



INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

# Green Coast Industries Cannabis Project

Prepared for:



Yolo County Department  
of Community Services

March 2021

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**Yolo County Department of  
Community Services**

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March 2021

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# LIST OF ABBREVIATIONS

BMP	best management practice
Board	Yolo County Board of Supervisors
BPTC	best practical treatment or control
cal. BCE	calibrated time before common era
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CLUO	Yolo County Cannabis Land Use Ordinance
CRHR	California Register of Historical Resources
CUP	conditional use permit
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
DA	Development Agreement
Delta	Sacramento–San Joaquin Delta
DOC	California Department of Conservation
ESA	Federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
GCI	Green Coast Industries
GSP	Groundwater Sustainability Plan
HCP/NCCP	Yolo Habitat Conservation Plan/Natural Community Conservation Plan
I-	Interstate
IS/MND	initial study/mitigated negative declaration
NAHC	Native American Heritage Commission
NOI	notice of intent

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NRHP	National Register of Historic Places
OES	Yolo County Office of Emergency Services
PRC	Public Resources Code
project	Green Coast Industries Cannabis Project
sq. ft.	square feet
SR	State Route
SWRCB	State Water Resources Control Board
TCR	tribal cultural resource
TMDL	total maximum daily load
YCFCWCD	Yolo County Flood Control and Water Conservation District
VMT	vehicle miles traveled
YSGA	Yolo Subbasin Groundwater Agency

# 1 INTRODUCTION

The Green Coast Industries (GCI) Cannabis Project (project) is requesting approval of a Development Agreement (DA) under Yolo County's Early Implementation Development Agreement Policy and Cannabis Nursery and Processing Facilities RFP Pilot Project. The project involves development of an 84,487-square-foot (sq. ft.) nursery, an 84,209-sq.-ft. of mixed-light greenhouses, and removal of an outdoor facility to be replaced with a 101,268-sq.-ft. of mixed-light greenhouses. In addition, an approximately 15,660-sq.-ft. solar panel array would be installed on the project site, as well as various ancillary buildings, including an office, drying facilities, irrigation equipment/tanks, and a restroom.

## 1.1 PURPOSE OF DOCUMENT

This draft initial study/mitigated negative declaration (Draft IS/MND) has been prepared by Yolo County to evaluate potential environmental effects resulting from the project. Chapter 2, "Project Description," presents the detailed project information.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.). Under CEQA, an IS can be prepared by a lead agency to determine whether a project may have a significant effect on the environment (CEQA Guidelines Section 15063[a]) and thus to determine whether an environmental impact report must be prepared. Yolo County, the lead agency for this project, has prepared the following analysis, which identifies the potential physical environmental impacts of the project and the mitigation measures that would reduce significant and potentially significant impacts to a less-than-significant level. As the lead agency, Yolo County is responsible for complying with the provisions of CEQA.

In accordance with the provisions of CEQA, Yolo County is distributing a notice of intent (NOI) to adopt an MND to solicit comments on the analysis and mitigation measures presented in this Draft IS/MND. The NOI will be distributed to property owners within 1,000 feet of the project site, as well as to the State Clearinghouse/Governor's Office of Planning and Research and each responsible and trustee agency. This Draft IS/MND will be available for review and comment from March 2, 2021, through April 1, 2021.

Written comments (including those submitted via e-mail) must be received by close of business on April 1, 2021. Letters should be addressed to:

Yolo County Department of Community Services  
292 West Beamer Street  
Woodland, CA 95695-2598  
Attn: Stephanie Cormier

E-mail comments should be addressed to [stephanie.cormier@yolocounty.org](mailto:stephanie.cormier@yolocounty.org). Anyone with questions regarding the NOI or Draft IS/MND may call Stephanie Cormier at 530.666.8041.

Digital copies of the NOI and Draft IS/MND are available at <https://www.yolocounty.org/government/general-government-departments/community-services/planning-division/current-projects>. Hard copies of the NOI and Draft IS/MND are available for public review at the following location:

Yolo County Department of Community Services  
292 West Beamer Street  
Woodland, CA 95695-2598

## 1.2 PUBLIC REVIEW PROCESS

This Draft IS/MND is being circulated for a 30-day public comment period and is available at the location identified above. Following the 30-day public review period, a final IS/MND will be prepared, presenting written responses to comments received on significant environmental issues. Before the Yolo County Board of Supervisors makes a decision on the project, the final IS/MND will be provided to all parties commenting on the Draft IS/MND.

## 1.3 DOCUMENT ORGANIZATION

This Draft IS/MND is organized as follows:

**Chapter 1, "Introduction":** This chapter provides an introduction to the environmental review process and describes the purpose and organization of this document.

**Chapter 2, "Project Description":** This chapter provides a detailed description of the project.

**Chapter 3, "Environmental Settings and Environmental Impacts":** This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines whether implementing the project would result in no impact, a less-than-significant impact, or a less-than-significant impact with mitigation incorporated for the different issues. Where needed to reduce impacts to a less-than-significant level, mitigation measures are presented.

**Chapter 4, "List of Preparers":** This chapter lists the organizations and people who prepared the document.

**Chapter 5, "References":** This chapter identifies the references used to prepare this Draft IS/MND.

## 1.4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources            | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Energy                             |
| <input type="checkbox"/> Geology and Soils               | <input type="checkbox"/> Greenhouse Gas Emissions           | <input type="checkbox"/> Hazards and Hazardous Materials    |
| <input type="checkbox"/> Hydrology and Water Quality     | <input type="checkbox"/> Land Use and Planning              | <input type="checkbox"/> Mineral Resources                  |
| <input type="checkbox"/> Noise                           | <input type="checkbox"/> Population and Housing             | <input type="checkbox"/> Public Services                    |
| <input type="checkbox"/> Recreation                      | <input type="checkbox"/> Transportation                     | <input type="checkbox"/> Tribal Cultural Resources          |
| <input type="checkbox"/> Utilities and Service Systems   | <input type="checkbox"/> Wildfire                           | <input type="checkbox"/> Mandatory Findings of Significance |
| <input checked="" type="checkbox"/> None with Mitigation |   |   |



# 1.5 DETERMINATION

On the basis of this initial evaluation:

- I find that the proposed project could not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project COULD have a significant effect on the environment, there WILL NOT be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



\_\_\_\_\_  
Signature

February 23, 2021

\_\_\_\_\_  
Date

Stephanie Cormier

\_\_\_\_\_  
Printed Name

Principal Planner

\_\_\_\_\_  
Title

Yolo County

\_\_\_\_\_  
Agency

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## 2 PROJECT DESCRIPTION

### 2.1 INTRODUCTION

This chapter presents a detailed description of the GCI Cannabis Project (project), including the project location, project objectives, project background, proposed facilities and operations, and anticipated construction activities. GCI proposes to seek approval of a Development Agreement (DA) under Yolo County's Early Implementation Development Agreement Policy and Cannabis Nursery and Processing Facilities RFP Pilot Project.

### 2.2 BACKGROUND

#### 2.2.1 Yolo County Cannabis Regulations

On March 22, 2016, in response to the Medical Marijuana Regulation and Safety Act and to effect greater local control, the Board of Supervisors (Board) adopted Ordinance Number 1467 (Marijuana Cultivation Ordinance), adding Chapter 20 to Title 5 of the Yolo County Code regulating medical cannabis cultivation in Yolo County. The Board adopted the initial ordinance as an interim measure to address neighbor complaints and limit harmful environmental impacts while protecting patient access to medical cannabis. It includes the following provisions:

- ▶ allows cultivation of cannabis for personal and medicinal purposes (six plants); however, outdoor cultivation is prohibited within buffer areas specified in the ordinance;
- ▶ allows commercial cultivation of cannabis of up to 1 acre of cannabis garden canopy under an annual licensing program;
- ▶ establishes nuisance provisions (odor cannot cause a nuisance);
- ▶ establishes a 1,000-foot buffer between cultivation sites and youth-oriented facilities, schools, school bus stops, churches, parks, and residential treatment facilities;
- ▶ establishes a 75-foot buffer between cultivation sites and residences;
- ▶ requires background checks of cultivators and property owners;
- ▶ establishes a track-and-trace program, which tracks each cannabis plant during cultivation, harvest, and distribution; and
- ▶ establishes enforcement provisions for violations of the ordinance.

The following notable amendments to the ordinance and cannabis program modifications were implemented since the inception of the Marijuana Cultivation Ordinance:

- ▶ October 25, 2016: The ordinance was amended to limit those who could obtain a license to cultivate in Yolo County to individuals who had submitted a complete Notice of Intent with full payment, to the Central Valley Regional Water Quality Control Board (CVRWQCB) by 5:00 p.m. on October 11, 2016. Since there were individuals who had submitted a complete Notice of Intent with full payment to the CVRWQCB by the deadline established by Yolo County (County), but who had not yet submitted an initial cannabis cultivation license application, the ordinance was further amended on November 7, 2017, to establish a deadline of December 31, 2017, for the submittal of an initial cultivation license by these individuals. These amendments in effect limited the number of eligible licensees in Yolo County to approximately 78.

- ▶ October 10, 2017: The Board of Supervisors approved the development of a cannabis land use ordinance (CLUO) and guiding principles upon which the ordinance would be based. The CLUO would create a conditional use permit (CUP) process for determining where various cannabis activities should appropriately be located. The CUP would be in addition to the ministerial license, required under the Marijuana Cultivation Ordinance. Ten public outreach meetings were held with residents, property owners, and cultivators to obtain comments on what should be included in the ordinance.
- ▶ November 7, 2017: A provision was added to the Marijuana Cultivation Ordinance allowing the licensing of a limited number of nursery and processing facilities as part of a pilot program. In addition, a sunset provision was added that would automatically repeal the ordinance unless a tax measure was put forth to the voters and approved.
- ▶ March 6, 2018: The Board adopted Ordinance Number 1495, adding Chapter 18 to Title 3 of the Yolo County Code to impose a County general tax on the gross receipts of commercial cannabis activity in the unincorporated area. A resolution was also approved by the Board on March 6, 2018, to place the cannabis tax measure on the June 5, 2018, ballot. The Board also approved an early implementation DA policy for existing licensed cannabis cultivators in Yolo County proposing projects that include indoor or mixed-light cultivation.
- ▶ April 24, 2018: The Board approved, for public outreach purposes, a draft CLUO based on the guiding principles approved on October 10, 2017. Eleven public outreach meetings were held in numerous locations within the County with residents, property owners, and cultivators to obtain public input on the CLUO. Two Planning Commission meetings were also held.
- ▶ June 5, 2018: The voters of Yolo County, including those in the incorporated cities, approved Measure K by 79 percent, authorizing the County to impose a general tax on the gross receipts of commercial cannabis activity in unincorporated Yolo County.
- ▶ July 24, 2018: The Marijuana Cultivation Ordinance was amended to allow for recreational, in addition to medicinal, cannabis activities. The amendment also allowed for the issuance of distributor licenses in conjunction with the nursery and processing facilities pilot program when requested under a DA.
- ▶ March 12, 2019: The Board adopted Ordinance Number 1509, amending the Marijuana Cultivation Ordinance to allow distribution licenses for existing County-licensed cultivators to distribute their own product, broaden penalties for violations of the ordinance, and provide an on-ramp for the adoption of early implementation DAs.

The Marijuana Cultivation Ordinance is administered through the County's Cannabis Task Force, which is a division of the Department of Community Services. The task force is overseen by the County's Environmental Health Director and is made up of three cannabis code enforcement officers, a supervisor, and two sheriff's detectives. Each of the cannabis code enforcement officers is assigned a caseload of approximately 25 cultivators. Routine site visits are made to ensure compliance with the ordinance, including the track-and-trace system. The sheriff's detectives accompany the task force on many of the site visits and assist with compliance activities. They also work on the investigation and abatement of illegal grows. Other Department of Community Services divisions, such as Building and Planning, and the various Environmental Health inspection units, assist the task force on compliance related items under their jurisdictions.

The County released a request for proposals in November 2017 to solicit applications for nursery facility and processing facility operations as part of a pilot program under Section 5-20.16 of the Yolo County Code. In addition, on March 6, 2018, the Board approved an early implementation DA policy for existing licensed cannabis cultivators in Yolo County proposing projects that include indoor or mixed-light (greenhouse) cultivation. The project applicant is pursuing the County's approval for a nursery facility under the pilot program, in addition to mixed-light cultivation, under the early implementation DA policy.

## 2.2.2 Cannabis Cultivation and Distribution Overview

Cannabis cultivation requires a growth medium, light, water, and nutrients. This section describes activities and processes associated with cannabis cultivation that are associated with the project, including stages of growth, indoor and outdoor growth requirements, harvesting activities, and distribution.

### NURSERY OPERATIONS

To maintain specific varieties of cannabis at cultivation sites, the practice of cloning is often employed. Mature female plants maintained in a vegetative nonflowering stage using artificial light for approximately 18 hours per day are used as a source of the cuttings, or “clones.” Cuttings (i.e., targeted trimmings of a plant) are taken and dipped into medium to stimulate root growth. After roots develop, the clones are placed into small pots to grow to a size sufficient for transplanting to larger pots in which they grow to maturity.

Germination, the process during which seeds sprout, typically occurs in a nursery in an enclosed greenhouse building. Generally, germination is initiated by soaking seeds between wet paper towels, soaking them in a cup of water at room temperature, planting them in wet peat pellets, or planting them directly in potting soil. Warmth, darkness, and moisture initiate metabolic processes, such as the activation of hormones that trigger the expansion of the embryo in the seed. After germination is complete, seedlings are prepared for indoor, outdoor, or mixed-light cultivation.

Nurseries can be located on the cultivation sites as an ancillary component of cultivation operations when used to support on-site needs without separate state licensing. Nurseries can also be operated as a stand-alone retail or wholesale operation that can provide a source of seed or immature clone plants that can be purchased for personal use or as part of a commercial cultivation operation. These types of nurseries are licensed separately from cultivation under the state’s licensing process. Nurseries may have indoor, outdoor, or mixed-light operations. In accordance with County regulation, cultivation garden canopy is limited to 43,560 sq. ft. per County license (Yolo County Code Section 5-20.04[A][2][a][1]).

### MIXED-LIGHT CULTIVATION

Mixed-light cultivation is cultivation using a combination of natural and supplemental artificial lighting to increase the number of harvests in a year. In Yolo County, this is cultivation that occurs within greenhouses. In accordance with state regulation, canopy is limited to 22,000 sq. ft. per state license (3 CCR Section 8201[d]); however, because the state allows stacking of small licenses, the County’s 1-acre limit becomes the effective limit for mixed-light cultivation in Yolo County. Mixed-light cultivation operations allow for manipulation of light and dark cycles through the use of artificial lighting or deprivation of light. Light manipulation is used to increase or decrease the vegetative and flowering phases by mimicking seasonal daylight variation. In the northern hemisphere, daylight exceeds 12 hours per day beginning with the vernal equinox (March 21) and is less than 12 hours per day after the autumnal equinox (September 21). Longer light exposure, which in nature peaks at the summer solstice (June 21), is associated with the vegetative stage; the flowering stage is prompted when the number of daylight hours approaches 12 hours per day or less.

Light manipulation techniques can increase the number of harvests per year. Artificial light is used to “extend” daylight hours or to disrupt periods of darkness (typically for approximately 2 hours in the middle of the night) to foster vegetative development, and shorter hours of exposure, achieved in mixed-light operations by covering greenhouses with light-blocking opaque tarps, are used to promote flowering. In addition, artificial light may be used to supplement sunlight during periods of low light (e.g., several days of rain).

### DISTRIBUTION ACTIVITIES

Under current state law, manufactured cannabis products must pass through a licensed distributor before they can be offered for retail sale to patients with physician recommendations for medical cannabis use or to adults for

recreational use. The distribution phase includes an important quality control step whereby product is held for testing by independent licensed testing laboratories for cannabis constituent content, strength, and contaminants.

There are currently no distribution facilities in the unincorporated area of the county because existing Yolo County Code prohibits this use, except as allowed under the County's nursery and processing facilities pilot program and early implementation DA program. In early 2019, however, the Board approved the issuance of County distribution licenses to enable licensed cultivators to distribute only their own product. Specifically, two types of distributor licenses were approved by the Board, consistent with the state distributor licenses:

- ▶ **Distributor:** A licensee with a distributor license is responsible for transporting cannabis goods, arranging for testing of cannabis goods, and conducting quality assurance review of cannabis goods to ensure that they comply with all packaging and labeling requirements.
- ▶ **Distributor-Transport:** A distributor-transport license allows a licensee to transport cannabis goods between licensed cultivators, manufacturers, and distributors.

## 2.3 PROJECT LOCATION

The project site is located at 31905 County Road 17 in Yolo County, California (Assessor Parcel Number 049-020-012) (Figures 2-1 and 2-2), on a 40-acre parcel, approximately 2 miles east of Interstate 505 (I-505), 5.5 miles west of I-5, and 7 miles northwest of the City of Woodland. Regional access to the project site is provided by I-505. Local access to the project site is obtained via a private graveled driveway leading from County Road 17.

The general area surrounding the project site is undeveloped agricultural land. Surrounding the project site to the north and south are cultivated lands. Undeveloped lands are located to the east and west. Seasonal wetlands, swales, and intermittent drainages are present in much of this surrounding area.

The project site, which is characterized by rolling hills covered in grasslands, includes two 1-acre outdoor cultivation facilities, each operating under a separate annual County Cannabis Cultivation License. Water tanks are located north of the cultivation area, and a retention basin collects runoff near the southern edge of the project site. Gravel roadways, parking areas, and storage areas have been established between County Road 17 and the existing outdoor cultivation area. Two diesel generators power the project site.

## 2.4 PROJECT OBJECTIVES

The overall goal of the project is to develop the proposed commercial cannabis complex. Specific objectives of the project are:

- ▶ approval and implementation of the proposed DA, and
- ▶ development and operation of a consolidated commercial cannabis operation on a single site that consists of a cannabis cultivation and processing facility, a nursery facility, and a distribution facility.

## 2.5 PROPOSED PROJECT

### 2.5.1 Project Components

The applicant is proposing to enter into a DA and develop a 40-acre parcel into a facility containing mixed-light greenhouses, a nursery, and associated operational components, such as storage structures, office space, and a restroom. The project would involve demolition of two 1-acre outdoor cultivation facilities on the site. Additional project features include new septic systems with leach fields and drainage basins for runoff, future solar-panel fields for sustainable energy, and new water wells for potable, irrigation, and fire protection (Figure 2-3).

The applicant's overall plan for this project is to develop its 40-acre parcel over approximately 2 years, resulting in two cannabis cultivation facilities, including ancillary processing and distribution, and one regional-serving nursery facility. The project is proposed as two phases. Phase 1 has been completed and consists of two 1-acre outdoor cultivation facilities. These cultivation facilities are currently in production. For the purposes of this CEQA analysis, Phase 1 is considered to be part of the existing conditions and its operation is not part of the project under CEQA and the Early Implementation DA Policy and RFP pilot project.

- ▶ Phase 2 would begin approximately 30 days after the DA is approved and would involve the construction of greenhouses and an approximately 15,660 sq. ft. solar panel array. A total of 11 nursery greenhouses would cover 84,487 sq. ft., and 10 mixed-light greenhouses would cover 84,209 sq. ft. In addition, other site facilities would include a storage structure, an electrical equipment building, an office, drying facilities, irrigation equipment/tanks, distribution facilities, and a restroom. After construction is complete, the applicant would demolish the outdoor cultivation facility.
- ▶ Phase 3 of the project would begin upon completion of Phase 2. This phase would consist of mixed-light cultivation greenhouses, which would replace the outdoor cultivation facilities that were demolished during Phase 2. The greenhouses constructed during Phase 3 would cover 101,268 sq. ft.

The applicant's cannabis canopy would measure 1 acre for each phase, for a total of 2 acres of canopy space. In all three cultivation facilities (nursery and two mixed-light), there would be integrated headhouses where cannabis would be processed.

The applicant is seeking to obtain the following state commercial cannabis licenses:

- ▶ Cultivation: Type 3B
- ▶ Nursery Cultivation: Type 4
- ▶ Distribution: Type 11

Currently, Yolo County prohibits any type of cannabis manufacturing. However, the applicant is also seeking to obtain the following state licenses, to use if manufacturing becomes allowable in Yolo County for non-volatile manufacturing (Type 6) and volatile manufacturing (Type 7). Note that details related to manufacturing activities are unknown, cannot be known at the time of release of this document, and are considered a separate effort (i.e., separate project under CEQA). Thus, because a meaningful evaluation of these activities is not possible, they are not discussed further in this IS.

If approved as requested, in accordance with the DA, the applicant's proposal to the County would extend over a 10-year period, which would include two renewable 5-year options, for a potential 20-year commitment to the project. During this period, the county road from where the maintained portion ends to the project site entry point would be maintained by GCI. As part of the DA process, the applicant has pledged a commitment to bring benefits to the community, public safety and local infrastructure through roadway repairs and the extension of electrical power lines.

## 2.5.2 Project Features

### LIGHTING FEATURES

Facilities would be equipped with automatic blackout curtain systems that automatically engage at sunset and disengage at sunrise. The blackout curtains would cover all translucent surfaces, thereby eliminating all visible light from the project facilities between sunset and sunrise. Downward directed and shielded security lighting would be used for security purposes.

## ODOR CONTROL PLAN

Each of the mixed-light greenhouses would be equipped with a Fogco Odor Control System. The greenhouses would each have a passive air intake located on one wall, and an exhaust fan with a shroud on the ridge of the opposing wall. Each exhaust fan would consist of a shroud that would inject a neutralizing agent for 30 seconds prior to starting the exhaust fan. The overall goal of this system would be for the odorant air stream to interact with the Fogco odor counteractant, resulting in odor elimination.

Odor controls are not proposed for the nursery greenhouses and nursery headhouse.

## EMPLOYEES

A total of 12–15 employees currently work on-site during two shifts: one from 4:00 a.m. to 1:00 p.m. and another from 7:00 a.m. to 4:00 p.m. From December through February, the number of employees decreases to eight. Upon completion of Phase 3, there would be a total of 36 employees, for a maximum of 51 employees within the site. All employees would work one shift, from 7:00 a.m. to 4:00 p.m. After all phases of the project are complete, the applicant would develop and implement a ride-sharing program that would use commercial vans to shuttle workers from a designated meeting place off-site to the premises and back.

## DELIVERIES AND OPERATIONAL EQUIPMENT

During operation, vendors and other visitors would visit the site on a monthly or weekly basis as follows: two deliveries per month for operational materials and supplies, such as soils, fertilizers, and other cultivation materials; one delivery of clones per week; and two to three export deliveries of cannabis product per week. Operational equipment would be limited to one forklift for each greenhouse/headhouse facility. County Road 17 would be maintained as needed from where the County-maintained portion ends to the entry point of the project site. Visits by the Yolo County Cannabis Task Force Staff would continue to occur periodically to ensure compliance with the annual licensing, and other relevant regulations (e.g., applicable County Code, track and trace system).

## UTILITIES

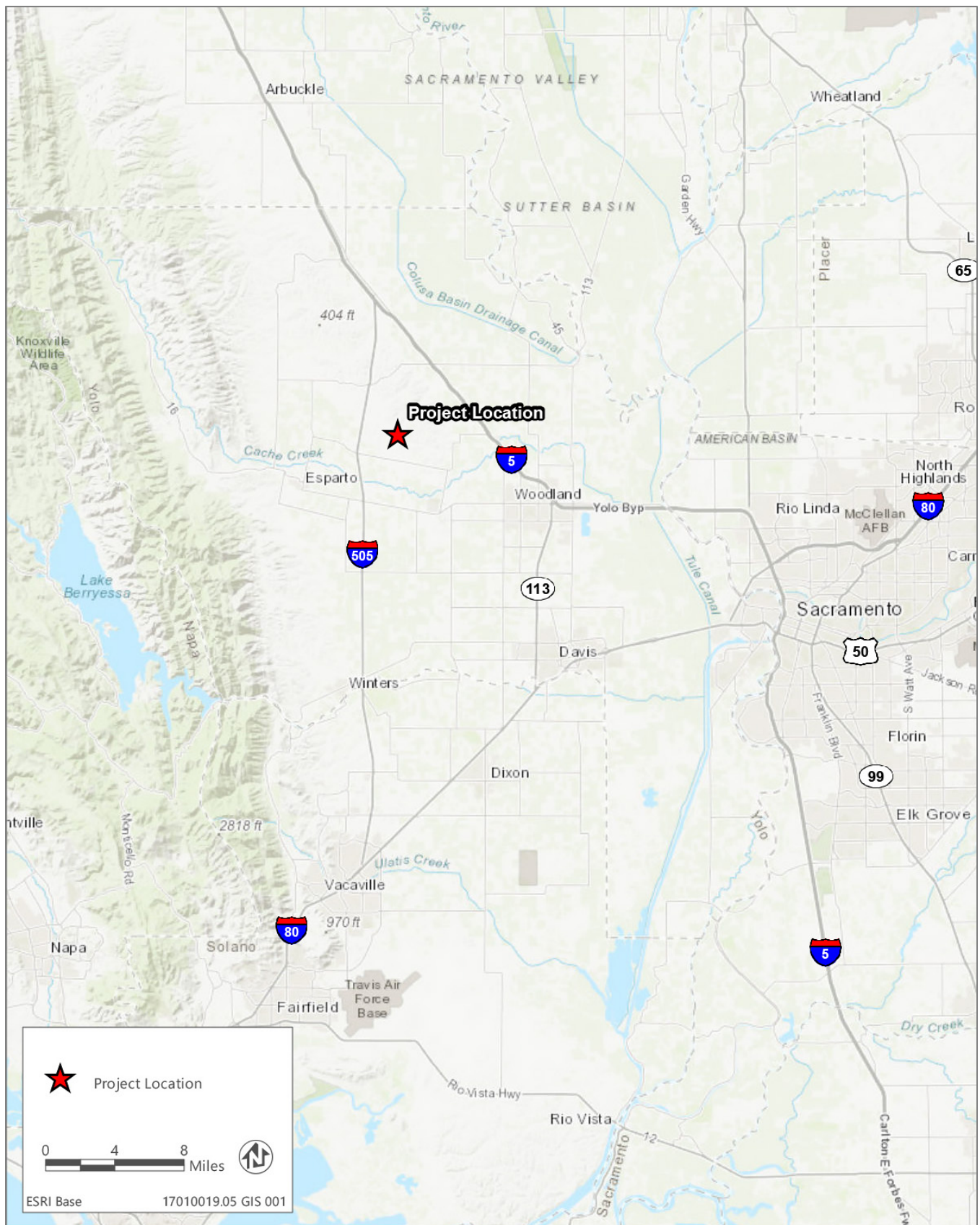
Water from the site would be obtained from on-site wells. Produced water would be used for both potable uses and irrigation and would be untreated. The project would use low-flow faucets and toilets, as well as drip irrigation and precision irrigation monitoring technologies.

Septic systems would be used to collect sewage associated with the project. Septic leach fields would be installed south of the Phase 2 project, as depicted in Figure 2-3.

Runoff within the site would continue to be routed to the existing retention basin via overland sheet flow through vegetated drainage swales. Stormwater retention basins would be developed to capture runoff associated with each greenhouse. Stormwater runoff from the project site would be collected in a catchment basin.

Upon completion of the project, the two diesel generators currently used on the project site would no longer be used to provide energy for the site. Electricity would be provided to the site from Pacific Gas and Electric Company, and additional electricity would be provided by ground-mounted 350-kilowatt solar panels, which would be installed within the Phase 2 footprint. The applicant would not require substantial quantities of petroleum products in its cultivation operations, except for gasoline in 1- to 5-gallon containers that would be used to fuel small engines, such as for line trimmers and rototillers, and utility vehicles, such as an all-terrain vehicle. Otherwise, all large equipment fueling and maintenance operations would occur at service stations off-site. Propane gas would be used to power boilers.





Source: Adapted by Ascent Environmental in 2019

**Figure 2-1 Project Location**

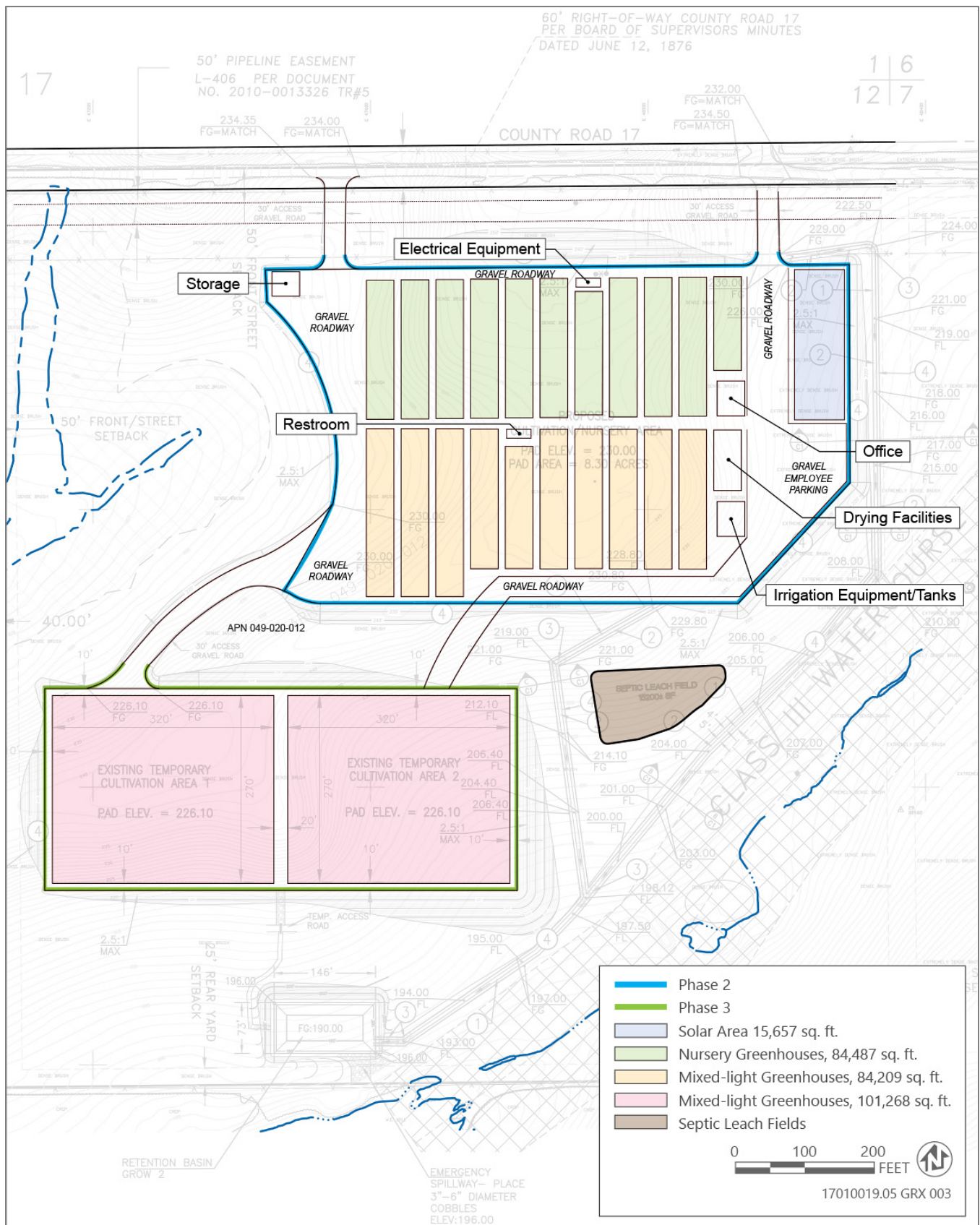




Source: Adapted by Ascent Environmental in 2019

**Figure 2-2** Project Site





Source: Adapted by Ascent Environmental in 2019

Figure 2-3 Project Components

## ROADWAY MAINTAINENCE AND SITE ACCESS

The Yolo County Board of Supervisors terminated maintenance on County Road 17 between the existing gates near Assessor's Parcel Numbers 049-010-004 and 025-010-034 in 2009. These gates are locked during winter, generally from mid-November to mid-April, during which time landowners are provided a key to allow for access. The applicant has improved the portion of County Road 17 from the locked gate to the entry point of the project site by grading and applying gravel to the roadways. As a condition of approval for the project, improvements required by the Madison Fire District to the unmaintained section of County Road 17 must be financed and managed by the applicant.

