

Dillard Groundwater Recharge and Solar Array Project

Draft Initial Study – Mitigated Negative Declaration

prepared by

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List of Acronyms

AB	Assembly Bill
AC	Alternating Current
AFY	Acre-Feet per Year
APN	Assessor's Parcel Number
BAT	Best Available Technology
BCT	Best Conventional Pollutant Control Technology
BESS	Battery Energy Storage System
BMP	Best Management Practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CY	Cubic Yards
DC	Direct Current
DOC	California Department of Conservation
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GSP	Groundwater Sustainability Plan
GWP	Global Warming Potential
HMP	Habitat Mitigation Plan
HVAC	Heating, Ventilation, and Air Conditioning
IPaC	Information for Planning and Consultation

kW	Kilowatt
kWh	Kilowatt-hour
Ldn	Day-Night Average Sound Level
Leq	Equivalent Continuous Sound Level
MBHCP	Metropolitan Bakersfield Habitat Conservation Plan
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NHD	National Hydrography Dataset
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NOX	Nitrogen Oxides
NPPA	Native Plant Protection Act
NPDES	National Pollutant Discharge Elimination System
OPR	Office of Planning and Research
PG&E	Pacific Gas and Electric
PM10	Particulate Matter ≤10 microns
PM2.5	Particulate Matter ≤2.5 microns
PPV	Peak Particle Velocity
PRC	Public Resources Code
PV	Photovoltaic
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Sacred Lands File
SOX	Sulfur Oxides
SR	State Route
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
TAC	Toxic Air Contaminant
USC	United States Code
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compounds
WEAP	Worker Environmental Awareness Program

Initial Study

1. Project Title

Dillard Groundwater Recharge and Solar Array Project

2. Lead Agency/Project Sponsor Name and Address

Rosedale-Rio Bravo Waster Storage District
849 Allen Road
Bakersfield, California 93314

3. Contact Person and Phone Number

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4. Project Location

The project area encompasses 50 acres of Assessor's Parcel No. (APN) 104-292-09, located approximately 0.6-miles northeast of the intersection of State Route (SR) 43 and SR 58 in unincorporated Kern County. The project area overlies the Kern County Subbasin (Kern County Subbasin) of the San Joaquin Valley Groundwater Basin.

Figure 1 shows the regional location of the project area, and Figure 2 shows an overview of the project area on a local scale. Figure 3 through Figure 7 show closer extents of the project components.

5. General Plan Designation

The project area is located within the Kern County Western Rosedale Specific Plan and has a land use designation of Intensive Agriculture with a minimum parcel size of 20 acres. This land use designation is intended for agricultural uses, including but not limited to irrigated cropland, orchards, and vineyards, and allows for groundwater recharge areas (County of Kern 2009).

6. Zoning

The project site is zoned Limited Agriculture (A-1). Pursuant to Kern County Code Chapter 19.14, the purpose of the A-1 district is to designate areas suitable for a combination of estate-type residential development, agricultural uses, and other compatible uses. Permitted uses in the A-1 district include but are not limited to irrigated cropland, livestock lands, residences, groundwater recharge facilities, public agency facilities, and solar facilities where power generated does not exceed the total on-site power demand.

7. Description of Project

Project Background

The Rosedale-Rio Bravo Water Storage District (Rosedale) is a California Special District, originally formed in 1959 by landowners to construct and operate groundwater recharge projects. Historically, surface water from the Kern River overflowed into the Goose Lake Channel, which traverses the surrounding communities, approximately once every three years. Landowners were aware that groundwater levels increased significantly after such events, and Rosedale was formed to create and maintain sustainable groundwater supplies. Rosedale's service area encompasses approximately 44,000 acres, 27,500 acres of which are used for irrigated agriculture. Unlike most water districts, Rosedale makes very few direct water deliveries to customers; instead, nearly all of Rosedale's water supplies are recharged into groundwater aquifers and then extracted by private wells (Rosedale 2025).

Rosedale operates about 2,500 acres of groundwater recharge ponds. The proposed Dillard Groundwater Recharge and Solar Array Project would include approximately 50 acres of groundwater recharge ponds, which would provide upwards of 6,000 acre-feet per year (AFY) of groundwater recharge capacity. In addition, the proposed solar facility would provide power to existing Rosedale water pumps, while the solar arrays would provide shade for the groundwater recharge pond, helping to prevent algae growth, reduce evaporation, and improve groundwater recharge efficiency.

Project Description

The Dillard Groundwater Recharge and Solar Array Project (project) would involve the construction and operation of a groundwater recharge basin, consisting of two to three ponds containing elevated solar panel arrays, a battery energy storage system (BESS), and approximately 25 miles of power transmission lines. Each of the project components are discussed further in the following sections.

Groundwater Recharge Basin

The project would involve grading to create two to three groundwater recharge ponds (see Figure 3). Earthwork would also be required to use onsite materials to construct the berms. Water for groundwater recharge would be available from Rosedale's existing Conjunctive Use Program, which includes water supplies from high-flow Kern River water, the Central Valley Project, and the State Water Project. Rosedale's existing Central Intake Pipeline would supply water to the groundwater recharge ponds. Interbasin control structures and inflow pipelines would be installed to facilitate water flow into the site. Pipelines would be installed via open-cut trench installation. Other interbasin control structures would be prefabricated off-site and then installed. The maximum depth of excavation would be ten feet, and the average depth of excavation would be six feet.

Solar Array and Battery Energy Storage System

The project would also include construction of an elevated solar array above the recharge ponds. The intent of the elevated solar array is to harness solar energy while also minimizing algae growth and water loss from evaporation in the recharge ponds. The solar array would have a capacity of 7,515 kilowatts (kW) of direct current (DC) power or 5,000 kW of alternating current (AC) power. The solar array would generate approximately 15.1 million kilowatt-hours (kWh) of power per year. Power generated by the solar array would be used to power existing Rosedale pumps. The proposed solar array would be designed and sized based on historic and projected energy use associated with existing Rosedale facilities and would not be intended to function as a commercial power generator or to produce surplus power. However, in the event that Rosedale energy demand is low, surplus energy generated by the solar array would be sold back to Pacific Gas & Electric (PG&E) for use in the local energy grid.

The solar array would connect to a BESS, which would store energy generated by the solar array. The BESS would be located northeast of the groundwater recharge ponds and the solar array with dedicated access from Superior Road (see Figure 3). The BESS would consist of four battery container enclosures, each with internal heating, ventilation, and air conditioning [HVAC] systems, internal fire detection and suppression systems, and battery management systems. The BESS would also include 40 rack-mounted string inverters, step-up transformers, and a switchboard, which would be located south of the battery container enclosures. The BESS components would be placed on either a concrete pad, drilled pier, or pile foundations. The battery storage technologies being considered are lithium-ion-phosphate (lithium-ion) or other similar technologies that may become commercially available as the BESS project undergoes final design. The BESS would have a storage capacity of approximately 4,000 kilovolt-amperes or 15,670 kWh.

The BESS enclosures would include internal HVAC and internal fire detection and fire suppression systems in each container. The internal HVAC systems would allow the battery containers to function properly in temperatures below 0°F and up to approximately 130°F. These containers would also include a battery management system which monitors battery voltage, current, temperature, security, fault diagnosis and management, and external communication with the power conversion system. In the event that ambient temperatures exceed 130°F, a liquid cooling system would automatically switch on and the battery management system would automatically limit charging, isolate certain areas of the system, or shut off. These actions would be in addition to the various operator alarms and warnings provided by the battery management system. Each inverter would include protection equipment, DC and AC circuit breakers, and a connection cabling system. The inverters would be connected to the battery containers by underground electrical conductors.

The proposed project would include a switchboard with switchgear located south of the battery container enclosures. The switchgear would manage and control the electrical energy flow within the BESS system. The switchgear would be able to isolate various parts of the BESS for safety during operation and maintenance activities. Additionally, the switchgear would ensure the BESS can connect to, and disconnect from, the energy grid to allow the BESS to provide or absorb power when required and provide energy at peak demand times. The switchgear facilities would include a step-up transformer, which would convert the voltage of electricity between the BESS and its connection to PG&E power lines.

Power Transmission Lines and Interconnection

The project would include construction of approximately 25 miles of overhead power lines, as shown in Figure 2 through Figure 6. Power line poles would generally be mounted in easements between agricultural properties, or along roadways. Several power line alignments would cross over SR 43 and 58. Rosedale would be required to comply with California Department of Transportation (Caltrans) encroachment permit policies. Multiple power line alignments would require crossing the Santa Fe Railroad right-of-way; depending on encroachment requirements established by the Burlington Northern Santa Fe Railway, power line alignments that cross the railroad would either be aboveground, pole-mounted power lines or installed belowground.

A point of interconnection would be constructed to transfer power generated by the solar array to existing PG&E infrastructure. The interconnection would consist of approximately three or four poles with protection devices, metering devices, and reclosers. The interconnection would be located near the intersection of Cherry Avenue and SR 58, approximately 0.4 miles south of the solar facility and groundwater recharge ponds.

Construction Activities

Project construction would occur over approximately 34 months, and Rosedale would initiate construction as early as June 2026. Anticipated project phases and their durations are summarized in Table 1. Actual project phasing would be determined by the construction contractor.

Construction activities would generally occur from 6:00 a.m. to 5:00 p.m., Monday through Friday. Construction staging and designated worker parking areas would be located throughout the project area,

as shown in Figure 2 through Figure 6. Construction activities may require lighting during early morning hours. Construction personnel would adhere to the Public Resources Code to minimize fire risk; these regulations include Public Resources Section 4442, which requires earth-moving and portable construction equipment with internal combustion engines to use spark arrestors when operating on any forest-covered, brush-covered, or grass-covered land. Project construction would not require the closure of adjacent roadways.

Construction Grading and Contouring

Groundwater recharge pond construction in the proposed groundwater recharge basin would require the excavation of approximately 75,000 cubic yards (CY) of soil and placement and compaction of approximately 50,000 CY of soil for infill. No excavated soil would be removed off-site. Once groundwater recharge ponds are constructed and contoured, solar panels with pole mounts will be installed within the footprint of the groundwater recharge ponds and would be connected to the BESS.

Open Cut Trench Pipeline Installation

A turnout pipeline would be installed via open cut trench. Open cut trench pipeline installation would involve excavation of a trench, installation of the new pipelines, and then backfilling the trench with soil. The maximum depth of excavation is anticipated to be ten feet. Excavated concrete or soil would not be removed off-site.

Power Lines

Aboveground power line poles would require excavation to a depth of approximately six feet so that the base of each pole can be partially buried. Locations of aboveground power line poles would be identified through easement agreements and will be located within the designated locations of the powerlines as shown in Figure 2 through Figure 6.If needed, belowground power lines crossing the Santa Fe Railroad, SR 43, and/or SR 58 would be installed using horizontal boring beneath a railroad or state right-of-way. Locations of belowground power lines would be identified through easement agreements and would be located within the designated locations of the powerlines as shown in Figure 2 through Figure 6.

Hazardous Materials Management

Construction would generate limited amounts of hazardous waste, such as used lubricants, cleaning solvents, and other chemicals. Additional hazardous waste that could be encountered or accidentally released during construction include incidental spill waste and concrete washout. Waste generated or encountered during construction would be handled, contained, transported, and/or disposed of in accordance with local, state, and federal regulations. The proposed project would not store or use any acutely or extremely hazardous materials in excess of threshold quantities established by the California Accidental Release Prevention Program, the California Code of Regulations, or federal Environmental Protection Agency regulations that would require additional regulatory requirements or environmental review.

With each module of the BESS, applicable building codes and design standards require that numerous controls and sensors be in place to shut down operation if any unsafe conditions occur, including those that could lead to a leak or spill. The proposed BESS design includes few facilities that could result in spills. The facility transformers that contain mineral or vegetable oil would have secondary containment. If a spill were to occur, pertinent measures in the project emergency response plan and/or the Spill Containment and Countermeasures Plan would be implemented to contain and clean up the spill. The proposed project would also include preparation of a Hazardous Material Business Plan to manage and report hazardous materials for the proposed project.

Operation and Maintenance

The proposed groundwater recharge basin would require periodic maintenance, including occasional clearing of debris. Weed and pest control operations would be conducted as necessary, utilizing products approved for aquatic use to protect and preserve groundwater quality. Periodic earthwork operations are required to maintain pond bottoms and levees and remove vegetative growth. Equipment could include tractors (110-horsepower light motor), mini-skid steers, mini-excavators, mowers, and loaders. Maintenance would redistribute soils on-site and would not require off-site soil removal or disposal.

One daily trip to the project site would be required during operation. Operation of the project would result in a minor increase in vehicle trips compared to existing conditions, as Rosedale staff visit nearby facilities and would subsequently visit the project site on the same trip. The proposed project would have the occasional need for battery upgrades or augmentation in the future. Augmentation batteries would be installed on existing foundations to maintain system load capacity as the batteries degrade over time. Methods of battery disposal are described below.

Solar and BESS Decommissioning

At the end of the useful life of the solar array and BESS (anticipated to be up to approximately 40 years), the solar facilities would be decommissioned. Currently, standard decommissioning practices include dismantling and repurposing, salvaging/recycling, or disposing of the proposed project components in accordance with applicable laws and regulations. However, actual decommissioning for the proposed project would be conducted in accordance with all applicable local, state, and federal requirements in effect at the time of decommissioning, and a final decommissioning plan, based on then-current technology, site conditions, and regulations, would be prepared prior to actual decommissioning.

Table 1 Project Construction Schedule

Construction Phase	Estimated Duration
Recharge Basin, Berm	7 months
Interbasin and Inflow Control Structure Installation	4 months
Turnout Pipeline Installation	2 months
Solar Array and Transmission Line Installation	12 months
Decommissioning	6 months

8. Surrounding Land Uses and Setting

The project area is located in an agricultural area and is generally surrounded by agricultural uses in all directions. Single-family residences are located approximately 0.3-miles south of APN 104-292-09, the proposed location of the recharge basins and solar array. Agricultural industrial uses are located immediately to the west. The recharge basins and solar array location is approximately 0.8 mile southeast of the Enos Shallow groundwater well (RMW-062a), which is one of several representative monitoring wells operated by Kern County GSAs under the Kern Subbasin GSP. Several of the proposed transmission lines are within 0.5-miles of the unincorporated community of Calder's Corner, which consists of rural residential and commercial land uses. Several transmission lines would cross over the Santa Fe Railroad. The recharge basins and solar array location is approximately five miles north of the Kern River and 0.5-miles northwest of the Old Hondo Plant and Gas Rail Yard.

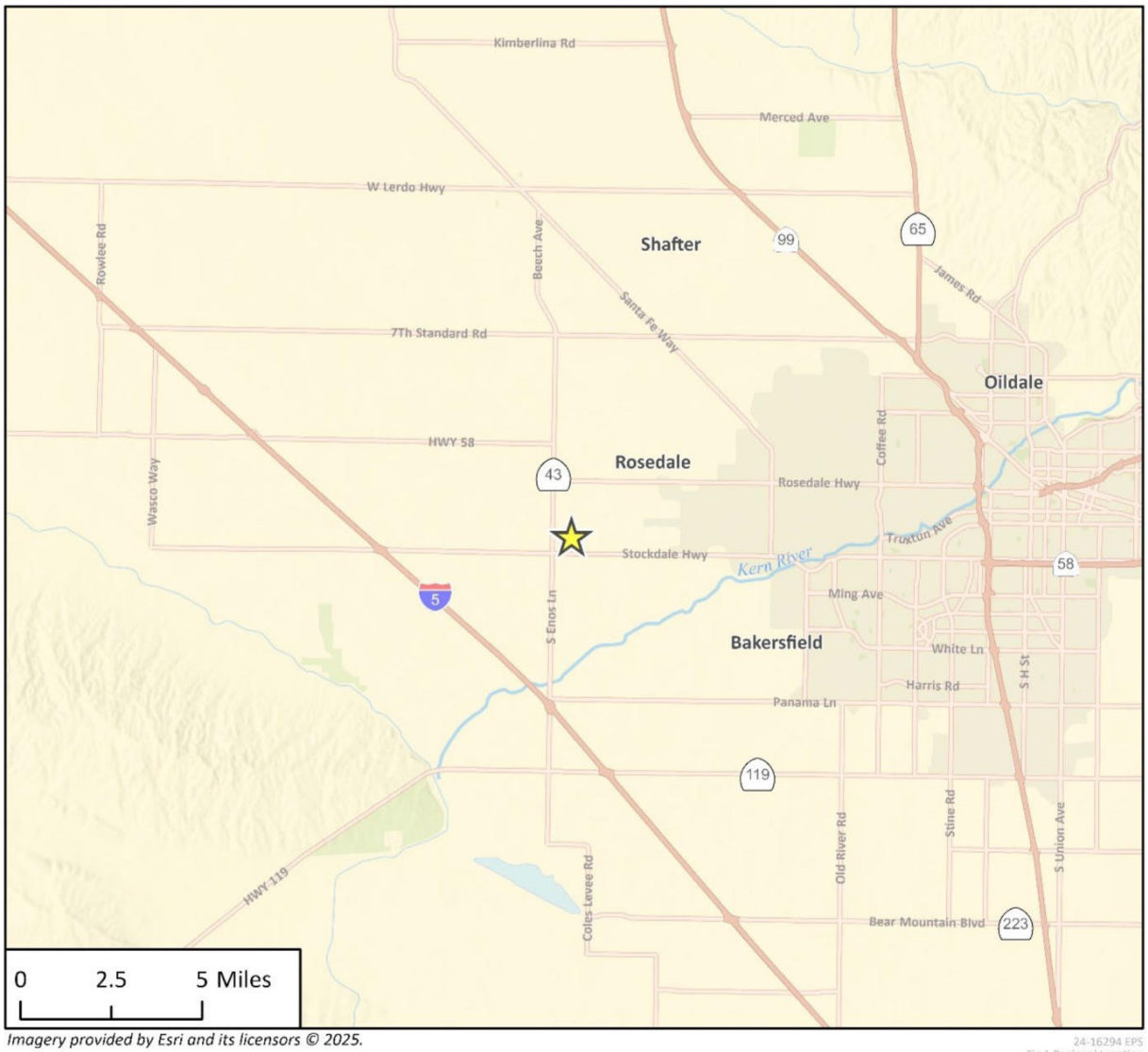
9. Other Public Agencies Whose Approval is Required

Rosedale is the lead agency for this project. The project would require encroachment permits from the County of Kern and Caltrans for work along local roadways and state right-of-way, and from Burlington Northern Santa Fe Railway for work near the Santa Fe Railroad.

10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

On December 17, 2024, Rosedale distributed Assembly Bill (AB) 52 consultation letters for the proposed project, including project information, map, and contact information, to six Native American tribes locally and culturally affiliated with the project area. Follow-up emails were sent on January 3, 2025. Additional letters were sent to tribes on September 23, 2025 to include the transmission lines, which were not included in the original letters. Follow-up emails were also sent on October 9, 2025. Two tribes responded with feedback and input, but none of the tribes requested consultation. Consultation was considered concluded on October 23, 2025, which is 30 days after the tribes were provided with the latest project description. Accordingly, AB 52 consultation for the project is complete. Refer to Section 18, *Tribal Cultural Resources*, for additional information.

Figure 1 Regional Location



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Fig 1 Regional Location

Project Location

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Figure 2 Project Site – Overview

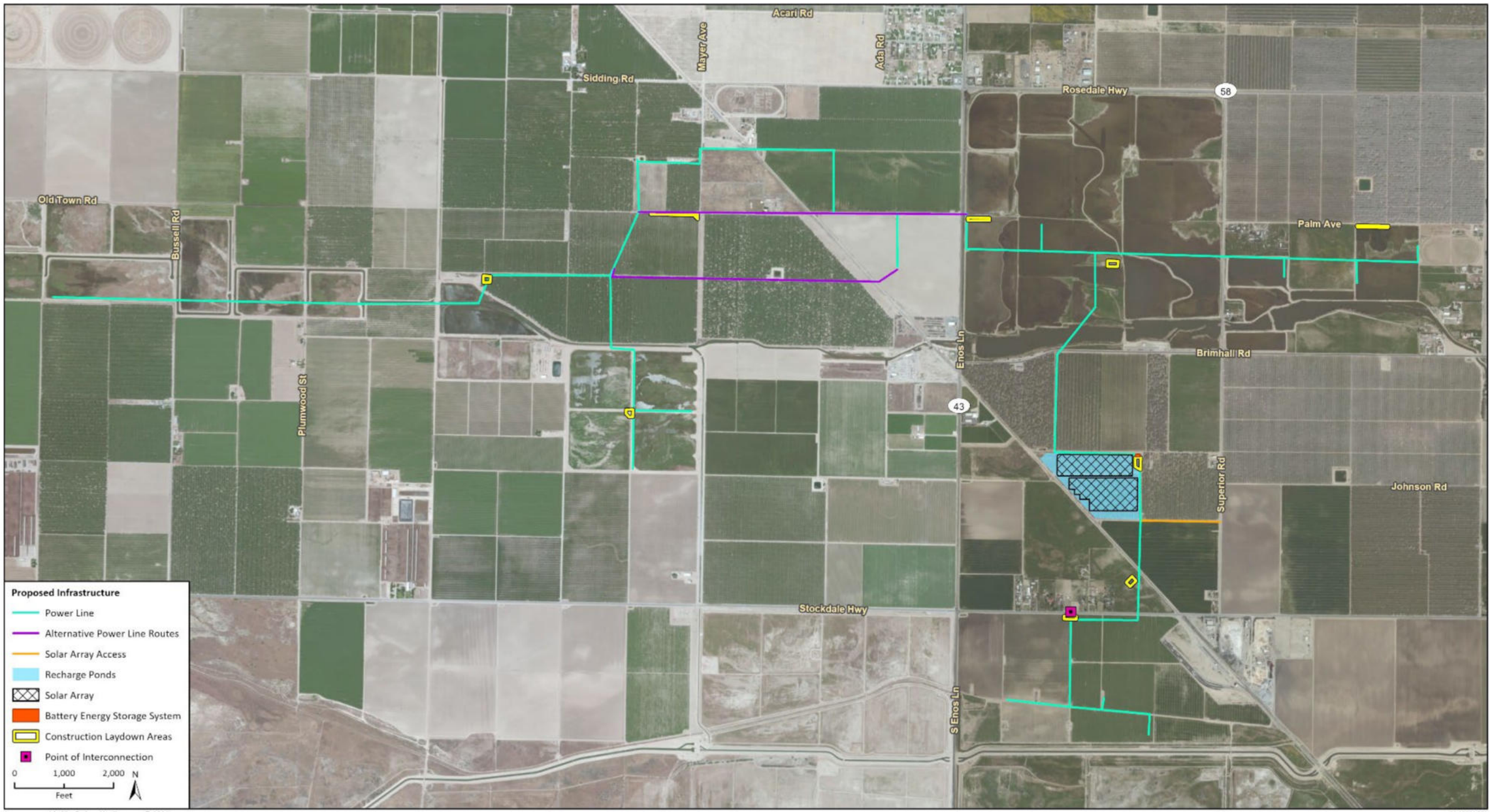
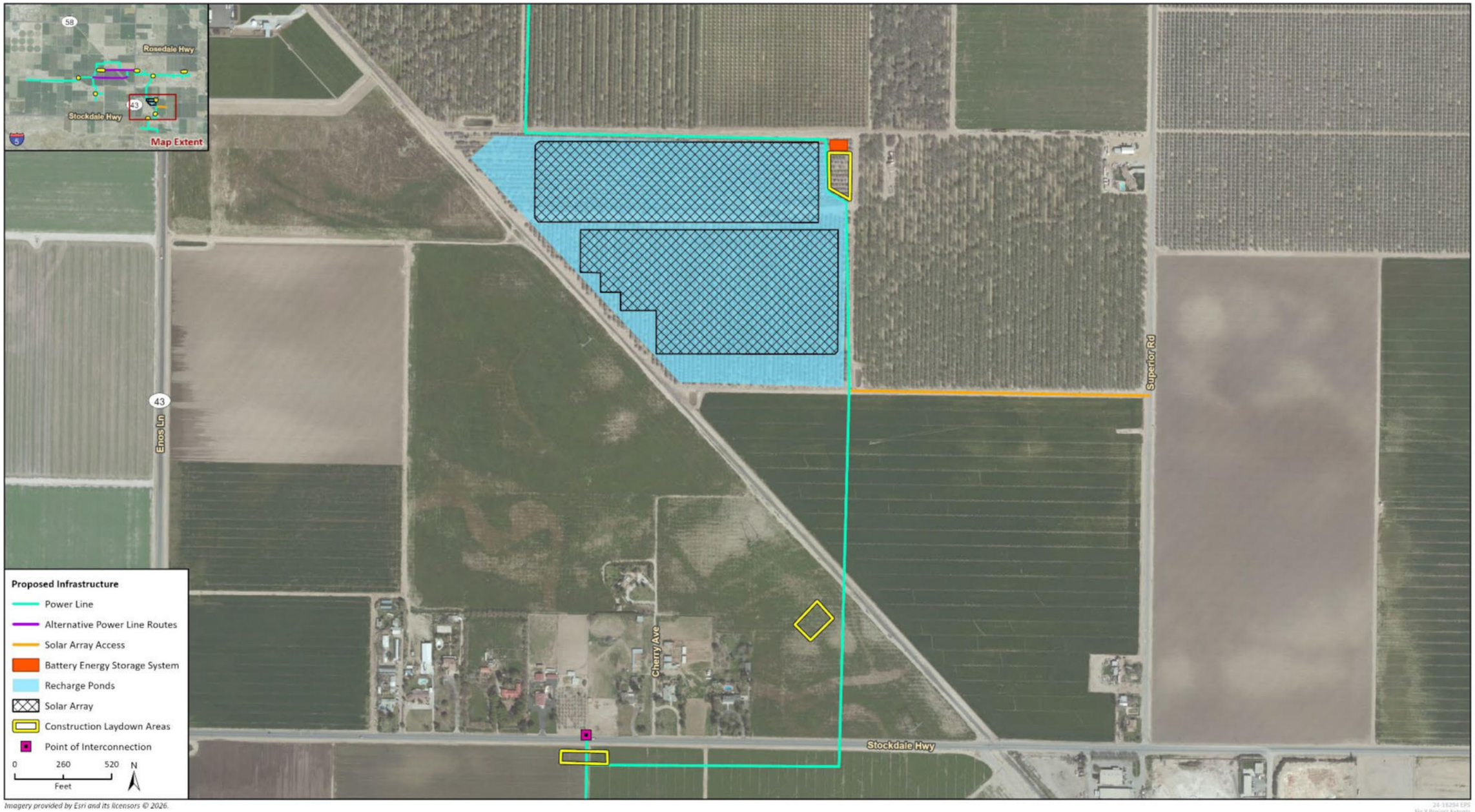
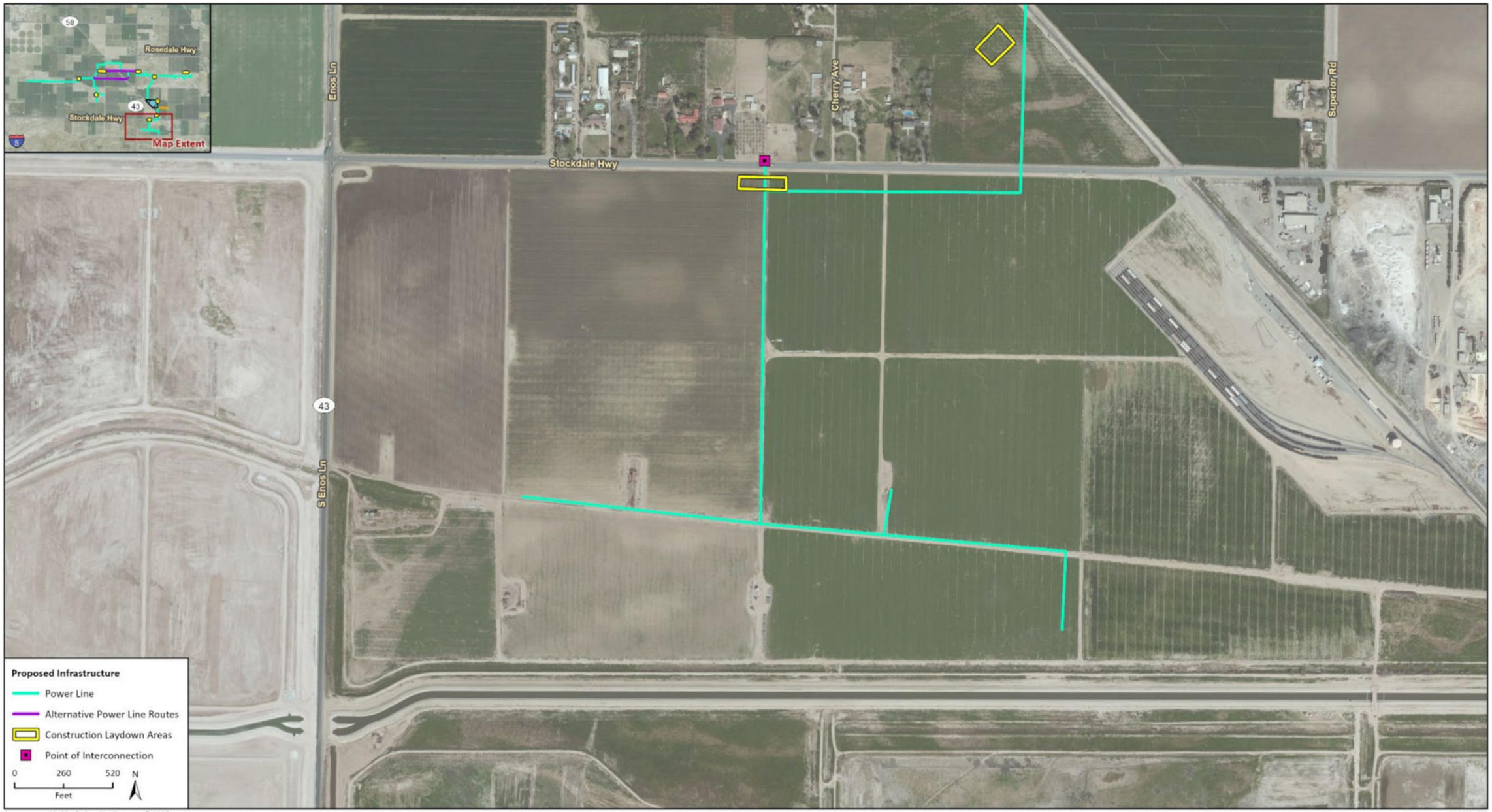


Figure 3 Project Site – Recharge Pond and Solar Array



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Figure 4 Project Site – Southern Extent



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Fig X Project Extents

Figure 5 Project Site – Western Extent



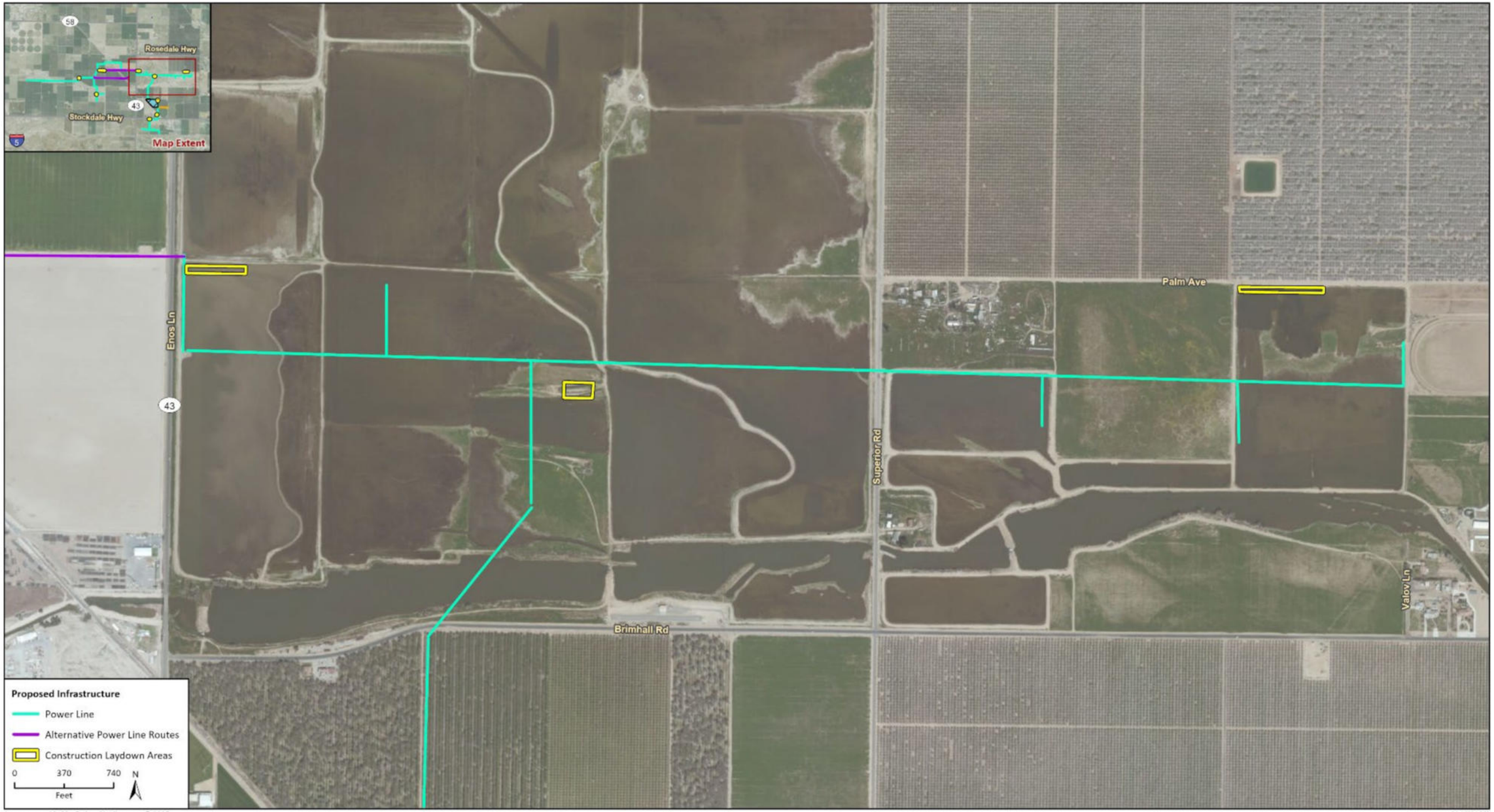
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Fig X Project Extents

Figure 6 Project Site – Central Extent



Figure 7 Project Site – Eastern Extent



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Fig X Project Extents

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology and Soils	☐	Greenhouse Gas Emissions	■	Hazards and Hazardous Materials
☐	Hydrology and Water Quality	☐	Land Use and Planning	☐	Mineral Resources
☐	Noise	☐	Population and Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities and Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a “potentially significant impact” or “less than significant with mitigation incorporated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

DBJ

Signature

3/10/2026

Date

Dan Bartel

Printed Name

Engineer-Manager

Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
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 non-urbanized 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 a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista?

While the Kern County General Plan (General Plan) does not designate specific scenic vistas, it does identify specific scenic resources which occur throughout the County. These include oak woodlands, open space lands, and designated scenic highway corridors. The General Plan identifies areas particularly suited for potential scenic open space purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors (Kern County 2003).

As described above, there are no designated scenic vistas within the County (Kern County 2003). The project site and surrounding areas to the north, east, and south are predominately agriculturally developed, with an agricultural industrial facility to the west. Additionally, due to the flat topography of the project site and surrounding terrain, some distant views of surrounding hillsides are available in the project vicinity. Public views of the proposed project would be limited. Views from Superior Road would be largely screened from view by existing orchards to the east, north, and south of the project site. Potential views of the project from SR 43 and SR 58 would be limited by the expansive agricultural lands and structures existing between the project site and the public right of way. Therefore, no impact would occur.

NO IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The nearest designated State Scenic Highway is a segment of SR 33 in Ventura County, located approximately 50 miles south of the project site. No designated scenic highways exist in the vicinity of the proposed project. The proposed project would not damage scenic resources within a State Scenic Highway. Therefore, no impact would occur.

NO IMPACT

c. Would the project, in non-urbanized 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 a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project site is in a non-urbanized area;[1] therefore, this discussion analyzes the proposed project's potential to substantially degrade the existing visual character or quality of public views of the site and its surroundings. The project area is located in an agricultural area and is generally surrounded by agricultural operations in all directions. Several of the proposed transmission lines are within 0.5 mile of the unincorporated community of Calder's Corner, which consists of rural residential and commercial land uses. Several transmission lines would cross over the Santa Fe Railroad. The recharge basin and solar array location is approximately five miles north of the Kern River and 0.5-miles northwest of the Old Hondo Plant and Gas Rail Yard. The proposed project involves the construction and operation of a groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines. As described above, the proposed groundwater recharge basin, solar panel array, and BESS components of the project would largely be concealed from public view by the adjacent orchards, expansive private agricultural lands, and existing structures and vegetation surrounding the project site. Newly constructed transmission lines and interconnecting infrastructure would be consistent in form and materiality with existing electrical infrastructure in the vicinity of the proposed project, such as those paralleling SR 43, SR 58, and the project site boundary. Accordingly, the proposed project would have a less-than-significant impact related to degrading existing visual character or quality of public views of the site and its surroundings.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The Kern County General Plan and Ordinance Code contain policies and regulations intended to limit light and glare throughout the County. The General Plan includes policies to minimize light and glare from discretionary new development projects in both rural and urban areas and to encourage the use of low-glare lighting to reduce nighttime glare effects on neighboring properties; however, implementation is deferred to the California Environmental Quality Act (CEQA) guidelines and the County Zoning Ordinance.

The Zoning Ordinance comprises Title 19 of the Kern County Ordinance Code. In accordance with the Development Standards contained within Chapter 19.81, Section 19.81.060 of the County Zoning Ordinance, Outdoor Lighting Plans, where permitted, shall be "down-shielded" to limit the potential for off-site lighting and glare impacts. The Dark Skies Ordinance, contained within Chapter 19.81 of the Kern County General Plan, promotes a reduction in unnecessary light intensity and glare to reduce light spillover onto adjacent properties, and restricts unnecessary upward projections of light to protect the ability to view the night sky (Kern County 2025a).

[1] California Public Resources Code Section 21071 defines an unincorporated area as an "Urbanized area" only when the area is completely surrounded by one or more incorporated cities, or located within an urban growth boundary and has an existing residential population of at least 5,000 persons per square mile. The project site is not surrounded by Bakersfield city limits and is not within the City's sphere of influence (Kern County 2007b).

Construction of the groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines would occur during daylight hours and would not require lighting. The solar array would be obscured as they would be installed on pole mounts within the footprint of the groundwater recharge ponds. Permanent operational lighting associated with the solar array and BESS would be limited to areas required for safety, security, or operations; would be directed on-site; would include shielding as necessary; and would be motion-activated to minimize illumination of the night sky and potential impacts on surrounding viewers. Due to the design of the proposed project, the project would not create a new source of substantial light that would adversely affect daytime or nighttime views in the area.

The BESS facility components would be comprised of non-reflective, non-specular finish materials that do not have the potential to cause glare. The groundwater recharge basin and transmission line components of the proposed project would not permanently add reflective surfaces, such as windows or car windshields, or lighting to the project site or its surroundings and therefore would not be new sources of glare. In addition, given the low visual profile of the proposed project, as shown in Figure 6, views of the BESS facility would be largely obscured to motorists by existing development and neighboring orchards. Therefore, the proposed project would not create a new source of substantial glare that would adversely affect daytime or nighttime views in the area. This impact would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

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2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	■	☐
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	■	☐
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	■	☐

a. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

The proposed project would involve the construction and operation of a groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines. Based on the California Department of Conservation (DOC) Important Farmland Finder, the groundwater recharge and solar array components of the proposed project would occur on land designated as Prime Farmland. Additionally, this portion of the project is located within Agriculture Preserve Boundary No. 10 under Kern County. Several of the transmission lines would also be located above designated Prime Farmland in Kern County (DOC 2022).

All components of the proposed project are considered permitted uses at the site by the Kern County General Plan and Ordinance Code. The proposed project would not alter the site's existing agricultural land use and zoning designations and would not preclude future agricultural operations at the site. The project also would not construct permanent buildings or structures that could result in the conversion of agricultural land.

At the end of the useful life of the solar array and BESS (anticipated to be up to approximately 40 years), the solar facilities would be decommissioned. Rosedale will have the flexibility to continue using the project site as a groundwater recharge basin following removal of the solar array and BESS facility. Standard decommissioning practices include dismantling and repurposing, salvaging/recycling, or disposing of the proposed project components in accordance with applicable laws and regulations. A final decommissioning plan, based on then-current technology, site conditions, and regulations, would be prepared prior to actual decommissioning.

The proposed groundwater recharge activities could benefit existing agricultural operations surrounding the site and any future agricultural production to occur at the site. The 25 miles of proposed utility transmission lines would be constructed through easements that would not impact agricultural production. Therefore, the proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

The recharge basin and solar array site is not under an active Williamson Act contract (Kern County 2025b). However, portions of the proposed transmission line routes would overlap portions of lands under Williamson Act Contract (DOC 2024), and lands within Kern County designated Agriculture Preserve Boundaries No. 9 and 10 (Kern County 2025b). As discussed above, the proposed project would not alter the site's existing agricultural land use and zoning designations, is a permitted use under existing zoning, and would not preclude future agricultural operations at the site. Further, the transmission lines would not interfere with ongoing agricultural operations in lands enrolled in a Williamson Act contract. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

The project site does not include lands zoned as forest land, timberland, or timberland zoned Timberland Production. There would be no conflict with forest land zoning. Therefore, no impact would occur.

NO IMPACT

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

As stated above (see Section 2c.), the project site does not include forest land and would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur.

NO IMPACT

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

As stated under (c) and (d) above, the project site does not contain forest land or timberland (see Section 2c. and d.). The project would not convert adjacent agricultural land to non-agricultural uses and would not preclude future agricultural use (see Section 2a. and b.). The project also would not construct permanent buildings or structures that could result in the conversion of agricultural land. At the end of the useful life of the solar array and BESS (anticipated to be up to approximately 40 years), the solar facilities would be decommissioned. The BESS site would be restored to its original state, at which point the site could be converted to traditional agricultural production use. Additionally, the project would facilitate groundwater recharge, which would benefit agricultural activities in the region. Therefore, the project would not involve changes which could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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 non-attainment 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?	☐	☐	■	☐

Overview of Air Pollution

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[2] nitrogen oxides (NO_X), particulate matter with diameters of ten microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between ROG and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog).

Air pollutant emissions are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.
- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources that may be legally operated on roadways and highways.
- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

[2] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this IS-MND.

Air Quality Standards and Attainment

The project site is located in the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). As the local air quality management agency, the SJVAPCD is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the SJVAB is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists for those air pollutants, and the human health impacts associated with these criteria pollutants, presented in Table 2, are already occurring in that area as part of the environmental baseline condition. Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The SJVAB is designated a nonattainment area for the state one-hour ozone standard as well as for the federal and state eight-hour ozone standards. The SJVAB is also designated as nonattainment for the state annual arithmetic mean and federal 24-hour $PM_{2.5}$ standards as well as the state 24-hour and annual arithmetic mean PM_{10} standards. The nonattainment statuses of the SJVAB are the result of several factors, such as increased population and unique topographical and meteorological conditions that exacerbate the formation and retention of high levels of air pollution in the SJVAB (SJVAPCD 2016). The SJVAB is unclassified or in attainment for all other ambient air quality standards (SJVAPCD 2018).

Table 2 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.

Source: EPA 2025a

Air Quality Management

The SJVAB is currently designated nonattainment for the ozone and $PM_{2.5}$ NAAQS, therefore the SJVAPCD is required to implement strategies to reduce pollutant levels to achieve attainment of the NAAQS. The SJVAPCD 2016 Ozone Plan and 2018 $PM_{2.5}$ Plan include emissions inventories that identify sources of air pollutants, evaluations for feasibility of implementing potential opportunities to reduce emissions, sophisticated computer modeling to estimate future levels of pollution, and a strategy for how air pollution will be further reduced. The plans also include innovative alternative strategies for accelerating attainment through non-regulatory measures. The 2016 Ozone Plan determines that, with implementation of the proposed control strategy, the SJVAB can expect to reach attainment of the 2008 eight-hour ozone NAAQS by December 31, 2031 (SJVAPCD 2016). The 2018 $PM_{2.5}$ Plan for the 1997, 2006, and 2012 $PM_{2.5}$ NAAQS includes a strategy for bringing SJVAB into attainment by the respective deadlines of 2023, 2024, and 2025 (SJVAPCD 2021).

Methodology

Air pollutant emissions generated by project construction were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1.0. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses, and location to model a project's air pollutant and greenhouse gas (GHG) emissions. The analysis reflects the construction and operation of the project as described under *Description of Project*.

Construction Emissions

Construction emissions were modeled to include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction of the proposed project was analyzed based on Rosedale's construction schedule and construction equipment list. Construction would occur on an approximately 100-acre portion of the project site over the course of approximately three years between June 2025 and March 2028. It is assumed that all construction equipment used would be diesel-powered, and no soil import or export would be required. This analysis assumes that the project would comply with all applicable regulatory standards. In particular, the project would comply with SJVAPCD Rule 8201 Construction, Demolition, Excavation, Extraction, And Other Earthmoving Activities. See Appendix A for the project's construction-related air pollutant emissions modeling and calculations.

Operational Emissions

Operational emissions of the project were also modeled in CalEEMod. The project would generate approximately one vehicle trip per day for operational activities. Therefore, minimal emissions would be generated by operational activities.

Decommissioning Emissions

After 40 years, the solar array, BESS and associated equipment would likely be decommissioned and removed from the site via a series of activities that would be similar in nature and duration to project construction activities excepting grading and contouring activities associated with construction of the groundwater recharge basins. Therefore, the project's decommissioning emissions were assumed to be approximately equal to the project's construction emissions for the purposes of this analysis.

Air Emission Thresholds

The SJVAPCD has adopted guidelines for quantifying and determining the significance of air quality emissions in its *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI 2015; SJVAPCD 2015a; SJVAPCD 2015b). The SJVAPCD recommends the use of quantitative thresholds to determine the significance of temporary construction-related emissions of criteria air pollutant emissions, which are shown in Table 3.

Table 3 Air Quality Thresholds of Significance

Pollutant	NO_X	ROG	PM_{10}	$PM_{2.5}$	SO_X	CO
Construction Thresholds (Tons Per Year)	10	10	15	15	27	100

NO_X= nitrogen oxides; CO= carbon monoxide; SO_X = sulfur oxides; ROG = reactive organic gases; PM_{10} = particulate matter with a diameter of 10 microns or less; $PM_{1.5}$ = particulate matter with a diameter of 2.5 microns or less

Source: SJVAPCD 2015a; SJVAPCD 2015b

In addition to the annual SJVAPCD thresholds presented above, SJVAPCD has published the *Ambient Air Quality Analysis Project Daily Emissions Assessment* guidance, which is summarized in Section 8.4.2, *Ambient Air Quality Screening Tools*, of the SJVAPCD's GAMAQI (2015). The Ambient Air Quality Screening

Tools guidance provides a screening threshold to evaluate construction activities of 100-pounds-per-day for any of the following pollutants: NO_X, ROG, PM_{10}, $PM_{2.5}$, sulfur oxides (SO_X), and carbon monoxide. Pursuant to the SJVAPCD's GAMAQI (2015), project impacts may be significant if on-site emissions from construction activities exceed the 100-pounds-per-day screening level after implementation of all enforceable mitigation measures. An ambient air quality assessment, which includes refined dispersion modeling, would be necessary if an exceedance occurs.

The SJVAPCD also recommends quantitative thresholds for evaluating a project's air quality impacts related to toxic air contaminants (TACs). Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SJVAPCD recommends a carcinogenic (cancer) risk threshold of 20 in a million. The Chronic Hazard Index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The SJVAPCD recommends a Chronic Hazard Index significance threshold of 1.0 and an Acute Hazard Index of 1.0. A hazard index of 1.0 indicates that predicted exposure equals the level below which adverse non-cancer health effects are not expected.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Construction, operation, and decommissioning of the project would result in emissions of criteria pollutants including ozone precursors, such as ROG and NO_X, as well as particulate matter. The SJVAPCD has prepared several air quality attainments plans to achieve ozone and particulate matter standards, the most recent of which include the 2016 Plan for the 2008 8-Hour Ozone Standard and the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards. The SJVAB is in attainment for carbon monoxide, sulfur dioxide, and lead; therefore, the SJVAPCD has not developed attainment plans for these pollutants. The SJVAPCD has determined that projects with emissions above the thresholds of significance for criteria pollutants would conflict with and obstruct implementation of the SJVAPCD's air quality plans (SJVAPCD 2015b). As discussed under item (b), the project would not exceed the SJVAPCD's significance thresholds for criteria air pollutant emissions. The project would not conflict with applicable air plans. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction Emissions

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles. Table 4 summarizes the estimated annual emissions of criteria air pollutants during project construction. As shown therein, construction-related emissions would not exceed SJVAPCD thresholds.

Table 4 Project Construction Emissions

	Annual Construction Emissions (tons/year)					
Construction Year	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2025	<1	<1	2	<1	<1	<1
2026	<1	<1	2	<1	<1	<1
2027	<1	<1	2	<1	<1	<1
2028	<1	<1	<1	<1	<1	<1
SJVAPCD Thresholds of Significance	10	10	100	27	15	15
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

ROG = reactive organic gas, NO_X = nitrogen oxides, CO = carbon monoxide, SO_X = sulfur oxides, PM_{10} = particulate matter 10 microns in diameter or less, $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Notes: All calculations were made using CalEEMod v.2022.1.0. See Appendix A for calculations. Some numbers may not add up due to rounding. Emission data is pulled from CalEEMod's "mitigated" results, which is a term of art for the modeling output and is not equivalent to mitigation measures that may apply to the CEQA impact analysis. The CalEEMod "mitigated" results account for compliance with regulations (Rule 8021) and project design features.

The SJVAB is a nonattainment area for the state one-hour ozone standard, the federal and state eight-hour ozone standards, the state $PM_{2.5}$ standard, and the state PM_{10} standard. The current nonattainment statuses of the SJVAB are the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (e.g., ROG and NO_X for ozone) potentially contribute to this poor air quality. Therefore, project-related construction emissions must be compared to the SJVAPCD's 100-pounds-per-day ambient air quality screening threshold for ROG, NO_x, sulfur dioxide, carbon monoxide, PM_{10}, and $PM_{2.5}$. As shown in Table 5, maximum daily emissions associated with project construction would not exceed the SJVAPCD's 100-pounds-per-day screening threshold during construction. Therefore, an ambient air quality assessment is not required for construction activities. Because the SJVAPCD annual and daily thresholds would not be exceeded, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

Table 5 Maximum Daily Project Construction Emissions

	Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions	1	3	26	<1	<1	<1
Screening Threshold	100	100	100	100	100	100
Screening Threshold Exceeded?	**No**	**No**	No	**No**	**No**	**No**

lbs/day = pounds per day, ROG = reactive organic gas, NO_X = nitrogen oxides, CO = carbon monoxide, SO_X = sulfur oxides, PM_{10} = particulate matter 10 microns in diameter or less, $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Notes: All calculations were made using CalEEMod v.2022.1.0. See Appendix A for calculations. Some numbers may not add up due to rounding. Emission data is pulled from CalEEMod's "mitigated" results, which is a term of art for the modeling output and is not equivalent to mitigation measures that may apply to the CEQA impact analysis. The CalEEMod "mitigated" results account for compliance with regulations (Rule 8021) and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

Operational Emissions

The proposed project would be operated and monitored remotely. Occasional passenger vehicle trips to the site for vegetation and solar array or BESS maintenance or repairs would occur approximately one trip per day. However, no heavy equipment would be required for vegetation and solar array or BESS maintenance. Therefore, the project's operational emissions would be *de minimis*, and project operation

would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. Impacts would be less than significant.

Decommissioning Emissions

After approximately 40 years, the solar array, BESS and associated equipment would likely be decommissioned and removed from the site via a series of activities that would be similar in nature and duration to project construction activities. As discussed above, the project's construction-related emissions would not exceed the SJVAPCD's daily or annual thresholds. Because the project's decommissioning activities would be similar to its construction activities, decommissioning emissions also would not exceed the SJVAPCD's daily or annual thresholds. Therefore, project decommissioning would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Therefore, the majority of sensitive receptor locations are schools, hospitals, and residences. CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* documents that concentrations of TACs, particularly diesel particulate matter (DPM), decline sharply within the first several hundred feet of a source, with substantial reductions occurring by about 1,000 feet (CARB 2005). CARB reports that recommended separation distances can reduce exposure by up to 80 percent, depending on source type and local conditions. As such, the 1,000-foot distance reflects the need to protect sensitive receptors from long-term cancer and chronic non-cancer risks, which are typically evaluated over a 70-year exposure period in CARB- and OEHHA-based health risk assessments. The nearest sensitive receptor is approximately 1,100 feet south of the proposed pond and solar array.

TACs are defined by California law as air pollutants that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. The following subsections discuss the project's potential to result in impacts related to TAC emissions during construction and operation.

Construction

Construction-related activities would result in temporary project-generated emissions of DPM exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. Inhalation of DPM has health risks associated with cancer and non-cancerous effects; however, because the cancer risk is more substantial and better established than its non-cancer effects (CARB 2020), cancer risk is the focus of the analysis in the following paragraphs. Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately four years. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70 year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., four years) is approximately five percent of the total exposure period used for 70-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-

term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (BAAQMD 2017).

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during the earthwork for recharge berms and well pad phase, which would last for approximately seven months, from June 2025 to December 2025 (Appendix A). DPM generated by project construction would not create conditions where the probability is greater than 20 in one million of contracting cancer for the Maximally Exposed Individual (the SJVAPCD's carcinogenic risk threshold) or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Chronic or Acute Hazard Index greater than one for the Maximally Exposed Individual (the SJVAPCD's hazard index thresholds). As referenced in Table 4 and discussed in 3(b) above, PM_{10} and $PM_{2.5}$ maximum daily emissions associated with project construction are less than one and would not exceed the SJVAPCD's 100-pounds-per-day screening threshold during construction. As PM_{10} and $PM_{2.5}$ are used as a proxy for DPM, project construction would not expose sensitive receptors to substantial TAC concentrations, and therefore impacts would be less than significant.

Operation

The proposed project does not include any stationary sources of TAC emissions, and operations and maintenance trips would be conducted using gasoline-powered vehicles, which do not generate TAC emissions. The project operation would not expose sensitive receptors to substantial TAC concentrations. Therefore, no impact would occur.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The project would generate oil and diesel fuel odors during construction and decommissioning activities from equipment use. The odors would be temporary and limited to these periods. With respect to operation, the SJVAPCD's GAMAQI (2015) identifies land uses associated with odor complaints to be wastewater treatment facilities, sanitary landfills, food processing facilities, and feed lot/dairy facilities. Solar array and BESS systems and groundwater basins are not listed in the guidance as a major odor-generating land use, and the project does not include components that would generate odors during operation. Therefore, the proposed project would not generate other emissions (such as those leading to odors) adversely affecting a substantial number of people, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	■	☐
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?	☐	☐	☐	■
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?	☐	☐	☐	■

The following analysis is based on Rincon's literature and desktop review, as well as two technical reports prepared by BPR Consulting (BRP) in December 2024 for the proposed project area: the *Biological Resources Assessment* (BRA) (Appendix B) and the *Blunt-nosed Leopard Lizard Protocol Survey Results Report at Dillard, Bakersfield, Kern County, California* (Appendix C).

Regulatory Setting

Federal and State

Regulatory authority over biological resources is shared by federal, State, and local agencies under a variety of laws, ordinances, regulations, and statutes. Primary authority for biological resources lies within the land use control and planning authority of local jurisdictions (in this instance, the Rosedale-Rio Bravo Water Storage District).

The U.S. Fish and Wildlife Service (USFWS) implements the Migratory Bird Treaty Act (MBTA; 16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC Section [§] 153 et seq.). Generally, the USFWS

implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species.

The California Department of Fish and Wildlife (CDFW) is a trustee agency for biological resources throughout the State under CEQA and has direct jurisdiction under the California Fish and Game Code (CFGC). Under the California Endangered Species Act (CESA) and FESA, CDFW and USFWS, respectively, have direct regulatory authority over species formally listed as threatened or endangered (and also those listed as rare for CDFW). Native and/or migratory bird species are protected under the MBTA and CFGC Sections 3503, 3503.5, and 3511.

CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFGC Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Laws and regulations found within the Clean Water Act (CWA), CFGC, California Water Code, and California Code of Regulations (CCR) protect wetlands and riparian habitat. The U.S. Army Corps of Engineers has regulatory authority over wetlands and other waters of the United States under Section 404 of the CWA. The State Water Resources Control Board and the nine Regional Water Quality Control Boards (RWQCBs) ensure water quality protection in California pursuant to Section 401 of the CWA and Section 13263 of the Porter-Cologne Water Quality Control Act. CDFW regulates certain water features, such as streams and lakes, under the CFGC Section 1600 et seq.

Local

Kern County General Plan

The Kern County General Plan serves as the overarching framework guiding land use, conservation, and development throughout unincorporated Kern County. The Land Use, Open Space, and Conservation Element include policies addressing biological resources, open space, and habitat preservation, and establish baseline requirements for CEQA compliance. The General Plan is implemented through area-specific plans and zoning ordinances, including those within the Metropolitan Bakersfield Planning Area.

The Metropolitan Bakersfield Planning Area encompasses approximately 261,000 acres centered on the City of Bakersfield and adjacent unincorporated County lands. It functions as a joint planning jurisdiction between Kern County and the City of Bakersfield, integrating regional growth strategies with environmental stewardship. The project area is subject to both the Metropolitan Bakersfield General Plan and the Western Rosedale Specific Plan, which collectively guide urban development while mitigating impacts to sensitive biological resources.

Western Rosedale Specific Plan

Located within the Metropolitan Bakersfield Planning Area, the Western Rosedale Specific Plan covers approximately 36,555 acres of predominantly undeveloped land slated for residential, commercial, and industrial growth. The plan provides detailed land use designations and development standards and incorporates biological resource policies consistent with the Kern County General Plan. Projects within this area must demonstrate consistency with both the Specific Plan and applicable regional conservation strategies. The Western Rosedale Specific Plan extends from the east side of Beech Avenue, just west of Enos Lane.

Metropolitan Bakersfield Habitat Conservation Plan

The proposed project falls within the plan area boundary of the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP). The MBHCP, which expired on January 1, 2023, served as a Habitat Conservation Plan pursuant to Section 10(a)(1)(B) of the Endangered Species Act and Incidental Take Permit issued under Section 2081 of CESA by CDFW that focused on the conservation of species and

habitats in the Metropolitan Bakersfield area. The MBHCP allowed permittees to obtain take of Threatened, Endangered, and Rare plant and animal species covered by the MBHCP. Regulation of take of species was authorized by the USFWS and the CDFW for lawful actions (e.g., public and private projects). Due to the expiration of the MBHCP as of January 1, 2023, the MBHCP does not apply to the proposed project.

Methodology

Literature Review

Rincon reviewed relevant databases and literature for baseline information on biological resources occurring and potentially occurring in the project area and immediate surrounding area. The review included the following sources:

- California Natural Diversity Data Base (CNDDB; CDFW 2025a) and Biogeographic Information and Observation System (BIOS; CDFW 2025b) for the four United States Geological Survey (USGS) 7.5-minute topographic quadrangle encompassing the project area (*Rosedale, Rio Bravo, Tupman*, and *Stevens*) and the eight surrounding quadrangles (*East Elk Hills, Buttonwillow, Oildale, Gosford, Connor, Millux, Mouth of Kern,* and *Taft*)
- Online Inventory of Rare and Endangered Plants of California (California Native Plant Society [CNPS] 2025a)
- Information for Planning and Consultation (IPaC; USFWS 2025a)
- Critical Habitat Portal (USFWS 2025b)
- National Wetlands Inventory (NWI; USFWS 2025c)
- National Hydrography Dataset (NHD; USGS 2025)
- Web Soil Survey (U.S. Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS] 2024)
- BRA (BRP 2024a)
- Blunt-nosed Leopard Lizard Protocol Survey Results Report (BRP 2024b)

Existing Conditions

Topography and Soils

The project area is at an elevation of approximately 309 to 328 feet above mean sea level, and the site topography is relatively flat. The project area crosses several soil map units, including Granoso loamy sand, Granoso sandy loam, Kimberlina fine sandy loam, Wasco fine sandy loam, Westhaven fine sandy loam, and Riverwash (USDA, NRCS 2025a). Many of these soils are found on alluvial fans and floodplains, and are generally neutral to moderately alkaline (USDA NRCS 1988).

Vegetation Communities and Land Cover Types

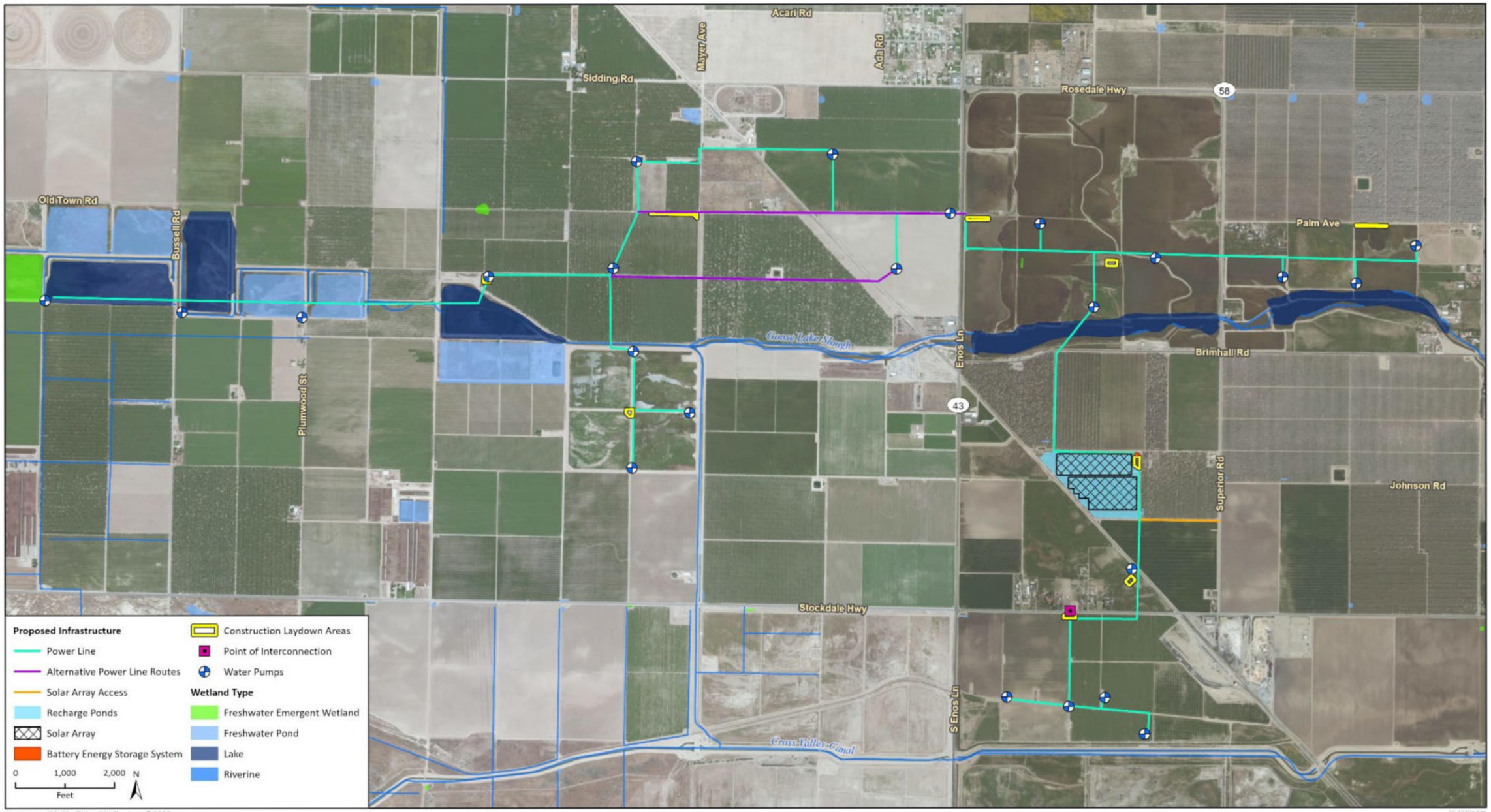
Vegetation within the project area generally consists of agricultural crops, ruderal margins, landscaped areas, or isolated patches of disturbed habitat. Agriculture consists of orchards, and row crops such as cotton and alfalfa. Developed areas include paved and dirt roadways, and bare agricultural staging areas.

Drainages and Wetlands

Two potential jurisdictional features, Goose Lake Slough and the Cross Valley Canal (Figure 8), were mapped in the NWI within or adjacent to the project area. Goose Lake Slough occurs within the proposed power line alignment and consists of riverine, lake, freshwater pond, and emergent freshwater wetland. Some of the areas mapped as lakes and ponds consist of agricultural fields along the slough that are

seasonally flooded to facilitate groundwater recharge and are regularly disked when dry. While most of Goose Lake Slough appears to follow its natural alignment adjacent to the project area, areas of obvious man-made engineering (i.e., 90° bends) exist. The hydrology of the slough is completely controlled through a weir that diverts water from the Kern River intermittently; thus, the slough is operated in a manner similar to other irrigation canals in the project area that are not considered jurisdictional features. The Cross Valley Canal is a man-made water-conveyance facility that runs east–west across the Bakersfield area and provides operational connections among State Water Project deliveries, local districts, and groundwater recharge/banking facilities in and around Rosedale. The Cross Valley Canal consists primarily of concrete-lined channel segments with managed flow regimes, does not function as a natural stream corridor, and provides low-quality wildlife habitat aside from occasional use of margins by disturbance-tolerant species. No riparian vegetation is present along Goose Lake Slough or the Cross Valley Canal. Numerous agricultural ditches also cross the project area and convey runoff into the slough or canal system.

Figure 8 National Wetlands Inventory Within the Project Area



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Additional data provided by the National Wetlands Inventory, 2025.

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Special-Status Species

Special-status species are plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS or NMFS under the FESA; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the CESA or Native Plant Protection Act; animals designated as "Species of Special Concern," (SSC) "Fully Protected," or "Watch List" by the CDFW; and plants with a California Rare Plant Rank (CRPR) of 1 or 2 which are defined as:

- List 1A = Plants presumed extinct in California
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known)
- List 2 = Rare, threatened or endangered in California, but more common elsewhere

Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB and other databases for other sites in the vicinity of the study area, and previous reports for the study area. The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species' requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species' requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species' requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species' requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last five years).

Special-Status Plants

A review of resource agency databases and lists for known special-status plant species occurrences in the 12 USGS quadrangles containing and surrounding the project area identified 21 regionally occurring special-status plant species.

Special-status plant species typically have specialized habitat requirements, including plant community types, soils, and/or elevational ranges. Because the project area lacks natural coniferous forest, dunes, vernal pools, natural marshes and swamps, and chaparral vegetation communities, and is highly developed agriculturally, 20 species were eliminated from further analysis due to their low potential to occur.

One special-status plant, Kern mallow (*Eremalche parryi* ssp. *kernensis*, federally endangered), has a moderate potential to occur within the project area due to previously documented occurrences in the project area and current habitat conditions.

Special-Status Wildlife

A review of resource agency databases and lists for known special-status wildlife species occurrences in the 12 USGS quadrangles containing and surrounding the project area identified 32 regionally occurring special-status wildlife species. Given the developed and disturbed nature of the project area in a predominantly agricultural area, the project area and surrounding areas generally provide marginal habitat for special-status wildlife species.

- **Low Potential or Not Expected to Occur.** Twenty species were eliminated from further analysis from having no more than a low potential to occur within the project area. This is due to the lack of undisturbed wildlife habitat and plant communities in the project area, such as forests, woodlands, riparian corridors, desert scrub, and natural wetland habitats. While Tipton kangaroo rat and San Joaquin kit fox have a low potential to occur, due to species listing status under FESA and CESA and regional significance, they are discussed further below.
- **Moderate Potential to Occur.** Five special-status species were determined to have a moderate potential to occur within the project area or immediate vicinity due to previously documented occurrences within the project area, the presence of suitable nest trees adjacent to the project area, and marginally suitable habitats within Goose Lake Slough: northwestern pond turtle (*Actinemys marmorata*, federally proposed threatened), California legless lizard (*Anniella* spp., SSC), California glossy snake (*Arizona elegans occidentalis*, SSC), tricolored blackbird (*Agelaius tricolor*, state threatened), and white-tailed kite (*Elanus leucurus*, fully protected).
- **High Potential to Occur.** Four species have a high potential to occur due to the number of previously documented occurrences within or adjacent to the projects area, and presence of suitable habitats within Goose Lake Slough and presence of suitable nest trees: western spadefoot (*Spea hammondii*, federally proposed threatened), Bakersfield legless lizard (*Anniella grinnelli*, SSC), burrowing owl (*Athene cunicularia*, state candidate endangered), and Swainson's hawk (*Buteo swainsoni*, state threatened).

Nesting Birds

Native bird nests are protected by the MBTA and CFGC Section 3503. Vegetated areas in the vicinity of the project area contain suitable nesting habitat for a variety of native avian species, including, but not limited to, house finch (*Haemorhous mexicanus*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), scrub jay (*Aphelocoma californica*), chestnut-backed chickadee (*Poecile rufescens*), yellow-rumped warbler (*Setophaga coronata*), and California towhee (*Melozone crissalis*).

Sensitive Communities and Critical Habitat

Plant communities are considered sensitive biological resources by CDFW if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in the CNDDB. Sensitive natural communities included in the CNDDB follow the original methodology according to Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). The methodology for determining sensitivity continues to be revised and is now based on *A Manual of California Vegetation, Online Edition* (CNPS 2025b). Communities considered sensitive by CDFW are published in the California Sensitive Natural Communities List (CDFW 2025b). Vegetation alliances are ranked 1 through 5 based on NatureServe’s (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Riparian areas are also considered sensitive natural communities by CDFW.

No CDFW sensitive habitats or federally designated critical habitats occur in the project area.

Wildlife Movement Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations.

Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Other corridors may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

Habitats within a habitat linkage do not necessarily need to be identical to those habitats being linked. Rather, the linkage needs only to contain sufficient cover and forage to allow temporary utilization by species moving between core habitat areas. Habitat linkages are typically contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Some species may require specific physical resources (such as rock outcroppings, vernal pools, or oak trees) within the habitat link for the linkage to serve as an effective movement corridor, while other more mobile or aerial species may only require discontinuous patches of suitable habitat to permit effective dispersal and/or migration. Wildlife movement corridors may occur at either large or small scales.

Wildlife movement corridors can be both large and small scale. Waterways such as Goose Lake Slough provide local-scale opportunities for wildlife movement through the project area. On a larger scale, an Essential Connectivity Area is mapped south of the project area in the CDFW Biogeographic Information and Observation System (Spencer et al. 2010, CDFW 2025c). This linkage connects riparian habitats along the Kern River with the southern end of the coastal range. The project area occurs primarily within developed areas, which are a local barrier for wildlife movement due to roads, agricultural fields, and landscaped areas that do not provide food, shelter, or other species-specific habitat requirements, and Goose Lake Slough is channelized west of the project area; therefore, the project area is not considered to be a regional corridor for wildlife movement.

Impact Analysis

a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Special-Status Plants

Given the developed nature of the site and lack of suitable natural vegetation communities, it is not anticipated that the project would have a substantial adverse effect, either directly or through habitat modifications, on special-status plants. As described above, one federally endangered special-status plant, Kern mallow, has potential to occur within the project area due to previously documented occurrences. The documented Kern mallow occurrence is located under the proposed power line alignment. Impacts could occur through mortality to individual plants (e.g., by crushing by equipment or soil excavation) if the species is present within the disturbance area for power pole installation. Impacts to federally endangered Kern mallow would be significant; therefore, Mitigation Measure BIO-1(a) *Kern Mallow Surveys and Avoidance* is proposed to address this impact. Mitigation Measure BIO-1(a) would require a seasonally timed survey within the area of the previously documented occurrence to identify if Kern mallow is present, and avoidance of any observed individuals determined to be present. With implementation of Mitigation Measure BIO-1(a), impacts on special-status plants, including Kern mallow, would be reduced to a less-than-significant level.

Special-Status Wildlife

Nine special-status wildlife species have more than a low potential to occur within the project area based upon known ranges, habitat preferences, species occurrence records in the vicinity of the project area, and presence of marginally suitable habitat. Two species listed under FESA and CESA have low potential to occur and therefore are also evaluated. Impacts to these 11 species are evaluated below.

In general, project activities will require construction of a solar facility and groundwater recharge basins as well as up to 25 miles of above ground power lines, which all require ground disturbing and noise generating activities that could affect special-status wildlife. However, construction of the power lines would be limited to the discrete locations where power poles would be installed, generally along roadsides and in highly disturbed areas less suitable for wildlife. If power lines cross the Santa Fe Railroad, they would be installed via horizontal boring, which would involve boring a path for the power lines underground below the railroad right-of-way, with bore entry and exit pits in similarly disturbed and developed areas.

Reptiles and Amphibians

Impacts to special-status reptiles and amphibians (northwestern pond turtle, California legless lizard, Bakersfield legless lizard, California glossy snake, and western spadefoot) could occur if individuals are present in the work area during construction and future solar facility decommissioning. Special-status reptiles are most likely to occur within the work areas and staging areas adjacent to Goose Lake Slough, but may also occur within the basin work area if small mammal burrows or sandy soils are present. If present, individuals of these species could be injured or killed due to ground disturbing activities or being crushed under equipment or vehicles, during construction of the basin, or power pole installation or staging of heavy equipment adjacent to Goose Lake Slough. Therefore, impacts to these species are significant and Mitigation Measure BIO-1(b) *Worker Environmental Awareness Program (WEAP)* and BIO-1(c) *Reptile and Amphibian Avoidance and Minimization* is proposed to address this impact. Mitigation Measure BIO-1(b) requires a WEAP training to aid workers in recognizing special-status species and sensitive biological resources that may occur in the construction area. Mitigation Measure BIO-1(c) requires a reptile preconstruction survey and avoidance measures, such as stopping work in the area of any special-status species observation and relocation outside the work area by a qualified biologist. Therefore, with implementation of Mitigation Measures BIO-1(b) and BIO-1(c), impacts on special-status reptiles and amphibians would be reduced to a less-than-significant level.

Special-Status Birds and Nesting Birds

Impacts to bird nests of tricolored blackbird, white-tailed kite, burrowing owl, and Swainson's hawk could occur if active nests are present in the work area or in the vicinity of the work area during construction. Construction activities could result in nest abandonment due to increased noise and disturbance from equipment and vehicles. These special-status birds are most likely to occur along Goose Lake Slough due to the presence of aquatic habitat and riparian areas preferred by some of these species, however suitable nest trees for white-tailed kites and Swainson's hawk may also be present within residential development, and suitable burrows for burrowing owl may be present throughout the power line alignment and basin work areas. Therefore, impacts to these species are significant and Mitigation Measures BIO-1(b) *WEAP*, BIO-1(d) *Burrowing Owl Impact Avoidance and Minimization*, BIO-1(e) *Swainson's Hawk Pre-construction Survey and Avoidance*, and BIO-1(f) *Pre-construction Nesting Bird Survey and Avoidance* are proposed to address this impact.

Mitigation Measure BIO-1(b) requires a WEAP training to aid workers in recognizing special-status species and sensitive biological resources that may occur in the construction area. Mitigation Measure BIO-1(d) requires a burrowing owl habitat assessment, preconstruction survey within areas identified as suitable habitat, and impact avoidance measures. Mitigation Measure BIO-1(e) requires a Swainson's Hawk preconstruction survey within 0.25-mile of the project area and biological monitoring for construction activities within 0.25-mile of an active nest. Mitigation Measure BIO-1(f) requires a preconstruction nesting bird survey during the nesting season and establishes no-disturbance buffers of 100-feet for passerine species, 250-feet for tricolored blackbird, and 300-feet for white-tailed kite, and other raptors for any active nests prior to the start of work. Therefore, with implementation of Mitigation Measures BIO-1(b), BIO-1(d), BIO-1(e), and BIO-1(f), impacts to special-status birds and nesting birds would be reduced to a less-than-significant level.

Tipton Kangaroo Rat and San Joaquin Kit Fox

Although two mammals, Tipton kangaroo rat and San Joaquin kit fox, have a low potential to occur, any impacts to individuals of these federally and state listed species would be significant. Tipton kangaroo rat has a low potential to occur within a previously documented occurrence along the west side of Highway 43 northwest of Brimhall Road, south of the proposed power line alignment and new pump 3. San Joaquin kit fox are a highly motile species, and may incidentally move through the work areas along the power line alignment or basin. Impacts to these species could occur if individuals are present in the work area and become entrapped within open trenches, use staged equipment for shelter, or are hit by vehicles or moving equipment.

