

COUNTY OF TULARE RESOURCE MANAGEMENT AGENCY



5961 South Mooney Boulevard
Visalia, CA 93277

Initial Study and Mitigated Negative Declaration

Tulare 40 Generation Facility (PSP 20-068)

April 2021

Prepared by
County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

INITIAL STUDY CHECKLIST

1. **Project Title:** Tulare 40 Generation Facility (PSP 20-068)
2. **Lead Agency:** County of Tulare
Resource Management Agency
5961 S. Mooney Blvd.
Visalia, CA 93277
3. **Contact Persons:** David Alexander, Planner II (Project Planner) – 559-624-7138
Hector Guerra, Chief, Environmental Planning Division – 559-624-7121
4. **Project Location:** The proposed Project is in an unincorporated area of southern Tulare County, California. The Project site is located approximately 5 miles east of the City of Tulare and is east of Road 152. The Project site is addressed as 23599 and 22996, Road 152. The northern proposed Project development area is located directly north of State Route (SR) 137/Avenue 232. The southern proposed development area is located approximately 0.4 miles south of SR 137/Avenue 232, approximately 100 to 300 feet south of Inside Creek. The site is located within the United States Geological Survey (USGS) Cairns Corner 7.5 Minute Quadrangle. It lies within Sections 2, 11, 12; Township 20 South; Range 25 East, MDB&M within APNs 195-070-025, 195-060-041, 195-060-050.
5. **Applicant:** Coldwell Solar I, LLC
500 Menlo Dr. # 100
Tulare CA 93274-9310
6. **Owner(s)** Wayne S. Mancebo and Karen L. Mancebo
14891 Avenue 232
Tulare CA 93274-9310
7. **General Plan Designation:** RVLP-Valley Ag
8. **Zoning:** AE-40 (Exclusive Agriculture – 40 Acre Minimum)
9. **Description of Project (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)** Coldwell Solar I, LLC (Applicant) is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. The Project site is divided into two (2) proposed development areas located directly north and approximately 0.4 miles south of SR 137/Avenue 232 (commonly locally referred to as the “Tulare-Lindsay Highway”), both directly east of Bliss Lane (Road 152). The installation would comprise approximately 129,000 fixed axis mounted solar modules, rated at 410 watts per module. It should be noted that watts per module may increase at time of Project construction; however, for planning purposes we have included an approximate module output of 410 watts. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries. The life of the Project is anticipated to be 35 years.

10. Surrounding land uses and setting (Brief description):

North: Scattered rural residences;

South: gas station, convenience store, and the Tulare Open Country Flea Market;

East: irrigated row crops and rural agriculture; and

West: irrigated row crops and rural agriculture

11. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement): Regional Water Quality Control Board, San Joaquin Valley Unified Air Pollution Control District, Caltrans, other TBD.

12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that include, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc? Pursuant to AB 52, a Sacred Land File request was submitted to the Native American Heritage Commission on January 25, 2021 and was returned with negative results. On February 23, 2021, tribal consultation notices were sent to sixteen (16) tribal contacts representing seven (7) Native American tribes. The County received no responses from the tribes within the 30-day response time. Mitigation measures have been included in the project to reduce potential impacts on tribal cultural resources in the unlikely event that any are unearthed during construction-related activities.

Figure 1. Vicinity Map

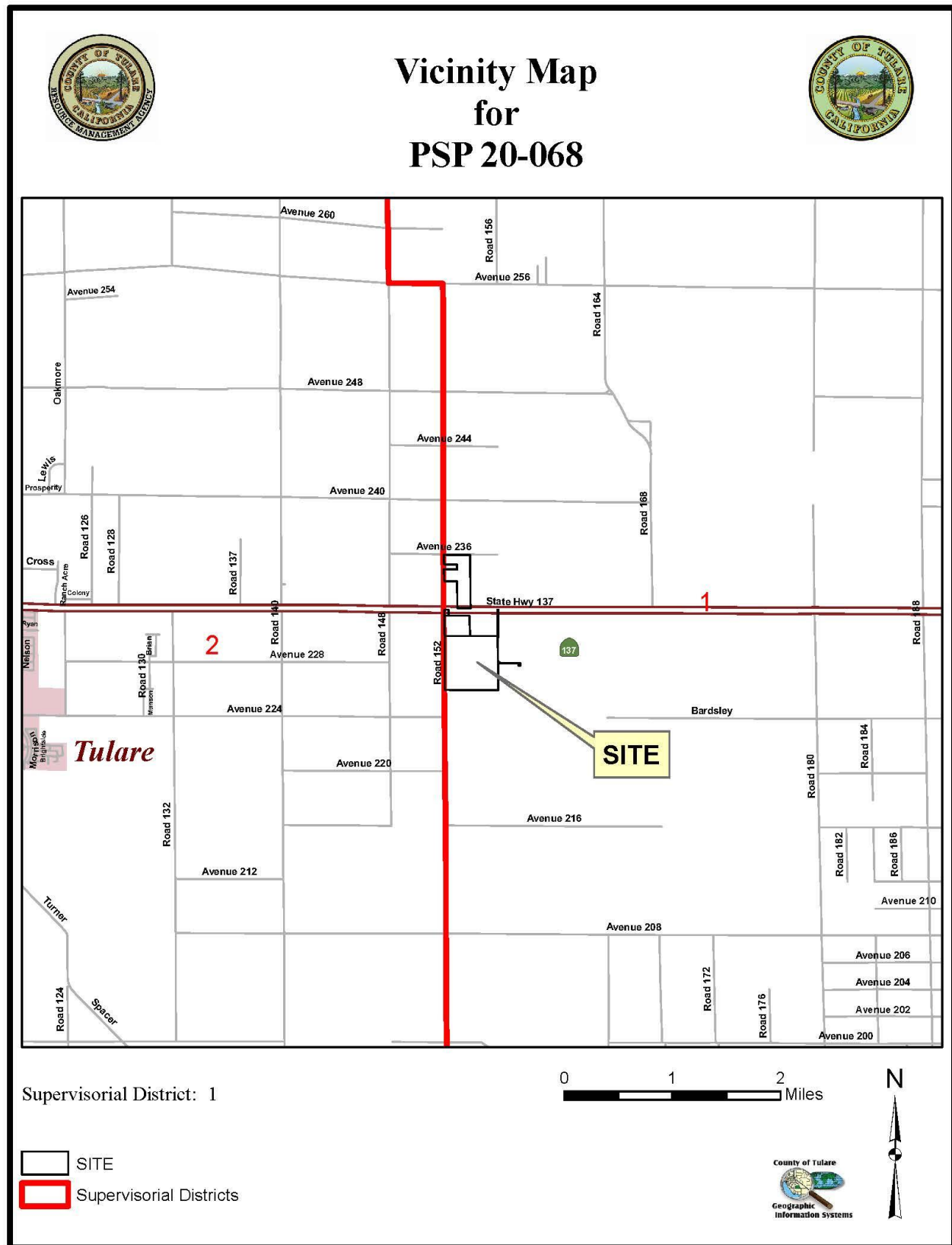


Figure 2. Aerial View of Site

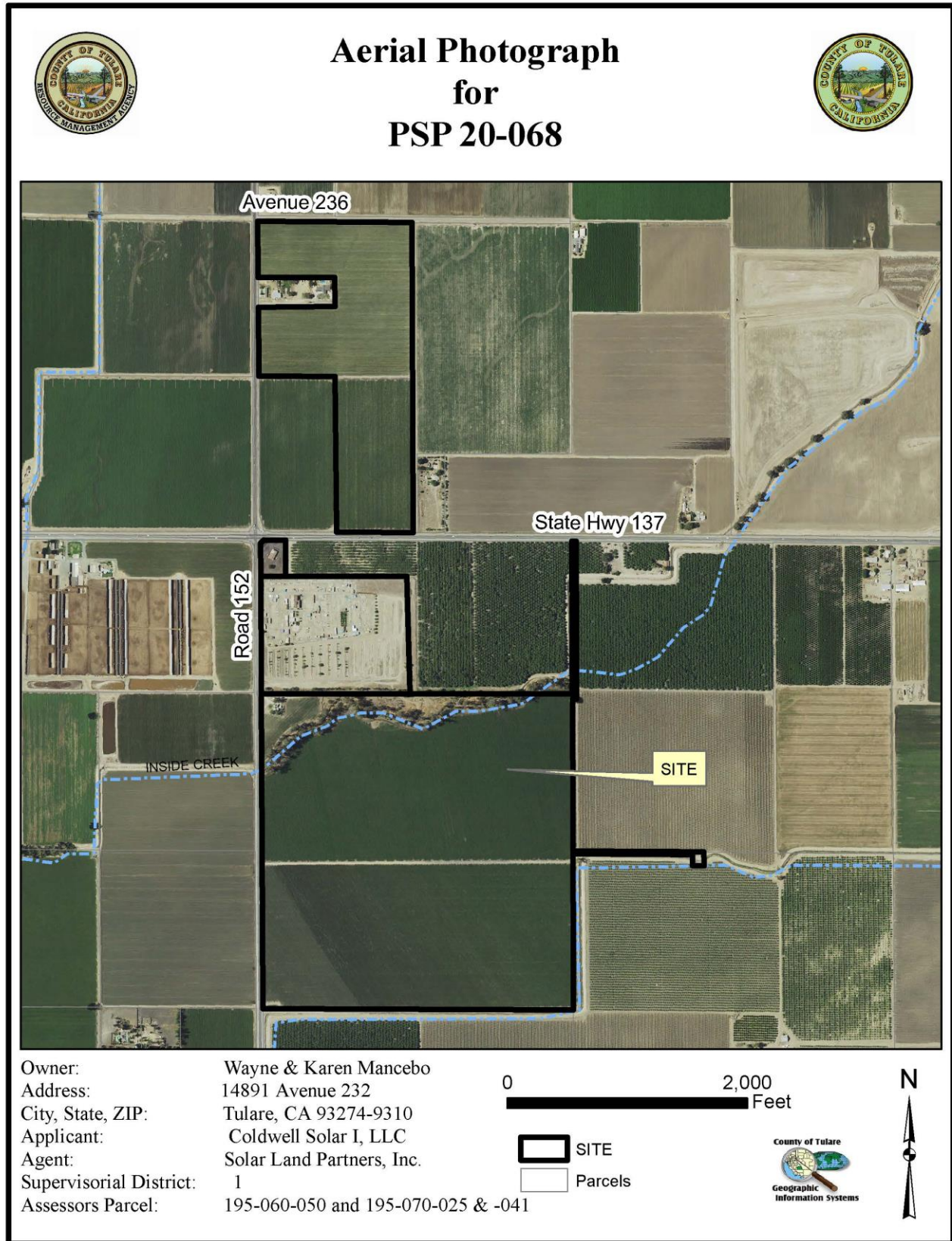


Figure 3. Zoning

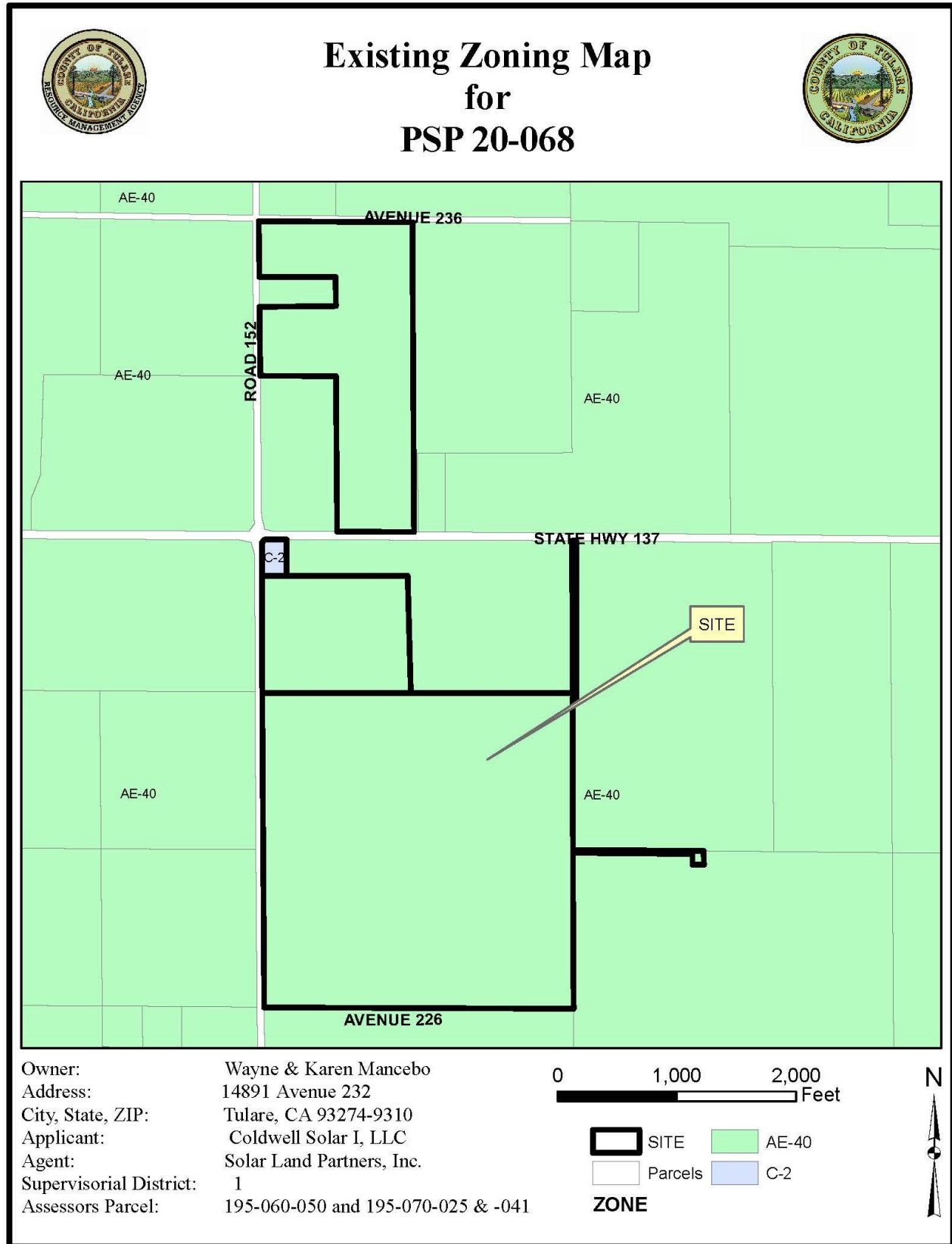


Figure 4A. Site Plan

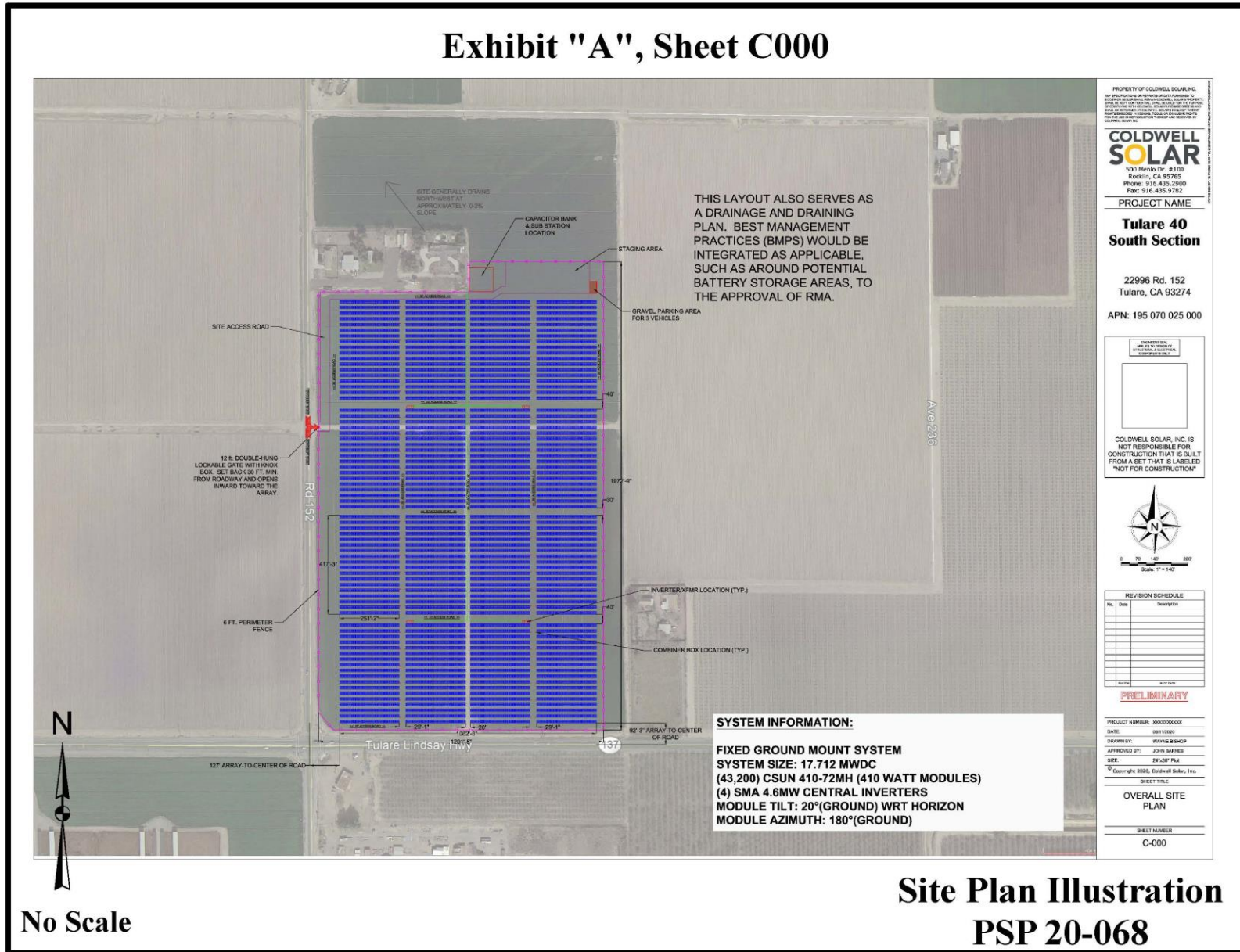
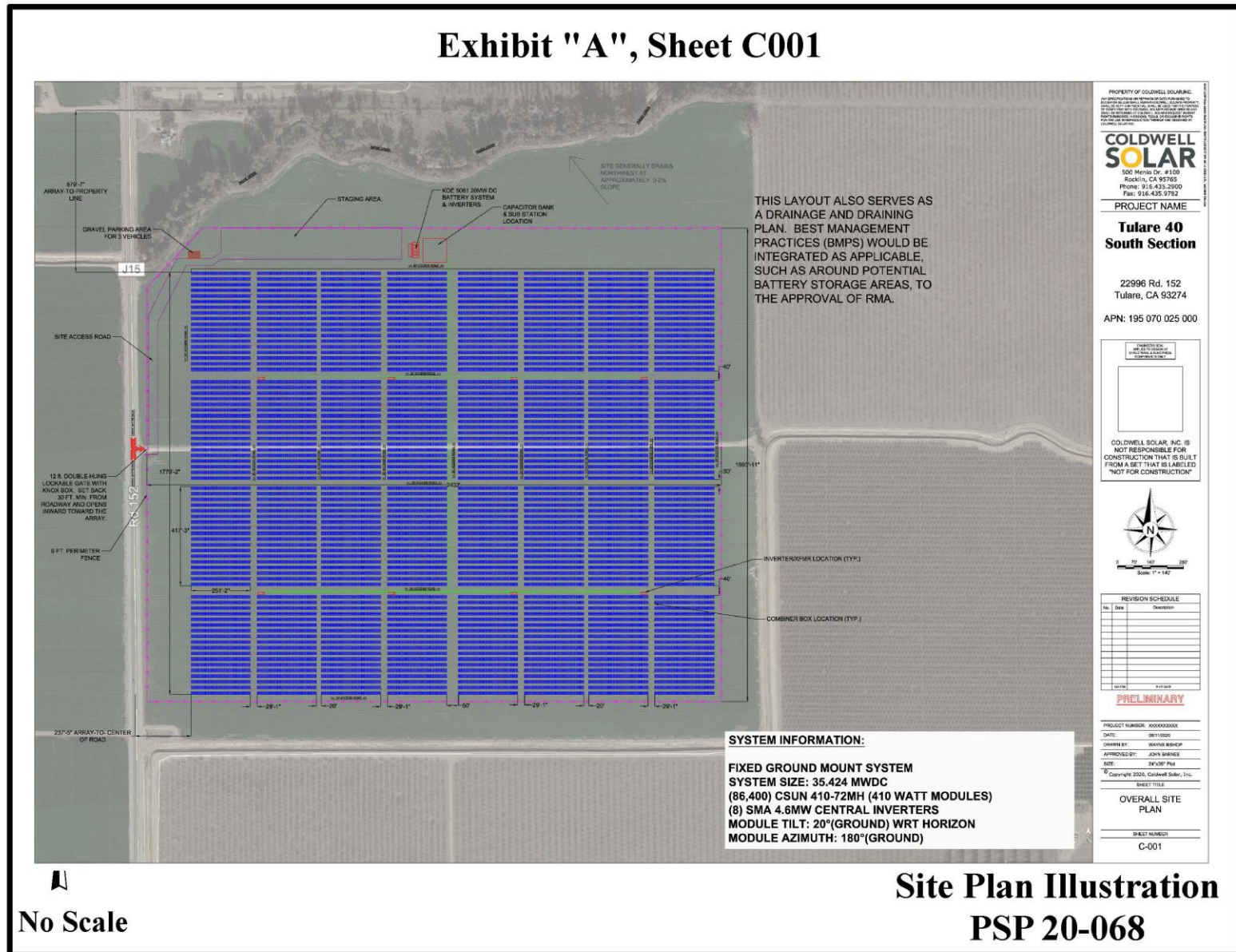


Figure 4B. Site Plan



A. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture / Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

B. DETERMINATION:

On the basis of 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 in the project have been made 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 "potentially significant unless mitigated" 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 potentially 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: _____

Hector Guerra
Printed Name

Date: _____

4.28.21
Chief Environmental Planner
Title

Signature: _____

Reed Schenke, P.E.
Printed Name

Date: _____

4/28/21
Environmental Assessment Officer
Title

C. EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

1. AESTHETICS					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies, with flat agricultural areas in the western portion of the County that gradually transform to the foothills and the Sierra Nevada mountain range to the east. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways through out the County, electric towers and telephone poles are noticeable. Mature trees, development, utility structures, and other vertical forms are highly visible in the region because of the flat terrain. Although, where such vertical elements are absent, views are expansive. The prevailing colors in the County are the greens and browns associated with agricultural land use. Most new structures are small, usually one story in height, through occasionally two story structures can be seen. Exceptions can be found in the downtown commercial areas of urban locations and in industrial agricultural complexes. Although the County provides a wide range of views from both mobile and stationary locations, a typical range of views is provided in Figures 3.1-3 through 3.1-6 [of the RDEIR].”¹ The proposed Project site is located on the San Joaquin Valley floor in an unincorporated area approximately five (5) miles east of the City of Tulare and abuts Road 152 to the west. The aesthetic features of the existing visual environment in the proposed Project area are relatively uniform, with broad, flat, agricultural setting landscapes. The Project site is located approximately 55 miles east of the Pacific Coast Range and approximately 12 miles west of foothills of the Sierra Nevada Mountain Range. Topographically, the Project site is flat (less than 2 percent slope across the site) with an average elevation of approximately 315 feet above mean sea level and has historically been used for grazing and irrigated row crop cultivation. The Project site is mapped by the Department of Conservation, Farmland Mapping and Monitoring Program with approximately 237 acres of “Prime” farmland (100 percent of the Project site) as rated by the Natural Resources Conservation Service (NRCS). Surrounding land is predominantly of similar rating for quality of agricultural land.

Regulatory Setting

Federal

Aesthetic resources are protected by several federal regulations, none of which are relevant to this Project because it will not be located on lands administered by a federal agency nor is the Project applicant requesting federal funding or any federal permits.

State

Nighttime Sky – Title 24 Outdoor Lighting Standards

The California Energy Commission (CEC) adopted changes to Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards), on November 5, 2003. These new Standards became effective on October 1, 2005. Included in the changes to the

¹ Tulare County 2030 General Plan: Recirculated Draft EIR (RDEIR). Page 3.1-11.

Standards are new requirements for outdoor lighting. The requirements vary according to which “Lighting Zone” the lighting equipment is located. The Standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone the project is located. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, alterations that increase the connected load, or replace more than 50% of the existing luminaires (for each outdoor lighting application that is regulated by the Standards) must comply with the lighting power allowances for newly installed equipment.

The Standards base the allowable lighting power on the brightness of the surrounding conditions. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; conversely, when the surrounding conditions are brighter, more light is needed to see. The least lighting power is allowed in Lighting Zone 1 and increasingly more lighting power is allowed in Lighting Zones 2, 3, and 4.

California Scenic Highway Program

The Scenic Highway Program allows county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program which was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. Two Eligible State Scenic Highways occur in Tulare County, SRs 198 and 190; however, they are not Designated State Scenic Highways.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 7 – Scenic Landscapes, contains the following goals and policies that relate to aesthetics, preservation of scenic vistas and daytime lighting/nighttime glare and which have potential relevance to the Project’s CEQA review: *SL-1.1 Natural Landscapes* which requires new development to not significantly impact or block views of Tulare County’s natural landscapes; *SL-1.2 Working Landscapes* which requires that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape; and *SL-2.1 Designated Scenic Routes and Highways* which is intended to protect views of natural and working landscapes along the County’s highways and roads by maintaining a designated system of County scenic routes and State scenic highways.

Project Impact Analysis:

- a) *Less Than Significant Impact:* For the purposes of this Project, a scenic vista is defined as an area that is designated, signed, and accessible to the public for the purpose of viewing and sightseeing. The Project site is located in unincorporated southern Tulare County in a generally undeveloped area on the floor of the San Joaquin Valley. The area surrounding the Project site is primarily rural agricultural land (i.e., scattered rural residences, active row crops, and small convenience stores) and the Project would be low-profile (that is, no building will be greater than 50’ feet in height). Zoning height limitations would restrict structures to not more than 50 feet to the uppermost part of the roof. No parts of the Project would obstruct local scenic views, be visually intrusive or incompatible with the surrounding area, or be visible to large numbers of sensitive receptors. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. Also, there are no designated scenic vistas within visible distance of the Project site (County of Tulare, 2010). The Applicant will install motion activated lighting which would be hooded and directed downward to minimize off-site light and glare. Therefore, the Project would have less than significant impact on a scenic vista.
- b) *No Impact:* There are no rock outcroppings, historic buildings, or other designated scenic resources within or near the Project site. The California Scenic Highway Program allows counties to nominate an eligible scenic highway to be approved by the California Department of Transportation and placed under the scenic corridor protection program. In Tulare County, there is currently one officially designated scenic highway, and two highways that are eligible for designation. Approximately two miles of the officially designated Scenic Highway (State Route) 180 passes through Tulare County, but this segment of SR 180 is greater than 20 miles north of the Project site. Additionally, there are two Eligible State Scenic Highways (SR 190, approximately eleven miles south; and SR 198, approximately eight miles north), but neither of these are near the Project site. As such, the Project is not located within the viewshed of any of the listed designated or eligible highway segments.

Additionally, the County of Tulare identified a number of County Scenic Roads in its 2012 General Plan Update; however, none of the roads are near or within the vicinity of the Project site. As a result, the Project would have no impact on existing scenic resources or highways. As noted earlier, the Project is located in a relatively flat area and does not contain scenic resources such as significant trees, rock outcroppings, or historic buildings. Therefore, there would be no impact to an eligible or designated state scenic highway or other scenic resources as a result of the proposed Project.

- c) *No Impact:* As noted earlier, the Project site is located in an isolated, rural, predominantly agricultural area. The remoteness of the site, the absence of persons (there are only a few scattered, rural residences near the site), and the likely low average daily vehicle trips per day (based on the absence of traffic generating uses, for example, commercial, industrial, higher residential, etc.) do not avail the site to a significant number of opportunities for the site to result in an adverse impact to public views or vantage points viewing. As such, even though the Project location is in a non-urbanized area, it would not substantially degrade the existing visual character or quality of the site and its surroundings. Therefore, the project would not conflict with applicable zoning and other regulations governing scenic quality resulting in no impact to this resource.
- d) *Less Than Significant Impact:* As noted in Item a) of this resource, the applicant will install motion activated lighting which would be hooded and directed downward to minimize off-site light and glare. As such, the Project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area resulting in a less than significant impact to this resource.

Cumulative Impact Analysis: *No-to-Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if proposed Project specific impacts were to occur. There are no designated scenic vistas on the Project site or within the proposed Project vicinity. Although the proposed Project will result in a change to the existing visual setting, the proposed Project will not substantially degrade the existing visual character or quality of the site and its surroundings. As with the proposed Project, other cumulative projects will be required to comply with Tulare County requirements (i.e., setbacks) to minimize potential visual impacts. The proposed Project will not create a new source of substantial light or glare which will adversely affect day or nighttime views in the area. All lighting associated with the Project will be subject to County approval and compliance with Tulare County requirements. Therefore, a less than significant cumulative impact will occur related to this Checklist Item.

2. AGRICULTURAL AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the Rural Valley Lands Plan point evaluation system prepared by the County of Tulare as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Conflict with existing zoning for agriculture use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	12220(g), timberland (as defined in Public Resource 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The proposed Project site is located in the San Joaquin Valley portion of Tulare County. As indicated in the Tulare County Farm Bureau's "Facts about Agriculture"; "Tulare County leads the nation in dairy production. Milk continues to be the leading agricultural commodity worth \$1.61 billion in the 2019 Tulare County Crop & Livestock Report."²

The 2019 Tulare County Crop and Livestock Report stated "Tulare County's total gross production value for 2019 was \$7,505,352,100. This represents an increase of \$292,048,700 or 4% above 2018's values of \$7,213,303,400. Milk continues to be the leading agricultural commodity in Tulare County; with a gross value of \$1,612,070,000, a decrease of \$71,677,000 or 4.3%. Milk represents 21.5% of the total crop and livestock value for 2019. Total milk production decreased by 11%. Livestock and Poultry's gross value of \$665,379,000 represents a decrease of 4.2% below 2018, mostly due to a lower per unit value for cattle."³ "Tulare County's agricultural strength is based on diversity of the crops produced. The 2019 report covers more than 120 different commodities, 44 of which had a gross value in excess of \$1,000,000. Although individual commodities may experience difficulties from year to year, Tulare County continues to produce high-quality crops that provide food and fiber to more than 96 countries throughout the world."⁴

According to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), in 2012 agricultural lands in Tulare County included 860,120 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 439,940 acres of grazing land.

Tulare County Farmland Conversion

Tulare County specific data from the period 2014-2016 indicates that agricultural lands in Tulare County in 2016 (the most recent report) included 858,119 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 439,934 acres of grazing land, for a total of 1,298,053 acres of agricultural land.⁵

Farmlands of Statewide Importance are defined as "lands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date."⁶

As presented in **Table AG-1**, the Farmland Mapping and Monitoring Program's 2015 California Farmland Conversion Report notes that 1,097,728 acres of farmland with Tulare County is under California Land Conservation Act (Williamson Act) contracts; a program designed to prevent premature conversion of farmland to residential or other urban uses. As of 2015, there were 1,097,728 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County divided by the following categories: 565,200 acres of Williamson Act prime, 521,376 acres nonprime, and 11,152 acres of Farmland Security Zone lands (The acreage totals also include 6,283 acres of Williamson Act prime contract land in nonrenewal and 10,848 acres of Williamson Act of nonprime contract land in renewal.⁷

² Tulare County. Crop & Livestock Report 2019. Accessed March 2021 at: <https://agcomm.co.tulare.ca.us/ag/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2019-crop-report/>.

³ Ibid.

⁴ Op Cit.

⁵ California Department of Conservation, Division of Land Resource Protection. Department of Conservation. Farmland Mapping and Monitoring Program. Table 2014-2016. Table A-44, Part I. Accessed March 2020 at: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>.

⁶ Ibid.

⁷ California Department of Conservation, Division of Land Resource Protection. Farmland Mapping and Monitoring Program California Farmland Conversion Report 2015. Accessed March 2020 at: https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf.

This same data indicates that farmland acreage in the County has generally been decreasing for each two-year period between 1998 and 2006. In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010. However, Tulare County specific data from the period 2014-2016 indicates that agricultural lands in Tulare County in 2014 included 859,171 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 439,961 acres of grazing land, for a total of 1,299,132 acres of agricultural land.⁸

Farmlands of Statewide Importance are defined as “lands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.”⁹

As presented in **Table AG-1**, the California Land Conservation Act of 1965 2016 Status Report (December 2016) notes that 1,093,126 acres of farmland with Tulare County is under California Land Conservation Act (Williamson Act) contracts; a program designed to prevent premature conversion of farmland to residential or other urban uses. The 1,093,126 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County divided by the following categories: 569,028 acres of Williamson Act prime, 512,946 acres nonprime, and 11,052 acres of Farmland Security Zone lands (The acreage totals also include 175 acres of Williamson Act prime contract land in nonrenewal and 15,731 acres of Williamson Act of nonprime contract land in nonrenewal.)¹⁰

Table AG-1¹¹	
2015 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts	
Acres	Category
569,028	Total prime = Prime active + NR Prime
512,946	Total Nonprime = Nonprime active + NR Prime
11,052	Farmland Security Zone
1,093,126	TOTAL ACRES in Williamson Act and Farmland Security Zone contracts

Important Farmland Trends

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998.¹² In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010; 13,815 acres of important farmland, and 14,216 acres of total farmland between 2010 and 2012; and 17,441 acres of important farmland, and 17,678 acres of total farmland between 2012 and 2014; and 12,547 acres of important farmland, and 13,086 acres of total farmland between 1998 and 2016.¹³ **Table AG-2** shows Tulare county FMMP Designated Land from 1998-2016; while **Table AG-3** shows the information for 2016-2018.

“For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer).”¹⁴

⁸ California Department of Conservation. Division of Land Resource Protection. Department of Conservation. Farmland Mapping and Monitoring Program. Table 2012-2014. Table A-44. Part I. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>. Accessed October 20, 2015. The California Farmland Conversion Report 2008-2010 can be found at <http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2008-2010/fcr/FCR%200810%20complete.pdf>.

⁹ Ibid.

¹⁰ California Land Conservation Act of 1965 2016-17 Status Report. August 2019. Pages 38 and 42. Accessed at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf

¹¹ California Department of Conservation. Division of Land Resource Protection. The California Land Conservation Act of 1965 2016 Status Report. Accessed March 2020 at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf

¹² California Department of Conservation. Division of Land Resource Protection. The California Land Conservation Act of 1965 2016 Status Report. Accessed March 2020 at: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf.

¹³ California Department of Conservation. Tulare County Land Use Conversion. Farmland Mapping and Monitoring Program. Tables 2008-2010, 2010-2012, 2012-2014 and 2014-2016. Table A-44. Accessed March 2020 at: <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>.

¹⁴ Tulare County General Plan 2030 Update Recirculated Draft EIR (SCH # 2006041162). Page 3.10-6. And, Tulare County General Plan 2030 Update Background Report. Page 4-25.

**Table AG-2
Tulare County FMMP-Designated Land (1998-2016)**

Farmland Category	Total Acres Inventoried								
	1998 ¹⁵	2000 ¹⁶	2002 ¹⁷	2004 ¹⁸	2006 ¹⁹	2010 ²⁰	2012 ²¹	2014 ²²	2016 ²³
Prime Farmland	396,130	393,030	387,620	384,340	379,760	370,249	368,527	366,414	366,136
Farmland of Statewide Importance	357,220	351,720	345,760	339,580	332,160	323,599	321,296	320,886	322,355
Unique Farmland	11,790	11,720	12,750	12,530	12,220	11,593	11,474	11,421	11,691
Important Farmland Subtotal	765,140	756,470	746,130	736,450	724,140	705,441	701,297	859,171	858,119
Farmland of Local Importance	110,040	124,140	126,820	137,440	143,830	154,550	158,823	160,450	157,937
Grazing Land	439,960	434,050	440,550	440,620	440,140	440,042	439,940	439,961	439,934
Total	1,315,140	1,314,660	1,313,500	1,314,560	1,308,110	1,300,033	1,300,060	1,299,132	1,298,053

**Table AG-3
Tulare County FMMP-Designated Land (2016-2018)²⁴**

Land Use Category	Total Acreage Inventoried 2016	Total Acreage Inventoried 2018	2016-18 Acres Lost (-)	2016-18 Acres Gained (+)	2016-18 Total Acreage Changed
Prime Farmland	366,137	365,943	2,262	2,068	4,330
Farmland of Statewide Importance	322,354	326,476	2,544	6,666	9,210
Unique Farmland	11,693	11,812	275	394	669
Farmland of Local Importance	157,938	153,782	8,285	4,129	12,414
Important Farmland Subtotal	858,122	858,013	13,366	13,257	26,623
Grazing Land	439,933	440,213	296	576	872
Agricultural Land Subtotal	1,298,055	1,298,226	13,662	13,833	27,495
Urban and Built-up Land	64,618	66,115	322	1,818	2,141
Other Land	218,599	216,932	3,251	1,584	4,835
Water Area	4,656	4,655	1	0	1
Total Area Inventoried	1,585,928	1,585,928	17,236	17,236	34,472

Forest Lands

“Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests.”²⁵

¹⁵ Tulare County General Plan 2030 Update Recirculated Draft EIR Sch#2006041162. Table 3.10-4.

¹⁶ Ibid.

¹⁷ Op. Cit.

¹⁸ Op. Cit.

¹⁹ Op. Cit.

²⁰ Tulare County Resource Management Agency. Tulare County Subvention Report for Fiscal Year 2012-2013 (submitted to Department of Conservation, November 2012).

²¹ Ibid.

²² California Department of Conservation. Division of Land Resource Protection. Farmland Mapping and Monitoring Program. Table 2014-2016. Table A-44, Part I.

Accessed March 2020 at: <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>.

²³ Ibid.

²⁴ Op. Cit. Alternate Tulare County 2016-2018 Land Use Conversion. Table A-44. Accessed April 2021 at:

https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2016-2018/alternate_conversion/Alternate_Tulare_County_2016-2018_Land_Use_and_Rural_Conversion.pdf.

²⁵ Ibid. 4-20.

As the proposed Project is located on the Valley floor, there is no timberland or forest in the Project vicinity.

Regulatory Setting

Federal

Federal regulations for agriculture and forest resources are not relevant to this project because it is not a federal undertaking (the Project site is not located on lands administered by a federal agency, and the Project applicant is not requesting federal funding or any federal permits).

State

California Environmental Quality Act (CEQA) Definition of Agricultural Lands

Public Resources Code Section 21060.1 defines “agricultural land” for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP serves as a tool to analyze agricultural land use and land use changes throughout California. As such, this Project is being evaluated using the FMMP pursuant to CEQA.

California Department of Conservation, Division of Land Resource Protection

The California Department of Conservation (DOC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands. These agricultural designations are used in planning for the present and future of California’s agricultural land resources. Pursuant to the DOC’s FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM). As noted earlier the FMMP was established in 1982 to assess the location, quality and quantity of agricultural lands, and the conversion of these lands. The FMMP serves as tool to analyze agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The following list provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are referred to as Farmland.²⁶

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

²⁶ California Department of Conservation. FMMP – Important Farmland Map Categories. <https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx>. Accessed May 2019.

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

California Land Conservation Act (Williamson Act)

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The Department of Conservation assists all levels of government, and landowners in the interpretation of the Williamson Act related government code. The Department also researches, publishes and disseminates information regarding the policies, purposes, procedures, and administration of the Williamson Act according to government code. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the Act within their jurisdiction. These rules include but are not limited to: enrollment guidelines, acreage minimums, enforcement procedures, allowable uses, and compatible uses.²⁷

Williamson Act Contracts are formed between a county or city and a landowner for the purpose of restricting specific parcels of land to agricultural or related open space use. Private land within locally-designated agricultural preserve areas are eligible for enrollment under a contract. The minimum term for contracts is ten years. However, since the contract term automatically renews on each anniversary date of the contract, the actual term is essentially indefinite. Landowners receive substantially reduced property tax assessments in return for enrollment under a Williamson Act contract. Property tax assessments of Williamson Act contracted land are based upon generated income as opposed to potential market value of the property.²⁸

Forestry Resources

State regulations regarding forestry resources are not relevant to the proposed project because no forestry resources exist at the Project site.

Local

County of Tulare

On February 26, 2013, per Resolution No. 2013-0104, Tulare County adopted a two-level review process for evaluating the siting of public and private utility structures on agricultural zoned land to analyze potential agricultural conversion impacts. The first level of review pertains to all agricultural zoned lands, while the second level applies to lands under Williamson Act contract. Level II states that a project should adhere to all the criteria noted in Level I.

Level I: Agricultural Zoned Lands

- a) Public and private utility structures on lands other than irrigated prime farmland, as defined in Level I, Section C, may be permitted subject to findings and conditions. Desired locations include marginal or impaired lands, land with insufficient water supplies for viable agricultural production or in the UDB, UAB, HOB areas of the County for agricultural buffers. The Project is consistent with the “other than irrigated prime farmland” criterion because the approximately 237 acres (100%) of the project site historically mapped as Prime Farmland will not be permanently removed as agricultural acreage, it is being re-purposed for an anticipated 35-year timeframe thereby preserving the land for future cropland use.
- b) Should be in proximity to the electrical grid/corridor/electrical substation or end user. The proposed Project will establish a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation.
- c) Should not support, unless a unique proposal is approved by the Board of Supervisors, the siting of public and private solar utility structures located outside of UDB, UAB, HOB areas of the County on irrigated prime farmland as defined by any of the following criteria:

²⁷ California Department of Conservation. Williamson Act Program. <https://www.conservation.ca.gov/dlwp/wa>. Site accessed March 2021.

²⁸ California Department of Conservation. Site accessed March 2021 at: <https://www.conservation.ca.gov/dlwp/wa/Pages/contracts.aspx..>

- i. Identified as Prime farmland by the FMMP. As noted above, 100 percent of the entire Project site's approximately 237 acres is considered Prime Farmland as rated by the Natural Resources Conservation Service (NRCS).
- ii. Identified as Class I Soil by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). The Project site is considered to be prime farmland for its approximately 237 acres of the entire site; although only 165 acres will be developed for the proposed Project with the remain 72 acres would remain undeveloped with the option for the property owner to continue agricultural uses.²⁹. The NRCS Non-Irrigated Land Capability Classification System evaluates the suitability of soils for most types of field crops. Soils are then grouped in capability classes that describe the limitations that the soil class might present for crop cultivation. The Class groups are numbered from 1 through 8 (USDA/NRCS, 2018). The capability classes of the soil types of the Project site are presented below in **Table AG-4**. Although the Copien, Flamen, and Nord fine sandy loam soils (which make up approximately 165 acres, or 100% of the soils within the Project site) are rated as "Prime farmland" by the NRCS, this classification only applies if the area is irrigated and either protected from flooding or not frequently flooded during the growing season. If left un-irrigated, the soil is not considered as Prime Farmland.

TABLE AG-4			
Soil Information for Project Sites			
Map Unit Symbol	Map Unit Name	Non-Irrigated Capability Class	Acreage/Site Percentage
Southern Area			
116	Flamen loam, 0 to 2 percent slopes	4	110 acres/100%
Northern Area			
108	Copien loam, 0 to 2% slopes	4	20 acres/36%
130	Nord fine sandy loam, 0 to 2 percent slopes	4	35 acres/64%
Source: USDA/NRCS 2020 accessed at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx			

As shown in **Table AG-4**, all soils within the Project site have a Non-Irrigated Capability Class of 4 meaning that the soils "have severe limitations that reduce the choice of plants or that require very careful management, or both" (USDA, 2019).

- iii. Land having been actively farmed in permanent crops at least one year during the past ten years. The land has been planted to row crops. Therefore, solar development of the site does not require removal of any permanent crops (such as orchards or vineyards)
- d) Should not support the removal of permanent crops when there is sufficient water available for continued crop production on lands outside of UDB, UAB and HOB areas of the County regardless of soil capability classification. As noted earlier, the Project site has been planted to row crops and would not result in the removal of permanent crops. Further, the Applicant estimates that 24,000 to 48,000 gallons per year would be used to wash solar panels, which is less water per year than row crops would use.
- e) Identify sources of water not limited to well, irrigation canal, water transfer and conduct water availability analysis demonstrating either (1) the insufficiency of adequate water supplies for continued crop production, or (2) the infeasibility of continued agricultural activities on the subject property. This analysis must include input from the water district, or other water authority. The proposed Project is not supplied by, or located within, any urban water management planning area. Nor is it located within any agricultural or urban water districts, or other public or private utilities that deliver water to the end user. The Project would import water via trucks to supply water as necessary (that is, to supply watering trucks used to minimize dust during construction-related activities and for solar panel washing approximately two time per year).
- f) Analyze the potential negative impacts on neighboring farming operations and mitigate for those impacts including, but not limited, to increases in invertebrate and vertebrate pest and invasive plant species. The Mitigation Monitoring Reporting Program (MMRP) will mitigate potential negative impacts as identified in this Initial Study. Also, conditions of approval

²⁹ Project and Operations Description for the Proposed Tulare 40 Project Unincorporated Portion of Tulare, California (APN 195-070-025, APN 195-060-041, APN 195-060-40). December 2020 (Project and Operations Description). Page 3. Prepared by Wood Environment & Infrastructure Solutions, Inc., for Coldwell Solar 1, LLC. See Attachment "D" of this IS/MND.

will require removal of combustible material from the site; the submission of a soil reclamation plan; fencing; dust management; on-site parking; etc. These measures will ensure impacts on neighboring farm operations will be less-than-significant. Therefore, the proposed Project is consistent with the “neighboring farming operations” criterion.

- g) Should not impede or reduce the productive agricultural capacity of the land for future uses. Thus, reclamation of the land to its previous agricultural condition is crucial and appropriate financial assurances are essential. The proposed solar facility represents a conversion of farmland with a life of approximately 35 years. It is unknown at this time if the solar facility may extend beyond 35 years. As a condition of approval, a Reclamation Plan would be submitted as a part of the permit application materials. This Reclamation Plan would provide financial assurances along with a detailed plan to remediate soils and return the land to its original pre-construction condition upon termination of the Project.

As described in the Project Description, the proposed life of the Project is 35 years. The Applicant would finalize and submit to the County for approval, a Decommissioning and Reclamation Plan, and attendant bond. The Decommissioning and Reclamation Plan would include the methods for removing all solar panels, demolishing and removing all support racks and structures, and removal of all infrastructure (road, foundations), which is assured according to the lease agreement with the property owner and through the agreement on and posting of a reclamation bond with the County.

The Project site would be leveled where needed and the onsite soil would be reclaimed to a condition that would again support agriculture. The Decommissioning and Reclamation Plan would include a summary of specific measures to restore the soil to its pre-Project condition, including removal of all fixtures, equipment, non-agricultural roads, and restoration of compacted soil. Reclamation would be completed within 120 days of the expiration of the County special use permit. The modules and ancillary materials would be sold and reused or recycled to minimize impact on the environment.

At the time of re-use, the zoning/land use designations will be used to determine the Project site’s highest and best use. As a result, the Project would result in a less than significant impact on this item.

- h) Require developer agreements that include cost recovery, loss of crop production and/or subvention funds, removal of facility and reclamation requirements, and other Tulare County financial incentives. A condition of approval will require the Project proponent to enter into the “Developer Agreement and Reclamation Plan for the Solar Photovoltaic Electric Generating Facility”, adopted on August 31, 2010 by Board of Supervisors Resolution 2010-0717. Therefore, the proposed Project is consistent with the “developer agreement” criterion.
- i) Require Sales and Use Tax Agreements to maximize capture of sales and use tax revenue. A condition of approval will require the Project proponent to enter into the “Agreement For Allocation of Sales and Use Tax Revenues and Limitations on Transfer of the Project to Nontaxable or Tax Exempt Entities”, adopted by the Board of Supervisors on February 28, 2012 by Resolution 2012-0187. Therefore, the proposed project is consistent with the “Sales and Use Tax Agreements” criterion.

Level II: Agricultural Zoned Lands Under Williamson Act Contracts

- a) Adhere to all criteria noted in Level I to be completed. Please see above.
- b) Review Resolution No. 89-1275 - Uniform Rules for Agricultural Preserves - and Resolution No. 99-0620 establishing Rules for Farmland Security Zones to insure compatibility. The Tulare County Board of Supervisors defined allowable uses on contracted lands in Resolution No. 89-1275, which established Uniform Rules for Agricultural Use. Resolutions No. 89-1275 and No. 99-0620 established the construction of gas, electric, water, and community utility facilities as compatible uses for lands under a Williamson Act Contract. Public and private utility structures were determined to be a compatible use on lands under Williamson Act Contract with Resolution No 2010-0717. Under Resolution No. 2010-0590, the Tulare County Board of Supervisors determined that solar generating facilities are a compatible use in Exclusive Agriculture Zone Districts subject to conditions of approval set forth in Special Use Permits.
- c) Review Williamson Act Contract Contents to insure compatibility. Williamson Act – Land Conservation Contracts Nos. 3528 and 3529 were recorded February 2, 1970 (Box 2879, Pages 227 and 232, respectively). The Tulare County Board of Supervisors defined allowable uses on contracted lands in Resolution No. 89-1275, which established Uniform Rules for Agricultural Use. Resolutions No. 89-1275 and No. 99-0620 established the construction of gas, electric, water, and community utility facilities as compatible uses for lands under a Williamson Act Contract. Public and private utility structures were determined to be a compatible use on lands under Williamson Act Contract with Resolution No 2010-0717. Under Resolution No. 2010-0590, the Tulare County Board of Supervisors determined that solar generating facilities are a

compatible use in Exclusive Agriculture Zone Districts subject to conditions of approval set forth in Special Use Permits. The proposed Project is therefore compatible with the Williamson Act contracts applicable to the Project site.

Project Impact Analysis:

- a) *Less Than Significant Impact:* As noted earlier, the Tulare County Board of Supervisors (Board) approved Resolution No. 2013-0104 on February 26, 2013, whereby Tulare County adopted a two-level review process for evaluating the siting of public and private utility structures on agricultural zoned land to analyze potential agricultural conversion impacts. As indicated above, this Project is consistent with the Board adopted resolutions. As such, the Project would not result in the Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. Upon ultimate decommissioning of the site, it will be reclaimed to the extent that agricultural production may be re-initiated. Implementation of the site's Reclamation Plan would result in a less than significant impact to this resource.
- b) *Less Than Significant Impact:* The Project site is zoned AE-40 (Exclusive Agriculture- 40 acre minimum). Additionally, two Project site parcels are under Williamson Act Contract. The Williamson Act enables local governments to enter into contracts with private landowners that restrict land use to agricultural or related uses in return for lower property tax assessments. Local governments are responsible for the implementation of this program; therefore, the rules that determine compatible uses within a contract vary by jurisdiction. As noted earlier, The Tulare County Board of Supervisors defined allowable uses on contracted lands in Resolution No. 89-1275, which established Uniform Rules for Agricultural Use. Resolutions No. 89-1275 and No. 99-0620 established the construction of gas, electric, water, and community utility facilities as compatible uses for lands under a Williamson Act Contract. Public and private utility structures were determined to be a compatible use on lands under Williamson Act Contract with Resolution No 2010-0717. Under Resolution No. 2010-0590, the Tulare County Board of Supervisors determined that solar generating facilities are a compatible use in Exclusive Agriculture Zone Districts subject to conditions of approval set forth in Special Use Permits.

Resolutions 2010-0717 and 2013-0104 subsequently created a two-level process through which solar facility projects can be found as a compatible use on Williamson Act Contracted lands. This allows impaired agricultural lands to be put to the highest and best use without cancelling the Williamson Act Contract, therefore preserving the option to return to farming the land in the future. Pending the approval of the Special Use Permit for the proposed Project and the approval of findings of compatibility under the Williamson Act, the Project would present a temporary change in land use that has been found to be compatible with the terms of the existing Williamson Act contract on the Project site. Therefore, the proposed Project would not conflict with existing zoning or a Williamson Act Contract and no impact would occur.

- c) and d) *No Impact:* The Project will not occur on land zoned as forest land or timberland, or result in a loss of forest land. As such, the Project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources code 12220(g), timberland (as defined in Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- e) *No Impact:* The Project site is not located near land zoned as forest land or timberland and therefore would not result in any changes in the environment that might convert forest land to non-forest land. The proposed Project would result in the use of approximately 237 acres of farmland to a non-agricultural use for approximately 35 years. However, as discussed earlier, this conversion is planned as temporary and in accordance with existing land use policies and regulations. Land surrounding the Project site is a mix of agriculturally productive lands, a developed area which supports a gas station, convenience store, a flea market, and scattered rural residences. As discussed in the Project Description, construction-, operation-, maintenance-, and decommissioning-related activities would take place within Project site boundaries. The proposed Project is not anticipated to involve changes to the environment that are different than impacts to the environment from agricultural production. Additionally, during construction- and decommissioning-related activities, Best Management Practices such as erosion prevention measures and dust-minimization measures (including those required by the San Joaquin Valley Air Pollution Control District) would be employed to limit the impact of the proposed Project on adjacent properties. Maintenance activities during Project operation would be minimal and limited to maintenance of facility components and washing the panels periodically. Therefore, no other changes to the environment are anticipated that could result in the conversion of farmland to non-farmland. There would be no impact on this item.

Cumulative Impact Analysis: *No-to-Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

As indicated above, this Project is consistent with the Board adopted resolutions. As such, the Project would not result in the Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. As noted earlier, the Tulare County Board of Supervisors defined allowable uses on contracted lands in Resolution No. 89-1275, which established Uniform Rules for Agricultural Use. Resolutions No. 89-1275 and No. 99-0620 established the construction of gas, electric, water, and community utility facilities as compatible uses for lands under a Williamson Act Contract; Via Resolution No 2010-0717, Public and private utility structures were determined to be a compatible use on lands under Williamson Act Contract; while via Resolution No. 2010-0590, the Tulare County Board of Supervisors determined that solar generating facilities are a compatible use in Exclusive Agriculture Zone Districts subject to conditions of approval set forth in Special Use Permits. The Project will not occur on land zoned as forest land or timberland, or result in a loss of forest land. As such, the Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. Lastly, no other changes to the environment are anticipated that could result in the conversion of farmland to non-farmland.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:					
a)	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB), a continuous inter-mountain air basin. The Sierra Nevada Range forms the eastern boundary; the Coast Range forms the western boundary; and the Tehachapi Mountains form the southern boundary. These topographic features restrict air movement through and beyond the SJVAB. The SJVAB is comprised of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties and the valley portion of Kern County; it is approximately 25,000 square miles in area. Tulare County lies within the southern portion of the SJVAB. Air resources in the SJVAB is managed by the San Joaquin Valley Air Pollution Control District (Air District).

Regulatory Setting

Both the federal government (through the United State Environmental Protection Agency (EPA)) and the State of California (through the California Air Resources Board (ARB)) have established health-based ambient air quality standards (AAQS) for six air pollutants, commonly referred to as "criteria pollutants." The six criteria pollutants are: carbon monoxide (CO), ozone (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb).

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for each criteria pollutant to protect the public health and welfare. The federal and state standards were developed independently with differing purposes and methods, although both processes are intended to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent.

The Federal Clean Air Act requires EPA to set NAAQS for the six criteria pollutants, noted above, that occur throughout the United States. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA regulates the

criteria pollutants by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards.

EPA is required to designate areas as meeting (attainment) or not meeting (nonattainment) the air pollutant standards. The Federal Clean Air Act (CAA) further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious. The Federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states will use to attain the NAAQS. The Federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the Federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and impose additional control measures.

The SJVAB is considered to be in attainment for federal and state air quality standards for carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂); attainment for federal and non-attainment for state air quality standards for respirable particulate matter (PM₁₀); and non-attainment of state and federal air quality standards for ozone (O₃) and fine particulate matter (PM_{2.5}). To meet federal Clean Air Act requirements, the Air District has adopted the following attainment plans: the 2004 Extreme Ozone Attainment Demonstration Plan (for the 1-hour standard); the 2007 Ozone Plan (for the 1997 8-hour standard); the 2009 RACT SIP; the 2013 Plan for the Revoked 1-Hour Ozone Standard; the 2014 RACT SIP; the 2016 Plan for the 2008 8-Hour Ozone Standard; the 2007 PM₁₀ Maintenance Plan; the 2008 PM_{2.5} Plan (for the 1997 annual standard); the 2012 PM_{2.5} Plan (for the 2006 24-hour standard); the 2015 Plan for the 1997 PM_{2.5} Standard (for annual and 24-hour standards); and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide. The State does not have an attainment deadline for the ozone standards; however, it does require implementation of all feasible measures to achieve attainment at the earliest date possible. State PM₁₀ and PM_{2.5} standards have no attainment planning requirements, but must demonstrate that all measures feasible for the area have been adopted.

It is reiterated that the Project does not contain a development proposal; rather, the Project is a tentative parcel map. Until such time a development proposal is submitted for processing with the County of Tulare, the Project will not result in a physical change in the environment. In the event development proposals were to occur, the proposals could be subject to various San Joaquin Valley Air Pollution Control District (Air District) rules/regulations, thresholds, and/or permitting requirements, as applicable. As indicated below, the mere size of the project (i.e., three potential rural residential sites) would not result in the exceedance of any Air District thresholds and, depending upon a final determination by the Air District, does not appear to meet rule applicability requirements.

State

The California Air Resources Board (CARB or ARB) is the state agency responsible for implementing the federal and state Clean Air Acts. ARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen Sulfide (H₂S), and vinyl chloride.

The Project is located within the San Joaquin Valley Air Basin, which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and parts of Kern counties and is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District).

Air basins are designated as attainment or nonattainment. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

Standards and attainment status for listed pollutants in the Air District can be found in **Table AQ-1**. Note that both state and federal standards are presented.

Local

San Joaquin Valley Unified Air Pollution Control District (Air District)

The San Joaquin Valley Unified Air Pollution Control District (Air District) is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. The Air District has several rules and regulations that may apply to the Project, following is an example of those rules/regulations which likely apply to this Project:

- Rule 3135 (Dust Control Plan Fees) – This rule requires the project applicant to submit a fee in addition to a Dust Control Plan. The purpose of this rule is to recover the Air District’s cost for reviewing these plans and conducting compliance inspections.
- Rules 4101 (Visible Emissions) and 4102 (Nuisance) – This rule applies to any source of air contaminants and prohibits the visible emissions of air contaminants or any activity which creates a public nuisance.
- Regulation VIII (Fugitive PM10 Prohibitions) – This regulation is a series of eight rules designed to reduce PM10 emissions by reducing fugitive dust emissions. Regulation VIII requires implementation of control measures to ensure that visible dust emissions are substantially reduced.
- Rule 9510 (Indirect Source Review) - requires developers to mitigate project emissions through 1) on-site design features that reduce trips and vehicle miles traveled, 2) controls on other emission sources, and 3) with reductions obtained through the payment of a mitigation fee used to fund off-site air quality mitigation projects. Rule 9510 requires construction related NOx emission reductions of 20 percent and PM10 reductions of 45 percent. Rule 9510 requires a 33 percent reduction in operational NOx emissions and a 50 percent reduction in PM10. The reductions are calculated by comparing the unmitigated baseline emissions and mitigated emissions from the first year of project operation. The Air District recommends using the [CalEEMOD] model to quantify project emissions and emission reductions. Rule 9510 was adopted to reduce the impacts of development on Air District’s attainment plans.

Table AQ-1 SJVAB Attainment Status		
Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard ¹	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Extreme ²	Nonattainment
PM ₁₀	Attainment ³	Nonattainment
PM _{2.5}	Nonattainment ⁴	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
<p>¹ Effective June 15, 2005, the U.S. EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.</p> <p>² Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010)</p> <p>³ On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM₁₀ National Ambient Air Quality Standard (NAAQS) and approved the PM₁₀ Maintenance Plan.</p> <p>⁴ The Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. EPA designated the Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).</p> <p>Source: San Joaquin Valley Unified Air Pollution Control District. Ambient Air Quality Standards & Valley Attainment Status. http://www.valleyair.org/aqinfo/attainment.htm. Accessed April 2019.</p>		

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *AQ-1.1 Cooperation with Other Agencies* requiring the County to cooperate with other local, regional, Federal, and State agencies (e.g., Valley Air District) in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards to achieve better air quality conditions locally and regionally; *AQ-1.5 California Environmental Quality Act (CEQA) Compliance* where the County will ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible; *AQ-2.2 Indirect*

Source Review regarding mitigating air quality impacts associated with the Project to Valley Air District's Rule 9510; *AQ-3.4 Landscape* regarding the use of ecologically based landscape design principles that can improve local air quality by absorbing CO₂, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates; and *AQ-4.2 Dust Suppression Measures* regarding implementation of dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions.

Project Impact Analysis:

- a) *Less Than Significant Impact:* Air quality plans (also known as attainment plans) and subsequent rules are used to bring the applicable air basin into attainment with federal ambient air quality standards designed to protect the health and safety of residents within that air basin. In the event development proposals were to occur following approval of the proposed Project, such developments will be required to comply with all applicable Air District rules and regulations including, but not limited to, Regulation VIII (Fugitive PM₁₀ Prohibitions) requirements and District Rule 9510 (Indirect Source Review). The Air District's *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI) states, "...the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District's air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan."³⁰

"Determination of whether a project would exceed the applicable thresholds of significance for criteria pollutants requires quantification of project specific emissions. To streamline the process of assessing significance of criteria pollutant emissions from commonly encountered projects, the District has developed the screening tool, Small Project Analysis Level (SPAL). Using project type and size, the District has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants."³¹

Construction-, operation-, maintenance-, and decommissioning-related activities of the proposed Project would result in emissions of criteria pollutants including ozone precursors such as ROG and NO_x as well as particulate matter. The Air District's 2016 Plan for the 2008 8-Hour Ozone Standard, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2007 PM₁₀ Maintenance Plan and Request for Redesignation, 2008 PM_{2.5} Plan, 2012 PM_{2.5} Plan, 2015 Plan for the 1997 PM_{2.5} Standard, the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard, and the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards outline a number of control strategies to help the SJVAPCD reach attainment for the revoked federal 1-hour ozone standard, the 24-hour PM₁₀ standard, and the federal and state PM_{2.5} standards, respectively.³² The San Joaquin Valley Air Basin is in attainment for CO, SO₂, and lead, so there are no attainment plans for those pollutants.

Control measures outlined in the ozone plans focus primarily on control of stationary and indirect sources such as housing and commercial developments that may generate substantial vehicle trips during operations. The primary source of criteria pollutant emissions generated by the proposed Project would be associated with construction-related activities; operation of the proposed Project would require only minor use of equipment and generate a very small number of vehicle trips required to perform routine maintenance and PV panel washing. Therefore, the proposed Project would not create a permanent substantial source of ozone precursor emissions, and would not obstruct implementation of the SJVAPCD's ozone attainment plan.

The 2008 PM_{2.5} Plan, 2012 PM_{2.5} Plan, and 2015 Plan for the 1997 PM_{2.5} Standard focus specifically on PM_{2.5}, although the control strategies from previous PM₁₀ plans (particularly those related to fugitive dust control) have already improved the SJVAB ambient PM_{2.5} levels. Therefore, because fugitive dust controls continue to be addressed in the PM₁₀ plan, the plans contain a comprehensive list of strict regulatory and incentive-based measures to reduce directly-emitted PM_{2.5} and precursor emissions. However, the Project would result in relatively negligible PM_{2.5} emissions from those types of sources, with the vast majority of PM_{2.5} emissions associated with the Project arising from the PM_{2.5} component of fugitive dust.

The Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants would not conflict or obstruct implementation of the Air District's air quality plan. As discussed below with respect to item b), unmitigated emissions during construction-related activities would not exceed the Air District significance thresholds. The Project would be required to comply with applicable Air District rules and regulations, such as Regulation VIII (Fugitive PM₁₀ Prohibitions) and Rule 9510 (Indirect Source Review), further reducing Project-related emissions.

³⁰ San Joaquin Valley Unified Air Pollution Control District (SJVAPCD). *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI). Page 65. Accessed April 2021 at: www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

³¹ Ibid. 85

³² SJVAPCD. Attainment Plans can be accessed at http://valleyair.org/Air_Quality_Plans/air-quality-plans.htm.

The entire SJVAB was previously designated as a serious nonattainment area for PM-10; however, the SJVAB must continue to “maintain” its attainment status by continued use of PM-10 controls. The SJVAPCD has adopted regulations for various activities that contribute to PM-10 emissions from fugitive dust in a set of eight rules collectively called Regulation VIII (Fugitive PM10 Prohibitions). Several components of Regulation VIII specifically address fugitive dust generated by earthmoving activities, such as those associated with construction-related activities. Therefore, the District has determined that any level of significance with respect to construction-related emissions should be based on a consideration of the control measures to be implemented. Compliance with Regulation VIII and implementation of applicable control measures (as appropriate, depending on the size and location of the project site) will result in adequate measures to reduce PM-10 impacts to less than significant.

Consistent with the San Joaquin Valley Air Pollution Control District (Air District) Indirect Source Review (ISR) requirements and District policy on CEQA compliance, construction emissions have been estimated (using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (the model)) from a similar solar project and are used in this document by analogy as similar projects will likely result in similar emissions. This Project is smaller than the comparative project and will likely generate fewer emissions.³³ The model was used to quantify annual construction-related activities ROG, NO_x, CO, SO₂, PM_{2.5} and PM₁₀ emissions from off-road equipment, haul trucks, on-road worker vehicle emissions, and vendor delivery trips. Since CalEEMod does not contain a Solar Array Land use type, a user defined industrial land use type was used to estimate on-site construction emissions. Construction phasing and off-road equipment estimates were based on information provided by the Project applicant. The annual construction-related emissions can be found in **Table AQ-2**; modeling outputs can be found in Attachment “A”. Only two ozone precursor emissions thresholds (10 tons per year), for NO_x and VOC (ROG), are established by the Air District.

