YOLO COUNTY
DEPARTMENT OF COMMUNITY SERVICES

INITIAL STUDY / NEGATIVE DECLARATION
ZONE FILE # 2016-0017

CONAWAY "MEDIUM-SIZED" SOLAR PROJECT
MINOR USE PERMIT

SEPTEMBER, 2016

Initial Environmental Study

1. **Project Title:** Zone File #2016-0017 (Conaway Solar Minor Use Permit)

2. **Lead Agency Name and Address:**
   Yolo County Department of Community Services
   292 West Beamer Street
   Woodland, CA 95695

3. **Contact Person, Phone Number, E-Mail:**
   Jeff Anderson, Associate Planner
   (530) 666-8036
   jeff.anderson@yolocounty.org

4. **Project Location:** The project is located on the east side of County Road 103, north of County Road 27, approximately 1.5 miles southeast of the City of Woodland. The two solar panels are located on two separate, contiguous parcels. The North Site is located on APN 042-040-001 and the South Site is located on APN 042-060-005. See Figure 1 (Vicinity Map).

5. **Project Sponsor's Name and Address:**
   Conaway Preservation Group, LLC (Robert Thomas)
   45332 County Road 25
   Woodland, CA 95778

6. **Land Owner's Name and Address:**
   Same as Project Sponsor, above

7. **General Plan Designation(s):** Agriculture (AG)

8. **Zoning:** Agricultural Intensive (A-N)

9. **Description of the Project:** See attached "Project Description" on the following pages.

10. **Surrounding Land Uses and Setting:** See table below.

Relation to Project	Land Use	Zoning	General Plan Designation
Project Site	Fallowed agricultural land, graveled area	Agricultural Intensive (A-N)	Agricultural (AG)
North	Agricultural, rice	A-N	AG
South	Agricultural, rice, row crop	A-N	AG
East	Agricultural, rice	A-N	AG
West	Agricultural, row crop	A-N	AG

11. **Other public agencies whose approval is required:** Yolo County Public Works Division; Yolo County Building Division; Environmental Health Division.

12. **Other Project Assumptions:** The Initial Study assumes compliance with all applicable State, Federal, and local codes and regulations including, but not limited to, County of Yolo Improvement Standards, the California Building Code, the State Health and Safety Code, and the State Public Resources Code. The project is reviewed and analyzed under the County's Code of Zoning Ordinances; particularly, the Agricultural Zoning Ordinance. The purpose of the Agricultural Zoning Ordinance is to provide for land uses that support and enhance agriculture as the predominant land use in the unincorporated area of the County.

Project Description

The proposed project is a request for a Minor Use Permit and Flood Hazard Development Permit to construct two photovoltaic ground mount systems (North Site and South Site). The North Site solar panels will take up 3.28 acres of a ±640 acre parcel (042-040-001). This site historically has been used for farming, most recently to grow rice using artificial irrigation. Prior to growing rice, the site was used for several decades to grow upland crops, primarily safflower and vetch. Artificial irrigation was discontinued after the 2013 season, and the site has been fallowed for approximately three years since then. The site currently consists of upland grasslands. The South Site solar panels will take up 3.32 acres of a ±640 acre parcel (APN: 042-060-005). This site historically has been a gravel lot used for storage of farm equipment. This site is adjacent to two homes that are rented by Conaway employees. Both of the 640-acre parcels host a mix of fallowed agricultural land, active rice production, and wetland areas. The solar facilities will help offset the irrigation pumps on the active rice fields on both 640-acre parcels and other adjacent agricultural land throughout the Conaway Ranch.

Conaway will be enrolling in the Net Energy Metering (NEM) Program through PG&E. Through the NEM Program, when the proposed solar project produces more power than is instantaneously being used by the irrigation pumps, it will be counted as credit to Conaway. At the end of the year, Conaway would receive a "true up" bill which will compare the energy produced by the solar project with the energy that Conaway irrigation pumps consumed over the course of the year, and then PG&E would bill Conaway for the difference. The NEM Program does not incentivize oversizing solar systems (i.e., producing more energy than is consumed on-site). The consumer (Conaway) is not paid/credited for any excess energy produced that is not used on-site. The systems are a combined 2.2 megawatts DC (1.1 megawatts DC each) and are designed to produce approximately 3.5 million kilowatt hours in the first year, and then degrade around .05% per year. In 2015, the Conaway Ranch consumed approximately 4.3 million kilowatt hours, and in 2014 they consumed approximately 7.4 million kilowatt hours. The entire Conaway Ranch is approximately 17,400 acres. According to the applicant, there are 37 meters throughout the Conaway Ranch, and the proposed solar project would offset approximately 60-70% of 30-34 of those meters.

Approximately ±3.3 acres will be required for the solar generation project on each parcel. The applicant is not proposing changes to the existing uses on the remainder of the parcels. The project would consist of an array of solar PV panels oriented in rows along an east-west axis, and supported on a galvanized metal racking system and mounted at a fixed tilt of 21 degrees facing south to optimize array performance during all seasons. The panels, which are dark in color, non-reflective, and designed to be highly absorptive of light, would be manufactured offsite and transported to the project site for installation. Concrete equipment pads would be constructed within the solar panel fields to support the switching gear to receive utility grid power from PG&E as well as for new transformers. The distance from the interconnection pole would be approximately 200 feet at each site. Access to the project will be from County Road 103. The solar sites will maintain a 12-foot wide access road around the perimeter of the solar panels which would also serve as a fire break.

The project would be monitored by Conaway employees, and security maintained through an existing six-foot high chain link-fence. Employees are anticipated to perform visual inspections and minor repairs up to once daily. Construction of the project is expected to take approximately eight weeks. The life of the project is approximately 35-40 years.

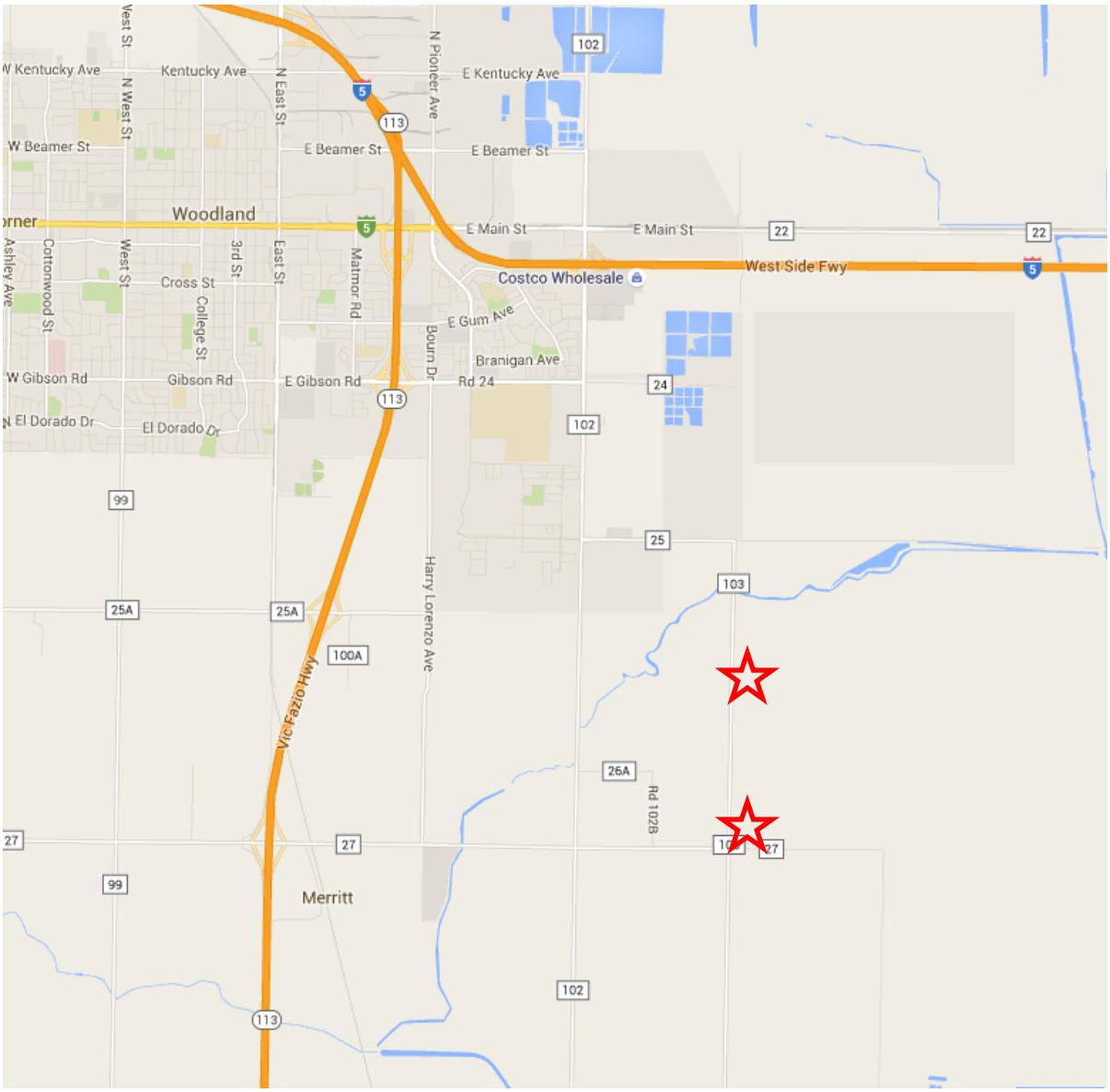
Each site will use concrete ballast blocks for mounting the PV panels. There will be approximately 324 ballast blocks per site. Each ballast block will be poured on top of the weed fabric and ¾" rock bedding that will cover each site, such that the ballast blocks will not come into contact with the original soil. The ballast blocks will be reusable and removable after the life of the project.

It is anticipated that the solar PV panels would be washed approximately two times per year to remove dust particles and other buildup to ensure optimum solar absorption. Panel cleaning would entail one or two water trucks spraying small amounts of water (approximately 2,000 gallons per MW). Due to the highly absorptive nature of the ground surface and underlying soils, water would run off the surface of the panels and absorb quickly, avoiding runoff and soil erosion.

Combustible vegetation on and around the solar generation project would be actively managed to minimize fire risk. Weed and rock fabric covering the project footprint will help prevent vegetation growth. There are no potentially dangerous, explosive, flammable, or hazardous chemical elements to the proposed project, and no hazardous waste materials would be generated by the operation of the project.

The applicant will also implement fire prevention measures to address potential fire hazards in the project area. Such measures will include training to familiarize emergency responders and employees of the codes, regulations, associated hazards, and mitigation processes related to solar electricity and fire suppression procedures for PV systems.

Figure 1
Vicinity Map



Approximate Project Limits

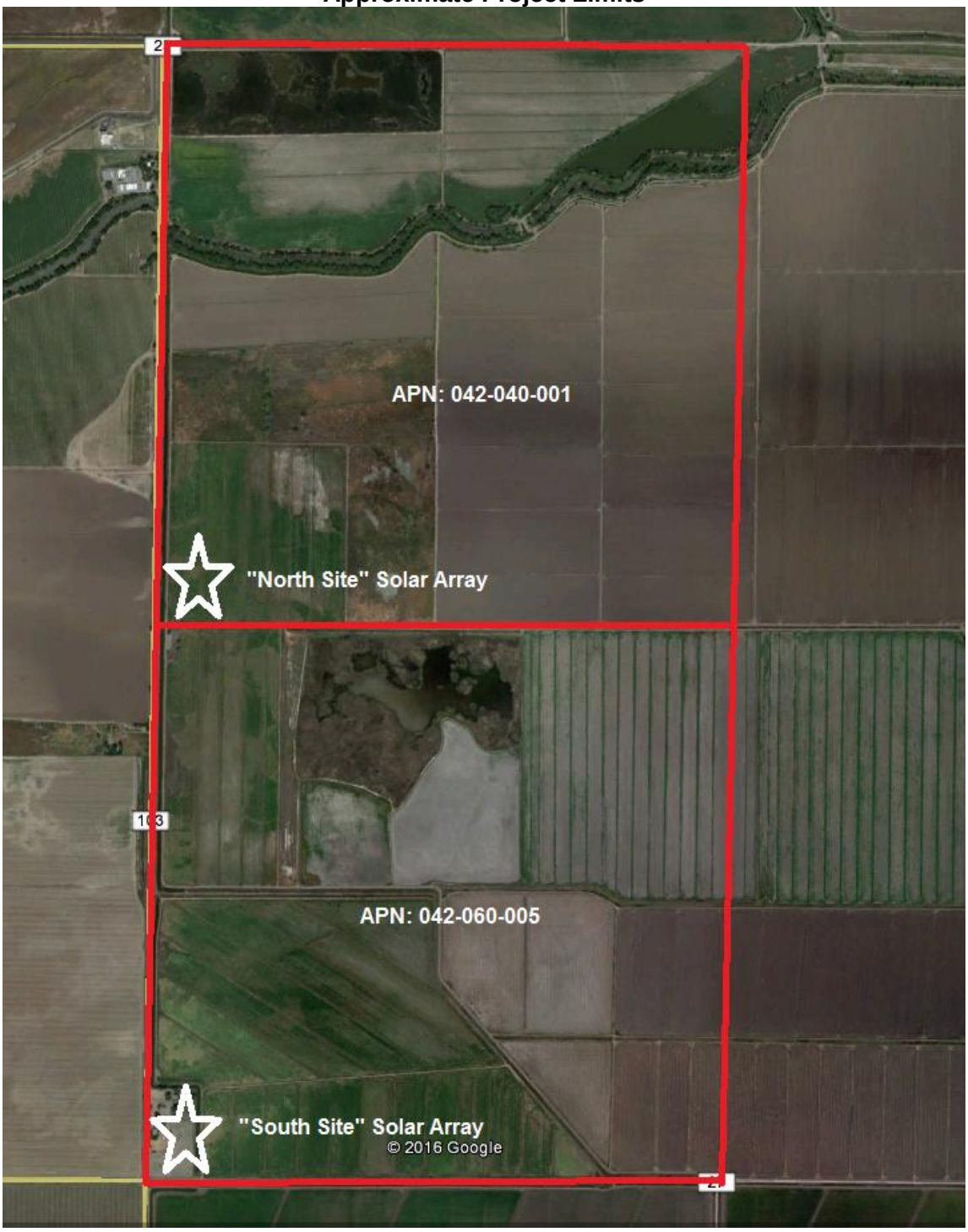


Figure 2
Site Plan- North Site

Figure 2
Site Plan- South Site

Environmental Factors Potentially Affected

The environmental factors checked below could potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact" (before any proposed mitigation measures have been adopted or before any measures have been made or agreed to by the project proponent) as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural and Forestry Resources	☐ Air Quality
☒ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

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 to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

☐ I find that the proposed project MAY have an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" 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 the project is consistent with an adopted general plan and all potentially significant effects have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT, the project is exempt from further review under the California Environmental Quality Act under the requirements of Public Resources Code section 21083.3(b) and CEQA Guidelines Section 15183.

Jeff Anderson

Planner's Signature | Date | Planner's Printed name

Purpose of this Initial Study

This Initial Study has been prepared consistent with CEQA Guideline Section 15063, to determine if the project as described herein may have a significant effect upon the environment.

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 if 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, 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. A "Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "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 Section XVIII, "Earlier Analyses", may be cross-referenced.)
5. A determination that a "Less than Significant Impact" would occur is appropriate when the project could create some identifiable impact, but the impact would be less than the threshold set by a performance standard or adopted policy. The initial study should describe the impact and state why it is found to be "less than significant."
6. 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) of the California Government Code. Earlier analyses are discussed in Section XVIII at the end of the checklist.
7. 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, when appropriate, include a reference to the page or pages where the statement is substantiated.
8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

I.	AESTHETICS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☒	☐
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION

a) Have a substantial adverse effect on a scenic vista?; *and*
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?