Therefore, impacts to these species are significant and Mitigation Measure BIO-1(b) *WEAP*, and BIO-1(g) *Tipton kangaroo Rat and San Joaquin Kit Fox Avoidance and Minimization* are proposed to address this impact. Mitigation Measure BIO-1(b) requires a WEAP training to aid workers in recognizing special-status species and sensitive biological resources that may occur in the construction area. Mitigation Measure BIO-1(g) requires reduced speed limits, avoidance measures for entrapment, capping of pipes stored onsite, and avoidance of use of rodenticides and herbicides. Therefore, with implementation of Mitigation Measures BIO-1(b) and BIO-1(g), impacts on Tipton kangaroo rat and San Joaquin kit fox would be reduced to a less-than-significant level.

Mitigation Measures

BIO-1(a) Kern Mallow Surveys and Avoidance

Prior to initiation of construction and decommissioning activities (including staging and mobilization), the District shall retain a qualified biologist to conduct a seasonally timed rare plant survey for Kern Mallow within the proposed power line alignment east of Highway 43, north of Brimhall Road. Surveys shall be done in accordance with CNPS's Botanical Survey Guidelines (CNPS 2001), CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018), and USFWS's Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants (USFWS 1996). If present, Kern mallow individuals or populations shall be flagged, and avoided by at least 50 feet during construction. If Ken mallow are located within the proposed work area for power pole installation, the pole shall be relocated to avoid individuals.

BIO-1(b) Worker Environmental Awareness Program

Prior to initiation of construction and decommissioning activities (including staging and mobilization), the District shall retain a qualified biologist to conduct a WEAP training for all personnel associated with project construction to aid workers in recognizing special-status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area, including special-status species, nesting birds, and potentially jurisdictional areas. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employees, and other personnel involved with construction. All employees shall sign a form provided by the qualified biologist indicating they have attended the WEAP training and understand the information presented to them. The form shall be submitted to the District by the qualified biologist to document compliance.

BIO-1(c) Reptile and Amphibian Avoidance and Minimization

No less than seven days prior to the start of any construction and decommissioning activities including mobilization, demolition, staging, etc., a qualified biologist will conduct surveys for northwestern pond turtle, California legless lizard, Bakersfield legless lizard, California glossy snake, and western spadefoot toad within suitable habitat in the project area as feasible. The biologist shall also oversee installation of

exclusion fencing where suitable habitat is present adjacent to but outside of work areas to prevent the species from entering active work areas. If any special-status reptiles and amphibians are identified within the work area during the preconstruction survey, they will be captured and relocated to the nearest suitable habitat outside the exclusion fencing by the qualified biologist. The relocation site will include suitable micro habitat and ecological features such as aquatic habitats, or open sandy or gravely areas. CNDDB Field Survey Forms will be submitted to the CDFW for all special-status animal species observed.

If any special-status reptiles and amphibians are observed by construction personnel within or adjacent to (within 50 feet) the project area during construction, all work within the vicinity of the observation will be halted and the qualified biologist will be notified immediately to evaluate the occurrence and relocate the animal as necessary. Only a qualified biologist will capture and relocate wildlife. Construction personnel are not permitted to handle said animals.

A report of all pre-construction survey efforts will be submitted to the District within 30 days of completion of the survey effort to document compliance. The report will include the dates, times, weather conditions, and personnel involved in the surveys and monitoring. The report will also include information for each captured special-status animal, the Universal Transverse Mercator (UTM) coordinates and habitat descriptions of the capture and release sites, the length of time between capture and release, and the general health of the individual(s).

BIO-1(d) Burrowing Owl Impact Avoidance and Minimization

Prior to initiation of project activities, the District shall implement the following measures to avoid and minimize impacts to burrowing owl, consistent with the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

Habitat Assessment and Early Design Avoidance

A qualified biologist shall conduct a burrowing owl habitat assessment of the project area and accessible portions of a 500-foot buffer to identify suitable habitat, potential burrows, and previous or current owl use. Based on the results of the habitat assessment, the District and its contractor shall work with the qualified biologist to relocate power poles, access routes, and staging areas to avoid potential or suitable burrow habitat to the maximum extent feasible. Early design avoidance shall be implemented prior to finalizing construction plans to minimize the likelihood of encountering active burrows during project implementation.

Pre-construction Surveys

If suitable habitat is present following design refinements, a qualified biologist shall conduct pre-construction burrowing owl surveys of the project area and accessible buffer areas in accordance with Appendix D of the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Surveys shall be conducted no more than 14 days prior to ground-disturbing activities and be conducted in accordance with CDFW protocol. A report documenting survey methods, results, and recommendations shall be submitted to the District within 30 days of survey completion.

If no burrowing owls, active burrows, or sign (e.g., pellets, feathers, tracks) are detected, no additional measures are required.

Burrowing Owls Present but Burrows Not Directly Impacted

If burrowing owls or active burrows are detected outside of the immediate disturbance footprint and direct impacts can be avoided, the following measures shall be implemented:

A qualified biologist shall establish no-disturbance buffers around active burrows as follows:

- Breeding season (February 1–August 31): 330 to 825 feet

- Non-breeding season (September 1–January 31): 165 to 330 feet
- Buffers shall be demarcated with flagging or fencing and may be reduced at the discretion of a qualified biologist based on activity type, topography, line-of-sight, or sound and visual barriers.
- A qualified biological monitor shall be present during all construction activities occurring within established buffer distances. The monitor shall document owl behavior, burrow status, and potential disturbance. If owls exhibit distress or abnormal behavior (e.g., agitation, alarm calls, failure to forage, failure to remain near the burrow), the monitor shall have authority to halt or modify construction activities until the behavior normalizes.

Active Burrows Within the Direct Impact Area

If active burrows occur within the proposed disturbance area and avoidance is not feasible:

- All work in the vicinity of the burrow shall stop until the qualified biologist evaluates the situation.
- The District shall consult with CDFW to determine appropriate next steps, which may include additional avoidance measures, further modifications to project design, passive relocation, compensatory habitat mitigation, or determination of whether an Incidental Take Permit is required.
- If CDFW authorizes passive relocation, it shall be conducted only during the non-breeding season and in accordance with Appendix D of the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

Compensatory Mitigation

If loss of an active burrow or its primary foraging area (within approximately 500 feet of the burrow) occurs as a result of CDFW-authorized passive relocation or other CDFW-approved action, the District, in coordination with CDFW, shall prepare a Habitat Mitigation Plan (HMP). The HMP shall identify compensatory mitigation lands at a ratio of no less than 1:1 for affected foraging habitat or as otherwise required by CDFW. The HMP shall include long-term management, or protection measures appropriate to the degree of impact.

BIO-1(e) Swainson's Hawk Pre-construction Survey and Avoidance

To prevent the loss of active Swainson's hawk nests, construction will be conducted outside of the breeding season, from September 1 through February 15, to the extent feasible.

If construction occurs during the Swainson's hawk nesting season (February 15 through September 15), ne pre-construction survey shall be conducted by a qualified biologist to search for Swainson's hawk nests within 0.25-mile of the project area, generally following guidance established by the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000).

If active nests are found within 0.25 mile during the pre-construction survey and construction activities will occur during the Swainson's hawk nesting season (February 15 through September 15), a qualified biologist shall be present daily during any activities within the project area, including access routes, that are within 0.25 mile of the active nests to monitor the behavior of the potentially affected Swainson's hawks. The qualified biologist shall have the authority to order the cessation of all project activities if the bird(s) exhibits distress and/or abnormal nesting behavior (swooping/stooping, excessive vocalization [distress calls], agitation, failure to remain on nest, failure to deliver prey items for an extended time period, failure to maintain nest, etc.), which may cause reproductive failure (nest abandonment and loss of eggs and/or young).

BIO-1(f) Pre-construction Nesting Bird Survey and Avoidance

A general pre-construction nesting bird survey shall be conducted by a qualified biologist within seven days prior to the initiation of construction and decommissioning activities. If construction is stopped for more than seven days during the nesting season, the pre-construction survey shall be repeated prior to

the re-start of construction activities. Surveys shall include the disturbance area plus a 100-foot buffer for passerine species, 250-foot buffer for tricolored blackbird, and a 300-foot buffer for white-tailed kite, and other raptors.

If active nests are located, an appropriate avoidance buffer shall be established within which no work activity would be allowed which would impact these nests. The avoidance buffer would be established by the qualified biologist on a case-by-case basis based on the species and site conditions. Larger buffers may be required depending upon the status of the nest and the construction activities occurring near the nest. The buffer area(s) shall be closed to all construction personnel and equipment until juveniles have fledged and/or the nest is inactive. A qualified biologist shall confirm that breeding/nesting is complete, and the nest is no longer active prior to removal of the buffer and resuming work in the area. If work within a buffer area cannot be avoided, then a qualified biologist shall be present to monitor all project activities that occur within the buffer. The biological monitor should evaluate the nesting avian species for signs of disturbance and should have the ability to stop work.

BIO-1(g) Tipton kangaroo Rat and San Joaquin Kit Fox Avoidance and Minimization

During all construction and decommissioning activities, the following avoidance and minimization measures shall be implemented:

- If at any time a Tipton kangaroo Rat or San Joaquin Kit Fox is observed, all work shall stop until the individual leaves the work area. If the individual does not leave the work area, or an active burrow complex or den is observed, all work shall be suspended until the USFWS has been consulted.
- Project-related vehicles shall observe a 20-mph speed limit within the vicinity of the project area, except on county roads and State and Federal highways. To the extent possible, night-time construction should be minimized. However, if night work does occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated work areas shall be prohibited.
- To prevent inadvertent entrapment of wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall either be covered at the close of each working day with plywood or similar materials, or one or more escape ramps within the trench shall be constructed of earth fill or wooden planks. Before holes or trenches are filled, they shall be thoroughly inspected for trapped animals.
- Any pipes greater than 3” in diameter shall be capped when not in use to prevent entrapment or mortality of individuals.
- All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from the project area.
- No firearms or pets should be allowed in the project area.
- Use of rodenticides and herbicides in the project area shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No riparian habitat or sensitive natural vegetation communities occur within the project area. Therefore, no impact would occur due to construction, operation and decommissioning activities.

NO IMPACT

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The only potential jurisdictional area within the project area is Goose Lake Slough, which occurs under the proposed powerline alignment where ground disturbing activities would not occur. No direct disturbance to state or federally protected wetlands are anticipated. Additionally, as discussed in Section 10, *Hydrology and Water Quality,* the project would be required to comply with the Construction Stormwater General Permit, which would require the creation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that would include Best Management Practices (BMPs) to prevent polluted stormwater runoff during construction and decommissioning. With implementation of the SWPPP and BMPs, impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project 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?

The project area is not located within any regional corridors for wildlife movement and only provides small scale opportunities for local movement due to the project's location within existing agriculture and development. Additionally, most of the project area would include above ground power lines, which would not contribute to any barriers for movement. Therefore, impacts to wildlife movement due to construction or decommissioning would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No biological resources, such as protected trees, protected by local policies or ordinances, occur within the project area, and groundwater recharge and solar facilities are consistent with the project area zoning under the Kern County Ordinance Code. There would be no impact due to conflicts with local policies or ordinances from project construction, operation, or decommissioning.

NO IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The proposed project area is not located within an adopted Habitat Conservation Plan Area; however, it is located within the expired MBHCP. If the MBHCP is renewed and the project is considered a covered activity under the MBHCP, the project would abide by its requirements, including payment of a habitat mitigation fee (if required), conducting appropriate biological clearance surveys, and implementing appropriate avoidance and minimization measures. Therefore, the proposed project would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and there would be no impact.

NO IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

The following analysis is based on the Phase I cultural resources survey report prepared for the project by ASM Affiliates in December 2025. The report is included as Appendix D.

a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

The CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC] Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR); a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript a lead agency determines to be historically significant (CEQA Guidelines Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In August 2024 and December 2025, ASM Affiliates conducted a search of the Southern San Joaquin Valley Information Center (SSJVIC) housed at California State University, Bakersfield. The SSJVIC is the official state repository for cultural resources records and reports for Kern County. The purpose of the records search is to identify previous cultural resources studies and previously recorded cultural resources within the project site and a 0.5-mile radius. ASM Affiliates also reviewed the National Register of Historic Places (NRHP), the CRHR, and the California Points of Historic Interest file. The results of the analysis are included in Appendix D.

The CHRIS records search identified 33 cultural resources studies previously conducted within the 0.5-mile records search radius. Of these 33 studies, 11 include portions of the project site. The CHRIS records search identified four previously recorded cultural resources within the project site, which are described in Table 6.

Table 6 Previously Recorded Built Environment Resources within the Project Site

Primary No.	Type	Description	Eligibility Status
P-15-002050	Structure, Object, Site	Southern Pacific Railroad abandoned China Lake Railroad Spur grade	Recommended not eligible
P-15-008121	Structure	Goose Lake Slough	Determined not eligible
P-15-017760	Structure	Oil tank farm	Recommended not eligible
P-15-017761	Structure	Pioneer Canal	Unevaluated

Source: Appendix D

A survey of the project site was conducted on November 6, 2024; October 10, 2025; and October 16, 2025. Field survey methods followed protocols of the California Office of Historic Preservation of Historic Preservation Instructions for Recording Historic Resources, using California Department of Parks and Recreation Series 523 forms. As a result of the field survey, one newly identified site was recorded within the project site (temporary field designation DILLARD-SITE-1). These five resources located within the project site and the project's potential to result in impacts are discussed below.

Southern Pacific Railroad (P-15-002050)

Resource P-15-002050 is recorded as the Southern Pacific Railroad with numerous spur lines. In the project site, the railroad is currently operating as the Santa Fe Railroad controlled by the Burlington Northern Santa Fe Railway. The proposed transmission lines would cross the railroad alignment four separate times. Due to right-of-way encroachment, the powerlines will either be placed above ground with poles outside of the right-of-way, or below the grade by horizontal boring. Therefore, the railway itself is outside of the project's area of potential impacts and would not be impacted by project construction.

Goose Lake Slough (P-15-008121)

Resource P-15-008121 is the Goose Lake Slough, which was a natural drainage that was first modified in 1874. The slough itself remained unchanged for 80 years, until the mid-1950s when it was initially channelized in conjunction with the construction of Isabella Reservoir. One segment of the canal was recorded by JRP Historical Consulting Services (JRP) in 1993 near Renfro Road, and was named the "Rio Bravo Canal." ASM Affiliates recorded an approximately 230-foot long segment of Goose Lake Slough in 2020 adjacent to the project site, and recommended that the recorded segment was not eligible for listing in the NRHP or CRHR. In addition, according to the Built Environment Resources Directory (BERD) for Kern County, the Goose Lake Slough was determined ineligible for the NRHP by consensus through the Section 106 process (NRHP Status Code 6Y) in 1997, which was upheld in 2004. Goose Lake Slough has not been evaluated for eligibility to the CRHR or another local listing; however, it is unlikely it would be found eligible given it has been determined not eligible for the NRHP. ASM Affiliates surveyed several segments of the slough and did not identify significant features. Therefore, the project would not impact a historic resource because Goose Lake Slough is not considered a historic resource under CEQA.

Oil Tank Farm (P-15-017760)

Site P-15-017760 is a historic-era tank farm consisting of 15 features related to oil production, likely associated with the Strand Oil Fields. This resource was recorded as a tank farm in 2012. ASM Affiliates revisited the site, and none of the features identified within the original recording are located within the project site. Therefore, this site would not be impacted by the project.

Pioneer Canal (P-15-017761)

Resource P-15-017761 is a portion of the historic-era Pioneer Canal. This resource no longer exists within the project site; based on historic aerial imagery, this segment of Pioneer Canal was removed prior to

1984 during construction of the Cross Valley Canal. Therefore, this site would not be impacted by the project.

DILLARD-SITE-1

DILLARD-SITE-1 is an agricultural maintenance shed, consisting of a shed structure and foundation, tanks, and a well pump station. Based on historic aerial imagery, at least three structures were located at this site by at least 1952, but by 1984, two of the three structures were destroyed, leaving the remaining shed. According to available records, the first sale of the property was recorded in 1979 as a deed transfer with no buyer or seller listed; however, the second event listed is a refinance in 1990 by Lonnie Dillard, so it is assumed the 1979 deed transfer was to Lonnie Dillard. The property stayed with Lonnie Dillard until 2018, when it was sold to Dave Paxton Dillard. On August 6, 2024, a loan was taken out by Lonnie Dillard and Lonnie Dillard Farming for the property. Finally, the property was sold later that month on August 16, 2024, to Rosedale.

ASM Affiliates recorded and documented the features of this site, and evaluated its eligibility for listing in the CRHR. While the shed is associated with farming and ranching in San Joaquin Valley, it is not from the period of significance of 1870-1959, when Rosedale was formed. In addition, the Dillard family is not a historically prominent or significant family in the formation of the community of Rosedale. Therefore, DILLARD-SITE-1 is not eligible for inclusion in the CRHR under Criteria 1 and 2.

While the main structure of the agricultural maintenance shed is still standing, it is in a deteriorated condition and is missing several structural components such as doors and windows. ASM Affiliates determined the shed does not embody the distinct characteristics of a type, period, or method of construction, and does not possess high artistic value. Further, the shed does not represent a significant or distinguishable entity, and its components do not have individual distinction. Preliminary research does not indicate that the structure was uniquely constructed or associated with the work of a significant engineer or builder, and It is not among the best or a rare surviving example of a distinctive type of structure or building either. Therefore, DILLARD-SITE-1 is not eligible for inclusion in the CRHR under Criterion 3. Finally, DILLARD-SITE-1 was constructed in the mid-twentieth century and does not have the potential to provide additional information about history or prehistory that is not available through historic research. ASM recommends this structure is not eligible under Criterion 4.

Conclusion

Based on the results of the records search, site survey, and evaluation of resources within the project site, none of the resources located within the project site are eligible for listing in the CRHR and are not considered historic resources. Therefore, the project would not cause a substantial adverse change in the significance of a historical resource and no impact would occur.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

PRC Section 21083.2(g) defines a unique archaeological resource 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:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Pursuant to PRC Section 21084.1, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a-b]).

No archaeological resources were identified as a result of the records search or the field survey. The background and archival research suggests the project site has low potential to contain intact archaeological deposits due to the site's past use for agricultural activities. As such, the potential for encountering intact archaeological deposits during project construction is low. Although there is low potential for encountering subsurface archaeological deposits, it is always possible unknown archaeological materials are encountered during project construction. Disturbance of these resources could result in substantial adverse change in the significance of an archaeological resource and impacts could be potentially significant. Mitigation Measure CUL-1 would be required.

Mitigation Measure

CUL-1 Unanticipated Discovery of Cultural Resources

In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and the construction contractor shall immediately contact Rosedale's project manager. Rosedale shall contract an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) to evaluate the resource. If the qualified archaeologist determines the resource to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of the CCR Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. Rosedale shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per CCR Guidelines Section 15126.4(b)(3)(C).

Significance After Mitigation

Mitigation Measure CUL-1 would minimize potential impacts to unanticipated cultural resources by establishing appropriate procedures for evaluation and treatment of any discoveries made during construction. Therefore, implementation of Mitigation Measures CUL-1 would reduce impacts to archaeological resources to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains are known to be present within the project site (Appendix D). However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, California Health and Safety Code Section 7050.5 states no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately by Rosedale. If the human remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a

most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	■
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

As a state, California is one of the lowest per capita energy users in the United States, ranked 50th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration 2021). Electricity is primarily consumed by the built environment for lighting, appliances, heating and cooling systems, fireplaces, and other uses such as industrial processes in addition to being consumed by alternative fuel vehicles.

Surplus electricity produced, beyond what is needed to operate the proposed project, would be supplied to the PG&E distribution system and would not require the usage of natural gas. Therefore, this section focuses on petroleum energy consumption. Petroleum fuels are primarily consumed by on-road and off-road equipment in addition to some industrial processes, with California being one of the top petroleum-producing states in the nation (California Energy Commission [CEC] 2023a). Gasoline, which is used by light-duty cars, pickup trucks, and sport utility vehicles, is the most used transportation fuel in California with 11.7 billion gallons sold in 2023 (CEC 2023b). Diesel, which is used primarily by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles, is the second most used fuel in California with 2 billion gallons sold in 2023 (CEC 2023b). Table 7 summarizes the petroleum fuel consumption for Kern County, in which the project site is located, as compared to statewide consumption.

Table 7 2023 Annual Gasoline and Diesel Consumption

Fuel Type	Kern County (gallons)	California (gallons)	Proportion of Statewide Consumption[1]
Gasoline	353,000,000	11,685,000,000	3%
Diesel	216,000,000	2,016,000,000	11%

[1] For reference, the population of Kern County (909,221 persons) is approximately two percent of the population of California (39,228,444 persons) (California Department of Finance 2023).

Source: CEC 2023b

Energy consumption is directly related to environmental quality in that the consumption of nonrenewable energy resources releases criteria air pollutant and GHG emissions into the atmosphere. The environmental impacts of air pollutants and GHG emissions associated with the project's energy consumption are discussed in detail in Section 3*, Air Quality,* and Section 8, *Greenhouse Gas Emissions*, respectively.

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction Energy Demand

The proposed project would use diesel and gasoline-fueled construction vehicles and equipment during the construction phase. Construction equipment, worker trips, and vendor trips information provided by White Pine Renewables as well as information from the air pollutant and GHG emissions modeling were used to estimate energy consumption associated with the proposed project (see Section 3, *Air Quality*, for additional modeling details). As shown in Table 8, project construction would require approximately 7,108 gallons of gasoline and approximately 89,341 gallons of diesel fuel. These energy estimates are conservative because they assume the construction equipment operates daily during the construction phases.

Table 8 Estimated Fuel Consumption during Construction

	Fuel Consumption (gallons)	
Source	**Gasoline**	**Diesel**
Construction Equipment & Vendor Trips	0	89,341
Construction Worker Vehicle Trips	7,108	0

See Appendix E for energy calculation sheets.

Energy use during construction would be temporary in nature, and equipment used would be typical of similar-sized projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the EPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. These practices would result in efficient use of energy necessary to construct the project. Furthermore, in the interest of cost-efficiency, construction contractors also would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, the project would not result in a potentially significant environmental impact due to the inefficient, wasteful, and unnecessary consumption of energy resources during construction, and no impact would occur.

Operational Energy Demand

The proposed project would be operated and monitored with an estimated one passenger vehicle trip per day to the site for vegetation or solar array and BESS maintenance and/or repairs. These trips would require minimal fuel consumption, and vehicles used to complete these trips would be subject to federal and state fuel efficiency regulations, which would minimize the potential for wasteful or inefficient fuel consumption.

The project site would experience an annual average solar radiation of 6.16 hours per day, which is approximately 26 percent of the day (National Renewable Energy Laboratory 2025). Therefore, the project would achieve approximately 2,248 operational hours per year. The solar array would have a capacity of 7,515 kW of DC power or 5,000 kW of alternating current (AC) power. The solar array would generate approximately 15.1 kWh of power each year. Power generated by the solar array would be used to power existing Rosedale pumps. The proposed solar array would be designed and sized based on historic and projected energy use associated with existing Rosedale facilities and would not be intended to function as a commercial power generator or to produce surplus power. However, in the event that Rosedale energy demand is low, surplus energy generated by the solar array would be sold back to PG&E for use in the local energy grid. The solar array would also connect to a BESS, which would store energy generated by the solar array. Thus, the minimal amount of nonrenewable fuel consumption required during project operation would be substantially offset by the generation of renewable electricity from the project. The

project operation would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, no impact would occur.

Decommissioning Energy Demand

After 40 years, the solar array and associated equipment would likely be decommissioned and removed from the site via a series of activities that would be similar in nature and duration to project construction activities. The project's decommissioning energy demand would therefore be similar to its construction energy demand, as shown in Table 8. Project decommissioning activities would be required to comply with all applicable regulations in effect at the time of decommissioning, including the California Code of Regulations and the EPA Construction Equipment Fuel Efficiency Standards. These practices would increase the energy efficiency of activities necessary to decommission the project. Also, as with project construction, decommissioning contractors would not utilize fuel in a manner that is wasteful or unnecessary.

Once the solar array is decommissioned, Rosedale would rely fully on PG&E to continue providing power for pumps and other infrastructure. As discussed further in Section 8, *Greenhouse Gas Emissions,* several statewide plans and regulations intend to increase California's procurement of energy from 100 percent renewable sources by 2045. Therefore, by the time the solar and BESS facilities are decommissioned, energy for continued operation of Rosedale infrastructure would be provided almost entirely by renewable energy sources. The project decommissioning would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, no impact would occur.

NO IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project involves the construction and decommissioning of a solar array and would produce a new renewable energy source in Kern County. The project would interconnect to PG&E's distribution system via a new primary meter installed within the project site. The 15.1 million kWh of power generated each year by the proposed project would be used to power existing Rosedale pumps. The proposed solar array would be designed and sized based on historic and projected energy use associated with existing Rosedale facilities and would not be intended to function as a commercial power generator or to produce surplus power. However, in the event that Rosedale energy demand is low, surplus energy generated by the solar array would be sold back to PG&E for use in the local energy grid. The solar array would also connect to a BESS, which would store energy generated by the solar array.

In terms of mobile energy usage, the National Highway Traffic and Safety Administration required manufacturers of light-duty vehicles to meet a combined estimated average fuel economy level of 34.1 miles per gallon by the model year 2016 for passenger vehicles and light trucks. Over 30 plus years, the National Energy Conservation Policy Act regulatory program has improved the fuel economy throughout the United States vehicle fleet. In addition, it protected against inefficient, wasteful, and unnecessary use of energy. The project construction and decommission workers would comply with vehicle standards; therefore, the project would not impede the efficient use of mobile fuel.

The project would support the state's energy goals by providing a new renewable energy source. The renewable source would offset existing Rosedale pumps fuel usage and comply with fuel and energy efficiency regulations. Once the solar array is decommissioned, Rosedale would rely fully on PG&E to continue providing power for pumps and other infrastructure. As discussed further in Section 8, *Greenhouse Gas Emissions,* several statewide plans and regulations intend to increase California's procurement of energy from 100 percent renewable sources by 2045. Therefore, by the time the solar and BESS facilities are decommissioned, energy for continued operation of Rosedale infrastructure would be provided almost entirely by renewable energy sources. The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, no impact would occur.

NO IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	☐	☐	☐	■
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	■
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect 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?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The project site is not intersected by a known earthquake fault, as delineated on the DOC Earthquake Hazard Zone Application (DOC 2025c). Therefore, the project would not cause the risk of loss, injury, or death involving rupture of an Alquist-Priolo designated earthquake fault. No impact would occur.

NO IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Although no fault lines intersect the project site, active and potentially active faults in the region could generate strong ground shaking on the project site. These faults include, but are not limited to, the Buena Vista Fault located approximately 12 southwest miles north of the project site, the Premier Fault located approximately 17 miles northeast of the project site, the San Andreas Fault located approximately 28-miles southwest of the project site, and the White Wolf Fault located approximately 28 miles southeast of the project site (DOC 2025c). Due to the project site's proximity to nearby fault zones, it may be subject to seismic ground shaking in the event of an earthquake which could potentially result in damage to project facilities.

The project would be designed and constructed in accordance with the seismic safety requirements of the California Building Code (CBC), which is adopted as Section 17.08.030 of the Kern County Ordinance Code. Compliance with the CBC would minimize the risk of loss, injury, or death involving strong seismic ground shaking. Thus, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The project site is relatively flat and surrounded by flat land and therefore is not subject to landslide risk. The project would not create steep slopes or otherwise increase the risk of landslides at the project site. The project site has not been evaluated by the California Geologic Survey and it is unknown if it is located within a liquefaction zone (DOC 2025c). However, the project site is generally underlain by granoso loamy sand, wasco sandy loam, wasco fine sandy loam, which are known to be potentially liquefiable if the soil is loose and saturated if shallow groundwater is present (USDA 2025). Project design and construction would incorporate standard safety measures from the CBC to address potential seismic hazards, including lateral spreading, subsidence, liquefaction and collapse. Compliance with the CBC would ensure the project would result in a less than significant impact related to unstable soils and directly or indirectly causing the risk of loss, injury, or death related to liquefaction or landslides. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Soil erosion is the removal of soil by water, wind, and gravity. The project site is relatively flat; however, construction of the proposed groundwater recharge ponds would require grading and open cut trenching on land that is currently undeveloped, which would involve exposing soil such that erosion and topsoil loss could occur.

There would be zero export and import of soils during project construction. Any dirt from excavation and grading would be distributed throughout the site in coordination with civil engineer guidance. As further discussed in Section 10, *Hydrology and Water Quality*, the project would be required to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2022-0057-DWQ, and National Pollutant Discharge Elimination System (NPDES) No. CAS000002 to comply with all established regulations of the NPDES permitting program to control construction stormwater discharges. Compliance with the conditions of the Construction Stormwater General Permit would require the developer to develop and implement a SWPPP to reduce potential erosion and loss of topsoil during project construction activities. Typical BMPs required by a SWPPP would include covering of inactive stockpiles, silt fences and gravel bag berms to trap sediments, inlet

protection, and slope stabilization to limit discharge of eroded soils from the construction site and sedimentation of surface waters off-site. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As discussed under 7(a.4) above, the project site exists in a flat area and is therefore not subject to landslides. As discussed in Item 7(a.3) above, the project site has not been evaluated by the California Geologic Survey and it is unknown if it is located within a liquefaction zone (DOC 2025c) but is underlain by soils that are potentially susceptible to liquefaction. The project is not anticipated to adversely affect soil stability or increase the potential for local or regional liquefaction, lateral spreading, subsidence or collapse, as excavated areas would be properly backfilled in accordance with applicable compaction requirements. The project would not include habitable structures and impacts related to landslide, lateral spreading, subsidence, liquefaction, or collapse would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils are soils with high shrink-swell potential. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent (USDA 2023). The project site is underlain primarily by granoso loamy sand, with portions underlain by wasco sandy loam and wasco fine sandy loam (USDA 2025). These soils have relatively low clay contents and linear extensibility ranging from 1.5 to 2.0 percent, indicating a low shrink-swell potential (USDA 2025). In addition, the project does not include construction of habitable structures. Therefore, the proposed project would not expose people to risks related to expansive soils and no impact would occur.

NO IMPACT

e. Would the project 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 proposed project does not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The potential for the project to significantly impact paleontological resources was evaluated in the *Paleontological Resources Technical Report* prepared by Department of PaleoServices at San Diego Natural History Museum in May 2025 (Appendix F). The project site is immediately underlain by late Holocene-age alluvial fan deposits at the surface. In addition, the utility lines are also underlain by late Holocene-age alluvial valley deposits and early to middle Holocene-age young alluvial fan deposits. These Holocene deposits are presumably underlain by Pleistocene-age alluvial deposits at a depth that is conservatively estimated to be as shallow as 15 feet below ground surface (bgs). Any impacts to paleontological resources are only likely to occur during excavations at the project site that will disturb alluvial deposits of Pleistocene-age, which are considered to be potentially fossil-bearing. Therefore, only excavations that will extend greater than about 15 feet bgs are here considered to have the potential to impact paleontological resources.

It is estimated that the maximum excavation depth for groundwater recharge basins and solar/energy storage facilities will be 10 feet bgs and that the average excavation depth will be three feet bgs. Construction of the overhead utility lines will require excavation to a depth of six to eight feet bgs with a diameter of approximately 12 inches. If power lines cross the Santa Fe Railroad, they would be installed via horizontal boring with bore entry and exit pits in that would reach up to 30 feet bgs. Accordingly, the project may potentially disturb soils that have the potential to contain paleontological resources and mitigation is required. Mitigation Measures GEO-1 and GEO-2 outline protocols for the discovery, preservation, and curation of paleontological resources if they are encountered during project construction.

Mitigation Measures

GEO-1 Unanticipated Fossil Discovery and Evaluation

Upon discovery of an unearthed fossil, earthwork in the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the qualified paleontologist deems the discovery site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.

GEO-2 Fossil Discovery Data Curation

In the case of an inadvertent discovery, the recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data. For projects in Kern County, the recommended repository is the Natural History Museum of Los Angeles County. Donation of the fossils should be accompanied by financial support for specimen storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

Significance After Mitigation

Implementation of Mitigation Measures GEO-1 and GEO-2 would reduce potential impacts to paleontological resources to less than significant level and would effectively mitigate the project's impacts to these resources by halting any earth moving activities and consulting a qualified paleontologist in the event an unearthed fossil is discovered. In the case of an inadvertent discovery, the recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data such that any potential paleontological resources are preserved.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	■
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Overview of Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of GHG emissions contributing to the "greenhouse effect," a natural occurrence which takes place in Earth's atmosphere and helps regulate the temperature of the planet. The majority of radiation from the sun hits Earth's surface and warms it. The surface, in turn, radiates heat back towards the atmosphere in the form of infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions.

GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021).[3]

The United Nations IPCC expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, a total of 2,390 gigatonnes of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (EPA 2025b). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature. Potential climate change impacts in California may include loss of snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (State of California 2018).

[3] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

Regulatory Framework

CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. There are numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the EPA granted the waiver of CAA preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the EPA. Pavley I regulates model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles, and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, the rules will be fully implemented, and new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)

The "California Global Warming Solutions Act of 2006," (AB 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT of CO_2e, which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of 6 MT of CO_2e by 2030 and 2 MT of CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects, because they include all emissions sectors in the state.

The 2022 Scoping Plan Update has been prepared to assess the progress towards the 2030 target and to outline a plan to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet California's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022).

Assembly Bill 1279

AB 1279, "The California Climate Crisis Act," was passed on September 16, 2022, and declares the State will achieve net zero GHG emissions as soon as possible, but no later than 2045, and will achieve and maintain net negative GHG emissions thereafter. In addition, the bill directs the State to reduce GHG emissions by 85 percent below 1990 levels no later than 2045.

CARB published the Final 2022 Climate Change Scoping Plan in November 2022 (2022 Update) (CARB 2022). The 2022 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying new, technologically feasible, cost-effective, and equity-focused paths to achieve the policies set forth in AB 1279, including California's 2045 GHG reduction target. The 2022 Update includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands (NWL) to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Update assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan; addresses recent legislation and direction from Governor Newsom; extends and expands upon these earlier plans; implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045; and takes an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Update, "The plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state's NWL and using a variety of mechanical approaches" (CARB 2022). Specifically, the 2022 Update:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document
- Incorporates the contribution of NWL to the state's GHG emissions, as well as their role in achieving carbon neutrality
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture
- Evaluates the substantial health and economic benefits of taking action to reduce GHGs
- Identifies key implementation actions to ensure success

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Update includes emissions and carbon sequestration in NWL and explores how NWL contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet the state's GHG reduction goals and achieve carbon neutrality no later than 2045. The 2022 Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

Senate Bill 1383

Adopted in September 2016, SB 1383 (Lara, Chapter 395, Statutes of 2016) requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- **CH_4** – 40 percent below 2013 levels
- **Hydrofluorocarbons** – 40 percent below 2013 levels
- **Anthropogenic black carbon** – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery, in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the California's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, former Governor Brown issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

San Joaquin Valley Air Pollution Control District Climate Change Action Plan

In August 2008, the SJVAPCD Governing Board adopted the Climate Change Action Plan (CCAP) (SJVAPCD 2008a). The CCAP directed the SJVAPCD Air Pollution Control Officer to develop guidance to assist lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project-specific GHG emissions on global climate change. In 2009, the SJVAPCD adopted the *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA* and the *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The guidance and policy rely on the use of performance-based standards, otherwise known as Best Performance Standards, to assess significance of project-specific GHG emissions on global climate change during the CEQA review process (SJVAPCD 2009a and 2009b).

The use of Best Performance Standards is a method for streamlining the process of determining the significance of a project's GHG emissions under CEQA and is not a required emission reduction measure. Projects that implement Best Performance Standards are determined to have a less-than-significant GHG emissions impact. Otherwise, the demonstration of a 29-percent reduction in GHG emissions from business-as-usual is required to determine that a project would have a less-than- significant impact and would be consistent with the 2020 GHG reduction targets under AB 32. However, the guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change (SJVAPCD 2008b).

SJVAPCD's adopted Best Performance Standards are specifically directed at reducing GHG emissions from stationary sources that require a permit from the SJVAPCD. Therefore, the adopted Best Performance Standards would not generally be applicable to the project because the project would not be a stationary source of emissions.

Methodology

GHG emissions associated with project construction and operation were estimated using CalEEMod, version 2022.1.0, with the assumptions described under Section 3, *Air Quality*. In addition, construction emissions were amortized over the project's estimated 35-year lifetime pursuant to guidance from the Association of Environmental Professionals (AEP 2016).

Operation of the project would generate renewable energy over its anticipated 40-year lifetime. Power generated by the solar array would be used to power existing Rosedale pumps. The proposed solar array would be designed and sized based on historic and projected energy use associated with existing RRBWSF facilities and would not be intended to function as a commercial power generator or to produce surplus power. However, in the event that Rosedale energy demand is low, surplus energy generated by the solar array would be sold back to PG&E for use in the local energy grid. The solar array would connect to a BESS, which would store energy generated by the solar array. The BESS would have a storage capacity of approximately 4,000 kilovolt-amperes or 15,670 kWh.

This energy would offset GHG emissions that are currently produced by Rosedale electricity consumption from PG&E, which is supplied by a mix of renewable and nonrenewable power generation resources. The annual energy generation and associated offset GHG emissions of the proposed solar array system were estimated based on solar radiation at the project site and annual operational time as well as PG&E's current power generation portfolio.[4] See Appendix A for the project's construction-related GHG emissions modeling and calculations.

Significance Thresholds

Most individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

According to CEQA Guidelines Section 15183.5, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. However, JID has not developed a qualified GHG reduction plan that can be used for project-level evaluation. Another approach is to use a quantitative threshold recommended by the local air district. However, the SJVAPCD has not adopted a numeric threshold to address project-level GHG emissions, and SJVAPCD's Best Performance Standards approach does not include measures to address the 2030 target established by SB 32. Therefore, for the purposes of this analysis, the project's GHG emissions would be less than significant if the project would contribute to a net decrease in GHG emissions.

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

The project would generate GHG emissions directly and indirectly during construction, operation, and decommissioning of the solar array and BESS facilities. Operation of the project is not expected to be a substantial source of GHG emissions because the project would produce minimal vehicle trips needed for maintenance and repair purposes. Therefore, operational GHG emissions would be *de minimis* and are excluded from this analysis. Table 9 presents total estimated emissions from construction and

[4] PV cell capacity is rated in terms of megawatts or kilowatts and indicates the amount of instantaneous power produced when operating at peak sun exposure. The total amount of electricity produced is measured in watt-hours and is dependent on operational time. The operational time of a solar panel is defined by the amount of time that the photovoltaic cells are actively converting solar energy into power, which depends on solar radiation. Solar radiation is the measure of energy emitted from the sun and varies daily depending on the time of day, season, local landscape, and geography.

decommissioning activities. As shown therein, estimated GHG emissions would be 335 MT CO_2e and during project construction and 335 MT CO_2e during project decommissioning. Total GHG emissions generated from project activities would be approximately 670 MT CO_2e, or approximately 19 MT CO_2e per year when amortized over the 35-year project lifetime.

Table 9 Estimated Project-Related GHG Emissions

	Project Emissions (MT of CO_2e)
Construction Emissions	335
Decommissioning Emissions	335
Total Emissions	**670**
Amortized over 35 Years	19 per year
Annual Displaced GHG Emissions	(1,380)
Net Annual GHG Emissions	**(1,361)**
Total Displaced GHG Emissions[1]	(48,295)
Net Total GHG Emissions	**(47,625)**

[1] Assumes a 35-year project lifetime

MT = metric ton; CO_2e = carbon dioxide equivalent

See Appendix A for calculations

Although the project would emit approximately 19 MT CO_2e per year when the construction and decommissioning emissions are amortized over the project's 40-year lifetime, the project would offset these emissions by supplying renewable energy to the PG&E grid, thereby replacing some of energy supplied by PG&E from nonrenewable resources with clean energy. Based on the project's anticipated annual electricity generation and the GHG emissions generated using PG&E's 2020 power mix, the project has the potential to result in a net reduction of 1,380 MT of CO_2e per year (Appendix A). Therefore, the proposed project would result in a net decrease of approximately 1,361 MT of CO_2e per year, as shown in Table 9. Furthermore, the project would result in an overall lifetime GHG emissions reduction of approximately 47,625 MT of CO_2e. Once the solar array is decommissioned, Rosedale would rely fully on PG&E to continue providing power for pumps and other infrastructure. There are several statewide plans and regulations intend to increase California's procurement of energy from 100 percent renewable sources by 2045, or the time the solar facilities are decommissioned, including AB 32, SB 32, and SB 100. By the time Rosedale's infrastructure is reconnected to PG&E's power grid, it can be assumed that most or all of PG&E's energy supplies will be from renewable sources. The project would result in a beneficial impact to regional, statewide, and global GHG emissions, and no impact would occur.

NO IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The primary plans, policies, and regulations adopted for the purposes of reducing GHG emissions applicable to the proposed project consist of SB 100, AB 32, the California Global Warming Solutions Act of 2006, and the subsequent legislation, SB 32 and AB 1279. SB 100 accelerated the state's Renewables Portfolio Standard Program by increasing California's procurement of electricity from renewable sources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045. The goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. In 2022, the State passed AB 1279, which declares the State would achieve net-zero GHG emissions by 2045 and would reduce GHG emissions by 85 percent below 1990 levels by 2045. The latest iteration of the Scoping Plan is the 2022 Scoping Plan, which focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the

State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities. The 2022 Scoping Plan's strategies that apply to the project include the following:

- Reducing fossil fuel use, energy demand and vehicle miles traveled (VMT)
- Building decarbonization
- Renewable Portfolio Standard

The project would be consistent with these goals through the expected reduction of fossil fuel use by the implementation of both solar generation and BESS storage facilities that would store electrical energy for additional grid support during peak demand. The project would be served by and work with PG&E to provide additional renewable energy through the BESS system installed on-site and supplemental solar generation, reducing the need to ramp-up non-renewable sources during peak demand periods.

Furthermore, as discussed under (a) above, the proposed project would offset the use of fossil fuel energy sources with renewable solar energy generation, which would result in a net reduction in GHG emissions of approximately 1,361 MT of CO_2e per year and 47,625 MT of CO_2e over the project's lifetime. This net reduction would further the State's overall goal of the 2022 Scoping Plan to reduce GHG emissions by 40 percent below 1990 levels by 2030. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The project's impact related GHG emissions would be beneficial, and no impacts would occur.

NO IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	■
d. Be located on a site that is included on a list of hazardous material 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 in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, 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 interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	■

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction and Decommissioning

During the construction and decommissioning phases, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The transport, use, and storage of hazardous materials would be conducted pursuant to applicable local, State, and federal regulations regarding the handling of potentially hazardous materials, including Title 49 of the Code of Federal Regulations and Title 13 of the CCR. Title 49 of the Code of Federal Regulations requires training of every employee who handles hazardous materials to ensure proper handling, transport, and disposal of the hazardous materials. Title 13 of the CCR regulates transport of hazardous materials to ensure the safe transport of hazardous materials.

As discussed under Title 13 of the CCR criterion 10(a), construction contractors would be required to prepare a SWPPP for construction activities according to the NPDES Construction Stormwater General Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff. With adherence to these regulations, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction or future decommissioning. Therefore, project impacts would be less-than-significant.

Operation

Once constructed, the operation and maintenance of the project would result in the transportation, use, and disposal of fewer hazardous materials compared to construction. Operation of the groundwater recharge basin would include the use of equipment to maintain the recharge basins, which would use fuels. As discussed above, the project would comply with applicable regulations regarding the use of potentially hazardous materials. The solar array and BESS facilities would be operated and monitored remotely. However, occasional passenger vehicle trips to the site for maintenance or repairs may occur, which would use fuels.

BESS technology proposed for the project would be designed so that battery units would not degrade to the point of needing to be routinely replaced during the project lifetime. However, if removal of defective batteries from the project site is required during operations, this material would be classified mostly as universal waste under the California Department of Toxic Substances Control (DTSC) regulations and guidance (DTSC 2018), which are defined as hazardous wastes that are widely produced by households and many different types of businesses. Transportation of lithium-ion batteries is subject to 49 Code of Federal Regulations 171-180. These regulations include requirements for prevention of a dangerous evolution of heat; prevention of short circuits; prevention of damage to the terminals; and require that no battery comes in contact with other batteries or conductive materials.

If a spill were to occur during project operation, pertinent measures in the project emergency response plan and/or the Spill Containment and Plan would be implemented to contain and clean up the spill. The project would also include a Hazardous Material Business Plan to manage and report hazardous materials for the project. Furthermore, the project would be required to comply with all applicable rules and regulations involving hazardous materials, including CCR Title 23 Health and Safety Regulations, the California Division of Occupational Safety and Health requirements, Hazardous Waste Control Act, California Accidental Release Prevention Program, and California Health and Safety Code. Compliance with these regulations would reduce any potential risk or impact associated with the transport, use, or disposal of hazardous materials. Therefore, project impacts would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project 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?

The presence of hazardous materials during project construction activities could result in an accidental upset or release of hazardous materials if they are not properly stored and secured. Hazardous materials used during project construction would be disposed of off-site in accordance with all applicable laws and regulations. Additionally, the project would adhere to BMPs required by the SWPPP, including BMPs to prevent spills, leaks, and off-site discharge of construction debris and waste. As discussed under 9(a) above, the use of fuels during project operation would also comply with applicable requirements for potentially hazardous materials.

Numerous regulations exist for the construction, operation, and decommissioning of BESS. These include requirements for the components that comprise the systems, installation of the systems, enclosures

within which the systems are contained, hazard detection systems, fire protection systems, temperature and venting components, and training to evaluate for and respond to hazards. The primary hazard associated with lithium-ion batteries is fire. In general, the conditions that cause hazard events with lithium-ion batteries can be categorized into electrical, mechanical, and environmental types. The most common electrical hazards are over-charge, over-discharge, and external and internal short circuits. Environmental hazards include abnormal conditions, such as temperatures beyond the manufacturer's recommended range. Other environmental hazard causes include floods and rain entering the batteries. Mechanical hazards include vibration, shock, and impact encountered under transportation conditions.

The Rosedale would implement fire protection, prevention, and detection measures and design features in accordance with the 2025 California Fire Code. These measures and design features include redundant separate methods of failure detection; remote alarms; ventilation, overcurrent protection, and battery controls; compliance with National Fire Protection Association standards; and equipment of thermal management systems. In addition, Rosedale would develop an Emergency Action and Emergency Response Plan pursuant to SB 38 in advance of construction to train local emergency response personnel during development and operation of the facility. The plan would be completed in accordance with existing State regulations such as Health and Safety Code Section 25504(b) and 19 CCR Section 2658, Emergency Response Plans and Procedures. The contents of the Emergency Action and Emergency Response Plan would comply with existing State regulations, be developed in consultation with the Kern County Fire and the energy storage system supplier and include defined roles and responsibilities and training for local first responders. Compliance with applicable federal, State, and local requirements, and implementation of fire protection protocols, would ensure the proposed project does not create a significant hazard to the public through the accidental release of hazardous materials. Therefore, this impact would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?

The project site is not located within 0.25 miles of an existing or proposed school. The closest schools to the project site, Rio Bravo – Greely Elementary and Middle Schools, are located approximately 4 miles north and east of the project site. Therefore, the proposed project would not emit hazardous emissions or handle hazardous materials within 0.25 miles of a school. No impact would occur.

NO IMPACT

d. Would the project be located on a site that is included on a list of hazardous material 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?

The project site does not appear on the California Environmental Protection Agency's Cortese List (California Environmental Protection Agency 2024). According to the California Department of Toxic Substances Control's EnviroStor database, the nearest hazardous material site to the project site is an inactive School Cleanup Site associated with Kern High School District, located approximately 4 miles northeast of the project site, which has been designated "Inactive – Needs Evaluation" since 2020. Action at the site is currently on hold until the lead agency decides to prepare and implement a Removal Action Workplan (DTSC 2025). No further hazardous material sites are identified within the vicinity of the project site. Additionally, according to the State Water Resources Control Board's Geotracker database, the former Chevron/ Wait-Midway Pipeline is located approximately 1.5 miles southeast of the project site (State Water Resources Control Board [SWRCB] 2025). The site has been designated "Completed – Case Closed" since 2013. Furthermore, a Phase I Environmental Site Assessment for the project site, prepared by Haro Environmental in May 2024, did not identify recognized environmental conditions or concerns that have impacted, or pose a significant environmental threat to subsurface soil, soil vapor, or groundwater beneath the project site (Appendix G). The groundwater recharge basin would be located approximately 0.75 mile north of the Hondo Chemical site, which is listed as "Stockdale Site

(L10008056166)" on the Geotracker database. The site houses industrial activities relating to the creation of fertilizer and soil amendments. Hondo Chemical was ordered by Kern County to make changes to operations and clean-up procedures to ensure environmental safety. According to SWRCB's Geotracker the site is classified as a "Land Disposal Site" (SWRCB 2026). The clean-up status of the site is classified as open, and there are no potential contaminants of concern listed. Preliminary groundwater testing on the site in 2011showed no signs of contamination; there is a continuing effort to monitor the groundwater wells on the site, and no groundwater concerns have been found. In 2014, Kern County submitted a notice of violation to the property owners, and a remediation work plan has been submitted (Kern County Local Enforcement Agency 2024).

Because these proximate sites do not have recognized environmental conditions, potential contaminants of concern, or groundwater concerns, and because the project would not involve ground disturbance within these sites, the project site would not be located on a hazardous materials site. No impact would occur.

NO IMPACT

e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

The project site does not exist within the vicinity of an airport or airport land use plan area. Accordingly, the project would not result in a safety hazard or excessive noise for people residing or working in the project area due to proximity to an airport. No impact would occur.

NO IMPACT

f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The project site is within the jurisdiction of the Kern County Multi-Jurisdictional Hazard Mitigation Plan (Kern County 2020).

The project would not involve the development of structures or infrastructure that would potentially impair implementation of or physically interfere with this plan. During construction, equipment and construction worker vehicles would be staged on the project site and therefore would not result in substantial delays on adjacent thoroughfares. The minimal, infrequent vehicle trips associated with construction and operation and maintenance activities would not disturb traffic patterns in such a manner that could affect emergency response or evacuations. As described in threshold 9(b), the Rosedale would develop an Emergency Action and Emergency Response Plan pursuant to SB 38 in advance of construction to train local emergency response personnel during development and operation of the facility. The plan would be completed in accordance with existing State regulations (Health and Safety Code Section 25504(b); 19 CCR Section 2731; 22 CCR Section 66262.34(a)(4)). The contents of the Emergency Action and Emergency Response Plan would comply with existing State regulations, be developed in consultation with the Kern County Fire Protection District and the energy storage system supplier and include defined roles and responsibilities and training for local first responders.

Following compliance with existing regulations, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and potential impacts on emergency response would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

g. *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

As described in Section 20, *Wildfire*, the project site is not within a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone, as delineated by the California Department of

Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity Zone Viewer (CAL FIRE 2024). The nearest fire hazard zone within a State Responsibility Zone is a moderate fire hazard zone located approximately 15 miles northeast of the project site. The City of Bakersfield, associated roads and infrastructure, and agricultural lands separate the moderate fire hazard zone from the project site. Thus, the proposed project would not expose people or structures to a risk of loss, injury, or death involving wildland fires. No impact would occur.

NO IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- 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; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. 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?	☐	☐	■	☐

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction and Decommissioning

As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals and transport them to receiving water bodies. Additionally, soil disturbance during project construction increases the potential for erosion and sedimentation. If construction or future decommissioning activities occur during the rainy season, or in the event of heavy storms, soils from the site could be eroded and transported off-site or downstream to receiving waters. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported off-site via stormwater runoff or to infiltrate into underlying groundwater aquifers.

Construction and future decommissioning of the project would involve activities, such as clearing, grading, excavation, installation of foundations, installation of wiring, and commissioning, which would result in the generation of potential pollutants, such as silt, debris, chemicals, pollutants, trash, paints, and other solvents with the potential to adversely affect water quality. As previously mentioned, construction would generate limited amounts of hazardous wastes, such as used lubricants, cleaning solvents, and other chemicals. Additional hazardous wastes that could be encountered or released during construction could include incidental spill waste and concrete washout. Waste generated or encountered during construction would be handled, contained, transported, and/or disposed of according to local, State, and federal regulations. The project would not store or use any acutely or extremely hazardous materials more than threshold quantities. Still, short-term water quality impacts have the potential to occur during construction activities in the absence of any protective or avoidance measures. However, because project construction would disturb more than one acre of land, on-site construction activities would be required to comply with the requirements of the statewide Construction Stormwater General Permit.

Compliance with the Construction Stormwater General Permit would require the creation and implementation of a SWPPP that would include BMPs to prevent polluted stormwater runoff during construction and decommissioning. Construction BMPs may include but are not limited to erosion and sediment control BMPs such as detention basins, straw wattles, and silt fencing to minimize erosion and retain soil from disturbed areas on-site, as well as BMPs to prevent spills, leaks, and off-site discharge of construction debris and waste.

With regulatory compliance, which requires implementation of a SWPPP and construction BMPs to minimize pollutant discharge into stormwater runoff, the project would not involve any activities that would mobilize contaminated soils into surface waters or surface water runoff. In areas where excavation activities would occur on site, such as for excavation of the proposed groundwater recharge basins, dewatering activities may be required. No existing contamination was identified in these areas by the Phase I Environmental Site Assessment prepared for the site, as further described in Section 9, *Hazards and Hazardous Materials*. Project construction would not violate water quality standards or waste discharge requirements, or otherwise substantially degrade surface or groundwater quality.

The project site is within the Central Valley Region Tulare Lake Hydrologic Basin Planning Area, the South Valley Floor Hydrologic Unit, and any potential construction related discharge is therefore subject to the regulations and thresholds outlined in the Tulare Lake Basin Plan. Additionally, construction of the project would be required to comply with all applicable regulations of the County Stormwater Ordinance, contained within Chapter 14.26 of the Kern County Ordinance Code, including conformance with outlined inspection and permitting requirements as necessary (Kern County 2025a). Through implementation of the SWPPP and related BMPs which would incorporate thresholds from the Tulare Lake Basin Plan, combined with adherence to applicable policies and regulations governing stormwater discharge, project construction would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts would be less than significant.

Operation

The project would not modify existing water diversion rights related to Rosedale's Conjunctive Use Program and would not involve diverting additional water from the Kern River, the Central Valley Project, or the State Water Project beyond existing permitted operations. Project operation would negligibly increase the amount of impervious surfaces on site and would not increase discharge of stormwater which could adversely affect water quality. With routine maintenance of the project to minimize trash and debris at the project site, project operation would not substantially degrade surface or groundwater quality.

Portions of the project area where small amounts of contaminants could be released, such as the paved areas surrounding the battery containers, would be constructed in compliance with storm water quality management measures (i.e., basins and infiltration areas, where required) designed to meet State and local storm water management requirements. These paved areas would be maintained, and any vehicle

leaks or spills would be periodically cleaned with absorbent materials to minimize the potential for contamination.

The proposed stormwater management procedures and SWPPP BMPs would control and prevent site runoff from degrading water quality through the release of sediment or other pollutants from the project site during project operation and maintenance. Operation of the project would be required to comply with all water quality and discharge requirements contained within the Kern County ordinance Code and the Tulare Lake Basin Plan as discussed above. With regulatory compliance and construction of any applicable stormwater management design features, project operation would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

As described above in Section 7, *Description of Project*, the purpose of the project is to facilitate groundwater recharge in the Kern County subbasin. The project would allow Rosedale to provide capacity for upwards of an additional 6,000 AFY of groundwater recharge capacity per year. The project would require a water supply during construction, for dust management and earthwork. Operational activities would require water use for the periodic washing of the photovoltaic (PV) modules and other maintenance activities. The operational demand would exist for the life of the solar array and BESS, which is expected to be approximately 40 years. The water required during construction and future decommissioning of the proposed project would be temporary, one-time expenditures. The expected annual water use for panel washing and maintenance would be nominal considering the sustainable yield of the basin and the additional projected groundwater recharge that would result from the project. In combination with adherence to sustainable groundwater management guidelines as outlined in the Kern County Subbasin GSP, the proposed project would not substantially decrease groundwater supplies or impede sustainable groundwater management of the basin. The project provides a benefit to the groundwater basin by allowing sustainable groundwater management to be achieved in alignment with projects and management actions described in the GSP to support sustainability (Kern County Subbasin 2025).

The project site overlies the Kern County Subbasin of the San Joaquin Valley Groundwater Basin (Basin Number 5-022.14), as defined by California Department of Water Resources (DWR) (DWR 2022). The Kern County Subbasin is one of 21 basins and subbasins identified by the DWR as being critically overdrafted. The subbasin is managed through the Kern County Subbasin Groundwater Sustainability Plan (GSP) which was approved by the SWRCB in September 2025 for jurisdictional transfer to DWR in December 2025. DWR is currently reviewing the Kern County Subbasin's GSP under their jurisdiction for compliance with SGMA.

The GSP identifies an annual sustainable yield for the subbasin, which represents the amount of groundwater that can be withdrawn annually without causing undesirable results. The sustainable yield for the Kern County Subbasin has been conservatively estimated to be approximately 1.31 million AFY based on results for the historical period using model-calculated groundwater pumping and recharge (Kern County Subbasin 2025). The proposed Dillard Groundwater Recharge and Solar Array Project would include approximately 50 acres of groundwater recharge ponds, which would provide upwards of 6,000 AFY of groundwater recharge capacity. In addition, the proposed solar facility would provide power for existing Rosedale water pumps and would provide shade for the groundwater recharge pond to prevent algae growth and reduce evaporation to increase groundwater recharge efficiency.

The project would not substantially decrease groundwater supplies and rather would provide additional groundwater recharge capacity in the region. Water used during project construction and operation would be provided by Rosedale. Though the agency's water supply is sourced from local groundwater, the

project would not directly dewater existing groundwater supply. Any water used by the project would be sustainably sourced by Rosedale, which manages groundwater supply in accordance with the GSP to avoid adverse impacts. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The project would not alter the course of a stream or river but would otherwise alter the existing drainage pattern of the site or area by developing groundwater recharge ponds that would collect precipitation or stormwater to benefit the groundwater basin through groundwater recharge activities, therefore preventing surface runoff that would result in flooding on- and off-site. The project would involve grading to create two to three groundwater recharge ponds where construction would require earthwork to build each pond and create up to five-foot berms surrounding the perimeter. Unpaved access roads to support future operations and maintenance needs would be added adjacent to the ponds. The solar array would be installed with footings and elevated above the recharge ponds, and BESS located on the northeast corner of the property would be constructed on a concrete pad. The project would not substantially alter existing drainage patterns in a manner which would result in substantial erosion or siltation on- or off-site. Less-than-significant impacts would occur.

LESS-THAN-SIGNIFICANT IMPACT

c.(iii) Would the project 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 that would 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?

The project would not alter the course of a stream or river or add substantial impervious surfaces. The project would include approximately 50 acres of groundwater recharge ponds, which would provide upwards of 6,000 AFY of groundwater recharge capacity and would not introduce stormwater to existing or planned drainage systems. As discussed above, the project would implement a site specific SWPPP and associated BMPs in order to reduce stormwater runoff and any potential risk of pollutant release. With adherence to site specific BMPs and routine maintenance of the project to minimize trash and debris at the project site, the project would not provide substantial additional sources of polluted runoff. The construction of the groundwater recharge ponds would capture precipitation and stormwater runoff to benefit recharge activities in the groundwater basin. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(iv) Would the project 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 impede or redirect flood flows?

According to the Federal Emergency Management Agency (FEMA), the project site is located within Zone X, or an area of minimal flood hazard (FEMA 2025). Given that the project is not located in a flood hazard area and would not increase the rate of surface runoff, the project would not impede or redirect flood flows or result in on- or off-site flood impacts. The project would not alter the course of a stream or river or add substantial impervious surfaces and therefore would not alter the existing flooding potential at the site. Therefore, the project would not substantially alter the existing drainage pattern of the site or area in a manner which would impede or redirect flood flows. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

As described in Item 10(c.iv), the project site is not located in a flood hazard area. The project site is situated approximately 70 miles away from the Pacific Ocean at its nearest point surrounding the City of Santa Barbara. According to the DOC, no part of Kern County, which encompasses the project site, exists within a tsunami hazard area (DOC 2025b). The project site is also not proximate to large bodies of water which could put the project site at risk due to a seiche. Therefore, the project would not risk release of pollutants due to inundation in flood hazard, tsunami, or seiche zones. No impact would occur.

NO IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As described in threshold 10(a), the proposed project would not violate water quality standards with adherence to regulations such as the NPDES Construction Stormwater General Permit during construction, and the Kern County Ordinance Code and policies contained within the Kern County Subbasin and GSP during operation. With adherence to these regulatory requirements, the proposed project would not interfere with or obstruct the achievement of any applicable water quality goals.

As described under threshold 10(b), the proposed project would require minimal water usage during construction, operation, and future decommissioning. If groundwater were provided to the proposed project, the groundwater would be distributed in compliance with the management requirements of the GSP. Construction and implementation of the proposed groundwater recharge ponds would provide a benefit to recharging the Kern County Subbasin groundwater basin and aligns with demand management activities described in the Kern County Subbasin GSP associated with Rosedale's projects and management actions planned for implementation (Kern County Subbasin 2025). Accordingly, the proposed project's use of Rosedale water, which is includes water supplies from high-flow Kern River water, the Central Valley Project, and the State Water Project via Rosedale's existing Central Intake Pipeline, would not conflict with or obstruct implementation of a sustainable groundwater management plan and would not inhibit adherence to the projected sustainable yield for the Kern County Subbasin. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	■

a. Would the project physically divide an established community?

The proposed project would involve the construction and operation of a groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines. The project area is located in an agricultural area and is generally surrounded by agricultural uses in all directions. Project construction would not require the closure of adjacent roadways. The project would not include any structures, new roads, freeways, or walls which could potentially physically divide an established community. Therefore, no impact would occur.

NO IMPACT

b. Would the project 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 applicable plans and policies relating to a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project (including, but not limited to, the General Plan) adopted for the purpose of avoiding or mitigating an environmental effect are summarized below.

Kern County Western Rosedale Specific Plan

The project area is located within the Kern County Western Rosedale Specific Plan area. The plan is largely consistent with the Kern County General Plan and the Metropolitan Bakersfield General Plan. The plan area is dominated by agricultural uses, consisting of about 29,400 acres. The plan identifies a need to improve the existing water infrastructure in the region, among goals to improve other existing infrastructure systems. The plan also seeks to diversify land uses and improve economic opportunity within the Western Rosedale Specific plan area. The plan requires evaluation of potential environmental impacts under CEQA for new development in the region (Kern County 2007a).

Metropolitan Bakersfield General Plan

The project site exists within the boundaries of the Metropolitan Bakersfield General Plan area. The southwest region of the plan area, where the project site is located, is a portion of the plan area identified as being removed from the general urban sphere of influence at the city center. The plan adopts all identified city and county specific plans, including the Western Rosedale Specific Plan, as discussed above. Aside from promoting continued urban development, addressing the severely lowered water table that occurs throughout the region is an identified priority of the plan. Specific policies direct the region to develop and maintain facilities for groundwater recharge in the planning area and to work towards resolving the problem of groundwater resource deficiencies in the upland portions of the planning area (Kern County 2007b).

Kern County General Plan

The proposed project would occur within Kern County and would be subject to the applicable policies and identified allowed land uses identified within the Kern County General Plan. The project site has a land use designation of Intensive Agriculture with a minimum parcel size of 20 acres. This land use designation is intended for agricultural uses, including but not limited to irrigated cropland, orchards, and vineyards, and allows for groundwater recharge areas, water storage, and public utility uses. Applicable policies contained within the General Plan are detailed below:

Resource

Goal 6: Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policy 10: To encourage effective groundwater resource management for the long-term economic benefit of the County the following shall be considered:

(a) Promote groundwater recharge activities in various zone districts.
(b) Support for the development of Urban Water Management Plans and promote Department of Water Resources grant funding for all water providers.
(c) Support the development of groundwater management plans.
(d) Support the development of future sources of additional surface water and groundwater, including conjunctive use, recycled water, conservation, additional storage of surface water and groundwater and desalination.

General Provisions

Policy 33: Water related infrastructure shall be provided in an efficient and cost-effective manner.

39. Encourage the development of the County's groundwater supply to sustain and ensure water quality and quantity for existing users, planned growth, and maintenance of the natural environment.

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 CEQA, to prevent the degradation of the watershed to the extent practical.

Energy

7. The processing of all discretionary energy project proposals shall comply with CEQA Guidelines directing that the environmental effects of a project must be taken into account as part of project consideration.

8. The County should work closely with local, State, and federal agencies to assure that energy projects (both discretionary and ministerial) avoid or minimize direct impacts to fish, wildlife, and botanical resources, wherever practical.

10. The County should require acoustical analysis for energy project proposals that might impact sensitive and highly-sensitive uses in accordance with the Noise Element of the General Plan.

Kern County Ordinance Code

The project site occurs within Kern County jurisdiction and must therefore comply with all applicable regulations contained within the Ordinance Code, including the Zoning Ordinance. The project site is zoned Limited Agriculture (A-1). Pursuant to Kern County Code Chapter 19.14, the purpose of the A-1 district is to designate areas suitable for a combination of estate-type residential development, agricultural uses, and other compatible uses. Permitted uses include but are not limited to irrigated cropland, livestock lands, residences, water storage or groundwater recharge facilities, solar energy electrical generator which are accessory to a permitted or conditionally permitted use and where the

power generated does not exceed the total on-site power demand, and transmission lines and supporting towers, poles, and underground facilities owned and operated by a public utility company or other company under the jurisdiction of the California Public Utilities Commission. The proposed project would involve the construction and operation of a groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines. All new uses proposed by the project would be permitted under the current zoning designation of the site.

The proposed project would be consistent with Kern County building and Zoning Ordinance. However, California Government Code Section 53091(d) states that building ordinances of a city or county do not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency. Additionally, Section 12808.5 of the Public Utilities Code Zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for the production or generation of electrical energy, facilities.

In summary, the proposed project would not 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 and no impact would occur.

NO IMPACT

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12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	■
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?	☐	☐	☐	■

a. *Would the project 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?*

b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The project site exists within the Bakersfield Production-Consumption Region, a portion of Kern County known to produce aggregate materials (DOC 2025a). Mineral and petroleum resources are basic to Kern County's economy. Kern County has the distinction of producing more oil than any other County in California. In addition, borax, cement production, and construction aggregates constitute major economic mineral resources (Kern County 2003).

There are no known mineral resources or resource recovery sites on the project site (DOC 2016, 2025). Therefore, the proposed project would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site. No impact would occur.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project 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. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

Overview of Noise and Vibration

Noise

Sound is a vibration that transmits through a medium (such as a gas, liquid, or solid) created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired, and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 hertz (Hz) and less sensitive to frequencies around and below 100 Hz (Kinsler et al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as the doubling of vehicle traffic volumes, results in a noise level increase of 3 dB, whereas dividing the energy in half results in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy (i.e., the perception of sound is not linear in terms of dBA or in terms of sound energy). Two sources, each containing the same sound energy, do not “sound twice as loud” as one source. It is widely accepted that the average healthy human ear can detect changes (either increases or decreases) of 3 dBA, which is recognized as being barely perceptible to most people. Similarly, a change of 5 dBA is readily perceptible and a change of 10 dBA sounds twice (or half) as loud (Crocker 2007).

The level and frequency content of sound change as it travels from the source to a receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which sound is reduced with distance depends on factors, such as the type of source (e.g., a point or line source), the path the sound travels, site conditions, and the presence of intervening structures or other obstacles. Noise from a point source (e.g., construction equipment, industrial machinery, ventilation

units) typically is reduced at a rate of 6 dBA per each doubling of distance away from the source. Noise from a line source (e.g., roadway, pipeline, railroad) typically is reduced at a rate of 3 dBA per each doubling of distance away from the source (Caltrans 2013). The propagation of noise is also affected by the absorption characteristics of the ground: a hard site, such as a parking lot or smooth body of water, provides no absorption/attenuation and the changes in noise levels with distance result simply from the geometric spreading of the source (i.e., 3 or 6 dBA reduction per doubling of distance for a point source or line source, respectively). Conversely, a soft site, such as soft dirt, grass, or scattered bushes and trees, may provide additional absorption/attenuation, potentially reducing noise levels an additional 1.5 dBA per doubling of distance away from the source (Caltrans 2013). Noise levels may also be reduced by intervening structures. The amount of reduction provided by the "shielding" of these features depends on the size of the structure/s, the location of the structure/s relative to the noise source and receivers, and the frequency content of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight between a noise source and receiver will provide at least a 5 dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). The presence of building structures can substantially reduce noise levels from the exterior to the interior as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

Descriptors

The impact of noise is not a function of loudness alone. The time of day at which noise occurs and the duration of the noise are also important factors when considering potential noise impacts. Most noise that lasts for more than a few seconds is variable in its amplitude (i.e., the noise level continuously fluctuates over time). Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent continuous sound level (L_{eq}), which considers both duration and the sound power level of the source. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. The extent of sound level fluctuations over a period of time is characterized by the minimum (L_{min}) and maximum (L_{max}) sound pressure levels, which represent the lowest and highest sound pressure levels measured during a given period, respectively.

The sound level that is exceeded "n" percent of time during a given sample period in the percentile noise level is represented as L_n. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum), and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

Noise that occurs at night tends to be more disturbing than noise that occurs during the day. Community noise is usually measured using the Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.) hours. It is also measured using the Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring during evening hours (7:00 p.m. to 10:00 p.m.) and a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.) (Caltrans 2013). Noise levels described by the L_{dn} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of traffic during the day, evening, and night.

Groundborne Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes

how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body ranges between less than 1 Hz to 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as that from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern of vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration amplitudes are usually expressed in peak particle velocity (PPV), or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

Existing Noise Environment

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The Kern County General Plan Noise Element defines noise-sensitive land uses as residential areas, schools, convalescent and acute care hospitals, parks and recreational areas, and churches (Kern County 2003). Additional noise-sensitive land uses not identified in the County's General Plan typically also include transient lodging (i.e., hotels and motels), libraries, and places of worship.

Noise-sensitive receptors in the project vicinity include single-family residential properties located along various portions of the project alignment, with the nearest residences situated approximately 250 feet northeast of the point of interconnection along Stockdale Highway (SR 58).

Project Site Noise Setting

The primary noise source in the vicinity of the project site is vehicular traffic along nearby roadways (primarily State Route 43/Enos Lane and State Route 58/Stockdale Highway). To characterize ambient noise levels in the project vicinity, two short-term (15-minute) noise level measurements were taken on August 11, 2025 and one long-term (48-hour) noise level measurement was taken on August 11–13, 2025 using Soft dB Piccolo-II, Type 2 integrating sound level meters. The sound level meters were calibrated prior to and after measurements. Short-term noise measurement 1 (ST 1) was conducted along Cherry Avenue near the closest residence located south of the solar array area/recharge basin and ST 2 was conducted along Superior Road near the closest residence located east of the solar array area/recharge basin. The long-term noise measurement (LT 1) was conducted approximately 625 feet south of the solar array area/recharge basin. Approximate noise measurement locations are shown in Figure 9. Table 10 summarizes the results of the short-term noise measurements and Table 11 and Table 12 summarize the results of the long-term noise measurement at LT 1.

Table 10 Short-Term Noise Measurement Results

Measurement Location	Location Description	Sample Times[1]	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST 1	Approximately 960 feet south of the project site, along Cherry Avenue	7:22 – 7:37 a.m.	51.3	44.8	58.7
ST 2	Approximately 1,715 feet east of the project site, along Superior Road	7:45 – 8:00 a.m.	54.9	43.9	78.5

dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level; L_{min} = minimum sound level; L_{max} = maximum sound level

[1] All short-term noise measurements were conducted on August 11, 2025.

Table 11 Long-Term Noise Measurement Results (LT 1, August 11–12, 2025)

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
LT 1, South of project site – August 11–12, 2025			
7:00 a.m.	55.7	7:00 p.m.	40.1
8:00 a.m.	42.3	8:00 p.m.	41.3
9:00 a.m.	37.1	9:00 p.m.	46.0
10:00 a.m.	41.8	10:00 p.m.	45.9
11:00 a.m.	39.3	11:00 p.m.	42.6
12:00 p.m.	39.2	12:00 a.m.	41.5
1:00 p.m.	43.9	1:00 a.m.	42.7
2:00 p.m.	46.3	2:00 a.m.	43.3
3:00 p.m.	46.9	3:00 a.m.	42.4
4:00 p.m.	46.4	4:00 a.m.	47.9
5:00 p.m.	42.8	5:00 a.m.	49.8
6:00 p.m.	36.1	6:00 a.m.	53.6
24-hour Noise Level (dBA CNEL)			**53.7**

dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level; CNEL = Community Noise Equivalent Level

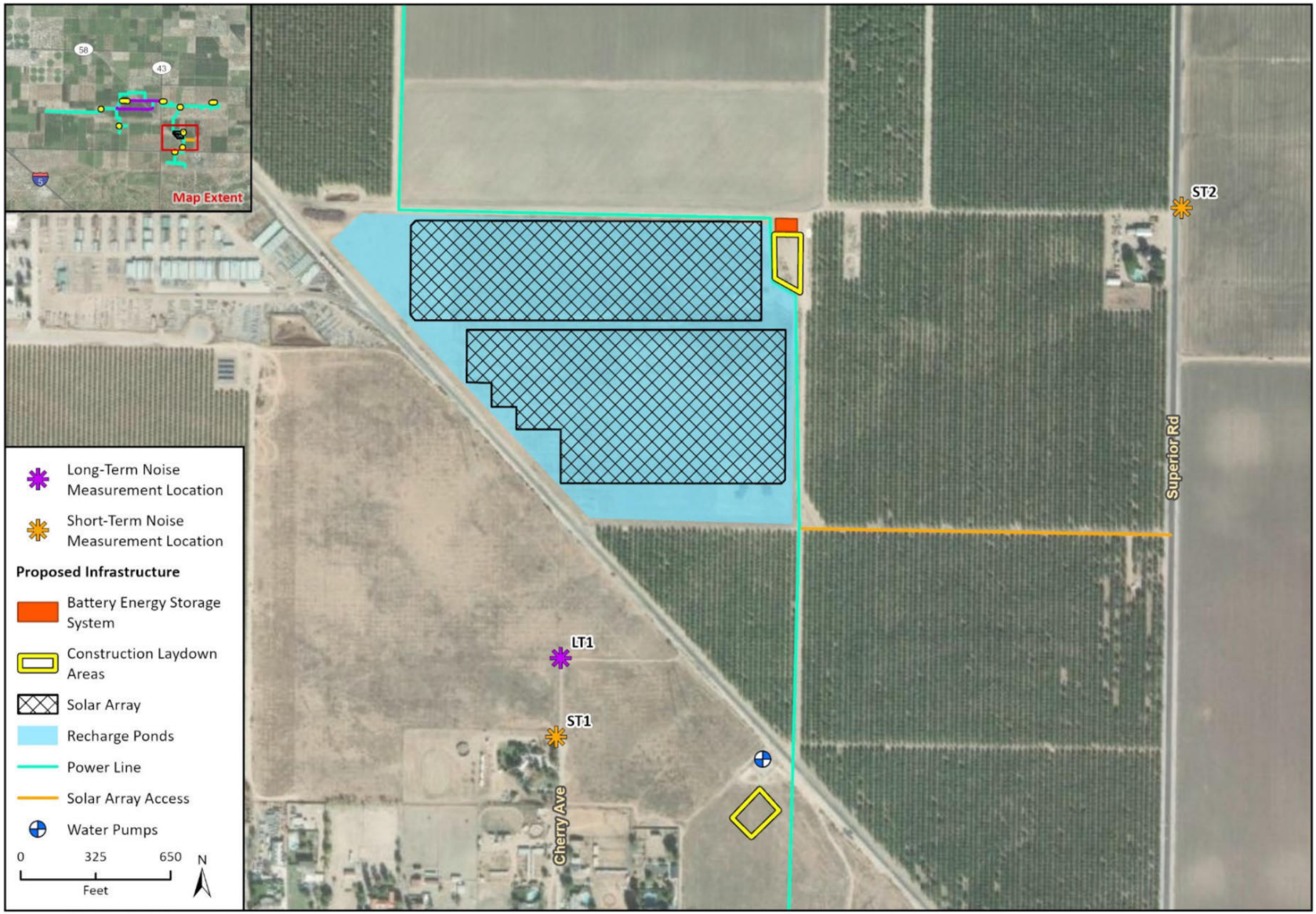
Graphical sound level measurement results are included in Appendix H.

