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
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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

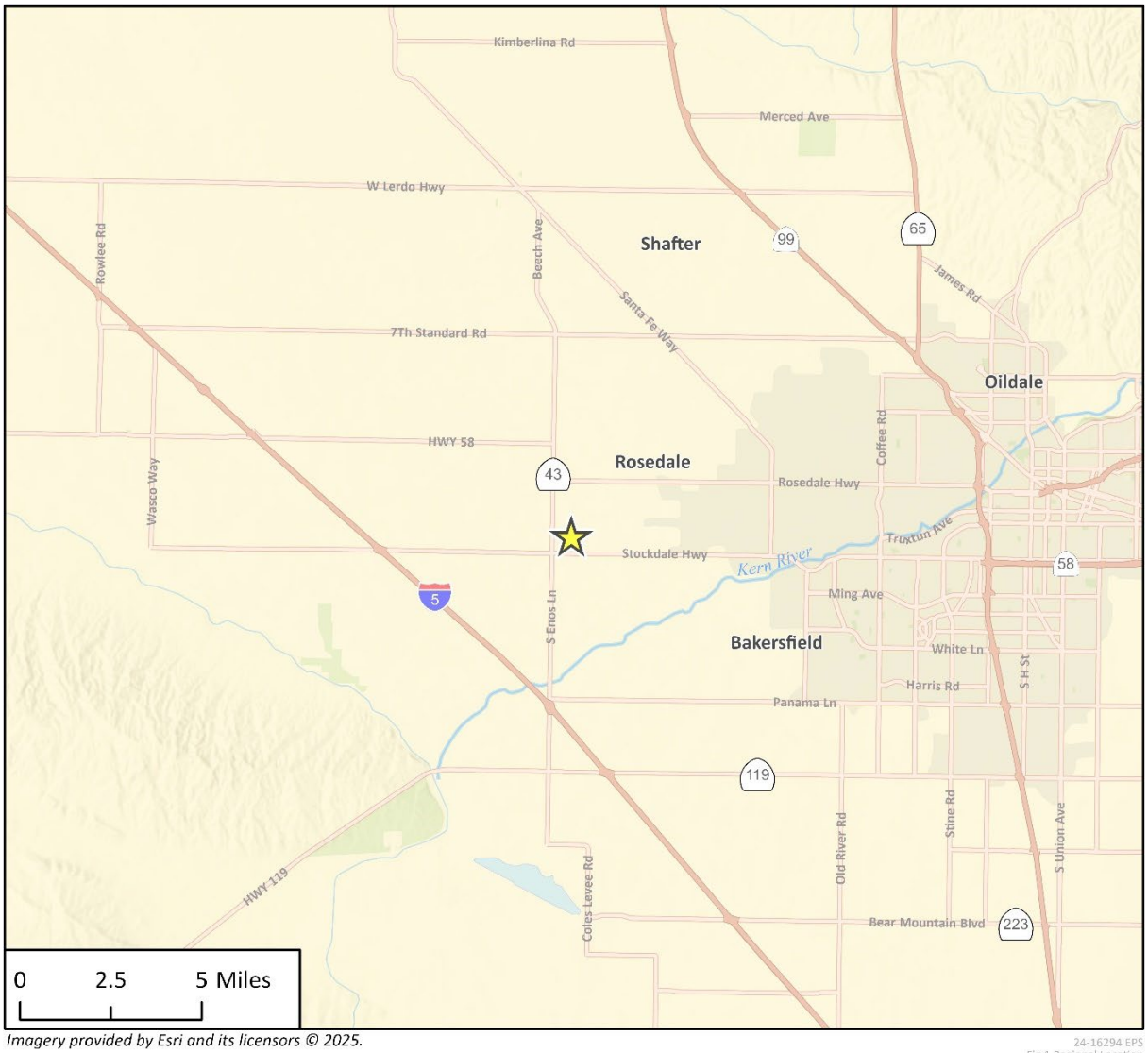

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Fig 1 Regional Location

Project Location

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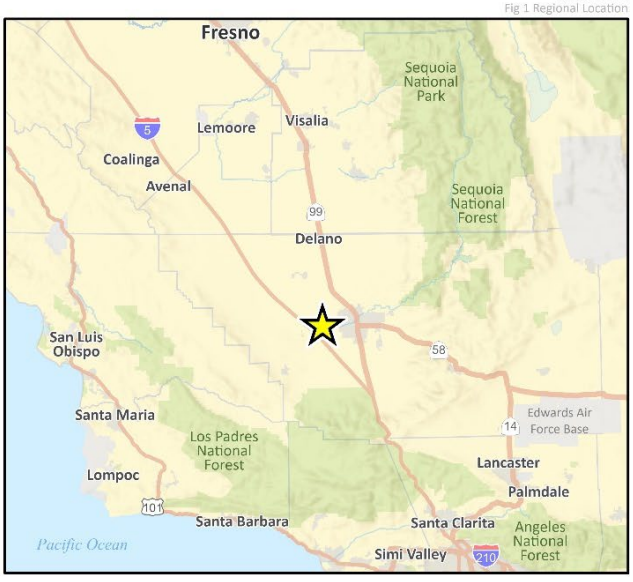

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Figure 2 Project Site – Overview

