DRAFT

MITIGATED NEGATIVE DECLARATION

FILE: CCUP20-0001

PROJECT NAME: Cybele Holdings Commercial Cannabis Cultivation and Nursery

NAME OF APPLICANT: Cybele Holdings/Lee Tannenbaum

ASSESSOR'S PARCEL NO.: 046-071-011 and 046-071-010 **SECTION:** 5-8 **T:** 8N **R:** 11E

LOCATION: The project site is located in southern El Dorado County at 3029 Freshwater Lane, El Dorado, CA. The project site is located near the El Dorado and Amador County line, and it is generally situated east of State Route (SR) 49 and south of Sand Ridge Road.

☐ **GENERAL PLAN AMENDMENT: FROM: TO:**

☐ **REZONING: FROM:** Open Space **TO:** Residential Estate Five-Acres

☐ **TENTATIVE PARCEL MAP** ☐
SUBDIVISION (NAME):

☒ **SPECIAL USE PERMIT TO ALLOW:** The project applicant is seeking a Cannabis Conditional Use Permit (CCUP) for the construction and operation of a cannabis cultivation facility on 5.5 acres. The first cannabis cultivation compound (Site 1) would contain approximately 45,000 square feet (sf) of cannabis cultivation while the second compound (Site 2) would contain approximately 30,000 sf of cultivation. Additionally, the project would include a 1-acre nursery operation, a 2,000-sf main building with an office and processing room, a 2,500-sf building with storage and drying rooms, and a solar array system to power the proposed structures. Up to twenty-four (24) greenhouses would be installed on Site 1 and up to fourteen (14) greenhouses would be installed on Site 2. The proposed greenhouses would each be approximately 2,700 sf (30' x 90') and combined would house a maximum of 2 acres of cannabis cultivation at any one time in addition to the proposed 1-acre of nursery.

☐ **OTHER:**

REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:

☐ **NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE INITIAL STUDY.**

☒ **MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**

☐ **OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Planning Department hereby prepares this MITIGATED NEGATIVE DECLARATION. A period of thirty (30) days from the date of filing this mitigated negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Mitigated Negative Declaration was adopted by the _____on _____.

_____

Executive Secretary

Cybele Holdings

Public Review Draft
Initial Study/Mitigated Negative Declaration

Prepared for:

County of El Dorado Planning and Building Department
2850 Fairlane Court
Placerville, CA 95667

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

January 2021

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AFY	acre-feet per year
APCD	Air Pollution Control District
bcf	billion cubic feet per year
BMP	Best Management Practices
BRA	Biological Resources Assessment
BTU	British thermal units
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCUP	Commercial Cannabis Use Permit
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CH_4	methane
CHRIS	California Historical Resources Information System
CNPS	California Native Plant Society
CO_2	carbon dioxide
County	El Dorado County
CRHR	California Register of Historical Resources
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibels
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EDCAQMD	El Dorado County Air Quality Management District
EIR	Environmental Impact Report
EO	Executive Order
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
FPR	Forest Practice Rules
GHG	greenhouse gas
GWh	gigawatt hours

ACRONYMS AND ABBREVIATIONS (cont.)

IS/MND	Initial Study and Mitigated Negative Declaration
kWh	kilowatt hours
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MCAB	Mountain Counties Air Basin
-MR	Mineral Resource
MRZ	Mineral Resource Zone
N2O	NAAQS National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEHRP	National Earthquake Hazards Reduction Program
NMFS	National Marine Fisheries Service
NOA	naturally occurring asbestos
NSF	National Science Foundation
OEHHA	Office of Environmental Health Hazard Assessment
ORMP	Oak Resources Management Plan
OSHA	Occupational Safety and Health Administration
PPV	peak particle velocity
PRC	Public Resources Code
RMP	risk management plan
RPF	Registered Professional Forester
RWQCB	Regional Water Quality Control Board
sf	square feet
SHMA	Seismic Hazards Mapping Act
SPCC	Spill Prevention, Control, and Countermeasure
SPL	sound pressure level
SRA	State Responsibility Areas
SWPPP	State Responsibility Areas
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TCR	Tribal Cultural Resources
TPZ	Timber Production Zone
USACE	U.S. Army Corps of Engineers
VMT	Vehicle Miles Travelled
WRPP	Water Resource Protection Plan

EL DORADO COUNTY PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667

INITIAL STUDY
ENVIRONMENTAL CHECKLIST

Project Title: Commercial Cannabis Use Permit CCUP20-0001/Cybele Holdings

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court, Placerville, CA 95667

Contact Person: Aaron Mount, Senior Planner | **Phone Number:** (530) 621-5355

Applicant's Name and Address: Lee Tannenbaum; 4241 Vega Loop, Shingle Springs, CA 95682

Project Agent's Name and Address: Same as above.