Table 12 Long-Term Noise Measurement Results (LT 1, August 12–13, 2025)

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
LT 1, South of project site – August 12–13, 2025			
7:00 a.m.	52.1	7:00 p.m.	42.7
8:00 a.m.	40.6	8:00 p.m.	41.0
9:00 a.m.	39.3	9:00 p.m.	43.3
10:00 a.m.	37.9	10:00 p.m.	45.6
11:00 a.m.	43.8	11:00 p.m.	43.3
12:00 p.m.	39.8	12:00 a.m.	41.7
1:00 p.m.	41.2	1:00 a.m.	43.7
2:00 p.m.	46.5	2:00 a.m.	43.4
3:00 p.m.	47.3	3:00 a.m.	45.0
4:00 p.m.	47.0	4:00 a.m.	47.9
5:00 p.m.	41.6	5:00 a.m.	49.1
6:00 p.m.	43.9	6:00 a.m.	51.1
24-hour Noise Level (dBA CNEL)			**52.7**

dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level; CNEL = Community Noise Equivalent Level
Graphical sound level measurement results are included in Appendix H.

Figure 9 Approximate Noise Measurement Locations



Significance Thresholds

The project is located in unincorporated areas of Kern County; therefore, the County's noise regulations apply to the project as outlined in the following sections.

Construction Noise

Kern County Code

Section 8.36.020(H) of the Kern County Code establishes regulations on construction activity, prohibiting construction activities between the hours of 9:00 p.m. and 6:00 p.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends.

Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual

Neither the County's General Plan nor the County Code establishes a quantitative threshold for evaluating construction noise impacts. In absence of quantitative construction noise limits established by the County, the limits recommended by the FTA in the *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018) are applicable to the project. This document provides criteria for assessing construction noise impacts based on the potential for adverse community reaction based on the type of affected land use. These construction noise limits are shown in Table 13.

Table 13 FTA Construction Noise Criteria

	L_{eq}, equip (8-hour), dBA	
Land Use	**Day (7:00 a.m. to 10:00 p.m.)**	**Night (10:00 p.m. to 7:00 a.m.)**
Residential	80	70
Commercial	85	85
Industrial	90	90

dBA = A-weighted decibels; L_{eq} = equivalent noise level
Source: FTA 2018.

Based on the noise thresholds shown in Table 13, noise impacts associated with construction of the project would be considered significant if noise levels were to exceed 80 dBA L_{eq} (8-hour) at nearby noise-sensitive land uses.

Operational Noise

Kern County General Plan Noise Element

The Kern County General Plan Noise Element establishes standards for maximum desired noise levels and develops an implementation program that deals with noise problems within the County. Implementation Measure F of the County's General Plan Noise Element requires that "…proposed commercial and industrial uses or operations [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}" (Kern County 2003). Therefore, noise impacts associated with operation of the project would be considered significant if noise levels were to exceed 65 dBA L_{dn} at nearby noise-sensitive land uses.

Vibration

Federal Transit Administration Transit Noise and Vibration Impact Assessment Manual

Neither the County's General Plan nor County Code establishes a quantitative threshold for evaluating vibration impacts. In absence of a quantitative vibration threshold, the limits recommended by the FTA in the *Transit Noise and Vibration Impact Assessment Manual* were used, which are shown in Table 14. The thresholds shown in Table 14 represent the limits at which minor architectural damage (i.e., non-structural) may occur to structures of various construction types.

Table 14 FTA Vibration Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

PPV = peak particle velocity; in/sec = inches per second
Source: FTA 2018

Based on the vibration thresholds shown in Table 14, vibration impacts associated with construction and operation of the project would be considered significant if vibration levels were to exceed 0.2 in/sec PPV at nearby residential structures.

a. *Would the project 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?*

Construction Noise

Temporary noise levels caused by construction activity would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of noise-generating activities. For a construction noise assessment, construction equipment can be considered to operate in two modes: stationary and mobile. As a rule, stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Conversely, mobile equipment moves around the construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts from mobile construction equipment are assessed from the center of the equipment activity area (e.g., construction site).

Construction noise was estimated using the FHWA's Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise sensitive receptors near the project site based on the equipment list provided by the Rosedale. RCNM provides reference noise levels for standard construction equipment, with an attenuation of 6 dBA per doubling of distance for stationary equipment, as is characteristic of "point" sources of noise.

Construction activity would result in temporary noise in the project areas, exposing surrounding sensitive receptors to increased noise levels. Typical construction projects have long-term noise averages that are lower than louder short-term noise events due to equipment moving from one point to another on the site, work breaks, and idle time. Each phase of construction has a specific equipment mix depending on the work to be carried out during that phase. Accordingly, each phase also has its own noise characteristics;

some will have higher continuous noise levels while others may have higher instantaneous noise levels. The maximum hourly L_{eq} of each phase is determined by combining the L_{eq} contributions from each piece of equipment used in that phase (FTA 2018). Construction of the project would involve recharge berms and well pad earthwork, interbasin and inflow structures installation, turnout pipeline installation, and solar array and transmission line installation.

Construction equipment would continually move around the project area over the course of a typical workday. Due to the complex and mobile nature of construction activity within a project site, the FTA *Transit Noise and Vibration Impact Assessment Manual* document recommends evaluating construction noise impacts from the center of the construction site, stating that the distance variable in its recommended construction noise calculation "assumes that all equipment operates at the center of the project" (FTA 2018). Due to the size of the project site and scope of construction, construction activity would occur in various project areas depending on the phase of work being carried out. For each phase of construction, noise impacts were evaluated from the approximate center of the primary work area (or the work area nearest to surrounding sensitive receptors). Construction noise levels for each phase were calculated under the conservative assumption that the five loudest pieces of equipment would be operating simultaneously.

Construction noise levels during each construction phase are presented at the nearest sensitive receptors in Table 15. As shown in Table 15, construction noise levels associated with all phases of construction would be below the FTA's recommended threshold of 80 dBA L_{eq} (8-hour); therefore, noise impacts associated with construction of the project would be less than significant.

Table 15 Estimated Construction Noise Levels at Sensitive Receptors by Phase

Construction Phase	RCNM Reference Noise Level at 50 feet	Nearest Sensitive Receptor	Distance to Nearest Sensitive Receptor (feet)	Construction Noise Level at Nearest Sensitive Receptor (dBA L_{eq} [8-hour])	Applicable Noise Threshold (dBA L_{eq} [8-hour])	Exceeds Applicable Threshold?
Recharge Berms and Well Pad Earthwork	86	Single-family residence located at 201 County Triangle Way (south of construction work area)	1,650	54	80	No
Interbasin and Inflow Structures Installation	84		1,050	58	80	No
Turnout Pipeline Installation	84		1,050	58	80	No
Solar Array Installation	85		1,650	54	80	No
Transmission Line Installation	85	Single-family residence located at 21718 Stockdale Highway (north of construction work area)	260	70	80	No

RCNM = Roadway Construction Noise Model; dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level
See Appendix I for construction noise modeling outputs.

Operational Noise

Operational noise generated by the proposed project would include onsite stationary noise sources such as water pumps, a solar array, BESS units, and offsite mobile noise sources such as vehicle traffic. These operational noise sources and their expected noise impacts are discussed further in the following sections.

Onsite Stationary Noise Sources

Solar Array and Battery Energy Storage System

The proposed project would include an elevated solar array above the recharge ponds. The solar array would connect to a BESS northeast of the groundwater recharge ponds and solar array. The primary noise-generating components associated with the solar array would be string inverters, which would be located in two groups of 20 units (for a total of 40 inverters) near the center of the solar array area. Inverters would be Chint Power Systems (CPS) SCH125KTL-DO/US-600 units, which produce a sound pressure level of 65 dBA at a reference distance of 3.28 feet away. Noise levels generated by the solar inverters are assumed to collectively emit from the center of each grouping of strings.

The BESS would include four BESS units located at the northeastern corner of the solar array/recharge basin area. BESS units would be Tesla Megapack 2 XL units, which are pre-assembled units that include integrated battery modules, inverters, a thermal management system, and controls. Based on technical information provided, each BESS unit generates a sound pressure level of 65.9 dBA at 32.8 feet away when operating at 100 percent load (see Appendix J for sound data). Noise levels generated by the BESS units would collectively emit from the center of the grouping.

The nearest sensitive receptors include a single-family residential property located approximately 1,320 feet east of the eastern edge of the solar array area and a single-family residential property located approximately 1,000 feet south of the southwestern corner of solar array area. Operational noise levels at these sensitive receptors were calculated while conservatively accounting for the simultaneous and continuous operation of solar inverters and BESS units. Operational noise levels associated with these sources are presented in Table 16. As shown in Table 16, simultaneous and continuous operation of solar inverters and BESS units would generate noise levels up to 45 dBA L_{dn} at the nearest single-family residential property to the east (located at 541 Superior Road), which would not exceed the County's threshold of 65 dBA L_{dn}. Therefore, noise impacts associated with operation of the project's solar inverters and BESS units would be less than significant.

Table 16 Operational Noise Levels at Nearby Sensitive Receptors (Solar Array and BESS)

Noise Source	Quantity	Nearest Sensitive Receptor	Combined Noise Level at Nearest Sensitive Receptor (dBA L_{dn})	Applicable Noise Threshold (dBA L_{dn})[1]	Exceeds Applicable Threshold?
Solar Inverters	40	Single-family residence located to the east (541 Superior Road)	45	65	No
BESS Units	4			65	No
Solar Inverters	40	Single-family residence located to the south (201 County Triangle Way)	41	65	No
BESS Units	4			65	No

dBA = A-weighted decibels; L_{dn} = day-night equivalent noise level

[1] The Kern County General Plan Noise Element requires that "…proposed commercial and industrial uses or operations [be] designed or arranged such that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB L_{dn}…" (Kern County 2003).

Offsite Mobile Noise Sources (Traffic Noise)

Rosedale staff currently take vehicle trips to facilities near the project site. Once the project is operational, staff would make visits to the project site part of existing rounds. Therefore, the project would not result in new vehicle trips and would subsequently not result in an increase of traffic noise. No impact would occur.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction

Construction activities generating high levels of vibration, such as impact pile driving and blasting, are not proposed during construction of the project. Based on the construction equipment list provided by Rosedale, equipment with the potential to generate the greatest vibration levels would be large earthmoving equipment (such as a backhoe, bulldozer, excavator, or grader) which generates vibration levels up to 0.089 in/sec PPV at a reference distance of 25 feet (FTA 2018). Based on the project site plan and location of project components, large earthmoving equipment may be used as close as 260 feet from the nearest offsite structures (e.g., residences located along Stockdale Highway). At this distance, large earthmoving equipment would generate vibration levels up to approximately 0.03 in/sec, which would not exceed the FTA's threshold of 0.2 in/sec PPV at offsite residential structures. Therefore, vibration impacts associated with the use of large earthmoving equipment would be less than significant.

Operation

The proposed project would not include substantial sources of vibration associated with operation, such as manufacturing or heavy equipment operations. Therefore, no vibration impacts associated with operation of the project would occur.

Mitigation Measures

No mitigation measures would be required.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The airports closest to the project site are the Meadows Field Airport (located approximately 11 miles northeast of the project site) and the Bakersfield Municipal Airport (located approximately 14 miles southeast of the project site). The project site is not located within the noise contours of either airport as shown on the respective noise contours for each airport contained within the Airport Land Use Compatibility Plan (Kern County 2012). Therefore, the project would not expose people working in the project area to excessive airport-related noise levels. No impact would occur.

Mitigation Measures

No mitigation measures would be required.

NO IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

The project does not include any housing or business development that would directly induce population growth. Construction and decommissioning of the project would be temporary in nature. It is anticipated that construction workers would live locally and would not relocate to the area.

The proposed groundwater recharge basin would require periodic maintenance, including occasional clearing of debris. Weed and pest control operations would be conducted as necessary, utilizing products approved for aquatic use in order to protect and preserve groundwater quality. Periodic earthwork operations would be required to maintain pond bottoms and levees and remove vegetative growth. The proposed project would also have the occasional need for battery upgrades or augmentation in the future, though these activities would occur on an as needed basis.

One daily trip to the project site would be required during operation. It is anticipated Rosedale staff visiting nearby facilities and would subsequently visit the project site in the same trip. It is therefore anticipated that maintenance workers would live locally, would potentially already be employed by Rosedale at the time of project implementation, and would not relocate to the area. If workers were required to relocate to the area, the additional population would not represent a substantial population change.

While the project would develop new energy system infrastructure, the project would store, and discharge energy derived from renewable sources to support energy demand for Rosedale's facilities to ensure grid reliability. The proposed groundwater recharge basin would recharge Rosedale supplies within the Kern County Subbasin of the San Joaquin Valley Groundwater Basin, which supports existing customers and agricultural operations. Because the project would support growth that is already anticipated to occur, the project would not indirectly encourage new development or induce population growth in the region due to the development of energy infrastructure. The project would not induce substantial unplanned population growth and impacts would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The proposed project would not displace any existing housing or people as the project site is currently vacant and undeveloped, with the exception of limited agricultural uses. The site is not used for housing and implementation of the proposed project would not preclude continued agricultural uses surrounding the project site nor future agricultural uses at the site. Therefore, no impact would occur.

NO IMPACT

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15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1 Fire protection?	☐	☐	■	☐
2 Police protection?	☐	☐	■	☐
3 Schools?	☐	☐	☐	■
4 Parks?	☐	☐	☐	■
5 Other public facilities?	☐	☐	☐	■

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The nearest fire station to the project site is Kern County Fire Station 67, located approximately 4.5 miles east of the project site at 14341 Brimhall Rd. in Bakersfield. Station 67 has a service area of 56 square miles, encompassing the project area (Kern County Fire Department 2025). Construction and future decommissioning of the project would not introduce uses that would necessitate the need for new or physically altered fire protection facilities. As discussed in Section 14, *Population and Housing*, the proposed project would not result in population growth and therefore, would not result in increased demand for fire protection services. However, operation of the project would include the use of lithium-ion batteries associated with the proposed BESS which can be explosive and flammable. Groundwater recharge, solar generation, and transmission line operations are not associated with the same fire risk.

In the event of a fire, the project could temporarily increase demand for fire protection. Numerous regulations exist for fire protection during the operation of BESSs to prevent fire due to the lithium-ion batteries. These fire protection systems would be designed in accordance with the 2022 California Fire Code (CCR Title 24, Part 9) or the version of the Fire Code that is current at the time of construction. The project would implement fire protection, prevention, and detection measures and design features in accordance with the 2022 California Fire Code, including redundant separate methods of failure detection. These redundant separate methods of failure detection would include installation of remote alarms for operations personnel and emergency response teams, including voltage, current, and temperature alarms from the battery management system. Other protective measures proposed in the BESS include ventilation, overcurrent protection, battery controls to operate the batteries within designated parameters, temperature and humidity controls, smoke detection, and maintenance in accordance with manufacturer guidelines. Implementation of applicable fire regulations and fire protection systems would reduce the risk of a battery fire requiring an emergency response.

In addition, the project would require development of an Emergency Action and Response Plan in advance of construction, pursuant to SB 38, to train local emergency response personnel during development and operation of the facility. Comprehensive training of local emergency response personnel would ensure emergency personnel are well-equipped and proficient in handling potential incidents at the BESS facility. Given the potential risk, particularly with lithium-ion batteries that may undergo explosive reactions in the presence of intense heat or fire, specialized emergency response protocols are essential for effectively

addressing such emergencies. The Emergency Action and Response Plan would be completed in accordance with existing state regulations (Health and Safety Code Section 25504(b); 19 CCR 2731; 22 CCR 66262.34[a][4]) and would be developed in consultation with the local fire departments and BESS supplier. The plan would also include defined roles and responsibilities and training for local first responders.

Implementation of the above fire protective measures during the project's operation would ensure the proposed project would not generate significant new demand for fire protection services beyond the demand that is already generated in the broader service area. The project would not require frequent action from emergency response or fire protection services to the extent that it would affect service ratios in a manner that would require expansion or construction of new facilities. Therefore, this impact would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The project site is served by the Kern County Sheriff's Department. The nearest police station to the project site is the North Area Substation, located at 181 East First Street in Buttonwillow, CA (approximately 13 miles west of the project site). The proposed project consists of groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines. The project would require periodic maintenance, but would not have permanent on-site employees. Additionally, the BESS containers would contain additional security features. Therefore, the proposed project would not generate substantial population growth and would not result in an increased demand for police protection services. As such, the proposed project would not result in the need for new or altered police protection facilities that could cause significant environmental impacts. This impact would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The proposed project would involve the construction and operation of a groundwater recharge basin consisting of two to three ponds, an elevated solar panel array, a BESS, and approximately 25 miles of power transmission lines. As described in Section 14, *Population and Housing*, the project does not include development of structures or infrastructure that would directly or indirectly result in population growth. Therefore, the proposed project would not increase demand for new or altered schools, parks, or public facilities, the construction of which could cause significant environmental impacts. No impacts would occur.

NO IMPACT

16 Recreation



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

As described in Section 14, *Population and Housing*, the project does not include development of housing or businesses that would directly or indirectly result in population growth. Therefore, the project would not increase the population served by local recreation facilities or otherwise result in increased demand for or degradation of those facilities. No impact would occur.

NO IMPACT

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As described in Section 14, *Population and Housing*, the proposed project does not include development of housing or businesses that would directly or indirectly result in population growth. Therefore, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. In addition, the proposed project would not include or require the construction or expansion of recreational facilities, the construction of which could have an adverse physical effect on the environment. Therefore, no impact would occur.

NO IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	■
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	☐	■
d. Result in inadequate emergency access?	☐	☐	☐	■

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Regional and local plans addressing the circulation system include the Kern Council of Governments 2022 Regional Transportation Plan and Sustainable Communities Strategy, and the Kern County General Plan Circulation Element. Access to the project site during construction, operation, and decommissioning would be provided by Superior Road. There are no transit stops located adjacent to the project site; the nearest transit stops are located approximately six miles east of the project site in the City of Bakersfield. There are no existing bicycle facilities on Superior Road, SR 43, or SR 58, and no new bicycle facilities are proposed for future installation near the project site. Superior Road does not contain sidewalks adjacent to the project site; the nearest sidewalks exist approximately two miles east of the project site, associated with neighborhoods within the City of Bakersfield.

On average, approximately 12 construction workers would be on the project site daily during construction. During construction, construction equipment staging and worker parking areas would be located throughout the project area. Project construction would not require the closure of adjacent roadways. Construction traffic would be temporary and limited to the duration of the approximately 34-month construction schedule. After construction is complete, operation of the proposed project would not generate substantial amounts of traffic. One daily trip to the project site would be required during operation, associated with periodic maintenance activities. Operation of the project would result in only a minor increase in vehicle trips compared to existing conditions, as Rosedale staff visit nearby facilities and would subsequently visit the project site in the same trip. This minimal level of additional trips generated would not have the potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Therefore, this impact would be less-than-significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state VMT exceeding an applicable threshold of significance may indicate a significant impact. In 2018, the Governor's Office of Planning and Research (OPR) published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* which provides thresholds for evaluating the potential significance of a project's VMT impacts. As stated in the Technical Advisory, projects that generate or

attract fewer than 110 passenger vehicle trips per day generally are assumed to have a less-than-significant impact related to VMT (OPR 2018).

Rosedale staff currently take vehicle trips to facilities near the project site. Once the project is operational, staff would make visits to the project site part of existing rounds. Therefore, the project would not result in new vehicle trips and would not generate new VMT. The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b), and no impact would occur.

NO IMPACT

c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

d. *Would the project result in inadequate emergency access?*

The proposed project would not require work in public rights-of-way or the reconfiguration or closure of any existing roads. During construction and future decommissioning, equipment staging and worker parking areas would be located throughout the project area and therefore would not result in substantial delays on nearby thoroughfares. As discussed under criterion 17(a), construction and operational traffic would be minimal and therefore would not result in transportation hazards or substantial delays in emergency access. In addition, the proposed project would be required to comply with Kern County Code Standards related to emergency access, including Municipal Code Chapter 4-1006, which sets standards for emergency access for fire apparatuses and emergency vehicles based on the Kern County Fire Chiefs Association, Fire Apparatus Access Road Standard. Therefore, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible use or result in inadequate emergency access. No impact would occur.

NO IMPACT

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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)?	☐	☐	☐	■
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.	☐	☐	☐	■

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 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)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 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?*

On July 1, 2015, Assembly Bill 52 (AB 52) was enacted, expanding CEQA by defining a new resource category, "tribal cultural resources." AB 52 states, "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" (PRC Section 21084.2). It further states the lead agency shall establish measures to avoid impacts altering the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Sections 21074 (a)(1)(A-B) define tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and are:

1. Listed or eligible for listing in the CRHR or in a local register of historical resources as defined in PRC Section 5020.1(k); or
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 PRC Section 5024.1(c). In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those having requested notice of projects proposed in the

jurisdiction of the lead agency. Although no tribes have requested notice of projects within Rosedale's jurisdiction, Rosedale conducted outreach and sent notification letters for the proposed project.

ASM Affiliates contacted the NAHC on August 14, 2024, to request a search of the Sacred Lands File (SLF) as well as an Assembly Bill 52 (AB 52) specific contact list of Native Americans culturally affiliated with the project site vicinity. The NAHC did not respond to the request; however, a separate request sent out on the same date for an adjacent project was returned with negative SLF results and six tribal contacts from six tribes. Rosedale deemed this response letter would be adequate for outreach for this project based on previous consultation experience in the area.

Outreach letters were mailed to all listed tribes on December 17, 2024, and follow-up emails were sent on January 3, 2025. Additional letters were sent to tribes on September 23, 2025 to include the transmission lines, which were not included in the original letters. Follow-up emails were also sent on October 9, 2025.

Pursuant to AB 52, Native American tribes have 30 days to respond and request further project information and formal consultation. The Santa Rosa Rancheria Tachi Yokut Tribe responded on January 3, 2025, stating in part, "due to the location of this project the Tribe will be deferring to the more local tribes of the area." Additionally, the Tejon Indian Tribe responded on October 8, 2025, stating, "In response to the project mentioned above, we don't currently have any knowledge of tribal cultural resources within the project. We do, however, know that the area was well-traveled by the Yokuts, Yowlumne, and Tulumne people. We recommend the project proceed as planned with the lone stipulation that the Tribe be notified if inadvertent discoveries are made."

None of the other contacted tribes responded to the consultation letters. Consultation was considered concluded on October 23, 2025, which is 30 days after the tribes were provided with the latest project description. Accordingly, AB 52 consultation for the project is complete. No tribal cultural resources listed or eligible for listing in the CRHR or in a local register of historical resources were identified within the project site. In addition, no tribal cultural resources were identified within or near the project site that have been determined by Rosedale (the lead agency) to be significant. Therefore, the project would not cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074 that is listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k) or that is a resource determined by United (the lead agency), in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). No impact would occur.

NO IMPACT

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	■
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

Minimal quantities of water would be needed for site grading and dust control over the expected project construction period as well as for PV panel washing and miscellaneous maintenance needs during project operation. The groundwater recharge basin component of the proposed project would supplement Rosedale's available water supply. Therefore, the project would not deplete the available regional water supply.

The project would include construction and operation of a groundwater recharge basin, pipelines, and other water supply infrastructure, the environmental effects of which are analyzed and mitigated throughout this Initial Study-Mitigated Negative Declaration . No additional new or expanded water facilities would be required. No additional impacts related to water facilities would occur.

Wastewater Treatment

The project would not require permanent on-site personnel and does not include the installation of permanent restroom facilities. Portable restrooms would be used for workers during construction and decommissioning. Therefore, the project would not require or result in the relocation or construction of new or expanded wastewater treatment. No impact would occur.

Stormwater Drainage

The project would include new stormwater quality management measures and BMPs in accordance with the Central Valley Water Board's Region-wide MS4 Permit (Order R5-2016-0040), the environmental effects of which are analyzed and mitigated throughout this Initial Study-Mitigated Negative Declaration. No additional new or expanded stormwater drainage facilities would be required other than those analyzed herein, and impacts would be less than significant.

Electric Power

The project is a hybrid renewable resource system that would power proposed project operations and connect to the PG&E grid, the environmental effects of which are analyzed and mitigated throughout this document. No additional new or expanded electric power facilities would be required other than those analyzed herein. Consequently, no additional impacts related to electric power facilities would occur.

Natural Gas

The project does not involve any components requiring natural gas service. Consequently, no impact related to natural gas facilities would occur.

Telecommunications

The project includes remote data collection systems for monitoring production, system health, and weather conditions, the environmental effects of which are analyzed and mitigated throughout this Initial Study-Mitigated Negative Declaration. No additional new or expanded telecommunications facilities would be required other than those analyzed herein, and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The purpose of the project is to facilitate groundwater recharge in the subbasin. The project would allow Rosedale to provide upwards of 6,000 AFY of additional groundwater recharge capacity, which would result in beneficial impacts related to groundwater supplies. The proposed solar facility would provide power for existing Rosedale water pumps and would provide shade for the groundwater recharge pond to prevent algae growth and reduce evaporation to increase groundwater recharge efficiency. Small quantities of water would be required during construction for dust suppression activities. This water use would be temporary and minimal and would ultimately be offset by Rosedale's increased groundwater recharge capacity that would occur following completion of the project. The project would not include habitable buildings or other structures requiring increased long-term water demand. Therefore, no impacts related to water supply would occur.

NO IMPACT

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

During construction, wastewater from construction personnel would be collected via portable facilities and would not require installation or expansion of wastewater infrastructure. In operation, the project would not require permanent on-site personnel and does not include installation of restroom facilities. No impact would occur

NO IMPACT

d. Would the project 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. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project site is currently undeveloped and would not require any demolition during construction. Construction and decommissioning activities would generate typical construction waste, such as equipment packaging, construction scrap, and debris. No excavated soil would be exported off-site during project construction. Construction would include minimal paving and grading activities and would generate minimal quantities of construction debris. Waste generated or encountered during construction would be handled, contained, transported, and/or disposed of according to local, state, and federal regulations.

Solid waste generated during project construction would be disposed of at the Shafter-Wasco Landfill. The Shafter-Wasco Landfill comprises approximately 357 acres and 135 acres are permitted for disposal. The landfill is expected to be operational through 2054 and can accept a maximum throughput of 1,500 tons of solid waste per day, The remaining capacity of the landfill is 12.8 million cubic yards (California Department of Resources Recycling and Recovery 2024).

The proposed project would not store or use any acutely or extremely hazardous materials in excess of threshold quantities established by the California Accidental Release Prevention Program, the California Code of Regulations, or federal Environmental Protection Agency regulations that would require additional regulatory requirements or environmental review. The construction contractor would adhere to State regulations pertaining to construction waste and recycling requirements, such as the California Green Building Standards Code, which requires diversion of at least 65 percent of construction debris. Earthmoving activities related to operation and maintenance would redistribute soils on-site and would not require off-site soil removal or disposal. Operation and maintenance of the project would not generate solid waste in excess of State or local standards, local infrastructure capacity, or otherwise impair the attainment of solid waste regulation goals and would comply with applicable statutes and regulations related to solid waste. Therefore, impacts related to solid waste would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
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 downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

b. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, 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. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project 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. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project site is not within a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone, as delineated by CAL FIRE's Fire Hazard Severity Zone Viewer (CAL FIRE 2024). The nearest fire hazard zone within a State Responsibility Zone is a moderate fire hazard zone located approximately 15 miles northeast of the project site. Associated roads and infrastructure, and agricultural lands separate the moderate fire hazard zone from the project site. The project site is not considered to be near a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone and would therefore not substantially impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, or expose people or structures to significant risks such as flooding, slope instability, or drainage changes. No impact would occur.

NO IMPACT

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21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	■	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 4, *Biological Resources*, the project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. In addition, as discussed in Section 5, *Cultural Resources*, the project would not eliminate important examples of the major periods of California history or prehistory. No impact would occur.

NO IMPACT

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described throughout this Initial Study-Mitigated Negative Declaration with respect to all environmental issues, the project would not result in significant and unmitigable impacts to the environment. All anticipated impacts associated with project construction, operation, and decommissioning would be either less than significant or less than significant with mitigation incorporated. The project would have no impact on land use and planning, mineral resources, noise (exposure within eleven miles of an airport), recreation, or wildfire. Thus, the project would not contribute to cumulative impacts for these resource topics, and these topics are not discussed further.

Section 15355 of the *CEQA Guidelines* defines a cumulative impact as the condition under which "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CCR Section 15355).

Project impacts are primarily temporary or localized effects that would occur from project construction. The potential for the project to contribute to cumulative impacts would be limited to the temporary periods of project construction activities and would be limited to the following issues.

Aesthetics

The geographic area used to assess cumulative impacts to aesthetics includes the viewshed of the agricultural environment experienced from public views on surface streets proximate to the project site. Cumulative development could result in cumulative changes to the visual environment by introducing development that are visually inconsistent with its surroundings, or introduce substantial light and glare. However, any planned development projects would be subject to the County's applicable regulations related to scenic quality, including the regulations within the Kern County Municipal Code. Any lighting related to future project construction and operation would be down-shielded to limit the potential for off-site lighting and glare impacts and unnecessary light intensity and glare would be reduced to minimize light spillover onto adjacent properties, in accordance with the County Zoning Ordinance contained comprising Title 19 of the Kern County Municipal Code. With adherence to County regulations related to aesthetics, cumulative development would have a less than significant impact related to aesthetics.

Agriculture and Forestry

The geographic area used to assess cumulative impacts to agriculture and forestry resources is Kern County. Cumulative development throughout the County could result in cumulative changes to agricultural lands and operations through conversion of farmland or proliferation of development with the potential to preclude agricultural uses. Any future development in the County would be subject to the policies and regulations contained within the Kern County General Plan and Municipal Code, including land use policies in the Land Use Element and zoning regulations contained within the County's Zoning Ordinance. As such, existing agricultural land in the County cannot be converted without undergoing appropriate permitting, approvals, and environmental review in coordination with the County. Adherence to established procedures would result in less than significant impacts to agricultural and forestry resources in the County throughout the buildout of reasonably foreseeable future cumulative development.

Air Quality

The geographic area used to assess cumulative impacts to air quality is the SJVAB. The evaluation of the project's potential to result in impacts to air quality is, in itself, a cumulative analysis, as the *CEQA Guidelines* Appendix G thresholds asks if the project would result in a cumulatively considerable net increase of a criteria pollutant for which the project region is in non-attainment. The SJVAB is a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$ under the NAAQS and/or CAAQS. Therefore, cumulative air quality impacts currently exist for these pollutants. As discussed in Section 3, *Air Quality*, proposed project construction, operation, and decommissioning would not generate emissions of these criteria air pollutants exceeding SJVAPCD's significance thresholds, which are intended to assess whether a project's contribution to existing cumulative air quality impacts is considerable. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable.

Biological Resources

The geographic area used to assess cumulative impacts to biological resources considers the cumulative effects of habitat disturbance and species impacts within Kern County and the Metropolitan Bakersfield planning area. Cumulative projects in this region would contribute to ongoing habitat fragmentation and potential impacts to special-status species, nesting birds, and sensitive habitats. However, these projects are subject to existing federal, state, and local regulations, including the Federal and California Endangered Species Acts, Migratory Bird Treaty Act, and Kern County General Plan policies, which require avoidance, minimization, and mitigation of biological resource impacts.

The proposed project, in combination with other cumulative development, could result in incremental impacts to special-status species and nesting birds. To reduce these impacts, the project incorporates mitigation measures such as seasonally timed Kern mallow surveys and avoidance (BIO-1(a)), a Worker Environmental Awareness Program (BIO-1(b)), reptile and amphibian avoidance and minimization (BIO-1(c)), burrowing owl impact avoidance and minimization (BIO-1(d)), Swainson's hawk pre-construction survey and avoidance (BIO-1(e)), pre-construction nesting bird survey and avoidance (BIO-1(f)), and Tipton kangaroo rat and San Joaquin kit fox avoidance and minimization (BIO-1(g)). With implementation of these measures and compliance with applicable regulations, the project's contribution to cumulative biological resources impacts would be less than significant.

Cultural Resources

The geographic area used to assess cumulative impacts to cultural resources considers the cumulative effects of ground disturbance impacts within Kern County and the Metropolitan Bakersfield Planning Area. Cumulative projects in this region would contribute to ongoing impacts to the significance of historical and archaeological resources and human remains. The proposed project, in combination with other cumulative development, could result in incremental impacts to archaeological resources. To reduce these impacts, the project incorporates a mitigation measure that establishes a protocol for the unanticipated discovery of cultural resources (CUL-1). With implementation of these measures and compliance with applicable regulations, the project's contribution to cumulative cultural resources impacts would be less than significant.

Energy

The geographic area used to assess cumulative impacts to energy considers the cumulative effects of energy use in the County. Cumulative projects would be subject to State requirements for energy efficiency, such as the California Building Energy Efficiency Standards and the California Green Building Standards Code which would ensure projects are designed and constructed to be energy efficient. Construction of cumulative development would be carried out in accordance with CCR Title 13 Sections 2449 and 2485 which would ensure construction would not use energy in a wasteful, inefficient, or unnecessary manner. Because cumulative development would be required to comply with existing state regulations for energy-efficiency, cumulative development would not result in a significant impact related to energy.

Geology and Soils

Geologic hazards are dependent on site-specific conditions, such that development at one project site would not increase another project's geologic hazards impacts. Therefore, this discussion pertains to cumulative impacts to paleontological resources. The geographic area used to assess cumulative impacts to paleontological resources is development within the southwestern portion of the San Joaquin Valley. Cumulative development within San Joaquin Valley would continue to disturb areas with the potential to contain paleontological resources. Cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential paleontological resources impacts and mitigate those impacts appropriately. This analysis conservatively assumes a significant cumulative impact to paleontological resources would occur. The proposed project would be

required to implement Mitigation Measures MM-GEO-1 and MM-GEO-2 which would halt any earth moving activities and require consultation with a qualified paleontologist in the event an unearthed fossil is discovered. In the case of an inadvertent discovery, the recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data such that any potential paleontological resources are preserved. Implementation of Mitigation Measures MM-GEO-1 and MM-GEO-2 would ensure the proposed project would not result in a cumulatively considerable contribution to cumulative paleontological resources impacts.

Greenhouse Gas Emissions

GHG emissions and climate change are, by definition, cumulative impacts. The adverse environmental impacts of cumulative GHG emissions, including sea level rise, increased average temperatures, more drought years, and more large forest fires, are already occurring. As a result, cumulative impacts related to GHG emissions are significant. Thus, the issue of climate change involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. As discussed in Section 8, *Greenhouse Gas Emissions,* the proposed project would be consistent with plans to minimize GHG emissions, including the SJVAPCD CCAP. Additionally, operation of the proposed project would ultimately result in an expansion of renewable energy technology which would promote the reduction of fossil fuel use and associated GHG emissions. Therefore, the project's impact would not be cumulatively considerable.

Hazards and Hazardous Materials

The geographic area used to assess cumulative impacts to hazards and hazardous materials includes the area within five miles of the project site, as hazardous materials releases from cumulative development could result exposure of people to hazardous materials proximate to the project site. Cumulative development would use hazardous materials, such as fuels and solvents during construction and includes agricultural and industrial projects with the potential to handle hazardous wastes during operation. The use, disposal, and transportation of hazardous materials for cumulative projects could potentially result in the release of hazardous materials which could create a significant hazard to the public within five miles of the proposed project. Cumulative projects would be required to comply with regulations applicable to the use, disposal, and transportation of hazardous materials during construction and operation. Compliance with applicable regulations would ensure that potential cumulative impacts of the project are less than significant.

Hydrology and Water Quality

The geographic area used to assess cumulative impacts to surface water is the Tulare Lake Hydrologic Basin Planning Area. The geographic area used to assess cumulative impacts to groundwater is land overlying the Kern County Subbasin. A cumulative impact could occur if future projects would discharge pollutants to the same watershed and violate water quality standards, or if these projects underly the same groundwater basin and would result in substantially decreased groundwater supplies. Cumulative projects would be required to comply with federal, State, and City water quality requirements, such as the Construction Stormwater General Permit the subbasin GSP. These regulations would require implementation of BMPs to maintain and treat stormwater and prohibit waste discharge in or adjacent to water bodies or into the water table. Cumulative impacts to hydrology and surface water quality would be minimized with adherence to these regulations. Therefore, cumulative impacts would be less than significant.

Cumulative development could result in increased water demand from the Kern County Subbasin. However, all water use would occur in compliance with the Kern County Subbasin GSP. As a result, cumulative impacts related to sustainable groundwater management would be less than significant.

Noise

The geographic area used to assess cumulative noise impacts considers the cumulative effects of construction and operational noise from projects in Kern County. Cumulative development could result in temporary increases in noise levels during construction and minor operational noise from new facilities. However, all cumulative projects would be subject to Kern County Code Section 8.36.020(H), which restricts construction hours, and applicable CEQA requirements, ensuring noise-generating activities occur during daytime hours and incorporate BMPs to minimize noise. Additionally, operational noise sources would be required to comply with the Kern County General Plan Noise Element, which limits exterior noise levels at sensitive receptors to 65 dBA Ldn. The proposed project would implement these requirements and would not exceed applicable thresholds for construction or operational noise. Therefore, when considered with other projects, the proposed project would not make a cumulatively considerable contribution to cumulative noise impacts, and impacts would be less than significant.

Population and Housing

Cumulative development within the County might include transportation, residential, commercial, and industrial projects which could result in direct impacts to population growth (due to the proposal of new homes and businesses) and indirect impacts to population growth (due to the expansion of transportation services and related infrastructure). The development of cumulative projects could potentially result in substantial population growth within the County. However, cumulative projects would be developed in accordance with the population and housing projections of the Kern County General Plan goals and policies and the Kern Council of Governments Regional Housing Needs Plan. Compliance with applicable regulations would result in a less than significant cumulative impact.

Public Services

The geographic area used to assess cumulative transportation impacts is Kern County. A cumulative impact to public services could occur if cumulative development would result in substantial adverse physical impacts to existing facilities or the need for new governmental facilities, or would adversely affect acceptable service ratios, response times, or other performance objectives. Cumulative development would create additional residential development within the County. Additional populations sustained from new residential development would require the use of public services, such as fire and police protection. Therefore, cumulative impacts are potentially significant. The proposed project would not result in an increase in population and would not require frequent action from emergency services. Therefore, the project would not contribute to substantial public service impacts.

Transportation

The geographic area used to assess cumulative transportation impacts is Kern County. A cumulative transportation impact could occur if cumulative development would result in exceedance of long-term Governor's OPR VMT threshold values. Cumulative development in the County includes residential, commercial, and industrial projects which could increase population, employment, and subsequently citywide VMT. Therefore, cumulative impacts are potentially significant. The proposed project would be require only periodic maintenance during operations and is expected to generate only one new trip per day. This minimal generation of trips would not exceed the State's threshold for VMT screening and therefore is presumed to not generate substantial VMT. Therefore, the project would not contribute to substantial cumulative VMT increases.

Tribal Cultural Resources

The geographic area used to assess cumulative impacts to tribal cultural resources considers the cumulative effects of ground disturbance impacts within Kern County and the Metropolitan Bakersfield Planning Area. Cumulative projects in this region would contribute to ongoing impacts to the significance of historical and archaeological resources and human remains. The proposed project would have no

impacts to tribal cultural resources. Therefore, the project would not contribute to cumulative impacts to tribal cultural resources.

Utilities and Service Systems

The project would have no impact on wastewater, electric, natural gas, or telecommunications infrastructure; therefore, these utilities are not discussed herein. The geographic area used to assess cumulative utilities and service systems impacts is the West Kern Water District service area for water and Kern County for solid waste disposal. A cumulative utilities and service systems impact could occur if cumulative development would increase water demand in the Kern County Subbasin service area such that the Kern County Subbasin cannot adequately meet cumulative demands, or generate solid waste that exceeds the current landfill capacity. According to the Kern County Subbasin Groundwater Sustainability Plan, the sustainable yield for the Kern County Subbasin has been conservatively estimated to be approximately 1.31 million AFY based on results for the historical period using model-calculated groundwater pumping and recharge (Kern County Subbasin 2025). Therefore, assuming regulatory compliance with the existing GSP for the region, cumulative development would be adequately served by the Kern County Subbasin's existing supply, and cumulative water supply impacts would be less than significant. The Shafer-Wasco Landfill, located approximately 14 miles from the project site and generally serving Kern County has an anticipated closure date of 2059 (Cal Recycle 2021). Additionally, the Taft Landfill within Kern County has an anticipated cease operation date from 2078 to 2076 (CalRecycle 2025). Accordingly, sufficient landfill capacity exists to serve cumulative development. Therefore, cumulative impacts to solid waste would be less than significant.

Based on the above, the project does not have impacts that are individually limited, but cumulatively considerable.

LESS-THAN-SIGNIFICANT IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Adverse effects on human beings are typically associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in Section 3, *Air Quality;* Section 9, *Hazards and Hazardous Materials*; and Section 13, *Noise*, implementation of the Project would result in less than significant environmental impacts with respect to air quality, noise, and hazards and hazardous materials.

LESS-THAN-SIGNIFICANT IMPACT

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Appendix A

CalEEMod Modeling Outputs

Dillard Groundwater Recharge and Solar Project - Data Request Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Dillard Groundwater Recharge and Solar Project - Data Request
Construction Start Date	6/1/2025
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	18.0
Location	35.361518, -119.242389
County	Kern-San Joaquin
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2815
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	100	Acre	100	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-6	Use Diesel Particulate Filters

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.51	0.50	2.83	25.8	0.04	0.08	0.21	0.30	0.08	0.05	0.13	—	4,832	4,832	0.20	0.05	0.85	4,851
Mit.	0.51	0.50	2.83	25.8	0.04	0.04	0.21	0.26	0.04	0.05	0.09	—	4,832	4,832	0.20	0.05	0.85	4,851
% Reduced	—	—	—	—	—	50%	—	14%	50%	—	31%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.50	0.49	2.84	25.4	0.04	0.08	0.21	0.30	0.08	0.05	0.13	—	4,803	4,803	0.19	0.05	0.02	4,821
Mit.	0.50	0.49	2.84	25.4	0.04	0.04	0.21	0.26	0.04	0.05	0.09	—	4,803	4,803	0.19	0.05	0.02	4,821
% Reduced	—	—	—	—	—	50%	—	14%	50%	—	31%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.21	1.60	10.7	0.02	0.04	0.13	0.16	0.04	0.03	0.06	—	2,017	2,017	0.08	0.02	0.20	2,024
Mit.	0.21	0.21	1.60	10.7	0.02	0.02	0.13	0.14	0.02	0.03	0.04	—	2,017	2,017	0.08	0.02	0.20	2,024
% Reduced	—	—	—	—	—	50%	—	8%	50%	—	22%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.04	0.04	0.29	1.95	< 0.005	0.01	0.02	0.03	0.01	0.01	0.01	—	334	334	0.01	< 0.005	0.03	335
Mit.	0.04	0.04	0.29	1.95	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	334	334	0.01	< 0.005	0.03	335
% Reduced	—	—	—	—	—	50%	—	8%	50%	—	22%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.51	0.50	2.27	25.8	0.04	0.08	0.21	0.30	0.08	0.05	0.13	—	4,832	4,832	0.20	0.05	0.85	4,851
2026	0.32	0.31	2.83	14.7	0.02	0.04	0.21	0.26	0.04	0.05	0.09	—	2,515	2,515	0.10	0.03	0.76	2,526
2027	0.25	0.25	1.63	12.5	0.02	0.04	0.15	0.19	0.04	0.04	0.07	—	2,126	2,126	0.08	0.02	0.49	2,135
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.50	0.49	2.29	25.4	0.04	0.08	0.21	0.30	0.08	0.05	0.13	—	4,803	4,803	0.19	0.05	0.02	4,821
2026	0.31	0.30	2.84	14.3	0.02	0.04	0.21	0.26	0.04	0.05	0.09	—	2,487	2,487	0.10	0.03	0.02	2,497
2027	0.24	0.24	1.64	12.3	0.02	0.04	0.15	0.19	0.04	0.04	0.07	—	2,106	2,106	0.08	0.02	0.01	2,114
2028	0.24	0.23	1.63	12.2	0.02	0.04	0.15	0.19	0.04	0.04	0.07	—	2,103	2,103	0.08	0.02	0.01	2,112
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.21	0.21	0.95	10.7	0.02	0.04	0.09	0.12	0.04	0.02	0.06	—	2,017	2,017	0.08	0.02	0.15	2,024
2026	0.19	0.19	1.60	8.83	0.01	0.03	0.13	0.16	0.03	0.03	0.06	—	1,582	1,582	0.06	0.02	0.20	1,589
2027	0.16	0.16	1.12	8.21	0.01	0.03	0.08	0.11	0.03	0.02	0.04	—	1,434	1,434	0.06	0.01	0.11	1,440
2028	0.04	0.04	0.29	2.18	< 0.005	0.01	0.03	0.03	0.01	0.01	0.01	—	376	376	0.01	< 0.005	0.03	377
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.04	0.17	1.95	< 0.005	0.01	0.02	0.02	0.01	< 0.005	0.01	—	334	334	0.01	< 0.005	0.03	335

2026	0.03	0.03	0.29	1.61	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	262	262	0.01	< 0.005	0.03	263
2027	0.03	0.03	0.20	1.50	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	237	237	0.01	< 0.005	0.02	238
2028	0.01	0.01	0.05	0.40	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	62.2	62.2	< 0.005	< 0.005	0.01	62.4

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.51	0.50	2.27	25.8	0.04	0.04	0.21	0.26	0.04	0.05	0.09	—	4,832	4,832	0.20	0.05	0.85	4,851
2026	0.32	0.31	2.83	14.7	0.02	0.02	0.21	0.24	0.02	0.05	0.07	—	2,515	2,515	0.10	0.03	0.76	2,526
2027	0.25	0.25	1.63	12.5	0.02	0.02	0.15	0.17	0.02	0.04	0.05	—	2,126	2,126	0.08	0.02	0.49	2,135
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.50	0.49	2.29	25.4	0.04	0.04	0.21	0.26	0.04	0.05	0.09	—	4,803	4,803	0.19	0.05	0.02	4,821
2026	0.31	0.30	2.84	14.3	0.02	0.02	0.21	0.24	0.02	0.05	0.07	—	2,487	2,487	0.10	0.03	0.02	2,497
2027	0.24	0.24	1.64	12.3	0.02	0.02	0.15	0.17	0.02	0.04	0.05	—	2,106	2,106	0.08	0.02	0.01	2,114
2028	0.24	0.23	1.63	12.2	0.02	0.02	0.15	0.17	0.02	0.04	0.05	—	2,103	2,103	0.08	0.02	0.01	2,112
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.21	0.21	0.95	10.7	0.02	0.02	0.09	0.11	0.02	0.02	0.04	—	2,017	2,017	0.08	0.02	0.15	2,024
2026	0.19	0.19	1.60	8.83	0.01	0.01	0.13	0.14	0.01	0.03	0.04	—	1,582	1,582	0.06	0.02	0.20	1,589
2027	0.16	0.16	1.12	8.21	0.01	0.01	0.08	0.09	0.01	0.02	0.03	—	1,434	1,434	0.06	0.01	0.11	1,440
2028	0.04	0.04	0.29	2.18	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	376	376	0.01	< 0.005	0.03	377
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.04	0.04	0.17	1.95	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	334	334	0.01	< 0.005	0.03	335
2026	0.03	0.03	0.29	1.61	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	262	262	0.01	< 0.005	0.03	263
2027	0.03	0.03	0.20	1.50	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	0.01	—	237	237	0.01	< 0.005	0.02	238

2028	0.01	0.01	0.05	0.40	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	62.2	62.2	< 0.005	< 0.005	0.01	62.4

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	9.11	9.11	< 0.005	< 0.005	0.03	9.29
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	8.37	8.37	< 0.005	< 0.005	< 0.005	8.53
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	8.58	8.58	< 0.005	< 0.005	0.01	8.74
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.12	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	1.42	1.42	< 0.005	< 0.005	< 0.005	1.45

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.11	9.11	< 0.005	< 0.005	0.03	9.29
Area	0.67	0.67	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	9.11	9.11	< 0.005	< 0.005	0.03	9.29
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	8.37	8.37	< 0.005	< 0.005	< 0.005	8.53
Area	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	8.37	8.37	< 0.005	< 0.005	< 0.005	8.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	8.58	8.58	< 0.005	< 0.005	0.01	8.74
Area	0.67	0.67	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	8.58	8.58	< 0.005	< 0.005	0.01	8.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.42	1.42	< 0.005	< 0.005	< 0.005	1.45
Area	0.12	0.12	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.12	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	1.42	1.42	< 0.005	< 0.005	< 0.005	1.45

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	9.11	9.11	< 0.005	< 0.005	0.03	9.29
Area	0.67	0.67	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	9.11	9.11	< 0.005	< 0.005	0.03	9.29
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	8.37	8.37	< 0.005	< 0.005	< 0.005	8.53
Area	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	8.37	8.37	< 0.005	< 0.005	< 0.005	8.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	8.58	8.58	< 0.005	< 0.005	0.01	8.74
Area	0.67	0.67	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.68	0.68	< 0.005	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	8.58	8.58	< 0.005	< 0.005	0.01	8.74
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.42	1.42	< 0.005	< 0.005	< 0.005	1.45
Area	0.12	0.12	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	0.12	0.12	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	1.42	1.42	< 0.005	< 0.005	< 0.005	1.45

3. Construction Emissions Details

3.1. Phase A (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	2.20	24.5	0.04	0.08	—	0.08	0.08	—	0.08	—	4,596	4,596	0.19	0.04	—	4,611
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	2.20	24.5	0.04	0.08	—	0.08	0.08	—	0.08	—	4,596	4,596	0.19	0.04	—	4,611
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.18	0.92	10.3	0.02	0.04	—	0.04	0.04	—	0.04	—	1,926	1,926	0.08	0.02	—	1,933
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.17	1.87	< 0.005	0.01	—	0.01	0.01	—	0.01	—	319	319	0.01	< 0.005	—	320
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	1.32	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	236	236	0.01	0.01	0.85	240
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.91	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	207	207	< 0.005	0.01	0.02	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.03	0.03	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	90.1	90.1	< 0.005	< 0.005	0.15	91.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Phase A (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	2.20	24.5	0.04	0.04	—	0.04	0.04	—	0.04	—	4,596	4,596	0.19	0.04	—	4,611
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.42	2.20	24.5	0.04	0.04	—	0.04	0.04	—	0.04	—	4,596	4,596	0.19	0.04	—	4,611
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.18	0.92	10.3	0.02	0.02	—	0.02	0.02	—	0.02	—	1,926	1,926	0.08	0.02	—	1,933
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.17	1.87	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	319	319	0.01	< 0.005	—	320
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.07	1.32	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	236	236	0.01	0.01	0.85	240
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.91	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	207	207	< 0.005	0.01	0.02	210
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.41	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	90.1	90.1	< 0.005	< 0.005	0.15	91.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Phase B (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.37	8.97	0.02	0.03	—	0.03	0.03	—	0.03	—	1,691	1,691	0.07	0.01	—	1,696
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.37	8.97	0.02	0.03	—	0.03	0.03	—	0.03	—	1,691	1,691	0.07	0.01	—	1,696

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.32	2.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	398	398	0.02	< 0.005	—	400
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.9	65.9	< 0.005	< 0.005	—	66.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	1.04	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	198	198	< 0.005	0.01	0.65	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.71	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	174	174	< 0.005	0.01	0.02	176
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.07	43.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Phase B (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.37	8.97	0.02	0.01	—	0.01	0.01	—	0.01	—	1,691	1,691	0.07	0.01	—	1,696
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.37	8.97	0.02	0.01	—	0.01	0.01	—	0.01	—	1,691	1,691	0.07	0.01	—	1,696
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.32	2.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	398	398	0.02	< 0.005	—	400
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.9	65.9	< 0.005	< 0.005	—	66.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.06	1.04	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	198	198	< 0.005	0.01	0.65	201
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.07	0.71	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	174	174	< 0.005	0.01	0.02	176
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.5	42.5	< 0.005	< 0.005	0.07	43.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.04	7.04	< 0.005	< 0.005	0.01	7.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Phase C (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.23	0.23	2.76	13.5	0.02	0.04	—	0.04	0.04	—	0.04	—	2,284	2,284	0.09	0.02	—	2,292
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	2.76	13.5	0.02	0.04	—	0.04	0.04	—	0.04	—	2,284	2,284	0.09	0.02	—	2,292
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	1.15	5.61	0.01	0.02	—	0.02	0.02	—	0.02	—	951	951	0.04	0.01	—	955
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.21	1.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	157	157	0.01	< 0.005	—	158

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.21	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	231	231	< 0.005	0.01	0.76	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.83	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.38	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.7	87.7	< 0.005	< 0.005	0.14	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	0.02	14.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Phase C (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	2.76	13.5	0.02	0.02	—	0.02	0.02	—	0.02	—	2,284	2,284	0.09	0.02	—	2,292
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.23	2.76	13.5	0.02	0.02	—	0.02	0.02	—	0.02	—	2,284	2,284	0.09	0.02	—	2,292
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	1.15	5.61	0.01	0.01	—	0.01	0.01	—	0.01	—	951	951	0.04	0.01	—	955
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.21	1.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	157	157	0.01	< 0.005	—	158
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.21	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	231	231	< 0.005	0.01	0.76	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.83	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	203	203	< 0.005	0.01	0.02	205
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.38	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.7	87.7	< 0.005	< 0.005	0.14	88.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	0.02	14.7

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Phase D (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.37	8.97	0.02	0.03	—	0.03	0.03	—	0.03	—	1,691	1,691	0.07	0.01	—	1,696
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	103	103	< 0.005	< 0.005	—	103
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.0	17.0	< 0.005	< 0.005	—	17.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Phase D (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.16	0.16	1.37	8.97	0.02	0.01	—	0.01	0.01	—	0.01	—	1,691	1,691	0.07	0.01	—	1,696
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	103	103	< 0.005	< 0.005	—	103
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.0	17.0	< 0.005	< 0.005	—	17.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Phase D (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	1.37	8.97	0.02	0.03	—	0.03	0.03	—	0.03	—	1,691	1,691	0.07	0.01	—	1,696
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.24	1.58	< 0.005	0.01	—	0.01	0.01	—	0.01	—	298	298	0.01	< 0.005	—	299
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	49.3	49.3	< 0.005	< 0.005	—	49.5

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Phase D (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.16	0.16	1.37	8.97	0.02	0.01	—	0.01	0.01	—	0.01	—	1,691	1,691	0.07	0.01	—	1,696
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.03	0.03	0.24	1.58	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	298	298	0.01	< 0.005	—	299
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.01	0.01	0.04	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	49.3	49.3	< 0.005	< 0.005	—	49.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Phase E (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.19	1.59	11.7	0.02	0.04	—	0.04	0.04	—	0.04	—	1,964	1,964	0.08	0.02	—	1,971
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.19	1.59	11.7	0.02	0.04	—	0.04	0.04	—	0.04	—	1,964	1,964	0.08	0.02	—	1,971
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.10	0.85	6.31	0.01	0.02	—	0.02	0.02	—	0.02	—	1,057	1,057	0.04	0.01	—	1,061
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	1.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	175	175	0.01	< 0.005	—	176
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.80	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	162	162	< 0.005	0.01	0.49	164
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.54	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	142	142	< 0.005	0.01	0.01	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.32	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.3	79.3	< 0.005	< 0.005	0.11	80.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.02	13.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Phase E (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.19	1.59	11.7	0.02	0.02	—	0.02	0.02	—	0.02	—	1,964	1,964	0.08	0.02	—	1,971
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.19	1.59	11.7	0.02	0.02	—	0.02	0.02	—	0.02	—	1,964	1,964	0.08	0.02	—	1,971
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.10	0.10	0.85	6.31	0.01	0.01	—	0.01	0.01	—	0.01	—	1,057	1,057	0.04	0.01	—	1,061
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	1.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	175	175	0.01	< 0.005	—	176
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.80	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	162	162	< 0.005	0.01	0.49	164
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.54	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	142	142	< 0.005	0.01	0.01	144
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.32	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.3	79.3	< 0.005	< 0.005	0.11	80.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.02	13.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Phase E (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.19	1.59	11.7	0.02	0.04	—	0.04	0.04	—	0.04	—	1,964	1,964	0.08	0.02	—	1,971
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.28	2.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	350	350	0.01	< 0.005	—	351
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.05	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.9	57.9	< 0.005	< 0.005	—	58.1
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.51	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	139	139	< 0.005	0.01	0.01	141
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.7	25.7	< 0.005	< 0.005	0.03	26.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.26	4.26	< 0.005	< 0.005	0.01	4.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Phase E (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.19	1.59	11.7	0.02	0.02	—	0.02	0.02	—	0.02	—	1,964	1,964	0.08	0.02	—	1,971
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.28	2.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	350	350	0.01	< 0.005	—	351
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.9	57.9	< 0.005	< 0.005	—	58.1
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.51	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	139	139	< 0.005	0.01	0.01	141
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.7	25.7	< 0.005	< 0.005	0.03	26.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.26	4.26	< 0.005	< 0.005	0.01	4.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	0.34	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.33	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.67	0.67	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.34	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.33	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.12	0.12	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.34	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.33	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.67	0.67	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.34	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.33	0.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.67	0.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.12	0.12	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Phase A	Demolition	6/1/2025	12/31/2025	5.00	153	—

Phase B	Site Preparation	1/1/2026	4/30/2026	5.00	86.0	—
Phase C	Grading	5/1/2026	11/30/2026	5.00	152	—
Phase D	Building Construction	12/1/2026	3/31/2027	5.00	87.0	—
Phase E	Paving	4/1/2027	3/31/2028	5.00	262	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Phase A	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase A	Plate Compactors	Diesel	Tier 4 Final	1.00	8.00	8.00	0.43
Phase A	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	87.0	0.43
Phase A	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Phase A	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Phase A	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase A	Scrapers	Diesel	Tier 4 Final	1.00	8.00	423	0.48
Phase B	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase B	Plate Compactors	Diesel	Tier 4 Final	1.00	8.00	8.00	0.43
Phase B	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase B	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Phase B	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Phase B	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase C	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase C	Bore/Drill Rigs	Diesel	Tier 4 Final	1.00	8.00	83.0	0.50
Phase C	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Phase C	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29

Phase C	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Phase C	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase C	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Phase D	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase D	Plate Compactors	Diesel	Tier 4 Final	1.00	8.00	8.00	0.43
Phase D	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase D	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Phase D	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Phase D	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase E	Aerial Lifts	Diesel	Tier 4 Final	1.00	8.00	46.0	0.31
Phase E	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase E	Bore/Drill Rigs	Diesel	Tier 4 Final	1.00	8.00	83.0	0.50
Phase E	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase E	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Phase A	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase A	Plate Compactors	Diesel	Tier 4 Final	1.00	8.00	8.00	0.43
Phase A	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	87.0	0.43
Phase A	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Phase A	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Phase A	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase A	Scrapers	Diesel	Tier 4 Final	1.00	8.00	423	0.48
Phase B	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37

Phase B	Plate Compactors	Diesel	Tier 4 Final	1.00	8.00	8.00	0.43
Phase B	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase B	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Phase B	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Phase B	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase C	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase C	Bore/Drill Rigs	Diesel	Tier 4 Final	1.00	8.00	83.0	0.50
Phase C	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Phase C	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase C	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Phase C	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase C	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Phase D	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase D	Plate Compactors	Diesel	Tier 4 Final	1.00	8.00	8.00	0.43
Phase D	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase D	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Phase D	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
Phase D	Pumps	Diesel	Tier 4 Final	1.00	8.00	11.0	0.74
Phase E	Aerial Lifts	Diesel	Tier 4 Final	1.00	8.00	46.0	0.31
Phase E	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Phase E	Bore/Drill Rigs	Diesel	Tier 4 Final	1.00	8.00	83.0	0.50
Phase E	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
Phase E	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase A	—	—	—	—
Phase A	Worker	17.5	17.3	LDA,LDT1,LDT2
Phase A	Vendor	—	10.6	HHDT,MHDT
Phase A	Hauling	0.00	20.0	HHDT
Phase A	Onsite truck	—	—	HHDT
Phase B	—	—	—	—
Phase B	Worker	15.0	17.3	LDA,LDT1,LDT2
Phase B	Vendor	—	10.6	HHDT,MHDT
Phase B	Hauling	0.00	20.0	HHDT
Phase B	Onsite truck	—	—	HHDT
Phase C	—	—	—	—
Phase C	Worker	17.5	17.3	LDA,LDT1,LDT2
Phase C	Vendor	—	10.6	HHDT,MHDT
Phase C	Hauling	0.00	20.0	HHDT
Phase C	Onsite truck	—	—	HHDT
Phase D	—	—	—	—
Phase D	Worker	0.00	17.3	LDA,LDT1,LDT2
Phase D	Vendor	0.00	10.6	HHDT,MHDT
Phase D	Hauling	0.00	20.0	HHDT
Phase D	Onsite truck	—	—	HHDT
Phase E	—	—	—	—
Phase E	Worker	12.5	17.3	LDA,LDT1,LDT2
Phase E	Vendor	—	10.6	HHDT,MHDT
Phase E	Hauling	0.00	20.0	HHDT
Phase E	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Phase A	—	—	—	—
Phase A	Worker	17.5	17.3	LDA,LDT1,LDT2
Phase A	Vendor	—	10.6	HHDT,MHDT
Phase A	Hauling	0.00	20.0	HHDT
Phase A	Onsite truck	—	—	HHDT
Phase B	—	—	—	—
Phase B	Worker	15.0	17.3	LDA,LDT1,LDT2
Phase B	Vendor	—	10.6	HHDT,MHDT
Phase B	Hauling	0.00	20.0	HHDT
Phase B	Onsite truck	—	—	HHDT
Phase C	—	—	—	—
Phase C	Worker	17.5	17.3	LDA,LDT1,LDT2
Phase C	Vendor	—	10.6	HHDT,MHDT
Phase C	Hauling	0.00	20.0	HHDT
Phase C	Onsite truck	—	—	HHDT
Phase D	—	—	—	—
Phase D	Worker	0.00	17.3	LDA,LDT1,LDT2
Phase D	Vendor	0.00	10.6	HHDT,MHDT
Phase D	Hauling	0.00	20.0	HHDT
Phase D	Onsite truck	—	—	HHDT
Phase E	—	—	—	—
Phase E	Worker	12.5	17.3	LDA,LDT1,LDT2
Phase E	Vendor	—	10.6	HHDT,MHDT
Phase E	Hauling	0.00	20.0	HHDT
Phase E	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Phase A	0.00	0.00	0.00	0.00	—
Phase B	0.00	0.00	0.00	0.00	—
Phase C	0.00	0.00	0.00	0.00	—
Phase E	0.00	0.00	0.00	0.00	100

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Other Non-Asphalt Surfaces	100	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1.00	1.00	1.00	365	10.0	10.0	10.0	3,650

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	261,360

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Non-Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Other Non-Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Non-Asphalt Surfaces	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Non-Asphalt Surfaces	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	23.3	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2

Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	98.5
AQ-DPM	9.21
Drinking Water	97.2
Lead Risk Housing	9.87
Pesticides	87.4
Toxic Releases	44.4
Traffic	13.0
Effect Indicators	—

CleanUp Sites	0.00
Groundwater	10.6
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	0.00
Solid Waste	22.1
Sensitive Population	—
Asthma	15.1
Cardio-vascular	63.0
Low Birth Weights	21.6
Socioeconomic Factor Indicators	—
Education	36.6
Housing	0.81
Linguistic	37.0
Poverty	26.2
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	89.32375209
Employed	71.97484922
Median HI	85.85910432
Education	—
Bachelor's or higher	55.60118055
High school enrollment	26.24149878
Preschool enrollment	60.77248813
Transportation	—

Auto Access	74.57975106
Active commuting	2.643397921
Social	—
2-parent households	69.44693956
Voting	84.02412421
Neighborhood	—
Alcohol availability	84.46041319
Park access	16.46349288
Retail density	9.893494161
Supermarket access	25.75388169
Tree canopy	5.440780187
Housing	—
Homeownership	90.85076351
Housing habitability	97.49775439
Low-inc homeowner severe housing cost burden	94.81586039
Low-inc renter severe housing cost burden	89.06711151
Uncrowded housing	81.14974978
Health Outcomes	—
Insured adults	93.81496215
Arthritis	88.7
Asthma ER Admissions	77.1
High Blood Pressure	84.3
Cancer (excluding skin)	63.4
Asthma	58.2
Coronary Heart Disease	90.3
Chronic Obstructive Pulmonary Disease	81.8
Diagnosed Diabetes	90.6
Life Expectancy at Birth	46.3

Cognitively Disabled	66.4
Physically Disabled	57.4
Heart Attack ER Admissions	25.6
Mental Health Not Good	60.0
Chronic Kidney Disease	90.3
Obesity	48.4
Pedestrian Injuries	19.6
Physical Health Not Good	81.0
Stroke	91.3
Health Risk Behaviors	—
Binge Drinking	3.0
Current Smoker	47.6
No Leisure Time for Physical Activity	68.2
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	40.5
Elderly	62.6
English Speaking	82.2
Foreign-born	19.4
Outdoor Workers	36.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	74.0
Traffic Density	17.4
Traffic Access	0.0
Other Indices	—
Hardship	21.8
Other Decision Support	—

2016 Voting	75.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	29.0
Healthy Places Index Score for Project Location (b)	75.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Information provided to Rincon
Construction: Off-Road Equipment	Information provided to Rincon.

Appendix B

Biological Resources Assessment

Dillard (APN 104-29-2099)
Kern County, California

Biological Resources Assessment



Prepared for:

Rosedale Rio Bravo Water
Storage District
Dan Bartel
849 Allen Rd
Bakersfield Ca 93312

Prepared by:

BPR CONSULTING
11625 Jubilee Ln
Bakersfield Ca 93311

December 9th, 2024

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I hereby certify that the statements furnished in the report and associated maps are true and correct to the best of my knowledge.



Signature

December 9th 2024
Date

EXECUTIVE SUMMARY

BPR Consulting (BPR) has prepared this Biological Resources Assessment (BRA) at the request of Rosedale Rio Bravo Water Storage District (RRBWSD) for the proposed construction of recharge ponds or solar panels (Project). The purpose of this BRA is to document the biological resources on the property and identify potential impacts to biological resources that could occur from the proposed Project activities. This document has been prepared in a format that is intended for use during future impact analysis required under the California Environmental Quality Act (CEQA).

The proposed Project is located on an agricultural parcel (Assessor's Parcel Number [APN] 104-29-2099). The parcel is currently being utilized for agricultural purposes only and has been farmed on an annual basis for several years. According to the landowner, has been fallow for the last few years. Unimproved roads provide access through along the perimeter of the parcel.

The proposed project includes the construction of recharge ponds or solar panels.

The results of this BRA are based on the following: 1) a review of the California Natural Diversity Database (CNDDB) and other databases and records documenting special-status species and sensitive habitat occurrence data from the region; 2) a review of previous biological surveys conducted within the area; 3) and one biological survey conducted outside of the appropriate blooming period for annual plant species.

As a result of this study, no special-status plant or wildlife species were observed during the surveys. Potential impacts identified during this assessment can be mitigated to a level that is less than significant with implementation of the recommended measures provided within this report. All standard best management practices required by the Kern County for such projects will also be implemented as part of the proposed Project, further reducing the potential for any additional impacts.

INTRODUCTION

BPR Consulting (BPR) has prepared this Biological Resources Assessment (BRA) at the request of RRBWSD for the proposed construction of recharge ponds or solar panels (Project) located west of Superior Rd and east of Enos Lane (Highway 43) in Kern County, California. Please refer to Figures 1 and 2.

The purpose of this BRA is to document the biological resources on the property and identify potential impacts that could occur from the proposed Project. This document has been prepared in a format that is intended for use during future impact analysis that is required under the California Environmental Quality Act (CEQA).

The proposed project includes the construction of recharge ponds or solar panels

EXISTING CONDITIONS

The proposed Project is located east Superior Rd and west of Enos Lane (Highway 43) and is easily accessed from Superior Road. The potential Project impacts will include the entire 50-acre parcel (Assessor's Parcel Number [APN] 104292099). This parcel is within the Stevens U.S. Geological Survey (USGS) 7.5-minute quadrangle and the site location is at a latitude of 35.3615007°N and a longitude of 119.2426459°W (WGS84) at an elevation of approximately 0 feet above mean sea level.

For the purposes of this report, the Biological Study Area (BSA) includes the entire 50-acre portion of the parcel that would be impacted by the Project and areas visible within 50-feet of the Project (Refer to Figure 3). Areas on adjacent parcels that were adjacent to the work areas were surveyed visually from the subject public right-of-way.

Impacts from the project would include grading activities, staging of materials, and ground disturbance for ponds or solar panels. The BSA is bordered by an urban environment at the northwest corner of the parcel and agricultural practices to the north, east, and south.

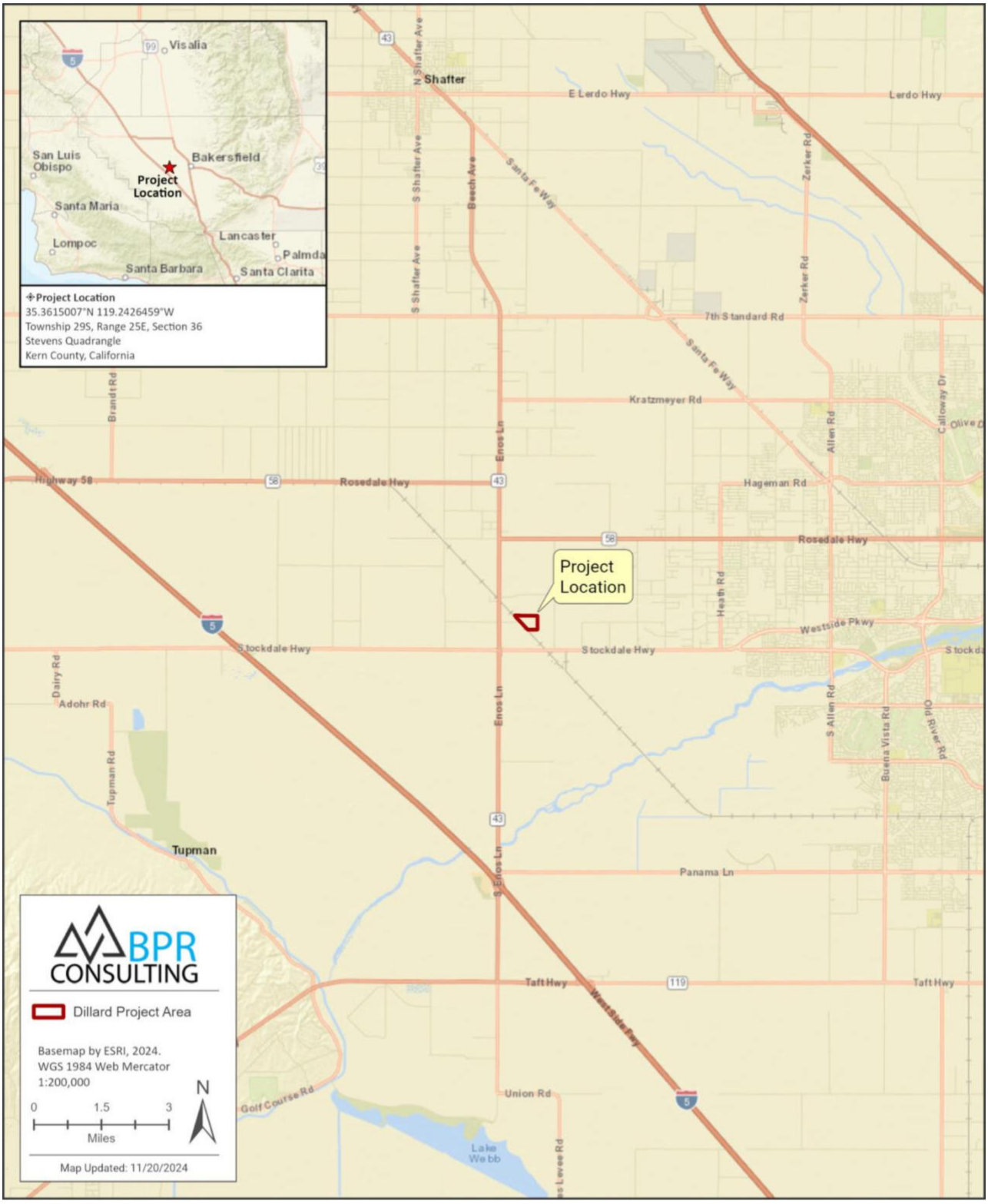


FIGURE 1. Project Location and Vicinity map



FIGURE 2. Project Study Area

Soils

The University of California Davis, Soil Resource Laboratory website, SoilWeb (http://casoilresource.lawr.ucdavis.edu/), maps two (2) underlying soil associations on within the BSA. Most of the site is within Granoso loamy sand, 0 to 2 percent slopes and a small portion of the project site falls within the Wasco sandy loam (243).

- *Granoso Sandy Loam: Granoso sandy loam is a well-drained soil type characterized by its sandy texture, which promotes good infiltration and reduces water retention. Found in arid regions like western Kern County, this soil typically supports sparse vegetation adapted to dry conditions. The sandy loam's composition makes it prone to wind and water erosion if left exposed but also allows for deep rooting, which benefits drought-tolerant plants.*

- *Wasco Sandy Loam: Wasco sandy loam is a well-drained, coarse-textured soil commonly found in the Central Valley of California. Its sandy composition is mixed with loam, creating a balance that provides adequate drainage while retaining some moisture for plant growth. This soil type is often associated with agricultural use due to its favorable structure for crop production but may support native vegetation in undeveloped areas, particularly those adapted to sandy environments.*

METHODOLOGY

Literature Review

Document and digital data review included information from federal, state, and local resource agencies, including the National Hydrography Dataset (NHD), National Wetland Inventory (NWI), California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants, the California Department of Fish and Wildlife (CDFW) Special Animals List, biological reports for nearby projects, and the U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC).

A nine-quadrangle query was conducted using the following U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles: Rio Bravo, Rosedale, Oildale, Tupman, Stevens, Gosford, Lake Buena Vista Bed, Millux, and Conner (CNDDB 2024). Refer to Attachment A and B.

In addition to the CNDDB, the CNPS Electronic Inventory of Rare and Endangered Plants of California (CNPS 2024) was reviewed to provide additional information on special-status plants that are known to occur in the area. Other databases and literature reviewed included the USFWS IPaC (unofficial species list), the CalFlora online database, and available environmental documents and reports conducted nearby.

The following other resources were also reviewed for information about the BSA:

- Aerial photographs of the BSA and general project vicinity.
- Stevens USGS 7.5-minute topographic quadrangle.
- UC Davis California Soil Resource Lab mapping tool.

- USFWS Critical Habitat Mapper.
- US Geological Survey National Hydrography Dataset; and,
- USFWS National Wetlands Inventory.

Field Surveys

Following the literature review and data queries, a field survey was conducted on March 5th 2024. During the surveys, existing site conditions were assessed and documented, plant communities and land cover types were characterized, plant species were identified, and the potential for occurrence of special-status plants and wildlife were evaluated. No protocol-level surveys for special-status wildlife species were necessary as part of this study and no formal wetland delineation efforts were conducted due to absence of jurisdictional features.

During the survey, botanical resources within the BSA were identified using dichotomous keys from *Jepson Manual, Second Edition* (Baldwin et al., 2012) as necessary. Vegetation classification and mapping followed Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986) and was cross- referenced with the updated California Natural Communities List and current alliance and association level taxonomy per *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009) to ensure consistency with current regulatory nomenclature for Sensitive Natural Communities.

Focused botanical surveys were not consistent with the botanical survey guidelines of the CDFW (CDFW 2018) due to the date in which Notice to Proceed was provided. However, for this project site it was obvious that the project was located within an area of heavy agricultural use and the potential for rare plant species to occur was considered low prior to conducting the field survey. Because of the out of season survey, professional judgment was necessary to determine if any future survey efforts for rare plant species would be necessary. Due to the vegetation communities present, limited species diversity, complexity, topography, and visibility, 100% visual coverage was easily achieved within the BSA. All plant species observed during the surveys were recorded and the complete list of plant species observed is included in Appendix C of this report.

RESULTS

Habitats

The surveys conducted within the BSA identified the following two habitat types: 1) Agriculture; and 2) Ruderal.

Below is a description of these habitats and the anticipated habitat value for wildlife species.

Agriculture – Agricultural habitat type is not a native plant community and is not described in the Manual of California Vegetation (2009) or in Holland's (1986) vegetation classification. Apart from the unimproved road, the entirety of the BSA within the parcel was actively farmed until a few years ago. Previously, the land was used in active orchards.