Implementation of the proposed Project would result in a renewable energy resource that would generate no direct emissions of criteria air pollutants. Indirect on- and off-site emissions of criteria pollutants associated with proposed Project operation would be generated as a result of employee trips related to maintenance and periodic PV panel washing activities. The proposed Project site would be monitored remotely 24-hours a day, seven days a week. Visits to the site for emergency purposes/upset events would likely, if at all, occur infrequently (i.e., only a few times per year).

The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

As shown in **Tables AQ-2 and AQ-3**, the estimated Project emissions will not exceed the Air District's CEQA significance thresholds for any pollutants.

TABLE AQ-2						
CONSTRUCTION EMISSIONS ESTIMATES						
Construction Year	Estimated Emissions, unmitigated tons per year					
	ROG	NO _x	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
2022	0.44	4.95	3.41	0.01	0.45	0.28
SJVAPCD Thresholds	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
<i>See Attachment “A” of this document.</i>						

³³ See Attachment “A”. These emissions estimates were derived from another solar energy project in Tulare County (Angela Solar) that is approximately the same acreage (i.e., 277 acres vs. this Project's 237 acres); same mega-watts (40MW); 138,000 solar panels vs. 129,000 solar panels for this Project; and similar construction time frame (9-months vs. this Project's nearly 8-total months). Angela Solar's emission estimates were derived by analogy from the Deer Creek Solar Project (approximately 18 miles southeast of this Project). Deer Creek Solar emissions analysis can be found in the MND prepared for the Deer Creek Solar Project, which is available at <https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/mitigated-negative-declarations/deer-creek-solar-project/>.

TABLE AQ-3 OPERATION AND MAINTENANCE EMISSIONS ESTIMATES						
Operation Year	Estimated Emissions, unmitigated tons per year					
	ROG	NO _x	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SJVAPCD Thresholds	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
See Attachment "A" of this document.						

According to the Air District's GAMAQI, a project would be considered to contribute considerably to a significant cumulative impact if it would result in an increase in ROG, NO_x, SO₂, CO, PM₁₀, or PM_{2.5} of more than its respective significance thresholds. As presented in **Tables AQ-2** and **AQ-3**, proposed Project construction- and operational-related activities emissions would not exceed the annual SJVAPCD thresholds of significance for ROG, NO_x, SO₂, CO, PM₁₀, and PM_{2.5}. Therefore, this Project would result in a less than significant impact.

- b) *Less Than Significant Impact:* As discussed earlier at item a), the Air Basin is currently designated as non-attainment for the 1-hour state ozone standard as well as for the federal and state 8-hour standards. Additionally, the Air Basin is designated as non-attainment for the state 24-hour and annual arithmetic mean PM₁₀ standards, as well as the state annual arithmetic mean and the national 24-hour PM_{2.5} standards. See **Table AQ-1** for designations and classifications of all criteria pollutants.

The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

According to the Air District's GAMAQI, a project would be considered to contribute considerably to a significant cumulative impact if it would result in an increase in ROG, NO_x, SO₂, CO, PM₁₀, or PM_{2.5} of more than its respective significance thresholds (SJVAPCD, 2015). As presented in **Tables AQ-2** and **AQ-3**, proposed Project construction- and operational-related activities emissions would not exceed the annual SJVAPCD thresholds of significance for ROG, NO_x, SO₂, CO, PM₁₀, and PM_{2.5}. Therefore, this Project would result in a less than significant impact.

- c) *Less Than Significant Impact With Mitigation:* Diesel particulate matter (DPM) represents the primary toxic air contaminates (TAC) of concern associated with the proposed Project. DPM emissions are primarily the result of the operation of internal combustion engines in equipment (e.g., loaders, backhoes, and cranes, as well as haul trucks) commonly associated with construction-related activities. Since activities associated with the operation-related activities of the proposed Project would result in short-term, temporary, and intermittent use of mobile or stationary sources of DPM (e.g., maintenance workers driving to and from the Project site, and the occupational use of off-road equipment to move equipment), operation-related activities of the proposed Project would not expose nearby sensitive receptors to DPM emissions that would result in a health risk. Therefore, health risks associated only with proposed Project construction-related activities are evaluated below.

The dose to which receptors are exposed is the primary factor affecting health risk from TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the State of California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments (which determine the exposure of sensitive receptors to TAC emissions), should be based on 9, 30, and/or 70-year exposure periods when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects. However, such health risk assessments should be limited to the duration of the emission-producing activities associated with the Project, unless the activities occur for less than 6-months. Activities that would last more than 2-months, but less than 6 months, are recommended to be evaluated as if they would last for 6-months. The OEHHA does not recommend assessing cancer risk for projects lasting less than 2-months near the maximum exposed individual resident (MEIR). Since construction-related activities of the proposed Project would occur over a 6-to-9 month period and the nearest sensitive receptors (property owners who are leasing the land to accommodate the Project and are upwind of the Project) are located within 200 feet from the proposed Project's northern boundary, the proposed Project has the potential to temporarily and intermittently expose off-site sensitive receptors to increased criteria pollutant emission concentrations from diesel powered construction-related equipment during the short-term, temporary construction-related phase.

The Air District recommends conducting a screening analysis for projects that have the potential to expose sensitive receptors to TAC emissions (e.g. DPM during project construction-related activities) that could pose a significance health risk. The SJVAPCD has devolved a prioritization tool to evaluate whether a Health Risk Assessment (HRA) should be prepared, which is based on the California Air Pollution Control Officers Association's (CAPCOA) latest methodology and OEHHA guidance. According to the Air District guidance, projects that obtain a prioritization score of 10 or more is considered to be potentially significant and an HRA should would be required for the project.

The Air District's prioritization screening tool was used to evaluate the potential health risks during proposed Project construction-related activities. Similar to the discussion at Item a) above, emissions have been estimated (using the District approved Health Risk Assessment model (the HRA model)) from a similar solar project and are used in this document by analogy as similar projects will likely result in similar emissions. This Project is smaller than the comparative project and will likely generate fewer emissions.³⁴ The result of the analysis can be found in **Table AQ-4**, which is based on an emission rate of 37.35 pounds per year of PM₁₀ exhaust. Modeling outputs can be found in Attachment "A". As shown in **Table AQ-4**, residences within 250 meters (i.e., 820 feet) would result in a score greater than 10 as allowed by the Air District.

TABLE AQ-4 PROJECT CONSTRUCTION PRIORITIZATION SCORE		
Receptor Proximity (in meters)	Unmitigated Max Score	Mitigated Max Score
0 < R < 100	1100	86
100 < R < 250	275	22
250 < R < 500	44	3
500 < R < 1,000	12	0
1,000 < R < 1,500	3	0
1,500 < R < 2,000	2	0
2,000 < R	1	0
<i>Notes: 1. Prioritization score is based on an annual emission rate of 37.35 pounds per year emission rate, see Appendix A for modeling details.</i>		

The operation of each piece of equipment within the proposed Project site would not be constant throughout the day and all the equipment would not operate concurrently at the same location of the proposed Project construction-related area. Again, by analogy, the use of Deer Creek Solar's emissions compared to this Project's emissions would result in 66% of Deer Creek Solar's emission (see Attachment "A"), construction-related emissions would occur in less month (6-9 months versus Deer Creek Solar's 12 months) and sensitive receptors (scattered rural residences) would be upwind of Project emissions. To quantify the maximum prioritization score, the receptor proximity is based on the distance between the center of the proposed Project construction-related area and the nearest sensitive receptor. Similar to Deer Creek Solar, the nearest receptors are within approximately 420 meters (i.e., 1,378 feet). Using the Air District's prioritization tool, annual emission rate of 37.35 pounds per year of PM₁₀ exhaust and a receptor proximity distance of 61 meters (200 feet), the proposed Project would obtain a score of 1,000, which would exceed the Air District's allowed score of 10. Therefore, emissions from construction-related activities of the proposed Project could expose nearby sensitive receptor to DPM that could result in a significant health risk. However, also similar to Deer Creek Solar, implementation of **Mitigation Measure AQ-1**, would reduce the max score by requiring the proposed Project applicant to use Tier 4 engines for all off-road construction equipment during project construction-related activities. (see **Table AQ-4**) Tier 4 engines use advanced engine controls and sensors that significantly reduce engine emissions on all four constituents (NOx, HC, CO and PM). The use of Tier 4 engines would reduce DPM emissions generated by off-road equipment to a max score to 86, which exceeds the Air District's allowed score.

AQ-1: Engine Standards for Off-Road Equipment. In order to reduce the impact of PM₁₀ off-road equipment exhaust emissions during construction-related activities, applicant shall ensure that construction contracts stipulate that all off-road diesel-powered equipment used will be equipped with USEPA Tier 4 or cleaner engines, except for specialized equipment in which a USEPA Tier 4 engine is not available. In lieu of Tier 4 engines, project equipment can incorporate retrofits such that emissions reductions achieved equal to that of the Tier 4 engines at a minimum. The construction contractor shall submit a detailed list of the equipment fleet that demonstrates achievement of this mitigation measure to Tulare County Resource Management Agency Planning Branch for approval prior to receiving Notice to Proceed.

³⁴ See Attachment "A". These emissions estimates were derived from another solar energy project in Tulare County (Angela Solar) that is approximately the same acreage (i.e., 277 acres vs. this Project's 237 acres); same mega-watts (40MW); 138,000 solar panels vs. 129,000 solar panels for this Project; and similar construction time frame (9-months vs. this Project's nearly 8-total months).

As previously noted, the operation of each piece of equipment within the proposed Project site would not be constant throughout the day and all the equipment would not operate concurrently at the same location of the proposed Project construction-related area. The prioritization screening tool assumes a 70-year exposure and as such, is likely to overestimate potential health risks as Project-related construction activities will be completed within nine months (or 1% of the exposure time utilized by the tool). Although the Project is not expected to result in significant health risk to the nearby receptors, a condition of approval requiring the Project applicant to consult with the Air District and obtain a refined analysis. Results of this analysis shall be provided to Tulare County Resource Management Agency's Planning Division prior to Project approval.

Therefore, with implementation of **Mitigation Measure AQ-1** and implementation of the condition of approval, construction-related activities of the proposed Project would result in less than significant construction-related health risks.

- d) *Less Than Significant Impact:* Operation of the proposed Project would not create odorous emissions. However, proposed Project construction-related activities would include fuels and other odor sources (such as diesel-fueled equipment), could result in the creation of objectionable odors. Since construction-related activities would be short-term, temporary, and spatially dispersed (i.e., intermittent), and occur in a predominantly rural area, these activities would not affect a substantial number of people. Therefore, odors generated by construction-related activities of the Project would result in a less than significant impact.

Cumulative Impact Analysis: *Less Than Significant-to-No Cumulative Impact*

The geographic area of this cumulative analysis is the entire San Joaquin Valley Air Basin, which includes Tulare County. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

As discussed above, no criteria pollutant threshold will be exceeded during construction- or operations-related activities. Project construction-related activities will not contribute to a violation of an ambient air quality standard. Furthermore, operations and decommissioning of the proposed Project will not result in exceedances of SJVAPCD recommended thresholds. Based on these considerations, the proposed Project will not contribute to a violation of an ambient air quality standard and will not conflict with implementation of existing air quality plans. The Air Basin currently is classified as non-attainment for the one-hour state ozone standard as well as for the federal and state eight-hour ozone standards. Additionally, the Air Basin is classified as non-attainment for the state 24-hour and annual arithmetic mean PM10 standards and the state annual arithmetic mean and national 24-hour PM2.5 standards. Therefore, there is an existing adverse cumulative effect in the Air Basin relative to these pollutants. The contribution of a project's individual air emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the region also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself will be sufficient in size to result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions. The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. While the Project's construction-related activities will likely contribute to an increase in NOX, PM2.5, and PM10, with implementation of dust control and exhaust emission reduction measures required by SJVAPCD Rule 8021 (and if applicable, Rule 9510), the Project's incremental contribution to the cumulative effect will not be considered cumulatively considerable. Additionally, as discussed above, the proposed Project will not conflict with or obstruct implementation of the SJVAPCD's air quality plans. Therefore, Project construction and decommissioning, and operations and maintenance, will not result in a cumulatively considerable increase in emissions of nonattainment pollutants. The proposed Project is not expected to expose sensitive receptors to substantial pollutant concentrations as the proposed Project is located in rural Tulare County and the majority of emission would be related to construction-related activities which will be short-term, temporary, and intermittent. As previously discussed above, construction of the proposed Project could potentially generate odors associated with diesel combustion emissions; however, construction-related odors are anticipated to be short-term, temporary, and intermittent. The proposed Project's permanent operation is not anticipated to result in the release of odors.

4. BIOLOGICAL RESOURCES					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	the California Department of Fish and Game 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, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The Project proposes the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. A six (6)-foot tall chain-link security fence would be installed around the perimeter of the Project site and motion activated lighting which would be hooded and directed downward to minimize off-site light and glare would also be installed. Project construction would require the use of graders, trenchers, small tractors, a crane, and miscellaneous equipment. An estimated average of 125-150 construction-related vehicle trips per day would be used to import construction workers, PV module materials, substation equipment, distribution line and associated support poles, the potential power storage (BESS) facilities, and the surfacing material access roads. Also, following its proposed life of 35 years, the site would be decommissioned and reclaimed as required by the County. The project is estimated to take approximately eight (8) months to complete, excluding 2-3 weeks of initial site grading. The comprehensive project description, including project components, is included in Attachment "D".

Biological Species Evaluation

The Technical Memorandum "*Biological Resources Evaluation for the Tulare 40 Generation Facility (PSP 20-068)*" (BRE Memo) was completed by RMA Staff (Jessica Willis, Planner IV) in April 2021 to analyze potential impacts on biological species in the Project vicinity (See Attachment "B"). The most recent California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB), RareFind 5 and Biogeographic Information and Observation System (BIOS) mapping applications were accessed in April 2021.³⁵

Special Status Species

Based on the information in the CNDDDB and BIOS, there have been 39 special status species recorded within the 9-quadrangle Project area (Cairns Corner, Visalia, Exeter, Rocky Hill, Lindsay, Porterville, Woodville, Tipton, and Tulare quadrangles) (see Figures 3 and

³⁵ California Department of Fish and Wildlife (CDFW). <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>

4). These species include the following 23 special status animal species, 13 special status plant species, and three (3) natural communities:

Based on the information in the CNDDDB and BIOS, there have been 10 special status species recorded within the Cairns Corner quadrangle Project area (see Figure 5). These species include the following four (4) special status animal species and six (6) special status plant species: *Buteo swainsoni* (Swainson's hawk); *Dipodomys nitratoide nitratoide* (Tipton kangaroo rat); *Spea hammondi* (western spadefoot); *Vulpes macrotis mutica* (San Joaquin kit fox); *Atriplex cordulata* var. *erecticaulis* (Earlimart orache); *Atriplex minuscule* (lesser saltscale); *Atriplex subtilis* (subtle orache); *Lasthenia chrysantha* (alkali-sink goldfields); *Delphinium recurvatum* (recurved larkspur); and *Puccinellia simplex* (California alkali grass).

Based on the information in the CNDDDB and BIOS, the following three (3) special status animal species and eight (8) special status plant species have been recorded within five (5) miles of the Project site: Swainson's hawk; San Joaquin kit fox; western spadefoot; *Pseudobahia peirsonii* (San Joaquin adobe sunburst); subtle orache; *Caulanthus californicus* (California jewelflower), California alkali grass; recurved larkspur; lesser saltscale; alkali-sink goldfields; and Earlimart orache. However, only one (1) special status species, the Swainson's hawk is recorded within one (1) mile of the site (see Figure 6).

To ensure the Project will have a less than significant impact on biological species within the Project area, mitigations measures will be implemented as contained in the Mitigation Monitoring and Reporting Program and as summarized in Item a) of this discussion.

Regulatory Setting

Federal

Endangered Species Act

The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries. Section 9 of the FESA prohibits the taking of listed wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16USC1538). Pursuant to Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed plant or wildlife species or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties, provided a Habitat Conservation Plan (HCP) is developed.

Migratory Bird Treaty Act

The MBTA implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits are in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the CDFG Code.

Federal Clean Water Act

The Federal Clean Water Act's (CWA's) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (ACOE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 7b)." The USEPA also has authority over wetlands and may override an ACOE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or Waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the RWQCB.

State

California Endangered Species Act

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called candidates by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the CDFG Code as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the CDFG to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened, or candidate species or result in destruction or adverse modification of essential habitat. The CDFG administers the act and authorizes take through Section 2081 agreements (except for designated fully protected species).

Fully Protected Species

The State of California first began to designate species as fully protected prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered pursuant to the CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CDFG Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act

Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (CDFG Code Sections 1900 to 1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants that are not protected pursuant to NPPA. In this case, plants listed as rare or endangered pursuant to the NPPA are not protected pursuant to CESA, but can be protected pursuant to the CEQA. In addition, plants that are not state listed, but that meet the standards for listing, are also protected pursuant to CEQA (Guidelines, Section 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the CNPS Inventory potentially qualify for protection pursuant to CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection pursuant to CEQA. List 3 includes plants for which more information is needed on taxonomy or distribution. Some of these are rare and endangered enough to qualify for protection pursuant to CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project such as: *ERM-1.1 Protection of Rare and Endangered Species* which protects environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development; *ERM-1.4 Protect Riparian Areas* where the County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls; *ERM-1.6 Management of Wetlands* where the County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats; *ERM-1.7 Planting of Native Vegetation* where the County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained; and *ERM-1.16 Cooperate with Wildlife Agencies* which states that the County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

Project Impact Analysis:

- a) *Less Than Significant Impact With Mitigation:*** As noted earlier, the Project is proposing the construction and operation of an approximate 40-megawatt (MW) solar generation facility on three parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access

roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The Project will not require removal of any native valley oaks or other trees. However, there is a possibility that migratory birds and raptors may be present within the vicinity of the Project site, or due to the transient nature of some species, the Project site could provide habitat or foraging areas for special status species such as kit fox and kangaroo rats.

As such, **Mitigation Measures BIO-1** through **BIO 12** would be implemented reduce potential impacts on special status species to less than significant, as applicable. **Table BIO-1** summarizes **Mitigation Measures BIO-1** through **BIO-12** which can be found in their entirety in Attachment “B” of this IS/MND.

Therefore, the proposed Project will not significantly impact any biological plant or animal species. The proposed Project will not have a significant direct or cumulative impact, or create an unusual circumstance that will cause the proposed Project to have a significant effect on the biological resources of the area and environment.

TABLE BIO-1		
SUMMARY OF MITIGATION MEASURES		
MITIGATION	TYPE OF MITIGATION	SUMMARIZED DESCRIPTION
Measures for Special Status Plant Species		
BIO-1	Pre-construction Survey	Qualified biologist/botanist conducts pre-construction surveys for special status plant species
Measures for Special Status Animal Species		
BIO-2	Pre-construction Survey	Qualified biologist conducts pre-construction surveys for special status animal species; surveys to follow established CDFW-approved protocols for San Joaquin kit fox, and nesting raptors and migratory birds (including loggerhead shrike and tricolor blackbird)
Measures for All Special Status Species Identified in Pre-construction Surveys		
BIO-3	Employee Education Program	Qualified biologist conduct s tailgate meeting to train construction staff on special status species that occur/may occur on the project site.
Measures for Nesting Raptor and Migratory Birds		
BIO-4	Avoidance	Where possible, Project will be constructed outside the nesting season (between September 1st and January 31st).
BIO-5	Pre-construction Survey	If Project activities occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys per the <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (2000)</i> .
BIO-6	Pre-construction Survey	A qualified biologist will conduct pre-construction surveys per the <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (2000)</i> .
BIO-7	Buffers	Upon active nest discovery, the biologist determines appropriate construction setback distances and a behavioral baseline using applicable CDFW guidelines and/or the biology of the affected species.
Measures for Tipton Kangaroo Rat		
BIO-8	Pre-construction Survey	Qualified biologist will conduct pre-construction surveys in accordance with CDFW protocols. If Tipton kangaroo rat are present, CDFW shall be consulted to identify actions to be taken as appropriate for the species.
Measures for San Joaquin Kit Fox		
BIO-9	Pre-construction Survey	Qualified biologist will conduct pre-construction surveys in accordance with USFWS <i>Standard Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (2011)</i> .
BIO-10	Avoidance	If active or potential den is detected in or adjacent to work area during pre-construction survey, the den shall not be disturbed or destroyed. Compliance with USFWS <i>Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (2011)</i> required. USFW and CDFW will be immediately contacted to determine best course of action
BIO-11	Minimization	Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes.
BIO-12	Mortality Reporting	USFWS and CDFW will be contacted immediately by phone and notified in writing within three working days in case of the accidental death or injury of a SJ kit fox during construction-related activities.

One (1) special status species, the San Joaquin kit fox, has been recorded within the Project site and the immediate vicinity (i.e., the parcels adjacent to the site); one special status species (Swainson's hawk) has been recorded approximately 0.6, 0.7, and 1.5 miles; respectively, east of the proposed Project. As such, Mitigation Measures **BIO-1** through **BIO-3**, which require pre-construction surveys and employee education for special status animal species, will be implemented prior to the onset of project-related activities. If no special status species are identified within the Project site during pre-construction surveys, no further action would be required; In the event that special status species are identified, Mitigation Measures **BIO-4** through **BIO-12**, as applicable, would be implemented and in consultation with the CDFW and/or USFWS. Specifically, Mitigation Measure **BIO-3** would apply to all identified special status species; Mitigation Measures **BIO-4** through **BIO-7** would apply to nesting raptors (e.g., Swainson's hawk) and migratory birds (including loggerhead shrike and tricolored blackbird); Mitigation Measure **BIO-8** would apply to Tipton kangaroo rat; and Mitigation Measures **BIO-9** through **BIO-12** would apply to San Joaquin kit fox.

Therefore, the proposed Project will not significantly impact any biological plant or animal species. The proposed Project will not have a significant direct or cumulative impact, or create an unusual circumstance that will cause the proposed Project to have a significant effect on the biological resources of the area and environment. With implementation of Mitigation Measures **BIO-1** through **BIO-12**, impacts to special status plant and animal species will be Less Than Significant with Mitigation.

b) , c) and d) Less Than Significant Impact With Mitigation: The proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; would not result in an 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; and it would not 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.

As noted in the Project and Operations Description for the Proposed Tulare 40 Project (Project and Operations Description, included in Attachment "D" in this IS/MND), "The southern proposed development area is located 0.4 miles south of Highway 137/Avenue 232, approximately 100 to 300 feet south of Inside Creek, a partially natural vegetated stream corridor."³⁶ "Inside Creek traverses the southern parcel (APN 195-070-025) near its northern boundary for approximately 3,000 feet and is mapped as an intermittent stream by the USGS and as a riverine habitat by the U.S Fish and Wildlife National Wetland Inventory Maps. Surface water is present at the creek for extended periods especially early in the growing season but is absent by the end of the growing season in most years."³⁷ "The Inside Creek is a channelized earthen ditch up and downstream of the site, with these areas lacking significant vegetation."³⁸ The Project and Operations Description further states, "A Storm Water Pollution Prevention Plan (SWPPP) would be in effect for the Project to prevent impacts on adjacent properties and to Inside Creek from any storm water generated on-site. Appropriate setbacks from Inside Creek would be enforced in the southern proposed development area to avoid adverse impacts to water quality in the creek and to preserve stream corridor habitat."³⁹ As noted earlier, the southern proposed development area is approximately 100 to 300 feet south of Inside Creek which allows for an adequate setback from areas that would be disturb and would provide an adequate distance to avoid impacts to the creek and the SWPPP would prevent stormwater generated on-site from impacting the creek.

"The most recent United States Geological Survey (USGS) National Water Information System (NWIS) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping applications were accessed in April 2021.^{40, 41} Based on the information provided in the NWIS, the nearest body of water lies approximately one-mile east Project site (Project site Area A north of Ave 232 /SR 137). Based on the information provided in the NWI, there are freshwater ponds located approximately 0.3 and 0.35 mile west, northwest, and northeast of the Project site, respectively; freshwater emergent wetlands approximately 0.35 and 1.27 miles northwest and northeast of the Project site; and riverine features within the proposed Project's area at the north extent of the southern portion of the Project site, respectively. However, as noted earlier, the proposed Project will be setback from 100-300 feet of Inside Creek (the riverine area). Lastly, jurisdictional waters of the U.S. are absent from the site itself (see Figures 7 and 8 [in the BRE Memo])

³⁶ Project and Operations Description for the Proposed Tulare 40 Project Unincorporated Portion of Tulare, California (APN 195-070-025, APN 195-060-041, APN 195-060-40). December 2020 (Project and Operations Description). Page 2. Prepared by Wood Environment & Infrastructure Solutions, Inc., for Coldwell Solar 1, LLC. See Attachment "D" of this IS/MND.

³⁷ Ibid 3.

³⁸ Op. Cit. 3

³⁹ Op. Cit. 6.

⁴⁰ United States Department of the Interior. United States Geological Service (USGS). <https://maps.waterdata.usgs.gov/mapper/index.html>

⁴¹ United States Department of the Interior. United States Fish and Wildlife Service (USFWS). <https://www.fws.gov/wetlands/data/mapper.HTML>

“As demonstrated in the BIOS, NWIS, and NWI maps, jurisdictional waters of the State and U.S. are present within the Project site. Best management practices, including compliance with all applicable Regional Water Quality Control Board (RWQCB) requirements, which includes a storm water pollution prevention plan (SWPPP), will be required during construction activities and will be included as a condition of project approval. A grading and drainage plan will be submitted to and approved by the Tulare County RMA Engineering Branch. As such, the Project will not result in significant impact to any riparian habitats or other protected wetlands. Therefore, mitigation measures that would reduce impacts have not been proposed, nor would any measures be warranted.”⁴²Therefore, implementation of **Mitigation Measures BIO-1** through **BIO-12** [(see summary in **Table BIO-1**)] would result in a Less than Significant Impact to this item.

- e) and f) No Impact:** The proposed Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances. Moreover, the proposed Project is not expected to conflict with the goals or policies of the Tulare County General Plan that protect biological resources. Also, as the proposed Project is not within or in the vicinity of any approved habitat conservation plans, natural community conservation plans, or regional or state habitat conservation plans in effect, the Project would result in no impact to these resources within the vicinity of the proposed Project site.

Cumulative Impact Analysis: *No-to-Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts will extend beyond Tulare County jurisdictional boundaries.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project specific impacts were to occur. With implementation of **Mitigation Measures BIO 1** through **BIO-12**, as applicable, potential Project specific impacts will be reduced to a less than significant level. There are no known waters of the U.S., the proposed Project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances; and the proposed Project is not within or in the vicinity of any approved habitat conservation plans, natural community conservation plans, or regional or state habitat conservation plans in effect. Also, an adequate setback from areas that would be disturb will provide an adequate distance to avoid impacts to Inside Creek and the SWPPP would prevent stormwater generated on-site from impacting the creek. Therefore, the Project’s cumulative impacts will result in a no-to-less than significant cumulative impact.

5. CULTURAL RESOURCES					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c)	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

Tulare County has a rich Native American history largely in part to the former abundance of wetlands, former abundance of game and foodstuffs, temperate climate, and central location within California. As such, it is important to summarize the Native America history as part of this analysis.

Tulare County was inhabited by indigenous California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Most information regarding these groups is based on Spanish government and Franciscan mission records of the 18th and 19th centuries, and in studies conducted during the 1900s to 1930s by American and British ethnographers.

⁴² Technical Memorandum “Biological Resources Evaluation for Tulare 40 Generation Facility Project (PSP 20-068)” (BRE Memo) was completed by RMA Staff (Jessica Willis, Planner IV) in April 2021. Page 5.

The ethnographic setting presented below is derived from the early works, compiled by W. J. Wallace, Robert F.G. Spier, and Charles R. Smith⁴³, with statistical information provided by the California Native American Heritage Commission.

Of the four main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory, which is defined roughly by the crest of the Diablo Range on the west and the foothills of the Sierra Nevada on the east, and from the Kings River on the north, to the Tehachapi Mountains on the south. The Foothill Yokuts inhabited the western slopes of the Sierra Nevada, between the Fresno River and Kern River, with settlements generally occurring between the 2,000 to 4,000-foot elevations. The Tubatulabal inhabited the Sierra Nevada Mountains, at the higher elevations, near Mt. Whitney in the east, extending westward along the drainages of the Kern River, and the Kern River-South Fork. The Monache were comprised of six small groups that lived in the Sierras east of the Foothill Yokuts, in locations ranging between 3,000 to 7,000 foot elevations.

Regulatory Setting

Federal

Cultural resources are protected by several federal regulations, none of which are relevant to this project because it will not be located on lands administered by a federal agency and the project applicant is not requesting federal funding and does not require any permits from any federal agencies.

State

The proposed Project is subject to CEQA which requires public or private projects financed or approved by public agencies to assess their effects on historical resources. CEQA uses the term “historical resources” to include buildings, sites, structures, objects or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (CCR 15064.5, 15126.4). For the purposes of this CEQA document, a significant impact would occur if project implementation:

- Causes a substantial change in the significance of a historical resource
- Causes a substantial adverse change in the significance of an archaeological resource
- Disturbs any human remains, including those interred outside of formal cemeteries

Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined. CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR)
- If the resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5(a))

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1(k), 5024.1, 5024.1(g)).

A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
- Is associated with the lives of persons important in our past
- 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
- Has yielded, or may be likely to yield, information important in prehistory or history Properties that area listed in or eligible for listing in the National Register of Historic Places are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

⁴³ Tulare County General Plan 2030 Update, Background Report. Page 9-54.

CEQA Guidelines Section 15126.4(b)

“(b) Mitigation Measures Related to Impacts on Historical Resources.

- (1) Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (1995), Weeks and Grimmer, the project’s impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.
- (2) In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur.
- (3) Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archaeological site:
 - (A) Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
 - (B) Preservation in place may be accomplished by, but is not limited to, the following:
 1. Planning construction to avoid archaeological sites;
 2. Incorporation of sites within parks, greenspace, or other open space;
 3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.
 4. Deeding the site into a permanent conservation easement.
 - (C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.
 - (D) Data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center.”⁴⁴

Public Resources Code Section 5097.5

California Public Resources Code §5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.” Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

Human Remains

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Local

Tulare County General Plan 2030 Update

⁴⁴ California Environmental Quality Act (CEQA) Statute and Guidelines. 2019.

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *ERM-6.1 Evaluation of Cultural and Archaeological Resources* which states that the County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards; *ERM-6.2 Protection of Resources with Potential State or Federal Designations* wherein the County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional; *ERM-6.3 Alteration of Sites with Identified Cultural Resources* which states that when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource; *ERM-6.4 Mitigation* – which states that if preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records; *ERM-6.7 Cooperation of Property Owners* where the County should encourage the cooperation of property owners to treat cultural resources as assets rather than liabilities, and encourage public support for the preservation of these resources; *ERM-6.8 Solicit Input from Local Native Americans* (which is consistent with AB 52 in regards to Tribal Consultation) wherein the County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance; *ERM-6.9 Confidentiality of Archaeological Sites* which is also consistent with AB 52) where the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts; and *ERM-6.10 Grading Cultural Resources Sites* wherein the County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

Project Impact Analysis:

a) and b) Less Than Significant Impact With Mitigation: The Project is proposing for the construction and operation of an approximate 40-megawatt (MW) solar generation facility on three parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries.

A cultural resources records search was conducted on February 8, 2021 by the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield (RS #21-034). The records search included an examination of the National Register of Historic Places, the OHP Built Environment Resources Directory, the California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources, and California State Historic Landmarks. There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. There have been no previous cultural resource studies conducted within the project area, and there have been seven studies within the one-half mile radius. There are no recorded resources within the project area, and there is one known resource within the one-half mile radius (Bridge 46-47). Although no other cultural resources were identified in the records search, a potentially significant impact could occur if historical or archaeological resources were uncovered during proposed Project construction. However, implementation of the **Mitigation Measures CUL-1** through **CUL-3** will reduce potential impacts in the unlikely event of encountering a historical or archaeological resource to a less than significant impact with mitigation.

CUL-1: If, in the course of Project construction, operation, or decommissioning, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to: planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in place shall be considered, and an appropriate method of achieving preservation in place

shall be selected and implemented, if feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential information from and about the site. Mitigation shall be consistent with CEQA Guidelines section 15126.4(b)(3). An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, hereafter "qualified archaeologist," should inspect the findings within 24 hours of discovery.

CUL-2: If cultural resources are encountered during construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.

If it is determined that the Project could damage a significant cultural resource, mitigation should be implemented with a preference for preservation in place, consistent with the priorities set forth in CEQA Guidelines Section 15126.4(b)(3). If avoidance is not feasible, a qualified archaeologist should prepare and implement a detailed treatment plan in consultation with the County of Tulare and, for prehistoric resources, the ethnographically associated Native American tribe. If the resource is determined to be a tribal cultural resource, as defined by Public Resources Code 21074, the County of Tulare, in consultation with the ethnographically associated Native American tribe, should, if feasible, minimize significant adverse impacts by avoiding the resource or treating the resource with culturally appropriate dignity, which includes protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource.

Therefore, implementation of **Mitigation Measures CUL-1** and **CUL-2** would result in a less than significant impact to this Item.

- c) *Less Than Significant Impact With Mitigation:* As noted in Items a) and b), the Project is proposing construction and operation of an approximate 40-megawatt (MW) solar generation facility on three parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The records search and background research confirmed that no human remains are known to exist in the Project site. Therefore, the proposed Project is not anticipated to impact human remains, including those interred outside of formal cemeteries.

While unlikely, if any previously unknown human remains were encountered during ground disturbing activities, any impacts to the human remains resulting from the Project could be potentially significant. Any such potential significant impacts would be reduced to a less than significant level by implementing **Mitigation Measure CUL-3**. Inadvertent Disturb any human remains, including those interred outside of formal cemeteries Discovery of Human Remains, by requiring work to halt in the vicinity of a find until the County coroner determines whether the remains are Native American in origin and, if they are, contacting the Native American Heritage Commission.

CUL-3: In the unlikely event of discovery or recognition of any human remains during construction-related activities, the provisions of CEQA Guidelines § 15064.5(e) shall be followed and such activities should cease within 50 feet of the find until the Tulare County Coroner has been contacted to determine that no investigation of the cause of death is required. If it is determined that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be contacted within 24 hours. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD would, in turn, make recommendations to the County of Tulare for the appropriate means of treating the human remains and any grave goods.

Therefore, implementation of **Mitigation Measure CUL-3** would result in a less than significant impact to this item.

Cumulative Impact Analysis: *Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project specific impacts were to occur. The records search and background research confirmed that no human remains are known to exist on the Project site. In the unlikely event that subsurface resources are uncovered during construction and earth disturbing activities, potentially significant impacts to previously unknown subsurface resources may occur. However, with the implementation of **Mitigation Measures CUL-1** through **CUL-3**, as applicable, potential Project specific impacts will be reduced to a less than significant level.

6. ENERGY

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The Project is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County. As noted in the Project and Operations Description for the Proposed Tulare 40 Project (Project and Operations Description); see Attachment “D” of this MND), the “Project construction would require the use of graders, trenchers, small tractors, a crane, and miscellaneous equipment. An estimated average of 125-150 construction-related vehicle trips per day would be used to import construction workers, PV module materials, substation equipment, distribution line and associated support poles, potential power storage (BESS) facilities, and the surfacing material for access roads.”⁴⁵ “The construction of the Project would take approximately eight (8) continuous months to complete. Initial site grading would take two (2) to three (3) weeks. The remainder of the construction period would consist of on-site assembly and installation of PV panels, which would not require heavy machinery. Construction would commence upon acquisition of all necessary permits, approvals, power sale, and financing. The Project would be constructed into twelve (12) blocks, with four (4) blocks in the northern proposed development area and eight (8) blocks in the southern proposed development area. Construction of the eight (8) blocks in the southern proposed development area would be initiated first. Separate staging areas in the northern portion of each development area would be used for material staging and storage, portable construction. maintenance trailer, and construction parking.”⁴⁶ Also, following its proposed life of 35 years, the site would be decommissioned and reclaimed as required by the County. The project is estimated to take approximately eight (8) months to complete, excluding 2-3 weeks of initial site grading. The comprehensive project description, including project components is included in Attachment “D”.

Regulatory Setting

Federal

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can obtain federal tax credits for purchasing fuel efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

State

California Energy Commission

⁴⁵ Project and Operations Description for the Proposed Tulare 40 Project Unincorporated Portion of Tulare, California (APN 195-070-025, APN 195-060-041, APN 195-060-40). December 2020. Page 6. Prepared by Wood Environment & Infrastructure Solutions, Inc., for Coldwell Solar 1, LLC. See Attachment “D” of this IS/MND.

⁴⁶ Ibid. 6 and 7.

The California Energy Commission CEC was created in 1974 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy. State of California Integrated Energy Policy (SB 1389) In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicles miles traveled and accommodate pedestrian and bicycle access. The CEC adopted the 2013 Integrated Energy Policy Report on February 20, 2014. The 2013 Integrated Energy Policy Report provides the results of the CEC's assessment of a variety of issues, including:

- Ensuring that the state has sufficient, reliable, and safe energy infrastructure to meet current and future energy demands;
- Monitoring publicly-owned utilities' progress towards achieving 10-year energy efficiency targets; defining and including zero-net-energy goals in state building standards;
- Overcoming challenges to increased use of geothermal heat pump/ground loop technologies and procurement of biomethane;
- Using demand response to meet California's energy needs and integrate renewable technologies;
- Removing barriers to bioenergy development; planning for California's electricity infrastructure needs given potential retirement of power plants and the closure of the San Onofre Nuclear Generating Station;
- Estimating new generation costs for utility-scale renewable and fossil-fueled generation;
- Planning for new or upgraded transmission infrastructure;
- Monitoring utilities' progress in implementing past recommendations related to nuclear power plants;
- Tracking natural gas market trends;
- Implementing the Alternative and Renewable Fuel and Vehicle Technology Program; and,
- Addressing the vulnerability of California's energy supply and demand infrastructure to the effects of climate change; and planning for potential electricity system needs in 2030.

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

California Global Warming Solutions Act of 2006 (Assembly Bill 32) Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission and CEC with providing information, analysis, and recommendations to the California Air Resources Board regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopted the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *ERM-4.1 Energy Conservation and Efficiency Measures* wherein the County encourages the use of solar energy, solar hot water panels, and other energy conservation and efficiency features; *ERM-4.3 Local and State Programs* wherein the County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources and; *ERM-4.3 Local and State Programs* wherein the County shall participate, to the extent feasible, in local and State programs that strive to reduce the consumption of natural or man-made energy sources.

Project Impact Analysis:

a) and b) No-to-Less Than Significant Impact: The proposed Project will not have a direct or cumulative impact, or create wasteful, inefficient, or unnecessary consumption of energy resources during project construction-related activities or operations. Also, it will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The only energy consumed would be through the use of fossil fuels (gasoline and diesel operated equipment) during construction-related activities which will be completed in approximately eight months and through the use of water trucks for annual-to-biannual panel washing. As such, construction-related and panel washing activities will be short-term, temporary, and intermittent. The Project will not use any energy per se over the next 35 years of its anticipated life; rather, it will be a renewable energy (electricity) generator. The proposed Project will directly support SB 100, which mandates that 100 percent of electricity in California be obtained by zero-carbon energy sources by 2045 and updates the state's Renewable Portfolio Standards (RPS). Additionally, the Project will support the following Tulare County General Plan Policies because it will assist the County in encouraging the development of renewable energy sources. As the proposed Project is an energy generator, there will be a beneficial impact to the Energy resource. As such, the Project will result in no adverse impact to this resource.

Cumulative Impact Analysis: *No Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County and the SCE and SoCal Gas companies' service areas.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Rather, the proposed Project result in an energy resource benefit. Therefore, there will be No Cumulative Impacts related to this Checklist Item.

7. GEOLOGY/SOILS					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication No. 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ii)	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii)	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv)	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

Environmental Setting

“Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges.”⁴⁷

“Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building.”⁴⁸

“Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered “potentially active.”⁴⁹

“Settlement can occur in poorly consolidated soils during ground-shaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to ground-shaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County.”⁵⁰

“Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground-shaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface)

⁴⁷ Tulare County General Plan 2030 Update. Appendix B General Plan Background Report. Page 8-5.

⁴⁸ Ibid.

⁴⁹ Op. Cit.

⁵⁰ Op. Cit. 8-9.

and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted.”⁵¹

Earthquake Hazards

“Ground-shaking is the primary seismic hazard in Tulare County because of the county’s seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of ground-shaking, which is directly related to the magnitude of a quake and the distance from a quake’s epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased ground-shaking over longer periods of time, thereby affecting a larger area. Ground-shaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”⁵²

“There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault** is located approximately 40 miles west of the Tulare County boundary and [approximately] 44 miles west of the project area. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the County. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west of Tulare County lies the “Central California Active Area,” section of the San Andreas Fault where many earthquakes have originated.
- **Owens Valley Fault Group** is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains approximately [approximately] 82 miles east of the project area. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- **Clovis Fault** is considered to be active within the Quaternary Period, although there is no historic evidence of its activity, and is therefore classified as “potentially active.” This fault lies approximately six miles south of the Madera County boundary in Fresno County and [approximately] 76 miles north of the project area. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts.⁵³

There are other unnamed faults north of Bakersfield and near Tulare Buttes about 30 miles north of Porterville. These faults are small and have exhibited activity in the last 1.6 million years, but not in the last 200 years. It is also possible, but unlikely, that previously unknown faults could become active in the area.⁵⁴ No Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the Project area.⁵⁵

Soils and Liquefaction

“The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-

⁵¹ Op. Cit.

⁵² Op. Cit.

⁵³ Op. Cit. 3.7-5; and *Tulare County, Revised Draft General Plan 2030 Update*, August 2012. Page 10-7.

⁵⁴ Tulare County, *Revised Draft General Plan 2030 Update*, August 2012. Page 10-15.

⁵⁵ California Geological Survey. <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>

shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”⁵⁶

“No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction.”⁵⁷

Landslides

“Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).”⁵⁸

Paleontology

According to the Paleontological Resources Preservation Act (PRPA) of 2009, “Section 6301 defines a paleontological resource as any fossilized remains, traces, or imprints of organisms, preserved in or on the Earth’s crust, that are of paleontological interest and provide information about the history of life on Earth.”⁵⁹ CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). California Public Resources Code §5097.5 also applies to paleontological resources.

Regulatory Setting

Federal

None that apply to the Project.

State

California Building Code

“The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards.”⁶⁰

Alquist-Priolo Earthquake Fault Zoning Act

“The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces.”⁶¹

⁵⁶ Tulare County, Revised Draft General Plan 2030 Update, August 2012. Page 8-7.

⁵⁷ Ibid. 8-9.

⁵⁸ Op. Cit. 8-10.

⁵⁹ U.S. Department of the Interior. Bureau of Land Management. Fact Sheet. Accessed March 2021 at: https://www.blm.gov/sites/blm.gov/files/programs_paleontology_quicklinks_PRPA%20fact%20sheet.pdf.

⁶⁰ Tulare County, Revised Draft General Plan 2030 Update, August 2012. Page. 8-3.

⁶¹ Ibid.

State Water Resources Control Board and Regional Water Quality Control Board

National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity- Water Quality Order 99-08 DWQ.

Typically, General Construction Storm Water NPDES permits are issued by the RWQCB for grading and earth-moving activities. The General Permit is required for construction activities that disturb one or more acres. The General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies practices that include prevention of all construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters. The NPDES permits are issued for a five-year term. NPDES general permits require adherence to the Best Management Practices (BMPs) including:

- Site Planning Consideration- such as preservation of existing vegetation.
- Vegetation Stabilization- through methods such as seeding and planting.
- Physical Stabilization- through use of dust control and stabilization measures.
- Diversion of Runoff – by utilizing earth dikes and temporary drains and swales.
- Velocity Reduction – through measures such as slope roughening/terracing.
- Sediment Trapping/Filtering – through use of silt fences, straw bale and sand bag filters, and sediment traps and basins.

Local

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project include: *HS-1.2 Development Constraints* wherein the County shall permit development only in areas where the potential danger to the health and safety of people and property can be mitigated to an acceptable level; *HS-1.3 Hazardous Lands* wherein the County shall designate areas with a potential for significant hazardous conditions for open space, agriculture, and other appropriate low intensity uses; *HS-1.5 Hazard Awareness and Public Education* wherein the County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures; *HS-1.11 Site Investigations* wherein the County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding; *HS-2.1 Continued Evaluation of Earthquake Risks* wherein the County shall continue to evaluate areas to determine levels of earthquake risk; *HS-2.4 Structure Siting* wherein the County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity; *HS-2.7 Subsidence* wherein the County shall confirm that development is not located in any known areas of active subsidence; *HS-2.8 Alquist-Priolo Act Compliance* wherein The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones; *WR-2.2 NPDES Enforcement* wherein the County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board; *WR-2.3 Best Management Practices* wherein the County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board; and *WR-2.4 Construction Site Sediment Control* wherein the County shall continue to enforce provisions to control erosion and sediment from construction sites.

Five County Seismic Safety Element (FCSSE)

The FCSSE report represents a cooperative effort between the governmental entities within Fresno, Kings, Madera, Mariposa and Tulare Counties to develop an adoptable Seismic Safety Element as required by State law. Part I, the Technical Report, is designed to be used when necessary to provide background for the Summary document. Part II, the Summary Report, establishes the framework and rationale for evaluation of seismic risks and hazards in the region. Part II of the Seismic Safety Element, the Policy Report, has been prepared as a “model” report designed to address seismic hazards as delineated in the Technical Report. The intent has been to develop a planning tool for use by county and city governments in implementing their seismic safety elements. The planning process utilized to develop the Element was developed through the efforts of Technical and Policy Committees, composed of both staff and elected representatives from Cities, Counties, and Special Districts or Areawide Planning Organizations in cooperation with the consulting firms of Envicom Corporation and Quinton-Redgate.⁶²

⁶² Five County Seismic Safety Element. Fresno, Kings, Madera, Mariposa, & Tulare Counties. 1974. Pages 4-7. Prepared by Envicom Corporation.

Project Impact Analysis:

- a) *Less Than Significant Impact:* According to the Tulare County General Plan, the planning area lies in the V1 seismic study area, characterized by a relatively thin section of sedimentary rock overlying a granitic basement.

The V-1 seismic zone, which is characterized by a relatively thick section of sedimentary rock overlying a granitic basement, has “low” risks for shaking hazards, “minimal” risk for landslides, “low to moderate” risk for subsidence, “low” risks for liquefaction and “minimal” risk for seicheing.⁶³

The distance to area faults i.e. the Clovis Group, Pond-Poso, and San Andreas, expected sources of significant shaking, is sufficiently great that shaking effects should be minimal.

- i) *Fault Rupture:* No substantial faults are known to occupy Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation. The nearest known faults likely to affect the Project site are the San Andreas Fault (approximately 40 miles west of Tulare County’s western border). According to the Five County Seismic Safety Element (FCSSE), the proposed Project site is located in the V-1 zone, characterized as a moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex. The FCSSE further states that, “Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance to either of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities. Therefore, as noted earlier, no Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the Project area. As such, the risk of rupture of a known earthquake fault will be less than significant.
- ii) *Ground Shaking:* The Project area is located in a seismic zone which is sufficiently far from known faults and consists primarily of a stable geological formation. Any impacts regarding strong seismic ground shaking have been discussed in Impact VI-a-i. As such, the impact due to ground shaking would be less than significant.
- iii) *Ground Failure and Liquefaction:* The proposed Project site is located in the Five County Seismic Safety Element’s V-1 zone, and therefore has a low risk of liquefaction. No subsidence-prone soils or oil or gas production is involved with the proposed Project. The any impacts will be less than significant.
- iv) *Landslides:* The proposed Project is located in the Five County Seismic Safety Element’s V-1 zone and therefore will have a minimal risk of landslides. As the proposed Project is located on the Valley floor, is situated on relatively flat topography, and there are no geologic landforms on or near the site that could result in a landslide event. Therefore, there is no risk of landslides within or near the Project area.
- b) *Less Than Significant Impact:* The Project is proposing for the construction and operation of an approximate 40-megawatt solar generation facility on three parcels totaling approximately 237 acres in the southwest quadrant of Tulare County on the San Joaquin Valley floor. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. These activities could expose soils to erosion processes. The extent of erosion will vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. The site has very little slope (i.e., a slight grade from east to west of 0 to 2%) and will have a flat topography after grading. To preserve and restore the agricultural productivity of the Project site to the existing condition during and upon completion of the life of the Project, no soils would be removed from the Project site during construction or operation of the Project. As stated earlier, the relatively flat nature of the site reduces the need for grading which would be limited to access roads, substation, inverter pads, and switchyard. Any soils removed from these areas would be redistributed around and retained elsewhere on the Project site (i.e., along solar panel support rack alignments). Beyond grading, soil disturbance would occur in association with trenching for emplacement of electrical conduits along each alignment of panel racks. This trenching would be limited in scale and anticipated to require an 18-inch wide and three (3)-foot deep trench with a four (4)-inch conduit cable which is not anticipated to displace significant soils.⁶⁴

To prevent water and wind erosion during the construction period, a Storm Water Pollution Prevention Plan (SWPPP) will be developed for the proposed Project as required for all projects which disturb more than one acre. As part of the SWPPP, the

⁶³ Envicom Corporation, 1974. Summary of Seismic Hazards & Safety Recommendations. Five County Seismic Safety Element Fresno, Kings, Madera, Mariposa & Tulare Counties. Available at the RMA Administrative Office upon request.

⁶⁴ Project and Operations Description. Page 9. Included in Attachment “D” of this document.

applicant will be required to provide erosion control measures to protect the topsoil.⁶⁵ The Project would comply with SJVAPCD Rule 8021 for construction and earthmoving activities. A SWPPP would be in effect for the Project to prevent impacts on adjacent properties and to Inside Creek from any storm water generated on-site.⁶⁶ As a result of these efforts, loss of topsoil and substantial soil erosion during the construction period are not anticipated.

As such, the Project would not result in substantial soil erosion or loss of thereby the impact by this Project would be a less than significant impact.

- c) *Less Than Significant Impact:* Substantial grade change will not occur in the topography to the point where the proposed Project will expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, liquefaction or collapse. As noted earlier, this Project is located in the Five County Seismic Safety Element's V-2 zone, characterized as a moderately thick section of marine and continental sedimentary deposits overlying the granitic basement complex, as such, the Project site has a low to moderate risk of subsidence or liquefaction. Therefore, the Project would result in a less than significant impact.
- d) *No Impact:* According to the USDA, NRCS, and the Soil Survey of Tulare County, the proposed Project site contains Flamen loam, Colpien loam, and Nord fine sandy loam soils. There are located on a site with a 0-2% slope and are well to moderately well drained. Generally, these soils are alluvium derived mainly from granitic rock or mixed materials. Therefore, the native soils identified on the site do not contain the characteristics of an expansive soil. As such, the Project would result in no impact and would not create substantial direct or indirect risks to life or property⁶⁷.
- e) *No Impact:* The proposed Project does not include the installation or use of septic tanks or other alternative waste water disposal systems. As such, the Project would result in no impact.
- f) *Less Than Significant Impact:* There are no known paleontological resources within the Project area, nor are there any known geologic features in the proposed Project area. Project construction will not be anticipated to disturb any paleontological resources not previously disturbed; however, **Mitigation Measure(s) CUL-1 thru CUL-3**, as specified in Item V Cultural Resources Items a) & b), as applicable, will ensure that any impact will be less than significant.

Cumulative Impact Analysis: *Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project will not result in significant impacts related to fault rupture, groundshaking, liquefaction, and landslides. Furthermore, the proposed Project will be required to adhere to the CBC, which includes design specifications and criteria to minimize damage from seismic events. Therefore, a less than significant cumulative impact will occur.

8. GREENHOUSE GAS EMISSIONS					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁶⁵ Ibid. 8.

⁶⁶ Op. Cit. 6.

⁶⁷ United States Department of Agriculture. Natural Resources Conservation Service (USDA/NRCS). Web Soil Survey. Accessed March 2021 at: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.

Analysis:

Environmental Setting

“An increase in the near surface temperature of the earth. Global warming has occurred in the distant past as the result of natural influences, but the term is most often used to refer to the warming predicted to occur as a result of increased emissions of greenhouse gases. Scientists generally agree that the earth’s surface has warmed by about 1 degree Fahrenheit in the past 140 years, but warming is not predicted evenly around the globe. Due to predicted changes in the ocean currents, some places that are currently moderated by warm ocean currents are predicted to fall into deep freeze as the pattern changes.”⁶⁸ “The warming of the earth’s atmosphere attributed to a buildup of CO₂ or other gases; some scientists think that this build-up allows the sun’s rays to heat the earth, while making the infra-red radiation atmosphere opaque to infrared radiation, thereby preventing a counterbalancing loss of heat. Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).”⁶⁹ “Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO₂ and methane are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF₆ is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.”⁷⁰ “Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas; o Increase of heat index over land areas; and
- More intense precipitation events.”⁷¹

“Snowpack and snowmelt may also be affected by climate change. Much of California’s precipitation falls as snow in the Sierra Nevada and southern Cascades Mountain ranges, and snowpack represents approximately 35 percent of the state’s useable annual water supply.”⁷² “The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended.”⁷³ “As air temperatures increase due to climate change, the water stored in California’s snowpack could be affected by increasing temperatures resulting in: (1) decreased snowfall, and (2) earlier snowmelt.”⁷⁴

“In 2007, Tulare County generated approximately 5.2 million tonnes of Carbon Dioxide Equivalent (CO₂e). The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources, the third largest portion (11%) is from electricity sources.”⁷⁵ Table 6-7 [Table GHG-1 in this document] identifies Tulare County’s emissions by sector in 2007.”⁷⁶

“In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO₂e. The largest portion of these emissions (59%) is attributed to dairies/feedlots, while the second largest portion (20%) is from mobile sources, and third largest portion (11%) is from electricity as shown on Table 6-8 [Table GHG-2 in this document]. Per capita emissions in 2030 are projected to be approximately 27 tonnes of CO₂e per resident.”⁷⁷

⁶⁸ Tulare County General Plan 2030 Update Background Report. Page 6-31. Accessed April 2021 at: <http://generalplan.co.tulare.ca.us/documents.html> then scroll down to and select Background Report

⁶⁹ Ibid. 6-16 and 6-20.

⁷⁰ Op. Cit. 6-31.

⁷¹ Op. Cit.

⁷² Op. Cit. 8-85.

⁷³ Op. Cit.

⁷⁴ Op. Cit.

⁷⁵ Op. Cit. 6-36.

⁷⁶ Op. Cit. 6-38.

⁷⁷ Op. Cit.

The Tulare County General Plan contains the following: Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO₂ and methane are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF₆ is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.⁷⁸

Table GHG-1		
GHG Emissions by Sector in 2007⁷⁹		
Sector	CO ₂ e (tons/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	5,208,060	100%
<i>Per Capita</i>	<i>36.1</i>	

Table GHG-2		
GHG Emissions by Sector in 2030⁸⁰		
Sector	CO ₂ e (tons/year)	% of Total
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	6,105,480	100%
<i>Per Capita</i>	<i>27.4</i>	

The San Joaquin Valley Air Pollution Control District (Air District) proposed, and subsequently adopted, the following process for determining the cumulative significance of project specific GHG emissions on global climate change when issuing permits for stationary source projects:

- “Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement [Best Performance Practices] BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to [Business As Usual] BAU, including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB’s AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Project requiring preparation of an Environmental Impact Report would require quantification of project specific GHG

⁷⁸ Op. Cit. 6-31.

⁷⁹ Op. Cit.

⁸⁰ Op. Cit.

emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.”⁸¹

Regulatory Setting

Federal

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization’s Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years.

The USEPA Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO₂-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in *Massachusetts v. EPA* (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA. On April 17, 2009, the USEPA found that CO₂, CH₄, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

State

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires the Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions; these regulations applied to automobiles and light trucks beginning with the 2009 model year.

California has taken action to reduce GHG emissions. In June 2005, Governor Schwarzenegger signed Executive Order S-3-05 to address climate change and GHG emissions in California. This Order sets the following goals for statewide GHG emissions:

- Reduce to 2000 levels by 2010
- Reduce to 1990 levels by 2020
- Reduce to 80 percent below 1990 levels by 2050

In 2006, California passed AB 32, the California Global Warming Solutions Act of 2006. The Act requires ARB to design and implement emission limits, regulations, and other feasible cost-effective measures to reduce statewide GHG emissions to 1990 levels by 2020. Senate Bill 97 was signed into law in August 2007. The Senate Bill required the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resource Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. On April 13, 2009, the OPR submitted to the Secretary for Natural Resources its recommended amendments to the State CEQA Guidelines for addressing GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting the amendments. Following a 55-day public comment period and 2 public hearings, and in response to comments, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments. The Natural Resources Agency transmitted the adopted amendments and the entire rulemaking file to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the CCR. The Amendments became effective on March 18, 2010.

The AB 32 Scoping Plan contains the main strategies California will use to reduce GHG emissions that cause climate change. The scoping plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms (such as a cap-and-trade system), and an AB 32 cost of implementation fee regulation to fund the program. The first regulation adopted by the ARB pursuant to AB 32 was the regulation requiring mandatory reporting of GHG emissions. The regulation requires large industrial sources emitting more than 25,000 metric tons of CO₂ per year to report and verify their GHG emissions from combustion of both fossil fuels and biomass-derived fuels. The California Cap and Trade program is being developed and the ARB must adopt regulations by January 1, 2011. Also, Governor

⁸¹ District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency. Page 8 and 9. Accessed in April 2021 at: <https://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>

Schwarzenegger directed the ARB, pursuant to Executive Order S-21-09, to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020.

California Environmental Quality Act (CEQA) Requirements

Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

- (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
 - (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
 - (2) Rely on a qualitative analysis or performance based standards.
- (b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
 - (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
 - (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
 - (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.⁸²

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 9 – Air Quality contains a number of policies that apply to projects within Tulare County that support GHG reduction efforts and which have potential relevance to the Project's CEQA review: *AQ-1.3 Cumulative Air Quality Impacts* wherein the County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts; *AQ-1.5 California Environmental Quality Act (CEQA) Compliance* wherein the County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible; *AQ-1.7 Support Statewide Climate Change Solutions* wherein the County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies, as appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies; *AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan* wherein the County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

- 1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
- 2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
- 3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

Tulare County Climate Action Plan

The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer

⁸². California Environmental Quality Act (CEQA). Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.⁸³

Construction-related emissions have been estimated (using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (the model), from a similar solar project and are used in this document by analogy as similar projects will likely result in similar GHG emissions. This Project is smaller than the comparative project and will likely generate fewer emissions.⁸⁴

Project Impact Analysis:

- a) *Less Than Significant Impact:* The Project will result in approximately 660 tons of GHG which will be generated only during construction-related activities (particularly, heavy-duty off-road equipment). However, these emissions will be intermittent (i.e., varying times throughout the course of a day, varying uses of construction-related equipment, varying duration of use by equipment type, etc.), temporary (i.e., only occurring during daylight hours), and short-term (lasting no longer than nine (9) months). GHG emissions also would be generated by construction-related worker-related daily commutes, by heavy-duty diesel tractor-trailer trucks that would be required to haul materials and debris to/from the proposed Project site, and as a result of water use for dust control and other construction-related activities. Once construction-related activities have ceased, operational emissions would be limited to infrequent vehicle-related emissions by maintenance staff and periodic PV panel washing.

High-voltage switchgear for the proposed Project may have circuit breakers that contain SF₆ gas, a GHG with high global warming potential. SF₆ is used as an insulator and arc suppressor in the circuit breakers. Under normal operating conditions, the SF₆ gas would be contained in the equipment and only released due to a leak in the circuit breaker housing.

The electricity generated during the operation of the Project would be added to the power grid and displace electricity generated from fossil fuels. Displaced GHG emissions were calculated by using the average solar radiation hours per day and the current mix of power sources in California. Power sources other than coal and natural gas were not included. The operation of the proposed Project would displace approximately 28,238 metric tons of CO_{2e} per year and result in a net reduction of GHG emissions. This annual displacement in GHG emissions would result in an annual net GHG emissions of 26,707 metric tons of CO_{2e} per year, as shown in **Table GHG-3**. (Calculations are provided in Attachment "A")

Table GHG-3	
Project Phase	CO _{2e} (metric tons per year)
Construction	762
Operation	6
Decommissioning	762
Project Total	1,530
Annual Displacement	-28,237
Annual Net Emissions	-26,707
<i>Source: See attachment "A".</i>	

The methodology found in the SJVAPCD's Climate Change Action Plan was used to determine the significance of impacts caused by GHG emissions from the Project (SJVAPCD, 2009). This methodology recommends projects be compared to a "business-as-usual" scenario, and that projects should be considered to not have a significant impact if it can be demonstrated to have a 29 percent reduction in GHG emissions from the "business-as-usual" scenario. The "business-as-usual" scenario for the Project assumes that the current electricity generation mix in California remains the same during the operational lifetime of the project (35 years) and that there would be no changes to the methods used to generate electricity in California. As described in **Table GHG-3**, the proposed Project would result in an annual GHG emissions reduction of more than 38,320 metric tons CO_{2e} compared to the "business-as-usual scenario", a reduction of greater than 100 percent.

The Project will result in a benefit as it will reduce GHG emissions typically generated by other energy producers as this Project is a renewable energy project (solar). Overall, the GHG emissions generated during construction-related activities will be nullified when the Project is fully operational. As such, the Project would result in a less than significant impact to this resource.

⁸³ Tulare County Climate Action Plan. Page 1. Accessed April 2021 at: <http://generalplan.co.tulare.ca.us/documents.html>. then select tab noted as "Climate Action Plan February 2010 Draft"

⁸⁴ See Attachment "A". These emissions estimates were derived by analogy from another solar energy project (Angela Solar) in Tulare County that is approximately the same acreage (i.e., 277 acres vs. this Project's 237 acres); same mega-watts (40MW); 138,000 solar panels vs. 129,000 solar panels for this Project; and similar construction time frame (9-months vs. this Project's nearly 8-total months). Angela Solar's emission estimates were derived by analogy from the Deer Creek Solar Project (approximately 18 miles southeast of this Project). Deer Creek Solar emissions analysis can be found in the MND prepared for the Deer Creek Solar Project, which is available at <https://tularecounty.ca.gov/rma/index.cfm/planning-building/environmental-planning/mitigated-negative-declarations/deer-creek-solar-project/>.

- b) *Less Than Significant Impact:* Since the proposed Project is located in an unincorporated area of Tulare County, the most applicable GHG plan is the Tulare County Climate Action Plan (CAP) (County of Tulare, 2010), Executive Order S-3-05, Executive Order B-30-15, SB 350, SB 100, AB 32, and SB 32, including the potential for the Project to conflict with the recommended actions identified by CARB in its 2017 Climate Change Scoping Plan.

In April 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target will make it possible for California to reach its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05. Executive Order B-30-15 also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the State's Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the Renewables Portfolio Standard (RPS) goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. Subsequently, SB 32, which codifies the Executive Order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 statewide GHG emissions limit no later than December 31, 2030 (the target date established by Executive Order B-30-15. CARB recently adopted the 2017 Scoping Plan) to achieve this goal.

The CAP serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP requires projects on average achieve a reduction that is six percent in excess of the reductions stated in the ARB Scoping Plan and by regional regulations and programs. AB 32 requires the California Air Resources Board to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

The Project involves the construction-, operation- and maintenance-, and decommissioning-related activities of a solar facility that would produce a new renewable source of energy in Tulare County. Therefore, the Project would directly support the renewable energy target under the 2017 Scoping Plan Update, and a goal of SB 100, for increasing California's procurement of electricity from renewable sources from 50 percent to 60 percent by 2030. As previously discussed, and through analogy of a similar project (see Attachment "A"), the proposed Project would result in a result in an annual GHG emissions reduction of more than 38,320 metric tons CO₂e compared to the "business-as-usual scenario" (a reduction of greater than 100 percent) and would be consistent with the Tulare County CAP, SB 32, SB 100, and AB 32. As such, the Project would result in no impact and provides a net, long-term benefit towards reducing GHG.

Therefore, the Project would not generate greenhouse gas emissions, either directly or indirectly that may have a significant impact on the environment.

Cumulative Impact Analysis: *Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin.

The Project related emissions will be considered to have a significant cumulative impact if Project specific impacts are determined to be significant. As previously discussed above, the proposed Project will generate GHG emissions during construction, routine operational and maintenance activities, and decommissioning activities. However, the proposed solar generating facility will offset

GHG emissions by replacing energy generated by fossil fueled power plants. The Project will result in an overall lifetime reduction estimated of CO₂e and will therefore be regionally beneficial. Further, the proposed Project is consistent with previously mentioned plans, policies, and regulations. As the proposed Project will result in a less than significant Project specific impact, a less than significant cumulative impact will also occur.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The proposed Project site is in an unincorporated area of southwest Tulare County (County), California, approximately five miles west of nearest city, the City of Tulare and east of Road 152. The County Seat, Visalia, is located approximately seven miles north of the Project site.

The nearest airport, Mefford Field Airport (City of Tulare) is approximately 4.8 miles southwest of the proposed Project site. The nearest operational landfill is Teapot Dome Landfill, approximately 16 miles southeast of the proposed Project site. When in reinitiates active operations in 2022 (estimated), the Woodville Landfill is located approximately 3.2 miles south of the site.

The nearest elementary (Sundale Union Elementary School) is approximately 1.6 miles northwest of the Project area.

Regulatory Setting

Federal

The NFPA 70®: National Electrical Code® is adopted in all 50 states. It includes requirements for electrical wiring and equipment. Article 705 covers interconnecting generators, windmills, and solar and fuel cells with other power supplies.⁸⁵ The federal Resource Conservation and Recovery Act (RCRA) and California Hazardous Waste Control Law regulate the disposal of solar PV cells. The local hazardous waste regulatory authority is the County of Tulare.