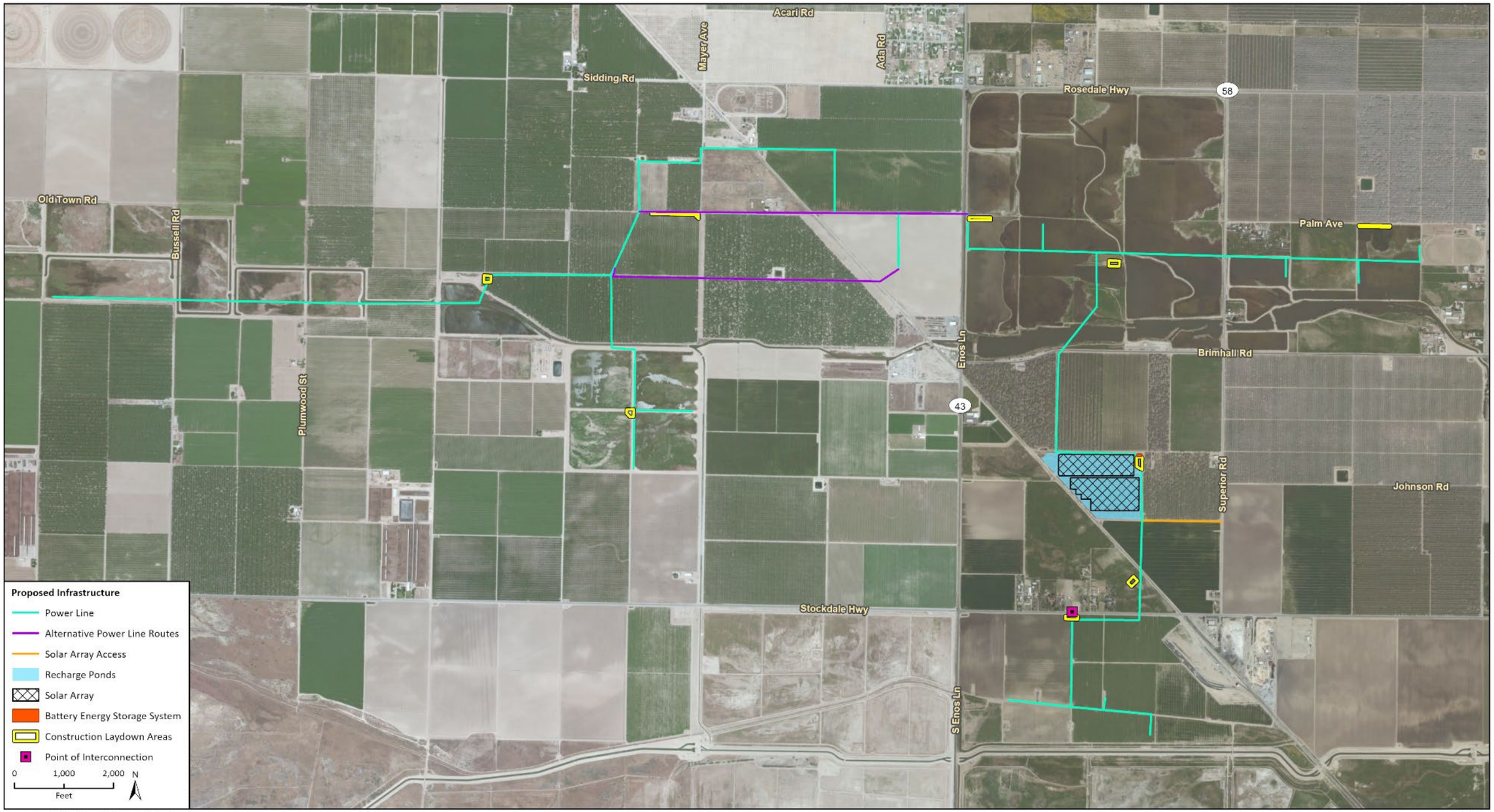

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Fig 2 Project Overview

Figure 3 Project Site – Recharge Pond and Solar Array