Less than Significant Impact. For purposes of determining significance under CEQA, a "scenic vista" is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. There are no officially designated scenic vistas near the project area. Additionally, the project site is not located along or near a scenic highway. The closest County-designated scenic roadway is located approximately six miles east of the project site (Old River Road), but provides no views of the property from the roadway. Scenic vistas would not be obstructed nor would scenic resources be damaged by the proposed solar panels. Therefore, aesthetic impacts would be considered less than significant.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The project proposes the construction of two solar facilities, each occupying 3.32 acres. The North Site has historically been used for farming, most recently to grow rice using artificial irrigation. Artificial irrigation was discontinued in 2013, and the site has been fallowed for approximately three years (currently consists of upland grasses). The South Site is a gravel area that has historically been used for storage of farming equipment. Both solar facilities are located in a rural area dominated by agricultural production, typically rice and various row crops. The nearest homes (not located on lands owned by the project proponent) are approximately 1,200 feet southwest of the North Site, and one-half mile south of the South Site, respectively. The project is not expected to degrade the existing aesthetic character of the site and its surroundings. The North Site will be screened from certain vantage points from the west due to trees and vegetation along the slough adjacent to County Road 103. The Conaway Ranch (approximately 17,400 acres in size) surrounds the project site to the north, east, and south. No trees will be removed for project construction. Impacts would be considered less than significant.

d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Less than Significant Impact. The solar project will be conditioned to require that the proposed solar facility be designed to minimize any glare or lighting on adjacent neighbors. The PV panels are dark in color and designed to be highly absorptive of light. Lighting is not proposed as part of this application. However, should lighting be installed at any point in the future, it would be required to be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties, the night sky, and the public right-of-way. Impacts from new light sources will be less than significant.

II.	AGRICULTURE AND FOREST RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. 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 the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
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?	☐	☐	☒	☐
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☒	☐
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

DISCUSSION

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?

Less than Significant Impact. The proposed solar project would occupy approximately 6.6 acres (3.28 and 3.32 acres, respectively). The North Site (3.28 acres) is located on a 640-acre parcel. The North Site has historically been used for farming, most recently to grow rice using artificial irrigation. Artificial irrigation was discontinued in 2013, and the site has been fallowed for approximately three years (currently consists of upland grasses). The South Site (3.32 acres) is located on a 640-acre parcel, directly south of the North Site parcel. The South Site is a gravel area that has historically been used for storage of farming equipment.

Soils on the North Site are identified as Sycamore silty clay loam, which is classified as prime farmland (if irrigated and drained), Class II soils by the U.S. Soil Conservation Service Soil Survey of Yolo County. The North Site is designated as "Prime Farmland" on maps prepared

pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Soils on the South Site are identified as Sycamore silty clay loam, drained, which is classified as prime farmland (if irrigated), Class I soils by the U.S. Soil Conservation Service Soil Survey of Yolo County. However, as described above, the South Site is a gravel area that has historically been used for storage of farming equipment. The South Site is designated as "Other Land" on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency.

As described in Section 8-2.1104 of the Yolo County Code ("Small and medium solar energy systems"), medium-sized solar facilities are encouraged to locate on predominantly (more than 60 percent) non-prime farmland. If a medium-sized facility is located on predominantly prime farmland, a Minor Use Permit is required. The entire project size is 6.6 acres, where approximately 3.28 acres (North Site) will be located on prime farmland. The North Site (prime farmland) has been fallowed for approximately three years. Impacts resulting in the conversion of prime farmland would be considered less than significant. Both of the 640-acre parcels host a mix of fallowed agricultural land, active rice production, and wetland areas. The solar facilities will help offset the irrigation pumps on the active rice fields on both 640-acre parcels and other adjacent agricultural land throughout the Conaway Ranch.

b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

Less than Significant Impact. The proposed solar project is located on A-N (Agricultural Intensive) zoned properties. The proposed solar project is classified as a "medium-sized solar energy system" under Section 8-2.2420 of the Yolo County Code, and such systems are allowed in all agricultural zoning districts, including the A-N zone, subject to a Use Permit (if applicable).

The proposed solar project is located on lands enrolled in the Williamson Act (Contract No. 70192). The proposed project was previously routed for early agency comments in July 2016. The Department of Conservation (DOC) submitted comments in a letter dated July 14, 2016, stating that the DOC is charged with oversight and interpretation of the Williamson Act, but delegates the primary responsibility of implementation to local governments. As long as a proposed use is associated with agricultural operations on the property, the Williamson Act allows counties to determine that the use is compatible with the intent of the Act. The DOC recommended in the July 14th letter that the staff report for this project discuss how the proposed project (solar panels) will be used solely in support of the agricultural operation on the property; therefore, qualifying the project as a compatible use.

The project proposes the construction and operation of two solar photovoltaic systems to help offset the electrical consumption of on-site irrigation wells on both 640-acre parcels and throughout the Conaway Ranch properties. Both of the 640-acre parcels host a mix of fallowed agricultural land, active rice production, and wetland areas. The approximately 3-acre North Site historically has been used for farming, most recently to grow rice using artificial irrigation. Prior to growing rice, the site was used for several decades to grow upland crops, primarily safflower and vetch. Artificial irrigation was discontinued after the 2013 season, and the site has been fallowed for approximately three years. The site currently consists of upland grasslands. The 3-acre South Site is a gravel lot that has historically been used for storage of farming equipment. Conaway will be enrolling in the Net Energy Metering (NEM) Program through PG&E. Through the NEM Program, when the proposed solar project produces more power than is instantaneously being used by the irrigation pumps, it will be counted as credit to Conaway. At the end of the year, Conaway would receive a "true up" bill which will compare the energy produced by the solar project with the energy that Conaway irrigation pumps consumed over the course of the year, and then PG&E would bill Conaway for the difference. The NEM Program does not incentivize oversizing solar systems (i.e., producing more energy than is consumed on-site). The consumer (Conaway) is not paid/credited for any excess energy produced that is not used on-site. The proposed solar project is designed to produced approximately 3.5 million

kilowatt hours in the first year, and then degrade around .05% per year. In 2015, the Conaway Ranch consumed approximately 4.3 million kilowatt hours, and in 2014 they consumed approximately 7.4 million kilowatt hours.

Further, Section 8-2.1104(g)(3) requires that the Use Permit for medium-sized solar facilities located on lands under a Williamson Act contract shall include findings under Section 51200 *et seq* of the California Government Code. The compatibility findings will be made as part of the staff report document to demonstrate that the solar facility will not significantly compromise the long-term productive agricultural capability nor displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel(s) or on other contracted lands in agricultural preserves. Additionally, the solar facility will not result in the significant removal of adjacent contracted land from agricultural or open space. The project proposes to place solar panels on approximately 3.28 acres of a 640-acre parcel (North Site) and on 3.32 acres of a separate 640-acre parcel (South Site). As stated above, the North Site is a fallowed agricultural field and the South Site is a graveled agricultural storage area. Therefore, impacts to zoning and Williamson Act would be considered less than significant.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?; *and*

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed solar project would not conflict with existing zoning for, or cause rezoning of, or result in the loss or conversion of forest or timberland.

e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?

Less than Significant Impact. As identified in (a), above, the project site has been shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency as “Prime Farmland” and “Other Land.” The surrounding area has similarly been mapped. Most of the surrounding farmland is under active agricultural production, including rice and rotating crops. Section 8-2.1104 of the Yolo County Code also states that medium-sized facilities are required to mitigate for the permanent loss of agricultural land, in accordance with Section 8-2.404 (the Agricultural Conservation and Mitigation Program). However, recent amendments to the Agricultural Conservation and Mitigation Program, as approved by the Board of Supervisors, exclude medium-sized solar energy systems from agricultural mitigation requirements if the approving authority reasonably determines that a medium-sized solar energy project generates energy solely to offset agricultural equipment demands (e.g., irrigation pumps) on the project site and on any contiguous lands of the applicant or, alternatively, that the project will be implemented in a manner that does not substantially diminish the agricultural productive capacity of the project site. See discussion in (b), above, which describes that the energy produced will be used onsite. Both of the 640-acre parcels host a mix of fallowed agricultural land, active rice production, and wetland areas. The solar facilities will help offset the irrigation pumps on the active rice fields on both 640-acre parcels and other adjacent agricultural land throughout the Conaway Ranch. Therefore, the staff report to the approving authority (Zoning Administrator) will recommend that the proposed solar project generates energy solely to offset agricultural equipment demands (irrigation pumps) on the project site and contiguous lands owned by the applicant (Conaway Ranch). Impacts to agricultural resources would be considered less than significant.

III.	AIR QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Where applicable, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Thresholds of Significance:

The project site is within the Yolo-Solano Air Quality Management District (YSAQMD), and the Sacramento Valley Air Basin regulates air quality conditions within Yolo County. Yolo County is classified as a non-attainment area for several air pollutants, including ozone (O_3) and particulate matter 10 microns or less in diameter (PM_{10}) for both federal and state standards, the partial non-attainment of the federal particulate matter 2.5 ($PM_{2.5}$), and is classified as a moderate maintenance area for carbon monoxide (CO) by the state.

Development projects are most likely to violate an air quality plan or standard, or contribute substantially to an existing or project air quality violation, through generation of vehicle trips.

For the evaluation of project-related air quality impacts, the YSAQMD recommends the use of the following thresholds of significance:

- Long-term Emissions of Criteria Air Pollutants (ROG, NO_X, and PM_{10})—The criteria air pollutants of primary concern include ozone-precursor pollutants (ROG and NO_X) and PM_{10}. Significance thresholds have been developed for project-generated emissions of reactive organic gases (ROG), nitrogen oxides (NO_X), and particulate matter of 10 microns or less (PM_{10}). Because $PM_{2.5}$ is a subset of $PM_{10,}$ a separate significance threshold has not be established for $PM_{2.5}$. Operational impacts associated with the proposed project would be considered significant if project-generated emissions would exceed YSAQMD-recommended significance thresholds, as identified below:

Table AQ-1 YSAQMD-Recommended Quantitative Thresholds of Significance for Criteria Air Pollutants	
Pollutant	**Threshold**
Reactive Organic Gases (ROG)	10 tons/year (approx. 55 lbs/day)
Oxides of Nitrogen (NO_X)	10 tons/year (approx. 55 lbs/day)
Particulate Matter (PM_{10})	80 lbs/day
Carbon Monoxide (CO)	Violation of State ambient air quality standard
Source: Handbook for Assessing and Mitigating Air Quality impacts (YSAQMD, 2007)	

- Emissions of Criteria Air Pollutants (ROG, NO_X, and PM_{10})—Construction impacts associated with the proposed project would be considered significant if project-generated emissions would exceed YSAQMD-recommended significance thresholds, as identified in Table AQ-1, and recommended control measures are not incorporated.

- Conflict with or Obstruct Implementation of Applicable Air Quality Plan— Projects resulting in the development of a new land use or a change in planned land use designation may result in a significant increase in vehicle miles traveled (VMT). Substantial increases in VMT, as well as, the installation of new area sources of emissions, may result in significant increases of criteria air pollutants that may conflict with the emissions inventories contained in regional air quality control plans. For this reason and given the region's non-attainment status for ozone and PM_{10}, project-generated emissions of ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} that would exceed the YSAQMD's recommended project-level significance thresholds, would also be considered to potentially conflict with or obstruct implementation of regional air quality attainment plans.

- Local Mobile-Source CO Concentrations—Local mobile source impacts associated with the proposed project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e., 9.0 ppm for 8 hours or 20 ppm for 1 hour).

- Toxic Air Contaminants. Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.

- Odors. Odor impacts associated with the proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

DISCUSSION

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The solar energy project would not substantially conflict with or obstruct implementation of the Yolo Solano Air Quality Management District Air Quality Attainment Plan (1992), the Sacramento Area Regional Ozone Attainment Plan (1994), or the goals and objectives of the Yolo County 2030 Countywide General Plan. Solar energy could have a beneficial impact by helping to reduce the County's and state's reliance on power generation from polluting sources of energy such as natural gas or coal.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?; *and*

c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. The Yolo-Solano Region is a non-attainment area for state particulate matter (PM_{10}) and ozone standards, the federal ozone standard, and the partial non-attainment of the federal particulate matter 2.5 ($PM_{2.5}$). Development of the solar energy systems would not contribute significantly to air quality impacts, but could generate some small amount of PM_{10} and $PM_{2.5,}$ during grading and construction activities to develop the project. To address the potential for short-term impacts related to grading and construction activities, standard dust and emissions control measures which are recommended by the Yolo Solano Air Quality Management District will be attached as Conditions of Approval to the Use Permit, and include the following best environmental practices:

To reduce tailpipe emissions from diesel-powered construction equipment, all applicable and feasible measures would be implemented, such as:

- Maximizing the use of diesel construction equipment that meet CARB's 2010 or newer certification standard for off-road heavy-duty diesel engines;
- Using emission control devices at least as effective as the original factory-installed equipment;
- Substituting gasoline-powered for diesel-powered equipment when feasible;
- Ensuring that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation; and
- Using Tier 4 engines in all construction equipment, if available.

To reduce construction fugitive dust emissions, the following dust control measures would be implemented:

- Water all active construction sites at least twice daily in dry conditions, with the frequency of watering based on the type of operation, soil, and wind exposure;
- Effectively stabilize dust emissions by using water or other approved substances on all disturbed areas, including storage piles, which are not being actively utilized for construction purposes;
- Prohibit all grading activities during periods of high wind (over 20 miles per hour);
- Limit onsite vehicle speeds on unpaved roads to 15 miles per hour;
- Cover all trucks hauling dirt, sand, or loose materials;
- Cover inactive storage piles;
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints; and
- Limit the area under construction at any one time.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The project does not have the potential to expose any sensitive receptors to any substantial increase in pollutant levels, since the solar project does not emit any pollutants, except during construction, and there are no sensitive receptors in the vicinity of the project. The nearest homes (not located on lands owned by the project proponent) are approximately 1,200 feet southwest of the North Site, and one-half mile south of the South Site, respectively. Air quality impacts to sensitive and other nearby receptors are expected to be less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact. The solar facility would not generate any new odors.

IV.	BIOLOGICAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

BIOLOGICAL SETTING

Description of the Project Site

The following description is excerpted from the Biological Site Assessment prepared for the project by Estep Environmental Consulting (Estep, 2016).

South Site. This site historically has been used as a farm yard used for storage of farm equipment. It is entirely graveled and contains no trees, shrubs, or other vegetation. It supports no wetlands or any unique biological resources. This site is adjacent to two homes that are rented by Conaway Ranch employees. This adjacent area includes small lawns and several trees, including three mature cottonwood (*Populus fremontii*), three walnut (*Juglans hindsii*), and several ornamental pines and palms.

North Site. This site historically has been used for farming, most recently to grow rice. Prior to growing rice, the site was used for several decades to grow upland crops, primarily safflower and vetch. The site was fallowed following the 2013 rice harvest and has been idle for the past three years. The site currently consists of dense agricultural weeds and nonnative grasses typical of the area, including star thistle (*Centaurea solstitalis*), milk thistle (*Silybum marianum*),

wild oat (*Avena fatua*) and field bindweed (*Convolvulus arvensis*). There are no trees or shrubs on the site. The site supports no wetlands or any unique biological resources. An irrigation canal extends along the west side of the project site adjacent to County Road 103. This canal supports emergent vegetation, consisting primarily of a narrow band of cattail marsh, and a row of willow trees along the west side of the canal adjacent to County Road 103. A small group of willow trees also occurs immediately south of the site.

The project site occurs within an intensively-farmed agricultural landscape with rice as the dominant crop type to the east, and alfalfa, rotational crops, and orchards to the west. Natural habitats are limited to stream corridors, such as Willow Slough, which supports a narrow valley oak-dominated riparian corridor approximately 0.6 miles north of the North Site, several managed wetlands on the Conaway Ranch, and several uncultivated parcels that support remnant alkaline sink habitats and associated grasslands such as the Woodland Regional Park located approximately 0.75 miles northwest of the North Site. The surrounding area also includes scattered rural residences, farmyards, and other farm-related structures. Urban development in the City of Woodland is approximately 1.2 miles northwest of the North Site.

Due to the potential for biological resources to occur within proximity to the project site, a biological assessment was conducted by Jim Estep, Estep Environmental Consulting. The results of the August 23, 2016, Biological Site Assessment of the Conaway Ranch Solar Project are included as Attachment A to this Initial Study.

DISCUSSION

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

Less Than Significant With Mitigation Incorporated. As described above, the project proposes two solar arrays located on two separate locations (North Site and South Site). The two sites are located approximately 0.85 miles from each other. The South Site historically has been used as a farm yard used for storage of farm equipment. It is entirely graveled and contains no trees, shrubs, or other vegetation. The North Site historically has been used for farming, most recently to grow rice. Prior to growing rice, the site was used for several decades to grow upland crops, primarily safflower and vetch. The site was fallowed following the 2013 rice harvest and has been idle for the past three years.

According to the Yolo Habitat Conservancy (YCH), there are seven documented Swainson's hawk nest sites and two documented white-tailed kite nest sites within one-mile of the proposed project, and numerous documented Swainson's hawk and white-tailed kite nests within 10 miles of the project. The proposed project site contains modeled habitat for the following covered animal species: Swainson's hawk, white-tailed kite, tricolored blackbird, western burrowing owl, western pond turtle, and giant garter snake.

As a result of existing habitat and the potential for special status species to occur within proximity to the project site, a biological survey was conducted. The following includes excerpts from the 2016 biological assessment prepared by Jim Estep.