Project Engineer's Name and Address: Nicole I. Young, P.E., 4111 Bunker Hill Road, Shingle Springs, CA 95682

Project Location: The project site is located in southern El Dorado County at 3029 Freshwater Lane, El Dorado, CA. The project site is located near the El Dorado and Amador County line, and it is generally situated east of State Route (SR) 49 and south of Sand Ridge Road. See Figure 1 for the regional location and an aerial map of the project site.

Assessor's Parcel Numbers (APNs): 046-071-011 and 046-071-010 **Acres:** approximately 180 acres

Sections: USGS Fiddletown 7.5-minute Quadrangle, Sections 5-8 of Township:8N, Range:11E

General Plan Designation: Natural Resource (NR)

Zoning: Limited Agriculture, 40-acre Minimum (LA-40)

Description of Project: The project applicant is seeking a Commercial Cannabis Use Permit (CCUP) for the construction and operation of a cannabis cultivation facility on 5.5 acres. The first cannabis cultivation compound (Site 1) would contain approximately 45,000 square feet (sf) of cannabis cultivation while the second compound (Site 2) would contain approximately 30,000 sf of cultivation. Additionally, the project would include a 1-acre nursery operation, a 2,000-sf main building with an office and processing room, a 2,500-sf building with storage and drying rooms, and a solar array system to power the proposed structures. Up to twenty-four (24) greenhouses would be installed on Site 1 and up to fourteen (14) greenhouses would be installed on Site 2. The proposed greenhouses would each be approximately 2,700 sf (30' x 90') and combined would house a maximum of 2 acres of cannabis cultivation at any one time in addition to the proposed 1-acre of nursery.

Surrounding Land Uses and Setting:

	Zoning	General Plan	Land Use/Improvements
Project Site	LA-40	NR	Baseline conditions: Undeveloped, Sparsely Wooded Land Current conditions: Developed with Industrial Hemp Cultivation Operation
North	LA-40	NR; Rural Residential (RR)	Residential, Sparsely Wooded Land
South	LA-40 and Rural Land, 80-acre minimum (RL-80)	NR	Agricultural, Sparsely Wooded Land
East	LA-40, and RL-80	NR	Vacant, Wooded to Sparsely Wooded Land
West	RL-40	NR	Vacant, Wooded to Sparsely Wooded Land

Environmental Setting: When the permit application was deemed complete on April 13, 2020, the project property was mostly undeveloped and consisted of mountainous terrain with some flat-lying areas near the upper elevations of the property where the cannabis cultivation facility is proposed. The flat-lying areas where the Site 1 cannabis cultivation facility is proposed have since been cleared, graded, and planted with industrial hemp. Other recent developments include a gravel parking area and water well and tank for irrigation. Elevations at the site range from approximately 1,000 to 1,830 feet above mean sea level (amsl). Drainage within the project site generally runs south, and eventually flows into the Middle Fork Cosumnes River which lies at the southern edge of the project property. The project site is also bound on the north by a rural residential property, to the east, south and west by wooded land. Prior to development, the project site contained four terrestrial vegetation communities: Mixed Oak Woodland, Coniferous Woodland, Ruderal/Disturbed Land, and Non-native Annual Grassland. These vegetation communities are discussed in further detail in Section IV, Biological Resources.

Other public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement):

1. El Dorado County – Grading permit, building permits, septic permit, Commercial Cannabis Operating Permit
2. El Dorado County Fire District – Building plan review
3. State of California – Commercial Cannabis Activity License
4. California Department of Food and Agriculture – CalCannabis Cultivation License
5. State Water Resources Control Board – Notice of Availability under the Cannabis General Order
6. California Department of Fish and Wildlife – General Permit

1.0 INTRODUCTION

This document is an Initial Study and Mitigated Negative Declaration (IS/MND) that has been prepared in accordance with the California Environmental Quality Act (CEQA) for the proposed Cybele Holdings project (proposed project). This IS/MND has been prepared in accordance with the CEQA Public Resources Code (PRC) Sections 21000 et seq., and the State CEQA Guidelines. Pursuant to the State CEQA Guidelines Section 15367, El Dorado County (County) is the lead agency for CEQA compliance.

An Initial Study is conducted by a CEQA lead agency to determine if a project may have a significant effect on the environment. In accordance with the State CEQA Guidelines Section 150649(a)(1), an Environmental Impact Report (EIR) must be prepared if the Initial Study indicates that the proposed project may have a potentially significant impact on the environment. According to State CEQA Guidelines Section 15070, a Negative Declaration or Mitigated Negative Declaration shall be prepared when either:

a) The Initial Study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

b) The Initial Study identified potentially significant effects, but:

    1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

    2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are incorporated into the proposed project in accordance with the State CEQA Guidelines Section 15070(b), a Mitigated Negative Declaration is prepared. This document includes such revisions in the form of mitigation measures. Therefore, this document is a Mitigated Negative Declaration, and it incorporates all of the elements of the accompanying Initial Study.