Ruderal – Ruderal habitat type is not a native plant community and is not described in the Manual of California Vegetation (2009) or in Holland's (1986) vegetation classification. This habitat type is common along roadsides, in un-maintained urban areas, and other areas that have been significantly altered by construction, agriculture, ornamental landscaping, or other types of regular activities that affect plant composition and growth. If vegetated, these areas are typically dominated by non-native annual grasses and herbaceous plants (occasionally native species are present) adapted to the regular cycle of disturbance from traffic, grading, and weed reduction practices such as mowing and herbicide application. Typical plants consist primarily of introduced species and escaped ornamentals that exhibit clinging seeds, adhesive stems, and rough leaves that assist their invasion and colonization of disturbed or unmaintained lands.

The ruderal areas within the parcel provide low habitat value for wildlife species.

SPECIAL-STATUS SPECIES

Special-Status Plant Species

For the purpose of this study, special-status plants are vascular plants listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the federal Endangered Species Act (ESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act (CESA); and plants occurring on the California Rare Plant Rank 1, 2, 3 and 4, as developed by the CDFW and the California Native Plant Society (CNPS).

The specific Rare Plant Rank code definitions are as follows:

- Rank 1A = Plants presumed extinct in California.
- Rank 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat).

- Rank 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened).
- Rank 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known).
- Rank 2 = Rare, threatened or endangered in California, but more common elsewhere.
- Rank 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA); and
- Rank 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened).
- Rank 4.3= Plants of limited distribution (watch list), not very endangered in California.

Based on a literature review and database query, a total of eleven (11) special-status plant species were identified and evaluated for potential to be present in the vicinity of the BSA (refer to Appendix A). Because this list of species is regional and includes a wide variety of plant species, an evaluation of the list was conducted to identify which special-status plant species have the potential to occur within the BSA prior to conducting the field survey. This analysis compared the known habitat requirements of those species when compared to the parcel's existing conditions, elevation, and soils. The analysis also considered proximity to the BSA from known occurrence records.

Based on this analysis, it was expected that none of the species identified in Appendix A are expected to occur within the project impact area due to the active agricultural practices and the highly disturbed state of the ruderal habitat. Overall, the BSA lacks the presence of specialized habitat requirements such as serpentine rock slopes, granitic soils, alkali sinks, coniferous forests, stream banks or other aquatic habitats, vernal pools, sandy beaches, and elevational restrictions, that many of the listed species require.

Of the 11 species evaluated and based on review of the existing conditions within the BSA, it is the professional judgement of BPR that a follow up botanical survey is <u>not</u> warranted for this project.

<u>Special-Status Wildlife Species</u>

For the purposes of this section, special-status animal species are defined as the following:

- Animals listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species).
- Animals that are candidates for possible future listing as threatened or endangered under the FESA.
- Animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines Section 15380).

- Animals listed or proposed for listing by the State of California as threatened and endangered under the CESA (14 CCR 670.5).
- Animal species of special concern to CDFW.
- Animal species that are fully protected in California (CFGC Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Based on a CNDDB nine-quadrangle query and a review of existing literature, a total of eighteen (18) special-status wildlife species have been previously documented in the vicinity of the BSA. Because this list of species is regional and includes a wide variety of wildlife species, an analysis of the range and habitat preferences of those animal species was conducted to identify which special-status wildlife species have the potential to occur within the BSA prior to conducting the field surveys. Based on this analysis, it was anticipated that there could be suitable habitat for nesting migratory birds like the tricolored black bird within the BSA. The likelihood of these species occurring onsite is moderate (discussed below).

Tricolored Blackbird and other Migratory nesting birds

The BSA provides moderate nesting opportunities for bird species. During the survey the vegetation and other features showed some evidence of previous nesting activity (non-active nest within orchard). Given the extensive nesting opportunities within the orchard, it is very likely nesting will continue in future seasons. Ground-nesting species may utilize the BSA such as killdeer or other ground-nesting birds.

Sensitive Plant Communities and Critical Habitat Identification

Sensitive natural communities are those plant communities listed as rare in the CNDDB. The CNDDB search identified eleven sensitive plant communities within the nine-quadrangle query – California jewel flower (*Caulanthus californicus*), Hoover's eriastrum (*Eriastrum hooveri*), Horn's milk vetch (*Astragalus hornii*), Kern mallow (*Eremalche kernensis*), Great Valley Mesquite scrub (*Prosopis glandulosa* and associated species), Mason's neststraw (*Stylocline masonii*), Great Valley cottonwood riparian forest (*Populus fremontii* and associated species), Recurved larkspur (*Delphinium recurvatum*), Valley saltbush scrub (*Atriplex polycarpa* and associated species), San Joaquin woolly threads(*Monolopia congdonii*), and Valley sink scrub (*Allenrolfea occidentalis* and associated species). None of these sensitive communities are located within the BSA and therefore and therefore are no longer discussed.

Based on review of the USFWS Threatened & Endangered Species Active Critical Habitat Report (https://ecos.fws.gov/ecp/report/table/critical-habitat.html), the BSA does not overlap any federal designated critical habitat.

IMPACT ASSESSMENT AND MITIGATION

Sufficiency of Biological Data

The analysis of the BSA includes a botanical survey that was not conducted during the appropriate blooming period. However, given that the development would occur directly within an agricultural field, and utilize existing unimproved road, there is no potential for impacts to any rare plant species. Further botanical surveys to justify the absence of rare plant species does not seem warranted based on BPR's professional opinion.

Impacts

This section focuses on identifying potential biological impacts associated with the proposed Project. The emphasis is on determining the potential effects of the Project on special-status species and sensitive habitats within the BSA. Adverse impacts could occur if construction and/or future uses of the property would result in temporary or permanent modification to sensitive habitats, or to habitats occupied by special-status species. Where potential impacts to sensitive resources have been identified, measures for avoiding, minimizing, or mitigating adverse effects to these resources are recommended.

The following impact analysis section follows CEQA guidelines:

Will the project:

1. **Result in a loss of unique or special status species or their habitats?**

With respect to plant species, there are no unique or special-status plant species that occur within the BSA. While the survey was conducted out of the typical blooming season for annual plant species, the BSA does not contain any suitable habitat for any of the species that have been documented in the vicinity. The BSA is located directly within an active agricultural field. Furthermore, ruderal habitat within the perimeter of the parcel would not be suitable habitat for special-status plant species, nor would this area be impacted by project activities. Therefore, impacts are anticipated to be less than significant under CEQA guidelines.

For special-status wildlife, marginal nesting habitat is present for migratory birds protected under the MBTA. It is possible that nesting birds may utilize the existing orchard and ground-nesting species may utilize this area for nesting purposes. These areas could be impacted by construction activities, grading and vegetation removal, and noise or other disturbances may cause an individual to abandon a nest resulting in an indirect impact. Pre-disturbance surveys for nesting birds would be necessary to ensure these species are not impacted.

2. **Substantially reduce the extent, diversity, or quality of native or other important vegetation?**

The proposed Project will not substantially reduce the extent, diversity or quality of native or other important vegetation. The BSA is mostly devoid of any native vegetation. Of the plant species identified during the out-of-season survey, only fourteen percent of the species are native (2 of 14 plants identified). Therefore, impacts are anticipated to be less than significant under CEQA guidelines, and no mitigation is anticipated.

3. Impact wetland or riparian habitat?

The proposed Project is not anticipated to result in permanent or temporary impacts to any wetland or riparian habitat. No wetland or riparian habitats are located on the parcel. Therefore, no impacts to wetland or riparian habitat are anticipated.

4. Introduce substantial barriers to movement of resident or migratory fish or wildlife species, or factors, which could hinder the normal activities of wildlife?

The proposed Project will consist of new structures that will be developed within a previously undeveloped location. Even though the new structures could act as a barrier for movement, the project is small and is not expected to create a significant impact on the movement of wildlife.

Recommended Measures

The following measures are recommendations to avoid, protect, minimize, and mitigate impacts to special-status species during and following construction. These measures are recommended for inclusion in the CEQA document to be prepared for the Project.

Tricolored Blackbird and Nesting Birds:

BIO-1 If feasible, all vegetation removal and ground disturbance should be scheduled to occur from September 1 to February 15, outside of the typical nesting bird season, to avoid potential direct and/or indirect impacts to nesting birds.

BIO-2 If work, including but not limited to, vegetation removal and/or ground disturbance, is proposed to occur within the typical nesting season (between February 16 and August 31), a qualified biologist should conduct a pre-construction survey for active bird nesting activity within 100 feet of the disturbance limits no more than three (3) days prior to any disturbance activities.

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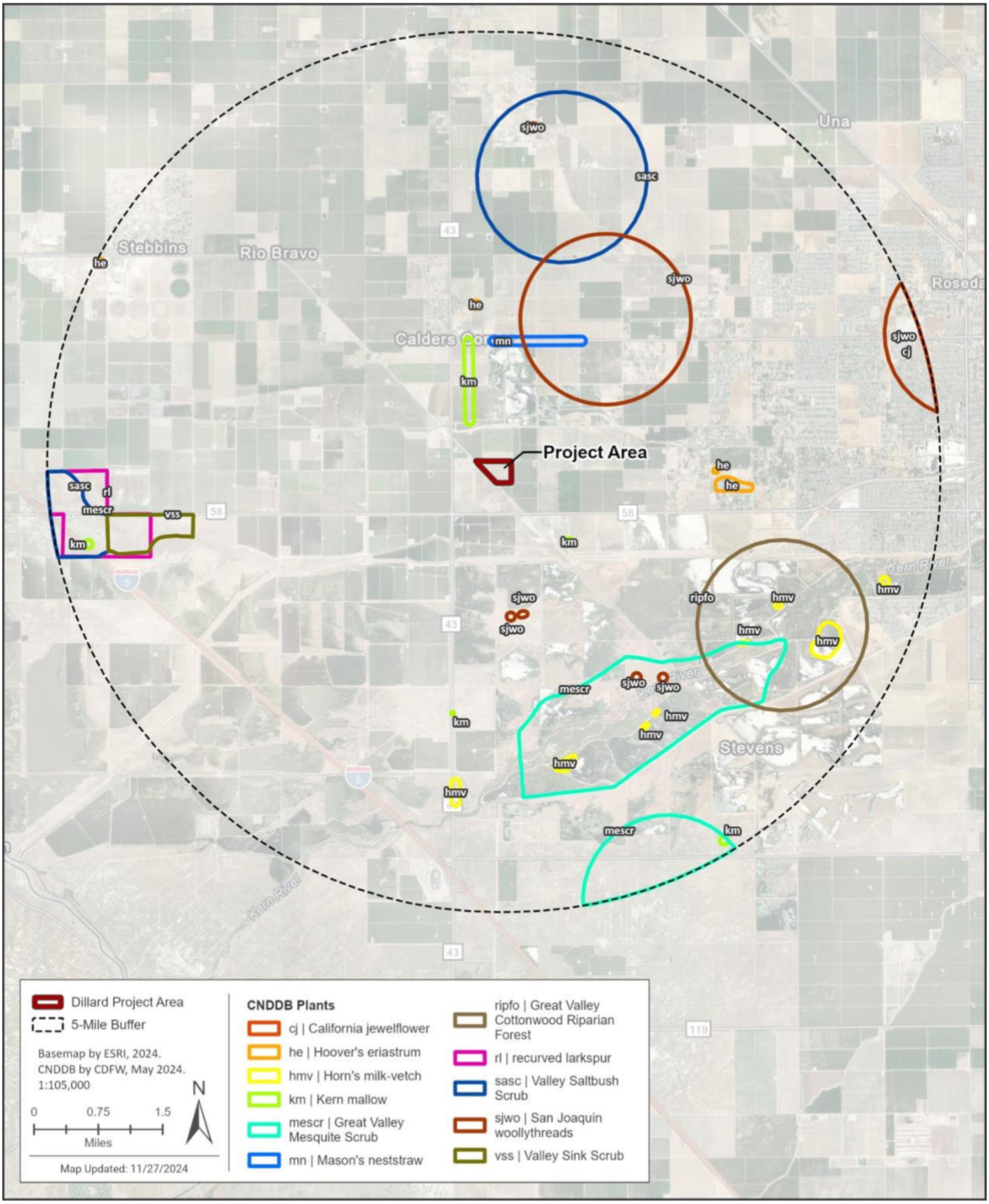
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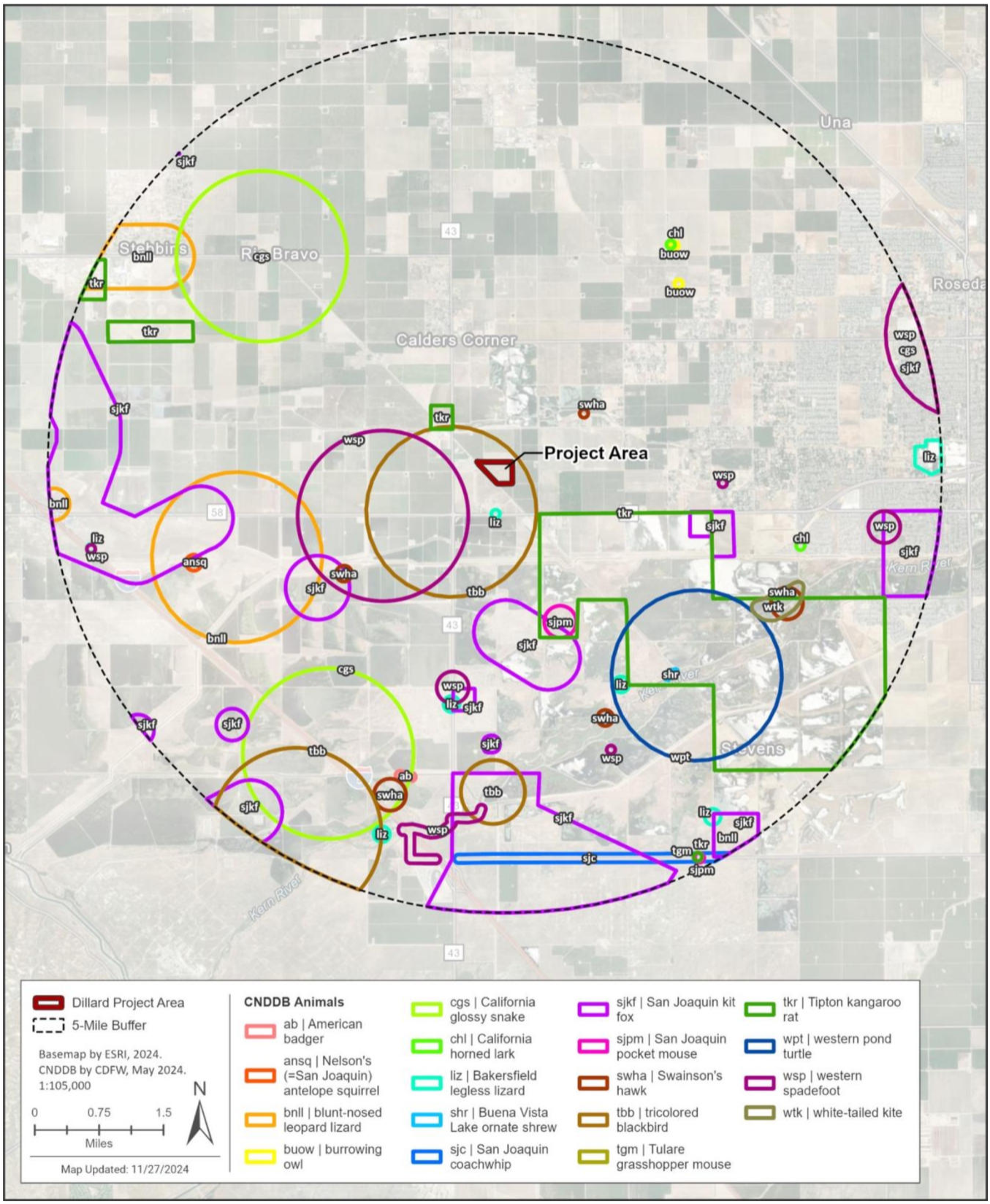
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APPENDIX A: Special-Status Plants and Natural Communities from CNDDB Review of Nine 24k U.S. Geological Survey (USGS) Quadrangles

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Una
Stebbins
Rio Bravo
Calders
Roseda
Project Area
Stevens
Kern River
43
58
119
5
sjwo
sasc
he
mn
km
cj
rl
mescr
vss
ripfo
hmv
Dillard Project Area
5-Mile Buffer
Basemap by ESRI, 2024.
CNDDB by CDFW, May 2024.
1:105,000
0 0.75 1.5
Miles
N
Map Updated: 11/27/2024
CNDDB Plants
cj | California jewelflower
he | Hoover's eriastrum
hmv | Horn's milk-vetch
km | Kern mallow
mescr | Great Valley Mesquite Scrub
mn | Mason's neststraw
ripfo | Great Valley Cottonwood Riparian Forest
rl | recurved larkspur
sasc | Valley Saltbush Scrub
sjwo | San Joaquin woollythreads
vss | Valley Sink Scrub

APPENDIX B: Special-Status Animals from CNDDB Review of Nine 24k U.S. Geological Survey (USGS) Quadrangles


Una
Stebbins
Ricgs Bravo
Calders Corner
Project Area
Stevens
Kern River
43
58
Dillard Project Area
5-Mile Buffer
Basemap by ESRI, 2024.
CNDDB by CDFW, May 2024.
1:105,000
0 0.75 1.5
Miles
N
Map Updated: 11/27/2024
CNDDB Animals
ab | American badger
ansq | Nelson's (=San Joaquin) antelope squirrel
bnll | blunt-nosed leopard lizard
buow | burrowing owl
cgs | California glossy snake
chl | California horned lark
liz | Bakersfield legless lizard
shr | Buena Vista Lake ornate shrew
sjc | San Joaquin coachwhip
sjkf | San Joaquin kit fox
sjpm | San Joaquin pocket mouse
swha | Swainson's hawk
tbb | tricolored blackbird
tgm | Tulare grasshopper mouse
tkr | Tipton kangaroo rat
wpt | western pond turtle
wsp | western spadefoot
wtk | white-tailed kite

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APPENDIX C: List of Observed Plant Species

Appendix C – List of Plant Species Observed within the Study Area.

Scientific Name	Common Name
*Brassica nigra**	Black mustard
*Bromus diandrus**	Ripgut brome
*Bromus madritensis**	Spanish brome
*Bromus rubens**	Red brome
*Erodium cicutarium**	Redstem stork's bill
Heliotropium curassavicum	Wild heliotrope
*Hirschfeldia incana**	Summer mustard
*Hordeum murinum**	Foxtail barley
*Hypochaeris glabra**	Smooth cat's ear
*Malva parviflora**	Cheeseweed mallow
*Medicago polymorpha**	Bur clover
*Melilotus indicus**	Annual yellow sweetclover
*Plantago lanceolata**	English plantain
Amsinckia spp	Fiddle neck

* Indicates non-native species

APPENDIX D: List of Observed Wildlife Species

Appendix D – List of Observed Wildlife Species.

Scientific Name	Common Name
Birds	
Otospermophilus beecheyi	California ground squirrel
Zenaida macroura	Mourning dove
Sceloporus occidentalis	Western fence lizard
Corvus corax	Raven
Mimus polyglottos	Mockingbird

APPENDIX E: Photo Documentation



Photo 1: Typical adjacent habitat. BSA on the right, and neighboring properties on the left of photos. March 5th, 2024



Photo 2: Photo of within BSA facing southeast. March 5th , 2024



Photo 3: Photo of ruderal habitat surrounding perimeter of BSA. March 5th, 2024

Appendix C

Blunt-nosed Leopard Lizard Protocol Survey Results Report

December 2024

Subject: *Blunt-nosed Leopard Lizard Protocol Survey Results Report at Dillard, Bakersfield, Kern County, California*

Project Contact Information
Rosedale Rio Bravo Water Storage District
Dan Bartel

Project Location

The proposed project is located east of Highway 43 and north of Highway 58 within the Bakersfield area of northwestern Kern County, California (refer to Appendix C). The project area encompasses a site that is currently used for active agriculture and lies within a region characterized by a mixture of agricultural operations and undeveloped lands. The project site is approximately 0.38 miles east of Highway 43 and 0.35 miles north of Highway 58, situated at latitude 35.3615007°N and longitude 119.2426459°W, within Township 29S, Range 25E, Section 36. The surrounding landscape consists of large rural properties, with agricultural activities dominating the land use and limited development to the north, south, east, and west.

The site falls within the Sevens Quadrangle of the U.S. Geological Survey (USGS) 24k topographic maps. Given its current use and location, the property is being evaluated for its potential conversion to recharge ponds or solar panel installations. To support these future land use plans, protocol surveys for the federally and state-listed Blunt-Nosed Leopard Lizard (BNLL) are being conducted. These surveys aim to assess the presence or absence of this endangered species and identify any critical habitat considerations. The findings will guide project development to ensure compliance with environmental regulations while balancing conservation efforts and project objectives.

Project Description

The Rosedale Rio Bravo Water Storage District (RRBWSD) is conducting protocol surveys specifically for the Blunt-Nosed Leopard Lizard (BNLL) on the property. These surveys are essential to determine the presence or absence of this federally and state-listed endangered species and assess potential habitat impacts. The results will guide future land use decisions, ensuring compliance with conservation regulations while considering the property's suitability for recharge ponds or solar panel installations.

Occurrence Information

The CNDDB identifies only two (2) occurrences of blunt-nosed leopard lizard (BNLL) within 2 miles of the parcel. Both occurrences last ELM (element last observed date) dates to 1974 as well as the last survey date/site visit.

Habitat description

Habitats within the Survey Area were observed to be dominated by non-native annual grasslands that (refer to Appendix C). Areas with sparse shrubs were also observed in numerous areas of the survey area. RRBWSD discussed the habitats present on site within their biological resources assessment and those habitat descriptions for the survey area are provided below.

- Non-native Annual Grassland

  Non-native annual grasslands corresponding to the *Bromus rubens - Schismus* (*arabicus, barbatus*) Semi-Natural Alliance as described in the Manual of California Vegetation is the dominant vegetation community observed throughout the Study Area. The predominant associated plant species are Fiddleneck (*Amsinckia intermedia)* and Russian Thistle (*Salsola*).

- Ruderal/Disturbed

  Ruderal/disturbed conditions are common along roadsides, in un-maintained urban areas, and other areas that have been significantly altered by construction, agriculture, ornamental landscaping, or other types of regular activities within oil and gas operations that affect plant composition and growth. If vegetated, these areas are typically dominated by non-native annual grasses and herbaceous plants adapted to the regular cycle of disturbance from traffic, grading, and weed reduction practices such as mowing and herbicide application. Typical plants consist primarily of introduced species and escaped ornamentals that exhibit clinging seeds, adhesive stems, and rough leaves that assist their invasion and colonization of disturbed or unmaintained lands.

  Ruderal or disturbed areas within the Study Area were present on and along roads, fence lines, and areas highly disturbed by agricultural use. These areas exhibited disturbed and compacted soils and were mostly unvegetated. Plant species observed within ruderal/disturbed areas included several non-native annual grasses, red brome (*Bromus madritensis*), vinegar weed (*Trichostema ovatum*), summer mustard (*Hirschfeldia incana*), and red-stemmed filaree (*Erodium cicutarium*).

Survey Methodology

The survey area for this for effort consisted of an approximate 50-acre area within the RRBWSD water storage operation (refer to Appendix B). A total of seventeen (17) blunt-nosed leopard lizard (BNLL) protocol surveys were conducted over the approximate 50-acre survey area by BPR Consulting biologists following the California Department of Fish and Wildlife's October 2019 survey methodology for BNLL (refer to Appendix A). The seventeen (17) surveys were conducted from May 13 to September 19, 2024. Per the 2019 survey protocol, surveys did not commence until after 8 am and when the air temperature reached 77 degrees Fahrenheit and each survey ended no later than 2:00 pm or if temperatures exceed 95 degrees Fahrenheit. All survey efforts were conducted by four (4) biologists consisting of at least one (1) level II surveyors during each survey effort. Survey results are summarized within a table in Appendix A and shown through photographic records in Appendix C.

Per the approved protocol, a known voucher site located in McKittrick LoKern was visited in April 2024 to confirm blunt-nosed leopard lizard were active. Blunt- nosed leopard lizards were observed during the voucher site visit.

Results

Even though habitats within the survey area are potentially suitable for BNLL, the seventeen (17) protocol surveys described within this report did not observe adult or juvenile BNLL. The only lizard species observed during the surveys consisted of more common species such as side-blotched lizards (*Uta stansburiana*) and California whiptail (*Aspidoscelis tigris munda*).

Conclusion

Based on the negative results of the seventeen (17) BNLL protocol surveys conducted by biologists, BNLL are not present within the survey area and impacts to BNLL are not expected to occur from the proposed project.

If you have any questions about this memo, please feel free to contact me directly at 661-444-3239.

Thanks



Ben Ruiz
BPR Consulting
661-444-3239
bpruiz40@yahoo.com

APPENDIX A:

Blunt-nosed Leopard Lizard Survey Results Table

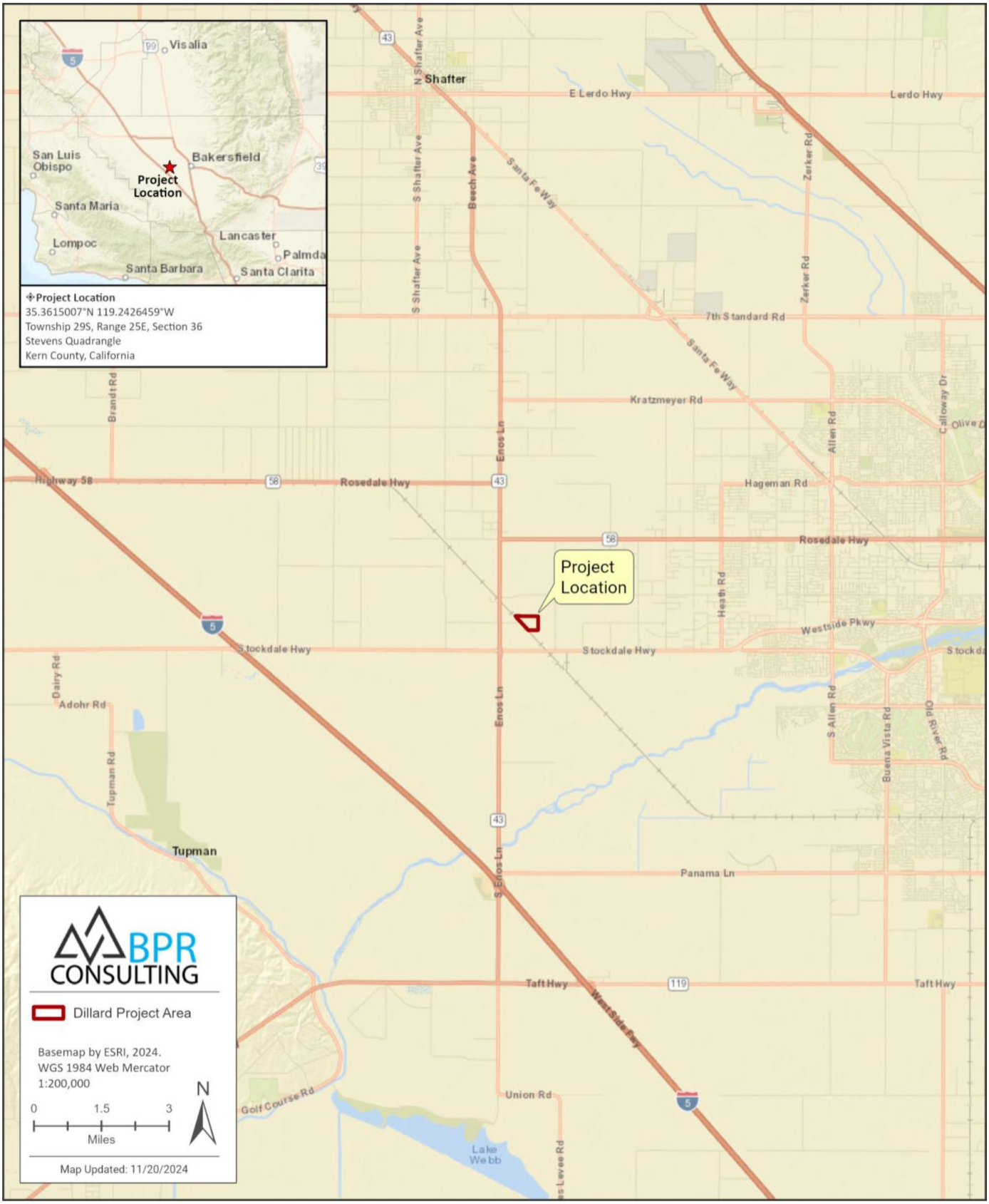
DILLARD
Appendix A: Blunt-nosed Leopard Lizard Survey Results Table

Survey No.	Date	Surveyors	Start Time	End Time	CONDITIONS				RESULTS		
					Air Temp Start/End (F°)	Soil Temp Start/End (F°)	Wind Speed Start/End (mph)	Cloud Cover (%)	No. of BNLL Observed	No. of Side-blotched Lizard	No. of CA Whiptail
1	5/13/2024	CP BP MY ZH	0827	1103	81.9/85.6	84.5/96.2	0.5/0.8	<5%	0		
2	5/14/2024	CP BP MY ZH	0830	1058	83.9/87.1	86.3/91.0	1.3/1.6	20%	0		
3	5/15/2024	CP BP MY ZH	835	1125	85.2/89.1	89.5/93.4	2.2/3.9	20%	0		
4	5/16/2024	CP BP MY ZH	0840	1118	83.2/88.4	86.9/92.5	0.8/1.3	10%	0	24	0
5	5/20/2024	CP BP MY ZH	0837	1122	79.6/82.4	84.8/89.1	0.3/1.1	<5%	0		
6	5/21/2024	CP BP MY ZH	0851	1139	83.9/86.8	86.9/91.4	2.1/3.4	<5%	0		
7	5/23/2024	CP BP MY ZH	0851	1109	85.1/89.2	88.8/94.3	1.1/1.7	<5%	0		
8	5/24/2024	CP BP MY ZH	0841	1131	83.4/86.9	87.8/90.4	0.2/0.5	<5%	0		
9	6/25/24	CP BP MY ZH	0910	1147	79.3/86.2	83.9/91.7	1.2/1.6	<5%	0	21	0
10	6/26/24	CP BP MY ZH	0836	1113	81.1/85.2	86.1/93.6	1.0/1.1	<5%	0		
11	7/1/24	CP BP MY ZH	0822	1059	82.3/84.4	88.6/93.9	0.2/1.9	<5%	0		
12	7/2/24	CP BP MY ZH	0841	1117	84.3/91.1	88.9/94.3	2.2/2.8	<5%	0		0
13	8/15/24	CP BP MY ZH	0805	1048	86.0/91.3	89.8/93.7	1.1/3.8	<5%	0		
14	8/16/24	CP BP MY ZH	0818	1053	84.3/90.2	92.1/94.5	2.4/3.1	<5%	0		
15	8/20/24	CP BP MY ZH	0905	1146	86.2/91.4	89.5/93.7	0.2/0.3	<5%	0	21	2
16	9/18/24	CP BP MY ZH	0839	1109	82.1/86.3	86.4/90.9	2.1/2.9	<5%	0		
17	9/19/24	CP BP MY ZH	0836	1121	83.4/86.2	87.3/93.8	0.9/1.4	<5%	0		
									0	66	10

Surveyors:
Caleb Paul- Level II
BP Brady Paul- Level I
MY Madison Yokie- Level II
ZH Zach Hebert- Level 1

APPENDIX B:

Survey Area Figures and Maps


Visalia
San Luis Obispo
Bakersfield
Project Location
Santa Maria
Lompoc
Lancaster
Palmdale
Santa Barbara
Santa Clarita
Project Location
35.3615007°N 119.2426459°W
Township 29S, Range 25E, Section 36
Stevens Quadrangle
Kern County, California
Shafter
E Lerdo Hwy
Lerdo Hwy
N Shafter Ave
S Shafter Ave
Beach Ave
Santa Fe Way
Zerker Rd
7th Standard Rd
Kratzmeyer Rd
Brandt Rd
Enos Ln
Allen Rd
Calloway Dr
Highway 58
Rosedale Hwy
Hageman Rd
Heath Rd
Westside Pkwy
Stockdale Hwy
Dairy Rd
Adohr Rd
Tupman Rd
S Allen Rd
Buena Vista Rd
Old River Rd
Tupman
Panama Ln
S Enos Ln
Taft Hwy
West Side Pwy
Golf Course Rd
Union Rd
Lake Webb
BPR CONSULTING
Dillard Project Area
Basemap by ESRI, 2024.
WGS 1984 Web Mercator
1:200,000
0 1.5 3
Miles
N
Map Updated: 11/20/2024


Brimhall Rd
Enos Ln
Superior Rd
Stockdale Hwy
58
BPR
CONSULTING
Dillard Project Area
Basemap by ESRI, 2024.
CA Teale Albers US-Ft
1:10,000
0
400
800
Feet
N
Map Updated: 11/20/2024


BPR
CONSULTING
Dillard Project Area
10-meter Transect Lines
Basemap by ESRI, 2024.
CA Teale Albers US-Ft
1:5,000
0
200
400
Feet
N
Map Updated: 11/20/2024

APPENDIX C:

Survey Area Photograph

Photo 1 and 2- Project area facing South and East





Figure 2- Project area facing North and West





Appendix D

Phase I Cultural Resources Survey

DRAFT

PHASE I SURVEY, DILLARD GROUNDWATER RECHARGE AND SOLAR ARRAY PROJECT, KERN COUNTY, CALIFORNIA

Prepared for:

Ms. Rachelle Echeverria

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

Prepared by:

Peter A. Carey, MA, RPA

Ashlee N. Younie, MA, RPA

and

Robert Azpitarte, BA

ASM Affiliates
4800 Stockdale Highway, Suite 405
Bakersfield, California 93309

December 2025
PN 30580.07

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MANAGEMENT SUMMARY

An intensive Phase I survey was conducted for the Rosedale-Rio Bravo Water Storage District (RRBWSD) Dillard Groundwater Recharge and Solar Array Project (Project), Kern County, California. This study was conducted by ASM Affiliates with Peter A. Carey, MA, RPA, serving as principal investigator. Background studies and fieldwork for the survey were completed from August 2024 – October 2025. The study was undertaken to assist with the preparation of an environmental document consistent with the California Environmental Quality Act (CEQA). The proposed project is designed to improve the efficiency of the RRBWSD through better management of surface water supplies in wet years by increasing groundwater recharge capacity. The Project area is located within the RRBWSD service area, east of Bakersfield, Kern County, California. The study area for the cultural resources fieldwork consists of the proposed 50 acre (ac.) recharge basins, solar array and battery energy storage system (BESS), approximately 25 miles (mi.) of overhead power lines with an added 50 foot (ft.) survey buffer, and all staging and laydown areas. The study area for the Project totals approximately 203 ac.

A records search of site files was conducted by the Southern San Joaquin Valley Information Center (SSJVIC), California State University, Bakersfield, in August 2024 and September 2025. According to the SSJVIC, 33 previous archaeological study reports have been conducted within 0.5-mile (mi.) of the study area; of these, 11 cover a portion of the study area. The SSJVIC results identified four previously recorded resources (P-15-002050, P-15-008121, P-15-017760, and P-15-017761) within the study area and an additional nine within 0.5 mi. of the study area.

In addition to the records search, ASM requested a search of the Sacred lands File from the Native American Heritage Commission. No response was received. A response from a separate but nearby project was utilized and outreach letters were sent. The Santa Rosa Rancheria Tachi Yokut Tribe responded deferring to local tribes, and Tejon Indian Tribe responded requesting to be notified if any inadvertent discoveries are made during Project construction.

The Project study area was surveyed by ASM archaeologists in October 2024 and October 2025, with crew walking parallel transects spaced at 15-m intervals. ASM revisited the locations of the four previously recorded resources (P-15-002050, P-15-008121, P-15-017760, and P-15-017761). Resource P-15-002050, the Southern Pacific Railroad, is currently operating as the Santa Fe Railroad within the study area. The project will occur either above or below the railroad and it is therefore considered to be outside of the study area and was therefore not updated. P-15-017760 is a large historic-era oil operation with numerous spread-out features, none of which are located within the study area. This site was also not updated since no features exist within the study area. P-15-017761, the Pioneer Canal, is no longer extant in the study area as the alignment was removed prior to 1984, likely when the Cross Valley Canal was constructed in 1975. ASM recorded several segments of P-15-008121, Goose Lake Slough, within the study area. In addition to the previously recorded resources, one newly identified resource (temporary field designation DILLARD-SITE-1) was recorded within the recharge basin and solar array portion of the study area.

Based on a lack of integrity, DILLARD-SITE-1 is recommended not eligible for inclusion in the California Register of Historical Resources (CRHR) under any criteria. Goose Lake Slough (P-15-008121) has been determined not eligible for inclusion in the National Register of Historic Places (NRHP) and previous segments have also been recommended not eligible for inclusion in both the NRHP and CRHR. ASM agrees with these previous determinations and recommendations for the newly recorded segments.

Based on the results of the records searches and intensive pedestrian survey of the study area, a determination of ***No Significant Impact to Historical Resources*** is recommended for this Project. In the

unlikely event that cultural resources are encountered during the construction or operation of the proposed Project, however, it is recommended that an archaeologist be contacted to evaluate the discovery.

1. INTRODUCTION AND REGULATORY CONTEXT

ASM Affiliates was retained by Rosedale-Rio Bravo Water Storage District (RRBWSD) to conduct an intensive Phase I survey for its proposed Dillard Groundwater Recharge and Solar Array Project (Project), Kern County, California. The purpose of this investigation was to assist with compliance with the California Environmental Quality Act (CEQA). The investigation was undertaken, specifically, to ensure that no significant adverse effects to historic properties or historical resources would occur as a result of this proposed project.

This current study included:

- A background records search and literature review to determine if any known archaeological sites were present in the proposed project areas and/or whether the project areas had been previously and systematically studied by archaeologists;
- A search of the NAHC *Sacred Lands File* to determine if any traditional cultural places or cultural landscapes have been identified within the project areas;
- An on-foot, intensive inventory of the study area to identify and record previously undiscovered cultural resources and to examine known sites; and
- A preliminary assessment of any such resources found within the project study areas.

This study was conducted by ASM Affiliates, of Bakersfield, California, from October 2024 to October 2025. Peter A. Carey, MA, RPA, served as principal investigator. ASM Associate Archaeologist Robert Azpitarte, BA, RPA, conducted the fieldwork with assistance from ASM Assistant Archaeologists Daniel Ware, BA, and Margarita Lemus, BA.

This manuscript constitutes a report on the Phase I survey. Subsequent chapters provide background to the investigation, including historic context studies; the findings of the archival records search; a summary of the field surveying techniques employed; and the results of the fieldwork. We conclude with management recommendations for the Study Area.

1.1 PROJECT LOCATION AND STUDY AREA

The Project is located in Sections 25, 26, 27, 28, 29, 34, Township 29 South, Range 25 East (T29S/R25E); Sections 25, 30, 31, 36, Township 29 South, Range 26 East (T29S/R26E); and Section 1 Township 30 South, Range 26 East (T30S/R26E), Kern County, California (Figures 1a-1c). The fieldwork is being conducted in advance of anticipated groundwater recharge basin and solar development activities, including an electrical transmission line. Elevations within the study area range from 300 ft. above mean sea level (amsl) to 350 ft. amsl.

The study area for the cultural resources fieldwork consists of the proposed 50 acre (ac.) recharge basins, solar array and battery energy storage system (BESS), approximately 25 miles (mi.) of overhead power lines with an added 50 foot (ft.) survey buffer, and all staging and laydown areas. The study area for the Project totals approximately 203 ac. The individual Project components are described in detail below.

1.1 PROJECT DESCRIPTION

The Project would involve the construction and operation of a groundwater recharge basin, consisting of two to three ponds containing elevated solar panel arrays, a battery energy storage system, and approximately 25 miles of power transmission lines. Each of the project components are discussed further in the following sections.

Groundwater Recharge Basin

The project would involve grading to create two to three groundwater recharge ponds. Earthwork would also be required to use onsite materials to construct the berms. Water for groundwater recharge would be available from Rosedale's existing Conjunctive Use Program, which includes water supplies from high-flow Kern River water, the Central Valley Project, and the State Water Project. Rosedale's existing Central Intake Pipeline would supply water to the groundwater recharge ponds. Interbasin control structures and inflow pipelines would be installed to facilitate water flow into the site. Pipelines would be installed via open-cut trench installation, and other interbasin control structures would be prefabricated off-site and then installed. The maximum depth of excavation would be ten feet, and the average depth of excavation would be six feet.

Solar Array and BESS

The Project would also include construction of an elevated solar array above the recharge ponds. The intent of the elevated solar arrays is to harness solar energy while also minimizing algae growth and water loss from evaporation in the recharge ponds. The solar array would have a capacity of 7,515 kilowatts (kW) of direct current (DC) power or 5,000 kW of alternating current (AC) power. The solar array would generate approximately 15.1 million kilowatt-hours (kWh) of power each year. Power generated by the solar array would be used to power existing Rosedale pumps. The proposed solar array would be designed and sized based on historic and projected energy use associated with existing Rosedale facilities and would not be intended to function as a commercial power generator or to produce surplus power. However, in the event that Rosedale energy demand is low, surplus energy generated by the solar array would be sold back to Pacific Gas & Electric (PG&E) for use in the local energy grid.

The solar array would connect to a BESS, which would store energy generated by the solar array. The BESS would be located northeast of the groundwater recharge ponds and the solar array with dedicated access from Superior Road. The BESS would consist of four battery container enclosures (each with internal heating, ventilation, and air conditioning [HVAC] systems, internal fire detection and suppression systems, and battery management systems). The BESS would also include 40 rack-mounted string inverters, step-up transformers, and a switchboard, which would be located south of the battery container enclosures. The BESS components would be placed on either a concrete pad, drilled pier, or pile foundations. The battery storage technologies being considered are lithium-ion-phosphate (lithium-ion) or other similar technologies that may become commercially available as the BESS project undergoes final design. The BESS would have a storage capacity of approximately 4,000 kilovolt-amperes or 15,670 kWh.

The BESS enclosures would include internal HVAC and internal fire detection and fire suppression systems in each container. The internal HVAC systems would allow the battery containers to function properly in temperatures ranging from below zero degrees Fahrenheit to approximately 130 degrees Fahrenheit. These containers would also include a battery management system which monitors battery voltage, current, temperature, security, fault diagnosis and management, and external communication with the power conversion system. In the event that ambient temperatures exceed 130 degrees Fahrenheit, a liquid cooling system would automatically switch on and the battery management system would automatically limit charging, isolate certain areas of the system, or shut off. These actions would be in addition to the battery

management system's various operator alarms and warnings. Each inverter would include protection equipment, direct current and alternating current circuit breakers, and a connection cabling system. The inverters would be connected to the battery containers by underground electrical conductors.

The proposed Project would include a switchboard with switchgear located south of the battery container enclosures. The switchgear would manage and control the electrical energy flow within the BESS system. The switchgear would be able to isolate different parts of the BESS for safety during operation and maintenance activities. Additionally, the switchgear would ensure the BESS can connect to, and disconnect from, the energy grid to allow the BESS to provide or absorb power when required and provide energy at peak demand times. The switchgear facilities would include a step-up transformer, which would convert the voltage of electricity between the BESS and its connection to PG&E power lines.

Power Transmission Lines and Interconnection

The Project would include construction of approximately 25 mi. of overhead power lines. Power line poles would generally be mounted in easements between agricultural properties, or along roadways. Several power line alignments would require crossing the Santa Fe Railroad right-of-way; depending on encroachment requirements established by the Burlington Northern Santa Fe Railway, power line alignments that cross the railroad would either be aboveground, pole-mounted power lines or installed belowground.

A point of interconnection would be constructed to transfer power generated by the solar array to existing PG&E infrastructure. The interconnection would consist of approximately three or four poles with protection devices, metering devices, and reclosers. The interconnection would be located near the intersection of Cherry Avenue and SR 58, approximately 0.4 mi. south of the solar facility and groundwater recharge ponds.

Construction Grading and Contouring

Construction of the groundwater recharge ponds in the proposed groundwater recharge basin would require the excavation of approximately 75,000 cubic yards (CY) of soil and would require placing and compacting approximately 50,000 CY of soil for infill. No excavated soil would be exported off-site.

Open Cut Trench Pipeline Installation

A turnout pipeline would be installed via open cut trench. Open cut trench pipeline installation would involve excavation of a trench, installation of the new pipelines, and then backfilling the trench with soil. The maximum depth of excavation is anticipated to be ten feet. No export of concrete materials or soils is anticipated to occur.

Power Lines

Aboveground power line poles would require excavation to a depth of approximately six feet to partially bury the base of each pole. Locations of aboveground power line poles would be identified through easement agreements and will be located within the designated locations of the powerlines. Belowground power lines that cross the Santa Fe Railroad, if required, would be installed via horizontal boring, which would involve boring a path for the power lines underground below the railroad right-of-way and pulling the power lines through the path. Locations of belowground power lines would be identified through easement agreements and will be located within the designated locations of the powerlines.

Operation and Maintenance

The proposed groundwater recharge basin would require periodic maintenance, including occasional clearing of debris. Weed and pest control operations would be conducted as necessary, utilizing products approved for aquatic use in order to protect and preserve groundwater quality. Periodic earthwork operations are required to maintain pond bottoms and levees and remove vegetative growth. Equipment could include tractors (110- HP light motor), mini-skid steers, mini-excavators, mowers, and loaders. Maintenance would redistribute soils on-site and would not require off-site soil removal or disposal.

One daily trip to the project site would be required during operation. Operation of the project would result in a minor increase in vehicle trips compared to existing conditions, as Rosedale staff visit nearby facilities and would subsequently visit the project site in the same trip. The proposed project would have the occasional need for battery upgrades or augmentation in the future. Augmentation batteries would be installed on existing foundations to maintain system load capacity as the batteries degrade over time. Methods of battery disposal are described below.

Solar and BESS Decommissioning

At the end of the useful life of the solar array and BESS (anticipated to be up to approximately 40 years), the solar facilities would be decommissioned. Currently, standard decommissioning practices include dismantling and repurposing, salvaging/recycling, or disposing of the proposed project components in accordance with applicable laws and regulations. However, actual decommissioning for the proposed project would be conducted in accordance with all applicable local, state, and federal requirements in effect at the time of decommissioning, and a final decommissioning plan, based on then-current technology, site conditions, and regulations, would be prepared prior to actual decommissioning.

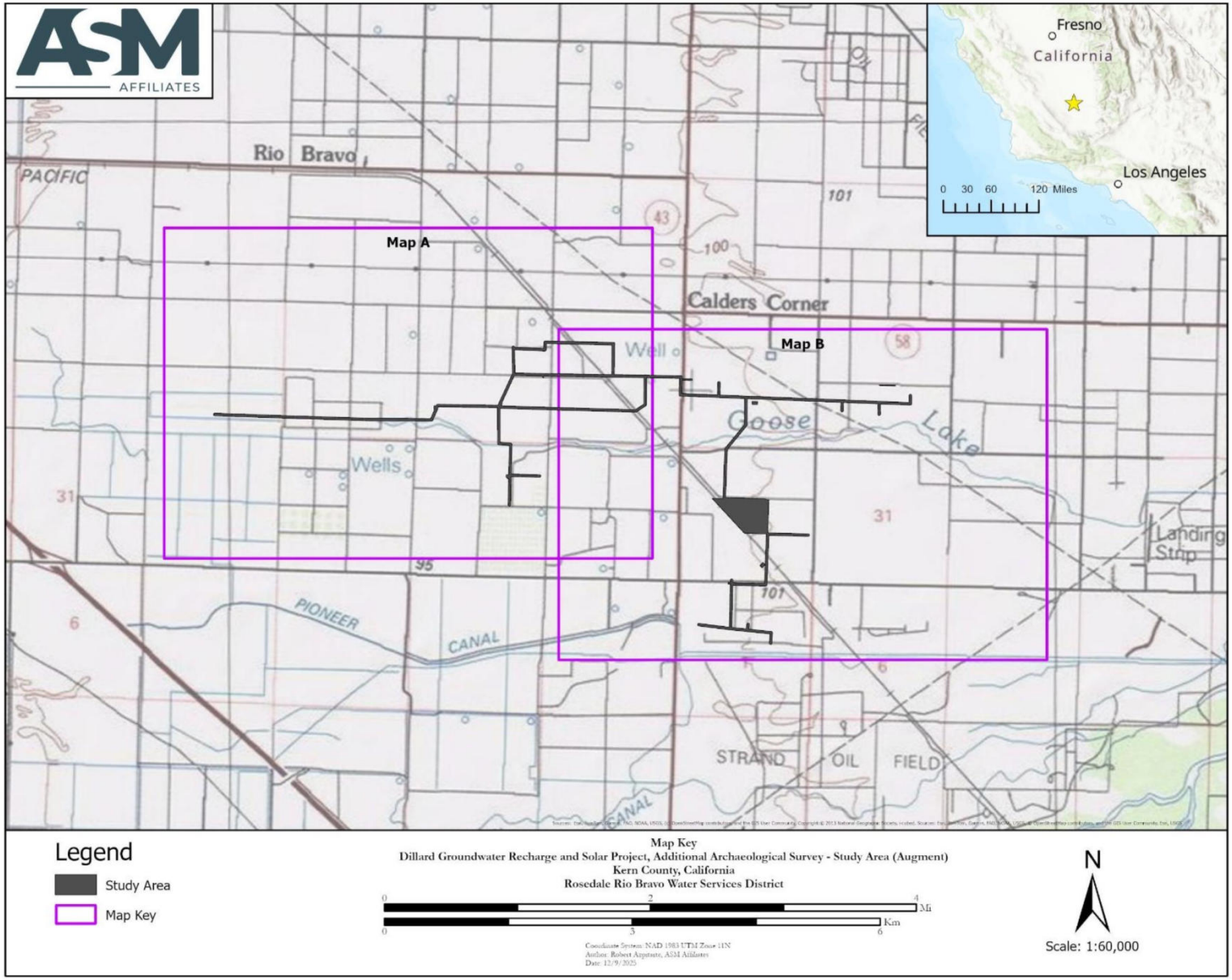


Figure 1a. Location of the Dillard Recharge and Solar Array Project study area, Kern County, California.

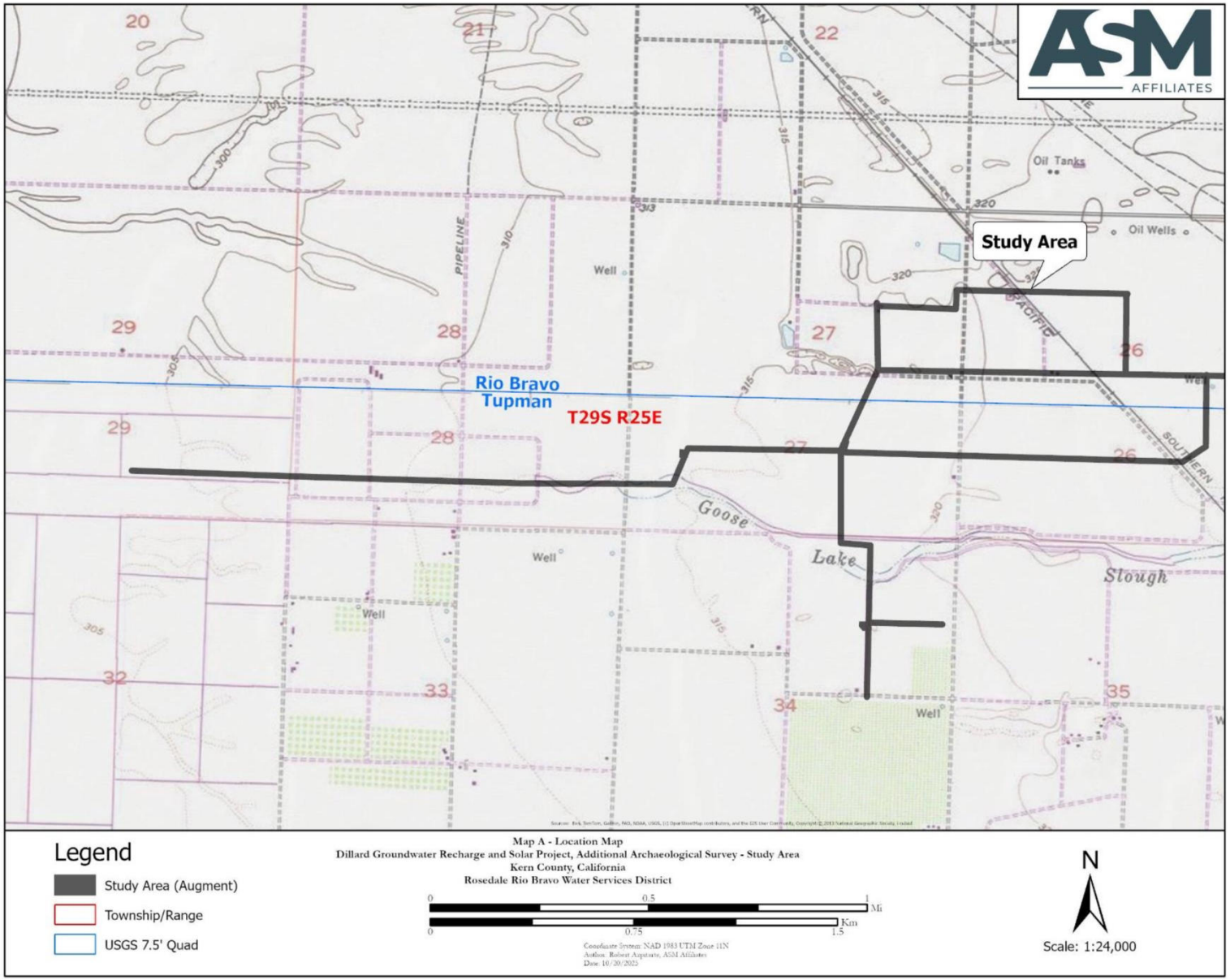


Figure 1b. Location of the Dillard Recharge and Solar Array Project study area, Kern County, California.

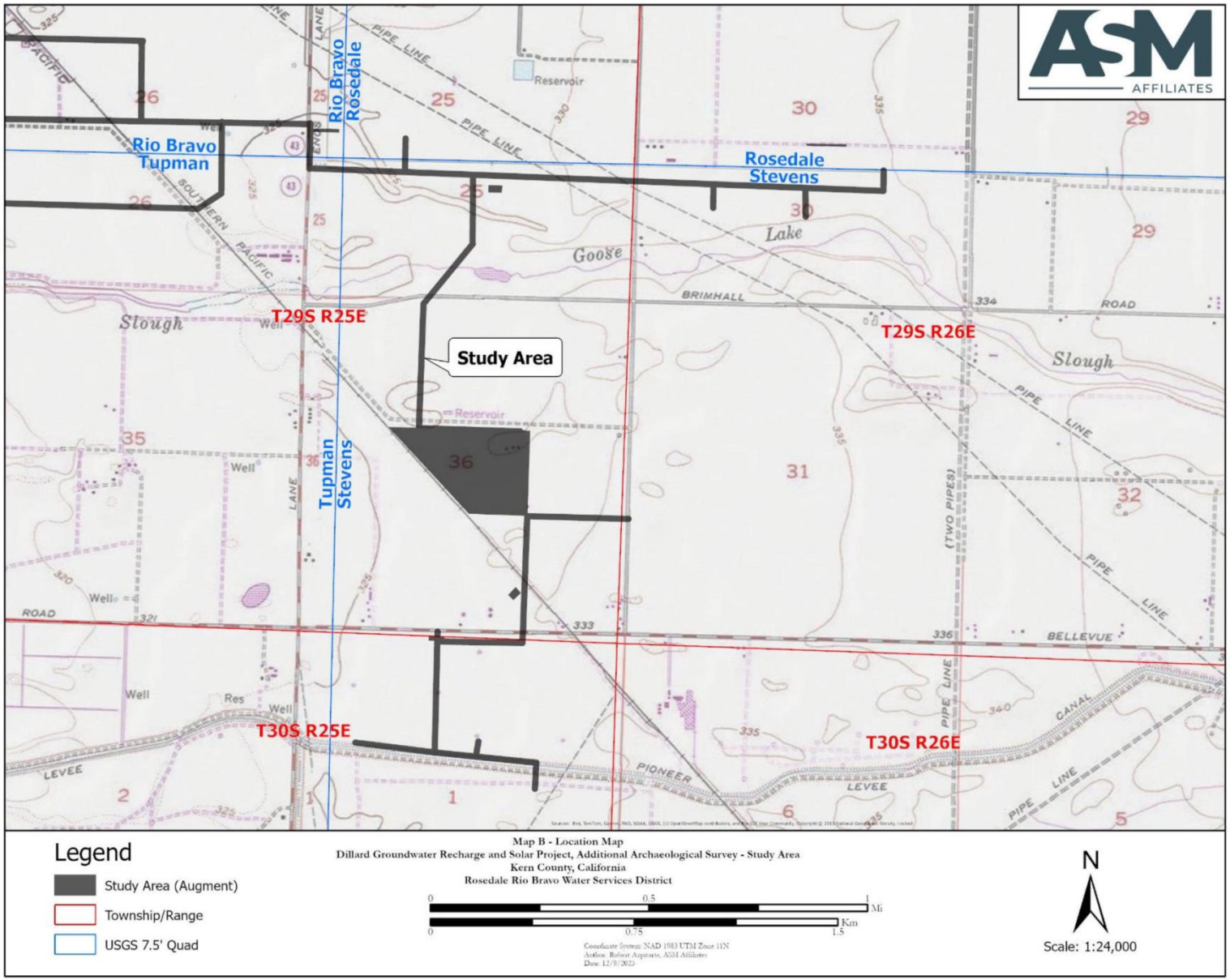


Figure 1c. Location of the Dillard Recharge and Solar Array Project study area, Kern County, California.

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1.2 REGULATORY CONTEXT

1.2.1 California Environmental Quality Act

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when "historically significant" or "unique" cultural resources are adversely affected, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register of Historical Resources (CRHR). In practice, the federal NRHP criteria for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Section 4852 and § 15064.5(a)(3)).

Significant cultural resources are those archaeological resources and historical properties that:

(1) Are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
(2) Are associated with the lives of persons important in our past;
(3) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
(4) Have yielded, or may be likely to yield, information important in prehistory or history.

Unique resources under CEQA, in slight contrast, are those that represent:

> 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 meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

1.2.2 California Register of Historical Resources Significance Criteria

The CRHR program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

Historical resources eligible for listing in the CRHR must meet at least one of the criteria of significance described above and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. For the purposes of eligibility for CRHR,

integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (California Office of Historic Preservation 2011:2). This general definition is strengthened by the more specific definition offered by the NRHP—the criteria and guidelines on which the CRHR criteria and guidelines are based upon. In 2012, the California Office of Historic Preservation clarified that the intent of the CRHR regulations is to be the same as the NRHP (California Office of Historic Preservation 2011).

2. ENVIRONMENTAL AND CULTURAL BACKGROUND

2.1 ENVIRONMENTAL BACKGROUND

The proposed Project is located on the open flats of the San Joaquin Valley. Currently it may be characterized as a dry open valley bottom, but it is within the historical Kern River Delta, with the current (post-1868) Kern River channel a short distance to the south. Prior to reclamation and channelization, the region would have been a low-lying, water-rich area characterized by sloughs, marshes, and swamps. Occasionally inundated by floodwaters, in most years the region would have been a swamp during the winter rainy season and marsh land during other parts of the year.

Historical and recent land use has changed the vegetation that was once present within and near the project area, which now consists of orchards and agricultural fields. Riparian Woodlands were likely present along Goose Lake Slough, which was channelized with the construction of the Isabella Reservoir and the Cross Valley Canal, and now operates as a controlled groundwater conveyance facility. Although the project area may have included the Valley Grassland community historically and prior to development, depending upon drainage and seasonal storm systems, freshwater marshes are more likely to have been present (see Schoenherr 1992).

Throughout the early twentieth century to present day, the area has become increasingly popular for rural residential development and agricultural uses. Permitted uses of the Project Study Area and its vicinity include, but are not limited to, irrigated cropland, livestock lands, residences, groundwater recharge facilities, and solar facilities, where power generated does not exceed the total on-site power demand. Historic aerial images dating back to 1955 depict a mix of undeveloped and developed agricultural lots in the Project Study Area and the surrounding area (NETROnline 2025).

2.2 ETHNOGRAPHIC BACKGROUND

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and through much of the nearby Sierra Nevada. Ethnographic information about the Yokuts was collected primarily by Powers (1971, 1976 [originally 1877]), Kroeber (1925), Gayton (1930, 1948), Driver (1937), Latta (1977) and Harrington (n.d.). For a variety of historical reasons, this information emphasizes the central Yokuts tribes occupying the valley and, especially, the foothills of the Sierra. The northernmost tribes had suffered from the influx of Euro Americans during the Gold Rush and were essentially extirpated by the time ethnographic study began at about the start of the twentieth century. The southernmost tribes, in contrast, were partly removed by the Spanish to the missions and subsequently were absorbed into multi-tribal communities on the Sebastian Indian Reservation (on the Tejon Ranch), and eventually the Tule River Reservation and Santa Rosa Rancheria, situated to the north. The result of these historical circumstances is limited ethnographic detail on southern Valley tribes, especially relative to the information collected from the central foothills tribes where it is quite rich and where native speakers of Yokuts dialects are still found. Still, it is clear that the general details of indigenous lifeways were similar across the broad expanse of Yokuts territory, particularly in terms of the patterns of life for valley versus foothill tribes, where environment influenced subsistence and adaptation, and in terms of religion and belief, which were similar everywhere.

This scarcity of specific detail is particularly apparent for southern valley tribal group distribution. According to Kroeber (1925:478), the Tulamni occupied the edges of Buena Vista Lake and the southwestern end of the valley, the Hometwoli lived in and around Kern Lake to the east, the Tuhohi (or Chuxoxi) resided near the mouth of Kern River as it drained north into Tulare Lake, and Yauelmani territory comprised the southeastern side of the valley, extending north into Bakersfield proper. The Project area then

likely falls within Yauelmani territory. Kroeber identifies the villages of *Tsineuhiu*, west of Bakersfield on the Kern River, *Woilo* in Bakersfield proper, *Kuyo* south of Bakersfield, *Tulamniu*, at the northwestern edge of Buena Vista Lake, *Hoschiu* on Bitter Water Creek, and *Wogitiu*, near McKittrick. None of these villages are within or close to the study area.

Many Yokuts groups, regardless of specific tribal affiliation, were organized as a recognized and distinct tribelet, and this circumstance almost certainly pertained for the tribal groups noted above. Tribelets were land-owning groups linked by their shared territory and descent from a common ancestor, organized around a central village. The population of most tribelets ranged from about 150 to 500 people (Kroeber 1925).

The tribelet was headed by a chief who was aided by a variety of assistants, perhaps the most important of whom was the *winatum*, a herald or messenger and assistant chief. A shaman served as a religious officer but did not have any direct political authority in a strict sense although, as Gayton (1930) has illustrated, they maintained substantial influence within their tribelet.

Shamanism is a religious system common to many Native American tribes. It involves a direct and personal relationship between each individual and the supernatural world, with this relationship enacted by entering a trance or hallucinatory state (usually through the ingestion of psychotropic plants such as jimsonweed or, more typically, native tobacco). Shamans, per se, were considered individuals with an unusual degree of supernatural power, and they served as healers or curers, diviners, and controllers of natural phenomena (such as rain or thunder). Shamans are also known to have produced the rock art of this region, which depicted the visions they experienced in their vision quests, believed to represent their spirit helpers and events in the supernatural realm (Whitley 1992, 2000).

The centrality of shamanism to the religious and spiritual life of the Yokuts was demonstrated by the role of shamans in the yearly ceremonial round, which was always the same. It started in the spring with the jimsonweed ceremony, then the rattlesnake dance, and finally (where appropriate), the first salmon ceremony. Fall rituals began in the late summer after returning from seed camps with the mourning ceremony, followed by first seed and acorn rites, and then the bear dance (Gayton 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances which, at the most fundamental level, involved a display of their supernatural powers (Kroeber 1925).

Subsistence practices varied from tribelet to tribelet likely due to specific environments of residence. Throughout Native California, and Yokuts territory in general, the acorn was a primary dietary component, as were a variety of gathered seeds. The valley tribes augmented this resource with lacustrine and riverine foods, especially fish and wildfowl.

Although population estimates vary, and population size was greatly affected by Euro-American introduced diseases and social disruption more generally, the Yokuts were one of the largest and most successful groups in Native California. Cook (1978), for example, estimates that the Yokuts region contained fully 27 percent of the aboriginal population in the state at the time of contact; some other estimates are even larger.

2.3 PRE-CONTACT ARCHAEOLOGICAL BACKGROUND

The southern San Joaquin Valley region, though far from remote in relation to other portions of California, has received minimal archaeological attention compared to other areas of the state. In part, this is probably due to the fact that the majority of California archaeological work has concentrated in the Sacramento Delta, Santa Barbara Channel, and central Mojave Desert areas (see Moratto 1984). Although our knowledge of the prehistory of this region is therefore limited in specific details, enough is known to determine that the archaeological record is broadly similar to south-central and central California as a whole (see Gifford and

Schenk 1926; Hewes 1941; Wedel 1941; Fenenga 1952; Elsasser 1962; Fredrickson and Grossman 1977; Schiffman and Garfinkel 1981). Siefkin (1999), in fact, has shown that, at least during the last approximately 1,000 years, southern San Joaquin Valley prehistory was most similar to the Santa Barbara region to the west. Based on this fact, the general prehistory of the study area and its vicinity can be outlined as follows.

Initial occupation of the region occurred at least as early as the Paleoindian Period, or prior to about 10,000 YBP Evidence of this early use of the region has been revealed by the discovery of characteristic fluted and stemmed points found around the margin of Tulare Lake, in the foothills of the Sierra, on the Carrizo Plain, and in the Mojave Desert proper.

Both fluted and stemmed points are particularly common around lake margins, suggesting a terminal Pleistocene/early Holocene lakeshore adaptation similar to that found in other portions of western North America at this same time, although little else is known about these earliest peoples. Additional finds consist of a Clovis-like projectile point discovered in a flash-flood cut-bank near White Oak Lodge in 1953, on the Tejon Ranch (Glennan 1987a, 1987b). More recently, a similar fluted point has been found near Bakersfield (Zimmerman et al. 1989), while a number are known from the Edwards Air Force Base and Boron area of the western Mojave Desert. Although it has now been well-established that human occupation of the state occurred during the Late Pleistocene, relatively little can yet be inferred about the nature and distribution of this occupation, with just a few exceptions. First, there is little evidence to support the idea that these Paleo-Indian peoples were necessarily big-game hunters similar to those found on the Great Plains. Second, the western Mojave Desert evidence, at least, suggests small, very mobile populations that have left minimal archaeological remains. Substantial evidence for human occupation of California first occurs during the Middle Holocene, from roughly 7500 to 4000 YBP. This period is known as the Early Horizon and is sometimes alternatively referred to as the Early Millingstone along the Santa Barbara Channel. In this southern area, population concentrated along the coast, with minimal visible use of inland areas. Adaptation appears to have emphasized hard seeds and nuts, with tool-kits dominated by mullers and grindstones (manos and metates). Minimal evidence of Early Horizon occupation has been found in most inland portions of the state. In part this may be due to a severe cold and dry paleoclimatic period which occurred at this time. Regardless of specifics, it appears that Early Horizon population density was low and, if any kind of specialized subsistence adaptation existed, it was probably tied to plant-food gathering rather than hunting.

Environmental conditions improved dramatically after about 4000 YBP, during the Middle Horizon (or Intermediate Period). This period is known climatically as the Holocene Maximum (which, strictly, starts at about 3800 YBP) and it was characterized by significantly warmer and wetter conditions than were experienced previously. Archaeologically, it was marked by a large population increase and radiation into new environments along coastal and interior south-central California and the Mojave Desert (Whitley 2000). In the Delta region to the north, this same period of favorable environmental conditions was marked by the appearance of the Windmiller culture, which exhibited a high degree of ritual elaboration (especially in burial practices). Along with ritual elaboration, Middle Horizon times experienced increasing subsistence specialization, perhaps correlating with the appearance of acorn-processing technology. Penutian-speaking peoples (including the Yokuts) are also posited to have entered the state roughly at the beginning of this period and, perhaps, to have brought this technology with them (cf. Moratto 1984). Likewise, it appears that the so-called “Shoshonean Wedge” in southern California, or the Takic-speaking groups that included the Gabrielino/Fernandeño, Tataviam, and Kitanemuk, may have moved into this region at this time, rather than at about 1500 YBP as first suggested by Kroeber (1925).

Evidence for Middle Horizon occupation of interior south-central California is substantial. In northern Los Angeles County, along the upper Santa Clara River, for example, the Agua Dulce village complex includes occupation extending back to the Intermediate Period, at which time population of the village may have

been 50 or more people (King et al. n.d.). Similarly, the inhabitation of the Hathaway Ranch region, near Lake Piru, and the Newhall Ranch, near Valencia, appears to have begun during the Intermediate Period (W&S Consultants 1994). To the west, there is little or no evidence for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama river drainages, with population appearing for the first time there at roughly 3500 YBP (Horne 1981). The Carrizo Plain experienced a major population expansion during the Middle Horizon (W&S Consultants 2004; Whitley et al. 2007). Moreover, more recently collected data indicate that the Tehachapi Mountains region was first significantly occupied during the Middle Horizon (W&S Consultants 2006), and a parallel can be drawn to the inland Ventura County region, where a similar pattern has been identified (Whitley and Beaudry 1991), as well as to the western Mojave Desert (Sutton 1988a, 1988b), the southern Sierra Nevada (W&S Consultants 1999), and the Coso Range region (Whitley et al. 1988). In all of these areas, a major expansion in settlement, the establishment of large site complexes, and an increase in the range of environments exploited appear to have occurred sometime roughly around 4,000 years ago. Although most efforts to explain this expansion have focused on very local circumstances and events, it is increasingly clear that this was a major occurrence throughout southern California, and therefore any explanation of it must be sought at a larger level of analysis (Whitley 2000). Moreover, evidence from the Carrizo Plain suggests that the origins of the tribelet level of political organization may have developed during this period (W&S Consultants 2004; Whitley et al. 2007). Whether this same demographic process holds for the southern San Joaquin Valley is yet to be determined.

The beginning of the Late Horizon is set variously at 1500 and 800 YBP, although a consensus is developing for the shorter chronology for this time period. In fact, there is increasing evidence for the importance of the Middle-Late Horizons transition, from roughly AD 800 to 1200, in the understanding of south-central California. This corresponds to the so-called Medieval Climatic Anomaly, a period of climatic instability that included major droughts and resulted in demographic disturbances across much of western North America (Jones et al. 1999). It is also believed to have resulted in major population decline and abandonments across south-central California, involving as much as 90 percent of the interior populations in some regions, such as the Carrizo Plain (Whitley et al. 2007). It is not yet clear whether this site abandonment was accompanied by a true reduction in population or instead an agglomeration of the same numbers of peoples into fewer but larger villages in other areas. What is clear, however, is the fact that Middle Period villages and settlements were widely dispersed across the landscape, including at many locations that lack contemporary evidence of fresh water sources. Late Horizon sites, in contrast, are typically located where fresh water was available during the historical period, if not currently.

The subsequent Late Horizon then can be best understood as a period of recovery from a major demographic collapse. One result is the development of the regional archaeological cultures that are the precursors to ethnographic Native California. That is, the ethnographic lifeways recorded by anthropologists are believed to extend back into the past for roughly 800 years.

The position of southern San Joaquin Valley prehistory relative to the patterns seen in surrounding areas is still somewhat unknown (cf. Siefkin 1999). The presence of large lake systems in the valley bottoms can be expected to have mediated some of the effects of desiccation seen elsewhere. But, as the reconstruction of Soda Lake in the nearby Carrizo Plain demonstrates (see Whitley et al. 2007), environmental perturbations had serious impacts on lake systems too. Identifying certain prehistoric demographic trends for the southern San Joaquin Valley, and determining how these trends (if present) correlate with those seen elsewhere, was one of the research objectives within the current study area.

2.4 HISTORIC-ERA BACKGROUND

Spanish explorers first visited the southern end of the San Joaquin Valley in 1772, but its lengthy distance from the missions and presidios along the Pacific Coast delayed permanent settlement for many years,

including during the Mexican period of control over the Californian region. In the 1840s, Mexican rancho owners along the Pacific Coast allowed their cattle to wander and graze in the San Joaquin Valley (JRP Historical Consulting 2009). The Mexican government granted the first ranchos in the southern part of the San Joaquin Valley in the early 1840s, but these did not result in permanent settlement. It was not until the annexation of California in 1848 that the exploitation of the southern San Joaquin Valley began (Pacific Legacy 2006).

The discovery of gold in northern California in 1848 resulted in a dramatic increase of population, consisting in good part of fortune seekers and gold miners, who began to scour other parts of the state. Population throughout the area grew rapidly with this rush, with new immigrants ranching in the San Joaquin Valley to supply the miners and mining towns. Ranchers grazed cattle and sheep, and farmers dry-farmed or used limited irrigation to grow grain crops, leading to the creation of small agricultural communities throughout the valley (JRP Historical Consulting 2009).

After the American annexation of California, the southern San Joaquin Valley became significant as a center of food production for this new influx of people to California. The expansive unfenced and principally public foothill spaces were well suited for grazing both sheep and cattle (Boyd 1997). As the Sierra Nevada gold rush presented extensive financial opportunities, ranchers introduced new breeds of livestock, consisting of cattle, sheep, and pig (Boyd 1997).

With the increase of ranching in the southern San Joaquin came the dramatic change in the landscape, as non-native grasses more beneficial for grazing and pasture replaced native flora (Preston 1981). After the passing of the Arkansas Act in 1850, efforts were made to reclaim small tracts of land in order to create more usable spaces for ranching. Eventually, as farming supplanted ranching as a more profitable enterprise, large tracts of land began to be reclaimed for agricultural use, aided in part by the extension of the railroad in the 1870s (Pacific Legacy 2006).

Following the passage of state-wide “No-Fence” laws in 1874, ranching practices began to decline, while farming expanded in the San Joaquin Valley in both large land holdings and smaller, subdivided properties. As the farming population grew, so did the demand for irrigation. Settlers began reclamation of swampland in 1866 and built small dams across the Kern River to divert water into the fields. By 1880, 86 different groups were taking water from the Kern River. Ten years later, 15 major canals provided water to thousands of acres in Kern County.

As unproductive land was reclaimed in the southern San Joaquin Valley, grants were given to individuals who had both the resources and the finances to undertake the operation alone. A small agricultural settlement, founded by Colonel Thomas Baker in 1861 after procuring one such grant, took advantage of reclaimed swampland along the Kern River. This settlement became the City of Bakersfield in 1869 and quickly became the center of activity in the southern San Joaquin Valley, and in the newly formed Kern County. Located on the main stage road through the San Joaquin Valley, the town became a primary market and transportation hub for stock and crops, as well as a popular stopping point for travelers on the Los Angeles and Stockton Road. The Southern Pacific Railroad reached the Bakersfield area in 1873, connecting it with important market towns elsewhere in the state, dramatically impacting both agriculture and, eventually, oil production (Pacific Legacy 2006).

Three competing partnerships developed during this period which had a great impact on control of water, land reclamation, and ultimately agricultural development in the San Joaquin Valley: Livermore and Chester, Haggin and Carr, and Miller and Lux, perhaps the most famous of the enterprises. Livermore and Chester were responsible, among other things, for developing the large Hollister plow (three feet wide by two feet deep), pulled by a 40-mule team, which was used for ditch digging. Haggin and Carr were largely responsible for reclaiming the beds of the Buena Vista and Kern lakes, and for creating the Calloway Canal,

which drained through the Rosedale area in Bakersfield to Goose Lake (Morgan 1914). Miller and Lux ultimately became one of the biggest private property holders in the country, controlling the rights to over 22,000 square mi, and their impacts were widespread. They recognized early-on that control of water would have important economic implications, and they played a major role in the water development of the state. They controlled, for example, more than 100 mi. of the San Joaquin River with the San Joaquin and Kings River Canal and Irrigation System. They were embroiled for many years in litigation against Haggin and Carr over control of the water rights to the Kern River. Descendants of Henry Miller continue to play a major role in California water rights, with his great-grandson, George Nickel, Jr., the first to develop the concept of water banking, thus creating a system to buy and sell water (Levine 2011).