State

The California Department of Industrial Relations, Division of Occupational Safety and Health, is the administering agency designed to protect worker health and general facility safety. The California Department of Forestry and Fire Protection (CalFire) has designated the area that includes the project site as a Local Responsibility Area which is defined as an area where the local fire jurisdiction is responsible for emergency fire response. The project area is also defined as “Unzoned,” which means that the fire hazard severity of the site has not been determined.⁸⁶

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update (at Chapter 10 – Health and Safety) contains the following goals and policies that relate to hazards and hazardous materials, and which have potential relevance to the Project’s CEQA review: *HS-4.1 Hazardous Materials* wherein the County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan; *HS-4.2 Establishment of Procedures to Transport Hazardous Wastes* wherein the County shall continue to cooperate with the California Highway Patrol (CHP) to establish procedures for the movement of hazardous wastes and explosives within the County; *HS-4.3 Incompatible Land Uses* wherein the County shall prevent incompatible land uses near properties that produce or store hazardous waste; and *HS-4.4 Contamination Prevention* wherein the County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

Project Impact Analysis:

- a) and b) *Less Than Significant Impact*: Proposed Project construction will require the transport and use of small quantities of hazardous materials in the form of gasoline, diesel, and oil. There is the potential for small leaks due to refueling of the construction equipment; however, standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for accidental release of construction-related fuels and other hazardous materials. These BMPs will prevent, minimize, or remedy storm water contamination from spills or leaks, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials.

Proposed Project operations may require the storage of small amounts of hazardous materials, such as fuel and lubricants. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements.

Therefore, the proposed Project will not result in a significant hazard to the public or the environment and impacts will be less than significant.

- c) *No Impact*: The nearest school, Sundale Union Elementary School, is approximately 1.6 miles northwest of the proposed Project site. The Project involves construction of a solar energy generation facility (and potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries in the southern proposed development areas) and will not emit hazardous emissions, involve hazardous materials, or create a hazard to the school. There will be no impact.
- d) *No Impact*: According to the State of California Department of Toxic Substances Control (DTSC) – Envirostor Search, no hazardous materials sites exist within an approximate two-mile radius of the proposed Project site Cam Chemicals (54280088) is listed as inactive to the south of the southern portion of proposed Project area⁸⁷ The proposed Project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control per a review of “Identified Hazardous Waste Sites” (conducted in February, 2021), by RMA staff. Therefore, as the proposed Project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 it would not create a significant hazard to the public or the environment.

⁸⁵ National Fire Protection Association. 2010. NFPA 70: National Fire Code.

⁸⁶ California Department of Forestry and Fire Protection. 2007. Draft Fire Severity Zones in LRA Map. September.

⁸⁷ California Department of Toxic and Substances Control Accessed February 2021 at: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Tulare+County%2C+CA>.

- e) *No Impact:* The nearest airport, Mefford Field Airport, is approximately 4.8 miles southwest of the proposed Project site; There are no private airports within the Project vicinity. The proposed Project will not conflict with Tulare County Airport Land Use Plan (ALUP) policy, and it is not within any airport's safety zone. The proposed Project will not result in a safety hazard for people working in the area. As such, the Project would result in no impact to this resource.
- f) *No Impact:* The proposed Project is not located in the vicinity of a principal route of assistance, as described by the Safety Element of the Tulare County General Plan. The Project's on-site roadway system of the northern parcel would include a single primary gated access road off Road 152, leading to key facilities such as the capacitor bank and substation for both the proposed northern and southern development areas as well as an internal access road system. The driveway from Road 152 would be constructed in accordance with Tulare County Improvement Standards. The roads would accommodate Project operations and maintenance activities such as cleaning of solar panels, providing a fire buffer, and facilitating on-site circulation for emergency vehicles. As such, the proposed Project will not interfere with implementation of an emergency response plan or evacuation.
- g) *No Impact:* The surrounding land is predominantly agricultural and rural residential uses and is not subject or vulnerable to wildland fires. The proposed Project will not contain any housing or buildings where workers will reside or be stationed that will be at risk of fire. As such, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires and would result in no impact to this resource.

Cumulative Impact Analysis: *Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

As noted above, the proposed Project will comply with applicable local, state, and federal regulations for hazardous materials management; it will not create a significant hazard to the public or the environment through foreseeable or accidental conditions involving the release of hazardous materials into the environment; it will not emit hazardous emissions, involve hazardous materials, or create a hazard to the nearest school which is approximately 1.6 miles northwest. Therefore, a less than significant cumulative impact will occur.

10. HYDROLOGY AND WATER QUALITY

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i)	Result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii)	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv)	Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

Tulare County has a dry climate with evaporation rates that exceeds rainfall. The local climate is considered warm desert with annual precipitation approximately 7 to 9 inches, and variable rainfall rates. The majority of precipitation (roughly 84%) falls during the months of November through April.

The Central Valley Region includes about 40% of the land in California and stretches from the Oregon border to the Kern County/Los Angeles County line. It is bound by the Sierra Nevada Mountains on the east and the Coast Range on the west. The Region is divided into three basins: the Sacramento River Basin, the San Joaquin River Basin, and the Tulare Lake Basin.⁸⁸ The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River.⁸⁹ Surface water from the Tulare Lake Basin only drains north into the San Joaquin River in years of extreme rainfall.⁹⁰ The Basin encompasses approximately 10.5 million acres, of which approximately 3.25 million acres are in federal ownership.⁹¹ The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, are of excellent quality and provide the bulk of the surface water supply native to the Basin. Imported surface supplies, which are also of good quality, enter the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta-Mendota Canal.⁹²

Regulatory Setting

Federal

Clean Water Act

The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

State

State Water Resources Control Board

The State Water Resources Control Board (SWRCB), located in Sacramento, CA, is the agency with jurisdiction over water quality issues in the State of California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code) which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The Project site is located within the Central Valley Region.

Regional Water Quality Board

⁸⁸ Central Regional Water Quality Control Board. Central Valley Region. Water Quality Control Plan for the Tulare Lake Basin. Second Edition. Revised January 2015. Page 1-1. Accessed March 2021 at: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/tlbp_201501.pdf.

⁸⁹ Ibid.

⁹⁰ Op. Cit.

⁹¹ Op. Cit.

⁹² Op. Cit. 1-2.

The Central Valley Regional Water Quality Control Board (RWQCB) administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The plan will include specifications for Best Management Practices (BMPs) that will be implemented during proposed Project construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the California Storm Water Best Management Practice Handbook (2003), and are recognized as effectively reducing degradation of surface waters to an acceptable level. Additionally, the SWPPP will describe measures to prevent or control runoff degradation after construction is complete, and identify a plan to inspect and maintain these facilities or project elements.

Local

Tulare County Land Development Regulations

The Tulare County Resource Management Agency (RMA) is responsible for review, approval, and enforcement of planning and land development throughout the unincorporated portions of Tulare County. County of Tulare regulations that direct planning and land development (and related water and wastewater utilities) include the Tulare County General Plan, Zoning Ordinance, Subdivision Ordinance, and CEQA procedures. These responsibilities are divided between Planning Branch, Public Works Branch, and other divisions or departments of RMA, and in coordination with the Environmental Health Division of the Tulare County Health and Human Services Agency, and the Tulare County Fire Department.

The County's flood damage prevention code is intended to promote public health, safety, and general welfare in addition to minimizing public and private losses due to flood conditions. The County code provisions to protect against flooding include requiring uses vulnerable to floods be protected against flood damage at the time of initial construction; controlling the alteration of natural flood plains; and preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. The County flood damage prevention code, most recently amended by Ord. No. 3212 and effective October 29, 1998, is modeled based upon FEMA guidance.

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: (Chapter 10 – Health and Safety and Chapter 11 – Water Resources) contains the following goals and policies that relate to hydrology and water quality and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *AG-1.17 Agricultural Water Resources* wherein the County shall seek to protect and enhance surface water and groundwater resources critical to agriculture; *HS-4.4 Contamination Prevention* wherein the County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination; *WR-1.1 Groundwater Withdrawal* wherein the County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County. These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes; *WR-2.1 Protect Water Quality* wherein all major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. This policy requires the County to confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site; *WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement* wherein the County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board; *WR-2.3 Best Management Practices (BMPs)* wherein the County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board; and *WR-2.4 Construction Site Sediment Control* wherein the County shall continue to enforce provisions to control erosion and sediment from construction sites.

Project Impact Analysis:

- a) *Less Than Significant Impact:* The State Water Resources Control Board requires any new construction project greater than one acre to complete a Stormwater Pollution Prevention Plan (SWPPP). A SWPPP would be prepared for the Project by a qualified engineer or erosion control specialist as a condition of approval and would be submitted to the County for review and approval before being implemented during construction. The SWPPP would be designed to reduce potential impacts related to erosion and

surface water quality during construction activities and throughout the life of the Project. It would include Project information and best management practices (BMP). The BMPs would include dewatering procedures, stormwater runoff quality control measures, concrete waste management, watering for dust control, and construction of perimeter silt fences, as needed. Implementation of the SWPPP will minimize the potential for the Project to substantially alter the existing drainage pattern in a manner that will result in substantial erosion or siltation onsite or offsite. There will be no discharge to any surface or groundwater sources which may impact water quality standards. As such, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the Project would result in a less than significant impact to this resource.

- b) *Less Than Significant Impact:* The proposed Project site is located in the Tulare Lake Basin, an area significantly affected by overdraft. The Department of Water Resources (DWR) has estimated the groundwater by hydrologic region and for the Tulare Lake Basin. DWR estimates a total overdraft of 820,000 acre-feet per year (which is the largest overdraft projected in the state, and approximately 56 percent of the statewide total overdraft). The Project site is located within the Kaweah Sub-basin portion of the regional area.⁹³

The proposed Project would allow the applicant to construct and operate the Tulare 40 Generation Facility (Project). It is an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. The Project would install approximately 129,000 fixed axis mounted solar modules, rated at 410 watts per module (the watts per module may increase at time of Project construction). In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries. “The proposed Project would not require a permanent potable supply of water and would not utilize or develop an on-site surface or groundwater supply over the life of the Project. Water would be imported via haul trucked to the Project site during annual (or biannual) panel washing activities, which are estimated to require approximately 24,000 to 48,000 gallons per year.”⁹⁴ “PV panel washing would occur approximately 1 to 2 times per year (depending on the amount of rainfall each year) using imported water. The panel washing is like common window washing and would employ no harsh chemicals or solvents. Water trucks would be brought on-site 1 to 2 times per year for the duration of approximately 10 days (20 days per year total).”⁹⁵ Therefore, based on the limited, temporary usage of water for dust control purposes during construction-related activities and PV panel washing, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

- c) *Less Than Significant Impact:* Overall, the Project would not 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.
- i) *Erosion and Siltation: Less Than Significant Impact:* The extent of potential erosion will vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. As noted in the Project Description (Attachment “D”) the relatively flat nature of the site reduces the need for grading which would be limited to access roads, substation, and inverter pads. Any soils removed from these areas would be redistributed around and retained elsewhere on the Project site (i.e., along solar panel support rack alignments).⁹⁶ “Beyond grading, soil disturbance would occur in association with trenching for emplacement of electrical conduits along each alignment of panel racks. This trenching would be limited in scale and anticipated to require an 18-inch wide and 3-foot-deep trench with a 4-inch conduit cable which is not anticipated to displace significant soils.”⁹⁷ As noted earlier, a SWPPP will be in place during construction, as described in Impact 10-a. Therefore, construction-related activities will minimally disturb the ground surface resulting in a less than significant impact from erosion and siltation.
- ii) *Runoff Resulting in Flooding On- or Off-site: Less Than Significant Impact:* The site will not result in waters capable of flooding either on- or off-site. The site is not subject to flooding and lies within Flood Zone X (area of minimal flooding)

⁹³ Sub-Basins map of the Tulare Lake Basin. Accessed April 2021 at: http://www.tularebasinwildlifepartners.org/uploads/2/1/4/7/21473344/maps-tularebasinirwmsubregionalboundariesmap-rev-0_2_orig.jpg

⁹⁴ “Project and Operations Description for the Proposed Tulare 40 Project Unincorporated Portion of Tulare, California”. December 2020. Page 10. Prepared by Wood Environment & Infrastructure Solutions, Inc. and included in Attachment “D” of this document.

⁹⁵ Ibid.

⁹⁶ Op. Cit. 9.

⁹⁷ Op. Cit.

per the Federal Emergency Management Agency FIRM map.⁹⁸ Also, the site will not generate substantial amounts of runoff that would result in on- or off-site flooding due to the nature of the Project as a renewable energy producer (i.e., solar energy). The Project will avoid runoff type water from dust suppression activities and PV panel washing through implementation of conditions of approval and project design features. As such, the Project would result in a less than significant impact to or from this resource Item.

iii) *Runoff Affecting Drainage Systems and Polluted Runoff: No Impact.* See Items 10 c) i) and ii). The Project will not connect to any existing or planned stormwater drainage system, as such it will not provide any additional sources of polluted runoff. As noted earlier, the very nature of the Project (as a renewable energy producer) does not lend itself as a contributor of polluted runoff. Therefore, the Project would result in no impact to this resource, 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, and as such, would result in no impact.

d) *No Impact:* The Project is not located on or near any areas that would result in or be impact by a flood hazard, tsunami, or seiche zones, that would result in a risk release of pollutants due to project inundation. As noted in Item 10 c) ii), the Project lies within Flood Zone (area of minimal flooding) per the Federal Emergency Management Agency FIRM map; it is not exposed to or near any river, reservoirs, pond, or lake subject to seiches from earthquake activity; and it is at least 85 miles east of the nearest coastline that would be subject to tsunami. Therefore, there would be no impact from potential inundation by the flood hazard, tsunami, or seiches.

e) *No Impact:* The nature of the Project (as a renewable energy producer), and the fact that its anticipated 35-year life would temporarily suspend usage of water for irrigation purposes of agricultural lands, leads to a reasonable conclusion that the Project would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan.

Cumulative Impact Analysis: *Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided in the Water Quality Control Plan for the Tulare Lake Basin and the requirements of the Tulare County Environmental Health Department.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted above, the proposed Project will be required to prepare and implement a SWPPP. Implementation of the SWPPP will ensure that impacts on water quality from construction-related activities will be minimized. As noted earlier, the applicant will import water via water trucks to meet the construction- and operational-related requirements (e.g., for dust suppression and panel washing) of the proposed Project. As there will be no employees stationed on site, domestic water will not be necessary. The proposed Project is not expected to interfere substantially with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the San Joaquin Basin or the Tule Subbasin. The proposed Project will not substantially affect the drainage pattern of the site or area. As part of the SWPPP, erosion prevention measures and other BMPs will be implemented during earthmoving-related activities (e.g., site grading). The Project is not located in the coastal zone or near a lake or reservoir; therefore, the Project will not be located in an area subject to inundation by seiche, tsunami, or related mudflow. Lastly, construction or operation of the Project will not conflict with or obstruct implementation of the Basin Plan. Project operation will not include activities which will degrade water quality, violate discharge requirements, or conflict or obstruct with the implementation of the Basin Plan. As such, the proposed Project will result in a less than cumulative impact to his resource.

II. LAND USE AND PLANNING					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁹⁸ Federal Emergency Management Agency FIRM Panel 06107C1300E June 16, 2009. Accessed February 2021 at: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-119.24027126756349,36.137670866489145,-119.15718716111826,36.17232174266695>

Analysis:

Environmental Setting

The proposed Project is in an unincorporated area of southern Tulare County, California. Tulare County is located in the San Joaquin Valley portion of the Great Central Valley of California that lies south of the Sacramento-San Joaquin Delta, and it is comprised of 4,863 square miles. Tulare County is bordered by Fresno County to the north, Kings County to the west; Kern County to the south; and Inyo County to the east.

Existing land uses in Tulare County have been organized into generalized categories that are summarized on **Table LU-1**. These lands total 3,930 square miles or approximately 81 percent of Tulare County. Open space, which includes wilderness, national forests, monuments and parks, and county parks, encompass 1,230 square miles, or approximately 25 percent of the County. Agricultural uses total over 2,150 square miles or about 44 percent of the entire county. Incorporated cities in Tulare County capture less than three percent of the entire County.

The proposed Project is in an unincorporated area of southern Tulare County, California. The Project site is located approximately 5 miles east of the City of Tulare and abuts Road 152 to the west. The northern proposed Project development area is located directly north of Highway 137/Avenue 232. The southern proposed development area is located 0.4 miles south of Highway 137/Avenue 232, approximately 100 to 300 feet south of Inside Creek, a partially natural vegetated stream corridor.

Table LU-1		
County of Tulare Summary of Assessed Land by Generalized Use Categories⁹⁹		
Generalized Land Use Category	Square Miles	Percentage¹
Residential	110	2.0
Commercial	10	Less than 1%
Industrial		Less than 1%
Agriculture		44.0
Public (including airports, churches, schools)		9.0
Open Space (including national forests and parks, timber preserves)	1,230	25.0
Classified Subtotal	3,930	81.0
Unclassified (includes streets and highways, rivers, canals, etc.)	780	16.0
Unincorporated County Subtotal	4,710	97.0
Incorporated Cities	130	3.0
Total County	4,840	100
<i>¹ Percent reflect those estimated for the total land area of the County and may not equal 100 due to rounding.</i>		
<i>Source: Tulare County Assessor's Database, 2008a</i>		

Coldwell Solar 1, LLC (Applicant) is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. The Project site is divided into two (2) proposed development areas located directly north and 0.4 miles south of Tulare Lindsay Highway (Highway 137/Avenue 232), both directly east of Bliss Lane (Road 152). The installation would comprise approximately 129,000 fixed axis mounted solar modules, rated at 410 watts per module (it should be noted that watts per module may increase at time of Project construction; however, for planning purposes we have included an approximate module output of 410 watts). In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries. The life of the Project is anticipated to be 35 years.

Regulatory Setting

Federal

Federal regulations for land use are not relevant to the Project because it is not a federal undertaking (the Project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

⁹⁹ Tulare County General Plan 2030 Update Background Report. February 2010, Page 3-53.

State

The Project is being evaluated pursuant to CEQA; however, there are no state regulations, plans, programs, or guidelines associated with land use and planning that are applicable to the proposed Project.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update (Chapter 4 – Land Use, Chapter 8 – Environmental Resources Management and Part II Chapter 1 - Rural Valley Lands Plan) contains the following goals and policies that relate to land use and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *LU-2.1 Agricultural Lands* wherein the County shall maintain agriculturally-designated areas for agriculture use and by directing urban development away from valuable agricultural lands to cities, unincorporated communities, hamlets, and planned community areas where public facilities and infrastructure are available; *LU-5.1 Industrial Developments* wherein the County shall encourage a wide range of industrial development activities in appropriate locations to promote economic development, employment opportunities, and provide a sound tax base; and *LU-7.15 Energy Conservation* wherein the County shall encourage the use of solar power and energy conservation building techniques in all new development.

Project Impact Analysis:

a) and b) No Impact: The proposed Project is in an unincorporated area of southwest Tulare County, California. The Project site is located approximately 5 miles east of the City of Tulare and abuts Road 152 to the west. The Project will not physically divide any established community or 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. Therefore, the Project would result in no impact to these resources.

Cumulative Impact Analysis: *No Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As noted earlier, the proposed Project does not include the construction of a major highway, railroad track, or other linear physical feature that will divide an existing community; nor with the proposed Project conflict with any applicable land use plans, policies, and regulations. Therefore, no cumulative impact will occur.

12. MINERAL RESOURCES

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

Per the Tulare County General Plan Background Report, Tulare County is divided into two major physiographic and geologic provinces: the Sierra Nevada Mountains and the Central Valley. The Sierra Nevada Physiographic Province, in the eastern portion of the Tulare County, is underlain by metamorphic and igneous rock. It consists mainly of homogeneous granitic rocks, with several islands of older metamorphic rock. The central and western parts of the County are part of the Central Valley Province, underlain by marine and non-marine sedimentary rocks. It is basically a flat, alluvial plain, with soil consisting of material deposited by the uplifting of the mountains.

Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock, and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur.

Aggregate resources are the most valuable mineral resource in Tulare County because it is a major component of the Portland cement concrete (PCC) and asphaltic concrete (AC). PCC and AC are essential to constructing roads, buildings, and providing for other infrastructure needs. There are four streams that have provided the main source of high quality sand and gravel in Tulare County: Kaweah River, Lewis Creek, Deer Creek and the Tule River. The highest quality deposits are located at the Kaweah and Tule Rivers. Lewis Creek deposits are considerably inferior to those of the other two rivers.

Regulatory Setting

Federal

There are no federal or local regulations pertaining to mineral resources relevant to the proposed project.

State

California Surface Mining and Reclamation Act of 1975

Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California. The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

Local

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 8 – Environmental Resources Management contains the following goals and policies that relate to mineral resources and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *ERM-2.1 Conserve Mineral Deposits* wherein the County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available

PCC grade aggregate; and *ERM-4.6 Renewable Energy* wherein the County shall support efforts, when appropriately sited, for the development and use of alternative energy resources, including renewable energy such as wind, solar, bio-fuels and co-generation.

Project Impact Analysis:

- a) *No Impact:* Mineral resources located within Tulare County are predominately sand and gravel resources primarily provided by four streams: Kaweah River, Lewis Creek, Deer Creek, and the Tule River. The Tule river is the nearest of these four streams to the proposed Project site and is located approximately 25 miles to the east. Due to the distance from these streams, the Project will not result in the loss of an available known mineral resource. The Tulare County General Plan Update (see Figure 8.2 Mineral Resource Zone in the General Plan) indicates the locations of State-designated Mineral Resource Zones. According to the map, the Project site is not located in or within 10 miles of a Mineral Resource Zone. The California Department of Conservation indicates that the nearest, active mining operation (Lee Gill Granite, mining decomposed granite) is located more than 15 miles southeast miles east of the Project site.¹⁰⁰ As such, the Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- b) *No Impact:* The proposed Project site is not delineated on a local land use plan as a locally important mineral resource recovery site. Therefore, the Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Cumulative Impact Analysis: *No Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR. As described above, the proposed Project does not include mining operations and will not result in the loss of availability of a known mineral resource. No cumulative impacts related to this Checklist Item will occur.

13. NOISE

Would the project result in:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The proposed Project site is designated and has historically been used for agricultural uses. The proposed solar energy generation facility site is currently and has historically been used for row crops, and grazing. The site is predominantly surrounded by agricultural land and scattered rural residences. Typically, sensitive receptors on noise-sensitive lands include residences, hospitals, places of worship, libraries and schools, nature and wildlife preserves, and parks. Noise sensitive land uses located in the proposed Project vicinity are rural residences that are located within 100-feet of the Project site.

¹⁰⁰ State of California Department Of Conservation Division of Mine Reclamation, Maps: Mines and Mineral Resources accessed May 2020 at: <https://maps.conservation.ca.gov/mol/index.html>.

Within the Tulare County General Plan Background Report, existing noise levels were recorded within unincorporated areas of County. Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be anticipated, the quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources.¹⁰¹

Noise levels around the Project site are associated with farm equipment and associated agricultural activities. Maximum noise levels generated by farm-related tractors typically range from 77 to 85 dB at a distance of 50 feet from the tractor, depending on the horsepower of the tractor and the operating conditions. Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is generated at the proposed Project site, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation. During periods without noise generated by agricultural production, noise levels would be typical of other noise-sensitive areas in unincorporated Tulare County, as discussed above.

The Tulare County General Plan Background Report Safety section and the Tulare County General Plan 2030 Update serve as the primary policy statement by the County for implementing policies to maintain and improve the noise environment in Tulare County. The General Plan presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of the Tulare County noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.¹⁰²

Regulatory Setting

Federal

Federal Vibration Policies

The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 PPV without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 RMS (Root Mean Square = The square root of the arithmetic average of the squared amplitude of the signal).¹⁰³

State

The California Noise Control Act was enacted in 1973 (Health and Safety Code § 46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff will work with the OPR to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

Local

Analytical noise modeling techniques, in conjunction with actual field noise level measurements, were used to develop generalized Ldn or Community Noise Equivalent Level (CNEL) contours for traffic noise sources within Tulare County for existing conditions. Traffic data representing annual average daily traffic volumes, truck mix, and the day/night distribution of traffic for existing conditions (1986) and future were obtained from the Tulare County Public Works Department and used in the Tulare County Noise Element. The Tulare County General Plan 2030 Update Health & Safety Element (2012) includes noise and land use compatibility standards for various land uses. These are shown in **Table NOI-1** Land Use Compatibility for Community Noise Environments¹⁰⁴.

¹⁰¹ County of Tulare General Plan 2030 Background Report. Page 8-77.

¹⁰² Ibid.

¹⁰³ U.S. Department of Transportation, "The Noise and Vibration Impact Assessment Manual". September 2018. FTA Report No. 0123 Federal Transit Administration. Pages 112 and 113. Accessed April 2021 at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

¹⁰⁴ Tulare County General Plan 2030 Update. Goals and Policies Report. Page 10-25.

Table NOI-1

Land Use Category		Community Noise Exposure-L _{dn} or CNEL (dB)						
		50	55	60	65	70	75	80
Residential - Low Density Single Family, Duplex, Mobile Homes								
Residential – Multi-Family								
Transient Lodging – Motels, Hotels								
Schools, Libraries, Churches, Hospitals, Nursing Homes								
Auditoriums, Concerts Halls, Amphitheaters								
Sports Arenas, Outdoor Spectator Sports								
Playgrounds, Neighborhood Parks								
Golf Courses, Riding Stables, Water Recreation, Cemeteries								
Office Buildings, Business Commercial and Professional								
Industrial, Manufacturing, Utilities, Agriculture								
	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.						
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
	Clearly Unacceptable	New construction or development generally should not be undertaken.						

[Source: Figure Noise-1. State Land Use Compatibility Standards for Community Noise Environment: California Governor's Office of Planning and Research, October 2003]

Tulare County General Plan 2030 Update

The Tulare County General Plan 2030 Update: Chapter 10 – Health and Safety contains the following goals and policies that relate to noise and which have potential relevance to the Project's California Environmental Quality Act (CEQA) review: *HS-8.4 Airport Noise Contours* wherein the County shall ensure new noise sensitive land uses are located outside the 60 CNEL contours of all public use airports; *HS-8.6 Noise Level Criteria* wherein the County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC); *HS-8.8 Adjacent Uses* wherein the County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB L_{dn} (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County; *HS-8.11 Peak Noise Generators* wherein the County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval; *HS-8.18 Construction Noise* wherein the County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 a.m. to 7 p.m., Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors; *HS-8.19 Construction Noise Control* wherein the County shall ensure that construction contractors implement best practices guidelines (i.e., berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

Project Impact Analysis:

- a) *Less Than Significant Impact With Mitigation:* The proposed Project site is zoned for agricultural purposes and is predominantly in crop production and scattered rural residences. The Tulare County General Plan Background Report indicates that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. The proposed Project will increase ambient noise levels, temporarily, intermittently, and on the short-term, during construction-related activities; however, the increase in noise levels will not be permanent in nature or exceed Tulare County's Maximum Acceptable Ambient Noise Exposure for Various Land Uses. The ambient noise environment in the proposed Project vicinity is dominated by agricultural-related uses, including tractor-intensive work. The magnitude and frequency of the existing ambient noise levels may vary considerably over the course of the day and throughout the week. The variation is caused by different reasons, for example, changing weather conditions, the effects of rotation of agricultural crops, and other human activities.

Project Operational Noise Impacts: The Project will largely be self-sufficient upon completion of construction, with only periodic monitoring and maintenance activities required. Once placed in service, the Project will be operated remotely. Project employees will frequent the site for maintenance and panel washing resulting in up to 5 trips per week to the site for security or maintenance and 20 days per year for panel washing activities. Except for biannual panel washing activities, emergency repair events, and occasional security checks, the facility would not require any full-time employees located on or traveling to the site.

Noise from electrical equipment, such as transformers, is characterized as a discrete low frequency hum. The noise from transformers is produced by alternating current flux in the core that causes it to vibrate. As the pad mounted transformers are housed in metal cabinets and are located a minimum of 200 feet to the interior of the Project, the noise levels produced are anticipated to be at or below existing ambient noise levels that the Project site undergoes during current agricultural activities (which include the use of a tractor for the grading of the site at least four times a year).

The County of Tulare's General Plan 2030 Update Health and Safety Element (2012) sets the standard noise threshold of 60 dB Ldn at the exterior of nearby residences. Exterior noise levels in the range of 45-60 dB Ldn or Community Noise Equivalent Level (CNEL) or below are generally considered acceptable for residential land uses and 45-75 dB Ldn (or CNEL) or below are considered acceptable for industrial, manufacturing utilities, and agriculture land uses. There are rural residences and agricultural outbuildings that are within vicinity of the Project site. There are rural residences and agricultural outbuildings that surround the Project site. The distance to the existing sensitive receptors from the edge of the Project's proposed solar arrays will be greater than 140 feet (in the norther proposed Project development area north of Highway 137).

The Project will employ passive solar power generation through the use of fix-tilt mounted arrays. Unlike tracking arrays that are typically powered by drive motors to track the east/west path of the sun on a single axis throughout the day, fix-tilt mounted arrays remain stationary. Noise from a tracker motor ranges from 62 dBA to 63 dBA at one meter distance; however, as the proposed Project will utilize fix-tilt mounted arrays, there will be no noise typically associated with a tracker motor. Therefore, there will be no long-term effects on existing ambient noise levels from the operation of the proposed Project.

As discussed earlier, operational noise is anticipated to be below Tulare County General Plan noise standards of 60 dB Ldn (or CNEL) or less at the exterior of nearby residences and 45 dB Ldn (or CNEL) or less within interior living spaces. The impact will be less than significant.

Project Construction Noise Impacts: Project construction-related will include site preparation, grading, installation of the photovoltaic (PV) solar modules, construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along Road 152 to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. Construction-related short-term, intermittent, temporary noise levels will be higher than existing ambient noise levels in the Project area, but will no longer occur after construction is completed.

Solar generation facility construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise-generating characteristics. These various sequential phases will change the character of the noise generated on the Project site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, there are similarities in the dominant noise sources and their anticipated noise levels. **Table NOI-2** indicates the anticipated noise levels of the typical construction-related equipment (i.e., graders, trenchers, tractors) based on a distance of 50-feet between the equipment and the sensitive noise receptor. Installation of solar panel arrays will involve the installation of steel beams using percussive or vibration equipment in a manner similar to installing freeway guardrails. The solar panel installation will include earthwork, grading, and erosion control, and erection of the panels, supports, and associated electrical equipment.

Table NOI-2 Construction Equipment Noise Levels ¹⁰⁵	
Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	80
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Paver	85
Pile-driver (Impact)	101
Pile-driver (Sonic)	95
Pneumatic Tool	85
Pump	77
Rail Saw	90
Rock Drill	95
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	84

Phase 1: Site Preparation

“Across most of the site, a low-impact mow and roll technique would be used to remove surface vegetation and keep root balls in place. This practice minimizes dust generation and the associated water requirements related to dust suppression. In addition, this practice allows for faster regeneration of vegetation cover than re-seeding alone. Grubbing and grading would be required to level particularly rough areas of the site and to prepare soils for concrete foundations for the substation equipment and inverters; however, the existing site is relatively flat and no additional imported fill is anticipated for site stabilization. Access roadbeds would also be grubbed, graded, and compacted. The fence-line would be shallowly excavated and graded to create a level surface for proper fence installation. The site cut and fill would be balanced, and all topsoil would be retained and preserved on-site.”¹⁰⁶ Noise resulting from the construction-related equipment necessary to complete this phase will be temporary, short-term, and intermittent.

Phase 2: Photovoltaic Module System

“The structure supporting the PV module arrays would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar), which would be driven into the soil using pneumatic techniques to a depth of between 3 and 5 feet. The piles are typically spaced 12.5 feet apart beneath each array, supporting approximately eight (8) modules between each pile. For a fixed tilt mounting system, piles typically would be installed to a reveal height of approximately 4 feet above grade. Some designs allow for PV modules to be secured directly to the torque tubes using appropriate panel clamps. A galvanized metal racking system, which secures the PV

¹⁰⁵ U.S. Department of Transportation, “The Noise and Vibration Impact Assessment Manual”. September 2018. FTA Report No. 0123 Federal Transit Administration Page 175. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

¹⁰⁶ Project and Operations Description. Page 7-8. Included in Attachment “D” of this document.

modules to the installed foundations, would then be assembled in the field and attached according to the manufacturer's guidelines. The solar panel installation will include noise generated as a result of construction-related activities such as earthwork, grading, trenching, erosion control, erection of the panels, supports, and associated electrical equipment. Construction of the new transmission line to the SCE Bliss substation will require the use of drill rigs, cranes, bucket trucks, etc."¹⁰⁷ Similar to Phase 1, noise resulting from the construction-related equipment necessary to complete Phase 2 will be temporary, short-term, and intermittent.

Phase 3: Inverters, Transformers, Substation, Electrical Collector System and Interconnection

"Underground cables to connect panel strings would be installed using standard trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. Wire depths would be in accordance with local, state, and federal requirements, and would likely be buried within excavated trenches approximately 18 inches wide and 3 feet below grade to accommodate the conduits or direct buried cables. Approximately 2 miles of trenching would be required to install the 34.5 kV conduits within the Project site. After excavation, cable rated for direct burial or cables installed inside a PVC conduit would be installed in the trench, and the excavated soil would likely be used to fill the trench and be lightly compressed. All electrical inverters and the transformer would be placed on concrete foundation structures or steel skids. The concrete foundations would be 1 foot thick with up to 6 inches below ground as needed for stabilization. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. Upon completion of successful testing, the equipment would be energized. The substation area would be excavated for the transformer equipment. The northern and southern sites' substations would be graded and compacted to an approximately level grade. The foundation for the substations would be formed with plywood and reinforced with structural rebar. A concrete pad would be constructed on each site as a foundation for the substation equipment, and the remaining area would be compacted with gravel or similar surface material."¹⁰⁸ Like Phases 1 and 2, noise resulting from the construction-related equipment necessary to complete Phase 3 will also be temporary, short-term, and intermittent.

All three Phases would result in temporary, short-term, and intermittent noise from the construction-related equipment necessary to complete the Phases. The applicant anticipates completion of the entire proposed Project site in eight months. The Interconnection component of the proposed Project would be completed in approximately 22 weeks (approximately 4 months). Overall, the proposed Project's construction-related activities are anticipated to be completed in 8 months.

The General Plan 2030 Update Health and Safety Element (2012) does not identify short-term, construction-noise-level thresholds. It limits noise generating activities (such as construction) to hours of normal business operation unless specific County approval is given. Construction-related activities will be restricted to daytime hours and will be short-term and temporary in nature.

Construction noise will be similar in character to existing noise in the area resulting from agricultural operations. Construction will occur throughout the Project site, will not be concentrated or confined in the area directly adjacent to sensitive receptors and will result in short-term, temporary periodic increases in noise. Normally, construction-related activities occur in small construction zones with noise emanating from the various points in the area. In several instances, the sensitive receptors located in the Project area are shielded from the construction areas by distance, existing roadways, agricultural vegetation, and agricultural-related structures.

Construction-related activities will adhere to the Tulare County General Plan goals and policies, the Tulare County Zoning Ordinance, and **Mitigation Measures NOI-1** through **NOI-5**. As there will be no long-term, on-going, operational noise (outside of equipment used to spray wash the panels and during maintenance activities (as needed), **Mitigation Measures NOI-1** through **NOI-5**, would reduce the short-term, intermittent, and temporary (approximately nine months) noise from construction-related activities. Therefore, implementation of **Mitigation Measures NOI-1** through **NOI-5** would reduce the impacts from construction-related activities noise to a less than significant impact with mitigation.

NOI-1: Internal combustion engines shall be equipped with a muffler of a type recommended by the manufacturer.

NOI-2: Construction activities, excluding activities required to occur without interruption or activities that would pose a significant safety risk to workers or citizens, shall be limited to between the daytime hours of 7:00 a.m. and 7:00 p.m.

¹⁰⁷ Ibid. 8.

¹⁰⁸ Op. Cit.

NOI-3: Portable/stationary equipment (e.g., generators, compressors) shall be located at the furthest distance from the nearest residential dwelling.

NOI-4: As directed by the County resident engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, siting the location of stationary construction equipment away from sensitive noise receptors to the greatest extent feasible, turning off idling equipment after no more than five minutes of inactivity, and rescheduling construction activity to avoid noise-sensitive days or times.

NOI-5: Use alternative pile installation techniques (e.g., drilled piles) to the extent possible.

- b) *Less Than Significant Impact:* “Vibration is an oscillatory motion that can be described in terms of the displacement, velocity, or acceleration. Because the motion is oscillatory, there is no net movement of the vibration element and the average of any of the motion metrics is zero. Displacement is the most intuitive metric. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. The velocity represents the instantaneous speed of the floor movement and acceleration is the rate of change of the speed. Although displacement is easier to understand than velocity or acceleration, it is rarely used for describing ground-borne vibration. Most transducers used for measuring ground-borne vibration use either velocity or acceleration. Furthermore, the response of humans, buildings, and equipment to vibration is more accurately described using velocity or acceleration.”¹⁰⁹

“The effects of ground-borne vibration can include perceptible movement of floors in buildings, rattling of windows, shaking of items on shelves or hanging on walls, and low-frequency noise (ground-borne noise). Building damage is not a factor for typical transportation projects, but in extreme cases, such as during blasting or pile-driving during construction, vibration could cause damage to buildings. Although the perceptibility threshold is approximately 65 VdB, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. A vibration level that causes annoyance is well below the damage risk threshold for typical buildings (100 VdB).”¹¹⁰ “Ground-borne vibration is almost never a problem outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of a building, the motion does not provoke the same adverse human reaction.”¹¹¹ **Table NOI-3** presents the human response to different levels of ground-borne vibration and noise. “The vibration level (VdB) is presented with the corresponding frequency assuming that the vibration spectrum peaks at 30 Hz or 60 Hz.(xi) The groundborne noise levels (dBA) are estimated for the specified vibration velocity with a peak vibration spectrum of 30 Hz (Low Freq) and 60 Hz (Mid Freq). Note that the human response differs for vibration velocity level based on frequency. For example, the noise caused by vibrating structural components may cause annoyance even though the vibration cannot be felt. Alternatively, a low frequency vibration can cause annoyance while the ground-borne noise level it generates does not.”¹¹²

Table NOI-3			
Human Response to Different levels of Ground-Bourne Vibration and Noise¹¹³			
Vibration Velocity Level	Noise Level		Human Response
	Low Freq*	Mid Freq**	
65 VdB	25 dBA	40dBA	Approximate threshold of perception for many humans. Low frequency sound: usually inaudible. Mid-frequency sound: excessive for quiet sleeping areas.
75 VdB	35 dBA	50dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying. Low-frequency noise: tolerable for sleeping areas. Mid-frequency noise: excessive in most quiet occupied
85 VdB	45 dBA	60dBA	Vibration tolerable only if there are an infrequent number of events per day. Low-frequency noise: excessive for sleeping areas. Mid-frequency noise: excessive even for infrequent events for some activities.
*Approximate noise level when vibration spectrum peak is near 30 Hz.			
**Approximate noise level when vibration spectrum peak is near 60 Hz.			

¹⁰⁹ U.S. Department of Transportation, Federal Transit Administration, Transit Noise & Vibration Impact Assessment, September 2018. Page 110. Accessed April 2021 at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

¹¹⁰ Ibid. 117-118

¹¹¹ Op. Cit.

¹¹² Op. Cit. 119.

¹¹³ Op. Cit. 120.

Table NOI-4 presents average source levels in terms of velocity for various types of construction equipment measured under a wide variety of construction activities.

Table NOI-4			
Vibration Source Levels for Construction Equipment¹¹⁴			
Equipment		PPV at 25 ft. in/sec	Approximate Lv * at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.544	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58
<i>*RMS velocity in decibels, VdB re 1 micro-in/sec</i>			

Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day.

Construction Related Vibration Impacts: The use of impact post driving or drilling will be utilized to install the solar arrays and drilling and cranes for construction of the new transmission line. While these construction-related activities will result in minor amounts of groundbourne vibration, such groundbourne noise or vibration will attenuate rapidly from the source and will not be generally perceptible outside of the construction areas. As such, impacts to the neighboring sensitive receptors will be less than significant.

Project Operational Vibration Impacts: As described in Impact 13 a), the Project's operations and maintenance will result in minimal maintenance activities. Other than the minimal traffic trips related to maintenance, there will be no vibrational impacts from Project operation. Therefore, the exposure of persons to or generation of excessive groundborne vibration will be less than significant.

Therefore, the Project would result in a less than significant impact and would not generate excessive groundbourne vibration or groundbourne noise.

- c) **No Impact:** The nearest public airport or public use or airport, Mefford Field Airport (in the City of Tulare) is located approximately 6.4 miles southwest of the Project site. Therefore, the Project site is located outside of the 55 dB CNEL noise contour. The proposed Project is not within an airport land use plan or within two miles of a public airport or public use airport. The proposed Project will not conflict with Tulare County Airport Land Use Plan policy. The project would not expose people residing or working in the project area to excessive noise levels. Therefore, there will be no impact.

Cumulative Impact Analysis: *No-to-Less Than Significant Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County.

As discussed earlier, implementation of the proposed Project will not result in a substantial increase in ambient noise levels as a result of construction and decommissioning related activities, construction related traffic, on site stationary sources, and operational traffic, nor would operations of the proposed Project result in any long term or excessive vibration impacts. As a result, the proposed Project will not result in a significant cumulative contribution to noise levels that will adversely affect nearby land uses. As the Project site is not located within area covered by an airport land use plan or within two miles of a public airport or public use airport, the Project will result in no impact to this resource.

¹¹⁴ Op. Cit. 184.

14. POPULATION AND HOUSING					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The California Department of Finance (DOF) provides population estimates for Tulare County. According to DOF population estimates, between 2010 and 2018, Tulare County grew from 442,179 to 475,834¹¹⁵ persons; an increase of 33,655 persons. Between 2010 and 2018, the County experienced an average yearly population growth of 0.84 percent, for a total (Year 2018) population of 475,837.

The annual growth rate for the entire County is anticipated to increase from 1.9 percent to 2.4 percent through 2030. While the percentage of the County's population living in incorporated cities is anticipated to increase by 2030, the percentage of persons living in unincorporated areas in the County will decrease by 2030. The Tulare County Association of Governments (TCAG) projects an additional 313,970 people to be living in Tulare County by 2030 for a total projected population of approximately 742,970.¹¹⁶

Regulatory Setting

Federal

U.S. Department of Housing and Urban Development (HUD)

“HUD’s mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes; utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business.”¹¹⁷ However, as the Project does not propose any housing, HUD or other federal regulations do not apply to this Project.

State

California Department of Housing and Community Development (HCD)

HCD’s mission is to “Promote safe, affordable homes and strong vibrant communities throughout California.”¹¹⁸ “In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element.”¹¹⁹

California Relocation Assistance Act

¹¹⁵ State of California. Department of Finance. E-4 Population Estimates for City, Counties, and the State, 2018-2018. Sacramento, California. November 2012. Accessed in May 2019 at: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-4/2010-18/>

¹¹⁶ Tulare County General Plan 2030 Update. General Plan Background Report. Table 2-16. Page 2-31.

¹¹⁷ U.S. Department of Housing and Urban Development. Mission. Accessed April 2021 at: <https://www.hud.gov/about/mission>.

¹¹⁸ California Department of Housing and Community Development. Our Mission and What We Do. Accessed April 2021 at: <http://www.hcd.ca.gov/about/mission.shtml>.

¹¹⁹ Tulare County Housing Element 2015 Update. Page 1-3.

The State of California adopted the California Relocation Assistance Act (California Government Code §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local

Tulare County Regional Housing Needs Assessment Plan 2014-2023

The Tulare County Association of Governments (TCAG) was responsible for allocating the State's projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element. Tulare County has no control over the countywide population and housing projections provided to TCAG when it prepared the Regional Housing Needs Assessment Plan.

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:¹²⁰

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;
- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and
- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

"The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. ...HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible.""¹²¹

"HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants."¹²²

Tulare County General Plan/Housing Element Policies

As this is a renewable energy project (i.e., no housing units are proposed), there are no policies from the Tulare County General Plan/Housing Element that would apply to this Project.

Project Impact Analysis:

- a) *No Impact:* Coldwell Solar 1, LLC (Applicant) is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in

¹²⁰ TCAG. Tulare County Regional Blueprint. May 2009. Page 18. Accessed March 2021 at: <http://www.tularecog.org/RTPSCS/TulareCountyBluePrint.pdf>.

¹²¹ Tulare County Housing Element 2015 Update. Page 5-12. Accessed March 2021 at: <http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/110Part%20I%20Voluntary%20Elements%20Chapters%206.%2012%20and%2015/001CHP%206%20Tulare%20County%20Housing%20Element%20Update%202015/CHP%206%20TULARE%20COUNTY%20HOUSING%20ELEMENT%20UPDATE%202015.pdf>

¹²² Ibid.

the southwest quadrant of Tulare County, California. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries. Total Project construction will take approximately eight continuous months to complete. Construction workers may be drawn from the local and regional area. No employees will be stationed at the site. Workers will only visit the site for occasional cleaning, maintenance, and repair. The proposed Project will not induce population growth. There will be no impact to this resource Item. No 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) will occur.

- b) *No Impact*: As stated in Item a), the Project is for the construction and operation of a solar generation facility. The site would be monitored remotely and will not require any permanent, on-site employees. The workers are anticipated to be drawn from the nearby, local labor and regional workforce. As such, the Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Cumulative Impact Analysis: *No Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As previously discussed, the proposed Project does not include development of homes or businesses nor does it propose road extensions or additional infrastructure that will generate adverse population growth as a result of the proposed Project, nor will the proposed Project impact existing housing units or people that will be affected as a result of the proposed Project. The proposed Project will not displace any housing units or people, necessitating the construction of replacement housing elsewhere. As such, no cumulative Impact related to this Checklist Item will occur.

15. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The Tulare County Sheriff Porterville Patrol Sub-station is the nearest law enforcement agency resource to the Project site and is located approximately 11 miles southeast of the proposed site.

Tulare County Fire Department has 28 stations that are situated throughout the County within its most densely populated areas. Tulare County Fire Department Station 25 (located in the City of Tulare) is the nearest station with a distance of approximately 4.7 miles southwest of the proposed Project site.

Sundale Union Elementary School, located approximately 1.6 miles to the northwest of the Project site, is the nearest school. The nearest high school (Mission Oak High School) is approximately 3.55 miles west of the Project site in the City of Tulare.

Live Oak Park, located approximately 4.8 miles northwest of the Project site, is the nearest park. The nearest operational landfill is Teapot Dome Landfill, approximately 16 miles southeast of the proposed Project site. When it becomes operational in 2020 (estimated), the Woodville Landfill is located approximately three miles northwest of the Project site.

Regulatory Setting

Federal

None that are applicable to this Project.

State

California Fire Code and Building Code

The purpose of the California Fire Code (Title 24, Part 9 of the California Code of Regulations) is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.¹²³

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update, Chapter 14 – Public Facilities and Services, contains the following policies that relate to public services and may apply to this Project: *PFS-7.2 Fire Protection Standards* wherein the County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection; *PFS-7.5 Fire Staffing and Response Time Standards* wherein the County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards; *PFS-7.6 Provision of Station Facilities and Equipment* wherein the County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County; *PFS-7.12 Design Features for Crime Prevention and Reduction* wherein the County shall promote the use of building and site design features as means for crime prevention and reduction; and *PFS-7.9 Sheriff Response Time* wherein the County shall work with the Sheriff's Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

The proposed Project will not rely on the addition or alteration of any public services. The subject site is within the southwestern portion of Tulare County and will utilize existing services provided by Tulare County. There will be a less than significant impact.

Project Impact Analysis:

- a) ***Fire Protection – Less Than Significant Impact:*** The County of Tulare will continue to provide fire protection services to the proposed Project site upon development. The proposed Project is within the service area of the Tulare County Fire Department. The County of Tulare Fire Department has 28 stations that are located throughout the County within its most densely populated areas and currently maintains minimal staffing to meet the requirements set forth under NFPA 1720 1721 for a rural area. As noted earlier, the nearest station is approximately 4.7 miles southwest of the proposed Project site. No residential or office construction is identified with this Project. Vegetation that could present a fire hazard will be removed from the Project site. Additionally, gravel will likely be placed around high voltage equipment to prevent the spread of fire in the unlikely event of an explosion. As a result of these project design features, impacts to fire protection services will be less than significant.
- b) ***Police Protection - Less than Significant:*** The County of Tulare will continue to provide police protection services to the Project site upon development. Emergency response is adequate to the Project site. As discussed in Item 14 a), no residential or office construction is proposed for this Project. Lighting will be installed along the Project perimeter, 6-foot tall chain-link security fence, lighting on motion sensors, and remotely viewed monitoring will be present across the facilities to lessen any potential impacts from theft and vandalism. As a result of these measures, any impact to police services will be less than significant.

¹²³ 2016 California Fire Code (Title 24, Part 9 of the California Code of Regulations). Page 3. Accessed May 2019.
<https://www.citymb.info/Home/ShowDocument?id=28089>

- c) *Schools – No Impact:* The nearest school, Sundale Union Elementary School, is located approximately 1.6 miles northwest of the proposed Project site. However, as discussed in Item 14 a), the Project will not include construction of any residential structures which could result in increases of school-aged children, nor change the existing land use. The Project will not result in an increase of population that will require additional school facilities because no employees will be assigned to on-site occupancy. There will be no impact.
- d) *Parks – No Impact:* Live Oak Park, (City of Tulare), is the nearest park to the Project site; Mooney Grove Regional Park is the nearest County-maintained park and is located approximately six miles northwest of the proposed Project site. As the proposed Project will not induce population growth, the Project will not create a need for additional park or recreational services. No employees will be assigned to on-site occupancy at the Project site. There will be no impact.
- e) *Other public facilities – No Impact:* There are no other public services (such as wastewater treatment facilities/systems) near the Project site. The nearest public use utility is a Southern California Edison (SCE) Bliss substation located approximately 5.4 linear miles southeast of the Project site. SCE limits the amount of direct line taps into transmission lines and requires most projects to connect to a SCE substation or to build a new SCE substation. The Project will include construction of a new distribution interconnect power line (on existing poles) along public road rights-of-way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. As a result of the Project's location, any impact to the electrical transmission systems will be less than significant.

Cumulative Impact Analysis: *No-to-Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, fire and police services can adequately serve the proposed Project site. No residential or office construction is identified with this Project; and no permanent, full-time employees will be working at the site. As such, there will be no significant cumulative to these resources. The proposed Project will not include any residential housing, as such, it will not result in any new or additional school students at any grade level, it will not create a need for additional park or recreational services, nor will it impact other public facilities. As such, less than significant cumulative impacts related to this Checklist Item will occur.

16. RECREATION

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

“Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them.”¹²⁴ Two new parks were completed and became operational in the unincorporated communities of Plainview (Plainview Community Park) in 2016 and Earlimart (Earlimart Community Park) in 2017. In addition to the 15 parks and recreation facilities that are owned and operated by Tulare County, there are State Parks and Forests, National Parks and National Forests, trails, and recreational areas. Mooney Grove Regional Park is the nearest park, and it is located approximately six miles northwest of the proposed Project site. Lastly, each incorporated city in the County maintains and operates municipal park and recreation facilities which can also be accessed by the County's total population.

¹²⁴ Tulare County General Plan 2030 Update Background Report. February 2010. Page 4-1. Access <http://generalplan.co.tulare.ca.us/documents.html> then scroll to Recirculated Draft EIR, the click on “Appendix B-Background Report”

Federal

Lakes Kaweah and Success

“Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake’s Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching.

Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking. The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area.”¹²⁵

National Parks and National Forests

“Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer.”¹²⁶

Sequoia National Forest

“Sequoia National Forest takes its name from the Giant Sequoia, which is the world’s largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and Mexico, crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year.”¹²⁷

Giant Sequoia National Monument

“The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail.”¹²⁸

Sequoia and Kings Canyon National Parks (SEKI)

“The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks, and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges,

¹²⁵ Ibid. 4-7

¹²⁶ Op. Cit. 4-8.

¹²⁷ Op. Cit. 4-9.

¹²⁸ Op. Cit.

the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.5 million people visit the two parks on an annual basis.”¹²⁹

State

“The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest.”¹³⁰ Colonel Allensworth State Historic Park (approximately 3,715 acres in area) is located in the unincorporated community of Allensworth in southwestern Tulare County, approximately 3.5 miles southeast of the Project site.

Other Recreational Facilities

Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.¹³¹

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust.

Local

Parks

As noted earlier, Mooney Grove Regional Park is the nearest County owned/operated park, approximately six (6.0) miles northwest of the Project site. It is an approximately 143-acre day use park; reservations for picnic areas area available and there is no entrance fee. The next nearest County park is Elk Bayou Park located approximately 6.5 miles southwest (south of the City of Tulare) of the Project site. It is an approximately 60-acre day use park; reservations for picnic areas area available and there is no entrance fee.

Schools

“A total of 48 school districts provide education throughout Tulare County... Of the 48 school districts, seven are unified districts providing educational services for kindergarten through 12th grade. The remaining 41 districts consist of 36 elementary school districts and four high school districts. Many districts only have one school.”¹³² The nearest school is Sundale Union Elementary School located approximately 1.6 miles northwest of the Project site. The Sundale Union Elementary School District operates Sundale Union Elementary School which serves grades K-8.¹³³

Regulatory Setting

Federal

None that apply to this Project.

State

None that apply to this Project.

Local

None that apply to this Project.

¹²⁹ Op. Cit.

¹³⁰ Op. Cit. 4-7.

¹³¹ Op. Cit. 4-10 to 4-11.

¹³² Op. Cit. 7-75 and 7-76.

¹³³ Sundale Union Elementary School District Accessed March 2021 at: <https://www.sundaleschool.com/>.

Project Impact Analysis:

- a) *No Impact:* As discussed in Item 15 e), the Project will not increase the demand for recreational facilities, nor will it put a strain on the existing recreational facilities. No employees will be located at the Project site. Maintenance crews will service the site; however, no population growth will be associated with the Project or necessitated by the Project. The only potential impact on recreational facilities may occur if construction workers (during the eight months of construction), or occasionally visiting maintenance workers, decided to recreate at their own leisure outside of work hours. As noted earlier, the nearest park is Mooney Grove Regional Park approximately six miles northwest of the proposed Project site. As such, 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. Therefore, there will be no impact to this resource.
- b) *No Impact:* The Project does not include recreational facilities. As there is no population growth associated with the Project, there will be no need to construct or expand any recreational facilities as there would be no adverse physical effect on the environment; therefore, there would be no impact to this resource.

Cumulative Impact Analysis: *No Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County.

The proposed Project does not include housing or the accompanying population growth. Operation of the Project will not require any full time employees, which does not significantly increase the use of parks or recreational facilities. The proposed Project does not include new recreational facilities or the expansion of recreational facilities. Therefore, no impact related to this Checklist Item will occur.

17. TRANSPORTATION

Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:**Environmental Setting**

The proposed Project is in an unincorporated area of southern Tulare County, California. The Project site is located approximately 5 miles east of the City of Tulare and abuts and is east of Road 152. The northern proposed Project development area is located directly north of SR137/Avenue 232. The southern proposed development area is located 0.4 miles south of SR 137/Avenue 232, approximately 100 to 300 feet south of Inside Creek, a partially natural vegetated stream corridor.¹³⁴ In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The northern and southern development areas are accessed via Road 152. As noted earlier, Mefford Field Airport (in the City of Tulare), is located approximately 4.8 miles southwest of the site.

¹³⁴ Project Location. Project and Operations Description for the Proposed Tulare 40 Project. Page 2, Prepared by Wood Environment & Infrastructure Solutions, Inc., December 2020.

The nearest railroad to the proposed Project site is Union Pacific Railroad (UPR), approximately seven miles to the west. The UPR provides freight service and functions to connect Tulare County with both northern and southern markets.

Regulatory Setting

Federal

Several federal regulations govern transportation issues. They include: Title 49, CFR, Sections 171-177 (49 CFR 171-177) which governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles; 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations which address safety considerations for the transport of goods, materials, and substances over public highways; and 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, which directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

State

Caltrans: Transportation Concept Reports

Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCP) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept". The proposed Project site is divided into northern and southern area, and the northern area abuts SR 137 (a Concept Report facility) and the southern area is located 0.4 miles south of Highway 137/ Avenue 232.

Caltrans Guide for the Preparation of Traffic Impact Studies

"The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS)."¹³⁵ However, the Project site will only have temporary traffic increases during construction-related activities. "An estimated average of 125 to 150 construction vehicle trips per day would be required for the import of construction workers, PV module materials, substation equipment, distribution line and associated support poles, potential power storage (BESS) facilities, and the surfacing material for access roads."¹³⁶ An estimated average of 1.4 trips per day over a typical year is expected,¹³⁷ and a traffic impact study is not required.

Local

Tulare County General Plan 2030 Update

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *TC-1.16 County Level Of Service (LOS) Standards* wherein the County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual; and *HS-1.9 Emergency Access* wherein the County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

County of Tulare SB 743 Guidelines

This report provides Tulare County's Vehicle Miles Traveled Guidelines (VMT Guidelines or Guidelines) for the implementation of Senate Bill 743 (SB 743) in the unincorporated area of Tulare County. SB 743 was passed by the legislature and signed into law in the fall of 2013. This legislation led to a change in the way that transportation impacts will be measured under the California

¹³⁵ Caltrans Guide for the preparation of traffic studies. Page ii. Accessed March 2021 at: <https://trid.trb.org/view.aspx?id=809652>

¹³⁶ Project and Operations Description. Page 6 Included in Attachment "D" of this document.

¹³⁷ Ibid. 10.

Environmental Quality Act (CEQA). Starting on July 1, 2020, automobile delay and level of service (LOS) may no longer be used as the performance measure to determine the transportation impacts of land development projects under CEQA and the new performance measure will be vehicle miles traveled (VMT). Although statewide guidance for the implementation of SB 743 has been written by the Governor's Office of Planning and Research (OPR), CEQA allows lead agencies (including Tulare County) the latitude to determine their own methodologies and significance thresholds for CEQA technical studies. The SB 743 Guidelines provided in this report are based on the statewide guidance provided by OPR, but they include clarifications and details tailored for and specific to local conditions in Tulare County SB 743 applies to both land development and transportation projects.

SB 743 applies to both land development and transportation projects. The VMT analysis methodology for land development projects was developed in order to accomplish the following:

- Meet the requirements of CEQA, including the new SB 743 regulations that were adopted into CEQA in December 2018 and go into effect on July 1, 2020.
- Provide for transportation improvements to be built that benefit Tulare County residents and facilitate travel by walking, bicycling, and transit.
- Provide for analysis and mitigation of VMT impacts in a way that is feasible and within the scale of land development projects in Tulare County.

VMT analysis for land development projects is to be conducted by comparing a project's VMT/capita or VMT/employee to the average VMT/capita or VMT/employee for the traffic analysis zone (TAZ) in which the project is located. Projects that have a VMT/capita or VMT/employee equal to or above the average for the TAZ are required to provide mitigation in the form of relatively low-cost improvement projects that would support travel by bicycling or walking or provide justification that improvements at the regional level are sufficient to mitigate their VMT impacts. Certain projects such as small projects and local-serving retail projects would be presumed to have a less than significant impact and would not be required to do a VMT analysis. **It is important to note that goods movement (e.g., the transport of raw or finished products from one location to another, for example, transfer of milk to an ice cream producing plant and then the transfer of ice cream to a distributor or directly to a retailer) is not subject to SB 743 and only passenger trips need to be considered in a VMT analysis.** (emphasis added)

Transportation projects that are focused on improvements to travel by bicycling, walking, and transit would be presumed to have a less than significant impact (as these modes of travel eliminate or reduce miles travelled by a vehicle) and would not be required to do a VMT analysis. Certain small roadway projects and all roadway projects that are consistent with the General Plan would be presumed to have a less than significant impact (as these projects have been anticipated to accommodate projected growth and/or are planned improvements to the roadway system for safety, to meet current roadway standards, or to improve roads that are functionally obsolete). Larger roadway projects that are inconsistent with the General Plan would need to conduct a VMT analysis and would need to consider providing mitigation if the project is forecasted to cause an increase in VMT.

Project Impact Analysis:

- a) *No Impact:* The Project will consist of construction and operation/maintenance of a solar energy generation facility. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. Initial site grading would take two to three weeks, and an estimated average of 125 to 150 construction vehicle trips per day would be required for the import of construction workers, PV module materials, substation equipment, distribution line and associated support poles, potential power storage (BESS) facilities, and the surfacing material for access roads. The construction of the Project would take approximately eight months to complete.¹³⁸ Level of Service (LOS) standards vary throughout the County and its eight incorporated cities. As noted earlier in Tulare County General Plan PolicyTC-1.16, the minimum LOS standard within the County shall be no lower than LOS D. Project operations and maintenance are anticipated to require up to 500 vehicle trips per year. This estimate includes up to twelve (12) trips per day during the 20 total days of panel washing activities per year and approximately five (5) trips per week to address security or maintenance issues; an estimated average of 1.4 trip per day over a typical year. Except for biannual panel washing activities, emergency repair events, weed abatement activities, and occasional security checks, the facility would not require any full-time employees located on or traveling to the site. PV panel washing would occur approximately one to two times a year depending on the amount of rainfall in a given year using imported water. Water trucks would be brought on-site twice a year for duration of approximately 10 days (20 days/year total). Construction-related traffic and

¹³⁸ Op Cit. 6.

an estimated average of 1.4 trips per day¹³⁹ associated with the Project operation and maintenance will not impact the local roadways. As such, the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. Therefore, the Project would result in no impact.

- b) *No Impact:* Except for the access road on Road 152, the Project does not require construction of any roadways, and will generate approximately 1.4 trips per day on average for operation and maintenance. The project would not exceed the County's threshold for Vehicle Miles Traveled (VMT) and goods movement trips are exempt from VMT counts as identified in the County of Tulare SB 743 Guidelines. As noted in Item a), an estimated average of 125 to 150 construction vehicle trips per day would be required for the import of construction workers, PV module materials, substation equipment, distribution line and associated support poles, potential power storage (BESS) facilities, and the surfacing material for access roads. The construction of the Project would take approximately eight months to complete, as such, these vehicle trips are temporary, short-term, and intermittent. Also as noted in Item a), Project operations and maintenance are anticipated to require up to 500 vehicle trips per year. This estimate includes up to twelve (12) trips per day during the 20 total days of panel washing activities per year and approximately five (5) trips per week to address security or maintenance issues; an estimated average of 1.4 trip per day over a typical year. Therefore, the Project would result in no impact to this resource.
- c) *No Impact:* No roadway design features are associated with this Project and the change in the existing land use will not result in an incompatible use. As noted earlier, in addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. Therefore, the Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, (e.g., farm equipment). As such, the Project would result in a less than significant impact to this resource.
- d) *Less Than Significant Impact:* No roads will be modified as a result of this Project, construction-related traffic that could impede emergency response will be short-term, temporary, and intermittent and would comply with laws requiring yielding right-of-way to emergency response vehicle. Daily operations and maintenance traffic will be limited to an estimated average of 1.4 trips per day. As such, it can be reasonably concluded that the Project would not result in inadequate emergency access. Therefore, there will be no impact to this resource.

Cumulative Impact Analysis: *No Impact*

The primary geographic area of this cumulative analysis is considered to be the stretch of SR 137 from SR 99 to the west (Tulare to Road 152). This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and the County of Tulare SB 743 Guidelines.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project specific impacts were to occur. As noted earlier, an estimated average of 125 to 150 construction-related vehicle trips per day, and approximately 1.4 trips per day on average for operation and maintenance; as such the proposed Project's vehicle trips will not exceed the County's VMT thresholds. Further, all roadway segments will operate at acceptable LOS D or better during construction and operations/maintenance related activities of the proposed Project. The Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. The proposed Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) as its VMT is below adopted Tulare County VMT Guideline thresholds and goods movement trips are exempt from VMT counts. Further, the proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections), nor would it result in an incompatible use that would impede emergency response. As such, the proposed Project would result in no cumulative impact.

¹³⁹ OP Cit. 10.

18.	TRIBAL CULTURAL RESOURCES				
	Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Analysis:</p> <p>Environmental Setting</p> <p>“Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory.”¹⁴⁰</p> <p><u>Records Search Results</u></p> <p>A search by the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS) to identify areas previously surveyed and identify known cultural resources present within or in close proximity to the Project Study Area was conducted on February 8, 2021 (see Attachment “C”). There are no recorded resources within the project area, and it is not known if any exist there. There is one known resource within the one-half mile radius (Bridge 46-67). There are no recorded cultural resources within the project area or radius.</p> <p><u>Native American Consultation</u></p> <p>The Native American Heritage Commission (NAHC) maintains a contact list of Native American Tribes as having traditional lands located within the County’s jurisdiction. A search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC) was also requested and resulted in negative results (i.e., no sacred lands were identified in the Project site) in a letter received from the NAHC on February 16, 2021 (see Attachment “C”). Pursuant to AB 52 Tulare County RMA staff contacted seven Native American Tribes (see Attachment “C”) by certified mail on February 23, 2021 regarding the Coldwell Solar I, LLC (PSP 20-068) MND. The County did not receive any response from any of the Tribes.</p> <p>Regulatory Setting</p> <p>Federal</p> <p><u>The National Historic Preservation Act</u></p> <p>The National Historic Preservation Act of 1966 (NHPA) established a partnership between the federal government and state, tribal, and local governments that is supported by federal funding for preservation activities. ¹⁴¹ “The National Register of Historic Places</p>					

¹⁴⁰ Tulare County General Plan 2030 Update. August 2012. Page 8-5. <http://generalplan.co.tulare.ca.us/documents.html>, then scroll to Recirculated Draft EIR, the click on “Appendix B-Background Report”

¹⁴¹ Advisory Council on Historic Preservation. National Historic Preservation Act. Accessed March 2021 at: <https://www.achp.gov/digital-library-section-106-landing/national-historic-preservation-act>.

is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.”¹⁴² “The State Historic Preservation Officer (SHPO) is responsible for the operation and management of the Office of Historic Preservation, as well as long range preservation planning. The Governor appoints the SHPO, in consultation with the State Historical Resources Commission and the Director of the Department of Parks and Recreation.”¹⁴³ “Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires federal agencies to consider the effects on historic properties of projects they carry out, assist, fund, permit, license, or approve throughout the country. If a federal or federally-assisted project has the potential to affect historic properties, a Section 106 review will take place.”¹⁴⁴

State

California State Office of Historic Preservation (OHP)

“The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), a gubernatorial appointee, and the State Historical Resources Commission.”¹⁴⁵

“OHP's responsibilities include identifying, evaluating, and registering historic properties; ensuring compliance with federal and state regulatory obligations; encouraging the adoption of economic incentives programs designed to benefit property owners; encouraging economic revitalization by promoting a historic preservation ethic through preservation education and public awareness and, most significantly, by demonstrating leadership and stewardship for historic preservation in California.”¹⁴⁶

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- 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
- Has yielded, or may be likely to yield, information important in prehistory or history.¹⁴⁷

Native American Heritage Commission

“In 1976, the California State Government passed AB 4239, establishing the Native American Heritage Commission (NAHC) as the primary government agency responsible for identifying and cataloging Native American cultural resources. Up until this point, there had been little government participation in the protection of California's cultural resources. As such, one of the NAHC's primary duties, as stated in AB 4239, was to prevent irreparable damage to designated sacred sites, as well as to prevent interference with the expression of Native American religion in California.