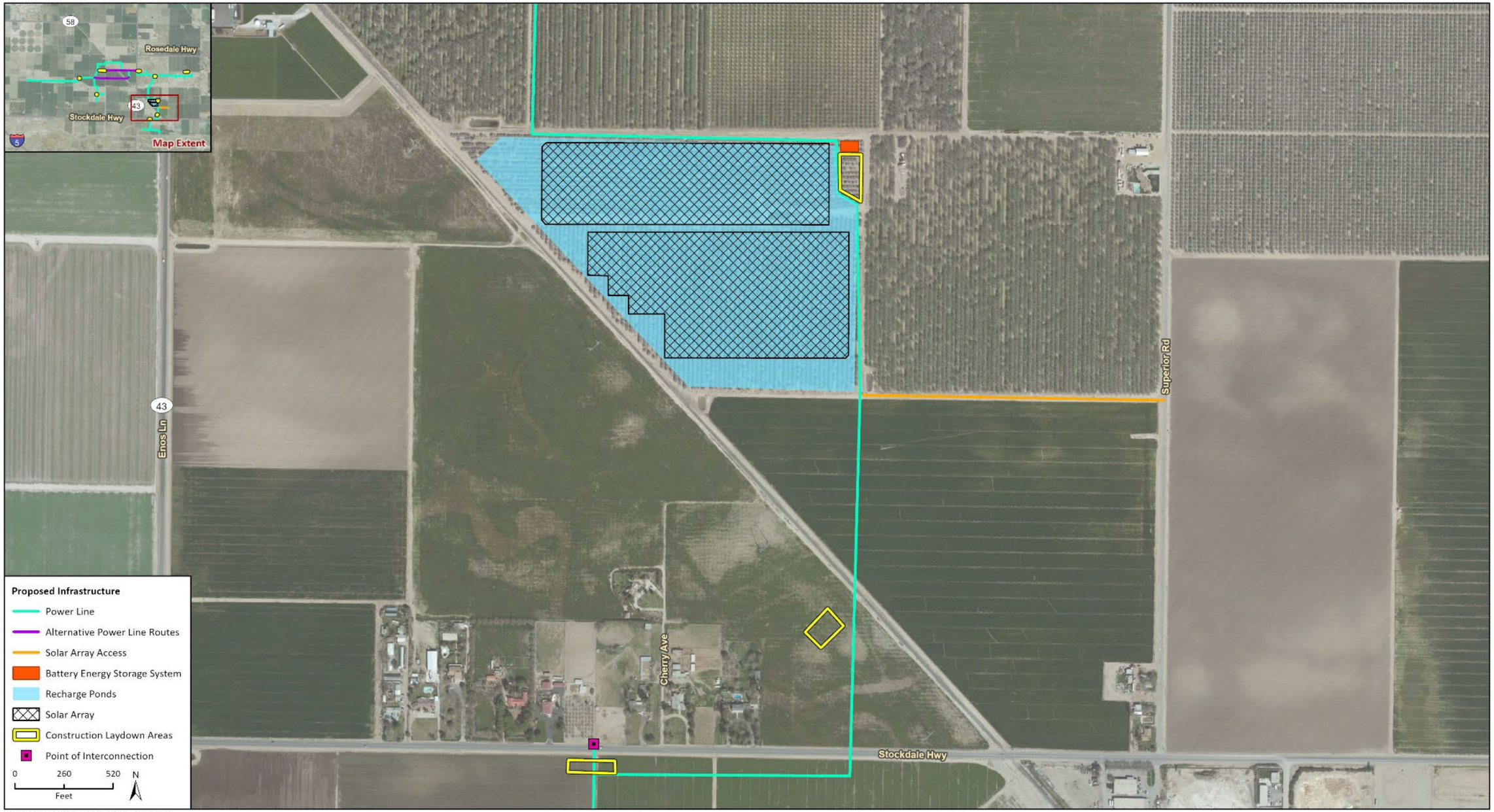

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Fig X Project Extents