### 2.5.3 Construction Activities

Construction of the project would occur over approximately 3 years (2 years for Phase 2 and 1 year for Phase 3). Construction phases would not overlap (Table 2-1). Construction equipment would vary from day to day depending on the project phase and the activities occurring but would involve operation of graders, paddle wheel, bulldozers, compactors, backhoes, trenchers, water trucks, excavators, scrapers, tractors, forklifts, generator sets, pavers, paving equipment, rollers, welders, and air compressors.

**Table 2-1 Construction Phasing and Duration**

Construction Phase	Anticipated Duration
Grading – Phase 2	60 days
Development of Phase 2 Mixed-Light Greenhouses	6 months
Development of Phase 2 Nursery	6 months
Grading – Phase 3	60 days
Development of Phase 3 Mixed-Light Greenhouses	6 months

Preconstruction activities would include permitting, any required biological clearance surveys, geotechnical surveys, and other surveying. After these activities are completed, the contractor would begin to mobilize for construction. Construction mobilization would include preparing and constructing site access road improvements, establishing temporary construction trailers and sanitary facilities, and preparing initial construction staging areas. Temporary staging/laydown areas would be located along existing roadways within the project site.

Construction activities associated with Phase 2 and Phase 3 would be similar, beginning with clearing and grubbing of the relevant building footprints. Grading activities would occur over a 60-day period and would consist of cut and fill of approximately 110,000 cubic yards of soil during each phase. Upon completion of grading activities, development of the cannabis cultivation facilities would begin. Buildings would consist of a concrete slab and grouted concrete masonry walls. The greenhouses would be constructed with a clear polycarbonate roof, and the headhouses would have a thermoplastic polyolefin membrane over a metal roof.

Fuel may be stored on-site during peak construction activities and would be stored consistent with standard construction best management practices. Fuel storage would be coordinated with the Yolo County Environmental Health Division. Temporary lighting may be installed to facilitate deliveries and construction management.

### 2.5.4 Construction Workforce

The construction workforce would consist of 20 workers. Construction activities would occur between approximately 6:00 a.m. and 5:00 p.m., Monday through Friday, for most of project construction.

## 2.6 PERMITS AND OTHER APPROVALS

As the lead agency under CEQA, Yolo County is responsible for considering the adequacy of this IS/MND and determining whether the project should be approved through the County's Early Implementation Development Agreement Policy and Cannabis RFP Pilot Project.

Elements of the project could be subject to the permitting and/or approval authority of other agencies. Potential permits required from other agencies could include:

- ▶ California Department of Food and Agriculture: cannabis cultivation (known as CalCannabis Cultivation Licensing) and management of the track-and-trace program, which is used statewide to record the inventory and movement of cannabis and cannabis products through the commercial cannabis supply chain (CCR Title 3, Division 8 [Cannabis Cultivation]);
- ▶ Bureau of Cannabis Control: permitting of distributors, retailers, testing laboratories, and microbusinesses (CCR Title 42); and
- ▶ Yolo-Solano Air Quality Management District: construction and operation permits.

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# 3 ENVIRONMENTAL SETTINGS AND ENVIRONMENTAL IMPACTS

## 3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. Aesthetics.</b>				
Except as provided in Public Resources Code Section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 3.1.1 Environmental Setting

Aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public’s experience and appreciation of the environment. Aesthetic impacts may occur depending on the extent to which a project’s presence would negatively alter the perceived visual character and quality of the environment.

The project site is characterized by rolling hills covered in grasslands and includes two 1-acre outdoor cultivation facilities. Water tanks are located north of the cultivation area, and a retention basin collects runoff near the southern edge of the project site. Gravel roadways, parking areas, and storage areas have been established between County Road 17 and the existing outdoor cultivation area. Two diesel generators currently power the project site.

The general area surrounding the project site is agricultural land. Surrounding the project site to the north and south are cultivated lands, consisting primarily of orchards. Undeveloped lands are located east and west of the site. Seasonal wetlands, swales, and intermittent drainages are present throughout much of this surrounding area.

Views of the project site are generally limited to those by surrounding landowners, although portions of it may be visible from certain vantage points, such as County Road 19 and I-505. However, because of the distance from the viewpoints to the project site, specific details related to on-site improvements would not be discernable. Accessibility to the project site is limited by a locked gate along County Road 17, where County maintenance ceases (see Section 3.17, “Transportation,” for more information related to circulation).

Views from the project site of the surrounding area consist of agricultural land and rural residences. The Coast Ranges dominate views to the west. Views to the east are obscured by rolling hills located at a higher elevation than the project site.

The scenic highway nearest to the project site is State Route (SR) 16, from the Colusa County line to Capay (Yolo County 2009a), approximately seven miles away. The project site is not visible from this portion of SR 16.

Goal CC-1 in the Yolo County General Plan seeks to maintain the rural character of the County, including the unique and distinct character of the unincorporated communities (Yolo County 2009b). There are no designated or scenic viewsheds identified in the Yolo County Countywide General Plan EIR

### 3.1.2 Discussion

#### a) Have a substantial adverse effect on a scenic vista?

**Less than significant.** The project site is located on agricultural land and is surrounded by undeveloped land, orchards, and rural residences. It is generally not visible to the general public. Implementation of the project would include development of buildings and other structures that would appear typical of those found on agricultural lands. Upon completion of Phases 2 and 3, the character of the project site would be similar to that of the surrounding land uses: agricultural land with agricultural buildings. The project would not substantially change the view of the project site or surrounding areas. Further, as noted above, views of and from the project site are limited, and any project-related changes would not prevent long-distance views from or through the area. Finally, there are no designated or scenic viewsheds identified in the Yolo County Countywide General Plan EIR. Therefore, the impact on scenic vistas would be less than significant.

#### b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

**No impact.** The project site cannot be seen from the nearest state scenic highway segment, on SR 16, located more than 7 miles away in Capay. Because there are no designated state scenic highways nearby, adjacent to, or visible from the project site, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, or historic buildings within a state scenic highway. There would be no impact.

#### c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

**Less than significant.** The project area is considered a nonurbanized area. As discussed above, the public views of the project site are limited to those by surrounding landowners, although portions of it may be visible from certain vantage points, such as County Road 19 and I-505. Views from these locations would be distant, and specific details related to on-site improvements would not be discernable. The proposed project involves construction of mixed-light greenhouses, nurseries, and other small project-related buildings. Overall, from public views, these buildings would appear similar to those used for other agricultural operations. Thus, this impact would be less than significant.

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

**Less than significant with mitigation incorporated.** Facilities would be equipped with automatic blackout curtain systems that engage at sunset and disengage at sunrise. The blackout curtains would cover all translucent surfaces, thereby eliminating all visible light from the project facilities between sunset and sunrise. In addition, downward directed and shielded security lighting would be used for security purposes and would limit excess light from spreading to neighboring locations. This would be consistent with the requirements of CCR Title 3, Food and



Agriculture, Division 8, Cannabis Cultivation, Chapter 1, Cannabis Cultivation Program, which includes the following requirements for the control of light sources at cultivation sites:

- ▶ Section 8304(c): All outdoor lighting used for security purposes shall be shielded and downward facing.
- ▶ Section 8304(g): Mixed-light license types of all tiers and sizes shall ensure that lights used for cultivation are shielded from sunset to sunrise to avoid nighttime glare.

In addition, the project would be consistent with the current Marijuana Cultivation Ordinance that restricts light escape (County Code Section 5-20.07[C]), and the Countywide General Plan Policy CC-1.3 that seeks to protect the rural night sky.

Buildings would consist of a concrete slab and grouted concrete masonry walls. The greenhouses would be constructed with a clear polycarbonate roof, and the headhouses would have a thermoplastic polyolefin membrane over a metal roof. Although grouted concrete masonry walls would not cause issues related to glare, the use of clear polycarbonate roofs on the greenhouses and a thermoplastic polyolefin membrane over a metal roof on the headhouses may result in glare that would be visible off-site. This impact would be potentially significant.

### **Mitigation Measure 3.1-1: Reduce Effects of Glare Associated with Building Materials**

The project applicant will finish the surfaces of all project structures and buildings visible to the public to minimize glare through use of coatings or nonreflective materials. The project applicant will submit a surface treatment plan to the lead agency for review and approval before the start of earth-moving activities.

#### **Significance after Mitigation**

Implementation of Mitigation Measure 3.1-1 would require incorporating design elements that would reduce glare associated with project structures to a less-than-significant level.

## 3.2 AGRICULTURE AND FORESTRY RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>II. Agriculture and Forestry Resources.</b>				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</p>				
<p>In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p>				
<p>Would the project:</p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>b) Conflict with existing zoning for agricultural use or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.2.1 Environmental Setting

The California Department of Conservation (DOC) classifies farmlands based on a system that combines technical soil ratings and current land use, as part of the Farmland Mapping and Monitoring Program (FMMP). Descriptions of the FMMP categories are presented in Table 3-1. The categories of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are collectively referred to under CEQA as “Important Farmland.” The project site is designated as Unique Farmland by DOC (DOC 2020).

**Table 3-1 Farmland Mapping and Monitoring Program Mapping Categories**

Category	Considered Important Farmland under CEQA <sup>1</sup>	Definition
Prime Farmland	Yes	Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years before the mapping date.
Farmland of Statewide Importance	Yes	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years before the mapping date.
Unique Farmland	Yes	Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years before the mapping date.
Farmland of Local Importance	No	Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
Farmland of Local Potential	No	Land that is of prime or statewide importance but that is not presently irrigated or cultivated.
Grazing Land	No	Land on which the existing vegetation is suited to the grazing of livestock.
Urban and Built-Up Land	No	Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
Other Land	No	Land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
Water	No	Perennial water bodies with an extent of at least 40 acres.

<sup>1</sup> "Important farmland" is defined by CEQA under Public Resources Code Section 21060.01 and State CEQA Guidelines Appendix G.

Source: DOC 2020

The project site is zoned A-X (Agricultural Extensive) and is not considered to be forestland or timberland. The project site is subject to a Williamson Act contract. (Yolo County 2020).

### 3.2.2 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.** The project consists of development plans to support the cultivation of cannabis, which is considered an agricultural crop by the state (California Health and Safety Code Section 11362.777(a) and Business and Profession Code Section 26067(a)). Thus, implementation of the project, including the construction of agricultural buildings, would not convert the project site to a nonagricultural use. This impact would be less than significant.

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

**Less than significant.** The project site is subject to a Williamson Act contract. Currently, the zoning regulations allow both agricultural production (cultivation of crops) and certain agricultural supporting land uses to occur on Williamson Act–contracted lands. As set forth in Section 106 (Compatible Uses) of the Yolo County Williamson Act Guidelines, compatible uses are those that are permitted or conditionally permitted in the County agricultural zones (A-N, A-X, A-I, and A-C). Agricultural buildings, like those proposed in the project, are permitted in the agricultural zones (Yolo County Code of Ordinances Section 8-2.303[a]). There would be less-than-significant impacts on zoning for agricultural use or Williamson Act contracts with implementation of the project.

**c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?****d) Result in the loss of forest land or conversion of forest land to non-forest use?**

**No impact.** The project site does not contain forestland and is not zoned as forestland or timberland. There would be no impact.

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

**Less than significant.** As noted above under (a), cannabis is considered an agricultural crop by the state. The project does not include a retail facility or other features that would encourage nearby development or otherwise result in conversion of Farmland to nonagricultural uses. This impact would be less than significant.

### 3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>III. Air Quality.</b>				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?				
	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.3.1 Environmental Setting

The project site is located in the Sacramento Valley Air Basin (SVAB). The SVAB includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties; the western portion of Placer County; and the eastern portion of Solano County. The ambient concentrations of air pollutant emissions are determined by the amount of emissions released by the sources of air pollutants and the atmosphere’s ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality and odor conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

#### AMBIENT AIR QUALITY

##### Criteria Air Pollutants

The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for six criteria air pollutants that are known to be harmful to human health and the environment: carbon monoxide (CO), lead, nitrogen dioxide (NO<sub>2</sub>), ozone, particulate matter with an aerodynamic diameter less than or equal to 10 microns in diameter (PM<sub>10</sub>) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). The State of California has also established California ambient air quality standards (CAAQS) for these six pollutants, as well as for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. NAAQS and CAAQS were established to protect the public, with a margin of safety, from adverse health impacts caused by exposure to air pollution. A brief description of the source and health effects of criteria air pollutants is provided below in Table 3-2.

**Table 3-2 Criteria Air Pollutants**

Pollutant	Sources	Effects
Ozone	Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG), also sometimes referred to as volatile organic compounds by some regulating agencies, and nitrogen oxides (NO <sub>x</sub> ). The main sources of ROG and NO <sub>x</sub> , often referred to as ozone precursors, are products of combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels.	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.
Carbon monoxide	CO is usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration.	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.
Particulate matter, including PM <sub>10</sub> and PM <sub>2.5</sub>	Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect.	Scientific studies have suggested links between fine particulate matter and numerous health problems, including asthma, bronchitis, and acute and chronic respiratory symptoms, such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air.
Nitrogen dioxide	NO <sub>2</sub> is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO <sub>2</sub> .	Aside from its contribution to ozone formation, NO <sub>2</sub> can increase the risk of acute and chronic respiratory disease and reduce visibility.
Sulfur dioxide	SO <sub>2</sub> is a combustion product of sulfur or sulfur-containing fuels, such as coal and diesel.	SO <sub>2</sub> is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid, which can precipitate downwind as acid rain.
Lead	Leaded gasoline, lead-based paint, smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere, with lead levels in the air decreasing substantially since leaded gasoline was eliminated in the United States.	Lead has a range of adverse neurotoxic health effects.

Notes: CO = carbon monoxide; NO<sub>2</sub> = nitrogen dioxide; NO<sub>x</sub> = oxides of nitrogen; ROG = reactive organic gases; SO<sub>2</sub> = sulfur dioxide.

Sources: EPA 2018

### Attainment Area Designations

The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require all areas of California to be classified as attainment, nonattainment, or unclassified with respect to the NAAQS and CAAQS. Under the CAA and the CCAA, both the California Air Resources Board (CARB) and EPA use ambient air quality monitoring data to designate the attainment status of an air basin relative to the CAAQS and NAAQS for each criteria air pollutant. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified based on available information as meeting or not meeting the standards. Attainment designations for the SVAB are shown in Table 3-3 for each criteria pollutant.

**Table 3-3 Ambient Air Quality Standards and SVAB Attainment Status**

Pollutant	Averaging Time	California (CAAQS) <sup>ab</sup>		National (NAAQS) <sup>c</sup>	
		Standards	SVAB Attainment Status	Standards - Primary <sup>bd</sup>	SVAB Attainment Status
Ozone	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	Nonattainment	— <sup>e</sup>	Nonattainment
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	Nonattainment	0.070 ppm (147 µg/m <sup>3</sup> )	Nonattainment
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m <sup>3</sup> )	Attainment	35 ppm (40 mg/m <sup>3</sup> )	Attainment
	8-hour	9 ppm (10 mg/m <sup>3</sup> )	Attainment	9 ppm (10 mg/m <sup>3</sup> )	Attainment
Nitrogen dioxide (NO <sub>2</sub> )	Annual arithmetic mean	0.030 ppm (57 µg/m <sup>3</sup> )	Attainment	53 ppb (100 µg/m <sup>3</sup> )	Attainment
	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )	Attainment	100 ppb (188 µg/m <sup>3</sup> )	Attainment
Sulfur dioxide (SO <sub>2</sub> )	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	Attainment	—	—
	3-hour	—	Attainment	—	—
	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	Attainment	75 ppb (196 µg/m <sup>3</sup> )	Attainment
Respirable particulate matter (PM <sub>10</sub> )	Annual arithmetic mean	20 µg/m <sup>3</sup>	Nonattainment	—	—
	24-hour	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	Attainment
Fine particulate matter (PM <sub>2.5</sub> )	Annual arithmetic mean	12 µg/m <sup>3</sup>	Attainment	12.0 µg/m <sup>3</sup>	Nonattainment
	24-hour	—	—	35 µg/m <sup>3</sup>	Attainment
Lead	Calendar quarter	—	—	1.5 µg/m <sup>3</sup>	Attainment
	30-day average	1.5 µg/m <sup>3</sup>	Attainment	—	—
	Rolling 3-month average	—	—	0.15 µg/m <sup>3</sup>	Attainment
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m <sup>3</sup> )	Unclassified	No national standards	
Sulfates	24-hour	25 µg/m <sup>3</sup>	Attainment		
Vinyl chloride <sup>f</sup>	24-hour	0.01 ppm (26 µg/m <sup>3</sup> )	Unclassified		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km	Unclassified		

- a California standards for ozone, carbon monoxide, SO<sub>2</sub> (1- and 24-hour), NO<sub>2</sub>, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- c National standards (other than for ozone and particulate matter and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM<sub>10</sub> 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than 1. The PM<sub>2.5</sub> 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Notes: µg/m<sup>3</sup> = micrograms per cubic meter; km = kilometers; mg/m<sup>3</sup> = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million (by volume).

Sources: CARB 2016; YSAQMD 2019

## TOXIC AIR CONTAMINANTS

According to the *California Almanac of Emissions and Air Quality* (CARB 2013), the majority of the estimated health risks from toxic air contaminants (TACs) can be attributed to relatively few compounds, the most important being particulate matter contained in diesel exhaust (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled

internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among the 10 TACs mentioned. Using receptor modeling techniques, CARB estimated the average statewide cancer risk associated with diesel PM concentrations to be 360 excess cancer cases per million people in the year 2020 (CARB 2000:15). Overall, statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013:3-8).

## ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., increase in blood pressure, nausea, vomiting, and headache).

Environmental odor quantification is inherently challenging for several reasons including:

1. Odor usually results from a mixture of substances (as opposed to a single chemical or compound).
2. Odor is prone to subjectivity and opinion (not everyone agrees on what smells good or bad).
3. Odor is highly influenced by meteorological conditions such as seasonality, wind, humidity, temperature, cloud cover, precipitation, and time of day.

These challenges are important to recognize and overcome when establishing an odor verification protocol that is both practical and objective.

The strength of an odor can be objectively measured with an acceptable degree of precision using an instrument called an olfactometer. The Nasal Ranger device recently purchased by Yolo County is an example of a conventional field olfactometer. The field olfactometer provides odor data that is consistent from location to location by quantifying odor strength in the ambient air. Numerically, the strength of an odor is identified by how many clean air dilutions are required to no longer detect any given odor. The more clean air dilutions required, then the stronger the odor – and strong odors are a good indicator of potential nuisance.

An olfactometer works by controlling the proportion of "clean air" (odor-free or carbon filtered air) to "odorous" air to which an odor investigator is exposed. As an example, for a given odor, a numeric value of 60 dilutions of clean air using an olfactometer would objectively be much stronger and likely much more offensive than a value of 15 dilutions of clean area. In this example, an olfactometer value of 60 represents a stronger odor than a value of 15 because the tested air simply requires much more clean air to dilute the sample of odorous air to a level that is undetectable. These values are known as dilution-to-threshold or "D/T" values.

While an olfactometer determines the strength of a given odor, it does not identify the character of the odor (i.e. what does the odor smell like?). Other observable characteristics such as the frequency, intensity, duration, and offensiveness of the odor are equally as important as measuring the strength. These parameters are noted alongside the numeric odor strength measurements from the olfactometer.

It is good practice to apply what is known as the "FIDOL" parameters to odor measurements. FIDOL is an acronym for the following characteristics or parameters:

*Frequency* – how often the odor impacts occur

*Intensity* – the relative odor strength (faint to overwhelming)

*Duration* – the length of time for a given odor event

*Offensiveness* – the character or description of the odor

*Location* – mapping impact and identifying other off-property contributing sources



As part of the odor verification process, the trained odor investigator addresses the FIDOL parameters on a standardized odor documentation field sheet. For consistency in qualifying the character of a specific odor, an odor wheel (Figure 3-1) is commonly used to define the descriptors of possible scents and provide investigators a standard set list from which to choose. The numerical values depicted in the exhibit allow for shorthand recordkeeping of odor descriptors only and are not indicative of odor strength or offensiveness.

Reliable ambient odor measurement limits require trained odor investigators with tested sensitivity within an acceptable range for detecting odors, as defined by European Standard EN13725. Competent investigators are trained to understand the various characteristics and parameters of odor and how to document them, and also how to assess and document various externalities (such as topography and meteorology) that might have relevance to the particular odor condition.

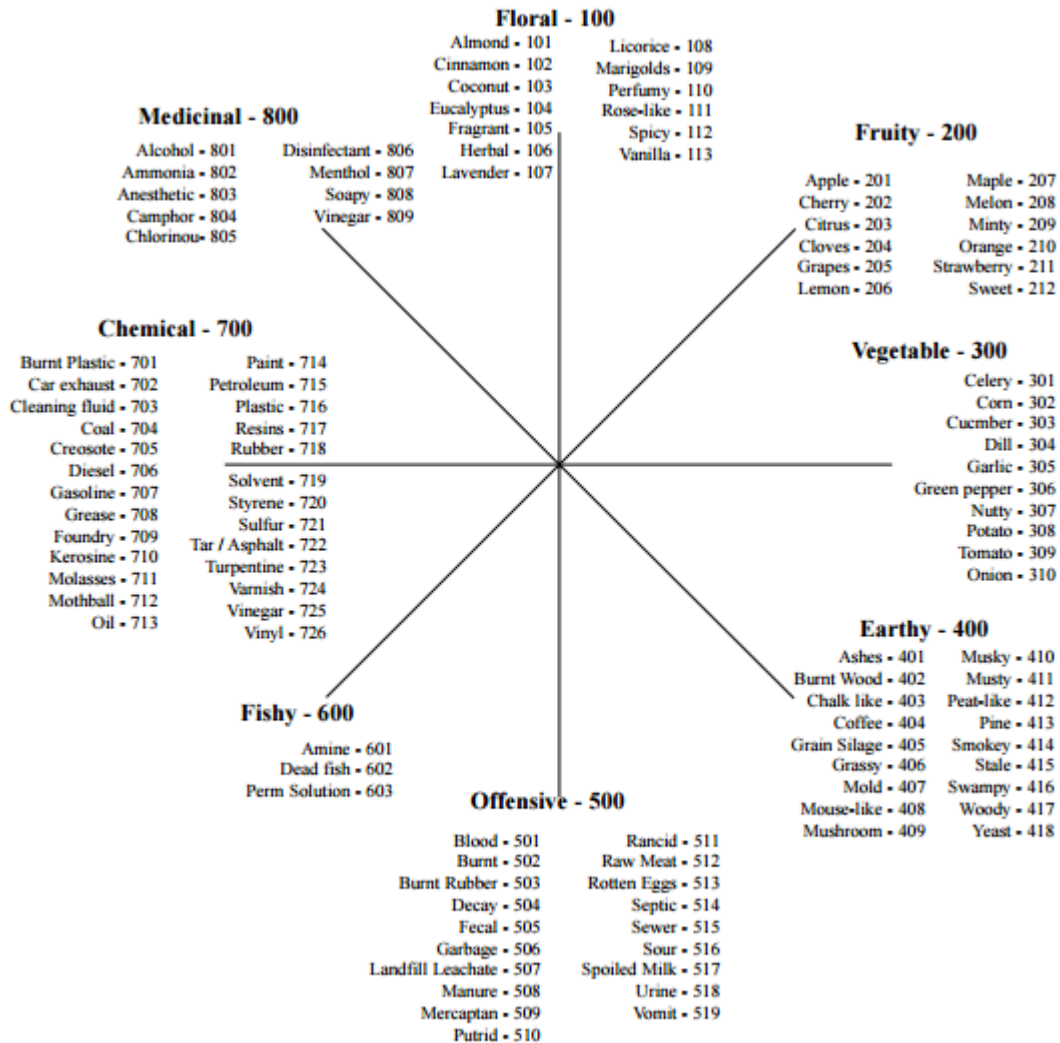


Figure 3-1 Odor Descriptor Wheel<sup>1</sup>

<sup>1</sup> Odor descriptor wheel obtained from St. Croix Sensory.

## Cannabis Odor Research

The typical smell of cannabis originates from roughly 140 different terpenes. A terpene is a volatile, unsaturated hydrocarbon that is found in essential oils of plants, especially conifers and citrus trees. Some terpenes are identified explicitly in research (myrcene, pinene, limonene). The “skunk” odor is primarily volatile thiols<sup>2</sup> (i.e., commonly offensive odor that vaporizes easily). Cannabis contains alpha-linolenic acid which may break down under ultraviolet rays of sunlight into methyl and butyl thiols.

Some researchers define an “odor activity value” (OAV) which is the chemical compound concentration divided by the chemical compound odor detection threshold (which is a literature-based value). A higher OAV could mean a more significant odor. One shortcoming of the OAV is the quality of the odor detection thresholds may be low. Highly odorous compounds in low concentrations which may have more potent OAV are nonanal, decanol, o-cymene, and benzaldehyde. In other research findings, it is believed the majority of the odor in the flowers is linked to pinene, limonene, and terpinolene.

Terpenes that are either commonly identified and/or thought to warrant further evaluation for odor impacts include: myrcene, pinene, limonene, b-caryophyllene, terpinolene, nonanal, decanol, o-cymene, and benzaldehyde. Utilizing published literature-based odor detection thresholds (where available) for these chemical compounds yields a range of 1 part per billion (ppb) to 3,500 ppb. Literature-based odor detection thresholds can vary widely (by orders of magnitude) for the same chemical compound.

Dispersion modeling has been conducted by other counties to determine distance that cannabis odor may be detected. This modeling indicated that specific cannabis compounds may be detectable at a distance of 2 miles or more depending on weather conditions (Kern County 2017:4.3-66 and 4.3-67).

Cannabis grown in enclosed, indoor environments (buildings and greenhouses) results in a concentration of odor-causing chemicals which can result in to the generation of significant odors within the internal air space. It has been reported that greenhouses can generate odor with strengths ranging from 30,000 to 50,000 odor units (COC, 2018). This implies that the untreated indoor air would need to be diluted up to 50,000 times with clean air to be reduced to levels which are no longer detectable to humans with normal odor sensitivity. While containment of cannabis in buildings is an effective means of addressing odors, unfiltered release of odors from vents or doors do generate concentrated odors into the surrounding areas that can create nuisances to off-site land uses and sensitive receptors.

## Examples of Odor Regulations in Other Jurisdictions

There are no numerical odor thresholds (such as a D/T or an intensity rating) established at the local level by an air district or at the state level in California. As shown in Table 3-4, there are other states that have established numerical thresholds for all odor types along with an established frequency and receptor location (e.g., property line, off property, sensitive receptor). Compliance with these numerical odor thresholds is determined off property with tools such as a field olfactometer, dynamic olfactometer (in an odor laboratory) or through odor dispersion modeling. The sense of smell, like vision and hearing, is logarithmic. The Nasal Ranger measures 2 D/T, 4 D/T, 7 D/T, 15 D/T, 30 D/T, and 60 D/T odor strength ratios, essentially doubling the amount of clean air added to the odorous air each test measurement, to reflect an increment of change that would be perceptible to the human nose.

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<sup>2</sup> Thiol is an organosulfur compound that can generate offensive odors.

**Table 3-4 Ambient Air Odor Threshold Examples**

Jurisdiction	Ambient Air Odor Threshold	Observed Frequency of Potential Violation	Observed Location	Regulatory Citation (cites to a relevant law, rule or ordinance)
Colorado <sup>1</sup>	7 D/T (residential/commercial) 15 D/T (all other areas) 127 D/T (violation level)	2 measurements in 1 hour separated by 15 minutes	Outside the property line	Regulation Number 2
Connecticut	7 D/T	3 samples or observations in 1 hour separated by 15 minutes	Ambient air (off-property)	Section 22a-174-23
Illinois	8 D/T (residential) 16 D/T (other land uses) 24 D/T (industrial property line)	2 out of 3 positive determinations where 2 observations are 15 minutes apart within 1 hour with 3 person team	On or adjacent to specified land use	Title 35, Part 245
Kentucky	7 D/T	At any time	Ambient air	401 KAR 53:010
Nevada	8 D/T	2 measurements in 1 hour separated by 15 minutes <sup>2</sup>	Places of occupancy	NAC 445B.22087
North Dakota	7 D/T	May not discharge at 7 D/T or higher	Property boundary for sources in City; residential/near public receptor for sources outside of City <sup>3</sup>	Chapter 33-15-16
Wyoming	7 D/T	2 measurements in 1 hour separated by at least 15 minutes	Odor producer property line	WDEQ Chapter 2 Section 11

<sup>1</sup> Colorado also has industry specific thresholds for swine, which are not summarized in the table above.

<sup>2</sup> Nevada requires investigation when 30% or more of sample of people are exposed to odor and believe it to be objectionable; sample must be at least 20 people or 75% of those exposed if sample is less than 20 people exposed.

<sup>3</sup> North Dakota has an additional provision for agricultural operations that have been in operation for more than 1 year and the business or residence making the complaint was built/established after the agricultural operation. There are different thresholds depending on whether the complainant is in the City or outside of the City. In this situation, for a complainant in the City, measurement must be taken within 100 ft of established residence rather than the property boundary of the agricultural operation, and the measurement may not be taken within 500 ft of the property boundary of the agricultural operation. See rule for additional provision for complainants located outside of the City.

Prepared by Trinity Consultants 2019

Many states assume a 7 D/T as an odor nuisance threshold. Many states require multiple observations within an hour to establish a nuisance. There is also some variability in where the odor must be observed or measured to constitute a nuisance (property line vs. receptor location). The 7 D/T standard is based on scientific publications on odor pollution control that have identified that odors above 7 D/T will often result in complaints (i.e., objectionable), with 15 D/T often described as a nuisance, and odors above 30 D/T described as a serious nuisance (i.e., nauseating) (McGinley 2000 and Huey et al. 1960).

The use of an olfactometer and D/T provides the strength of an odor. Examples of odor types that have been documented at the 7 D/T standard includes the following:

- ▶ Wastewater treatment plant site (on the site): smelled like a musty/musky odor
- ▶ Compost facility that accepts biosolids and food waste (across the street): smelled like manure septic odor
- ▶ Compost facility (adjacent to the site): smelled like an earthy/urine odor
- ▶ Agricultural area (adjacent to the field): smelled like a grassy odor (Wanger 2019)

The Yolo County Cannabis Task Force currently uses a 7 D/T to determine if objectional odors are present on a cannabis cultivation site.

### 3.3.2 Regulatory Setting

#### LOCAL PLANS, POLICIES, LAWS, AND REGULATIONS

The Yolo-Solano Air Quality Management District (YSAQMD) attains and maintains air quality conditions in Yolo and Solano Counties through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of YSAQMD includes the preparation of plans and programs for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. YSAQMD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA and Clean Air Act Amendments and the CCAA.

The CCAA requires air districts to submit air quality plans for areas that do not meet CAAQS for ozone, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. YSAQMD has attained all standards with the exception of ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> (YSAQMD 2019). The CCAA does not currently require attainment plans for PM<sub>10</sub> and PM<sub>2.5</sub>. For the attainment and maintenance of ozone, in July 2016, YSAQMD adopted its 2015 Triennial Plan Update, which examined air quality conditions for 2012–2014 and documents efforts made by YSAQMD to improve air quality (YSAQMD 2016).

In addition, as a part of the Sacramento Valley federal ozone nonattainment area, YSAQMD works with the Sacramento Metropolitan Air Quality Management District and other air districts in the region to develop and implement a regional air quality management plan under CAA requirements.

YSAQMD developed guidance for lead agencies to use when preparing CEQA documents (YSAQMD 2007) and adopted CEQA thresholds of significance for evaluating impacts on air quality. YSAQMD's recommended thresholds of significance are tied to achieving or maintaining attainment designations with respect to the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health and public welfare.

In accordance with Appendix G of the State CEQA Guidelines and YSAQMD recommendations, the project's impact on air quality would be significant if it would (YSAQMD 2007:6):

- ▶ conflict with or obstruct implementation of the applicable air quality plan;
- ▶ cause construction-generated criteria air pollutant or precursor emissions to exceed the YSAQMD-recommended thresholds of 10 tons per year (tons/year) for ROG, 10 tons/year for NO<sub>x</sub>, or 80 pounds per day (lb/day) for PM<sub>10</sub>;
- ▶ result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the YSAQMD-recommended thresholds of 10 tons/year for ROG, 10 tons/year for NO<sub>x</sub>, 80 lb/day for PM<sub>10</sub>, or violation of a state ambient air quality standard for CO;
- ▶ result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million or the 8-hour CAAQS of 9 parts per million;
- ▶ generate TACs that would expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million and/or a chronic or acute health hazard index of 1.0 or greater; or
- ▶ create odorous emissions that adversely affect a substantial number of people.