Furthermore, the bill authorized the Commission to act in order to prevent damage to and insure Native American access to sacred sites. Moreover, the Commission could request that the court issue an injunction for the site, unless it found evidence that public interest and necessity required otherwise.

In addition, the bill authorized the commission to prepare an inventory of Native American sacred sites located on public lands and required the commission to review current administrative and statutory protections accorded to such sites.

In 1982, legislation was passed authorizing the Commission to identify a Most Likely Descendant (MLD) when Native American human remains were discovered any place other than a dedicated cemetery. MLDs were granted the legal authority to make recommendations regarding the treatment and disposition of the discovered remains. These recommendations, although they cannot

¹⁴² U.S. Department of the Interior. National Park Service. State Historic Preservation Offices. Accessed March 2021at: <https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm>.

¹⁴³ California State Parks. Office of Historic Preservation. State Historic Preservation Officer (SHPO). Accessed March 2021at: https://ohp.parks.ca.gov/?page_id=21755.

¹⁴⁴ Advisory Council on Historic Preservation. An Introduction to Section 106. Accessed March 2021at: <https://www.achp.gov/protecting-historic-properties/section-106-process/introduction-section-106>.

¹⁴⁵ California State Parks. Office of Historic Preservation. Mission and Responsibilities. http://ohp.parks.ca.gov/?page_id=1066

¹⁴⁶ Ibid.

¹⁴⁷ California State Parks. Office of Historic Preservation. California Register of Historic Places. http://www.ohp.parks.ca.gov/?page_id=21238

halt work on the project site, give MLDs a means by which to ensure that the Native American human remains are treated in the appropriate manner.

Today, the NAHC provides protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction. It also provides a legal means by which Native American descendants [sic] can make known their concerns regarding the need for sensitive treatment and disposition of Native American burials, skeletal remains, and items associated with Native American burials.”¹⁴⁸

Tribal Consultation Requirements: AB 52 (Gatto, 2014)

“By requiring consideration of tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and tribal governments, public agencies, and project proponents would have information available early in the project planning process to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflict in the environmental review process.”¹⁴⁹ “The Public Resources Code has established that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” Pub. Resources Code, § 21084.2. To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. Pub. Resources Code, § 21080.3.1.”¹⁵⁰ “If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact.”¹⁵¹

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.¹⁵²

- (1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:¹⁵³

- (d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating

¹⁴⁸ California Native American Heritage Commission. History. Accessed April 2021 at: <http://nahc.ca.gov/about/>.

¹⁴⁹ State of California. California Natural Resources Agency. Governor’s Office of Planning and Research. Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA. Page 3, Legislative Intent. Accessed April 2021 at: https://opr.ca.gov/docs/20200224-AB_52_Technical_Advisory_Feb_2020.pdf.

¹⁵⁰ Ibid.

¹⁵¹ Op. Cit.

¹⁵² State of California. California Natural Resources Agency. Governor’s Office of Planning and Research. Determining the Significance of Impacts to Archeological and Historical Resources, Section 15064.5(c). <http://resources.ca.gov/ceqa/guidelines/art5.html>

¹⁵³ Ibid.

or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
 - (2) The requirements of CEQA and the Coastal Act.
- (e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
- (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
 - (B) If the coroner determines the remains to be Native American:
 1. The coroner shall contact the Native American Heritage Commission within 24 hours.
 2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
 3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - (B) The descendant identified fails to make a recommendation; or
 - (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.
- (f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place

Local

Tulare County General Plan 2030 Update

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

The following Tulare County General Plan 2030 Update policies for this resource apply to this Project: *ERM-6.1 Evaluation of Cultural and Archaeological Resources* wherein the County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards; *ERM-6.2 Protection of Resources with Potential State or Federal Designations* wherein the County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources; *ERM-6.3 Alteration of Sites with Identified Cultural Resources* which states that when planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource; *ERM-6.4 Mitigation* which states that if preservation of cultural resources is not feasible,

every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records; *ERM-6.9 Confidentiality of Archaeological Sites* wherein the County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts; and *ERM-6.10 Grading Cultural Resources Sites* wherein the County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

The Project is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The intensive use of the Project site and the path of the transmission live have continually been disturbed to the point that there are no evident surface Tribal cultural resources. However, as discussed below, mitigation measures are included in the unlikely event that Tribal cultural resources are encountered.

Project Impact Analysis:

a) and b) Less Than Significant Impact With Mitigation: As noted earlier, a search of records by the Southern San Joaquin Valley Information Center of the California Historical Resources Information System was done on February 8, 2021. There are no recorded resources within the project area, and it is not known if any exist there. There is one known resource within the one-half mile radius (Bridge 46-67). There are no recorded cultural resources within the project area or radius. The Native American Heritage Commission (NAHC) conducted a search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC) which concluded negative results (i.e., no sacred lands were identified in the Project site). Lastly, seven Native American Tribes were notified consistent with AB 52 requirements; no responses were received. However, as an abundance of caution, in the unlikely event that subsurface resources are located, **Mitigation Measures CUL-1 through CUL-3** as specified at Item 5 Cultural Resources would be implemented thereby reducing the potential level of impact to this resource as less than significant for resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or to a resource consider significant to a California Native American tribe. Therefore, the Project would result in a less than significant impact to this resource.

Cumulative Impact Analysis: *Less Than-to-No Cumulative Impact*

The geographic area of this cumulative analysis is Tulare County. The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project specific impacts were to occur. The records search and background research confirmed that no human remains are known to exist on the Project site. In the unlikely event that subsurface resources are uncovered during construction and earth disturbing activities, potentially significant impacts to previously unknown subsurface resources may occur. However, with the implementation of **Mitigation Measures CUL-1 through CUL-3**, as applicable, potential Project specific impacts will be reduced to a less than significant level.

19. UTILITIES AND SERVICE SYSTEMS					
Would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

"Tulare County and special districts provide many important services to County residents and businesses in unincorporated communities and hamlets such as water, wastewater, storm drainage, solid waste removal, utilities, communications, fire protection, law enforcement, and a number of other community facilities and services (schools, community centers, etc.)."¹⁵⁴

"Water districts supply water to communities and hamlets throughout the County. Most communities and some hamlets have wastewater treatment systems; however, several communities including Three Rivers, Plainview, Alpaugh, and Ducor rely on individual septic systems. Storm drainage facilities are generally constructed and maintained in conjunction with transportation improvements or new subdivisions in communities. Solid waste collection in the County is divided into service areas, as determined by the Board of Supervisors, with one license for each area. Southern California Edison provides electric service to the south and central areas of Tulare County while PG&E provides electric service in the north. The [Southern California] Gas Company is the primary provider of natural gas throughout the County."¹⁵⁵

Regulatory Setting

Federal

U.S. Environmental Protection Agency (U.S. EPA) - Federal Regulation Title 40, Part 503

In 1993, the [U.S. Environmental Protection Agency](#) (U.S. EPA) promulgated Standards for the Use or Disposal of Sewage Sludge (Code of Federal Regulations Title 40, Part 503), which establish pollutant limitations, operational standards for pathogen and vector attraction reduction, management practices, and other provisions intended to protect public health and the environment from any reasonably anticipated adverse conditions from potential waste constituents and pathogenic organisms.

This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.¹⁵⁶

"The [Resource Conservation and Recovery Act](#) — commonly referred to as RCRA — is our nation's primary law governing the disposal of solid and hazardous waste. Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

¹⁵⁴ Tulare County General Plan Update 2030. Page 14-3.

¹⁵⁵ Ibid. 14-3.

¹⁵⁶ Code of Federal Regulations (CFR). Title 40: Protection of Environment Part 503: Standards for the Use or Disposal of Sewage Sludge. Accessed April 2021 at: <http://www.ecfr.gov/cgi-bin/text-idx?SID=faac2040ebd49d57cc2786437545c8cf&node=40:30.0.1.2.42.1.13.1&rgn=div8>

- Protecting human health and the environment from the potential hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner

To achieve these goals, RCRA established three distinct, yet interrelated, programs:

- The [solid waste program](#), under RCRA Subtitle D, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.
- The [hazardous waste program](#), under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal — in effect, from “cradle to grave.”
- The underground storage tank (UST) program, under RCRA Subtitle I, regulates [underground storage tanks](#) containing hazardous substances and petroleum products. RCRA banned all open dumping of waste, encouraged [source reduction](#) and [recycling](#), and promoted the [safe disposal of municipal waste](#). RCRA also mandated strict controls over the [treatment, storage, and disposal of hazardous waste](#).¹⁵⁷

State

The Integrated Waste Management Act (Assembly Bill 939)

In 1989 the California legislature passed the Integrated Waste Management Act of 1989, known as AB 939. The bill mandates a reduction of waste being disposed: jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance.

The Regional Water Quality Control Board – Biosolids

In California, the beneficial reuse of treated municipal sewage sludge (*a.k.a.*, biosolids) generally must comply with the California Water Code in addition to meeting the requirements specified in Part 503 in Title 40 of the Code of Federal Regulations.

In July 2004, the State Water Resources Control Board adopted [Water Quality Order No. 2004-12-DWQ](#) (General Order), and certified a supporting statewide [Programmatic Environmental Impact Report](#) (PEIR)

The General Order incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

Persons interested in seeking coverage under the General Order should contact the appropriate Regional Water Quality Control Board. Only applicants who submit a complete *Notice of Intent* (NOI), appropriate application fee, and are issued a Notice of Applicability by the executive officer of the appropriate Regional Water Quality Control Board are authorized to land apply biosolids at an agricultural, horticultural, silvicultural, or land reclamation site as a soil amendment under the General Order.

State Water Resources Control Board, Divisions of Drinking Water and Clean Water

Recycled water regulations are administered by both Central RWQCB and the California State Water Resources Control Board (SWRCB). The regulations governing recycled water are found in a combination of sources, including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations (CCR). Issues related to the treatment and distribution of recycled water are generally under the permitting authority of RWQCB and the Clean Water Division of the SWRCB. .

CalRecycle

CalRecycle (formerly the California Integrated Waste Management Board) governs solid waste regulations on the state level, delegating local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). Regulations authored

¹⁵⁷ United States Environmental Protection Agency. EPA History: Resource Conservation and Recovery Act. Accessed April 2021 at: <https://www.epa.gov/history/epa-history-resource-conservation-and-recovery-act>.

by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board (SWRCB) pertaining to landfills (Title 23, Chapter 15) to form CCR Title 27.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Local

Tulare County General Plan 2030 Update

As the Project will not utilize any new or expanded water, wastewater treatment or storm water drainage, natural gas, or telecommunications facilities, the applicable Tulare County General Plan 2030 Update policies for this resource are limited to the following for this resource item: *PFS-5.3 Solid Waste Reduction* wherein the County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs; *PFS-5.4 County Usage of Recycled Materials and Products* wherein the County shall encourage all industries and government agencies in the County to use recycled materials and products where economically feasible; *PFS-5.5 Private Use of Recycled Products* wherein the County shall work with recycling contractors to encourage businesses to use recycled products and encourage consumers to purchase recycled products; *PFS-5.6 Ensure Capacity* wherein the County shall require evidence that there is adequate capacity within the solid waste system for the processing, recycling, transmission, and disposal of solid waste prior to approving new development; *PFS-5.7 Provisions for Solid Waste Storage, Handling, and Collection* wherein the County shall ensure all new development adequately provides for solid waste storage, screening, handling, and collection prior to issuing building permits; *PFS-5.8 Hazardous Waste Disposal Capabilities* wherein the County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan; *PFS-9.1 Expansion of Gas and Electricity Facilities* wherein the County shall coordinate with gas and electricity service providers to plan the expansion of gas and electrical facilities to meet the future needs of County residents; *PFS-9.2 Appropriate Siting of Natural Gas and Electric Systems* wherein the County shall coordinate with natural gas and electricity service providers to locate and design gas and electric systems that minimize impacts to existing and future residents; *PFS-9.4 Power Transmission Lines* wherein the County shall work with the Public Utilities Commission and power utilities in the siting of transmission lines to avoid interfering with scenic views, historic resources, and areas designated for future urban development; and *PFS-9.3 Transmission Corridors* wherein the County shall work with the Public Utilities Commission and power utilities so that transmission corridors meet the following minimum requirements:

1. Transmission corridors shall be located to avoid health impacts on residential lands and sensitive receptors, and
2. Transmission corridors shall not impact the economic use of adjacent properties.

Project Impact Analysis:

a) toc) No Impact: The proposed Project involves the leasing of property for the construction and operation/operation of a solar energy generation facility, which will not include any facilities that will generate wastewater. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. A portable maintenance trailer, along with a portable restroom facility would be located within each staging area during Project construction-related activities. The Project does not require or would 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. Further, the Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. The Project would use less water than the amount of water used to irrigate the current agricultural use; as such, the Project would have sufficient water supplies available to serve the project during normal, dry and multiple dry years as water would be imported for washing the solar panels approximately twice per year; and the usage of water to minimize dust during construction-related activities would be short-term, intermittent, and temporary. Other than the renewable energy Project, there is no anticipated foreseeable future development other than the reclamation of the Project site as agricultural land following termination of the 35-year project life. As such, there will be no impact to these resources.

d) Less Than Significant Impact: The proposed Project is not anticipated to generate large volumes of solid waste during construction, operation, or decommissioning related activities. “The Project would not generate, use, or dispose of any hazardous waste during construction activities. Petroleum products would be used on-site. Petroleum products are excluded as hazardous substances. Diesel, oil, and lubricants would be transported to the site in portable containers (e.g., tanks in the pickup trucks for diesel fuel) but would not be stored on-site. If regulated materials (petroleum products) are spilled, measures would be taken to control the extent of the spill, and the appropriate agencies would be notified in accordance with the applicable federal and state regulations. Trucks and construction vehicles would be serviced from off-site facilities. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and County regulations. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of Project construction. Material Safety Data Sheets for all applicable materials present on-site would be made readily available to onsite personnel.

Construction waste would be sorted on-site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility. It is anticipated that at least 20 percent of construction waste would be recyclable, and 50 percent of those materials would be recycled. Wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted.

Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at the municipal County landfill. Hazardous waste and electrical waste would not be placed in a landfill, but rather would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling facility). All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste. Signs for emergency contacts and hazard warning signs will be posted at the entrance to the facility, as necessary.”¹⁵⁸

California’s Green Building Standards Code (CALGreen; Title 24 Cal. Code Regs., Part 11) requires that nonresidential building projects recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, or meet a local construction and demolition waste management ordinance, whichever is more stringent (§ 5.408.1). The Tulare County Construction and Demolition (C&D) Ordinance, will require the Applicant to divert 100 percent of inert waste and 50 percent of all other waste, prepare and implement a C&D Debris Recycling and Reuse Plan, and develop a C&D Debris Recycling and Reuse Compliance report to be submitted after Project completion. In order to obtain a building permit, the Applicant will be required to comply with the Tulare County C&D Ordinance. By diverting 100 percent of inert waste and 50 percent of all other waste, the Applicant will not generate waste in excess of state or local standards.

Any waste that cannot be recycled will be transported to the Tulare County Solid Waste Department operated Teapot Dome Landfill located near Porterville (or alternatively, to Visalia Disposal Site). According to CalRecycle, Teapot Dome Landfill is permitted to accept 800 tons per day of solid waste. The landfill has a remaining capacity of 712,861 cubic yards out of a total maximum capacity of 8,320,307 cubic yards and has an estimated closure date of 2022. The proposed Project is not anticipated to generate a significant amount of solid waste and Teapot Dome is anticipated to have sufficient space to accommodate the Project needs through construction related activities. In the event that Teapot Dome is either closed or at capacity the waste could be transported to the Visalia Disposal or Woodville Landfill. The Visalia Disposal Site is permitted to accept 2,000 tons per day and has a total permitted capacity of 18,630,666 cubic yards. The Visalia Disposal Site has a remaining capacity of 14,815,501 cubic yards and has an estimated closure date of 2024. Woodville Landfill is planned for reinitialization of operations in 2021. Although currently inoperative, Woodville Landfill is currently permitted to accept approximately 900 tons per day (tpd), although the site is permitted for 1,078 tpd. The increase in acreage will also result in an increase to the permitted landfill capacity by approximately 14.0 million cubic yards for an overall capacity of the Woodville Landfill to approximately 27.5 million cubic yards. The additional Waste Management Units (WMUs) will be designated Class III landfill units and will extend the anticipated landfill closure date by 55 years (to approximately Year 2074).

If, and when, Project decommissioning occurs, facility equipment and structures will be removed in order to return the Project site to its pre-construction condition. A collection and recycling program will be executed to promote the recycling of Project components and minimize disposal of Project components in landfills. Therefore, the Project is anticipated to generate a minimal amount of waste during decommissioning related activities. The Project has an anticipated lifetime of approximately 35 years. Therefore, at the time of decommissioning, it is likely that solid waste generated at the Project site will be transported to Woodville Landfill as it will have an estimated lifetime to the Year 2074.

¹⁵⁸ Project and Operations Description for the Proposed Tulare 40 Project Unincorporated Portion of Tulare, California (APN 195-070-025, APN 195-060-041, APN 195-060-40). December 2020. Pages 8 and 9. Prepared by Wood Environment & Infrastructure Solutions, Inc., for Coldwell Solar 1, LLC. See Attachment “D” of this IS/MND.

During O&M related activities, the Project will generate a small amount of waste associated with maintenance activities, such as broken or rusted metal, defective or malfunctioning equipment, electrical materials, empty containers, other miscellaneous solid waste, and typical refuse from the O&M staff. Any waste that will be accumulated in an on-site dumpster that will be collected as needed by a commercial waste management service.

Based on these considerations, the proposed Project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. See also Section 3.15 Public Services. As such, the Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and it will comply with federal, state, and local management and reduction statutes and regulations related to solid waste as applicable.

- e) *No Impact*: Project Impact Analysis: Waste generated during Project construction, operation, or decommissioning related activities will be recycled or disposed of in a manner that is consistent with all applicable federal, state, and local recycling reduction and waste mandates, requirements, and policies. Therefore, the Project will not result in any impacts related to conflicts with statutes and regulations regarding solid waste.

Cumulative Impact Analysis: *No-to-Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project specific impacts were to occur. As noted above, the proposed Project is not anticipated to generate large volumes of solid waste during construction, operation, or decommissioning related activities. The Project does not require or would 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 Project would not 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; the Project would use less water than the amount of water used to irrigate the current agricultural use; as such, the Project would have sufficient water supplies available to serve the project during normal, dry and multiple dry years; and the usage of water to minimize dust during construction-related activities would be short-term, intermittent, and temporary. The Project Applicant will be required to comply with the Tulare County C&D Ordinance and state regulations (e.g., mandates), as applicable. Furthermore, a collection and recycling program will be implemented to promote the recycling of Project components and minimize disposal of Project components in landfills. The proposed Project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. The proposed Project is required to comply with statutes and regulations regarding solid waste. Therefore, No Cumulative Impact will occur related to this Checklist Item.

20. WILDFIRES

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Expose people or structures to significant risks, including downslope or downstream flooding, or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Analysis:

Environmental Setting

The proposed Project site is surrounded by scattered rural residences, irrigated row crops and rural agriculture, and convenience store/gas station and a flea market. It is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The Project site is located approximately 5 miles east of the City of Tulare and east of Road 152. The proposed Project site is zoned as Exclusive Agriculture – 40 (AE-40). No forest or timber land is present at the proposed Project site or in the proposed Project vicinity. Overall, the Project is located in a rural location and is relatively isolated from either an urban or a rural community. Also, following its proposed life of 35 years, the site would be decommissioned and reclaimed as required by the County.

Regulatory Setting

Federal

None that apply to the Project.

State

None that apply to the Project.

Local

Tulare County General Plan 2030 Update

The Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones¹⁵⁹. The following Tulare County General Plan 2030 Update policies could apply to this Project if it were located on sloped areas, fire hazards areas, lands susceptible to landslides, subsidence/settlement, contamination, and/or flooding; potential for wildland fires; etc.: *ERM-7.3 Protection of Soils on Slopes* wherein unless otherwise provided for in this General Plan, building and road construction on slopes of more than 30 percent shall be prohibited, and development proposals on slopes of 15 percent or more shall be accompanied by plans for control or prevention of erosion, alteration of surface water runoff, soil slippage, and wildfire occurrence; *HS-1.5 Hazard Awareness and Public Education* wherein the County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures; *HS-1.11 Site Investigations* wherein the County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding; *HS-6.1 New Building Fire Hazards* wherein the County shall ensure that all building permits in urban areas, as well as areas with potential for wildland fires, are reviewed by the County Fire Chief; *HS-6.2 Development in Fire Hazard Zones* wherein the County shall ensure that development in extreme or high fire hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable State and County fire standards; *HS-6.3 Consultation with Fire Service Districts* wherein the County shall consult the appropriate fire service district in areas identified as subject to high and extreme fire hazard, for particular regulations or design requirements prior to issuance of a building permit or approval of subdivisions; *HS-6.5 Fire Risk Recommendations* wherein the County shall encourage the County Fire Chief to make recommendations to property owners regarding hazards associated with the use of materials, types of structures, location of structures and subdivisions, road widths, location of fire hydrants, water supply, and other important considerations regarding fire hazard that may be technically feasible but not included in present ordinances or policies; *HS-6.6 Wildland Fire Management Plans* wherein the County shall require the development of wildland fire management plans for projects adjoining significant areas of open space that may have high fuel loads; *HS-6.13 Restoration of Disturbed Land* wherein the County shall support the restoration of disturbed lands resulting from wildfires; *HS-6.14 Coordination with Cities* wherein the County shall coordinate with cities to develop cohesive fire safety plans with overlapping coverage; and *HS-6.15 Coordination of Fuel Hazards on Public Lands* wherein the County shall work with local and Federal agencies to support efforts to reduce fuel related hazards on public lands.

¹⁵⁹ California Fire and Forestry Protection. Fire Hazard Severity Zones in SRA. Accessed April 2021 at: https://osfm.fire.ca.gov/media/6830/fhszs_map54.pdf.

Project Impact Analysis:

a) – d) *No Impact*: The Project site is not in the State Responsibility Area. The Project does not impair the implementation of any adopted emergency response plan or evacuation plan. The Project is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The proposed Project does not propose any other new developments or any changes to the existing surrounding land uses. According to the State Responsibility Area (SRA) Viewer, the proposed Project site is not located in the SRA¹⁶⁰. The Project does not impair the implementation of any adopted emergency response plan or evacuation plan. The Project will not exacerbate wildfire risks or expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, due to slope, prevailing winds, and other factors. The Project will not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The Project will include development of a new 2.5-mile transmission line from the Project site to the SCE Bliss substation along a utility easement on the east side of Road 164. The Project will not expose people or structures to significant risks, including downslope or downstream flooding, or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, the proposed Project will result in no impact related to this resource. As it is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the Project will not exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, due to slope, prevailing winds, and other factors. The Project will not 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. The Project will not expose people or structures to significant risks, including downslope or downstream flooding, or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The facility shall comply with all applicable 2016 California Building Code and CFC standards (such as lighting, fire extinguishers, access/egress, etc.). The applicant shall install a Knox Box (key box) as required by the Tulare County Fire Department. Conditions of approval are included. All new construction would require the submittal of plans for fire department review, and would be required to meet construction methods in accordance with Chapter 7A of the 2016 California Building Code. Therefore, there will be no impact to the Wildfires resource.

Cumulative Impact Analysis: *Less Than-to-No Cumulative Impact*

The geographic area of this cumulative analysis is the entire State of California. The Project site is relatively flat and is not located in the State Responsibility Area. Solar generating facilities are a compatible use in Exclusive Agriculture Zone Districts subject to conditions of approval set forth in Special Use Permits. The Project shall comply with all State and County fire regulations. Therefore, as indicated above, the Project does not impair the implementation of any adopted emergency response plan or evacuation plan, will not exacerbate wildfire risk, and will not expose people or structures to significant risks from runoff, post-fire slope instability, or drainage change.

21. MANDATORY FINDINGS OF SIGNIFICANCE					
		SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹⁶⁰ Ibid.

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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Analysis:

The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project will have a less than significant effect on the local environment. The Project includes developing an approximately 237-acre site into a solar energy generation facility and construction of a new transmission line to the SCE Bliss substation along a utility easement on the east side of Road 152.

a) *Less Than Significant Impact With Mitigation:* The potential for impacts to biological and cultural resources from the construction and operation of the proposed Project will be less than significant with the incorporation of the **Mitigation Measures CUL-1** through **CUL -5** as contained in Item 5 Cultural Resources. The analysis contained in Item 4 Biological Resources concludes that this resource has the potential to be impacted and has included **Mitigation Measures BIO-1** through **BIO-12**. Accordingly, the proposed Project will involve no potential for significant impacts due to degradation of the quality of the environment, substantial reductions in the habitat of a fish or wildlife species, causing a fish or wildlife population to drop below self-sustaining levels, threatening to eliminate a plant or animal community, reduction in the number or restriction of the range of a rare or endangered plant or animal or elimination of important examples of the major periods of California history or prehistory. As such, the impact will be less than significant for biological resources and less than significant with mitigation for cultural and tribal cultural resources.

b) *Less Than Significant Impact:* Projects considered in a cumulative analysis include those that would be constructed concurrently with the Project and those that would be in operation at the same time as the Project. The cumulative projects considered in this analysis are limited to projects that would result in similar impacts to the Project due to their potential to collectively contribute to significant cumulative impacts, as well as other development projects that would be located in the vicinity of the Project. There are no similar projects under consideration or construction located in and around a 10-mile radius of the Project site. The nearest approved solar facility is located approximately eight (8) miles northeast of the project, is less than 18 acres in area, and is located within and surrounded by agriculturally productive lands. As such, its physical distance and location would not contribute to a cumulative impact.

Tulare County staff have determined that there are no projects that could have the potential to contribute to cumulative impacts. The Project was determined to have no impacts to Energy, Land Use and Planning, Mineral Resources, Population and Housing, Recreation and Wildfire. Therefore, the Project will not result in considerable impacts in combination with the other similar renewable energy projects (solar energy projects). The following environmental impacts were determined to be less than significant and did not require mitigation: Aesthetics, Agricultural Resources, Air Quality, Biological, Geology and Soils, Greenhouse Gases, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Public Services, Transportation, and Utilities and Service Systems. As discussed earlier, the Project will result in less than significant impacts to cultural resources (including Tribal Cultural Resources) and noise with incorporation/implementation of mitigation measures identified earlier

The majority of the potential impacts resulting from the Project will be short term, temporary, and intermittent occurring during Project construction-related activities; and with negligible impacts resulting from Project operation as discussed in the earlier environmental analysis. Because construction-related impacts are of a short duration, temporary, intermittent, and localized, they would have to occur concurrently and in proximity of other projects in order to have a cumulative impact. Construction-related impacts (which are primarily associated with air quality, biological resources, noise, and traffic) are not likely to act cumulatively with any other projects in a manner that would result in significant impacts.

This Project (as described in Items 3 and 8) will have short-term impacts with regard to air quality and greenhouse gases during construction-related activities. However, the emissions associated with this Project are minor as compared to baseline emissions levels as quantified in Items 3 and 8, and are not considered cumulatively considerable pursuant to guidelines from the Air District. (See Impact 3(c) for a complete discussion of the Project's cumulative air quality impacts.) The proposed Project would implement

the applicable SJVAPCD Best Performance Standards; therefore, reducing the Project specific and cumulative impacts to a less than significant level. In addition, the Project would lead to cumulatively beneficial reductions in GHG emissions.

As discussed in Item 4, the Project site consists of disturbed agricultural land. Operation of the Project would not result in the loss of sensitive biological habitats or sensitive cultural resources as seen in Attachments “B” and “C”. As such, when combined cumulatively with other projects, the Project would not result in impacts to biological or cultural resources that are cumulatively considerable.

Impacts to aesthetics from the proposed Project would be minimal. As noted earlier, the general vicinity of the Project’s location consists of a regional viewshed that already includes agriculturally productive lands, agricultural-related structures (e.g., barns, equipment sheds, wells, etc.), scattered rural residences, an electrical substation, rural streets, and seasonally used irrigation ditches. Areas of the related projects are not identified as having sensitive or significant visual resources. However, most of the projects would not be visible in the same viewshed. Further, while the solar projects may change the visual character of the area, in general they do not obstruct scenic vistas. Although the Project may contribute to visual impacts on the area due to the addition of more solar facility uses in an agricultural area, the contribution of the Project would not be cumulatively considerable because the visual quality of the overall area is low and other currently operational solar facilities are scattered throughout out the County. Thus, the proposed Project plus the related solar projects would result in less than significant cumulative impact to Aesthetics.

No archaeological or historic resources were located on the project site. With implementation of the cultural resource mitigation measures called for in Impact 5, the Project would not cause cumulatively considerable cultural resource impacts because impacts to unknown cultural resources would be minimized.

The Project also will not cause cumulatively considerable geology and soils impacts, as Project-specific impacts will be less than significant and will not be anticipated to combine with impacts caused by the cumulative projects identified by the County.

The Project will not cause cumulatively considerable impacts related to hazards and hazardous materials. While small amounts of hazardous materials may be used or transported as a result of the Project, these activities will occur in compliance with applicable laws and regulations, and any impacts resulting from use, transport, disposal, or accident or upset conditions will be localized in nature. As a result, any Project-level impacts will not have the potential to contribute to hazards associated with other projects because these impacts would only occur intermittently, if at all. Similarly, the Project will not contribute to cumulative wildland fire-related impacts because it is located in an area with low wildland fire risk,

The Project will not cause cumulatively considerable hydrology and water quality-related impacts. The Project applicant will be required to implement a SWPPP to reduce impacts and will not cause discharge to any surface or groundwater sources or alter the course of any stream or river. Nor will the Project change runoff patterns in the area.

The Project will not cause cumulatively considerable land use and planning impacts. The Project is consistent with all applicable land use planning policies and will be required to implement a reclamation plan at the end of the Project’s life. The reclamation plan will ensure that the Project does not result in effects on neighboring land uses. As a result, the Project’s impacts will not be cumulatively significant.

The Project also will not combine noise-related impacts with that of other projects to cause cumulatively considerable impacts. Construction-related activities will cause short-term, temporary, and intermittent increases in noise in the area, and could occur at the same time as other noise-causing events in the area. However, no other concurrent construction project are anticipated to occur adjacent to or near the Project site, and operational noise will be minimal. As a result, the Project is not anticipated to considerably contribute to cumulative noise impacts during construction or operation.

Because the Project will not cause population growth in the area, it will not lead to construction of new or expanded police or fire protection facilities, or interfere with operation of existing facilities, or create the need for new recreation facilities. The Project will also be designed to minimize fire hazard, and existing emergency response in the area is adequate. Cumulative projects in the area are similarly situated, in that they will not lead to the new for new or expanded police or fire protection facilities or recreation facilities or cause substantial fire hazards. As a result, the Project will not cause cumulatively considerable public services or recreation impacts.

Finally, the Project will not cause cumulatively considerable traffic, transportation, or utilities-related impacts. The Project’s trip generation projections during both construction and operation are low and will not cause substantial increases in traffic on surrounding roads. In addition, Project construction is not anticipated to overlap with other construction projects in a way that will cause combining of traffic impacts. Because the Project and cumulative projects would cause very little runoff and a minimal amount of waste, the Project will not cause cumulatively considerable utilities-related impacts.

Each of the cumulative projects considered in this section would be required to comply with project-specific mitigation measures and/or conditions of approval, as well as applicable General Plans, zoning ordinances, laws and policies. The implementation of the identified Project-specific mitigation measures and compliance with applicable codes, compliance with the Tulare County General Plan, identified Best Management Practices, ordinances, laws and other required regulations will reduce the magnitude of any contribution to cumulative impacts to a less than significant level.

On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, requiring that California utilities reach the 33 percent renewable goal by 2020; subsequently, in 2011 the Legislature enacted SB X1-2, codifying this goal. In the last several months, a series of similarly sized solar generation projects have been approved or are being considered in Kings County as well as neighboring counties. As of the date of this document, four such projects have been approved by Kings County, six in Tulare County. The cumulative benefit to the environment of reduced reliance on fossil fuels is consistent with the goals of the State Executive Order.

- c) *Less Than Significant Impact With Mitigation:* The proposed Project will not result in substantial adverse effect on human beings, either directly or indirectly. Mitigation measures are provided to reduce the Project's potential effects on Cultural Resources and Noise to less than significant (see **BIO-1** through **BIO-12**, **CUL-1** through **CUL-3**, and **NOI-1** through **NOI-5**). No additional mitigation measures will be required. The reduction of approximately 38,000 tons of GHG emissions provided by the Project's renewable energy (solar) would result in a benefit to the environment, as such, the Project would result in beneficial impacts on human beings. Therefore, implementation of the proposed Project would result in a less than significant impact.

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ATTACHMENT “A”

Air Quality and Greenhouse Gas Emissions

Deer Creek Project Equipment Hours (diesel fuel)

Phase	# equipment	hrs/day	days	total hours
Staging	1	7	5	35
	2	10	5	100
	1	7	5	35
	6	5	5	150
	8	5	5	200
	1	7	5	35
	1	7	5	35
Site Grading	1	7	65	455
	3	2	65	390
	3	2	65	390
	1	7	65	455
	1	7	65	455
	1	7	65	455
	1	7	65	455
Access Road	1	8	65	520
	1	7	65	455
	1	7	65	455
Collection Line	2	2	47	188
	1	4	47	188
	1	7	47	329
	1	1	47	47
	2	2	47	188
	1	2	47	94
	3	7	47	987
Substation	2	4	60	480
	1	2	60	120
	1	4	60	240
	1	2	60	120
	1	2	60	120
	4	4	60	960
	4	2	60	480
Solar Array	5	4	152	3,040
	4	4	152	2,432
	7	4	152	4,256
	4	2	152	1,216
	8	3	152	3,648
	2	4	152	1,216
	1	1	152	152
	4	1	152	608
Total	95		329	26,219

Project Comparison

	Deer Creek	Angela	Coldwell
Project Size (acres)	378	277 73%	237 63%
Construction (months)	12	9 75%	8 67%

Project Construction Criteria Pollutant Emissions (Tons Per Year)

		ROG	NOx	CO	SO2	Total PM10	Total PM2.5
Deer Creek	unmitigated	0.6798	7.6107	5.2542	0.0130	0.6877	0.4354
	mitigated	0.2192	4.6099	6.2030	0.0130	0.3948	0.1650
Angela	unmitigated	0.5099	5.7080	3.9407	0.0098	0.5158	0.3266
	mitigated	0.1644	3.4574	4.6523	0.0098	0.2961	0.1238
Coldwell	unmitigated	0.4419	4.9470	3.4152	0.0085	0.4470	0.2830
	mitigated	0.1425	2.9964	4.0320	0.0085	0.2566	0.1073

Project Operation Criteria Pollutant Emissions (Tons Per Year)

		ROG	NOx	CO	SO2	Total PM10	Total PM2.5
Deer Creek	unmitigated	0.0025	0.0075	0.0400	0.0001	0.0105	0.00286
	mitigated	0.0025	0.0075	0.0400	0.0001	0.0105	0.0029
Angela	unmitigated	0.0019	0.0056	0.0300	0.0001	0.0079	0.0021
	mitigated	0.0019	0.0056	0.0300	0.0001	0.0079	0.0021
Coldwell	unmitigated	0.0016	0.0049	0.0260	0.0001	0.0068	0.0019
	mitigated	0.0016	0.0049	0.0260	0.0001	0.0068	0.0019

DPM (PM10 Exhaust) Emissions Rate

		equip. hrs.	tons/yr	lb/yr	lb/hr
Deer Creek	unmitigated	26,219	0.3178	635.6000	0.0242
	mitigated	26,219	0.0249	49.8000	0.0019
Angela Solar	unmitigated	19,664	0.2384	476.7000	0.0242
	mitigated	19,664	0.0187	37.3500	0.0019
Coldwell	unmitigated	17,042	0.2066	413.1400	0.0158
	mitigated	17,042	0.0162	32.3700	0.0012

GHG (CO2e) Emissions (metric tons)

		Construction	Operation	Decommissioning	Total	Displacement	Net
Deer Creek	unmitigated	1,172	10	1,172	2,355	-43,442	-41,088
	mitigated	1,172	10	1,172	2,355	-43,442	-41,088
Angela Solar	unmitigated	879	7	879	1,766	-32,582	-30,816
	mitigated	879	7	879	1,766	-32,582	-30,816
Coldwell	unmitigated	762	6	762	1,530	-28,237	-26,707
	mitigated	762	6	762	1,530	-28,237	-26,707

Name		Prioritization Calculator					
Applicability		Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.					
Author or updater		Matthew Cegielski		Last Update		March 17, 2020	
Facility:		Coldwell Solar (unmitigated)					
ID#:							
Project #:							
Unit and Process#							
Operating Hours hr/yr		17,042.00					
Receptor Proximity and Proximity Factors		Cancer	Chronic	Acute	Max Score	Receptor proximity is in meters. Prioritization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.	
		Score	Score	Score			
0< R<100	1.000	1.10E+03	8.39E-01	0.00E+00	1.10E+03		
100≤R<250	0.250	2.75E+02	2.10E-01	0.00E+00	2.75E+02		
250≤R<500	0.040	4.40E+01	3.36E-02	0.00E+00	4.40E+01		
500≤R<1000	0.011	1.21E+01	9.23E-03	0.00E+00	1.21E+01		
1000≤R<1500	0.003	3.30E+00	2.52E-03	0.00E+00	3.30E+00		
1500≤R<2000	0.002	2.20E+00	1.68E-03	0.00E+00	2.20E+00		
2000<R	0.001	1.10E+00	8.39E-04	0.00E+00	1.10E+00		
		Enter the unit's CAS# of the substances emitted and their amounts.			Prioritization score for each substance generated below. Totals on last row.		
0							
Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	9901	4.77E+02	2.42E-02	2.80E-02	1.10E+03	8.39E-01	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	1.10E+03	8.39E-01	0.00E+00

Name		Prioritization Calculator					
Applicability		Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.					
Author or updater		Matthew Cegielski	Last Update		March 17, 2020		
Facility:		Coldwell Solar (mitigated)					
ID#:							
Project #:							
Unit and Process#							
Operating Hours hr/yr		17,042.00					
Receptor Proximity and Proximity Factors		Cancer	Chronic	Acute	Max Score	Receptor proximity is in meters. Prioritization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.	
		Score	Score	Score			
0< R<100	1.000	8.63E+01	6.57E-02	0.00E+00	8.63E+01		
100≤R<250	0.250	2.16E+01	1.64E-02	0.00E+00	2.16E+01		
250≤R<500	0.040	3.45E+00	2.63E-03	0.00E+00	3.45E+00		
500≤R<1000	0.011	9.49E-01	7.23E-04	0.00E+00	9.49E-01		
1000≤R<1500	0.003	2.59E-01	1.97E-04	0.00E+00	2.59E-01		
1500≤R<2000	0.002	1.73E-01	1.31E-04	0.00E+00	1.73E-01		
2000<R	0.001	8.63E-02	6.57E-05	0.00E+00	8.63E-02		
		Enter the unit's CAS# of the substances emitted and their amounts.			Prioritization score for each substance generated below. Totals on last row.		
0							
Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	9901	3.74E+01	1.90E-02	2.19E-03	8.63E+01	6.57E-02	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	8.63E+01	6.57E-02	0.00E+00



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Public Works
Fiscal Services

TECHNICAL MEMORANDUM AIR QUALITY AND GREENHOUSE GASES

DATE: May 19, 2020

TO: Hector Guerra, Chief Environmental Planner

FROM: Jessica Willis, Planner IV

SUBJECT: Air Quality and Greenhouse Gas Assessments for the Angela Solar Project (PSP 19-083)

PROJECT DESCRIPTION

The proposed Project is located on a ± 277 -acre site and consists of a solar facility that would provide approximately 40 megawatts (MW) of electricity (renewable energy). Project components include: 138,408 solar (photo-voltaic, PV) modules mounted on single access trackers; associated motors, torque tubes, and drivelines for the single-axis tracking system; eleven (11) inverter stations; various wiring, underground cables, combiner boxes, inverters, and transformers; a new, on-site substation tying into a new mile-long 138-kV transmission interconnection line with the nearby Pacific Gas and Electric (PG&E) Olive substation; access and internal roads; security fencing; and, if applicable, motion activated lighting. Construction of the Project will be completed in six to nine months. Following its proposed 35-year life, the facility would be decommissioned and the site reclaimed as required by the County.

PURPOSE AND NEED FOR ASSESSMENT

This document is intended to assist Tulare County Resource Management Agency (RMA) staff in the preparation of the Air Quality and Greenhouse Gas components of the Mitigated Negative Declaration (MND) being prepared for the Angela Solar Project (PSP 19-083). The assessments have been conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.) and are intended to provide the County with sufficient detail regarding potential impacts of Project implementation and to identify mitigation measures, if necessary, to reduce potentially significant impacts.

Air Quality Assessment

The air quality assessment provided in this document was prepared to evaluate whether the air pollutant emissions generated from implementation of the Project would cause significant impacts to air quality and nuisance odor or health risks to nearby receptors. The estimated emissions are compared to federal and state ambient air quality standards (AAQS) and the thresholds of significance established by the San Joaquin Valley Unified Air Pollution Control

District (Air District). The methodology for the air quality assessment follows Air District recommendations for quantification of emissions and evaluation of potential impacts as provided in their guidance document *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI), adopted March 19, 2015.¹

Greenhouse Gas Assessment

The greenhouse gas (GHG) assessment provided in this document was prepared to evaluate whether the estimated GHG emissions generated from the implementation of the Project would cause significant impacts on global climate change. The methodology follows Air District recommendations for quantification of GHG emissions and evaluation of potential impacts on global climate change as provided in the GAMAQI, as well as their guidance and policy documents *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* (Guidance for Agencies) and *District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* (Air District Policy), adopted December 17, 2009.^{2,3}

Emissions Analyses

The Project will include construction and operational emissions. On-site construction activities include: site preparation, PV panel system installation, and installation of inverters, transformers, and substation. Off-site construction activities include installation of the collector system and interconnection with the PG&E Olive substation. Construction emissions include vehicle exhaust from on-site construction equipment as well as off-site material hauling and construction employee travel trips. On-site operational activities include vehicle exhaust from maintenance activities including panel washing and weed abatement. Off-site operational activities include transport of operation and maintenance supplies and employee travel trips.

SIGNIFICANCE THRESHOLDS

CEQA Guidelines define a significant effect on the environment as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.⁴ To determine if a project would have a significant impact on air quality and climate change, the type, level, and impact of criteria pollutant and GHG emissions generated by the project must be evaluated. Appendix G of the CEQA Guidelines provides the criteria (as Checklist Items) for evaluating potential impacts on the environment. The CEQA criteria and the Air District's significance thresholds and guidance for evaluation are provided below.

¹ Air District. *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI). March 19, 2015. Accessed November 2019 at: http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf.

² Air District. *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* (Guidance for Agencies). December 17, 2009. Accessed November 2019 at: <https://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf>.

³ Air District. *District Policy — Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* (Air District Policy). Accessed November 2019 at: <https://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>.

⁴ CEQA §§ 15002(g), 15382

Air Quality Plans

The Air District has established thresholds of significance for criteria pollutant emissions. These thresholds are based on District New Source Review (NSR) offset requirements for stationary sources. “Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District’s air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to “Not conflict or obstruct implementation of the District’s air quality plan”.⁵

The Air District has three sets of significance thresholds based on the source of the emissions. According to the GAMAQI, “The District identifies thresholds that separate a project’s short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations.”⁶

Long-term (operational) emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, “District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District’s significance thresholds... District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds....”⁷

The Air District’s significance thresholds are provided in **Table 1**.

Table 1. Air District Criteria Pollutant Significance Thresholds			
Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO_x	10	10	10
ROG	10	10	10
SO_x	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15
Source: Air District, GAMAQI, Table 2, page 80; and http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf , accessed November 1, 2019.			

⁵ Air District, GAMAQI, Section 7.12, Page 65.

⁶ Air District, GAMAQI, Section 8.1, Page 75

⁷ Air District, GAMAQI, Section 8.2.1, Page 76

Air Quality Violations

“Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project’s property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The need to perform an air quality dispersion modeling analysis for any project (urban development, commercial, or industrial projects) is determined on a case-by-case basis depending on the level of emissions associated with the proposed project. If such modeling is found necessary, the project consultant should check with the District to determine the appropriate model and input data to use in the analysis. Specific information for assessing significance, including screening tools and modeling guidance is available on-line at the District’s website www.valleyair.org.”⁸

“The thresholds of significance for Ambient Air Quality are based on the California Ambient Air Quality Standard (CAAQS) and National Ambient Air Quality Standard (NAAQS). A project would be considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of an ambient air quality standard by exceeding any of the following:

1. Any of the CAAQS, or
2. Any of the NAAQS, and if available, the associated Significant Impact Level (SIL).”⁹

Table 2 provides the California and National Ambient Air Quality Standards.

Table 2. Ambient Air Quality Standards				
Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Ozone (O₃)	1 Hour	0.09 ppm (180 µg/m ³)	---	Same as Primary
	8 Hour	0.070 ppm (137 µg/m ³)	0.070 ppm* (137 µg/m ³)	
Respirable Particulate Matter (PM₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	Annual Arithmetic Mean	20 µg/m ³	---	
Fine Particulate Matter (PM_{2.5})	24 Hour	---	35 µg/m ³	Same as Primary
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	---
	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	---
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)	---	---
Nitrogen Dioxide (NO₂)	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	Same as Primary
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	

⁸ Air District, GAMAQI, Section 7.13, Page 65

⁹ Air District, GAMAQI, Section 8.4, Page 90

Table 2. Ambient Air Quality Standards				
Pollutant	Averaging Time	California Standards	National Standards	
		Concentration	Primary	Secondary
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	---
	3 Hour	---	---	0.5 ppm (1300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)	---
	Annual Arithmetic Mean	---	0.030 ppm (for certain areas)	---
Lead	30 Day Average	1.5 µg/m ³	---	---
	Calendar Quarter	---	1.5 µg/m ³ (for certain areas)	Same as Primary
	Rolling 3-Month Average	---	0.15 µg/m ³	
Visibility Reducing Particles	8 Hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standards	
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)		
* The standard at the time of the GAMAQI was 0.075 ppm; the standard presented here was finalized on October 26, 2015. Abbreviations: ppm = parts per million; mg/m ³ = milligram per cubic meter; µg/m ³ = micrograms per cubic meter. Sources: Air District, GAMAQI, Table 3, page 91; ARB, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf , accessed November 1, 2019.				

“The District ISR rule exempts small development projects (see Table 4 [of the GAMAQI]) from project-specific mitigation requirements. The District performed extensive analysis to identify small projects for which additional mitigation is not feasible. For instance, the exemptions include small residential housing developments of less than 50 units and commercial developments of less than 2,000 square feet. All projects on the exemption list emit less than 2 tons per year of either PM₁₀ or NO_x, which is substantially lower than the District’s 10-ton per year significance thresholds. Furthermore, as the tailpipe emissions from motor vehicles continue to decline, these projects will emit even less today than was estimated in 2005 when this rule was adopted. In addition, two tons per year is expected to result in daily emissions of less than the 100 lb/day screening level for either NO_x or PM₁₀ that the District has concluded that projects under the ISR exemption thresholds will have a less than significant impact on air quality. Consequently, projects below ISR applicability thresholds are not expected to exceed the thresholds of significance for criteria pollutants emissions (see Section 8.3 [of the GAMAQI]). In addition, projects below the ISR applicability thresholds are not expected to violate any air quality standards or contribute substantially to an existing or projected air quality violation and will not exceed the thresholds of significance for ambient air quality. In this case, the District concludes no emission calculation is needed and no ambient air quality analysis is required.”¹⁰

¹⁰ Air District, GAMAQI, Section 8.4.4, Page 95

Table 3 provides the Air District’s ambient air quality analysis (AAQA) screening levels for development projects. For projects that exceed the screening thresholds identified in Table 4, the Air District provides further guidance on how to evaluate the 100 pound per day screening level in their guidance document *Ambient Air Quality Analysis Project Daily Emissions Assessment*.¹¹

Table 3: AAQA Screening Levels For Development Project	
Development Project Type	Space / Size
Residential	50 dwelling units
Commercial	2,000 square feet
Light Industrial	25,000 square feet
Heavy Industrial	100,000 square feet
Medical Office	20,000 square feet
General Office	39,000 square feet
Educational	9,000 square feet
Governmental	10,000 square feet
Recreational	20,000 square feet
Transportation / Transit	Construction exhaust emissions equal or exceeding 2.0 tons NOx or 2.0 tons PM ₁₀
Source: Air District, GAMAQI, Table 4, page 96	

Cumulative Increase in Emissions

“By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the District’s attainment plans. Consequently, the District’s application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project’s individual emissions would have a cumulatively significant impact on air quality. A Lead Agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located [CCR §15064(h)(3)]. Thus, if project specific emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the District is in non-attainment under applicable Federal or State ambient air quality standards. This does not imply that if the project is below all such significance thresholds, it cannot be cumulatively significant.”¹²

Table 4 provides the San Joaquin Valley Air Basin attainment status for federal and state ambient air quality standards.

¹¹ Air District, <http://www.valleyair.org/transportation/CEQA%20Rules/Ambient-Air-Quality-Analysis-Project-Daily-Emissions-Assessment.pdf>, accessed November 1, 2019.

¹² Air District, GAMAQI, Section 7.14, Pages 65-66

Table 4. San Joaquin Valley Attainment Status		
Pollutant	Designation	
	Federal Standards	State Standards
Ozone—1-hour	No Federal Standard	Nonattainment/Severe
Ozone—8-hour	Nonattainment/Extreme	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Attainment
Source: Air District, http://www.valleyair.org/aqinfo/attainment.htm , accessed November 1, 2019.		

Exposure Risks

The location of a project is a major factor in determining whether the project will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and receptors decreases. From a health risk perspective, there are two (2) categories of projects that have the potential to cause long-term health risks impacts:

- Type A Projects: Land use projects that will place new toxic sources in the vicinity of existing receptors. This category includes sources of toxic emissions such as gasoline dispensing facilities, asphalt batch plants, warehouse distribution centers, freeways and high traffic roads, and other stationary sources that emit toxic substances.
- Type B Projects: Land use projects that will place new receptors in the vicinity of existing toxic sources. This category includes residential, commercial, and institutional developments proposed in the vicinity of existing sources such as stationary sources, freeways and high traffic roads, rail yards, and warehouse distribution centers.¹³

“Various tools already exist to perform a screening analysis from stationary sources impacting receptors (Type A projects) as developed for the AB2588 Hot Spots and air district permitting programs. Screening tools may include prioritization charts, AERSCREEN and various spreadsheets. For projects being impacted by existing sources (Type B projects), one screening tool is contained in the ARB Handbook: *Air Quality and Land Use Handbook: A Community Health Perspective*. The document includes a table entitled “*Recommendations on Siting New Sensitive Land Uses Such As Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities*” with recommended buffer distances associated with various types of common sources. If a proposed project is located within an established buffer distance to any of the listed sources, a health risk screening and/or assessment should be performed to assess risk to potential sensitive receptors. These guidelines are intended only for projects that are impacted by a single

¹³ Air District, GAMAQI, Section 6.5, Page 44

source. Another useful tool is the CAPCOA Guidance Document: *Health Risk Assessments for Proposed Land Use Projects*. CAPCOA prepared the guidance to assist Lead Agencies in complying with CEQA requirements. The guidance document describes when and how a health risk assessment should be prepared and what to do with the results.”¹⁴

Table 5 presents the Air District’s and ARB’s siting recommendations for projects proposing sensitive land uses.

Table 5: ARB Recommendations on Siting New Sensitive Land Uses	
Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.
Sources: Air Resources Board, <i>Air Quality and Land Use Handbook: A Community Health Perspective</i> , Page 4, Table 1-1, https://www.arb.ca.gov/ch/handbook.pdf , accessed November 1, 2019. California Air Pollution Control Officers Association, <i>Health Risk Assessments for Proposes Land Use Projects</i> , Page 9, Table 2, http://www.valleyair.org/transportation/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf , accessed November 1, 2019.	

“Determination of whether project emissions would expose sensitive receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and

¹⁴ Air District, GAMAQI, Section 6.5, Page 45

residential areas are examples of sensitive receptors. When evaluating whether a development proposal has the potential to result in localized impacts, Lead Agency staff need to consider the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography. Lead Agencies are encouraged to use the screening tools for Toxic Air Contaminant presented in section 6.5 (Potential Land Use Conflicts and Exposure of Sensitive Receptors [pages 44 – 45 of the GAMAQI]) to identify potential conflicts between land use and sensitive receptors and include the result of their analysis in the referral document.”¹⁵

Nuisance Odors

“Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. Rather, the District recommends that odor analyses strive to fully disclose all pertinent information. The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley. These are presented in Chapter 8 [of the GAMAQI] along with a reasonable distance from the source within which, the degree of odors could possibly be significant.”¹⁶

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing receptor. The second occurs when a new receptor locates near an existing source of odor. “An analysis of potential odor impacts should be conducted for the following two situations:

1. Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
2. Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.”¹⁷

“The intensity of an odor source’s operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The District has identified some common types of facilities that have been known to produce odors in the San Joaquin Valley Air Basin. These are presented in Table 6 (Screening Levels For Potential Odor Sources) [of the GAMAQI] along with a reasonable distance from the source within which, the degree of odors could possibly be significant. Table 6 (Screening Levels for Potential Odor Sources) [of the GAMAQI], can be used as a screening tool to qualitatively assess a project’s potential to adversely affect area receptors. This list of facilities is not all-inclusive. The Lead Agency should evaluate facilities not included in the table or projects separated by greater distances if warranted by local conditions or special circumstances. If the proposed project would result in sensitive receptors being located closer than the screening level distances, a more detailed analysis should be provided.”¹⁸

¹⁵ Air District, GAMAQI, Section 7.15, Page 66

¹⁶ Air District, GAMAQI, Section 7.16, Pages 66-67

¹⁷ Air District, GAMAQI, Section 8.6, Page 102

¹⁸ Air District, GAMAQI, Section 8.6, Pages 102-103

Table 6 presents the Air District’s screening levels for potential nuisance odor sources.

Table 6. Air District Screening Levels for Potential Odor Sources	
Odor Generator / Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Sources: Air District, GAMAQI, Table 6, page 103; and http://www.valleyair.org/transportation/GAMAQI-2015/GAMAQI-Criteria-Pollutant-Thresholds-of-Odors.pdf .	

2017 Climate Change Scoping Plan

The California State Legislature adopted Senate Bill 32 (SB 32) on September 8, 2016. SB 32 focuses on reducing GHG emissions to 40% below 1990 levels by the year 2030. Pursuant to the requirements in SB 32, the ARB adopted the Climate Change Scoping Plan Update (2017 Scoping Plan), which outlines actions recommended to obtain that goal. ARB recommends statewide targets of no more than six (6) metric tons CO_{2e} per capita by 2030 and no more than two (2) metric tons CO_{2e} per capita by 2050.¹⁹

Air District Guidance

“On December 17, 2009, the District’s Governing Board adopted the District Policy: *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District’s Governing Board also approved the guidance document: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA*. In support of the policy and guidance document, District staff prepared a staff report: *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*. These documents adopted in December of 2009 continue to be the relevant policies to address GHG emissions under CEQA. As these documents may be modified under a separate process, the latest versions should be referenced to determine the District’s current guidance at the time of analyzing a particular project.”²⁰

“It is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature. However, the combination of GHG emissions

¹⁹ ARB, California’s 2017 Climate Change Scoping Plan, Page 99, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed November 1, 2019.

²⁰ Air District, GAMAQI, Section 8.9, Page 110

from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change. GHG emissions, and their associated contribution to climate change, are inherently a cumulative impact issue. Therefore, project-level impacts of GHG emissions are treated as one-in-the-same as cumulative impacts.

In summary, the staff report evaluates different approaches for assessing significance of GHG emission impacts. As presented in the report, District staff reviewed the relevant scientific information and concluded that the existing science is inadequate to support quantification of the extent to which project specific GHG emissions would impact global climate features such as average air temperature, average rainfall, or average annual snow pack. In other words, the District was not able to determine a specific quantitative level of GHG emissions increase, above which a project would have a significant impact on the environment, and below which would have an insignificant impact. This is readily understood, when one considers that global climate change is the result of the sum total of GHG emissions, both manmade and natural that occurred in the past; that is occurring now; and will occur in the future.

In the absence of scientific evidence supporting establishment of a numerical threshold, the District policy applies performance based standards to assess project-specific GHG emission impacts on global climate change. The determination is founded on the principal that projects whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006, commonly referred to as “AB 32”, should be considered to have a less than significant impact on global climate change. For a detailed discussion of the District’s establishment of thresholds of significance for GHG emissions, and the District’s application of said thresholds, the reader is referred to the above referenced staff report, District Policy, and District Guidance documents.”²¹

“As presented in Figure 6 (Process of Determining Significance of Greenhouse Gas Emissions) [of the GAMAQI], the policy provides for a tiered approach in assessing significance of project specific GHG emission increases.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the Lead Agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the Lead Agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).
- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG

²¹ Air District, GAMAQI, Section 8.9.1, Pages 111-112

emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

The District guidance for development projects also relies on the use of BPS. For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Projects implementing any combination of BPS, and/or demonstrating a total 29 percent reduction in GHG emissions from business-as-usual (BAU), would be determined to have a less than cumulatively significant impact on global climate change.”²²

The Air District's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* states, “Projects implementing Best Performance Standards in accordance with this guidance would be determined to have a less than significant individual and cumulative impact on global climate change and would not require project specific quantification of GHG emissions. Projects exempt from the requirements of CEQA, and projects complying with an approved GHG emission reduction plan or mitigation program would also be determined to have a less than significant individual or cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified final CEQA document. Projects not implementing BPS would require quantification of project specific GHG emissions. To be determined to have a less than significant individual and cumulative impact on global climate changes, such projects must be determined to have reduced or mitigated GHG emissions by 29%, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be expected for all projects for which the lead agency has determined that an Environmental Impact Report is required, regardless of whether the project incorporates Best Performance Standards.”²³

“If total GHG emissions reductions measures add up to 29% or more, are enforceable, and are required as a part of the development's approval process, the project achieves the Best Performance Standard (BPS) for the respective type of development project. Thus, the GHG emissions from the development project would be determined to have a less than individually and cumulatively significant impact on global climate change for CEQA purposes.”²⁴

“By definition, BPS for development projects is achieving a project-by-project 29% reduction in GHG emissions, compared to BAU. Thus, it is reasonable to conclude that Lead Agencies implementing the proposed *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* threshold will achieve an overall reduction in GHG emissions consistent with AB 32 emission reduction targets...”²⁵

Figure 1 provides a visual summary of the Air District's process for determining significance of project-related GHG emissions.

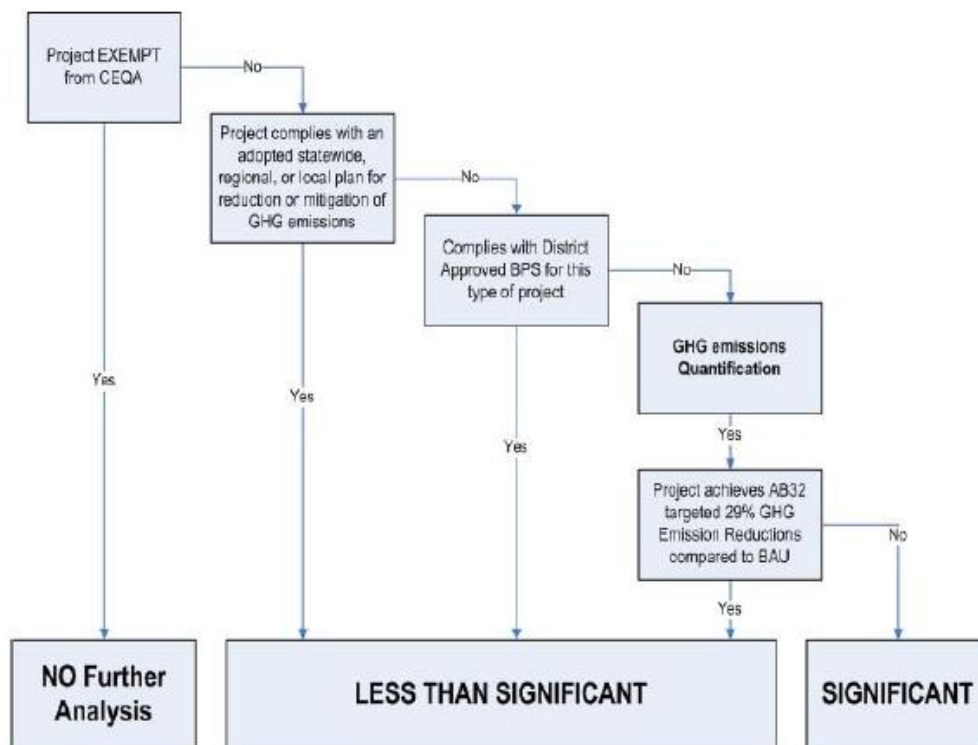
²² Air District, GAMAQI, Section 8.9.1, Page 112

²³ Air District, Guidance for Valley Land-use Agencies, Page 4

²⁴ Air District, Guidance for Valley Land-use Agencies, Pages 7-8

²⁵ Air District, Guidance for Valley Land-use Agencies, Page 8

Figure 1. Process of Determining Significance of Greenhouse Gas Emissions



Source: Air District, GAMAQI, Figure 6, Page 113

The Air District’s guidance document was adopted to provide a basis for lead agencies to establish significance thresholds consistent with ARB’s 2008 Scoping Plan. The Air District currently does not have a recommendation for establishing thresholds or assessing significance consistent with the reduction requirements established in ARB’s 2017 Scoping Plan Update, which requires a 33.2% reduction from BAU to achieve the 2030 target. As such, Tulare County prepared and adopted the Tulare County 2018 Climate Action Plan (CAP) Update.

“The CAP serves as a guiding document for County of Tulare (“County”) actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan’s framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.”²⁶

“The County of Tulare (County) adopted the Tulare County Climate Action Plan (CAP) in August 2012. The CAP includes provisions for an update when the State of California Air Resources Board (CARB) adopts a Scoping Plan Update that provides post-2020 targets for the State and an updated strategy for achieving a 2030 target. Governor Brown signed Senate Bill (SB) 32 on September 8, 2016 which contains the new 2030 target. The CARB 2017 Scoping Plan Update for the Senate Bill (SB) 32 2030 targets was adopted by the CARB on December

²⁶ Tulare County Climate Action Plan, December 2018 Update. Page 1.
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/220Climate%20Action%20Plan/CLIMATE%20ACTION%20PLAN%202018%20UPDATE.pdf>. Accessed November 1, 2019.

14, 2017 which provided new emission inventories and a comprehensive strategy for achieving the 2030 target (CARB 2017a). With the adoption of the 2017 Scoping Plan, the County proceeded with the 2018 CAP Update that is provided in this document.

The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The 2030 target requires the State to reduce emissions by 40 percent below 1990 levels from the 2017 Scoping Plan and County data. The CAP identifies the County's fair share of reductions required to maintain consistency with the State target."²⁷

IMPACT EVALUATION

AIR QUALITY IMPACTS

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

Impact Analysis:

Less Than Significant Impact

Air quality plans (also known as AQPs or attainment plans) and subsequent rules are used to bring the applicable air basin into attainment with federal AAQS designed to protect the health and safety of residents within that air basin. In order to show attainment of the standards, the Air District analyzes the growth projections in the San Joaquin Valley Air Basin (SJVAB), contributing factors in the formation and emission of air pollutants, and existing and future emissions controls. The Air District then formulates an AQP which details the Air District's control strategy to reach attainment. The Air District's 2016 Plan for the 2008 8-Hour Ozone Standard, 2013 Plan for the Revoked 1-Hour Ozone Standard, 2007 Ozone Plan, 2007 PM₁₀ Maintenance Plan and Request for Redesignation, 2008 PM_{2.5} Plan, 2012 PM_{2.5} Plan, 2015 Plan for the 1997 PM_{2.5} Standard, and the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard outline a number of control strategies to help the SJVAPCD reach attainment for the revoked federal 1-hour ozone standard, the 24-hour PM₁₀ standard, and the federal and state PM_{2.5} standards, respectively. The 2008 PM_{2.5} Plan, 2012 PM_{2.5} Plan, and 2015 Plan for the 1997 PM_{2.5} Standard focus specifically on PM_{2.5}, although the control strategies from previous PM₁₀ plans (particularly those related to fugitive dust control) have already improved the SJVAB ambient PM_{2.5} levels. Therefore, because fugitive dust controls continue to be addressed in the PM₁₀ plan, the plans contain a comprehensive list of strict regulatory and incentive-based measures to reduce directly-emitted PM_{2.5} and precursor emissions. The San Joaquin Valley Air Basin is in attainment for CO, SO₂, and lead, so there are no attainment plans for those pollutants.²⁸ The proposed Project will be required to comply with all applicable Air District rules and regulations including, but not limited to, Regulation VIII (Fugitive PM₁₀ Prohibitions) requirements and District Rule 9510 (Indirect Source Review).