Figure 4 Project Site – Southern Extent

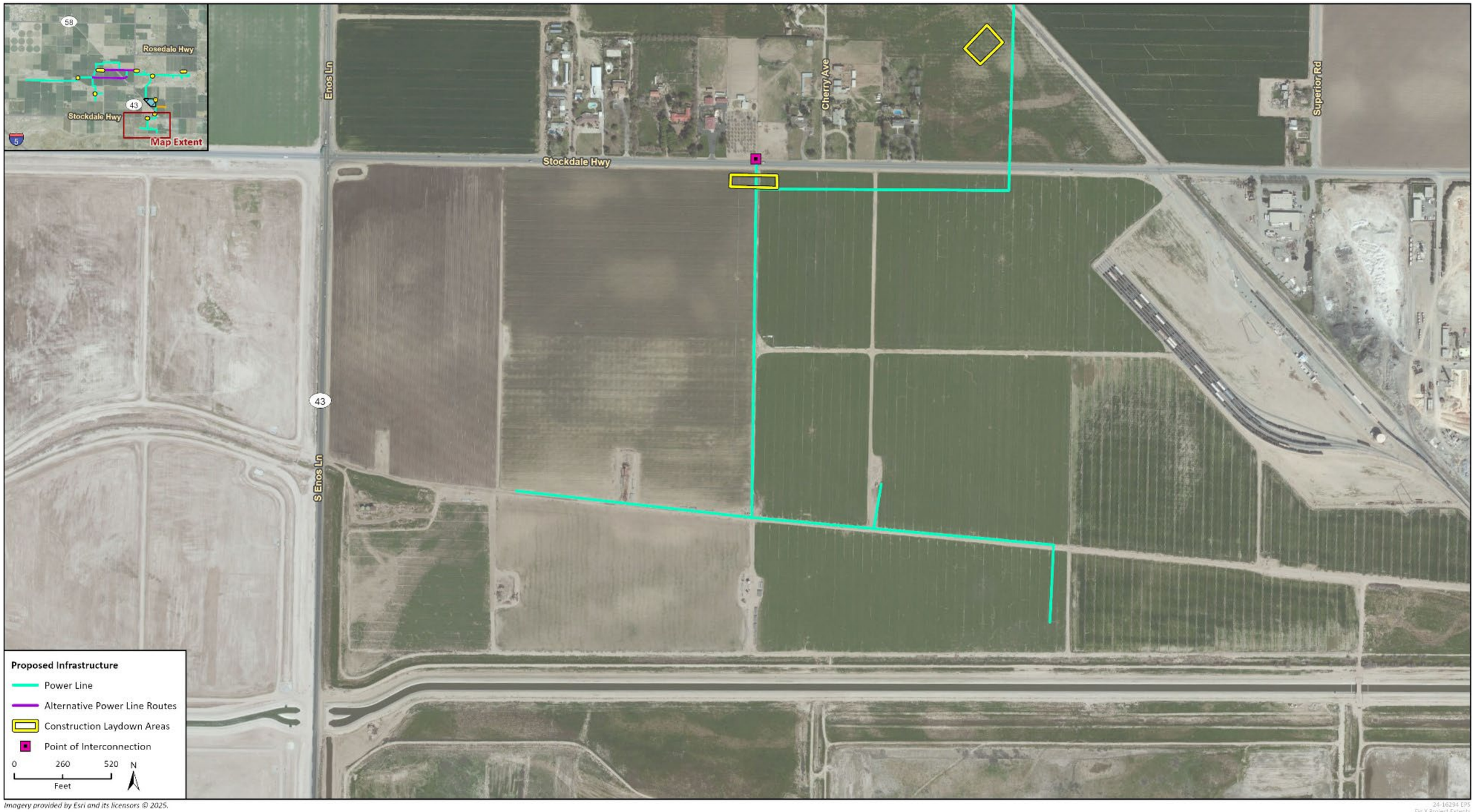

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Fig X Project Extents

