

YOLO COUNTY COMMUNITY SERVICES DEPARTMENT

INITIAL STUDY / NEGATIVE DECLARATION ZONE FILE # 2016-0062

SUNPOWER YOLO RESEARCH CENTER TENTATIVE PARCEL MAP AND REZONING

February, 2017

Initial Environmental Study

- **1. Project Title:** Zone File #2016-0062 (SunPower Tentative Parcel Map and Rezoning)
- 2. Lead Agency Name and Address:

Yolo County Community Services Department 292 West Beamer Street Woodland, CA 95695

3. Contact Person, Phone Number, E-Mail:

Eric Parfrey, Principal Planner 530-666-8043 eric.parfrey@yolocounty.org

- **4. Project Location:** The project site is located south of the City of Davis at 28058 Mace Boulevard (APN: 069-010-008). See Figure 1, Vicinity Map.
- 5. Project Sponsor's Name and Address:

Kyle Cobb SunPower Corp. 27993 Mace Blvd. Davis, CA 95618

6. Land Owner's Name and Address:

John Martin 28150 Mace Blvd. Davis, CA 95618

- 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: agriculture
- **11. Other public agencies whose approval is required:** Yolo County Public Works Division; Yolo County Board of Supervisors
- **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 Subdivision Ordinance.

Project Description

The project is a request for a Tentative Parcel Map and rezoning. The applicant is SunPower Corporation (Kyle Cobb), and the landowner (John Martin). The application involves an 83-acre parcel, a small portion of which (16 acres) is located in Solano County (see Vicinity Map, Figure 1).

The applicant proposes to subdivide 6 acres off from the main parcel and rezone it from Agricultural Intensive (A-N) to Agricultural Industrial (A-I) (see Figure 2, Tentative Parcel Map). The remaining 77 acres would be designated a "remainder" on the Tentative Parcel Map and remain zoned A-N (approximately 61 acres in Yolo County) and A-40 (16 acres in Solano County). The Assessor Parcel Number in Yolo County is 069-010-008.

The 6 acres proposed for rezoning is not currently farmed (see Figure 3, Aerial of Site and R&D Center). SunPower is currently leasing the 6 acres from the agricultural landowner (Martin). The applicant SunPower previously received approval of a Site Plan Review (ZF 2015-0012) in April 2015, to construct an agricultural support facility called the SunPower Yolo Research Center, on 3 acres (see Figure 4, Research Center Drawings). A 14,000 square foot barn with offices is now under construction (see Figure 5). The barn will house up to forty employees focused on developing innovative ways to integrate solar arrays with agricultural uses.

The applicant states that the reason for the proposal to create the 6-acre parcel is because "SunPower's project nearly failed before it started because financing is not available when leasing a portion of a larger parcel -- this process led us to explore a split off of the lots outlined in this proposal."

The applicant notes in their application that "SunPower's business activities represent cutting-edge research that could benefit Yolo County and the agriculture industry more broadly, and do so at no cost to surrounding crop production on the Western side of the larger parcel. SunPower has leased the land from the Martin family for 30 years (because they cannot purchase the lot unless it is separated), and has invested over \$2M to construct a state-of-the-art research facility with farmhouse-style construction that preserves the look and feel of the countryside."

Research that is performed at the site includes the evaluation of agricultural production, i.e., row crops, under partial shade from solar trackers at the on-site 100 kW PV installation. The application states that "Agricultural research and (hopefully) commercial production will be part of the operations long-term. Much of the research is based around understanding the coexistence of solar and ag. This research will take place alongside other solar technology research and energy production studies, technology innovation in various areas (i.e. energy storage, robotics) and typical day-to-day office work."

The applicant states they are currently considering an agricultural easement that would be attached to the property that would limit the 6-acre parcel from being used for some of the more 'industrial' activities outlined in the Zoning Ordinance. The applicant is also implementing a landscape buffer from the edge of the road, height restrictions on new buildings, operations and noise limitations and no new access onto Mace Blvd.