As previously noted, the Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants (see **Table 1**) would "Not conflict or obstruct implementation of the District's air quality plan."²⁹ Project-related emissions have been estimated (using CalEEMod, Version 2016.3.2) from a similar solar project and are used in this

²⁷ Ibid.

²⁸ More information on Air District air quality plans can be found online at http://valleyair.org/Air_Quality_Plans/air-quality-plans.htm.

²⁹ Air District, GAMAQI, Section 7.12, Page 65.

assessment by analogy as similar projects will likely result in similar emissions. This Project is smaller than the comparative project and will likely generate fewer emissions. CalEEMod was used to quantify annual construction-related activities ROG, NOx, CO, SO₂, PM_{2.5} and PM₁₀ emissions from off-road equipment, haul trucks, on-road worker vehicle emissions, and vendor delivery trips. Since CalEEMod does not contain a Solar Array Land use type, a user defined industrial land use type was used to estimate on-site construction emissions.

Implementation of the proposed Project would result in a renewable energy resource that would generate no direct emissions of criteria air pollutants. Indirect on- and off-site emissions of criteria pollutants associated with proposed Project operation would be generated as a result of employee trips related to maintenance and periodic PV panel washing activities. The proposed Project site would be monitored remotely 24-hours a day, seven days a week. Visits to the site for emergency purposes/upset events would likely, if at all, occur infrequently (i.e., only a few times per year).

Table 7 provides the construction-related criteria pollutant emissions and **Table 8** provides the operations-related criteria pollutant emissions associated with the development of the Project. As shown in **Tables 7** and **8**, the estimated Project emissions will not exceed the Air District's CEQA significance thresholds for any pollutants. This determination is based on comparing the previously approved Deer Creek Solar Project's emissions to the proposed Project. As air emissions are linear by nature, this Project is approximately 75% the size of Deer Creek Solar and, as such, it would emit 75% less emissions than Deer Creek Solar. Attachment "A" includes the project comparison calculations and Attachment "C" includes the Deer Creek Solar CalEEMod results.

Table 7. Construction Emissions Estimates (unmitigated)						
Project	Estimated Emissions, tons per year					
	ROG	NOx	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
Deer Creek Solar	0.6798	7.6107	5.2542	0.0130	0.6877	0.4354
Angela Solar	0.5099	5.7080	3.9407	0.0098	0.5158	0.3266
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
<i>Source: See Attachment "A" of this document.</i>						

Table 8. Annual Operational Emissions Estimates (unmitigated)						
Project	Estimated Emissions, tons per year					
	ROG	NOx	CO	SO ₂	Total PM ₁₀	Total PM _{2.5}
Deer Creek Solar	0.0025	0.0075	0.0400	0.0001	0.0105	0.00286
Angela Solar	0.0019	0.0056	0.0300	0.0001	0.0079	0.0021
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded	No	No	No	No	No	No
<i>Source: See Attachment "A" of this document.</i>						

As previously noted, the primary source of emissions from the Project are the result of on-site construction equipment and on-road hauling of construction materials. The Air District evaluates significance of short-term (construction) emissions independent of long-term (operational) emissions. As demonstrated in **Tables 7** and **8**, the estimated Project-related emissions during construction and operations will not exceed the Air District's CEQA significance thresholds for

any criteria pollutant. The Project will comply with all applicable Air District rules and regulations including, but not limited to, Regulation VIII (Fugitive PM10 Prohibition) and Rule 9510 (Indirect Source Review), which will further reduce Project-related emissions. As such, Project-related emissions would be included in the AQPs emissions inventories. Therefore, the Project would not conflict with or obstruct implementation of the applicable AQPs. The Project will have a ***Less Than Significant Impact*** related to this Checklist Item.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

As previously noted, the Project will not exceed the Air District's thresholds of significance and therefore, will not conflict with or obstruct implementation of the applicable air quality plans. As such, ***Less Than Significant Impacts*** related to this Checklist Item will occur.

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

Impact Analysis: ***Less Than Significant Impact***

The Project would be considered to have a significant cumulative impact on air quality if project-specific impacts are determined to be significant. As previously noted, the emissions analysis confirms that Project-specific emissions are below the Air District's thresholds of significance at a project-specific level, and that the Project will not cause or contribute to an existing air quality violation. The Project will be required to implement all applicable General Plan policies and to comply with all applicable Air District rules and regulations. Therefore, because the Project would have ***Less Than Significant Project-specific Impacts***, the Project will have a ***Less Than Significant Cumulative Impact*** on air quality.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

As previously noted, Project-related criteria pollutant emissions fall below the Air District's significance thresholds and the Project will be required to implement all applicable General Plan policies and to comply with all applicable Air District rules and regulations. Therefore, the Project will have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

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

Impact Analysis: ***Less Than Significant Impact With Mitigation***

Sensitive receptors are those individuals who are sensitive to air pollution and include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The Air District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of

sensitive receptors include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units.³⁰

Diesel particulate matter (DPM) represents the primary toxic air contaminates (TAC) of concern associated with the proposed Project. DPM emissions are primarily the result of the operation of internal combustion engines in equipment (e.g., loaders, backhoes, and cranes, as well as haul trucks) commonly associated with construction-related activities. Since activities associated with the operation-related activities of the proposed Project would result in short-term, temporary, and intermittent use of mobile or stationary sources of DPM (e.g., maintenance workers driving to and from the Project site, and the occupational use of off-road equipment to move equipment), operation-related activities of the proposed Project would not expose nearby sensitive receptors to DPM emissions that would result in a health risk. Therefore, health risks associated only with proposed Project construction-related activities are evaluated below.

The dose to which receptors are exposed is the primary factor affecting health risk from TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. According to the State of California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments (which determine the exposure of sensitive receptors to TAC emissions), should be based on 9, 30, and/or 70-year exposure periods when assessing TACs (such as DPM) that have only cancer or chronic non-cancer health effects. However, such health risk assessments should be limited to the duration of the emission-producing activities associated with the Project, unless the activities occur for less than 6-months. Activities that would last more than 2-months, but less than 6 months, are recommended to be evaluated as if they would last for 6-months. The OEHHA does not recommend assessing cancer risk for projects lasting less than 2-months near the maximum exposed individual resident (MEIR). Since construction-related activities of the proposed Project would occur over a 6-to-9 month period and the nearest sensitive receptors (property owners who are leasing the land to accommodate the Project and are upwind of the Project) are located within 200 feet from the proposed Project's northern boundary, the proposed Project has the potential to temporarily and intermittently expose off-site sensitive receptors to increased criteria pollutant emission concentrations from diesel powered construction-related equipment during the short-term, temporary construction-related phase.

The Air District recommends conducting a screening analysis for projects that have the potential to expose sensitive receptors to TAC emissions (e.g. DPM during project construction-related activities) that could pose a significance health risk. The SJVAPCD has devolved a prioritization tool to evaluate whether a Health Risk Assessment (HRA) should be prepared, which is based on the California Air Pollution Control Officers Association's (CAPCOA) latest methodology and OEHHA guidance. According to the Air District guidance, projects that obtain a prioritization score of 10 or more is considered to be potentially significant and a refined analysis and an HRA may be required for the project.

The Air District's prioritization screening tool was used to evaluate the potential health risks during proposed Project construction-related activities. Similar to the discussion at Item a) above, emissions have been estimated (using the District approved prioritization screening tool) using data from the Deer Creek Solar Project and are used in this document by analogy as similar projects will likely result in similar emissions. As previously noted, this Project is smaller than

³⁰ Air District, *Guidance for Assessing and Mitigating Air Quality Impacts*, page 10

the comparative project (approximately 75% of the size) and will likely generate fewer emissions. The operation of each piece of equipment within the proposed Project site would not be constant throughout the day and all the equipment would not operate concurrently at the same location of the proposed Project construction-related area. Again, by analogy, the use of Deer Creek Solar's emissions compared to this Project's emissions would result in 75% of Deer Creek Solar's emission (see Attachment "A"), construction-related emissions would occur in less month (6-9 months versus Deer Creek Solar's 12 months) and sensitive receptors (scattered rural residences) would be upwind of Project emissions.

The result of the analysis can be found in **Table 9**, which is based on an emission rate of 37.35 pounds per year of PM₁₀ exhaust. Modeling outputs can be found in Attachment "B". As shown in **Table 9**, residences within 500 meters (i.e., 1,640 feet) would result in a score greater than 10 as allowed by the Air District.

Table 9. Project Construction Prioritization Score		
Receptor Proximity (in meters)	Unmitigated Max Score	Mitigated Max Score
0 < R < 100	1100	86
100 < R < 250	275	22
250 < R < 500	44	3
500 < R < 1,000	12	1
1,000 < R < 1,500	3	0
1,500 < R < 2,000	2	0
2,000 < R	1	0
<i>Prioritization score is based on an annual emission rate of 37.35 pounds per year emission rate; see Attachment A for emission rate calculations and Attachment B for prioritization screening results.</i>		

To quantify the maximum prioritization score, the receptor proximity is based on the distance between the center of the proposed Project construction-related area and the nearest sensitive receptor. The nearest receptors are within approximately 61 meters (i.e., 200 feet) of the solar array boundary. Using the Air District's prioritization tool, annual emission rate of 37.35 pounds per year of PM₁₀ exhaust, and a receptor proximity distance of 61 meters, the proposed Project would obtain a score of 1,000, which would exceed the Air District's allowed score of 10. Therefore, emissions from construction-related activities of the proposed Project could expose nearby sensitive receptor to DPM that could result in a significant health risk. However, similar to Deer Creek Solar, implementation of **Mitigation Measure AQ-1**, would reduce the max score by requiring the proposed Project applicant to use Tier 4 engines for all off-road construction equipment during project construction-related activities. Tier 4 engines use advanced engine controls and sensors that significantly reduce engine emissions on all four constituents (NO_x, HC, CO and PM). As demonstrated in **Table 9**, the use of Tier 4 engines would reduce DPM emissions generated by off-road equipment to a max score to 86, which exceeds the Air District's allowed score.

As previously noted, the operation of each piece of equipment within the proposed Project site would not be constant throughout the day and all the equipment would not operate concurrently at the same location of the proposed Project construction-related area. The prioritization screening tool assumes a 70-year exposure and as such, is likely to overestimate potential health risks as Project-related construction activities will be completed within nine months (or 1% of the exposure time utilized by the tool). Although the Project is not expected to result in

significant health risk to the nearby receptors, a condition of approval requiring the Project applicant to consult with the Air District and obtain a refined analysis will be incorporated into the Project. Results of this analysis shall be provided to Tulare County Resource Management Agency's Planning Division prior to Project approval. Therefore, with implementation of **Mitigation Measure AQ-1** and implementation of the condition of approval, Project construction-related activities would result in less than significant health risks. As such, ***Less Than Significant Impacts With Mitigation*** related to this Checklist Item will occur.

Mitigation Measures: ***None Required***

AQ-1: *Engine Standards for Off-Road Equipment.* In order to reduce the impact of PM₁₀ off-road equipment exhaust emissions during construction-related activities, applicant shall ensure that construction contracts stipulate that all off-road diesel-powered equipment used will be equipped with USEPA Tier 4 or cleaner engines, except for specialized equipment in which an USEPA Tier 4 engine is not available. In lieu of Tier 4 engines, project equipment can incorporate retrofits such that emissions reductions achieved equal to that of the Tier 4 engines at a minimum. The construction contractor shall submit a detailed list of the equipment fleet that demonstrates achievement of this mitigation measure to Tulare County Resource Management Agency Planning Branch for approval prior to receiving Notice to Proceed.

Conclusion: ***Less Than Significant Impact With Mitigation***

Although the prioritization score exceeds the Air District's allowed score of 10, the Project is not expected to result in significant health risk to the nearby receptors. A condition of approval requiring the Project applicant to consult with the Air District and obtain a refined analysis will be incorporated into the project. Results of refined analysis shall be provided to Tulare County Resource Management Agency's Planning Division prior to Project approval. Therefore, with implementation of **Mitigation Measure AQ-1** and implementation of the condition of approval, Project construction-related activities would result in less than significant health risks. As such, ***Less Than Significant Impacts With Mitigation*** related to this Checklist Item will occur.

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

Impact Analysis: ***Less Than Significant Impact***

Operation of the proposed Project would not create odorous emissions. Project construction-related activities would include fuels and other odor sources (such as diesel-fueled equipment and fumes from architectural coating operations), could result in the creation of objectionable odors. Since construction-related activities would be short-term, temporary, and spatially dispersed (i.e., intermittent), and occur in a predominantly rural area, these activities would not affect a substantial number of people. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

The Project is not a source of nuisance odors. As such, the Project will not expose a substantial number of people to objectionable odors. Therefore, *Less Than Significant Impacts* related to this Checklist Item will occur.

GREENHOUSE GAS IMPACTS

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Project Impact Analysis: *Less Than Significant Impact*

The Air District has determined that projects consistent with an adopted Climate Action Plan (CAP) would be considered to have a less than significant impact on the environment. The Tulare County CAP was initially adopted in August 2012 and serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the Tulare County General Plan 2030 Update (General Plan) which provides the supporting framework for development in the County. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets required by State of California legislation. The General Plan fulfills many sustainability and GHG reduction objectives at the program level. The CAP identifies the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption. The CAP requires projects achieve reductions in excess of the reduction identified in the Scoping Plan. The CAP identifies General Plan policies in place to assist the County in reducing GHG emissions. The 2018 CAP Update incorporates new baseline and future year inventories to reflect the latest information and updates the County's strategy to address the SB 32 2030 target. The CAP identifies the County's fair share of reductions required to maintain consistency with the State's target.

The CAP thresholds for determining consistency with the CAP are 500 dwelling units, 100,000 square feet of retail, or equivalent intensity for other uses. These thresholds are the amounts currently required from development related sources within the County to demonstrate consistency with SB 32 2030 targets. Projects exceeding the consistency thresholds must comply with the requirements of the CAP, which requires a GHG analysis report demonstrating emission reductions of at least 31% below 2015 levels by 2030 or a 9% reduction from 2030 BAU emissions. As the CAP implements the County's strategy to achieve the State's 2030 reduction targets, projects below the consistency thresholds have been determined to be consistent with the State's targets and do not require GHG emissions quantification. Projects below the consistency thresholds would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Construction-related emissions have been estimated (CalEEMod, Version 2016.3.2), from the Deer Creek Solar Project and are used in this document by analogy as similar projects will likely result in similar GHG emissions. This Project is smaller than the comparative project (74% of the size) and will likely generate fewer emissions.

The Project will result in approximately 879 metric tons of GHG which will be generated only during construction-related activities (particularly, heavy-duty off road equipment). However, these emissions will be intermittent (i.e., varying times throughout the course of a day, varying

uses of construction-related equipment, varying duration of use by equipment type, etc.), temporary (i.e., only occurring during daylight hours), and short-term (lasting no longer than nine (9) months). GHG emissions also would be generated by construction-related worker-related daily commutes, by heavy-duty diesel tractor-trailer trucks that would be required to haul materials and debris to/from the proposed Project site, and as a result of water use for dust control and other construction-related activities. Once construction-related activities have ceased, operational emissions would be limited to infrequent vehicle-related emissions by maintenance staff and periodic PV panel washing. Decommissioning emissions are assumed to be the same as those from construction-related activities.

The electricity generated during the operation of the Project would be added to the power grid and displace electricity generated from fossil fuels. Displaced GHG emissions were calculated by using the average solar radiation hours per day and the current mix of power sources in California. Power sources other than coal and natural gas were not included. The operation of the proposed Project would displace approximately 81,205 metric tons of CO_{2e} per year and result in a net reduction of GHG emissions. This annual displacement in GHG emissions would result in an annual net GHG emissions of 79,439 metric tons of CO_{2e} per year, as shown in **Table 10**.

Table 10 Project GHG Emissions	
Project Phase	CO_{2e} (metric tons per year)
Construction	879
Operation	7
Decommissioning	879
Project Total	1,766
Annual Displacement	-81,205
Annual Net Emissions	-79,439
<i>Source: See attachment "A".</i>	

The methodology found in the SJVAPCD's Climate Change Action Plan was also used to determine the significance of impacts caused by GHG emissions from the Project. This methodology recommends projects be compared to a "business-as-usual" scenario, and that projects should be considered to not have a significant impact if it can be demonstrated to have a 29 percent reduction in GHG emissions from the "business-as-usual" scenario. The "business-as-usual" scenario for the Project assumes that the current electricity generation mix in California remains the same during the operational lifetime of the project (35 years) and that there would be no changes to the methods used to generate electricity in California. As described in **Table 10**, the proposed Project would result in an annual GHG emissions reduction of more than 38,320 metric tons CO_{2e} compared to the "business-as-usual scenario", a reduction of greater than 100 percent.

The Project will result in a benefit as it will reduce GHG emissions typically generated by other energy producers as this Project is a renewable energy project (solar). Overall, the GHG emissions generated during construction-related activities will be nullified when the Project is fully operational. As such, the Project would result in a ***Less Than Significant Impact*** to this resource.

Mitigation Measures: ***None Required***

Conclusion:

Less Than Significant Impact

As previously noted, the Project is consistent with the Tulare County CAP and assists in achieving the reduction targets established in the Scoping Plan. As such, the Project would not generate GHG emissions that would have a significant impact on the environment. ***Less Than Significant Impacts*** related to this Checklist Item will occur.

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

Impact Analysis:

Less Than Significant Impact

Since the proposed Project is located in an unincorporated area of Tulare County, the most applicable GHG plan is the Tulare County CAP, Executive Order S-3-05, Executive Order B-30-15, SB 350, SB 100, AB 32, and SB 32, including the potential for the Project to conflict with the recommended actions identified by CARB in its 2017 Climate Change Scoping Plan.

In April 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target will make it possible for California to reach its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05. Executive Order B-30-15 also specifically addresses the need for climate adaptation and directs state government to:

- Incorporate climate change impacts into the State's Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the Renewables Portfolio Standard (RPS) goals established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly-owned utilities from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. California must procure 100 percent of its energy from carbon free energy sources by the end of 2045. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. Subsequently, SB 32, which codifies the Executive Order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40

percent below the 1990 statewide GHG emissions limit no later than December 31, 2030 (the target date established by Executive Order B-30-15. CARB recently adopted the 2017 Scoping Plan) to achieve this goal.

The CAP serves as a guiding document for County actions to reduce GHG emissions and adapt to the potential effects of climate change. The CAP requires projects on average achieve a reduction that is six percent in excess of the reductions stated in the ARB Scoping Plan and by regional regulations and programs. AB 32 requires the California Air Resources Board to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

The Project involves the construction-, operation- and maintenance-, and decommissioning-related activities of a solar facility that would produce a new renewable source of energy in Tulare County. Therefore, the Project would directly support the renewable energy target under the 2017 Scoping Plan Update, and a goal of SB 100, for increasing California's procurement of electricity from renewable sources from 50 percent to 60 percent by 2030. As previously discussed, and through analogy of a similar project (see Attachment "A"), the proposed Project would result in a result in an annual GHG emissions reduction of more than 38,320 metric tons CO₂e compared to the "business-as-usual scenario" (a reduction of greater than 100 percent) and would be consistent with the Tulare County CAP, SB 32, SB 100, and AB 32. As such, the Project would result in no impact and provides a net, long-term benefit towards reducing GHG.

Therefore, the Project would not generate greenhouse gas emissions, either directly or indirectly that may have a significant impact on the environment.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***Less Than Significant Impacts*** related to this Checklist Item would occur.

Attachment “A”

Project Emission Calculations

Deer Creek Project Equipment Hours (diesel fuel)

Phase	# equipment	hrs/day	days	total hours
Staging	1	7	5	35
	2	10	5	100
	1	7	5	35
	6	5	5	150
	8	5	5	200
	1	7	5	35
	1	7	5	35
	1	7	5	35
Site Grading	1	7	65	455
	3	2	65	390
	3	2	65	390
	1	7	65	455
	1	7	65	455
	1	7	65	455
	1	7	65	455
Access Road	1	8	65	520
	1	7	65	455
	1	7	65	455
Collection Line	2	2	47	188
	1	4	47	188
	1	7	47	329
	1	1	47	47
	2	2	47	188
	1	2	47	94
	3	7	47	987
Substation	2	4	60	480
	1	2	60	120
	1	4	60	240
	1	2	60	120
	1	2	60	120
	4	4	60	960
	4	2	60	480
Solar Array	5	4	152	3,040
	4	4	152	2,432
	7	4	152	4,256
	4	2	152	1,216
	8	3	152	3,648
	2	4	152	1,216
	1	1	152	152
	4	1	152	608
Total	95		329	26,219

Project Comparison

	Deer Creek	Angela	
Project Size (acres)	378	277	73%
Construction (months)	12	9	75%

Project Construction Criteria Pollutant Emissions (Tons Per Year)

		ROG	NOx	CO	SO2	Total PM10	Total PM2.5
Deer Creek	unmitigated	0.6798	7.6107	5.2542	0.0130	0.6877	0.4354
	mitigated	0.2192	4.6099	6.2030	0.0130	0.3948	0.1650
Angela	unmitigated	0.5099	5.7080	3.9407	0.0098	0.5158	0.3266
	mitigated	0.1644	3.4574	4.6523	0.0098	0.2961	0.1238

Project Operation Criteria Pollutant Emissions (Tons Per Year)

		ROG	NOx	CO	SO2	Total PM10	Total PM2.5
Deer Creek	unmitigated	0.0025	0.0075	0.0400	0.0001	0.0105	0.00286
	mitigated	0.0025	0.0075	0.0400	0.0001	0.0105	0.0029
Angela	unmitigated	0.0019	0.0056	0.0300	0.0001	0.0079	0.0021
	mitigated	0.0019	0.0056	0.0300	0.0001	0.0079	0.0021

DPM (PM10 Exhaust) Emissions Rate

		equip. hrs.	tons/yr	lb/yr	lb/hr
Deer Creek	unmitigated	26,219	0.3178	635.6000	0.0242
	mitigated	26,219	0.0249	49.8000	0.0019
Angela Solar	unmitigated	19,664	0.2384	476.7000	0.0242
	mitigated	19,664	0.0187	37.3500	0.0019

GHG (CO2e) Emissions (metric tons)

		Construction	Operation
Deer Creek	unmitigated	1172.3859	9.8341
	mitigated	1172.3850	9.8341
Angela Solar	unmitigated	879.2894	7.3756
	mitigated	879.2888	7.3756

Attachment “B”

Project Prioritization Screening

Name

Prioritization Calculator

Applicability Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.

Author or updater

Matthew Cegielski

Last Update

March 17, 2020

Facility:

Tulare County PSP 19-083 (mitigated)

ID#:

Project #:

Unit and Process#

Operating Hours hr/yr	19,664.00					
Receptor Proximity and Proximity Factors	Cancer	Chronic	Acute			
	Score	Score	Score	Max Score	Receptor proximity is in meters. Prioritization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.	
0< R<100 1.000	8.63E+01	5.70E-02	0.00E+00	8.63E+01		
100≤R<250 0.250	2.16E+01	1.42E-02	0.00E+00	2.16E+01		
250≤R<500 0.040	3.45E+00	2.28E-03	0.00E+00	3.45E+00		
500≤R<1000 0.011	9.49E-01	6.27E-04	0.00E+00	9.49E-01		
1000≤R<1500 0.003	2.59E-01	1.71E-04	0.00E+00	2.59E-01		
1500≤R<2000 0.002	1.73E-01	1.14E-04	0.00E+00	1.73E-01		
2000<R 0.001	8.63E-02	5.70E-05	0.00E+00	8.63E-02		

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritization score for each substance generated below. Totals on last row.

0							
Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	9901	3.74E+01	1.90E-02	1.90E-03	8.63E+01	5.70E-02	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	8.63E+01	5.70E-02	0.00E+00

Name

Prioritization Calculator

Applicability Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.

Author or updater

Matthew Cegielski

Last Update

March 17, 2020

Facility:

Tulare County PSP 19-083 (mitigated)

ID#:

Project #:

Unit and Process#

Operating Hours hr/yr	19,664.00					
Receptor Proximity and Proximity Factors	Cancer	Chronic	Acute			
	Score	Score	Score	Max Score	Receptor proximity is in meters. Prioritization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.	
0< R<100 1.000	1.10E+03	7.27E-01	0.00E+00	1.10E+03		
100≤R<250 0.250	2.75E+02	1.82E-01	0.00E+00	2.75E+02		
250≤R<500 0.040	4.40E+01	2.91E-02	0.00E+00	4.40E+01		
500≤R<1000 0.011	1.21E+01	8.00E-03	0.00E+00	1.21E+01		
1000≤R<1500 0.003	3.30E+00	2.18E-03	0.00E+00	3.30E+00		
1500≤R<2000 0.002	2.20E+00	1.45E-03	0.00E+00	2.20E+00		
2000<R 0.001	1.10E+00	7.27E-04	0.00E+00	1.10E+00		

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritization score for each substance generated below. Totals on last row.

0							
Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Diesel engine exhaust, particulate matter (Diesel PM)	9901	4.77E+02	2.42E-02	2.42E-02	1.10E+03	7.27E-01	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
Totals					1.10E+03	7.27E-01	0.00E+00

Attachment “C”

CalEEMod Report (Deer Creek Solar)

Appendix A

Air Quality

Deer Creek Solar - Tulare County, Annual

Deer Creek Solar
Tulare County, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	378.00	User Defined Unit	378.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	7			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Deer Creek Solar - Tulare County, Annual

Project Characteristics -

Land Use - Project site is 378 acres

Construction Phase - Assumed construction phasing is based on information provided by the applicant.

Off-road Equipment - Construction equipment provided by applicant.

Off-road Equipment -

Off-road Equipment - Construction equipment provided by applicant. Other Construction equipment is "Carts/ATVs".

Off-road Equipment - Just concrete truck deliveries

Off-road Equipment - Construction equipment provided by applicant.

Off-road Equipment - Construction equipment provided by applicant. Other Construction equipment is "Carts/ATVs". Tractors are assumed to support post drivers.

Off-road Equipment - Construction equipment provided by applicant. Other Construction equipment is "Carts/ATVs"

Off-road Equipment - Construction equipment provided by applicant.

Off-road Equipment - Just water tankers

Trips and VMT - Assumed work and haul trips based on information provided by the applicant. Aggregate trips based on 28,000 cy estimate.

Grading - Note that acres graded are default calculations based on equipment list and grading days. Refer to page 9 of CalEEMod Apx A.

Vehicle Trips - Assumes 5 workers to clean solar panels over 40 days 4 time per year or 1600 annual trips.

Construction Off-road Equipment Mitigation - Tier 4 engines as mitigation

Fleet Mix - Removed buses, MH, and HHD trucks from fleet mix for workers commuting to site and allocated those percentages as LDT1 (pick up trucks).

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	16.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	21.00

Deer Creek Solar - Tulare County, Annual

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	240.00	5.00
tblConstructionPhase	NumDays	620.00	65.00
tblConstructionPhase	NumDays	440.00	65.00
tblConstructionPhase	NumDays	6,200.00	47.00
tblConstructionPhase	NumDays	6,200.00	60.00
tblConstructionPhase	NumDays	6,200.00	152.00
tblFleetMix	HHD	0.08	0.00

Deer Creek Solar - Tulare County, Annual

tblFleetMix	LDT1	0.03	0.12
tblFleetMix	MH	7.6100e-004	0.00
tblFleetMix	OBUS	1.8220e-003	0.00
tblFleetMix	SBUS	1.1320e-003	0.00
tblFleetMix	UBUS	1.3110e-003	0.00
tblLandUse	LotAcreage	0.00	378.00
tblOffRoadEquipment	HorsePower	367.00	80.00
tblOffRoadEquipment	LoadFactor	0.48	0.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

Deer Creek Solar - Tulare County, Annual

tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripNumber	0.00	72.00
tblTripsAndVMT	HaulingTripNumber	0.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	72.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,506.00
tblTripsAndVMT	HaulingTripNumber	0.00	472.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,288.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripLength	16.80	17.50
tblTripsAndVMT	WorkerTripLength	16.80	17.50
tblTripsAndVMT	WorkerTripLength	16.80	17.50

Deer Creek Solar - Tulare County, Annual

tblTripsAndVMT	WorkerTripLength	16.80	17.50
tblTripsAndVMT	WorkerTripLength	16.80	17.50
tblTripsAndVMT	WorkerTripLength	16.80	17.50
tblTripsAndVMT	WorkerTripNumber	53.00	25.00
tblTripsAndVMT	WorkerTripNumber	28.00	50.00
tblTripsAndVMT	WorkerTripNumber	8.00	23.00
tblTripsAndVMT	WorkerTripNumber	0.00	23.00
tblTripsAndVMT	WorkerTripNumber	0.00	23.00
tblTripsAndVMT	WorkerTripNumber	0.00	23.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CW_TL	14.70	17.50
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.02

2.0 Emissions Summary

Deer Creek Solar - Tulare County, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.6798	7.6107	5.2542	0.0130	0.3699	0.3178	0.6877	0.1403	0.2951	0.4354	0.0000	1,166.4868	1,166.4868	0.2360	0.0000	1,172.3859
Maximum	0.6798	7.6107	5.2542	0.0130	0.3699	0.3178	0.6877	0.1403	0.2951	0.4354	0.0000	1,166.4868	1,166.4868	0.2360	0.0000	1,172.3859

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2192	4.6099	6.2030	0.0130	0.3699	0.0249	0.3948	0.1403	0.0246	0.1650	0.0000	1,166.4859	1,166.4859	0.2360	0.0000	1,172.3850
Maximum	0.2192	4.6099	6.2030	0.0130	0.3699	0.0249	0.3948	0.1403	0.0246	0.1650	0.0000	1,166.4859	1,166.4859	0.2360	0.0000	1,172.3850

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	67.75	39.43	-18.06	0.00	0.00	92.16	42.59	0.00	91.65	62.11	0.00	0.00	0.00	0.00	0.00	0.00

Deer Creek Solar - Tulare County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	4.9475	2.6854
2	4-1-2020	6-30-2020	2.1450	1.3340
3	7-1-2020	9-30-2020	1.1265	0.7464
		Highest	4.9475	2.6854

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.1800e-003	7.4600e-003	0.0365	1.1000e-004	0.0104	9.0000e-005	0.0105	2.7700e-003	9.0000e-005	2.8500e-003	0.0000	9.8196	9.8196	2.9000e-004	0.0000	9.8269
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5100e-003	7.4900e-003	0.0400	1.1000e-004	0.0104	1.0000e-004	0.0105	2.7700e-003	1.0000e-004	2.8600e-003	0.0000	9.8263	9.8263	3.1000e-004	0.0000	9.8341

Deer Creek Solar - Tulare County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.1800e-003	7.4600e-003	0.0365	1.1000e-004	0.0104	9.0000e-005	0.0105	2.7700e-003	9.0000e-005	2.8500e-003	0.0000	9.8196	9.8196	2.9000e-004	0.0000	9.8269
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.5100e-003	7.4900e-003	0.0400	1.1000e-004	0.0104	1.0000e-004	0.0105	2.7700e-003	1.0000e-004	2.8600e-003	0.0000	9.8263	9.8263	3.1000e-004	0.0000	9.8341

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Deer Creek Solar - Tulare County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Staging	Site Preparation	1/1/2020	1/7/2020	5	5	
2	Site Grading	Grading	1/8/2020	4/7/2020	5	65	
3	Water Deliveries	Trenching	1/8/2020	10/27/2020	5	210	
4	Concrete Deliveries	Trenching	1/8/2020	10/27/2020	5	210	
5	Aggregate Delivery	Trenching	1/8/2020	4/7/2020	5	65	
6	Access Road Construction	Paving	1/8/2020	4/7/2020	5	65	
7	Collection Line Construction	Building Construction	1/14/2020	3/18/2020	5	47	
8	Substation Construction	Building Construction	1/14/2020	4/6/2020	5	60	
9	Solar Array Installation	Building Construction	1/21/2020	8/19/2020	5	152	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Staging	Forklifts	1	7.00	89	0.20
Staging	Generator Sets	2	10.00	84	0.74
Staging	Graders	1	7.00	187	0.41
Staging	Off-Highway Trucks	6	5.00	402	0.38
Staging	Other Construction Equipment	8	5.00	172	0.42
Staging	Rubber Tired Dozers	0	8.00	247	0.40
Staging	Scrapers	1	7.00	80	0.38

Deer Creek Solar - Tulare County, Annual

Staging	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Staging	Trenchers	1	7.00	78	0.50
Water Deliveries	Aerial Lifts	0	1.00	63	0.31
Concrete Deliveries	Aerial Lifts	0	1.00	63	0.31
Site Grading	Excavators	0	8.00	158	0.38
Site Grading	Graders	1	7.00	187	0.41
Site Grading	Off-Highway Trucks	3	2.00	402	0.38
Site Grading	Other Construction Equipment	3	2.00	172	0.42
Site Grading	Rollers	1	7.00	80	0.38
Site Grading	Rubber Tired Dozers	1	7.00	247	0.40
Site Grading	Scrapers	1	7.00	367	0.48
Site Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Access Road Construction	Graders	1	8.00	187	0.41
Access Road Construction	Pavers	0	8.00	130	0.42
Access Road Construction	Paving Equipment	0	8.00	132	0.36
Access Road Construction	Rollers	1	7.00	80	0.38
Access Road Construction	Rubber Tired Dozers	1	7.00	247	0.40
Aggregate Delivery	Aerial Lifts	0	1.00	63	0.31
Collection Line Construction	Aerial Lifts	2	2.00	63	0.31
Collection Line Construction	Cranes	1	4.00	231	0.29
Collection Line Construction	Forklifts	1	7.00	89	0.20
Collection Line Construction	Generator Sets	1	1.00	84	0.74
Collection Line Construction	Off-Highway Trucks	2	2.00	402	0.38
Collection Line Construction	Other Construction Equipment	1	2.00	172	0.42
Collection Line Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Collection Line Construction	Welders	0	8.00	46	0.45
Substation Construction	Aerial Lifts	2	4.00	63	0.31

Deer Creek Solar - Tulare County, Annual

Substation Construction	Cranes	1	2.00	231	0.29
Substation Construction	Forklifts	1	4.00	89	0.20
Substation Construction	Generator Sets	0	8.00	84	0.74
Substation Construction	Off-Highway Trucks	1	2.00	402	0.38
Substation Construction	Other Construction Equipment	1	2.00	172	0.42
Substation Construction	Tractors/Loaders/Backhoes	4	4.00	97	0.37
Substation Construction	Trenchers	4	2.00	78	0.50
Substation Construction	Welders	0	8.00	46	0.45
Solar Array Installation	Cranes	0	7.00	231	0.29
Solar Array Installation	Forklifts	5	4.00	89	0.20
Solar Array Installation	Generator Sets	4	4.00	84	0.74
Solar Array Installation	Off-Highway Tractors	7	4.00	124	0.44
Solar Array Installation	Off-Highway Trucks	4	2.00	402	0.38
Solar Array Installation	Other Construction Equipment	8	3.00	172	0.42
Solar Array Installation	Skid Steer Loaders	2	4.00	65	0.37
Solar Array Installation	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Solar Array Installation	Trenchers	4	1.00	78	0.50
Solar Array Installation	Welders	0	8.00	46	0.45

Trips and VMT

Deer Creek Solar - Tulare County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Staging	21	25.00	0.00	72.00	17.50	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Water Deliveries	0	0.00	40.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Deliveries	0	0.00	0.00	50.00	16.80	6.60	15.00	LD_Mix	HDT_Mix	HHDT
Site Grading	11	50.00	0.00	72.00	17.50	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Access Road Construction	3	23.00	0.00	0.00	17.50	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Aggregate Delivery	0	0.00	0.00	3,506.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Collection Line Construction	11	23.00	0.00	472.00	17.50	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Substation Construction	14	23.00	0.00	0.00	17.50	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Solar Array Installation	35	23.00	0.00	2,288.00	17.50	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Staging - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4800e-003	0.0000	3.4800e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0184	0.1839	0.1326	2.8000e-004		9.0100e-003	9.0100e-003		8.3800e-003	8.3800e-003	0.0000	24.5267	24.5267	6.9900e-003	0.0000	24.7014
Total	0.0184	0.1839	0.1326	2.8000e-004	3.4800e-003	9.0100e-003	0.0125	3.8000e-004	8.3800e-003	8.7600e-003	0.0000	24.5267	24.5267	6.9900e-003	0.0000	24.7014

Deer Creek Solar - Tulare County, Annual

3.2 Staging - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0101	1.6700e-003	3.0000e-005	6.1000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.7337	2.7337	9.0000e-005	0.0000	2.7360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	3.0000e-004	3.0000e-003	1.0000e-005	8.1000e-004	1.0000e-005	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6851	0.6851	2.0000e-005	0.0000	0.6856
Total	7.1000e-004	0.0104	4.6700e-003	4.0000e-005	1.4200e-003	4.0000e-005	1.4600e-003	3.8000e-004	3.0000e-005	4.2000e-004	0.0000	3.4188	3.4188	1.1000e-004	0.0000	3.4216

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4800e-003	0.0000	3.4800e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4900e-003	0.0955	0.1752	2.8000e-004		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	24.5267	24.5267	6.9900e-003	0.0000	24.7014
Total	4.4900e-003	0.0955	0.1752	2.8000e-004	3.4800e-003	4.5000e-004	3.9300e-003	3.8000e-004	4.5000e-004	8.3000e-004	0.0000	24.5267	24.5267	6.9900e-003	0.0000	24.7014

Deer Creek Solar - Tulare County, Annual

3.2 Staging - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0101	1.6700e-003	3.0000e-005	6.1000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.7337	2.7337	9.0000e-005	0.0000	2.7360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.2000e-004	3.0000e-004	3.0000e-003	1.0000e-005	8.1000e-004	1.0000e-005	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6851	0.6851	2.0000e-005	0.0000	0.6856
Total	7.1000e-004	0.0104	4.6700e-003	4.0000e-005	1.4200e-003	4.0000e-005	1.4600e-003	3.8000e-004	3.0000e-005	4.2000e-004	0.0000	3.4188	3.4188	1.1000e-004	0.0000	3.4216

3.3 Site Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2165	0.0000	0.2165	0.0990	0.0000	0.0990	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1126	1.2372	0.6932	1.5000e-003		0.0545	0.0545		0.0501	0.0501	0.0000	131.5994	131.5994	0.0426	0.0000	132.6634
Total	0.1126	1.2372	0.6932	1.5000e-003	0.2165	0.0545	0.2710	0.0990	0.0501	0.1491	0.0000	131.5994	131.5994	0.0426	0.0000	132.6634

Deer Creek Solar - Tulare County, Annual

3.3 Site Grading - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0101	1.6700e-003	3.0000e-005	6.1000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.7337	2.7337	9.0000e-005	0.0000	2.7360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0110	7.8600e-003	0.0780	2.0000e-004	0.0210	1.4000e-004	0.0211	5.5700e-003	1.3000e-004	5.7000e-003	0.0000	17.8122	17.8122	5.4000e-004	0.0000	17.8256
Total	0.0113	0.0179	0.0797	2.3000e-004	0.0216	1.7000e-004	0.0218	5.7400e-003	1.6000e-004	5.9000e-003	0.0000	20.5459	20.5459	6.3000e-004	0.0000	20.5616

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2165	0.0000	0.2165	0.0990	0.0000	0.0990	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.4501	0.8672	1.5000e-003		2.4500e-003	2.4500e-003		2.4500e-003	2.4500e-003	0.0000	131.5992	131.5992	0.0426	0.0000	132.6633
Total	0.0249	0.4501	0.8672	1.5000e-003	0.2165	2.4500e-003	0.2189	0.0990	2.4500e-003	0.1015	0.0000	131.5992	131.5992	0.0426	0.0000	132.6633

Deer Creek Solar - Tulare County, Annual

3.3 Site Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0101	1.6700e-003	3.0000e-005	6.1000e-004	3.0000e-005	6.5000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.7337	2.7337	9.0000e-005	0.0000	2.7360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0110	7.8600e-003	0.0780	2.0000e-004	0.0210	1.4000e-004	0.0211	5.5700e-003	1.3000e-004	5.7000e-003	0.0000	17.8122	17.8122	5.4000e-004	0.0000	17.8256
Total	0.0113	0.0179	0.0797	2.3000e-004	0.0216	1.7000e-004	0.0218	5.7400e-003	1.6000e-004	5.9000e-003	0.0000	20.5459	20.5459	6.3000e-004	0.0000	20.5616

3.4 Water Deliveries - 2020

Unmitigated Construction On-Site

[illegible]

Deer Creek Solar - Tulare County, Annual

3.4 Water Deliveries - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0157	0.4910	0.0972	1.1000e-003	0.0251	2.6400e-003	0.0278	7.2600e-003	2.5200e-003	9.7800e-003	0.0000	104.3454	104.3454	5.1400e-003	0.0000	104.4740
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0157	0.4910	0.0972	1.1000e-003	0.0251	2.6400e-003	0.0278	7.2600e-003	2.5200e-003	9.7800e-003	0.0000	104.3454	104.3454	5.1400e-003	0.0000	104.4740

Mitigated Construction On-Site

[illegible]

Deer Creek Solar - Tulare County, Annual

3.4 Water Deliveries - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0157	0.4910	0.0972	1.1000e-003	0.0251	2.6400e-003	0.0278	7.2600e-003	2.5200e-003	9.7800e-003	0.0000	104.3454	104.3454	5.1400e-003	0.0000	104.4740
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0157	0.4910	0.0972	1.1000e-003	0.0251	2.6400e-003	0.0278	7.2600e-003	2.5200e-003	9.7800e-003	0.0000	104.3454	104.3454	5.1400e-003	0.0000	104.4740

3.5 Concrete Deliveries - 2020

Unmitigated Construction On-Site

[illegible]

Deer Creek Solar - Tulare County, Annual

3.5 Concrete Deliveries - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	5.8700e-003	9.4000e-004	2.0000e-005	3.2000e-004	2.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.4969	1.4969	6.0000e-005	0.0000	1.4984
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6000e-004	5.8700e-003	9.4000e-004	2.0000e-005	3.2000e-004	2.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.4969	1.4969	6.0000e-005	0.0000	1.4984

Mitigated Construction On-Site

[illegible]

Deer Creek Solar - Tulare County, Annual

3.5 Concrete Deliveries - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	5.8700e-003	9.4000e-004	2.0000e-005	3.2000e-004	2.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.4969	1.4969	6.0000e-005	0.0000	1.4984
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6000e-004	5.8700e-003	9.4000e-004	2.0000e-005	3.2000e-004	2.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.4969	1.4969	6.0000e-005	0.0000	1.4984

3.6 Aggregate Delivery - 2020

Unmitigated Construction On-Site

[illegible]

Deer Creek Solar - Tulare County, Annual

3.6 Aggregate Delivery - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0141	0.4898	0.0812	1.4000e-003	0.0299	1.6900e-003	0.0316	8.2200e-003	1.6200e-003	9.8400e-003	0.0000	133.1151	133.1151	4.4700e-003	0.0000	133.2269
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.4898	0.0812	1.4000e-003	0.0299	1.6900e-003	0.0316	8.2200e-003	1.6200e-003	9.8400e-003	0.0000	133.1151	133.1151	4.4700e-003	0.0000	133.2269

Mitigated Construction On-Site

[illegible]

Deer Creek Solar - Tulare County, Annual

3.6 Aggregate Delivery - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0141	0.4898	0.0812	1.4000e-003	0.0299	1.6900e-003	0.0316	8.2200e-003	1.6200e-003	9.8400e-003	0.0000	133.1151	133.1151	4.4700e-003	0.0000	133.2269
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.4898	0.0812	1.4000e-003	0.0299	1.6900e-003	0.0316	8.2200e-003	1.6200e-003	9.8400e-003	0.0000	133.1151	133.1151	4.4700e-003	0.0000	133.2269

3.7 Access Road Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0521	0.5870	0.2303	5.3000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	46.8479	46.8479	0.0152	0.0000	47.2267
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0521	0.5870	0.2303	5.3000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	46.8479	46.8479	0.0152	0.0000	47.2267

Deer Creek Solar - Tulare County, Annual

3.7 Access Road Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0500e-003	3.6200e-003	0.0359	9.0000e-005	9.6400e-003	6.0000e-005	9.7100e-003	2.5600e-003	6.0000e-005	2.6200e-003	0.0000	8.1936	8.1936	2.5000e-004	0.0000	8.1998
Total	5.0500e-003	3.6200e-003	0.0359	9.0000e-005	9.6400e-003	6.0000e-005	9.7100e-003	2.5600e-003	6.0000e-005	2.6200e-003	0.0000	8.1936	8.1936	2.5000e-004	0.0000	8.1998

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1600e-003	0.1532	0.2995	5.3000e-004		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	46.8478	46.8478	0.0152	0.0000	47.2266
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.1600e-003	0.1532	0.2995	5.3000e-004		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	46.8478	46.8478	0.0152	0.0000	47.2266

Deer Creek Solar - Tulare County, Annual

3.7 Access Road Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0500e-003	3.6200e-003	0.0359	9.0000e-005	9.6400e-003	6.0000e-005	9.7100e-003	2.5600e-003	6.0000e-005	2.6200e-003	0.0000	8.1936	8.1936	2.5000e-004	0.0000	8.1998
Total	5.0500e-003	3.6200e-003	0.0359	9.0000e-005	9.6400e-003	6.0000e-005	9.7100e-003	2.5600e-003	6.0000e-005	2.6200e-003	0.0000	8.1936	8.1936	2.5000e-004	0.0000	8.1998

3.8 Collection Line Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0335	0.3427	0.2825	5.2000e-004		0.0179	0.0179		0.0165	0.0165	0.0000	45.7639	45.7639	0.0144	0.0000	46.1228
Total	0.0335	0.3427	0.2825	5.2000e-004		0.0179	0.0179		0.0165	0.0165	0.0000	45.7639	45.7639	0.0144	0.0000	46.1228

Deer Creek Solar - Tulare County, Annual

3.8 Collection Line Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-003	0.0659	0.0109	1.9000e-004	4.0300e-003	2.3000e-004	4.2500e-003	1.1100e-003	2.2000e-004	1.3200e-003	0.0000	17.9208	17.9208	6.0000e-004	0.0000	17.9359
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6500e-003	2.6200e-003	0.0260	7.0000e-005	6.9700e-003	5.0000e-005	7.0200e-003	1.8500e-003	4.0000e-005	1.9000e-003	0.0000	5.9246	5.9246	1.8000e-004	0.0000	5.9291
Total	5.5500e-003	0.0686	0.0369	2.6000e-004	0.0110	2.8000e-004	0.0113	2.9600e-003	2.6000e-004	3.2200e-003	0.0000	23.8454	23.8454	7.8000e-004	0.0000	23.8649

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9400e-003	0.1902	0.3414	5.2000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	45.7638	45.7638	0.0144	0.0000	46.1228
Total	9.9400e-003	0.1902	0.3414	5.2000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	45.7638	45.7638	0.0144	0.0000	46.1228

Deer Creek Solar - Tulare County, Annual

3.8 Collection Line Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-003	0.0659	0.0109	1.9000e-004	4.0300e-003	2.3000e-004	4.2500e-003	1.1100e-003	2.2000e-004	1.3200e-003	0.0000	17.9208	17.9208	6.0000e-004	0.0000	17.9359
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6500e-003	2.6200e-003	0.0260	7.0000e-005	6.9700e-003	5.0000e-005	7.0200e-003	1.8500e-003	4.0000e-005	1.9000e-003	0.0000	5.9246	5.9246	1.8000e-004	0.0000	5.9291
Total	5.5500e-003	0.0686	0.0369	2.6000e-004	0.0110	2.8000e-004	0.0113	2.9600e-003	2.6000e-004	3.2200e-003	0.0000	23.8454	23.8454	7.8000e-004	0.0000	23.8649

3.9 Substation Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0406	0.4061	0.3418	5.5000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	48.2814	48.2814	0.0156	0.0000	48.6718
Total	0.0406	0.4061	0.3418	5.5000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	48.2814	48.2814	0.0156	0.0000	48.6718

Deer Creek Solar - Tulare County, Annual

3.9 Substation Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6600e-003	3.3400e-003	0.0331	8.0000e-005	8.9000e-003	6.0000e-005	8.9600e-003	2.3700e-003	5.0000e-005	2.4200e-003	0.0000	7.5634	7.5634	2.3000e-004	0.0000	7.5690
Total	4.6600e-003	3.3400e-003	0.0331	8.0000e-005	8.9000e-003	6.0000e-005	8.9600e-003	2.3700e-003	5.0000e-005	2.4200e-003	0.0000	7.5634	7.5634	2.3000e-004	0.0000	7.5690

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0111	0.2219	0.3835	5.5000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	48.2814	48.2814	0.0156	0.0000	48.6717
Total	0.0111	0.2219	0.3835	5.5000e-004		1.9700e-003	1.9700e-003		1.9700e-003	1.9700e-003	0.0000	48.2814	48.2814	0.0156	0.0000	48.6717

Deer Creek Solar - Tulare County, Annual

3.9 Substation Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6600e-003	3.3400e-003	0.0331	8.0000e-005	8.9000e-003	6.0000e-005	8.9600e-003	2.3700e-003	5.0000e-005	2.4200e-003	0.0000	7.5634	7.5634	2.3000e-004	0.0000	7.5690
Total	4.6600e-003	3.3400e-003	0.0331	8.0000e-005	8.9000e-003	6.0000e-005	8.9600e-003	2.3700e-003	5.0000e-005	2.4200e-003	0.0000	7.5634	7.5634	2.3000e-004	0.0000	7.5690

3.10 Solar Array Installation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3444	3.4352	3.0673	5.2700e-003		0.1802	0.1802		0.1682	0.1682	0.0000	460.9123	460.9123	0.1261	0.0000	464.0653
Total	0.3444	3.4352	3.0673	5.2700e-003		0.1802	0.1802		0.1682	0.1682	0.0000	460.9123	460.9123	0.1261	0.0000	464.0653

Deer Creek Solar - Tulare County, Annual

3.10 Solar Array Installation - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.2000e-003	0.3196	0.0530	9.1000e-004	0.0195	1.1000e-003	0.0206	5.3700e-003	1.0600e-003	6.4200e-003	0.0000	86.8703	86.8703	2.9200e-003	0.0000	86.9433
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0118	8.4600e-003	0.0839	2.1000e-004	0.0226	1.5000e-004	0.0227	5.9900e-003	1.4000e-004	6.1300e-003	0.0000	19.1605	19.1605	5.8000e-004	0.0000	19.1749
Total	0.0210	0.3281	0.1369	1.1200e-003	0.0421	1.2500e-003	0.0433	0.0114	1.2000e-003	0.0126	0.0000	106.0308	106.0308	3.5000e-003	0.0000	106.1182

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0815	2.0804	3.6298	5.2700e-003		0.0117	0.0117		0.0117	0.0117	0.0000	460.9117	460.9117	0.1261	0.0000	464.0647
Total	0.0815	2.0804	3.6298	5.2700e-003		0.0117	0.0117		0.0117	0.0117	0.0000	460.9117	460.9117	0.1261	0.0000	464.0647

Deer Creek Solar - Tulare County, Annual

3.10 Solar Array Installation - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.2000e-003	0.3196	0.0530	9.1000e-004	0.0195	1.1000e-003	0.0206	5.3700e-003	1.0600e-003	6.4200e-003	0.0000	86.8703	86.8703	2.9200e-003	0.0000	86.9433
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0118	8.4600e-003	0.0839	2.1000e-004	0.0226	1.5000e-004	0.0227	5.9900e-003	1.4000e-004	6.1300e-003	0.0000	19.1605	19.1605	5.8000e-004	0.0000	19.1749
Total	0.0210	0.3281	0.1369	1.1200e-003	0.0421	1.2500e-003	0.0433	0.0114	1.2000e-003	0.0126	0.0000	106.0308	106.0308	3.5000e-003	0.0000	106.1182

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Deer Creek Solar - Tulare County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1800e-003	7.4600e-003	0.0365	1.1000e-004	0.0104	9.0000e-005	0.0105	2.7700e-003	9.0000e-005	2.8500e-003	0.0000	9.8196	9.8196	2.9000e-004	0.0000	9.8269
Unmitigated	2.1800e-003	7.4600e-003	0.0365	1.1000e-004	0.0104	9.0000e-005	0.0105	2.7700e-003	9.0000e-005	2.8500e-003	0.0000	9.8196	9.8196	2.9000e-004	0.0000	9.8269

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	6.12	0.00	0.00	27,862	27,862
Total	6.12	0.00	0.00	27,862	27,862

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	17.50	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.516727	0.116777	0.172440	0.141085	0.022326	0.005434	0.020884	0.000000	0.000000	0.000000	0.004327	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

Deer Creek Solar - Tulare County, Annual

5.1 Mitigation Measures Energy

[illegible]

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Deer Creek Solar - Tulare County, Annual

5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Deer Creek Solar - Tulare County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003
Unmitigated	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003

Deer Creek Solar - Tulare County, Annual

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003
Total	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003
Total	3.3000e-004	3.0000e-005	3.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.7500e-003	6.7500e-003	2.0000e-005	0.0000	7.2000e-003

7.0 Water Detail

Deer Creek Solar - Tulare County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Deer Creek Solar - Tulare County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Deer Creek Solar - Tulare County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Deer Creek Solar - Tulare County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT “B”

Biological Resources Evaluation Technical Memorandum



RESOURCE MANAGEMENT AGENCY

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Aaron R. Bock	Economic Development and Planning
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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

DATE: April 29, 2021
TO: Hector Guerra, Chief Environmental Planner
FROM: Jessica Willis, Planner IV
SUBJECT: Biological Resources Evaluation for the Tulare 40 Generation Facility (PSP 20-068)

PROJECT DESCRIPTION

Coldwell Solar 1, LLC (Applicant) is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in the southwest quadrant of Tulare County, California. The installation would comprise approximately 129,000 fixed axis mounted solar modules, rated at 410 watts per module. It should be noted that watts per module may increase at time of Project construction; however, for planning purposes we have included an approximate module output of 410 watts. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line (on existing poles) along public road rights of way to the existing substation located approximately 5.4 linear miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries. The life of the Project is anticipated to be 35 years.

PROJECT LOCATION

The Project site is addressed as 23599 and 22996, Road 152. The Project site is divided into two (2) proposed development areas located directly north and approximately 0.4 miles south of SR 137/Avenue 232 (commonly locally referred to as the "Tulare-Lindsay Highway"), both directly east of Bliss Lane (Road 152). See Figures 1 and 2.

United States Geological Survey 7.5-minute Quadrangle: Cairns Corner

Surrounding Quadrangles: Visalia, Exeter, Rocky Hill, Lindsay, Porterville, Woodville, Tipton, Tulare

Public Land Survey System: Sections 2, 11, 12, Township 20 South, Range 25 East, Mount Diablo Base and Meridian

Assessor Parcel Number: 195-070-025, 195-060-041, 195-060-050

Latitude/Longitude: 36° 11' 17" N / 119° 12' 35" W

BIOLOGICAL SPECIES EVALUATION

The most recent California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB), RareFind 5 and Biogeographic Information and Observation System (BIOS) mapping applications were accessed on April 29, 2021.¹

Based on the information in the CNDDDB and BIOS, there have been 39 special status species recorded within the 9-quadrangle Project area (Cairns Corner, Visalia, Exeter, Rocky Hill, Lindsay, Porterville, Woodville, Tipton, and Tulare quadrangles) (see Figures 3 and 4). These species include the following 23 special status animal species, 13 special status plant species, and three (3) natural communities:

Based on the information in the CNDDDB and BIOS, there have been 10 special status species recorded within the Cairns Corner quadrangle Project area (see Figure 5). These species include the following four (4) special status animal species and six (6) special status plant species: *Buteo swainsoni* (Swainson's hawk); *Dipodomys nitratoideus nitratoideus* (Tipton kangaroo rat); *Spea hammondi* (western spadefoot); *Vulpes macrotis mutica* (San Joaquin kit fox); *Atriplex cordulata* var. *erecticaulis* (Earlimart orache); *Atriplex minuscula* (lesser saltscall); *Atriplex subtilis* (subtle orache); *Lasthenia chrysantha* (alkali-sink goldfields); *Delphinium recurvatum* (recurved larkspur); and *Puccinellia simplex* (California alkali grass).

Based on the information in the CNDDDB and BIOS, the following three (3) special status animal species and eight (8) special status plant species have been recorded within five (5) miles of the Project site: Swainson's hawk; San Joaquin kit fox; western spadefoot; *Pseudobahia peirsonii* (San Joaquin adobe sunburst); subtle orache; *Caulanthus californicus* (California jewelflower), California alkali grass; recurved larkspur; lesser saltscall; alkali-sink goldfields; and Earlimart orache. (see Figure 6) However, only one (1) special status species, the Swainson's hawk) is recorded within one (1) mile of the site (see Figure 7).

To ensure the Project will have a less than significant impact on special status species within the Project area, the following mitigations measures will be implemented.

Measures for Special Status Plant Species

BIO-1: (**Pre-construction Survey**) A qualified biologist/botanist shall conduct pre-construction surveys for special status plant species in accordance with the California Department of Fish and Wildlife (CDFW) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (2009). This protocol includes identification of reference populations to facilitate the likelihood of field investigation occurring during the appropriate floristic period. Surveys should be timed to coincide with flowering periods for species that could occur (March-May). In the absence of protocol-level surveys being performed, additional surveys may be necessary.

- If special status plant species are not identified during pre-construction surveys, no further action is required.
- If special status plant species are detected during pre-construction surveys, the biologist/botanist will supervise establishment of a minimum 50-foot no

¹ CDFW. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data#43018407-rarefind-5>

disturbance buffer from the outer edge of the plant population. If buffers cannot be maintained, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate minimization actions to be taken as appropriate for the species identified and to determine permitting needs.

Measures for Special Status Animal Species

BIO-2: (*Pre-construction Survey*) A qualified biologist will conduct pre-construction surveys during the appropriate periods for special status animal species in accordance with CDFW guidance and recommendations. In the absence of protocol-level surveys being performed, additional surveys may be necessary. If special status animal species are not identified during pre-construction surveys, no further action is required. If special status animal species are detected during pre-construction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate avoidance and minimization actions to be taken as applicable for the species identified and to determine permitting needs.

Measures for All Special Status Species Identified in Pre-construction Surveys

BIO-3: (*Employee Education Program*) Prior to the start of construction, the applicant shall retain a qualified biologist/botanist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the special status species that occur, or may occur, on the project site. This training will include a description of the species and its habitat needs; a report of the occurrence of the species in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

Measures for Nesting Raptors and Migratory Birds

BIO-4: (*Avoidance*) In order to avoid impacts to nesting raptors and migratory birds, individual Projects within the Project will be constructed, where possible, outside the nesting season (between September 1st and January 31st).

BIO-5: (*Pre-construction Survey*) If Project activities must occur during the nesting season (February 1-August 31), the proponent is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code. A qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds; with the exception of Swainson's hawk. The Swainson's hawk survey will utilize the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000) methodology which will extend to ½-mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-6: (***Pre-construction Survey***) A qualified biologist will conduct pre-construction surveys in accordance with the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000) which employs the following:

Survey Period	Survey Dates	Survey Time	Number of Surveys Needed
I	January – March 20	All day	1
II	March 20 – April 5	Sunrise – 1000; 1600 to Sunset	3
III	April 5 – April 20	Sunrise – 1200; 1630 – Sunset	3
IV	April 21 – June 10	Monitoring sites only	Initiating surveys is not recommended
V	June 10 – July 30	Sunrise – 1200; 1600 – Sunset	3

If project activities must occur during the nesting season (February 1-August 31), the project proponent and/or their contractor is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code, and a qualified biologist will conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-7: (***Buffers***) Should any active nests be discovered near proposed work areas, a qualified biologist will determine appropriate construction setback distances and a behavioral baseline of all identified nests based on applicable CDFW guidelines and/or the biology of the affected species. Within these buffers, the biologist will continue monitoring to detect behavioral changes. If adverse behavioral changes occur, the activity causing the changes will cease and CDFW will be consulted to determine if avoidance and minimization measures need to be modified to adequately protect the impacted birds. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged (i.e., when a bird's feathers and wing muscles are sufficiently developed for flight). Unless a variance is approved by CDFW, the buffer shall not be less than 250 feet around active nests of non-listed bird species and not less than 500 feet around active nests of non-listed raptor species until the birds have fledged. Unless a variance is approved by CDFW, a ½ mile distance shall be used for SWHA, until the birds have "fledged".

Measures for Tipton Kangaroo Rat

BIO-8: (***Pre-construction Survey***) Pre-construction survey shall be conducted on and in the vicinity of the project site by a qualified biologist prior to the start of ground disturbance activities. The survey shall be conducted according to methodologies deemed appropriate by California Department of Fish and Wildlife (CDFW). If the

survey indicates that Tipton kangaroo rat are present within or in close proximity to the Project site, consultation with the Fresno Field Office of the CDFW shall be required to identify actions to be taken as appropriate for the species.

Measures for San Joaquin Kit Fox

- BIO-9: (***Pre-construction Survey***) Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (2011). Specifically the survey will include the project site and a minimum of a 200-foot area outside of all project impact areas. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit fox through the use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If potential dens are not identified, no further action is required.
- BIO-10: (***Avoidance***) Should an active or potential kit fox den be detected within or immediately adjacent to the area of work during pre-construction surveys, the den shall not be disturbed or destroyed. In accordance with the USFWS, *Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (2011), a minimum 50-foot no-disturbance buffer area shall be established around potential and man-made (atypical) dens and a minimum 100-foot no-disturbance buffer area shall be established around known den sites. The Sacramento Field Office of the USFWS and Fresno Field Office of the CDFW shall be contacted immediately by phone and in writing to determine the best course of action, if required, and to initiate the take authorization/permit process.
- BIO-11: (***Minimization***) Construction activities shall be carried out in a manner that minimizes disturbance to kit fox. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.
- BIO-12: (***Mortality Reporting***) The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be contacted immediately by phone and notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

WATERS OF THE STATE AND U.S.

The southern Project development area is located 0.4 miles south of Highway 137/Avenue 232, approximately 100 to 300 feet south of Inside Creek, a partially natural vegetated stream corridor.

Inside Creek traverses the southern parcel near its northern boundary for approximately 3,000 feet and is mapped as an intermittent stream by the USGS and as a riverine habitat by the U.S Fish and Wildlife National Wetland Inventory Maps. Surface water is present at the creek for extended periods especially early in the growing season but is absent by the end of the growing season in most years. Review of aerial photographs indicates that the creek appears to support a mix of nonnative trees and native riparian habitat.

The most recent United States Geological Survey (USGS) National Water Information System (NWIS) and United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping applications were accessed in April 2021. Based on the information provided in the NWIS, the nearest body of water lies approximately one-mile east Project site (Project site Area A north of Ave 232 /SR 137). Based on the information provided in the NWI, there are freshwater ponds located approximately 0.3 and 0.35 mile west, northwest, and northeast of the Project site, respectively; freshwater emergent wetlands approximately 0.35 and 1.27 miles northwest and northeast of the Project site; and riverine features within the proposed Project's area at the north extent of the southern portion of the Project site, respectively. However, as noted earlier, the proposed Project will be setback from 100-300 feet of Inside Creek (the riverine area). Lastly, jurisdictional waters of the U.S. are absent from the site itself (see Figures 8 and 9).

As demonstrated in the BIOS, NWIS, and NWI maps, jurisdictional waters of the State and U.S. are present within the Project site. Best management practices, including compliance with all applicable Regional Water Quality Control Board (RWQCB) requirements, which includes a storm water pollution prevention plan (SWPPP), will be required during construction activities and will be included as a condition of project approval. A grading and drainage plan will be submitted to and approved by the Tulare County RMA Engineering Branch. As such, the Project will not result in significant impact to any riparian habitats or other protected wetlands. Therefore, mitigation measures that would reduce impacts have not been proposed, nor would any measures be warranted." Therefore, implementation of Mitigation Measures BIO-1 through BIO-12 would result in a Less than Significant Impact to this item.