Figure 5 Project Site – Western Extent

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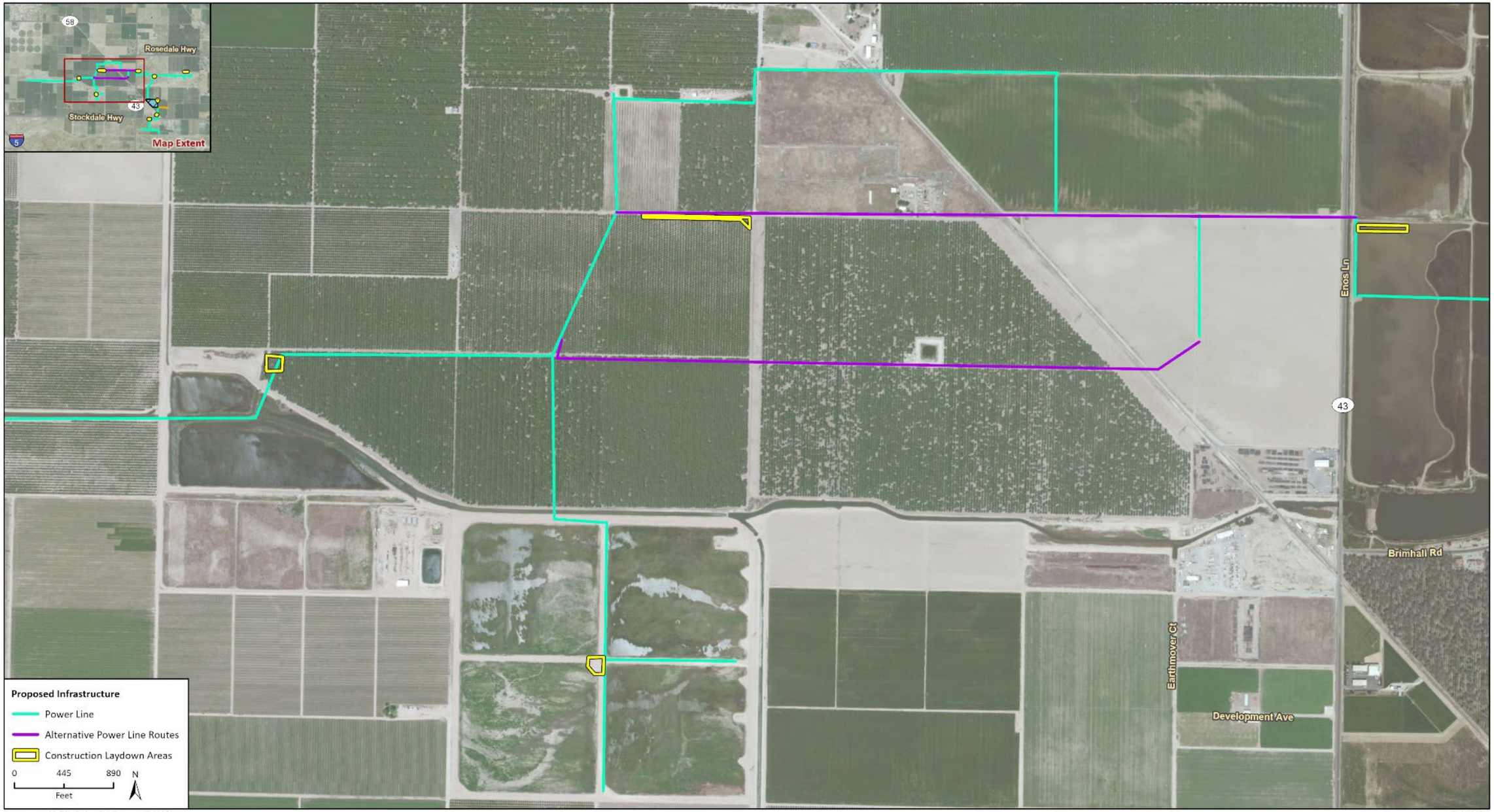
Fig X Project Extents