The proposed rezoning, parcel map, and planned solar research uses are consistent with applicable General Plan policies and will be consistent zoning regulations following the rezoning. The Zoning Code states that "The Agricultural Industrial (A-I) Zone is applied to land in the rural areas for more intensive processing and industrial-type uses, which are directly related to the local agricultural industry. Minimum parcel size in the A-I Zone shall be adequate enough to support the use, with a minimum of five (5) acres." See further discussion in Sec. II of this Initial Study.

FIGURE 1

VICINITY MAP

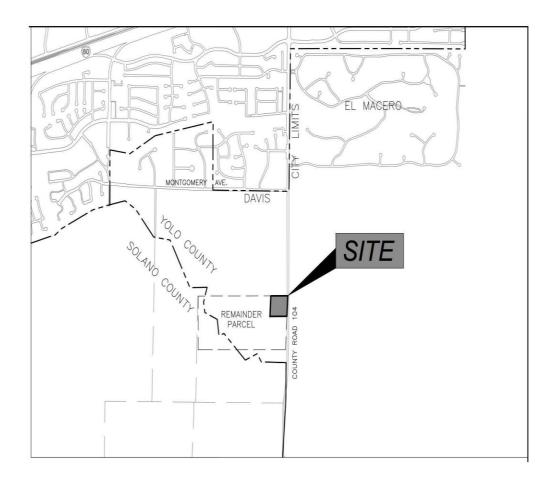


FIGURE 2 TENTATIVE PARCEL MAP

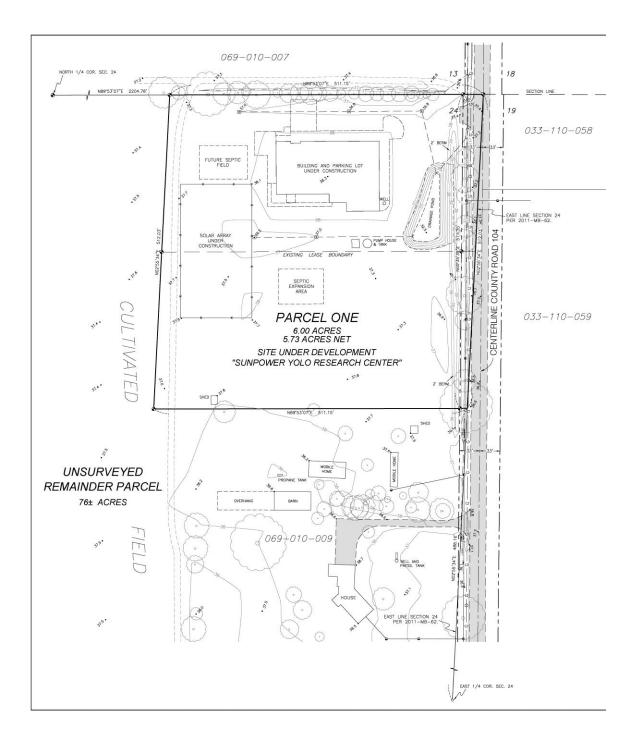


FIGURE 3

AERIAL OF SITE AND RESEARCH CENTER

Location of Yolo Research Center under construction

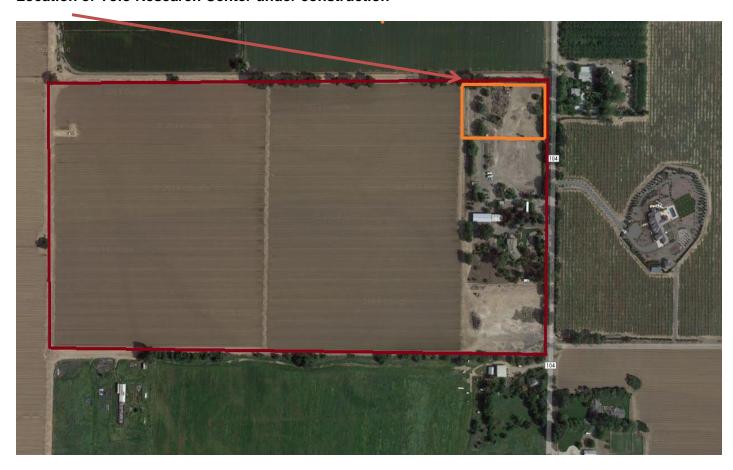


FIGURE 4

ELEVATION DRAWINGS OF RESEARCH CENTER

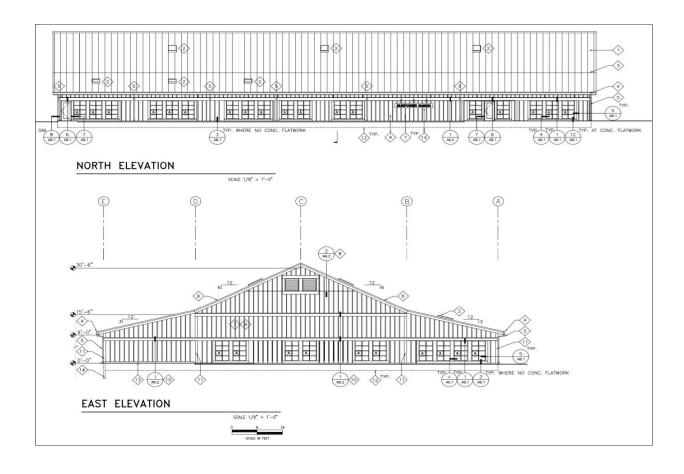


FIGURE 5

RESEARCH CENTER UNDER CONSTRUCTION (NOVEMBER 2016)



Environmental Factors Potentially Affected

The environmental factors checked below could potentially be affected by this project, involving at least two impacts that are 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 evalua	ation:						
\boxtimes	I find that the proposed pr NEGATIVE DECLARATION		COULD NOT have a significant prepared.	effec	t on the environment, and a			
	not be a significant effect in	this ca	project could have a significant e ase because revisions to the proje ATED NEGATIVE DECLARATION	ct ha	ve been made by or agreed to			
	I find that the proposed ENVIRONMENTAL IMPACT		ct MAY have a significant effe ORT is required.	ect o	n the environment, and an			
	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.							
					Eric Parfrey			
Pla	anner'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 onsite, 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
Wou	ld the project:				
a.	Have a substantial adverse effect on a scenic vista?				\boxtimes
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?				

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

No 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, and the project would not substantially degrade the existing visual character of the surrounding vicinity, which includes expansive views of flat agricultural lands with varying crops, including some orchards, as well as the south fork of Putah Creek.