Figure 1. Project Vicinity

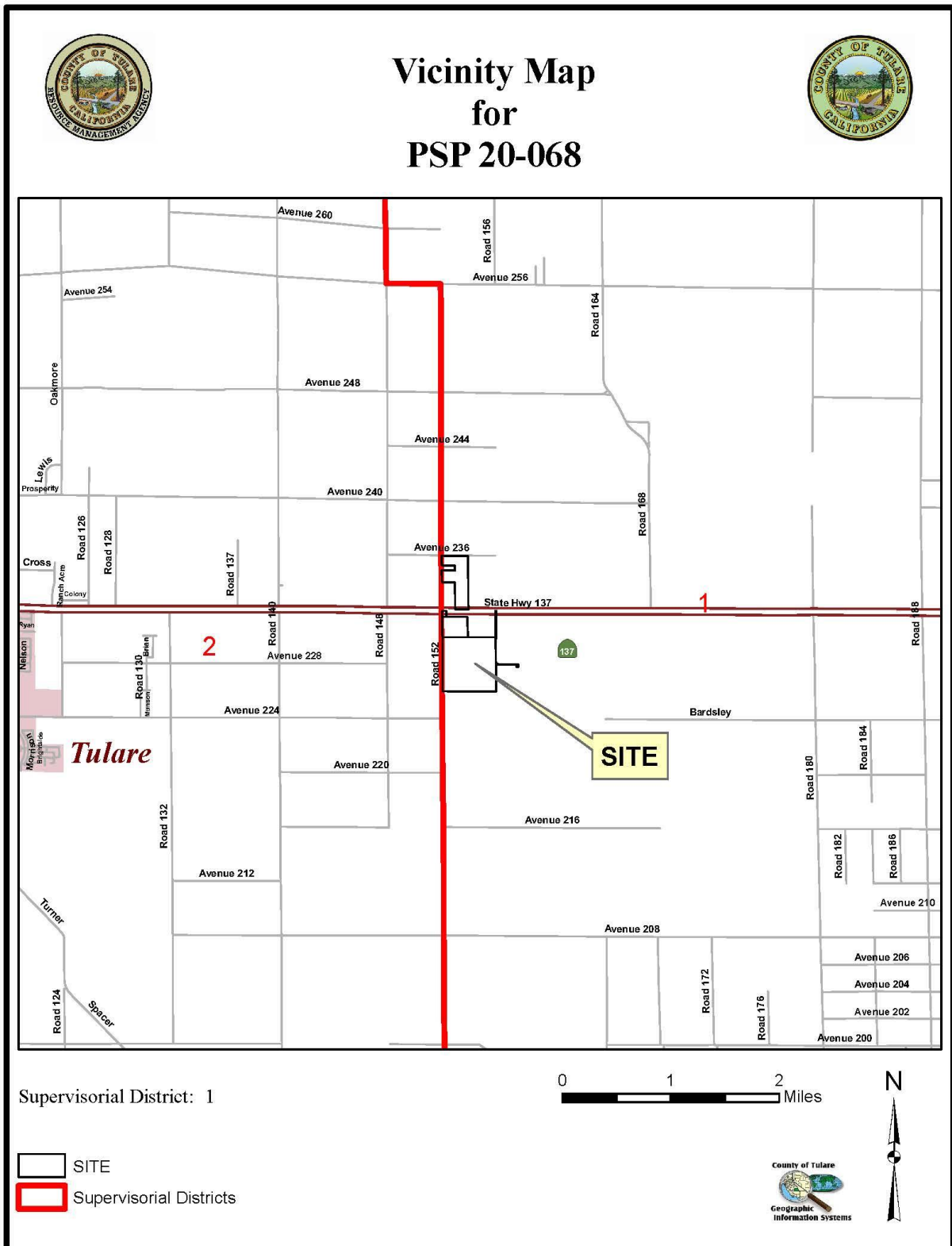


Figure 2. Aerial View of Project Site

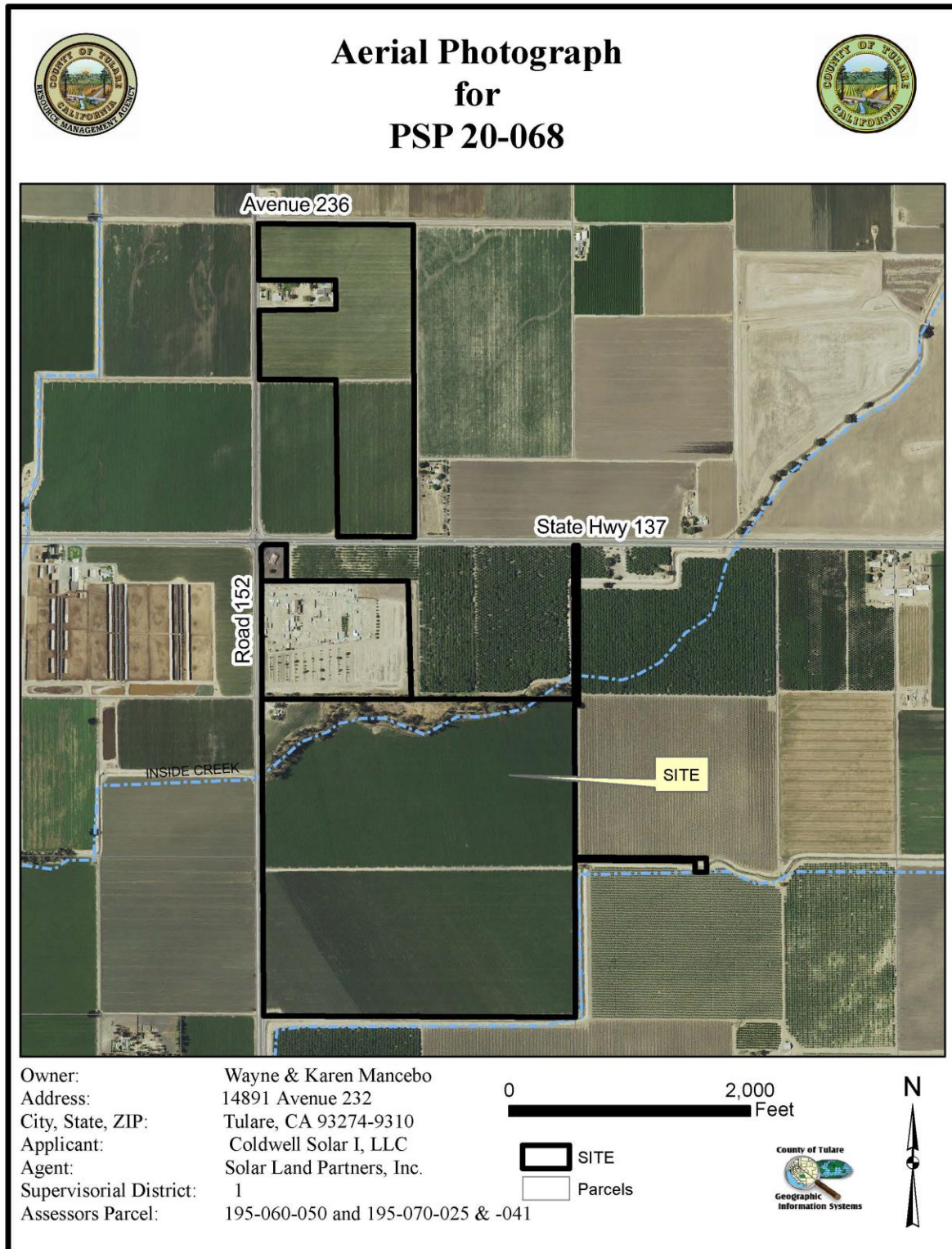
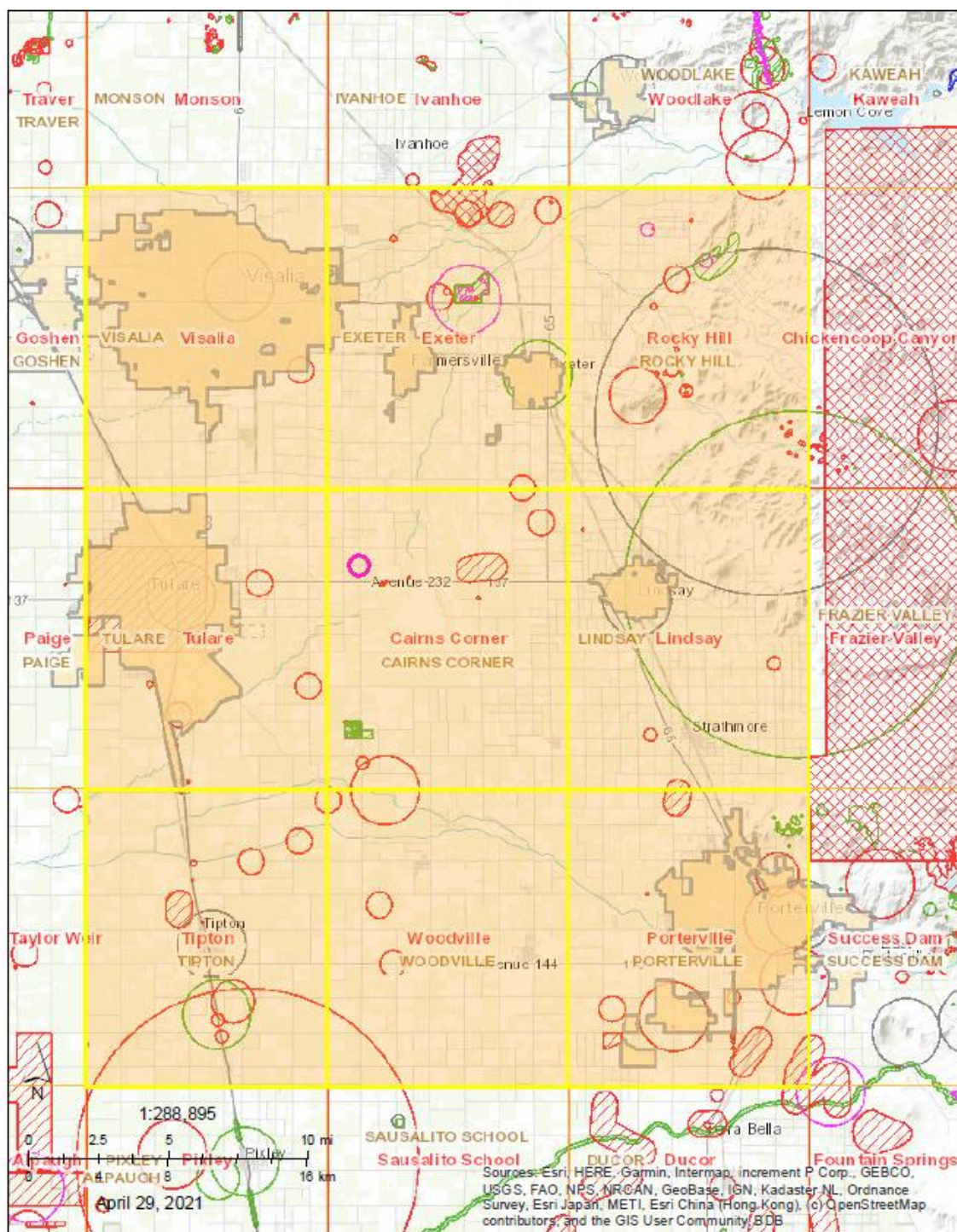


Figure 3. CNDDDB BIOS Map

Map of 9-Quad Regional Vicinity



Author: jwills@tularecounty.ca.gov
Printed from <http://bios.dfg.ca.gov>

Figure 4. CNDDDB 9-Quadrangle Project Area Species List



Selected Elements by Scientific Name California Department of Fish and Wildlife California Natural Diversity Database



Query Criteria: Quad(Cairns Corner (3611922) OR Visalia (3611933) OR Rocky Hill (3611931) OR Lindsay (3611921) OR Porterville (3611911) OR Woodville (3611912) OR Tipton (3611913) OR Tulare (3611923) OR Exeter (3611932)) AND County(Tulare)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Andrena macswaini</i> An andrenid bee	IIHYM35130	None	None	G2	S2	
<i>Anniella pulchra</i> Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Atriplex cordulata</i> var. <i>erecticaulis</i> Earlmarc orache	PDCHE042V0	None	None	G3T1	S1	1B.2
<i>Atriplex depressa</i> brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
<i>Atriplex minuscula</i> lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
<i>Atriplex subtilis</i> subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Caulanthus californicus</i> California jewelflower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
<i>Clarkia springvillensis</i> Springville clarkia	PDONA05120	Threatened	Endangered	G2	S2	1B.2
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<i>Delphinium recurvatum</i> recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
<i>Diplacus pictus</i> calico monkeyflower	PDSCR1B240	None	None	G2	S2	1B.2
<i>Dipodomys nitratoides nitratoides</i> Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	

Figure 4. CNDDDB 9-Quadrangle Project Area Species List (continued)



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eryngium spinosepalum</i> spiny-sepaled button-celery	PDAP1020Y0	None	None	G2	S2	1B.2
<i>Eumops perotis californicus</i> western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
<i>Fritillaria striata</i> striped adobe-lily	PMLIL0V0K0	None	Threatened	G1	S1	1B.1
<i>Gambelia sila</i> blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S1	FP
<i>Great Valley Valley Oak Riparian Forest</i> Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	G1	S1.1	
<i>Imperata brevifolia</i> California satintail	PMPOA3D020	None	None	G4	S3	2B.1
<i>Lanius ludovicianus</i> loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
<i>Lasthenia chrysantha</i> alkali-sink goldfields	PDAST5L030	None	None	G2	S2	1B.1
<i>Lytta hoppingi</i> Hopping's blister beetle	IICOL4C010	None	None	G1G2	S1S2	
<i>Lytta molesta</i> molestan blister beetle	IICOL4C030	None	None	G2	S2	
<i>Lytta morrisoni</i> Morrison's blister beetle	IICOL4C040	None	None	G1G2	S1S2	
<i>Northern Claypan Vernal Pool</i> Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
<i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
<i>Puccinellia simplex</i> California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Spea hammondi</i> western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
<i>Talanites moodyae</i> Moody's gnaphosid spider	ILARA98020	None	None	G1G2	S1S2	
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Valley Sacaton Grassland</i> Valley Sacaton Grassland	CTT42120CA	None	None	G1	S1.1	
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 39

Figure 5. CNDDDB Cairns Corner Quadrangle Project Area Species List

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Cairns Corner (3611922))
 AND County IS (Tulare)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Atriplex cordulata</i> var. <i>erecticaulis</i> Earlismart orache	PDCHE042V0	None	None	G3T1	S1	1B.2
<i>Atriplex minuscula</i> lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
<i>Atriplex subtilis</i> subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Delphinium recurvatum</i> recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<i>Dipodomys nitratoideus nitratoideus</i> Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
<i>Lasthenia chrysantha</i> alkali-sink goldfields	PDAST5L030	None	None	G2	S2	1B.1
<i>Puccinellia simplex</i> California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
<i>Spea hammondi</i> western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 10

Figure 6. CNDDDB 5-Mile Project Area Species List

California Natural Diversity Database (CNDDDB) Government [ds45]

Scientific Name	Common Name	Element Code	Occ Number	MAPNOX	EONDX	Key Quad Code	Key Quad Name	Key County Code	Accuracy	Presence	Occ Type	Occ Rank	Sensitive	Site Date	Em Date	Owner Management	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank	CDFW Status	Other Status	Symbology	Taxon Group
Buteo swainsoni	Swainson's hawk	ABNKC19070	777	41944	41944	3611922	Cairns Corner	TUL	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20000521	20000521	UNKNOWN	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	201	Birds
Pseudobahia peirsonii	San Joaquin adobe sunburst	PDAST7P030	11	22864	12803	3611923	Tulare	TUL	1 mile	Extirpated	Natural/Native occurrence	None	N	189704XX	189704XX	PVT	Threatened	Endangered	G1	S1	1B.1		SB_CalBG/RSABG	804	Dicots
Atriplex subtilis	subtle orache	PDOHE042T0	25	56674	56690	3611922	Cairns Corner	TUL	specific area	Presumed Extant	Natural/Native occurrence	Excellent	N	19990817	19990817	TUL COUNTY	None	None	G1	S1	1B.2			102	Dicots
Caulanthus californicus	California jew elflower	PDBRA31010	1	22864	63227	3611923	Tulare	TUL	1 mile	Extirpated	Natural/Native occurrence	None	N	1988XXXX	19320310	UNKNOWN	Endangered	Endangered	G1	S1	1B.1		SB_CalBG/RSABG; SB_SBBG; SB_UCBG	804	Dicots
Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	623	67383	67551	3611932	Exeter	TUL	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	197507XX	197507XX	UNKNOWN	Endangered	Threatened	G4T2	S2				204	Mammals
Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	625	67385	67553	3611922	Cairns Corner	TUL	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	197507XX	197507XX	UNKNOWN	Endangered	Threatened	G4T2	S2				203	Mammals
Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	802	67779	67931	3611923	Tulare	TUL	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	197507XX	197507XX	UNKNOWN	Endangered	Threatened	G4T2	S2				204	Mammals
Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	803	67780	67932	3611923	Tulare	TUL	2/5 mile	Presumed Extant	Natural/Native occurrence	Unknown	N	197507XX	197507XX	UNKNOWN	Endangered	Threatened	G4T2	S2				204	Mammals
Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	1120	69809	70631	3611923	Tulare	TUL	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	1992XXXX	1992XXXX	UNKNOWN	Endangered	Threatened	G4T2	S2				203	Mammals
Puccinellia simplex	California alkali grass	PMFOA53110	34	98721	100188	3611922	Cairns Corner	TUL	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19980325	19980325	TUL COUNTY	None	None	G3	S2	1B.2		BLM_S	803	Monocots
Delphinium recurvatum	recurved larkspur	PDRANB1J0	82	98907	58418	3611922	Cairns Corner	TUL	non-specific area	Presumed Extant	Natural/Native occurrence	Good	N	20100430	20100430	TUL COUNTY	None	None	G2?	S2?	1B.2		BLM_S; SB_SBBG	103	Dicots
Atriplex minuscule	lesser saltscall	PDOHE042M0	32	B0726	56694	3611922	Cairns Corner	TUL	specific area	Presumed Extant	Natural/Native occurrence	Good	N	20100924	20100924	TUL COUNTY	None	None	G2	S2	1B.1			102	Dicots
Spea hammondi	western spadefoot	AAABF02020	881	B2638	114572	3611922	Cairns Corner	TUL	80 meters	Presumed Extant	Natural/Native occurrence	Fair	N	20100316	20100316	TUL COUNTY	None	None	G2G3	S3		SSC	BLM_S; IUCN_NT	201	Amphibians
Buteo swainsoni	Swainson's hawk	ABNKC19070	2516	90298	91336	3611922	Cairns Corner	TUL	specific area	Presumed Extant	Natural/Native occurrence	Good	N	20160322	20160322	UNKNOWN, PVT	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	202	Birds
Buteo swainsoni	Swainson's hawk	ABNKC19070	2796	B3407	115322	3611922	Cairns Corner	TUL	80 meters	Presumed Extant	Natural/Native occurrence	Unknown	N	20170701	20170701	PVT	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	201	Birds
Lasthenia chrysantha	alkali-sink goldfields	PDAST5L030	18	98721	118546	3611922	Cairns Corner	TUL	non-specific area	Presumed Extant	Natural/Native occurrence	Unknown	N	19980325	19980325	TUL COUNTY	None	None	G2	S2	1B.1			803	Dicots
Lasthenia chrysantha	alkali-sink goldfields	PDAST5L030	19	22864	118547	3611923	Tulare	TUL	1 mile	Possibly Extirpated	Natural/Native occurrence	None	N	18970401	18970401	UNKNOWN	None	None	G2	S2	1B.1			804	Dicots
Atriplex cordulata var. erecticaulis	Earlhart orache	PDOHE042V0	20	B5725	66427	3611922	Cairns Corner	TUL	specific area	Presumed Extant	Natural/Native occurrence	Good	N	20100924	20100924	TUL COUNTY	None	None	G3T1	S1	1B.2			102	Dicots

Figure 7. CNDDDB California Native Plant Species List

California Natural Diversity Database (CNDDDB) Government [ds45]

Scientific Name	Common Name	Element Code	Occ Number	MAPNDX	EONDX	Key Quad Code	Key Quad Name	Key County Code	Accuracy	Presence	Occ Type	Occ Rank	Sensitive	Site Date	Elm Date	Owner Management	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank	CDFW Status	Other Status	Symbology	Taxon Group
Buteo swainsoni	Swainson's hawk	ABNKC19070	2516	90298	91336	3611622	Cairns Corner	TUL	specific area	Presumed Extant	Natural/Native occurrence	Good	N	20160322	20160322	UNKNOWN, PVT	None	Threatened	G5	S3			BLM_S; IUCN_LC; USFWS_BCC	202	Birds

Figure 8. USGS National Water Information System Map

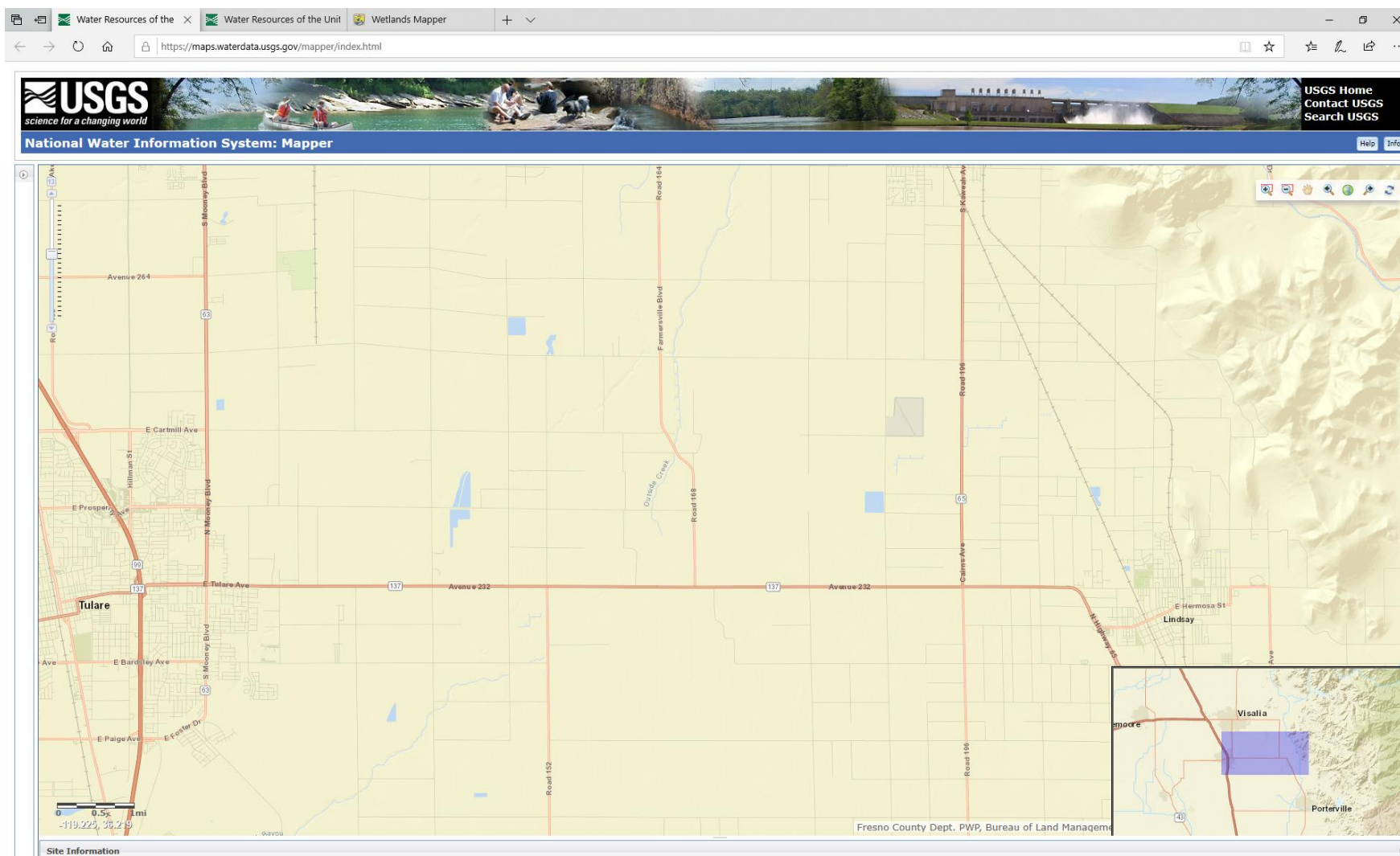
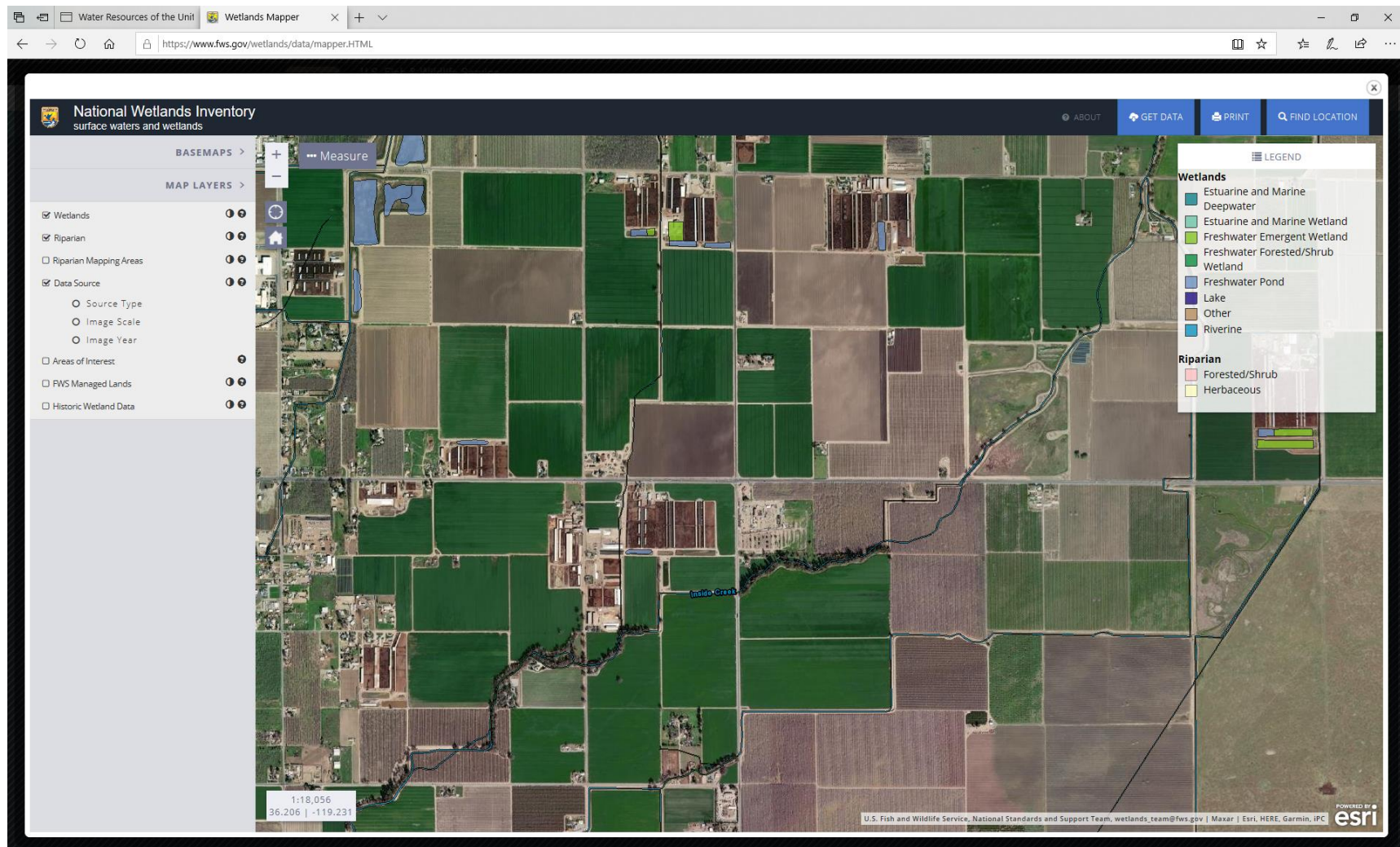


Figure 9. USFWS National Wetlands Inventory Map



ATTACHMENT “C”

California Historical Resources Information Search Record Search

Native American Tribal Consultation Process



To: Hector Guerra
Tulare County Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Record Search 21-034

Date: February 8, 2021

Re: Coldwell Solar I, LLC. PSP 20-068

County: Tulare

Map(s): Cairns Corner 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, the OHP Built Environment Resources Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the OHP are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within the project area. There have been seven studies within the one-half mile radius, TU-00179, 00180, 01007, 01353, 01425, 01498, and 01601.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There are no recorded resources within the project area, and it is not known if any exist there. There is one known resource within the one-half mile radius, Bridge 46-67.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of construction and operation of the Tulare 40 Generation Facility, a solar generation facility on three parcels totaling approximately 237 acres. Information on the current state of the parcels was not provided. Because a cultural resource study has not been conducted on this property, it is unknown if any cultural resources are present. Therefore, we recommend a qualified, professional consultant conduct a field survey of all undeveloped areas of the project area, prior to ground disturbance activities, to determine if cultural resources are present. Please note that agriculture does not qualify as development, as it does not destroy cultural resources but merely moves them around within the plow zone. Additionally, if any structures more than 45 years old will be impacted by this project, we recommend a qualified, professional consultant first record the structures and evaluate them for historical significance. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Celeste M. Thomson, Coordinator

Date: February 8, 2021

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

TRIBAL CONSULTATION NOTIFICATION COLDWELL SOLAR I, LLC PROJECT (PSP 20-068)														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
SACRED LAND FILE (SLF) REQUEST														
Native American Heritage Commission	X			X	X				1/25/21					2/16/21, SLF returned with “negative” results.
CONSULTATION REQUEST LETTERS														
Big Sandy Rancheria of Western Mono Indians Elizabeth D. Kipp, Chairperson P.O. Box 337 Auberry, CA 93602	x			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1466	3/9/21	4/8/21	4/27/29, as of this date no response has been received; J. Willis sent email for follow up.
Dunlap Band of Mono Indians Benjamin Charley Jr., Tribal Chair P.O. Box 14 Dunlap, CA 93621	x			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1510	2/26/21	3/28/21	
Dunlap Band of Mono Indians Dirk Charley, Tribal Secretary 5509 E. McKenzie Avenue Fresno, CA 93727	x			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1503	2/26/21	3/5/21	3/23/21, Dirk Charley responded stating that the Tribe has no comments as it is out of the range of their concern, but recommended consultation with the Santa Rosa and Tule River Tribes (via phone call with J. Willis).
Kern Valley Indian Community Robert Robinson, Co-Chairperson P.O. Box 1010 Lake Isabella, CA 93240	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1480	3/8/21	4/7/21	
Kern Valley Indian Community Julie Turner, Secretary P. Box 1010 Lake Isabella, CA 93240	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1473	3/8/21	4/7/21	
Kern Valley Indian Community Brandi Kendricks 30741 Foxridge Court Tehachapi, CA 93561	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1497	2/27/21	3/29/21	

TRIBAL CONSULTATION NOTIFICATION COLDWELL SOLAR I, LLC PROJECT (PSP 20-068)														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
Santa Rosa Rancheria Tachi Yokut Tribe Leo Sisco, Chairperson P. O. Box 8 Lemoore, CA 93245	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1442	3/2/21	4/1/21	
Santa Rosa Rancheria Tachi Yokut Tribe Robert Jeff, Vice-Chair P. O. Box 8 Lemoore, CA 93245	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1428	3/2/21	4/1/21	
Santa Rosa Rancheria Tachi Yokut Tribe Bianca Arias, Admin. Assistant. P. O. Box 8 Lemoore, CA 93245	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1527	3/2/21	4/1/21	
Santa Rosa Rancheria Cultural Department Shana Powers, Director P. O. Box 8 Lemoore, CA 93245	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1435	3/2/21	4/1/21	
Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Greg Cuara, Cultural Specialist P. O. Box 8 Lemoore, CA 93245	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1411	3/2/21	4/1/21	
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P.O. Box 226 Lake Isabella, CA 93240	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1459	---	---	3/15/21, envelope returned to RMA as "Unclaimed, Unable to Forward"
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1558	3/3/21	4/2/21	

TRIBAL CONSULTATION NOTIFICATION COLDWELL SOLAR I, LLC PROJECT (PSP 20-068)														
TRIBE CONTACTED	REQUEST TYPE			ITEMS & DOCUMENTS SUBMITTED					DELIVERY METHOD			CONSULTATION PERIOD		CONSULTATION / ACTIONS
	AB 52	SB 18	Sec 106	Map	Project Description	SLF Search Results	CHRIS Results	Other	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Summary
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1541	3/3/21	4/2/21	
Tule River Indian Tribe Dept. of Environmental Protection Felix Christman, Archaeological Monitor P. O. Box 589 Porterville, CA 93258	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1565	3/3/21	4/2/21	
Wuksache Indian Tribe/ Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906	X			X	X	X (in body of letter)	X (in body of letter)				2/24/21 7014 0150 0001 1537 1534	3/3/21	4/2/21	



RESOURCE MANAGEMENT AGENCY

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FAX (559) 730-2653

Aaron R. Bock
Reed Schenke
Sherman Dix

Economic Development and Planning
Public Works
Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Elizabeth D. Kipp, Chairperson
Big Sandy Rancheria of Western Mono Indians
P.O. Box 337
Auberry, CA 93602

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Kipp,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing a Mitigated Negative Declaration (MND) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

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A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on January 25, 2021. The CHRIS search dated February 8, 2021, indicated that there are no recorded resources within the project area (it is not known if any exist there), and there is one known resource within the one-half mile radius (Bridge 46-67). The CHRIS search also indicated that there are no recorded cultural resources within the project area; however, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present on the project site. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search may be made available to your Tribal Representatives if a written request for consultation is received. Should the County not receive a response to this request within thirty (30) days of receipt of this letter, it will be presumed that there are no cultural resources of concern and a Cultural Resources Study will not be required.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



FOR Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
Map



RESOURCE MANAGEMENT AGENCY

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Aaron R. Bock
Reed Schenke
Sherman Dix

Economic Development and Planning
Public Works
Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Ms. Turner,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



For
Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
Map



RESOURCE MANAGEMENT AGENCY

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Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Robert Robinson, Chairperson
Kern Valley Indian Community
P.O. Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Robinson,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sacred Lands File Search

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Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



for Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
Map



RESOURCE MANAGEMENT AGENCY

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Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Brandy Kendricks
Kern Valley Indian Community
30741 Foxridge Court
Tehachapi, CA 93561

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Ms. Kendricks,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,



For Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
Map



RESOURCE MANAGEMENT AGENCY

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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Dirk Charley, Tribal Secretary
Dunlap Band of Mono Indians
5509 E. McKenzie Avenue
Fresno, CA 93727

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Mr. Charley,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,



for Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

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Map



RESOURCE MANAGEMENT AGENCY

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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Benjamin Charley Jr., Tribal Chair
Dunlap Band of Mono Indians
P.O. Box 14
Dunlap, CA 93621

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Charley,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sherman Dix

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Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Bianca Arias, Administrative Assistant
Santa Rosa Rancheria Tachi Yokut Tribe
P.O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Ms. Arias,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Chief Environmental Planner
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Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Kenneth Woodrow, Chairperson
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA 93906

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Woodrow,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing a Mitigated Negative Declaration (MND) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

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If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Kerri Vera, Director
Tule River Indian Tribe
Department of Environmental Protection
P.O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Ms. Vera,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



For
Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

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Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

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PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

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

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Peyron,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



For
Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

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Map



RESOURCE MANAGEMENT AGENCY

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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Felix Christman, Archaeological Monitor
Tule River Indian Tribe
Department of Environmental Protection
P.O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Mr. Christman,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sacred Lands File Search

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Sincerely,



For
Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

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Map



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Robert L. Gomez, Jr., Chairperson
Tubatulabals of Kern Valley
P.O. Box 226
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Gomez,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,



FOR Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

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Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Leo Sisco, Chairperson
Santa Rosa Rancheria Tachi Yokut Tribe
P.O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Chairperson Sisco,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

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Sincerely,



FOR Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Shana Powers, Director
Santa Rosa Rancheria
Cultural Department
P.O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Ms. Powers,

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Sincerely,



for Hector Guerra
Chief Environmental Planner
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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

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Fiscal Services

REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Robert Jeff, Vice-Chairperson
Santa Rosa Rancheria Tachi Yokut Tribe
P.O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Vice-Chairperson Jeff,

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Sincerely,



FOR
Hector Guerra
Chief Environmental Planner
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Aaron R. Bock

Reed Schenke

Sherman Dix

Economic Development and Planning

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REED SCHENKE, DIRECTOR

MICHAEL WASHAM, ASSOCIATE DIRECTOR

February 23, 2021

Greg Cuara, Cultural Specialist
Santa Rosa Rancheria Tachi Yokut Tribe
Cultural Department
P.O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 for the Coldwell Solar I, LLC (PSP 20-068) Project

Dear Mr. Cuara,

Pursuant to the provisions of AB 52, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the California Environmental Quality Act (CEQA) review of the Coldwell Solar I, LLC (PSP 20-068) Project in order to assist with identifying and/or preserving and/or mitigating project impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing a Mitigated Negative Declaration (MND) to evaluate the environmental effects associated with the Project.

Sacred Lands File Search

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on January 25, 2021, for the Project. The SLF search returned on February 16, 2021, with negative results; however, the NAHC recommended consultation with your Tribe. Results of the SLF search will be made available upon the release of the MND for public review. However, results may be made available to your Tribal Representatives if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter.

California Historical Resources Information System

A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on January 25, 2021. The CHRIS search dated February 8, 2021, indicated that there are no recorded resources within the project area (it is not known if any exist there), and there is one known resource within the one-half mile radius (Bridge 46-67). The CHRIS search also indicated that there are no recorded cultural resources within the project area; however, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present on the project site. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search may be made available to your Tribal Representatives if a written request for consultation is received. Should the County not receive a response to this request within thirty (30) days of receipt of this letter, it will be presumed that there are no cultural resources of concern and a Cultural Resources Study will not be required.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above or e-mailed to the addresses provided below.

If the County does not receive a response to this notification, it will be presumed that your Tribe has declined the opportunity to consult on this project pursuant to AB 52.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail should you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact, Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at JWillis@tularecounty.ca.gov.

Sincerely,



FOR Hector Guerra
Chief Environmental Planner
(559) 624-7121
HGuerra@tularecounty.ca.gov

Attachment: Tribal Consultation Notice
Map

ATTACHMENT “D”

Project Operational Statement

**Project and Operations Description
for the Proposed Tulare 40 Project
Unincorporated Portion of
Tulare, California
(APN 195-070-025,
APN 195-060-041,
APN 195-060-40)**

Prepared for:



Coldwell Solar 1, LLC
500 Menlo Dr. #100
Rocklin, CA 95765

Prepared by:



Wood Environment & Infrastructure Solutions, Inc.
104 West Anapamu Street, Suite 204A Santa Barbara, CA 93101
(805) 962-0992

December 2020

1 PROPOSED PROJECT SUMMARY

Coldwell Solar 1, LLC (Applicant) is proposing the construction and operation of the Tulare 40 Generation Facility (Project), an approximate 40-megawatt (MW) solar generation facility on three (3) parcels totaling approximately 237 acres in western Tulare County, California. The Project site is divided into two (2) proposed development areas located directly north and 0.4 miles south of Tulare Lindsay Highway (Highway 137/Avenue 232), both directly east of Bliss Lane (Road 152). The installation would comprise approximately 129,000 fixed axis mounted solar modules, rated at 410 watts per module. It should be noted that watts per module may increase at time of Project construction; however, for planning purposes we have included an approximate module output of 410 watts. In addition to the installation of photovoltaic (PV) solar modules, both the north and south proposed development areas of the proposed Project would include the construction of an on-site substation, wiring and inverters, fence, access roads, and a new distribution interconnect power line along public road rights of way to the existing substation located approximately 2.5 miles southeast of the Project location at the Southern California Edison (SCE) Bliss Substation. The southern proposed development areas of the Project would potentially include a 5 megawatt-hour (MWhr) storage component in the form of batteries. The life of the Project is anticipated to be 35 years.

2 PROPOSED PROJECT DESCRIPTION

2.1 Project Location

The proposed Project site is in an unincorporated area of southern Tulare County, California. The Project site is located approximately 5 miles east of the City of Tulare and abuts Road 152 to the west. The Project site is addressed as 23599 and 22996, Road 152. The northern proposed Project development area is located directly north of Highway 137/Avenue 232. The southern proposed development area is located 0.4 miles south of Highway 137/Avenue 232, approximately 100 to 300 feet south of Inside Creek, a partially natural vegetated stream corridor. The site is located within the United States Geological Survey (USGS) Visalia 7.5-minute quadrangle.

Latitude: N 36° 11' 17"

Longitude: W 119° 12' 35"

The proposed northern Project development area is located on Assessor's Parcel Numbers (APN) 195-060-041 and 195-060-40, which total approximately 75 acres.

The proposed southern Project development area is located on Assessor's Parcel Number (APN) 195-070-025, which is approximately 160 acres. The northern portion of this parcel is traversed by a natural (unchannelized) portion of Inside Creek, which supports riparian habitat near the northern boundary of the parcel.

The proposed Project's parcels are owned by Wayne S. Mancebo and Karen L. Mancebo.

The Project site is located within the jurisdiction of the Rural Valley Lands Area Plan pursuant to the Tulare County General Plan.

2.2 Project Background and Objectives

The Project would provide emission-free, solar powered electrical energy to the California electrical grid to assist with meeting regional energy demands, State Renewable Portfolio Standards, as well as Assembly Bill

(AB) 32 and Senate Bill (SB) 350 and 100 mandates. The Project would provide approximately 40 MW of renewable energy with associated potential Resource Adequacy and Full Capacity Deliverability. Resource Adequacy allows the utility to use this system for annual guaranteed supply as required by the California Independent System Operator (CAISO) and the California Public Utilities Commission. Full Capacity Deliverability status certifies that the CAISO system (the grid) has sufficient capacity to ensure delivery of the Project's full expected energy output to the whole CAISO system.

Existing Setting

The Project site is located approximately 55 miles east of the Pacific Coast Range and 12 miles west of foothills of the Sierra Nevada Mountain Range. Topographically, the Project site is flat (less than 2 percent slope across the site) with an average elevation of approximately 315 feet above mean sea level. The Project site has historically been used for grazing and irrigated row crop cultivation. The Project site is mapped by the Department of Conservation, Farmland Mapping and Monitoring Program with approximately 237 acres of "Prime" Farmland (100 percent of the Project site) as rated by the Natural Resources Conservation Service (NRCS). Surrounding land is predominantly of similar rating for quality of agricultural land.

Inside Creek traverses the southern parcel (APN 195-070-025) near its northern boundary for approximately 3,000 feet and is mapped as an intermittent stream by the USGS and as a riverine habitat by the U.S Fish and Wildlife National Wetland Inventory Maps. Surface water is present at the creek for extended periods especially early in the growing season but is absent by the end of the growing season in most years. Although no biological resources survey has yet been prepared, review of aerial photographs indicates that the creek appears to support a mix of nonnative trees (e.g., eucalyptus trees) and native riparian habitat. The Tulare County General Plan does not identify specific regulations related to Inside Creek. The Inside Creek is a channelized earthen ditch up and downstream of the site, with these areas lacking significant vegetation.

The land uses surrounding the Project site include irrigated row crops and rural agriculture, scattered rural residences, and a developed area at Spinks Corner (intersection of Highway 137/Avenue 232 and Road 152, located between the northern and southern proposed development areas) that supports a gas station, convenience store, and the Tulare Open Country Flea Market. The Tulare County General Plan designates the Project site and surrounding land as Valley Agriculture, with the Project site and surrounding lands zoned Exclusive Agriculture, 20- or 40-acre Minimum (AE-20 and AE-40). The northern and southern parcels are both currently accessed from Road 152.

The Project lies within the San Joaquin Valley Air Basin and air quality in the region is regulated by the San Joaquin Valley Air Pollution Control District 9 (SJVAPCD). The Project is also located within jurisdiction of the Central Valley Regional Water Quality Control Board.

2.3 Proposed Project Components

2.3.1 Overview

The Applicant is proposing the lease of APNs 195-070-025, 195-060-040, 195-060-041 for a period of approximately 35 years to accommodate construction and operation of the proposed Project. The Project would include installation of solar modules with associated equipment and inverter stations, substation to support interconnection to SCE infrastructure, an energy storage component, access roads, and lighting and fencing around the perimeter of each proposed development area. The developed area would occupy approximately 165 acres of the total 237 acres across three parcels (Table 1). Approximately 72 acres would remain undeveloped with the option for the property owner to continue agricultural uses.

Table 1. Parcel Sizes

Parcel APN	Parcel Size (Acres)	Approximate Proposed Development (Acres)	Percent of Parcel Area to be Developed
195-070-025	160	110	69%
195-060-040	55	35	64%
195-060-041	20	20	100%

2.3.2 Solar Modules

The proposed Project would install approximately 129,000 solar modules, rated at 410 or greater watts per module, with exact wattage still under consideration. Each array would be comprised of approximately 150 modules, configured with two (2) modules stacked in portrait orientation (attached at the shorter end), and approximately 75 modules long. The width of each array would be approximately 14 feet and the total length of the arrays would be approximately 250 feet. Each array would be separated by approximately 9 feet, and the support pilings for each array would be installed approximately 23 feet away from the next nearest piling. The precise panel count would depend on the panel electrical output and electrical capacity of the solar field (estimated at approximately 40MW). Types of panels that may be installed include crystalline silicon panels or other similar commercially available PV technology.

Structures supporting the PV modules would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar). For a fixed tilt mounting system with 20-degree tilt north to south, the piles would be installed with the lower side of each panel approximately 2 feet above grade, while the higher side would be a maximum of 7 feet above grade. The piles would be spaced approximately 12.5 feet apart within their respective rows and would reach a depth of up to approximately 3.5 to 5 feet below ground surface.

PV modules would be manufactured at an off-site location and transported via truck to the Project site. The steel piles supporting the PV modules would be driven into the soil using pneumatic techniques. Some designs allow for PV panels to be secured directly to the torque tubes using appropriate panel clamps. For all fixed-tilt systems, a galvanized metal racking system, which secures the PV panels to the installed foundations, would be field-assembled, and attached according to the manufacturer's guidelines.

2.3.3 Equipment and Inverter Stations

The Project would include the installation of twelve (12) inverter stations containing electrical equipment to serve each block of solar panel arrays built on a concrete foundation or steel skids. The dimension of each inverter is approximately 9 feet in width, 7.5 feet in height, and 5.1 feet in depth. The total height for these inverter stations would be approximately 8.5 feet from ground level built on a 1-foot thick concrete slab. The inverter stations would therefore be the tallest structures in each solar array field. The northern parcel would contain four (4) inverter stations, and the southern parcel would contain eight (8) inverter stations. Panels would be electrically connected into panel strings using wiring secured to the panel racking system. Underground cables, either rated for direct bury or installed in polyvinyl chloride (PVC) conduit, would be installed to convey the direct current (DC) electricity from the panels via combiner boxes located throughout the PV arrays, to inverters. Inverters would then convert the DC electricity to alternating current (AC) suitable for delivery to the grid. The output voltage of the inverters would be stepped up to the collection system voltage via transformers located near the inverters.

2.3.4 Substation/Interconnect

The Project would include installation of two (2) new 400-foot by 100-foot (40,000 square feet), 66-kilo volt (kV) interconnection substations on-site in the northeast corner of both the north and south proposed development areas. These substations would tie into a new 66-kV transmission interconnection line that would connect to the off-site SCE Bliss 66-kV Substation. The Project would include an energy storage component in the form of a capacitor bank within the substation area of the southern development area. The substation areas would be built on concrete foundations.

The Project has completed the required Phase I and Phase II studies by SCE (see Attachment 1 – Tulare 40 Queue Cluster 11 Phase I Report; and Attachment 2 – Tulare 40 Queue Cluster 11 Phase II Report). The Phase I and Phase II reports describe the interconnection of the Project to the SCE Bliss Substation and identify energy distribution impacts of the Project.

2.3.5 Energy Storage

The Project would include up to 5 MWhr of energy storage in the northeast corner of the southern proposed development area of the Project site. This BESS (battery energy storage system) units would be in a metal storage enclosure that is approximately 10 feet tall, 52 feet long and 10 feet wide (see Attachment 3 - Inverter and Battery Storage System Examples). It is anticipated that lithium-ion batteries would be used. This enclosure includes a fire suppression system for safety and a heating, ventilation and air conditioning (HVAC) climate control system. Fire extinguishers will be provided onsite where required by the Fire Code. Five inverters similar to those used for the PV system will then convert the BESS to the 34.5 kV conduits that connect to the final step-up transformer in the adjacent substation, which transfers energy to the grid.

2.3.6 Access Roads

The Project's on-site roadway system of the northern parcel would include a single primary gated access road off Road 152, leading to key facilities such as the capacitor bank and substation for both the proposed northern and southern development areas as well as an internal access road system. The driveway from Road 152 would be constructed in accordance with Tulare County Improvement Standards. Access gates will be set back 30 feet from the roadways and open inwards towards the array. The perimeter road and main access roads would be approximately 20 feet wide with exact widths and surfacing designed consistent with facility maintenance requirements and Tulare County Fire Department standards. These roads would be surfaced

with gravel, compacted dirt, or another commercially available surface and will be maintained so that dust or mud do not create conditions detrimental to the roadways. The roads would accommodate Project operations and maintenance activities such as cleaning of solar panels, providing a fire buffer, and facilitating on-site circulation for emergency vehicles. Internal roads would have additional permeable surfaces designed similarly to the perimeter and main access roads, approximately 12 to 15 feet in width or as otherwise required by County fire standards. They would be treated to create a durable, dust-minimizing surface for use during construction and operation. This would not involve lime treatment but would likely involve surfacing with gravel, compacted native soil, or a dust palliative. The address to the site will also be posted on the Project sites' driveways, with minimum numbering dimensions of 4 inches tall, 3 inches wide, and with 0.5-inch line widths, visible from the roadway.

2.3.7 Fencing

For public safety and facility security, a 6-foot tall chain-link security fence would be installed around the approximately 1.2-mile-long perimeter of the northern Project development area and the approximately 1.6-mile-long perimeter of the southern Project development area. One (1) gate at each proposed development area would be provided through this fence from Road 152 to provide access to the proposed northern and southern development areas.

2.3.8 Lighting

Motion activated lighting would be installed on the Project site and would be calibrated to moving objects greater than 50 pounds. This would limit their use to only those times when people walk or drive vehicles onto the site and would not create sustained lighting to disturb local wildlife. All Project lighting would be hooded and directed downward to minimize off-site light and glare.

2.4 Project Construction

Project construction would require the use of graders, trenchers, small tractors, a crane, and miscellaneous lighter duty construction equipment. Construction equipment would comply with "clean-fleet" standards per the SJVAPCD. After initial site grading, a hydraulic driver would be used to drive metal supports into the ground. An estimated average of 125 to 150 construction vehicle trips per day would be required for the import of construction workers, PV module materials, substation equipment, distribution line and associated support poles, potential power storage (BESS) facilities, and the surfacing material for access roads.

The Project would comply with SJVAPCD Rule 8021 for construction and earthmoving activities. A Storm Water Pollution Prevention Plan (SWPPP) would be in effect for the Project to prevent impacts on adjacent properties and to Inside Creek from any storm water generated on-site. Appropriate setbacks from Inside Creek would be enforced in the southern proposed development area to avoid adverse impacts to water quality in the creek and to preserve stream corridor habitat.

2.4.1 Schedule

The construction of the Project would take approximately eight (8) continuous months to complete. Initial site grading would take two (2) to three (3) weeks. The remainder of the construction period would consist of on-site assembly and installation of PV panels, which would not require heavy machinery. Construction would commence upon acquisition of all necessary permits, approvals, power sale, and financing. The Project would be constructed into twelve (12) blocks, with four (4) blocks in the northern proposed development area and eight (8) blocks in the southern proposed development area. Construction of the eight (8) blocks in

the southern proposed development area would be initiated first. Separate staging areas in the northern portion of each development area would be used for material staging and storage, portable construction maintenance trailer, and construction parking.

Upon completion of the final block, soils would be redistributed and the site would be stabilized, and Project commissioning would ensue.

2.4.2 Material Staging

Construction of the Project would require temporary staging and storage areas for the Project materials and equipment. The material staging and storage areas would be located in the northern portion of each development area. Construction debris would be disposed of at the applicable recycling facility or landfill.

2.4.3 Construction Access

All materials for Project construction would be delivered by heavy haul trucks. Most of the truck traffic would occur on designated truck routes and major streets. Trucks would access the Project site from Road 152. It is anticipated that Project construction would require on average approximately three (3) heavy haul truck vehicle trips per day and approximately 150 construction worker trips per day on average during the eight (8) months of construction, with the peak number of trips occurring during installation of the solar modules. This means a total of approximately 153 construction vehicle trips per day on average. A portable maintenance trailer, along with a portable restroom facility would be located within each staging area during Project construction.

2.4.4 Grading

The Project site is relatively flat with a slight grade from east to west of 0 to 2 percent. The site would continue to have the same grade following Project construction. The site would require focused grading or surface excavation where the PV module supports would be installed. Approximately 30 acres of grading would be required on each proposed development area for access roads, inverter pads, the potential power storage (BESS) facility, and the substation. One (1) 20- to 40-foot wide access road would be included along Road 152 for the northern development area and one (1) 20- to 40-foot wide access road would be provided along Road 152 for the southern development area of the site. Narrower 20-foot wide access roads would extend through the middle of the Project site. The soil would be compacted, as required, for access roads, the substation, and inverter pads.

2.4.5 Construction Phasing

2.4.5.1 *Phase 1: Site Preparation*

Across most of the site, a low-impact mow and roll technique would be used to remove surface vegetation and keep root balls in place. This practice minimizes dust generation and the associated water requirements related to dust suppression. In addition, this practice allows for faster regeneration of vegetation cover than re-seeding alone. Grubbing and grading would be required to level particularly rough areas of the site and to prepare soils for concrete foundations for the substation equipment and inverters; however, the existing site is relatively flat and no additional imported fill is anticipated for site stabilization. Access roadbeds would also be grubbed, graded, and compacted. The fence-line would be shallowly excavated and graded to create a level surface for proper fence installation. The site cut and fill would be balanced, and all topsoil would be retained and preserved on-site.

A SWPPP would be prepared by a qualified engineer or erosion control specialist as a condition of approval and would be submitted to the County for review and approval before construction. The SWPPP would be designed to reduce potential impacts related to erosion and surface water quality during construction activities and throughout the operational life of the Project, especially regarding impacts to Inside Creek. It would include Project information and best management practices (BMP) to reduce adverse impacts, such as dewatering procedures, storm water runoff quality control measures, concrete waste management, watering for dust control, and construction of perimeter silt fences, as needed.

2.4.5.2 Phase 2: Photovoltaic Module System

The structure supporting the PV module arrays would consist of steel piles (e.g., cylindrical pipes, H-beams, or similar), which would be driven into the soil using pneumatic techniques to a depth of between 3 and 5 feet. The piles are typically spaced 12.5 feet apart beneath each array, supporting approximately eight (8) modules between each pile. For a fixed tilt mounting system, piles typically would be installed to a reveal height of approximately 4 feet above grade. Some designs allow for PV modules to be secured directly to the torque tubes using appropriate panel clamps. A galvanized metal racking system, which secures the PV modules to the installed foundations, would then be assembled in the field and attached according to the manufacturer's guidelines.

2.4.5.3 Phase 3: Inverters, Transformers, Substation, Electrical Collector System and Interconnection

Underground cables to connect panel strings would be installed using standard trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. Wire depths would be in accordance with local, state, and federal requirements, and would likely be buried within excavated trenches approximately 18 inches wide and 3 feet below grade to accommodate the conduits or direct buried cables. Approximately 2 miles of trenching would be required to install the 34.5 kV conduits within the Project site. After excavation, cable rated for direct burial or cables installed inside a PVC conduit would be installed in the trench, and the excavated soil would likely be used to fill the trench and be lightly compressed.

All electrical inverters and the transformer would be placed on concrete foundation structures or steel skids. The concrete foundations would be 1 foot thick with up to 6 inches below ground as needed for stabilization. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. Upon completion of successful testing, the equipment would be energized. The substation area would be excavated for the transformer equipment. The northern and southern sites' substations would be graded and compacted to an approximately level grade. The foundation for the substations would be formed with plywood and reinforced with structural rebar. A concrete pad would be constructed on each site as a foundation for the substation equipment, and the remaining area would be compacted with gravel or similar surface material.

2.4.6 Hazardous Materials and Waste Management

The Project would not generate, use, or dispose of any hazardous waste during construction activities. Petroleum products would be used on-site. Petroleum products are excluded as hazardous substances. Diesel, oil, and lubricants would be transported to the site in portable containers (e.g., tanks in the pickup trucks for diesel fuel) but would not be stored on-site. If regulated materials (petroleum products) are spilled, measures would be taken to control the extent of the spill, and the appropriate agencies would be notified in accordance with the applicable federal and state regulations. Trucks and construction vehicles would be serviced from off-site facilities. The use, storage, transport, and disposal of hazardous materials used in construction of the facility would be carried out in accordance with federal, state, and County regulations. No extremely

hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations) are anticipated to be produced, used, stored, transported, or disposed of as a result of Project construction. Material Safety Data Sheets for all applicable materials present on-site would be made readily available to on-site personnel.

Construction waste would be sorted on-site throughout construction and transported to appropriate waste management facilities. Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility. It is anticipated that at least 20 percent of construction waste would be recyclable, and 50 percent of those materials would be recycled. Wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted.

Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at the municipal County landfill. Hazardous waste and electrical waste would not be placed in a landfill, but rather would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling facility). All contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste. Signs for emergency contacts and hazard warning signs will be posted at the entrance to the facility, as necessary.

2.4.7 Soil Conservation

To preserve and restore potential agricultural productivity of the Project site to the existing condition during Project construction and operation, no soils would be exported from the Project site. As previously stated, the Project site is rated as Prime Farmland by NRCS. The prime soil types supported the enrollment of two (2) Project site parcels under Williamson Act contracts for the preservation of agricultural production. As stated above, the relatively flat nature of the site reduces the need for grading which would be limited to approximately 30 acres or less than 15 percent of the Project site, primarily for access roads, substations, and inverter pads. Any soils removed from these areas would be redistributed and retained elsewhere within the Project site (i.e., along solar panel support rack alignments). Beyond grading, soil disturbance would occur in association with trenching for emplacement of electrical conduits along each alignment of panel racks. This trenching would be limited in scale and anticipated to require an 18-inch wide and 3-foot deep trench with a 4-inch conduit cable which is not anticipated to displace significant soils. After the estimated 35-year life of the Project, if solar production is abandoned, the site would be regraded and any stockpiled soils would be redistributed to permit the site to be returned to agricultural production after potential removal of solar facilities.

2.5 Project Operations

2.5.1 Operations Activities

The substation equipment, inverters, collector system, and PV array systems would be tested prior to commencement of commercial operations. The proposed facility would operate seven (7) days a week and 365 days per year. Remote monitoring of the facility would be conducted utilizing a Supervisory Control and Data Acquisition (SCADA) system. Any minor on-site trash generated through maintenance activities would be hauled away by maintenance crews and disposed of at approved recycling facility or landfill.

2.5.2 Maintenance Workforce and Activities

Project operations and maintenance are anticipated to require up to 500 vehicle trips per year. This estimate

includes up to twelve (12) trips per day during 20 total days of panel washing activities per year and approximately five (5) trips per week to address security or maintenance issues; an estimated average of 1.4 trips per day over a typical year. Site maintenance would include vegetation clearing pursuant to a Tulare County Fire Department-approved weed abatement plan to prevent the accumulation of combustible vegetation. Except for annual (or biannual) panel washing activities, emergency repair events, weed abatement activities, and occasional security checks, the facility would not require any full-time employees located on or traveling to the site.

PV panel washing would occur approximately 1 to 2 times per year (depending on the amount of rainfall each year) using imported water. The panel washing is like common window washing and would employ no harsh chemicals or solvents. Water trucks would be brought on-site 1 to 2 times per year for the duration of approximately 10 days (20 days per year total).

2.5.3 Project Water Demand

The proposed Project would not require a permanent potable supply of water and would not utilize or develop an on-site surface or groundwater supply over the life of the Project. Water would be imported via haul trucked to the Project site during annual (or biannual) panel washing activities, which are estimated to require approximately 24,000 to 48,000 gallons per year.

2.5.4 Project Wastewater Demand

The proposed Project would not require a permanent liquid waste disposal or treatment system or connection to an existing sewer system. No employees would be located on-site at the Project full-time and would spend extended periods of time on-site only during annual (or biannual) panel washing activities. A temporary portable toilet, serviced by a licensed provider, would be transported to the Project site for employee use and then removed from the Project site for each panel washing activity period.

2.5.5 On-Site Access Road Network

Access to both the northern and southern development areas would occur from Road 152. Access within each proposed development area would occur along 15- to 20-foot wide maintenance roads between the solar arrays. The access roads will consist of an all-weather surface (gravel or similar commercially available material compacted to a minimum two inches). Three (3) parking spaces are proposed on the graded gravel area adjacent to each proposed substation. All Project site access gates would be equipped with a Knox box permitting emergency fire response.

2.6 Project Site Reclamation

The proposed life of the Project is 35 years. The Applicant would finalize and submit to the County for approval, a Decommissioning and Reclamation Plan, and attendant bond. The Decommissioning and Reclamation Plan would include the methods for removing all solar panels, demolishing and removing all support racks and structures, and removal of all infrastructure (e.g., roads, foundations), which is assured according to the lease agreement with the property owner and through the agreement on and posting of a reclamation bond with the County. The proposed lease would run for at least 35 years with the potential for renewal.

The Project site would be leveled where needed and the on-site soil would be reclaimed to a condition that

would again support agriculture. The Decommissioning and Reclamation Plan would include a summary of specific measures to restore the soil to its pre-Project condition, including removal of all fixtures, equipment, non-agricultural roads, and regrading of compacted soil. Reclamation would be completed within 120 days of the expiration of the County special use permit. The modules and ancillary materials would be sold and reused or recycled to minimize impacts on the environment.

Attachments

Attachment 1 – Tulare 40 Queue Cluster 11 Phase I Report (*subattachments available upon request*)

Attachment 2 – Tulare 40 Queue Cluster 11 Phase II Report (*subattachments available upon request*)

Attachment 3 – Inverter and Battery Storage System Example

Attachment 1 – Tulare 40 Queue Cluster 11 Phase I Report

Appendix A – WDT1580

Coldwell Solar 1, LLC

Tulare 40

Queue Cluster 11 Phase I Report

January 15, 2019

This study has been completed in coordination with the California Independent System Operator Corporation (ISO) per Southern California Edison Company's Wholesale Distribution Access Tariff (WDAT), Attachment I Generator Interconnection Procedures (GIP)

Interconnection Study Document History

No.	Date	Document Title	Description of Document
1	1/15/19	Queue Cluster 11 Phase I Appendix A Report	Final Phase I interconnection study report

TABLE OF CONTENTS

A. Introduction	1
B. Study Assumptions	6
C. Technical requirements	7
D. Reliability Standards, Study Criteria and Methodology	9
E. Power Flow Reliability Assessment Results	9
F. Transient stability Evaluation.....	12
G. Short-Circuit Duty Results	14
H. Deliverability Assessment Results	15
I. Interconnection Facilities, Network Upgrades, and Distribution Upgrades	16
J. Cost and Construction Duration Estimate.....	16
K. In-Service Date and Commercial Operation Date Assessment	18
L. ADDITIONAL STUDY ANNOTATIONS.....	20

ATTACHMENTS

Attachment 1: Interconnection Facilities, Network Upgrades, and Distribution Upgrades	23
Attachment 2: Escalated Cost and Time to Construct for Interconnection Facilities, Reliability Network Upgrades, Delivery Network Upgrades, and Distribution Upgrades	24
Attachment 3: Allocation of Network Upgrades for Cost Estimates and Maximum Network Upgrade Cost Responsibility	25
Attachment 4: SCE's Interconnection Handbook.....	27
Attachment 5: Short-Circuit Duty Calculation Study Results	28
Attachment 6: IC Provided Generating Facility Dynamic Data	29
Attachment 7 Subtransmission Assessment Report.....	30

A. INTRODUCTION

Coldwell Solar 1, LLC, the Interconnection Customer (IC), has submitted a completed Interconnection Request (IR) to Southern California Edison (SCE), the Distribution Provider, for its proposed Tulare 40 (Generating Facility).

In accordance with FERC approved SCE's WDAT Attachment I Generator Interconnection Procedures (GIP), the Generating Facility was grouped with Queue Cluster 11 (QC11) Phase I projects to determine the impacts of the group as well as impacts of the Generating Facility on SCE's Distribution System and the ISO Grid.

An Area Report and, where applicable, a Subtransmission Assessment Report have been prepared separately identifying the combined impacts of all projects on the ISO Grid and to distribution facilities served out of the Springville 66 kV Subtransmission System, respectively. This Appendix A report focuses only on the impacts or impact contributions of the Generating Facility. This report is not intended to supersede any contractual terms or conditions specified in a forthcoming Generator Interconnection Agreement (GIA).

The report provides the following:

1. Distribution and transmission system impacts allocated to the Generating Facility.
2. System reinforcements or mitigation necessary to address the adverse impacts allocated to the Generating Facility under various system conditions.
3. A list of required facilities and a good faith estimate of the Generating Facility's cost responsibility and time to construct¹ these facilities. Such information is provided in Attachment 1 and Attachment 2 as separate documents in the Appendix A report package of the Generating Facility.
4. Identification of potential short circuit duty impacts to Affected Systems served from the Subtransmission or Distribution System.

The Generating Facility consist of all equipment and facilities comprising the IC's solar photovoltaic Tulare 40 generating facility to be located in Tulare, California, as disclosed by the IC in its IR and/or Attachment B, as may have been amended during the Interconnection Study process, as summarized below:

Table A.1: Generation Facility General Information per the IR

Description: (i) nineteen (19) SMA Sunny Central 2500EV-US inverter units with a rated output of 2.25 MVA @ 50°C but will be managed to not exceed a total gross MW output of 40 MW in order to meet the requested POI value, (ii) the associated infrastructure and step-up transformers, (iii) meters and metering equipment, and (iv) appurtenant equipment.	
Total rated (gross) capacity at inverter terminals:	42.75 MW at 1.0 p.f.
Total net capability at high-side of main step-up transformer(s):	41.2 MW

¹ It should be noted that construction is only part of the duration of months specified in the study, which includes detailed engineering, licensing, and other activities required to bring such facilities into service. These durations are from the execution of the GIA, receipt of: all required information, funding, and written authorization to proceed with design and engineering, procurement, and construction from the IC as will be specified in the GIA to commence the work.

Total net capacity provided under the GIA at high-side of main step-up transformer(s):	40.45 MW
Total net capacity provided under the GIA at Point of Interconnection (POI):	40 MW

The IC has requested, and the GIA will provide for, a total net capacity of 41.2 MW as measured at the high-side of the main step-transformer(s) and 40 MW at the POI. In case the generator decides to install additional inverters to meet the total net capacity provided under the GIA at Point of Interconnection, the IC shall be required to install, own and maintain a control limiting device or, alternatively, by means of configuring the Generating Facility's control system, as approved by SCE that will ensure the Generating Facility complies with these restrictions.