A field assessment was conducted on the property on August 28, 2016. Mr. Estep inspected the project site on foot to characterize land use, biological resources, and presence of plant communities and wildlife species on each site and in the surrounding landscape. Using binoculars and spotting scope, species occurrences were documented focusing on the potential presence of special-status species. All trees were searched on and within 0.5 miles of each site

for evidence of nesting Swainson's hawk, white-tailed kites, and other raptors. The potential for and magnitude of impact from implementation of the proposed project was addressed.

According to the assessment, wildlife use of the South Site is limited to species that can nest or forage in gravel. With the exception of one killdeer (*Charadrius vociferus*), a ground-nesting bird that may have established a nest somewhere on the gravel lot, no wildlife was observed on the South Site during the survey. Species observed using the trees and shrubs on the adjacent lot include mourning dove (*Zenaida macroura*), shrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), western kingbird (*Tyrannus verticalis*), and cliff swallow (*Petrochelidon pyrrhonota*). There is an historic record of a red-tailed hawk (*Buteo jamaicensis*) nest in one of the trees in the adjacent lot, but no evidence of raptor nesting was detected during the site visit.

As a fallow field, the North Site supports nesting and foraging habitat primarily for agricultural-associated species, including red-wing blackbirds (*Agelaius phoeniceus*), mourning dove, ring necked pheasant (*Phasianus colchicus*), western meadowlark (*Sturnella neglecta*), and other common species. The emergent wetland and willow trees along the irrigation canal bordering the western edge of the North Site support additional species. Species observed during the site visit in the adjacent canal include red-winged blackbirds, great egret (*Ardea alba*), and green heron (*Butorides virescens*). No raptor nests were found in the willow trees along the adjacent canal or in the small group of trees just south of the site. Other species that could occur on or near the site include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*). coyote (*Canis latrans)*, striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), gopher snake (*Pituophis catenifer*), and other common mammals and reptiles.

Table 1 indicates the special-status species that have potential to occur on or in the vicinity of the project site, along with their habitat association, the availability of habitat on the project site, and whether or not the species has been detected on the project site.

Table 1.
Special-status species with potential to occur on in the vicinity of the project site

Species	Status State/ Federal	Habitat Association	Habitat Availability on the Project Site	Observed Onsite During Survey	Reported Occurrence on the Project Site
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	-/T	Elderberry shrubs	None	No	No
Western pond turtle *Actinemys marmorata*	CSC/-	Streams, ponds, water conveyance channels	None	No	No
White-tailed kite *Elanus leucurus*	FP/-	Nests in trees, hunts in fields, grasslands, and wetlands.	Suitable foraging habitat—North Site	No	No
Swainson's hawk *Buteo swainsoni*	T/-	Nests in trees, hunts in grassland and cultivated fields	Suitable foraging habitat—North Site	No	No
Mountain plover *Charadrius montanus*	CSC/PT	Short grassland, plowed fields	None	No	No
Northern harrier *Circus cyaneus*	CSC/-/-	Grasslands, pastures, fields, seasonal wetland	Suitable nesting and foraging habitat – North Site	No	No

Burrowing owl *Athene cunicularia*	CSC/-/-	Grasslands, field edges with ground squirrel activity	Marginally suitable habitat perimeter of both sites	No	No
Loggerhead shrike *Lanius ludovicianus*	CSC/-/-	Grasslands, agricultural areas	Suitable foraging habitat – North Site; trees nearby but offsite	No	No
Tricolored blackbird *Agelaius tricolor*	CSC/-/-	Marsh, bramble, thickets, silage, grasslands, pastures	No nesting; suitable foraging habitat – North Site	No	No
Palid bat *Antrozous pallidus*	CSC/-/-	Grasslands, shrub lands, woodlands	Aerial foraging habitat—both sites	No	No
Townsends big-eared bat *Corynorhinus townsendii*	CSC/-/-	Caves, bridges, buildings, rock crevices, tree hollows	Aerial foraging habitat—both sites	No	No
Western red bat *Lasiurus blossevillii*	-/CSC/-	Large trees, woodlands, grasslands and cultivated fields	Arial foraging habitat—both sites	No	No
Palmate-bracted birds beak *Chloropyron palmatum*	E/E	Alkali playa/meadow	None. Occurs in Woodland Regional Park, 0.7 mile NW	No	No
Brittlescale *Atriplex depressa*	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs in Woodland Regional Park, 0.7 mile NW	No	No
San Joaquin spearscale *Atriplex joaquiniana*	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs in Woodland Regional Park	No	No
Rose mallow *Hibiscus lasiocarpus*	-/-/2	Freshwater marshes, riparian	None. Occurs in Woodland Regional Park	No	No
Alkali milkvetch (*Astraglus tener*)	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs at Woodland Regional Park	No	No
Heckard's peppergrass (*Lepidium latipes*)	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs at Woodland Regional Park	No	No

T=threatened; E=Endangered; PE=Proposed Threatened; CSC=California species of species concern; FP=state fully protected; 1B=CNPS threatened or endangered in California; 2=CNPS

Valley Elderberry Longhorn Beetle. The valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is a medium-sized woodboring beetle, about 0.8 inches long. Endemic to California's Central Valley and watersheds that drain into the Central Valley, this species' presence is entirely dependent on the presence of its host plant, the elderberry shrub (*Sambucus* spp.). VELB is a specialized herbivore that feeds exclusively on elderberry shrubs, the adults feeding on leaves and flowers, and the larvae on the stem pith. Habitat for VELB consists of elderberry shrubs with stems greater than 1 inch in basal diameter. Elderberry grows in upland riparian forests or savannas adjacent to riparian vegetation, but also occurs in oak woodlands and savannas and in disturbed areas. It usually co-occurs with other woody riparian plants, including valley oak, Fremont cottonwood, various willows, and other riparian trees and shrubs (Barr 1991, U.S. Fish and Wildlife Service 1984, Collinge et al 2001).

There are no elderberry shrubs on or near either of the project sites and therefore no potential for VELB occurrence. The nearest reported occurrence of VELB is along the Sacramento River, over six miles west of the project sites (CNDDB 2015).

Western Pond Turtle. Western pond turtles (*Actinemys marmorata*) are closely associated with permanent water bodies, such as lakes, ponds, slow moving streams, and irrigation canals that include down logs or rocks basking sites, and that support sufficient aquatic prey. Western pond turtles also require upland habitat that is suitable for building nests and to overwinter. Nests are constructed in sandy banks immediately adjacent to aquatic habitat or if necessary, females will climb hillsides and sometimes move considerable distances to find suitable nest sites (Jennings and Hayes 1994).

There are no water bodies, streams, or suitable conveyance channels (e.g., permanent water) on or near either project site and therefore no potential for western pond turtle to occur. The nearest potential habitat for western pond turtles is along Willow Slough, north of the North Site.

Mountain Plover. Unlike most other plover species, the mountain plover (*Charadrius montanus*) is an upland species, often found far from water. The mountain plover does not breed in California, but does occur during the winter. The species arrives on its wintering grounds in California from November through December where it remains through March. The wintering habitat of mountain plovers in the Central Valley has been described as pastureland nearly devoid of vegetation, sparsely vegetated fields, grazed grasslands and disked agricultural fields The species occurs only in areas either devoid of or with very sparse and short vegetation (Stoner 1942, Manolis and Tangren 1975, Hunting et al. 2001, Hunting and Edson 2008).

Mountain plovers are uncommon, localized winter visitors to Yolo County. Small flocks have been observed in recently-plowed agricultural fields near Woodland and Davis, especially along County Roads 16, 25, 27, and 102 and in unflooded portions of the Yolo Bypass. Neither project site supports habitat typical of this species and therefore there is no potential for occurrence.

Swainson's Hawk. The Swainson's hawk is a medium-sized raptor associated with generally flat, open landscapes. In the Central Valley it nests in mature native and nonnative trees and forages in grassland and agricultural habitats. Although a state-threatened species, the Swainson's hawk is relatively common in Yolo County due to the availability of nest trees and the agricultural crop patterns that are compatible with Swainson's hawk foraging. Numerous nest sites have been documented in Yolo County (Estep 2008).

There is no potential nesting habitat on either project site. There is suitable, but unoccupied nesting habitat near each project site and there are numerous reported nest sites in the vicinity of the project sites. The nearest reported occurrences are 0.5 miles west of the North Site and 0.8 miles northwest of the South Site. There are 10 reported nest sites within 1 mile of the North Site and three reported nest sites within one mile of the South Site (Estep 2008). Since it consists entirely of gravel, the South Site does not support foraging habitat; however, in its fallow condition, the North Site does support suitable foraging habitat.

White-tailed kite. The white-tailed kite is a highly specialized and distinctively-marked raptor associated with open grassland and seasonal wetland landscapes. It typically nests in riparian forests, woodlands, woodlots, and occasionally in isolated trees, primarily willow, valley oak, cottonwood, and walnut) and some nonnative trees. It forages in grassland, seasonal wetland, and agricultural lands, but is more limited in its use of cultivated habitats compared with the Swainson's hawk. As a result, the species occurs throughout most of Yolo County, but in low breeding densities (Dunk 1995, Erichsen 1995, Estep 2008).

Neither project site supports nesting habitat for the white-tailed kite; however, like the Swainson's hawk, some trees adjacent to the project site are suitable for kite nesting. Few nesting white-tailed kites have been reported from the immediate area. The nearest reported nest site is approximately 0.6 miles northwest of the North Site along Willow Slough. Another reported nest site is approximately two miles south of the South Site along the Willow Slough

Bypass. The South Site does not support foraging habitat for this species, but in its current fallow condition, the North Site does support suitable foraging habitat.

Northern harrier. The northern harrier (*Circus cyaneus*) is a ground-nesting raptor, constructing rudimentary nest sites on the ground in marsh, grassland, and some agricultural habitats, particularly grain fields. They forage in seasonal wetland, grassland, and agricultural habitats for voles and other small mammals, birds, frogs, and small reptiles, crustaceans, and insects. They also roost on the ground, using tall grasses and forbs in wetlands, or along wetland/field borders for cover (MacWhirter and Bildstein 1996).

The South Site supports neither nesting or foraging habitat for this species; however, in its current fallow condition, the North Site supports suitable nesting and foraging habitat. The species was not observed during the site visit and there are no nesting records from the project sites or neighboring fields (CNDDB 2015).

Western Burrowing Owl. The western burrowing owl (*Athene cunicularia*) occurs in open, dry grasslands, agricultural and range lands, and desert habitats. In the Central Valley, they are associated with remaining grassland habitats, pasturelands, and edges of agricultural fields. They also occur in vacant lots and remnant grassland or ruderal habitats within urbanizing areas. Historically nesting in larger colonies, due to limited nesting habitat availability most of the more recent occurrences are individual nesting pairs or several loosely associated nesting pairs. The burrowing owl is a subterranean-nesting species, typically occupying the burrows created by California ground squirrels *(Otospermophilus beecheyi)*. They also occupy artificial habitats, such as those created by rock piles and occasionally in open pipes and small culverts. They forage for small rodents and insects in grassland and some agricultural habitats with low vegetative height. Key to burrowing owl occupancy are grassland or ruderal conditions that maintain very short vegetative height around potential nesting sites. They will generally avoid otherwise suitable grassland habitats if vegetation exceeds 12 inches in height (Gervais et al. 2008).

In Yolo County, burrowing owls occur mainly in the grassland and pasture habitats of the southern panhandle and in cultivated and ruderal habitats in the Davis area. Nesting and wintering occurrences have also been reported from the area immediately north of Winters and elsewhere and along the grassland foothills on the west side of the valley. Isolated occurrences have also been reported from cultivated lands in the interior of the county. There is no suitable habitat for burrowing owls on either site. The South Site is entirely graveled and the dense and tall vegetation on the North Site precludes burrowing owl occurrence. However, there is marginal potential for occurrence along roadside or field berms around the perimeter of both sites. None have been reported from the immediate vicinity of the project sites (CNDDB 2015). The nearest reported occurrences are approximately 1.7 miles north of the North Site just south of the City of Woodland water treatment facility and two miles south of the South Site along the Willow Slough Bypass.

Loggerhead Shrike. The loggerhead shrike (*Lanius ludovicianus*) occurs in open habitats with scattered trees, shrubs, posts, fences, utility lines, or other perches. It nests in small trees and shrubs and forages for small rodents, reptiles, and insects in pastures and agricultural lands. It has been reported from numerous locations in Yolo County (CNDDB 2015), including the grassland and oak savannah foothills along the western edge of the valley.

Neither project site supports nesting or roosting habitat for loggerhead shrike. Trees on adjacent lots do support suitable nesting habitat, but no nesting occurrences have been reported and neither the species nor evidence of nesting were detected during the site visit. The South Site also does not support foraging habitat; however, in its current fallowed condition, the North Site does support suitable foraging habitat for this species.

Tricolored Blackbird. Although currently designated as a state species of special concern, the legal status of the tricolored blackbird (*Agelaius tricolor*) has recently been under review by the CDFW and the USFWS. The species was emergency listed as endangered under the state endangered species act in December 2014, which expired in December 2015. The species is currently under review for a permanent state listing. The species is also currently under review by the USFWS following a 90-day finding that formal federal listing may be warranted.

The tricolored blackbird nests in colonies from several dozen to several thousand breeding pairs. They have three basic requirements for selecting their breeding colony sites: open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony. Nesting colonies are found in freshwater emergent marshes, in willows, blackberry bramble, thistles, or nettles, and in silage and grain fields. Suitable foraging habitat includes grasslands, pasturelands, seasonal wetlands, and some cultivated habitats (Beedy and Hamilton 1999).

Neither project site supports breeding habitat for this species. Tricolored blackbirds could potentially forage on the north site, but there is no suitable foraging habitat on the South Site. There is no breeding habitat in the immediately vicinity of either site, but there is a nearby breeding colony approximately 0.9 miles north of the North Site on Conaway Ranch land at the corner of County Road 103 and County Road 25. A wetland area is maintained by Conaway Ranch at this location to support continued nesting of the breeding colony. The wetland is part of a 224-acre conservation easement granted to the State of California that includes surrounding foraging habitats. The conservation easement area extends southward to approximately 0.3 miles north of the North Site.

Special-status Bats. Three special status bats potentially occur in the vicinity of the project site, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), and western red bat (*Lasiurus blossevillii*), all state species of special concern. Pallid bat occurs primarily in shrublands, woodlands, and forested habitats, but also can occur in grasslands and agricultural areas. Townsends's big-eared bat occurs in a variety of woodland and open habitats, including agricultural areas. Western red bat occurs in wooded habitats, including orchards, and grasslands. Pallid bat and Townsend's big-eared bat roost in mines, caves, rocky crevices, large hollow trees, and occasionally in large open buildings that are usually abandoned or infrequently inhabited. Western red bat usually roosts in large trees (Pierson and Rainey 1998, Pierson 1998, Fellers and Pierson 2002, Pierson et al. 2006).

Neither project site supports roosting habitat for these species. The nearest potential roosting habitat is along Willow Slough, 0.6 miles north of the North Site. All species could potentially forage over either site.

Special-Status Plants. Six special-status plant species have potential to occur in the vicinity of the project sites. Rose mallow (*Hibiscus lasiocarpus*) occurs in marshes and riparian habitats, neither of which occurs on the project site. Therefore, there is no potential for this species to occur.

The remaining five species, palmate-bracted bird's beak (*Cordylanthus palmatus*), brittlescale (*Atriplex depressa*), San Joaquin spearscale (*Atriplex joaquiniana*), alkali milkvetch (*Astraglus tener*), and Heckard's peppergrass (*Lepidium latipes*) occur in alkali sink habitats. Prior to agricultural and urban conversion the alkali sink natural community was more widespread in the area, occurring throughout much of the area east and southeast of the City of Woodland. Remaining patches occur primarily between County Road 24 south to Willow Slough and east to County Road 103 (Figure 2). Two of these remnant patches are currently managed as alkali sink preserves, Woodland Regional Park and Alkali Grasslands Preserve, both located near County Road 25 and County Road 102, within 0.75 miles of the North Site. Recent surveys of these sites have detected occurrences of all four species noted above (Dean 2009, Center for Natural Lands Management (http://www.cnlm.org).

Because it's entirely graveled, the South Site has no potential to support special-status plants. Although the North Site may have historically supported habitat for alkali sink plants, its conversion to agricultural uses many decades ago precludes occurrence of these species.