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

No Impact. The 6-acre parcel to be created by the Tentative Parcel Map (TPM) and rezoning includes the SunPower Yolo Research Center, on 3 acres, a 14,000 square foot barn with offices that is now under construction. The applicants do not anticipate any further building construction on the remaining 3 acres, which is now used for crop production. However, the existing Research Center and future construction of other accessory buildings could produce additional sources of light to the surrounding agricultural area. Any future development of the parcel will require a lighting plan before building permits are issued. Any new lighting would be required to be low-intensity and shielded and/or directed away from adjacent properties, public right-of-way, and the night sky.

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?			\boxtimes	
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?				\boxtimes
е.	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?				

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?

No Impact. The 83-acre parcel consists of Reiff very fine sandy loam, a Class I prime soil with a Story index of 98. The California Department of Conservation designates most of the parcel that is under active cultivation by the Martin family as "Prime Farmland." However, approximately 13 acres of the 83-acre parcel along Mace Blvd. is designated "Other Lands." The "Other Lands" designation is applied by the Department of Conservation to identify non-productive lands that include rural residential uses, semi-agricultural and rural commercial land, and vacant or disturbed land. The proposed 6-acre lot is within the area designated "Other Lands." The existing 83-acre parcel is not under an active Williamson Act contract. The project will not convert any "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance" to a non-agricultural use.

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

Less than Significant Impact. The proposed project is located on A-N (Agricultural Intensive) zoned property. The property is not under a Williamson Act contract.