Rosedale Area & RRBWSD History

The community of Rosedale is located immediately west of Bakersfield. It was formed in the late 1870s after investors enticed prospective buyers to lay claim to the land in the southern San Joaquin Valley. The dry climate of the valley and the rich soil it provided when irrigated from local water resources drew people to ranch and farm the land. The construction of the Calloway Canal in 1875 was an impetus for land sales in the area. People were drawn to the profitable irrigated land that this canal provided, sourcing its water supply from the Kern River. Marketing was particularly focused on English settlers who emigrated from the United Kingdom to the area called "Rosedale" for its abundant natural supply of roses. S.W. Fergusson, manager of the Kern Land Company, printed ads in English newspapers proclaiming the abundance of farmland in Rosedale. In March 1890, the first English emigrants arrived in Rosedale and purchased land. By 1889, Rosedale had a town site and appeared to be growing. In the next few years, Rosedale residents suffered drought, and the nation suffered financial panic in the mid-1890s. Colonization efforts failed by the turn of the twentieth century. Although the Santa Fe Railroad laid tracks through Rosedale in 1899, attempts at reviving the area failed (Lynch 2006).

Through the twentieth century, the Rosedale area became a quiet suburb of the growing city of Bakersfield. As irrigation efforts of the San Joaquin Valley increased in the twentieth century, more water districts, formed by local landowners and farmers, were established.

The RRBWSD was founded in 1959, named after the community of Rosedale and the nineteenth-century Mexican moniker for the Kern River, "Rio Bravo" (Lynch 2006). It was created to construct and operate a groundwater recharge project to offset declining groundwater levels. These declines largely resulted from the construction of the Lake Isabella Dam on the Kern River, completed in 1954.

The Goose Lake Slough, which branches off the Kern River to the south of the Rosedale area, was initially modified in 1874 when the head of the slough was cleaned and enlarged and a regulator was placed across it (Grunsky 1898). Channelization of the slough resulted from the construction of the Lake Isabella Reservoir, completed in 1953. It is currently entirely channelized and it terminates in a series of RRBWSD recharge basins. Renamed the Goose Lake Channel, it connects to both the Kern River and the Cross Valley Canal.

The Cross Valley Canal is the Kern County Water Agency's (KCWA) primary conduit for water delivered to and from the California Aqueduct (KCWA n.d.). The canal was built in 1975 to supply Bakersfield with SWP water, and it has been expanded between 2005 and 2012. Currently, the canal is more than 21 mi. in length (KCWA n.d.).

The sandy-bottomed Kern River proved very inefficient for moving water through the flats of the San Joaquin Valley. The Kern County Land (KCL) Company, successor to Miller and Lux, owned most of these rights. It created the concrete-lined Kern River Canal in 1963, which is south of and parallels the current riverbed, to improve its water supply west of Bakersfield. The creation of the lined channel contributed to groundwater problems in the City of Bakersfield. In 1970, the City sued Tenneco, which had acquired KCL

in 1967, obtaining its lands, infrastructure, and water rights by legal settlement in 1976 for $18 million (Stetson 1975; Water Resources Department 2003). The City now operates the Kern River Canal and controls use of the Kern River through its boundaries, which is usually dry west of Highway 99.

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3. ARCHIVAL RECORDS SEARCH AND TRIBAL COORDINATION

3.1 ARCHIVAL RECORDS SEARCH

For this study, ASM utilized an archival records search conducted at the Southern San Joaquin Valley Information Center (SSJVIC), California State University, Bakersfield. This records search was utilized to determine whether the study area had been previously surveyed for cultural resources, and/or whether any such resources were known to exist on it. The records search was reviewed to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the study area; (ii) if the study area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive. Records examined included archaeological site files and maps, the National Register of Historic Places, Historic Property Data File, California Inventory of Historic Resources, and the California Points of Historic Interest. The results of this archival records search are summarized here; see Confidential Appendix A for records search results.

According to the SSJVIC, 33 previous archaeological study reports have been conducted within 0.5-mi. of the study area; of these, 11 cover a portion of the study area (Table 1). The SSJVIC results identified four previously recorded cultural resources within the study area and an additional nine within a 0.5-mi. buffer of the study area (Table 2).

Table 1. Previous Reports

Report #	Year	Author/Affiliation	Title	Relationship to Study Area
KE-00110	1997	Schiffman, Robert A. / Bakersfield College	Archaeological investigation for GPA #18/Zcc #41 at Rosedale and Enos Lane	Outside
KE-00263	1981	Baker, Suzanne / Archaeological Consultants	Archaeological Reconnaissance of the Kern River Co-Generation Plant Gas and Electricity Pipeline Routes, Kern County, California	Outside
KE-00695	**1996**	**Murphy, Peggy B., Pruett, Catherine Lewis, and Fleagle, Dorothy / Three Girls and A Shovel**	**An Archaeological Assessment of 58.13 Acres Northwest of Bakersfield, Kern County, California - Castle and Cooke, Vesting Tentative Tract No. 5489, Parcel Map 4244**	**Within**
KE-0862	1995	Parr, Robert E. / California State University, Bakersfield	Archaeological Survey Report for a Proposed Route Adoption on Highway 58, Bakersfield, Kern County, California	Outside
KE-0866	**1992**	**Parr, Robert E. and Osborne, Richard / California State**	**Archaeological Survey Report for the Proposed Route Adoption Study on Highway 58, Bakersfield, Kern County, California**	**Within**
KE-01315	1988	Schiffman, Robert A. / Bakersfield College	Archaeological Investigation for 40 Acre Subdivision, Kern County, California	Outside
KE-01497	1996	Schuster, T.J. / Individual Consultant	Negative Archaeological Survey Report for Overlay & Widening of Route 43 from Route 58 to .3 Mile S. of Lerdo Highway PM 8.1-16.3	Outside
KE-01633	1980	Swenson, Laurie, Clayton, Al, and Jahani, Andre / California Department of Transportation	Archaeological Survey Report for Bridge Widening at Goose Lake Slough	Outside
KE-01728	**1984**	**Uli, Jim and Schiffman, Robert A. / Bakersfield College**	**Archaeological Investigation of Proposed Rosedale Wastewater Sewage Treatment Plant, 1600 Acres Bakersfield, Kern County, California**	**Within**

Report #	Year	Author/Affiliation	Title	Relationship to Study Area
KE-01740	**1992**	**Valdez, Sharynn-Marie / California State University, Bakersfield**	**An Archaeological Assessment of 41.69 Acres of Land West of Bakersfield, Kern County, California / Cultural Resource Facility, California State University, Bakersfield**	**Within**
KE-02226	**1998**	**Laylander, Don / California Department of Transportation**	**Second Supplemental Archaeological Survey Report for the Highway 58 Route Adoption Project (Stockdale Highway Alternative), Bakersfield, Kern County, California / California Department of Transportation**	**Within**
KE-02278	**1999**	**Gassner, Sarah, Nishamura, Lisa, Chick, Philip, Hoang, James, and Tackett, Will / Jones & Stokes Associates, Inc.**	**Cultural Resources Inventory Report for Williams Communications, Inc. Fiber Optic Cable System Installation Project, San Luis Obispo to Bakersfield, Volume I / Jones & Stokes Associates, Inc.**	**Within**
KE-02323	1999	Demos-Petropoulous, Francine, McGowan, Dana, Scott, Barry, O'Brien, Teresa, Norton, Bill, and Rause, Wendy / Jones & Stokes Associates, Inc.	Cultural Resources Inventory Report for the AT&T Corp. Cable Upgrade Project, Los Angeles, Kern, and San Luis Obispo Counties, California	Outside
KE-02490	**2001**	**Hudlow, Scott M. / California Department of Transportation**	**Negative Archaeological Survey Report: 06- KER-43, PM 0.0/9.0 / Bakersfield, Kern County, California / California Department of Transportation**	**Within**
KE-02807	**1993**	**Herbert, Rand F. / JRP Historical Consulting Services**	**Historic Resource Evaluation Report: Tier 1, Route Adoption on Route 58 Between I-5 and State Route 99**	**Within**
KE-03419	2006	Hudlow, Scott M. / Hudlow Cultural Resource Associates	A Phase I Cultural Resource Survey for APNs 104-292-28 and 29, Stock Manufacturing Site, Enos Lane, Kern County, California	Outside
KE-03482	2004	Hudlow, Scott M. / Hudlow Cultural Resource Associates	A Phase I Cultural Resource Survey Alliance Appraisal, Strand Ranch, Kern County, California	Outside
KE-03483	2003	Pruett, Catherine Lewis / Hudlow Cultural Resource Associates	A Phase I Cultural Resource Survey Alliance Appraisal, Bardeen Partners, Kern County, California	Outside
KE-03514	2007	Hudlow, Scott M. / Hudlow Cultural Resource Associates	A Phase I Cultural Resource Survey for APN 407-32-023 and 24, Brimhall Road, Bakersfield, Kern County, CA	Outside
KE-03674	2008	Hudlow, Scott M. / Hudlow Cultural Resource Associates	A Phase I Architectural Survey Bureau of Reclamation, Strand Ranch Kern County, California	Outside
KE-03748	2007	Manney, Shelby / TRC Companies	Cultural Resource Assessment Inergy Propane Pipeline: North Coles Levee Oil Field to Rogas Rail Terminal	Outside
KE-03749	2009	Glentis, Dionisios and Stropes, Tracy Shelby / TRC Companies	Cultural Resources Monitoring Report: ARB/Inergy-North Coles Levee Oil Field to Rogas Rail Terminal Pipeline Project Tupman, California to Bakersfield, California	Outside
KE-03769	2009	Gassner, Sarah, Nishamura, Lisa, Chick, Philip, Hoang, James, and Tackett, Will / Three Girls and A Shovel	A Cultural Resources Assessment for APN 104-291-52, 5.38 Acres on Enos Lane and Development Way West of Bakersfield, Kern County, California	Outside

Report #	Year	Author/Affiliation	Title	Relationship to Study Area
KE-03777	2010	Palm-Leach, Laura, Brandy, Paul, King, Jay, Mikkelsen, Pat, Seil, Libby, Hartman, Lindsay, Bradeen, Jill, Larson, Bryan, Freeman, Joseph, Costello, Julia, Rosenthal, Jeffrey, and Jones, Deborah / Far Western Anthropological Research Group, Inc.	Cultural Resources Inventory of Caltrans District 6 Rural Conventional Highways in Fresno, Western Kern, Kings, Madera, and Tulare Counties Summary of Methods and Findings	Outside
KE-03840	2009	Miller, Michelle A. / California Department of Transportation	Historic Property Survey Report for Kern 119/43 Overlay Project on States Routes 119 and 43, Kern County	Outside
KE-04262	**2012**	**Hudlow, Scott M. / Hudlow Cultural Resource Associates**	**A Phase I Cultural Resources Survey for Proposed Plains LPG Service Pipeline Inergy Gas Plant to Plains LPG Facility, Kern County and City of Shafter, California**	**Within**
KE-04538	**2013**	**Ehringer, Candace, Lockwood, Chris, and Marks, Brian / ESA**	**IRWD Stockdale West Ranch Joint Banking Project Draft Phase I Cultural Resources Study**	**Within**
KE-04550	2012	Loftus, Shannon / Ace Environmental	Cultural Resource Records Search and Site Survey AT&T Site BKCL47 (35033) Frito Lay 2851 Ada Road Bakersfield, Kern County, California	Outside
KE-04550A	2012	Loftus, Shannon / Ace Environmental	Historic Architectural Resource -Inventory and Assessment AT&T Site BKCL47 (35033) Frito Lay 2851 Ada Road Bakersfield, Kern County, California	Outside
KE-05012	**2018**	**Wickstrom, Brian / California Department of Transportation**	**Historic Property Survey Report for the State Route 43 and 119 Pavement and Rehabilitation Project West of Bakersfield, Kern County, California**	**Within**
KE-05012A	2018	Wickstrom, Brian / California Department of Transportation	Archaeological Survey Report for the State Route 43 and 119 Pavement and Rehabilitation Project West of Bakersfield, Kern County, California	Outside
KE-05012B	2018	Wickstrom, Brian / California Department of Transportation	Environmentally Sensitive Area Action Plan For The State Route 43 and 119 Pavement and Rehabilitation Project West of Bakersfield, Kern County, California	Outside
KE-05039	2018	McCarthy-Reid, Amy / Parsons Corporation	Centennial Corridor Project Re-validation #9 State Route 43 (Enos Lane)/Stockdale	Outside
KE-05131	2019	Kleam, Samantha / California Department of Transportation	Historic Property Survey Report (NEGATIVE) for West Rosedale CAPM Project, Kern County, California	Outside
KE-05131A	2019	Heilmann, Nathaniel / California Department of Transportation	Architectural History Compliance Memo for the Rosedale CAPM Project in Kern County on SR 43 at Postmile 8.25 and SR 58 at Postmile 39.9/46.0	Outside
KE-05131B	2019	Valentin, Sylvere CM / California Department of Transportation	Archaeological Survey Report (Negative) for West Rosedale CAPM Project, Kern County, California	Outside
KE-05459	**2021**	**Whitley, David S. and Carey, Peter A. / ASM Affiliates**	**Class III Inventory/Phase I Survey, Rosedale-Rio Bravo Water Storage District, Groundwater Banking and Conveyance Improvement Project, Kern County, California**	**Within**

Table 2. Previously Recorded Resources

Primary #	Type	Description	Eligibility Status	Relationship to Study Area
P-15-002050	**Structure, Object, Site**	**Southern Pacific Railroad, abandoned China Lake Railroad Spur grade**	**Recommended not eligible**	**Within**
P-15-008000	Building	Unknown	Unknown	Outside
P-15-008026	Structure	Cross Valley Canal	Recommended not eligible	Outside
P-15-008066	Building	Unknown	Unknown	Outside
P-15-008098	Building	Unknown	Unknown	Outside
P-15-008121	**Structure**	**Goose Lake Slough**	**Determined not eligible**	**Within**
P-15-008172	Building	Unknown	Unknown	Outside
P-15-009312	Other	Broken isolated cottonwood projectile point	Unevaluated	Outside
P-15-012769	Structure	Oil pump and well	Recommended not eligible	Outside
P-15-015199	Building	Strand Ranch House	Unevaluated	Outside
P-15-015818	Other	Isolated white chert flake	Unevaluated	Outside
P-15-017760	**Structure**	**Oil tank farm**	**Recommended not eligible**	**Within**
P-15-017761	**Structure**	**Pioneer Canal**	**Unevaluated**	**Within**

3.2 TRIBAL COORDINATION

On August 14, 2024, the Native American Heritage Commission (NAHC) was contacted to request a list of Tribes traditionally and culturally affiliated with the study area, as well as a Sacred Lands File (SLF). The NAHC did not respond to the request; however, a separate request sent out on the same date for an adjacent project was returned with negative SLF results and six Tribal contacts from six Tribes. This response letter was utilized for outreach since it was deemed adequate based on previous experience in the area. Outreach letters were mailed to all listed Tribes on December 17, 2024, and follow-up emails were sent on January 3, 2025. Additional letters were sent to Tribes on September 23, 2025 to include the transmission lines, which were not included in the original letters. Follow-up emails were also sent on October 9, 2025. Documentation of the request made to the NAHC and the results of the outreach are available in Appendix B.

The Santa Rosa Rancheria Tachi Yokut Tribe responded, stating, in part, "*Due to the location of this project the Tribe will be deferring to the more local tribes of the area.*" Additionally, the Tejon Indian Tribe was a respondent, stating, "*In response to the project mentioned above, we don't currently have any knowledge of tribal cultural resources within the project. We do, however, know that the area was well-traveled by the Yokuts, Yowlumne, and Tulumne people. We recommend the project proceed as planned with the lone stipulation that the Tribe be notified if inadvertent discoveries are made.*" No other responses were received.

4. METHODS AND RESULTS

4.1 FIELD METHODS

A Phase I survey of the approximately 203 ac. study area was conducted on November 6, 2024, October 10, 2025, and October 16, 2025, by ASM Associate Archaeologist Robert Azpitarte, BA, and ASM Assistant Archaeologists Daniel Ware, BA, and Margarita Medina Lemus, BA. The field methods employed followed the California Office of Historic Preservation Instructions for Recording Historic Resources, using DPR 523 forms.

The site boundaries, features, any diagnostic artifacts and concentrations of artifacts were all plotted on electronically generated maps created with ESRI's ArcMap software. Feature documentation, in addition to mapping, consisted of photography and descriptions. Artifact documentation involved a tabulation of the varieties of artifactual materials and types present, with photography and tabulation of the temporally diagnostic specimens. No artifact collection occurred because the kinds of artifacts present are all mass-produced, twentieth-century objects that do not justify curation. Given the nature of the site, no subsurface test excavation was conducted as the presence of an intact subsurface archaeological deposit was highly unlikely.

The study area was examined by the crew walking parallel transects spaced at 15-meter (m) intervals. The ground visibility in the study area was generally fair to poor, with 65 to 90 percent of the study area being developed for agriculture creating 10 to 45 percent ground visibility. Areas of heavy disturbance were therefore common in the study area. Exposed disturbances of natural ground were examined to determine whether they contained cultural resources, with particular attention paid to rodent burrow spoils piles and the cleared edges of disturbed areas. Disturbances from agricultural field development were common across the entirety of the study area.

4.2 RESULTS

The study area is within an active agricultural community, with graded dirt roads, above and below-ground transmission lines, agricultural wells for irrigation, and other crop production-related facilities common within the study area and its vicinity (Figure 2). As a result of the Phase I survey, one newly identified site (temporary field designation DILLARD-SITE-1) was recorded, in addition to updates to four previously identified resources (P-15-002050, P-15-008121, P-15-017760, and P-15-017761). A site description and CRHR eligibility evaluation for evaluated sites are presented in the following section, and DPR site records are available in Confidential Appendix C for the newly recorded site and updated sites. The site records contain all site photographs, including overview and feature photographs; a GIS resource location map; and a GIS site sketch map.



Figure 2. Study area overview showing terrain, agricultural developments, and prior disturbances including transmission lines and agricultural-production-related facilities. View southwest.



Figure 3. Study area overview showing horizon, topography and canal system. View south southwest.

Previously Recorded Resources

Southern Pacific Railroad (P-15-002050)

Resource P-15-002050 is recorded as the Southern Pacific Railroad with numerous spur lines. In the study area, the railroad is currently operating as the Santa Fe Railroad controlled by the Burlington Northern Santa Fe Railway. The study area crosses the railway four separate times. Due to right-of-way encroachment, the powerlines will either be placed above ground with poles outside of the right-of-way, or below the grade by horizontal boring. Therefore, the railway itself is outside of the study area and will not be impacted by Project construction. For this reason, no update was performed on resource P-15-002050.

Goose Lake Slough (P-15-008121)

Resource P-15-008121 is the Goose Lake Slough. Goose Lake Slough was a natural drainage that was first modified in 1874 when a regulator was built across the cleaned and enlarged head of Goose Lake Slough (Grunsky 1898). The slough itself remained unchanged for 80 years, until the mid-1950s when it was initially channelized in conjunction with the construction of Isabella Reservoir (Whitley et al. 2015). One segment of the canal was recorded by JRP Historical Consulting Services (JRP) in 1993 near Renfro Road. This segment of the canal was named the "Rio Bravo Canal" by JRP. ASM recorded an approximately 230-ft. long segment of Goose Lake Slough in 2020 adjacent to the study area. ASM recommended the recorded segment not eligible for the NRHP or CRHR. According to the Built Environment Resources Directory (BERD) for Kern County, the Goose Lake Slough was determined ineligible for the National Register of Historic Places (NRHP) by consensus through the Section 106 process (NRHP Status Code 6Y) in 1997. This decision was upheld in 2004. Goose Lake Slough has not been evaluated for eligibility to the CRHR or local listing; however, it is unlikely it would be found eligible given it has been determined not eligible for the NRHP.

ASM identified several segments of Goose Lake Slough during the current field study. The slough varies by Section, though it mostly remains as described in previous records. The general area around the slough consists of orchards and agricultural fields bisected by various dirt roads. No water was present in the slough during the survey.

Section 25: The natural course of the Goose Lake Slough extends into Section 25. This portion of the slough measures approximately 80 ft. wide and 10 ft. deep and is surrounded by a series of existing basins. A review of historic aerial imagery showed no evidence that this segment has ever been channelized or realigned. No significant features were identified in this portion of the slough.

Section 27: Two segments of Goose Lake Slough were identified in Section 27. The eastern segment in Section 27 is channelized and measures roughly 45 ft. wide by 10 ft. deep. The natural course of Goose Lake Slough has been destroyed in this area. Historic aerials reveal the eastern segment in Section 27 was realigned and channelized between 1967 and 1968. It has remained unchanged since that time. No significant features were identified in this portion of the slough.

The western segment in Section 27 follows the natural course of Goose Lake Slough; however, it was channelized sometime between 1961 and 1967 based on historic aerials. Sometime between 1968 and 1984 a retention basin was constructed surrounding the segment. This segment is difficult to measure due to flooding, but likely measures roughly 45 ft. wide by 10 ft. deep.

Section 28: A segment of Goose Lake Slough was identified on the eastern side of Section 28. This segment of Goose Lake Slough represents the western extent of the slough, beyond which to the west the slough enters retention basins and no longer exists. This segment measures roughly 45 ft. wide by 10 ft. deep.

A north south road separates the segments in Section 27 and Section 28. At this road there are five concrete box culverts. These measures approximately 8 ft. by 3 ft. by 4 ft. with 3-ft. diameter culverts with metal grates.

P-15-017760

Site P-15-017760 is a historic-era tank farm consisting of 15 oil production related features likely associated with the Strand Oil Fields. The entire site measures 1,576 ft. north to south by 2,328 ft. east to west, for an area of approximately 72 ac. This resource was recorded as a tank farm in 2012 (McLean 2012).

ASM revisited the site during the current field study. None of the features identified within the original recording are located within the study area and, therefore, the site will not be impacted by the Project. No update was performed on the site as there were no features within the study area to update.

Pioneer Canal (P-15-017761) (Destroyed)

Resource P-15-017761 is a portion of the historic-era Pioneer Canal. This resource no longer exists within the study area. The segment of Pioneer Canal was removed prior to 1984 based on historic aerials. This work likely occurred when the Cross Valley Canal was constructed in 1975. The Cross Valley Canal runs roughly parallel to the previous alignment of the Pioneer Canal approximately 750 ft. to the south.

Newly Recorded Resources

DILLARD-SITE-1

DILLARD-SITE-1 is an agricultural maintenance shed with associated components located just west of Bakersfield and southwest of Calder's Corner. The site measures 290 ft. (east-west) by 60 ft. (north-south) and is situated on open flats surrounded by active agricultural fields. The site is in fair condition.

The site consists of a shed structure and associated foundation (F1), tanks (F2 and F3), and a well pump station (F4). According to historic aerial imagery, at least three structures were located at the site by at least 1952. By c. 1984, two of the three structures appear to have been destroyed, with the remaining shed structure located at the east end of the site. All existing associated components are west of the shed. Undiagnostic and fragmented debris was observed throughout the site and contemporary farming equipment was noted just northeast of the structure. The site is bounded on the north by a contemporary transmission line with wooden poles. All identified features are described below in Table 3.

Table 3. Feature Descriptions

Designation	Description
F1	F1, the structure, is a single-story utilitarian sheet-metal shed structure that measures approximately 216 square feet (sq. ft.), measuring approximately 18 ft. (north-south) by 12 ft. (east- west) by 10 ft. tall. The shed was constructed using round head nails, and on top of a larger poured concrete foundation that measures 32 ft. (east- west) by 18 ft. (north-south). It has a slightly asymmetrical primary façade with two externally hinged sheet metal doors on the west. A simple window frame (now covered) is on the east façade. The shed has a slightly pitched, sheet metal roof with no exposed wood plank rafters and extending sheet metal eaves on the north and south. At the time of the survey, the shed was filled with modern trash, including discarded furniture, hoses, metal barrels, and plastic tubs. Although this shed rests on the original c. 1950s foundation, it is unclear whether this structure replaced a larger one at some point after the destruction of the adjacent structures c. 1980s.
F2	Immediately west of the shed, is a welded and pressurized tank measuring 3.5 ft. in diameter by 7.5 ft. in length. A welded placard on the tank reads "MFD. BY BUEHLER TANK AND WELDING WORKS LOS ANGELES – CUCAMONGA CA. PRESSURE 6 LBS". According to the California Department of Industrial Relations (CDIR 2025), Buehler Tank and Welding Works has manufactured pressurized tanks in the Los Angeles area since at least 1956.

Designation	Description
F3	Adjacent to F2, is a small vertical holding tank with an electrical conduit and modified with PVC piping.
F4	Furthest west of shed, consists of water pump and adjacent standpipe that also appears on historic aerial imagery as early as 1952, though it has modern attachments.

According to available records, the first sale of the property was recorded in 1979 as a deed transfer with no buyer or seller listed; however, the second event listed is a refinance in 1990 by Lonnie Dillard, so it is assumed the 1979 deed transfer was to Lonnie Dillard. The property stayed with Lonnie Dillard until 2018, when it was sold to Dave Paxton Dillard. On August 6, 2024, a loan was taken out by Lonnie Dillard and Lonnie Dillard Farming for the property. Finally, the property was sold later that month on August 16, 2024, to RRBWSD.

4.3 CRHR ELIGIBILITY EVALUATION

GOOSE LAKE SLOUGH (P-15-008121)

Goose Lake Slough has previously been determined not eligible for inclusion in the NRHP by consensus through the Section 106 process. Additionally, ASM has recommended previous nearby segments not eligible for inclusion in the NRHP or CRHR. ASM agrees with these previous determinations and recommendations for the newly recorded segments.

DILLARD-SITE-1

While DILLARD-SITE-1 is associated with farming and ranching in the San Joaquin Valley, it is not within the period of significance of 1870–1959, when RRBWSD formed. Additionally, the Dillard family is not a prominent or significant family in the formation of the community of Rosedale. Therefore, DILLARD-SITE-1 is recommended not eligible for inclusion in the CRHR under Criteria 1 or 2.

While F1, the main structure, is still standing, it is missing several structural components such as doors and windows. It is in a deteriorated condition, and the materials and features on its interior and exterior do not embody the distinct characteristics of a type, period, or method of construction, or possess high artistic values. Further, DILLARD-SITE-1 does not represent a significant and distinguishable entity, and its components do not have individual distinction. Preliminary research does not indicate that the structure was uniquely constructed or associated with the work of a significant engineer or builder. DILLARD-SITE-1 is utilitarian in construction and like other structures constructed during the mid-twentieth century in central California. It is not among the best or a rare surviving example of a distinctive type of structure or building either. Therefore, ASM recommends DILLARD-SITE-1 is not eligible for inclusion in the CRHR under Criterion 3.

Finally, DILLARD-SITE-1 was constructed in the mid-twentieth century and does not have the potential to provide additional information about history or prehistory that is not available through historic research. ASM recommends this structure is not eligible under Criterion 4.

In summary, DILLARD-SITE-1 is recommended not eligible for inclusion in the CRHR under any criteria.

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5. SUMMARY AND RECOMMENDATIONS

An intensive Phase I survey was conducted for the Rosedale-Rio Bravo Water Storage District's Dillard Groundwater Recharge and Solar Array Project, comprising 203 ac. in Kern County, California. The fieldwork was conducted in advance of anticipated groundwater recharge basin and solar development activities. An archival records search conducted prior to the fieldwork was completed at the SSJVIC. The records search indicated that 11 previous surveys had been conducted within the study area and that four previously recorded resources (P-15-002050, P-15-008121, P-15-017760, and P-15-017761) had been recorded within the study area. In addition to the records search, a search of the NAHC SLF was requested, though no response was received. A response from a separate but nearby project was utilized and outreach letters were sent. One response was received from Santa Rosa Rancheria Tachi Yokut Tribe deferring to local Tribes, and one response was received from Tejon Indian Tribe requesting to be notified if there are inadvertent discoveries during project construction.

The Project study area was surveyed by ASM archaeologists in October 2024 and October 2025, with crew walking parallel transects spaced at 15-m intervals. ASM revisited the locations of the four previously recorded resources (P-15-002050, P-15-008121, P-15-017760, and P-15-017761). Resource P-15-002050, the Southern Pacific Railroad, is currently operating as the Santa Fe Railroad within the study area. The Project will occur either above or below the railroad and it is therefore considered to be outside of the study area, and the resource was therefore not updated. P-15-017760 is a large historic-era oil operation with numerous spread-out features, none of which are located within the study area. This site was also not updated since no features exist within the study area. P-15-017761, the Pioneer Canal, is no longer extant in the study area as the alignment was removed prior to 1984, likely when the Cross Valley Canal was constructed in 1975. ASM recorded several segments of P-15-008121, Goose Lake Slough, within the study area. In addition to the previously recorded resources, one newly identified resource (temporary field designation DILLARD-SITE-1) was recorded within the recharge basin and solar array portion of the study area.

Based on a lack of integrity, DILLARD-SITE-1 is recommended not eligible for inclusion in the CRHR under any criteria. Goose Lake Slough (P-15-008121) has been determined not eligible for inclusion in the NRHP and previous segments have also been recommended not eligible for inclusion in both the NRHP and CRHR. ASM agrees with these previous determinations and recommendations for the newly recorded segments.

Based on the results of the records searches and intensive pedestrian survey of the study area, a determination of ***No Significant Impact to Historical Resources*** is recommended for this Project. In the unlikely event that cultural resources are encountered during the construction or operation of the proposed Project, however, it is recommended that an archaeologist be contacted to evaluate the discovery.

Should previously unidentified cultural resources be discovered as a result of project implementation, all work in the area of the find should stop and a qualified archeologist shall be notified immediately so that the resource value may be assessed.

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CONFIDENTIAL APPENDICES

Appendix E

Construction Fuel Consumption Calculations

Dillard Groundwater Recharge & Solar Project - Construction

7/3/2025

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Tractors/Loaders/Back hoes	1	8	84	0.37	Phase A	2,236
Plate Compactors	1	8	8	0.43	Phase A	247
Crawler Tractors	1	8	87	0.43	Phase A	2,691
Rubber Tired Dozers	1	8	367	0.4	Phase A	9,498
Graders	1	8	148	0.41	Phase A	3,926
Pumps	1	8	11	0.74	Phase A	585
Scrapers	1	8	423	0.48	Phase A	13,137
Tractors/Loaders/Back hoes	1	8	84	0.37	Phase B	2,236
Plate Compactors	1	8	8	0.43	Phase B	247
Cranes	1	8	367	0.29	Phase B	6,886
Excavators	1	8	36	0.38	Phase B	984
Forklifts	1	8	82	0.2	Phase B	1,180
Pumps	1	8	11	0.74	Phase B	585
Tractors/Loaders/Back hoes	1	8	84	0.37	Phase C	2,236
Bore/Drill Rigs	1	8	83	0.5	Phase C	2,985
Air Compressors	1	8	37	0.48	Phase C	1,277
Cranes	1	8	367	0.29	Phase C	6,886
Forklifts	1	8	82	0.2	Phase C	1,180
Pumps	1	8	11	0.74	Phase C	585
Welders	1	8	46	0.45	Phase C	1,489
Tractors/Loaders/Back hoes	1	8	84	0.37	Phase D	2,236
Plate Compactors	1	8	8	0.43	Phase D	247
Cranes	1	8	367	0.29	Phase D	6,886
Excavators	1	8	36	0.38	Phase D	984
Forklifts	1	8	82	0.2	Phase D	1,180
Pumps	1	8	11	0.74	Phase D	585
Aerial Lifts	1	8	46	0.31	Phase E	1,026
Tractors/Loaders/Back hoes	1	8	84	0.37	Phase E	2,236
Bore/Drill Rigs	1	8	83	0.5	Phase E	2,985
Cranes	1	8	367	0.29	Phase E	6,886
Forklifts	1	8	82	0.2	Phase E	1,180
					Total Fuel Used	**87,505**
						(Gallons)

Construction Phase	Days of Operation
Phase A	153
Phase B	86
Phase C	152
Phase D	87
Phase E	262
Total Days	**740**

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Phase A	24.1	18	17.3	1,922
Phase B	24.1	15	17.3	926
Phase C	24.1	18	17.3	1,909
Phase D	24.1	0	17.3	-
Phase E	24.1	13	17.3	2,351
			Total	**7,108**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
		HAULING TRIPS		
Phase A	7.5	0	0.0	0.00
Phase B	7.5	0	0.0	0.00
Phase C	7.5	0	0.0	0.00
Phase D	7.5	0	0.0	0.00
Phase E	7.5	0	0.0	0.00
			Total	**-**

Total Gasoline Consumption (gallons)	**7,108**
Total Diesel Consumption (gallons)	**89,341**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

Appendix F

Paleontological Resources Technical Report

PALEOSERVICES
SAN DIEGO NATURAL HISTORY MUSEUM

Paleontological Resources Technical Report

Rosedale-Rio Bravo Water Storage District
Dillard Groundwater Recharge and Solar Study
Rosedale, Kern County, California

March 21, 2025 (revised May 5, 2025)

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thenat | SAN DIEGO NATURAL HISTORY MUSEUM

Executive Summary

This technical report provides a paleontological resources assessment of the Rosedale-Rio Bravo Water Storage District's (RRBWSD) proposed Dillard Groundwater Recharge and Solar Study project (Project) site, located in the southwestern portion of the census-designated place of Rosedale, about 16 miles west of downtown Bakersfield, in an unincorporated area of Kern County, California. The purpose of this report is to identify and summarize any paleontological resources that occur in the vicinity of the Project site, identify Project elements (if any) that may negatively impact paleontological resources, and provide, if necessary, recommendations to reduce any potential negative impacts to less than significant levels. The report includes the results of an institutional records search conducted at the San Diego Natural History Museum (SDNHM) and a records search that was previously conducted by the Natural History Museum of Los Angeles County (NHMLA) for the Stockdale Integrated Banking Project (whose footprint encompasses the current Project site).

The Project site consists of an approximately 50-acre, trapezoidal-shaped parcel (Assessor's Parcel Number [APN] 104-292-09) located east of Enos Lane, south of Brimhall Road, west of Superior Road, and north of Stockdale Highway. The site is bounded to the southwest by railroad tracks, and on all other sides by existing agricultural fields. The Project proposes to construct two to three groundwater recharge basins, up to three water control structures, and associated utilities for interconnection to the Central Intake Conveyance Connection pipeline distribution system. The Project also includes the construction and operation of a photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to 7,500 kW of renewable electrical energy with the ability to store up to 16,000 kWh or 4,000 kW of energy in an onsite Battery Energy Storage System (BESS). Approximately 20 miles of utility lines are anticipated to support the necessary facilities associated with the Project located both on- and off-site. Laydown areas will be located on the Project site and along the utility line alignment. In addition, a legal access path will connect the Project site to Superior Road. The purpose of the Project is to support up to 4,000 acre-feet per year of groundwater recharge, when surface water is available, to the Rosedale-Rio Bravo Water Storage District and to generate solar energy to support the groundwater recharge facilities with excess production anticipated to support the California energy grid. path

The Project site is located within the southern San Joaquin Valley portion of the Great Valley geomorphic province, and is entirely underlain at the surface by Holocene-age alluvial deposits associated with the Kern River alluvial fan, which were derived from regional erosion of the southern Sierra Nevada. Presumably, the Holocene-age deposits transition in the subsurface into older, Pleistocene-age deposits. Because the nearest surface exposures of Pleistocene-age alluvial deposits occur approximately 6.5 miles to the northeast of the Project site, the depth of this transition is here conservatively estimated to occur at 15 feet or more below ground surface (bgs).

Based on the results of the paleontological record searches and literature review, fossils have not been documented specifically from Holocene- or Pleistocene-age alluvial deposits within a five-mile radius of the Project site. However, fossils are known from older Quaternary-age alluvial deposits exposed elsewhere in the southern San Joaquin Valley. These deposits have yielded fossil remains of freshwater snails, bony fish, insects, frogs, lizards, birds, small-bodied mammals (e.g., rabbits and hares, pocket mice, kangaroo rats, geomyid rodents, shrews) and large-bodied mammals (e.g., horse, deer, pronghorn, dog).

Following the paleontological potential criteria developed by the Society of Vertebrate Paleontology, the Quaternary alluvial fan deposits underlying the Project site are assigned a low paleontological potential at depths of less than 15 feet bgs (where they are assumed to be Holocene in age) and an undetermined paleontological potential at depths greater than 15 feet bgs (where the strata may represent older

sedimentary deposits of Pleistocene age). By convention, geologic units with undetermined paleontological potential are considered to be potentially fossil-bearing until proven otherwise.

Following a conservative approach, Project-related earthwork that would disturb deposits with an undetermined potential (i.e., earthwork extending greater than 15 feet bgs) are assumed to have the potential to result in impacts to paleontological resources unless mitigated, while earthwork extending less than 15 feet bgs will not impact paleontological resources. Project site earthwork, including grading, trenching, and control structure installation, are proposed to only require shallow excavation extending less than 5 feet bgs. Excavation for the overhead utility lines are proposed to require excavation of six- to eight-foot deep holes measuring 12 inches in diameter. In addition, earthwork involving placement of fill will not require excavation. If the Project is modified to include any components that will require excavation extending more than 15 feet bgs, these should be separately evaluated for their potential to impact paleontological resources.

Implementation of a paleontological mitigation program is **not** recommended for the Project because Project-related earthwork, as currently outlined, is not anticipated to negatively impact paleontological resources (i.e., mitigable earthwork will not extend deep enough to impact geologic units with undetermined resource potential). In the unlikely event that fossils are encountered during earthwork on the Project site, potential impacts to paleontological resources should be minimized through implementation of the recommended contingency mitigation measures, which are designed to address inadvertent fossil discoveries. Implementation of these measures will reduce such impacts to a level below the threshold of significance.

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1.0 Introduction

1.1 Project Description

This technical report provides a paleontological resources assessment for the Rosedale-Rio Bravo Water Storage District's (RRBWSD) proposed Dillard Groundwater Recharge and Solar project (Project) site, located in the southwestern portion of the census-designated place of Rosedale, about 16 miles west of downtown Bakersfield, in an unincorporated area of Kern County, California (Figure 1). The Project site consists of an approximately 50-acre, trapezoidal-shaped parcel (Assessor's Parcel Number [APN] 104-292-09) located east of Enos Lane, south of Brimhall Road, west of Superior Road, and north of Stockdale Highway. The site is bounded to the southwest by railroad tracks, and on all other sides by existing agricultural fields. The utility line alignment includes branches going south to the Cross Valley Canal, west of Bussell Road, east to Greeley Road, and spurs off of these branches.

The Project proposes to construct two to three groundwater recharge basins with five-foot berms, up to three water control structures, and associated utilities for interconnection to the Central Intake Conveyance Connection pipeline distribution system. The Project also consists of the construction and operation of a photovoltaic (PV) solar facility and associated infrastructure necessary to generate up to 7,500 kW of renewable electrical energy with the ability to store up to 16,000 kWh or 4,000 kW of energy in an onsite Battery Energy Storage System (BESS). The groundwater recharge basins will contain pole-mounted solar panels elevated above the recharge areas to minimize water loss from evaporation and mitigate algae growth within the recharge basins. Approximately 20 miles of utility lines are anticipated to support the necessary facilities associated with the Project located both on- and off-site. Laydown areas will be located on the Project site and along the utility line alignment. In addition, a legal access path will connect the Project site to Superior Road.

The purpose of the Project is to support up to 4,000 acre-feet per year of groundwater recharge, when surface water is available, to the Rosedale-Rio Bravo Water Storage District and to generate solar energy to support the groundwater recharge facilities with excess production anticipated to support the energy grid.

1.2 Scope of Work

The Project is located in an area underlain by native sedimentary deposits. For this reason, a paleontological resource assessment was conducted in order to determine whether construction of the Project has the potential to negatively impact paleontological resources. This technical report is intended to summarize existing paleontological resource data within the Project site, discuss the significance of these resources, examine potential Project-related impacts to paleontological resources, and suggest mitigation measures to reduce potential impacts to paleontological resources to less than significant levels, as needed. The assessment also includes the results of a literature review of relevant geological and paleontological reports, an institutional records search of the paleontological collections at the San Diego Natural History Museum (SDNHM), and a records search that was previously conducted by the Natural History Museum of Los Angeles County (NHMLA) for the Stockdale Integrated Banking Project (whose footprint encompasses the current Project site). This technical report was prepared by Zev Brook, Katie M. McComas, and Thomas A. Deméré of the Department of PaleoServices, SDNHM.

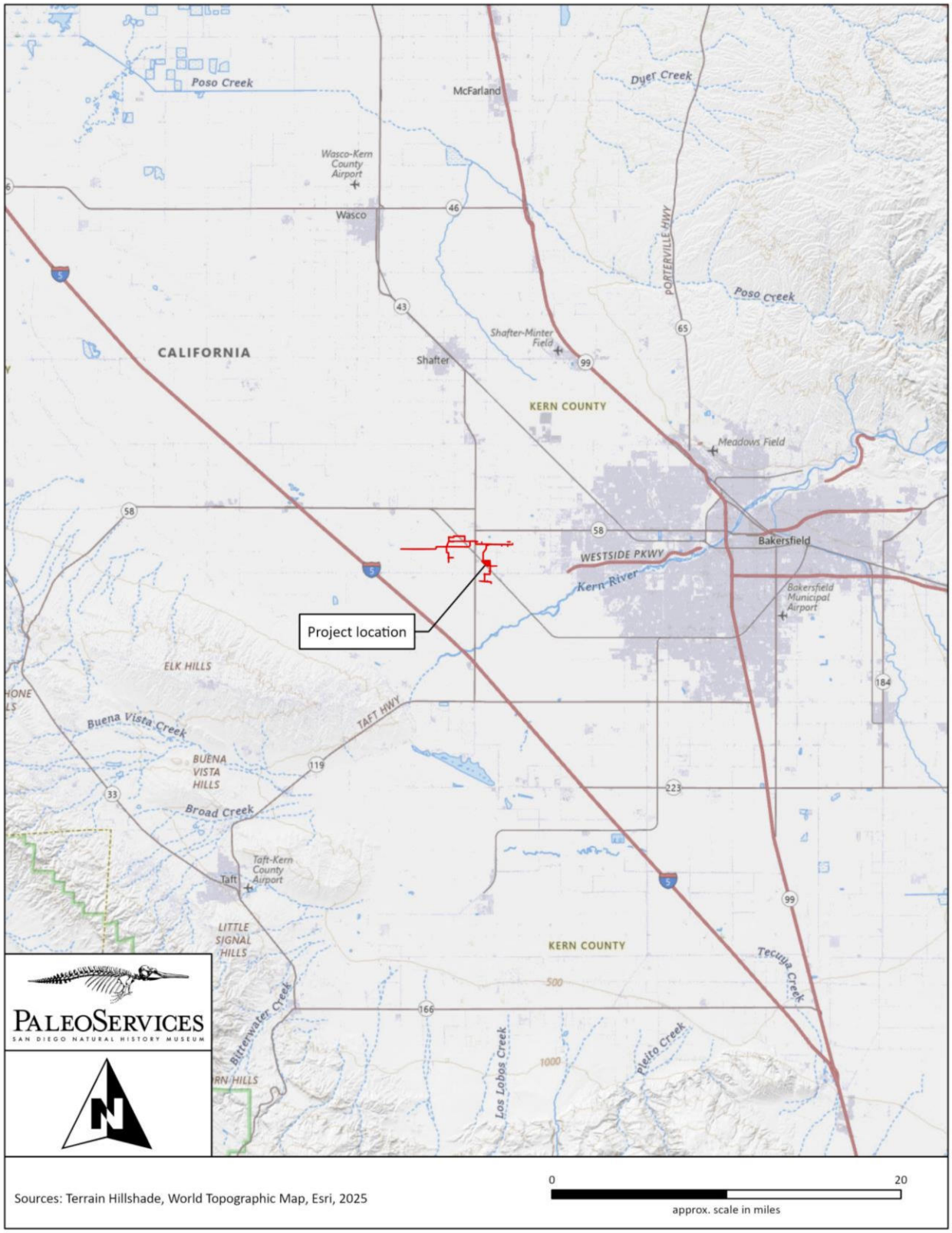


Figure 1. Project index map, Dillard Groundwater Recharge and Solar Project, Rosedale, Kern County, California.

1.3 Definition of Paleontological Resources

As defined here, paleontological resources (i.e., fossils) are the buried remains and/or traces of prehistoric organisms (i.e., animals, plants, and microbes). Body fossils such as bones, teeth, shells, leaves, and wood, as well as trace fossils such as tracks, trails, burrows, and footprints, are found in the geologic units/formations within which they were originally buried. The primary factor determining whether an object is a fossil or not is not how the organic remain or trace is preserved (e.g., "petrified"), but rather the age of the organic remain or trace. Although typically it is assumed that fossils must be older than ~11,700 years (i.e., the generally accepted end of the last glacial period of the Pleistocene Epoch), organic remains older than recorded human history and/or older than middle Holocene (about 5,000 radiocarbon years) can also be considered to represent fossils (Society of Vertebrate Paleontology [SVP]; SVP, 2010).

Fossils are considered important scientific and educational resources because they serve as direct and indirect evidence of prehistoric life and are used to understand the history of life on Earth, the nature of past environments and climates, the membership and structure of ancient ecosystems, and the pattern and process of organic evolution and extinction. In addition, fossils are considered to be non-renewable resources because typically the organisms they represent no longer exist. Thus, once destroyed, a particular fossil can never be replaced.

Finally, paleontological resources can be thought of as including not only the actual fossil remains and traces, but also the fossil collection localities and the geologic units containing those localities. The locality includes both the geographic and stratigraphic context of fossils—the place on the earth and stratum (deposited during a particular time in Earth's history) from which the fossils were collected. Localities themselves may persist for decades, in the case of a fossil-bearing outcrop that is protected from natural or human impacts, or may be temporarily exposed and ultimately destroyed, as is the case for fossil-bearing strata uncovered by erosion or construction. Localities are documented with a set of coordinates and a measured stratigraphic section tied to elevation detailing the lithology of the fossil-bearing stratum as well as that of overlying and underlying strata. This information provides essential context for any future scientific study and educational use of the recovered fossils.

1.3.1 Definition of Significant Paleontological Resources

SVP has further defined significant paleontological resources as consisting of "fossils and fossiliferous deposits[…]consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information" (SVP, 2010).

1.4 Regulatory Framework

Paleontological resources are considered scientifically and educationally significant nonrenewable resources, and as such they are protected under state (e.g., California Environmental Quality Act [CEQA]; Public Resources Code) and local (Kern County) laws, ordinances, and regulations, outlined below.

1.4.1 State

The California Environmental Quality Act (CEQA, Public Resources Code Section 21000 *et seq.*) protects paleontological resources on both state and private lands in California. This act requires the identification of environmental impacts of a proposed project, the determination of significance of the impacts, and the identification of alternative and/or mitigation measures to reduce adverse environmental impacts. The Guidelines for the Implementation of CEQA (Title 14, Chapter 3, California Code of Regulations: 15000 *et seq*.) outlines these necessary procedures for complying with CEQA.

Paleontological resources are specifically included as a question in the CEQA Environmental Checklist (Section 15023, Appendix G): "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature."

Most CEQA lead agencies follow the definitions and guidelines provided by SVP (2010), which are in line with industry standards (e.g., Murphey et al., 2019). SVP (2010) additionally provides criteria for determining the significance of paleontological resources (see sections 1.3.1 and 2.2), and for appropriate measures to minimize impacts to paleontological resources. As advised by SVP (2010), impacts to paleontological resources can be minimized to a level below the threshold of significance through 1.) the permanent preservation of a fossil locality and its contained fossil resources); or 2.) the implementation of a paleontological mitigation program that would reduce any adverse impacts to a level below the threshold of significance through the salvage and permanent storage of any salvaged fossils in an established scientific institution.

Other state requirements for paleontological resource management are included in the Public Resources Code (Chapter 1.7), Section 5097.5 and 30244. These statutes prohibit the removal of any paleontological site or feature on public lands without permission of the jurisdictional agency, defines the removal of paleontological sites or features as a misdemeanor, and requires reasonable mitigation of adverse impacts to paleontological resources from developments on public (state) lands.

1.4.2 Local: Kern County

The 2009 Kern County General Plan addresses paleontological resources in Chapter 1 (Land Use/Conservation/Open Space Element), Section 1.10 (General Provisions), Subsection 1.10.3 (Archaeological, Paleontological, Cultural, and Historical Preservation).

- **Policy 25**: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.
    - **Implementation Measure M**: In areas of known paleontological resources, the County should address the preservation of these resources, where feasible.

2.0 Methods

2.1 Paleontological Records Search and Literature Review

A paleontological records search was conducted at the SDNHM in order to identify known fossil collection localities within an approximately five-mile radius of the Project site. The results of a paleontological records search that was previously conducted by the NHMLA for the Stockdale Integrated Banking Project (whose footprint encompasses the current Project site) were also reviewed.

In addition, a literature review was conducted to gain a greater understanding of the geologic history of the area surrounding the Project site, as well as to determine the types of fossils that specific geologic units underlying the Project site have produced. The review included examination of relevant published geologic maps and reports, peer-reviewed papers, and other relevant literature (e.g., field trip guidebooks, unpublished theses and dissertations, archived paleontological mitigation reports). This approach was followed in recognition of the direct relationship between paleontological resources and the geologic units within which they are entombed. Knowing the geologic history of a particular area and the fossil productivity of geologic units that occur in that area, it is possible to predict where fossils may or may not be encountered. Understanding the fossil content of a geologic unit everywhere it

occurs is important for outlining the types of fossils that may occur within the geologic unit and confidently assigning a paleontological potential rating.

2.2 Paleontological Resource Assessment Criteria

The SVP has developed mitigation guidelines for paleontological resources (SVP, 2010) that were developed with input from a variety of federal and state land management agencies and conform with industry standards (Murphey et al., 2019). As described in Section 1.4.1, use of the SVP (2010) guidelines is common practice by CEQA lead agencies.

The SVP (2010) guidelines recognize that significant paleontological resources are considered to include not only actual fossil remains and traces, but also the fossil collecting localities and the geologic units containing those fossils and localities, and thus evaluate paleontological potential (or paleontological sensitivity) of individual geologic units within a project area. Paleontological potential is determined based on the existence of known fossil localities within a given geologic unit, and/or the potential for future fossil discoveries, given the age and depositional environment of a particular geologic unit. The SVP guidelines include four classes of paleontological potential: High Potential, Low Potential, No Potential, or Undetermined Potential (SVP, 2010). The criteria for each paleontological potential ranking is outlined below, as defined by SVP (2010).

2.2.1 High Potential

Geologic units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcaniclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary geologic units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.). Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Geologic units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and geologic units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.

2.2.2 Undetermined Potential

Geologic units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these geologic units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these geologic units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.

2.2.3 Low Potential

Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some geologic units have low potential for yielding significant fossils. Such

geologic units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule (e.g., basalt flows or Recent colluvium). Geologic units with low potential typically will not require impact mitigation measures to protect fossils.

2.2.4 No Potential

Some geologic units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Geologic units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

2.3 Paleontological Impact Analysis

Direct impacts to paleontological resources occur when earthwork operations cut into the geologic units within which fossils are buried and physically destroy the fossil remains. As such, only those excavations that will disturb potentially fossil-bearing geologic units have the potential to significantly impact paleontological resources. As described above, potentially fossil-bearing geologic units are those rated with a high potential. Taking a conservative approach, geologic units with an undetermined potential are also considered to be potentially fossil-bearing until proven otherwise. Although impact avoidance is possible through relocation of a proposed action, paleontological monitoring during construction is typically recommended to reduce any negative impacts to paleontological resources to less than significant levels.

The purpose of the impact analysis is to determine which (if any) of the proposed Project-related earthwork activities may disturb potentially fossil-bearing geologic units, and where and at what depths these potential impacts will occur. The paleontological impact analysis involved analysis of available Project documents and comparison with geological and paleontological data gathered during the records searches and literature review.

3.0 Results

3.1 Results of the Records Search and Literature Review

3.1.1 Project Geology

Geologic setting: The Project site is located in the census-designated place of Rosedale, west of the City of Bakersfield in western Kern County, California. The Bakersfield region is located in the southern Great Valley geomorphic province, which encompasses the entire San Joaquin Valley. The San Joaquin Valley is bounded by the southern Coast Ranges to the west, the Tehachapi Mountains to the south, and the foothills of the Sierra Nevada to the east. For the most part, the San Joaquin Valley is a broad alluvial plain, the southern portion of which is primarily a closed basin with Sierran rivers like the Tule River and Kern River flowing into it and, until the 20th Century, filling large and landlocked freshwater lakes (e.g., Tulare Lake, Kern Lake, and Buena Vista Lake). From the Pleistocene through the present, sediments eroded out of the surrounding highlands have been transported downstream to form extensive coalesced alluvial fans near the mountain fronts, and finer-grained fluvial and lacustrine deposits farther out on the valley floor. The extensive Kern River alluvial fan is the southernmost alluvial fan complex of the western Sierra Nevada, and consists of sediments derived from weathering and erosion of Sierran granitic rocks and transported downstream by the Kern River as it incised the Kern River gorge (Dale et al., 1966).

Project-specific geology: As mapped by Smith (1964) and Haydon and Hayhurst (2011), the Project site is underlain at the surface by alluvial fan deposits (Qf) of late Holocene age, with the utility lines also underlain at the surface by alluvial valley deposits (Qa) of late Holocene age and young alluvial fan depisits (Qyf) of early to middle Holocene age (Figure 2). All of these alluvial deposits are generally derived from erosion of the surrounding highlands and comprise part of the modern Kern River alluvial fan complex.

Presumably, the Holocene-age deposits transition in the subsurface into older, Pleistocene-age sedimentary deposits. It is estimated that the maximum thickness of Holocene-age alluvial sediments in the San Joaquin Valley measures up to 100 feet, although alluvial sediments can be found as veneers as thin as one foot thick (Dibblee, 1999). Because the nearest surface exposures of Pleistocene-age alluvial deposits occur approximately 6.5 miles to the northeast of the Project site, the depth of this temporal transition is conservatively estimated here to occur at 15 feet or more below ground surface (bgs).

3.1.2 Project Paleontology

A records search of the paleontological collections at the SDNHM found no SDNHM fossil collection localities from similar Holocene- or Pleistocene-age alluvial deposits located within a 5-mile radius of the Project site. Additionally, a records search previously conducted by the NHMLA for the Stockdale Integrated Banking project (whose footprint encompasses the current Project site) also found no NHMLA fossil localities from Holocene- or Pleistocene-age alluvial deposits in this area (ESA, 2015). However, fossil localities are known from early Holocene- and Pleistocene-age alluvial deposits elsewhere in the southern San Joaquin Basin, as documented in the paleontological literature.

In the San Joaquin Valley, vertebrate fossils are known from older Quaternary-age sites at the Eagle Crest residential development and a site identified during cutting of a canal in the City of Bakersfield (located approximately 8.5 miles southeast of the Project site); at the Buena Vista Hills Oil Field (located approximately 20 miles southwest of the Project site); at the Midway Sunset Oil Field (located approximately 25 miles southwest of the Project site); at the Arvin Landfill (located approximately 26 miles southeast of the Project site); and at additional more distant sites near Corcoran, near Delano, and near Poso Creek (Reynolds, 1990; Jefferson, 1991b; Fay and Thiessen, 1993; SDNHM unpublished collections data). Fossils recovered from these older Quaternary-age sites collectively include remains of freshwater snails, bony fish, insects, frogs, lizards, finches, small mammals (e.g., rabbits and hares, pocket mice, kangaroo rats, geomyid rodents, shrews) and large mammals (e.g., horse, deer, pronghorn, dog). Similar fossils are known from Pleistocene-age alluvial sediments in other inland valleys of California (e.g., Jefferson, 1991a,b; Reynolds and Reynolds, 1991; Scott and Cox, 2008; Springer et al., 2009, 2010), indicating the potential for the recovery of additional fossils from similar deposits in other parts of the southern San Joaquin Valley.

3.2 Results of the Paleontological Resource Assessment

Following the SVP (2010) resource assessment criteria as outlined in Section 2.2, Holocene-age alluvial deposits are assigned a low paleontological potential based on their relatively young age (less than about 11,700 years old) and the lack of known, scientifically significant paleontological resources from similar Holocene-age deposits in the southern San Joaquin Valley. As mentioned, however, the Holocene-age alluvial deposits likely transition to older, Pleistocene-age deposits in the subsurface, at a depth that is estimated to be as shallow as 15 feet bgs. Pleistocene-age alluvial deposits are assigned an undetermined paleontological potential (see Section 2.2.2), and therefore are considered to be potentially fossil-bearing until proven otherwise.

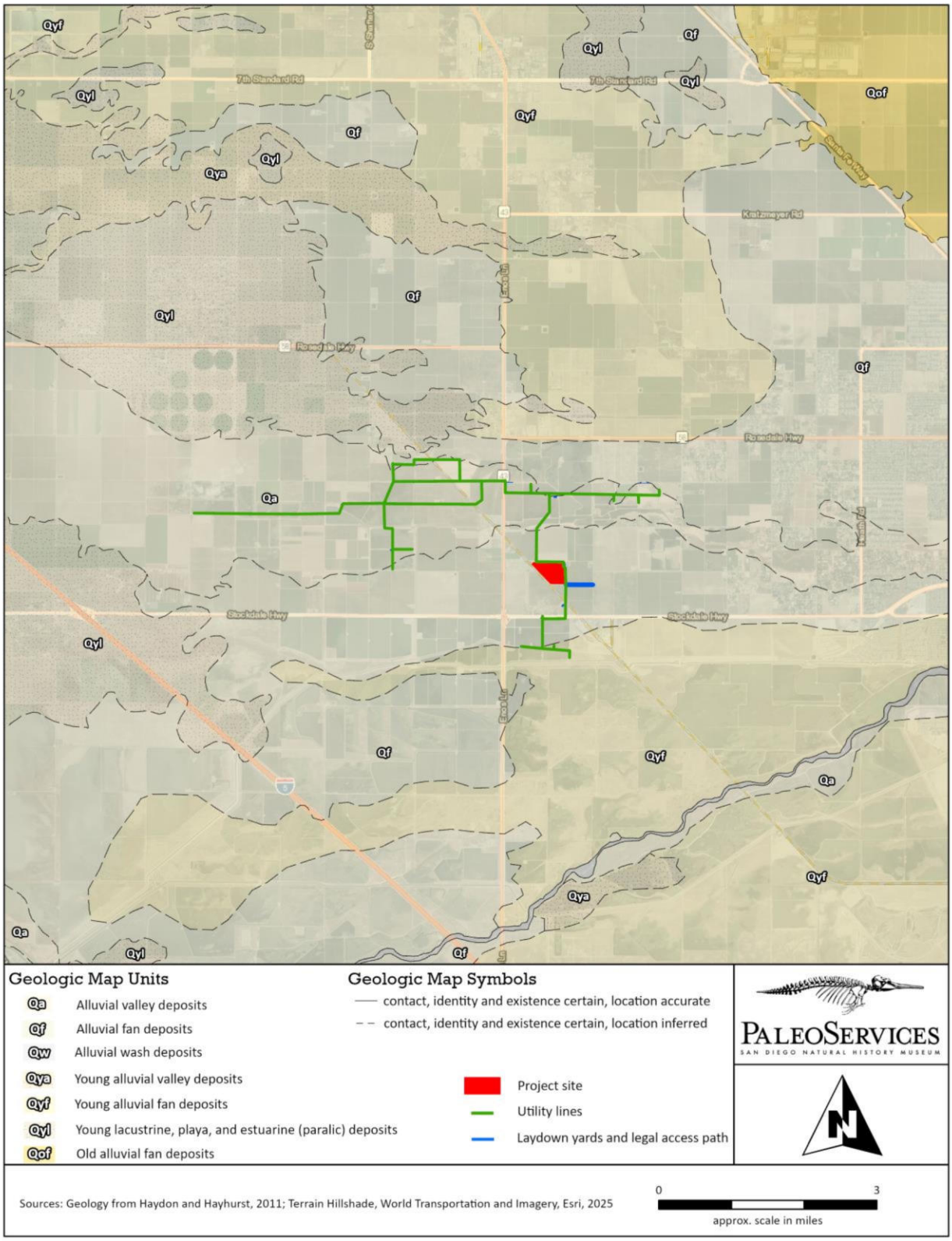


Figure 2. Geologic map, Dillard Groundwater Recharge and Solar Project, Rosedale, Kern County, California.

Because the transitional contact between the Holocene-age and Pleistocene-age sedimentary deposits may be as shallow as 15 feet bgs, the sedimentary deposits underlying the Project site are specifically assigned a low paleontological potential from 0–15 feet bgs where they are assumed to be Holocene in age and an undetermined paleontological potential at depths greater than 15 feet bgs where they may be Pleistocene in age (Figure 3).

3.3 Results of the Paleontological Impact Analysis

As discussed above, the Project site is immediately underlain by late Holocene-age alluvial fan deposits at the surface. In addition, the utility lines are also underlain by late Holocene-age alluvial valley deposits and early to middle Holocene-age young alluvial fan deposits. These Holocene deposits are presumably underlain by Pleistocene-age alluvial deposits at a depth that is conservatively estimated to be as shallow as 15 feet bgs. Any impacts to paleontological resources are only likely to occur during excavations at the Project site that will disturb alluvial deposits of Pleistocene-age, which are considered to be potentially fossil-bearing. Therefore, only excavations that will extend greater than about 15 feet bgs are here considered to have the potential to impact paleontological resources (Figure 3, Table 1).

Table 1. Summary of geology underlying the Project site and paleontological monitoring recommendations for the Project.

Geologic Unit	Age	Paleontological Resource Potential	Monitoring recommended?*
alluvial fan deposits (Qf)	late Holocene (Pleistocene at depth)	low potential, 0–15 feet; undetermined potential, >15 feet	No, 0–15 feet bgs; **Yes, >15 feet bgs**
alluvial valley deposits (Qa)	late Holocene (Pleistocene at depth)	low potential, 0–15 feet; undetermined potential, >15 feet	No, 0–15 feet bgs; **Yes, >15 feet bgs**
young alluvial fan deposits (Qyf)	early to middle Holocene (Pleistocene at depth)	low potential, 0–15 feet; undetermined potential, >15 feet	No, 0–15 feet bgs; **Yes, >15 feet bgs**

Although specific construction details about the extent and dimensions of earthwork that will eventually take place within the Project site have not been finalized at this time, the response to the data request from Rincon Consultants, Inc., dated 1 July 2024 indicates that the maximum excavation depth for groundwater recharge basins and solar/energy storage facilities will be five feet bgs and that the average excavation depth will be three feet bgs. Construction of the overhead utility lines will require excavation to a depth of six to eight feet bgs with a diameter of approximately 12 inches (R. Echeverria, email communication dated 3 April 2025).

Project components that will presumably require some degree of excavation include, but are not limited to:

- grading of groundwater recharge basins and construction of five-foot berms,
- installation of water control structures,
- open-cut trenching for interconnection pipelines,
- installation of pole-mounted solar panels,
- construction of the BESS facilities on an area of approximately 5,000 square feet in the northeast corner of the Project site, and
- installation of approximately 20 miles of poles for overhead utility lines.

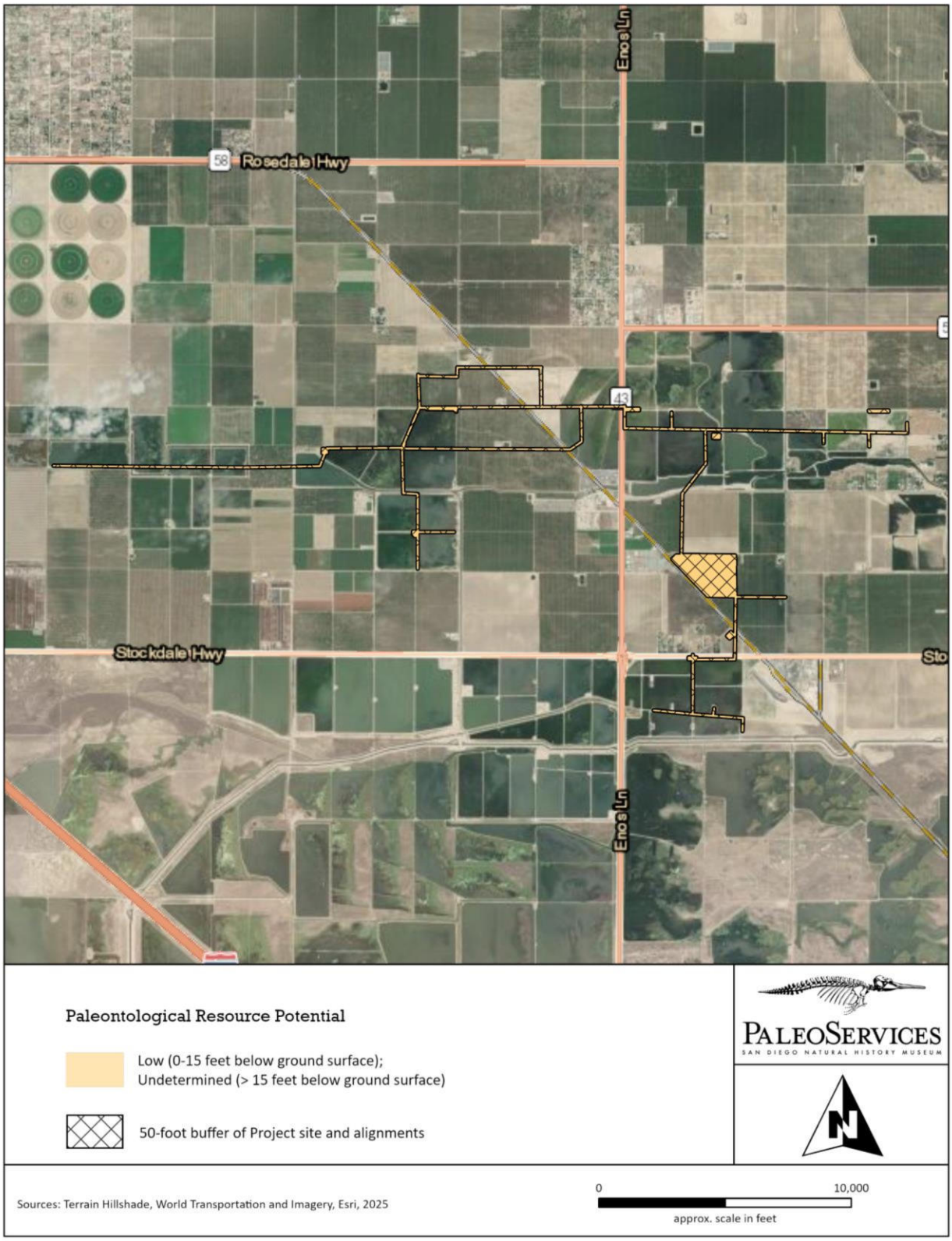


Figure 3. Paleontological resource potential map, Dillard Groundwater Recharge and Solar Project, Rosedale, Kern County, California.

Additional project components that are not anticipated to require excavation impacting previously undisturbed deposits include:

- placement of fill to construct five-foot berms around the groundwater recharge basins,
- a legal access path connecting the Project site to Superior Road, and
- use of laydown areas within the Project site or on existing banking areas.

Due to the lack of detailed information concerning the excavation dimensions and construction methods for the above Project components, only a general impact analysis, using the 15-foot depth threshold described above, can be completed. As Project details are finalized, an updated impact analysis should be conducted.

4.0 Recommendations

Implementation of a paleontological mitigation program is **not recommended** for the Project because Project-related earthwork, **as currently outlined**, is not anticipated to negatively impact paleontological resources (i.e., earthwork will not extend deep enough to impact geologic units with undetermined resource potential).

However, as noted in the previous section, as Project details are finalized and when more information is available concerning the excavation dimensions, locations, and construction methods associated with each Project component, an updated impact analysis should be completed to verify that earthwork will not exceed the 15-foot depth threshold.

In the unlikely event that fossils are unearthed during earthwork activities (i.e., an inadvertent discovery), the following mitigation measures should be implemented.

1. Upon discovery of an unearthed fossil, earthwork in the vicinity of the discovery shall immediately halt, and a qualified paleontologist should evaluate the discovery. Earthwork shall be diverted until the significance of the fossil discovery can be assessed by the qualified paleontologist. If the fossil discovery is deemed significant, the fossil shall be recovered using appropriate recovery techniques based on the type, size, and mode of preservation of the unearthed fossil. Earthwork may resume in the area of the fossil discovery once the fossil has been recovered, and the qualified paleontologist deems the discovery site has been mitigated to the extent necessary. Additional earthwork following the fossil discovery may be monitored for paleontological resources on an as-needed basis, at the discretion of the qualified paleontologist.
2. In the case of an inadvertent discovery, the recovered fossils shall be prepared, identified, catalogued, and stored in a recognized professional repository along with associated field notes, photographs, and compiled fossil locality data. For projects in Kern County, the recommended repository is the Natural History Museum of Los Angeles County. Donation of the fossils should be accompanied by financial support for specimen storage. A final summary report should be completed that outlines the results of the mitigation program. This report should include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. This report shall be submitted to appropriate agencies, as well as to the designated repository.

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Appendix G

Phase I Environmental Site Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Dillard Property
APN 104-292-09
Bakersfield, California 93314

May 31, 2024
Haro Environmental Project 6054-2024

Prepared by:
Haro Environmental, Inc.
872 Higuera Street
San Luis Obispo, California

Prepared for:

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

Prepared by:

Jessica Manley
Staff Environmental Scientist

Elliot R. Haro
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APPENDICES

Appendix A – Regulatory Records and Historical Documentation Reports
EDR Corporation: Government Records Report, Historical Aerial Photo Report, Historical Topographic Map Report, Sanborn® Fire Insurance Maps Report, City Directory Abstract

Appendix B – Interview and Research Documentation

Appendix C – Photolog

Appendix D – Qualifications

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (Phase I ESA) of the property identified as the Dillard Property located in Kern County, California (the Site) was performed by Haro Environmental for the Rosedale-Rio Bravo Water Storage District (the RRBWSD). Haro Environmental performed this Phase I ESA consistent with the American Society for Testing and Materials (ASTM) Practice E-1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM Standard). Exceptions to, or deletions from, this practice are described in this report.

The purpose of this assessment was to identify known, potential or historic recognized environmental conditions (RECs) resulting from historic and/or current uses of hazardous substances or petroleum products at the Site. We understand the RRBWSD considering purchasing the Site, and is interested in identifying environmental concerns associated with the Site. The findings of this environmental assessment are based on Haro Environmental's knowledge of the Site from observations and information gathered during this Phase I ESA.

The Site is an approximately 50-acre property currently developed with one small structure. Access to the Site is provided by several dirt roads off main roads. The Site is designated County of Kern Assessor's Parcel Number (APN) 104-292-09.

Results of a regulatory agency database search indicate the Site was not listed in any of the databases searched. In addition, no adjacent or nearby properties were listed within the ASTM-minimum search distances in the government databases searched.

A review of historic aerial photographs, topographic maps and city directories listings show the Site was undeveloped until at least 1952, and was used for agricultural production from at least 1952 through at least 2016.

An unaccompanied reconnaissance of the Site was conducted by a Haro Environmental representative on April 19, 2024. During the reconnaissance, Haro Environmental did not observed hazardous materials or petroleum hydrocarbons at or adjacent to the Site under conditions that could pose an environmental concern to the Site.

Based on the data gathered and reviewed during this Phase I ESA, Haro Environmental did not identify recognized environmental conditions or concerns that have impacted, or pose a significant environmental threat to subsurface soil, soil vapor, or groundwater beneath the Site.

The following potential environmental concerns to note include:

- The historical use of the Site for agricultural row crops. Agricultural farming practices often include the application of chemicals to control pests and weeds. Although no evidence of agricultural chemical usage at the Site was found during preparation of this Phase I ESA, because agricultural land use appears in historic aerial photographs beginning in 1952 and ending by at least 1984, there is a potential residual concentrations of agricultural chemicals could persist in soils at the Site.

- The presence of railroad tracks to the west of the Site. Railroads often utilize chemicals to control vegetation at and near the tracks. These chemicals can include metals such as arsenic and other organic chemicals.

1.0 INTRODUCTION

This Phase I Environmental Site Assessment (Phase I ESA) of the property identified as the Dillard Property located west of the City of Bakersfield, California (the Site) was performed by Haro Environmental for the Rosedale-Rio Bravo Water Storage District (RRBWSD). Haro Environmental performed this Phase I ESA consistent with the American Society for Testing and Materials (ASTM) Practice E-1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM Standard). Exceptions to, or deletions from, this practice are described in this report.

1.1 PURPOSE

This Phase I ESA was conducted in an effort to identify known, potential or historic recognized environmental conditions (RECs) resulting from historic and/or current uses of the Site. We understand this information will be used to qualify for the liability protections granted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The ASTM Standard defines a REC as:

> "(1) The presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment." The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions or controlled recognized environmental conditions.

The ASTM Standard defines a historical REC as:

> "A previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and

meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls." For example, a historical REC could be identified if a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated to the satisfaction of the lead regulatory agency as evidenced by a no further action letter or a case closure determination.

At the request of the RRBWSD, whom we understand is considering purchasing the Site for use as a groundwater recharge and storage facility, Haro Environmental has completed this Phase I ESA. This report is subject to the limitations presented in this Phase I ESA report.

This report describes Haro Environmental's assessment methodology, presents our findings, and provides our opinion as to the potential presence of RECs in connection with the Site.

1.2 SCOPE OF SERVICES

The scope of services conducted for this study included the following tasks:

- Perform an on-site reconnaissance to identify indicators of the existence of hazardous materials or petroleum products.

- Observe adjacent or nearby properties from the Site and public thoroughfares in an attempt to see if such properties are likely to use, store, generate, or dispose of hazardous materials or petroleum products.

- Obtain and review an environmental records database search from Environmental Data Resources, Inc. (EDR) to acquire information about the potential for hazardous materials to exist at on-site or at nearby properties.

- Review the current U.S. Geological Survey (USGS) topographic map to obtain information about topography and uses of the Site and nearby properties.

- Review historic aerial photographs, topographic maps, and city directories listings to obtain information about historic uses of the Site and adjacent properties.

- Review California Division of Oil and Gas records to obtain information about historic oil and gas activity in the vicinity of the Site.
- Review National Pipeline Mapping System (NPMS) Public Viewer to obtain information about pipelines, liquefied natural gas (LNG) plants, and breakout tank data on county or offshore areas.
- Conduct interviews with persons familiar with the Site development and local and/or State government agencies to obtain information about current and historic uses of the property.
- Prepare this report documenting the findings of the Phase I study.

Our scope of services did not include any inquiries with respect to non-scope ASTM considerations including but not limited to asbestos containing materials unrelated to releases into the environment, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint unrelated to releases into the environment, lead in drinking water, mold or microbial growth conditions, Polychlorinated Biphenyls (PCB)-containing building materials, naturally-occurring radon, regulatory compliance, substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance, wetlands, or Per- and Polyfluoroalkyl Substances (PFAS).

2.0 SITE SETTING

The Site setting presented in this section describes the condition of the Site at the time of the Phase I ESA. Tables 2-1 and 2-2 summarize the physical characteristics of the Site and adjoining properties. A Site and Adjacent Land Use Map is provided on Plate 2.

2.1 SITE DESCRIPTION

Table 2-1 provides a summary of the physical location and size of the Site, as well as the current uses. This information was obtained from review of various maps (such as topographic maps and tax assessor maps), aerial photographs, and a site visit. Additional site description information was obtained during the site visit; please refer to the Section 5.0 of the report that covers site reconnaissance information.

TABLE 2-1
SITE LOCATION AND LAND USE

Parameter	Information/Comments
Location	The Site is located west of the City of Bakersfield, north of Highway 58, east of Highway 43, and in an area of rural residential and agricultural land uses.
Section, Township, and Range	Section 36, Township 29 South, Range 25 East of the Mount Diablo Base and Meridian.
Assessor's Parcel No.	APN 104-292-09
Current Use	The Site is currently undeveloped with one small structure used for storage.
Current Owner	Dave Paxton Dillard

2.2 REGIONAL GEOLOGY AND HYDROGEOLOGY

Information on regional geology and hydrogeology is presented in Table 2-2. This information was obtained from published data and maps of the Site vicinity.

TABLE 2-2
PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

Geologic/Hydrogeologic Parameter	Information/Comments
Site Topography	Based on a review of the USGS Stevens, California 7.5-Minute Topographic Quadrangle Map dated 2021, elevation at the Site is approximately 330 feet above Mean Sea Level (MSL), and the relief across the Site is relatively flat.
Site Geology and Soil Types	The Site is located within the Great Valley of the California Geomorphic Provinces (CGS, 2002). The Great Valley is an alluvial plain approximately 50 miles wide by 400 miles long. The northern part is identified as the Sacramento Valley (drained by the Sacramento River) and the southern part is identified as the San Joaquin Valley (drained by the San Joaquin River). The Great Valley is a trough in which sediments have been deposited almost continuously since the Jurassic (about 160 million years ago). The Great Valley is bound by the Klamath Mountains to the north, the Sierra Nevada to the east, the Coast Ranges to the west, and the Tehachapi Mountains to the south. According to the Geologic Atlas of California - Bakersfield sheet, the site is underlain by recent Quaternary-aged alluvium consisting of fan deposits (CGS, 1964). According to the Geocheck® section of the EDR report (Appendix A), soils at the Site include the Cajon Series. The Cajon soils are characterized by high infiltration rates and are somewhat excessively drained.
Site Hydrogeologic Setting	The Site is located within the Kern County Subbasin of the San Joaquin Valley Groundwater Basin (DWR, 2006). The San Joaquin Valley represents the southern portion of the Great Central Valley of California. The San Joaquin Valley is a structural trough up to 200 miles long and 70 miles wide filled with up to 32,000 feet of marine and continental sediments deposited during periodic inundation by the Pacific Ocean and by erosion of the surrounding mountains, respectively. Sediments that comprise the shallow to intermediate depth water-bearing deposits in the groundwater subbasin are primarily continental deposits of Tertiary and Quaternary age. According to the GAMA website maintained by the State Water Resources Control Board (SWRCB), there are no groundwater wells located at the Site. However, one domestic well is mapped adjacent to the west of the Site, just west of the railroad tracks. One groundwater well was observed at the Site during the site reconnaissance in the northeastern corner of the Site. One groundwater well is located adjacent to the Site, and the location is shown on Plate 2.