Figure 6 Project Site – Central Extent



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24-16294 EPS
Fig X Project Extents

Figure 7 Project Site – Eastern Extent

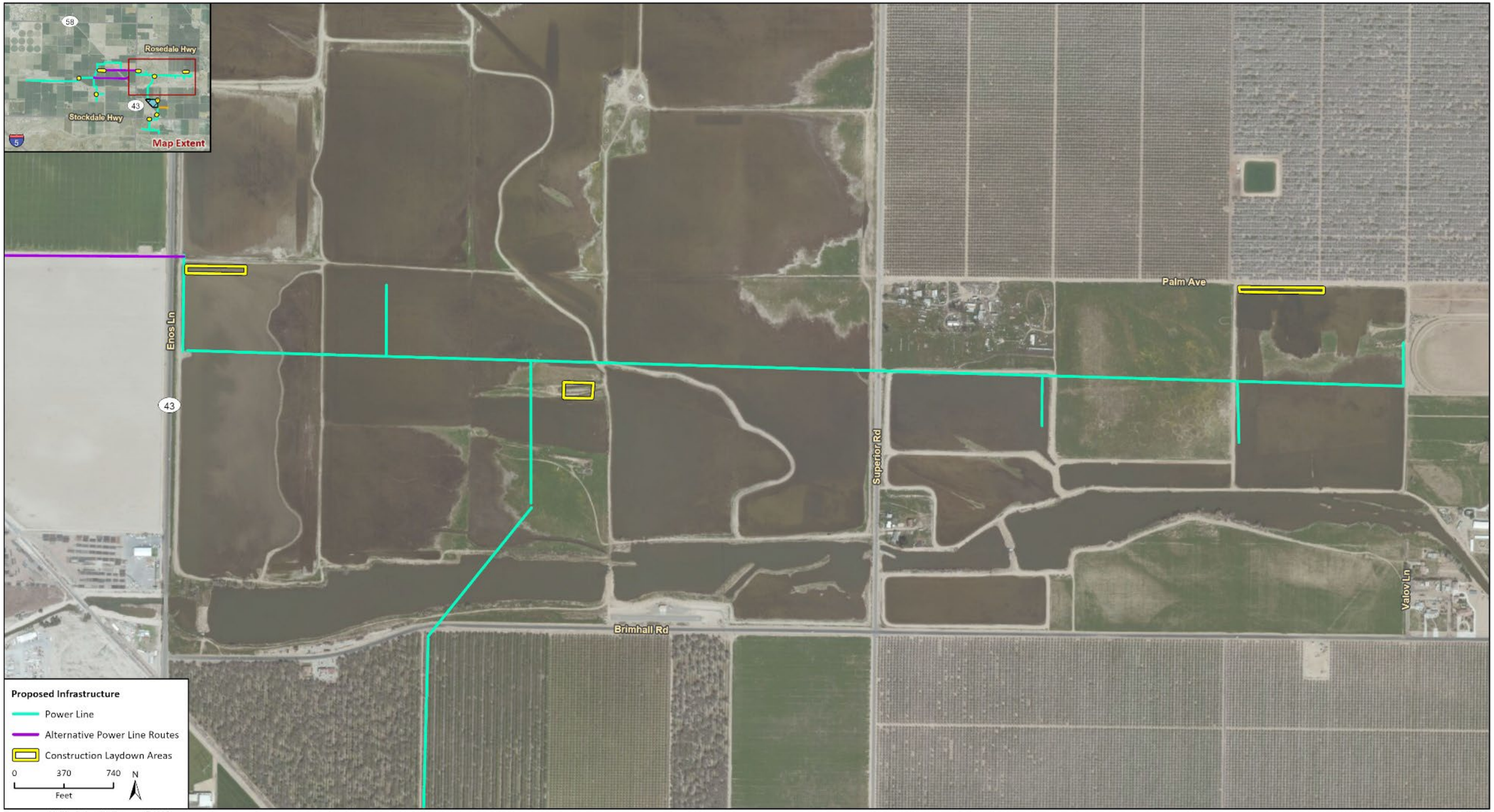

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Fig X Project Extents

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.