The proposed rezoning, parcel map, and planned solar research uses are consistent with applicable General Plan policies and will be consistent with zoning regulations following the rezoning, with the exception of the minimum parcel size for A-N. The Zoning Code states that "The Agricultural Industrial (A-I) Zone is applied to land in the rural areas for more intensive processing and industrial-type uses, which are directly related to the local agricultural industry. Minimum parcel size in the A-I Zone shall be adequate enough to support the use, with a minimum of five (5) acres."

The existing 83-acre Martin parcel arguably currently meets the minimum parcel size of 80 acres for the A-N zoning in Yolo County, however, a portion of the farm (16 acres) is located in Solano County, so only 67 acres are located in Yolo County. The 77 acres that would be designated a "remainder" on the Tentative Parcel Map includes approximately 61 acres in Yolo County, which would remain zoned A-N, with the remaining 16 acres in Solano County zoned A-40 (40-acre minimum).

- 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 Tentative Parcel Map would not conflict with existing zoning for, or cause rezoning of, or result in the loss or conversion of forest or timberland. There is very little forest in Yolo County.

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?

No Impact. As identified in (a), above, the 6-acre property subject to the TPM has been shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to be "Other Lands." The TPM designates the land around the six acres consisting of the other 77 acres of the Martin farm as a "remainder" on the Parcel Map, which is not proposed for any change from the existing agricultural use. The remainder land (61 acres in Yolo County) will remain zoned A-N (Agricultural Intensive).

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?				\boxtimes
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?				\boxtimes
e.	Create objectionable odors affecting a substantial number of people?				

The 6-acre parcel to be created by the Tentative Parcel Map (TPM) and rezoning would not contribute to significant air quality impacts since no additional development or a change in existing uses, other than the completion of the previously permitted use, is expected to occur with the approval of a Parcel Map to divide an existing 83-acre parcel into one parcel of 6± acres (Parcel 1) and a remainder parcel (not surveyed) of approximately 77± acres, 61 of which are located in Yolo County and 16 in Solano County.

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 PM₁₀)—The criteria air pollutants of primary concern include ozone-precursor pollutants (ROG and NO_X) and PM₁₀. 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 (PM₁₀). Because PM_{2.5} is a subset of PM₁₀, 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 PM₁₀)—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 PM₁₀, project-generated emissions of ozone precursor pollutants (i.e., ROG and NO_x) or PM₁₀ 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.
- <u>Local Mobile-Source CO Concentrations</u>—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).
- <u>Toxic Air Contaminants</u>. 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.

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

No Impact. The 6-acre parcel to be created by the Tentative Parcel Map (TPM) and rezoning 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.

- 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)?

No 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 $(PM_{2.5})$. The project is a 6-acre parcel to be created by the Tentative Parcel Map and rezoning, which includes an existing research building now under construction. Accessory buildings consistent with the Agricultural Industrial zoning could be constructed in the future but are not planned by the applicant. Any air pollutants generated by any future construction would be primarily dust and particulate matter during construction. Dust generated by construction activity would be required to be controlled through effective management practices, such as water spraying, and would therefore be a less than significant impact. Any future construction will be reviewed by the Planning and Building divisions to ensure compatibility with air quality standards.

Any additional buildings would not exceed thresholds as indicated in the 2007 YSAQMD Guidelines, and there are no sensitive receptors in the vicinity of the project site, although there are a few nearby rural home sites.

d) Expose sensitive receptors to substantial pollutant concentrations?

No Impact. See discussion in (b) and (c), above. The proposed project is located in an agricultural area south of the City of Davis on the west side of County Road 104 (Mace Boulevard), with no sensitive receptors nearby. ("Sensitive receptors" refer to those segments of the population most susceptible to poor air quality, i.e. children, elderly, and the sick, and to certain at-risk sensitive land uses such as schools, hospitals, parks, or residential communities.)

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

No Impact. The Tentative Parcel Map and rezoning 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?				