Loss of Habitat

Potential Impacts

The proposed project will remove a total of 3.32 acres of graveled farmyard at the South Site and 3.28 acres of fallow agricultural land at the North Site. Adjacent offsite habitats, including the irrigation canal and associated emergent wetland and willow trees adjacent to the North Site and the rural residential trees adjacent to the South Site, will not be disturbed by project construction or operation. Because of the small number of acres, low habitat value, and the lack of any unique biological communities, habitat conversion to a solar array does not represent a significant impact pursuant to CEQA and would not be in conflict with any General Plan Policy. Habitat removal or conversion would not affect resident or migratory wildlife movement, would not substantially degrade the quality of the environment or reduce the habitat of wildlife species, and would not cause wildlife populations to drop below self-sustaining levels.

Special-status Species

Valley Elderberry Longhorn Beetle. The proposed project will not result in impacts to this species.

Western Pond Turtle. The proposed project will not result in impacts to this species.

Mountain Plover. The proposed project will not result in impacts to this species.

Swainson's Hawk The proposed project will convert 3.28 acres of fallow agriculture land, considered suitable foraging habitat for the Swainson's hawk, to a solar array. This does not represent a significant loss of Swainson's hawk foraging habitat in Yolo County. However, it is subject to the conditions in General Plan Policy CO-2.42, which requires the applicant to provide compensatory mitigation according to the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County.

White-tailed Kite. The proposed project will convert 3.28 acres of fallow agricultural land, considered suitable foraging habitat for the white-tailed kite, to a solar array. Although not considered significant, adhering to the condition in Policy CO-2.42 for the Swainson's hawk will also address foraging habitat impacts to this species.

Northern Harrier. The project will convert 3.28 acres of fallow agricultural land, considered suitable nesting and foraging habitat for the northern harrier, to a solar array. The small number of acres does not represent a significant loss of nesting or foraging habitat for this species. However, adhering to the condition in Policy CO-2.42 for the Swainson's hawk will also address foraging habitat impacts to this species. In addition, possible nest destruction or mortality should be avoided for this ground-nesting species by implementing pre-construction surveys for construction that occurs in subsequent years, and construction timing restrictions if active nests are found.

Western Burrowing Owl. The project will convert 3.28 acres of fallow agricultural land that is not currently considered suitable habitat for the burrowing owl to a solar array. Because the species is not known to occur on the project site and because the site is not currently considered suitable habitat, this does not constitute a significant impact to this species. However, in the event construction occurs in subsequent years when habitat conditions may be more suitable,

possible nest destruction or mortality should be avoided by implementing pre-construction surveys and implementing standard avoidance measures if the site becomes occupied.

Loggerhead Shrike. The conversion of 3.28 acres of agricultural land, considered suitable foraging habitat for loggerhead shrike, to a solar array does not constitute a significant impact to this species.

Tricolored Blackbird. The project will convert 3.28 acres of agricultural land that is suitable foraging habitat for the tricolored blackbird. This small number of acres does not constitute a significant loss of suitable foraging habitat for this species. The project site is sufficiently distant from the breeding colony north of Willow Slough to avoid any disturbances to the colony.

Special-Status Bats. The conversion of 3.28 acres of agricultural land to a solar array does not constitute a significant impact to these species.

Special-Status Plants. No special-status plants occur on either project site and thus the projects will have no impact on these species.

According to the results of the survey, Mr. Estep concluded that there are no direct impacts associated with the South Site due to the lack of habitat on the site. The small amount of habitat conversion on the North Site also does not represent a significant removal of habitat, but compensatory mitigation for this loss will be required to address the loss of Swainson's hawk foraging habitat pursuant to General Plan Policy CO-2.42. The potential loss of Swainson's hawk (and other raptors) foraging habitat is addressed in Mitigation Measure BIO-1, below.

All other potential biological impacts are associated with potential for occurrence of special status species on and adjacent to the sites prior to construction of the solar arrays. At both project sites, there is potential for Swainson's hawks and white-tailed kites to nest in trees near the project sites. To avoid disturbance to breeding sites of these species and to avoid violation of the state endangered species act and Fish and Game Code 3503.5, preconstruction surveys should be conducted to determine presence or absence. If species are found to be present during the breeding season, set-backs should be established to avoid disturbance and possible nest abandonment. Pre-construction surveys to document the presence of raptor habitat is required per Mitigation Measure BIO-2, below.

Similarly, at the North Site there is also potential for northern harriers and to a lesser extent burrowing owls to occur within the project area. Preconstruction surveys should also be conducted at the North Site to determine presence or absence of these species within and near the project footprint. If found, set-backs should be established to avoid disturbance and possible nest abandonment or destruction. Pre-construction surveys to document the presence of northern harrier habitat is required per Mitigation Measure BIO-2, below. Pre-construction surveys to document the presence of burrowing owl habitat is required per Mitigation Measure BIO-3, below.

Mitigation Measure BIO-1

Prior to issuance of any grading or building permits on the North Site, the applicant will be required to mitigate for the permanent loss of Swainson's hawk foraging habitat, which may be satisfied by payment of an in-lieu fee (for projects under 40 acres), the purchase of credits from an approved mitigation bank or mitigation receiving site, dedication of conservation easements either onsite or offsite, or other arrangements satisfactory to the County that ensure permanent 1:1 conservation of high-quality foraging habitat for the Swainson's hawk.

Significance After Mitigation

Implementation of MM BIO-1 adequately addresses the loss of suitable foraging habitat for this species. With mitigation, this impact would be considered less than significant.

Mitigation Measure BIO-2

If construction occurs during the breeding season (March-September 15) on the North and/or South Site, the project applicant shall conduct preconstruction nesting surveys for Swainson's hawk, white-tailed kite, northern harrier, and other raptors no more than 14 days and no less than 7 days prior to initiating construction. A qualified biologist shall conduct the surveys and the surveys shall be submitted to Yolo County Community Services Department for review. The survey area shall include all potential nesting habitat for Swainson's hawk and white-tailed kite within 0.5 miles of the project and all potential habitat for northern harrier and other raptors within 500-feet of the project site. If no active nests are found during the surveys, no further mitigation shall be required except with regard to foraging habitat, as discussed above.

If an active nest used by a Swainson's hawk, white-tailed kite, or northern harrier is found sufficiently close (as determined by the qualified biologist) to the construction area to be affected by construction activities, a qualified biologist shall notify the California Department of Fish and Wildlife and a ¼-mile construction-free buffer zone shall be established around active Swainson's hawk and white-tailed kite nest sites and a 500-foot buffer established around northern harrier nest sites. Intensive new disturbances (e.g., heavy equipment activities associated with construction) that may cause nest abandonment or forced fledging shall not be initiated within this buffer zone between March and September unless it is determined by a qualified biologist in coordination with CDFW that the young have fledged and are feeding on their own, or the nest is no longer in active use.

Mitigation Measure BIO-3

Prior to construction at any time of the year on the North Site, a qualified biologist shall conduct a survey consistent with CDFW's Staff Report on Burrowing Owl Mitigation (Mitigation Guidelines; CDFW, 2012.) Results of the habitat assessment and surveys shall be submitted to the County and, if an active nest is identified, survey results and planned no-disturbance setbacks will also be submitted to and approved by CDFW.

If an active burrowing owl nesting burrow is located during preconstruction surveys, a no-disturbance setback shall be established to avoid destruction or disturbance of the burrow. No project activity shall commence within the setback until a qualified biologist has determined in coordination with CDFW that the young have fledged, the nest is no longer active, or that reducing the buffer would not result in nest abandonment.

If an active wintering burrow is within construction areas, the construction areas shall be adjusted to avoid direct disturbance to the burrow. If this is not feasible, the winter burrow may be removed by installing one-way doors to allow owls to escape and then collapse the burrow according to Mitigation Guidelines. Before any burrow exclusion and/or burrow closure (temporary or permanent) occurs, a Burrowing Owl Exclusion Plan, consistent with Appendix E of the Mitigation Guidelines (CDFW, 2012) shall be submitted to and approved by CDFW. If an active burrow is found and must be relocated, habitat compensation will be implemented subject to approval by CDFW and consistent with the Mitigation Guidelines.

Significance After Mitigation (BIO-2 and BIO-3)

Implementation of MM BIO-2 and MM BIO-3 would protect potential Swainson's hawk nests, other birds of prey (including northern harriers and white-tailed kite), and burrowing owl nests that may exist in the project vicinity from construction related impacts. With mitigation, this impact would be considered less than significant.

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

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal

pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impact. The project is not located on or near riparian habitat. As described in the biological assessment prepared by Mr. Estep, the South Site and North Site do not support wetlands or any unique biological resources. Willow Slough, which supports a narrow valley oak-dominated riparian corridor is located approximately 0.6 miles north of the North Site. Several managed wetlands on the Conaway Ranch and several uncultivated parcels that support remnant alkaline sink habitats and associated grasslands are located approximately 0.75 miles northwest of the North Site. Impacts will be less than significant.

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?

Less than Significant Impact. The project proposes two solar arrays located on two separate locations (North Site and South Site). The two sites are located approximately 0.85 miles from each other. The South Site historically has been used as a farm yard used for storage of farm equipment. It is entirely graveled and contains no trees, shrubs, or other vegetation. The North Site historically has been used for farming, most recently to grow rice. Prior to growing rice, the site was used for several decades to grow upland crops, primarily safflower and vetch. The site was fallowed following the 2013 rice harvest and has been idle for the past three years. The project is not expected to interfere with the movement of any wildlife species nor impede a wildlife nursery site. Impacts will be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. The proposed project would not conflict with any other local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The County does not have any other conservation ordinances, except for a voluntary oak tree preservation ordinance that seeks to minimize damage and require replacement when oak groves are affected by development. There are no proposed oak tree removals to accommodate the project. Impacts will be less than significant.

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?

No Impact. The Yolo Habitat Conservancy, a Joint Powers Agency composed of the County, the cities, and other entities, is in the process of preparing a Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for Yolo County. The NCCP/HCP will focus on protecting habitat of terrestrial (land, non-fish) species. Through implementation of the project's Conditions of Approval and the specific biological resources mitigation measures, conflicts with the developing NCCP/HCP are not anticipated, as potential impacts to special-status species have been addressed through a biological site evaluation prepared by Estep Environmental Consulting (August 28, 2016).

V.	CULTURAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☒	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?;

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?; *and*

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact. The construction of the proposed solar project would not be expected to affect any historic, cultural, or paleontological resources known or suspected to occur on the project site. The Yolo County 2030 Countywide General Plan lists the "B.F. Conaway Ranch House," located on the South Site (APN 042-060-005), as a County-Recognized Historical Resource. However, the B.F. Conaway Ranch House was demolished in or around 1997 per Building Permit #96-1218. The project site is not known to have any significant archaeological or paleontological resources as defined by the criteria within the CEQA Guidelines. Yocha Dehe Wintun Nation reviewed the project materials and responded to the County in a letter dated July 21, 2016. Yocha Dehe Wintun Nation is not aware of any known cultural resources near the project site.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. No human remains are known or predicted to exist in the project area. However, the potential exists during construction to uncover previously unidentified resources. Section 7050.5 of the California Health and Safety Code states that when human remains are discovered, no further site disturbance shall occur until the County coroner has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendation concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and the remains are recognized to be those of a Native American, the coroner shall contact the Native American Heritage Commission within 24 hours.

VI.	GEOLOGY AND SOILS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
	1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
	2. Strong seismic groundshaking?				
	3. Seismic-related ground failure, including liquefaction?				
	4. Landslides?				
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c.	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

GEOLOGICAL SETTING

According to the 2030 Countywide General Plan, the only fault in Yolo County that has been identified by the California Division of Mines and Geology (1997) to be subject to surface rupture (within an Alquist-Priolo Earthquake Fault Zone) is the Hunting Creek Fault, which is partly located in a sparsely inhabited area of the extreme northwest corner of the County. Most of the fault extends through Lake and Napa Counties. The other potentially active faults in the County are the Dunnigan Hills Fault, which extends west of I-5 between Dunnigan and northwest of Yolo, and the newly identified West Valley and East Valley Faults (Fault Activity Map of California, California Geological Survey, 2010), which are also not in the vicinity of the proposed project. These faults are not within an Alquist-Priolo Earthquake Fault Zone, and are therefore not subject to surface rupture.

DISCUSSION

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture or 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 California Geological Survey Special Publication 42).

Less than Significant Impact. The project is not located within an Alquist-Priolo Earthquake Special Study Zone. No landforms are known to be on the project site that would indicate the presence of active faults. Several earthquake fault zones are present within the County, and the above-identified faults are within regional proximity, albeit remote, of the project site. However, surface ground rupture along faults is generally limited to a linear zone a few yards wide. Because the project site is not located within an Alquist-Priolo Earthquake Special Study Zone, ground rupture that would expose people or structures at the facility to substantial adverse effects is unlikely to result in any significant impacts.

ii) Strong seismic ground shaking?

Less than Significant Impact. Ground shaking occurs as a result of energy released during faulting, which could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. Any major earthquake damage on the project site is likely to occur from ground shaking, and seismically related ground and structural failures. Local soil conditions, such as soil strength, thickness, density, water content, and firmness of underlying brock affect seismic response. Although known active seismic sources are located within regional proximity to the project site, damage from seismically induced shaking during a major event should be no more severe in the project area than elsewhere in the region. The solar project would be required to be built in accordance with Uniform Building Code requirements, and will be generally flexible enough to sustain only minor structural damage from ground shaking. Therefore, people and structures would not be exposed to potential substantial adverse effects involving strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid. Factors determining the liquefaction potential are the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Liquefaction poses a hazard to engineered structures, as the loss of soil strength can result in bearing capacity insufficient to support foundation loads. The solar project is required to comply with all applicable Uniform Building Code and County Improvement Standards requirements to ensure that risks from ground failure are minimized.

iv) Landslides?

Less than Significant Impact. A landslide involves the downslope transport of soil, rock, and sometimes vegetative material *en masse*, primarily under the influence of gravity. Landslides occur when shear stress (primarily weight) exceeds shear strength of the soil/rock. The shear strength of the soil/rock may be reduced during high rainfall periods when materials become saturated. Landslides also may be induced by ground shaking from earthquakes.

The project site is relatively flat and is in an area of low landslide susceptibility due to the slope class and material strength. Development of the project will be required to comply with all applicable Uniform Building Code and County Improvement Standards. Large landslides are unlikely to occur at the project site, particularly with enough force and

material to expose people or structures on the project site to potentially substantial adverse effects, including the risk of loss, injury, or death.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. The land surface at the project site is relatively flat and would require minimal grading to allow for installation of the solar project. The project is located in an area with little potential for erosion; substantial soil erosion or loss of topsoil is unlikely to occur as the project proposes very little grading and ground disturbance. The proposed solar project would not be expected to result in any new impacts related to erosion. Existing requirements for erosion control, stability of the building site and building code compliance would remain in effect. The Use Permit approval will be conditioned to require that the solar facility comply with all building and electrical codes, and will require detailed grading, geotechnical, erosion and sediment control plans. A site specific geotechnical investigation will be performed prior to construction of the solar project, which will provide the final design recommendations for above ground structures at the project site.

Construction proposed by the project will be subject to a building/grading permit that requires implementation of best management practices to minimize any adverse effects, and a Storm Water Pollution Prevention Plan is required for disturbance of one acre or more. Additionally, the project will require a Flood Hazard Development Permit to ensure that the alteration of the natural floodplain does not otherwise unnaturally divert flood waters or increase flood hazards in other areas. These existing requirements for erosion control, stability of building sites, including flood hazard development, and building code compliance would remain in effect for all phases of project implementation. The proposed solar facility project would not be expected to result in significant impacts related to erosion.

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?

Less than Significant Impact. The project site is not located in an area of unstable geologic materials, and the project is not expected to significantly affect the stability of the underlying materials, which could potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The project proposes no permanent residences, and would not subject people to landslides or liquefaction or other cyclic strength degradation during a seismic event. Landslides and lateral spreading occurrences in Yolo County are typically more prevalent in the Capay Valley along Cache Creek.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

Less than Significant Impact. The existence of substantial areas of expansive and/or corrosive soils has not been documented at the project site. A geotechnical report, along with soil samples, will be required as part of the building permit process. Risks to life and property from project development on expansive soils would be considered less than significant.

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?

Less than Significant Impact. The proposed solar project will not be served by a septic system.

VII.	GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment.	☐	☐	☒	☐
b.	Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	☐	☐	☐	☒
c.	Be affected by climate change impacts, e.g., sea level rise, increased wildfire dangers, diminishing snow pack and water supplies, etc.?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The issue of combating climate change and reducing greenhouse gas emissions (GHG) has been the subject of state legislation (AB 32 and SB 375). The Governor's Office of Planning and Research has adopted changes to the California Environmental Quality Act (CEQA) Guidelines, and the environmental checklist which is used for Initial Studies such as this one. The changes to the checklist, which were approved in 2010, are incorporated above in the two questions related to a project's GHG impacts. A third question has been added by Yolo County to consider potential impacts related to climate change's effect on individual projects, such as sea level rise and increased wildfire dangers.