The Interconnection Facilities of the Generating Facility are illustrated in Figure A.1. While Figure A.2 illustrates the location of the Generating Facility. Additional Generating Facility information is provided in Table A.2

Figure A.1: Generating Facility One-Line Diagram

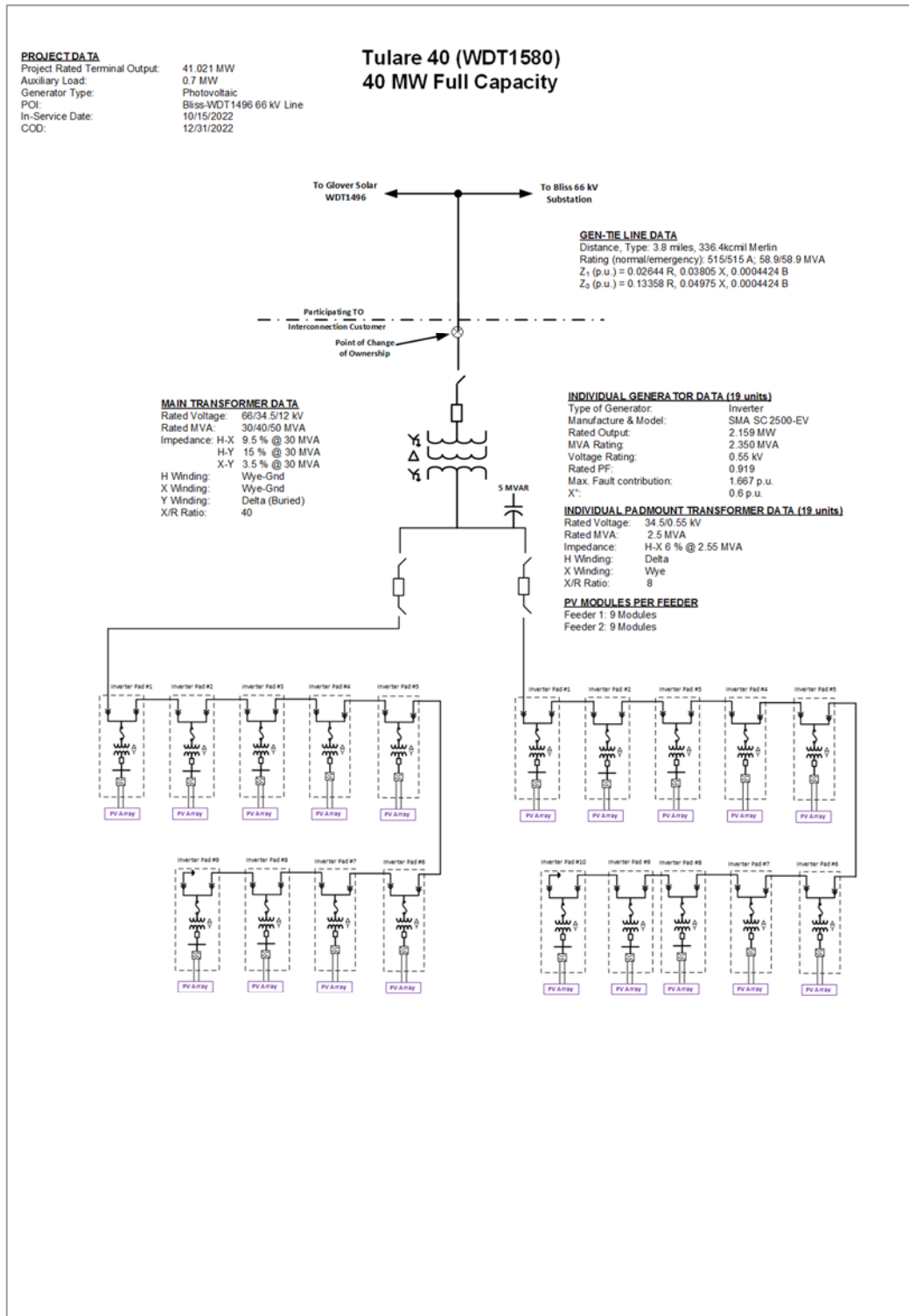


Figure A.2: Generating Facility Location Map



Table A.2: Additional Generating Facility General Information

Generating Facility Location	21387 Road 152 Tulare CA 93274 Tulare County Latitude: 36.2035 Longitude: -119.22861
SCE's Planning Area	Northern Area
Interconnection Voltage	66 kV
POI	Bliss-Glober Solar 66 kV line
Number and Types of Generators	Nineteen (19) SMA Sunny Central 2500EV-US inverter units with a rated output of 2.5 MVA @ 25°C and 2.25 MVA @ 50°C but will be managed to not exceed a total gross MW output of 40 MW at inverter terminal.
Requested Maximum Generating Facility Delivery at POI ²	40 MW
Generation Tie Line	3.8 miles, 336.4kcmil Merlin Line Rating: 515/515 A; 58.9/58.9 MVA Z ₁ (p.u.) = 0.02644 R, 0.03805 X, 0.0004424 B Z ₀ (p.u.) = 0.13358 R, 0.04975 X, 0.0004424 B
Main Step-Up Transformer(s)	Rated Voltage: 66/34.5/12 kV Rated MVA: 30/40/50 MVA Impedance: H-X 9.5 % @ 30 MVA H-Y 15 % @ 30 MVA X-Y 3.5 % @ 30 MVA H Winding: Wye-Gnd X Winding: Wye-Gnd Y Winding: Delta (Buried) X/R Ratio: 40
Collector Equivalent	Equivalent Rating: 100 MVA Nominal Voltage: 34.5 kV Z ₁ (p.u.) = 0.012407 R, 0.016437 X, 0.014860B Z ₀ (p.u.) = 0.055207 R, 0.017248 X, 0.014860B
Pad-Mount Transformer(s)	Number of Pad-Mount Transformers: 19 Rated Voltage: 34.5/0.55 kV Rated MVA: 2.5 MVA Impedance: H-X 6 % @ 2.55 MVA H Winding: Delta X Winding: Wye X/R Ratio: 8 Equivalent Representation

² The MW output at the POI varies under different operating conditions. The IC is reminded that this value is tied to the generation tie-line (gen-tie) losses. The estimated Maximum Net Output value at POI and gen-tie losses illustrated in Section E, are contingent upon the accuracy of the technical data provided by the IC, and are subject to change should the IC change its gen-tie parameters during the detailed engineering and design phase of the Generating Facility. Please note that the Generating Facility shall not exceed the total net output of 40 MW at the POI.

	Equivalent MVA: 47.5 MVA H-X Impedance Value (R): 6% @ 47.5 MVA
Generator Data	Manufacturer: SMA SC 2500-EV-US Number of Units: 19 Rated Output: 2.159 MW MVA Rating: 2.350 MVA Voltage Rating: 0.55 kV Rated PF: 0.919 Equivalent Representation: Equivalent MVA: 41.021 MVA Equivalent Output (Gross): 44.65 MW Per-Unit Fault Duty: 1.667 p.u. X'': 0.6
Generator Auxiliary Load and/or Station Light and Power	0.7 MW
Voltage Regulation Devices	One (1) 5.0 MVAR capacitor bank
Dynamic Models Used	gencs, regc_a, reec_b, repc_a, lhvrt, and lhfrt
Deliverability Requested	Full Capacity
Proposed Dates ³	
In-Service Date (ISD)	10/1/2022
Initial Synchronization Date/Trial Operation	10/15/2022
Commercial Operation Date (COD)	12/31/2022

B. STUDY ASSUMPTIONS

For detailed assumptions regarding the group cluster analysis, please refer to the QC11 Phase I Area Report. Below are the assumptions specific to the Generating Facility:

1. The Generating Facility was modeled as described in Table A.1 and A.2 above.
2. The facilities that will be installed by SCE and the IC are detailed in Attachment 1.
3. Roles and Responsibilities for Environmental Activities, Permits, and Licensing.
 - No Environmental activities were included in the analysis of this Generating Facility, as no environmental impacts were identified based on the facilities that will be installed by SCE disclosed in Attachment 1.
4. Other Items to Consider:
 - Final metering requirements will be identified as part of the detailed engineering and design of the Generating Facility and could result in modifications to the Generating Facility.

³ Such dates are specified in the Generating Facility's IR. Actual ISD, Initial Synchronization Date, and COD will depend on licensing, engineering, detailed design, and construction requirements to interconnect the Generating Facility after the GIA has been executed and/or filed at Federal Energy Regulatory Commission (FERC) for acceptance.

C. TECHNICAL REQUIREMENTS⁴

1. Preliminary Protection Requirements

Protection requirements are designed and intended to protect SCE's electric system only. The preliminary protection requirements were based upon the interconnection plan as shown in the one-line diagram depicted in line item #4 in Attachment 1.

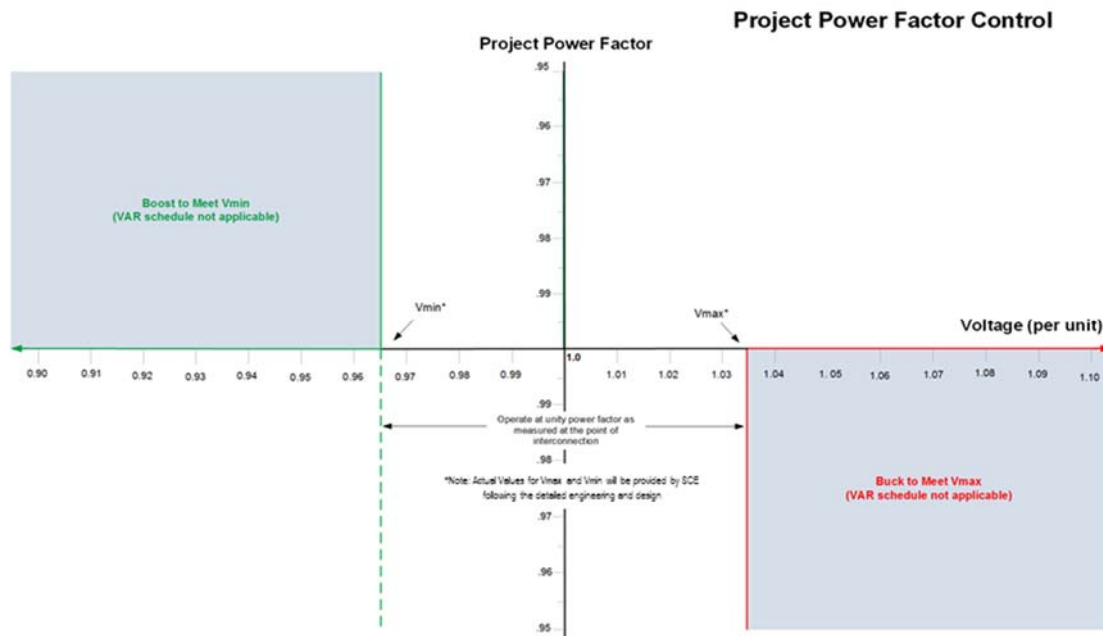
The IC is responsible for the protection of its own system and equipment and must meet the requirements in the SCE's Interconnection Handbook.

2. Power Factor Requirements

The Generating Facility will be required to maintain a composite power delivery at continuous rated power output at the high-side of the IC's substation or other equivalent location at a power factor within the range of 0.95 leading to 0.95 lagging. This power factor range standard shall be dynamic.

3. Operating Voltage Requirements

Under real-time operations, the Generating Facility will be required to operate under the control of automatic voltage regulator with settings as shown in the figure below. The actual values of the V_{min} and V_{max} will be provided once the Generating Facility executes a Generation Interconnection Agreement and detailed engineering and design is complete. The V_{min} and V_{max} values are to be used as the basis for setting up the automatic voltage control mode (with its automatic voltage regulator in service and controlling voltage) of the Generating Facility in order to maintain scheduled voltage at a reference point.



⁴ The IC is advised that there may be technical requirements in addition to those that outlined above in Section C of this report that are included in SCE's Interconnection Handbook or that will be addressed in the Generating Facility's GIA.

4. Harmonic Requirements

The harmonic impact of the subject inverter-based generation was not part of this study. Impacts on voltage distortion levels may be significant due to the penetration level of the Generating Facility with respect to the local distribution grid strength. As with all equipment connected to SCE's Electric System, the Generating Facility will be subject to the provisions of CPUC Rule 2.E, allowing SCE to require the IC to mitigate interference with service to other SCE customers, including harmonic impacts, if the harmonic interference is caused by the IC.

5. Low/High Voltage Ride-Through (LHVRT) and Low/High Frequency Ride-Through (LHFRT) Capability

Actual fault events have demonstrated that certain asynchronous generators (i.e., inverters) from specific manufacturers may be susceptible to false tripping or temporary shutdown during fault conditions. The most severe disturbance to date resulted in the temporary loss of 1,178 MW at photovoltaic plants when inverter control systems throughout Southern California responded to a 500 kV fault by temporarily stopping the production of electric power. Based on the results of an investigation performed into this issue, several causes and contributing factors have been identified which include:

- a. Apparent miscalculated frequency at many inverters when fault-induced phase shifts occurred in the reference voltage
- b. Inverter protection settings set to meet IEEE 1547 standards
- c. Momentary overvoltage
- d. Momentary under-voltage

The NERC PRC-024-2 standard currently allows generators to instantaneously trip if the system conditions are outside of a defined set of bounds. Because different inverter manufacturers use different methods to calculate frequency (zero crossing, DFT, PLL, etc.), the methods used by some manufacturers have resulted in calculations of the instantaneous frequency during power system disturbances that do not accurately reflect actual frequency. Inaccurate frequency calculations may result in the reduction of electric power from inverter-based resources which is an unacceptable response. In addition, voltage transients caused by capacitive switching (among other potential causes) can cause inverters to trip due to a momentary overvoltage condition which too is an unacceptable response unless the Generating Facility has reached the power factor lead (buck) limits and the voltage is still in excess of the maximum allowable voltage limit.

When under-voltage occurs during the fault, some inverters may cease operation temporarily. Such performance impacts system reliability and may not be allowed in the future reliability standards/interconnection standards.

The IC should work with the inverter manufacturer to ensure that the Generating Facility's inverters meet the requirements of NERC Standard PRC-024 and conform to the NERC industry recommendations issued on May 01, 2018:

[https://www.nerc.com/pa/rrm/bpsa/Alerts%20DL/NERC Alert Loss of Solar Resources during Transmission Disturbance-II 2018.pdf](https://www.nerc.com/pa/rrm/bpsa/Alerts%20DL/NERC%20Alert%20Loss%20of%20Solar%20Resources%20during%20Transmission%20Disturbance-II%202018.pdf)

This NERC industry recommendations are required to be followed by all inverter based generation connected to the ISO controlled grid.

6. Primary Frequency Response Requirement

Per FERC Order 842, the IC is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ± 0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from the Approved Applicable Reliability Standards providing for equivalent or more stringent parameters. The IC shall ensure that the Electric Generating Unit's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Electric Generating Unit has operating capability in the direction needed to correct the frequency deviation.

Also per FERC Order 841, nuclear generating facilities and certain Combined Heat and Power (CHP) facilities are exempt from these primary frequency response requirements.

D. RELIABILITY STANDARDS, STUDY CRITERIA AND METHODOLOGY

1. SCE Analysis

The generator interconnection studies were conducted to ensure the ISO Grid is in compliance with the North American Electric Reliability Corporation (NERC) reliability standards, WECC regional criteria, and the ISO planning standards. Refer to Section C of the Area Report for details of the applicable reliability standards, study criteria, and methodology. In addition, the Subtransmission Assessment was performed in compliance with SCE's Subtransmission Planning Criteria.

2. Coordination with Affected Systems

Per GIP section 3.7, SCE will notify the Affected System Operators that are potentially affected by an IC's IR or group of interconnection requests subject to a Group Study. The SCE will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators and, if possible, include those results (if available) in its applicable Interconnection Study within the time frame specified in the GIP. SCE will include such Affected System Operators in all meetings held with IC as required by the GIP. IC will cooperate with SCE in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A transmission provider which may be an Affected System shall cooperate with SCE with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

Refer to Section F for additional information.

E. POWER FLOW RELIABILITY ASSESSMENT RESULTS

Analysis of the Generating Facility

Steady State Power Flow Analysis Results – Bulk Electric System

1. Thermal Overloads

The group study indicated that the Generating Facility contributes to overloads on the following facilities listed below under normal, single contingency, and/or multiple contingency conditions. The details of the analysis and overload levels as well as the details of the recommended mitigation to address these overloads are provided in the corresponding Northern Area Report.

- I. Normal Conditions
 - None identified
- II. Single Contingency
 - Pardee-Sylmar No.1 or No. 2 220 kV line under loss of the Pardee-Sylmar No. 2 or No.1 220 kV line.
- III. Multiple Contingency
 - Antelope-Vincent No.1 or No.2 500 kV line under loss of the Antelope-Vincent No. 2 or No. 1 and Whirlwind-Vincent 500 kV line.
 - The Pardee leg of the Pardee-Pastoria-Warne 220 kV line under loss Bailey-Pastoria and Pardee-Pastoria 220 kV lines
 - The Pastoria leg of the Pardee-Pastoria-Warne 220 kV line under loss Bailey-Pastoria and Pardee-Pastoria 220 kV lines
 - Magunden-Pastoria No.1 or No.2 under loss of Magunden-Pastoria No. 2 and No .3 or No.1 and No. 3 220 kV lines
 - Antelope-Magunden No.1 220 kV Line under the loss of the Pardee-Sylmar No.1 and No.2

2. Required Mitigations

The study indicated the Generating Facility contributes to overloads under contingency scenarios with all existing and prior queued transmission upgrades. Under single contingency the overloads will be mitigated by the new Moorpark RAS. Under multiple contingencies, it was identified that QC11 Bulk Projects in the North of Magunden Area will be added to the Big Creek RAS. Additionally, the need to upgrade terminal equipment and ground clearances on the Pardee leg of the Pardee-Pastoria-Warne 220 kV line, and the Pastoria leg of the Pardee-Pastoria-Warne 220 kV line was triggered. Additionally the terminal equipment on the Antelope-Vincent No. 1 and No. 2 will need to be upgrade. The details of the power flow analysis are provided in the Northern Area Report.

Steady State Power Flow Analysis Results - Subtransmission System

1. Thermal Overloads

The group and/or Subtransmission study indicated that the Generating Facility contributes to overloads on the following facilities listed below under normal, single contingency, and multiple contingency conditions. The details of the analysis and overload levels, as well as the details of the recommended mitigation to address these overloads, are provided in the corresponding Area and/or Subtransmission Assessment Report(s).

- I. Normal Conditions
 - No thermal overloads have been identified

- II. Single Contingency
 - No thermal overloads have been identified
- III. Multiple Contingency
 - No thermal overloads have been identified

2. Power Flow Non-Convergence

There were no non-convergence issues identified with the inclusion of the Generating Facility operating at the required power factor range; refer to Area Report and/or Subtransmission Assessment Report for additional details.

3. Voltage Performance

There were no voltage performance issues identified with the inclusion of the Generating Facility; refer to Area Report and/or Subtransmission Assessment Report for additional details.

4. Required Mitigations

There is no mitigation required.

5. Line Loss Analysis for Generating Facility

Based on the technical data provided for the individual generator unit(s), the collector system equivalent, pad-mount and main transformer banks, the internal Generating Facility losses are shown in Table 1. In addition, losses incurred on the generation tie line are shown in Table 2 below. The Generating Facility losses identified represent those assuming the Generating Facility is limiting its output at the high side of the main transformer bank to achieve the desired MW delivery at the POI.

Table 1

Resource	Gross output to Achieve Desired output at POI (MW)*	Internal Generating Facility Losses (MW)			Aux Load (MW)	Net Output (MW)
		Pad-Mount	Collector	Main Transformer		
Photovoltaic	42	0.27	0.45	0.13	0.7	40.45

*This represents the MW value needed at the inverter terminal to achieve the desired Net Output MW in order to meet the requested POI MW.

Table 2

Resource	Net Output* (MW)	Losses on Interconnection Facilities (MW)	POI (MW)
		Generating Facility Gen-Tie	
Photovoltaic	40.45	0.45	40

*MW (net) represents the MW value as measured on the high side of the main transformer bank to achieve the desired MW delivery at the POI.

6. Power Factor Evaluation

FERC Order 827 provides the reactive power requirements for newly interconnecting non-synchronous generators which requires these resources to design the facility to be capable of providing reactive power to meet power factor 0.95 as measured on the high-side of the IC's substation or other equivalent location. This capability should be dynamic.

Base case power flow was evaluated to determine reactive power losses internal to the Generating Facility in order to ascertain if the reactive capability of the Generating Facility is adequate to supply these losses and meet the power factor requirements. A summary of the power factor evaluation is provided in the table below.

Evaluation Assumptions		
Generating Facility MW Output at Terminal(MW)	42.75	42.75
Ambient Temperature for Generator Capability (°C)	34.40	46.10
Effective Power Factor at Generator Terminal	0.94	0.97
Generating Facility MW at High Side of the Transformer (MW)	40.45	40.45
Reactive Power Requirements		
Pad-mount transformer losses (MVar)	2.16	2.16
Collector equivalent losses (Mvar)	0.00	0.00
Main transformer losses (Mvar)	5.04	5.04
PF Requirements at High Side of Transformer (Mvar)	13.28	13.28
Total VAR Requirements (Mvar)	20.48	20.48
Reactive Power Supply		
SMA 2500-EV PV Inverters at Pgen (Mvar)	15.26	96.04
Shunt Capacitors (Mvar)	5.00	5.00
Collector Line Charging (Mvar)	1.21	1.21
Other Dynamic VAR Devices (MVar)	0.00	0.00
Total VAR Supply (Mvar)	21.47	102.25
Total Dynamic VAR Supply (Mvar)	15.26	96.04
Total Reactive Power (Shortage) / Surplus Total Requirements less Total Supply	0.99	81.77
Dynamic Reactive Power (Shortage) / Surplus	1.98	82.76

Based on the technical details provided, the Generating Facility, as proposed, does have the capability to meet 0.95 power factor requirement as measured at the high-side of the IC's substation or other equivalent location.

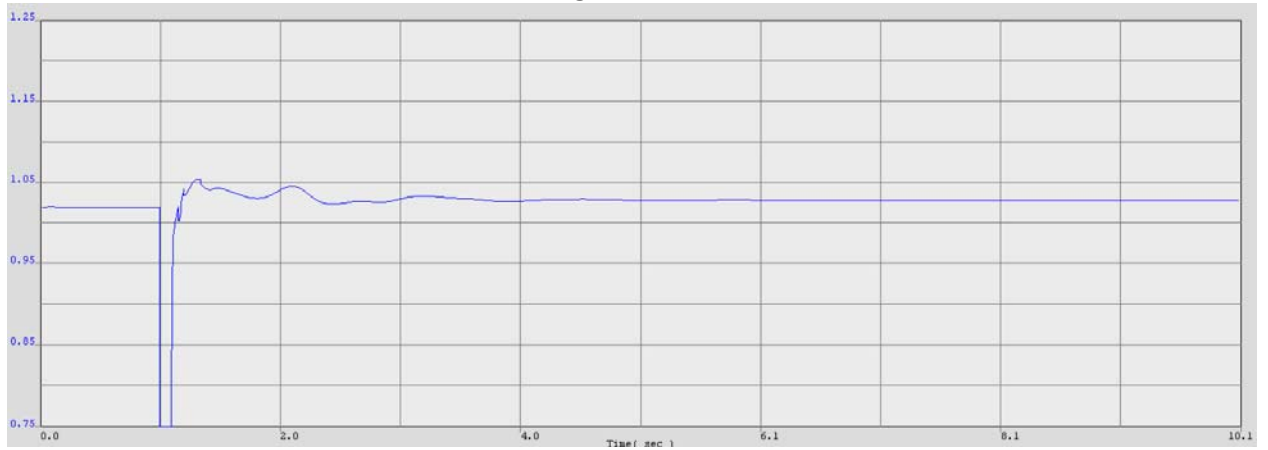
F. TRANSIENT STABILITY EVALUATION

1. Generating Facility Performance

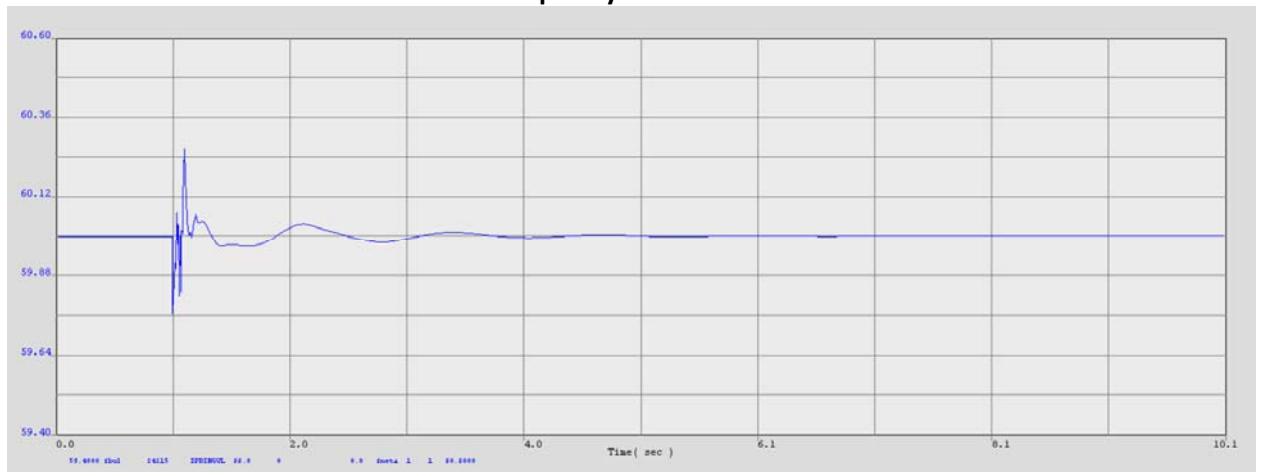
Dynamic simulation study results illustrating the frequency and voltage performance of the Generating Facility based on the technical parameters supplied for the Generating Facility are provided below.

Voltage and Frequency Plots for Generating Facility with fault at Springville 66 kV Sub

Voltage Plot

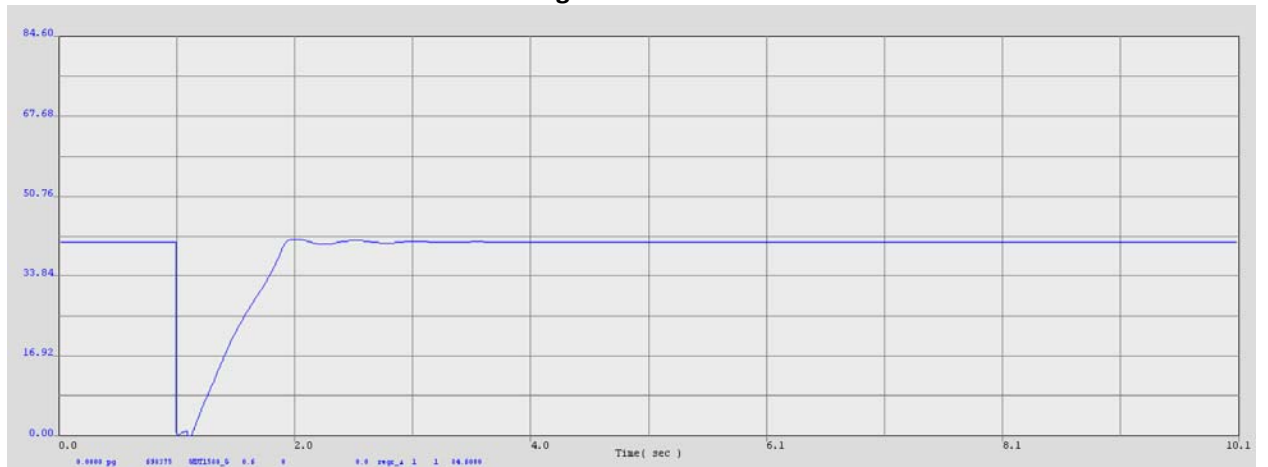


Frequency Plot



Power Flow Plots for Generating Facility at inverter terminal with fault at Springville 66 kV Sub

Pg Plot



2. System Performance

System transient stability performance was found to be acceptable. Refer to the Area Report for additional details pertaining to the Phase I transient stability evaluation criteria and assessment results, respectively.

G. SHORT-CIRCUIT DUTY RESULTS

Short-circuit studies were performed to determine the fault duty impact of adding the Phase I projects to SCE's electric system and to ensure system coordination. The fault duties were calculated with and without the projects to identify any equipment overstress conditions. Once overstressed circuit breakers are identified, the fault current contribution from each individual project in Phase I is determined. Each project in the cluster will be responsible for its share of the upgrade cost based on the rules set forth in Section 4 of the GIP.

1. SCE-owned Facilities

All bus locations where the Phase I projects increase the short-circuit duty by 0.1 kA or more and where duty was found to be in excess of 60% of the minimum breaker nameplate rating are listed in the Area Report (Appendix H) and applicable Subtransmission Assessment Report (Attachment 7). These values have been used to determine if any equipment is overstressed as a result of the inclusion of Phase I interconnections and corresponding Network Upgrades, if any.

If any equipment is found to be overstressed with the inclusion of the cluster, corresponding Area Deliverability Network Upgrade and/or corresponding Local Deliverability Network Upgrade, further analysis is performed to identify the specific projects that drive the need for the upgrade and/or mitigation. Individual project contribution at the impacted location are then used to determine which project or group of projects drives the need for the upgrade and/or mitigation.

The responsibility to finance short circuit related Distribution and Reliability Network Upgrades identified from increases in short circuit duty through a group study shall be assigned pro rata to all projects requiring the upgrade based on SCD contribution of each project.

The QC11 Phase I breaker evaluation did identify additional overstressed circuit breakers triggered with the inclusion of the projects in QC11 Phase I at the following locations:

- Barre 230 kV Substation
- Antelope 66 kV Substation

Please refer to the QC11 Phase I Area Report and/or the applicable Subtransmission Assessment report for additional details.

2. Affected Systems

The specific SCD contribution from the Generating Facility to Neighboring Utilities is outlined in Table F.1 below. Impacts on the Affected Systems with the addition of all QC11 Phase I projects, are provided in the Area Report (Section H.2), and in Attachment 7.

Table F.1: Short-Circuit Duty Evaluation of Neighboring Utilities Impacted by the Generating Facility

Substation	Voltage	Entity	Generating Facility Impact	
			3-Phase (kA)	Single Line-to-Ground (kA)
Midway	525	PG&E	0.000	0.000
Edmonston	230	CDWR	0.008	0.005
Pearblossom	230	CDWR	0.000	0.000
Warne	230	CDWR	0.001	0.000
Sylmar	230	LADWP	0.000	0.000
Goodrich	230	City of Pasadena	0.000	0.000
Oso	66	CDWR	0.000	0.000

3. SCE's Ground Grid Duty Concerns

The short-circuit studies flagged certain existing substations for further review where the Phase I projects increased the substation ground grid duty by at least 0.25 kA. Additional review will be performed as part of Phase II to determine if any of these locations will require a detailed ground grid analysis. The ground grid study will be performed as part of project execution once GIAs are in place and projects proceed forward towards interconnection. Refer to the Area Report and/or Subtransmission Assessment Report (if applicable) for further information.

H. DELIVERABILITY ASSESSMENT RESULTS

1. On Peak Deliverability Assessment

The Generating Facility contributes to the following overloads in this Cluster Study:

Contingency	Overloaded Facility	Flow %
Magunden - Pastoria 230kV No. 1 & 3	Magunden - Pastoria 230kV No. 2	174.88%
Magunden - Pastoria 230kV No. 1 & 2	Magunden - Pastoria 230kV No. 3	119.09%
Pardee - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Bailey - Pastoria 230kV	131.46%
Bailey - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Pardee - Pastoria 230kV	130.30%
Pardee - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Bailey - Pardee 230kV	125.20%
Pardee - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Bailey - Pastoria 230kV	137.17%
Pardee - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Bailey - Pastoria 230kV	131.46%
Pardee - Pastoria 230kV & Bailey - Pastoria 230kV	Pastoria - Warne - Pardee 230kV (Pardee tap)	102.67%
Pardee - Pastoria 230kV & Bailey - Pardee 230kV	Pastoria - Warne - Pardee 230kV (Pastoria tap)	131.61%

Pardee - Pastoria 230kV & Bailey - Pardee 230kV	Pastoria - Warne - Pardee 230kV (Pastoria tap)	131.79%
Pardee - Pastoria 230kV & Bailey - Pastoria 230kV	Pastoria - Warne - Pardee 230kV (Pastoria tap)	140.01%
Pardee - Sylmar 230kV No. 2	Pardee - Sylmar 230kV No. 1	104.28%
Vincent - Whirlwind 500kV and Antelope - Vincent 500kV No. 1	Antelope - Vincent 500kV No. 2	127.14%

1. Off- Peak Deliverability Assessment

Under off-peak conditions, Antelope – Vincent 500kV No. 1 and No. 2 transmission lines are overloaded under various contingency conditions. For details, see Section E.2 of the Area Report.

2. Required Mitigations

The following upgrades are required to mitigate overloads identified in the deliverability assessment:

- Upgrade ground clearances and terminal equipment for the Pardee leg of the Pardee-Pastoria-Warne 220 kV line
- Develop new Moorpark RAS to trip generation for Pardee – Sylmar outage
- Upgrade Antelope – Vincent 500kV transmission lines to increase area deliverability

I. INTERCONNECTION FACILITIES, NETWORK UPGRADES, AND DISTRIBUTION UPGRADES

Please see Attachment 1 for SCE's IF's, RNU's, Delivery Network Upgrades⁵ (DNU's), and DU's allocated to the Generating Facility. Please note that SCE considered current system configuration, approved SCE sponsored projects, and all queued generation in determining scope for IFs and/or Plan of Service but will not "reserve" the identified scope of upgrades for the proposed POI unless a GIA is executed per the specified timelines shown in Table K.1.

J. COST AND CONSTRUCTION DURATION ESTIMATE

1. Cost Estimate

The Generating Facility's estimated interconnection costs, adjusted for inflation and provided in 'constant' 2018 dollars escalated to the Generating Facility's feasible operating date (as identified below), are provided in Attachment 2 and the Generating Facility's allocated cost for shared network upgrades are provided in Attachment 3. The costs will be utilized in developing the GIA. However, should there be a delay in executing the GIA beyond 2020, new cost estimate adjusted for inflation will be required and reflected into the GIA.

2. Construction Duration Estimate

The construction duration for the identified facilities is as follows:

⁵ At the IC's discretion, the IC or parties other than SCE pursuant to Section 10.2 under GIP may construct an Option (B) Generating Facility Area Delivery Network Upgrades (ADNUs) not allocated TP Deliverability. If SCE does not construct the ADNUs, the IC is not required to make the third Interconnection Financial Security posting to SCE pursuant to Section 4.8.4.2.1 under GIP.

a. SCE's Interconnection Facilities – 27 months

These facilities involve non-network facilities located within SCE's Springville 220 kV Substation and at the IC's Generating Facility that are necessary to complete physical interconnection of the Generating Facility and ensure adequate line protection and CRAS implementation. Please refer to Attachment 1 for details related to these facilities.

b. Reliability Network Upgrades

Short-Circuit Duty (SCD) Mitigation

1. Barre Substation – 30 months

De-loop Barre 220 kV Bus from the Barre – Del Amo and the Barre Ellis 220 kV Line to form the DelAmo-Ellis 220 kV Line

2. Antelope Substation – 45 months

Replace a total of forty-one (41) Antelope 66 kV overstressed circuit breakers with 50 kA.

c. Voltage Support Mitigation

No required voltage support mitigations were identified in this Phase I Interconnection Study.

d. Distribution Upgrades

Plan of Service – 27 months

Note 1—Construction Duration Estimates and Identified Upgrades. Any construction durations identified in this section may vary. During the cluster study process, SCE includes all queued and active generation projects without regard to corresponding desired in-service dates or actual project status to identify Short Circuit Duty and Distribution upgrades and a duration for SCE to build them. Such duration, of course, affects the In-Service Date for this specific project. As status for queued projects change (withdrawals, downsizing, suspensions, or deferred in-service dates), SCE may be able to accelerate in-service dates for projects affected by status changes. Furthermore, SCE will only begin design/construction of an identified Short Circuit Duty and Distribution upgrade when enough projects 1) execute and fund a Generation Interconnection Agreement and/or a Letter of Agreement with SCE and 2) those projects trigger the need for an upgrade.

Note 2 -- Construction Duration Estimates and Coordination of Environmental Work. The IC is advised that any durations provided above assume the IC will perform environmental work related to the installation of SCE's IF's and/or DU's specified in this report and will perform them in parallel with SCE's preliminary design and engineering. The IC is expected to engage SCE Environmental Services to obtain concurrence prior to commencement of any environmental work and during execution of that work. Since SCE will be using the IC's environmental documents and/or work products, IC delays producing them may delay SCE's ability to obtain required permits and/or license(s). Such delays would likely cause additional delays in the commencement of SCE's detailed engineering, procurement, and

construction. These delays could increase any durations identified in this report and push out the feasible ISD provided in Table K.1 ISD and COD Assessment.

3. Other Potential Costs to the Generating Facility

- a. Project to share a generation tie-line with a previously queued project WDT1496. Since the generation tie-line is required to interconnect the Generating Facility regardless of the other project, the estimated costs of the gen-tie have been added as a potential cost to the Generating Facility.
- b. For the purposes of this study SCE assumed that all facilities associated with the pending SCE WDT1496 are already in service. Should the future WDT1496 not materialize, the Generating Facility's facilities to interconnect will need to be reassessed which may potentially change the Plan of Service and associated Generating Facility costs.
- c. The Generating Facility will utilize existing SCE Interconnection Facilities and other plan of service upgrades whose costs (both capital costs and applicable ongoing O&M charges) have or are being paid for by an earlier-queued project(s). The IC will be responsible for its allocated share of such costs unless the earlier-queued project(s) agrees to fund the IC's allocated share.

K. IN-SERVICE DATE AND COMMERCIAL OPERATION DATE ASSESSMENT

An ISD and COD assessment was performed for this Generating Facility to establish SCE's estimate of the earliest achievable ISD based on the QC11 Phase I Interconnection Study process timelines and the time required for SCE to complete the facilities needed to enable physical interconnection as an Interim Deliverability or Energy Only Deliverability interconnection (as applicable) for the Generating Facility. This date may be different from the IC's requested ISD and will be the basis for establishing the associated milestones in the draft GIA.

Details pertaining to Full Capacity Deliverability Status and Partial Capacity Deliverability Status are provided below.

1. ISD Estimation Details

For the QC11 Phase I Interconnection Study, the estimated earliest achievable ISD is derived by the time requirements to complete the QC11 Interconnection Study Process, tender a draft GIA, negotiate and execute the GIA, and construct the necessary facilities as described below in Table K.1.

Table K.1 ISD and COD Assessment

Reference starting point	Days/Months	Issuance of Phase II Interconnection Study Report	11/20/19
Add:	30 CD	Phase II Results Meetings	12/20/19

Add:	15 BD (20 CD)	Starting Point: TPD Results issued and IC response provided	4/2/20
Add:	30 CD	Earliest Reasonable Tender of draft GIA	5/2/20
Add:	90 CD	GIA negotiation time, execution, filing, and related activities.	7/31/20
Add: Construction Duration	45 months	Construction duration outlined in the Phase II Study Report. Construction completion no earlier than date which reflects earliest ISD	4/30/24
	Reference:	IC-requested ISD via Attachment B	10/1/22
	Reference:	IC-requested COD via Attachment B	12/31/22
		Difference between IC ISD and COD	2 months
Equals:		Earliest achievable In-Service Date (ISD)	4/30/24
		Earliest achievable Commercial Operation Date (COD) (Using difference between ISD and COD requested by IC)	7/30/24

Notes on the Achievable ISD and COD calculation:

- 1) Assumes duration required to construct those facilities required for an Interim Deliverability Interconnection or Energy Only interconnection (as applicable) for the Generating Facility until the applicable DNUs are completed.
- 2) The construction durations shown represent the estimated amount of time needed to design, procure, and construct the facilities with the start date of the duration based on the effective date of the GIA; and necessarily include timely receipt of all required information and written authorizations to proceed (ATP), and timely receipt of construction payments and financial security postings and other milestones.
- 3) Assumes that GIA is tendered after the TP Deliverability allocation results are disclosed.

2. ISD Conclusion

Based on these timelines, the IC's requested ISD of 10/1/2022 and COD of 12/31/2022 does not appear to be achievable.

SCE can reasonably tender a draft GIA by May 2020. The draft GIA should be executed and/or filed at FERC no later than August 2020 and will include the earliest ISD and COD as identified in Table K.1.

The ISO will perform its Annual Reassessment (January - July 2020) and Transmission Plan Deliverability (TPD) Allocation⁶ (due April 2020). Any changes in scope, cost, or schedule requirements that come out of ISO's Annual Reassessment and 2020 TPD Allocation will be reflected in a 2020 Reassessment Report, which will be used to revise the draft LGIA (if under negotiation) or amend the LGIA (if already executed).

L. ADDITIONAL STUDY ANNOTATIONS

1. Conceptual Plan of Service

The results provided in this study are based on conceptual engineering and a preliminary Plan of Service (POS) and are not sufficient for permitting of facilities. The POS is subject to change as part of detailed engineering and design.

2. The study does not include analysis related to the power output rate of change that may occur due to the following or other conditions:

- System morning start up for solar generating facilities: That is when each morning the Generating Facility commences to generate and export electrical energy to the electric system.
- Cloud Cover: Solar generating facilities have significant generation output variation (Variability) which can have an impact on electric system voltage profiles.

3. IC's Technical Data

The study accuracy and results for the QC11 Phase I Interconnection Study was contingent upon the accuracy of the IR technical data provided by each IC during the Interconnection Study Cycle. Any changes from the data provided as allowed under GIP should be submitted in the Attachment B within ten (10) Business Days following the Phase I Interconnection Study Results Meeting. Any changes in the Attachment B submission that extended beyond the modifications allowed in accordance with Section 4.5.7.2.2 of GIP would have been evaluated under a Material Modification Assessment (MMA). The MMA process would have determined if such change resulted in a material impact to queued-behind generation. These change(s) would have been permitted if it was determined that there were no material impacts to queued-behind generation.

4. Study Impacts on Affected Systems

Results or consequences of this Phase I Interconnection Study may require additional studies, facility additions, and/or operating procedures to address impacts to neighboring utilities and/or regional forums. For example, impacts may include but are not limited to WECC Path Ratings, short-circuit duties outside of the ISO Controlled Grid, and sub-synchronous resonance (SSR). Refer to Affected Systems Coordination Section H of the Area Report and above in Section F for additional information.

5. Use of SCE's Facilities

The IC is responsible for acquiring all property rights necessary for the IC's Interconnection Facilities, including those required to cross the SCE's facilities and property. This Phase I Interconnection Study does not include the method or estimated cost to the IC of SCE mitigation

⁶ The TPD Allocation Process is estimated to be completed in April 2020. The actual date may vary.

measures that may be required to accommodate any proposed crossing of SCE's facilities. The crossing of SCE's property rights shall only be permitted upon written agreement between SCE and the IC at SCE's sole determination. Any proposed crossing of SCE property rights will require a separate study and/or evaluation, at the IC's expense, to determine whether such use may be accommodated.

6. SCE's Interconnection Handbook

The IC shall be required to adhere to all applicable requirements in SCE's Interconnection Handbook. These include, but are not limited to, all applicable protection, voltage regulation, VAR correction, harmonics, switching and tagging, and metering requirements.

7. Western Electricity Coordinating Council (WECC) Policies

The IC shall be required to adhere to all applicable WECC policies including, but not limited to, the WECC Generating Unit Model Validation Policy.

8. System Protection Coordination

Adequate Protection coordination will be required between SCE-owned protection and IC-owned protection. If adequate protection coordination cannot be achieved, then modifications to the IC-owned facilities (i.e., Generation-tie or Substation modifications) may be required to allow for ample protection coordination.

9. Standby Power and Temporary Construction Power

The Phase I Interconnection Study does not address any requirements for standby power or temporary construction power that the Generating Facility may require prior to the ISD of the Interconnection Facilities (IF's). Should the Generating Facility require standby power or temporary construction power from SCE prior to the ISD of the IF's, the IC is responsible to make appropriate arrangements with SCE to receive and pay for such retail service.

10. Licensing Cost and Estimated Time to Construct Estimate (Duration)

The estimated licensing cost and durations applied to this Generating Facility are based on the Generating Facility scope details presented in this Phase I Interconnection Study. These estimates are subject to change as the Generating Facility's environmental and real estate elements are further defined. Upon execution of the GIA, additional evaluation including but not limited to preliminary engineering, environmental surveys, and property right checks may enable licensing cost and/or duration updates to be provided.

11. Network/Non-Network Classification of Telecommunication Facilities

- a. Non-Network (Interconnection Facilities) Telecommunications Facilities: The cost for telecommunication facilities that were identified as part of the IC's Interconnection Facilities was based on an assumption that these facilities would be sited, licensed, and constructed by the IC. The IC will own, operate, maintain, and construct main and diverse telecommunication paths associated with the IC's generation tie line, excluding terminal equipment at both ends. In addition, the telecommunication requirements for the RAS were assumed based on tripping of the generator's breaker in lieu of tripping the circuit breakers and opening the IC's gen-tie at SCE's substation.
- b. Network (Network Upgrades) Telecommunications Upgrades: Due to uncertainties related to telecommunication upgrades for the numerous projects in queues ahead of this Generating Facility, telecommunication upgrades for earlier queued projects without a signed GIA which upgrades have not been constructed were not considered in this study. Depending on the scope of these earlier queued projects, the cost of telecommunication upgrades identified for Phase I may be reduced. Any changes in these

assumptions may affect the cost and schedule for the identified telecommunication upgrades.

12. Ground Grid Analysis

A detailed ground grid analysis will be required as part of the detailed engineering for the Generating Facility at the SCE substations whose ground grids were flagged with duty concerns.

13. SCE Technical Requirements

The IC is advised that there may be technical requirements in addition to those that outlined above in Section C of this report that will be addressed in the Generating Facility GIA.

14. Applicability

This document has been prepared to identify the impact(s) of the Generating Facility on the SCE's electric system; as well as establish the technical requirements to interconnect the Generating Facility to the POI that was evaluated in the final Phase I Interconnection Study for the Generating Facility. Nothing in this report is intended to supersede or establish terms/conditions specified in GIAs agreed to by the SCE, ISO, and the IC.

15. Process for Initial Synchronization Date/Trial Operation Date and COD of the Generating Facility

The IC is reminded that the ISO has implemented a New Resource Implementation (NRI) process that ensures that a generation resource meets all requirements before Initial Synchronization Date/Trial Operation Date and COD. The NRI uses a bucket system for deliverables from the IC that are required to be approved by the ISO. The first step of this process is to submit an "ISO Initial Contact Information Request form" at least seven (7) months in advance of the planned Initial Synchronization Date. Subsequently an NRI project number will be assigned to the Generating Facility for all future communications with the ISO. SCE has no involvement in this NRI process except to inform the IC of this process requirement. Further information on the NRI process can be obtained from the ISO Website using the following links:

New Resource Implementation webpage:

<http://www.caiso.com/participate/Pages/NewResourceImplementation/Default.aspx>

NRI Checklist:

<http://www.caiso.com/Documents/NewResourceImplementationChecklist.xls>

NRI Guide:

<http://www.caiso.com/Documents/NewResourceImplementationGuide.doc>

16. ISO Market Dispatch

This study did not evaluate any potential limitations that may be driven by the ISO market under real-time operating conditions.

17. Interconnection Request to Third-Party Owned Facilities

Generating Facility's requesting to interconnect to a Third party owned facility will need to obtain written approval from the owner(s) of the facility prior to execution of the GIA.

Attachment 1:
Interconnection Facilities, Network Upgrades, and Distribution Upgrades
Please refer to separate document

Attachment 2:
Escalated Cost and Time to Construct for Interconnection Facilities, Reliability Network Upgrades,
Delivery Network Upgrades, and Distribution Upgrades
Please refer to separate document

Attachment 3:
Allocation of Network Upgrades for Cost Estimates and Maximum Network
Upgrade Cost Responsibility

Phase I Network Upgrade Cost Allocation

Queue

WDT1580



Phase I RNU, LDNU and Potential NU Cost Allocation

	NU Total Cost (2018 \$k)	Project Allocation (%)	Allocated Cost (2018 \$k)	Allocated Cost (Escalated \$k)
LDNU				
Pardee – Pastoria- Warne 220 kV T/L rating increase	\$ 5,176.2	8.44%	\$ 437.1	\$ 501.6
LDNU Total			\$ 437.1	\$ 501.6

RNU

New Moorpark RAS - monitoring infrastructure	\$ 15,182.7	2.50%	\$ 380.1	\$ 436.1
Antelope 66kV SCD ground grid study	\$ 45.9	100.00%	\$ 45.9	\$ 52.7
Antelope 66kV CB upgrades	\$ 36,120.5	0.29%	\$ 103.2	\$ 118.4
Barre 220kV SCD upgrades	\$ 12,575.8	0.01%	\$ 0.9	\$ 1.0
Barre 220kV SCD ground grid study	\$ 45.9	100.00%	\$ 45.9	\$ 52.7
RNU Total			\$ 576.0	\$ 661.0

Phase I ADNU Cost Assignment

	NU Total Cost (2018 \$k)	Incremental Deliverability MW	Cost Rate (2018 \$k/MW)	Project MW	Allocated Cost (2018 \$k)	Allocated Cost (Escalated \$k)
Antelope - Vincent #1 and #2 500 kV T/L rating increase upgrade	\$ 9,617.6	2020	\$5	40.00	\$ 190.4	\$ 208.8
Total ADNU					\$ 190.4	\$ 208.8

Network Upgrade Cost Responsibility

TULARE 40	WDT1580
A. RNU Cost (\$k)	\$ 661
B. LDNU Cost (\$k)	\$ 502
C. Generating Facility RNU and LDNU Cost Responsibility (\$k) (=A+B)	\$ 1,163
D. Potential NU Cost (\$k)	\$ -
E. Maximum RNU and LDNU Cost Responsibility (\$k) (=C+D)	\$ 1,163
F. Generating Facility ADNU Cost Estimate (\$k)	\$ 209

Notes:

“Generating Facility RNU and LDNU Cost Responsibility” is the RNU and LDNU cost currently assigned to the Generating Facility. It doesn’t include the cost share of the Potential Network Upgrades. This is the RNU and LDNU cost that the IC is required to post the Interconnection Financial Security for.

“Maximum RNU and LDNU Cost Responsibility” is the maximum RNU and LDNU cost that could be assigned to the Generating Facility. The total cost re-allocation for RNU and LDNU in the subsequent reassessments shall not exceed this amount.

Attachment 4:
SCE's Interconnection Handbook

Preliminary Protection Requirements for Interconnection Facilities are outlined in SCE's Interconnection Handbook at the following link:

https://www.sce.com/wps/wcm/connect/348e4d71-5c2a-431f-bf78-16267486fdc9/Interconnection%2BHandbook_1483725988_1485215238.pdf?MOD=AJPERES

Attachment 5:
Short-Circuit Duty Calculation Study Results
Please refer to the Appendix H of the Area Report

Attachment 6:
IC Provided Generating Facility Dynamic Data

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Attachment 7
Subtransmission Assessment Report
Please refer to separate document

Attachment 2 – Tulare 40 Queue Cluster 11 Phase II Report

Appendix A – WDT1580

Coldwell Solar 1, LLC

Tulare 40

Queue Cluster 11 Phase II Report

November 20, 2019

This study has been completed in coordination with the California Independent System Operator Corporation (ISO) per Southern California Edison Company's Wholesale Distribution Access Tariff (WDAT), Attachment I Generator Interconnection Procedures (GIP)

Interconnection Study Document History

No.	Date	Document Title	Description of Document
1	11/20/19	Queue Cluster 11 Phase II Appendix A Report	Final Phase II interconnection study report

TABLE OF CONTENTS

A. Introduction	1
B. Report objective	1
C. Description of Generating facility	1
D. Study Assumptions	6
E. Technical requirements	8
F. Reliability Standards, Study Criteria and Methodology	10
G. Power Flow Reliability Assessment Results	11
H. Transient stability Evaluation	13
I. Short-Circuit Duty Results	15
J. Deliverability Assessment Results	16
K. Interconnection Facilities, Network Upgrades, and Distribution Upgrades	17
L. Cost and Construction Duration Estimate	17
M. In-Service Date and Commercial Operation Date Assessment	19
N. Timing of Full Capacity Deliverability Status, Interim Deliverability STATUS, Area Constraints, and Operational Information	21
O. ADDITIONAL STUDY ANNOTATIONS	22

ATTACHMENTS

Attachment 1: Interconnection Facilities, Network Upgrades, and Distribution Upgrades	25
Attachment 2: Escalated Cost and Time to Construct for Interconnection Facilities, Reliability Network Upgrades, Delivery Network Upgrades, and Distribution Upgrades	26
Attachment 3: Allocation of Network Upgrades for Cost Estimates and Maximum Network Upgrade Cost Responsibility	27
Attachment 4: SCE's Interconnection Handbook	28
Attachment 5: Short-Circuit Duty Calculation Study Results	29
Attachment 6: IC Provided Generating Facility Dynamic Data	30
Attachment 7: Subtransmission Assessment Report	31

A. INTRODUCTION

Coldwell Solar 1, LLC, the Interconnection Customer (IC), has submitted a completed Interconnection Request (IR) to Southern California Edison (SCE), the Distribution Provider, for its proposed Tulare 40 (Generating Facility).

In accordance with FERC approved SCE's WDAT Attachment I Generator Interconnection Procedures (GIP), the Generating Facility was grouped with Queue Cluster 11 (QC11) Phase II projects to determine the impacts of the group as well as impacts of the Generating Facility on SCE's Distribution System and the ISO Grid.

An Area Report and, where applicable, a Subtransmission Assessment Report have been prepared separately identifying the combined impacts of all projects on the ISO Grid and to distribution facilities served out of the Springville 66 kV Subtransmission System, respectively. This Appendix A report focuses only on the impacts or impact contributions of the Generating Facility. This report is not intended to supersede any contractual terms or conditions specified in a forthcoming Generator Interconnection Agreement (GIA).

B. REPORT OBJECTIVE

SCE has now performed the QC11 Phase II Study for the Generating Facility, and this report addresses the results of the analysis.

The report provides the following:

1. Distribution and transmission system impacts allocated to the Generating Facility.
2. System reinforcements or mitigation necessary to address the adverse impacts allocated to the Generating Facility under various system conditions.
3. A list of required facilities and a good faith estimate of the Generating Facility's cost responsibility and time to construct¹, with the assumption of SCE constructing the required facilities. Such information is provided in Attachment 1 and Attachment 2 as separate documents in the Appendix A report package of the Generating Facility.
4. Identification of potential short circuit duty impacts to Affected Systems served from the Subtransmission or Distribution System.

C. DESCRIPTION OF GENERATING FACILITY

The Generating Facility consists of all equipment and facilities comprising the IC's Solar Photovoltaic Tulare 40 plant in Tulare, California, as disclosed by the IC in its IR and/or Attachment B, as may have been amended during the Interconnection Study process, as summarized below:

¹ It should be noted that construction is only part of the duration of months specified in the study, which includes final engineering, licensing, and other activities required to bring such facilities into service. These durations are from the execution of the GIA, receipt of: all required information, funding, and written authorization to proceed with final design and engineering, procurement, and construction from the IC as will be specified in the GIA to commence the work.

Table A.1: Generation Facility General Information per the IR, including Attachment B

Description: (i) twenty (20) SMA Sunny Central 2500EV-US inverter units with a rated output of 2.25 MVA @ 50°C but will be managed to not exceed a total gross MW output of 40 MW in order to meet the requested POI value, (ii) the associated infrastructure and step-up transformers, (iii) meters and metering equipment, and (iv) appurtenant equipment.	
Total rated (gross) capacity at inverter terminals:	45 MW at 1.0 p.f.
Total net capability at high-side of main step-up transformer(s):	43.72 MW
Total net capacity provided under the GIA at high-side of main step-up transformer(s):	41.13 MW
Total net capacity provided under the GIA at Point of Interconnection:	40 MW

The IC has requested, and the forthcoming GIA will provide for, a total net capacity of 41.13 MW as measured at the high-side of the main step-up transformer(s) and 40 MW at the POI. The Parties acknowledge that the Generating Facility has a total net capability that exceeds these values. Accordingly, the IC agrees to install, own, operate and maintain a control limiting device or, alternatively, by means of configuring the Generating Facility's control system to ensure the Generating Facility does not exceed the total net capacity provided under the forthcoming GIA at the high-side of the main step-up transformer(s) and POI.

The proposed plan for interconnecting the Generating Facility is illustrated in Figure A.1. Whereas Figure A.2 illustrates the proposed location of the Generating Facility. Additional information is provided in Table A.2

Figure A.1: Generating Facility One-Line Diagram

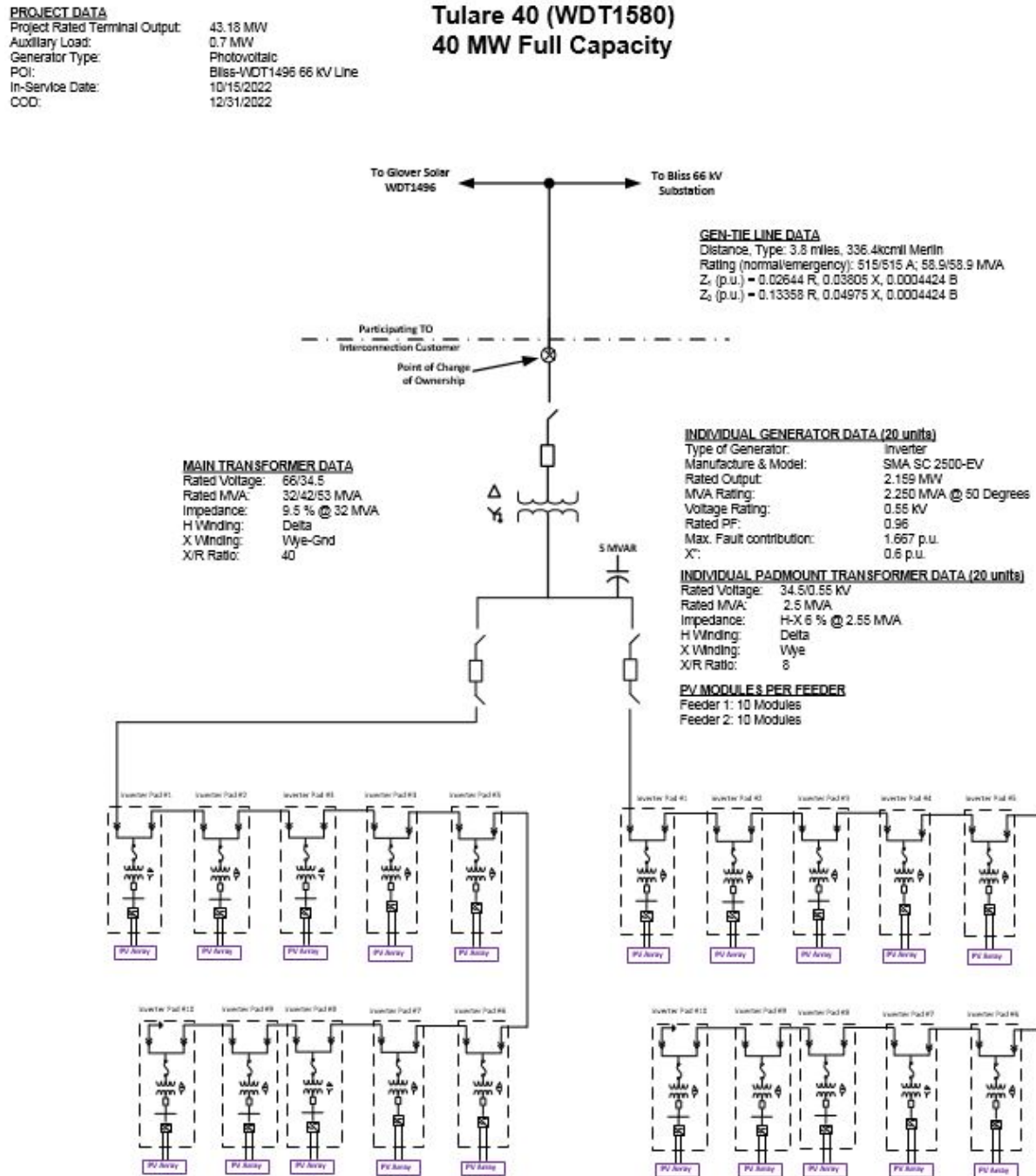


Figure A.2: Generating Facility Location Map



Table A.2: Additional Generating Facility General Information per IR, including Attachment B

Generating Facility Location	21387 Road 152 Tulare CA 93274 Tulare County Latitude: 36.2035 Longitude: -119.22861
SCE's Planning Area	Northern Area
Interconnection Voltage	66 kV
POI	Bliss-Glober Solar 66 kV line
Number and Types of Generators	Twenty (20) SMA Sunny Central 2500EV-US inverter units with a rated output of 2.5 MVA @ 25°C and 2.25 MVA @ 50°C but will be managed to not exceed a total gross MW output of 40 MW at inverter terminal.
Generation Tie Line	3.8 miles, 336.4kcmil Merlin Line Rating: 515/515 A; 58.9/58.9 MVA Z1 (p.u.) = 0.02644 R, 0.03805 X, 0.0004424 B Z0 (p.u.) = 0.13358 R, 0.04975 X, 0.0004424 B
Main Step-Up Transformer(s)	Rated Voltage: 66/34.5 Rated MVA: 32/42/53 MVA Impedance: 9.5 % @ 32 MVA H Winding: Delta X Winding: Wye-Gnd X/R Ratio: 40
Collector Equivalent	Equivalent Rating: 100 MVA Nominal Voltage: 34.5 kV Z1 (p.u.) = 0.012407 R, 0.016437 X, 0.014860B Z0 (p.u.) = 0.055207 R, 0.017248 X, 0.014860B
Pad-Mount Transformer(s)	Number of Pad-Mount Transformers: 19 Rated Voltage: 34.5/0.55 kV Rated MVA: 2.5 MVA Impedance: H-X 6 % @ 2.55 MVA H Winding: Delta X Winding: Wye X/R Ratio: 8 Equivalent Representation Equivalent MVA: 47.5 MVA H-X Impedance Value (R): 6% @ 47.5 MVA
Generator Data	Manufacturer: SMA SC 2500-EV-US Number of Units: 20 Rated Output: 2.159 MW MVA Rating: 2.250 MVA Voltage Rating: 0.55 kV Rated PF: 0.96

	Equivalent Representation: Equivalent MVA: 45 MVA Equivalent Output (Gross): 43.18 MW Per-Unit Fault Duty: 1.667 p.u. X'': 0.6
Generator Auxiliary Load and/or Station Light and Power	0.7 MW
Voltage Regulation Devices	One (1) 5.0 MVAR capacitor bank
Dynamic Models Used	gencs, regc_a, reec_b, repc_a, lhvrt, and lhfrt
Deliverability Requested	Full Capacity
Option (A/B) Requested	Option A
Proposed Dates ²	
In-Service Date (ISD)	10/1/2022
Initial Synchronization Date/Trial Operation	10/15/2022
Commercial Operation Date (COD)	12/31/2022

D. STUDY ASSUMPTIONS

For detailed assumptions regarding the group cluster analysis, please refer to the QC11 Phase II Area Report. Below are the assumptions specific to the Generating Facility:

1. The Generating Facility was modeled as described in Table A.1 and A.2 above.
2. Wildfire mitigation measures have been incorporated into all of SCE's construction standards and operational practices. SCE has notified ICs with a proposed Generating Facility and associated Interconnection Facilities to be located in, or interconnecting to, an identified high fire risk area (HFRA) or high fire risk area circuit (HFRA circuit). As a result of implementing these mitigation measures, please be advised that the facilities and their associated costs identified in this Cluster Study (Attachment 1 and Attachment 2) are above and beyond the mitigation identified in previous cluster studies. SCE is implementing these measures to address the heightened wildfire risk in HFRAs and HFRA circuits. In the future, SCE may develop and implement additional mitigation measures in these HFRAs to continuously ensure the safety and reliability of SCEs Transmission System and the public it serves.
3. The facilities that will be installed by SCE and the IC are detailed in Attachment 1.

² Such dates are specified in the Generating Facility's Attachment B. Actual ISD, Initial Synchronization Date, and COD will depend on licensing, engineering, final engineering & design, and construction requirements to interconnect the Generating Facility after the GIA has been executed and/or filed at Federal Energy Regulatory Commission (FERC) for acceptance.

4. Environmental Activities, Permits, and Licensing.

The assumptions for the Environmental Activities, Permits, and Licensing are as follows:

i. SCE's Interconnection Facilities (IFs) and Distribution Upgrades (DUs) needed to interconnect the Generating Facility:

SCE's scope of work will not require a California Public Utilities Commission (CPUC) license.

a. SCE's IFs and DUs needed to interconnect the Generating Facility: No Environmental activities were assumed as no environmental impacts were identified based on the IFs and DUs that will be installed by SCE disclosed in Attachment 1.

b. SCE's Shared DUs assigned to the Generating Facility and needed to interconnect the Generating Facility:

- SCE will perform all required environmental studies, prepare environmental permit applications, obtain required environmental permits, and perform monitoring of all SCE construction activities related to the installation of SCE's Shared DUs.
- Under certain circumstances, SCE's Shared DUs may need to be described and analyzed as part of the IC's California Environmental Quality Act (CEQA) and/or National Environmental Policy Act (NEPA) documents for the Generating Facility. Further coordination to discuss these circumstances may occur during GIA negotiations and/or after GIA execution. Any changes to the environmental and licensing assumptions may result in the need to update cost and duration estimates, and potentially amend the GIA.

ii. SCE's Reliability Network Upgrades (RNUs) and Delivery Network Upgrades (DNUs) assigned to the Generating Facility:

- SCE will perform all required environmental studies, prepare environmental permit applications, obtain required environmental permits, and perform monitoring of all SCE construction activities related to the installation of SCE's RNUs and DNUs.
- Under certain circumstances, the RNUs and/or DNUs may need to be described and analyzed as part of the IC's California Environmental Quality Act (CEQA) and/or National Environmental Policy Act (NEPA) documents for the Generating Facility. Further coordination to discuss these circumstances may occur during GIA negotiations and/or after GIA execution. Any changes to the environmental and licensing assumptions may result in the need to update cost and duration estimates, and potentially amend the GIA.

iii. For further details on the environmental evaluation and permitting/licensing requirements for generation interconnection projects, refer to Appendix K of the Area report.