#### 3.3.3 Discussion

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

**Less than significant.** Air quality planning for Yolo County is under the jurisdiction of YSAQMD. YSAQMD, along with other districts with jurisdiction in portions of the SVAB, has adopted air quality management plans (AQMPs) to reduce emissions of reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>), which are both ozone precursors, as well as PM<sub>10</sub> and PM<sub>2.5</sub> to attain the NAAQS and CAAQS. Yolo County is currently designated as nonattainment with respect

to the NAAQS and CAAQS for ozone, the CAAQS for PM<sub>10</sub>, and the NAAQS for PM<sub>2.5</sub>. The AQMPs rely on emissions forecasts based on demographic and economic growth projections provided by the city and county general plans. Projects whose growth is included in the projections used in the formulation of the AQMPs are considered to be consistent with the AQMPs and would not interfere with its attainment plans. Because the project would not modify land uses or result in an increase in the residential population, the project would be consistent with YSAQMD's AQMPs. Furthermore, as discussed for item b), the short-term construction and long-term operation of the project would not generate emissions of criteria air pollutants and precursors that would exceed the YSAQMD-established mass emission thresholds, which were developed to determine whether a project's emissions would cumulatively contribute to the nonattainment designations in the SVAB. As a result, this impact would be less than significant.

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

**Less than significant.** Yolo County is designated as nonattainment with respect to the NAAQS and CAAQS for ozone, the NAAQS for PM<sub>2.5</sub>, and the CAAQS for PM<sub>10</sub>. The mass emission thresholds developed by YSAQMD are tied to attaining and maintaining these health-based standards, and projects that exceed the thresholds would result in a cumulative, regional contribution to the nonattainment status of YSAQMD

### **Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors**

Implementation of the proposed project would involve construction of a cannabis cultivation and distribution facility on approximately 40 acres. Construction would begin in 2021, with completion anticipated in 2023. Construction activities would result in temporary and intermittent generation of criteria air pollutants and precursors from heavy-duty construction equipment, vendor truck trips, and worker commute trips. Earth-moving equipment (e.g., backhoes, graders, scrapers, and dozers) would be used during site preparation and grading. Equipment such as backhoes, forklifts, welders, air compressors, and generators would be used during building construction and the application of architectural coatings.

Emissions of NO<sub>x</sub> would be primarily associated with off-road construction equipment exhaust; secondary sources would include on-road trucks for the hauling of materials and equipment, as well as worker vehicles for commuting. Worker commute trips in gasoline-fueled vehicles and the application of architectural coatings would be the principal sources of ROG, with additional ROG coming from off- and on-road construction equipment. Emissions of fugitive PM<sub>10</sub> and PM<sub>2.5</sub> dust are associated primarily with ground-disturbance activities during site preparation, excavation, and grading and may vary as a function of such soil parameters as silt content, soil moisture, wind speed, and the area of disturbance. Exhaust emissions from diesel equipment and worker commute trips also contribute to short-term increases in PM<sub>10</sub> and PM<sub>2.5</sub>, but to a much lesser extent than fugitive dust emissions.

The project's construction-related emissions of criteria air pollutants and precursors were modeled based on project specifications (e.g., construction schedule and building area) and default settings and parameters contained in the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 (CAPCOA 2016). Refer to Appendix A for specific input parameters and modeling output results. On the basis of this modeling, it is estimated that construction would generate a total of 2 tons of ROG and 5 tons of NO<sub>x</sub> during the entire construction period, which would begin in 2021 and end in 2023. These emission totals would not exceed YSAQMD's recommended emissions thresholds of 10 tons/year. It is also estimated that construction activity would generate up to 21 lb/day of PM<sub>10</sub> (and up to 12 lb/day of PM<sub>2.5</sub>) on a peak day, which would not exceed YSAMQD's peak daily threshold of 80 lb/day.

### **Long-Term Operational Related Criteria Air Pollutants and Precursors**

Project operations would result in the generation of emissions of criteria air pollutants and precursors. Mobile-source emissions would be generated from employees' commute vehicles traveling to and from the project site, as well as delivery and maintenance vehicles. As identified in Section 3.17, "Transportation," the project would generate an estimated 94 additional daily vehicle trips.

Project operation would result in the generation of long-term operational emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> as a result of area-wide, energy, mobile, and off-road sources. Area-wide and energy sources would include fertilizers,

the periodic application of architectural coatings, the generation of ROG from the use of consumer products, and the combustion of propane for power boilers. Mobile-source emissions of criteria air pollutants and precursors would result from vehicle trips generated by employee commute trips, and other associated vehicle trips (e.g., delivery of supplies, visitors).

Table 3-5 summarizes the operational emissions of criteria air pollutants and precursors. Emissions were calculated using CalEEMod and are based on the proposed land use type and number of trips (Appendix A). As shown in Table 3-5, proposed project operational-related emissions would not exceed YSAQMD's thresholds of significance.

**Table 3-5 Operational Emissions of Criteria Air Pollutants and Precursors**

Source Type	ROG (tons/year)	NO <sub>x</sub> (tons/year)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)
Area sources <sup>a</sup>	1	<1	<1	<1
Propane <sup>b</sup>	<1	<1	<1	<1
Mobile (vehicle trips) <sup>c</sup>	<1	<1	65	7
Off-road (forklifts) <sup>d</sup>	<1	1	<1	<1
<b>Total</b>	<b>1</b>	<b>1</b>	<b>65</b>	<b>7</b>
<b>YSAQMD thresholds of significance</b>	<b>10</b>	<b>10</b>	<b>80</b>	<b>N/A</b>

Notes: ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; PM<sub>10</sub> = respirable particulate matter; PM<sub>2.5</sub> = fine particulate matter; lb/day = pounds per day; tons/year = tons per year; YSAQMD = Yolo-Solano Air Quality Management District; N/A = not applicable.

a Area-source emissions include emissions from landscape maintenance activity, the application of architectural coatings as part of regular maintenance, and consumer products.

b Propane emissions were assumed for powering boilers.

c Mobile-source emissions were estimated using average daily trips estimated by the traffic analysis prepared for the project and used to support the transportation analysis in Section 3.17, "Transportation." An estimated 7 percent of vehicle trip lengths would be on gravel road. Fugitive dust emissions (PM<sub>10</sub>) would be generated on the portion of County Road 17 laid with gravel material. The estimate of PM<sub>10</sub> emissions is conservative because it is based on a dirt road emission factor, and dirt roads have a higher silt content than gravel roads.

d Off-road emissions from diesel fuel use were estimated for each greenhouse. The estimate of diesel fuel use is based on an operation time of 4 hours per day.

Source: Modeling conducted by Ascent Environmental in 2020

## Summary

The levels of criteria air pollutants and precursors generated during project construction and operation would not exceed the mass emission thresholds established by YSAQMD. Therefore, project-related emissions would not result in or contribute to the nonattainment designations with respect to the CAAQS and NAAQS in Yolo County and the SVAB. In addition, the project would not exacerbate or interfere with the region's ability to attain the health-based standards. Therefore, this impact would be less than significant.

### c) Expose sensitive receptors to substantial pollutant concentrations?

**Less than significant.** Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and the potential for increased and prolonged exposure of individuals to pollutants. The project is generally located in an agriculturally designated area with sparse development. The closest sensitive receptor is a residence on County Road 91B approximately 950 feet southwest of the project boundary.

The potential cancer risk from inhaling diesel PM outweighs the potential for all other diesel PM-related health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003:K-1). With regard to exposure to diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure

period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, when a health risk assessment is prepared to project the results of exposure of sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the duration of activities associated with the proposed project if emissions occur for shorter periods (OEHHA 2015:5-23, 5-24).

## Construction

Construction-related activities would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment. Construction activities would occur at a minimum of 950 feet away from the nearest sensitive receptor. Construction activities would occur this close to a sensitive receptor only over a short duration of construction phasing.

The results of emissions modeling show that maximum daily emissions of exhaust PM<sub>2.5</sub> would not exceed 12 lb/day during construction. As noted previously, these estimates represent a conservative analysis, and construction activities would occur near a sensitive receptor only for a relatively short period.

Considering the highly dispersive properties of diesel PM, the relatively low mass of diesel PM emissions that would be generated at any single place during project construction, the relatively short period during which diesel PM-emitting construction activities would take place, and the fact that the nearest sensitive receptor (occupied residence) is 950 feet away, construction-related TACs would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a Health Index greater or equal to 1.0.

## Operations

Project operations would result in the long-term emissions of diesel PM from the increase in vehicle trips and associated diesel PM emissions. In particular, diesel-powered trucks associated with the proposed commercial land uses could emit diesel PM at the project site. However, the frequency of delivery trips to and from the project site by diesel-powered trucks would not be atypical. As a result, operation of the project would not result in a substantial increase in concentrations of diesel PM at or near the project site. Thus, operational TACs would not expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a Health Index greater or equal to 1.0.

## Summary

Because of the dispersive properties of diesel PM, the relatively low mass diesel PM emissions that would be generated in one place during the construction and operation of proposed land uses, and the relatively short construction period, it is not anticipated that project-related TACs would expose sensitive receptors to an incremental increase in cancer risk that exceeds 10 in one million or a Hazard Index of 1.0 or greater. As a result, this impact would be less than significant.

### d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

**Less than significant with mitigation incorporate.** The typical smell of cannabis originates from roughly 140 different terpenes. A terpene is a volatile, unsaturated hydrocarbon that is found in essential oils of plants, especially conifers and citrus trees. Some terpenes are identified explicitly in research (myrcene, pinene, limonene). The "skunk" odor that some people attribute to cannabis consists primarily of volatile thiols. Cannabis uses that have potential to generate nuisance odors include cultivation, processing, manufacturing, and microbusiness. Project-related odors would be associated with the mixed-light cultivation, and nursery greenhouses on the project site. At the time of preparing this analysis, the Yolo County Cannabis Task Force or YSAQMD have not received any odor complaints associated with existing operations on the project site.

The farthest distance cannabis odors may be recognizable or detectable is approximately 2 miles or more, depending on topography and meteorology (Kern County 2017). This is consistent with the experience of the Yolo County Cannabis Task Force, which investigates complaints regarding cannabis operations that include the verification of odor complaints. However, recognition of an odor does not imply that the odor is a nuisance, only that it can be

identified or detected as cannabis. Typically, the odor is detectable much closer to the source, such as adjacent to or on a cultivation site. The distance for odor detection is site-specific and can be affected by many variables, including meteorology, topography, plant strain, and how ready plants are for harvesting. County odor complaint data indicate that calm and/or light wind conditions tend to create the greatest potential for odor complaints. In addition, human perception of cannabis plant odors may be influenced by personal views regarding cannabis. Whether the odor is acceptable and the level at which it should be defined as objectionable at various strengths and distances in the agricultural setting from various land uses is a matter of policy.

Cannabis grown in enclosed, indoor environments (buildings and greenhouses) results in a concentration of odor-causing chemicals that can result in the generation of substantial odors within the internal air space. It has been reported that greenhouses can generate odor with strengths ranging from 30,000 to 50,000 odor units (COC 2018). This implies that the untreated indoor air would need to be diluted up to 50,000 times with clean air to be reduced to levels that are no longer detectable to humans with normal odor sensitivity. Although containment of cannabis in buildings is an effective means of addressing odors, unfiltered release of odors from vents or doors does create concentrated odors in the surrounding areas that can create nuisances to people at off-site land uses.

As discussed in Section 2.5.2, "Project Features," each of the mixed-light greenhouses would be equipped with a Fogco Odor Control System. The greenhouses would each have a passive air intake located on one wall and an exhaust fan with a shroud on the ridge of the opposing wall. Each exhaust fan would consist of a shroud that would inject a neutralizing agent for 30 seconds prior to starting the exhaust fan. The overall goal of this system would be for the Fogco odor counteractant to interact with the odorant air stream to interact with, resulting in odor elimination.

To best assess the potential odors associated with the project, the facility's odor control strategies were reviewed by Trinity Consultants (Trinity Consultants 2021). The odor report discusses the project's odor control system and its potential to meet the County's DA policy associated with the Early Implementation Development Agreements:

All development agreements approved pursuant to this policy will include language requiring prevention of all significant offsite odor and lighting/aesthetic impacts. The objective is to achieve as close to a "zero impact" outcome for each project, particularly for offsite odor impacts, as may be feasible with current technology.

Because the odor control system relies on the odor counteractant neutralizing the odorous air stream, the efficiency of the overall odor control system was assessed considering the following components:

- ▶ nozzle placement;
- ▶ effect of crosswind on the mixing of the odor counteractant with the odorous gas stream;
- ▶ feed rate of the counteractant; and
- ▶ contact time between the odor counteractant and odorous air stream.

The odor assessment indicated that the proposed odor control system can effectively control odor. However, detailed improvement plans of the ventilation system for the greenhouses and headhouses were not available at the time of the preparation of this document. Thus, it is difficult to determine whether the proposed system would effectively reduce cannabis-related odors during project operation.

As discussed in Section 2.5.2, "Project Features," odor controls are not proposed for the nursery greenhouses and nursery headhouse. Although mature plants emit the most substantial odors, immature plants may also emit objectionable odors. Because the nursery greenhouses and nursery headhouse are located near the property boundary, there is potential for odor from the nursery greenhouses and nursery headhouse to be present outside of the project site boundary.

Thus, because there is not adequate information available to support a conclusion of a sufficient reduction in odors from the mixed-light greenhouses and because no odor control systems are currently proposed for the nursery greenhouses and headhouse, it could not be determined whether the project would meet the Yolo County standard



of "close to a 'zero impact' outcome" as feasible, which is considered by the County to be a 7 D/T at the property boundary (see subheading, "Odors," above for more information related to this threshold). Thus, this impact would be potentially significant.

**Mitigation Measure 3.3-1: Submit Final Odor Control System Specifications for Review and Approval by the County**

Before approval of the DA, GCI shall submit the final specifications for the odor control system to Yolo County for review and approval. The odor control system specifications shall apply to all greenhouses and headhouses associated with the project. The final odor control system specifications shall be calibrated to achieve a 7 D/T at the property boundary. Corrective actions/modifications for the operation of the site should nuisance odor complaints be verified by the County.

The effectiveness of the odor control technology should be assessed by the County's Cannabis Task Force following commissioning of the operation, and optimized, as needed, to ensure that a 7 D/T is achieved for all operating scenarios and operating conditions.

**Significance after Mitigation**

Implementation of Mitigation Measure 3.3-1 would require detailed design of an odor reduction system that would be reasonably expected to meet the Yolo County standard of "as close to a 'zero impact' outcome" as feasible with current technology for off-site odor impacts. If it is determined from a verified odor complaint associated with the project that nuisance odors occur off-site during operation of the project, Mitigation Measure 3.3-1 would require additional modifications to the greenhouses and headhouses to reduce odor levels. Thus, because detailed specifications would be reviewed and odor complaints would be addressed, this impact would be reduced to a less-than-significant level.

### 3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IV. Biological Resources.</b>				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The project site contains annual grassland habitat composed of mostly nonnative grasses, including slender wild oat (*Avena barbata*), medusa head (*Elymus caput-medusae*), and soft chess (*Bromus hordeaceus*). The project site, which ranges in elevation from approximately 190 to 250 feet, is surrounded by agricultural uses, including orchards, vineyards, row crops, and cattle grazing land. The project site does not contain any trees.

On the basis of a site visit on June 26, 2019, by an Ascent Environmental wildlife biologist and botanist, as well as historic and recent aerial imagery, wetland habitat, including an intermittent, seasonally flooded watercourse, has been identified in the northwestern portion of the project site. No project components are proposed within this area of the project site.

A query of the California Natural Diversity Database and a California Native Plant Society Inventory of Rare and Endangered Plants search of the Bird Valley, Zamora, Eldorado Bend, Esparto, Madison, Woodland, Monticello Dam, Winters, and Merritt U.S. Geological Survey 7.5-minute quadrangles were conducted to identify sensitive biological resources within the vicinity of the project site. A review of the query and search results, documented species ranges, and habitat within the project site identified one special-status plant species and 12 special-status wildlife species that may or are known to occur on the project site (Tables 3-6 and 3-7) (CNDDDB 2020; CNPS 2020).

**Table 3-6 Special-Status Plant Species Known to Occur in the Project Vicinity and Their Potential for Occurrence on the Project Site**

Species	Listing Status <sup>1</sup>			Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State	CRPR		
Contra Costa manzanita <i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	—	—	1B.2	Chaparral. Rocky slopes. 492–2,001 feet in elevation. Blooms January–March.	Not expected to occur. The project site does not contain chaparral habitat.
Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>	—	—	1B.1	Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. 16–246 feet in elevation. Blooms April–May.	Not expected to occur. The project site does not contain alkaline flat habitat.
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	—	—	1B.2	Alkaline flats and scalds in the Central Valley, sandy soils. 10–902 feet in elevation. Blooms April–October.	Not expected to occur. The project does not contain alkaline flat habitat.
San Joaquin spearscale <i>Extriplex joaquinana</i>	—	—	1B.2	In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , and others. 3–2,740 feet in elevation. Blooms April–October.	Not expected to occur. The project does not contain alkali wetland or alkali sink scrub habitat
Brewer's western flax <i>Hesperolinon breweri</i>	—	—	1B.2	Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. 640–2,904 feet in elevation. Blooms May–July.	Not expected to occur. The project site does not contain serpentine soils.
Colusa layia <i>Layia septentrionalis</i>	—	—	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 49–3,609 feet in elevation. Blooms April–May.	Not expected to occur. The project site does not contain serpentine soils.
Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>	—	—	1B.2	Valley and foothill grassland, vernal pools. Grassland, and sometimes vernal pool edges. Alkaline soils. 3–98 feet in elevation. Blooms March–May.	Not expected to occur. The project site does not contain alkaline soils.
Jepson's leptosiphon <i>Leptosiphon jepsonii</i>	—	—	1B.2	Chaparral, cismontane woodland. Open to partially shaded grassy slopes. On volcanic soils or the periphery of serpentine substrates. 180–2,805 feet in elevation. Blooms March–May.	Not expected to occur. The project site does not contain serpentine or volcanic soils.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	—	—	1B.1	Vernal pools and swales; adobe or alkaline soils. 16–5,709 feet in elevation. Blooms April–July.	May occur. The project site contains wetland and swale habitat potentially suitable for this species.
California alkali grass <i>Puccinellia simplex</i>	—	—	1B.2	Alkaline, vernal mesic. Sinks, flats, and lake margins. 3–3,002 feet in elevation. Blooms March–May.	Not expected to occur. The project site does not contain alkaline soils.

Species	Listing Status <sup>1</sup>			Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State	CRPR		
Keck's checkerbloom <i>Sidalcea keckii</i>	FE	—	1B.1	Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. 279–1,657 feet in elevation. Blooms April–May.	Not expected to occur. The project site does not contain blue oak woodland habitat or serpentine soils.

Notes: CESA = California Endangered Species Act; CRPR = California Rare Plant Rank; ESA = Endangered Species Act.

**California Rare Plant Rank:**

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

**Threat Ranks:**

0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

0.2 Moderately threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)

<sup>1</sup> Legal Status Definitions

**Federal:**

FE Endangered (legally protected by ESA)

<sup>2</sup> Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Sources: CNDDDB 2020; CNPS 2020

**Table 3-7 Special-Status Wildlife Species Known to Occur in the Project Vicinity and Their Potential for Occurrence on the Project Site**

Species	Listing Status <sup>1</sup>		Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State		
<b>Amphibians and Reptiles</b>				
California tiger salamander <i>Ambystoma californiense</i>	FT	ST	Central Valley DPS federally listed as threatened. Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	May occur. The nearest known occurrence of California tiger salamander is approximately 10 miles west of the project site (CNDDDB 2020). The project site is within habitat modeled as suitable for California tiger salamander by the Yolo Habitat Conservancy. Potentially suitable aquatic breeding habitat may be present within the freshwater pond and associated wetland habitat on the property adjacent to the project site to the south.
Foothill yellow-legged frog <i>Rana boylei</i>	–	CE SSC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not expected to occur. The aquatic habitat present on the project site does not contain habitat suitable for this species.
Giant gartersnake <i>Thamnophis gigas</i>	FT	ST	Prefers freshwater marsh and low-gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	Not expected to occur. The aquatic habitat present on the project site does not contain habitat suitable for this species.
Western pond turtle <i>Actinemys marmorata</i>	–	SSC	Ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet in elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying.	May occur. The project site contains an intermittent, seasonally flooded watercourse that connects to a pond within the parcel adjacent to the project site and eventually to Cache Creek. This aquatic habitat could provide seasonal habitat for western pond turtle. Additionally, grassland habitat within the project site may provide upland habitat

Species	Listing Status <sup>1</sup>		Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State		
				suitable for this species. The project site is within upland habitat modeled as suitable for western pond turtle by the Yolo Habitat Conservancy.
Western spadefoot <i>Spea hammondi</i>	–	SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	May occur. Wetland habitat potentially suitable for this species is present within and adjacent to the project site. Grassland habitat with rodent burrows within the project site may be used for aestivation.
<b>Birds</b>				
American peregrine falcon <i>Falco peregrinus anatum</i>	FD	SD FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Not expected to occur. The project site does not contain nesting habitat suitable for this species.
Bank swallow <i>Riparia</i>	–	ST	Colonial nester; nests primarily in riparian and other lowland habitats. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not expected to occur. The project site does not contain bank or cliff nesting habitat suitable for this species.
Burrowing owl <i>Athene cunicularia</i>	–	SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	May occur. The project site contains grassland nesting habitat potentially suitable for this species. The project site is within habitat modeled as suitable for burrowing owl by the Yolo Habitat Conservancy.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE	SE	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Not expected to occur. The project site does not contain riparian habitat suitable for this species.
Loggerhead shrike <i>Lanius ludovicianus</i>	–	SSC	Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Not expected to occur. The project site does not contain brush or shrub nesting habitat suitable for this species.
Mountain plover <i>Charadrius montanus</i>	–	SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	May occur. The project site contains short, grazed grassland habitat potentially suitable for this species.
Northern harrier <i>Circus hudsonius</i>	–	SSC	Nests and forages in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	May occur. Although the project site does not contain nesting habitat suitable for this species, nesting habitat is potentially present in adjacent properties. Additionally, northern harrier could forage on the project site.
Swainson's hawk <i>Buteo swainsoni</i>	–	ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannas, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas, such as grasslands, or alfalfa or grain fields supporting rodent populations.	May occur. Although the project site does not contain nesting habitat suitable for this species, trees that may provide nesting habitat are present in adjacent properties. Additionally, Swainson's hawk could forage on the project site. The

Species	Listing Status <sup>1</sup>		Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State		
				project site is within foraging habitat modeled as suitable for Swainson's hawk by the Yolo Habitat Conservancy.
Tricolored blackbird <i>Agelaius tricolor</i>	-	ST SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Not expected to occur. The project site does not contain nesting habitat suitable for this species.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT	SSC	Great Basin standing waters, sand shore, wetland. Sandy beaches, salt pond levees, and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	Not expected to occur. The project site does not contain nesting habitat suitable for this species.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not expected to occur. The project site does not contain riparian nesting habitat suitable for this species.
White-tailed kite <i>Elanus leucurus</i>	-	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	May occur. Although the project site does not contain nesting habitat suitable for this species, trees that may provide nesting habitat are present in adjacent properties. Additionally, white-tailed kite could forage on the project site. The project site is within foraging habitat modeled as suitable for white-tailed kite by the Yolo Habitat Conservancy.
Yellow warbler <i>Setophaga petechia</i>	-	SSC	Riparian plant associations close to water. Also nests in montane shrubbery in open conifer forests in the Cascade Range and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants, including cottonwoods, sycamores, ash, and alders.	Not expected to occur. The project site does not contain riparian habitat suitable for this species.
Yellow-breasted chat <i>Icteria virens</i>	-	SSC	Riparian forest, riparian scrub, riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	Not expected to occur. The project site does not contain riparian habitat suitable for this species.
<b>Fish</b>				
Chinook salmon - Central Valley fall/late fall-run ESU <i>Oncorhynchus tshawytscha</i>	-	SSC	Populations spawning in the Sacramento and San Joaquin Rivers and their tributaries.	Not expected to occur. The project site does not contain aquatic habitat suitable for this species.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	-	SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay, and associated marshes. Slow-moving river sections, dead-end sloughs. Requires flooded vegetation for spawning and foraging for young.	Not expected to occur. The project site does not contain aquatic habitat suitable for this species.

Species	Listing Status <sup>1</sup>		Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State		
Steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i>	FT	–	Populations in the Sacramento and San Joaquin Rivers and their tributaries.	Not expected to occur. The project site does not contain aquatic habitat suitable for this species.
<b>Invertebrates</b>				
Crotch bumble bee <i>Bombus crotchii</i>	–	–	Coastal California east to the Sierra Nevada–Cascade Range crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	May occur. There is a known occurrence of crotch bumble bee approximately 7.4 miles west of the project site within the Capay Valley, where crotch bumble bees were detected during a ground-nesting bee study in sunflower fields in 2003 (CNDDDB 2020). Additionally, a recent occurrence (2020) of the species is located approximately 8.5 miles south of the project site (CNDDDB 2020).
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT	–	Riparian scrub. Occurs only in the Central Valley of California, in association with blue elderberry ( <i>Sambucus nigra</i> ssp. <i>caerulea</i> ). Prefers to lay eggs in elderberries 2–8 inches in diameter; some preference shown for “stressed” elderberries.	Not expected to occur. The project site does not contain any trees or shrubs and thus does not contain blue elderberry shrub habitat for this species.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	–	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	May occur. The project site contains wetland habitat suitable for this species.
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE	–	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	May occur. The project site contains wetland habitat suitable for this species.
Western bumble bee <i>Bombus occidentalis</i>	–	–	Bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens. Western bumble bee distribution is currently largely limited to the high Sierra Nevada and some areas along the North Coast.	Not expected to occur. The project site is within the historic range of this species. However, western bumble bee has recently undergone a decline in abundance and distribution and is no longer present across much of its historic range. In California, western bumble bee populations are currently largely restricted to high-elevation sites in the Sierra Nevada and a few locations on the northern California coast (Xerces 2018).
<b>Mammals</b>				
American badger <i>Taxidea taxus</i>	–	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Known to occur. A carcass of a juvenile badger was observed within the project site during the June 26, 2019, site visit. The project site contains grassland habitat with burrows potentially suitable for this species.
Pallid bat <i>Antrozous pallidus</i>	–	SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats	Not expected to occur. The project site does not contain any roosting habitat

Species	Listing Status <sup>1</sup>		Habitat	Potential for Occurrence <sup>2</sup>
	Federal	State		
			from high temperatures. Very sensitive to disturbance of roosting sites.	(e.g., rocky areas, trees) suitable for this species.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	–	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not expected to occur. The project site does not contain any roosting habitat (e.g., caves, barns) suitable for this species.
Western red bat <i>Lasiurus blossevillii</i>	–	SSC	Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Not expected to occur. The project site does not contain any roosting habitat (e.g., trees) suitable for this species.

Notes: DPS = distinct population segment; ESU = evolutionarily significant unit.

<sup>1</sup> Legal Status Definitions

**Federal:**

FE Endangered (legally protected)

FT Threatened (legally protected)

FD Delisted

**State:**

FP Fully protected (legally protected)

SSC Species of special concern (no formal protection other than CEQA consideration)

SD Delisted

SE Endangered (legally protected)

ST Threatened (legally protected)

SC Candidate for Listing (legally protected)

<sup>2</sup> Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available, or there have been nearby recorded occurrences of the species.

Known to occur: The species or signs of the species have been observed within the project site.

Sources: CNDDDB 2020; eBird 2019

## Yolo Habitat Conservation Plan/Natural Community Conservation Plan

The Draft Yolo Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) and accompanying environmental impact statement/environmental impact report was approved in 2018. The Yolo HCP/NCCP, which became effective January 11, 2019, is implemented by the Yolo Habitat Conservancy, a joint powers agency composed of Yolo County and its four cities (Davis, West Sacramento, Woodland, and Winters). The HCP/NCCP planning area includes the entirety of Yolo County, which is approximately 653,500 acres. The plan also includes conservation activities outside of Yolo County within an additional 1,174 acres along Putah Creek in Solano County. The plan would provide coverage for 12 species, including eight state-listed or federally listed species and four species that are not listed but could become listed during the 50-year term of the plan: palmate-bracted bird's beak (*Chloropyron palmatum*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), California tiger salamander (*Ambystoma californiense*), western pond turtle (*Actinemys marmorata*), giant gartersnake (*Thamnophis gigas*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), burrowing owl (*Athene cunicularia*), least Bell's vireo (*Vireo bellii pusillus*), bank swallow (*Riparia riparia*), and tricolored blackbird (*Agelaius tricolor*).

The Yolo HCP/NCCP identifies avoidance and minimization measures (AMMs) to minimize impacts on sensitive natural communities, wetlands, waters of the United States and state, and covered plant and wildlife species. The applicant is required to participate in the Yolo HCP/NCCP as a condition of project approval by the County. Participation in the Yolo HCP/NCCP includes payment of fees to the Yolo Habitat Conservancy. In turn, the Yolo Habitat Conservancy uses these fees to support a preserve system to compensate for land conversion in the County.



## 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 Wildlife or the U.S. Fish and Wildlife Service?

Less than significant with mitigation incorporated.

### Special-Status Plants

A total of 11 special-status plant species were identified as having potential to occur in the vicinity of the project site (Table 3-5) (CNDDDB 2020; CNPS 2020). Of these 11 species, one has potential to occur on the project site: Baker's navarretia. This species is associated with wetland and vernal pool habitat, which is present in the northwest portion of the project site.

Development of the project site, including ground disturbance associated with construction of roads or buildings, would be limited to areas on the project site that do not contain wetland habitat. Thus, impacts on Baker's navarretia, if present, are not expected to occur. This impact would be less than significant.

### Special-Status Wildlife

A total of 31 special-status wildlife species were identified as having potential to occur in the vicinity of the project site (Table 3-6) (CNDDDB 2020). Of these 31 species, 12 have potential to occur on the project site: California tiger salamander, western pond turtle, western spadefoot, burrowing owl, mountain plover, northern harrier, Swainson's hawk, white-tailed kite, crotch bumble bee, vernal pool fairy shrimp, vernal pool tadpole shrimp, and American badger.

#### California Tiger Salamander

California tiger salamander is listed as threatened under both the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). The nearest known occurrences of California tiger salamander are approximately 10 miles west of the project site (CNDDDB 2020). The project site is within habitat modeled as suitable for California tiger salamander by the Yolo Habitat Conservancy. The nearest aquatic breeding habitat potentially suitable for California tiger salamander is present within a freshwater pond on the property adjacent to the project site to the south. However, according to the landowner, this pond has supported a population of bullfrogs and fish (e.g., bass), which typically significantly reduces the quality of aquatic breeding habitat for California tiger salamanders, because these species are predators to the salamander and salamander larvae (ECORP Consulting 2020). As a result, California tiger salamanders are unlikely to breed within this pond. Despite the likely unsuitability of this pond for California tiger salamanders, all proposed project components are located greater than 500 feet from the pond. Aside from the pond adjacent to the project site, at least nine other ponds are present within approximately 1.2 miles of the project site (ECORP Consulting 2020). These ponds are generally surrounded by highly managed agricultural land with little to no upland habitat suitable for California tiger salamander (ECORP Consulting 2020).

The project site contains grassland habitat with rodent burrows that may provide aestivation habitat potentially suitable for California tiger salamander. California tiger salamander generally uses upland habitat within approximately 1.2 miles of a breeding pond. Because of the presence of predator species and intensive agricultural activity, the breeding habitat within approximately 1.2 miles of the project site is of marginal quality, and because the nearest known occurrence of the species is approximately 10 miles away from the project site, it is unlikely that California tiger salamanders would use the project site for upland aestivation habitat (ECORP Consulting 2020).

Development of the project site, including ground disturbance associated with construction of roads or buildings, is not expected to result in disturbance or direct loss of California tiger salamander. This impact would be less than significant.