Yolo County has adopted General Plan policies and a Climate Action Plan (CAP) which addresses these issues. In order to demonstrate project-level compliance with CEQA relevant to GHG emissions and climate change impacts, applications for discretionary projects must demonstrate consistency with the General Plan and CAP. The adopted 2030 Yolo Countywide General Plan contains the following relevant policies and actions:

Policy CO-8.2: Use the development review process to achieve measurable reductions in greenhouse gas emissions.

Action CO-A117: Pursuant to the adopted Climate Action Plan (CAP), the County shall take all feasible measures to reduce its total carbon dioxide equivalent (CO2e) emissions within the unincorporated area (excluding those of other jurisdictions, e.g., UC-Davis, Yocha Dehe Wintun Nation, DQ University, school districts, special districts, reclamation districts, etc.), from 648,252 metric tons (MT) of CO2e in 2008 to 613,651 MT of CO2e by 2020. In addition, the County shall strive to further reduce total CO2e emissions within the unincorporated area to 447,965 MT by 2030. These reductions shall be achieved through the measures and actions provided for in the adopted CAP, including those measures that address the need to adapt to climate change. (Implements Policy CO-8.1)

Action CO-A118: Pursuant to and based on the CAP, the following thresholds shall be used for determining the significance of GHG emissions and climate change impacts associated with future projects:

> 1) Impacts associated with GHG emissions from projects that are consistent with the General Plan and otherwise exempt from CEQA are determined to be less than significant and further CEQA analysis for this area of impact is not required.

2) Impacts associated with GHG emissions from projects that are consistent with the General Plan, fall within the assumptions of the General Plan EIR, consistent with the CAP, and not exempt from CEQA are determined to be less than significant or mitigated to a less than significant level, and further CEQA analysis for this area of impact is generally not required.

To be determined consistent with the CAP, a project must demonstrate that it is included in the growth projections upon which the CAP modeling is based, and that it incorporates applicable strategies and measures from the CAP as binding and enforceable components of the project.

3) Impacts associated with GHG emissions from projects that are not consistent with the General Plan, do not fall within the assumptions of the General Plan EIR, and/or are not consistent with the CAP, and are subject to CEQA review are rebuttably presumed to be significant and further CEQA analysis is required. The applicant must demonstrate to the County's satisfaction how the project will achieve its fair share of the established targets including:

- Use of alternative design components and/or operational protocols to achieve the required GHG reductions; and

- Use of real, additional, permanent, verifiable and enforceable offsets to achieve required GHG reductions. To the greatest feasible extent, offsets shall be: locally based, project relevant, and consistent with other long term goals of the County.

The project must also be able to demonstrate that it would not substantially interfere with implementation of CAP strategies, measures, or actions. (Implements Policy CO-8.5)

DISCUSSION

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

Less than Significant Impact. The proposed solar project could create a small amount of GHG emissions due to the operation of grading equipment and vehicle employee trips generated during construction; however, these emissions would be more than offset by the beneficial effects of creating new sources of renewable energy to the local and state grid of electrical power. The proposed project is not considered to have an individually significant or cumulatively considerable impact on global climate change. The proposed project will provide a sustainable resource supporting onsite agricultural production.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. The proposed solar project would not conflict with any applicable plan, policy or regulation adopted to reduce GHG emissions, including the numerous policies of the adopted 2030 Yolo Countywide General Plan and Climate Action Plan. The proposed solar project would help to implement many of the policies identified to support policies in the General Plan and Climate Action Plan that call for measurable reductions in GHGs through expanded capacity and reliance on renewable energy resources such as solar, wind, biomass, and others. The Climate Action Plan identifies solar energy as one of the most promising options for future renewable energy generation, with photovoltaic systems given favorable regard due to Yolo County's considerable solar energy potential.

c) Be affected by climate change impacts, e.g., sea level rise, increased wildfire dangers, diminishing snow pack and water supplies, etc.?

No Impact. The project is not located in an area of risk for fire or sea level rise. No impacts are expected due to climate change.

VIII.	HAZARDS AND HAZARDOUS MATERIALS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e.	For a project located within 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 for people residing or working in the project area?	☐	☐	☐	☒
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

DISCUSSION

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*;*

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?;

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?; ***and***

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. The solar facility would not use or emit any large amounts of hazardous materials, other than small amounts of lubricating oil. Any stored materials would be required to comply with Yolo County Environmental Health regulations. No schools are located within one-quarter mile of the project site. The project site is not located on a site that is included on a list of hazardous materials sites compiled by the Yolo County Environmental Health Division- Hazardous Waste Site Files pursuant to Government Code Section 65962.5.

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 for people residing or working in the project area?; *and*

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not within the vicinity of a public airport or private airstrip, nor within the boundaries of an airport land use plan. The closest public airport is the Sacramento International Airport, located approximately 7 miles northeast of the project site. The closest private airstrip is the Grower's Air Service facility, located approximately 2 miles west of the project site. Therefore, there would be no safety hazard related to public airports or private airstrips that would endanger people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The location of the solar energy system would not affect any emergency response plan.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is not located in a designated Fire Hazard Severity Zone, and is furthermore located in an area rich in vegetation and surrounded by irrigated farmland and surface water provided by sloughs. Impacts will be negligible.

IX.	HYDROLOGY AND WATER QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site?	☐	☐	☒	☐
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?	☐	☐	☒	☐
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f.	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☒	☐
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

DISCUSSION

a) Violate any water quality standards or waste discharge requirements?

Less than Significant Impact. The proposed project would not discharge any pollutants into the water system, or result in any violations of existing requirements. The applicant has indicated that no hazardous chemicals would be used for the construction or operation of the solar project. The panels would be washed with water only. Water quality standards and waste discharge requirements are not expected to be violated.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-

existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact. The proposed project would not affect any onsite well and would not deplete groundwater supplies or interfere with groundwater recharge. It is anticipated that the solar PV panels would be washed approximately two times per year to remove dust particles and other buildup to ensure optimum solar absorption. Panel cleaning would entail one or two water trucks spraying small amounts of water (approximately 2,000 gallons per MW). More frequent washings may occasionally be required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation? *and*

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?

Less than Significant Impact. The proposed project is located on a relatively flat portion of an agricultural property that has previously been used as farmland (North Site) and equipment storage area (South Site). The ground beneath the solar mounts will remain permeable and the project is not expected to cause additional runoff. The final engineering design for the project will include measures to reduce soil erosion around the concrete pads and solar arrays. The project would not modify any drainage patterns or change absorption rates, or the rate and amount of surface runoff. No additional impacts to water quality are anticipated.

e) 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*

f) Otherwise substantially degrade water quality?

Less than Significant Impact. With the implementation of project construction and site preparation-related Conditions of Approval that address proper drainage improvements, flood protection measures, and storm water pollution controls, the proposed solar project is not expected to cause additional runoff. Impacts to water quality are expected to be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The North Site is located within a 100-year flood plain (Flood Zone A) as mapped by FEMA (Federal Emergency Management Agency). Flood Zone A is a designation given to areas located in a flood hazard area where the base flood level has not been determined. The project does not propose any residential uses. Therefore, no impact would occur.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

Less than Significant Impact. The North Site is located within a 100-year flood plain (FEMA Zone A) and will be required to address flood protection regulations and standards to ensure new development does not impede any flood flows or subject individuals on the project site to risk from flooding. Specifically, the project will be required to meet the requirements of Yolo County Code Section 8-4.501 that define standards of construction in areas of designated flood zones in order to reduce flood hazards. Specifically, these standards of construction address

requirements for anchoring, construction materials and methods, and elevation and floodproofing. Additionally, the project includes a request for a Flood Hazard Development Permit. The Flood Hazard Development Permit will document that the project will adhere to standards of construction in areas of designated flood zones and will ensure no adverse impacts to the surrounding properties. Adherence to flood protection measures will ensure impacts remain less than significant.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than Significant Impact. The project site is not located within a designated dam inundation zone, as defined in the 2030 Yolo Countywide General Plan, however, the project is located within Flood Zone A. The policy framework in the Health and Safety Element of the 2030 Countywide General Plan includes policies and measures for achieving General Plan Goal HS-2: flood hazard protection. These actions are implemented through the County's Flood Protection Ordinance codified in Chapter 4 of Title 8 of the Yolo County Code as identified elsewhere in this Initial Study. The development review process for approval of the project includes standard conditions for protecting people, structures, and personal property from unreasonable risk from flooding and flood hazards (General Plan Policy HS-2.1). As such, new construction is required to adhere to the standards of construction for providing flood protection. These standards ensure that the design and construction of a project will not significantly contribute to cumulative flooding that could pose a hazard to surrounding landowners and/or or the public. Additionally, the project includes a request for a Flood Hazard Development Permit. With the implementation of these standard requirements for development within a floodplain, risk of exposing people or structures to hazards due to flooding will be less than significant.

j) Result in inundation by seiche, tsunami, or mudflow?

No Impact. The project is not located in an area that could potentially pose a seiche or tsunami hazard and is not located near any physical or geologic features that would produce a mudflow hazard.

X.	LAND USE AND PLANNING.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

DISCUSSION

a) Physically divide an established community?

No Impact. The proposed project is located in unincorporated Yolo County and would not divide any established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The Yolo County 2030 Countywide General Plan and Climate Action Plan encourage the installation of renewable energy technologies in order to promote GHG emission reductions (Policy CO-8.5).

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Less than Significant Impact. The County does not have an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP), although a draft plan is now being prepared by the Yolo County Habitat/Natural Community Conservation Plan Joint Powers Agency (the Yolo Habitat Conservancy (YHC)). In accordance with this draft plan, this Initial Study addresses measures to reduce impacts to special status species that have been identified by YHC as possibly occurring at the project site due to the potential for the site to support habitat. See discussion in Section IV (Biological Resources).

XI.	MINERAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

DISCUSSION

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?; *and*

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?

No Impact. The project area is not located within any identified area of significant aggregate deposits, as classified by the State Department of Mines and Geology. Most aggregate resources in Yolo County are located along Cache Creek in the Esparto-Woodland area.

XII.	NOISE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:					
a.	Exposure of persons to or generation of noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Yolo County has not adopted a noise ordinance which sets specific noise levels for different zoning districts or for different land uses in the unincorporated area. Instead, the County relies on the State of California Department of Health Services' recommended Community Noise Exposure standards, which are set forth in the State's General Plan Guidelines (2003). These standards are included in the Yolo County 2030 Countywide General Plan and used to provide guidance for new development projects. The recommended standards provide acceptable ranges of decibel (dB) levels. The noise levels are in the context of Community Noise Equivalent Level (CNEL) measurements, which reflect an averaged noise level over a 24-hour or annual period. The Countywide General Plan identifies up to 75 dB CNEL as an acceptable exterior noise environment for agricultural land uses and up to 60 dB CNEL for residential land uses.

DISCUSSION

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?;
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?;
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?; *and*
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. Construction of the project would generate temporary noise due to the use of heavy construction equipment, which may include use of a backhoe, pile installer, compressor, concrete mixer, concrete vibrator, dozer, front end loader, generator, pneumatic tools, and dump and delivery trucks. The nearest homes (not located on lands owned by the project proponent) are approximately 1,200 feet southwest of the North Site, and one-half mile south of the South Site, respectively. Groundborne vibration levels may be measured similar to noise in vibration decibels (VdB). The 2030 Yolo Countywide General Plan FEIR notes that typical construction vibration levels range from 58 VdB at 25 feet for a small bulldozer and up to 112 VdB for a pile driver. The solar project may require pile driving to anchor the footings, so vibration levels in this upper range may be generated during construction. However, construction activities are not expected to generate vibration levels at the boundaries of the property that will significantly impact the nearest neighbors, since the residence is located far enough away from the construction activities. Long-term noise sources from operation of the project will come from 22 small-scale inverter/distributer transformers per site that would be located within the solar panel fields. This equipment would be mounted to the north piles of the solar array (solar modules would provide shade for them). The distance from the inverters to fence line is approx. 15 feet. The inverter equipment generates low noise emissions (less than 50dBA at 3 meters away), and this fixed noise source decreases at a rate of 6 dBA for every doubling of distance. The inverter/distributer transformers would operate only during daytime hours when the project is generating power.

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 expose people residing or working in the project area to excessive noise levels?; *and*

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant Impact. The proposed project site is not located within an airport land use plan. The project site is located approximately two miles east of the Grower's Air Service facility. However, implementation of the proposed project would not expose individuals to excessive noise levels associated with any nearby airstrip's aircraft operations.

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

DISCUSSION

a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?;

b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?; *and*

c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed solar project would not result in an increase in population growth and would not displace any existing housing or current residents that would necessitate the construction of housing elsewhere.

XIV.	PUBLIC SERVICES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:					
a.	Fire protection?	☐	☐	☒	☐
b.	Police protection?	☐	☐	☒	☐
c.	Schools?	☐	☐	☐	☒
d.	Parks?	☐	☐	☐	☒
e.	Other public facilities?	☐	☐	☐	☒

DISCUSSION

a) Fire protection?

Less than Significant Impact. The project proposes the ongoing management of all combustible vegetation and/or agricultural products on and around the project boundary in order to minimize risk to fire hazards, and the project will be conditioned to ensure vegetation is maintained. The solar equipment will be UL rated and built to NEC (National Electric Code) standards. Additionally, fire extinguishers will be located at each of the major components, and the site will be monitored with a remote system alarm notification. The site will maintain a 20-foot wide access road around the perimeter of the solar panels which would serve as a fire break. If necessary, the applicant has proposed to coordinate with local fire and emergency personnel to provide photovoltaic training and to familiarize responders with the codes, regulations, and associated processes related to solar electricity. The training would include techniques for fire suppression of PV systems. However, such training would not result in the need for new or substantially altered fire facilities, and implementation of the proposed project is not expected to have a significant impact on fire protection services.

b) Police Protection?

Less than Significant Impact. Employees and delivery drivers associated with the proposed facility would slightly increase the demand for police protection services. The Yolo County Sheriff's Department would continue to serve the project site through existing regular patrols and/or resident deputies.

c) Schools?;
d) Parks?; *and*
e) Other public facilities?

No Impact. The proposed solar project will not result in the demand for any new housing and would not generate any additional demand for schools, parks, or other public facilities such as libraries, hospitals, satellite County offices, etc. Prior to issuance of building permits at the project site, any applicable impact fees will be collected.

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

DISCUSSION

a) 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?; *and*

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. The proposed project would not require the construction of additional recreational facilities nor substantially increase the use of existing recreational facilities.

XVI.	TRANSPORTATION/TRAFFIC.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	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?	☐	☐	☒	☐
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e.	Result in inadequate emergency access?	☐	☐	☒	☐
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The roadway network within unincorporated Yolo County consists primarily of two lane roads that are designed to serve small farming communities and agricultural uses. Thus, policies in the 2030 Countywide General Plan encourage inter-and intra-regional traffic to use State and federal interstates and highways, since the primary role of county roads is to serve local and agricultural traffic. The project site is located southwest of the City of Woodland, and is accessed off County Road 103, a two-lane roadway. County Road 103 is not a designated “General Plan roadway” in the 2030 Countywide General Plan.

General Plan roadways are defined as: Minor Two-Lane County Roads, which primarily function as collector roads providing access to adjacent land carrying local traffic; Major Two-Lane County Roads, which function as collector roads that serve travel that is intra-county, carrying traffic between communities and/or other areas of the County; Conventional Two-Lane Highways, which are identified for State-maintained highways used as connectors between major traffic generators or links in State and national highway networks; Arterials, which are fed by local and collector roads to provide intra-community circulation and connection to regional roadways; and Freeways, which are intended to serve both intra-regional and inter-regional travel (Yolo County, 2009).

Level of Service (LOS) is a quantitative measure of traffic operating conditions whereby a letter grade A through F is assigned to an intersection or roadway segment, representing

progressively worsening traffic conditions. LOS A, B, and C are considered satisfactory to most motorists, and allow for the relatively free movement of traffic. LOS D is marginally acceptable, with noticeable delays and unstable traffic speeds. LOS E and F are associated with increased congestion and delay. County Road 103 has not been measured for level of service.

DISCUSSION

a) 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?; *and*

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. The proposed solar project will require a limited number of truck trips to prepare the site for construction, and to install the racking system and assemble the panels. Access to the project would be provided from County Road 103 via County Road 25 and/or County Road 27, with interior access provided by a 20-foot wide perimeter road, maintained to facilitate onsite circulation. Construction of the project is expected to generate 10-25 vehicle trips per date for approximately eight weeks, with crews working five 10-hour work days per week. The number of trips generated during the construction period would not be expected to be substantial in relation to existing traffic loads, and would not exceed any levels of service standards of nearby roads or intersections.