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 Impact. The site of the proposed Tentative Parcel Map and rezoning is flat and is disturbed farmland that is now occupied by the SunPower Yolo Research Center, on 3 acres, which includes a 14,000 square foot barn with offices that is now under construction. The applicants do not anticipate any further building construction on the remaining 3 acres, which is now used for crop production and research.

As with most areas of the County, and as indicated by the California Natural Diversity Data Base (2014), there is the potential for the Swainson's hawk to occur near the project site because suitable nesting and foraging habitat exists within the project vicinity. Additionally, there are known occurrences of the Swainson's hawk, including nest sites, within one mile of the project site.

The Swainson's hawk (*Buteo swainsoni*) is dedicated as a federal species of concern and listed on the State Endangered Species Act as "threatened." In the Central Valley, the Swainson's hawk nests primarily in riparian areas adjacent to agricultural fields or pastures, although it sometimes uses isolated trees or roadside trees. Nest sites are in mature trees and are typically located near suitable foraging areas. The primary foraging areas for Swainson's hawk include open agricultural fields, pastures, and fallowed land. The County requires biological mitigation to be considered for all discretionary development projects, according to the Yolo Natural Heritage Program based on discussions and prior agreements with the California Department of Fish and Wildlife. The project will be conditioned to require Swainson's hawk foraging habitat mitigation if any grading or building permits are submitted for additional agricultural industrial development.

- 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?

No Impact. The project is located within proximity (approximately 0.75 mile) to the south fork of Putah Creek but will not affect any riparian habitat, or any wetlands, as indicated by the Wetlands Mapper provided by the U.S. Fish and Wildlife Service. A wetlands delineation has not been prepared for the project.

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?

No Impact. The project will not interfere with the movement of any native resident or wildlife species.

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

No 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.

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. In the interim, the program has implemented a mitigation program acceptable to the Department of Fish and Wildlife for a main species of concern, the Swainson's hawk. The agreement requires that local agencies review all discretionary applications for potential impacts to the hawk or hawk habitat, and either pay a per-acre in-lieu fee or purchase a conservation easement (or mitigation credits) to mitigate for loss of habitat. The project's conditions of approval are specified in (a), above. No conflict with the developing NCCP/HCP is anticipated, as potential impacts to Swainson's hawk foraging habitat have already been addressed.

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?				\boxtimes
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?

No Impact. The Tentative Parcel Map and rezoning will not affect any historic, cultural, or paleontological resources known or suspected to occur on the project site. The project site is within the aboriginal territories of the Yocha Dehe Wintun Nation; however the site is not known to have any significant historical, archaeological, or paleontological resources as defined by the criteria with the CEQA Guidelines. No development is proposed with the parcel map.

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 any future 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:				
	 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?				\boxtimes
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?				
е.	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?				

- 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).

No 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. Although several earthquake fault zones are present within the County, none are present within proximity of the project site. 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 and no development is proposed, ground rupture that would expose people or structures at the site to substantial adverse effects is unlikely to result in any significant impacts. Any future development that may occur as a result of the parcel map will be required to comply with all applicable Uniform Building Code and

County Improvement Standards and Specifications requirements in order to obtain permit approval from the Yolo County Community Services Department.

ii) Strong seismic ground shaking?

No 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. Because known active seismic sources are located fairly distant from the project site, strong seismic ground shaking would not be anticipated at the project site and is unlikely to result in any impact.

iii) Seismic-related ground failure, including liquefaction?

No 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 potential for seismic ground shaking on the site is low, and even though the groundwater table in the area is generally higher than other areas of the County, there is a low potential for seismic-related ground failure at the site. Any future structures may be required to provide a geotechnical report for the building foundation in order to obtain a building permit from the Yolo County Community Services Department.

iv) Landslides?

No 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 flat and has a low landslide susceptibility due to the slope class and material strength. Mass movements are unlikely to occur at the site, particularly large landslides 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?

No Impact. The land surface at the project site is relatively flat and no development is proposed. 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 no change to existing uses. The proposed tentative parcel map would not be expected to result in any new impacts related to erosion. Any future construction, as a result of an approved parcel map and rezoning, would be required to comply with all applicable Uniform Building Code requirements.