### **Western Pond Turtle**

Western pond turtle is a California Department of Fish and Wildlife (CDFW) species of special concern and a covered species under the Yolo HCP/NCCP. Aquatic habitat potentially suitable for western pond turtle is present within the intermittent, seasonally flooded watercourse that bisects the project site. The grassland habitat surrounding this watercourse may provide suitable upland habitat for the species. The project site is within upland habitat modeled as suitable for western pond turtle by the Yolo Habitat Conservancy. Development of the project site, including ground disturbance associated with construction of roads or buildings, could result in disturbance or direct loss of western pond turtles, their eggs, or hatchlings if they are present on the project site. This would be a potentially significant impact. Implementation of the following mitigation measure would reduce the project's impacts on western pond turtle to a less-than-significant level.

### **Mitigation Measure 3.4-1 (Yolo HCP/NCCP AMM 14): Conduct Survey for Western Pond Turtle and Relocate Individuals**

This measure shall be implemented to avoid or minimize loss of western pond turtle consistent with the Yolo HCP/NCCP:

- ▶ Within 24 hours before beginning construction activities within 200 feet of suitable aquatic habitat for western pond turtle, a qualified biologist will survey areas of anticipated disturbance for the presence of western pond turtle and potential nests.
- ▶ If pond turtles are found during the survey or the qualified biologist determines that there is a moderate to high likelihood of western pond turtle nests within the project site, then a qualified biologist will monitor all initial ground disturbance for nests that may be unearthed. If western pond turtles or hatchlings are observed during this activity, they will be relocated by a qualified biologist to upstream or adjacent aquatic habitat that would not be disturbed by construction activity.

### **Significance after Mitigation**

Implementation of Mitigation Measure 3.4-1 would minimize impacts on western pond turtle by requiring that surveys be conducted to determine the presence of individuals or nests on the site. If necessary, monitoring of ground disturbances and relocation of individuals would be conducted. With implementation of Mitigation Measure 3.4-1, the potential impact on western pond turtle would be reduced to a less-than-significant level.

### **Western Spadefoot**

Western spadefoot is a CDFW species of special concern. Breeding habitat potentially suitable for western spadefoot is present within wetlands on the project site, and upland aestivation habitat is present within grassland habitat in the project site. Development of the project site, including ground disturbance associated with construction of roads or buildings, would be limited to areas in the project site that do not contain wetland habitat. Thus, impacts on potential western spadefoot aquatic habitat are not expected to occur. However, these activities may result in disturbance of upland aestivation habitat within grasslands in the project site, resulting in death of western spadefoot if the species is present. This would be a potentially significant impact. Implementation of the following mitigation measure would reduce the project's impacts on western spadefoot to a less-than-significant level.

### **Mitigation Measure 3.4-2: Conduct Survey for Western Spadefoot and Avoid or Relocate Individuals**

The following measure shall be implemented to avoid or minimize loss of western spadefoot:

- ▶ Before ground disturbance, a qualified biologist will survey the project site within 48 hours before initiation of construction activities. If no western spadefoot individuals are found during the preconstruction survey, the biologist will document the findings in a letter report to Yolo County, and further mitigation will not be required.
- ▶ If western spadefoot is found within the project site, the qualified biologist will implement a 50-foot no-disturbance buffer around burrows that provide suitable upland habitat for western spadefoot. Burrows considered suitable for spadefoot will be identified by a qualified biologist. The biologist will delineate and mark the no-disturbance buffer.
- ▶ If establishing a 50-foot no-disturbance buffer is not feasible (i.e., if project elements are planned within the 50-foot no-disturbance buffer), then a qualified biological monitor with a valid CDFW Scientific Collecting Permit will be

present during all initial ground disturbance activities and will relocate western spadefoot individuals that enter the project site before the no-disturbance buffer is disturbed.

### **Significance after Mitigation**

Implementation of Mitigation Measure 3.4-2 would minimize impacts on western spadefoot by requiring that surveys be conducted to determine the presence of individuals on the site. If necessary, a qualified biologist would implement measures that would avoid disturbance, such as establishing buffers or relocating individuals. With implementation of Mitigation Measure 3.4-2, the potential impact on western spadefoot would be reduced to a less-than-significant level.

### **Burrowing Owl**

Burrowing owl is a CDFW species of special concern and a covered species under the Yolo HCP/NCCP. Nesting habitat (e.g., California ground squirrel and other mammal burrows) potentially suitable for burrowing owl is present within the grassland habitat throughout the project site. The project site is within habitat modeled as suitable for burrowing owl by the Yolo Habitat Conservancy. Participation in the Yolo HCP/NCCP would include payment of fees toward enhancement of natural habitats, including grassland, which would have a beneficial effect on this species. Development of the project site, including ground disturbance associated with construction of roads or buildings, could result in disturbance or direct loss of burrowing owls or their burrows if they are present on the project site. This impact would be potentially significant. Implementation of the following mitigation measure would reduce the project's impacts on burrowing owl to a less-than-significant level.

### **Mitigation Measure 3.4-3 (Yolo HCP/NCCP AMM 18): Conduct Surveys for Burrowing Owl and Protect Occupied Burrows**

This measure shall be implemented to avoid or minimize loss of burrowing owl consistent with the Yolo HCP/NCCP:

- ▶ The applicant will retain a qualified biologist to conduct burrowing owl surveys in accordance with Appendix D of CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no active burrows are observed, a letter report documenting the survey methods and results will be submitted to Yolo County, and no further mitigation would be required.
- ▶ If active burrows are observed, they will be avoided during the breeding season (February 1 through August 31) with a no-disturbance buffer of at least 600 feet and non-breeding season (September 1 through January 31) with a no-disturbance buffer of at least 150 feet (or larger as determined by a qualified biologist in consultation with the Yolo Habitat Conservancy and CDFW depending on the time of year and anticipated level of disturbance).
- ▶ Active burrowing owl nests will be monitored throughout the construction period by a qualified biologist to determine whether construction activities are disturbing the owls. The qualified biologist will have the authority to stop construction or to modify buffers to prevent disturbance to the owls. Construction may occur inside of the disturbance buffer if the nest is not disturbed (e.g., the adult burrowing owl does not display outward disturbance response, flush from the nest, or otherwise change nesting or foraging behavior) as determined by a qualified biologist and the applicant develops an avoidance and minimization plan approved by the County, the Yolo Habitat Conservancy, and CDFW.
- ▶ The applicant may remove the no-disturbance buffer when the burrow is no longer in use by owls and any young have fledged, as determined by the qualified biologist in concurrence with CDFW. If the abandoned, unoccupied burrow cannot be avoided by construction activity, the biologist, with approval from CDFW, will excavate and collapse the burrow in accordance with CDFW's 2012 guidelines to prevent reoccupation.

### **Significance after Mitigation**

Implementation of Mitigation Measure 3.4-3 would minimize impacts on burrowing owl by requiring that surveys be conducted to determine the presence of individuals or nests on the site. Active burrows would be avoided during the breeding season, and any abandoned burrow that cannot be avoided would be excavated and collapsed. Potential impacts on burrowing owl habitat (e.g., loss of burrows) would be offset through participation in the Yolo HCP/NCCP

and associated payment of fees to the Yolo Habitat Conservancy that would be used to support a preserve system to compensate for land conversion in the County. With implementation of Mitigation Measure 3.4-3, the potential impact on burrowing owl would be reduced to a less-than-significant level.

#### **Mountain Plover**

Mountain plover is a CDFW species of special concern. This species nests in high-elevation grasslands east of California but overwinters in California within chenopod scrub and valley and foothill grassland habitats, most frequently where vegetation is short (less than 3 inches) and cover is less than 65 percent (Hunting et al. 2001). Mountain plovers can be found in short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms, especially fallow, grazed, or burned sites (Hunting et al. 2001). In the Sacramento Valley, mountain plover have been recorded recently at only traditionally used sites (Hunting and Edson 2008). The project site contains overwintering habitat potentially suitable for this species within short, previously grazed grasslands, but mountain plover is not known to have used these fields in the past. Project activities, including grading and vegetation removal, are not expected to result in direct impacts on mountain plover, and the loss of this habitat is not expected to result in a significant adverse effect on the species, because suitable grassland, grain field, and plowed field habitat is abundant elsewhere in the region surrounding the project site. Additionally, participation in the Yolo HCP/NCCP would include payment of fees toward enhancement of natural habitats, including grassland, which would have an indirect beneficial effect on this species. Therefore, this impact would be less than significant.

#### **Swainson's Hawk, White-Tailed Kite, Northern Harrier, and Other Nesting Raptors**

Swainson's hawk is listed as threatened under CESA, and white-tailed kite is a fully protected species under the California Fish and Game Code. Northern harrier is a CDFW species of special concern. Other nesting raptors (e.g., red-tailed hawk [*Buteo jamaicensis*]) and nesting native birds are protected under the California Fish and Game Code (Sections 3503 and 3503.5). Swainson's hawk and white-tailed kite are also covered species under the Yolo HCP/NCCP. Nesting habitat potentially suitable for these species is not present within the project site but is present within trees on the property directly adjacent to the site. Because there are no trees on the project site, direct removal of nests as a result of project implementation would not occur. However, the presence of construction equipment, trucks, and construction personnel could result in disturbance to nests—raptor nests in particular—if they are present within trees on the adjacent property. The project site is adjacent to nesting habitat modeled as suitable for Swainson's hawk and white-tailed kite by the Yolo Habitat Conservancy. Disturbance to nests could result in nest abandonment and potential loss of eggs or chicks. This impact would be potentially significant. Implementation of the following mitigation measure would reduce the project's impacts on Swainson's hawk, white-tailed kite, and other raptor nests to a less-than-significant level.

#### **Mitigation Measure 3.4-4 (Yolo HCP/NCCP AMM 15 and AMM 16): Conduct Surveys for Swainson's Hawk, White-Tailed Kite, Northern Harrier, and Other Nesting Raptors**

This measure shall be implemented to avoid or minimize disturbance to nesting Swainson's hawk, white-tailed kite, northern harrier, and other nesting raptors consistent with the Yolo HCP/NCCP:

- ▶ To minimize the potential for disturbance to nesting raptors, project construction will occur during the nonbreeding season (September 1 through January 31). If construction is completed during the nonbreeding season, no further mitigation would be required.
- ▶ Before commencing project construction activities during the breeding season (February 1 through August 31), a qualified biologist will conduct preconstruction surveys for nesting birds within suitable habitat within 0.25 mile of the project site no more than 14 days before construction is scheduled to commence.
- ▶ If nesting raptors are not identified within 0.25 mile of the project site, no further mitigation will be required.
- ▶ If nesting raptors are identified within 0.25 mile of the project site, impacts will be avoided by establishing appropriate buffers around active nest sites. Activity will not commence within the buffer areas until a qualified biologist has determined, in coordination with the Yolo Habitat Conservancy and CDFW, that the young have fledged, that the nest is no longer active, or that reducing the buffer would not likely result in nest abandonment.

A 0.25-mile no-disturbance buffer will be implemented for nesting Swainson's hawk or white-tailed kite. The size of the buffer may be adjusted (i.e., reduced) if a qualified biologist, in consultation with the Yolo Habitat Conservancy and CDFW, determines that such an adjustment would not be likely to adversely affect the nest.

- ▶ Construction activities may commence within the no-disturbance buffer when a qualified biologist has determined that the young have fledged and the nest is no longer active.

### **Significance after Mitigation**

Implementation of Mitigation Measure 3.4-4 would ensure that the project would not result in disturbance to or loss of nesting birds by requiring either that activities would be undertaken outside of the nesting bird season or that buffers would be established around active nests during the nesting bird season. Therefore, the impact on nesting Swainson's hawk, white-tailed kite, and other nesting birds would be reduced to a less-than-significant level.

### **Swainson's Hawk Foraging Habitat**

Suitable foraging habitat for Swainson's hawk is present within grasslands on the project site. Conversion of this grassland habitat would constitute a reduction of suitable foraging habitat for the species within the vicinity of the project site, and the overall region. Adequate foraging habitat suitable for Swainson's hawk in proximity to nest sites is critical for successful reproduction of this species, and loss of foraging habitat can displace nesting individuals, thereby reducing local population numbers. The applicant is required to participate in the Yolo HCP/NCCP as a condition of project approval. The Yolo HCP/NCCP replaced the interim Swainson's hawk foraging habitat mitigation program operated by the Yolo Habitat Conservancy during preparation of the plan. Participation in the Yolo HCP/NCCP includes payment of fees to the Yolo Habitat Conservancy that would be used to support a preserve system to compensate for land conversion in the County, including Swainson's hawk foraging habitat. Consistent with the interim Swainson's hawk foraging habitat mitigation program, the total acreage of Swainson's hawk converted as a result of implementation of covered activities under the Yolo HCP/NCCP would be replaced at a ratio of at least 1:1. Therefore, the impact on Swainson's hawk foraging habitat would be less than significant.

### **Vernal Pool Branchiopods**

Vernal pool fairy shrimp is listed as threatened under the ESA, and vernal pool tadpole shrimp is listed as endangered under the ESA. The project site contains seasonal wetland habitat that may provide habitat suitable for these species. Development of the project site, including ground disturbance associated with construction of roads or buildings, would be limited to areas in the project site that do not contain wetland habitat. Thus, impacts on vernal pool fairy shrimp and vernal pool tadpole shrimp, if they are present, are not expected to occur. This impact would be less than significant.

### **American Badger**

American badger is a CDFW species of special concern. Habitat potentially suitable for this species is present within grasslands on the project site, and a badger carcass was observed on the project site during the June 26, 2019, site visit. Development of the project site, including ground disturbance associated with construction of roads or buildings, could result in disturbance to or direct loss of American badgers or their dens if they are present on the project site. This impact would be potentially significant. Implementation of the following mitigation measure would reduce the project's impacts on American badger to a less-than-significant level.

### **Mitigation Measure 3.4-5: Conduct survey for American Badger and Protect Occupied Dens**

This measure shall be implemented to avoid or minimize loss of American badger:

- ▶ A qualified wildlife biologist will conduct surveys to identify any American badger burrows/dens. These surveys will be conducted not more than 15 days before the start of construction. If occupied burrows are not found, further mitigation will be not required. If occupied burrows are found, impacts on active badger dens will be avoided by establishing a no-disturbance buffer of at least 100 feet or as large as needed to prevent disturbance to the den as determined by a qualified biologist around all active badger dens, within which construction-related activities will be prohibited until denning activities are complete or the den is abandoned. A qualified

biologist will monitor each den once per week to track the status of the den and to determine when a den area has been cleared for construction.

### **Significance after Mitigation**

Implementation of Mitigation Measure 3.4-5 would minimize impacts on American badger by requiring that surveys be conducted to determine the presence of burrows/dens on the site. If necessary, active burrows would be avoided until denning activities are complete or the den is abandoned. With implementation of Mitigation Measure 3.4-5, the potential impact on American Badger would be reduced to a less-than-significant level.

### **Crotch Bumble Bee**

Crotch bumble bee was designated as a candidate for listing as endangered under CESA by the California Fish and Game Commission on June 12, 2019. A November 13, 2020 court decision by the Superior Court of Sacramento ruled that insects are not eligible for listing under CESA and vacated the candidacy of this and four other bumble bee species. Although crotch bumble bee is not currently a candidate for listing under CESA, the species is imperiled and considered sufficiently rare by the scientific community to be considered a special-status species under CEQA. Crotch bumble bee has recently undergone a decline in abundance and distribution and is no longer present across much of its historic range. In California, crotch bumble bee populations are currently largely restricted to the Central Valley and adjacent foothills (Williams et al. 2014; Xerces 2018). There is a known occurrence of crotch bumble bee approximately 7.4 miles west of the project site within the Capay Valley, where crotch bumble bees were detected during a ground-nesting bee study in sunflower fields in 2003 (CNDDDB 2020). Additionally, a recent occurrence (2020) of the species is located approximately 8.5 miles south of the project site (CNDDDB 2020).

Although the life history characteristics of crotch bumble bees are not well understood, bumble bees have three basic habitat requirements: suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for queens. Bumble bees in general are capable of flying up to approximately 6 miles from the nest while foraging; however, most foraging activity is likely conducted much closer to the nest (Williams et al. 2014).

Known native floral resources for crotch bumble bee include milkweed (*Asclepias* spp.), lupine (*Lupinus* spp.), *Phacelia* spp., *Clarkia* spp., poppy (*Eschscholzia* spp.), sage (*Salvia* spp.), and buckwheat (*Eriogonum* spp.). Bumble bees are typically generalist foragers and are known to use other native and nonnative floral resources, such as vetch (*Vicia* spp.) and clover (*Trifolium* spp.) (Williams et al. 2014). These floral species are fairly common within grassland habitats in California. Grassland habitat within the project site is dominated by nonnative grasses and forbs and may include flowering plants that could be used by bumble bees for foraging. Development of the project site, including ground disturbance and vegetation removal associated with construction of roads or buildings, could result in removal of this potential foraging habitat.

The Yolo HCP/NCCP conservation strategy includes establishment of a reserve system to protect and maintain habitat areas with high habitat diversity, sufficient size to support sustainable populations of covered species, and habitat connectivity. One of the objectives of the Yolo HCP/NCCP conservation strategy is to increase the abundance of native pollinators, and a Pollinator Conservation Strategy was developed in support of this objective (Xerces 2009).

Crotch bumble bee is generally believed to overwinter near the ground surface in loose soil or under leaf litter or other debris (e.g., thatch and bunch grasses). Crotch bumble bee nests typically occur in abandoned rodent burrows or other animal nests. Nesting and overwintering habitat potentially suitable for this species may be present in grassland habitat on the project site. Vegetation removal and ground-disturbing activities could result in direct mortality of crotch bumble bees while they are foraging or within nesting or overwintering colonies (e.g., in underground rodent holes, loose soil, thatch).

While the project site contains grassland habitat with features (e.g., floral resources, burrows) that may provide foraging, nesting, and overwintering habitat suitable for the species, this habitat is considered marginal. The project site is surrounded by agricultural and rural residential development and is fragmented from other natural habitat areas. Because the habitat is marginal, it is unlikely that the project site would support a high concentration of bumble bee colonies and project implementation is not expected to result in loss of a significant number of bumble

bees, if present. Loss of individual crotch bumble bees or a colony as a result of project activities is not expected to cause the population to drop below self-sustaining levels, threaten to eliminate the species, or substantially reduce the range of the species. As a result, and because potential habitat impacts would be compensated through participation in the Yolo HCP/NCCP, which includes conservation objectives to increase the abundance of native pollinator species, this impact would be 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 Wildlife or the U.S. Fish and Wildlife Service?**

**No impact.** There is no riparian habitat within the project site. Two sensitive natural communities were identified as occurring within the vicinity of the project site: valley oak woodland and great valley mixed riparian forest. The project site does not contain valley oak woodland or riparian forest habitat. Therefore, project implementation would have no impact on riparian habitat or any other sensitive natural community.

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

**Less than significant.** On the basis of a site visit on June 26, 2019, by an Ascent Environmental wildlife biologist and botanist, as well as historic and recent aerial imagery, wetland habitat has been identified in the northwestern portion of the project site, including an intermittent, seasonally flooded watercourse. Wetlands and vernal pools are of special concern to resource agencies and are afforded specific consideration based on the Porter-Cologne Water Quality Control Act and other applicable regulations. Development plans for cannabis operations are required to comply with Attachment A (General Requirements and Prohibitions) of State Water Resources Control Board (SWRCB) Order WQ 2017-0023-DWQ, which prohibits cannabis cultivation within at least 50 feet of all surface water features, including ephemeral water features that are not present year-round. Fifty-foot buffers around the wetland features have been incorporated into the project's design, and no project components are proposed within 50 feet of these features. Development of the project site, including ground disturbance associated with construction of roads or buildings, is not expected to result in disturbance to or loss of state-protected or federally protected wetlands. This impact would 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.** The California Essential Habitat Connectivity Project was commissioned by the California Department of Transportation (Caltrans) and CDFW with the purpose of making transportation and land use planning more efficient and less costly while helping reduce dangerous wildlife-vehicle collisions (Spencer et al. 2010). The project involved mapping of Natural Landscape Blocks (i.e., relatively natural habitat blocks that support native biodiversity) and Essential Connectivity Areas. Although the project site is developed for outdoor cannabis cultivation and is located within an area of extensive agricultural development, the project site and surrounding area have been identified as a Natural Landscape Block, likely because of the relatively undeveloped grassland character of the project site and other grazing land to the northeast of the project site, compared to surrounding agricultural development, and because the project site contains an intermittent, seasonally flooded watercourse. The watercourse that bisects the project site likely functions as a wildlife movement corridor. Development plans for cannabis operations are required to comply with Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2017-0023-DWQ, which prohibits cannabis cultivation within at least 50 feet of all surface water features. Fifty-foot buffers around the wetland and water features have been incorporated into the project's design, and no project components are proposed within 50 feet of these features. This would prevent disturbance to surface waters within the project site. There are no known wildlife nursery sites or potential habitat to support wildlife nursery sites on the project site (e.g., trees, riparian habitat).

Because the project site is surrounded entirely by land developed for agriculture (primarily orchards) and because there are no known nursery sites on the project site, the site is not expected to function as a significant movement corridor for wildlife. Although the project site and vicinity have been identified as a Natural Landscape Block, the project site is surrounded by agricultural development and associated infrastructure (e.g., roads) and is not connected to natural habitat in the region. Additionally, setbacks would be implemented around the watercourse on the project site, allowing it to continue to support wildlife movement through the site. Therefore, the impact on native resident or migratory wildlife corridors or nursery sites would 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.** The County of Yolo 2030 Countywide General Plan Conservation and Open Space Element contains policies with the purpose of protecting habitats and special-status species in the County. The project site may contain habitats for which the general plan requires protection (e.g., wetlands). Consistent with County Policy CO-2.22, development associated with the project would be located at a minimum of 100 feet from the top of the bank of the ephemeral stream located on the project site. In addition, no project components are proposed within 50 feet of any wetland features. Therefore, the project would not conflict with any local policies or ordinances, and the impact would 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?**

**Less than significant.** Because the project site is within the plan area of the Yolo HCP/NCCP, the project is required to be consistent with the Yolo HCP/NCCP as a condition of project approval. Several wildlife species designated as covered species under the Yolo HCP/NCCP (western pond turtle, burrowing owl, Swainson's hawk, and white-tailed kite) could occur within the project site. For this reason, the applicant will seek coverage under the NCCP portion of the Yolo HCP/NCCP and pay all applicable fees. The mitigation measures presented above to reduce impacts on these species to a less-than-significant level are consistent with those AMMs included in the Yolo HCP/NCCP. This impact would be less than significant.



### 3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>V. Cultural Resources.</b>				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.5.1 Environmental Setting

##### NATIONAL REGISTER OF HISTORIC PLACES

Federal protection of cultural resources is legislated by (a) the National Historic Preservation Act of 1966 as amended by 16 U.S. Code 470, (b) the Archaeological Resource Protection Act of 1979, and (c) the Advisory Council on Historical Preservation. These laws and this organization maintain processes for determining the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). The NRHP is the nation’s master inventory of known historic resources. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, and cultural districts that are considered significant at the national, state, or local level.

The formal criteria (36 Code of Federal Regulations 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and association; and
3. It possesses at least one of the following criteria:
  - A. Association with events that have made a significant contribution to the broad patterns of history (events).
  - B. Association with the lives of persons significant in the past (persons).
  - C. Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).
  - D. Has yielded, or may be likely to yield, information important to prehistory or history (information potential).

Listing in the NRHP does not entail specific protection or assistance for a property, but it does guarantee recognition in planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

## CALIFORNIA REGISTER OF HISTORIC PLACES

The California Register of Historical Resources (CRHR) established a list of those properties that are to be protected from substantial adverse change (PRC Section 5024.1). A historical resource may be listed in the CRHR if it meets any of the following criteria:

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

The CRHR also includes properties that are listed or have been formally determined to be eligible for listing in the NRHP, State Historical Landmarks, and eligible Points of Historical Interest.

## KNOWN RESOURCES AND SITE SURVEYS

### Records Search and Results

A cultural resources literature search was conducted in October 2016 by the Northwest Information Center of the California Historical Resources Information System at Sonoma State University in Rohnert Park. In 2018, the County submitted an additional cultural resources literature request during the DA comment review period. The records search was conducted to determine whether prehistoric or historic cultural resources had been previously recorded within the project site, the extent to which the project site had been previously surveyed, and the number and type of cultural resources within a 0.25-mile radius of the project site.

The results of the records search indicated that no prior studies have been completed on the project site or within the 0.25-mile search radius. They also indicated that no cultural resources have been previously recorded on the project site or within the 0.25-mile search radius.

Intensive-level pedestrian surveys of the project site were conducted by archaeologists and historians on September 26, 2016. Survey transects were spaced apart at intervals no greater than 15 meters and followed a north-south pattern. During the pedestrian survey, the entire project site was carefully examined for the presence of cultural resources. All visible ground surface on the project site were carefully examined for cultural material (e.g., flaked stone tools, tool-making debris, stone milling tools, or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), and historic-period debris (e.g., metal, glass, ceramics). Additionally, ground disturbances (e.g., dirt roads, animal burrows) were visually inspected.

No prehistoric or historic-period archaeological sites, ethnographic sites, or historic built environment features were identified during the survey.

### 3.5.2 Discussion

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

**No impact.** Historical resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges). As described above, no historic features were identified through the records search or site survey. There would be no impact.

**b) Cause a substantial adverse change in the significance of archaeological resources as defined in Section 15064.5?**

**Less than significant with mitigation incorporated.** CEQA requires lead agencies to consider whether projects would affect unique archaeological resources. PRC Section 21083.2(g) states that “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

In summary, a “unique archaeological resource” is generally correlated with an archaeological site being eligible under CRHR Criterion 4 (yielded or is likely to yield information important in prehistory or history).

As described above, no archaeological sites were identified through the records search or site survey. Further, the project area has been highly disturbed by historic flooding, reclamation activities, more than 100 years of agriculture, and other related activities. Therefore, the potential for the discovery of buried archaeological materials on the project site is considered low. However, the potential exists that unidentified historical or archaeological resources could be discovered during construction. Damage to an unknown unique archaeological resource or historical resource would be a potentially significant impact.

**Mitigation Measure 3.5-1: Follow Protocol If Archaeological Resources Are Discovered**

If any prehistoric or historic-period subsurface archaeological features or deposits, including locally darkened soil (potentially a midden), which could conceal cultural deposits, are discovered during construction, all ground-disturbing activity within 100 feet of the resources shall be halted, and a qualified professional archaeologist shall be retained to assess the significance of the find. If the find is determined to be significant by the qualified archaeologist (i.e., because it is determined to constitute either a historical resource or a unique archaeological resource), the archaeologist shall develop appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to preservation in place, archival research, subsurface testing, or contiguous block unit excavation and data recovery.

**Significance after Mitigation**

Implementation of Mitigation Measure 3.5-1 would reduce impacts associated with archaeological resources to a less-than-significant level because it would require the performance of professionally accepted and legally compliant procedures following the discovery of previously undocumented significant archaeological resources. This is consistent with the requirements of State Water Resources Control Board Order WQ 2019-0001-DWQ Term 22 that requires documentation and protection of any discovered archaeological resources during cultivation operations.

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

**Less-than-significant impact.** No evidence obtained during documented research suggests that any prehistoric or historic-period marked or unmarked human interments are present within or in the immediate vicinity of the project site. However, the location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites. Therefore, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project site and could be uncovered by project-related construction activities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and PRC Section 5097.

These statutes require that, if human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the Yolo County coroner and

Native American Heritage Commission (NAHC) shall be notified immediately, in accordance with to PRC Section 5097.98 and Section 7050.5 of California's Health and Safety Code. If the remains are determined by NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the archaeologist, the NAHC-designated Most Likely Descendant, and the landowner shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Compliance with California Health and Safety Code Section 7050.5 and PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, this impact would be less than significant.

### 3.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VI. Energy.</b>				
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.6.1 Environmental Setting

California relies on a regional power system composed of a diverse mix of natural gas, petroleum, renewable, hydroelectric, and nuclear generation resources:

- ▶ **Natural gas:** Almost two-thirds of California households use natural gas for home heating, and about half of California’s utility-scale net electricity generation is fueled by natural gas (EIA 2018).
- ▶ **Petroleum:** Petroleum products (gasoline, diesel, jet fuel), which are consumed almost exclusively by the transportation sector, account for almost 99 percent of the energy used in California by the transportation sector, with the rest provided by ethanol, natural gas, and electricity (Bureau of Transportation Statistics 2017). Between January 2007 and May 2016, an average of approximately 672 billion gallons of gasoline were purchased in California (California State Board of Equalization 2016). Gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet specific formulations required by the California Air Resources Board (CARB) (EIA 2018).
- ▶ **Electricity and renewables:** The California Energy Commission (CEC) estimates that 34 percent of California’s retail electricity sales in 2018 was provided by Renewable Portfolio Standard (RPS)-eligible renewable resources (EIA 2018).
- ▶ **Alternative fuels:** Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity). Use of alternative fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, 2017 Scoping Plan).

#### ENERGY FACILITIES AND SERVICES IN THE COUNTY

Electric and natural gas services in Yolo County is provided by Pacific Gas and Electric Company (PG&E). PG&E operates electricity and natural gas infrastructure in the County and throughout northern California, including power lines, power plants, pipelines, and substations. Private companies provide service for some of the unincorporated areas of the County not covered by PG&E. As of 2018, PG&E procured 39 percent of its electricity from renewable sources (CEC 2019a). In June 2018, the Valley Clean Energy (VCE) Community Choice Aggregator became the default electric supplier for all customers in unincorporated Yolo County with the electricity delivered by PG&E. CCA’s give customers the option to opt out of the CCA and be served by PG&E instead. VCE offers electricity at higher renewable rates than PG&E. VCE offers two levels of electricity service: Standard Green (42 percent of the electricity provided by renewables) and UltraGreen (100 percent provided by renewables) (Valley Clean Energy n.d.). This project would receive electricity services only from PG&E.

## 3.6.2 Regulatory Setting

### FEDERAL REGULATIONS

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Under this act, the National Highway Traffic and Safety Administration is responsible for revising fuel economy standards and establishing new vehicle economy standards. The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Three Energy Policy Acts have been passed, in 1992, 2005, and 2007, to reduce dependence on foreign petroleum, provide tax incentives for the development of alternative fuels, and support energy conservation.

### STATE REGULATIONS

#### California's 2017 Climate Change Scoping Plan

The 2017 Climate Change Scoping Plan (Scoping Plan) addresses Executive Order B-30-15 and SB 32, which extend the goals of AB 32 and set a 2030 goal of reducing GHG emissions 40 percent below 2020 levels. The 2017 Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources (CARB 2017).

#### Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The act was created as a response to the state legislature's review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced state policy for siting power plants to reduce potential environmental impacts and sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings that ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code), which have been updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all environmental impact reports required on local projects.

#### State of California Energy Action Plan

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 California Energy Action Plan (2008 update). The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, and encouragement of urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

#### Transportation-Related Regulations

The U.S. Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) have issued rules to reduce greenhouse gas emission (GHG) emissions and improve CAFE standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a

single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. The purpose of this program is to increase fuel economy and limit vehicle emissions, including carbon dioxide emissions, of cars and light-duty trucks (77 *Federal Register* 62630).

The Safer Affordable Fuel-Efficient Vehicles Rule, promulgated by NHTSA and EPA in 2020, set new CAFE standards for passenger cars and light-duty trucks, model years 2021–2026 (NHTSA and EPA 2020). This rule also revoked a waiver granted by EPA to the State of California under Section 209 of the Clean Air Act to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of GHG reduction and, indirectly, criteria air pollutant and ozone precursor emission reduction (NHTSA and EPA 2020). Various regulatory and planning efforts are aimed at reducing dependency on fossil fuels, increasing the use of alternative fuels, and improving California’s vehicle fleet. Senate Bill (SB) 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. CARB, in consultation with the metropolitan planning organizations, provides each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035.

Under Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and CARB prepared and adopted a joint agency report in 2003, *Reducing California’s Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003).

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare the State Alternative Fuels Plan to increase the use of alternative fuels in California.

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017–2025. The program’s zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California’s new vehicle sales by 2025.

## Renewable Energy Regulations

The state has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018).

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

The energy consumption of new residential and nonresidential buildings in California is regulated by the state’s Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California’s energy consumption and provide energy efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. In 2016, CEC updated the California Energy Code again, effective January 1, 2017. CEC estimates that the 2016 California Energy Code is 28 percent more efficient than 2013 California Energy Code for residential construction and is 5 percent more efficient for nonresidential construction.