5. Other Items to Consider:

- Final metering requirements will be identified as part of the execution the Generating Facility and could result in modifications to the Generating Facility.
- As a requirement for Interconnection Customers electing to share the responsibility to perform the environmental activities for SCE-owned Interconnection Facilities (IFs), Distribution Upgrades (DUs), and/or other facilities based on the study assumption(s) as disclosed in Section D.4, and to ensure proper accounting of costs used in the calculation of the Income Tax Component of Contribution ("ITCC") and Operations & Maintenance

(“O&M”) charges, referred to as an Interconnection Facilities Charge and/or a Distribution Upgrades Charge, if applicable in the forthcoming GIA for the Generating Facility, the IC is required to complete and submit an “Environmental Services Costs Declaration Form” (“Form”). An authorized representative of the IC will sign the Form attesting to the actual costs spent on environmental services work that would otherwise have been performed by SCE for SCE-owned IFs, DUs and/or other facilities required to interconnect the Generating Facility.

The Form shall be provided to SCE by a specified date in the Generating Facility’s forthcoming GIA Appendix B - Milestone table. Should the IC fail to provide the Form by the specified deadline, SCE will hold the IC in default of the GIA pursuant to the terms therein. The costs declared by the IC in the Form, once approved by SCE will be used to adjust the ITCC and the applicable monthly O&M charges for the Generation Facility and will be reflected via an amendment to the GIA upon true-up.

The information declared in the Form is subject to review and/or audit by SCE pursuant to the terms and conditions in the forthcoming GIA. Should an audit be deemed necessary by SCE, the IC will need to provide supporting documentation (copies of invoices/receipts) to substantiate the costs declared in the Form within ten (10) business days from receipt of notice.

The IC is advised that should the environmental studies and resulting reports not meet the industry standards utilized in the State of California and/or by SCE in accordance with Applicable Laws and Regulations, as determined by SCE, the IC shall be required to remedy all deficiencies under SCE’s direction. Otherwise, SCE will be required to perform the additional environmental studies at the sole expense of the IC to the GIA, and associated costs will be reflected during the true-up amendment

E. TECHNICAL REQUIREMENTS³

1. Preliminary Protection Requirements

Protection requirements are designed and intended to protect SCE’s electric system only. The preliminary protection requirements were based upon the interconnection plan as shown in the one-line diagram depicted in line item #4 in Attachment 1.

The IC is responsible for the protection of its own system and equipment and must meet the requirements in the SCE’s Interconnection Handbook.

2. Power Factor Requirements

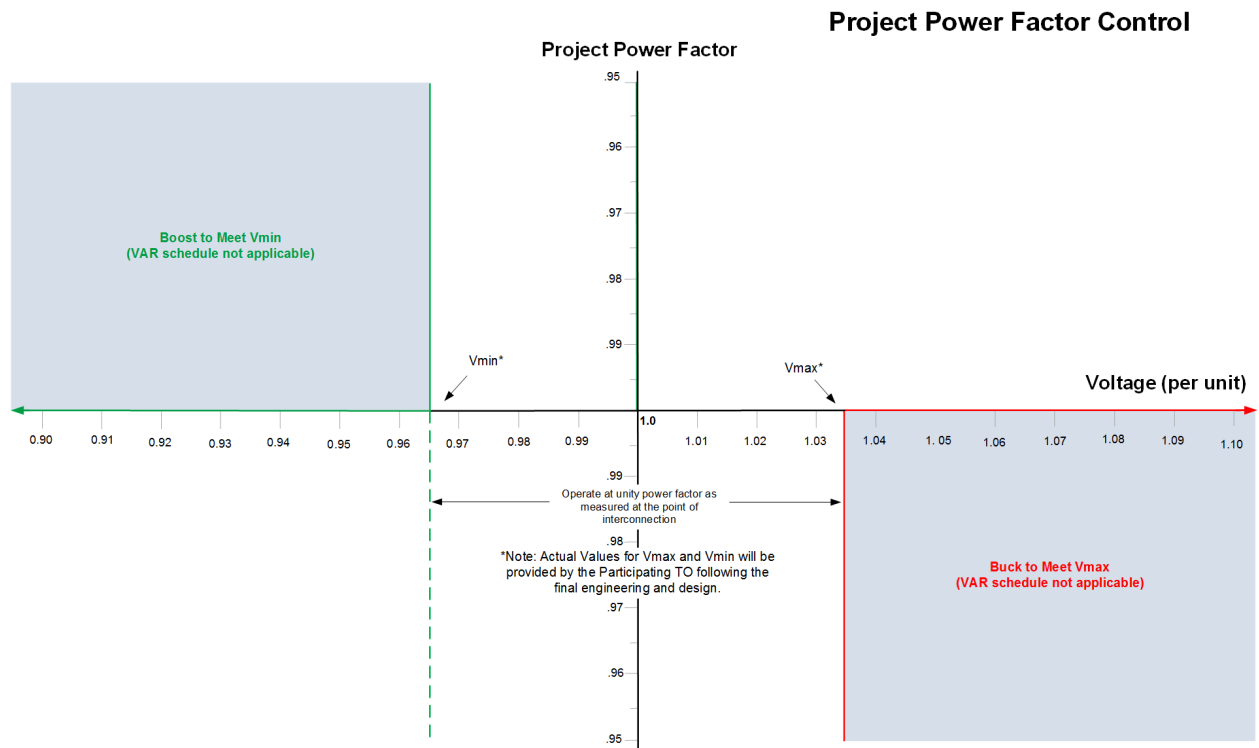
The Generating Facility will be required to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation or other equivalent location. At that point, the generator must provide dynamic reactive power within the power factor range of 0.95 leading to 0.95 lagging. The Generating Facility may meet the dynamic reactive power requirement by utilizing a combination of the inherent dynamic reactive power capability of the

³ The IC is advised that it shall comply with mandatory regulatory standards of but not limited to FERC/NERC/WECC/CPUC and there may be technical requirements in addition to those that outlined above in Section C of this report that are included in the SCE’s Interconnection Handbook or that will be addressed in the Generating Facility’s GIA.

inverter, dynamic reactive power devices, and static reactive power devices to make up for losses.

3. Operating Voltage Requirements

Under real-time operations, the Generating Facility will be required to operate under the control of automatic voltage regulator with settings as shown in the figure below. The actual values of the V_{min} and V_{max} will be provided once the Generating Facility executes a Generation Interconnection Agreement and final engineering and design is complete. The V_{min} and V_{max} values are to be used as the basis for setting up the automatic voltage control mode (with its automatic voltage regulator in service and controlling voltage) of the Generating Facility in order to maintain scheduled voltage at a reference point.



4. Harmonic Requirements

The harmonic impact of the subject inverter-based generation was not part of this study. Impacts on voltage distortion levels may be significant due to the penetration level of the Generating Facility with respect to the local distribution grid strength. As with all equipment connected to SCE's Electric System, the Generating Facility will be subject to the provisions of CPUC Rule 2.E, allowing SCE to require the IC to mitigate interference with service to other SCE customers, including harmonic impacts, if the harmonic interference is caused by the IC.

5. Low/High Voltage Ride-Through (LHVRT) and Low/High Frequency Ride-Through (LHFRT) Capability

Consistent with PRC-024, the Generating Facility may not trip or cease to inject current within the "no-trip" zone of the frequency and voltage ride through curves of PRC-024. Momentary

cessation—ceasing to inject current during a fault—is prohibited unless transient high voltage conditions rise to 1.20 per unit or more. For transient low voltage conditions, the Generating Facility will inject reactive current directionally proportional to the decrease in voltage. The inverter must produce full rating reactive current when the AC voltage at the inverter terminals drops to a level of 0.50 per unit and must continue to operate and attempt to maintain voltage for transient voltage conditions between 1.10 and 1.20 per unit. In addition, the Generating Facility may not trip or cease to inject current for momentary loss of synchrony within the no-trip zone of PRC-024.

6. Primary Frequency Response Requirement

Per FERC Order 842, the IC is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ± 0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from the Approved Applicable Reliability Standards providing for equivalent or more stringent parameters. The IC shall ensure that the Electric Generating Unit's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Electric Generating Unit has operating capability in the direction needed to correct the frequency deviation.

Per FERC Order 841, nuclear generating facilities and certain Combined Heat and Power (CHP) facilities are exempt from these primary frequency response requirements.

F. RELIABILITY STANDARDS, STUDY CRITERIA AND METHODOLOGY

1. SCE Analysis

The generator interconnection studies were conducted to ensure the ISO Grid follows the North American Electric Reliability Corporation (NERC) reliability standards, WECC regional criteria, and the ISO planning standards. Refer to Section C of the Area Report for details of the applicable reliability standards, study criteria, and methodology. In addition, the Subtransmission Assessment was performed in compliance with SCE's Subtransmission Planning Criteria.

2. Coordination with Affected Systems

Per GIP section 3.7, SCE will notify the Affected System Operators that are potentially affected by an IC's IR or group of interconnection requests subject to a Group Study. SCE will coordinate the conduct of any studies required to determine the impact of the IR on Affected Systems with Affected System Operators and, if possible, include those results (if available) in its applicable Interconnection Study within the time frame specified in the GIP. SCE will include such Affected System Operators in all meetings held with IC as required by the GIP. IC will cooperate with SCE in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A transmission provider which may be an Affected System shall cooperate with SCE with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

Refer to Section F for additional information.

G. POWER FLOW RELIABILITY ASSESSMENT RESULTS

I. Discharging Analysis of the Generating Facility

a) Steady State Power Flow Analysis Results – ISO controlled facilities

I. Normal Conditions

- None Identified

II. Single Contingency

- None Identified

III. Multiple Contingency

- Antelope-Vincent No.1 or No.2 500 kV line under loss of the Antelope-Vincent No. 2 or No. 1 and Whirlwind-Vincent 500 kV line.
- The Pardee leg of the Pardee-Pastoria-Warne 220 kV line under loss Bailey-Pastoria and Pardee-Pastoria 220 kV lines
- The Pastoria leg of the Pardee-Pastoria-Warne 220 kV line under loss Bailey-Pastoria and Pardee-Pastoria 220 kV lines
- Magunden-Pastoria No.1 or No.2 under loss of Magunden-Pastoria No. 2 and No .3 or No.1 and No. 3 220 kV lines

Section J – Deliverability Assessment Results of this report provides information on any Delivery Network Upgrades (Local or Area) assigned to the project to help mitigate these overloads, if any

b) Steady State Power Flow Analysis Results - 66 kV or 115 kV (non-ISO controlled)

1. Thermal Overloads

The results in the Area Report and/or Subtransmission assessment indicated that the Generating Facility contributes to overloads on the following facilities listed below under normal, single contingency, and multiple contingency conditions. The details of the analysis and overload levels, as well as the details of the recommended mitigation to address these overloads, are provided in the corresponding Area and/or Subtransmission Assessment Report(s). Provided below is a summary of the overloaded facilities under normal, single contingency, and/or multiple contingency conditions with associated mitigation, if applicable.

I. Normal Conditions

- No thermal overloads have been identified

II. Single Contingency

No thermal overloads have been identified

III. Multiple Contingency

- No thermal overloads have been identified

2. Power Flow Non-Convergence

There were no non-convergence issues identified with the inclusion of the Generating Facility operating at the required power factor range; refer to Area Report and/or Subtransmission Assessment Report for additional details.

3. Voltage Performance

There were no voltage performance issues identified with the inclusion of the Generating Facility; refer to Area Report and/or Subtransmission Assessment Report for additional details.

4. Required Mitigations

There is no mitigation required. However, the one line provided by the IC illustrates the installation of a bank as wye-grounded, this configuration triggers a system wide relay coordination study to ensure proper system protection.

5. Line Loss Analysis for Generating Facility

Based on the technical data provided for the individual generator unit(s), the collector system equivalent, pad-mount and main transformer banks, the internal Generating Facility losses are shown in Table 1. In addition, losses incurred on the generation tie line are shown in Table 2 below. The Generating Facility losses identified represent those assuming the Generating Facility is limiting its output at the high side of the main transformer bank to achieve the desired MW delivery at the POI.

Table 1

Resource	Gross output to Achieve Desired output at POI (MW)*	Internal Generating Facility Losses (MW)			Aux Load (MW)	Net Output (MW)
		Pad-Mount	Collector	Main Transformer		
Photovoltaic	41.28	0.25	0.21	0.12	0.7	40.7

*This represents the MW value needed at the inverter terminal to achieve the desired Net Output MW in order to meet the requested POI MW.

Table 2

Resource	Net Output* (MW)	Losses on Interconnection Facilities (MW)	POI (MW)
		Generating Facility Gen-Tie	
Photovoltaic	41.13	1.13	40

*MW (net) represents the MW value as measured on the high side of the main transformer bank to achieve the desired MW delivery at the POI.

6. Power Factor Evaluation

FERC Order 827 provides the reactive power requirements for newly interconnecting non-synchronous generators which requires these resources to design the facility to be capable of providing reactive power to meet power factor 0.95 as measured on the high-side of the IC's substation or other equivalent location. This capability should be dynamic.

Base case power flow was evaluated to determine reactive power losses internal to the Generating Facility in order to ascertain if the reactive capability of the Generating Facility is adequate to supply these losses and meet the power factor requirements. A summary of the power factor evaluation is provided in the table below.

Evaluation Assumptions	
Generating Facility MW Output at Terminal(MW)	41.28
Ambient Temperature for Generator Capability (°C)	34.40
Effective Power Factor at Generator Terminal	0.96
Generating Facility MW at High Side of the Transformer (MW)	40.43
Reactive Power Requirements	
Pad-mount transformer losses (MVar)	2.16
Collector equivalent losses (Mvar)	0.26
Main transformer losses (Mvar)	5.04
PF Requirements at High Side of Transformer (Mvar)	13.29
Total VAR Requirements (Mvar)	20.75
Reactive Power Supply	
SMA 2500-EV PV Inverters at Pgen (Mvar)	18.86
Shunt Capacitors (Mvar)	5.0
Collector Line Charging (Mvar)	1.49
Other Dynamic VAR Devices (MVar)	0.00
Total VAR Supply (Mvar)	25.35
Total Dynamic VAR Supply (Mvar)	18.69
Total Reactive Power (Shortage) / Surplus Total Requirements less Total Supply	4.60
Dynamic Reactive Power (Shortage) / Surplus PF Requirements at High Side of Transformer less Total Dynamic VAR Supply	5.58

Based on the technical details provided, the Generating Facility, as proposed, does have the capability to meet 0.95 power factor requirement as measured at the high-side of the IC's substation or other equivalent location.

II. As-Available Charging Analysis of the Generating Facility

Not applicable

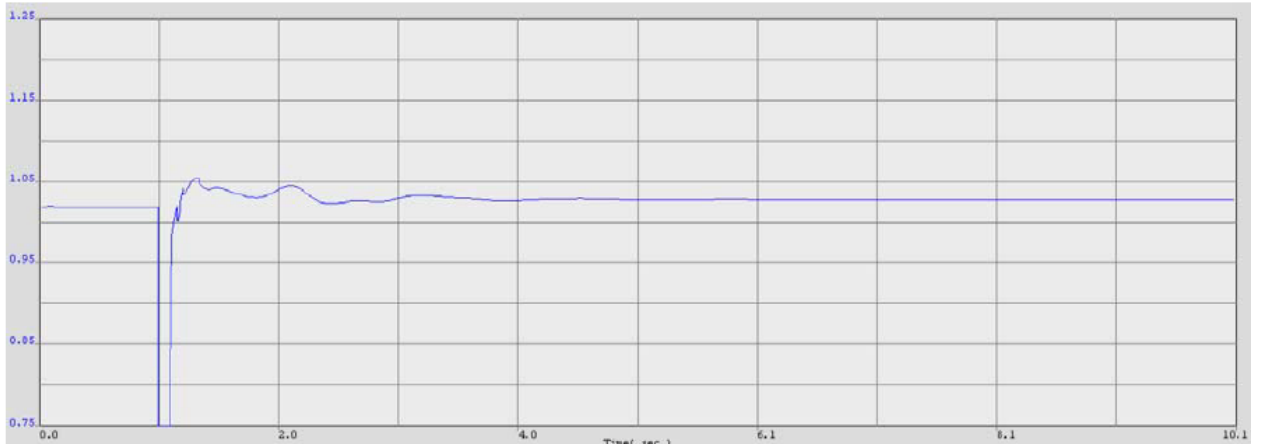
H. TRANSIENT STABILITY EVALUATION

1. Generating Facility Performance

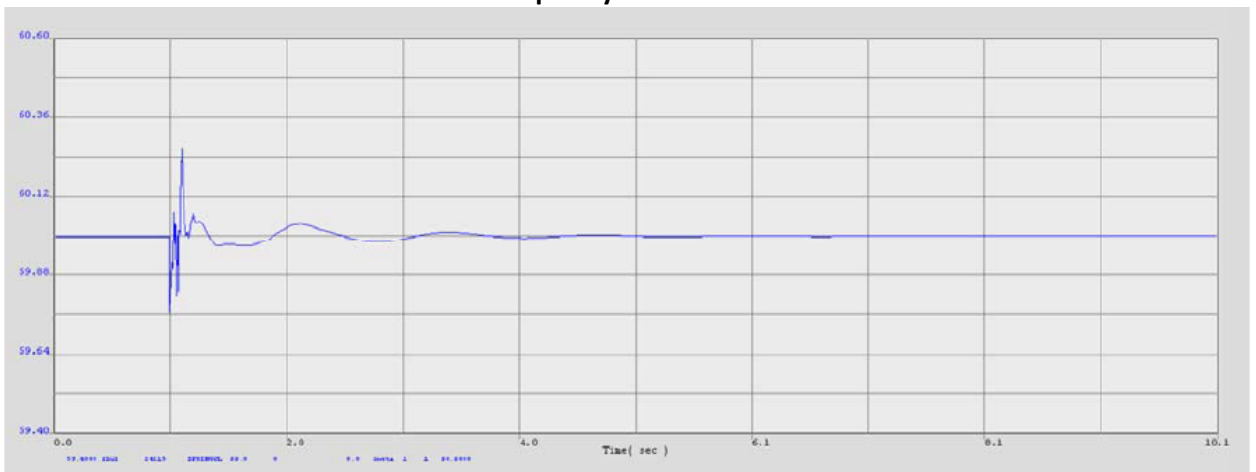
Dynamic simulation study results illustrating the frequency and voltage performance of the Generating Facility based on the technical parameters supplied for the Generating Facility are provided below.

Voltage and Frequency Plots for Generating Facility with fault at Springville 66 kV Sub.

Voltage Plot

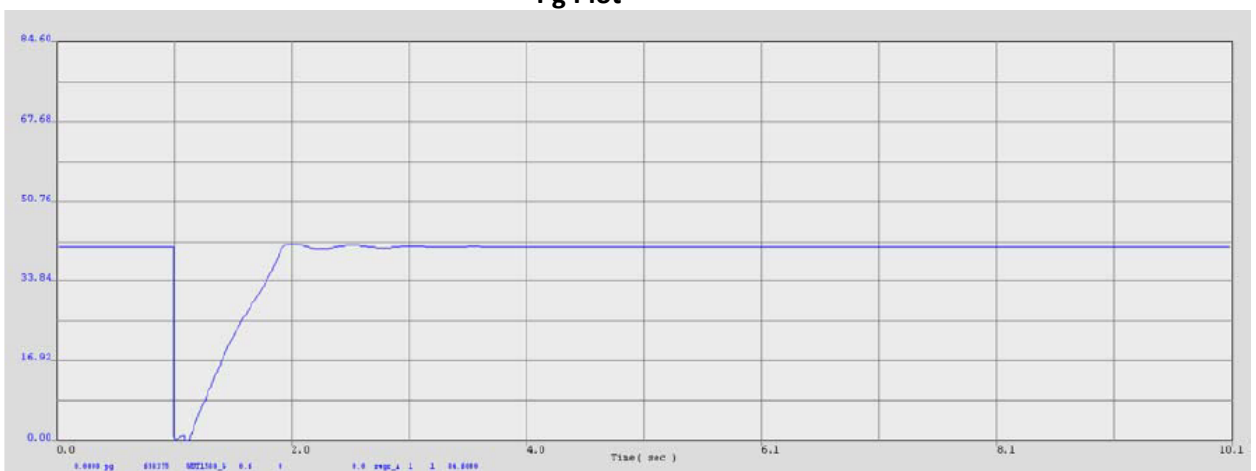


Frequency Plot



Power Output Flow Plots for Generating Facility at inverter terminal with fault at POI.

Pg Plot



2. System Performance

System transient stability performance was found to be acceptable. Refer to the Area Report for additional details pertaining to the Phase II transient stability evaluation criteria and assessment results, respectively.

I. SHORT-CIRCUIT DUTY RESULTS

Short-circuit duty (SCD) studies were performed to determine the fault duty impact of adding the Phase II projects to SCE's electric system and to ensure system coordination. The fault duties were calculated with and without the projects to identify any equipment overstress conditions. Once overstressed circuit breakers are identified, the fault current contribution from each individual project in Phase II is determined. Each project in the cluster will be responsible for its share of the upgrade cost based on the rules set forth in Section 4 of the GIP.

1. SCE-owned Facilities

All bus locations where the Phase II projects increased the SCD by 0.1 kA or more and where duty was found to be in excess of 60% of the minimum breaker nameplate rating are listed in the Area Report (Appendix H) and applicable Subtransmission Assessment Report (Attachment 7). These values have been used to determine if any equipment is overstressed as a result of the inclusion of Phase II interconnections and corresponding Network Upgrades, if any.

If any equipment is found to be overstressed with the inclusion of the cluster, corresponding Area Deliverability Network Upgrade and/or corresponding Local Deliverability Network Upgrade, further analysis is performed to identify the specific projects that drive the need for the upgrade and/or mitigation. Individual project contribution at the impacted location are then used to determine which project or group of projects drives the need for the upgrade and/or mitigation.

The QC11 Phase II SCD evaluation results are summarized below.

a. ISO controlled facilities:

The QC11 Phase II SCD evaluation at the Bulk Level did not identify any additional overstressed circuit breakers at the triggered with the inclusion of the projects in QC11 Phase II.

b. Subtransmission Level Results (66 kV or 115 kV non-ISO controlled):

The QC11 Phase II SCD evaluation at the subtransmission level did not identify any additional overstressed circuit breakers triggered with the inclusion of the projects in QC11 Phase II.

2. Affected Systems

I. Results

The specific SCD contribution from the Generating Facility to Neighboring Utilities is outlined in Table F.1 below. Table F.2 addresses the SCD impact from the Generating Facility on municipalities. Impacts on the Affected Systems with the addition of all QC11 Phase II projects, are provided in the Area Report (Section H.2), and in Attachment 7.

[Table F.1: Short-Circuit Duty Evaluation of Neighboring Utilities Impacted by the Generating Facility]

Substation	Voltage	Entity	Generating Facility Impact	
			3-Phase (kA)	Single Line-to-Ground (kA)
Sylmar	230	LADWP	0.001	0.000

Table F.2: Short-Circuit Duty Evaluation of Impacted Municipalities Impacted by the Generating Facility

Substation	Voltage	Entity	Generating Facility Impact	
			3-Phase (kA)	Single Line-to-Ground (kA)
Edmonston	230	CDWR	0.008	0.005
Warne	230	CDWR	0.001	0.000

3. SCE's Ground Grid Duty Concerns

The short-circuit studies flagged SCE-owned substations beyond the Generating Facility POI with ground grid duty concerns that necessitate a ground grid study. The Generating Facility's short circuit duty contribution to the following SCE-owned substations was found to be significant:

- Springville 66 kV Substation

The Generating Facility will be responsible for the associated cost of performing ground grid studies at this location, which is approximately \$45k.

4. Short Circuit Duty Considerations

SCD operational mitigation was identified accounting for new generation projects that have executed GIAs, approved SCE's Transmission Network Upgrades fully permitted and under construction, and new generation projects including the QC11 Phase II projects, which do not yet have an executed GIA. The study results for these operational studies are provided in Section II of the Generation Sequencing Implementation Short Circuit Duty evaluation (Appendix G). Based on the study results, replacement of four (4) Vincent 500 kV circuit breakers (triggered by QC3&4) are required to be in place in order to enable interconnection of the generating facility. Replacement of the four (4) Vincent 500 kV circuit breakers has not been initiated, because this upgrade is required only when enough generation projects (with executed GIAs in good standing) achieve ISD. The identification of the need for the Vincent 500 kV circuit breaker upgrades assumes that all queued generation projects materialize and are interconnected, but the true need occurs only when enough queued generation achieves ISD. This SCD mitigation will be continuously evaluated as part of ongoing GIA negotiations with queued generation projects to properly define the actual trigger of SCD mitigation based on the actual execution of GIA and development of generation facilities toward commercial operation.

J. DELIVERABILITY ASSESSMENT RESULTS

1. On Peak Deliverability Assessment

The Generating Facility contributes to the following overloads in this Cluster Study:

Contingency	Overloaded Facility	Loading
Magunden - Pastoria 230kV No. 2 & 3	Magunden - Pastoria 230kV No. 1	128%
Pardee - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Bailey - Pastoria 230kV	114%
Bailey - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Pardee - Pastoria 230kV	109%
Pardee - Pastoria 230kV & Padee - Warne - Pastoria 230kV	Bailey - Pardee 230kV	101%
Pardee - Pastoria 230kV & Bailey - Pastoria 230kV	Padee - Warne - Pastoria 230kV	120%
Pardee - Pastoria 230kV & Bailey - Pardee 230kV	Padee - Warne - Pastoria 230kV	111%
Pardee - Pastoria 230kV & Bailey - Pastoria 230kV	Padee - Warne - Pastoria 230kV (Pastoria leg)	120%
Pardee - Pastoria 230kV & Bailey - Pardee 230kV	Padee - Warne - Pastoria 230kV (Pastoria leg)	111%

2. Off- Peak Deliverability Assessment

Under off-peak conditions, Antelope – Vincent 500kV No. 1 and No. 2 transmission lines are overloaded under various contingency conditions. For details, see Section E.2 of the Area Report.

3. Required Mitigations

The following Local Delivery Network Upgrade is required:

Upgrade ground clearances and terminal equipment for the Pastoria leg of the Pardee-Pastoria-Warne 220 kV line

K. INTERCONNECTION FACILITIES, NETWORK UPGRADES, AND DISTRIBUTION UPGRADES

Please see Attachment 1 for SCE's IF's, RNU's, Delivery Network Upgrades⁴ (DNU's), and DU's allocated to the Generating Facility. Please note that SCE considered current system configuration, approved SCE sponsored projects, and all queued generation in determining scope for IFs and/or Plan of Service but will not "reserve" the identified scope of upgrades for the proposed POI unless a GIA is executed per the specified timelines shown in Table M.1.

L. COST AND CONSTRUCTION DURATION ESTIMATE

1. Cost Estimate

The Generating Facility's estimated interconnection costs, adjusted for inflation and provided in 'constant' 2019 dollars escalated to the Generating Facility's feasible operating date (as identified

⁴ At the IC's discretion, the IC or parties other than SCE pursuant to Section 10.2 under GIP may construct an Option (B) Generating Facility Area Delivery Network Upgrades (ADNUs) not allocated TP Deliverability. If SCE does not construct the ADNUs, the IC is not required to make the third Interconnection Financial Security posting to SCE pursuant to Section 4.8.4.2.1 under GIP.

below), are provided in Attachment 2 and the Generating Facility's allocated cost for shared network upgrades are provided in Attachment 3. The costs will be utilized in developing the GIA. However, should there be a delay in executing the GIA beyond 2020, a new cost estimate adjusted for inflation will be required and reflected into the GIA.

2. Construction Duration Estimate

The construction duration for the identified facilities is as follows:

a. SCE's Interconnection Facilities – 27 months

These facilities involve non-network facilities located within SCE's Bliss 66 kV Substation and at the IC's Generating Facility that are necessary to complete physical interconnection of the Generating Facility.

Please refer to Attachment 1 for details related to these facilities.

b. Reliability Network Upgrades

No required RNU mitigations were identified in this Phase II Interconnection Study.

c. Distribution Upgrades

i. Plan of Service Upgrades – 27 months

These facilities involve facilities located within SCE's Bliss 66 kV Substations that are necessary to interconnect the new substation to the Springville 66 kV Subtransmission System and ensure adequate line protection. This also includes the required system wide relay coordination study.

Please refer to Attachment 1 for details related to these facilities.

ii. Short-Circuit Duty (SCD) Mitigation

No required SCD mitigations were identified in this Phase II Interconnection Study. However, one SCE Substation was flagged for a ground grid study, as mentioned in section I.3 of this report.

iii. Voltage Support

No required voltage support mitigations were identified in this Phase II Interconnection Study.

Note 1—Construction Duration Estimates and Identified Upgrades. Any construction durations identified in this section may vary. During the cluster study process, SCE includes all queued and active generation projects without regard to corresponding desired in-service dates or actual project status to identify SCD and Distribution Upgrades and a duration for SCE to build them. Such duration, of course, affects the In-Service Date for this specific project. As status for queued projects change (withdrawals, downsizing, suspensions, or deferred in-service dates), SCE may be able to accelerate in-service dates for projects affected by status changes. Furthermore, SCE will only begin design/construction of an identified SCD and Distribution Upgrade when enough projects 1) execute and fund a Generation Interconnection Agreement and/or a Letter of Agreement with SCE and 2) those projects trigger the need for an upgrade.

Note 2 -- Construction Duration Estimates and Coordination of Environmental Work.

Where this study assumes that the IC will perform environmental work related to the installation of SCE's IFs, DUs, and RNUs as specified in this report, the IC is advised that any durations provided above assume so and that the IC will perform this environmental work related to the installation of SCE's IFs and/or DUs specified in this report and will perform them in parallel with SCE's preliminary design and engineering. The IC is expected to engage SCE to obtain concurrence prior to commencement of any environmental work and during execution of that work. Since SCE will be using the IC's environmental documents and/or work products, IC delays producing them may delay SCE's ability to obtain required permits and/or license(s). Such delays would likely cause additional delays in the commencement of SCE's final engineering, procurement, and construction. These delays could increase any durations identified in this report and push out the feasible ISD provided in Table M.1 ISD and COD Assessment.

3. Other Potential Costs to the Generating Facility

- a. Note that the Generating Facility proposed to tap the generation tie-line being proposed from a previously queued project (WDT1496). Since the generation tie-line is required to interconnect the Generating Facility regardless of the other project, the estimated costs of the gen-tie termination have been added as a potential cost to the Generating Facility.

M. IN-SERVICE DATE AND COMMERCIAL OPERATION DATE ASSESSMENT

An ISD and COD assessment was performed for this Generating Facility to establish SCE's estimate of the earliest achievable ISD based on the QC11 Phase II Interconnection Study process timelines and the time required for SCE to complete the facilities needed to enable physical interconnection as an Interim Deliverability or Energy Only Deliverability interconnection (as applicable) for the Generating Facility. This date may be different from the IC's requested ISD and will be the basis for establishing the associated milestones in the draft GIA.

Details pertaining to Full Capacity Deliverability Status and Partial Capacity Deliverability Status are provided below.

1. ISD Estimation Details

For the QC11 Phase II Interconnection Study, the estimated earliest achievable ISD is derived by the time requirements to complete the QC11 Interconnection Study Process, tender a draft GIA, negotiate and execute the GIA, and construct the necessary facilities as described below in Table M.1.

Table M.1 ISD and COD Assessment

Reference starting point	Days/Months	Issuance of Phase II Interconnection Study Report	11/20/19
Add:	30 CD	Phase II Results Meetings	12/20/19

Add:	15 BD (20 CD)	Starting Point: TPD Results issued and IC response provided	4/2/20
Add:	30 CD	Earliest Reasonable Tender of draft GIA	5/2/20
Add:	90 CD	GIA negotiation time, execution, filing, and related activities.	7/31/20
Add: Construction Duration	27 months	Construction duration outlined in the Phase II Study Report. Construction completion no earlier than date which reflects earliest ISD	10/31/22
	Reference:	IC-requested ISD via Attachment B	10/1/2022
	Reference:	IC-requested COD via Attachment B	12/31/2022
		Difference between IC ISD and COD	2 months
Equals:		Earliest achievable In-Service Date (ISD)	10/31/22
		Earliest achievable Commercial Operation Date (COD) (Using difference between ISD and COD requested by IC)	12/31/22

Notes on the Achievable ISD and COD calculation:

- 1) Assumes duration required to construct those facilities required for an Interim Deliverability Interconnection or Energy Only interconnection (as applicable) for the Generating Facility until the applicable DNUs are completed.
- 2) The construction durations shown represent the estimated amount of time needed to design, procure, and construct the facilities with the start date of the duration based on the effective date of the GIA; and necessarily include timely receipt of all required information and written authorizations to proceed (ATP), and timely receipt of construction payments and financial security postings and other milestones.
- 3) Assumes that GIA is tendered after the TP Deliverability allocation results are disclosed.

2. ISD Conclusion

Based on these timelines, the IC's requested ISD of 10/1/2022 appears to not be achievable and COD of 12/31/2022 appears to be achievable if the milestone dates outlined in Table M.1 are met.

SCE can reasonably tender a draft GIA by May 2020. The draft GIA should be executed and/or filed at FERC no later than August 2020 and will [include the earliest ISD and COD as identified in Table M.1

The ISO will perform its Annual Reassessment (January - July 2020) and Transmission Plan Deliverability (TPD) Allocation⁵ (due April 2020). Any changes in scope, cost, or schedule requirements that come out of ISO's Annual Reassessment and 2020 TPD Allocation will be reflected in a 2020 Reassessment Report, which will be used to revise the draft GIA (if under negotiation) or amend the GIA (if already executed).

N. TIMING OF FULL CAPACITY DELIVERABILITY STATUS, INTERIM DELIVERABILITY STATUS, AREA CONSTRAINTS, AND OPERATIONAL INFORMATION

The Generating Facility would be granted its requested FCDS only if the Generating Facility receives TPD allocation in the forthcoming TPD Allocation Study Process. Furthermore, timing of obtaining the requested FCDS is dependent on the completion of DNU's identified below in this report, which may be updated in any subsequent annual reassessment. Until such time that these DNU's are completed and placed in-service, the Generating Facility may be granted Interim Deliverability Status based on annual system availability. The sections below provide a discussion of the timing of FCDS, Interim Deliverability Status, Area Constraints, and Operational Information.

1. System Upgrades Required for Full Capacity Deliverability Status (FCDS)

In order to provide for FCDS, the following facilities are required in addition to the Reliability Network Upgrades described in Section 2 (b) of Attachment 1:

a. Triggered Delivery Network Upgrades – 36 months

The Generating Facility has been identified to require Pardee – Pastoria – Warne 220kV line as a LDNU.

b. Delivery Network Upgrades Triggered by Earlier Queued Projects – None

c. Approved Transmission Upgrades - Various

- Eldorado-Lugo 500kV series capacitor and terminal equipment upgrade with estimated in service date of Dec 2021.
- Lugo-Mohave 500kV series capacitor and terminal equipment upgrade with estimated in service date of Dec 2021.
- Lugo –Victorville 500kV line upgrade with estimated in service date of June 2021.

d. Transmission Upgrades outside the ISO Controlled Grid - None

2. Interim Operational Deliverability Assessment for Information Only

The operational deliverability assessment was performed for study years 2020 ~ 2022 by modeling the Transmission and generation in service in the corresponding study year. For details

⁵ The TPD Allocation Process is estimated to be completed in April 2020. The actual date may vary.

of the Transmission and generation assumption, refer to Section E.3 of the Area Report. No deliverability issues were identified.

3. Area Constraints

With all approved transmission upgrades modeled, no area deliverability constraints were identified for the Generating Facility. However, interconnection of new generation in advance of completing the approved transmission upgrades and upgrades triggered by queued ahead generation projects may result in increased congestion on SCE's Transmission System.

O. ADDITIONAL STUDY ANNOTATIONS

1. Conceptual Plan of Service

The results provided in this study are based on conceptual engineering and are preliminary. The information is not sufficient for permitting purposes and is subject to change as part of final engineering and design.

2. The study does not include analysis related to the power output rate of change that may occur due to the following or other conditions:

- System morning start up for solar generating facilities: That is when each morning the Generating Facility commences to generate and export electrical energy to the electric system.
- Cloud Cover: Solar generating facilities have significant generation output variation (Variability) which can have an impact on electric system voltage profiles.

3. IC's Technical Data

The study accuracy and results for the QC11 Phase II Interconnection Study was contingent upon the accuracy of the technical data provided by the IC during the Interconnection Study Cycle in the IR, including Attachment B, for the Generating Facility. Any changes from the data provided must be approved by SCE in accordance with the Material Modification Process (MMA) per GIP Section 4.5.7.2.

4. Study Impacts on Affected Systems

Results or consequences of this Phase II Interconnection Study may require additional studies, facility additions, and/or operating procedures to address impacts to neighboring utilities and/or regional forums. For example, impacts may include but are not limited to WECC Path Ratings, short-circuit duties outside of the ISO Controlled Grid, and sub-synchronous resonance (SSR). Refer to Affected Systems Coordination Section H of the Area Report and above in Section F for additional information.

5. Use of SCE's Facilities

The IC is responsible for acquiring all property rights necessary for the IC's Interconnection Facilities, including those required to cross the SCE's facilities and property. This Phase II Interconnection Study does not include the method or estimated cost to the IC of SCE mitigation measures that may be required to accommodate any proposed crossing of SCE's facilities. The crossing of SCE's property rights shall only be permitted upon written agreement between SCE and the IC at SCE's sole determination. Any proposed crossing of SCE property rights will require a separate study and/or evaluation, at the IC's expense, to determine whether such use may be accommodated. If the IC's Facilities result in the need to modify SCE's existing facilities, SCE recommends that the IC identify and include a description of such modifications in the IC's environmental study reports submitted to the lead agency permitting the Generating Facility.

6. SCE's Interconnection Handbook

The IC shall be required to adhere to all applicable requirements in SCE's Interconnection Handbook. These include, but are not limited to, all applicable protection, voltage regulation, VAR correction, harmonics, switching and tagging, and metering requirements.

7. Western Electricity Coordinating Council (WECC) Policies

The IC shall be required to adhere to all applicable WECC policies including, but not limited to, the WECC Generating Unit Model Validation Policy.

8. System Protection Coordination

Adequate Protection coordination will be required between SCE-owned protection and IC-owned protection. If adequate protection coordination cannot be achieved, then modifications to the IC-owned facilities (i.e., Generation-tie or Substation modifications) may be required to allow for ample protection coordination.

9. Standby Power and Temporary Construction Power

The Phase II Interconnection Study does not address any requirements for standby power or temporary construction power that the Generating Facility may require prior to the ISD of the Interconnection Facilities (IF's). Should the Generating Facility require standby power or temporary construction power from SCE prior to the ISD of the IF's, the IC is responsible to make appropriate arrangements with SCE to receive and pay for such retail service. SCE recommends that the IC identify and include a description of such facilities in the IC's environmental study reports submitted to the lead agency permitting the Generating Facility.

10. Licensing Cost and Estimated Time to Construct Estimate (Duration)

The estimated licensing cost and durations applied to this Generating Facility are based on the Generating Facility scope details presented in this Phase II Interconnection Study. These estimates are subject to change as the Generating Facility's environmental and real estate elements are further defined. Upon execution of the GIA, additional evaluation including but not limited to preliminary engineering, environmental surveys, and property right checks may enable licensing cost and/or duration updates to be provided.

11. Network/Non-Network Classification of Telecommunication Facilities

- a. Non-Network (Interconnection Facilities) Telecommunications Facilities: The cost for telecommunication facilities that were identified as part of the IC's Interconnection Facilities was based on an assumption that these facilities would be sited, licensed, and constructed by the IC. The IC will own, operate, maintain, and construct main and diverse telecommunication paths associated with the IC's generation tie line, excluding terminal equipment at both ends. In addition, the telecommunication requirements for the RAS were assumed based on tripping of the generator's breaker in lieu of tripping the circuit breakers and opening the IC's gen-tie at SCE's substation.
- b. Network (Network Upgrades) Telecommunications Upgrades: Due to uncertainties related to telecommunication upgrades for the numerous projects in queues ahead of this Generating Facility, telecommunication upgrades for earlier queued projects without a signed GIA which upgrades have not been constructed were not considered in this study. Depending on the scope of these earlier queued projects, the cost of telecommunication upgrades identified for Phase II may be reduced. Any changes in these assumptions may affect the cost and schedule for the identified telecommunication upgrades.

12. Ground Grid Analysis

A detailed ground grid analysis will be required as part of the final engineering for the Generating Facility at the SCE substations whose ground grids were flagged with duty concerns.

13. SCE Technical Requirements

The IC is advised that there may be technical requirements in addition to those that outlined above in Section C of this report that will be addressed in the Generating Facility GIA.

14. Applicability

This document has been prepared to identify the impact(s) of the Generating Facility on the SCE's electric system; as well as establish the technical requirements to interconnect the Generating Facility to the POI that was evaluated in the final Phase II Interconnection Study for the Generating Facility. Nothing in this report is intended to supersede or establish terms/conditions specified in GIAs agreed to by the SCE, ISO, and the IC.

15. Process for Initial Synchronization Date/Trial Operation Date and COD of the Generating Facility

The IC is reminded that the ISO has implemented a New Resource Implementation (NRI) process that ensures that a generation resource meets all requirements before Initial Synchronization Date/Trial Operation Date and COD. The NRI uses a bucket system for deliverables from the IC that are required to be approved by the ISO. The first step of this process is to submit an "ISO Initial Contact Information Request form" at least seven (7) months in advance of the planned Initial Synchronization Date. Subsequently an NRI project number will be assigned to the Generating Facility for all future communications with the ISO. SCE has no involvement in this NRI process except to inform the IC of this process requirement. Further information on the NRI process can be obtained from the ISO Website using the following links:

New Resource Implementation webpage:

<http://www.caiso.com/participate/Pages/NewResourceImplementation/Default.aspx>

NRI Checklist:

<http://www.caiso.com/Documents/NewResourceImplementationChecklist.xls>

NRI Guide:

<http://www.caiso.com/Documents/NewResourceImplementationGuide.doc>

16. ISO Market Dispatch

This study did not evaluate any potential limitations that may be driven by the ISO market under real-time operating conditions.

17. Interconnection Request to Third-Party Owned Facilities

Generating Facility's requesting to interconnect to a Third party owned facility will need to obtain written approval from the owner(s) of the facility prior to execution of the GIA.

Attachment 1:
Interconnection Facilities, Network Upgrades, and Distribution Upgrades
Please refer to separate document

Attachment 2:
Escalated Cost and Time to Construct for Interconnection Facilities, Reliability Network Upgrades,
Delivery Network Upgrades, and Distribution Upgrades
Please refer to separate document

Attachment 3:
Allocation of Network Upgrades for Cost Estimates and Maximum Network Upgrade Cost Responsibility

Phase II Network Upgrade Cost Allocation

Queue WDT1580

	NU Total Cost (2019 \$k)	Project Allocation	Allocated Cost (2019 \$k)	Allocated Cost (Escalated \$k)
LDNU				
Pardee – Pastoria- Warne 220 kV T/L rating increase	\$5,287	11.87%	\$628	\$672
Total	\$5,287		\$628	\$672

TULARE 40	QWDT1580
A. Deliverability Option	A
A. Phase II ANU Cost Allocation for Current Cost Responsibility (CCR)	
A.1 GRNU Cost (\$k)	\$ -
A.2 LDNU Cost (\$k)	\$ 672
A.3 IRNU Cost (\$k)	\$ -
Phase II ANU Cost Allocation for CCR (\$k) ($A = A.1 + A.2 + A.3$)	\$ 672
B. Phase II ANU Cost Allocation for Maximum Cost Responsibility (MCR)	
B.1 GRNU Cost (\$k)	\$ -
B.2 LDNU Cost (\$k)	\$ 672
B.3 IRNU Cost (\$k)	\$ -
Phase II ANU Cost Allocation for MCR (\$k) ($B = B.1 + B.2 + B.3$)	\$ 672
C. Phase II CANU Cost Allocation	
C.1 CANU - GRNU (\$k)	\$ -
C.2 CANU - LDNU (\$k)	\$ -
C.3 CANU - IRNU (\$k)	\$ -
Phase II CANU Cost Allocation (\$k) ($C = C.1 + C.2 + C.3$)	\$ -
D. MCR from Phase I	
D.1 Phase I CCR for ANU (\$k)	\$ 1,163
D.2 Phase I CANU Cost for Upgrades Becoming ANU in Phase II (\$k)	\$ -
Phase I MCR (\$k) ($D = D.1 + D.2$)	\$ 1,163
E. Maximum Cost Responsibility (\$k) ($E = \min\{B, D\}$)	\$ 672
F. Current Cost Responsibility (\$k) ($F = \min\{A, E\}$)	\$ 672
G. Maximum Cost Exposure (\$k) ($G = C + E$)	\$ 672
H. Project ADNU Cost Responsibility (\$k)	\$ -

Notes:

“Generating Facility RNU and LDNU Cost Responsibility” is the RNU and LDNU cost currently assigned to the Generating Facility. It doesn’t include the cost share of the Potential Network Upgrades. This is the RNU and LDNU cost that the IC is required to post the Interconnection Financial Security for.

“Maximum RNU and LDNU Cost Responsibility” is the maximum RNU and LDNU cost that could be assigned to the Generating Facility. The total cost re-allocation for RNU and LDNU in the subsequent reassessments shall not exceed this amount.

Attachment 4:

SCE's Interconnection Handbook

Preliminary Protection Requirements for Interconnection Facilities are outlined in SCE's Interconnection Handbook at the following link:

https://www.sce.com/sites/default/files/inline-files/SCE_InterconnectionHandbook.pdf

Attachment 5:
Short-Circuit Duty Calculation Study Results
Please refer to the Appendix H of the Area Report

Attachment 6:
IC Provided Generating Facility Dynamic Data

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"lvpnt0" 0.050000 "qmin" -1.1000 "accel" 0.700000 /
"tg" 0.020000 "tfltr" 0.010000 "iqrmax" 2.0000 "iqrmin" -2.0000 "xe" 0.0
reec_b 698375 "WDT1580_G " 0.55 "1" : #11 "mvab" 42.3 /
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"vref0" 1.0864 /
"tp" 0.016668 "qmax" 0.600000 "qmin" -0.600000 "vmax" 1.1500 "vmin" 0.850000 "kqp" 1.000000 "kqi" 1.000000 "kvp"
1.000000 "kvi" 1.000000 "tiq" 0.016668 /
"dpmax" 1.000000 "dpmin" -1.000000 "pmax" 1.000000 "pmin" 0.0 "imax" 1.1000 "tpord" 0.016668 "pfflag" 0.0 "vflag"
0.000000 "qflag" 0.000000 "pqflag" 0.0
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"kc" 0.0 "vcmpflg" 1.000000 "emax" 999.00 "emin" -999.00 "dbd" 0.0 "qmax" 0.440000 "qmin" -0.440000 "kpg" 0.100000
"kig" 0.500000 "tp" 0.250000 /
"fdbd1" 0.0 "fdbd2" 0.0 "femax" 999.00 "femin" -999.00 "pmax" 999.00 "pmin" -999.00 "tflag" 0.100000 "ddn" 20.0000
"dup" 0.0 "frqflg" 0.0 /
"outflag" 0.0
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1.6000 "dftrp3" -3.0000 "dftrp4" -2.2000 "dftrp5" -1.6000 "dftrp6" 0.0000 "dftrp7" 0.0000 "dftrp8" 0.0 "dftrp9" 0.0 /
"dftrp10" 0.0 "dttrp1" 30.0000 "dttrp2" 180.00 "dttrp3" 7.5000 "dttrp4" 30.0000 "dttrp5" 180.0000 "dttrp6" 0.0000
"dttrp7" 0.0000 "dttrp8" 0.0000 "dttrp9" 0.0000 /
"dttrp10" 0.0 "alarm" 0.0
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"dvtrp10" 0.0 "dttrp1" 1.000000 "dttrp2" 2.0000 "dttrp3" 3.0000 "dttrp4" 4.0000 "dttrp5" 1.0000 "dttrp6" 1.750000
"dttrp7" 4.000 "dttrp8" 0.0000 "dttrp9" 0.0000 /
"dttrp10" 0.0 "alarm" 0.0

Attachment 7:
Subtransmission Assessment Report
Please refer to separate document

Attachment 3 – Inverter and Battery Storage System Examples

Inverter & Battery Storage System Examples for Tulare 40 Project

The present expected inverter system to be used for the Tulare 40 project is shown pictorially below. It consists of one central inverter on a sled and one intermediate voltage transformer to transform the power from the DC of the solar modules to a voltage of 34 KV that is then connected to the final transformer at the substation on each section of the Tulare 40 project.

MEDIUM VOLTAGE POWER STATION
4000-S2-US / 4200-S2-US / 4400-S2-US / 4600-S2-US



Robust

- Complete station is UL listed for higher safety and lower risk
- Station and all individual components type-tested for maximum reliability
- Optimally suited to extreme ambient conditions

Simple Integration

- Plug and play concept
- Completely pre-assembled for easy setup and commissioning

Cost-Effective

- Fully integrated transformer and switchgear simplifies logistics
- Minimum O&M requirements create lowest cost of ownership

Flexible

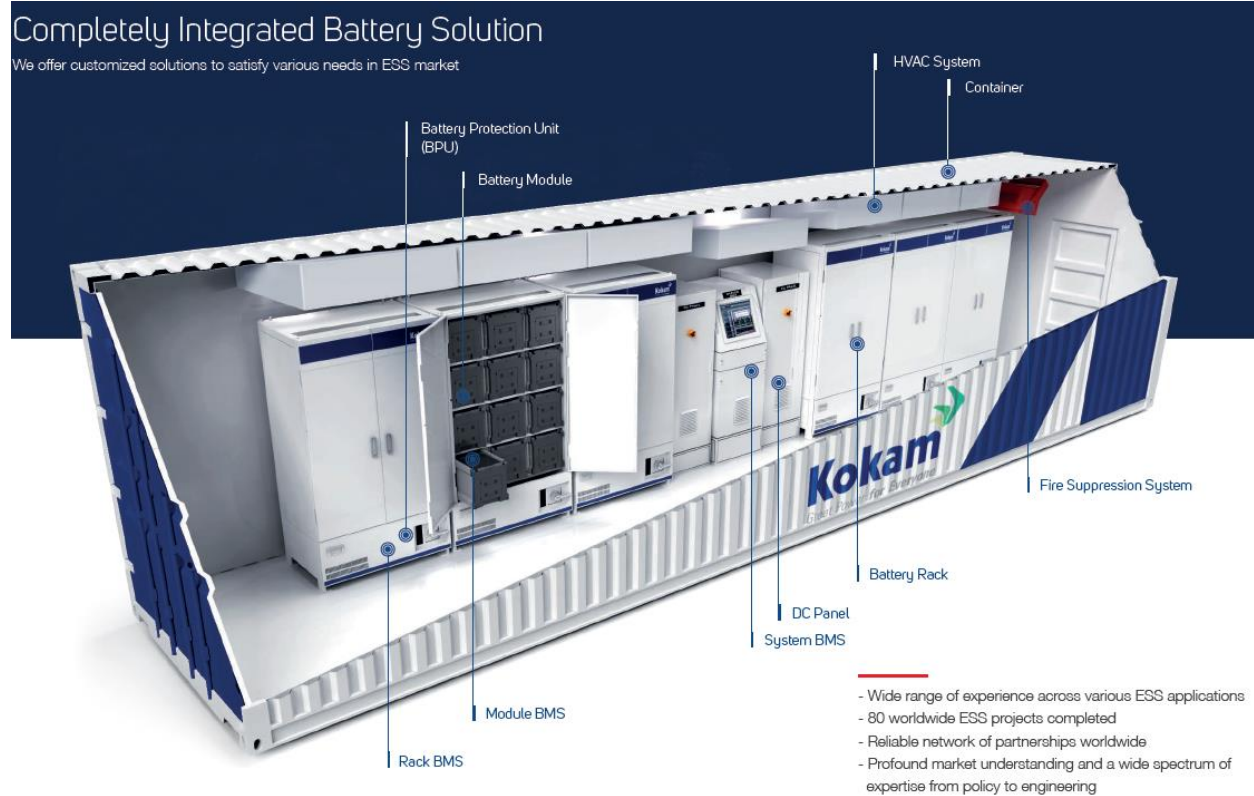
- One product for every global market and application
- Ideally suited for PV applications, PV plus storage (DC coupled) and storage applications (AC coupled)

MEDIUM VOLTAGE POWER STATION 4000-S2-US / 4200-S2-US / 4400-S2-US / 4600-S2-US

Turnkey solution for PV power plants

With the power of the new robust central inverters, the Sunny Central UP or Sunny Central Storage UP, and with perfectly integrated medium-voltage components, the new Medium Voltage Power Station (MVPS) offers even more power density in a turnkey solution available worldwide. The solution is the ideal choice for next-generation PV power plants operating at 1500 V DC. Delivered pre-configured on a 20-foot container-integrated skid, the solution is easy to transport and quick to commission. The UL-listed MVPS combines rigorous plant safety with maximum energy yield and minimized deployment and operating risk. The MVPS is DC-coupling ready for large-scale storage integration.

The battery storage system will be in an enclosure like the one shown below. It is a complete 5MWh battery system with sufficient safety measures such as fire control as seen below. One of these is located at the NE corner of the South site and then connected by 5 of the 4000-S2-US inverters shown above to the final transformer at the substation.



This enclosed battery system (BESS) is approximately 10ft by 52 feet long and about 10 feet high.

The Lithium Ion Battery will be of similar or the same as described below.

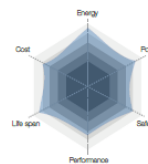
Lithium Ion Battery

The right choice for your business

Kokam sets about to solve the limitations associated with conventional Lithium Ion Battery technology, including cycle and calendar life, safety, recharge time, power delivery, and ability to operate in extreme temperatures. The performance and features of this technology surpass other existing battery capabilities in the market space today.



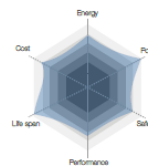
High Power	20 C-rate
High Energy Density	203 Wh/kg
Operating Temperature	-30 ~ 60 degC



High Energy NMC (Nickel Manganese Cobalt)

Advantages

- High energy density ESS: ~203Wh/kg, UHE NMC: ~248Wh/kg; Up to 5.4MWh of batteries can be stored in a 40ft container
- More than 90% of high efficiency at 0.5C
- Competitive Price: The NMC cells have a comparative advantage in terms of price, considering it's superior performance, reliability and safety features.



High Power NMC

Advantages

- High C-rate up to 8C-rate discharging performance
- High C-rate up to 8C-rate charging performance
- Improved high power cycle life
- Up to 3MWh of batteries can be stored in a 40ft container
- Special coating applied to cathode to improve high power performance

ATTACHMENT “E”

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
						Initials	Date	Remarks
AIR QUALITY								
AQ-1	Engine Standards for Off-Road Equipment. In order to reduce the impact of PM10 off-road equipment exhaust emissions during construction-related activities, applicant shall ensure that construction contracts stipulate that all off-road diesel-powered equipment used will be equipped with USEPA Tier 4 or cleaner engines, except for specialized equipment in which an USEPA Tier 4 engine is not available. In lieu of Tier 4 engines, project equipment can incorporate retrofits such that emissions reductions achieved equal to that of the Tier 4 engines at a minimum. The construction contractor shall submit a detailed list of the equipment fleet that demonstrates achievement of this mitigation measure to Tulare County Resource Management Agency Planning Branch for approval prior to receiving Notice to Proceed.	Prior to construction	Once prior to start of construction and once after completion of construction	County of Tulare	Equipment and Usage Report			
BIOLOGICAL RESOURCES								
<i>Measures for Special Status Plant Species</i>								
BIO-1	(Pre-construction Survey) A qualified biologist/botanist will conduct preconstruction surveys for special status plant species in accordance with the California Department of Fish and Wildlife (CDFW) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (2009). This protocol includes identification of reference populations to facilitate the likelihood of field investigation occurring during the appropriate floristic period. Surveys should be timed to coincide with flowering periods for species that could occur (March-May).In the absence of protocol-level surveys being performed, additional surveys may be necessary. <ul style="list-style-type: none">If special status plant species are not identified during preconstruction surveys, no further action is required.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Tulare County RMA	County of Tulare	Field survey by a qualified Biologist.			

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
						Initials	Date	Remarks
	<ul style="list-style-type: none"> If special status plant species are detected during preconstruction surveys, plant population shall be avoided with the establishment of a minimum 50-foot no disturbance buffer from the outer edge of the plant population. If buffers cannot be maintained, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate minimization actions to be taken as appropriate for the species identified and to determine permitting needs. 							
Measures for Special Status Animal Species								
BIO-2	(Pre-construction Survey) A qualified biologist will conduct pre-construction surveys during the appropriate periods for special status animal species in accordance with CDFW guidance and recommendations. In the absence of protocol-level surveys being performed, additional surveys may be necessary. If special status animal species are not identified during pre-construction surveys, no further action is required. If special status animal species are detected during pre-construction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW shall be contacted immediately to identify the appropriate avoidance and minimization actions to be taken as applicable for the species identified and to determine permitting needs.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Tulare County RMA	County of Tulare	Field survey by a qualified Biologist.			
Measures for All Special Status Species Identified in Pre-construction Surveys								
BIO-3	(Employee Education Program) Prior to the start of construction, the applicant shall retain a qualified biologist/botanist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the special status species that occur, or may occur, on the project site. This training will include a description of the species and its habitat needs; a report of the occurrence of the species in the project area; an	Prior to construction-related activities.	As needed if special status species are detected.	County of Tulare	Qualified biologist working with USFS and/or CFW			

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
						Initials	Date	Remarks
	explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.							
<i>Measures for Nesting Raptors and Migratory Birds (Including Swainson's Hawk)</i>								
BIO-4	(Avoidance) In order to avoid impacts to nesting raptors and migratory birds, individual Projects within the Project will be constructed, where possible, outside the nesting season (between September 1st and January 31st).	Implemented only if sensitive species are encountered.	Throughout construction.	County of Tulare	Determination by qualified biologist.			
BIO-5	(Pre-construction Survey) If Project activities must occur during the nesting season (February 1- August 31), the proponent is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code. A qualified biologist shall conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds; with the exception of Swainson's hawk. The Swainson's hawk survey will utilize the Swainson's Hawk Technical Advisory Committee <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley</i> (2000) methodology which will extend to ½-mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.	Prior to start of construction.	Once within 10 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Tulare County RMA	County of Tulare	Field survey by a qualified Biologist.			
BIO-6	(Pre-construction Survey) A qualified biologist will conduct pre-construction surveys in accordance with the Swainson's Hawk Technical Advisory Committee <i>Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley</i> (2000) which employs the following:	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study	County of Tulare	Field survey by a qualified Biologist.			

Mitigation Monitoring and Reporting Program

Mitigation Measure					When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
									Initials	Date	Remarks
	Survey Period	Survey Dates	Survey Time	Number of Surveys Needed		and mitigation. Then mitigation should occur as recommended following coordination with Tulare County RMA					
	I	January – March 20	All day	1							
	II	March 20 – April 5	Sunrise – 1000; 1600 to Sunset	3							
	III	April 5 – April 20	Sunrise – 1200; 1630 – Sunset	3							
	IV	April 21 – June 10	Monitoring sites only	Initiating surveys is not recommended							
	V	June 10 – July 30	Sunrise – 1200; 1600 – Sunset	3							
	<p>If project activities must occur during the nesting season (February 1-August 31), the project proponent and/or their contractor is responsible for ensuring that implementation does not violate the Migratory Bird Treaty Act or relevant Fish and Game Code, and a qualified biologist will conduct pre-construction surveys for active raptor and migratory bird nests within 10 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.</p>										
BIO-7	<p>(Buffers) Should any active nests be discovered near proposed work areas, a qualified biologist will determine appropriate construction setback distances and a behavioral baseline of all identified nests based on applicable CDFW guidelines and/or the biology of the affected species. Within these buffers, the biologist will continue monitoring to detect behavioral changes. If adverse behavioral</p>				Implemented only if sensitive species are encountered.	Throughout construction.	County of Tulare	Determination by qualified biologist.			

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
						Initials	Date	Remarks
	changes occur, the activity causing the changes will cease and CDFW will be consulted to determine if avoidance and minimization measures need to be modified to adequately protect the impacted birds. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged (i.e., when a bird's feathers and wing muscles are sufficiently developed for flight). Unless a variance is approved by CDFW, the buffer shall not be less than 250 feet around active nests of non-listed bird species and not less than 500 feet around active nests of non-listed raptor species until the birds have fledged. Unless a variance is approved by CDFW, a ½ mile distance shall be used for SWHA, until the birds have "fledged".							
<i>Measures for Tipton Kangaroo Rat</i>								
BIO-8	(Pre-construction Survey) Pre-construction survey shall be conducted on and in the vicinity of the project site by a qualified biologist prior to the start of ground disturbance activities. The survey shall be conducted according to methodologies deemed appropriate by California Department of Fish and Wildlife (CDFW). If the survey indicates that Tipton kangaroo rat are present within or in close proximity to the Project site, consultation with the Fresno Field Office of the CDFW shall be required to identify actions to be taken as appropriate for the species.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Tulare County RMA	County of Tulare	Field survey by a qualified Biologist.			
<i>Measures for San Joaquin Kit Fox</i>								
BIO-9	(Pre-construction Survey) Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of	Prior to start of construction.	Once within 30 days of construction,	County of Tulare	Field survey by a qualified Biologist.			

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
						Initials	Date	Remarks
	ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS Standard <i>Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance</i> (2011). Specifically the survey will include the project site and a minimum of a 200-foot area outside of all project impact areas. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit fox through the use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If potential dens are not identified, no further action is required.		unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Tulare County RMA					
BIO-10	(Avoidance) Should an active or potential kit fox den be detected within or immediately adjacent to the area of work during pre-construction surveys, the den shall not be disturbed or destroyed. In accordance with the USFWS, <i>Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance</i> (2011), a minimum 50-foot no-disturbance buffer area shall be established around potential and man-made (atypical) dens and a minimum 100-foot no-disturbance buffer area shall be established around known den sites. The Sacramento Field Office of the USFWS and Fresno Field Office of the CDFW shall be contacted immediately by phone and in writing to determine the best course of action, if required, and to initiate the take authorization/permit process.	Implemented only if sensitive species are encountered	Throughout construction.	County of Tulare	Determination by qualified biologist			
BIO-11	(Minimization) Construction activities shall be carried out in a manner that minimizes disturbance to kit fox. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of	During construction.	As needed during construction.	County of Tulare	Determination by qualified biologist.			

Mitigation Monitoring and Reporting Program

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	structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.							
BIO-12	(Mortality Reporting) The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be contacted immediately by phone and notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	During Construction.	Ongoing throughout construction.	County of Tulare	Qualified biologist working with USFS and/or CFW			
CULTURAL RESOURCES								
CUL-1	If, in the course of Project construction or operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to: planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in place shall be considered, and an appropriate method of achieving preservation in place shall be selected and implemented, if	During Construction.	Ongoing throughout construction.	County of Tulare	Determination by qualified archaeologist or paleontologist and consultation with County of Tulare			

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
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	feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential information from and about the site. Mitigation shall be consistent with CEQA Guidelines section 15126.4(b)(3). An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, hereafter "qualified archaeologist," should inspect the findings within 24 hours of discovery.							
CUL-2	<p>If cultural resources are encountered during construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.</p> <p>If it is determined that the Project could damage a significant cultural resource, mitigation should be implemented with a preference for preservation in place, consistent with the priorities set forth in CEQA Guidelines Section 15126.4(b)(3). If avoidance is not feasible, a qualified archaeologist should prepare and implement a detailed treatment plan in consultation with the County of Tulare and, for prehistoric resources, the ethnographically associated Native American tribe. If the resource is determined to be a tribal cultural resource, as defined by Public Resources Code 21074, the County of Tulare, in consultation with the ethnographically associated Native American tribe,</p>	During Construction.	Ongoing throughout construction.	County of Tulare	Determination by qualified archaeologist or paleontologist and consultation with County of Tulare. Also, applicable Native American Tribe.			

Mitigation Monitoring and Reporting Program

Mitigation Measure		When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
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	should, if feasible, minimize significant adverse impacts by avoiding the resource or treating the resource with culturally appropriate dignity, which includes protecting the cultural character and integrity of the resource, protecting the traditional use of the resource, and protecting the confidentiality of the resource							
CUL-3	Inadvertent Discovery of Human Remains. In the unlikely event of discovery or recognition of any human remains during construction-related activities, the provisions of CEQA Guidelines § 15064.5(e) shall be followed and such activities should cease within 50 feet of the find until the Tulare County Coroner has been contacted to determine that no investigation of the cause of death is required. If it is determined that the remains are Native American in origin, the Native American Heritage Commission (NAHC) will be contacted within 24 hours. The NAHC will then identify the person or persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD would, in turn, make recommendations to the County of Tulare for the appropriate means of treating the human remains and any grave goods.	During Construction.	Ongoing throughout construction.	County of Tulare	Determination by qualified archaeologist or paleontologist and consultation with County of Tulare. Also, applicable Native American Tribe.			
NOSE								
NOI-1	Internal combustion engines shall be equipped with a muffler of a type recommended by the manufacturer.	During Construction.	Ongoing throughout construction.	County of Tulare	On-site Project Manager			
NOI-2	Construction activities, excluding activities required to occur without interruption or activities that would pose a significant safety risk to workers or citizens, shall be limited to between the daytime hours of 7:00 a.m. and 7:00 p.m.	During Construction.	Ongoing throughout construction.	County of Tulare	On-site Project Manager			
NOI-3	Portable/stationary equipment (e.g., generators, compressors) shall be located at the furthest distance from the nearest residential dwelling.	During Construction.	Ongoing throughout construction.	County of Tulare	On-site Project Manager			

Mitigation Monitoring and Reporting Program

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NOI-4	As directed by the County resident engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, siting the location of stationary construction equipment away from sensitive noise receptors to the greatest extent feasible, turning off idling equipment after no more than five minutes of inactivity, and rescheduling construction activity to avoid noise-sensitive days or times.	During Construction.	Ongoing throughout construction.	County of Tulare	On-site Project Manager			
NOI-5	Use alternative pile installation techniques (e.g., drilled piles) to the extent possible.	During Construction.	Ongoing throughout construction.	County of Tulare	On-site Project Manager			
TRIBAL CULTURAL RESOURCES								
See Mitigation Measures CUL-1 through CUL-3								