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?

No Impact. The project 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 new development, and would not subject people to landslides or liquefaction or other cyclic strength degradation during a seismic event. Any future construction, as a result of an approved parcel map, would be required to comply with all applicable Uniform Building Code requirements.

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?

No Impact. The existence of substantial areas of expansive and/or corrosive soils has not been documented in the project area, and no new development is proposed. Any future construction, as a result of an approved parcel map, would be required to comply with all applicable Uniform Building Code requirements.

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?

No Impact. The project site is served by a septic system for the research barn now under construction. The tentative parcel map and rezoning, which will create a 6-acre parcel, proposes no new development. Any new septic systems, to accommodate future uses, must meet the requirements and be approved by the Yolo County Environmental Health Division.

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?

No Impact. The Tentative Parcel Map and rezoning will not generate any significant greenhouse gas emissions as no development is proposed, other than completion of the previously permitted research building.

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 Tentative Parcel Map and rezoning 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.

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

No Impact. As discussed below in the Hydrology and Water Quality section, the project site is located in Flood Zone X, outside the floodplain, as designated by the Federal Emergency Management Agency (FEMA). The project is not at significant risk of wildfire dangers or diminishing snow pack or water supplies.

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?				

VIII.	Hazards And Hazardous Materials.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?				

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

No Impact. The Tentative Parcel Map and rezoning will not create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, or 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?

No Impact. The project site is not located within one-quarter mile of an existing or proposed school, and will not emit hazardous materials.

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?

No Impact. The project is not located on a site that has been included on a list of hazardous materials sites. No impacts from any listed hazardous materials sites are expected from implementation of 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 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 located within the vicinity of a public airport, or within the vicinity of a private airstrip. There would be no safety hazard related to public or private airports 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?

No Impact. The location of the tentative parcel map 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, therefore, would not be at significant risk from wildland fires.

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?				\boxtimes
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 preexisting 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?				\boxtimes
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?				\boxtimes
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?

No Impact. The Tentative Parcel Map and rezoning does not propose any new development that would discharge any pollutants into the water system, nor result in any violations of existing requirements. No water quality standards or waste discharge requirements will 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)?

No Impact. A new well system to serve the previously permitted research building now being completed has been reviewed and approved by the Yolo County Environmental Health Division. The project is not expected to significantly affect any nearby wells and would not deplete groundwater supplies or interfere with groundwater recharge.

- 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?
- 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?
- 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?

No Impact. No additional impacts to water quality are anticipated. Any future development proposal would be required to address erosion, drainage and runoff impacts.

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 project does not propose any residential uses and the property is not located within a 100-year flood plain as mapped by FEMA (Federal Emergency Management Agency).

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

No Impact. The property is not located within a 100-year flood plain.

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 located in a dam inundation zone and is near the Putah Creek levee system that could expose people to flooding in the event of catastrophic dam failure at Berryessa Reservoir. However, no additional development is proposed with the Parcel Map and Rezone request.

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

No Impact. The project area is not located near a water course that could potentially pose a seiche or tsunami hazard. The project site is level, and is not located near any physical or geologic features that would produce a mudflow hazard.

х.	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?				\boxtimes
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?				

a) Physically divide an established community?

No Impact. The proposed project is located in the unincorporated area of Yolo County, south of the City of Davis, and is surrounded by other agricultural uses. The project would not 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?

No 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.

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

No 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 Habitat Conservancy (the Joint Powers Agency).

XI.	MINERAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would	d 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?				

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?

No Impact. 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. However, the State of California Department of Health Services developed recommended Community Noise Exposure standards, which area set forth in the State's General Plan Guidelines (2003). These standards are also 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 project site is surrounded by intensive agricultural uses, including row crops and some tree crops. The noise guidelines define 70-75 dB CNEL for outdoor noise levels in agricultural areas, such as the project site, as "normally acceptable." The ambient noise levels in the project vicinity are primarily a result of surrounding agricultural activities.