The 2019 California Energy Code was adopted by CEC on May 9, 2018, and will apply to projects constructed after January 1, 2020. The 2019 California Energy Code is designed to move the state closer to its zero-net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the electricity needs of each residential unit (CCR, Title 24, Part 6, Section 150.1[c]4). CEC estimates that the combination of mandatory on-site renewable energy and prescriptively required energy efficiency standards will result in a 53-percent reduction in new residential developments as compared to the 2016 California Energy Code. Nonresidential buildings are anticipated to reduce energy consumption by 30 percent as compared to the 2016 California Energy Code primarily through prescriptive requirements for high-efficiency lighting (CEC 2018). The Energy Code is enforced through the local plan check and building permit process. Local government agencies may

adopt and enforce additional energy standards for new buildings as reasonably necessary because of local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code.

### Regulations Pertaining to Cannabis

The following energy-related requirements are included in the CalCannabis regulation (CCR, Title 3, Division 8, Chapter 1) and pertain to cultivation sites:

- ▶ **Section 8203: Renewal of License. Section G.** Beginning January 1, 2022, an application for renewal of a license shall include the following record for each power source indicated on the application for licensure for the previous annual licensed period:
  1. Total electricity supplied by local utility provider, name of local utility provider, and greenhouse gas emission intensity per kilowatt hour reported by the utility provider under Section 398.4(c) of the Public Utilities Code for the most recent calendar year available at time of submission;
  2. Total electricity supplied by a zero net energy renewable source, as set forth in Section 398.4(h)(5) of the Public Utilities Code, that is not part of a net metering or other utility benefit;
  3. Total electricity supplied from other unspecified sources, as defined in 398.2(e) of the Public Utilities Code, and other on-site sources of generation not reported to the local utility provider (e.g., generators, fuel cells) and the greenhouse gas emission intensity;
  4. Average weighted greenhouse gas emission intensity considering all electricity use in Subsection (1), (2), and (3).
- ▶ **Section 8305: Renewable Energy Requirements.** Beginning January 1, 2023, all indoor, tier 2 mixed-light license types of all sizes, and nurseries using indoor or tier 2 mixed-light techniques, shall ensure that electrical power used for commercial cannabis activity meets the average electricity greenhouse gas emissions intensity required of their local utility provider pursuant to the California Renewables Portfolio Standard Program, division 1, part 1, chapter 2.3, article 16 (commencing with Section 399.11) of the Public Utilities Code. As evidence of meeting the standard, licensees shall comply with the following:
  - (a) If a licensee's average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider's greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period:
    - (1) Voluntary greenhouse gas offset credits purchased from any of the following recognized and reputable voluntary carbon registries:
      - (A) American Carbon Registry;
      - (B) Climate Action Reserve;
      - (C) Verified Carbon Standard.

## LOCAL

### Yolo County Climate Action Plan

Yolo County adopted its Climate Action Plan (CAP) on March 15, 2011. The CAP builds on the momentum of the County's 2007 decision to participate in the Cool Counties Climate Stabilization Program, which committed the County to reduce GHG emissions to 1990 levels by 2020, 27 percent below 1990 levels by 2030, 53 percent below 1990 levels by 2040, and 80 percent below 1990 levels by 2050. Reduction strategies address GHG emissions with short-, mid-, and long-term goals associated with agriculture, transportation and land use, building energy, solid waste, and wastewater (Yolo County 2011).



## Yolo County Energy Plan

The Yolo County Energy Plan generally aims to reduce per capita and overall consumption of nonrenewable energy resources and increase usage efficiency to meet the social, economic and environmental needs of the Region. The Energy Plan specifies objectives that address conserving energy resources, and meeting new energy demands with renewable resources. The Agricultural Sector of the Energy Plan includes objectives that promote energy efficient systems, and exploration of renewable energy sources such as solar, wind, and hydroelectric systems (Yolo County 1982).

### 3.6.3 Discussion

- a) **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**
- b) **Conflict with or obstruct a state or local plan for renewable energy or energy efficiency**

**Less than significant with mitigation incorporated.** Thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary have not been established in federal or state law or in the State CEQA Guidelines. Compliance with CCR Title 24 Energy Efficiency Standards would result in energy-efficient buildings. However, compliance with building codes does not adequately address all potential energy impacts during construction and operation. For example, energy would be required to transport people and goods to and from the project site. Energy use is discussed further below. In addition, energy supplies that conflict with state or local plans for renewable energy or energy efficiency, when alternatives are available, may reasonably be considered wasteful, inefficient, or unnecessary.

#### Construction

Energy would be required to operate and maintain construction equipment and transport construction materials. The one-time energy expenditure required to construct the physical buildings and facilities and infrastructure associated with the proposed project would be non-recoverable. Most energy consumption would result from operation of off-road construction equipment and on-road vehicle trips associated with construction worker commute trips and vendor haul truck trips.

The energy consumption associated with proposed project construction was estimated by year using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. Most of the construction-related energy consumption would be associated with off-road equipment and the transport of equipment and waste using on-road haul trucks for all phases of construction. An estimated 15,208 gallons of gasoline and 35,401 gallons of diesel fuel would be used during project construction (Appendix B).

The energy needs for project construction would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Associated energy consumption for construction would be typical of that associated with similar facilities. Automotive fuels would be consumed to transport construction workers and materials to and from the project site. Energy would be required for construction elements and transport of construction materials. The energy expenditure required to construct the physical infrastructure associated with the project would be non-recoverable. However, the energy consumption associated with project construction would not be consumed in a wasteful, inefficient, or unnecessary manner when compared to other construction activity in the region.

#### Operation

The project would increase energy consumption in the region relative to existing conditions. However, the new facilities would, at a minimum, comply with 2019 Title 24 Building Energy Efficiency Standards. The project would source most of its electricity from an on-site 1,050-kilowatt photovoltaic system. Table 3-8 summarizes the estimated energy

consumption associated with the first full year of operation. Energy consumption was estimated using CalEEMod Version 2016.3.2 (CAPCOA 2016), which was also used to estimate emissions for the air quality and GHG analyses.

**Table 3-8 Annual Operational Energy Consumption**

Energy Type	Annual Energy Consumption	Units
<b>On-Site Operations</b>		
Electricity from the grid <sup>a</sup>	572	MWh/year
Propane combustion	405,714	L/year
Diesel fuel <sup>b</sup>	12,218	gal/year
Gasoline <sup>c</sup>	260	gal/year
<b>Transportation</b>		
Gasoline	14,688	gal/year
Diesel	1,990	gal/year

a Includes electricity that would be consumed from the grid after the application of on-site solar power generation. Modeled electricity use would be typical of cultivation operations and was modeled under the CalEEMod land use category of Research and Development to consider the intensive use of electricity from lighting and mechanical equipment. The project would generate electricity by an on-site 1,050-kilowatt photovoltaic system.

b Diesel fuel would be consumed by the forklifts at each greenhouse.

c Gasoline would be consumed by utility vehicles on-site (e.g., the Gator™ manufactured by John Deere).

Notes: MWh/year= megawatt-hours per year; L/year = liters per year; gal/year = gallons per year.

Source: Calculations performed by Ascent Environmental in 2020

Operation of the project would include the use of electricity for lighting and propane for powering boilers. Gasoline and diesel would be used for on-site auxiliary equipment, utility vehicles, and transportation. Energy use would also include the consumption of electricity associated with wastewater treatment and water well pumping, as well as automotive fuels used for solid waste removal.

Title 24 Building Energy Efficiency Standards for 2019 would be integrated into the project to reduce the project's energy demands. The facility's on-site photovoltaic system would meet electricity demand beyond what is required by law. In addition, the proposed project's gasoline and diesel consumption would be subject to state and federal regulations regarding fuel efficiency standards for vehicles. For these reasons, the project's consumption of electricity, gasoline, and diesel would not be considered wasteful, inefficient, or unnecessary.

Yolo County's Climate Action Plan provides strategies to reduce grid source energy demand with the increased use of renewable energy sources (Measure E-4). The project would implement a 1,050-kilowatt on-site solar photovoltaic system that would meet most of the project's electricity demand. The remaining electricity demand would be met by PG&E. PG&E's energy sources are subject to California's RPS program to increase procurement from eligible renewable energy resource to 33 percent of total procurement by 2020, 50 percent by 2026, and 60 percent by 2030.

In addition, the project would be required to meet renewable energy requirements for new and relicensed cultivation sites, as set forth in CCR Sections 8203 and 8305, as described above. Under these requirements, the project must meet the average electricity GHG emissions intensity required of its local utility provider under the California RPS program.

However, the project includes propane as an energy source to power boilers. The Yolo County CAP did not consider propane consumption for the commercial cultivation of cannabis or, more generally, the need to power boilers for agricultural purposes. This is primarily due to the fact that commercial growing of cannabis was not legal at the time the Yolo County CAP was developed and, as a result, was not accounted for when considering County-wide GHG emission sources. Nonetheless, the Yolo County CAP, Yolo County Energy Plan, and the 2017 Scoping Plan clearly state the objective to replace the use of fossil fuels with renewable energy sources. Thus, because propane is not a renewable source of energy and expanding its use is inconsistent with the 2017 Scoping Plan, Yolo County CAP, and

Yolo County Energy Plan, this project would conflict with or obstruct plans for renewable energy or energy efficiency. Because electricity is available to the project site, the use of propane, a nonrenewable energy source, would be considered a wasteful, inefficient, and unnecessary use of energy. This would be a **significant** impact.

#### **Mitigation Measure 3.6-1: Eliminate the Use of Propane on the Project Site**

The project shall be re-designed to eliminate the use of propane on site. Instead, the applicant shall implement a low-carbon method of heating water. Feasible and reasonably available methods of heating water may include, but are not limited to:

- ▶ the use of electric heat pump–based water heaters,
- ▶ solar water heating,
- ▶ geothermal systems, and
- ▶ electric radiant heating strips or coils.

Details related to the methods for heating water on the project site shall be submitted to County for approval prior to issuance of building permits.

#### **Significant after Mitigation**

Implementation of Mitigation Measure 3.6-1 would eliminate the use of propane on the project site, and thus the wasteful, inefficient, and unnecessary use of energy. Because 2019 Title 24 Building Energy Efficiency Standards would be integrated into the project to reduce the project's energy demands, and the project would rely primarily on electricity and on-site solar energy, including low-carbon methods of water heating, this impact would be reduced to a less-than-significant level.

Implementation of Mitigation Measure 3.6-1 would also reduce GHG emissions because electricity emits less CO<sub>2</sub>e than propane. In addition, electricity use does not contribute to direct criteria air pollutant emissions and would reduce criteria air pollutant emissions from propane use, thus, criteria air pollutant emissions associated with the project would not increase due to implementation of this mitigation measure.

### 3.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VII. Geology and Soils.</b>				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.7.1 Environmental Setting

The project site is located on the southwestern edge of the Dunnigan Hills, which is located along the edge of the Great Valley and Coastal Range geomorphic province of California. Geologic units in the Great Valley area generally consist of Quaternary alluvium or basin deposits, and the Quaternary Modesto and Riverbank Formations, both of which consist of somewhat older alluvium. The rocks in the Coast Ranges consist of various Quaternary and Cretaceous geologic formations, including upturned marine sandstones, shales, mudstones, and conglomerates, with some volcanoclastic rocks. The Dunnigan Hills consist of dissected and rolling terraces of the Tehama Formation (nonmarine sandstone, siltstone, and volcanoclastic rocks) (Yolo County 2009).

The topography of the project site consists of rolling hills sloping from the Dunnigan Hills toward the western extent of the Great Valley. The elevation of the project site ranges from approximately 250 to 190 feet above sea level. Primary topographic features include the existing outdoor cultivation site, a retention basin and drainage, and an access road. Remaining natural topographic features include a natural seasonal wetland swale.

## SEISMIC CONDITIONS

The project site is located near to the Dunning Hills Fault. The fault, which extends west of I-5 between the town of Dunnigan and northwest of the town of Yolo, has caused Holocene (i.e., the last 11,000 years) displacement, but no displacement during historic times (approximately 200 years). This fault is considered potentially active but has not been delineated by the California Geological Survey (CGS) as an Alquist-Priolo Earthquake Fault Zone, indicating that CGS does not consider it likely to generate surface rupture (Yolo County 2009).

The only fault in the County that has been identified by CGS to be active, or potentially active, and subject to surface rupture (i.e., is delineated as an Alquist-Priolo Earthquake Fault zone) is the Hunting Creek Fault (sometimes referred to as the Hunting Creek-Berryessa Fault). The fault is located in the extreme northwestern corner of the County, more than 25 miles from the project site. (Yolo County 2009)

## SOILS

The results of a geotechnical analysis of the site indicate that the surface soils on the higher, hilltop areas are sandier and more gravelly than surface soils on the lower swales and flanks of the hills. Subsurface materials on the site appear relatively uniform in color and composition. Test boring completed on the higher areas encountered interlayered, light brown to red- and orange-brown fine to coarse sandy clayey silts with gravel, as well as clayey gravelly sand and sandy gravelly clay mixtures on the surface and extending to depths varying from about 7 to 10 feet. These gravelly soils generally are of medium dense/very stiff to dense consistencies. On the lower areas, the test borings found stiff to very stiff, light brown to black to brown, silty moderate to high plasticity clays with some gravel on the surface and extending to depth varying from about 3 to 7 feet below the ground surface (Raney Geotechnical 2017).

Beneath the surface soils, the test borings encountered interlayered, light tan-gray silty clays, clayey to fine sandy silts, and occasionally silty fine sands. The clayey subsurface soils generally are of very stiff to hard to lightly variably cemented consistencies. The sandier subsurface soils generally are of medium dense to very dense consistencies (Raney Geotechnical 2017).

Geologic mapping indicates that the site is underlain by the Tehama Formation of Tertiary age. The Tehama formation generally consists of light-colored sands, silts, and clays of volcanic origin. Locally, the Tehama Formation is overlain by erosional remnants of the younger Red Bluff formation of Quaternary age. The Red Bluff formation is characterized by reddish gravelly soils (Raney Geotechnical 2017).

### Expansive Soils

The near surface soils on the lower portion of the site include moderate- to high-plasticity clays that undergo substantial shrinking and swelling with variation in moisture content. The clayier fractions of the surface soils on other portions of the site, as well as the dominant clays of the deeper Tehama Formation soils, also shrink and swell with moisture variation (Raney Geotechnical 2017).

### Landslide

The project site is considered to have a low risk of landslide based on a review of County mapping efforts (Yolo County 2009).

### Subsidence

Within Yolo County, subsidence related to groundwater pumping has been detected in the northern Yolo-Zamora area of Yolo County and the vicinity of the cities of Davis and Woodland. No subsidence has been reported within the project site (Water Resources Association of Yolo County 2018).

## Liquefaction

Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths.

Test borings on the project site indicate the presence of cemented clays and silts. These are cohesive soils that are not considered susceptible to liquefaction. These types of soils can include occasional layers of medium dense to very dense silty sands and sandy silts. Analysis has shown that such soils are subject to liquefaction only when below groundwater levels and only under extreme levels of shaking. Geotechnical analysis indicated that because moderate levels of shaking expected, and that groundwater is more than 60 feet below planned building pad levels, seismic-induced liquefaction is unlikely to occur (Raney Geotechnical 2017).

## PALEONTOLOGICAL RESOURCES

The project is underlain by Pliocene-Pleistocene-aged materials. The majority of alluvium in the southern portion of the County consist of the Pleistocene-age Modesto-Riverbank and Red Bluff formations. Vertebrate fossils in this alluvium are representative of the age of land mammals, including mammoths, ground sloths, saber-toothed cats, dire wolves, and rodents, as well as birds, reptiles, and amphibians. Pleistocene alluvium is highly sensitive for paleontological resources.

Mammoth fossils have been collected from the unit mapped as the Modesto-Riverbank formation, which underlies the project site. In 2018, mammoth remains were uncovered during aggregate excavation at the CEMEX off-channel mining operation northeast of the community of Madison. In 1982, during in-channel aggregate excavations at the same general location, then operated by Solano Concrete, mammoth tusks, four to five molars, and a skull were collected in the bed of Cache Creek. In 1955, a large molar was collected about 3 miles downstream from the 1982 find. (Yolo County 2019).

### 3.7.2 Discussion

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
  - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**
  - ii) **Strong seismic ground shaking?**

**Less than significant.** The project site is located near the Dunnigan Hills Fault. The Dunnigan Hills Fault, which extends west of I-5 between the town of Dunnigan and northwest of the town of Yolo, has caused Holocene (i.e., the last 11,000 years) displacement, but no displacement during historic times (approximately 200 years). This fault is considered potentially active but has not been delineated by CGS as an Alquist-Priolo Earthquake Fault Zone, indicating that the CGS does not consider it likely to generate surface rupture (Yolo County 2009). This impact would be less than significant.

- iii) **Seismic-related ground failure, including liquefaction?**

**Less than significant.** As discussed above, test borings on the project site indicate the presence of cohesive soils that are not considered susceptible to liquefaction. Although these types of soils can include occasional layers of medium dense to very dense silty sands and sandy silts, because of the moderate levels of shaking expected and the fact that

groundwater is more than 60 feet below planned building pad levels, seismic induced liquefaction is unlikely to occur (Raney Geotechnical 2017). This impact would be less than significant.

**iv) Landslides?**

**Less than significant.** The project site is considered to have a low risk of landslide based on a review of County mapping efforts (Yolo County 2009). Thus, this impact would be less than significant.

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

**Less than significant.** Development of the project would require compliance with SWRCB Order WQ 2019-0001-DWQ, which requires for cannabis cultivation the use of soil erosion and sedimentation controls (best management practices [BMPs]) for soil stability and the implementation of a Site Erosion and Sediment Control Plan and Disturbed Area Stabilization Plan for higher-risk sites. Examples of BMPs for soil erosion control that may be used include the use of ground cover vegetation (grasses), detention/water quality control basins, drainage control features that are rock lined and that reduce stormwater flow velocities, and other similar features. In addition, grading permits must be obtained before development of the project.

In addition, grading and/or land clearing associated with the project requires the issuance of a County Grading Permit and must be developed in compliance with the SWRCB statewide General Permit (Order WQ 2009-0009-DWQ) for construction activities (Construction General Permit). In accordance with the requirements of the Construction General Permit, before construction of the proposed project, a risk assessment must be prepared and submitted to CVRWQCB to determine the project's risk level and associated water quality control requirements. These requirements would, at a minimum, include the preparation and implementation of a storm water pollution prevention plan that identifies specific BMPs to be implemented and maintained on the site to comply with the applicable effluent standards. Compliance with the various requirements of the SWRCB statewide general permit for construction and cannabis cultivation would reduce the potential for soil erosion and loss of topsoil to a less-than-significant level.

**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.** The project site is not located in an area at risk of landslide, subsidence, liquefaction, or other geologic hazards (Raney Geotechnical 2017). Thus, this impact would be less than significant.

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

**Less than significant.** The near surface soils on the lower portion of the project site include moderate- to high-plasticity clay that undergo substantial shrinking and swelling with variations in moisture content. The clayier fractions of the surface soil on other portions of the project site, as well as the dominant clays of the deeper Tehama Formation soils, also shrink and swell with moisture variations. With the redistribution of soils that would occur during grading, clays would likely be the dominate soil type near the surface of the building pads. Seasonal wetting and drying of the clayey soils result in soil expansion pressures and soil movement that could cause distress to floor slabs, foundations, flatwork, and pavement (Raney Geotechnical 2017).

However, greenhouses and other buildings associated with the project are required to comply with Title 7 (Building Regulations) of the Yolo County Code. Title 7 of the Yolo County Code defines the regulations, conditions, and circumstances necessary for approval of a building permit for projects within the County. This includes building standards that address potential hazards associated with expansive soils, which could be addressed through soil treatments at foundations and roadbeds. Thus, this impact would be 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.** The proposed septic system would be regulated through the Yolo County Onsite Wastewater Treatment System Ordinance described in Yolo County Code Chapter 19 of Title 6. The Ordinance requires that a site evaluation be prepared to confirm that a septic system can operate properly. Section 6-19.605 states that the evaluation must include details on soil conditions (e.g., soil textural character and percolation rate), depth to groundwater, and adequate land area to accommodate a 100-percent system replacement. Section 6-19.606 includes requirements for siting, design, operation, and maintenance measures to avoid system failures. Use of septic tanks or other on-site wastewater treatment and disposal systems would not be authorized in areas with soils incapable of supporting these facilities. Because the proposed septic system would be subject to County approval, which requires an analysis of soil conditions, this impact would be less than significant.

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

**Less than significant with mitigation incorporated.** The project site is overlaid by Pliocene-Pleistocene-aged materials, which are considered to be sensitive for paleontological resources. Paleontological resources are classified as nonrenewable scientific resources and are protected by state statute, as well as by Yolo County General Plan Action CO-A63, which requires a cultural resources inventory for all new development projects. A cultural inventory was completed for the site, but it did not include an evaluation for paleontological resources. The project would require extensive grading, which would have the potential to encounter a unique paleontological resource. This impact would be potentially significant.

**Mitigation Measure 3.7-1: Submit Preliminary Site Survey and, If Merited, Develop and Implement a Mitigation Plan to Protect Identified Paleontological Resources**

The applicant shall submit a preliminary site survey to determine the potential for paleontological resources to be located on the project site. If the site has a low potential for this to occur, no further actions are necessary unless resources are encountered during construction or farming. If the site has a medium to high potential, a cultural resources inventory is required to be submitted as part of the application. If on-site resources are identified, a mitigation plan is required to protect identified resources before issuance of permits. If paleontological resources are encountered during construction, workers shall not alter the materials or their context until an appropriately trained consultant has evaluated the find. Project personnel shall not collect paleontological resources.

If a paleontological resource is discovered during the survey or construction, a mitigation plan shall be developed, if merited, to protect identified paleontological resources before the issuance of permits. The plan may require redesigning the site to avoid the paleontological resource, capping the paleontological resource site to avoid impacts, or properly removing and curating the resource.

**Significant after Mitigation**

Implementation of Mitigation Measure 3.7-1 would reduce the impact to a less-than-significant level because the risk of encountering paleontological resources would be assessed, appropriate measures would be taken if the area is considered to be of medium or high risk, and any inadvertently discovered resources would be protected in accordance with an approved mitigation plan.



### 3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VIII. Greenhouse Gas Emissions.</b>				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.8.1 Environmental Setting

Certain gases in the earth’s atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth’s surface temperature. Solar radiation enters the earth’s atmosphere from space. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial on-site fuel use, and agriculture and forestry. It is “extremely likely” that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing together (IPCC 2014:5).

Climate change is a global problem. GHGs are global pollutants because even local GHG emissions contribute to global impacts. GHGs have long atmospheric lifetimes (one to several thousand years) and persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO<sub>2</sub> is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration (IPCC 2013:467).

#### 3.8.2 Regulatory Setting

##### STATE PLANS, POLICIES, LAWS, AND REGULATIONS

###### Statewide GHG Emission Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades (State of California 2018). GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. EO B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets align with the scientifically established levels needed globally to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at

which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (UN 2015:3).

The 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the California Air Resources Board, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and “substantially advance toward our 2050 climate goals” (CARB 2017:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). The state has also passed more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption.

## Regulations Pertaining to Cannabis

The following energy-related requirements are included in the CalCannabis regulation (CCR, Title 3, Division 8, Chapter 1) and pertain to cultivation sites:

- ▶ **Section 8203: Renewal of License. Section G.** Beginning January 1, 2022, an application for renewal of a license shall include the following record for each power source indicated on the application for licensure for the previous annual licensed period:
  1. Total electricity supplied by local utility provider, name of local utility provider, and greenhouse gas emission intensity per kilowatt hour reported by the utility provider under Section 398.4(c) of the Public Utilities Code for the most recent calendar year available at time of submission;
  2. Total electricity supplied by a zero net energy renewable source, as set forth in Section 398.4(h)(5) of the Public Utilities Code, that is not part of a net metering or other utility benefit;
  3. Total electricity supplied from other unspecified sources, as defined in 398.2(e) of the Public Utilities Code, and other on-site sources of generation not reported to the local utility provider (e.g., generators, fuel cells) and the greenhouse gas emission intensity;
  4. Average weighted greenhouse gas emission intensity considering all electricity use in Subsection (1), (2), and (3).
- ▶ **Section 8305: Renewable Energy Requirements.** Beginning January 1, 2023, all indoor, tier 2 mixed-light license types of all sizes, and nurseries using indoor or tier 2 mixed-light techniques, shall ensure that electrical power used for commercial cannabis activity meets the average electricity greenhouse gas emissions intensity required of their local utility provider pursuant to the California Renewables Portfolio Standard Program, division 1, part 1, chapter 2.3, article 16 (commencing with Section 399.11) of the Public Utilities Code. As evidence of meeting the standard, licensees shall comply with the following:
  - (a) If a licensee’s average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider’s greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period:
    - (1) Voluntary greenhouse gas offset credits purchased from any of the following recognized and reputable voluntary carbon registries:
      - (A) American Carbon Registry;
      - (B) Climate Action Reserve;
      - (C) Verified Carbon Standard.

## LOCAL

### Yolo-Solano Air Quality Management District

The Yolo-Solano Air Quality Management District's (YSAQMD's) CEQA Handbook and website recommend that GHG emissions and impacts on climate change be evaluated for every CEQA project (YSAQMD 2007:24, 25; 2016). YSAQMD's website recommends resources from the California Air Pollution Control Officers Association to evaluate project-level GHG emissions. YSAQMD has not adopted project- or plan-level thresholds to be used for CEQA evaluations at the time of writing of this CEQA document.

### Yolo County

Yolo County's 2030 Countywide General Plan identifies goals and policies relevant to climate change and GHG emissions for projects within unincorporated areas of the County. Policies within the 2030 General Plan address sustainable development and land use, the use of alternative energy sources and transportation systems, solid waste management and reuse, and improved air quality.

Yolo County adopted its Climate Action Plan (CAP) on March 15, 2011. The CAP builds on the momentum of the County's 2007 decision to participate in the Cool Counties Climate Stabilization Program, which committed the County to reduce GHG emissions to 1990 levels by 2020, 27 percent below 1990 levels by 2030, 53 percent below 1990 levels by 2040, and 80 percent below 1990 levels by 2050. Reduction strategies address GHG emissions with short-, mid-, and long-term goals associated with agriculture, transportation and land use, building energy, solid waste, and wastewater.

## 3.8.3 Discussion

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**
- b) **Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less than significant with mitigation incorporated.** State CEQA Guidelines Section 15064(h)(3) and relevant portions of Appendix G recommend that a lead agency consider a project's cumulative consistency with relevant adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Therefore, in the absence of applicable quantitative thresholds developed by YSAQMD, the County, or some other agency, this analysis qualitatively examines the project's consistency with plans adopted for the purpose of reducing GHG emissions. More specifically, this analysis examines the project's consistency with the 2017 Scoping Plan, which is the statewide plan to achieve the legislated GHG emission target for 2030, and the Yolo County CAP, which is the plan to meet specific countywide GHG targets for 2030, 2040, and 2050. This approach is consistent with one of the pathways to compliance presented in the recent California Supreme Court ruling in *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 229-231.

During construction of the project, GHGs would be emitted by off-road equipment, haul trucks transporting equipment and materials, and commute trips by construction workers. GHG emissions associated with the proposed project were estimated for project construction and operation using CalEEMod Version 2016.3.2 (CAPCOA 2016). On the basis of modeling conducted for the project, construction is estimated to generate a total of 871 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) over the duration of all construction activities (2021–2023). See Appendix A for detailed input parameters and modeling results.

Operation of the project would generate GHG emissions from area sources, energy consumption, vehicle trips, off-road equipment use, water consumption, and wastewater and solid waste generation. During operation of cultivation sites, GHGs would be associated with the consumption of electricity used to power cooling and grow lights. Propane would be combusted on-site to power boilers. Estimates of GHG emissions associated with project operations are presented in Table 3-9.

**Table 3-9 GHG Emissions Associated with Project Operations**

Source Areas	MTCO <sub>2e</sub> /year
Landscape maintenance	<1
Propane	627
Electricity consumption	40
Mobile (vehicle trips)	194
Off-road (forklifts)	194
Solid waste disposal	11
Water consumption and wastewater treatment	557
<b>Operations Total</b>	<b>1,622</b>

Notes: GHG = greenhouse gas; MTCO<sub>2e</sub>/year = metric tons of carbon dioxide equivalent per year.

Total may not add because of rounding.

Source: Modeling conducted by Ascent Environmental in 2020

As shown in Table 3-9, the project's operations are estimated to generate a total of 1,622 MTCO<sub>2e</sub> per year.

Yolo County has developed measures in its CAP for the purpose of reducing GHG emissions and meeting emission targets of SB 32 of 2016. Most of the measures set forth in the CAP are efforts in support of reducing the County's overall GHG emissions. However, various policies related to new development within the County's unincorporated areas would directly apply to the proposed project.

The project would be consistent with the Yolo County CAP and 2017 Scoping Plan in multiple ways. The project would incorporate on-site renewable energy through the installation of a ground-mounted 1,050-kilowatt solar photovoltaic system to supply electricity for the project's operations. Additional electricity demand would be supplied to the site from Pacific Gas and Electric Company's utility system. The incorporation of on-site renewable energy is consistent with Yolo County CAP Measure E-4, which calls for increasing the use of on-site renewable energy generation to reduce demand for grid energy. In addition, including on-site renewable energy generation would be consistent with goals and recommendations included in the 2017 Scoping Plan.

All buildings constructed under the project would be built to the 2019 California Energy Code, which would reduce energy consumption by 30 percent compared to the 2016 standards (CEC 2018a). This would be consistent with Yolo County CAP Measure E-3, which calls for a reduction in energy consumption by new residential and nonresidential development. All indoor spaces used for cultivation and noncultivation would use light-emitting diode lighting, which would be consistent with Yolo County CAP Measure E-3, as well as goals and recommendations included in the 2017 Scoping Plan.

The project would be required to meet renewable energy requirements for new and relicensed cultivation sites, as set forth under CCR Sections 8203 and 8305, as described above. Under these requirements, the project must meet the average electricity GHG emissions intensity required of its local utility provider under the California Renewables Portfolio Standard program.

The potential use of nitrogen fertilizer at outdoor cultivation sites would be limited and regulated through compliance with a Nitrogen Management Plan required under State Water Resources Control Board Order WQ 2019-0001-DWQ, which specifies the application of fertilizers to plant performance. This provision would be consistent with Yolo County CAP Measure A-1, which calls for a reduction in rates of nitrogen fertilizer application.

Additional project attributes would include water efficiency features, including drip irrigation and precision irrigation monitoring technologies. This would be consistent with Yolo County CAP Measure E-7, which promotes weather-based irrigation systems and water efficient turf management. In addition, the integration of water efficiency features for irrigation would be consistent with goals and recommendations included in the 2017 Scoping Plan.

However, the project includes propane as an energy source to power boilers. The Yolo County CAP did not consider propane consumption for the commercial cultivation of cannabis or, more generally, the need to use boilers for agricultural purposes. This is primarily because commercial growing of cannabis was not legal at the time the Yolo County CAP was developed and, as a result, was not accounted for when considering County-wide GHG emission sources. Nonetheless, the Yolo County CAP, Yolo County Energy Plan, and the 2017 Scoping Plan clearly state the objective to replace the use of fossil fuels with renewable energy sources. Propane is not a renewable source of energy and expanding its use is inconsistent with these plans. Therefore, the project's operational GHG emissions would be a cumulatively considerable contribution to climate change. This would be a **significant** impact.

### **Mitigation Measure 3.8-1: Implement Mitigation Measure 3.6-1: Eliminate the Project's Use of Propane**

#### **Significant after Mitigation**

Implementation of Mitigation Measure 3.8-1 would eliminate the project's use of propane. Because Mitigation Measure 3.8-1 would make the project consistent with the Yolo County CAP and 2017 Scoping Plan, this impact would be reduced to a less-than-significant level.

### 3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IX. Hazards and Hazardous Materials.</b>				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.9.1 Environmental Setting

The project site contains two 1-acre outdoor grow sites and was historically used for grazing. Similar to many agricultural operations, commercial cannabis operations involve the use of pesticides, herbicides, rodenticides, and other chemicals for growing, processing, and manufacturing cannabis and cannabis products. In addition, cattle grazing may involve the use of fertilizer and other chemicals to maintain adequate pasture management.