Signature	Date
Dan Bartel	Engineer-Manager
Printed Name	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

Construction Year	Annual Construction Emissions (tons/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

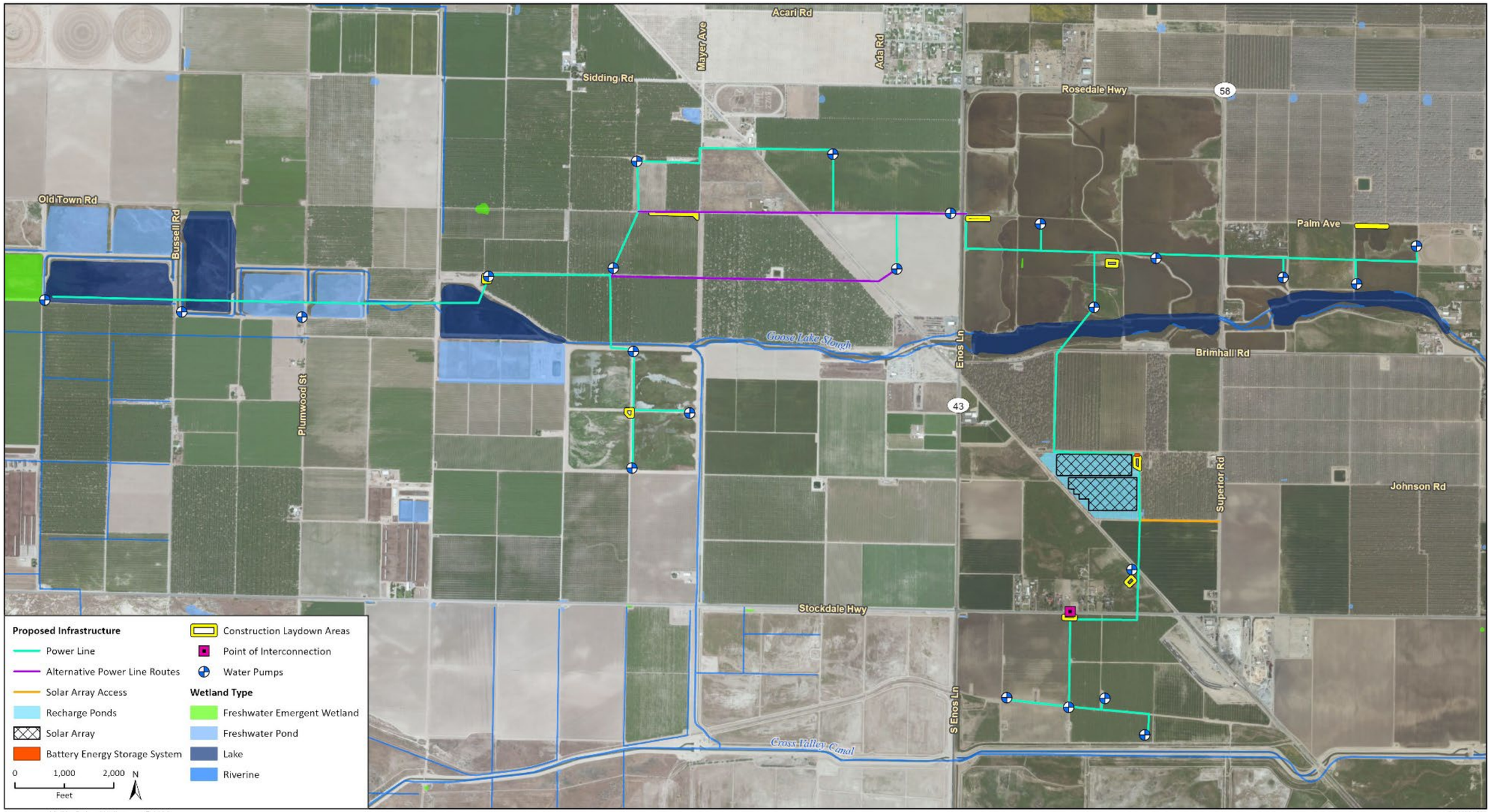
Vegetation within the project area generally consists of agricultural crops, ruderal margins, landscaped areas, or isolated patches of disturbed habitat. Agriculture consists of orchards, and row crops such as cotton and alfalfa. Developed areas include paved and dirt roadways, and bare agricultural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