2.3 ADJOINING AREA LAND USE

A drive-by survey of the area adjoining to the Site was performed by Haro Environmental personal April 19, 2024. The results of this survey indicate the properties to the north, east, and south, are in use for agriculture, and the property to the west is train tracks followed by commercial industrial uses. Site and adjoining land uses are depicted on Plate 2.

2.4 USER PROVIDED INFORMATION

Mr. Trent Taylor, Water Resources Manager with the RRBWSD, was interviewed for actual knowledge pertaining to the Site to help identify the possibility of RECs in connection with the Site. A copy of the user questionnaire completed by Mr. Taylor is provided in Appendix B, and the results of the interview are summarized below.

2.4.1 Title Records

Haro Environmental was provided and reviewed the Preliminary Title Report dated January 19, 2024 prepared by First American Title Company. No information regarding deed restrictions or environmental liens were noted during our review of the January 19, 2024 Preliminary Title Report. The Title Report identified several oil and gas leases, which were granted to third parties from 1976 to 1982. The lease appears to be for a parcel that is 100 acres more or less, and may be associated with the parent parcel for the subject Site. This lease may also relate to the Strand Oil Field that the Site is located within. Easements were also included in the title report for a water pipeline and a canal ditch known as the Railroad or Dixon Ditch. A copy of the Title Report is provided in Appendix B.

2.4.2 Environmental Liens or Activity and Use Limitations

Mr. Taylor is unaware of any information pertaining to environmental liens or activity and use limitations for the Site. Haro Environmental was not provided with a copy of an environmental lien records search for the Site.

2.4.3 Specialized Knowledge

Mr. Taylor did not provide Haro Environmental with any information pertaining to specialized knowledge or experience regarding the Site.

2.4.4 Commonly Known or Reasonably Ascertainable Information

Mr. Taylor did not provide Haro Environmental with and was not aware of any information pertaining to commonly known or reasonably ascertainable information about the Site with the exception of historic irrigated agricultural use of the Site (most recently, almond trees).

2.4.5 Valuation Reduction for Environmental Issues

Mr. Taylor was not aware of and did not provide Haro Environmental with any information pertaining to a valuation reduction for the Site relative to any known environmental issues.

2.4.6 Owner, Property Manager, and Occupant Information

Mr. Taylor indicated that based on his knowledge and experience related to the property, there are no obvious indicators that point to the presence or likely presence of contamination at the Site.

2.4.7 Reason for Performing Phase I ESA

The purpose of this Phase I ESA was to assess the environmental conditions of the Site, taking into account commonly and reasonably ascertainable information.

2.4.8 Other

No other information pertinent to the condition of the Site was provided to Haro Environmental by Mr. Taylor.

2.5 ENVIRONMENTAL LIENS

No environmental lien search was conducted by the preparer or the user of this Phase I report.

3.0 RECORDS REVIEW

Government agency database records are sources of information that may be helpful in evaluating activities that may have contributed to a release of hazardous substances or petroleum products to soil and/or groundwater. Haro Environmental contracted a government agency database search from EDR. A copy of the EDR report, which specifies the approximate minimum search distance for each public list as defined in the ASTM Standard, is included as Appendix A.

The subject Site was not listed in any of the databases searched by EDR. In addition, adjacent and nearby properties were not listed in any of the databases searched by EDR. Information regarding the listings is provided below.

3.1 RESULTS OF DATABASE SEARCH

The following sections contain information on the results of the government records search conducted by EDR. Opinions presented below are based on information provided in EDR's report (unless otherwise noted) and on criteria such as distance from the Site, anticipated groundwater movement direction in the vicinity of the Site, and the nature of any reported unauthorized releases. In assessing the potential impact to buildings materials, soil, soil vapor, and/or groundwater beneath the Site, the shallowest groundwater was considered with an anticipated groundwater movement direction assumed to follow the local topographic gradient to the west-northwest. According to a local cleanup case (Chevron Pipeline/Wait – Midway – 1 mile southeast from the Site), indicated groundwater may be found at approximately 30 feet below ground surface (bgs) in the area.

3.1.1 Subject Property

The subject Site was not listed in any of the databases searched by EDR.

3.1.2 Adjacent and/or Nearby Properties

Results of the regulatory agency database search performed by EDR indicate no adjacent properties and one nearby property is listed in the databases searched by EDR. The property to the east across the road, identified as 508 Enos Lane had two listings. B & B Pipe and Tool Company was listed in the Resource

Conservation and Recovery Act – Nanogenerator/ No Longer Regulated (RCRA NONGEN/NLR) database. The listing was last updated in 2018 for handling all other waste management services, and no violations were reported. Tubular Transport and Logistics was also listed in the California Environmental Reporting System Hazardous Waste Generator (CERS HAZ WASTE), Certified Unified Program Agency (CUPA Listings), and the California Environmental Reporting System (CERS) database and no violations were reported.

3.1.3 Orphan List

Sites not plotted by EDR due to poor or inadequate address information are referred to as orphan sites. There were no unmapped orphan sites listed in the EDR Report.

3.1.4 Non-ASTM Issues

Assessment of non-ASTM issues including but not limited to asbestos containing materials unrelated to releases into the environment, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint unrelated to releases into the environment, lead in drinking water, mold or microbial growth conditions, Polychlorinated Biphenyls (PCB)-containing building materials, naturally-occurring radon, regulatory compliance, Substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance, wetlands, or Per- and Polyfluoroalkyl Substances (PFAS) were not included as part of this Phase I ESA.

3.2 OTHER RECORDS REVIEWED

The following additional sources of information were reviewed as part of this Phase I ESA.

3.2.1 Public Agency Records

The San Joaquin Valley Air Pollution Control District (SJVAPCD) was contacted regarding information for the Site and indicated that they cannot locate records or permits for any properties without an address. Because the Site can only be identified by APN and not with an address, it is uncertain whether the Site has current or past SJVAPCD permits or not.

The County of Kern Department of Agriculture was contacted regarding information for the Site and provided an online link: https://maps.kerncounty.com/H5/Index.html?Viewer=Agriculture. The map indicated this Site is not currently used for agriculture. However, several adjacent properties are used to grow almonds.

The County of Kern Planning and Building Department was contacted and as of the writing of this report have not yet replied to our request for information. If they reply to our information requests with information that changes the findings of this Phase I ESA, Haro Environmental will prepare an addendum letter presenting the information obtained and providing the updated findings.

The following public agencies were contacted regarding files for the Site and were either unresponsive or indicated they do not maintain any files for the Site.

- County of Kern Planning and Building Department (online request; January 30, 2024 unresponsive
- County of Kern Environmental Health Department (email; January 30, 2024)
- Central Valley Regional Water Quality Control Board (email; January 30, 2024)
- California State Water Resources Control Board (Geotracker website) (Accessed February 2, 2024)
- California Department of Toxic Substances Control (Envirostor Website) (Accessed February 2, 2024)

3.2.2 Previous Environmental Reports

No previous environmental reports were reviewed as part of this Phase I ESA.

4.0 SITE HISTORY

The history of the site was researched to identify obvious uses of the site back to the first developed use, or at least 40 years ago, whichever is earlier or readily available.

Four data gaps since 1940 of greater than 5 years were identified in the historical records reviewed and include the years from 1958 to 1968, from 1973 to 1984, from 1984 to 1994, and from 1994 to 2006. Between these gaps the Site use does not appear to change, and these periods are not of concern to potentially pose an environmental concern.

4.1 AERIAL PHOTOGRAPHS

A review of historical aerial photography may indicate past activities at a property that may not be documented by other means, or observed during a site visit. The effectiveness of this technique depends on the scale and quality of the photographs and the available coverage. Aerial photographs were obtained from several historical photograph collections through EDR. A tabulation of the aerial photographs reviewed is presented in Table 4-1.

TABLE 4-1
HISTORICAL AERIAL PHOTOGRAPHS REVIEWED

Date	Approximate Scale	Source
1937	1” = 500’	USDA
1942	1” = 500’	USDA
1952	1” = 500’	USGS
1958	1” = 500’	USDA
1968	1” = 500’	USGS
1973	1” = 500’	USDA
1984	1” = 500’	USDA
1994	1” = 500’	USGS/DOQQ
2006	1” = 500’	USDA/NAIP
2009	1” = 500’	USDA/NAIP
2012	1” = 500’	USDA/NAIP
2016	1” = 500’	USDA/NAIP
2020	1” = 500’	USDA/NAIP

Note: Aerial photographs only provide information on indications of land use and no conclusions regarding the release of hazardous substances or petroleum products can be drawn from the review of photographs alone.

Copies of the reviewed aerial photographs are included in Appendix A. The following is a summary of our review of these photographs.

- ***1937*** – The Site and surrounding properties appear as primarily undeveloped land. The Site appears to be minimally vegetated. Railroad tracks appear adjacent to the west of the Site.

- ***1942*** – The Site and surrounding properties appear similar to the 1937 aerial photograph with the exception of some agricultural row fields now appearing further to the southwest of the Site.

- ***1952*** – The Site appears planted with agricultural row crops. A road through the central portion of the Site appears, running east to west. To the northeast of the road on-Site, three small structures appear. New roads appear on the northern and eastern border of the Site. All surrounding land has been partitioned into rectangular grids, and appear to be used for row cropping.

- ***1958*** – The Site and surrounding areas appear similar to the 1952 aerial photograph with the exception of more structures now appearing in the surrounding area. A few hundred feet to the northeast of the Site, a large structure now appears whose use cannot be identified.

- ***1968*** – The Site remains used for row cropping and contains only one road running east to west through the central portion of the Site. Several structures still appear to the north of the road, on the eastern portion of the Site. The surrounding area still appears to be in use for row cropping and the facility a few hundred feet to the northeast of the Site has now been replaced by several small structures. Adjacent to the north of the Site, a large structure now appears.

- ***1973*** – The Site and adjacent properties appear similar to the 1968 photograph with the exception that the adjacent property to the north has been removed.

- ***1984*** – The Site and adjacent properties appear similar to the 1973 photograph with the exception that the adjacent property to the east now appears to be developed with several small structures.

- ***1994*** – The Site and the adjacent properties appear similar to the 1984 photograph with the exception of a new feature within the Site near the existing structures. However, due to the quality of the photograph the identity of the feature is unclear.

- ***2006*** – The Site remains in agricultural use with several small unidentifiable structures appearing to the north of the road. The surrounding area appears similar to the 1994 aerial photograph with the exception of several properties west of Development Avenue no longer in use for agricultural purposes. Multiple residential homes now appear north of Highway 58, southwest of the Site.

- ***2009*** – The Site and adjacent properties appear similar to the 2006 photograph with the exception that the adjacent property to the south no longer appears to be in agricultural use.

- ***2012*** – The Site and adjacent properties appear similar to the 2009 photograph.

- ***2016*** – The Site appears similar to the 2012 aerial photograph with the exception of the property to the west now appearing to be used for pipe storage.

- ***2020*** – The Site appears similar to the 2012 aerial photograph with the exception that several small features now appear on the northeastern corner, although their use cannot be identified. The surrounding properties appear similar to the 2016 aerial photograph.

4.2 HISTORICAL TOPOGRAPHIC MAPS

Haro Environmental contacted EDR for information regarding historical topographic maps of the Site vicinity. The topographic maps reviewed for this assessment are listed below in Table 4-2. Copies of the maps are included in Appendix A.

TABLE 4-2
HISTORICAL TOPOGRAPHIC MAPS REVIEWED

Year	Quadrangle	Series	Scale
1910	Buena Vista Lake	30 minute	1:125,000
1912	Buena Vista Lake	30 minute	1:125,000
1929	Stevens	7.5 minute	1:31,680
1932	Stevens	7.5 minute	1:31,680
1942 (aerial photo revised 1942)	Bakersfield West	15 minute	1:62,500
1947	Bakersfield West	15 minute	1:50,000
1950	Stevens	7.5 minute	1:24,000
1954 (aerial photo revised 1952)	Stevens	7.5 minute	1:24,000
1968 (aerial photo revised 1968)	Stevens	7.5 minute	1:24,000
1973 (aerial photo revised 1973)	Stevens	7.5 minute	1:24,000
2012	Stevens	7.5 minute	1:24,000
2015	Stevens	7.5 minute	1:24,000
2018	Stevens	7.5 minute	1:24,000
2021	Stevens	7.5 minute	1:24,000

The Site is located approximately 15 miles west of the City of Bakersfield, near the present-day unincorporated community of Rosedale. The Kern River is further to the south of the Site. Copies of the

reviewed historic topographic maps are included in Appendix A. The following is a summary of our review of the maps.

- ***1910*** – The Site and surrounding properties are depicted as undeveloped land. A railroad is depicted west of the Site running northwest to southeast. The Pioneer levee is depicted running east to west further south of the Site.

- ***1912*** – The Site and surrounding properties are depicted similar to the 1910 map.

- ***1929*** – The Site and surrounding properties are depicted similar to the 1912 map with the exception of an unpaved road crossing through the Site from west to east. In addition, elevation contours have been added, which depict that the Site is primarily flat with an elevation of 330 feet.

- ***1932*** – The Site and surrounding properties are depicted similar to the 1929 map.

- ***1942*** – The Site and surrounding properties are depicted similar to the 1929 map with the exception of the unpaved road no longer being depicted through the Site, and the road south of the Site now depicted as Stockdale Highway.

- ***1947*** – The Site and surrounding properties are depicted similar to the 1942 map.

- ***1950*** – The Site and surrounding properties are depicted similar to the 1947 map with the exception of an unpaved road crossing through the Site from west to east.

- ***1954*** – The Site is depicted as undeveloped with the exception of one structure located in the northeast corner. The unpaved road is no longer depicted through the Site, and instead an unpaved road is now depicted adjacent to the north of the Site. The surrounding properties are depicted as vacant. Pipelines are depicted north and south of the Site, mostly moving west to east.

- ***1968*** – The Site and surrounding properties are depicted similar to the 1954 map, with the exception of a reservoir now depicted on the adjacent property to the north.

- ***1973*** – The Site and surrounding properties are depicted as similar to the 1968 map with the exception that two new structures are now depicted on the Site near the northeast corner, adjacent to the pre-existing structure.

- ***2012*** – The map is simplified, and individual building depictions have been removed. The railroad is no longer depicted. The only feature depicted on the map is the reservoir to the north. Many present-day roads are depicted including Highway 43, Highway 58, and Hazelwood Court.

- ***2015*** – The map is similar to the 2012 map with the exception of the reservoir no longer being depicted and the railroad being depicted again in its present-day location.

- ***2018*** – The Site and surrounding properties are depicted similar to the 2015 map.

- ***2021*** – The Site and surrounding properties are depicted similar to the 2018 map.

4.3 SANBORN® FIRE INSURANCE MAPS

Sanborn® Fire Insurance Maps provide historical land use information in some metropolitan areas and small, established towns. No Sanborn Fire Insurance Map coverage was available for the Site and a copy of the no coverage letter is provided in Appendix A.

4.4 CITY DIRECTORIES

There are no roads associated with the Site. The nearest road is Development Avenue, to the west of the Site. City directories results for Development Avenue did not report any addresses available. Brimhall Road is the next closest road, 1/3 mile north of the Site. However, addresses were not found for this street either. A copy of the EDR City Directories Abstract is provided in Appendix A.

4.5 OIL AND GAS MAPS

Maps provided online by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources were reviewed to determine the current or historic presence of oil or gas wells in the vicinity of the Site (CalGEM, 2023). The Site records showed no current or historic presence of oil or gas tanks, wells, or other features. The Site is currently within the Strand oil field, and several idle and plugged oil and gas wells are located within the vicinity of the Site.

Two oil wells are present offsite to the north and east of the Site. The oil and gas well to the north (API 0402942011) is located approximately 150 feet from the Site, and was reportedly plugged and abandoned in 1968. The oil and gas well to the east (API 0402954493) is located approximately 200 feet from the Site,

began operating in 1976, and is currently idle. The aerial photographs reviewed in section 4 indicate that the wells were plugged and inactive by 1952. Based on the distance from the subject Site, and on the inactive status, these two nearby former oil wells would not be expected to pose an environmental concern to the Site.

4.6 CRUDE OIL PIPELINES

The National Pipeline Mapping System maintained by the Pipeline and Hazardous Materials Safety Administration was reviewed for the presence of gas and hazardous liquid transmission pipelines (PHMSA, 2023). The maps reviewed indicate one natural gas pipeline within a half-mile of the Site. The pipeline travels east/west within a half mile north of the Site. Records identify this natural gas transmission pipeline as being operated by Southern California Gas Company and is listed as active and filled. Based on the contents of this pipeline, it is not expected to pose an environmental concern to the Site.

5.0 SITE RECONNAISSANCE AND INTERVIEWS

Haro Environmental's assessment activities included a site reconnaissance. This section summarizes the findings from the site reconnaissance.

5.1 SITE RECONNAISSANCE

5.1.1 Methodology and Limiting Conditions

Haro Environmental personnel performed an unaccompanied reconnaissance of the Site on April 19, 2024. The site reconnaissance was conducted by: 1) observing the Site from public thoroughfares, 2) observing the adjoining properties from public thoroughfares, and 3) observing the Site from walking paths. The purpose of the site reconnaissance was to identify the presence or likely presence of hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or threat of release into soil, groundwater, or surface water at the Site (recognized environmental conditions). Observations from the site reconnaissance are summarized in the following sections. A photolog of photographs taken during the site reconnaissance is included as Appendix C.

5.1.2 Current Use of the Property and Adjoining Properties

The Site is currently undeveloped land with the exception of one structure on Site used for storage, and several water features (See photo #1).

No utilities were observed onsite.

Surrounding properties are either in agricultural or commercial land use (See photo #2, 3, 4, and 5). Nearby land uses are depicted on Plate 2.

5.1.3 General Description of Structures

There is currently one structure onsite, appearing to be used for storage (See photo #6). The remainder of the Site appears to be vacant and undeveloped land.

5.1.4 Interior and Exterior Observations

The Site is undeveloped with exception of one storage structure. The interior of the building was not inspected. This metal structure with a metal roof was located on a cement slab (See photo #6).

The exterior of the Site was undeveloped and vacant.

5.1.5 Hazardous Substances and Petroleum Products

Hazardous substances and petroleum products were not observed during the site reconnaissance.

5.1.6 Unidentified Substance Containers

Unidentified hazardous substance containers or unidentified containers that might contain hazardous substances were not observed during the site reconnaissance.

5.1.7 Storage Tanks

During the site reconnaissance, Haro Environmental did not observe evidence of underground storage tanks (USTs). Haro Environmental observed one above-ground storage tank (AST) located in the northeast corner of the Site (See photo #7). Some rust was noted; however, there were no signs of soil staining or odors.

5.1.8 Odors

During the site reconnaissance, Haro Environmental did not identify any strong, pungent, or noxious odors.

5.1.9 Pools of Liquid

During the site reconnaissance, Haro Environmental did not identify any pools of liquid including standing surface water. Sumps containing liquids likely to be hazardous substances or petroleum products were not observed.

5.1.10 Drums

During the site reconnaissance, Haro Environmental did observe one drum onsite. The drum was empty, rusted, and broken open (See photo #7). However, no signs of soil staining or distressed vegetation were present within the vicinity of the drum.

5.1.11 Indications of Polychlorinated Biphenyls (PCBs)

Toxic PCBs were commonly used historically in electrical equipment such as transformers, fluorescent lamp ballasts, and capacitors. According to USEPA regulation 40 CFR Part761, there are three categories for classifying such equipment: <50 ppm of PCBs is considered "Non-PCB"; between 50 and 500 ppm is considered "PCB-Contaminated"; and >500 ppm is considered "PCB-Containing". Since January 1, 1977, the manufacture, process, or distribution in commerce or use of any polychlorinated biphenyl in any manner other than in a totally enclosed manner has been prohibited. The management of potential PCB-containing transformers is the responsibility of the local utility or the transformer owner. Actual material samples need to be collected to determine if transformers are PCB-containing.

Transformers installed prior to 1977 may be PCB-containing while transformers installed after 1977 are unlikely to be PCB-containing.

During the site reconnaissance, Haro Environmental observed two pole-mounted transformers onsite, and two pole-mounted transformers adjacent to the southeast of the Site (See photo #8 and 12). The transformers appeared in good condition, and no indications of a current or historic release were observed.

5.1.12 Other Conditions of Concern

During the site reconnaissance Haro Environmental did not note or observe evidence of any of the following:

- Corrosion
- Clarifiers, and/or sumps
- Pits, ponds, and/or lagoons
- Stressed vegetation
- Waste water

- Fill soil
- Solid waste
- Septic tanks

Several water features were observed on Site (See photo #9 and 10). One water well was observed on Site (See photo #11).

5.2 INTERVIEWS

Mr. Lonnie S. Dillard completed an environmental questionnaire and a copy of the completed questionnaire is provided in Appendix B. Mr. Dillard indicated he is unaware of the on-site current or historic presence of:

- Industrial or automotive batteries,
- Pesticides or herbicides,
- Fill dirt,
- Pits, ponds, or lagoons,
- USTs or ASTs,
- Stained soil,
- Vent pipes, fill pipes, or access ways,
- PCBs.

Mr. Dillard also indicated that he is unaware of any environmental liens, environmental deed restrictions, land use regulations, engineering controls, environmental violations, environmental assessments, or past, threatened, or pending lawsuits concerning releases of hazardous materials relating to the Site.

6.0 FINDINGS, CONCLUSTIONS AND RECOMMENDATIONS

This Phase I ESA of the property identified as the Dillard Property and identified as APN 104-292-09 located in Kern County, California (the Site) was performed by Haro Environmental for the RRBWSD. Haro Environmental performed this Phase I ESA consistent with ASTM Practice E-1527-21, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM Standard). Exceptions to, or deletions from, this practice are described in this report.

Based on the data gathered and reviewed during this Phase I ESA, Haro Environmental did not identify recognized environmental conditions or concerns that have impacted, or pose a significant environmental threat to subsurface soil, soil vapor, or groundwater beneath the Site.

The following potential environmental concerns to note include:

- The historical use of the Site for agricultural row crops. Agricultural farming practices often include the application of chemicals to control pests and weeds. Although no evidence of agricultural chemical usage at the Site was found during preparation of this Phase I ESA, because agricultural land use appears in historic aerial photographs beginning in 1952 and ending by at least 1984, there is a potential residual concentrations of agricultural chemicals could persist in soils at the Site.

- The presence of railroad tracks to the west of the Site. Railroads often utilize chemicals to control vegetation at and near the tracks. These chemicals can include metals such as arsenic and other organic chemicals.

7.0 STANDARD OF CARE

The findings and conclusions contained in this Phase I ESA are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted industry standards and practices applicable to this location and are subject to the following inherent limitations:

Accuracy of Information. Certain information utilized by Haro Environmental in this assessment has been obtained, reviewed, and evaluated from various sources believed to be reliable. Although Haro Environmental's conclusions, opinions, and recommendations are based, in part, on such information, Haro Environmental's services did not include the verification of the information's accuracy or authenticity. Should such information prove to be inaccurate or unreliable, Haro Environmental reserves the right to amend or revise its conclusions, opinions and/or recommendations.

Reconnaissance. Haro Environmental performed a reconnaissance of the Site that is the subject of this assessment to document current conditions. Haro Environmental focused on areas deemed more likely to exhibit hazardous materials conditions while other areas received limited attention. No known areas were inaccessible at the time of our reconnaissance.

Limitations. Haro Environmental does not guarantee that the Site is free of hazardous or potentially hazardous materials or conditions, or that latent or undiscovered conditions will not become evident in the future. This assessment has been prepared in accordance with currently accepted industry standards, and no other warranties, representations, or certifications are made. Unless stated otherwise herein, this report is intended for and restricted to the sole use of the RRBWSD. Any other use, interpretation, or reliance upon this assessment is at the sole risk of the user and Haro Environmental shall have no liability for such unauthorized use, interpretation or reliance.

Qualifications of Environmental Professionals. Mr. Elliot Haro representing Haro Environmental performed this ESA. Mr. Haro is an environmental consultant who has performed over 100 ESAs for a variety of clients. Mr. Haro's resume is provided in Appendix D.

Reliance. This ESA report has been prepared for the exclusive use and reliance of the RRBWSD. Use or reliance by any other party is prohibited without the written authorization the RRBWSD and Haro Environmental.

Scope Limitations and ASTM Exceptions. This ESA did not include any inquiries with respect to non-scope ASTM considerations (including but not limited to asbestos containing materials unrelated to releases into the environment, biological agents, cultural and historic resources, ecological resources, endangered

species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint unrelated to releases into the environment, lead in drinking water, mold or microbial growth conditions, Polychlorinated Biphenyls (PCB)-containing building materials, naturally-occurring radon, regulatory compliance, Substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance, wetlands, or Per- and Polyfluoroalkyl Substances (PFAS)), subsurface or other invasive assessments, business environmental risk evaluations or other services not particularly identified and discussed herein. Note, however, that virtually no scope of work, no matter how exhaustive, can identify all contaminants or all conditions above and below ground.

Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested may not be received by the issuance date of the report. In the event information obtained from sources mentioned previously alters the findings stated in this report, an addendum letter will be forwarded to the RRBWSD under separate cover providing Haro Environmental's findings and conclusions. Additional Phase I ESA limitations include:

- Several data gaps since 1940 of greater than 5 years were identified in the historical records reviewed and included the years from 1958 to 1968, from 1973 to 1984, from 1984 to 1994, and from 1994 to 2006. These data gaps are considered insignificant because the site use appears to be similar during the data gaps.

- The San Joaquin Valley Air Pollution Control District was contacted regarding information for the Site and indicated that they cannot locate records or permits for any properties without an address.

- An environmental lien search was not performed by the user or preparer of this Phase I ESA. This data gap is considered insignificant because the Site history is well documented through other sources of information.

This report represents our service to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based upon the Site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable or not present during the reconnaissance and

may subsequently become observable (such as after site renovation or development). Further, these services are not to be construed as legal interpretation or advice.

Certification. I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR Part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

8.0 REFERENCES

California Department of Conservation, California Geological Survey (CGS). 2002. *California Geomorphic Provinces – Note 36.*

CGS. 1964. *Geologic Atlas of California - Bakersfield Sheet.*

California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (CalGEM). 2022. Well Finder Mapping System website: https://maps.conservation.ca.gov/doggr/wellfinder/

California Department of Water Resources (DWR). 2006. *Kern County Subbasin of the San Joaquin Valley Groundwater Basin.* Updated January 20, 2006.

Environmental Data Resources (EDR). January 23, 2024. EDR Historical Topographic Map Report, Dillard Property, Bakersfield, CA 93314.

EDR. January 23, 2024. City Directory Abstract, Dillard Property, Bakersfield, CA 93314.

EDR. January 23, 2024. The EDR Sanborn® Map Report, Dillard Property, Bakersfield, CA 93314.

EDR. January 23, 2024. The Radius Map Report with Geocheck, Dillard Property, Bakersfield, CA 93314.

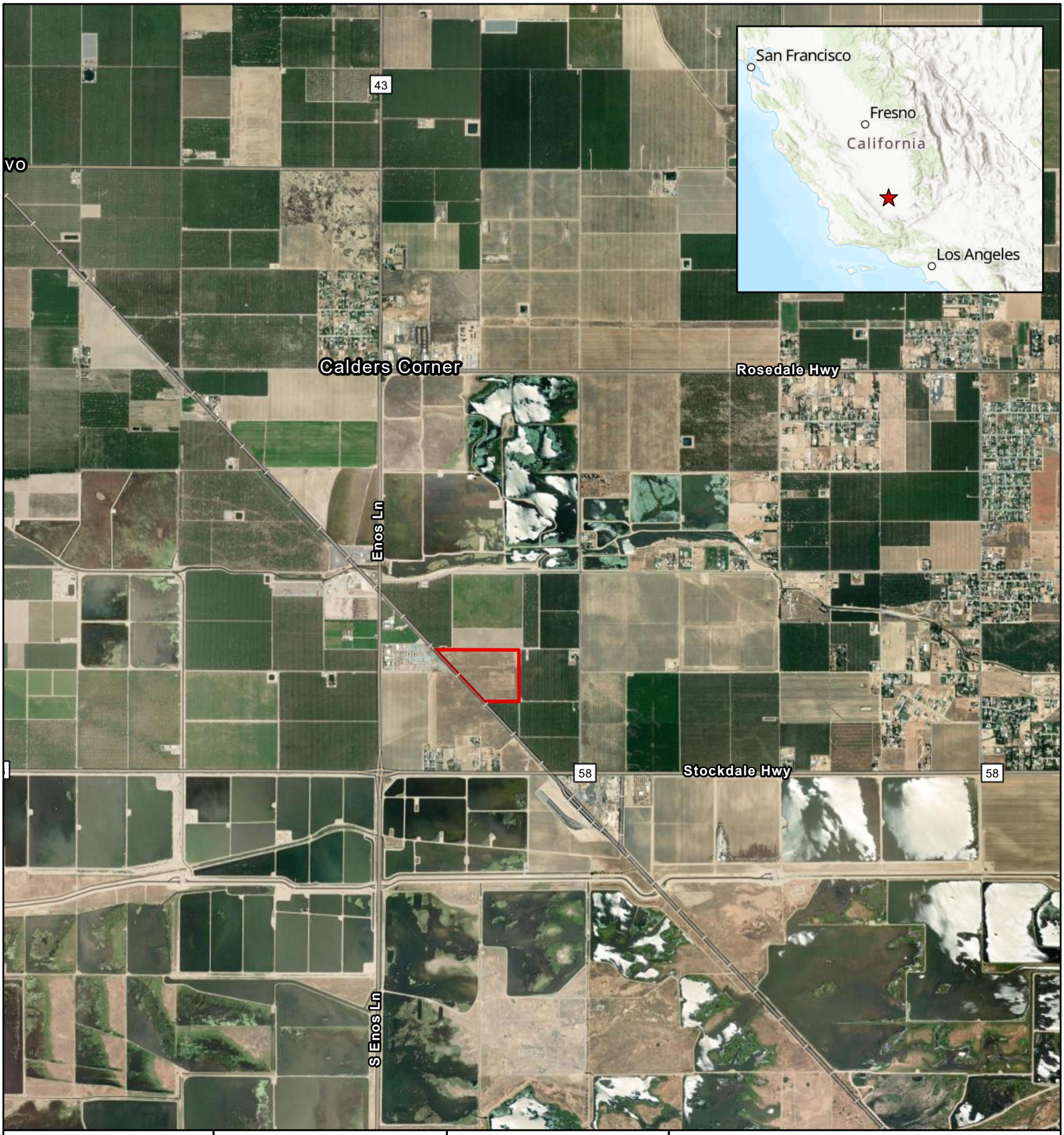
EDR. January 23, 2024. Historical Aerial Photo Report, Dillard Property, Bakersfield, CA 93314.

Kern County Department of Agriculture (KCDA). 2024. Kern Crop Map website: https://maps.kerncounty.com/H5/Index.html?Viewer=Agriculture

Kern County Department of Agriculture (KCDA). 2024. Kern permit data and pesticide use website: http://www.kernag.com/ep/permit-use/permit-use.asp

Pipeline and Hazardous Materials Safety Administration (PHMSA). 2021. National Pipeline Mapping System website: https://www.npms.phmsa.dot.gov/PublicViewer/

PLATES



HARO ENVIRONMENTAL

872 Higuera Street
San Luis Obispo, CA 93405
Phone: 805.204.4483
www.haroenv.com

0 0.5 1 Miles

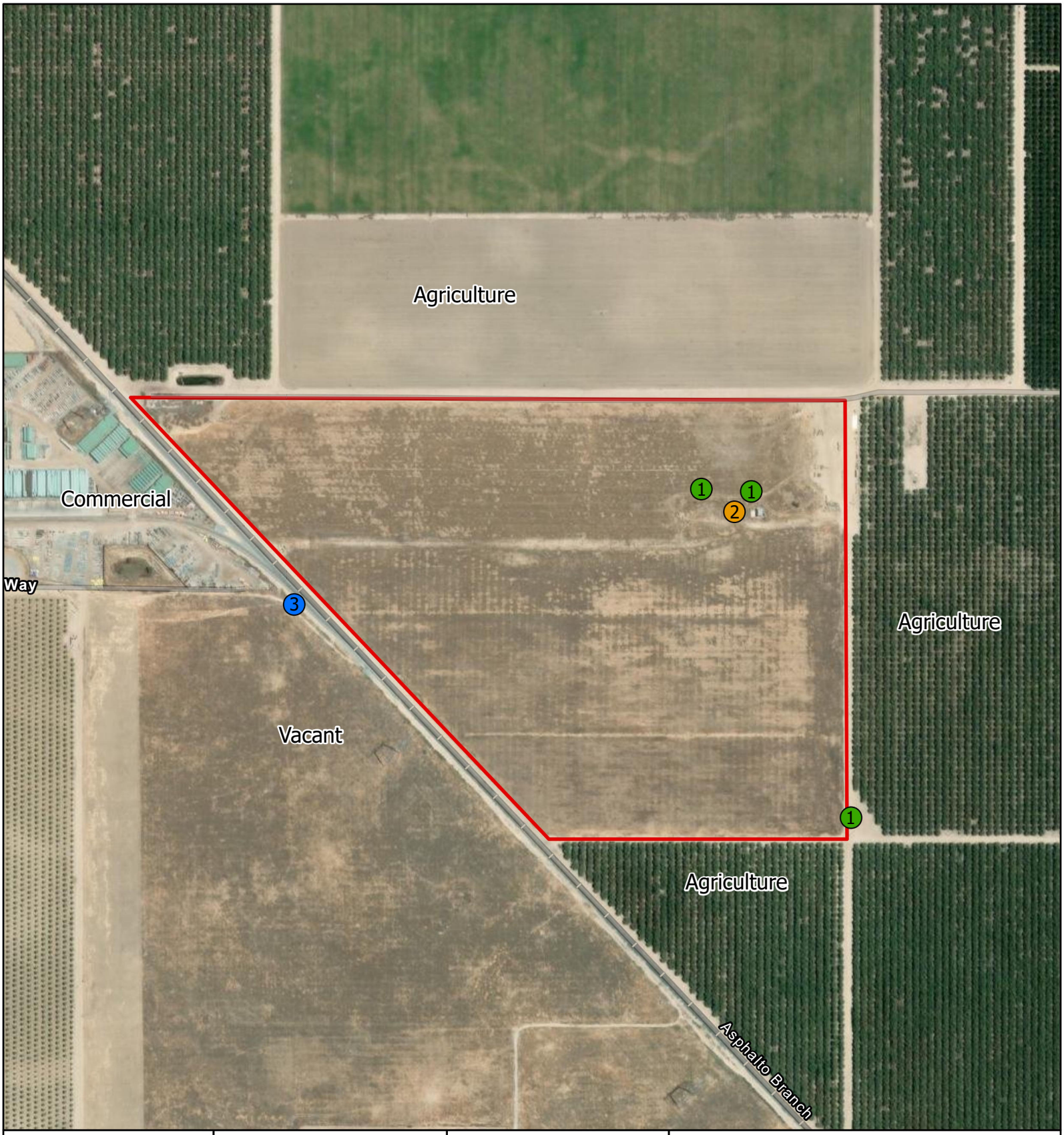
N

Dillard Property
Bakersfield, California

Legend

Site Location

Plate 1 - Site Vicinity Map



HARO ENVIRONMENTAL
872 Higuera Street
San Luis Obispo, CA 93405
Phone: 805.204.4483
www.haroenv.com

0 250 500 Feet

N

Dillard Property
Bakersfield, California

Legend

- Approximate Site Boundary
- 1 Pole-Mounted Transformers
- 2 Above Ground Storage Tank
- 3 Domestic Water Well

Plate 2 - Site and Adjacent Land Use Map

APPENDIX A

REGULATORY RECORDS DOCUMENTATION

Dillard Property

Not Reported

Bakersfield, CA 93314

Inquiry Number: 7548073.3

January 23, 2024

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

01/23/24

Site Name:	Client Name:
Dillard Property	Haro Environmental, Inc.
Not Reported	PO Box 7002
Bakersfield, CA 93314	Los Osos, CA 93412
EDR Inquiry # 7548073.3	Contact: Elliot Haro

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Haro Environmental, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 3E28-4EDA-8C61

PO # NA

Project Dillard Property

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 3E28-4EDA-8C61

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Dillard Property

Not Reported

Bakersfield, CA 93314

Inquiry Number: 7548073.4

January 23, 2024

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

01/23/24

Site Name:

Dillard Property
Not Reported
Bakersfield, CA 93314
EDR Inquiry # 7548073.4

Client Name:

Haro Environmental, Inc.
PO Box 7002
Los Osos, CA 93412
Contact: Elliot Haro

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Haro Environmental, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: Dillard Property

Coordinates:

Latitude:	35.361689 35° 21' 42" North
Longitude:	-119.242485 -119° 14' 33" West
UTM Zone:	Zone 11 North
UTM X Meters:	296256.73
UTM Y Meters:	3915462.39
Elevation:	331.12' above sea level

Maps Provided:

2021	1947
2018	1942
2015	1932, 1933
2012	1929, 1930, 1931
1973	1912
1968	1910
1954	
1950	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets



Stevens
2021
7.5-minute, 24000



Tupman
2021
7.5-minute, 24000



Rosedale
2021
7.5-minute, 24000



Rio Bravo
2021
7.5-minute, 24000

2018 Source Sheets



Stevens
2018
7.5-minute, 24000



Tupman
2018
7.5-minute, 24000



Rosedale
2018
7.5-minute, 24000



Rio Bravo
2018
7.5-minute, 24000

2015 Source Sheets



Stevens
2015
7.5-minute, 24000



Tupman
2015
7.5-minute, 24000

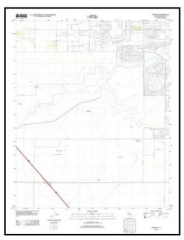


Rosedale
2015
7.5-minute, 24000



Rio Bravo
2015
7.5-minute, 24000

2012 Source Sheets



Stevens
2012
7.5-minute, 24000



Tupman
2012
7.5-minute, 24000



Rosedale
2012
7.5-minute, 24000



Rio Bravo
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1973 Source Sheets



Rio Bravo
1973
7.5-minute, 24000
Aerial Photo Revised 1968



Stevens
1973
7.5-minute, 24000
Aerial Photo Revised 1973



Rosedale
1973
7.5-minute, 24000
Aerial Photo Revised 1968



Tupman
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1968 Source Sheets



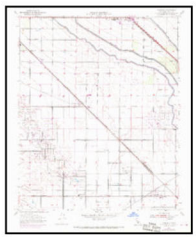
Stevens
1968
7.5-minute, 24000
Aerial Photo Revised 1968



Rio Bravo
1968
7.5-minute, 24000
Aerial Photo Revised 1968



Tupman
1968
7.5-minute, 24000
Aerial Photo Revised 1968



Rosedale
1968
7.5-minute, 24000
Aerial Photo Revised 1968

1954 Source Sheets



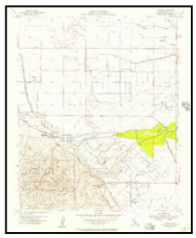
Stevens
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Rosedale
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Rio Bravo
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Tupman
1954
7.5-minute, 24000
Aerial Photo Revised 1952

1950 Source Sheets



Rosedale
1950
7.5-minute, 24000

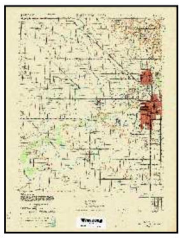


Stevens
1950
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets



BAKERSFIELD WEST
1947
15-minute, 50000

1942 Source Sheets



Bakersfield West
1942
15-minute, 62500
Aerial Photo Revised 1942

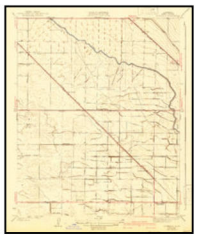


Buttonwillow
1942
15-minute, 62500
Aerial Photo Revised 1937

1932, 1933 Source Sheets



Stevens
1932
7.5-minute, 31680

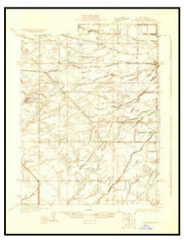


Rosedale
1933
7.5-minute, 31680



Tupman
1933
7.5-minute, 31680

1929, 1930, 1931 Source Sheets



Stevens
1929
7.5-minute, 31680



Coles Levee
1929
7.5-minute, 31680



Rosedale
1930
7.5-minute, 31680



Rio Bravo
1931
7.5-minute, 31680

Topo Sheet Key

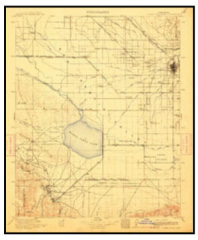
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1912 Source Sheets



Buena Vista Lake
1912
30-minute, 125000

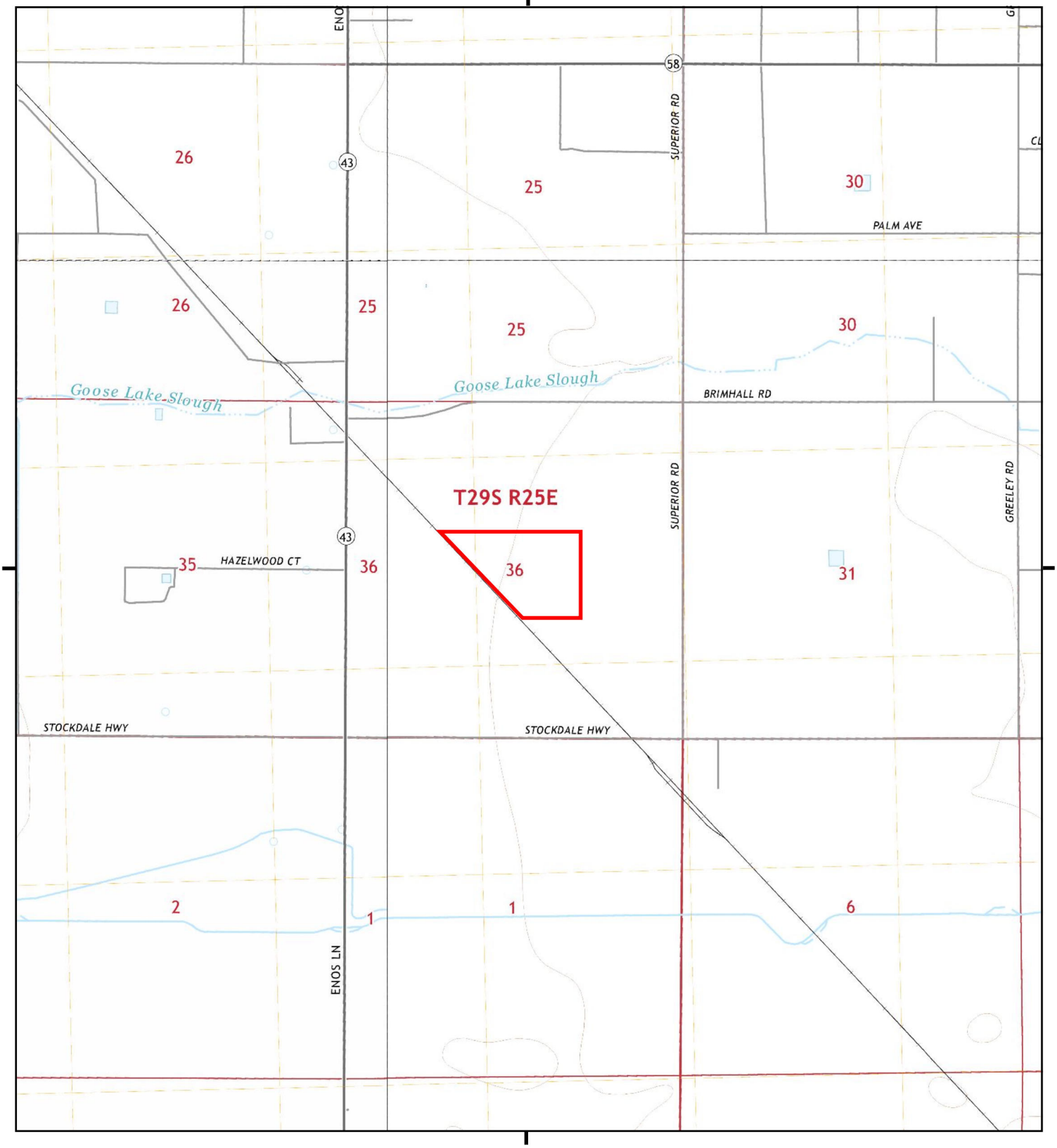
1910 Source Sheets



Buena Vista Lake
1910
30-minute, 125000

Historical Topo Map

2021



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

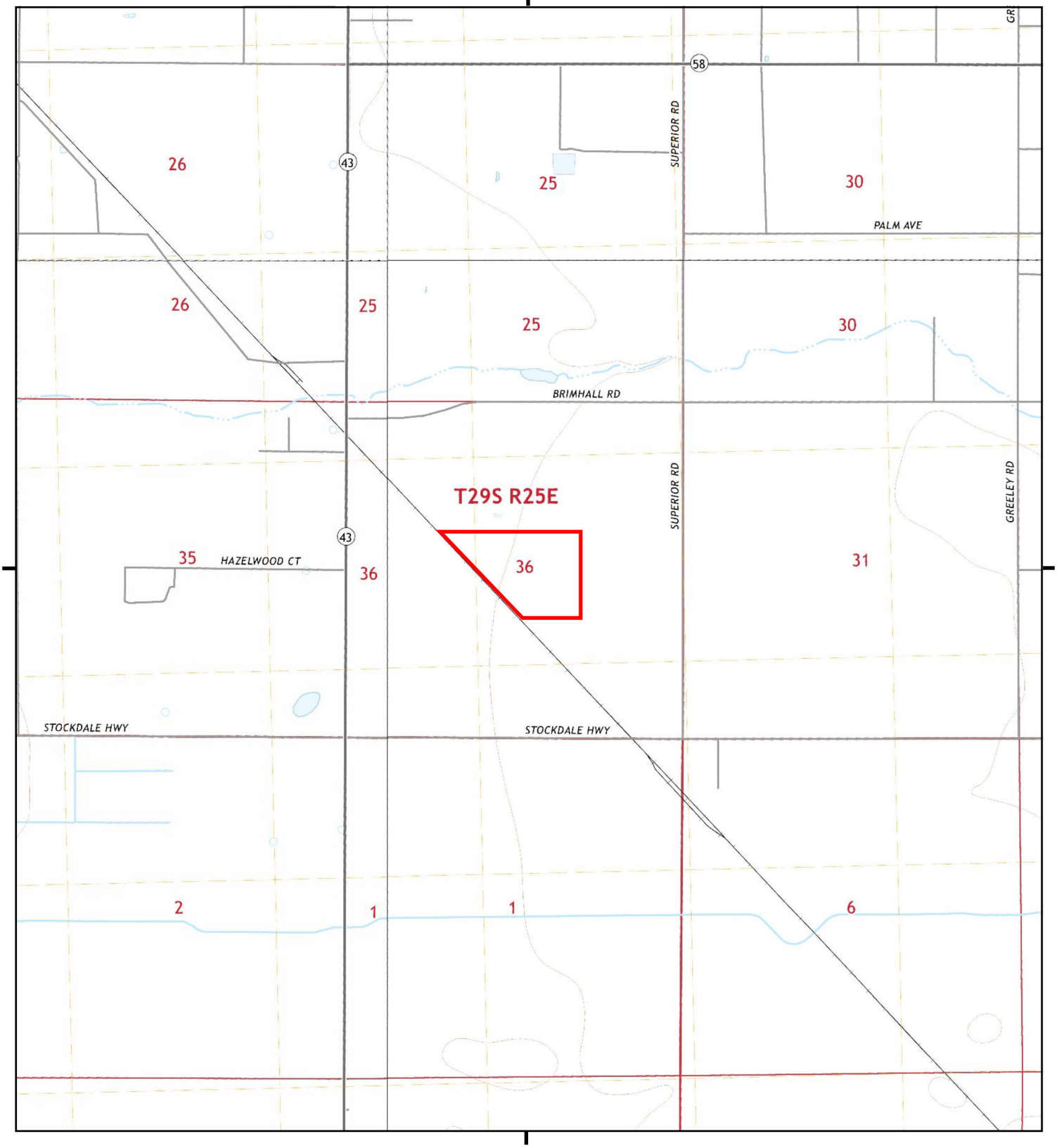
TP, Stevens, 2021, 7.5-minute
NE, Rosedale, 2021, 7.5-minute
SW, Tupman, 2021, 7.5-minute
NW, Rio Bravo, 2021, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

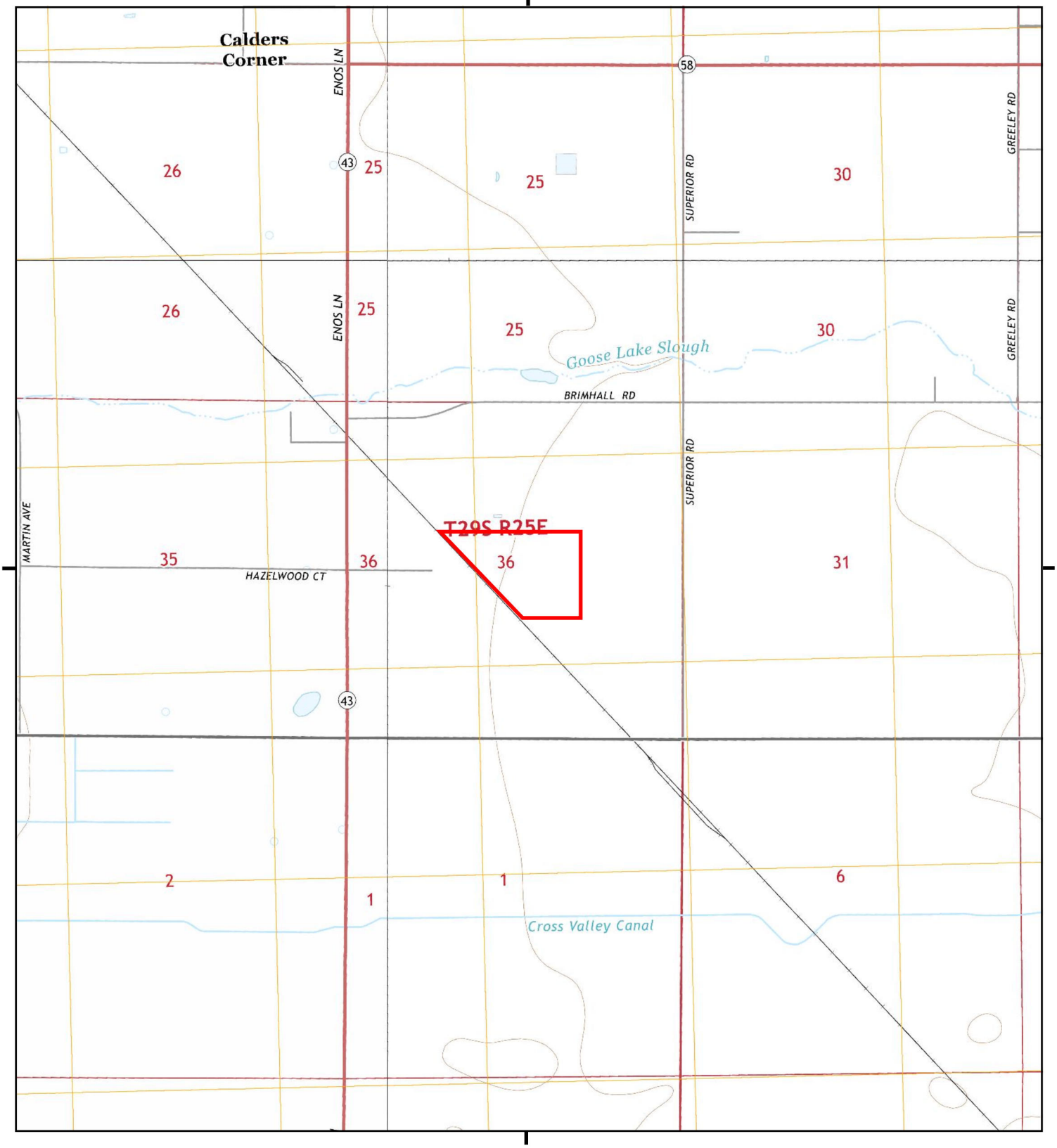
TP, Stevens, 2018, 7.5-minute
NE, Rosedale, 2018, 7.5-minute
SW, Tupman, 2018, 7.5-minute
NW, Rio Bravo, 2018, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

2015



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

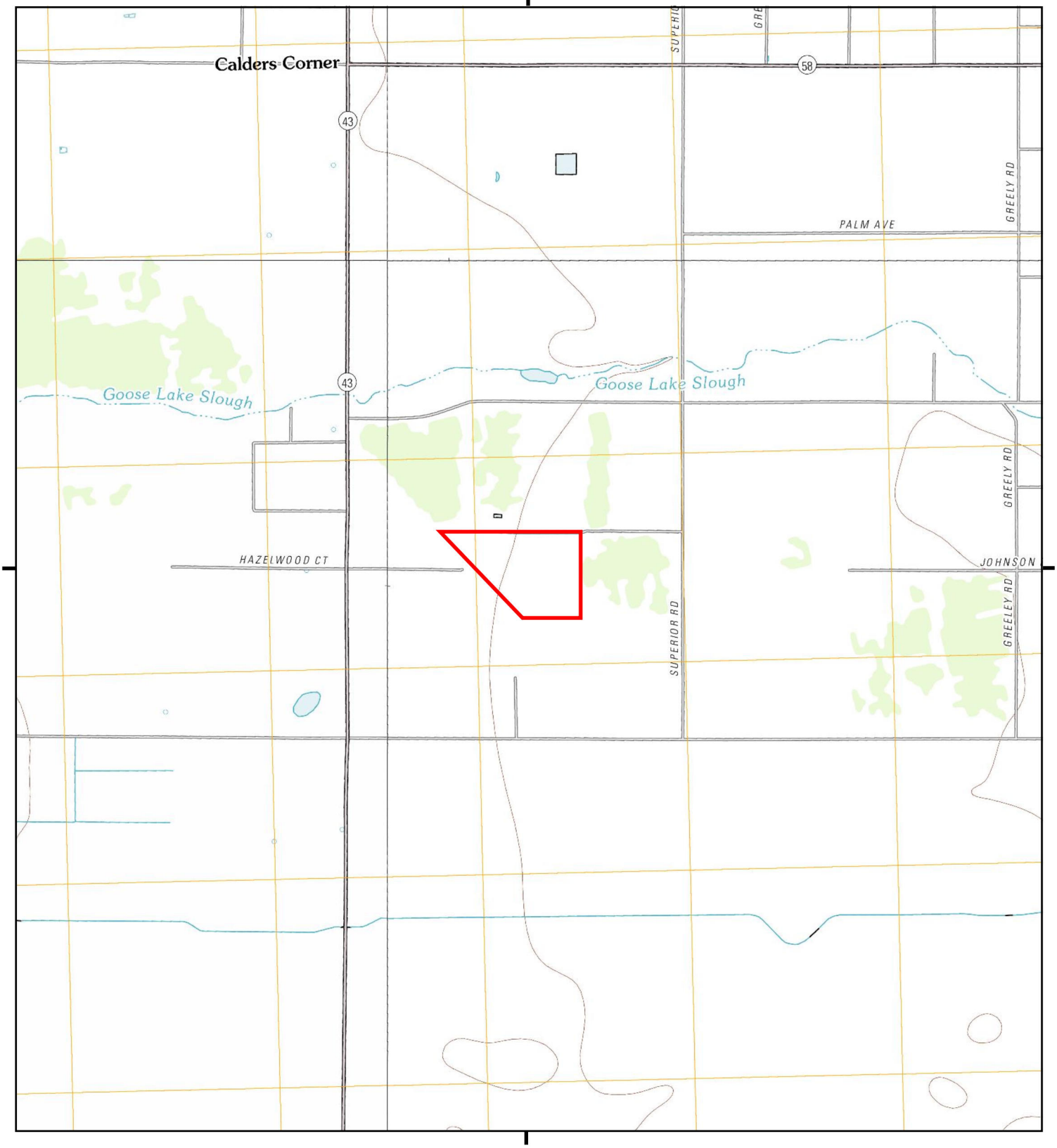
TP, Stevens, 2015, 7.5-minute
NE, Rosedale, 2015, 7.5-minute
SW, Tupman, 2015, 7.5-minute
NW, Rio Bravo, 2015, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

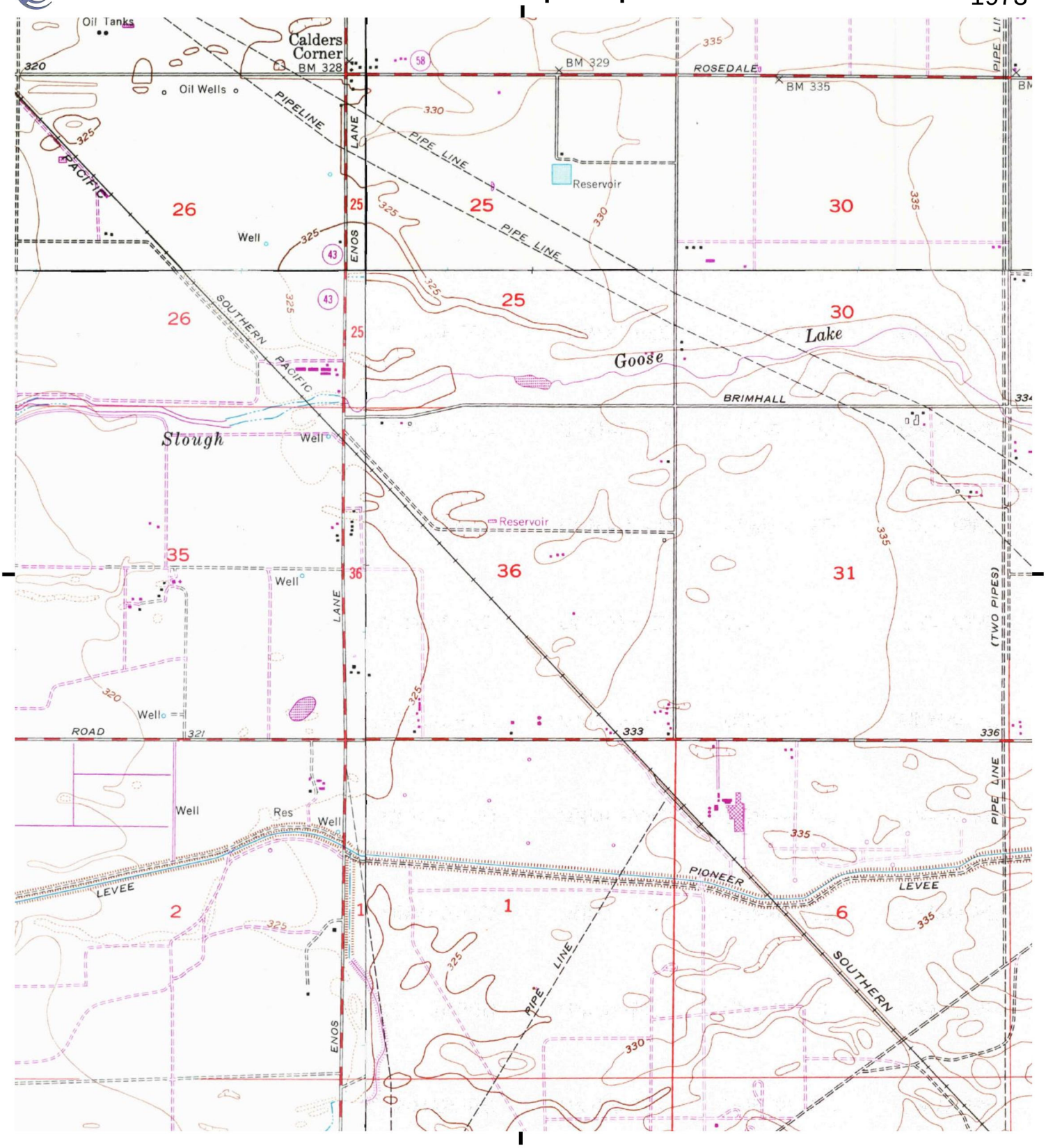
TP, Stevens, 2012, 7.5-minute
NE, Rosedale, 2012, 7.5-minute
SW, Tupman, 2012, 7.5-minute
NW, Rio Bravo, 2012, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

1973



This report includes information from the following map sheet(s).

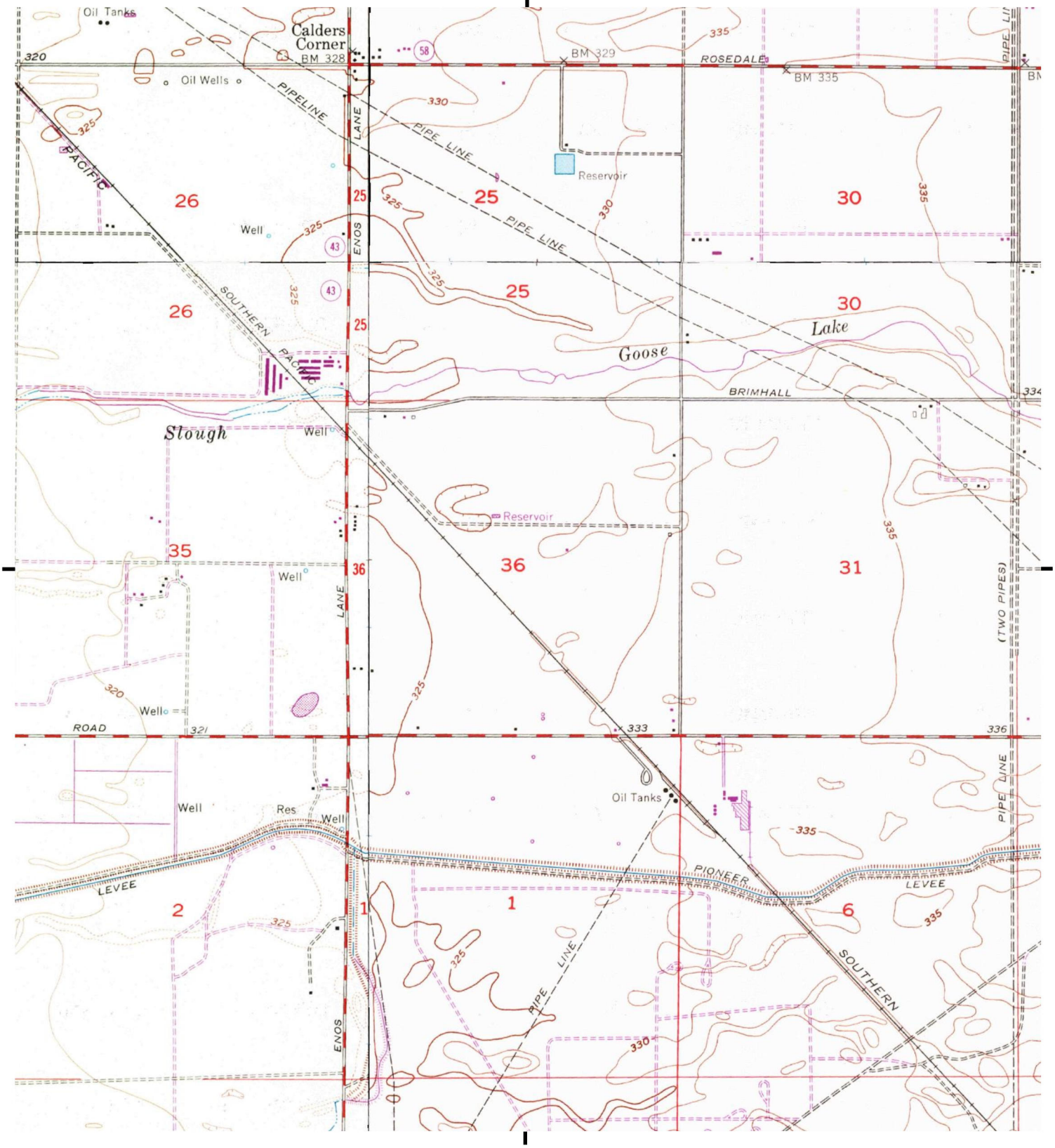
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Stevens, 1973, 7.5-minute
NE, Rosedale, 1973, 7.5-minute
SW, Tupman, 1973, 7.5-minute
NW, Rio Bravo, 1973, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

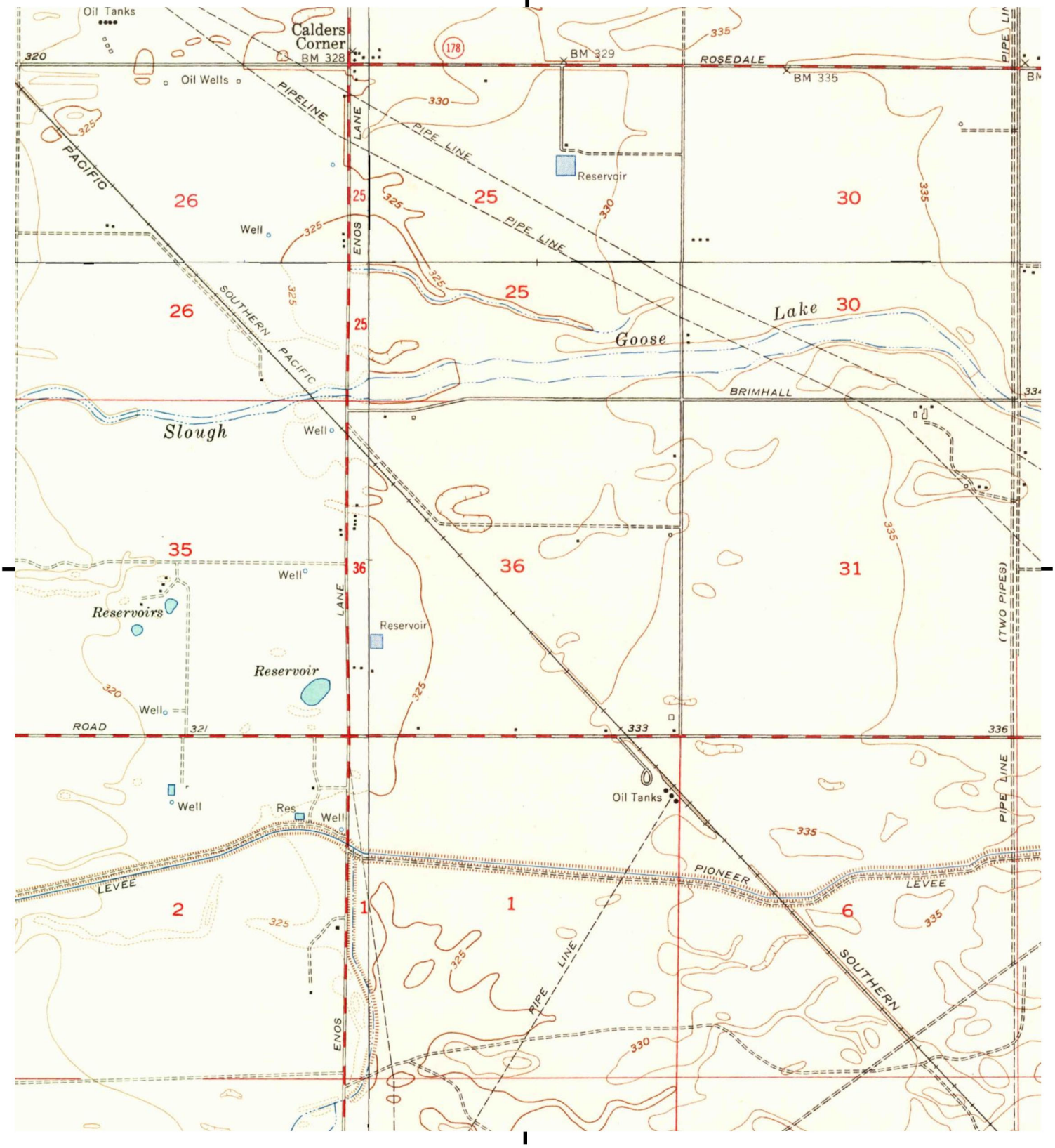
TP, Stevens, 1968, 7.5-minute
NE, Rosedale, 1968, 7.5-minute
SW, Tupman, 1968, 7.5-minute
NW, Rio Bravo, 1968, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

1954



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

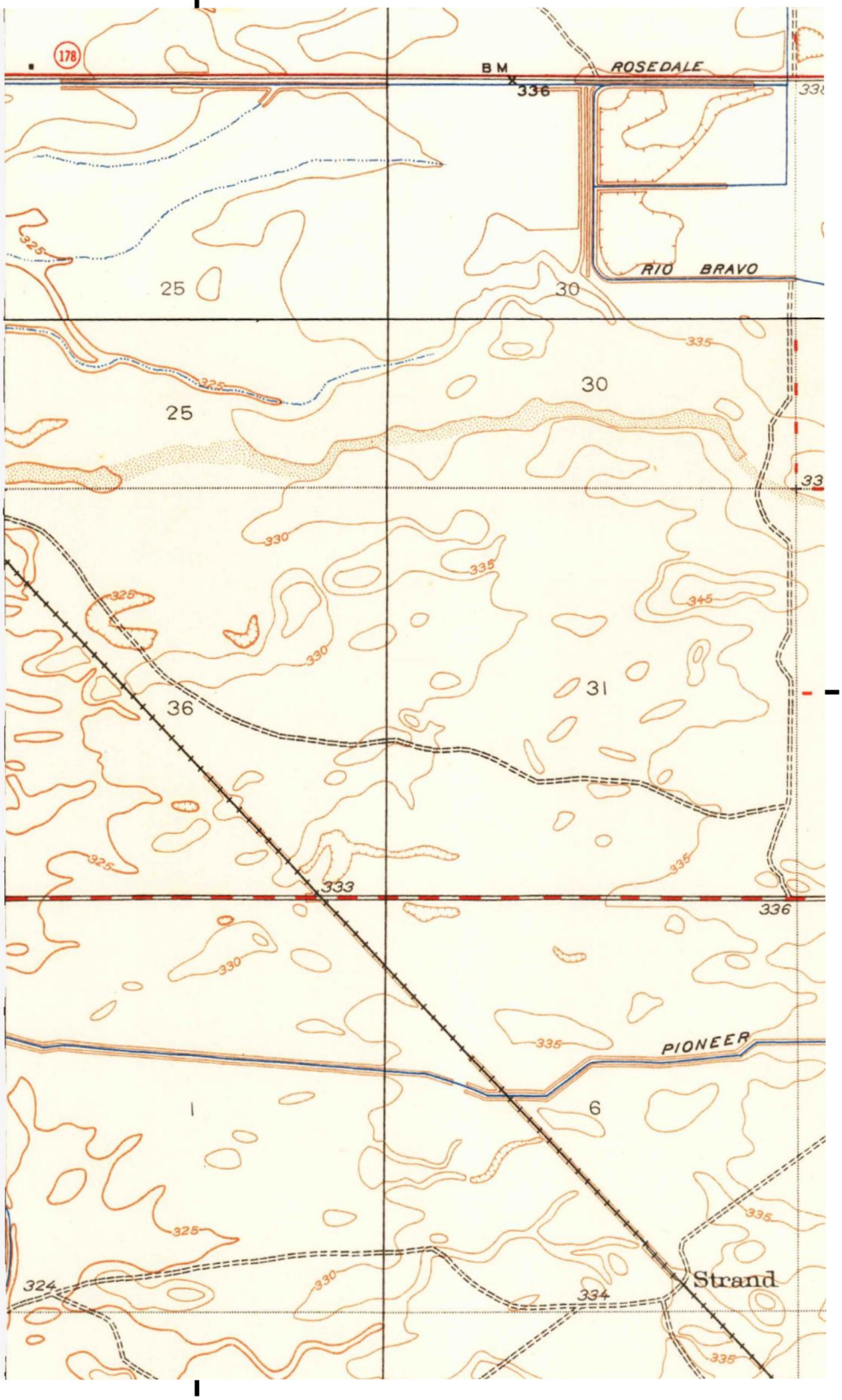
TP, Stevens, 1954, 7.5-minute
NE, Rosedale, 1954, 7.5-minute
SW, Tupman, 1954, 7.5-minute
NW, Rio Bravo, 1954, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

1950



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

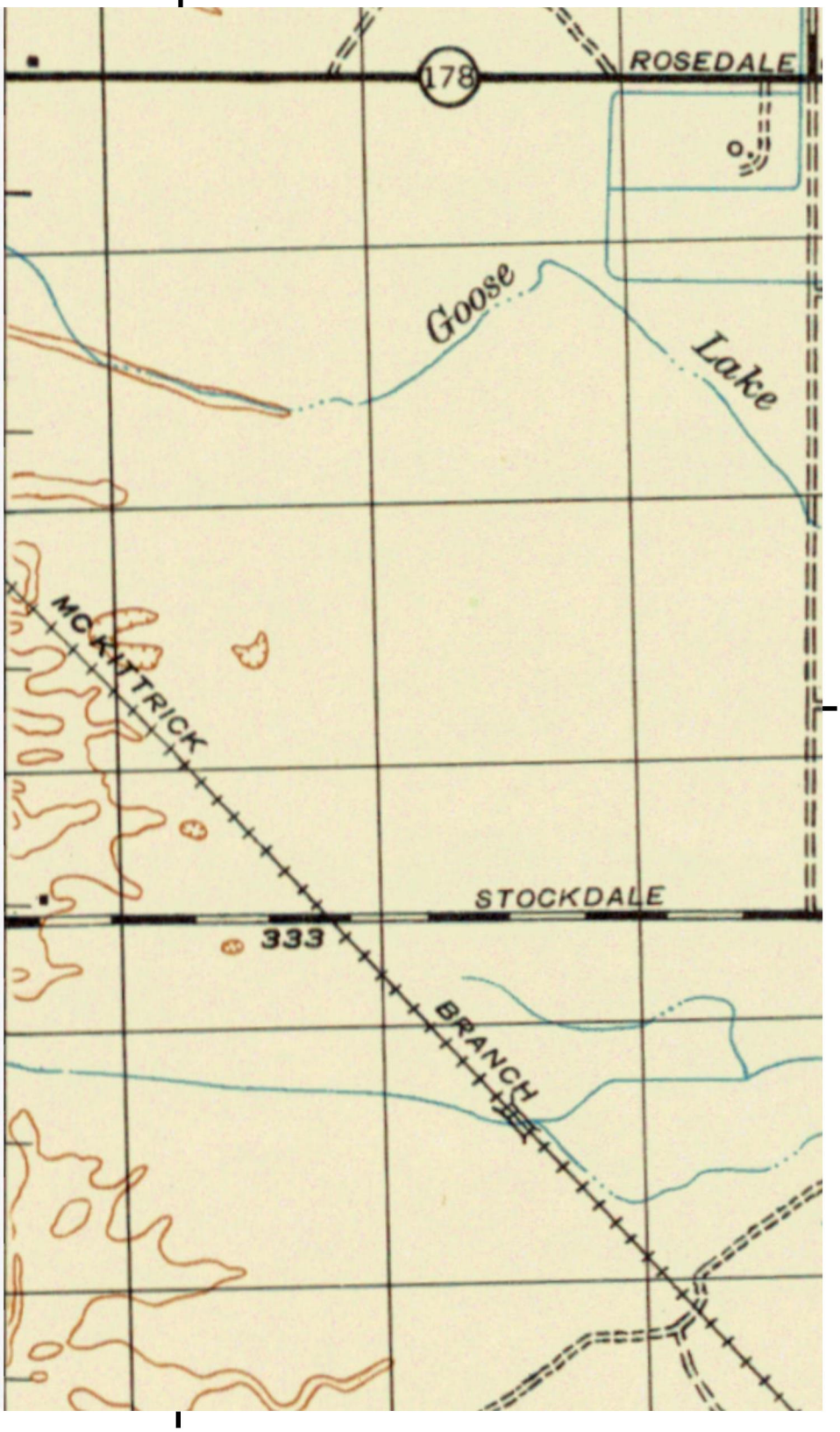
NW N NE
W E
SW S SE

TP, Stevens, 1950, 7.5-minute
NE, Rosedale, 1950, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

UNMAPPED UNMAPPED
UNMAPPED UNMAPPED
UNMAPPED UNMAPPED
UNMAPPED UNMAPPED
UNMAPPED UNMAPPED
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UNMAPPED UNMAPPED
UNMAPPED UNMAPPED
UNMAPPED UNMAPPED
UNMAPPED UNMAPPED



This report includes information from the following map sheet(s).