There are no known hazardous materials located on the project site. According to the California Department of Toxic Substances Control EnviroStor database, the nearest documented hazardous materials site is the Esparto Asphalt Plant Cleanup Program Site, located at 27944 Road 19A in Esparto, California, approximately 23,000 feet from the project site. The cleanup effort at this site has been completed, and the case is no longer open (DTSC 2020).

The school closest to the project site is Esparto High School, located approximately 6 miles from the project site at 26675 Plainfield Street, Esparto, California.

The airport nearest to the project site is the Watts-Woodland Airport, located approximately 5 miles to the south. The project site is located outside of zones designated within the Watts-Woodland Airport Comprehensive Land Use Plan (SACOG 1988).

The Yolo County Office of Emergency Services (OES) is the emergency management agency for Yolo County. OES coordinates the County government's response to disaster or other large-scale emergencies. The project site is located within Evacuation Zone 26, which contains the primary routes of I-505, County Road 19, and SR 16 (Yolo County 2020).

In accordance with PRC Sections 4201–4204 and Government Code Sections 51175–51189, the California Department of Forestry and Fire Protection has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones, represent the risks associated with wildland fires. The project site is located within an area of the County that is not zoned, representing minimal to moderate wildfire risk (CAL FIRE 2020).

Fire protection services for the area around the project site are provided by the Madison Fire Protection District. The Madison Fire Protection District, which serves approximately 65 square miles in central western Yolo County, responds to a wide array of emergency incidents, from fire to medical aids and vehicle accidents. The fire station closest to the project site is located at 17880 Stephens Street in Madison, California. The Madison Fire Protect District boundary is located at the eastern edge of the project site. The parcel just east of the project site, which is owned by the applicant, is within the Yolo Fire Protection District.

### 3.9.2 Discussion

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

**Less than significant.** Construction activities would involve the use of hazardous materials, such as fuels, gasoline, and oil. The use and storage of these materials could potentially expose and adversely affect workers, the public, or the environment through improper handling or use, accident, environmentally unsound disposal methods, fire, explosion, or other emergencies. Exposure to hazardous materials may result in adverse health or environmental effects.

The California Highway Patrol and Caltrans are responsible for enforcing regulations related to the transportation of hazardous materials on local roadways, and the use of these materials is regulated by the California Department of Toxic Substances Control, as outlined in CCR Title 22. The applicant and its construction contractors would be required to comply with the California Environmental Protection Agency's Unified Program, which protects Californians from hazardous waste and hazardous materials by ensuring consistency throughout the state regarding the implementation of administrative requirements, permits, inspections, and enforcement at the local regulatory level. Regulated activities would be managed by Yolo County Environmental Health, which is the designated Certified Unified Program Agency, and in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California Uniform Fire Code hazardous material management plans and inventories). Such compliance would reduce the potential for accidental release of hazardous materials during project construction.

The project would be required to comply with existing laws and regulations regarding the transportation, use, and disposal of hazardous materials. These regulations are specifically designed to protect the public health and the environment and must be adhered to during project construction and operation. Because the project would comply with applicable regulations, the impact would be less than significant.

**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?**

**Less than significant.** Similar to many agricultural operations, commercial cannabis operations involve the use of pesticides, herbicides, rodenticides, and other chemicals for growing, processing, and manufacturing cannabis and cannabis products. Cannabis uses are regulated to protect public health and through storage, use, and safety requirements.

Pesticides used on cannabis cultivation sites must contain active ingredients that are exempt from residue tolerance requirements and that are either exempt from registration requirements or are registered for a use that is broad enough to include use on cannabis. Some of these pesticides are bacterial-based insect pathogens (e.g., *Bacillus thuringiensis*) or biofungicides (e.g., *Bacillus subtilis*, *Gliocladium virens*). Active ingredients exempt from registration requirements are mostly food-grade essential oils, such as peppermint oil or rosemary oil. The use of restricted pesticides on cannabis cultivation is prohibited. Harvested cannabis is required to pass laboratory tests for the following constituents as required under CCR Title 16, Division 42, Sections 5304 and 5702. Cannabis must be sampled for the following constituents and pass the testing levels set forth in CCR Sections 5718–5725, which are based on protection of public health and the environment:

- ▶ cannabinoids;
- ▶ foreign material;
- ▶ heavy metals;
- ▶ microbial impurities;
- ▶ mycotoxins;
- ▶ moisture content and water activity;
- ▶ residual pesticides;
- ▶ residual solvents and processing chemicals;
- ▶ if applicable, terpenoids; and
- ▶ if applicable, homogeneity.

If the tested cannabis batch fails these tests, the cannabis batch cannot be released for retail sale. As a result of these testing requirements, licensed cannabis cultivation sites limit the use of pesticides that could create conflicts with adjoining land uses and agricultural activities. CCR Section 8307(b) includes pesticide storage requirements (leak containment) and restrictions on application methods to prevent off-site drift to avoid public health impacts and off-site contamination, as well as protect water quality.

In addition, the Certified Unified Program Agency protects public health and the environment from hazardous material use through storage requirements and measures to contain accidental releases, proper handling and disposal requirements, and disclosure of operations involving hazardous materials to the County and fire protection agencies to ensure proper response if accidents occur (e.g., spills and fires).

Existing regulation and programs described above would limit the potential for exposure of people and the environment to hazardous materials. This impact would be less than significant.

**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 school nearest to the project site is 5 miles away and would not be affected by project construction or operation. There would be no impact.



- 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 site is not included on a list of hazardous materials sites compiled under Government Code Section 65962.5. There would be no impact.

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

**No impact.** The airport nearest to the project site is the Watts-Woodland Airport, located approximately 5 miles to the south. The project site is located outside of zones designated within the Watts-Woodland Airport Comprehensive Land Use Plan (SACOG 1988). There would be no impact.

- f) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**No Impact.** The project site is located behind a locked gate along County Road 17, which is not considered to be part of an evacuation route. Construction and operation of the project would not interfere with an adopted emergency response plan or emergency evacuation plan. There would be no impact.

- g) **Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?**

**Less than significant.** The project site is located within a minimal to moderate fire risk area. In addition to California Fire Code requirements regarding construction requirements for buildings, state regulations address and minimize wildfire hazards through vegetation management and building design. Specifically, PRC Section 4291 requires a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material to maintain defensible space of 100 feet from each side and from the front and rear of the structure. However, the project site is located along a gravel road that is behind a locked gate during the winter months. Because of these logistics and the magnitude of the project, the Yolo Fire Protection District has expressed concerns related to access to the project site and areas to the east in the case of a fire. The applicant would be required to submit final project plans for review to the Madison and/or Yolo Fire Protection Districts, as applicable. The fire protection districts would ensure that all fire code requirements are met. Any and all recommendations provided by the fire protection districts would be incorporated into project plans. This may include additional access improvements to support fire equipment, water storage for fire protection, and other similar provisions. Although not anticipated, additional CEQA documentation would be completed if necessary. Compliance with fire district requirements would ensure that adequate fire protection would be provided to the site. Thus, this impact would be less than significant.

### 3.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>X. Hydrology and Water Quality.</b>				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.10.1 Environmental Setting

The project site has a rolling topography, consisting of several hilltops and slopes in the Dunnigan Hills. The elevation ranges from approximately 200 to 250 feet above sea level. One unnamed stream (a Class III water course) runs through the middle of the northern parcel. The watercourse contains one stock pond; small wetlands exist in the pond and other low areas near the southern border of the project site.

#### SURFACE WATER

The project site is located within the Upper Cache Creek watershed. The watershed encompasses approximately 1,165 square miles, and about 248 square miles of the watershed (approximately 21 percent) is located in Yolo County. Cache Creek provides numerous benefits, including habitat and water supply. The Yolo County Flood Control and

Water Conservation District (YCFCWCD) owns the Cache Creek Dam, located on Cache Creek approximately 5 miles downstream of Clear Lake outlet, and operates both Cache Creek Dam and Clear Lake in accordance with the Solano and Gopcevic Decrees. The North Fork Cache Creek subwatershed drains the area north of Clear Lake and includes Long Valley Creek, Wolf Creek, and Bartlett Creek. YCFCWCD owns and operates the Indian Valley Dam on the North Fork Cache Creek, which forms the Indian Valley Reservoir. Indian Valley Reservoir has a total storage capacity of 300,600 acre-feet, of which 40,000 acre-feet is dedicated to flood control. Bear Creek drains the area to the east of the North Fork Cache Creek, and its watershed lies entirely within Colusa County. Bear Creek flows into the main stem of Cache Creek at the border of Colusa and Yolo Counties (Water Resources Association of Yolo County 2018).

## **SURFACE WATER QUALITY**

The 1972 Clean Water Act (CWA) established strategies for managing water quality. To support these strategies, Section 303(d) of the CWA requires the identification of water bodies that do not meet, or are not expected to meet, water quality standards (i.e., impaired water bodies), and it requires development of a total maximum daily load (TMDL) for each listing. CVRWQCB is the state agency responsible for identifying impaired water bodies within Yolo County. Impaired water bodies are identified by CVRWQCB in an integrated report to be approved by both SWRCB and the U.S. Environmental Protection Agency and included on the Section 303(d) list of impaired waters requiring TMDLs.

The waterway nearest to the project site, Gordon Slough, is located approximately 1.2 miles southwest of the site. This waterway has been listed on the 303(d) list for depleted dissolved oxygen levels (SWRCB 2017). Although the source of this issue is not reported, depleted dissolved oxygen is typically attributed to excessive nutrient contamination causing excess algal growth.

## **GROUNDWATER**

The Sustainable Groundwater Management Act requires local public agencies and Groundwater Sustainability Agencies in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long-term sustainability.

The project site overlays the Yolo Subbasin of the Sacramento Valley Groundwater Basin, which is designated as a high-priority groundwater basin. This groundwater basin lies over approximately 540,690 acres of land and is managed by the Yolo Subbasin Groundwater Agency (YSGA) as its Groundwater Sustainability Agency. YSGA initiated the development of the Yolo Subbasin GSP in March 2018. Development of the Yolo Subbasin GSP is in process. Upon completion, it is planned to contain information related to sustainability indicators and undesirable results; monitoring requirements; water budget components; and models that address hydrogeologic, surface water, and groundwater conditions. Although the GSP is not yet available, information related to the Yolo Subbasin has been compiled to support its development. This information indicates that approximately 327,196 acre-feet of groundwater are used per year from approximately 6,899 wells (DWR 2018).

### **Agricultural Water Use**

Irrigation water in Yolo County is primarily supplied from groundwater or through purchasing supplies from YCFCWCD. YCFCWCD, which includes approximately 216,000 acres, or nearly 40 percent of the valley lands in Yolo County, is located within the northern portion of Yolo County. The YCFCWCD distribution system comprises approximately 160 miles of canals and laterals. Three dams—Cache Creek Dam, Indian Valley Dam, and the Capay Diversion Dam—are managed by YCFCWCD (YCFCWCD 2016). Although the project would be served with groundwater, the following discussion provides valuable information related to agricultural water use in Yolo County.

#### **YCFCWCD Service Area Water Supply**

YCFCWCD's surface water supplies consist of water stored in Clear Lake under pre-1914 rights, water stored in Indian Valley Reservoir under appropriative rights issued by SWRCB, pre-1914 rights from Cache Creek and North Fork Cache Creek, and riparian rights along Cache Creek and North Fork Cache Creek (YCFCWCD 2016). The district does

not own any groundwater wells or supply groundwater to its water users, nor does it maintain records of groundwater pumped by privately owned groundwater wells (YCFCWCD 2016).

Yolo County contains extensive farmlands and produces several different types of crops, including field crops, vegetable crops, grapes, and seed crops. Each year in March, requests to YCFCWCD are made for water supply for the summer months. The amount of water distributed to individual farms is related to availability and the quantities requested.

Each type of crop has a different application rate. Table 3-10 provides an overview of the annual irrigated area, water demands, and application rates of different crop types receiving water supplies from YCFCWCD from 2012 through 2015. Note that in addition to water use by crops, unquantified water is used for habitat, environmental benefits, and recreational water uses. YCFCWCD also provides water for municipal and industrial purposes and to support groundwater recharge efforts (YCFCWCD 2016). Between one and three existing cannabis cultivation sites purchase water each year from YCFCWCD (Stevenson, pers. comms., 2019).

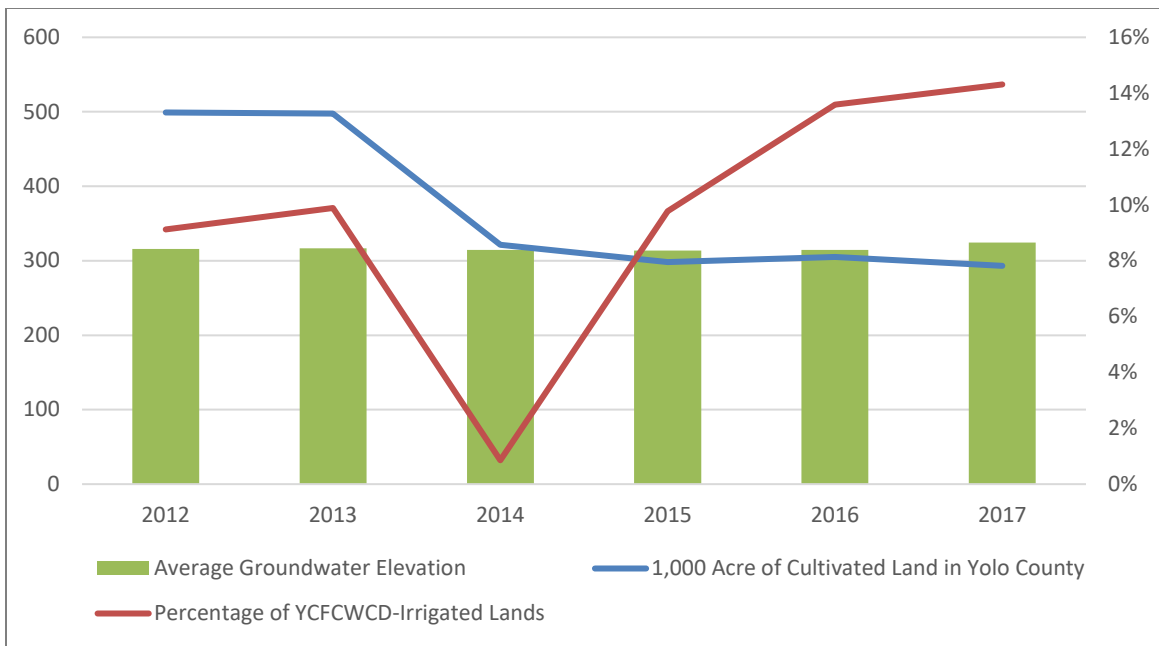
**Table 3-10 Annual Irrigated Area, Water Demand, and Application Rates in Yolo County from YCFCWCD Supplies**

Crop Type	2012			2013			2014			2015			Average Acre-Feet/Acre
	Irrigated Acreage	Water Demand (af)	Acre-Feet/Acre	Total Acreage	Total Crop Water Needs (af)	Acre-Feet/Acre	Total Acreage	Total Crop Water Needs (af)	Acre-Feet/Acre	Total Acreage	Total Crop Water Needs (af)	Acre-Feet/Acre	
Field crops	24,909	79,487	3.19	27,367	92,674	3.39	769	1,823	2.37	11,351	37,326	3.29	<b>3.06</b>
Vegetable crops	6,703	11,028	1.65	6,650	11,434	1.72	659	784	1.19	3,849	5,638	1.46	<b>1.50</b>
Fruit and nut crops	6,184	20,675	3.34	6,874	24,237	3.53	1,079	3,219	2.98	7,996	24,961	3.12	<b>3.24</b>
Grapes/wine grapes	1,747	4,105	2.35	2,065	5,142	2.49	69	164	2.38	2,022	4,752	2.35	<b>2.39</b>
Seed crops	6,003	11,026	1.84	6,243	18,282	2.93	172	345	2.01	3,931	7,111	1.81	<b>2.14</b>
Miscellaneous	1,390	979	0.70	916	1,053	1.15	221	642	2.90	794	1,846	2.32	<b>1.77</b>
<b>TOTAL</b>	<b>46,936</b>	<b>127,300</b>	<b>2.71</b>	<b>50,115</b>	<b>152,822</b>	<b>3.05</b>	<b>2,969</b>	<b>6,977</b>	<b>2.35</b>	<b>29,943</b>	<b>81,634</b>	<b>2.73</b>	<b>2.71</b>

Notes: af = acre-feet; YCFCWCD = Yolo County Flood Control and Water Conservation District.

Source: YCFCWCD 2016

As noted above, Countywide groundwater pumping data for Yolo County are not available; however, YCFCWCD maintains information related to agricultural water use in its service area. As depicted in Figure 3-2, from 2012 through 2017, water supplies in YCFCWCD varied from year to year depending on available resources. Notably, little water was available for purchase in 2014 because of low rainfall and persistent drought conditions. Regardless of fluctuations in surface water supplies, which increase reliance on groundwater pumping, and changes to the Countywide cultivated land area, groundwater elevation levels did not fluctuate substantially.



Sources: Stevenson, pers. comms., 2019; Yolo County 2014, 2016; YCFCWCD 2018

**Figure 3-2 Change in Groundwater Elevation during Drought and Changing Water Supply Conditions**

Subsidence related to groundwater pumping has been detected in the northern Yolo-Zamora area of Yolo County between Zamora and Knights Landing, where subsidence is reported to be on the order of 5 feet, and the vicinity of the cities of Davis and Woodland, where subsidence is estimated at 2 or 3 feet. The project site is not located within an area known to be subject to subsidence (Water Resources Association of Yolo County 2018).

## GROUNDWATER PRODUCTION ON THE PROJECT SITE

Under the existing conditions, there are two one-acre outdoor cannabis grows, contained in hoop houses, on the project site. On an annual basis the hoop houses demand approximately 4.7 gallons of water per sq. ft. (0.63 acre feet per year/acre [afy/ac]) and the nursery hoop houses demand 19 gallons of water per sq. ft. (2.54 afy/ac) (Barnum pers. comms., 2020).

## GROUNDWATER QUALITY

The groundwater in the Yolo Subbasin is generally high in calcium (generally more than 180 milligrams per liter calcium carbonate) and magnesium, with localized areas of high selenium and boron. The intrusion of saline or brackish water into freshwater aquifer systems is generally associated with coastal areas. However, the intrusion of saline or brackish water from the Delta area may occur in the Sacramento Valley, including eastern Yolo County, if overdrafting of deep wells lowers the water levels in the groundwater basin. If saltwater intrusion were to occur on a widespread basis in this area, the local water supply would be adversely affected (USFWS and Yolo Habitat Conservancy 2018). Groundwater analysis at the project site indicated high levels of sodium and boron (Denele Analytical 2018).

## FLOODING

The project site is within an area with minimal flood hazard (Zone X) as identified on the Federal Emergency Management Agency (FEMA) flood maps (FEMA 2020).

### 3.10.2 Discussion

a) **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

**Less than significant.** Construction and operation of facilities such as those proposed by the project have the potential to degrade water quality in various ways, including through discharges of sediment to surface water from roads or other land improvements; discharges of fertilizers, pesticides, and other chemicals to surface waters or groundwater; discharges of fertilizers and pesticides to surface water or groundwater; and spills or leaks of fuels, lubricants, hydraulic oil, or other chemicals associated with construction, pumps, or other equipment. In addition, construction of on-site improvements and buildings can lead to erosion and further degradation of surface water quality during construction. The surface waterway nearest to the project site, Gordon Slough, is listed under Section 303(d) of the Clean Water Act for depleted dissolved oxygen. Depleted dissolved oxygen is typically attributed to excessive nutrient contamination, which causes excess algal growth.

SWRCB has developed a policy for water quality control to establish principles and guidelines for cannabis cultivation, as well as the Cannabis General Order (SWRCB Order WQ 2019-0001-DWQ). The principles and guidelines for a project shall include measures to protect springs, wetlands, and aquatic habitats from the negative impacts of cannabis cultivation. They may include instream flow objectives, limits on diversions, and requirements for screening of diversions and elimination of barriers to fish passage. To obtain coverage under the waiver or enroll under the general order, the discharger is required to submit an online application and application fee and relevant technical reports. At a minimum, the applicant would be required to provide a site management plan, nitrogen management plan, and site closure report.

A site management plan describes how the cannabis cultivator is complying with the requirements listed in Attachment A of SWRCB Order WQ 2019-0001-DWQ. The plan must describe how the requirements are implemented property-wide, including requirements implemented to address discharges from legacy activities and water diversions, as well as waste discharge requirements related to cannabis cultivation. Dischargers must also indicate how the best practical treatment or control (BPTC) measures included in the Cannabis Policy will be implemented. The site management plan may include a schedule to achieve compliance, but all work must be completed by the onset of the winter period each year.

The requirements related to water diversion and waste discharge for cannabis cultivation cover the following 10 BPTC categories:

1. Riparian and wetland protection and management
2. Water diversion, storage, and use
3. Irrigation runoff
4. Land development and maintenance, erosion control, and drainage features
5. Soil disposal
6. Stream crossing installation and maintenance
7. Fertilizer and soil use and storage
8. Cultivation-related waste disposal
9. Refuse and human waste disposal
10. Winterization

In addition, the project would also be subject to the requirements of the County's Stormwater Management and Discharge Ordinance and the Stormwater Management Program, which requires water quality controls (BMPs) for construction and operational stormwater discharges to prevent the discharge of pollutants (Yolo County Code Section 10-9.303). In addition, the Yolo County Improvement Standards (Section 9, Storm Water) include

requirements for stormwater detention and storage, fencing, outfall design, design runoff rates, and drainage diversions, and Section 11 of the Yolo County Improvement Standards contains details on BMPs determined appropriate for construction and postconstruction activities. Nonagricultural activities within the County are also subject to grading permit requirements, which limit the potential for erosion to occur from development. These requirements provide protective measures that ensure that discharge related to construction and operation of the project would not degrade water quality.

Because applicable state and local regulations require water quality control measures for construction and operation of the project, this impact would be less than significant.

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

**Less than significant.** As discussed above, on an annual basis the existing outdoor cultivation sites, currently contained in hoop houses, demand approximately 0.63 acre afy/ac of water, and the nursery hoop houses demand approximately 2.54 afy/ac (Barnum pers. comms., 2020). Upon completion, the project would consist of nursery greenhouses, covering 84,487 sq. ft. and mixed-light greenhouses covering 185,755 sq. ft. Assuming 0.63 afy/ac for the nursery greenhouses and 2.54 afy/ac for the mixed-light greenhouses, the estimate groundwater demand for the project would be approximately 11.97 afy. Because mixed-light water estimates associated with the proposed greenhouses are not available, the higher-demand rate of 2.54 afy/ac is used to provide a conservative evaluation. A negligible amount of water may be required to clean the solar PV panels up to two times per year, and to provide water to the restroom.

The project would use groundwater for irrigation and potable water uses. Overall, the complete project would use approximately 11.97 acre-feet per year (Table 3-11). This amount would account for less than 0.004 percent of the approximately 327,196 acre-feet of groundwater currently used per year from approximately 6,899 wells associated with the Yolo Subbasin. The increase would reasonably be considered insubstantial compared to existing pumping rates.

**Table 3-11 Estimated Groundwater Demands**

Greenhouse Type	Square Feet	Acres	Application Rate (AFY/A)	Water Demand
Nursery (Phase 2)	84,487.00	1.94	0.63	1.22
Mixed-Light (Phase 2)	84,209.00	1.93	2.54	4.90
Mixed-Light (Phase 3)	101,268.00	2.3	2.54	5.84
<b>Total</b>				11.97

Source: Compiled by Ascent in 2020, Yolo County 2009

In addition, it is helpful to consider water demands associated with other types of agriculture. Agricultural water in Yolo County is primarily supplied from groundwater or through purchasing of supplies from YCFCWCD, which distributes water through canals and laterals. Each crop type in the County has a different application rate, as depicted in Table 3-10. Although the quantities of water supplied from purveyors versus on-site groundwater pumping is unknown, orchards cannot be fallowed during dry years. As shown in Table 3-10, the amount of purchased water varies substantially from year to year, and it is reasonable to assume that during years when relatively little water was purchased from YCFCWCD, groundwater was used as irrigation. (Note that the extent of YCFCWCD-irrigated land, which covers nearly 40 percent of the valley lands in Yolo County, was 6,917 acres greater in 2015 than in 2014, indicating that 6,917 acres may have used groundwater as irrigation.)

Furthermore, groundwater demand associated with the project would be approximately 11.97 acre-feet per year. This demand would be similar to the annual irrigation demand for approximately 3.6 acres of orchard, which require 3.34 acre-feet per acre. In 2017, approximately 86,130 acres of fruit and nut crops were harvested in Yolo County (Yolo County 2018). Thus, the equivalent increase in potential water demand to irrigate the equivalent of approximately 3.6 acres of orchard is reasonably considered to be insubstantial to Countywide demands on the Yolo Subbasin given the

area of orchards within the County and the wide range of groundwater pumping for orchard irrigation demand. Further, water use for the project would be comparable to use for other crop types that could occur at the project site.

Finally, as depicted in Figure 3-2, the groundwater conditions in the County have maintained consistent depth to groundwater elevations, regardless of production rates in recent years, indicating a substantial amount of available groundwater resources. Thus, groundwater pumping associated with the project would not result in substantially decreased groundwater supplies under normal- and dry-year conditions or interfere substantially with groundwater recharge in the County. This impact would be less than significant.

- c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**
- i) **Result in substantial on- or offsite erosion or siltation;**
  - ii) **Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**
  - iii) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**
  - iv) **Impede or redirect flood flows?**

**Less than significant.** Implementation of the project would create new impervious surfaces, buildings, and other improvements that could affect drainage flows and thereby alter and increase the extent of flooding conditions. However, as discussed under a), above, implementation of the project would require compliance with SWRCB Order WQ 2019-0001-DWQ and other County regulations that would ensure that discharge related to construction and operation of the project would not degrade water quality through polluted runoff. In addition, approval of the DA with Yolo County would require preparation and approval of a hydrology study to assess the required stormwater retention volume needed to support the site. Finally, the project site is located within an area with minimal flood risk (Zone X) as identified on FEMA flood maps (FEMA 2020) and therefore would not be subject to substantial flood hazard. This impact would be less than significant.

- d) **In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

**Less than significant.** The project site is located at an inland location that is outside of any ocean-related tsunami zones. It is not located within a flood hazard zone and would not be subject to seiche hazard. As discussed above under a), project approval of the DA with Yolo County would require preparation and approval of a hydrology study to assess the required stormwater retention volume needed to support the site, and as a result, project inundation would not occur. Thus, the project would not be at risk of flood, seiche, tsunamis, or the release of pollutants from inundation, and the impact would be less than significant.

- e) **Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

**Less than significant.** There are no approved GSPs or water quality control plans associated with the project site. Regardless, as described above under a), there are various regulations that would substantially limit the potential for degraded water quality conditions. This impact would be less than significant.



### 3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XI. Land Use and Planning.</b>				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.11.1 Environmental Setting

The project site consists of agricultural land used for grazing and two 1-acre outdoor cannabis cultivation operations. Areas surrounding the project site include undeveloped land to the east and west, rural residential lands to the south, and orchards to the north. The project area is located in the unincorporated area of Yolo County.

The area is designated as agriculture in the Yolo County General Plan Land Use Diagram (Yolo County 2009) and is zoned as Agricultural Extensive (A-X) (Yolo County 2020). The A-X zone is applied to protect and preserve lands that are typically less dependent on high soil quality and available water for irrigation. Such lands require considerably larger parcel sizes to allow extensive agricultural activities, such as livestock and ranching operations and dryland farming. These lands may also be used for open space functions that are often connected with foothill and wetland locations, such as grazing land and pastureland and wildlife habitat and recreational areas. The A-X zone allows for accessory structures/uses, including greenhouses up to 100,000 sq. ft.; greenhouses over 100,000 sq. ft. are allowed with administrative review.

#### 3.11.2 Discussion

**a) Physically divide an established community?**

**No impact.** The project is located in a rural area outside of an established community. Project implementation would not physically affect an established community. There would be no impact.

**b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

**Less than significant.** As discussed above, the project site is zoned A-X, which is a district applied to protect and preserve lands that are typically less dependent on high soil quality and available water for irrigation. Implementation of the project would maintain agricultural uses on-site and would thus be consistent with the parcel’s land use designation and zoning. The project would involve development of greenhouses that were previously reviewed through an administrative site plan review. The project is subject to the County’s Early Implementation DA Policy review and approval process, as well as other relevant County regulations. This impact would be less than significant.

### 3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XII. Mineral Resources.</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.12.1 Environmental Setting

Yolo County contains important mineral resources, primarily aggregate and natural gas. The State of California has mapped the aggregate resources along lower Cache Creek and natural gas fields in several areas of Yolo County, including areas near Clarksburg, Rumsey, Woodland, Winters, Yolo, and Davis. The project site is not in an area mapped for aggregate or natural gas resources (Yolo County 2009:Figure IV.L-2).

#### 3.12.2 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?
- 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 site is not classified as an area containing known mineral deposits, so implementing the project would not be expected to result in the loss of known mineral resources that would be of value to the region or residents of the state (Yolo County 2009). Therefore, the loss of a known mineral resources would not occur as a result of project implementation. There would be no impact.

### 3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIII. Noise.</b>				
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.13.1 Environmental Setting

##### ACOUSTIC FUNDAMENTALS

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. Sound is the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on a variety of factors, including geometric spreading (i.e., spherical or cylindrical spreading), ground absorption (i.e., hard versus soft sites), atmospheric conditions (e.g., wind direction and speed, air temperature, humidity, turbulence), and shielding by natural or human-made features.

The amplitude of pressure waves generated by a sound source determines the loudness of that source, also called the sound pressure level (SPL). SPL is most commonly described by using decibels (dB) because this logarithmic unit best corresponds to the way the human ear interprets sound pressures. However, the decibel scale does not adequately characterize how humans perceive noise, because the human ear is not equally sensitive to loudness at all frequencies (i.e., pitch) in the audible spectrum. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of A-weighted decibels) can be computed based on this information. All sound levels discussed in this section are expressed in A-weighted decibels.

Because decibels are logarithmic units, SPLs expressed in dB cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness (Caltrans 2013a:2-10).

Various noise descriptors have been developed to describe time-varying noise levels. The following noise descriptors are used in this section:

- ▶ Equivalent Continuous Sound Level ( $L_{eq}$ ):  $L_{eq}$  represents an average of the sound energy occurring over a specified period. In effect,  $L_{eq}$  is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013a:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly  $L_{eq}$ , is the energy average of sound levels occurring during a 1-hour period.
- ▶ Day-Night Level ( $L_{dn}$ ):  $L_{dn}$  is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB "penalty" applied to sound levels occurring during nighttime hours between 10 p.m. and 7 a.m. (Caltrans 2013a:2-48; FTA 2018:214).

## GROUND VIBRATION

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Groundborne vibration is vibration of and through the ground. Sources of groundborne vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., operating factory machinery) or transient (e.g., explosions).

Groundborne vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) but can also be expressed in decibel notation (VdB), which is used mainly in evaluating human response to vibration.

## EXISTING NOISE SOURCES AND SENSITIVE RECEPTORS

The area surrounding the project site primarily consists of agricultural land. Thus, the predominant noise sources in the area are agricultural operations (e.g., heavy equipment used for fertilizer application and crop harvesting) and vehicular traffic along local roadways, including County Road 17. Two diesel generators, which are the project site's primary source of electric power, also generate noise when operating.

Noise-sensitive land uses generally include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Vibration-sensitive land uses are generally considered to be buildings or structures that could be damaged by vibration or land uses where vibration levels could interfere with operations or cause human annoyance. The noise receptor nearest to the project site is a rural single-family residence located on an A-X zoned property approximately 930 feet south of the nearest boundary of the project site.