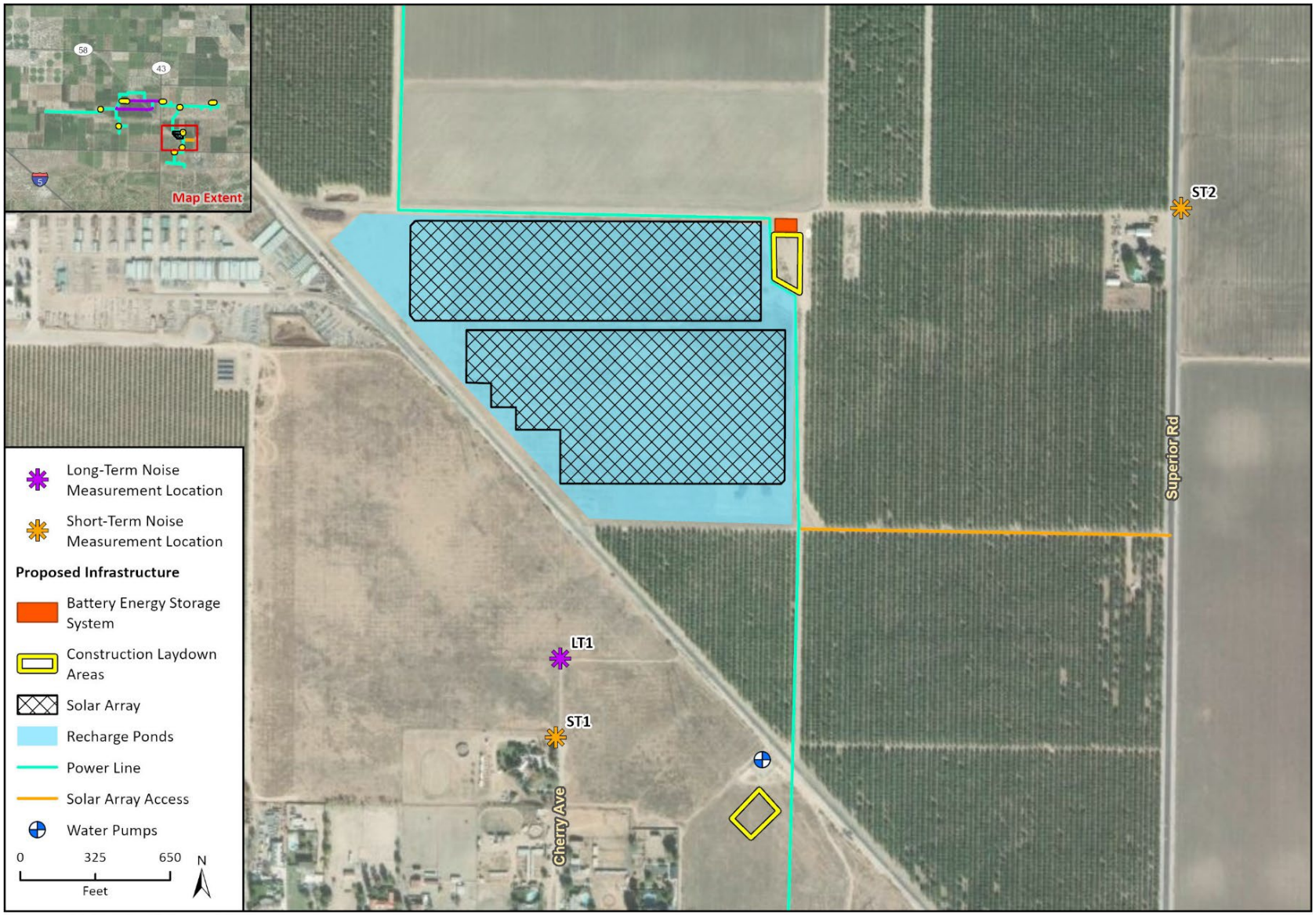
Graphical sound level measurement results are included in Appendix H.

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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