Operation of the project would include occasional maintenance of the solar arrays by one or two employees performing visual inspections and minor repairs. The solar PV panels would be washed approximately two times per year by use of a water truck. Additional traffic from employees monitoring/maintaining the project site would be negligible and impacts are expected to be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project site is located approximately two miles east of the Grower's Air Service airstrip. However, the proposed project does not include any uses that would adversely affect air traffic patterns. Therefore, no impact on air traffic patterns would be anticipated with project implementation.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. See discussion in (a), (b), above. The site is accessed from County Road 103 via County Road 25 and/or County Road 27. No changes to the road system are proposed. Large trucks and construction equipment will be utilized during the construction period, however, such uses are standard on county roads. Therefore, there will be no increase in hazards due to a design feature or incompatible use.

e) Result in inadequate emergency access?

Less than Significant Impact. The project would not result in inadequate emergency access. See discussion in (d), above. The site is accessed from County Road 103. The project does not

propose any development other than the solar facility and related infrastructure. Parking and turn-around access is available onsite.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The project would not result in any permanent features that would affect or alter existing public transit, bicycle, or pedestrian facilities nor interfere with the construction of any planned facilities.

XVII.	UTILITIES AND SERVICE SYSTEMS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☐	☒
e.	Result in a determination by the wastewater treatment provider that 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?	☐	☐	☐	☒
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

DISCUSSION

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?;

e) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?;

f) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?;

g) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

h) Result in a determination by the wastewater treatment provider that 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?;

i) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?; *and*

j) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The proposed solar project would not affect utilities or service systems because solar facilities do not rely on any of these services. Anticipated onsite water use would be limited to approximately 10,000 gallons per year, primarily for washing the PV panels, up to two times per year. Panel washing is typically done with de-ionized water supplied by a water truck. The applicant will tie-in all new drainage improvements to existing drainage facilities and features, as necessary.

XVIII.	MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b.	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.)	☐	☐	☒	☐
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

DISCUSSION

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

Less than Significant Impact. Based on the analysis provided in this Initial Study and the mitigation measures required, the project would not degrade the quality of the environment. As discussed in Section IV, Biological Resources, of this Initial Study, the proposed project could potentially impact raptor foraging habitat for the Swainson's hawk and other raptors, as well as nesting habitat for the Swainson's hawk, other raptors, and burrowing owl. Mitigation Measures proposed as part of the project would reduce impacts to biological resources to less than significant levels so that the habitat and/or range of any special status plants or animals are not endangered. Additionally, the project will be required to comply with Conditions of Approval that regulate construction activity during raptor nesting season, if any nearby nests are identified. No important examples of major periods of California history or prehistory in California were identified. Impacts to biological resources will be less than significant.

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.)

Less than Significant Impact. Based on the analysis provided in this Initial Study, the project would have no significant cumulative impacts. As noted in the analysis, solar energy development will play a key role in reducing the consumption of non-renewable energy in the

county and in California, and solar development projects such as this could contribute to that beneficial cumulative impact to reduce greenhouse gases.

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

Less than Significant Impact. Based on the analysis provided in this Initial Study, impacts to human beings resulting from the proposed project would be less than significant with the implementation of required mitigation and other standard regulations. The project as conditioned would not have substantial adverse effects on human beings, either directly or indirectly, and would be required to comply with Conditions of Approval. Impacts related to all issues discussed in this Initial Study have been determined to be less than significant through the implementation of standard requirements, project design, as well as the mitigation measures identified in Section IV (Biological Resources). Overall impacts from implementation of the project will be less than significant.

References

- Estep Environmental Consulting, 2016. *Biological Site Assessment of Two Proposed Solar Arrays at the Conaway Ranch, Yolo County,* August, 2016
- Project description and application materials provided by applicant
- Project comments submitted by Responsible Agencies, 2016. *Agencies include: California State Department of Conservation, Yolo Habitat Conservancy, Yocha Dehe Wintun Nation*
- USDA Natural Resource Conservation District maps and materials provided by District Conservationist
- Wood Rodgers, 2016. *Conaway Solar Project, 100-Year Floodplain Analysis,* July 12, 2016.
- Yolo County, 1970. *Resolution No. 70-15 (Resolution establishing and/or enlarging Agricultural Preserve 28),* February, 1970
- Yolo County, 1970. *Land Use Contract, Agreement No. 70-192 (Williamson Act Contract),* February 1970.
- Yolo County, 2009. *Yolo County 2030 Countywide General Plan*, adopted November, 2009 and *Yolo County 2030 Countywide General Plan Final EIR*, April 2009
- Yolo County, 1986. *Historic Resources Survey*
- Yolo-Solano Air Quality Management District, 2007. *Handbook for Assessing and Mitigating Air Quality Impacts,* July, 2007.
- Yolo County Zoning Ordinance*, Title 8, Chapter 2 of the County Code*, 2014, as amended

Attachments:
Attachment A – Biological Site Assessment

ATTACHMENT A

Biological Site Assessment of Two Proposed Solar Arrays at the Conaway Ranch, Yolo County

August 28, 2016

Introduction

The Conaway Preservation Group, owner/operator of Conaway Ranch is proposing to construct two approximately 3-acre photo-voltaic (PV) solar arrays on ranch property in western Yolo County (Figure 1). The project is expected to improve the ranch's overall energy efficiency by supplementing its existing electricity delivered through the grid by Pacific Gas and Electric Company (PG&E) with an onsite, emission-free renewable energy source. Conaway Ranch has submitted an application to Yolo County for a Minor Use Permit to construct and operate the solar energy facilities. As part of the permit review process, Yolo County is preparing an environmental document to address potential impacts of the proposed project pursuant to the California Environmental Quality Act (CEQA). Information in this report is intended to inform or be incorporated into the CEQA document to address issues related to biological resources.

Project Location

The two approximately 3-acre project sites (hereafter referred to as North Site and South Site) are located along the east side of County Road 103 between County Road 27 and County Road 25, 1.5 to 2 miles southeast of the City of Woodland. South Site is at the northeast intersection of County Road 103 and County Road 27 (Figure 2). North Site is located approximately 1-mile north of Project A (Figure 3).

Project Description

The energy generated from the two arrays will service electric meters owned by the landowner. Constructed under PG&E's net metering program, the systems are intended to offset a portion of the electricity consumption of the irrigation wells on the Conaway Ranch. The combined systems will provide 2.2 megawatts of electrical energy (1.1 megawatts each), and are expected to produce around 3.5 million kilowatt hours in the first year.

The proposed project consists of the construction, operation and maintenance, and eventual decommissioning of the two solar PV facilities. Project infrastructure includes: solar panels; inverters; transformers; electrical wiring; and an interconnection generation tie line that would interconnect from the project to a local electrical utility transmission line. The solar arrays would be installed in parallel rows separated by approximately 10 feet from edge of panel to edge of

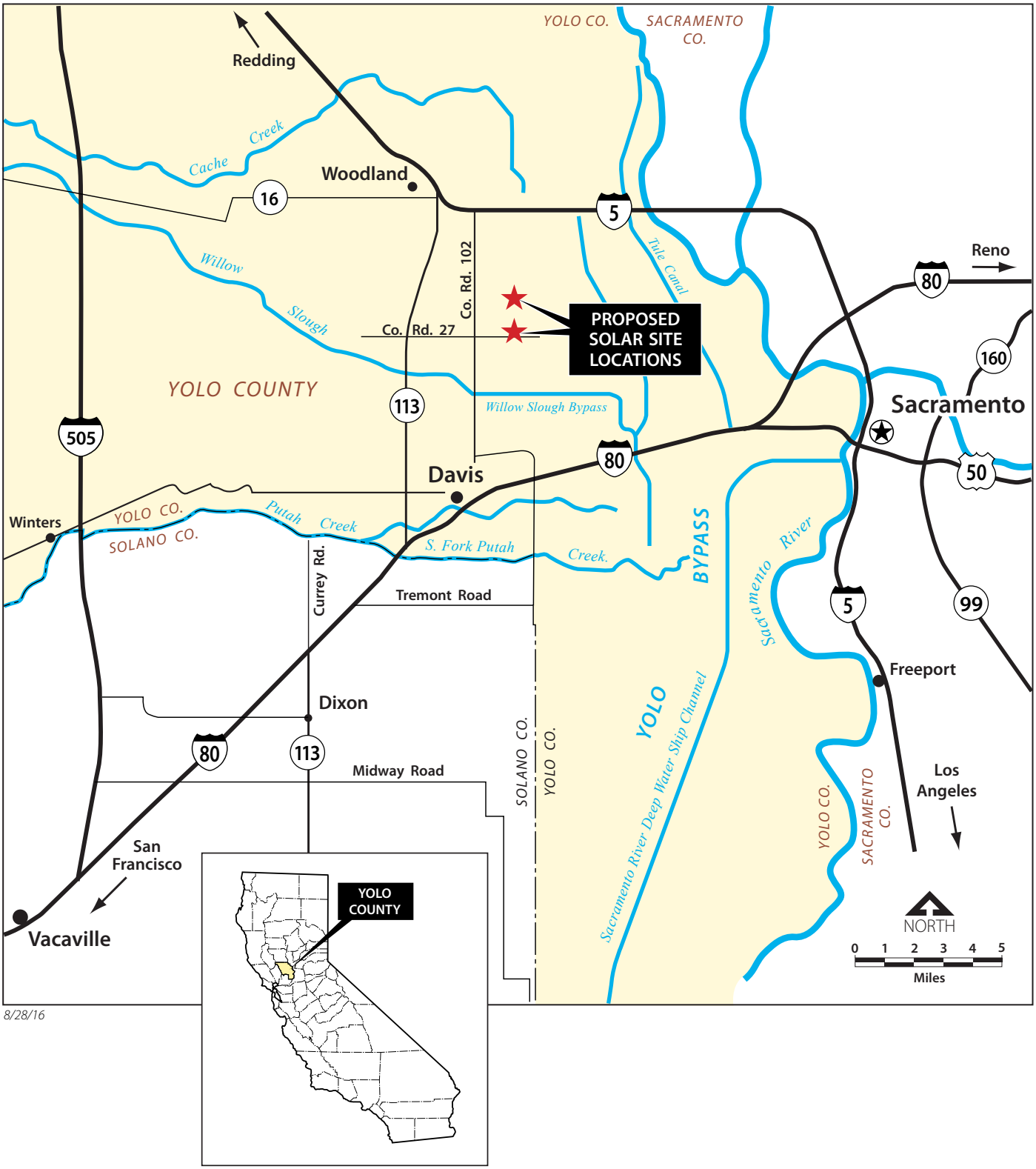


Figure 1
Location of Proposed Conaway Ranch North Site and South Site Solar Projects

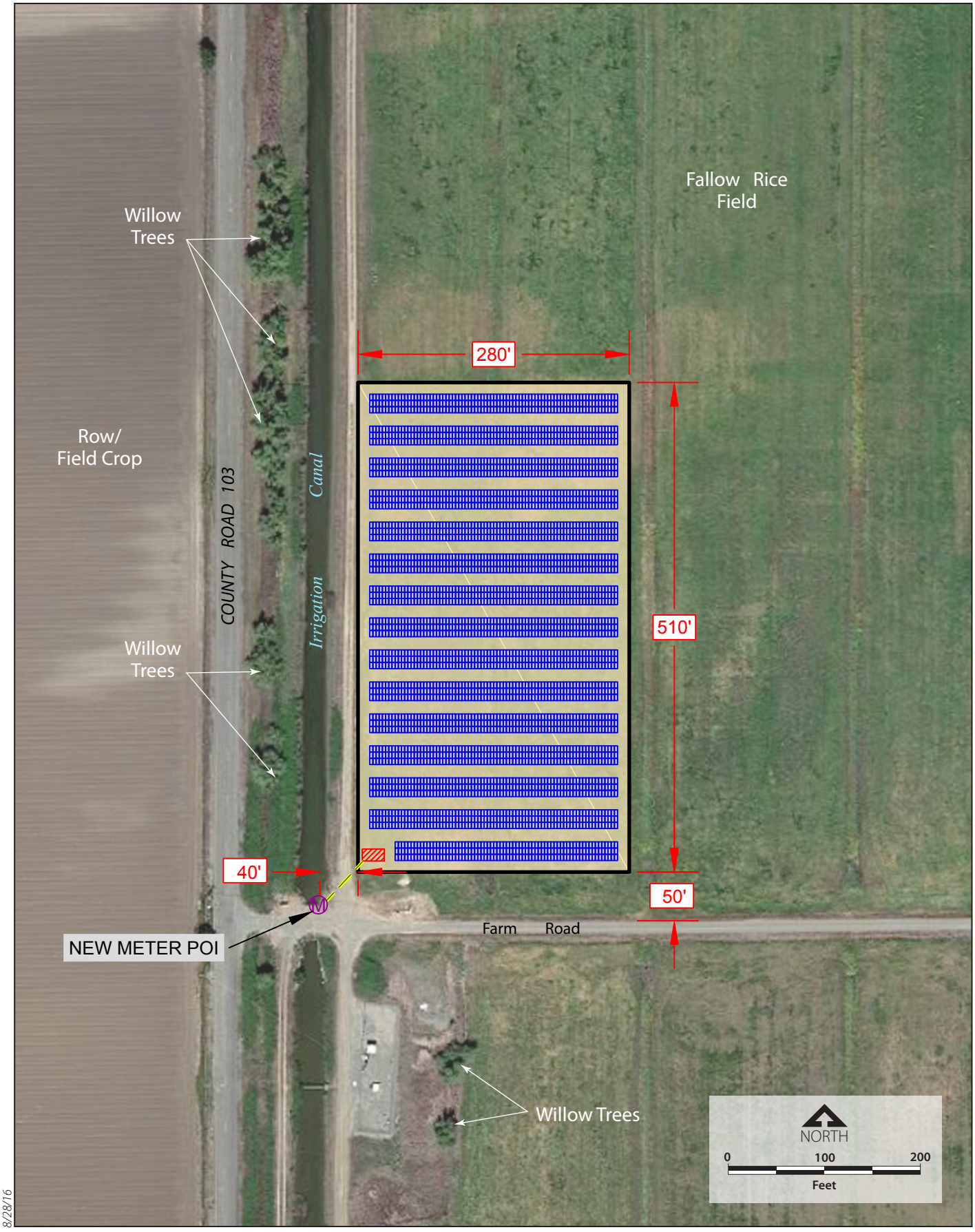


Figure 2
Proposed North Site Solar Project

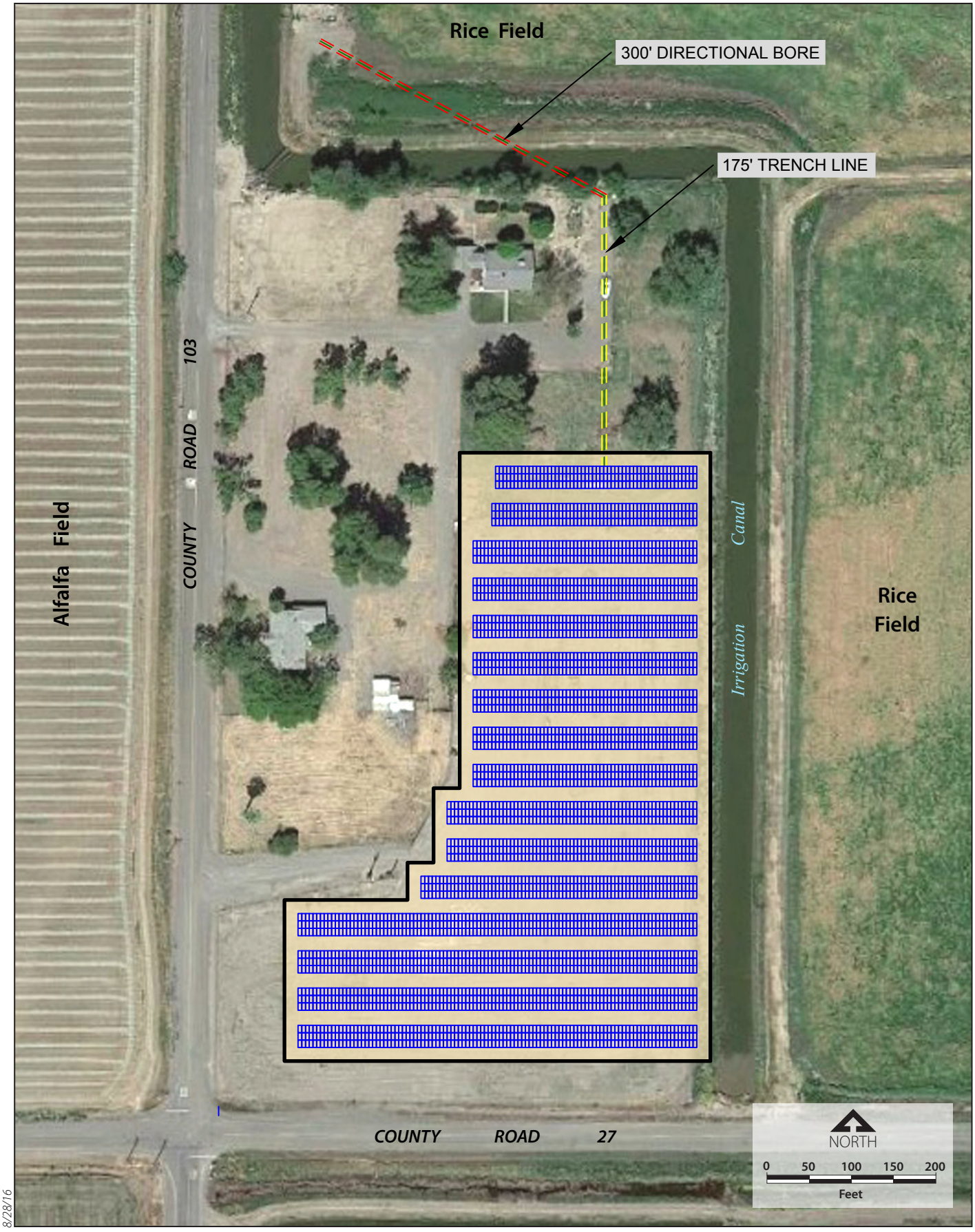


Figure 3
Proposed South Site Solar Project

panel. The North Site array will take up 3.28 acres of a ±640 acre parcel. The South Site array will take up 3.32 acres of a ±640 acre parcel.