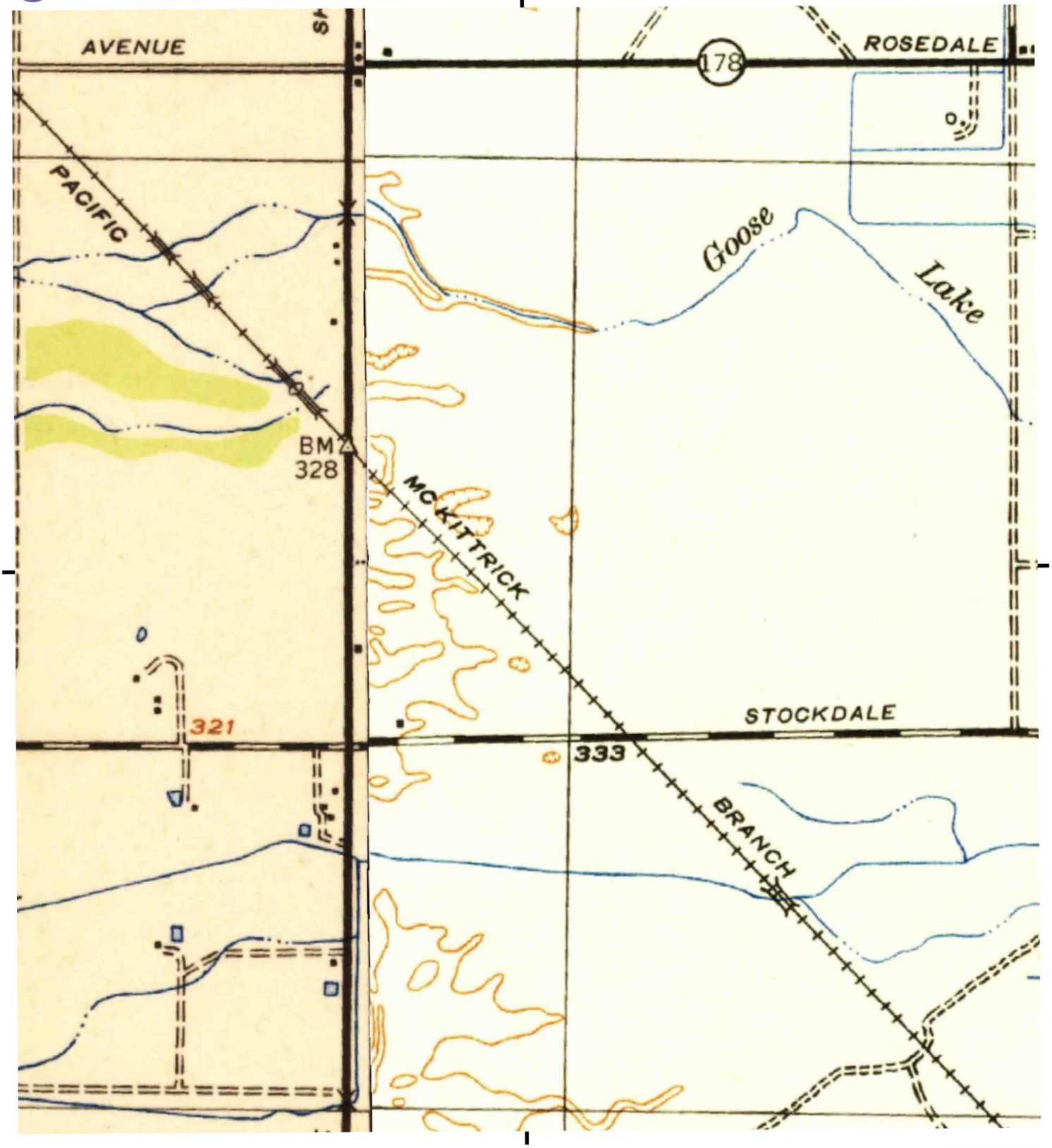
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, BAKERSFIELD WEST, 1947, 15-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N



This report includes information from the following map sheet(s).

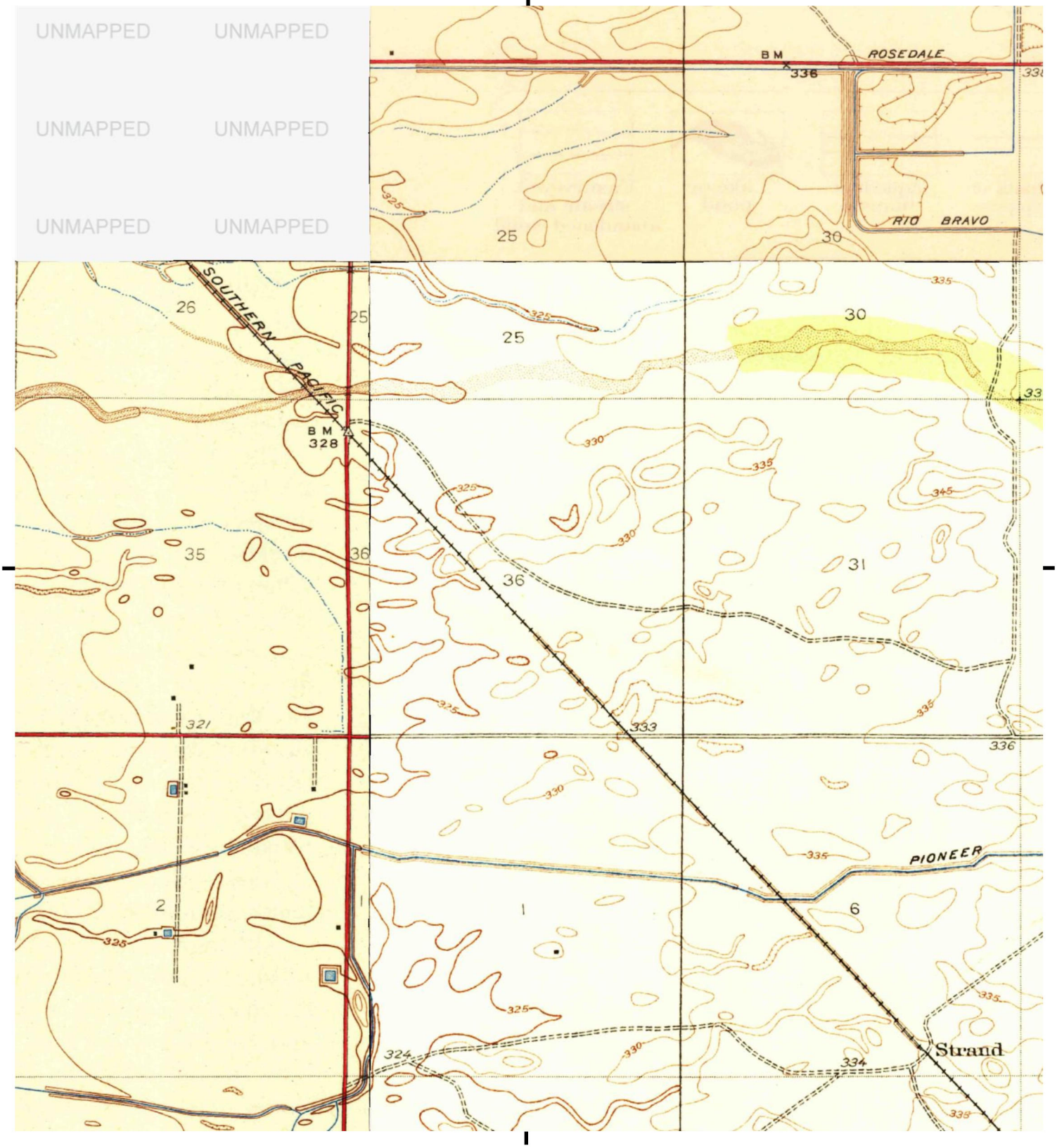
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bakersfield West, 1942, 15-minute
W, Buttonwillow, 1942, 15-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

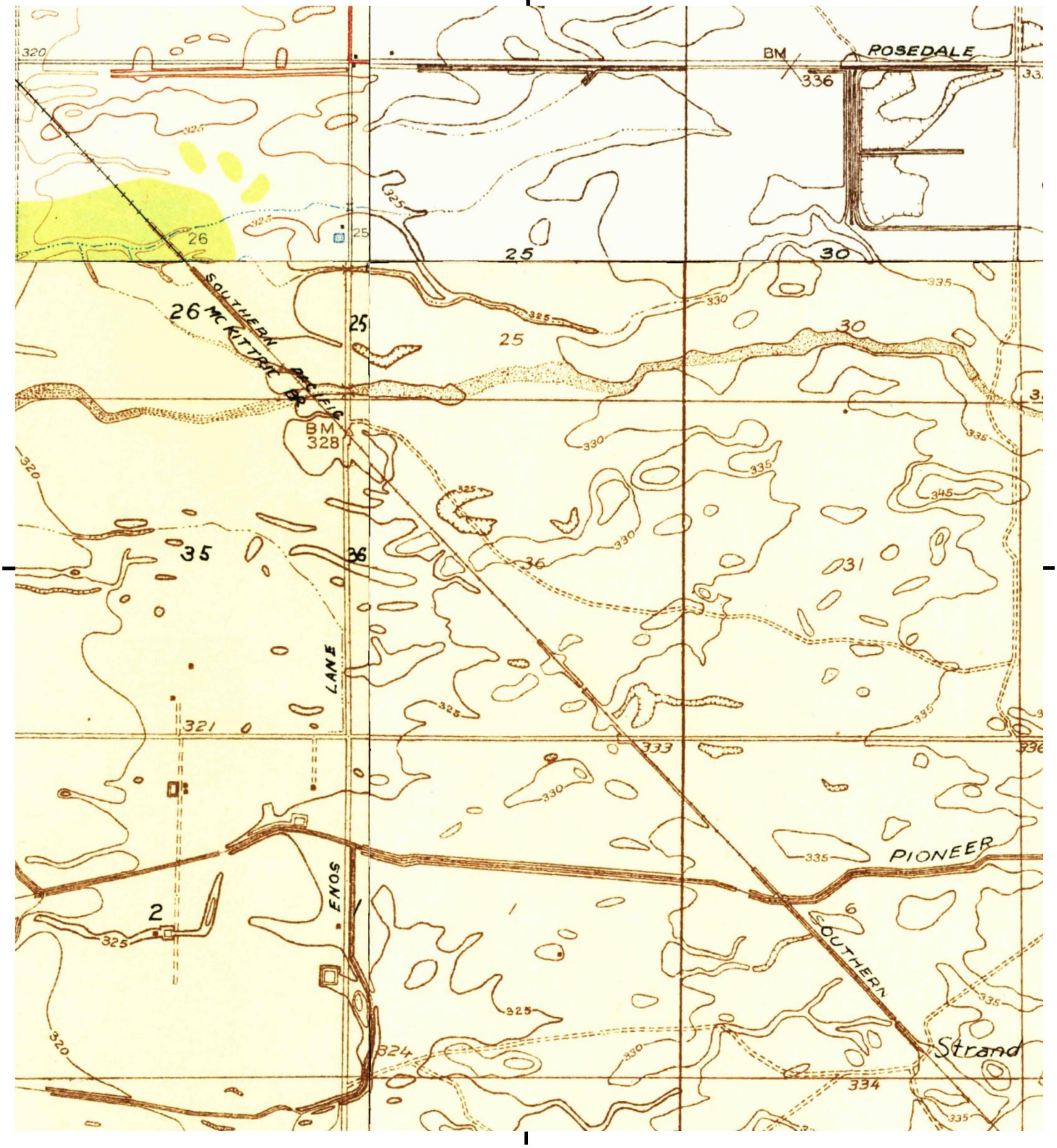
TP, Stevens, 1932, 7.5-minute
NE, Rosedale, 1933, 7.5-minute
SW, Tupman, 1933, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Historical Topo Map

1929, 1930, 1931



This report includes information from the following map sheet(s).

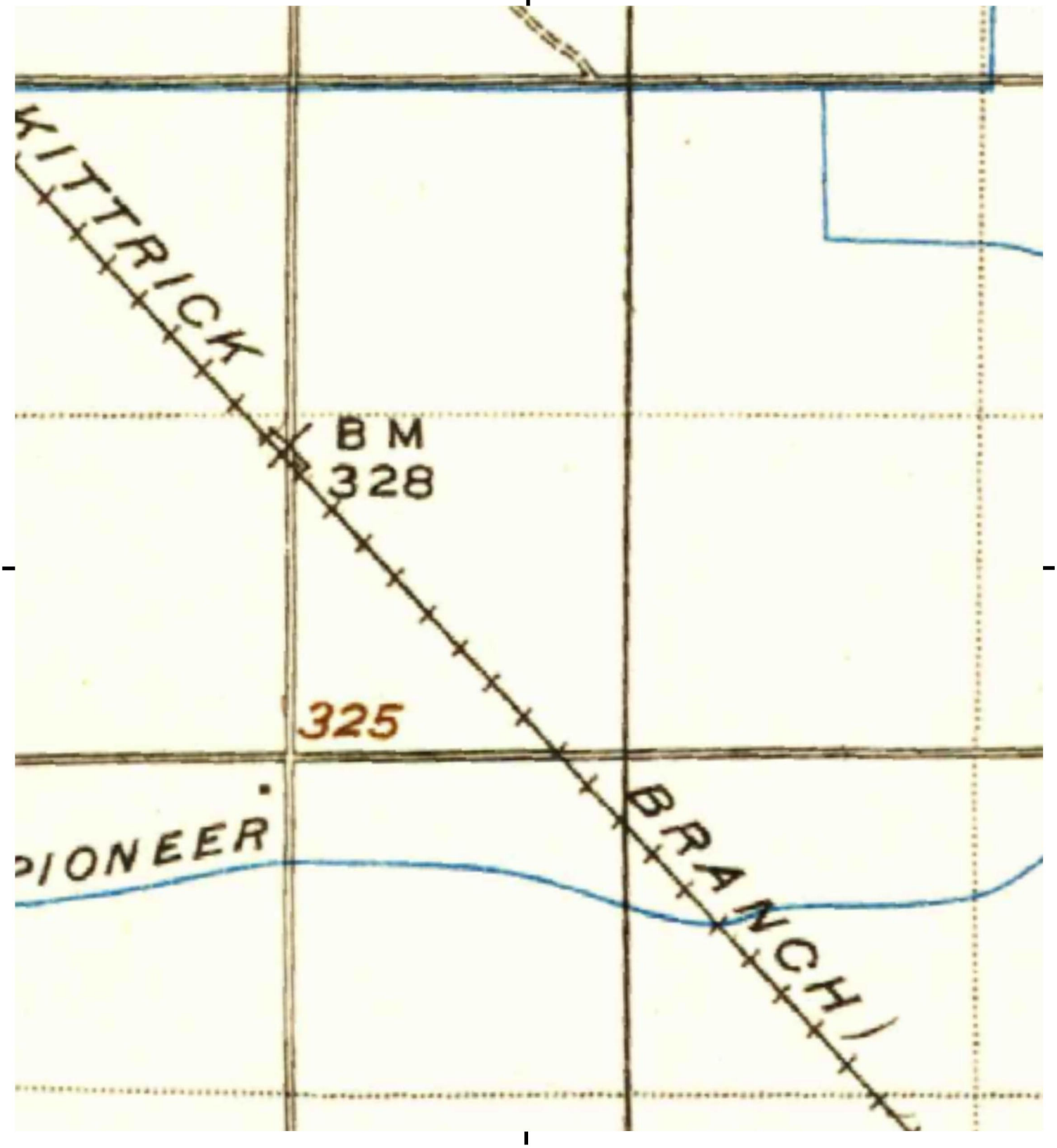
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Stevens, 1929, 7.5-minute
NE, Rosedale, 1930, 7.5-minute
SW, Coles Levee, 1929, 7.5-minute
NW, Rio Bravo, 1931, 7.5-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N



This report includes information from the following map sheet(s).

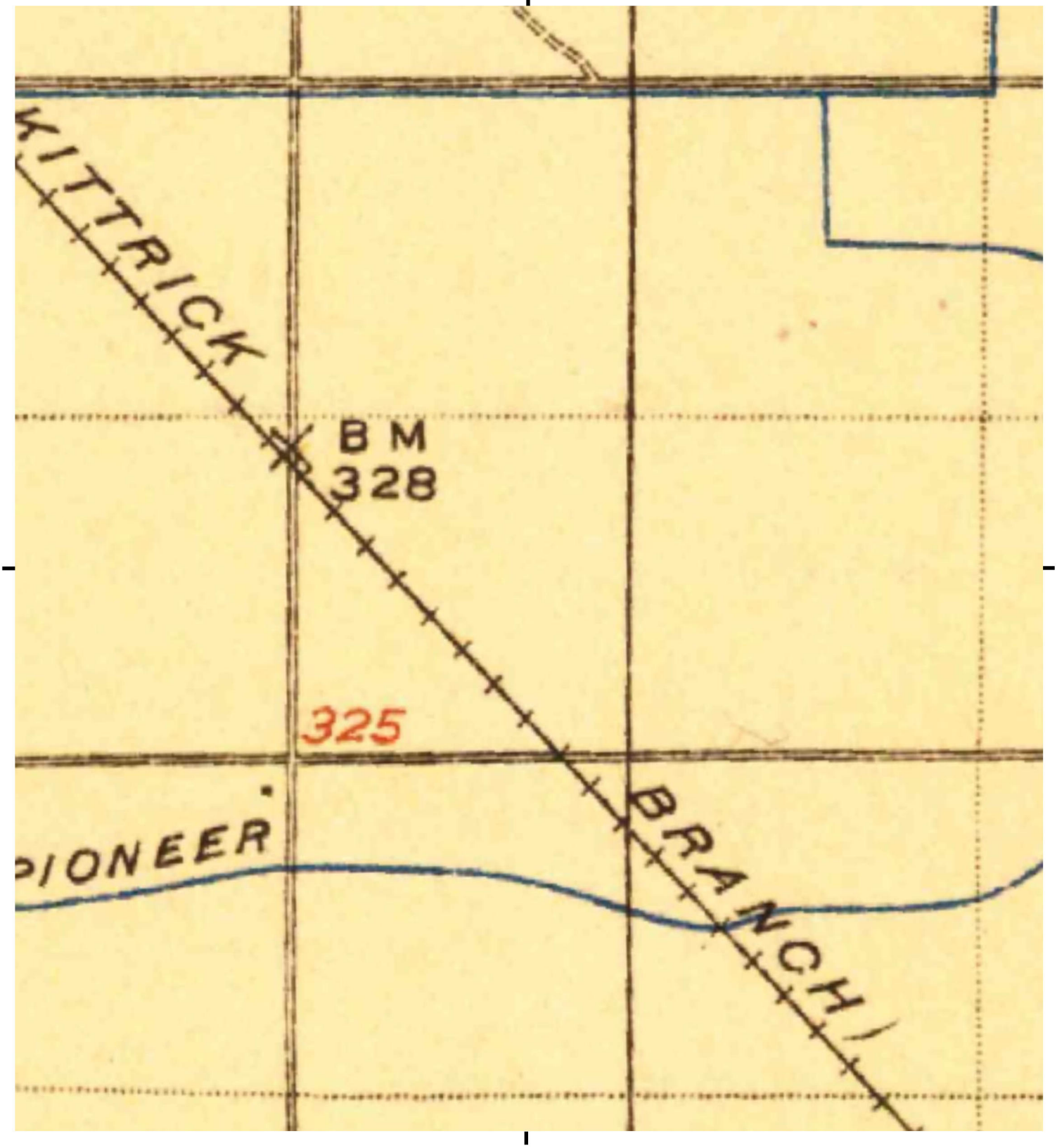
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buena Vista Lake, 1912, 30-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Buena Vista Lake, 1910, 30-minute

SITE NAME: Dillard Property
ADDRESS: Not Reported
Bakersfield, CA 93314
CLIENT: Haro Environmental, Inc.

N

Dillard Property

Not Reported

Bakersfield, CA 93314

Inquiry Number: 7548073.8

January 23, 2024

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

01/23/24

Site Name:

Dillard Property
Not Reported
Bakersfield, CA 93314
EDR Inquiry # 7548073.8

Client Name:

Haro Environmental, Inc.
PO Box 7002
Los Osos, CA 93412
Contact: Elliot Haro

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Search Results:

Year	*Scale*	*Details*	*Source*
2020	1"=500'	Flight Year: 2020	USDA/NAIP
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1994	1"=500'	Acquisition Date: January 01, 1994	USGS/DOQQ
1984	1"=500'	Flight Date: September 01, 1984	USDA
1973	1"=500'	Flight Date: May 01, 1973	USDA
1968	1"=500'	Flight Date: April 21, 1968	USGS
1958	1"=500'	Flight Date: March 05, 1958	USDA
1952	1"=500'	Flight Date: August 15, 1952	USGS
1942	1"=500'	Flight Date: May 22, 1942	USDA
1937	1"=500'	Flight Date: July 29, 1937	USDA

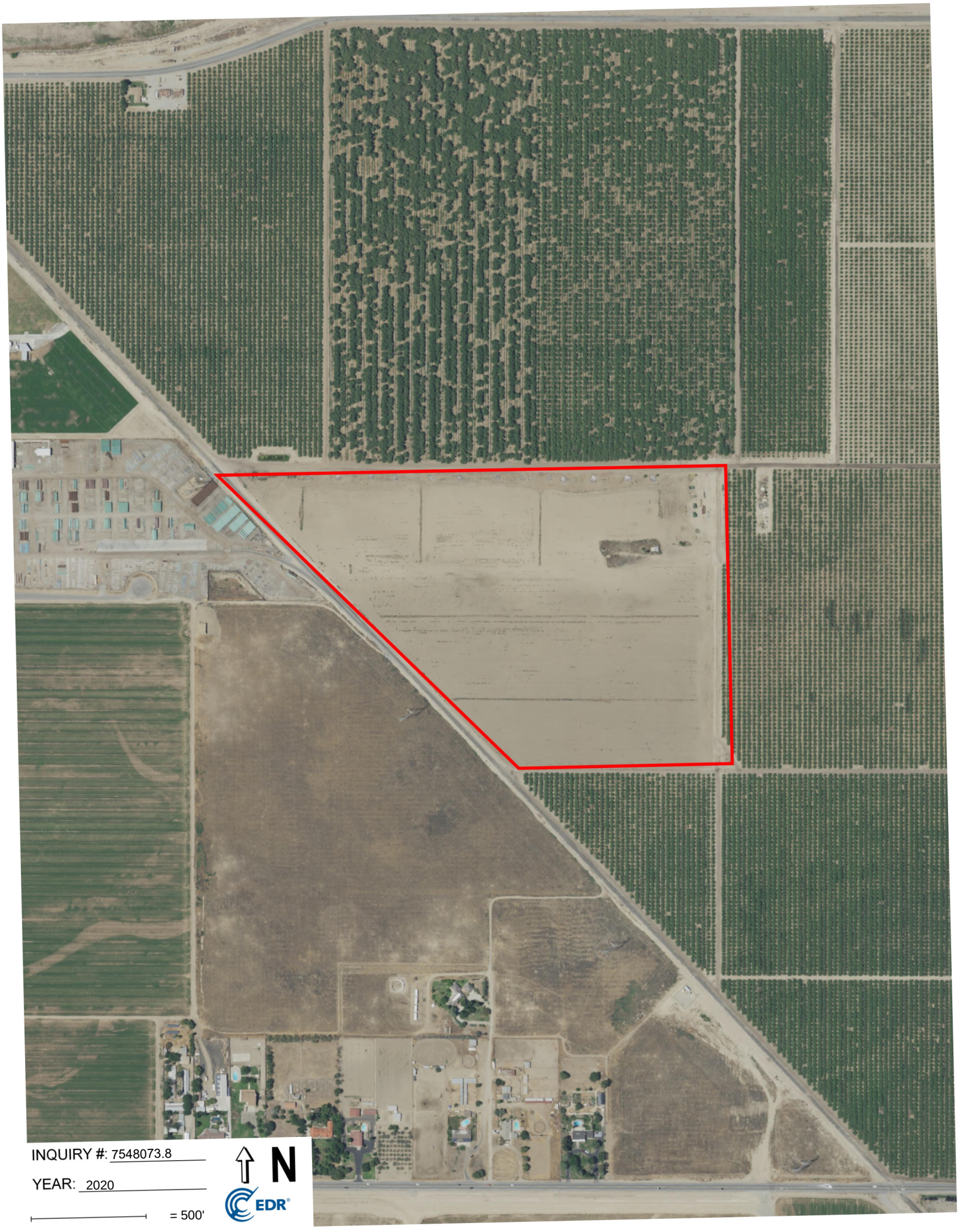
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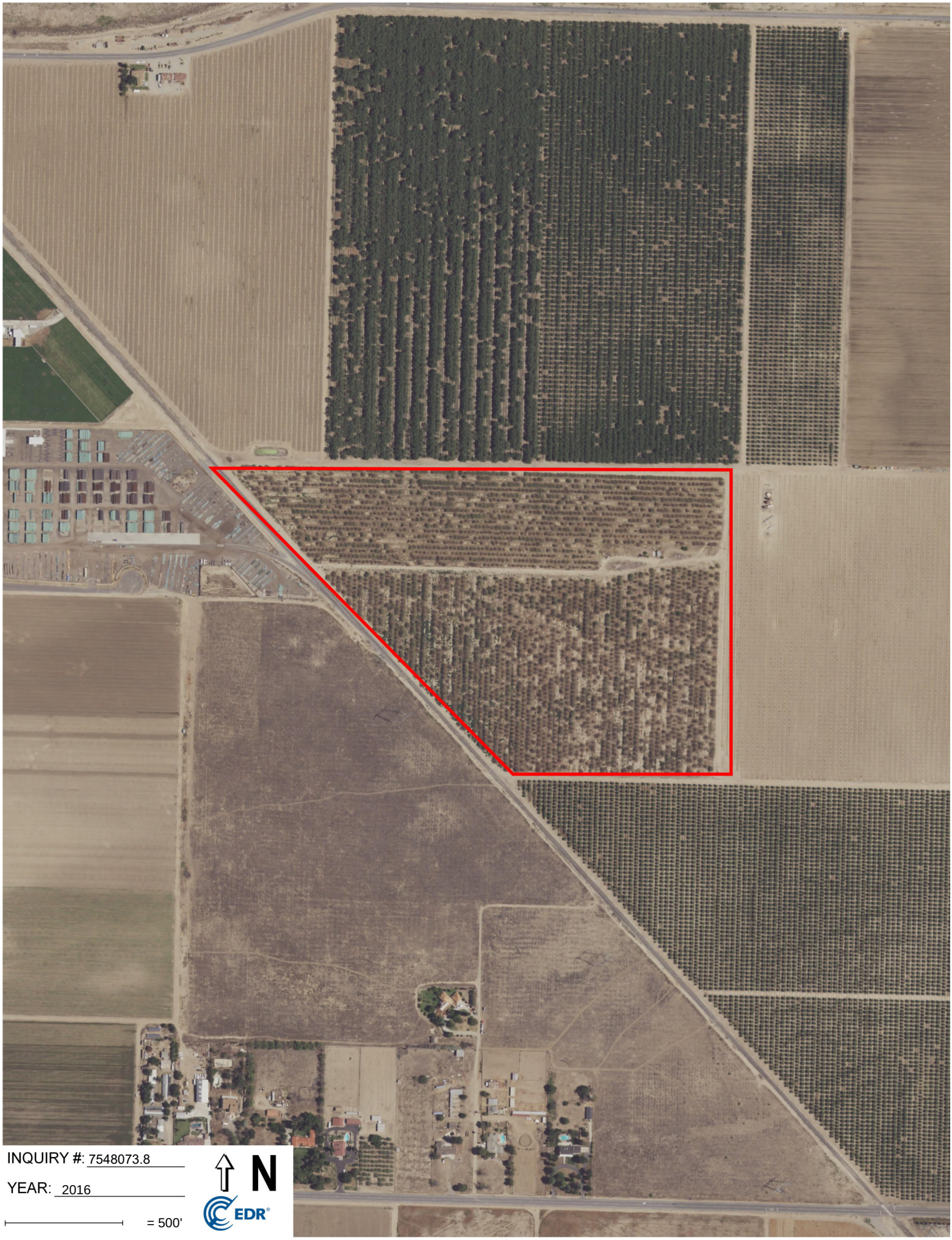
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INQUIRY #: 7548073.8
YEAR: 2020
= 500'
N
EDR



INQUIRY #: 7548073.8

YEAR: 2016

= 500'

N

EDR


INQUIRY #: 7548073.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 7548073.8
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 7548073.8
YEAR: 2006
= 500'
N
EDR



INQUIRY #: 7548073.8

YEAR: 1994

= 500'

N

EDR


INQUIRY #: 7548073.8
YEAR: 1984
= 500'
N
EDR


INQUIRY #: 7548073.8
YEAR: 1973
= 500'
N
EDR



INQUIRY #: 7548073.8

YEAR: 1968

= 500'

N

EDR



INQUIRY #: 7548073.8

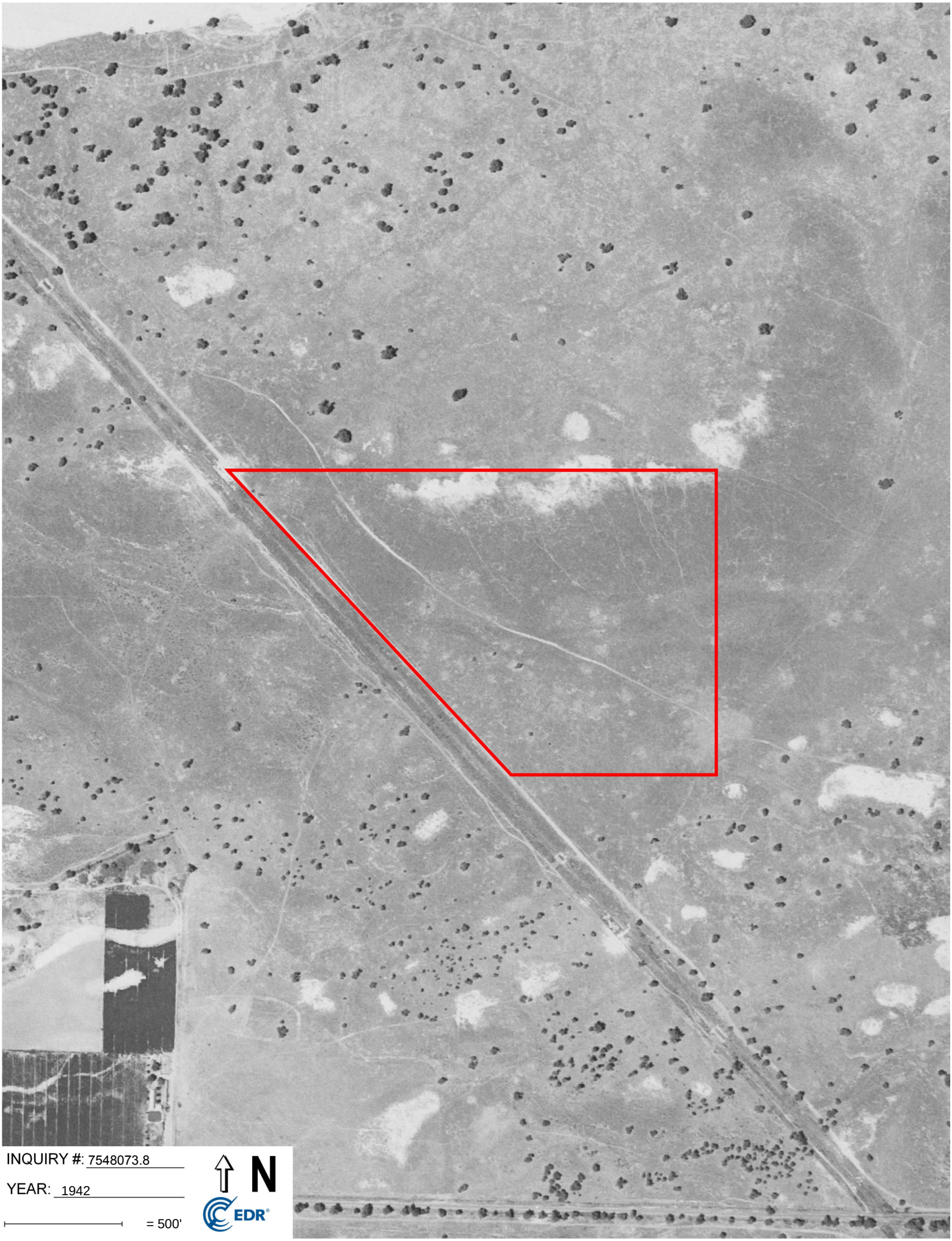
YEAR: 1958

= 500'

N

EDR


INQUIRY #: 7548073.8
YEAR: 1952
= 500'
N
EDR



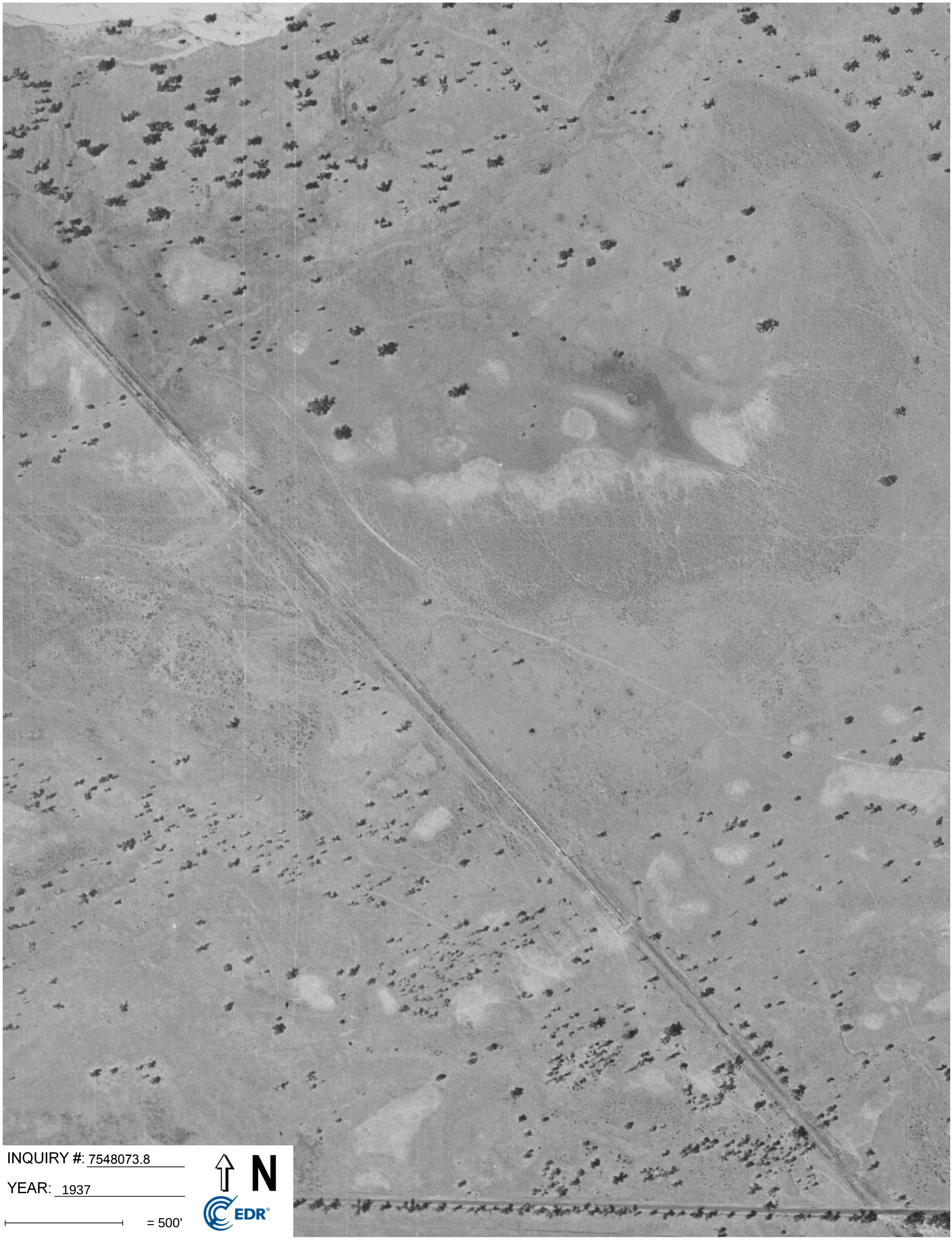
INQUIRY #: 7548073.8

YEAR: 1942

= 500'

N

EDR



INQUIRY #: 7548073.8

YEAR: 1937

= 500'

N

EDR

Dillard Property
Not Reported
Bakersfield, CA 93314

Inquiry Number: 7548073.2s
January 23, 2024

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NOT REPORTED
BAKERSFIELD, CA 93314

COORDINATES

Latitude (North):	35.3616890 - 35° 21' 42.08''
Longitude (West):	119.2424850 - 119° 14' 32.94''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	296252.0
UTM Y (Meters):	3915263.8
Elevation:	332 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	50004632 STEVENS, CA
Version Date:	2021
Northeast Map:	50005219 ROSEDALE, CA
Version Date:	2021
Southwest Map:	50005249 TUPMAN, CA
Version Date:	2021
Northwest Map:	50004602 RIO BRAVO, CA
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20200702
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NOT REPORTED
BAKERSFIELD, CA 93314

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	B & B PIPE AND TOOL	508 ENOS LN	RCRA NonGen / NLR	Lower	700, 0.133, West
A2	TUBULAR TRANSPORT &	508 ENOS LN	CERS HAZ WASTE, CUPA Listings, CERS	Lower	700, 0.133, West

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE..... State Response Sites

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR..... EnviroStor Database

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF..... Solid Waste Information System

Lists of state and tribal leaking storage tanks

LUST..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC..... Statewide SLIC Cases

Lists of state and tribal registered storage tanks

FEMA UST..... Underground Storage Tank Listing
UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Program Properties

Lists of state and tribal brownfield sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

ODI	Open Dump Inventory
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST	SWEEPS UST Listing
HIST UST	Hazardous Substance Storage Container Database
CA FID UST	Facility Inventory Database
CERS TANKS	California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List

EXECUTIVE SUMMARY

PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
MINES MRDS	Mineral Resources Data System
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS ECHO	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING	Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC	Aqueous Foam Related Incidents Listing
BIOSOLIDS	ICIS-NPDES Biosolids Facility Data
PFAS	PFAS Contamination Site Location Listing
AQUEOUS FOAM	Former Fire Training Facility Assessments Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CHROME PLATING	Chrome Plating Facilities Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	Inspection, Compliance and Enforcement
HIST CORTESE	Hazardous Waste & Substance Site List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
HWTS	Hazardous Waste Tracking System
HAZNET	Facility and Manifest Data
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
HAZMAT	Hazardous Material Facilities
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)

WASTEWATER PITS Oil Wastewater Pits Listing
WDS Waste Discharge System
WIP Well Investigation Program Case List
MILITARY PRIV SITES MILITARY PRIV SITES (GEOTRACKER)
PROJECT PROJECT (GEOTRACKER)
WDR Waste Discharge Requirements Listing
CIWQS California Integrated Water Quality System
CERS CERS
NON-CASE INFO NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ Well Stimulation Project (GEOTRACKER)
UST FINDER RELEASE UST Finder Releases Database
UST FINDER UST Finder Database

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 10/16/2023 has revealed that there

is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TUBULAR TRANSPORT &	***508 ENOS LN***	***W 1/8 - 1/4 (0.133 mi.)***	***A2***	***11***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/04/2023 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
B & B PIPE AND TOOL EPA ID:: CAL000402880	508 ENOS LN	W 1/8 - 1/4 (0.133 mi.)	A1	9

CUPA Listings: A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

A review of the CUPA Listings list, as provided by EDR, has revealed that there is 1 CUPA Listings site within approximately 0.25 miles of the target property.

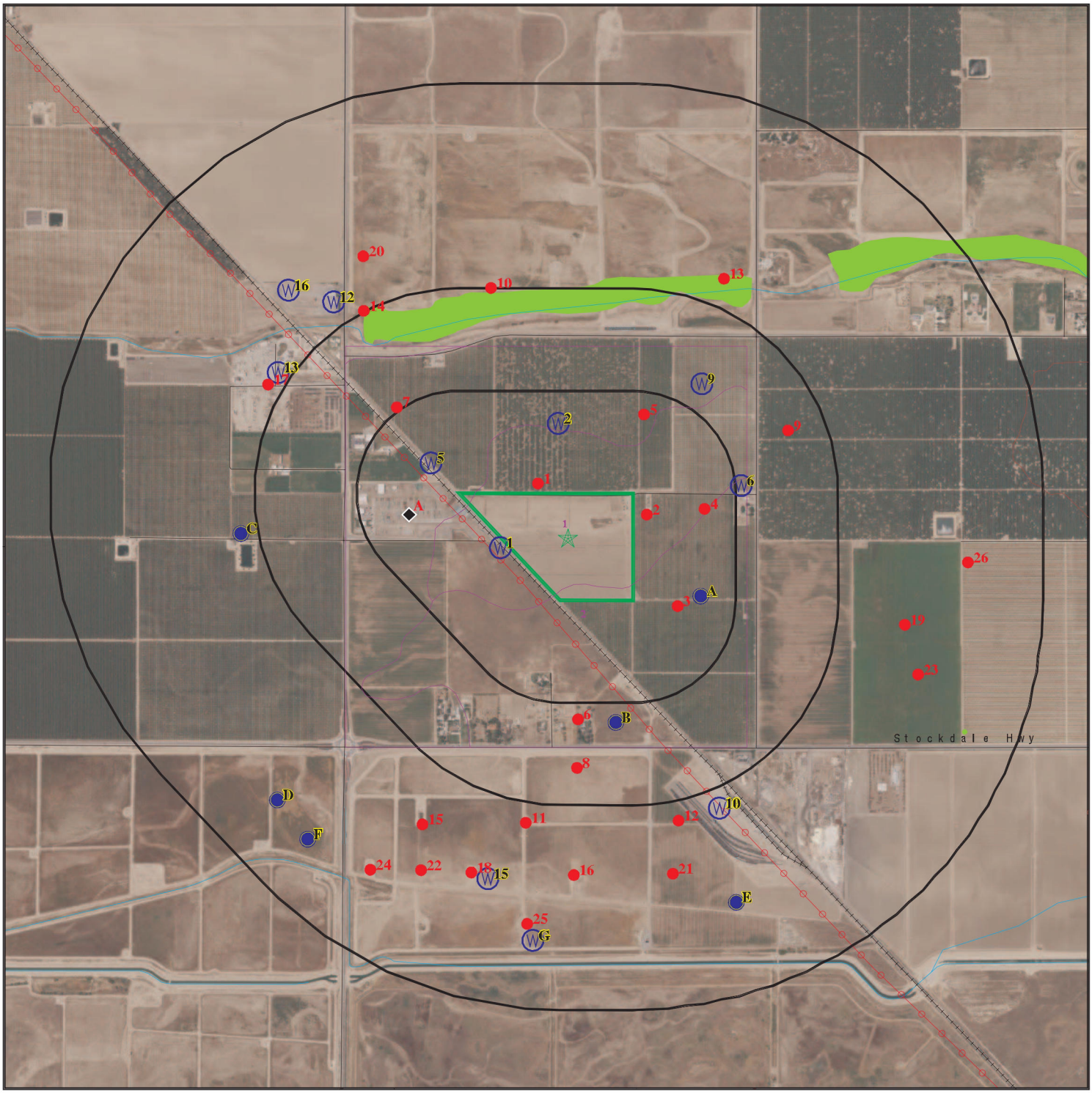
Lower Elevation	Address	Direction / Distance	Map ID	Page
TUBULAR TRANSPORT &	***508 ENOS LN***	***W 1/8 - 1/4 (0.133 mi.)***	***A2***	***11***

Database: KERN CO CUPA, Date of Government Version: 07/26/2023

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 7548073.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

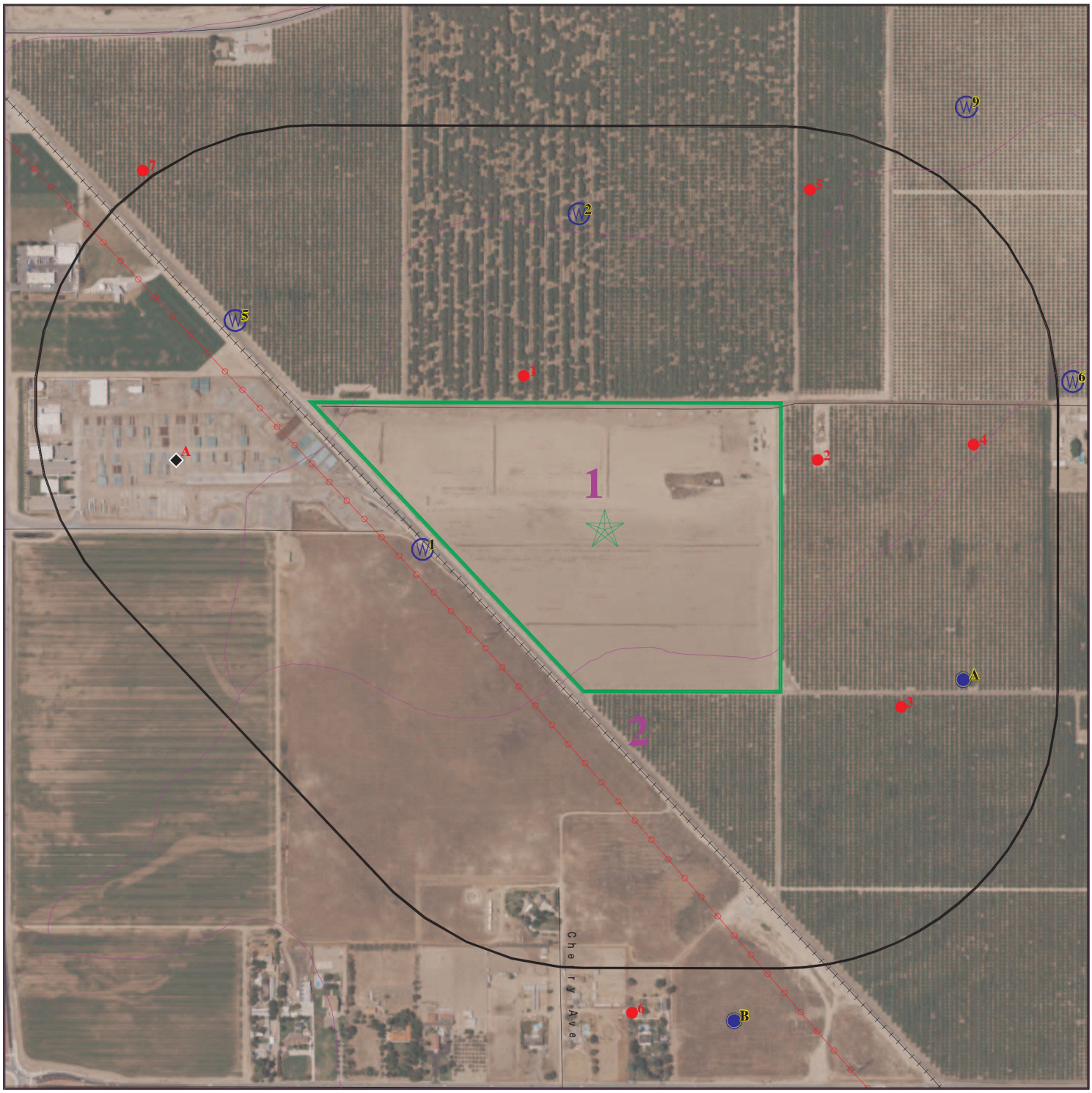
Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Dillard Property	CLIENT:	Haro Environmental, Inc.
ADDRESS:	Not Reported Bakersfield CA 93314	CONTACT:	Elliot Haro
		INQUIRY #:	7548073.2s
LAT/LONG:	35.361689 / 119.242485	DATE:	January 23, 2024 2:18 pm

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DETAIL MAP - 7548073.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Areas of Concern

0 1/8 1/4 1/2 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Dillard Property	CLIENT:	Haro Environmental, Inc.
ADDRESS:	Not Reported Bakersfield CA 93314	CONTACT:	Elliot Haro
		INQUIRY #:	7548073.2s
LAT/LONG:	35.361689 / 119.242485	DATE:	January 23, 2024 2:20 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal (Superfund) equivalent sites								
RESPONSE	1.000		0	0	0	0	NR	0
Lists of state- and tribal hazardous waste facilities								
ENVIROSTOR	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	1	NR	NR	NR	1
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
CHROME PLATING	0.500		0	0	0	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	1	NR	NR	NR	1
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWTS	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
HAZMAT	0.250		0	0	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	0	3	0	0	0	3

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
West
1/8-1/4
0.133 mi.
700 ft.

B & B PIPE AND TOOL COMPANY
508 ENOS LN
BAKERSFIELD, CA 93314

Site 1 of 2 in cluster A

RCRA NonGen / NLR

1024847733
CAL000402880

Relative:
Lower

Actual:
327 ft.

RCRA Listings:

Date Form Received by Agency:	20141211
Handler Name:	B & B Pipe And Tool Company
Handler Address:	508 ENOS LN
Handler City,State,Zip:	BAKERSFIELD, CA 93314-9536
EPA ID:	CAL000402880
Contact Name:	JASON INCLAN
Contact Address:	3035 WALNUT AVENUE
Contact City,State,Zip:	LONG BEACH, CA 90807
Contact Telephone:	562-424-0704
Contact Fax:	562-490-0682
Contact Email:	JASON@BBPIPE.COM
Contact Title:	Not reported
EPA Region:	09
Land Type:	Not reported
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Not reported
State District:	Not reported
Mailing Address:	3035 WALNUT AVE
Mailing City,State,Zip:	LONG BEACH, CA 90807-5221
Owner Name:	B & B Pipe & Tool Company
Owner Type:	Other
Operator Name:	Jason Inclan
Operator Type:	Other
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	Yes
Universal Waste Destination Facility:	Yes
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

B & B PIPE AND TOOL COMPANY (Continued) **1024847733**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20180906
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	B & B PIPE & TOOL COMPANY
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3035 WALNUT AVE
Owner/Operator City,State,Zip:	LONG BEACH, CA 90807-5221
Owner/Operator Telephone:	562-424-0704
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	JASON INCLAN
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	3035 WALNUT AVENUE
Owner/Operator City,State,Zip:	LONG BEACH, CA 90807
Owner/Operator Telephone:	562-424-0704
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20141211
Handler Name:	B & B PIPE AND TOOL COMPANY
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

B & B PIPE AND TOOL COMPANY (Continued) **1024847733**

List of NAICS Codes and Descriptions:
NAICS Code: 56299
NAICS Description: ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

A2 **TUBULAR TRANSPORT & LOGISTICS** **CERS HAZ WASTE** **S121737704**
West **508 ENOS LN** **CUPA Listings** **N/A**
1/8-1/4 **BAKERSFIELD, CA 93314** **CERS**
0.133 mi.
700 ft. **Site 2 of 2 in cluster A**

Relative:
Lower

Actual:
327 ft.

CERS HAZ WASTE:
Name: TUBULAR TRANSPORT & LOGISTICS
Address: 508 ENOS LN
City,State,Zip: BAKERSFIELD, CA 93314
Site ID: 10447
CERS ID: 10608931
CERS Description: Hazardous Waste Generator

KERN CO CUPA:
Facility ID: FA0041720
CERS ID: 10608931
Name: TUBULAR TRANSPORT & LOGISTICS
Address: 508 ENOS LN
Address 2: Not reported
City,State,Zip: BAKERSFIELD, CA
Billing Status: Active, billable
Program Element: BUS PLAN SMALL LOW RISK 1 UNIT
Program Element Code: CB1T
HMIRRP Due Date: Not reported
Current Inspection Date: 8/1/2024
Employee: IWUCHUKWU
Mailing Address: 508 Enos Lane
Mailing Address 2: Not reported
Mailing City: Bakersfield
Mailing State: CA
Mailing Zip: 93314

CERS:
Name: TUBULAR TRANSPORT & LOGISTICS
Address: 508 ENOS LN
City,State,Zip: BAKERSFIELD, CA 93314
Site ID: 10447
CERS ID: 10608931
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 10447
Site Name: TUBULAR TRANSPORT & LOGISTICS
Violation Date: 07-12-2018

TUBULAR TRANSPORT & LOGISTICS (Continued) **S121737704**

Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Description: Failure to annually review and electronically certify that the business plan is complete and accurate on or before the annual due date.
Violation Notes: Returned to compliance on 08/02/2018. The facility Owner/Operator has failed to complete the required annual Hazardous Materials Business Plan, Consolidated Contingency Plan & Chemical Inventory update in the California Environmental Reporting System (CERS). The last update submitted in CERS was completed on February 9, 2017. The annual submittal and certification should have been completed and submitted by February 28, 2018. Please contact your Inspector, Marty Brownfield - martyb@kerncounty.com when you have completed your required CERS reporting so the submittal can be verified and the violation can be closed.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 10447
Site Name: TUBULAR TRANSPORT & LOGISTICS
Violation Date: 10-27-2021
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description: Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes: Returned to compliance on 11/08/2021. Facility staff was unable to provide logs for initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material. CORRECTIVE ACTION: Please provide hazmat training logs provided to staff between 2018-2021. Send logs to Gabriela Reyes plascenciaga@kerncounty.com for review and violation closure.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS,

Site ID: 10447
Site Name: TUBULAR TRANSPORT & LOGISTICS
Violation Date: 10-27-2021
Citation: HSC 6.95 25508(a)(3) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(3)
Violation Description: Failure to report program data electronically.
Violation Notes: Returned to compliance on 11/08/2021. At the time of inspection facility staff informed Cesar Martinez was no longer with the company. CORRECTIVE ACTION: Please update Business Owner/ Operator Identification page with current environmental and emergency contacts for the facility. Please notify Gabriela Reyes plascenciaga@kerncounty.com when submittal has been made for violation closure.
Violation Division: Kern County Env Health Services Department
Violation Program: HMRRP
Violation Source: CERS,

Evaluation:
Eval General Type: Compliance Evaluation Inspection

TUBULAR TRANSPORT & LOGISTICS (Continued) **S121737704**

Eval Date: 07-12-2018
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2021
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 07-12-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 10-27-2021
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HW
Eval Source: CERS,

Eval General Type: Compliance Evaluation Inspection
Eval Date: 09-02-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Kern County Env Health Services Department
Eval Program: HMRRP
Eval Source: CERS,

Coordinates:
Site ID: 10447
Facility Name: TUBULAR TRANSPORT & LOGISTICS
Env Int Type Code: HWG
Program ID: 10608931
Coord Name: Not reported
Ref Point Type Desc: Unknown,
Latitude: 35.362568
Longitude: -119.249344

Affiliation:
Affiliation Type Desc: Property Owner

TUBULAR TRANSPORT & LOGISTICS (Continued) **S121737704**

Entity Name:	Braly Property II LLC
Entity Title:	Not reported
Affiliation Address:	3010 Old Ranch Parkway, Ste. 400
Affiliation City:	Seal Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90740
Affiliation Phone:	(562) 342-2850,
Affiliation Type Desc:	Document Preparer
Entity Name:	RAY FLETCHER
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Operator
Entity Name:	Tubular Transport & Logistics
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(661) 213-3563,
Affiliation Type Desc:	CUPA District
Entity Name:	Kern County Environmental Health Services Departme
Entity Title:	Not reported
Affiliation Address:	2700 M Street, Suite 300
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93301-2370
Affiliation Phone:	(661) 862-8740,
Affiliation Type Desc:	Environmental Contact
Entity Name:	Rudy Serrano
Entity Title:	Not reported
Affiliation Address:	508 Enos Lane
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93314
Affiliation Phone:	,
Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	508 Enos Lane
Affiliation City:	Bakersfield
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	93314

TUBULAR TRANSPORT & LOGISTICS (Continued) **S121737704**

Affiliation Phone:	,
Affiliation Type Desc:	Identification Signer
Entity Name:	RAY FLETCHER
Entity Title:	PRESIDENT, SYTECH SERVICES
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,
Affiliation Type Desc:	Legal Owner
Entity Name:	Braly Property II LLC
Entity Title:	Not reported
Affiliation Address:	3010 Old Ranch Parkway Ste. 400
Affiliation City:	Seal Beach
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90740
Affiliation Phone:	(562) 342-2850,
Affiliation Type Desc:	Parent Corporation
Entity Name:	B AND B PIPE AND TOOL CO
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	,

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 09/25/2023
Date Data Arrived at EDR: 09/26/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/20/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/07/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 64

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 82

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

Lists of state- and tribal (Superfund) equivalent sites

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 10/23/2023
Date Data Arrived at EDR: 10/24/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 10/23/2023
Date Data Arrived at EDR: 10/24/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 79

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

Lists of state and tribal leaking storage tanks

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/22/2023
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 05/30/2023
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 08/10/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/19/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/20/2023
Date Data Arrived at EDR: 05/09/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 66

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 10/23/2023
Date Data Arrived at EDR: 10/24/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/08/2023
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/14/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/16/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/13/2023
Number of Days to Update: 83

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/23/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 10/23/2023
Date Data Arrived at EDR: 10/24/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/24/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 09/28/2023
Date Made Active in Reports: 12/18/2023
Number of Days to Update: 81

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

CERS HAZ WASTE: California Environmental Reporting System Hazardous Waste

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 10/16/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/25/2023
Number of Days to Update: 78

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 10/16/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 75

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 11/14/2023
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 06/01/2023
Date Data Arrived at EDR: 07/18/2023
Date Made Active in Reports: 10/05/2023
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/18/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/22/2023
Number of Days to Update: 77

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/22/2023
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 56

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/10/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/31/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/03/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/14/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 08/18/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 81

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 10/19/2023
Date Data Arrived at EDR: 10/20/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 88

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 09/01/2023
Date Data Arrived at EDR: 09/27/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/12/2024
Next Scheduled EDR Contact: 04/19/2024
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/20/2023
Date Data Arrived at EDR: 09/01/2023
Date Made Active in Reports: 09/20/2023
Number of Days to Update: 19

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 04/14/2023
Date Made Active in Reports: 07/10/2023
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/03/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 12/19/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/11/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 5

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/09/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 1

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 12

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/20/2023
Number of Days to Update: 12

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 65

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 12/27/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: No Update Planned

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 12/27/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

AQUEOUS FOAM: Former Fire Training Facility Assessments Listing

Airports shown on this list are those believed to use Aqueous Film Forming Foam (AFFF), and certified by the Federal Aviation Administration (FAA) under Title 14, Code of Federal Regulations (CFR), Part 139 (14 CFR Part 139). This list was created by SWRCB using information available from the FAA. Location points shown are from the latitude and longitude listed on the FAA airport master record.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHROME PLATING: Chrome Plating Facilities Listing

This listing represents chrome plating facilities the California State Water Resources Control Board staff identified as possibly being a source of Per- and polyfluoroalkyl substance (PFAS) contamination. Sites and locations were identified by staff with the Division of Water Quality in the California State Water Board. Data was collected from the CA Air Resources Board 2013 and 2018 - Cr VI emission survey, CA Emission Inventory, CA HAZ Waste discharge database and by reviewing storm water permits. Former chrome plating sites are also included that are open site investigation or remediation cases with the Regional Water Quality Control Boards and the Department of Toxic Substances Control.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 916-341-5455
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/08/2023
Number of Days to Update: 79

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 03/31/2023
Date Data Arrived at EDR: 05/08/2023
Date Made Active in Reports: 07/31/2023
Number of Days to Update: 84

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 11/09/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

DRYCLEAN LAKE CO DIST: Lake County Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Lake County Air Quality Management District,

Date of Government Version: 04/29/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455

Source: Lake County Air Quality Management District
Telephone: 707-263-7000
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN DIEGO CO DIST: San Diego County Air Pollution Control District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the San Diego County Air Pollution Control District.

Date of Government Version: 08/08/2023
Date Data Arrived at EDR: 08/09/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 78

Source: San Diego County Air Pollution Control District
Telephone: 858-586-2616
Last EDR Contact: 08/08/2023
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO SIERRA DIST: Northern Sierra Air Quality Management District Drycleaner Facility Listing

A listing of drycleaner facility locations, for the Northern Sierra Air Quality Management District,

Date of Government Version: 05/07/2019
Date Data Arrived at EDR: 05/07/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1455

Source: Northern Sierra Air Quality Management District
Telephone: 530-274-9350
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN NO SONOMA CO DIST: Norther Sonoma County County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Northern Sonoma County Air Pollution Control District.,

Date of Government Version: 04/17/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Santa Barbara County Air Pollution Control District
Telephone: 707-433-5911
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SANTA BARB CO DIST: Santa Barbara County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Santa Barbara County Air Pollution Control District.

Date of Government Version: 02/19/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Santa Barbara County Air Pollution Control District
Telephone: 805-961-8867
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN TEHAMA CO DIST: Tehama County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Tehama County Air Pollution Control District.

Date of Government Version: 04/24/2019
Date Data Arrived at EDR: 04/24/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1468
Source: Tehama County Air Pollution Control District
Telephone: 530-527-3717
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN VENTURA CO DIST: Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Ventura County Air Pollution Control District.

Date of Government Version: 04/16/2019
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1475
Source: Ventura County Air Pollution Control District
Telephone: 805-645-1421
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SACRAMENTO METO DIST: Sacramento Metropolitan Air Quality Management DistrictDrycleaner Facility Listing
A listing of drycleaner facility locations, for the Sacramento Metropolitan Air Quality Management District.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/17/2023
Date Made Active in Reports: 10/31/2023
Number of Days to Update: 75
Source: Sacramento Metropolitan Air Quality Management District
Telephone: 916-874-3958
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN LUIS OB CO DIST: San Luis Obispo County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Luis Obispo County Air Pollution Control District.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/13/2023
Number of Days to Update: 78
Source: San Luis Obispo County Air Pollution Control District
Telephone: 805-781-5756
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BUTTE CO DIST: Butte County Air Quality Management DistrictDrycleaner Facility Listing
Butte County Air Quality Management DistrictDrycleaner Facility Listing.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 10/18/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 90
Source: Butte County Air Quality Management District
Telephone: 530-332-9400
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN FEATHER RIVER DIST: Feather River Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Feather River Air Quality Management District.

Date of Government Version: 03/08/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 06/05/2023
Number of Days to Update: 88
Source: Feather River Air Quality Management District
Telephone: 530-634-7659
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 08/18/2023
Date Data Arrived at EDR: 08/18/2023
Date Made Active in Reports: 11/01/2023
Number of Days to Update: 75
Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 75
Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

DRYCLEAN NO COAST UNIFIED DIST: North Coast Unified Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the North Coast Unified Air Quality Management District.

Date of Government Version: 11/30/2016
Date Data Arrived at EDR: 04/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1473
Source: North Coast Unified Air Quality Management District
Telephone: 707-443-3093
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN GLENN CO DIST: Glenn County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Glenn County Air Pollution Control District.

Date of Government Version: 05/02/2023
Date Data Arrived at EDR: 05/03/2023
Date Made Active in Reports: 07/25/2023
Number of Days to Update: 83
Source: Glenn County Air Pollution Control District
Telephone: 530-934-6500
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SAN JOAQ VAL DIST: San Joaquin Valley Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the San Joaquin Valley Air Pollution Control District.

Date of Government Version: 05/24/2023
Date Data Arrived at EDR: 05/30/2023
Date Made Active in Reports: 08/21/2023
Number of Days to Update: 83
Source: San Joaquin Valley Air Pollution Control District
Telephone: 559-230-6001
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN EAST KERN DIST: Eastern Kern Air Pollution Control District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Eastern Kern Air Pollution Control District.

Date of Government Version: 01/12/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79
Source: Eastern Kern Air Pollution Control District
Telephone: 661-862-9684
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN IMPERIAL CO DIST: Imperial County Air Pollution Control District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Imperial County Air Pollution Control District

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79

Source: Imperial County Air Pollution Control District
Telephone: 442-265-1800
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MENDO CO DIST: Mendocino County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mendocino County Air Quality Management District.

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/28/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 77

Source: Mendocino County Air Quality Management District
Telephone: 707-463-4354
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MOJAVE DESERT DIST: Mojave Desert Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Mojave Desert Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78

Source: Mojave Desert Air Quality Management District
Telephone: 760-245-1661
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN MONTEREY BAY DIST: Monterey Bay Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Monterey Bay Air Quality Management District.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/26/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 79

Source: Monterey Bay Air Quality Management District
Telephone: 831-647-9411
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN SHASTA CO DIST: Shasta County Air Quality Management District District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Shasta County Air Quality Management District.

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78

Source: Shasta County Air Quality Management District
Telephone: 530-225-5674
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN YOLO-SOLANO DIST: Yolo-Solano Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Yolo-Solano Air Quality Management District.

Date of Government Version: 04/25/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/14/2023
Number of Days to Update: 78

Source: Yolo-Solano Air Quality Management District
Telephone: 530-757-3650
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN PLACER CO DIST: Placer County Air Quality Management District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Placer County Air Quality Management District.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 05/17/2023
Date Made Active in Reports: 08/14/2023
Number of Days to Update: 89

Source: Placer County Air Quality Management District
Telephone: 530-745-2335
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN BAY AREA DIST: Bay Area Air Quality Management District Drycleaner Facility Listing
Bay Area Air Quality Management District Drycleaner Facility Listing.

Date of Government Version: 02/20/2019
Date Data Arrived at EDR: 05/30/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1432
Source: Bay Area Air Quality Management District
Telephone: 415-516-1916
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEAN CALAVERAS CO DIST: Calaveras County Environmental Management Agency Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Calaveras County Environmental Management Agency.

Date of Government Version: 06/17/2019
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 1412
Source: Calaveras County Environmental Management Agency
Telephone: 209-754-6399
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/16/2019
Data Release Frequency: Varies

DRYCLEAN GRANT: Grant Recipients List
Assembly Bill 998 (AB 998) established the Non-Toxic Dry Cleaning Incentive Program to provide financial assistance to the dry cleaning industry to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 05/01/2023
Number of Days to Update: 816
Source: California Air Resources Board
Telephone: 916-323-0006
Last EDR Contact: 10/28/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Varies

DRYCLEAN AMADOR: Amador Air District Drycleaner Facility Listing
A listing of drycleaner facility locations, for the Amador Air Quality Management District

Date of Government Version: 04/26/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77
Source: Amador Air Quality Management District
Telephone: 209-257-0112
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 09/11/2023
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/31/2023
Date Data Arrived at EDR: 09/08/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 80
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/18/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 06/09/2023
Date Made Active in Reports: 08/30/2023
Number of Days to Update: 82
Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/14/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 10/16/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 09/13/2023
Date Data Arrived at EDR: 09/14/2023
Date Made Active in Reports: 09/21/2023
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/16/2023
Date Made Active in Reports: 11/01/2023
Number of Days to Update: 77

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

ICE: Inspection, Compliance and Enforcement

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/14/2023
Date Made Active in Reports: 10/31/2023
Number of Days to Update: 78

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/14/2023
Date Made Active in Reports: 10/31/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/02/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 12/27/2023
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Quarterly

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/09/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 07/05/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 76

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Annually

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 08/08/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/07/2023
Date Data Arrived at EDR: 09/08/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 81

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Annually

SANTA CRUZ CO SITE MITI: Site Mitigation Listing

Sites may become contaminated with toxic chemicals through illegal dumping or disposal, from leaking underground storage tanks, or through industrial or commercial activities.The goal of the site mitigation program is to protect the public health and the environment while facilitating completion of contaminated site clean-up projects in a timely manner.