2.0 PROJECT LOCATION AND SURROUNDING LAND USES

The proposed project would be located on a 180-acre property in the southern El Dorado County area at 3029 Freshwater Lane, El Dorado, California. The property consists of two parcels: APN 046-071-011 (139.5 acres) and APN 046-071-010 (40.0 acres), but construction and operation of the cannabis cultivation facility would only occur on 5.5 acres on APN 046-071-011. The proposed project consists of two cannabis cultivation areas (Sites 1 and 2) that would be situated within the 5.5-acre, relatively flat-lying area located near the upper elevations of the property (see Figure 1). The property is accessible via a private, graveled road that branches off of Freshwater Lane. The property is designated for Natural Resource (NR) in the County's General Plan, and it is within the Limited Agriculture, 40-acre minimum (LA-40) zone district.

When the permit application was deemed complete by the County on April 13, 2020, the project property was undeveloped and sparsely wooded land which serves as the baseline site conditions for this CEQA analysis. The site consists of mountainous terrain with its elevation ranging from approximately 1,000 feet to 1,830 feet amsl. Drainage within the project site generally runs south, and eventually flows into the Middle Fork Cosumnes River which lies at the bottom of the project property. The property is bound to the north by a rural residential property, to the east and south by the Middle Fork Cosumnes River and wooded land, and to the west by wooded land. The project site was partially burned in the 2014 Sand Fire, and according to the project applicant, was used as a staging area for the California Department of Forestry and Fire Protection (CAL FIRE). Prior to recent grading for a County-approved hemp growing operation, the project site consisted of mixed oak woodland, coniferous woodland, ruderal/disturbed land, and non-native annual grassland.

Since the CCUP permit application was deemed complete by the County, the project applicant obtained a permit from the County Department of Agriculture to cultivate hemp on-site in the areas that are currently proposed for

cannabis cultivation. Current site conditions are reflective of a dormant industrial hemp cultivation operation. Site 1 of the project site was cleared of vegetation, graded, and planted with industrial hemp plants in 2020. Approximately 14,403 sf of oak woodland was removed from Site 1 to allow for the industrial hemp operation. Along with the clearing and planting of industrial hemp on Site 1, a new, solar-powered water well was constructed for hemp crop irrigation, irrigation lines and water storage tanks were installed, and a gravel parking area was established. Grading of Site 2 has not yet occurred but that would be necessary for the proposed cannabis cultivation. No additional tree removal is proposed for cannabis cultivation on Site 2. The project's tree removal requirements are documented and discussed in the Oak Resource Technical Report that was prepared for the proposed cannabis cultivation project and included as Appendix B to this Initial Study (NIC 2020b).

3.0 PROJECT DESCRIPTION

Cybele Holdings, Inc. is applying for a Commercial Cannabis Use Permit (CCUP20-0001) for the construction and operation of a commercial cannabis cultivation facility. The proposed project consists of two phases: Phase I includes the construction and operation of an outdoor cannabis cultivation facility on approximately 3.5 acres (referred to as Site 1) to be implemented immediately upon project approval, and Phase II consists of the construction and operation of a second cultivation area on approximately 2 acres (referred to as Site 2) and potential conversion of outdoor cannabis cultivation to mixed light cannabis cultivation in Site 1 to be implemented between 2 to 4 years after project approval. The goal of the applicant is to ultimately have all cannabis canopy under mixed light to allow for year-round cannabis cultivation. See Figures 2 and 3 for the project site plan.

Phase I

Phase I would be located in the center of APN 046-017-011 and consists of the construction and installation of:

- Cannabis cultivation compound covering approximately 84,791 sf (1.9 acres), with approximately 1,000 planting stations with a mature cannabis canopy of 45,000 sf;
- Solar array area (3,000 sf; dimensions of 30 ft by 100 ft);
- One greenhouse (2,000 sf; dimensions of 40 ft by 50 ft);
- Main (west) building with office and processing rooms (2,000 sf; dimensions of 40 ft by 50 ft);
- Storage (east) building with storage and drying room (2,500 sf, dimensions of 50 ft by 50 feet);
- Septic tank and septic leach field; and
- Security fencing, lighting, and cameras.