Objectives

The objectives of the biological resources site assessment are to:

- Evaluate land use and natural community associations
- Evaluate general wildlife use
- Determine the presence of unique biological resources and sensitive habitats
- Determine the presence, absence, or potential for occurrence of special-status species
- Assess current baseline levels of human use and disturbance
- Assess the potential for and the extent to which proposed project components could significantly impact biological resources relative to the baseline condition pursuant to CEQA definition
- Provide recommendations to minimize the impact of project elements on biological resources.

Methods

Presurvey Investigation

Prior to conducting the site visit, available information regarding biological resources on or near the project area was gathered and reviewed. Sources include:

- California Natural Diversity Data Base;
- Yolo County Habitat Conservation Plan/Natural Community Conservation Plan species accounts and maps;
- Yolo County General Plan,
- Other published and unpublished biological reports, accounts, and research.

Aerial photographs and land use/vegetation maps of the project area and surrounding area were also reviewed.

Field Surveys

I conducted a field assessment of the project sites between approximately 0930 and 1230 hours on August 23, 2016. I inspected each project site on foot to characterize land use, biological resources, and presence of plant communities and wildlife species on each site and in the surrounding landscape. Using binoculars and spotting scope, I documented species occurrences focusing on the potential presence of special-status species. I searched all trees on and within 0.5 miles of each site for evidence of nesting Swainson's hawks (*Buteo swainsoni*), white-tailed kites (*Elanus leucurus*), and other raptors. I assessed the potential for and magnitude of impact from implementation of the proposed project.

Regulatory Framework

Several state and federal laws and regulations are relevant to the proposed project. Each is briefly described below.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that significant environmental impacts of proposed projects be reduced to a less-than-significant level through adoption of feasible avoidance, minimization, or mitigation measures unless overriding considerations are identified and documented.

During the CEQA review process, environmental impacts are assessed and a significance determination provided based on pre-established thresholds of significance. Thresholds are established using guidance from CEQA, particularly Appendix G of the State CEQA guidelines and CEQA Section 15065 (Mandatory Findings of Significance). CEQA guidance is then refined or defined based on further direction from the lead agency.

Consistent with Appendix G of the State CEQA guidelines, a biological resource impact is considered significant (before considering offsetting mitigation measures) if the lead agency determines that project implementation would result in one or more of the following:

- Substantial adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife (CDFW) or US Fish and Wildlife Service (USFWS);
    - A substantial adverse effect on a special-status wildlife species is typically defined as one that would:
        - Reduce the known distribution of a species,
        - Reduce the local or regional population of a species,
        - Increase predation of a species leading to population reduction,
        - Reduce habitat availability sufficient to affect potential reproduction, or
        - Reduce habitat availability sufficient to constrain the distribution of a species and not allow for natural changes in distributional patterns over time.
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or interference with the use of native wildlife nursery sites.
    - Substantial interference with resident wildlife movement is typically defined as obstructions that prevent or limit wildlife access to key habitats, such as water sources or foraging habitats, or obstructions that prohibit access through key movement corridors considered important for wildlife to meet needs for food, water, reproduction, and local dispersal.
    - Substantial interference with migratory wildlife movement is typically defined as obstructions that prevent or limit regional wildlife movement through the project area to meet requirements for migration, dispersal, and gene flow that exceed the defined baseline condition.

Consistent with CEQA Section 15065 (Mandatory Findings of Significance), a biological resource impact is considered significant if the project has 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 an endangered, rare or threatened species.

CEQA defines the significance of an impact on a state-listed species based on the following:

- Appendix G of the State CEQA guidelines states that a biological resource impact is considered significant (before considering offsetting mitigation measures) if the lead agency determines that project implementation would result in "substantial adverse effects, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFG or USFWS"; and
- CEQA Section 15065 (Mandatory Findings of Significance), a biological resource impact is considered significant if the project has the potential to "substantially reduce the number or restrict the range of an endangered, rare or threatened species".

Federal Migratory Bird Treaty Act (MBTA)

The federal Migratory Bird Treaty Act (MBTA) (Title 16, United States Code [USC], Part 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703, 50 CFR 21, 50 CFR 10). Specifically, the MBTA states: "Unless and except as permitted by regulations …it shall be unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, kill … possess, offer for sale, sell … purchase … ship, export, import…transport or cause to be transported … any migratory bird, any part, nest, or eggs of any such bird … (The Act) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior." The word "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect."

Federal Endangered Species Act

The USFWS administers the federal Endangered Species Act (ESA) as it relates to terrestrial wildlife. The ESA requires USFWS to maintain lists of threatened and endangered species and affords substantial protection to listed species. The USFWS can list species as either endangered or threatened. An endangered species is at risk of extinction throughout all or a significant portion of its range (ESA Section 3[6]). A threatened species is likely to become endangered within the foreseeable future (ESA Section 3[19]). Section 9 of the ESA prohibits the take of any fish or wildlife species listed under the ESA as endangered and most species listed as threatened. Take, as defined by the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Harm is defined as "any act that

kills or injures the species, including significant habitat modification." The ESA includes mechanisms that provide exceptions to the Section 9 take prohibitions. For non-federalized projects, Section 10 allows for the issuance of a 10(a)(1)(b) permit to take covered species during otherwise lawful activities with approval of a habitat conservation plan.

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits take of wildlife and plants listed as threatened or endangered by the California Fish and Game Commission. *Take* is defined under the California Fish and Game Code as any action or attempt to "hunt, pursue, catch, capture, or kill." The CESA allows exceptions to the take prohibition for take that occurs during otherwise lawful activities. The requirements of an application for incidental take under CESA are described in Section 2081 of the California Fish and Game Code. Incidental take of state-listed species may be authorized if an applicant submits an approved plan that minimizes and "fully mitigates" the impacts of this take.

California Fish and Game Code 3503.5 (Birds of Prey)

Section 3503.5 of the Fish and Game Code prohibits the take, possession, or destruction of any birds of prey or their nests or eggs. The California Department of Fish and Wildlife may issue permits authorizing take pursuant to CESA.

Yolo County General Plan

The Yolo County General Plan includes numerous policies regulating and emphasizing the protection of natural resources. Those most relevant to the proposed project include the following:

- Policy CO-2.1. Consider and maintain the ecological function of landscapes, connecting features, watersheds, and wildlife movement corridors.
- Policy CO-2.3. Preserve and enhance those biological communities that contribute to the county's rich biodiversity including blue oak and mixed oak woodlands, native grassland prairies, wetlands, riparian areas, aquatic habitat, agricultural lands, heritage valley oak trees, remnant valley oak groves, and roadside tree rows.
- Policy CO-2.38. Avoid adverse impacts to wildlife movement corridors and nursery sites (e.g., nest sites, dens, spawning areas, breeding ponds).
- Policy CO-2.41. Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with applicable local, State, and Federal requirements.
- Policy CO-2.42. Projects that would impact Swainson's hawk foraging habitat shall participate in the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HIP/NCCP Joint Powers Agency, or satisfy other subsequent adopted mitigation requirements consistent with applicable local, State, and federal requirements.

Biological Setting

Description of the Project Sites

South Site. This site historically has been used as a farm yard used for storage of farm equipment. It is entirely graveled and contains no trees, shrubs, or other vegetation (Plates 1 and 2). It supports no wetlands or any unique biological resources. This site is adjacent to two homes that are rented by Conaway Ranch employees. This adjacent area includes small lawns and several trees, including three mature cottonwood (*Populus fremontii*), three walnut (*Juglans hindsii*), and several ornamental pines and palms (Plate 3).

North Site. This site historically has been used for farming, most recently to grow rice. Prior to growing rice, the site was used for several decades to grow upland crops, primarily safflower and vetch. The site was fallowed following the 2013 rice harvest and has been idle for the past three years. The site currently consists of dense agricultural weeds and nonnative grasses typical of the area, including star thistle (*Centaurea solstitialis*), milk thistle (*Silybum marianum*), wild oat (*Avena fatua*) and field bindweed (*Convolvulus arvensis*) (Plates 4 and 5). There are no trees or shrubs on the site. The site supports no wetlands or any unique biological resources. An irrigation canal extends along the west side of the project site adjacent to County Road 103. This canal supports emergent vegetation, consisting primarily of a narrow band of cattail marsh, and a row of willow trees (*Salix* sp) along the west side of the canal adjacent to County Road 103 (Plate 6). A small group of willow trees also occurs immediately south of the site.

Plate 1. Location of the South Site showing the graveled farmyard. Looking west from east side.

Plate 2. South Site looking south from north end. .

Plate 3. South Site looking north toward the north end of the project site toward farm residence and mature trees on adjacent land. .

Plate 4. North Site looking north along the western boundary. The project boundary is the east edge of the farm road.

Plate 5. North Site looking northeast showing weedy vegetation in the fallowed field.

Plate 6. North Site looking north along the irrigation canal bordering County Road 103. Note the narrow band of cattails and the small willow trees. This is outside of the project area

Description of the Surrounding Area

The project site occurs within an intensively-farmed agricultural landscape with rice as the dominant crop type to the east, and alfalfa, rotational crops, and orchards to the west. Natural habitats are limited to stream corridors, such as Willow Slough, which supports a narrow valley oak-dominated riparian corridor approximately 0.6 miles north of the North Site, several managed wetlands on the Conaway Ranch, and several uncultivated parcels that support remnant alkaline sink habitats and associated grasslands such as the Woodland Regional Park located approximately 0.75 miles northwest of the North Site. The surrounding area also includes scattered rural residences, farmyards, and other farm-related structures. Urban development in the City of Woodland is approximately 1.2 miles northwest of the North Site.

General Wildlife Use

South Site. Wildlife use of the South Site is limited to species that can nest or forage in gravel. With the exception of one killdeer (*Charadrius vociferus*), a ground-nesting bird that may have established a nest somewhere on the gravel lot, no wildlife was observed on the South Site during the survey. Species observed using the trees and shrubs on the adjacent lot include mourning dove (*Zenaida macroura*), shrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), western kingbird (*Tyrannus verticalis*), and cliff swallow (*Petrochelidon pyrrhonota*). There is an historic record of a red-tailed hawk (*Buteo jamaicensis*) nest in one of the trees in the adjacent lot, but no evidence of raptor nesting was detected during the site visit.

North Site. As a fallow field, the North Site supports nesting and foraging habitat primarily for agricultural-associated species, including red-wing blackbirds (*Agelaius phoeniceus*), mourning dove, ring-necked pheasant (*Phasianus colchicus*), western meadowlark (*Sturnella neglecta*), and other common species. The emergent wetland and willow trees along the irrigation canal bordering the western edge of the North Site support additional species. Species observed during the site visit in the adjacent canal include red-winged blackbirds, great egret (*Ardea alba*), and green heron (*Butorides virescens*). No raptor nests were found in the willow trees along the adjacent canal or in the small group of trees just south of the site. Other species that could occur on or near the site include black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*). coyote (*Canis latrans)*, striped skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), gopher snake (*Pituophis catenifer*), and other common mammals and reptiles.

Special-Status Species

Special-status species are generally defined as species that are assigned a status designation indicating possible risk to the species. These designations are assigned by state and federal resource agencies (e.g., California Department of Fish and Wildlife, U.S. Fish and Wildlife Service) or by private research or conservation groups (e.g., National Audubon Society, California Native Plant Society). Assignment to a special-status designation is usually done on the basis of a declining or potentially declining population, either locally, regionally, or nationally. To what extent a species or population is at risk usually determines the status designation. The factors that determine risk to a species or population generally fall into one of several categories, such as habitat loss or modification affecting the distribution and abundance of a species; environmental contaminants affecting the reproductive potential of a species; or a variety of mortality factors such as hunting or fishing, interference with man-made objects (e.g., collision, electrocution, etc), invasive species, or toxins.

For purposes of environment review, special-status species are generally defined as follows:

- Species that are listed, proposed, or candidates for listing under the federal Endangered Species Act (50 CFR 17.11 – listed; 61 FR 7591, February 28, 1996 - candidates);
- Species that are listed or proposed for listing under the California Endangered Species Act (Fish and Game Code 1992 Sections 2050 et seq.; 14 CCR Sections 670.1 et seq.);
- Species that are designated as Species of Special Concern by CDFW;
- Species that are designated as Fully Protected by CDFW (Fish and Game Code, Section 3511, 4700, 5050, and 5515;
- Species included on Lists 1B or 2 by the California Native Plant Society;
- Species that meet the definition of rare or endangered under CEQA (14 CCR Section 15380).

Table 1 indicates the special-status species that have potential to occur on or in the vicinity of the project, along with their habitat association, the availability of habitat on the project site, and whether or not the species has been detected on the project site.

Table 1. Special-status species with potential to occur in the vicinity of the project site.

Species	Status State/ Federal	Habitat Association	Habitat Availability on the Project Site	Observed Onsite During Survey	Reported Occurrence on the Project Site
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	-/T	Elderberry shrubs	None	No	No
Western pond turtle *Actinemys marmorata*	CSC/-	Streams, ponds, water conveyance channels	None	No	No
White-tailed kite *Elanus leucurus*	FP/-	Nests in trees, hunts in fields, grasslands, and wetlands	Suitable foraging habitat – North Site	No	No
Swainson's hawk *Buteo swainsoni*	T/-	Nests in trees, hunts in grassland and cultivated fields	Suitable foraging habitat – North Site	No	No
Mountain plover *Charadrius montanus*	CSC/PT	Short grassland, plowed fields	None	No	No
Northern harrier *Circus cyaneus*	CSC/-/-	Grasslands, pastures, fields, seasonal wetland	Suitable nesting and foraging habitat – North Site	No	No
Burrowing owl *Athene cunicularia*	CSC/-/-	Grasslands, field edges with ground squirrel activity	Marginally suitable habitat perimeter of both sites	No	No
Loggerhead shrike *Lanius ludovicianus*	CSC/-/-	Grasslands, agricultural areas	Suitable foraging habitat – North Site; trees nearby but offsite	No	No
Tricolored blackbird *Agelaius tricolor*	CSC/-/-	Marsh, bramble, thickets, silage, grasslands, pastures	No nesting; suitable foraging habitat – North Site.	No	No
Palid bat *Antrozous pallidus*	CSC/-/-	Grasslands, shrub lands, woodlands.	Aerial foraging habitat – both sites	No	No
Townsends big-eared bat *Corynorhinus townsendii*	CSC/-/-	Caves, bridges, buildings, rock crevices. tree hollows	Aerial foraging habitat – both sites	No	No
Western red bat *Lasiurus blossevillii*	-/CSC/-	Large trees, woodlands, grasslands and cultivated fields	Aerial foraging habitat – both sites	No	No
Palmate-bracted birds beak *Chloropyron palmatum*	E/E	Alkali playa/meadow	None. Occurs in Woodland Regional Park, 0.7 mile NW	No	No

Species	Status State/ Federal	Habitat Association	Habitat Availability on the Project Site	Observed Onsite During Survey	Reported Occurrence on the Project Site
Brittlescale *Atriplex depressa*	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs in Woodland Regional Park, 0.7 mile NW	No	No
San Joaquin spearscale *Atriplex joaquiniana*	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs in Woodland Regional Park.	No	No
Rose mallow *Hibiscus lasiocarpus*	-/-/2	Freshwater marshes, riparian	None. Occurs in Woodland Regional Park.	No	No
Alkali milkvetch (*Astraglus tener*)	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs at Woodland Regional Park.	No	No
Heckard's peppergrass (*Lepidium latipes*)	-/-/1B	Alkali playa, vernal pools, valley grasslands	None. Occurs at Woodland Regional Park.	No	No

T=threatened; E=Endangered; PE=Proposed Threatened; CSC=California species of species concern; FP=state fully protected; 1B=CNPS threatened or endangered in California; 2=CNPS

Valley Elderberry Longhorn Beetle. The valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is a medium-sized woodboring beetle, about 0.8 inches long. Endemic to California's Central Valley and watersheds that drain into the Central Valley, this species' presence is entirely dependent on the presence of its host plant, the elderberry shrub (*Sambucus* spp.). VELB is a specialized herbivore that feeds exclusively on elderberry shrubs, the adults feeding on leaves and flowers, and the larvae on the stem pith. Habitat for VELB consists of elderberry shrubs with stems greater than 1 inch in basal diameter. Elderberry grows in upland riparian forests or savannas adjacent to riparian vegetation, but also occurs in oak woodlands and savannas and in disturbed areas. It usually co-occurs with other woody riparian plants, including valley oak, Fremont cottonwood, various willows, and other riparian trees and shrubs (Barr 1991, U.S. Fish and Wildlife Service 1984, Collinge et al 2001).