## APPLICABLE NOISE AND VIBRATION STANDARDS

The Yolo County 2030 General Plan (Yolo County 2009) contains noise standards that are used as thresholds of significance in the evaluation of project-related noise impacts. Because the County has not established local ground vibration standards, criteria recommended by the California Department of Transportation (Caltrans) and Federal Transit Administration (FTA) are used in the evaluation of project-related vibration impacts (Caltrans 2013b). Consistent with County planning efforts and in accordance with State CEQA Guidelines Appendix G, the project would have a significant noise or vibration impact if it would result in:

- ▶ temporary or permanent ambient noise levels at noise-sensitive receptors (i.e., residences) generated by project construction or on-site operational activities that exceed the County's exterior and interior noise standards for low-density residential land uses of 60 dB  $L_{dn}$  and 45 dB  $L_{dn}$ , respectively;

- ▶ traffic noise levels at residences or other noise-sensitive receptors that exceed the County's exterior and interior noise standards for low-density residential land uses of 60 dB  $L_{dn}$  and 45 dB  $L_{dn}$ , respectively, or a noticeable increase in traffic noise levels (i.e., 3 dB or greater);
- ▶ construction-generated vibration levels exceeding Caltrans-recommended standards with respect to the prevention of structural building damage (0.5 in/sec PPV for new residential buildings) or FTA's maximum-acceptable-vibration standard with respect to human response (80 VdB for residential uses) at nearby existing vibration-sensitive land uses; or
- ▶ the exposure of people residing or working in the project area to excessive noise levels related to airport or airstrip activity.

### 3.13.2 Discussion

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?**

**Less than significant.** Project-related noise would be generated by equipment used on-site during project construction and operation and by traffic associated with project operation. These types of noise sources are discussed separately below.

#### Temporary Construction Noise

The use of heavy equipment during project construction would generate noise, resulting in a temporary increase in noise levels on and around the project site. Construction of the project would occur over approximately 3 years, and activities would occur between 6 a.m. and 5 p.m., Monday through Friday, for most of project construction. All staging areas for equipment storage, personnel vehicles, and construction materials would be located along existing roadways within the project site. Refer to Figure 2-3 in Chapter 2, "Project Description," for a map of various project components that would involve the construction of various cultivation and supporting facilities and the demolition of the existing outdoor cultivation facility.

Project construction activities would involve the use of heavy equipment, such as graders, dozers, excavators, scrapers, tractors, forklifts, generator sets, paving equipment, rollers, welders, and air compressors. However, construction equipment used would vary depending on the project phase and specific activities occurring. The loudest pieces of equipment that would be used during construction would be dozers, excavators, graders, pavers, rollers, and scrapers, all of which individually generate 85 dB  $L_{eq}$  at 50 feet (FHWA 2006:3). These noise levels would not be substantially different than noise levels generated by tractors and other heavy equipment used in agriculture. Three pieces of construction equipment operating simultaneously and close to each other would generate a combined noise level of approximately 86 dB  $L_{eq}$  at 50 feet. Assuming heavy construction equipment would not be operated outside of the hours of 6 a.m. to 5 p.m., the resultant 24-hour exterior noise level generated by construction activity would be 85 dB  $L_{dn}$  at 50 feet. This noise level would attenuate to the General Plan's normally acceptable exterior noise standard of 75 dB  $L_{dn}$  for agricultural land uses (General Plan Policy HS-7.1), including those adjacent to the project site, at 125 feet. In addition, this noise level would attenuate to 52 dB  $L_{dn}$  at the single-family home located 930 feet away and, assuming an exterior-to-interior noise reduction of 24 dB provided by the walls of the residence (EPA 1971:11), an interior noise level of 28 dB  $L_{dn}$ . Therefore, the General Plan's normally acceptable exterior noise standard of 60 dB  $L_{dn}$  for single-family residences (General Plan Policy HS-7.1) would not be exceeded. Detailed calculations are provided in Appendix C.

#### On-Site Operational Noise

Operation-related project noise would be generated primarily by incoming and outgoing truck deliveries, heavy-duty equipment used to run the facility (e.g., forklifts), and electric fans for odor control. Incoming and outgoing truck deliveries would occur infrequently, approximately 18 times per month. More specifically, the facility would receive two deliveries per month of materials and supplies (e.g., fertilizer, soils), receive one delivery of clones per week, and

export two to three deliveries of cannabis product per week. Heavy-duty operational equipment would be limited to one forklift for each greenhouse/headhouse facility. Large trucks used for deliveries and forklifts used for facility operations would generate noise levels similar to those described above for construction equipment. Because delivery activities and the use of forklifts would occur occasionally and for short durations, impacts related to noise generated by delivery trucks and forklifts would be less substantial (i.e., lower decibel level and shorter duration of noise events) than the impact discussed in the construction noise analysis. It is also likely that these types of operational noise sources would be located farther from the nearest noise-sensitive receptor, resulting in lower noise levels at the receptor. As discussed above, the results of the construction noise analysis indicate that noise levels would not exceed the County's exterior or interior noise standard at any nearby sensitive receptors. Thus, delivery and forklift activities occurring during project operation also would not expose the nearest residence to noise levels that exceed the County's exterior or interior noise standard.

The project would also include an odor control system that would use electric fans to move air. The loudest possible fans would generate 27 sones at 5 feet, which is equal to approximately 76 dB  $L_{eq}$  (ACME 2007; Industrial Fans Direct 2020). Three fans operating simultaneously in the mixed-light greenhouses would generate a combined noise level of 54 dB  $L_{eq}$  at 50 feet, and if they were operated all 24 hours of a day they would generate a combined noise level of 61 dB  $L_{dn}$  at 50 feet, which is a weighted 24-hour average. Thus, this noise level would not result in an exceedance of the General Plan noise standard of 75 dB  $L_{dn}$  at adjacent agriculture land uses (General Plan Policy HS-7.1) of 75 dBA  $L_{dn}$ .

In addition, this noise level would attenuate to 27 dB  $L_{dn}$  at the closest residential receptor located approximately 930 feet away and, therefore, not exceed the General Plan noise standard of 60 dB  $L_{dn}$  for single-family residences.

## Traffic Noise

Operation of the project would result in an increase of 36 employees at the project site. Assuming each employee makes two single-occupancy round trips per day, and accounting for a nominal increase in truck trips, the project would not generate more than 100 new vehicle trips per day. These trips would result in an increase in average daily traffic volumes and associated increases in traffic noise levels along roadways near the project site. The local roadway segment that would be used most for these new vehicle trips would be the segment of County Road 17 between the entrance to the project site and County Road 90A. The single-family residence closest to this segment of County Road 17 is located approximately 160 feet from the roadway centerline. According to traffic noise level estimates prepared using calculations consistent with FHWA's Traffic Noise Model Version 2.5 (FHWA 2004), the County's exterior noise standard of 60 dB  $L_{dn}$  would be exceeded at the closest residence only if average daily traffic volumes increased to 5,500 average daily trips. This volume of daily traffic trips would not exceed the County's interior noise standard of 45 dB  $L_{dn}$ , assuming that residential building walls would provide 24 dB of attenuation (EPA 1971:11). During operation of the project, average daily trips along County Road 17 would reach a maximum level of 94 trips per day, which is substantially lower than 5,500 trips per day (see Section 3.17, Transportation). Therefore, existing receptors located along local roadways would not be exposed to noise levels that exceed the County's exterior or interior noise standard for residential land uses. Detailed calculations are provided in Appendix C.

Additionally, as discussed in Chapter 2, "Project Description," the applicant would develop and implement a ride-sharing program, which would use commercial vans to shuttle workers from a designated meeting place off-site to the premises and back. This program would help to decrease the number of worker commutes and associated increases in traffic noise levels.

## Summary

Because noise generated during both construction and operation of the project would not exceed applicable County noise standards or, with respect to traffic noise, result in a perceptible noise level increase, this impact would be less than significant.

**b) Generation of excessive groundborne vibration or groundborne noise levels?**

**Less than significant.** Project construction would not involve the use of ground vibration-intensive activities, such as pile driving or blasting. Pieces of equipment that generate lower levels of ground vibration, such as bulldozers and pavers, would be used during construction. These types of common construction equipment do not generate substantial levels of ground vibration that could result in structural damage, except at extremely close distances (i.e., within at least 10 feet). Construction activities would not occur close to any vibration-sensitive land uses and thus would not generate ground vibration that exceeds the Caltrans-recommended criterion of 0.5 in/sec PPV with respect to structural damage. A bulldozer operating at the boundary of the project site would expose the single-family home located approximately 930 feet south of the project site to a vibration level of 40 VdB, which would also not exceed FTA's maximum-acceptable-vibration standard 80 VdB with respect to human response. Additionally, construction activities would occur during the less sensitive daytime hours between approximately 6 a.m. and 5 p.m., Monday through Friday, for most of project construction. For these reasons, project construction would not result in vibration levels at sensitive receptors that would exceed the Caltrans-recommended criterion of 0.5 in/sec PPV with respect to the prevention of structural damage or FTA's recommended criterion of 80 VdB for assessing human annoyance. Because vibration generated by construction would not exceed Caltrans's or FTA's recommended criterion, this impact would be less than significant.

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

**No impact.** The project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Additionally, the project is not located within 2 miles of a private airstrip. Watts-Woodland Airport, the closest airport, is located approximately 4.5 miles southeast of the project site. Also, the project would not include any new land uses where people would live. Thus, the project would have no impact regarding the exposure of people residing or working in the project area to excessive aircraft-related noise levels.

### 3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIV. Population and Housing.</b>				
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.14.1 Environmental Setting

The project site is located on undeveloped agricultural land in a rural area of Yolo County, approximately 7 miles northwest of Woodland. In January 2020, the population of Yolo County, including its cities, was estimated to be 221,705 (DOF 2020).

#### 3.14.2 Discussion

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

**Less than significant.** The project would not involve construction of new housing and thus would not directly induce population growth. There would be no extension of roads or other infrastructure related to project development. A small construction crew would be required for development of the greenhouses and other structures, and construction would occur over a short period. Operation of the project would require approximately 23 new employees. This increase in employees would not be considered substantial compared to the overall County population. This impact would be less than significant.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

**No impact.** The project would not require the demolition of existing housing and would not otherwise displace people. There would be no impact.



### 3.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XV. Public Services.</b>				
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.15.1 Environmental Setting

Fire protection services for the area around the project site are provided by the Madison Fire Protection District. Madison Fire Protection District serves approximately 65 square miles in central western Yolo County, and responds to a wide array of emergency incidents from fire to medical aids and vehicle accidents. The closest fire station to the project site is located at 17880 Stephens Street in Madison, California. The Madison Fire Protect District boundary is located at the eastern edge of the project site. The parcel just east of the project site, which is owned by the applicant, is within the Yolo Fire Protection District (Yolo LAFCo 2016).

Police protection services for the project site would be provided by the Yolo County Sheriff’s Department out of the Sheriff’s Office located in Woodland. The Sheriff’s Office is located roughly 15 miles from the project site and serves over 200,000 residents with 300 full and part time employees (Yolo County Sheriff Department 2020).

The project site is located within the Esparto Unified School District with the closest school being the Madison Community High School about 5 miles southwest of the project site. The closest recreation facility is the Esparto Community Park, located approximately 6 miles southwest of the project site in Esparto, California.

## 3.15.2 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

### Fire protection?

**Less than significant.** In general, fire protection–related activities include plan review, site/structure inspections, fire code enforcement, fire preparedness/prevention education, fire suppression, and hazardous material/emergency response. The project would not extend the service areas associated with Madison Fire Protection District or Yolo Fire Protection District. There would be no need for new or physically altered governmental facilities. This impact would be less than significant.

### Police protection?

**Less than significant.** Cannabis cultivation may present an increased risk of criminal activities, such as theft of product, compared to other agricultural uses. However, the applicant has developed a safety and security plan to provide comprehensive protection for the employees, facilities, and inventory. The safety and security plan includes a full-service security system that provides video and audio monitoring. Services contracted by the applicant provide the availability of emergency services 24 hours per day, 7 days per week. Because security systems would be incorporated into the project site, there would not be a substantial effect on police protection associated with implementing the project. This impact would be less than significant.

### Schools?

**No Impact.** The project would not provide any new housing; thus, it would not generate new students in the community or result in an increase in employment opportunities that could indirectly contribute new students to the local school district. There would be no impact.

### Parks?

**No Impact.** The project would not provide any new structures that could result in additional residents or employees or necessitate new or expanded park facilities. Therefore, there would be no impact.

### Other public facilities?

**No Impact.** No other public facilities in the project area could be affected by implementation of the project. Therefore, there would be no impact.

### 3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVI. Recreation.</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.16.1 Environmental Setting

The neighborhoods and parks surrounding the area are located in the incorporated parts of the County. The closest recreation facility is the Esparto Community Park, located approximately 6 miles southwest of the project site in Esparto, California.

#### 3.16.2 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?**

**No Impact.** The project does not include any new development that could increase the use of existing parks or recreational facilities. Therefore, there would be no impact.

- 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 project does not include any new development that could necessitate new or expanded recreational facilities. Therefore, there would be no impact.

### 3.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVII. Transportation.</b>				
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.17.1 Environmental Setting

The impact analysis presented in this section is based primarily on the *Traffic Assessment for Green Coast Industries Cannabis Facility (Traffic Analysis)* prepared by KDAAnderson & Associates. The *Traffic Analysis*, which is included as Appendix D, provides additional detailed data, modeling results, and other information related to the transportation analysis.

#### ROADWAY NETWORK

Regionally, the unincorporated portions of Yolo County are served by a roadway network consisting of state highways, streets within incorporated cities, rural arterial roads, rural collector roads, and local rural roads. General descriptions of these roadways in the vicinity of the project site and their intended function are provided below.

Regional access to the project site is provided by County Road 17 via I-5; County Road 90A, which connects to I-505 via County Roads 17 and 19; and County Roads 95 and 95A, which extend south from County Road 17 to SR 16.

#### State Highways

The following state highway and interstates are operated and maintained by Caltrans and serve the project site:

- ▶ **I-5** is a north-south route in Yolo County and serves as a primary truck route for the transportation of goods. From the Sacramento County line to the Colusa County line, I-5 is a four-lane freeway and provides connections to the city of Woodland and communities of Dunnigan, Zamora, and Yolo. I-5 provides regional access to the project site.
- ▶ **I-505** is a north-south freeway that serves as a major connection for goods movement and interregional travel between I-80 near the city of Vacaville and I-5 in the northern part of Yolo County. I-505 is a four-lane freeway from the Solano County line to I-5 and provides a connection to the city of Winters. I-505 provides regional access to the project site.
- ▶ **SR 16** serves east-west traffic through the western rural area of Yolo County, including the communities of Rumsey, Guinda, Brooks, Capay, Esparto, Madison, and Monument Hills and the city of Woodland. SR 16 also provides connection to the Cache Creek Casino Resort, located near the town of Brooks. North of Rumsey, SR 16

passes through the Cache Creek Regional Park area and is one of the routes used by trucks to access Colusa and Lake Counties. SR 16 extends east as a two-lane conventional highway from the Colusa County line to the Woodland city limit, then north, where it connects to I-5. SR 16 provides regional access to the project site.

## County Roadways

Currently, the County maintains approximately 800 miles of roadways in the unincorporated areas. Major County roads are also part of the regional roadway system and typically provide connections to the highway and freeway systems.

The following County roadways provide access to the project site:

- ▶ **County Road 17** is a minor road that extends intermittently across north-central Yolo County. The Circulation Element of the Yolo County General Plan identifies the segment of County Road 17 east of County Road 95 as a "minor two-lane County road," and that designation is also applied to the segments east of SR 113. Between County Road 90A and County Road 95, this roadway is designated as a local road. The first mile east of County Road 90 is paved, but Yolo County does not maintain the remainder of the segment that continues from that point easterly for roughly 2½ miles, goes past the project site, and ends at a location about 2 miles west of County Road 95A.

The Yolo County Board of Supervisors ceased maintenance of County Road 17 between the existing gates near Assessor's Parcel Numbers 049-010-004 and 025-010-034 in 2009. The gates on County Road 17 remain locked during the winter months (generally from November 15 to April 15). Landowners are provided a key to open these gates and access their property.

The maintained portion of County Road 17 consists of a paved section roughly 22–24 feet wide with unpaved shoulders, and it has deteriorated pavement in many locations. The unmaintained portion of County Road 17 has been upgraded by the project applicant and consists of a compacted aggregate surface that is roughly 20 feet wide. There is no posted speed limit on County Road 17. Daily traffic volume counts collected in 2018 indicated that the segment of County Road 17 between SR 113 and County Road 102 carried 1,542 vehicles per day; however, no traffic volume data are available for County Road 17 along the project frontage.

- ▶ **County Road 95** and **County Road 95A** are north-south minor roads located west of I-5. County Road 95A extends south from County Road 17 to County Road 17A. County Road 95 continues south from County Road 17B to County Road 94B and ultimately SR 16. These roads are designated "minor two-lane County roads." All have a 20- to 22-foot-wide paved sections and shoulders of varying materials. Traffic counts conducted in 2018 indicated that County Road 94B carried 991 vehicles per day north of SR 16.
- ▶ **County Road 90A** is a north-south rural road that lies east of and immediately adjacent to I-505. County Road 90A extends north from the I-505/County Road 19 interchange to County Road 14 near its interchange with I-505. County Road 90A is designated a local road within the Yolo County General Plan Circulation Element. In the area of the project, County Road 90A has two 12-foot-wide travel lanes and paved shoulders.

## BICYCLE AND PEDESTRIAN FACILITIES

The bicycle and pedestrian transportation system in Yolo County is composed of local and regional bikeways and trails. Bikeways are classified into the following three types:

- ▶ Class I—off-street bike paths,
- ▶ Class II—on-street bike lanes marked by pavement striping, and
- ▶ Class III—on-street bike routes that share the road with motorized vehicles.

However, the project is located in a remote rural area; thus, there are no bicycle or pedestrian facilities in the vicinity of the project site.

## TRANSIT SYSTEM

The Yolo County Transportation District operates YOLOBUS, which offers local fixed routes within Woodland and West Sacramento and intercity routes serving Davis, West Sacramento, Winters, Woodland, downtown Sacramento, the Sacramento International Airport, Capay, Dunnigan, Esparto, Madison, Yolo, Knights Landing, Vacaville, and Cache Creek Casino Resort. However, because of the rural and remote nature of the project site, there are no nearby transit facilities or transit routes.

### 3.17.2 Discussion

#### a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

**Less than significant.** Implementation of the project would not require the construction, redesign, or alteration of any roadways. Because of the remote nature of the project site's location, no existing or planned transit, bicycle, or pedestrian facilities are located in the vicinity of the project site, and the project would not generate new pedestrian, bicycle, or transit demand. Therefore, implementing the project would not adversely affect any existing or planned transit, bicycle, or pedestrian facility, and it would not conflict with a program, plan, ordinance, or policy addressing pedestrian, bicycle, transit, or roadway facilities. This impact would be a less than significant.

#### b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b)?

**Less than significant.**

#### Construction

The project would generate trips associated with construction and operation activities. Construction activities that would generate new vehicle trips would include worker commutes and the hauling of construction equipment and materials. However, heavy vehicles (e.g., haul trucks) are not intended to be addressed under CCR Section 15064.3 (see Appendix D for a discussion related to the methods for determining VMT threshold of significant). Therefore, the following construction vehicle miles traveled (VMT) analysis is based on the trips generated by the construction workforce. As detailed in Chapter 2, "Project Description," the construction workforce would consist of 20 workers during construction activities. Conservatively assuming that construction workers would not carpool and would generate two trips per worker per day, a total of 40 daily employee trips would be generated during construction. Additionally, these trips would occur only during construction activities and thus would be temporary.

#### Operations

Operational activities that would generate new vehicle trips would include employee commutes and deliveries to and from the project site. The project would result in the addition of 36 new employees. Following project completion, all employees would work from 7:00 a.m. to 4:00 p.m. and would remain on-site during their shift. As detailed in Chapter 2, "Project Description," after all phases of the project are complete, the applicant would develop and implement a ride-sharing program, which would use commercial vans to shuttle workers from a designated off-site meeting place to the premises and back. Additionally, at completion, the project would generate four new monthly nutrient deliveries, two new weekly clone deliveries, four new weekly cannabis shipments from the site, and one new daily miscellaneous delivery.

To provide a conservative worst-case analysis of daily trips generated by the proposed project, the *Traffic Analysis* was based on the following assumptions (Table 3-12):

- ▶ 36 new employees would travel to and from the site on a daily basis,
- ▶ all monthly nutrient deliveries to the site (i.e., four deliveries) would occur on the same worst-case day,
- ▶ all weekly clone deliveries to the site (i.e., two deliveries) would occur on the same worst-case day,

- ▶ all weekly shipments from the site (i.e., four shipments) would occur on the same worst-case day, and
- ▶ one miscellaneous daily delivery to the site would occur on the same worst-case day.

**Table 3-12 Project Vehicle Trip Generation**

Activity	Quantity	Assumed Daily Trip Rate	Total Trips per Day
Employee commute	36	2 per employee	72
Nutrient deliveries	4	2 per delivery	8
Clone deliveries	2	2 per delivery	4
Cannabis shipments from the site	4	2 per shipment	8
Miscellaneous	1	2 per delivery	2
<b>Total</b>			<b>94</b>

Source: KDAnderson & Associates 2020

Deliveries could involve the use of heavy vehicles. As noted above, heavy vehicles are not intended to be addressed under CCR Section 15064.3. However, all delivery trips were included in the trip generation estimates to ensure a conservative worst-case analysis. Additionally, no trip rate reductions associated with implementation of the aforementioned ride-sharing program were applied to the trip generation calculations. The *Traffic Analysis*, which is included as Appendix D, provides additional detailed data and information related to the trip generation calculations.

Therefore, assuming this worst-case scenario would occur daily, 94 daily operational trips would be generated.

## Conclusion

Consistent with the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018), a project generating fewer than 110 trips per day is assumed to cause a less-than-significant VMT impact. Therefore, because the number of daily construction and operation trips (i.e., 40 and 94 daily trips, respectively) would not exceed 110 trips per day, the increase in VMT attributable to construction and operation of the proposed project would be less than significant.

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

**Less than significant.** Implementation of the project would not require the construction, redesign, or alteration of any roadways. However, the proposed project would add vehicle and heavy vehicle trips to County-maintained roads and to an unmaintained County road during construction and operation. As described in the *Traffic Analysis*, access to the project site would require the use of narrow bridges over canals that exist at locations on the County roads south of County Road 17. However, these narrow bridge crossings are signed, and the roadways in the vicinity of the project provide adequate width to accommodate two-way travel, as well as agricultural truck traffic (i.e., heavy vehicles). Additionally, the surrounding roadway network is used by agricultural trucks and farm equipment; thus, the types of vehicle trips generated by the project would be consistent with the existing mix of vehicle types currently using the roadway network.

As described in the *Traffic Analysis*, all County-maintained roads that would be used to access the project site provide adequate sight distance, are adequately signed, and do not present any hazards related to poor roadway conditions. Thus, construction and operation of the project would not increase hazards related to a design feature or incompatible uses. Therefore, the project would not substantially increase transportation hazards. This impact would be less than significant.

### d) Result in inadequate emergency access?

**Less than significant.** The construction and operation of the proposed project would not occur within any portions of County-maintained roadway right-of-way or the unmaintained portion of County Road 17. Additionally, as described in in Chapter 2, "Project Description," all construction staging would be located within the project site. Therefore,

emergency access would be maintained to all adjacent parcels and properties and would not be impeded or delayed during construction or operation of the project.

Emergency access to the project site would be subject to review by the County and the responsible emergency service agencies, thus ensuring that the project would be designed to meet all County emergency access and design standards. Therefore, adequate emergency access would be provided. This impact would be less than significant.

Please note that a similar topic is addressed in Section 3.9, "Hazards and Hazardous Materials," under checklist item g): "expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?" This impact was determined to be potentially significant because a wildland fire would pose a substantial risk of loss, injury, or death related to accessibility to the site. Although both these topics address issues pertaining to adequate emergency access, the impact discussed in Section 3.9 considers how the project may increase the potential for fires, which would be difficult to access because of road conditions. In contrast, this impact describes general emergency access in the vicinity of the project site (i.e., along County Road 17 and other nearby roadways).



### 3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVIII. Tribal Cultural Resources.</b>				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.18.1 Environmental Setting

Under PRC Sections 21080.3.1 and 21082.3, Yolo County must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded to project notification letters with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource (TCR) when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

#### TRIBAL CONSULTATION

On August 31, 2018, Yolo County sent notification letters that the project was being addressed under CEQA, as required by PRC 21080.3.1, to the five Native American tribes that had previously requested such notifications: Yocha Dehe Wintun Nation, Cortina Rancheria Band of Wintun Indians of California, Lone Band of Miwok Indians, Wilton Rancheria, and Torres Martinez Desert Cahuilla Indians. Yocha Dehe responded, stating that there are no known cultural resources near the project site and that a cultural monitor would not be necessary. However, the Tribe requested cultural sensitivity training for the construction workforce before the start of project construction.

The cultural resources study (NIC 2016) prepared for the project included a request for an NAHC Sacred Lands File search. The NAHC search indicated that the Sacred Lands File was negative for the presence of Native American resources within the project site.

### 3.18.2 Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

**No impact.** The project site contains no TCRs that are listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources. There would be no impact.

- b) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?**

**Less than significant with mitigation incorporated.** Yolo County sent notification letters to the Yocha Dehe Wintun Nation, Cortina Rancheria Band of Wintun Indians of California, Lone Band of Miwok Indians, Wilton Rancheria, and Torres Martinez Desert Cahuilla Indians. Yocha Dehe responded, stating that there are no known cultural resources near the project site and that a cultural monitor would not be necessary. However, the Tribe requested cultural sensitivity training for the construction workforce before the start of project construction. Because it is possible that yet-undiscovered TCRs could be encountered or damaged during ground-disturbing construction activities, this impact would be potentially significant.

#### **Mitigation Measure 3.18-1: Allow Tribe to Inspect Project Site during Ground-Disturbing Activities**

A minimum of 7 days before beginning earthwork, clearing and grubbing, or other soil-disturbing activities, Yolo County shall contact Yocha Dehe regarding the proposed earthwork start date, and a Yocha Dehe tribal representative or tribal monitor shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first 5 days of groundbreaking activity or as appropriate for the type and size of the project. During this inspection, a Yocha Dehe tribal representative or tribal monitor may provide an on-site meeting for construction personnel information on TCRs and a workers' awareness brochure.

If any TCRs are encountered during this initial inspection or during any subsequent construction activities, Mitigation Measure 3.18-2 shall be implemented.

#### **Mitigation Measure 3.18-2: Coordinate with Tribe Regarding the Treatment of Any TCRs Discovered during Ground-Disturbing Activities**

If any suspected TCRs, including midden soil, artifacts, chipped stone, exotic rock (nonnative), or unusual amounts of baked clay, shell, or bone, are discovered during ground-disturbing construction activities, all work shall cease within 100 feet of the find. Yocha Dehe shall be immediately notified and shall determine whether the find is a TCR (pursuant to PRC Section 21074). The tribal representative will make recommendations for further evaluation and treatment as necessary.

Preservation in place is the preferred alternative under CEQA protocols, and every effort must be made to preserve the resources in place, including through project redesign. Culturally appropriate treatment may be, but would not be limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or moving objects to a location within the project area where they will not be subject to future impacts. Treatment that preserves or restores the cultural character and integrity of a TCR may include tribal monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.

**Significance after Mitigation**

Implementation of Mitigation Measures 3.18-1 and 3.18-2 would reduce the impact on TCRs to a less-than-significant level by requiring notification of tribal representatives before earth-disturbing activities and, in the case of a discovery, appropriate treatment and proper care of significant TCRs.

### 3.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIX. Utilities and Service Systems.</b>				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project’s projected demand, in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 3.19.1 Environmental Setting

No municipal water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities provide services to the project site.

#### 3.19.2 Discussion

- a) **Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

**Less than significant.** The drilling of wells, installation of septic systems, and use of propane tanks are part of the project, and the associated impacts are discussed throughout this IS. This impact would be less than significant.

**b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

**Less than significant.** Water would be supplied to the project through groundwater wells. No municipal water supplies would be used. This impact would be less than significant.

See Section 3.10 for a discussion related to the adequacy of groundwater resources associated with the project.

**c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?**

**Less than significant.** Municipal wastewater treatment would not be included as part of the project. A septic system would be installed. The impact would be less than significant.

**d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

**e) Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

**Less than significant.** CCR Sections 8108 and 8308 require cultivation, nursery, and processing facilities to have a cannabis waste management plan that identifies methods for managing cannabis waste, including on-premises composting, collection and processing by an agency or self-hauling to a permitted facility. Transportation of self-hauled cannabis waste shall be performed only by the licensee or employees of the licensee. CCR Section 5054 provides methods for disposal of cannabis products.

These regulations require that to be rendered as cannabis waste for proper disposal, cannabis goods must first be destroyed on the licensed premises. This includes, at a minimum, removing or separating the cannabis goods from any packaging or container and rendering it unrecognizable and unusable. A licensee must report all cannabis waste activities, up to and including disposal, into the state's track-and-trace system. CCR Section 40290 requires that all disposed cannabis be entered into the track-and-trace system for manufacturing uses in a manner similar to that described in CCR Sections 8108 and 8308.

In addition, the Yolo County Department of Community Services' Integrated Waste Management Division has prepared internal procedures for the disposal of waste generated from cannabis operations. Cannabis disposal at the Yolo County Central Landfill is allowed with a copy of the driver's license or photo ID of the disposer and completion of a Cannabis Acceptance Form. Cannabis waste is not accepted at the green waste facility. For items considered to be hazardous waste, a hazardous waste appointment must be set up through the Conditionally Exempt Small Quantity Generator business program. Various items related to cannabis operations are considered to be hazardous waste, including growth media; fertilizers, pesticides, and other agricultural chemicals; and solvents used in extractions (Yolo County 2018). Franchised waste haulers (Waste Management Inc. and Recology Davis) may haul organic cannabis waste to the Yolo County Landfill in source-separated loads only, following record-keeping procedures similar to those described above for self-haulers. Because the applicant would be required to follow all state and County requirements related to solid waste associated with the project, this impact would be less than significant.

### 3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XX. Wildfire.</b>				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.20.1 Environmental Setting

In accordance with PRC Sections 4201–4204 and Government Code Sections 51175–51189, the California Department of Forestry and Fire Protection has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones, represent the risks associated with wildland fires. The project site is located within an area of the County that is unzoned, representing minimal to moderate wildfire risk (CAL FIRE 2020).

### 3.20.2 Discussion

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

**No Impact.** The project site is not located within a High or Very High Wildfire Hazard Zone. There would be no impact.

As discussed in Section 3.9, "Hazards and Hazardous Materials," impacts related to the potential for wildland fire to pose a substantial risk of loss, injury, or death related to accessibility to the site would be potentially significant. Implementation of Mitigation Measure 3.9-1 would ensure that the project complies with all fire code requirements to the satisfaction of the Madison and Yolo Fire Protection Districts. Please see Section 3.9, "Hazards and Hazardous Materials," for additional information.

### 3.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XX. Mandatory Findings of Significance.</b>				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### 3.21.1 Discussion

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

**Less than significant with mitigation incorporated.** As discussed in Section 3.4, “Biological Resources,” of this IS/MND, one special-status plant species has potential to occur on the project site: Baker’s navarretia. This species is associated with wetland and vernal pool habitat, which is present in the northwest portion of the project site. Development of the project site, including ground disturbance associated with construction of roads or buildings, would be limited to areas in the project site that do not contain wetland habitat. Thus, impacts on Baker’s navarretia, if present, are not expected to occur.

The project has potential to adversely affect western pond turtle, western spadefoot, burrowing owl, Swainson’s hawk, white-tailed kite, and American badger. Potentially significant impacts would be reduced to a less-than-significant level with implementation of Mitigation Measures 3.4-1 through 3.4-5, consistent with the relevant HCP/NCCP AMMs.

As discussed in Section 3.5, “Cultural Resources,” no historical or archaeological resources were identified through the records search or site survey. Further, the project area has been highly disturbed by historic flooding, reclamation



activities, more than 100 years of agricultural activities, and construction of a groundwater treatment facility. Therefore, the potential for the discovery of buried historical or archaeological materials within the project area is considered low. However, the potential exists that unidentified historical or archaeological resources could be discovered during construction. Damage to an unknown unique archaeological resource or historical resource would be a potentially significant impact. For this reason, it is possible that archaeological materials could be encountered during ground-disturbing activities. Implementing Mitigation Measure 3.5-1 would reduce potential impacts on archaeological resources discovered during project construction activities to a less-than-significant level by requiring construction monitoring and, in the case of a discovery, preservation options (including data recovery, mapping, capping, or avoidance) and proper curation if significant artifacts are recovered.