The project proposes no new development, other than completion of the previously permitted research building. The noise from potential future development or additional research activity on the resulting parcel is not expected to exceed noise levels already present on the site. The noise levels from the existing operations are found to be consistent with noise levels typically found in agricultural areas.

- 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?

No Impact. The proposed project site is not located within an airport land use plan, or a private airstrip. The project would not expose individuals to excessive noise levels associated with 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 Tentative Parcel Map and rezoning would not result in increases in population, as no development, including residential, is proposed, and would not displace any existing housing or current residents.

XIV.	Public Services.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
associ govern govern signific accept	the project result in substantial adverse physical impacts ated with the provision of new or physically altered mental facilities or a need for new or physically altered mental facilities, the construction of which could cause cant environmental impacts, in order to maintain table service ratios, response times, or other performance wes for any of the following public services:				
a.	Fire protection?				\boxtimes
b.	Police protection?				\boxtimes
C.	Schools?				\boxtimes
d.	Parks?				\boxtimes
e.	Other public facilities?				\boxtimes

- a) Fire protection?;
- b) Police Protection?;
- c) Schools?;
- d) Parks?; and
- e) Other public facilities?

No Impact. The project does not propose any new development, including housing, and thus would not generate any additional demand for fire and police protection, schools, parks, or other public facilities such as libraries, hospitals, satellite County offices, etc. Applicable impact fees were applied to the previously approved project for the construction of the R&D facility currently being constructed at the site. If any future development is proposed, such as agricultural industrial support structures, prior to issuance of building permits at the project site, all applicable impact fees will be collected.

XV.	RECREATION.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would	I 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?				\boxtimes
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 agriculture uses. The project site is located south of the City of Davis, and is accessed from County Road 104 (Mace Boulevard). County Road 104, south of the City limits and within the vicinity of the project site, is a maintained County road. Current traffic levels along this portion of Mace Boulevard were estimated in 2007 at 150 evening peak hour trips, for a level of service of B.

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?

No Impact. The property is currently served by County Road 104 (Mace Blvd), which has very low current traffic levels, estimated in 2007 at 150 evening peak hour trips, for a level of service of B. Buildout of the 2030 Yolo Countywide General Plan is projected to increase these traffic levels to 360 evening peak hour trips, level of service C. The proposed Tentative Parcel Map and rezoning proposes no new development. The completion of the SunPower Yolo Research Center will add up to forty employees on the site, which should not significantly impact traffic levels on Mace Boulevard.

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 not located within the vicinity of a public airport, or a private airstrip.

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

No Impact. The site is accessed from County Road 104, which is a county-maintained paved road. No changes to the road system are proposed. There will be no increase in hazards due to a design feature or incompatible uses.

e) Result in inadequate emergency access?

No Impact. The project would not result in inadequate emergency access. The site is accessed from County Road 104. The site does not propose any new development or change in uses, other than a completion of the existing research building.

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 proposes no development and thus would not result in any 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?				\boxtimes
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?				

XVII.	UTILITIES AND SERVICE SYSTEMS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?				

- 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?; and
- g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. A new well and septic system to serve the previously permitted research building now being completed has been reviewed and approved by the Yolo County Environmental Health Division. Detention of storm waters/project-related runoff has also been approved for the R&D project. No additional development is proposed with the Parcel Map and Rezone request. The project would be served by the existing County Landfill.

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?				

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 project's required conditions of approval, the project would not degrade the quality of the environment. As discussed in Section IV, Biological Resources, the project's conditions of approval would require payment of a fee to mitigate for any potential loss of Swainson's hawk foraging habitat, if any additional construction of buildings occurred on the site. 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.)

No Impact. Based on the analysis provided in this Initial Study, the project would have no significant cumulative impacts.

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

No Impact. Based on the analysis provided in this Initial Study, there would be no impacts to human beings resulting from the proposed project.

References

- Project description and application materials provided by applicant
- Yolo County, 2015. Zone File 2015-0012: SunPower Solar Farm Research Center Site Plan Review project approval, April 2015
- 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 Zoning Ordinance, Title 8, Chapter 2 of the County Code, 2014, as amended