There are no elderberry shrubs on or near either of the project sites and therefore no potential for VELB occurrence. The nearest reported occurrence of VELB is along the Sacramento River, over six miles west of the project sites (CNDDB 2015).

Western Pond Turtle. Western pond turtles (*Actinemys marmorata*) are closely associated with permanent water bodies, such as lakes, ponds, slow moving streams, and irrigation canals that include down logs or rocks basking sites, and that support sufficient aquatic prey. Western pond turtles also require upland habitat that is suitable for building nests and to overwinter. Nests are constructed in sandy banks immediately adjacent to aquatic habitat or if necessary, females will climb hillsides and sometimes move considerable distances to find suitable nest sites (Jennings and Hayes 1994).

There are no water bodies, streams, or suitable conveyance channels (e.g., permanent water) on or near either project site and therefore no potential for western pond turtle to occur. The nearest potential habitat for western pond turtles is along Willow Slough, north of the North Site.

Mountain Plover. Unlike most other plover species, the mountain plover (*Charadrius montanus*) is an upland species, often found far from water. The mountain plover does not breed in California, but does occur during the winter. The species arrives on its wintering grounds in California from November through December where it remains through March. The wintering habitat of mountain plovers in the Central Valley has been described as pastureland nearly devoid of vegetation, sparsely vegetated fields, grazed grasslands and disked agricultural fields The species occurs only in areas either devoid of or with very sparse and short vegetation (Stoner 1942, Manolis and Tangren 1975, Hunting et al. 2001, Hunting and Edson 2008).

Mountain plovers are uncommon, localized winter visitors to Yolo County. Small flocks have been observed in recently-plowed agricultural fields near Woodland and Davis, especially along County Roads 16, 25, 27, and 102 and in unflooded portions of the Yolo Bypass. Neither project site supports habitat typical of this species and therefore there is no potential for occurrence.

Swainson's Hawk. The Swainson's hawk is a medium-sized raptor associated with generally flat, open landscapes. In the Central Valley it nests in mature native and nonnative trees and forages in grassland and agricultural habitats. Although a state-threatened species, the Swainson's hawk is relatively common in Yolo County due to the availability of nest trees and the agricultural crop patterns that are compatible with Swainson's hawk foraging. Numerous nest sites have been documented in Yolo County (Estep 2008).

There is no potential nesting habitat on either project site. There is suitable, but unoccupied nesting habitat near each project site and there are numerous reported nest sites in the vicinity of the project sites. The nearest reported occurrences are 0.5 miles west of the North Site and 0.8 miles northwest of the South Site. There are 10 reported nest sites within 1 mile of the North Site and three reported nest sites within one mile of the South Site (Estep 2008). Since it consists entirely of gravel, the South Site does not support foraging habitat; however, in its fallow condition, the North Site does support suitable foraging habitat.

White-tailed kite. The white-tailed kite is a highly specialized and distinctively-marked raptor associated with open grassland and seasonal wetland landscapes. It typically nests in riparian forests, woodlands, woodlots, and occasionally in isolated trees, primarily willow, valley oak, cottonwood, and walnut) and some nonnative trees. It forages in grassland, seasonal wetland, and agricultural lands, but is more limited in its use of cultivated habitats compared with the Swainson's hawk. As a result, the species occurs throughout most of Yolo County, but in low breeding densities (Dunk 1995, Erichsen 1995, Estep 2008).

Neither project site supports nesting habitat for the white-tailed kite; however, like the Swainson's hawk, some trees adjacent to the project site are suitable for kite nesting. Few nesting white-tailed kites have been reported from the immediate area. The nearest reported nest site is approximately 0.6 miles northwest of the North Site along Willow Slough. Another reported nest site is approximately two miles south of the South Site along the Willow Slough Bypass. The South Site does not support foraging habitat for this species, but in its current fallow condition, the North Site does support suitable foraging habitat. .

Northern harrier. The northern harrier (*Circus cyaneus*) is a ground-nesting raptor, constructing rudimentary nest sites on the ground in marsh, grassland, and some agricultural habitats, particularly grain fields. They forage in seasonal wetland, grassland, and agricultural habitats for voles and other small mammals, birds, frogs, and small reptiles, crustaceans, and insects. They also roost on the ground, using tall grasses and forbs in wetlands, or along wetland/field borders for cover (MacWhirter and Bildstein 1996).

The South Site supports neither nesting or foraging habitat for this species; however, in its current fallow condition, the North Site supports suitable nesting and foraging habitat. The species was not observed during the site visit and there are no nesting records from the project sites or neighboring fields (CNDDB 2015)

Western Burrowing Owl. The western burrowing owl (*Athene cunicularia*) occurs in open, dry grasslands, agricultural and range lands, and desert habitats. In the Central Valley, they are associated with remaining grassland habitats, pasturelands, and edges of agricultural fields. They also occur in vacant lots and remnant grassland or ruderal habitats within urbanizing areas. Historically nesting in larger colonies, due to limited nesting habitat availability most of the more recent occurrences are individual nesting pairs or several loosely associated nesting pairs. The burrowing owl is a subterranean-nesting species, typically occupying the burrows created by California ground squirrels *(Otospermophilus beecheyi)*. They also occupy artificial habitats, such as those created by rock piles and occasionally in open pipes and small culverts. They forage for small rodents and insects in grassland and some agricultural habitats with low vegetative height. Key to burrowing owl occupancy are grassland or ruderal conditions that maintain very short vegetative height around potential nesting sites. They will generally avoid otherwise suitable grassland habitats if vegetation exceeds 12 inches in height (Gervais et al. 2008).

In Yolo County, burrowing owls occur mainly in the grassland and pasture habitats of the southern panhandle and in cultivated and ruderal habitats in the Davis area. Nesting and wintering occurrences have also been reported from the area immediately north of Winters and elsewhere and along the grassland foothills on the west side of the valley. Isolated occurrences have also been reported from cultivated lands in the interior of the county. There is no suitable habitat for burrowing owls on either site. The South Site is entirely graveled and the dense and tall vegetation on the North Site precludes burrowing owl occurrence. However, there is marginal potential for occurrence along roadside or field berms around the perimeter of both sites. None have been reported from the immediate vicinity of the project sites (CNDDB 2015). The nearest reported occurrences are approximately 1.7 miles north of the North Site just south of the City of Woodland water treatment facility and two miles south of the South Site along the Willow Slough Bypass.

Loggerhead Shrike. The loggerhead shrike (*Lanius ludovicianus*) occurs in open habitats with scattered trees, shrubs, posts, fences, utility lines, or other perches. It nests in small trees and shrubs and forages for small rodents, reptiles, and insects in pastures and agricultural lands. It has been reported from numerous locations in Yolo County (CNDDB 2015), including the grassland and oak savannah foothills along the western edge of the valley. .

Neither project site supports nesting or roosting habitat for loggerhead shrike. Trees on adjacent lots do support suitable nesting habitat, but no nesting occurrences have been reported and neither the species nor evidence of nesting were detected during the site visit. The South Site also does not support foraging habitat; however, in its current fallowed condition, the North Site does support suitable foraging habitat for this species.

Tricolored Blackbird. Although currently designated as a state species of special concern, the legal status of the tricolored blackbird (*Agelaius tricolor*) has recently been under review by the CDFW and the USFWS. The species was emergency listed as endangered under the state endangered species act in December 2014, which expired in December 2015. The species is currently under review for a permanent state listing. The species is also currently under review by the USFWS following a 90-day finding that formal federal listing may be warranted.

The tricolored blackbird nests in colonies from several dozen to several thousand breeding pairs. They have three basic requirements for selecting their breeding colony sites: open accessible water; a protected nesting substrate, including either flooded or thorny or spiny vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony. Nesting colonies are found in freshwater emergent marshes, in willows, blackberry bramble, thistles, or nettles, and in silage and grain fields. Suitable foraging habitat includes grasslands, pasturelands, seasonal wetlands, and some cultivated habitats (Beedy and Hamilton 1999).

Neither project site supports breeding habitat for this species. Tricolored blackbirds could potentially forage on the north site, but there is no suitable foraging habitat on the South Site. There is no breeding habitat in the immediately vicinity of either site, but there is a nearby breeding colony approximately 0.9 miles north of the North Site on Conaway Ranch land at the corner of County Road 103 and County Road 25. A wetland area is maintained by Conaway Ranch at this location to support continued nesting of the breeding colony. The wetland is part of a 224-acre conservation easement granted to the State of California that includes surrounding foraging habitats. The conservation easement area extends southward to approximately 0.3 miles north of the North Site

Special-status Bats. Three special status bats potentially occur in the vicinity of the project site, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii townsendii*), and western red bat (*Lasiurus blossevillii*), all state species of special concern. Pallid bat occurs primarily in shrublands, woodlands, and forested habitats, but also can occur in grasslands and agricultural areas. Townsends's big-eared bat occurs in a variety of woodland and open habitats, including agricultural areas. Western red bat occurs in wooded habitats, including orchards, and grasslands. Pallid bat and Townsend's big-eared bat roost in mines, caves, rocky crevices, large hollow trees, and occasionally in large open buildings that are usually abandoned or infrequently inhabited. Western red bat usually roosts in large trees (Pierson and Rainey 1998, Pierson 1998, Fellers and Pierson 2002, Pierson et al. 2006)

Neither project site supports roosting habitat for these species. The nearest potential roosting habitat is along Willow Slough, 0.6 miles north of the North Site. All species could potentially forage over either site.

Special-Status Plants. Six special-status plant species have potential to occur in the vicinity of the project sites. Rose mallow (*Hibiscus lasiocarpus*) occurs in marshes and riparian habitats, neither of which occurs on the project site. Therefore, there is no potential for this species to occur.

The remaining five species, palmate-bracted bird's beak (*Cordylanthus palmatus*), brittlescale (*Atriplex depressa*), San Joaquin spearscale (*Atriplex joaquiniana*), alkali milkvetch (*Astraglus tener*), and Heckard's peppergrass (*Lepidium latipes*) occur in alkali sink habitats. Prior to agricultural and urban conversion the alkali sink natural community was more widespread in the area, occurring throughout much of the area east and southeast of the City of Woodland. Remaining patches occur primarily between County Road 24 south to Willow Slough and east to County Road 103 (Figure 2). Two of these remnant patches are currently managed as alkali sink preserves, Woodland Regional Park and Alkali Grasslands Preserve, both located near County Road 25 and County Road 102, within 0.75 miles of the North Site. Recent surveys of these sites have detected occurrences of all four species noted above (Dean 2009, Center for Natural Lands Management (http://www.cnlm.org).

Because its entirely graveled, the South Site has no potential to support special-status plants. Although the North Site may have historically supported habitat for alkali sink plants, its conversion to agricultural uses many decades ago precludes occurrence of these species.

Project Impacts

Loss of Habitat

The proposed project will remove a total of 3.32 acres of graveled farmyard at the South Site and 3.28 acres of fallow agricultural land at the North Site. Adjacent offsite habitats, including the irrigation canal and associated emergent wetland and willow trees adjacent to the North Site and the rural residential trees adjacent to the South Site, will not be disturbed by project construction or operation. Because of the small number of acres, low habitat value, and the lack of any unique biological communities, habitat conversion to a solar array does not represent a significant impact pursuant to CEQA and would not be in conflict with any General Plan Policy. Habitat removal or conversion would not affect resident or migratory wildlife movement, would not substantially degrade the quality of the environment or reduce the habitat of wildlife species, and would not cause wildlife populations to drop below self-sustaining levels.

Special-status Species

Valley Elderberry Longhorn Beetle. The proposed project will not result in impacts to this species.

Western Pond Turtle. The proposed project will not result in impacts to this species.

Mountain Plover. The proposed project will not result in impacts to this species.

Swainson's Hawk The proposed project will convert 3.28 acres of fallow agriculture land, considered suitable foraging habitat for the Swainson's hawk, to a solar array. This does not represent a significant loss of Swainson's hawk foraging habitat in Yolo County. However, it is subject to the conditions in General Plan Policy CO-2.42, which requires the applicant to provide compensatory mitigation according to the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County .

White-tailed Kite. The proposed project will convert 3.28 acres of fallow agricultural land, considered suitable foraging habitat for the white-tailed kite, to a solar array. Although not considered significant, adhering to the condition in Policy CO-2.42 for the Swainson's hawk will also address foraging habitat impacts to this species.

Northern Harrier. The project will convert 3.28 acres of fallow agricultural land, considered suitable nesting and foraging habitat for the northern harrier, to a solar array. The small number of acres does not represent a significant loss of nesting or foraging habitat for this species. However, adhering to the condition in Policy CO-2.42 for the Swainson's hawk will also address foraging habitat impacts to this species. In addition, possible nest destruction or mortality should be avoided for this ground-nesting species by implementing pre-construction surveys for construction that occurs in subsequent years, and construction timing restrictions if active nests are found.

Western Burrowing Owl. The project will convert 3.28 acres of fallow agricultural land that is not currently considered suitable habitat for the burrowing owl to a solar array. Because the species is not known to occur on the project site and because the site is not currently considered suitable habitat, this does not constitute a significant impact to this species. However, in the event construction occurs in subsequent years when habitat conditions may be more suitable, possible nest destruction or mortality should be avoided by implementing pre-construction surveys and implementing standard avoidance measures if the site becomes occupied. .

Loggerhead Shrike. The conversion of 3.28 acres of agricultural land, considered suitable foraging habitat for loggerhead shrike, to a solar array does not constitute a significant impact to this species.

Tricolored Blackbird. The project will convert 3.28 acres of agricultural land that is suitable foraging habitat for the tricolored blackbird. This small number of acres does not constitute a significant loss of suitable foraging habitat for this species. The project site is sufficiently distant from the breeding colony north of Willow Slough to avoid any disturbances to the colony.

Special-Status Bats. The conversion of 3.28 acres of agricultural land to a solar array does not constitute a significant impact to these species.

Special-Status Plants. No special-status plants occur on either project site and thus the projects will have no impact on these species.

Conclusions and Recommendations

There are no direct impacts associated with the South Site due to the lack of habitat on the site. The small amount of habitat conversion on the North Site also does not represent a significant removal of habitat, but compensatory mitigation for this loss will be required to address the loss of Swainson's hawk foraging habitat pursuant to General Plan Policy CO-2.42.

All other potential biological impacts are associated with potential for occurrence of special-status species on and adjacent to the sites prior to construction of the solar arrays. At both project sites, there is potential for Swainson's hawks and white-tailed kites to nest in trees near the project sites. To avoid disturbance to breeding sites of these species and to avoid violation of the state endangered species act and Fish and Game Code 3503.5, preconstruction surveys should be conducted to determine presence or absence. If species are found to be present during the breeding season, set-backs should be established to avoid disturbance and possible nest abandonment.

Similarly, at the North Site there is also potential for northern harriers and to a lesser extent burrowing owls to occur within the project area. Preconstruction surveys should also be conducted at the North Site to determine presence or absence of these species within and near the project footprint. If found, set-backs should be established to avoid disturbance and possible nest abandonment or destruction.

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