Date of Government Version: 12/03/2018
Date Data Arrived at EDR: 06/23/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 20

Source: Santa Cruz Environmental Health Services
Telephone: 831-454-2761
Last EDR Contact: 11/16/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 02/11/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/29/2021
Number of Days to Update: 90

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing
In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83
Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76
Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 11/22/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 10/16/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84
Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 09/05/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/27/2023
Number of Days to Update: 82

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 11/09/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 10/31/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 09/27/2023
Date Data Arrived at EDR: 09/28/2023
Date Made Active in Reports: 12/18/2023
Number of Days to Update: 81

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 07/13/2023
Number of Days to Update: 77

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 09/12/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/04/2023
Number of Days to Update: 82

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 10/20/2023
Date Data Arrived at EDR: 10/24/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 84

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 10/24/2023
Date Data Arrived at EDR: 10/25/2023
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 83

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/09/2022
Date Made Active in Reports: 09/01/2022
Number of Days to Update: 23

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/28/2021
Date Data Arrived at EDR: 12/21/2021
Date Made Active in Reports: 03/03/2022
Number of Days to Update: 72

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 12/26/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 08/12/2021
Date Data Arrived at EDR: 08/12/2021
Date Made Active in Reports: 11/08/2021
Number of Days to Update: 88

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 10/10/2023
Date Data Arrived at EDR: 10/11/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 85

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List
A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 13

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/26/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 08/03/2023
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List

Cupa facility list

Date of Government Version: 10/27/2023
Date Data Arrived at EDR: 11/01/2023
Date Made Active in Reports: 11/21/2023
Number of Days to Update: 20

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/09/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List

Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/01/2023
Date Data Arrived at EDR: 10/06/2023
Date Made Active in Reports: 12/27/2023
Number of Days to Update: 82

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 10/09/2023
Date Data Arrived at EDR: 10/09/2023
Date Made Active in Reports: 12/27/2023
Number of Days to Update: 79

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/10/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 03/29/2023
Number of Days to Update: 76

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/04/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/13/2023
Date Data Arrived at EDR: 07/13/2023
Date Made Active in Reports: 09/27/2023
Number of Days to Update: 76

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 12/01/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 12/14/2023
Number of Days to Update: 1

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 09/01/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 12/08/2023
Number of Days to Update: 79
Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/09/2024
Number of Days to Update: 84
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/19/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 01/04/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 04/12/2023
Date Data Arrived at EDR: 05/02/2023
Date Made Active in Reports: 06/13/2023
Number of Days to Update: 42
Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020
Date Data Arrived at EDR: 08/12/2020
Date Made Active in Reports: 10/23/2020
Number of Days to Update: 72
Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 12/18/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Semi-Annually

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/22/2021
Date Data Arrived at EDR: 11/18/2021
Date Made Active in Reports: 11/22/2021
Number of Days to Update: 4

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/25/2023
Date Data Arrived at EDR: 08/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 77

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 10/04/2021
Date Data Arrived at EDR: 10/06/2021
Date Made Active in Reports: 12/29/2021
Number of Days to Update: 84

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/21/2023
Date Data Arrived at EDR: 07/25/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/15/2023
Date Data Arrived at EDR: 07/31/2023
Date Made Active in Reports: 08/09/2023
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/01/2023
Date Data Arrived at EDR: 05/18/2023
Date Made Active in Reports: 06/14/2023
Number of Days to Update: 27

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 11/09/2023
Date Data Arrived at EDR: 11/09/2023
Date Made Active in Reports: 11/21/2023
Number of Days to Update: 12

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 11/01/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 09/29/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 12/27/2023
Number of Days to Update: 84

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 09/29/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 12/27/2023
Number of Days to Update: 84

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/21/2022
Date Made Active in Reports: 03/16/2023
Number of Days to Update: 85

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/18/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 12/09/2022
Date Made Active in Reports: 03/01/2023
Number of Days to Update: 82

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 12/18/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 05/02/2023
Date Data Arrived at EDR: 05/04/2023
Date Made Active in Reports: 07/25/2023
Number of Days to Update: 82

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 08/15/2023
Date Data Arrived at EDR: 08/16/2023
Date Made Active in Reports: 11/01/2023
Number of Days to Update: 77

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 10/26/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 08/29/2023
Date Made Active in Reports: 11/13/2023
Number of Days to Update: 76

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 11/27/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/04/2023
Date Data Arrived at EDR: 04/05/2023
Date Made Active in Reports: 06/27/2023
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/22/2021
Date Data Arrived at EDR: 10/19/2021
Date Made Active in Reports: 01/13/2022
Number of Days to Update: 86

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/26/2023
Number of Days to Update: 79
Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 08/04/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/25/2023
Number of Days to Update: 78
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Quarterly

SAN FRANCISO COUNTY:

SAN FRANCISCO MAHER: Maher Ordinance Property Listing
a listing of properties that fall within a Maher Ordinance, for all of San Francisco

Date of Government Version: 10/15/2023
Date Data Arrived at EDR: 10/17/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 86
Source: San Francisco Planning
Telephone: 628-652-7483
Last EDR Contact: 01/18/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 03/25/2024
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/09/2023
Date Data Arrived at EDR: 08/10/2023
Date Made Active in Reports: 10/27/2023
Number of Days to Update: 78

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/07/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 11/07/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/16/2023
Number of Days to Update: 8

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 10/31/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/13/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/15/2021
Date Data Arrived at EDR: 09/16/2021
Date Made Active in Reports: 12/09/2021
Number of Days to Update: 84

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 06/30/2021
Date Made Active in Reports: 09/24/2021
Number of Days to Update: 86

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/12/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/08/2022
Date Data Arrived at EDR: 02/10/2022
Date Made Active in Reports: 05/04/2022
Number of Days to Update: 83

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 01/04/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 08/03/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 09/12/2023
Number of Days to Update: 19

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 08/01/2023
Date Data Arrived at EDR: 08/02/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 78

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 12/05/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 10/10/2023
Date Data Arrived at EDR: 10/11/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 85

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 10/07/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 75

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 10/25/2023
Next Scheduled EDR Contact: 02/12/2024
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/26/2023
Date Data Arrived at EDR: 10/20/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 83

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/18/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/02/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/26/2023
Date Data Arrived at EDR: 10/24/2023
Date Made Active in Reports: 01/11/2024
Number of Days to Update: 79

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/16/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/28/2023
Date Data Arrived at EDR: 09/06/2023
Date Made Active in Reports: 11/28/2023
Number of Days to Update: 83
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 09/21/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 12/27/2023
Number of Days to Update: 84
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/18/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 07/26/2023
Date Made Active in Reports: 10/11/2023
Number of Days to Update: 77
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/08/2023
Date Made Active in Reports: 10/24/2023
Number of Days to Update: 77
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/07/2023
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 12/27/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/30/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

DILLARD PROPERTY
NOT REPORTED
BAKERSFIELD, CA 93314

TARGET PROPERTY COORDINATES

Latitude (North):	35.361689 - 35° 21' 42.08''
Longitude (West):	119.242485 - 119° 14' 32.95''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	296252.0
UTM Y (Meters):	3915263.8
Elevation:	332 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	50004632 STEVENS, CA
Version Date:	2021
Northeast Map:	50005219 ROSEDALE, CA
Version Date:	2021
Southwest Map:	50005249 TUPMAN, CA
Version Date:	2021
Northwest Map:	50004602 RIO BRAVO, CA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

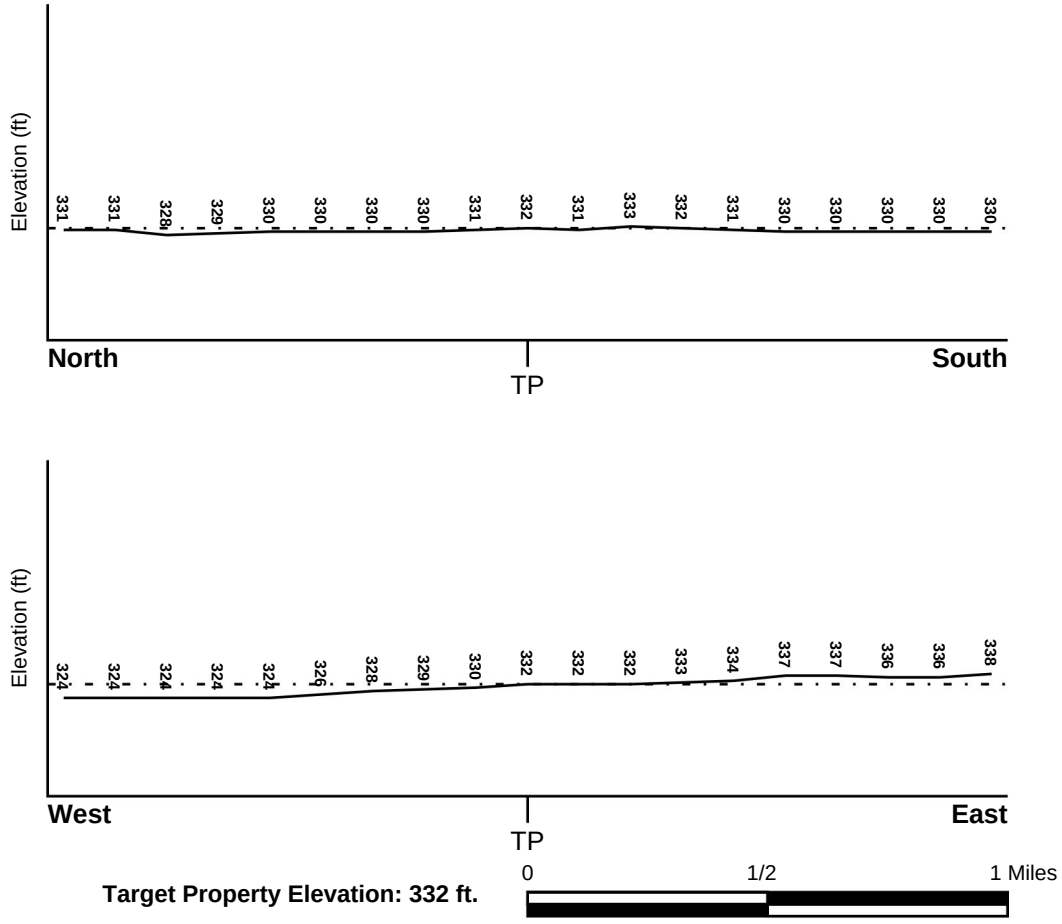
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WNW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06029C2275E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06029C1800E	FEMA FIRM Flood data
06029C2250E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
STEVENS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

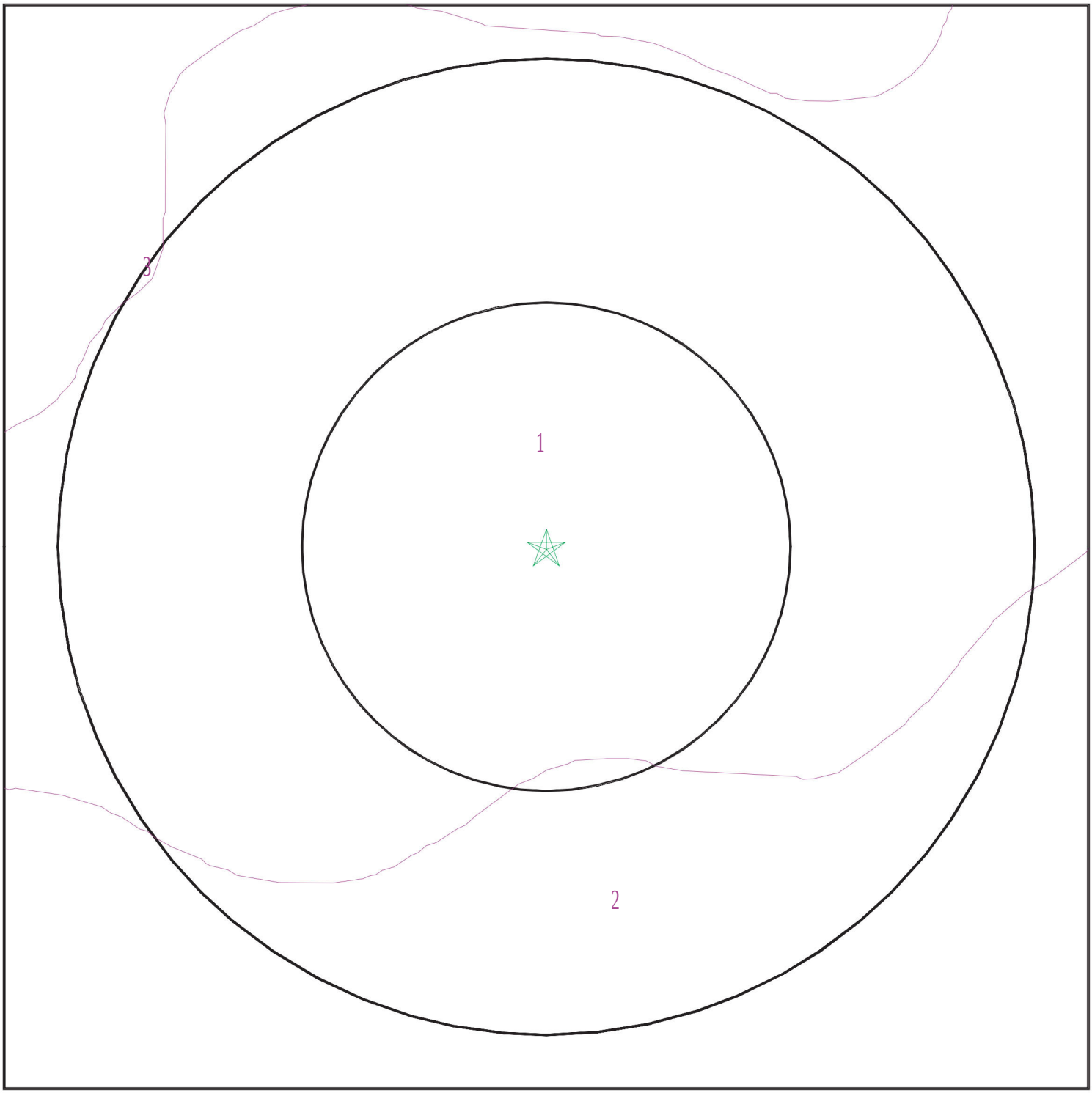
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7548073.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Dillard Property	CLIENT:	Haro Environmental, Inc.
ADDRESS:	Not Reported Bakersfield CA 93314	CONTACT:	Elliot Haro
		INQUIRY #:	7548073.2s
LAT/LONG:	35.361689 / 119.242485	DATE:	January 23, 2024 2:20 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: CAJON

Soil Surface Texture:
Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
2	9 inches	44 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4
3	44 inches	59 inches		Not reported	Not reported	Max: 141 Min: 42	Max: 8.4 Min: 7.4

Soil Map ID: 2

Soil Component Name: WASCO

Soil Surface Texture:
Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	14 inches	59 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 3

Soil Component Name: WASCO

Soil Surface Texture:

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	29 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6
2	29 inches	59 inches		Not reported	Not reported	Max: 42 Min: 14	Max: 8.4 Min: 6.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A4	USGS40000163298	1/4 - 1/2 Mile ESE
B8	USGS40000163239	1/4 - 1/2 Mile SSE
10	USGS40000163175	1/2 - 1 Mile SSE
C11	USGS40000163322	1/2 - 1 Mile West
15	USGS40000163141	1/2 - 1 Mile SSW
16	USGS40000163419	1/2 - 1 Mile NW
D17	USGS40000163186	1/2 - 1 Mile SW
F19	USGS40000163158	1/2 - 1 Mile SW
E25	USGS40000163140	1/2 - 1 Mile SSE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CADPR0000001247	1/8 - 1/4 Mile West
2	CADPR0000000836	1/4 - 1/2 Mile North
A3	CADWR9000018395	1/4 - 1/2 Mile ESE
5	CADPR0000005027	1/4 - 1/2 Mile WNW
6	CADWR0000036094	1/4 - 1/2 Mile ENE
B7	CADWR9000018366	1/4 - 1/2 Mile South
9	CALLNL000000613	1/2 - 1 Mile NE
12	CADDW0000008670	1/2 - 1 Mile NW
13	CADDW0000020678	1/2 - 1 Mile WNW
C14	CADWR0000007387	1/2 - 1 Mile West
E18	CADWR9000018297	1/2 - 1 Mile SSE
D20	CADWR9000018327	1/2 - 1 Mile SW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

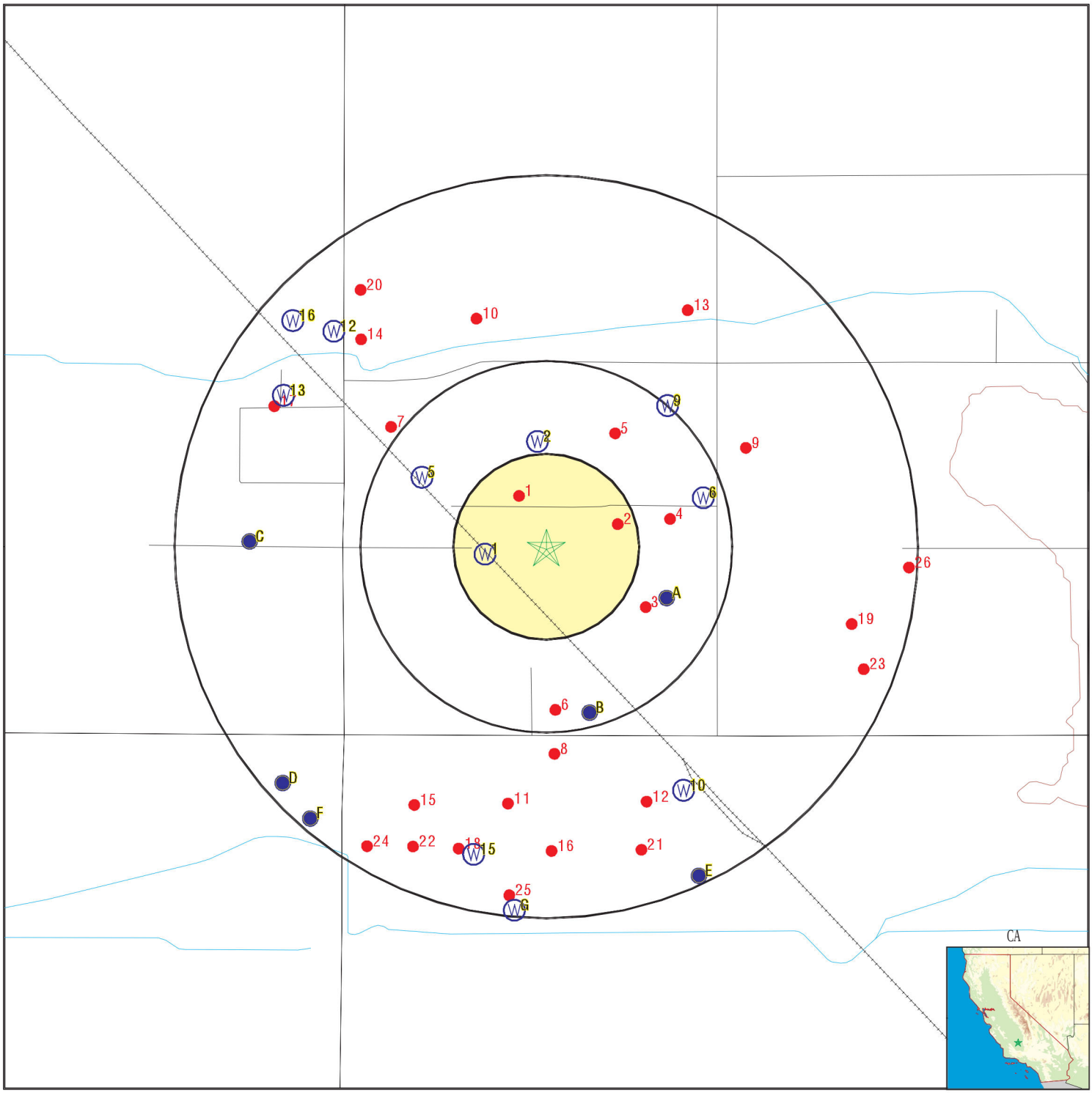
MAP ID	WELL ID	LOCATION FROM TP
D21	CADWR0000028904	1/2 - 1 Mile SW
F22	CADWR9000018314	1/2 - 1 Mile SW
G23	CADWR9000018291	1/2 - 1 Mile South
G24	CADWR0000037267	1/2 - 1 Mile South
E26	CAUSGSN00003218	1/2 - 1 Mile SSE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG15000224484	1/8 - 1/4 Mile NNW
2	CAOG15000224411	1/8 - 1/4 Mile ENE
3	CAOG15000224449	1/4 - 1/2 Mile ESE
4	CAOG15000224528	1/4 - 1/2 Mile ENE
5	CAOG15000224421	1/4 - 1/2 Mile NNE
6	CAOG15000224505	1/4 - 1/2 Mile South
7	CAOG15000224450	1/2 - 1 Mile NW
8	CAOG15000224493	1/2 - 1 Mile South
9	CAOG15000010615	1/2 - 1 Mile ENE
10	CAOG15000015083	1/2 - 1 Mile NNW
11	CAOG15000224414	1/2 - 1 Mile South
12	CAOG15000224425	1/2 - 1 Mile SSE
13	CAOG15000014721	1/2 - 1 Mile NNE
14	CAOG15000003756	1/2 - 1 Mile NW
15	CAOG15000224412	1/2 - 1 Mile SSW
16	CAOG15000224416	1/2 - 1 Mile South
17	CAOG15000007778	1/2 - 1 Mile WNW
18	CAOG15000224413	1/2 - 1 Mile SSW
19	CAOG15000003762	1/2 - 1 Mile ESE
20	CAOG15000010819	1/2 - 1 Mile NW
21	CAOG15000224523	1/2 - 1 Mile SSE
22	CAOG15000224549	1/2 - 1 Mile SSW
23	CAOG15000013544	1/2 - 1 Mile ESE
24	CAOG15000224417	1/2 - 1 Mile SSW
25	CAOG15000224415	1/2 - 1 Mile South
26	CAOG15000224500	1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 7548073.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
Indeterminate Groundwater Flow at Location
Groundwater Flow Varies at Location
Closest Hydrogeological Data
Oil, gas or related wells

SITE NAME:	Dillard Property	CLIENT:	Haro Environmental, Inc.
ADDRESS:	Not Reported Bakersfield CA 93314	CONTACT:	Elliot Haro
LAT/LONG:	35.361689 / 119.242485	INQUIRY #:	7548073.2s
		DATE:	January 23, 2024 2:20 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
West
1/8 - 1/4 Mile
Lower

CA WELLS **CADPR0000001247**

Well ID:	110235	Well Type:	UNK
Source:	Department of Pesticide Regulation		
Other Name:	110235	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DPR&samp_date=&global_id=&assigned_name=110235&store_num=		
GeoTracker Data:	Not Reported		

2
North
1/4 - 1/2 Mile
Lower

CA WELLS **CADPR0000000836**

Well ID:	109668	Well Type:	UNK
Source:	Department of Pesticide Regulation		
Other Name:	109668	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DPR&samp_date=&global_id=&assigned_name=109668&store_num=		
GeoTracker Data:	Not Reported		

A3
ESE
1/4 - 1/2 Mile
Higher

CA WELLS **CADWR9000018395**

State Well #:	29S25E36J001M	Station ID:	24252
Well Name:	Not Reported	Basin Name:	Kern County
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

A4
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000163298**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	029S025E36J001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	137
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1960-10-10
Feet below surface:	109.00	Feet to sea level:	Not Reported

Note: Not Reported

5
WNW **CA WELLS** **CADPR0000005027**
1/4 - 1/2 Mile
Lower

Well ID:	89932	Well Type:	UNK
Source:	Department of Pesticide Regulation		
Other Name:	89932	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DPR&samp_date=&global_id=&assigned_name=89932&store_num=		
GeoTracker Data:	Not Reported		

6
ENE **CA WELLS** **CADWR0000036094**
1/4 - 1/2 Mile
Higher

Well ID:	29S25E36H001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	29S25E36H001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=29S25E36H001M&store_num=		
GeoTracker Data:	Not Reported		

B7
South **CA WELLS** **CADWR9000018366**
1/4 - 1/2 Mile
Higher

State Well #:	29S25E36R002M	Station ID:	38704
Well Name:	Not Reported	Basin Name:	Kern County
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

B8
SSE **FED USGS** **USGS40000163239**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	029S025E36R002M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1955	Well Depth:	175
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1960-10-10

Feet below surface:	77.00	Feet to sea level:	Not Reported
Note:	Not Reported		

9
NE **CA WELLS** **CALLNL000000613**
1/2 - 1 Mile
Higher

Well ID:	101622	Well Type:	MUNICIPAL
Source:	Lawrence Livermore National Laboratory		
Other Name:	29S/28E-31D02 M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	Not Reported		
GeoTracker Data:	Not Reported		

Chemical:	Helium-4	Results:	.000000125284
Units:	cm3STP/g	Date:	03/19/2004

Chemical:	Krypton	Results:	.0000000954844
Units:	cm3STP/g	Date:	03/19/2004

Chemical:	Helium-3/Helium-4	Results:	.00000169501
Units:	atom ratio	Date:	03/19/2004

Chemical:	Tritium (Hydrogen 3)	Results:	19.2
Units:	pCi/L	Date:	09/04/2003

Chemical:	Argon	Results:	.000488176
Units:	cm3STP/g	Date:	03/19/2004

Chemical:	Neon	Results:	.000000509889
Units:	cm3STP/g	Date:	03/19/2004

10
SSE **FED USGS** **USGS40000163175**
1/2 - 1 Mile
Higher

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	030S025E01A001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1952	Well Depth:	30
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C11
West
1/2 - 1 Mile
Lower

FED USGS **USGS40000163322**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	029S025E35J001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	300
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-02-10
Feet below surface:	86.00	Feet to sea level:	Not Reported
Note:	Not Reported		

12
NW
1/2 - 1 Mile
Lower

CA WELLS **CADDW0000008670**

Well ID:	1503666-001	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 01 - RAW	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=1503666-001&store_num=		
GeoTracker Data:	Not Reported		

13
WNW
1/2 - 1 Mile
Lower

CA WELLS **CADDW0000020678**

Well ID:	1503649-001	Well Type:	MUNICIPAL
Source:	Department of Health Services		
Other Name:	WELL 01	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DHS&samp_date=&global_id=&assigned_name=1503649-001&store_num=		
GeoTracker Data:	Not Reported		

C14
West
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000007387**

Well ID:	29S25E35J001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	29S25E35J001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=29S25E35J001M&store_num=		

GeoTracker Data: Not Reported

15
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS40000163141**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	030S005E01F001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1952	Well Depth:	340
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-01-20
Feet below surface:	86.00	Feet to sea level:	Not Reported
Note:	Not Reported		

16
NW
1/2 - 1 Mile
Lower

FED USGS **USGS40000163419**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	029S025E26R001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1958	Well Depth:	150
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

D17
SW
1/2 - 1 Mile
Lower

FED USGS **USGS40000163186**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	030S025E02A001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	1953	Well Depth:	126
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

E18
SSE
1/2 - 1 Mile
Higher

CA WELLS **CADWR9000018297**

State Well #:	30S25E01H001M	Station ID:	23725
Well Name:	6D11	Basin Name:	Kern County
Well Use:	Irrigation	Well Type:	Single Well
Well Depth:	506	Well Completion Rpt #:	Not Reported

F19
SW
1/2 - 1 Mile
Lower

FED USGS **USGS40000163158**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	030S025E02H001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	510
Well Depth Units:	ft	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

Ground water levels,Number of Measurements:	1	Level reading date:	1961-02-06
Feet below surface:	76.00	Feet to sea level:	Not Reported
Note:	Not Reported		

D20
SW
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000018327**

State Well #:	30S25E02A001M	Station ID:	36981
Well Name:	Not Reported	Basin Name:	Kern County
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

D21
SW
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000028904**

Well ID:	30S25E02A001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	30S25E02A001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=30S25E02A001M&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

F22
SW
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000018314**

State Well #:	30S25E02H001M	Station ID:	23726
Well Name:	Not Reported	Basin Name:	Kern County
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

G23
South
1/2 - 1 Mile
Lower

CA WELLS **CADWR9000018291**

State Well #:	30S25E01F001M	Station ID:	23724
Well Name:	6D12	Basin Name:	Kern County
Well Use:	Unknown	Well Type:	Unknown
Well Depth:	0	Well Completion Rpt #:	Not Reported

G24
South
1/2 - 1 Mile
Lower

CA WELLS **CADWR0000037267**

Well ID:	30S25E01F001M	Well Type:	UNK
Source:	Department of Water Resources		
Other Name:	30S25E01F001M	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=DWR&samp_date=&global_id=&assigned_name=30S25E01F001M&store_num=		
GeoTracker Data:	Not Reported		

E25
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000163140**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	030S025E01H001M	Type:	Well
Description:	Not Reported	HUC:	18030012
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Central Valley aquifer system		
Formation Type:	Alluvium of the Sierra Nevada, Younger (Pleistocene-Holocene)		
Aquifer Type:	Not Reported	Construction Date:	1952
Well Depth:	560	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-01-20
Feet below surface:	72.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
CA WELLS	**CAUSGSN00003218**

E26
SSE
1/2 - 1 Mile
Higher

Well ID:	USGS-352058119140901	Well Type:	UNK
Source:	United States Geological Survey		
Other Name:	USGS-352058119140901	GAMA PFAS Testing:	Not Reported
Groundwater Quality Data:	https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/GamaDataDisplay.asp?dataset=USGSNEW&samp_date=&global_id=&assigned_name=USGS-352058119140901&store_num=		
GeoTracker Data:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
NNW
1/8 - 1/4 Mile

OIL_GAS **CAOG15000224484**

API #:	0402942011	Well #:	43-46
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Clark 43-46	Lease Name:	Clark
Operator ID:	O0500	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

2
ENE
1/8 - 1/4 Mile

OIL_GAS **CAOG15000224411**

API #:	0402954493	Well #:	1
Well Status:	Idle	Well Type:	Oil & Gas
Well Design:	NW Strand 1	Lease Name:	NW Strand
Operator ID:	S7165	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

3
ESE
1/4 - 1/2 Mile

OIL_GAS **CAOG15000224449**

API #:	0402957807	Well #:	2
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Calplans-NW Strand 2	Lease Name:	Calplans-NW Strand
Operator ID:	C1350	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

4
ENE
1/4 - 1/2 Mile

OIL_GAS **CAOG15000224528**

API #:	0402900718	Well #:	74-36
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Clark 74-36	Lease Name:	Clark
Operator ID:	C5640	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

5
NNE **OIL_GAS** **CAOG15000224421**
1/4 - 1/2 Mile

API #:	0402966550	Well #:	1
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Elrich 1	Lease Name:	Elrich
Operator ID:	N0200	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

6
South **OIL_GAS** **CAOG15000224505**
1/4 - 1/2 Mile

API #:	0402918553	Well #:	58-36
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Clark et al 58-36	Lease Name:	Clark et al
Operator ID:	G2400	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

7
NW **OIL_GAS** **CAOG15000224450**
1/2 - 1 Mile

API #:	0402972355	Well #:	2-36
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Elrich 2-36	Lease Name:	Elrich
Operator ID:	04858	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

8
South **OIL_GAS** **CAOG15000224493**
1/2 - 1 Mile

API #:	0402918596	Well #:	51-1
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	KCL 56 51-1	Lease Name:	KCL 56
Operator ID:	P0325	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

9
ENE
1/2 - 1 Mile

OIL_GAS **CAOG15000010615**

API #:	0402973946	Well #:	13-31
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	S. P. 13-31	Lease Name:	S. P.
Operator ID:	04858	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

10
NNW
1/2 - 1 Mile

OIL_GAS **CAOG15000015083**

API #:	0402930888	Well #:	F 24-25
Well Status:	Plugged	Well Type:	Dry Hole
Well Design:	Intex-MJM&M-SP F 24-25	Lease Name:	Intex-MJM&M-SP
Operator ID:	C5640	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

11
South
1/2 - 1 Mile

OIL_GAS **CAOG15000224414**

API #:	0402918595	Well #:	42-1
Well Status:	Idle	Well Type:	Oil & Gas
Well Design:	KCL 56 42-1	Lease Name:	KCL 56
Operator ID:	11166	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

12
SSE
1/2 - 1 Mile

OIL_GAS **CAOG15000224425**

API #:	0402918602	Well #:	1
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	KCL Strand 1	Lease Name:	KCL Strand
Operator ID:	C5640	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

13
NNE **OIL_GAS** **CAOG15000014721**
1/2 - 1 Mile

API #:	0402947912	Well #:	87X
Well Status:	Plugged	Well Type:	Dry Hole
Well Design:	Tenneco-Quintana-Bravo 87X		
Lease Name:	Tenneco-Quintana-Bravo	Operator ID:	T0800
Field Name:	Any Field	Area Name:	Any Area
Place:	Kern County	GIS Source:	hud
Confidential Well:	N	Directionally Drilled:	N
Spud Date:	Not Reported		

14
NW **OIL_GAS** **CAOG15000003756**
1/2 - 1 Mile

API #:	0402930892	Well #:	1
Well Status:	Plugged	Well Type:	Dry Hole
Well Design:	McCulloch S.P. 1	Lease Name:	McCulloch S.P.
Operator ID:	05792	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

15
SSW **OIL_GAS** **CAOG15000224412**
1/2 - 1 Mile

API #:	0402918592	Well #:	22
Well Status:	Idle	Well Type:	Oil & Gas
Well Design:	KCL 56 22	Lease Name:	KCL 56
Operator ID:	11166	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

16
South **OIL_GAS** **CAOG15000224416**
1/2 - 1 Mile

API #:	0402918597	Well #:	53-1
Well Status:	Idle	Well Type:	Dry Gas
Well Design:	KCL 56 53-1	Lease Name:	KCL 56
Operator ID:	11166	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

17
WNW
1/2 - 1 Mile

OIL_GAS **CAOG15000007778**

API #:	0402947429	Well #:	1
Well Status:	Plugged	Well Type:	Dry Hole
Well Design:	McCaffery 1	Lease Name:	McCaffery
Operator ID:	W3660	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

18
SSW
1/2 - 1 Mile

OIL_GAS **CAOG15000224413**

API #:	0402918594	Well #:	33-1
Well Status:	Idle	Well Type:	Oil & Gas
Well Design:	KCL 56 33-1	Lease Name:	KCL 56
Operator ID:	11166	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

19
ESE
1/2 - 1 Mile

OIL_GAS **CAOG15000003762**

API #:	0403004400	Well #:	1
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	North Strand 1	Lease Name:	North Strand
Operator ID:	A4105	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

20
NW
1/2 - 1 Mile

OIL_GAS **CAOG15000010819**

API #:	0402930896	Well #:	17-25
Well Status:	Plugged	Well Type:	Dry Hole
Well Design:	SP 17-25	Lease Name:	SP
Operator ID:	O0500	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

Map ID
Direction
Distance

Database EDR ID Number

21
SSE
1/2 - 1 Mile

OIL_GAS **CAOG15000224523**

API #:	0402918598	Well #:	73-1
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	KCL 56 73-1	Lease Name:	KCL 56
Operator ID:	P0325	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

22
SSW
1/2 - 1 Mile

OIL_GAS **CAOG15000224549**

API #:	0402918555	Well #:	D-1
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	K.C.L. D-1	Lease Name:	K.C.L.
Operator ID:	M1700	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

23
ESE
1/2 - 1 Mile

OIL_GAS **CAOG15000013544**

API #:	0402946996	Well #:	47X-31
Well Status:	Plugged	Well Type:	Dry Hole
Well Design:	Bravo 47X-31	Lease Name:	Bravo
Operator ID:	08631	Field Name:	Any Field
Area Name:	Any Area	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

24
SSW
1/2 - 1 Mile

OIL_GAS **CAOG15000224417**

API #:	0402900941	Well #:	13
Well Status:	Active	Well Type:	Oil & Gas
Well Design:	13	Lease Name:	Lease by Glendale Oil LLC
Operator ID:	G1862	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

25
South
1/2 - 1 Mile

OIL_GAS **CAOG15000224415**

API #:	0402900120	Well #:	44-1
Well Status:	Idle	Well Type:	Water Disposal
Well Design:	KCL 56 44-1	Lease Name:	KCL 56
Operator ID:	11166	Field Name:	Strand
Area Name:	Northwest	Place:	Kern County
GIS Source:	GPS	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

26
East
1/2 - 1 Mile

OIL_GAS **CAOG15000224500**

API #:	0402967436	Well #:	55X-31
Well Status:	Plugged	Well Type:	Oil & Gas
Well Design:	Bravo 55X-31	Lease Name:	Bravo
Operator ID:	C4650	Field Name:	Strand
Area Name:	Main	Place:	Kern County
GIS Source:	hud	Confidential Well:	N
Directionally Drilled:	N	Spud Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93314	3	2

Federal EPA Radon Zone for KERN County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for KERN COUNTY, CA

Number of sites tested: 94

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.422 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program
State Water Resources Control Board
Telephone: 916-341-5577
The GAMA Program is Californias comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Heath Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

PHYSICAL SETTING SOURCE RECORDS SEARCHED

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Dillard Property
Not Reported
Bakersfield, CA 93314

Inquiry Number: 7548073.5
January 23, 2024

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at approximately five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through current. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 1320 feet of the target property.

Summary information obtained is provided in the text of this report.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2020	EDR Digital Archive	-	-	-	-
2017	Cole Information	-	-	-	-
2014	Cole Information	-	-	-	-
2010	Cole Information	-	-	-	-
2005	Cole Information	-	-	-	-
2002	R.L. Polk Co Publishers	-	-	-	-
2000	Cole Information	-	-	-	-
1995	Cole Information	-	-	-	-
	R.L. Polk Co Publishers	-	-	-	-
1992	Cole Information	-	-	-	-
1990	Pacific Bell Telephone Co	-	-	-	-
1986	Pacific Telephone	-	-	-	-
1980	R.L. Polk Co Publishers	-	-	-	-
1976	B&G Publications	-	-	-	-
1975	R.L. Polk Co Publishers	-	-	-	-
1971	B&G Publications	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1970	R.L. Polk Co Publishers	-	-	-	-
1965	R.L. Polk Co Publishers	-	-	-	-
1960	R. L. Polk & Co.	-	-	-	-
1955	R. L. Polk & Co.	-	-	-	-
1951	R. L. Polk & Co.	-	-	-	-
1945	R. L. Polk Co.	-	-	-	-
1940	R. L. Polk & Co.	-	-	-	-
1935	R.L. Polk Co Publishers	-	-	-	-
1930	R. L. Polk Co.	-	-	-	-
1928	R.L. Polk Co Publishers	-	-	-	-
1922	Polk-Husted Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

Address	*Type*	*Findings*
Development Avenue	Client Entered	
Brimhall Road	Client Entered	

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

Not Reported
Bakersfield, CA 93314

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

No Addresses Found

FINDINGS

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
Brimhall Road	2020, 2017, 2014, 2010, 2005, 2002, 2000, 1995, 1992, 1990, 1986, 1980, 1976, 1975, 1971, 1970, 1965, 1960, 1955, 1951, 1945, 1940, 1935, 1930, 1928, 1922

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
Not Reported	2020, 2017, 2014, 2010, 2005, 2002, 2000, 1995, 1992, 1990, 1986, 1980, 1976, 1975, 1971, 1970, 1965, 1960, 1955, 1951, 1945, 1940, 1935, 1930, 1928, 1922

APPENDIX B

INTERVIEW AND RESEARCH DOCUMENTATION

To qualify for one of the *Landowner Liability Protections* (*LLPs*) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *"Brownfields Amendments"*), the *user* must provide the following information to the *environmental professional.* Failure to provide this information could result in a determination that "*all appropriate inquiry*" is not complete.

The following was filled out by TRENT TAYLOR *who we understand is* THE WATER RESOURCES MANAGER FOR THE BUYER OF *the subject site.*

1. **Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law? (40 CFR 312.25)**

   Please checkmark the most appropriate response:

   ☑ I *have not* reviewed the records and ***do not know*** if there are any filed or recorded environmental liens.

   ☐ I *have* reviewed the records, and ***No, there aren't any*** filed or recorded environmental liens.

   ☐ I *have* reviewed the records, and ***Yes, there are*** environmental liens. Explain:

2. **Are you aware of any activity and land use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls, that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law? (40 CFR 312.26)**

   Please checkmark the most appropriate response:

   ☑ I *have not* reviewed the records and ***do not know*** if there are any filed/recorded AULs or any AULs in place at the site.

   ☐ I *have* reviewed the records, and ***No, there aren't any*** filed/recorded AULs or any AULs in place at the site.

   ☐ I *have* reviewed the records, and ***Yes, there are*** AULs filed, recorded, and/or in place at the site. Explain:

3. Does the Title Report provide any information pertaining to environmental cleanup liens or activity and use limitations (AULs) for the subject property?

Please checkmark the most appropriate response:

☑ I *have not* reviewed the Title Report and ***do not know*** if it provides environmental cleanup liens or AULs information.

☐ I *have* reviewed the Title Report, and ***No, it does not*** provide environmental cleanup liens or AULs information.

☐ I *have* reviewed the Title Report, and ***Yes, it does provide*** environmental cleanup liens or AULs information. Explain:

4. As the user of this ESA, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? (40 CFR 312.28)

Please checkmark the most appropriate response:

☑ *No*, I *do not* have any specialized knowledge and/or experience related to the property or nearby properties.

☐ *Yes*, I *do* have specialized knowledge and/or experience related to the property or nearby properties. Explain:

5. As the user of this ESA, based on your knowledge and experience related to the property, are you aware of any information pertaining to a reduction in value for the subject property relative to any known environmental issues?

Please checkmark the most appropriate response:

☑ *No*, I *do not* have any information about a reduction in property value relative to environmental issues.

☐ *Yes*, I *do* have information about a reduction in property value relative to environmental issues. Explain:

6. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? (40 CFR 312.30)

a. What are the past uses of the property?

☐ I *do not* know.

☑ I *do* know. Explain: Irrigated Agriculture. Most recently, almond trees.

b. What (if any) specific chemicals are present, or once were present, at the property?

☑ I *do not* know.

☐ I *do* know. Explain:

c. What (if any) spills or other chemical releases have taken place at the property?

☑ I *do not* know.

☐ I *do* know. Explain:

d. What (if any) environmental cleanups have taken place at the property?

☑ I *do not* know.

☐ I *do* know. Explain:

7. The purpose of this Phase I ESA is . . . (checkmark all that apply)

- ☑ to assess the environmental conditions of a property, taking into account commonly and reasonably ascertainable information.
- ☑ to identify the possible presence of recognized environmental conditions associated with possible soil and groundwater contamination at the site.
- ☑ to understand potential environmental conditions that could materially impact the operation of business associated with the parcel.
- ☐ to identify the possible presence of recognized environmental conditions that could materially impact the operation of the business associated with the parcel of commercial real estate.

8. As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination or hazardous materials handling at the property or adjoining properties? (40 CFR 312.31)

Please checkmark the most appropriate response:

- ☑ *No*, I *do not know and/or do not have any experience with* any obvious indicators that point to the presence or likely presence of contamination at the property or adjoining properties.
- ☐ *Yes*, I *do know of and/or do have experience with* obvious indicators that point to the presence or likely presence of contamination at the property or adjoining properties. Explain:

This questionnaire was completed by (please print):

Name	TRENT TAYLOR
Title	WATER RESOURCES MANAGER
Firm	ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
Street Address	849 ALLEN ROAD
City, State, Zip Code	BAKERSFIELD, CA 93314
Phone Number	661-589-6045
email	TTAYLOR@RRBWSD.COM
What is the preparer's relationship to the property (i.e., seller, buyer, occupant, property manager, employee, agent, consultant, etc.)?	EMPLOYEE OF BUYER

The preparer represents that to the best of the preparer's knowledge the above statements and facts are true and correct, and to the best of the preparer's knowledge, no material facts have been suppressed or misstated.

Signature  **Date** 4/17/24

Please fax this form to ***Haro Environmental (fax 805.832.6081)****, email a copy to info@haroenv.com, or mail a copy to the following address.*

Haro Environmental, Inc.
872 Higuera Street
San Luis Obispo, California 93401
Attention: Elliot Haro
Phone: (805) 204-4483

HARO ENVIRONMENTAL

Environmental Site Assessment Questionnaire

Information provided in this Questionnaire will be used to develop a preliminary assessment of the environment condition of the proposed site and to develop an opinion regarding the potential for soil, groundwater, and/or surface water contamination associated with the former or current generation, use, storage, handling, or disposal of hazardous materials on or in the vicinity of the site. This Questionnaire is based on the guidelines of the American Society for Testing Materials (ASTM) Practice E 1528-14 (Standard Practice for Environment Site Assessments: Transaction Screen Process). The purpose of ASTM Practice 1528-14 and ASTM Practice E 1527-13 (Standard Practice for Environmental Site Assessments: Phase I Environmental: Phase I Environmental Site Assessment Process) is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to range of contaminates within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and petroleum products.

Property Address: APN 104-292-009-00-3

City, State, Zip Bakersfield, California 93314

Based on your knowledge of the site and adjacent properties, please check the best response to the questions below. Please answer the questions in good faith and to the extent of your knowledge. Please explain each "YES" response (use additional pages as necessary).

		Yes	No	Unknown
1a	Is the site used for an industrial use?	☐	☑	☐
1b	Are any adjacent properties used for an industrial use?	☐	☑	☐
2a	Do you have any knowledge that the site has been used for industrial function in the past?	☐	☑	☐
2b	Do you have any knowledge that any adjacent property has been used for an industrial function in the past?	☐	☑	☐
3a	Is the site used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo development laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? (If yes, indentify which)	☐	☑	☐

3b	Are any of the adjacent properties used as gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo development laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? (If yes, indentify which)	☐	☐	☑
4a	Do you have any knowledge that the site has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo development laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? (If yes, indentify which)	☐	☑	☐
4b	Do you have any knowledge that adjacent property has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo development laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility? (If yes, indentify which)	☐	☑	☐
5a	Are there currently any damaged or discarded automotive or industrial batteries, pesticide or paint containers, or other chemicals in individual containers or greater that 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the site?	☐	☐	☑
5b	Do you have knowledge that there have been previously any damaged or discarded automotive or industrial batteries, pesticide or paint containers, or other chemicals in individual containers or greater that 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the site?	☐	☑	☐
6a	Are there currently any industrial drums, typically 55 gal (208 L) or sacks of chemicals located on the site?	☐	☐	☑
6b	Do you have knowledge that previously there have been any industrial drums, typically 55 gal (208 L) or sacks of chemicals located on the site?	☐	☑	☐
7a	Has fill dirt been brought onto the site that originated from a contaminated property?	☐	☑	☐
7b	Do you have any knowledge that fill dirt has been brought onto the site that is from an unknown origin?	☐	☑	☐
8a	Are there currently any pits, ponds, or lagoons located on the site in connection with waste treatment or waste disposal?	☐	☑	☐
8b	Do you have any knowledge that there previously have been any pits, ponds, or lagoons located on the site in connection with waste treatment or waste disposal?	☐	☑	☐
9a	Is there currently any soil stained by hazardous materials or	☐	☐	☑

	petroleum products on the site?			
9b	Do you have any knowledge that there previously has been soil stained by hazardous materials or petroleum products on the site?	☐	☑	☐
10a	Are there currently any registered or unregistered storage tanks (above or underground) located on the site?	☐	☐	☑
10b	Do you have any knowledge that there previously have been any registered or unregistered storage tanks (above or underground) located on the site?	☐	☑	☐
11a	Are there currently any vent pipes, fill pipes, or access way indicting a fill pipe protruding from the ground on the site or adjacent to any structure located on the site?	☐	☐	☑
11b	Do you have any knowledge that there previously have been any vent pipes, fill pipes, or access way indicting a fill pipe protruding from the ground on the site or adjacent to any structure located on the site?	☐	☑	☐
12a	Are there currently any flooring, drains, or walls located on the site that are stained by substances other than water or are emitting foul odors?	☐	☐	☑
12b	Do you have any knowledge that there previously have been any flooring, drains, or walls located on the site that are stained by substances other than water or are emitting foul odors?	☐	☑	☐
13a	If the site is served by a private well or non-public water system, do you have any knowledge that contaminates have been identified in the well or system that exceed guidelines applicable to the water system?	☐	☑	☐
14	Do you have any knowledge of environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the site or any facility located on the site?	☐	☑	☐
15a	Do you have any knowledge of any current use, manufacture, storage, or disposal of hazardous substance or petroleum products on the site?	☐	☑	☐
15b	Do you have any knowledge of any past use, manufacture, storage, or disposal of hazardous substance or petroleum products on the site?	☐	☑	☐
15c	Do you have any knowledge of the current existence of any environmental violations with respect to the site or any facility located on the site?	☐	☑	☐

15d	Do you have any knowledge of the past existence of any environmental violations with respect to the site or any facility located on the site?	☐	☑	☐
16	Do you have any knowledge of any environmental site assessment of the site that indicates the presence of hazardous substances or petroleum products on, or contamination of, the site or recommended further assessment of the site?	☐	☑	☐
17	Do you have any knowledge of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the site by any existing or former owner or occupant of the site or adjacent property?	☐	☑	☐
18a	Does the site discharge waste water (excluding sanitary waste or storm water) onto or adjacent to the site and/or into a storm water system?	☐	☑	☐
18b	Do you have any knowledge of any adjacent property that discharges waste water (excluding sanitary waste or storm water) onto or adjacent to the site and/or into the storm water system?	☐	☑	☐
19	Do you have any knowledge that any hazardous substance or petroleum products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials have been dumped above grade, buried and/or burned on the site?	☐	☑	☐
20	Is Polychlorinated Biphenyls (PCB) in electrical transformers, capacitors, or other hydraulic equipment present on the site or are they any records of indicating past presents of equipment related to PCB?	☐	☑	☐
21a	Are any of the following documents regarding the site available for review: environmental site assessment reports; environmental audit reports; environmental permits; registration for above and/or underground storage tanks; material safety data sheets; community right-to-know plans regarding safety, preparedness and prevention, spill prevention, countermeasure, and/or disaster/emergency control; hydro geological reports; notices or correspondence from any governmental agency relating to past or current violations of environmental laws and/or environmental liens encumbering the site; hazardous waste generator notices or reports; geotechnical studies?	☐	☑	☐
21b	Do you have any knowledge that there have previously been any man-made structures (e.g., buildings, docks/platforms, railroad	☐	☑	☐

tracks, etc.) on the site? (If so, indicate the approximate construction date and use the structures(s))

Response to this questionnaire was prepared by:

Name(s): Lonnie S. Dillard

Title(s): Executor

Firm: Estate of Lonnie Dillard

Address: 4342 Edgewood Avenue, Oakland, California 94602

Phone#: (f510) 482-5247

Relationship to the site (e.g. Owner Site Manager, Agent, Tenant, etc): Executor

Years Associated with the site: 20

The foregoing information, including comments and attachments (if any), is true and complete to the best of the undersigned's knowledge, information, and belief. Any limitations with respect to the completeness of the responses have been disclosed.

Lonnie S. Dillard — 3/12/2024

(Preparer Signature) (Date)

(Preparer Signature) (Date)

(Preparer Signature) (Date)

APPENDIX C

PHOTOLOG



Photo #1 Overview of the Site, facing southeast.



Photo #2 View of the adjacent property to the west across the railroad tracks, facing west.



Photo #3 View of the adjacent agricultural land to the north, facing north.



Photo #4 View of the road to the south of the Site and adjacent property in agricultural use, facing west.



Photo #5 View of the road to the east of the Site and adjacent property in agricultural use, facing south.



Photo #6 View of the structure on Site, facing southeast.



Photo #7 View of the above ground storage tank in the northeastern corner of the Site, and the rusted drum.



Photo #8 View of the two pole-mounted transformers on Site in the northeastern corner, facing northwest.



Photo #9 View of the water feature in the northeastern corner of the Site, facing southwest.



Photo #10 View of the water feature in the northeastern corner of the Site, facing southwest.



Photo #11 View of the water well located in the northeastern corner of the Site, facing north.



Photo #12 View of the adjacent pole-mounted transformers and ag water infrastructure, facing south.

APPENDIX D

QUALIFICATIONS

ELLIOT R. HARO
Principal Scientist

Mr. Haro is the founding principal of Haro Environmental, Inc. With over 17 years of experience in the environmental consulting field, Mr. Haro has directed, managed and performed environmental site assessments, as well as site investigation and remediation activities. As Principal Scientist, Mr. Haro's responsibilities include project management, proposal and cost estimate preparation, design of soil and groundwater investigation and remediation programs, staff and subcontractor coordination, technical report preparation, and permit acquisition. Mr. Haro has managed and performed numerous Phase I and Phase II Environmental Site Assessments (ESAs) as well as site investigation and remediation field activities including air, soil, groundwater, and surface water sampling, groundwater monitoring well installations, and remediation system operations and maintenance. He has prepared various environmental reports including site assessment reports, feasibility studies, remedial/corrective action plans, remedial work plans and health-based risk evaluations. Mr. Haro is familiar with the regulatory process and has consulted with both local and regional agencies on Client's behalf for work plan approvals and modifications. Mr. Haro's technical expertise includes evaluation, design and implementation of innovative in-situ groundwater treatment technologies including enhanced bioremediation and in-situ chemical oxidation.

EXPERTISE

- Program Management
- Phase I and II Environmental Site Assessments
- Soil and Groundwater Investigations
- Soil and Groundwater Remediation
- Remediation Technology Evaluation
- Site Characterization
- Remediation System Operations and Maintenance
- Health Risk Evaluations
- Feasibility Studies
- Data Analysis and Management
- Construction Oversight
- Permitting – Environmental and Construction

WORK HISTORY

• Haro Environmental, Inc.	2013 to Present
• Equipoise Corporation	2007 to 2013
• Rincon Consultants, Inc.,	2004 to 2007
• TN & Associates	2003 to 2004
• Environmental Biotechnology Inst.	2002 to 2004
• Creek Environmental Laboratory	1999 to 2002

EDUCATION AND CERTIFICATIONS

- Registered Environmental Assessor I (REA I), California, No. 30228 (Former; DTSC discontinued the REA program effective July1, 2012)
- M.S., Agriculture – Soil Science Specialization, California Polytechnic State University, San Luis Obispo, CA
- B.S., Soil Science, California Polytechnic State University, San Luis Obispo, CA
- OSHA and EPA 40-hour safety training and 8-hour hazardous materials refresher courses

PROJECT DESCRIPTIONS

Groundwater Remediation and Agency Closure, SRI PADMA LLC, Santa Barbara, CA

- Groundwater Monitoring and Sampling Management
- In-Situ Bioremediation
- Permitting
- Regulatory Agency Negotiations
- Remediation Reporting
  - Target compounds: PCE & TCE
  - In-Situ Chemical Reduction Work Plan
  - Health and Safety
- Remediation System Design
- Groundwater Monitoring Well Destructions

Mr. Haro is the program manager for the remediation of the chlorinated solvents TCE and PCE in groundwater at a former manufacturing facility in Santa Barbara, CA. The site is located in a historic industrial area, which has recently been transformed into an urban wine trail area known as the “Funk Zone”. Haro Environmental worked with the remediation contractor, Regenesis, to perform a soil assessment to gather detailed information regarding the lithology beneath the site, and to develop an appropriate injection program based on the findings. For this site, a combined remedy was selected and included the injection of Plumestop, Hydrogen Release Compound, and BDI Plus, a bioaugmentation formulation. After two months, wells within the treatment zone exhibited reductions of TCE and PCE to non-detectable concentrations. The case is currently being considered for closure under oversight by the CCRWQCB.

Retail Service Station Portfolio, Various Locations, CA

- Groundwater Monitoring and Sampling Management
- In-Situ Bioremediation
- Permitting
- Regulatory Agency Negotiations
- Quarterly Reporting
- Target compounds: Hydrocarbons and MTBE
- Interim Remedial Action Plans
- Remedial and Corrective Action Plans
- Health and Safety
- Remediation System Design
- Multiphase and Dual Phase Extraction Systems

Managed project activities for monitoring and cleanup of multiple gas station facilities throughout Northern, Central and Southern California. Evaluated in-situ and ex-situ treatment options for source zone reduction and off-site containment of contaminants.

Performed and managed operations and maintenance activities on remediation systems and prepared quarterly remediation reports. Prepared quarterly groundwater monitoring reports for agency submittal and approval. Prepared corrective actions plans and remedial action plans for implementation of mobile high vacuum dual phase extraction, multi-phase extraction, and dual-phase extraction systems. Designed and permitted innovative groundwater remediation approaches including enhanced aerobic bioremediation using ORC®. Negotiated with overseeing agencies for acceptance of proposed remedial actions.

Phase I Environmental Site Assessment, Remediation Engineering Evaluation, & Indoor Air Quality Assessment, Former Aircraft Manufacturing Facility, Playa Vista, CA

- Phase I ESA
- Remediation System Performance Evaluation
- Historic Chlorinated VOC and Hydrocarbon Use
- 550,000 Square Feet of Building Space

Performed a Phase I ESA for an approximately 38-acre site developed with 8 historic structures totaling approximately 550,000 square feet. Historic aircraft manufacturing resulted in chlorinated VOCs and petroleum hydrocarbon impacts to soil and groundwater. Identified recognized environmental conditions (RECs) at 11 source areas. Consulted client on extent of environmental liabilities and potential environmental costs. Evaluated the performance of the on-site dual-phase extraction system targeting identified source areas. Developed potential life-cycle costs for the existing remediation system, and costs for remediation of metals contaminated soil. Performed an indoor air survey to assess potential impacts from the historic aircraft manufacturing operations on indoor air quality. Indoor air study results were compared to published regulatory thresholds and calculated site-specific health risks.

Soil, Soil Vapor, and Groundwater Investigation – Buckley Road Area TCE Investigation, San Luis Obispo, CA

- Phase II ESA
- Multiple Potential Responsible Parties
- TCE In Groundwater
- Other COCs: PFAS

A regional TCE plume located south of the San Luis Obispo County Regional Airport is being investigated to identify a possible source. Haro Environmental, Inc. was contracted with one of the potentially responsible parties to investigate the property as a possible source of the TCE in groundwater. A work plan was developed and approved by the lead regulatory agency, Central Coast Regional Water Quality Control Board, for the advancement of two soil borings and the collection and analysis of soil, soil vapor, and groundwater samples. The results were used to clear the client as a responsible party.

Soil and Groundwater Investigation of Per- and Polyfluoroalkyl Substances (PFAS), Meadows Field Airport, Bakersfield, CA

- Soil Sampling Work Plan
- Well Investigation
- Soil Borings and Sampling
- Data Report and Data Analysis
- Target compounds: PFAS
- Health and Safety Plan Preparation
- Lead Agency: Central Valley Regional Water Quality Control Board

PFAS compounds are an emergent set of chemicals that have come to the forefront of environmental concern due to their toxicity and stability in the environment. To evaluate the distribution of PFAS in the environment, the State Water Resources Control Board through their nine regional boards required multiple airports within California perform site investigation for PFAS compounds based on the high concentration of PFAS used in firefighting foams [also known as aqueous film forming foams (AFFF)]. The Meadows Field Airport was one of the airports listed in the requirements order. Haro Environmental prepared a work plan to investigate PFAS in soil which included a sampling and analysis program to sample soil at multiple potential release points as wells at multiple depths. A soil sampling report was prepared for the CVRWQCB and will be followed up with a groundwater investigation work plan based on the soil sampling results.

Soil and Groundwater Remediation of Chlorinated Solvents using Chemical Oxidation, Former Aerospace Manufacturing Facility, Newbury Park, CA

- Groundwater Monitoring and Sampling Management
- In-Situ Chemical Oxidation using Potassium Permanganate
- Injection and Monitoring Well Installations
- Quarterly WDR Reporting
- Target compounds: Chlorinated VOCs
- Health and Safety Plan Preparation
- Lead Agency Negotiations

Managed in-situ chemical oxidation injections for remediation of soil and groundwater impacted with the chlorinated solvents TCE and PCE. Negotiated with the lead agency (LARWQCB) for revised Waste Discharge Requirements (WDR) and amendments to the original work plan. Developed and implemented a site-specific health and safety plan to protect the health and safety of workers and the environment from accidental exposure to the chemical oxidant. Oversaw the installation of 35 injection wells and 14 dual-nested monitoring wells, and the injection of approximately 12,000 pounds of potassium permanganate. Conducted performance evaluation sampling per WDR requirements, and prepared and submitted quarterly WDR monitoring reports to the regulatory agency.

Soil and Groundwater Remediation of Chlorinated Solvents, Soil Source Zone Removal and In-Situ Bioremediation, Former Industrial Facility, Los Angeles, CA.

- Groundwater Monitoring and Sampling Management
- Large Diameter Auger Excavation
- Enhanced Anaerobic Bioremediation
- Soil Vapor Survey
- Injection and Monitoring Well Installations
- Quarterly WDR Reporting
- Target compounds: Chlorinated VOCs
- Health and Safety Plan Preparation
- Lead Agency Negotiations

Managed soil and groundwater investigation and remediation activities for a site with soil and perched groundwater water zone with chlorinated hydrocarbons present. A Remedial Action Plan (RAP) was developed and approved by the LARWQCB to remediate soil and groundwater at the site. Because site constraints precluded the use of conventional excavation approaches without extensive shoring requirements, soil remediation activities included the design and implementation of source area soil removal using large diameter augers. Groundwater remediation activities included acquisition of a Waste Discharge Requirement (WDR) permit from the LARWQCB for injection of HRC® into the perched zone, injection design, and implementation of an Enhanced Anaerobic Biodegradation approach to stimulate by injecting HRC®.

RCRA Facility Closure, Former Hazardous Waste Handling Facility, Wilmington, CA

- Lead Agency: DTSC
- RCRA Hazardous Waste Permit Closure
- Port of Los Angeles Permitting
- Health and Safety Plan Preparation
- DTSC Approval of Work Plan Updates and Modifications

Managed work plan modification/updating and permitting for a closure of a RCRA hazardous waste permit under DTSC oversight. This former hazardous waste handling facility was the subject of an enforcement action by the lead regulatory agency and resulted in the conviction of the former operator. The chemicals associated with the facility included VOCs and petroleum hydrocarbons. Negotiated with DTSC for work plan modification resulting in a reduction of $70,000 in the sampling costs.

Feasibility Study, Former Aerospace Testing Facility, CA

- Chlorinated VOCs
- Emergent Compounds 1,4-dioxane and NDMA
- In-Situ and Ex-Situ Treatment Options
- Conforming to Lead Agency Requirements

Provided technical assistance for preparation of a feasibility study for remediation of a 2,800-acre former test site facility being closed after 50 years of storied operations. The feasibility study in part addressed the emergent chemicals 1,4-dioxane and N-nitrosodimethylamine (NDMA). These chemicals are somewhat recalcitrant in the environment and are the subject of research at many DOD-sponsored projects. Evaluated innovative remedial alternatives including enhanced aerobic bioremediation

and in-situ chemical oxidation. Prepared a bench-scale work plan and reported the findings evaluating sodium persulfate and propane to reduce NDMA concentrations in groundwater.

Former Oil Field Sumps Assessment and Remediation, Santa Maria Valley, CA

- Sump Assessment and Remediation
- Remediation construction
- Target compounds: Metals, volatile and semi-volatile organics, hydrocarbons,
- Soil Excavation
- Health and Safety Plan Preparation

Project manager for sump assessment and remediation activities for multiple land leases within the Santa Maria Valley. Former oil field features were identified by reviewing historic maps and aerial photographs. The lateral and vertical limits of identified features were assessed in the field using direct push technology. Non-hazardous sump material was excavated and transported to a local landfill for reuse. Confirmation samples were collected and based on the results, closure reports were prepared and submitted to the lead oversight agency (County Santa Barbara Fire Prevention Division).

Operations and Maintenance, Ex-situ Bioremediation, San Luis Obispo, CA

- Groundwater monitoring well installation
- Groundwater sampling
- Remediation construction
- Vapor extraction system O&M
- Soil Excavation
- Field safety coordinator

Feasibility Study and Remedial Action Plan, Thousand Oaks, CA

- Project Coordinator
- Oversee field activities
- Permitting
- Conducted dual phase extraction events
- Managed and performed O & M

Site Investigations, Multiple Clients

- Oversee well installation
- Oversee boring installation
- Remediation construction
- Perform Monitoring and Optimization.
- Soil and Soil Vapor Sampling
- Risk Analysis
- Managed Subcontractors
- Construction

Publications

Roth, A. E., Lingle, E. L., Haro, E. R., Stark, J. M., Unkefer, P. J. and Kitts, C. L. 2005. *Sample Preservation Method and Storage Time Can Affect 16S rRNA Terminal Restriction Fragment Patterns Made From Soil DNA.* Soil Biology and Biochemistry.

JESSICA L. MANLEY
Staff Environmental Scientist

Ms. Manley has performed numerous Phase I Environmental Site Assessments (ESAs) for a variety of sites including industrial sites, airports, mobile home parks, automotive repair shops, residential properties, and numerous other commercial sites throughout Central California. Ms. Manley has experience with in-depth historical and current research relating to business operations and historical uses, agency records review, regulatory compliance, historical aerial photographs, Sanborn fire insurance maps, interviews, analysis of adjacent and nearby sites, environmental database listings, and several other mediums to determine environmental risks. With over 2 years of experience in the environmental consulting field, Ms. Manley has helped perform Initial Site Assessments (ISAs), Transaction Screen Assessments (TSAs), Spill Prevention Control and Countermeasures (SPCC) Plans, construction monitoring, groundwater and stormwater sampling, oversight activities, and soil sampling.

EXPERTISE

- Phase I Environmental Site Assessments (ESAs)
- Construction Monitoring
- Soil Sampling

WORK HISTORY

- Haro Environmental, Inc. January 2022 to Present

EDUCATION AND CERTIFICATIONS

- B.S., Business Administration, California Polytechnic State University, San Luis Obispo, CA
- OSHA 24-hour safety training
- ASTM E1527 Phase I Training Course

PROJECT DESCRIPTIONS

Nipomo Skate Park, Construction Monitoring, Nipomo, CA

- Lead Agency: County of San Luis Obispo Parks and Recreation Department (CSLOPRD)
- Monitored the Site from May 31 to June 10, 2022

Monitored ambient air and disturbed soils for volatile organic compounds (VOCs) using a hand-held photoionization detection (PID); observed disturbed soil for staining and odors, and potentially hazardous debris. Reported all observations and photo documented the process.

ADL Sampling and Soil Sampling, Former Agricultural Operations, Selma, CA

Collected 26 shallow soil samples from the Site to be tested for chlorinated pesticides and arsenic. In addition, collected two samples to be tested for aerially deposited lead (ADL). The objective of the soils investigation was to identify the presence or absence of pesticides and arsenic at locations within the Site boundaries that may have been impacted by historic agricultural operations, and to screen shallow soils in the vicinity of Highland Avenue (Highway 43) and Nebraska Avenue. The sampling was performed generally consistent with California Department of Toxic Substances Control (DTSC) guidance.

Mission Boulevard Phase I, Riverside, CA

Managed the Phase I Environmental Site Assessment for a property that was within a groundwater plume associated with the Stringfellow Superfund site. This report included evaluation of potential impacts on groundwater and soil vapor; which concluded that perchlorate and chloroform were both detected beneath the subject Site.

Site Investigations, Multiple Clients

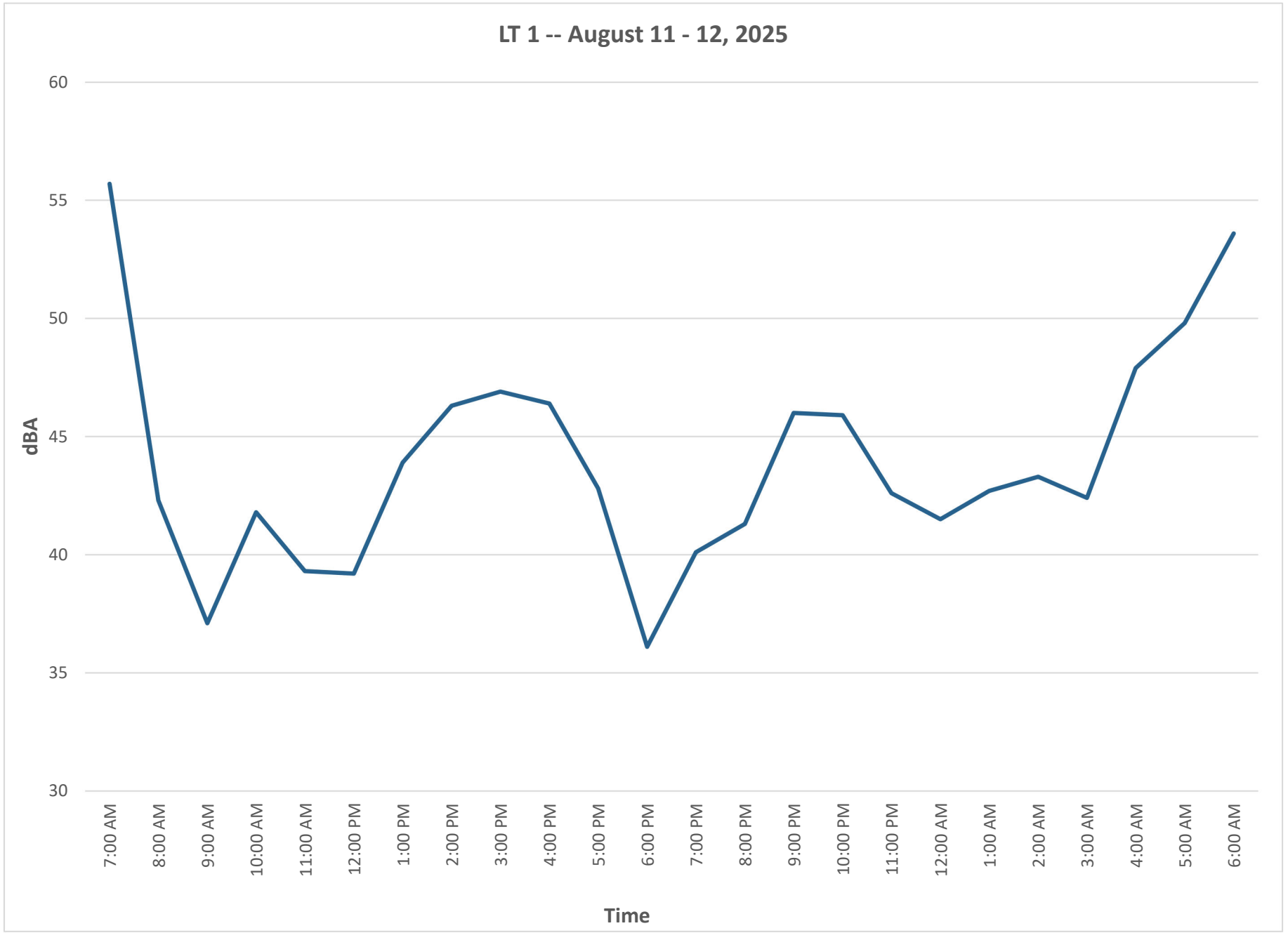
- Oversee well installation
- Oversee boring installation
- Perform Stormwater Sampling
- Soil Sampling
- Closed Landfill Monitoring
- Construction Monitoring

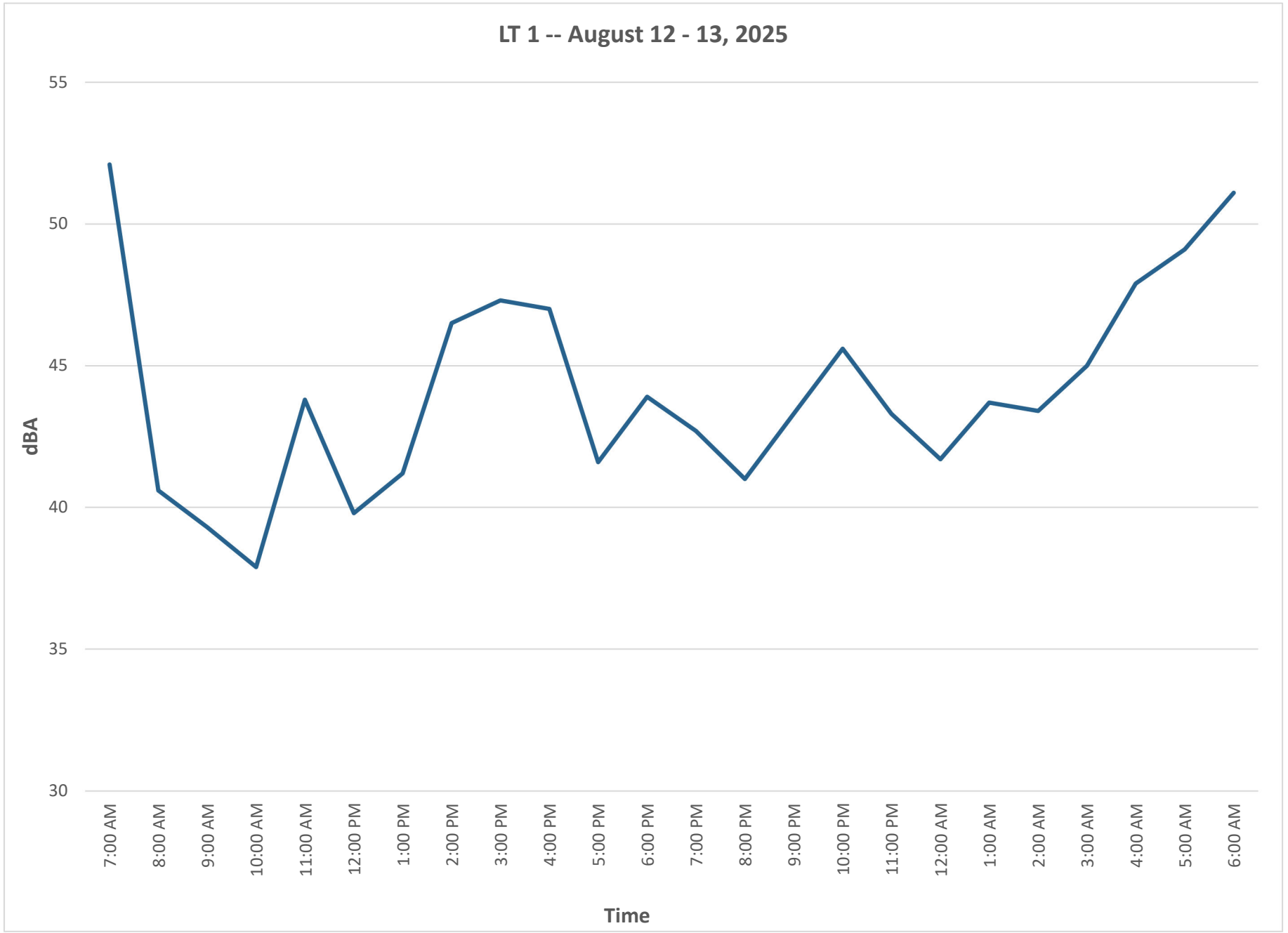
Appendix H

Graphical Sound Level Measurement Results

Number	Start Date	Start Time	End Time	Duration	LZeq	LCeq	LAeq	LZSmax	LCSmax	LASmax	LZSmin	LCSmin	LASmin	LZE	LCE
ST 1	8/11/2025	7:22:23 AM	7:37:23 AM	0:15:00	64	62	51.3	70.4	67.3	58.7	59.5	57.6	44.8	93.5	91.5
ST 2	8/11/2025	7:45:49 AM	8:00:49 AM	0:15:00	64.4	63.1	54.9	81.6	81.4	78.5	61.5	59.8	43.9	93.9	92.6

Number	LAE	LZpk	LCpk	LApk	LAS1%	LAS2%	LAS5%	LAS8%	LAS10%	LAS25%	LAS50%	LAS90%	LAS95%	LAS99%	
ST 1	80.8	85.3	83.3	76	55.1	54.6	53.7	53.2	53.1	52.1	51	48.5	47.5	46	
ST 2	84.4	94.5	93.9	91.8	61.6	54.6	52.8	51.2	50.8	49.3	47.9	45.8	45.2	44.5	


LT 1 -- August 11 - 12, 2025
60
55
50
45
40
35
30
dBA
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
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10:00 PM
11:00 PM
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
Time


LT 1 -- August 12 - 13, 2025
55
50
45
40
35
30
dBA
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
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9:00 PM
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12:00 AM
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Time

Appendix I

Construction Noise Modeling

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2025
Case Description: Dillard Groundwater Recharge and Solar Array Project

**** Receptor #1 ****

Description	Baselines (dBA) Land Use	Daytime	Evening	Night
Recharge Berms and Well Pad Earthwork	Industrial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80.0		50.0	0.0
Compactor (ground)	No	20	80.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Dozer	No	40	85.0		50.0	0.0
Grader	No	40	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A	N/A					
	Total	85.0	86.2	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A	N/A					

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2025
Case Description: Dillard Groundwater Recharge and Solar Array Project

**** Receptor #1 ****

Description	Baselines (dBA) Land Use	Daytime	Evening	Night
Interbasin and Inflow Structures Installation	Industrial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80.0		50.0	0.0
Compactor (ground)	No	20	80.0		50.0	0.0
Crane	No	16	85.0		50.0	0.0
Excavator	No	40	85.0		50.0	0.0
Pumps	No	50	77.0		50.0	0.0

Results

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	85.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Pumps			77.0	74.0	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A				
		Total	85.0	84.2	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	N/A				

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2025
Case Description: Dillard Groundwater Recharge and Solar Array Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Turnout Pipeline Installation	Industrial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80.0		50.0	0.0
Compactor (ground)	No	20	80.0		50.0	0.0
Crane	No	16	85.0		50.0	0.0
Excavator	No	40	85.0		50.0	0.0
Pumps	No	50	77.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	85.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pumps	77.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	85.0	84.2	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2025
Case Description: Dillard Groundwater Recharge and Solar Array Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Solar Array Installation	Industrial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20	85.0		50.0	0.0
Man Lift	No	20	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0
Auger Drill Rig	No	20	85.0		50.0	0.0
Crane	No	16	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	85.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	85.0	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2025
Case Description: Dillard Groundwater Recharge and Solar Array Project

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Transmission Line Installation	Industrial	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20	85.0		50.0	0.0
Man Lift	No	20	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0
Auger Drill Rig	No	20	85.0		50.0	0.0
Crane	No	16	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	85.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total	85.0	84.5	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A			

Appendix J

Sound Data

MEGAPACK 2 XL DATASHEET

Grid transformation for the world's largest energy projects
- Best-in-class energy density and round-trip efficiency
- Industry-leading power electronics and thermal system performance
- Rapid and cost-effective deployment with factory-assembled and pre-tested solution

Scaled and rigorously tested product safety and reliability
- Comprehensive in-house reliability testing by the leading experts in the industry
- Engineered for safety and performance at every level
- Continuous improvement based on large-scale operational experience

Designed with flexibility and configurability in mind
- Modular architecture that allows for a range of configurations across multiple applications
- Industry experts available to identify site-specific needs
- Integrated solution that allows for battery augmentation over time



POWER AND ENERGY

Megapack duration is configurable. Standard configurations are 2-Hour and 4-Hour durations. Nominal energy is specified at 25°C (77°F).

	AC Power per Megapack	Energy per Megapack
2-Hour	1927 kW	3854 kWh
4-Hour	979 kW	3916 kWh

ELECTRICAL

Nominal AC Voltage	480 V AC 3-phase	
Nominal Frequency	50 or 60 Hz	
Inverter Power per Megapack[1]	2-Hour Max: 4-Hour Max:	2400 kVA 1320 kVA
Round-Trip Efficiency[2]	2-Hour: 4-Hour:	91.7% 93.7%

[1] Scalable from 400 kVA minimum in increments of 50 kVA
[2] Full-depth cycle including all power conversion and thermal system losses, at 25°C (77°F)

WARRANTY

Coverage	All-inclusive, equipment and energy retention
Term	15 years standard, extendable to 20 years

PART NUMBER

1848844-XX-Y Where X is a number between 0-9 and Y is a letter

MECHANICAL AND MOUNTING

Ingress Ratings	IP66/NEMA 3R (Main Enclosure) IP20 (Thermal System)		
Enclosure Dimensions +/- 13 mm (½ in)	Width: Depth: Height:	8800 mm 1650 mm 2785 mm	(346 ½ in) (65 in) (110 in)
Maximum Weight	38,100 kg (84,000 lb)		
Operating Ambient Temperature	-30°C to 50°C (-22°F to 122°F)		

REGULATORY

System is compliant to grid codes and safety standards of all major markets.

System	NRTL listed to UL 1973, UL 9540, UL 9540A, UL 1741 SB, IEC 62619, IEEE 1547
Cells	NRTL listed to UL 1642

CONTROLS AND COMMUNICATIONS

Protocols	Modbus TCP / DNP3 / REST API	
Core Control Modes	Direct Real Power Direct Reactive Power Frequency Support Virtual Inertia	Ramp Rate Control Site Control Power Factor Control Voltage Control

MONITORING

Powerhub	Free-to-use cloud monitoring portal

100/125kW, 1500Vdc String Inverters for North America



CPS SCH100/125KTL-DO/US-600

The 100 & 125kW medium power CPS three phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.0% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the standard wire-box, each fully integrated and separable with touch safe fusing, monitoring, and AC and DC disconnect switches. The CPS Flex Gateway enables communication, controls and remote product upgrades.

Key Features

- NEC 2014/17 compliant & UL listed Arc-Fault circuit protection
- Touch safe DC Fuse holders adds convenience and safety
- CPS Flex Gateway enables remote FW upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 16 and 20 inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Advanced Smart-Grid features (CA Rule 21 compatible)
- kVA Headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.5 DC/AC Inverter Load Ratio
- Separable wire-box design for fast service
- Standard 10 year warranty with extensions to 20 years



100/125kW Standard Wire-box



100/125kW Centralized Wire-box

Intertek 4004522
Conforms to UL Std. 1741
Cert.to CSA Std.C22.2 No.107.1-01

This device complies with part 15 of the FCC Rules

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Chint Power Systems America
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Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

Model Name	CPS SCA100KTL-DO/US-600	CPS SCA125KTL-DO/US-600
DC Input		
Max. PV Power	150kW	187.5kW
Max. DC Input Voltage	1500V	
Operating DC Input Voltage Range	860-1450Vdc	
Start-up DC Input Voltage / Power	900V / 250W	
Number of MPP Trackers	1	
MPPT Voltage Range	870-1300Vdc	
Max. PV Input Current (Isc x1.25)	220A	275A
Number of DC Inputs	16 fused inputs (Standard) / 2 (Centralized)	20 fused inputs (Standard) / 2 (Centralized)
DC Disconnection Type	Load rated DC switch	
DC Surge Protection	Type II MOV, Up=2.5kV , In=20kA(8/20us)	
AC Output		
Rated AC Output Power	100kW	125kW
Max. AC Output Power[1]	100kVA (111KVA @ PF>0.9)	125kVA (132KVA @ PF>0.95)
Rated Output Voltage	600Vac	
Output Voltage Range[2]	528-660Vac	
Grid Connection Type[3]	3Φ / PE / N (Neutral optional)	
Nominal AC Output Current @600Vac	106.9A	127.2A
Rated Output Frequency	60Hz	
Output Frequency Range[2]	57-63Hz	
Power Factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	
AC Disconnection Type	Load rated AC switch (Standard Wire-box only)	
AC Surge Protection	Type II MOV, Up=2.5kV , In=20kA(8/20us)	
System		
Topology	Transformerless	
Max. Efficiency	99.0%	
CEC Efficiency	98.5%	
Stand-by / Night Consumption	<2W	
Environment		
Enclosure Protection Degree	NEMA Type 4X	
Cooling Method	Variable speed cooling fans	
Operating Temperature Range	-22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)	
Non-Operating Temperature Range[4]	-40°F to +158°F / -40°C to +70°C maximum[4]	
Operating Humidity	0-100%	
Operating Altitude	8202ft / 2500m (no derating)	
Audible Noise	<65dBA@1m and 25°C	
Display and Communication		
User Interface and Display	LED Indicators, WiFi + APP	
Inverter Monitoring	Modbus RS485, PLC Option (Standard Wire-box only)	
Site Level Monitoring	CPS Flex Gateway (1 per 70 inverters)	
Modbus Data Mapping	SunSpec/CPS	
Remote Diagnostics/FW Upgrade Functions	Standard	
Mechanical		
Dimensions (WxHxD)	45.28x24.25x9.84in (1150x616x250mm) with Standard Wire-box 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box	
Weight	Inverter: 121lbs / 55kg; Wire-box: 55lbs / 25kg (standard); 33lbs / 15kg (centralized)	
Mounting/Installation Angle	15 - 90 degrees from horizontal (vertical, angled)	
AC Termination[5]	M8 Stud Type Terminal Block (Wire range: #6 - 3/0AWG CU/AL[5], Lugs not supplied)	
DC Termination	Screw Clamp Fuse Holder (Wire range: #12 - #6AWG CU) - Standard Wire-box Busbar, M8 PEMserts (Wire range: #1AWG - 250kcmil CU/AL, Lugs not supplied) - Centralized Wire-box	
Fused String Inputs	20A fuses provided (Fuse values of 15 or 20A allowed)	
Safety		
Safety and EMC Standard	UL1741-SA-2016, UL1699B, CSA-C22.2 NO.107.1-01, IEEE1547a-2014; FCC PART15	
Grid Standard	IEEE 1547a-2014, CA Rule 21	
Smart-Grid Features	Voltage-RideThru, Frequency-RideThru, Soft-Start, Volt-Var, Frequency-Watt	
Warranty		
Standard	10 years	
Extended Terms	15 and 20 years	

1) "Max. AC Apparent Power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-22°F to +104°F) for 100KW PF ≥0.9 and 125KW PF ≥0.95
2) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.
3) Wye neutral-grounded, Delta may not be corner-grounded.
4) See user manual for further requirements regarding non-operating conditions.
5) AL requires bi-metallic compression lug or bi-metallic adapter.