- 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 with mitigation incorporated.**

### **CEQA Requirements**

Section 15130 of the State CEQA Guidelines requires that an EIR “discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable...” While the CEQA Guidelines do not require such an analysis of cumulative impacts when, such as here, an EIR is not warranted, the County believes that discussion of potential cumulative impacts from this and other cannabis-related projects is worthwhile because the County is currently overhauling its regulatory regime governing cannabis uses through a new Cannabis Land Use Ordinance (CLUO). Therefore, although this Initial Study concludes that this Project will not have any significant impacts after mitigation is implemented, this section will consider whether there are any impacts that, in conjunction with the projects affected by the land use ordinance, could nonetheless cause a cumulative impact.

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]).

This section provides an analysis of cumulative impacts that would result from implementation of the project together with other past, present, and probable future projects producing related impacts. The analysis provided in this chapter uses the EIR cumulative analysis process identified in Section 15130 of the State CEQA Guidelines. The goal of such an analysis is twofold: first, to determine whether the overall long-term impacts of all such projects combined would be cumulatively significant, and second, to determine whether the incremental contribution to any such cumulatively significant impacts from adoption and implementation of the proposed project would be “cumulatively considerable” (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], 15355[b], 15064[h], and 15065[a].) In other words, the required analysis examines the broad context in which cumulative impacts occur and examines whether incremental contributions from the project would result in new significant cumulative impacts or would significantly add to anticipated cumulative impacts (i.e., be “cumulatively considerable”).

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts focuses on significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

## Cumulative Setting

### Scope of the Cumulative Analysis

The geographic area that could be affected from implementation of the project varies depending on the type of environmental resource being considered. This geographic area provides the context for consideration of cumulative impacts. The general geographic area associated with various environmental effects defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Table 3-13 identifies the general geographic areas associated with the different resources addressed in this draft IS and evaluated in the related sections of this cumulative analysis.

**Table 3-13 Geographic Scope of Cumulative Impacts**

Resource Issue	Geographic Area
Aesthetics	Project area
Agricultural Resources	Yolo County
Air Quality and Odors	Regional for criteria pollutants within the Yolo Solano Air Quality Management District; project area specific for odor.
Biological Resources	Yolo County (Yolo Habitat Conservation Plan/Natural Community Conservation Plan Planning Area) and site specific
Cultural Resources	Primarily site specific; larger localized area for certain impacts
Energy	Regional (Pacific Gas and Electric Company and Valley Clean Energy service area)
Geology and Soils	Site specific
Greenhouse Gas Emissions and Climate Change	Global
Hazards and Hazardous Materials	Site specific for hazardous materials, emergency vehicle access and evacuation, and airports; regional for wildfires
Hydrology and Water Quality	Localized and watershed
Land Use and Planning	Yolo County and site specific
Noise	Site specific and localized (e.g., along transportation corridors)
Population and Housing	Unincorporated area of Yolo County
Public Services	Unincorporated Yolo County and fire protection districts
Recreation	Yolo County
Transportation and Circulation	Project area
Tribal Cultural Resources	Original Tribal Territory
Utilities and Service Systems	Site specific and countywide
Wildfire	Regional

### Yolo County 2030 Countywide General Plan

The Yolo County 2030 General Plan EIR examined the impacts associated with planned growth of 23,265 residents, 7,263 residential dwelling units, and 20,818 jobs in the unincorporated area in 2008/2009 to approximately 64,700 residents, 22,061 residential dwelling units, and 53,154 jobs by 2030. Buildout of a specific plan area in the community of Dunnigan was assumed to account for most of this growth. (Yolo County 2019)

The General Plan designates the majority of the unincorporated area of the County, approximately 545,000 acres, for agricultural use. Open space is the second largest designation, with approximately 53,000 acres, followed by approximately 7,000 acres of public and quasi-public uses. The remaining areas (approximately 18,000 acres) are designated for parks and recreation, residential, commercial, industrial, specific plan, and other uses.

The General Plan Agriculture land use designation allows the following uses:

Agriculture (AG) -- Full range of cultivated agriculture such as row crops, orchards, vineyards, dryland farming, livestock grazing, forest products, confined animal facilities, and equestrian facilities. Agricultural industrial – agricultural research, processing and storage; crop dusting. Agricultural commercial – roadside stands, “Yolo Stores,” wineries, farm-based tourism (e.g., u-pick, dude ranch, lodging), horse shows, rodeos, crop-based seasonal events; agricultural chemical and equipment sales. Pre-existing isolated restaurants and/or stores (e.g., old stage stops and cross-roads) serving rural areas. Farmworker housing. Surface mining. Incidental habitat.

The General Plan EIR assumed these uses on the 545,000 acres of designated as Agriculture and additionally assumed agricultural commercial and agricultural industrial uses (as described in the designation) on 1,178 acres of these acres.

Additional growth may occur in the County as a result of planned land uses within the four incorporated cities; on the University of California, Davis, campus; and on lands held in trust by the federal government for the Yocha Dehe Wintun Nation. Although these are all activities the County does not control, the General Plan EIR examined the potential for cumulative effects associated with buildout of planned growth within the unincorporated County area, growth within these areas of the County not under County jurisdiction, and growth in jurisdictions adjoining Yolo County (see pages 805 through 817 of the Draft volume of the 2030 Countywide General Plan Final EIR) (State Clearinghouse # 2008102034, certified November 10, 2009).

In 2017 the Yolo County Board of Supervisors (Board) approved two General Plan amendments that removed four specific plans from the General Plan for Dunnigan, Elkhorn, Knights Landing, and Madison. These actions removed approximately 10,200 residential dwelling units and approximately 960 acres of commercial and industrial land use growth (Yolo County 2019). This growth reduction in the General Plan will reduce many of the significant environmental impacts identified in the General Plan EIR (i.e., land use and housing, agricultural resources, transportation and circulation, air quality, noise, greenhouse gases and climate change, utilities, energy, cultural resources, biological resources, hydrology and water quality, hazards and hazardous materials, and visual and scenic resources).

### **Yolo County Cannabis Land Use Ordinance**

On March 22, 2016, in response to the Medical Marijuana Regulation and Safety Act and to affect greater local control, the Board adopted the Marijuana Cultivation Ordinance (Ordinance Number 1467), adding Chapter 20 to Title 5 of the Yolo County Code, which regulates the issuance of ministerial licenses for medical cannabis cultivation in Yolo County. This ordinance, also referred to herein as the County’s cannabis licensing ordinance, was subsequently amended by the Board on July 24, 2018, to allow for adult commercial (recreational) cannabis activities, thereby eliminating the original restriction to medical marijuana only.

Yolo County is currently in the final phase of adopting a Cannabis Land Use Ordinance (CLUO). The overall purpose of the proposed CLUO is to add Article 14 (Cannabis Land Use Ordinance) to Title 8, Chapter 2, Zoning Regulations, of the Yolo County Code, establishing new zoning regulations to control land use, zoning, and development aspects of cannabis operations throughout the unincorporated County area and create a discretionary use permit process for all cannabis land uses. These regulations are separate and distinct from the cannabis licensing regulations currently in Chapter 20 of Title 5 of the Yolo County Code, which will ultimately be modified and moved to a new Chapter 4 in Title 12 (Business Licenses). The proposed new CLUO and the modified existing cannabis licensing ordinance will be implemented in tandem, as an integrated set of County regulations.

The County is also nearing completion of an Environmental Impact Report to assess and address environmental impacts from the CLUO. The CLUO Final EIR evaluates five alternative variations to the CLUO for a range of cannabis uses (78–264 cannabis operations), recognizing that the final CLUO may combine elements of more than one alternative. The current version of the CLUO now proposes a cannabis use permit cap of 132 and is under consideration by the Board.

## Cumulative Impact Analysis

The following sections contain a discussion of the cumulative effects anticipated from implementation of the project, together with planned land use activities in the County, and including implementation of the proposed CLUO, for each of the environmental issue areas evaluated in this document.

When considered in relation to other reasonably foreseeable projects, cumulative impacts on some resources would be significant and more severe than those caused by the project alone.

The project would result in a significant cumulative effect if:

- ▶ the cumulative effects of related projects and land use activities (past, current, and probable future projects) are not significant, but the incremental impact of implementing the project is substantial enough, when added to the cumulative effects of related projects, to result in a cumulatively significant impact, or
- ▶ the cumulative effects of related projects and land use activities (past, current, and probable future projects) are already significant, and implementation of the project makes a considerable contribution to the effect.

The analysis herein analyzes whether, after implementation of project-specific mitigation and performance criteria that minimize environmental effects, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.

### **Impact CUM-1: Contribution to Cumulative Aesthetic Impacts**

*(Not cumulatively significant / cumulatively considerable)*

Visual quality and scenic resources are generally limited to the immediate project area and not cumulative in nature. For example, the creation of glare or physical alteration of a site at one location is not generally worsened by these conditions occurring at another location in a different part of the County.

While the General Plan EIR did identify significant and unavoidable visual character, glare, and nighttime lighting impacts from planned growth, no significant cumulative impacts were identified because the planned growth would be concentrated near adjacent communities and would not affect regional visual and scenic resources (Yolo County 2009).

The CLUO Final EIR concluded that existing and proposed regulations would reduce impacts on scenic vistas, scenic resources along scenic highways, and light and glare such that a significant cumulative condition would not occur. However, aesthetic impacts related to visual character are subjective, and cannabis uses have distinctly recognizable visual characteristics as compared to other traditional forms of agriculture in the County. Thus, the CLUO would result in significant cumulative impacts on visual character (Yolo County 2019).

The GCI project site, which is characterized by rolling hills covered in grasslands, includes two 1-acre outdoor cultivation facilities, each operating under a separate annual County Cannabis Cultivation License. The general area surrounding the project site is undeveloped agricultural land. Surrounding the project site to the north and south are cultivated lands. Undeveloped lands are located to the east and west. As discussed in Section 3.1, the project would have a less-than-significant impact on scenic vistas and visual character of the project site and no impact on scenic resources within a state scenic highway. Potentially significant impacts related to light or glare would be reduced to a less-than-significant level through implementation of Mitigation Measure 3.1-1. There is no potential for new developments or cannabis sites adjacent to the project site or within view of the project site. Thus, aesthetic impacts of other development would not combine such that a cumulative condition could occur. Thus, the project would not make a considerable contribution to significant cumulative impacts on aesthetic resources.

### **Impact CUM-2: Contribution to Cumulative Agricultural Resource Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative setting for agricultural resources consists of the entire County. Agriculture in Yolo County is varied and includes farms of all sizes, as well as equestrian, ranching, and other related uses. The conversion of agricultural

land to nonagricultural uses would be considered a cumulatively considerable contribution to farmland impacts within Yolo County (Yolo County 2009).

The General Plan EIR identified significant and unavoidable cumulative impacts for the loss of agricultural land from implementation of planned land use activities (Yolo County 2009).

As discussed in the CLUO EIR, California Health and Safety Code Section 11362.777(a) and Business and Profession Code Section 26067(a) define medical and adult-use cannabis as agricultural products. CLUO Section 8-2.1404(E) states that cannabis cultivation and related activities are agricultural land uses. Thus, implementation of the CLUO would not result in a significant cumulative impact on agricultural resources (Yolo County 2019).

Implementation of the GCI project would involve development of greenhouses to support cultivation of cannabis products. Because cannabis is considered to be an agricultural use, the project would not convert agricultural lands to other uses in Yolo County. Thus, the project would not make a considerable contribution to significant cumulative impacts on agricultural resources.

### **Impact CUM-3: Contribution to Cumulative Air Quality and Odor Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative setting for air quality is the Sacramento Valley Air Basin (SVAB). The SVAB includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties; the western portion of Placer County; and the eastern portion of Solano County. The cumulative setting for odor is generally site specific and/or a larger localized area based on the site, the proposed cannabis operation, topography, meteorology, and other relevant conditions.

The General Plan EIR identified significant and unavoidable cumulative impacts for ozone and particulate matter from implementation of planned land use activities. Other air quality and odor impacts were identified as less than significant (Yolo County 2009).

As described in the CLUO EIR, adoption and implementation of the CLUO would result in construction-generated emissions of reactive organic gases, oxides of nitrogen, respirable particulate matter, and fine particulate matter. However, emissions of criteria air pollutants and ozone precursors would not result in a cumulatively considerable contribution to cumulative air quality impacts. In addition, implementation of the CLUO would not conflict with air quality policies or regulations but would result in cumulatively considerable contributions to cumulative odor impacts. However, despite regulations to reduce cannabis cultivation-related odors, the potential for cumulative odor impacts to occur as a result of adoption and implementation of the CLUO, including issuance of future cannabis use permits, was identified as cumulatively considerable and significant and unavoidable (Yolo County 2019).

The GCI project would result in a less-than-significant level of construction-generated emissions of criteria air pollutants and ozone precursors. The project would not result in a cumulatively considerable contribution to air pollutant emissions because short-term construction and long-term operation of the project would not generate emissions of criteria air pollutants and precursors that would exceed the YSAQMD-established mass emission thresholds, which were developed to determine whether a project's emissions would cumulatively contribute to the nonattainment designations in the SVAB. In addition, while cannabis cultivation produces objectional odors, the project would include installation of odor control systems intended to reduce odor emissions from the greenhouses. Mitigation Measure 3.4-1 would require that the odor control systems be calibrated such that there are no detectable odors at the property line. Thus, odors from the GCI project would not combine with the odors from other cultivation facilities in the County. The project would not make a considerable contribution to significant cumulative impacts on odor.

### **Impact CUM-4: Contribution to Cumulative Biological Resource Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative setting for some biological resources is countywide. However, depending on the resource, many biological resource impacts are site specific rather than cumulative in nature.

The General Plan includes policies to protect habitats (e.g., wetlands, oak woodlands, grassland prairies, riparian habitat, aquatic habitat) and special-status species in the County. The General Plan EIR identified significant and unavoidable cumulative impacts on special-status species, habitat, and movement corridors from implementation of planned land use activities (Yolo County 2009).

The CLUO includes performance standards (including participation in the Yolo Habitat Conservation Plan/Natural Community Conservation Plan [HCP/NCCP]) that address special-status species, habitat impacts, and invasive plants. Operation of the cultivation sites are also subject to compliances with Terms 4, 10, 27, and 37 of Attachment A (General Requirements and Prohibitions) of State Water Resources Control Board (SWRCB) Order WQ 2019-0001-DWQ, which provide special-status species and habitat protection requirements. In addition, Mitigation Measure BIO-1, presented in the CLUO EIR, would reduce potentially significant impacts on special status species to a less-than-significant level. Thus, the CLUO EIR concluded that the CLUO would not result in significant cumulative biological resources impacts (Yolo County 2019).

The project site contains annual grassland habitat composed of mostly nonnative grasses, including slender wild oat (*Avena barbata*), medusa head (*Elymus caput-medusae*), and soft chess (*Bromus hordeaceus*). There is no riparian habitat within the project site. Development of the project site, including ground disturbance associated with construction of roads or buildings, would be limited to areas on the project site that do not contain wetland habitat. Because the project site is surrounded entirely by land developed for agriculture (primarily orchards) and because there are no known nursery sites on the project site, the site is not expected to function as a significant movement corridor for wildlife. In addition, the project would not conflict with any local policies or ordinances and would be consistent with the Yolo HCP/NCCP as a condition of project approval. Therefore, there would not be significant impacts on riparian or other sensitive habitat, wetlands, native resident or migratory wildlife corridors or nursery sites, policies, ordinances, or HCPs. Development of the project site, including ground disturbance associated with construction of roads or buildings, could result in disturbance to or direct loss of western pond turtle, western spadefoot, burrowing owl, American badger, Swainson's hawk, white-tailed kite, and other nesting raptors. However, implementing Mitigation Measures 3.4-1 through 3.4-5 would offset project contributions to cumulative impacts through requirements for surveys and avoidance measures, consistent with Yolo HCP/NCCP avoidance and minimization measures. Thus, impacts on biological resources would be avoided, and the project would not considerably contribute to significant cumulative biological resources impacts.

#### **Impact CUM-5: Contribution to Cumulative Cultural Resource Impacts**

*(Not cumulatively significant / cumulatively considerable)*

While some cultural resources may have regional significance, the resources themselves are site specific, and impacts on them are project specific.

The General Plan EIR stated that implementation of the General Plan would not result in cumulative considerable impacts on cultural resources (Yolo County 2009).

The CLUO would require site assessments to determine potential cultural resources in the area, and site plans may need to be redesigned to protect resources consistent with existing and proposed regulations associated with the Yolo County General Plan and SWRCB Order WQ 2019-0001-DWQ. Thus, the CLUO EIR indicates that adoption and implementation of the CLUO, including issuance of subsequent cannabis use permits pursuant to the adopted CLUO, would not result in significant cumulative cultural resource impacts (Yolo County 2019).

The GCI project site does not contain any historical resources; thus, there would be no impact on historical resources. Because development of the project site would include ground-disturbing activities, the potential exists that unidentified archaeological resources could be damaged during construction. However, implementation of Mitigation Measure 3.5-1 would offset project contributions to cumulative impacts because it would require the performance of professionally accepted and legally compliant procedures following the discovery of previously undocumented significant archaeological resources. If human remains are encountered during construction, compliance with California Health and Safety Code Section 7050.5 and PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains and to appropriately treat any remains that are discovered. Thus,

because procedures would be implemented to properly address the discovery of unknown historical or archaeological resources, the project would not result in a cumulatively considerable impact on cultural resources.

#### **Impact CUM-6: Contribution to Cumulative Energy Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The geographic area considered for cumulative impacts related to energy use includes the service area for Pacific Gas and Electric Company and Valley Clean Energy.

The General Plan EIR stated that implementation of the General Plan would not result in cumulative considerable impacts on energy resources (Yolo County 2009).

The CLUO EIR stated that there would not be a cumulatively considerable contribution to cumulative energy impacts because potential energy consumption would not result in the wasteful, inefficient, or unnecessary consumption of energy. In addition, CLUO Section 8-2.1408(O) would commit individual projects to renewable energy sources. Thus, the implementation of the CLUO would not result in significant cumulative impacts on energy resources (Yolo County 2019).

The GCI project would conflict with or obstruct state or local plans for renewable energy or energy efficiency, and result in the wasteful, inefficient, or unnecessary use of energy resources, because it would use propane, a nonrenewable resource. However, implementation of Mitigation Measure 3.6-1 would offset project contributions to cumulative impacts because it would eliminate the use of propane at the project site. Thus, because electricity would replace proposed propane uses, the project would not result in a cumulatively considerable impact on energy resources.

#### **Impact CUM-7: Contribution to Cumulative Geology and Soil Impacts**

*(Not cumulatively significant / cumulatively considerable)*

Geology and mineral resource impacts are generally site specific rather than cumulative in nature. While some paleontological resources could have regional significance, the resources themselves are site specific, and impacts on them are project specific. For example, impacts on a paleontological find at one project site are generally not made worse by impacts from another project on a paleontological resource at another site. Rather, the resources and the effects upon them are generally independent.

The General Plan EIR identified no cumulative considerable impacts on paleontological resources from planned land use activities (Yolo County 2009).

Under the CLUO, cannabis cultivation operators would be required to prepare a site survey to determine the potential for paleontological resources and development of a mitigation plan, if merited, to protect identified paleontological resources. Thus, the CLUO would not result in significant cumulative geology or soil impacts (Yolo County 2019).

As noted above, geology and mineral resource impacts are site specific rather than cumulative in nature; thus, these types of impacts would not combine such that a cumulatively considerable condition could occur. While a cultural inventory was completed for the site, it did not include an evaluation for paleontological resources. The project would require extensive grading, which would have the potential to encounter a unique paleontological resource. However, implementation of Mitigation Measure 3.7-1 would offset project contributions to cumulative impacts because the risk of encountering paleontological resources would be assessed, appropriate measures would be taken if the area is considered to be of medium or high risk, and any inadvertently discovered resources would be protected in accordance with an approved mitigation plan. Thus, development of the GCI project would not result in a cumulatively considerable impact on paleontological resources.

#### **Impact CUM-8: Contribution to Cumulative Greenhouse Gas emissions and Climate Change Impacts**

*(Not cumulatively significant / cumulatively considerable)*

GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions, which is a significant cumulative condition.

The General Plan EIR identified significant and unavoidable cumulative impacts associated with GHG emissions (Yolo County 2009).

The CLUO includes requirements for renewable energy procurement, energy-efficient lighting, water conservation, and drought-tolerant landscaping. Implementation of Mitigation Measure GHG-1 would offset project contributions to cumulative impacts related to compliance with the Yolo County CAP, resulting in a required reduction of GHG emissions. With this mitigation measure, all alternatives under the CLUO would align with the Yolo County CAP and 2017 Scoping Plan and the applicable plans and policies adopted for the purpose of reducing GHG emissions. Thus, the CLUO would not result in significant cumulative GHG emissions or climate change impacts (Yolo County 2019).

The project would be developed consistent with the 2019 California Energy Code and would be required to meet renewable energy requirements for new and relicensed cultivation sites, as set forth under CCR Sections 8203 and 8305. Additional project attributes would include water efficiency features, including drip irrigation and precision irrigation monitoring technologies. However, the project would not be consistent with the Yolo County CAP, Yolo County Energy Plan, and 2017 Scoping Plan because it would use propane, a nonrenewable resource. However, implementation of Mitigation Measure 3.8-1 would offset project contributions to cumulative impacts because it would eliminate the use of propane at the project site. Thus, because electricity would replace proposed propane uses, the project would not result in a considerable contribution to significant cumulative climate change impacts.

#### **Impact CUM-9: Contribution to Cumulative Hazard and Hazardous Material Impacts**

*(Not cumulatively significant / cumulatively considerable)*

Although some hazardous material releases can cover a large area and interact with other releases (e.g., atmospheric contamination, contamination of groundwater aquifers), incidents of hazardous material contamination are more typically isolated to a small area, such as leaking underground storage tank sites or release at individual businesses. These relatively isolated areas of contamination typically do not interact in a cumulative manner with other sites of hazardous materials contamination. Impacts related to emergency vehicle access and evacuation are considered site specific and are not cumulative. The potential for airport hazards are associated with site-specific conditions in relation to particular airports and are not considered cumulative impacts.

No significant cumulative wildfire or fire protection service impacts from implementation of the General Plan were identified in the General Plan EIR (Yolo County 2009).

Under the CLUO, cannabis uses would be required to comply requirements that would protect buildings and avoid the spread of wildfire and ensure adequate access to individual sites. Therefore, implementation of the CLUO would not result in significant cumulative hazard or hazardous material impacts (Yolo County 2019).

The GCI project applicant would be required to submit final project plans for review to the Madison and Yolo Fire Protection Districts. Compliance with fire district requirements would ensure that adequate fire protection would be provided to the site. Thus, implementation of the project would not substantially increase the risk of loss, injury, or death involving wildland fires under cumulative conditions, and the project would not result in cumulatively considerable impacts on hazards or hazardous materials.

#### **Impact CUM-10: Contribution to Cumulative Hydrology and Water Quality Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative context for hydrologic impacts is the unincorporated area of Yolo County and the regional groundwater basins.

The General Plan EIR identified significant and unavoidable cumulative impacts on hydrology and water quality (Yolo County 2009).

Implementation of the CLUO would require compliance standards involving on-site erosion control, use of construction and operational best management practices, and the routing of discharge drainage and stormwater into a County-approved on-site stormwater management system. Estimated groundwater demand per acre of cultivation area is assumed within the cumulative groundwater demand presented in the General Plan EIR. In addition,



cultivation sites would be subject to the requirements of the Yolo County Code, which contains standards that avoid drainage and flooding impacts in the County. Thus, the CLUO would not result in a significant cumulative impact on hydrology or water quality (Yolo County 2019).

The GCI project would be required to implement all applicable state and local regulations related to water quality control measures for construction and operation of the project. In addition, approval of the development agreement between GCI and Yolo County would require preparation and approval of a hydrology study to assess the required stormwater retention volume needed to support the site. These requirements would control the potential for pollutant stormwater or flood flows from leaving the project site. In addition, groundwater pumping associated with the project would not result in substantially decreased groundwater supplies under normal- and dry-year conditions or interfere substantially with groundwater recharge in the County. Thus, the project would not result in a considerable contribution to significant hydrology or water quality impacts.

#### **Impact CUM-11: Contribution to Cumulative Land Use and Planning Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative context for land use impacts is the unincorporated area of Yolo County. Land use impacts are localized impacts that affect individual communities, neighborhoods, and specific sites and are not generally considered cumulative in nature. Thus, land use impacts would not combine such that a cumulatively impact could occur.

#### **Impact CUM-12: Contribution to Cumulative Noise Impacts**

*(Not cumulatively significant / cumulatively considerable)*

Noise and vibration impacts are generally experienced locally and are not cumulative in nature. Stationary noise sources attenuate (reduce) over distance from the source. Increases in vehicle traffic could contribute to cumulative traffic noise along roadways within the County.

The General Plan EIR identified significant and unavoidable cumulative traffic noise impacts along the County roadway network (Yolo County 2009).

Implementation of the CLUO would not result in an audible increase (i.e., greater than 3-decibel increase) in noise on any roadway and would not exceed County noise standards. Therefore, the CLUO would not result in significant cumulative noise impacts (Yolo County 2019).

Development of the GCI project would not generate noise levels or vibration from construction or operation that would exceed applicable County noise standards. Because existing receptors located along local roadways would not be exposed to noise levels that exceed the County's exterior or interior noise standard for residential land uses, the project would not result in a considerable contribution to significant noise impacts.

#### **Impact CUM-13: Contribution to Cumulative Population and Housing Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative context for population and housing impacts is the unincorporated area of Yolo County.

The General Plan EIR identified significant and unavoidable cumulative growth impacts from implementation of the General Plan.

Under the CLUO, new jobs would become available at the end of 2022, based on review of cultivation activities and permit interest in the County. Based on current vacancy rates and the anticipated extent of new dwelling units by 2036, there would be adequate housing opportunities in the region to accommodate employment generated under the CLUO, and the cumulative need to develop new housing beyond growth projections or what was evaluated in the General Plan EIR would not be triggered. Thus, the CLUO would not have significant cumulative impacts on population and housing (Yolo County 2019).

The GCI project would not involve construction of new housing and thus would not directly induce population growth. Operation of the project would require approximately 23 new employees, which is not considered substantial

compared to the overall County population. Thus, because the project would not substantially affect population and housing in the County, it would not result in a considerable contribution to significant cumulative growth impacts.

#### **Impact CUM-14: Contribution to Cumulative Public Service Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative context for public service impacts is the unincorporated area of Yolo County and the individual fire protection districts.

The General Plan EIR identified no significant cumulative public service impacts (Yolo County 2009).

Implementation of the CLUO would not increase the demand for public services such that construction of new or expanded facilities that could result in environmental impacts would be required. Construction of cannabis-related buildings under all of the CLUO alternatives would require payment of the County Facilities and Services Development Fee at the building permit issuance, which would provide funding for facility improvements or new government service facilities the timing of which would be determined by the County as part of facilities planning. In addition, cannabis users would pay additional taxes that would be used by the County for a variety of related uses, including potentially improved law enforcement and other services. Thus, the CLUO would not result in significant cumulative public services impacts (Yolo County 2019).

The GCI project would not require new or physically altered fire facilities because it would not extend fire protection service districts. In addition, security systems would be incorporated into the project site; thus, there would not be a substantial effect on police protection associated with project implementation. The project would have no impact on the provision of schools, parks, or other public facilities. Thus, the project would not result in a cumulatively considerable impact on public services.

#### **Impact CUM-15: Contribution to Cumulative Recreation Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The GCI project would have no impacts on recreation resources. Thus, there would be no potential to considerably contribute to a cumulative recreation impact.

#### **Impact CUM-16: Contribution to Cumulative Transportation and Circulation Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative context for transportation impacts is Yolo County and the region. Appendix G provides estimates of traffic conditions for the cumulative base condition and with anticipated traffic from CLUO alternatives.

The General Plan EIR identified significant and unavoidable cumulative impacts associated with vehicle miles traveled (VMT) and level of service standards (Yolo County 2009).

Implementation of the CLUO would not result in greater cumulative traffic operational impacts than were disclosed in the General Plan EIR, because cannabis uses would be consistent with the General Plan Agriculture land use designation that was factored in the EIR analysis. Implementation of the CLUO would not result in greater cumulative VMT impacts than were disclosed in the General Plan EIR because cannabis uses would be consistent with the General Plan Agriculture land use designation that was factored in the EIR analysis. Thus, the CLUO would not result in significant cumulative impacts on transportation (Yolo County 2019).

Consistent with the Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018), a project generating fewer than 110 trips per day is assumed to cause a less-than-significant VMT impact. Therefore, because the number of daily construction and operation trips (i.e., 40 and 94 daily trips, respectively) would not exceed 110 trips per day, the increase in VMT attributable to construction and operation of the proposed project would be less than significant. In addition, development of a commercial cannabis nursery would establish local services to existing cannabis cultivators in the County, thus limiting travel to areas outside the County. The project would not considerably contribute to significant cumulative VMT impacts.

**Impact CUM-17: Contribution to Cumulative Tribal Cultural Resources Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The cumulative context for tribal cultural resources (TCRs) is the original territory associated with five Native American tribes that had previously requested notifications to consult on projects with Yolo County: Yocha Dehe Wintun Nation, Cortina Rancheria Band of Wintun Indians of California, Lone Band of Miwok Indians, Wilton Rancheria, and Torres Martinez Desert Cahuilla Indians. There are existing significant cumulative impacts on TCRs.

The General Plan EIR does not include an evaluation of TCRs.

The CLUO process includes requirements for cultural resources studies, which would apply to all cannabis conditional use permit applicants. Therefore, implementation of the proposed CLUO would not result in adverse effects on tribal cultural resources. No significant cumulative impacts are associated with the CLUO (Yolo County 2019).

Regarding the GCI project, Yolo County sent notification letters to the Yocha Dehe Wintun Nation, Cortina Rancheria Band of Wintun Indians of California, Lone Band of Miwok Indians, Wilton Rancheria, and Torres Martinez Desert Cahuilla Indians. Yocha Dehe responded, stating that there are no known cultural resources near the project site and that a cultural monitor would not be necessary. However, the tribe requested cultural sensitivity training for the construction workforce before the start of project construction. It is possible that previously undiscovered TCRs could be encountered or damaged during ground-disturbing construction activities. However, implementation of Mitigation Measures 3.18-1 and 3.18-2 would offset project contributions to cumulative impacts through requiring notification of tribal representatives before earth-disturbing activities and, in the case of a discovery, appropriate treatment and proper care of any discovered TCRs. Thus, because previously unknown TCRs discovered during project development would be treated appropriately, the project would not considerably contribute to significant cumulative impacts on TCRs.

**Impact CUM-18: Contribution to Cumulative Utilities and Service System Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The project will rely on groundwater for water supply and a septic tank to dispose of wastewater. Thus, there would be no cumulative condition related to water supplies or wastewater treatment. In addition, the extension of utility infrastructure would occur within the project site and would not combine with other project such that a cumulative condition could occur. Solid waste services are provided countywide.

The General Plan EIR identified no significant cumulative impacts related to wastewater service and solid waste (Yolo County 2009).

As discussed in the CLUO EIR, the Yolo County Division of Integrated Waste Management has prepared internal procedures for the disposal of waste generated from cannabis operations. The Yolo County Central Landfill is anticipated to have adequate capacity for the foreseeable future (2081) to accommodate cannabis-related waste in addition to other solid waste accepted. Thus, the CLUO would not have significant cumulative impacts on solid waste (Yolo County 2019).

The GCI Project would be required to follow all state and County requirements related to solid waste associated with the project. This includes a cannabis waste management plan that identifies methods for managing cannabis waste, including on-premises composting, collection and processing by an agency, or self-hauling to a permitted facility. Because the applicant would be required to follow all state and County requirements related to solid waste associated with the project, the project would not result in a cumulatively considerable impact on solid waste.

**Impact CUM-19: Contribution to Cumulative Wildfire Impacts**

*(Not cumulatively significant / cumulatively considerable)*

The GCI project would have no impacts related to wildfire. Thus, there would be no potential to considerably contribute to a cumulative wildfire impact.

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

**Less than significant with mitigation incorporated.** The project would have potentially significant impacts related to aesthetic resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and TCRs. However, all these impacts would be reduced to a less-than-significant level with incorporation of the mitigation measures included in the respective section discussions above. No other direct or indirect impacts on human beings were identified in this IS/MND. Therefore, this impact would be less than significant.

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### Chapter 2, Project Description

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