The following formerly proposed project components have recently been constructed or installed on the project site to support the new industrial hemp cultivation operation:

- A solar-powered water well for crop irrigation;
- Irrigation infrastructure;
- Water storage tanks; and
- Gravel parking area with 15 spaces at end of the existing driveway/material storage area (7,500 sf, dimensions 50 ft by 150 ft).

Phase II

Phase II would be located adjacent to the northeast of Site 1 and would consist of a second cultivation area of approximately 2 acres of land (Site 2). Phase II would include the expansion of the cannabis cultivation, the installation of mixed light cannabis cultivation Site 2, and conversion of the outdoor cultivation on Site 1 to mixed light cultivation. Phase II would be implemented between 2 to 4 years after project approval and would consist of the following:

- Cannabis cultivation compound of approximately 80,000 sf (1.8 acres), with approximately 1,000 planting stations with a mature cannabis canopy of approximately 30,000 sf;
- Construction of twenty-four (24), (2,700-sf; dimensions 30 ft by 90 ft) mixed light greenhouses on Site 1; and

- Construction of fourteen (14) (2,700-sf; dimensions 30 ft by 90 ft) mixed light greenhouses on Site 2.

The components of the proposed project are described in more detail below.

Cannabis Cultivation Areas

Phase I of the proposed project would solely consist of outdoor cultivation, totaling approximately 45,000 sf of cannabis canopy at Site 1. Eventual buildout of Phase II would add approximately 30,000 sf cannabis canopy at Site 2. The 30,000 sf of cannabis canopy proposed in Phase II would be housed within approximately fourteen (14) greenhouses. Phase II would also include construction of twenty-four (24) greenhouses on Site 1 to convert the 45,000 sf of outdoor cannabis cultivation to mixed light cannabis cultivation. The greenhouses are anticipated to be 2,700 sf each and would include solar panels on their roofs to power the proposed mixed light cannabis cultivation. The final sizes of the greenhouses would be determined upon final project design and is subject to variation. The total cannabis cultivation area after the final buildout of Phase II would not exceed two acres of cannabis cultivation at any one time, plus the nursery growing area. The proposed two acres of cannabis cultivation of may be a mix of outdoor and mixed light as the project transitions. The total square footage of greenhouses at maximum capacity (when Sites 1 and 2 are completely built out) would be approximately 120,000 sf (3 acres) and consist of 2 acres of cannabis canopy with 1 acre of nursery/commercial nursery.

Support Structures and Infrastructure

The proposed project would include the construction of two buildings to support the cannabis cultivation facility. The main building, depicted as the west building in Figure 2, would be 2,000 sf and provide rooms for an office, restroom, and cannabis processing. The storage building, depicted as the east building in Figure 2, would be 2,500 sf and provide rooms for storage and product drying. The construction of an on-site septic system and septic leach field would be necessary to support the proposed 2,000-sf main building and would be located just west of the proposed building.

The proposed project is estimated to demand approximately 1.2 million gallons of water per year for cannabis cultivation (14 gallons of water per sf of cultivation per year). A solar-powered water well was constructed on-site on July 29, 2020 to provide the water supply for irrigation for the industrial hemp cultivation operation and would be the primary source of water for irrigation for the proposed cannabis cultivation operation that is planned to replace the current hemp cultivation. The well report that was prepared for completion of the construction documented that the well is 300 feet deep and can provide approximately 46 gallons per minute of water during initial operation. Additionally, irrigation infrastructure and water storage tanks have been installed to support the current industrial hemp operation and would support the proposed cannabis operation.

The proposed project is planned to be powered wholly through solar power and would include the installation of a solar PV array system within a 3,000-sf area just south of the proposed buildings to provide all electricity demanded to power the two east and west buildings proposed to support the cultivation facility. The proposed greenhouses would be equipped with solar panels on the roofs of the structures to provide the electricity demanded to power the supplemental light for the mixed light cultivation and exhaust fans. Use of an on-site generator would be limited to power outage events, and if the solar energy system were limited by undetermined weather conditions, County and State guidelines would be followed.

Employees

Under the most conservative (i.e., the busiest) assumptions, during peak season when both phases of the project are fully operational, up to 20 employees would be on-site. The actual number would be lower most days since several of these employees would be seasonal to assist only during the busiest time of year, and some of the security employees included in this number would not work concurrent shifts. Up to six full-time employees would work on production and administrative tasks, five employees would provide security on staggered schedules, and up to nine seasonal employees would assist with cultivation and harvesting as needed.

Security Plan

A Security Plan was prepared by Matthew Carroll of Carroll Security Consulting LLC. The plan includes a variety of security measures including fencing, deterrence, background checks of employees, training, surveillance and alarm systems, engineering controls to limit access to sensitive areas, systems for authorizing and monitoring site workers and visitors, and measures to respond to potential break ins and robberies. Private security would be obtained by the project applicant. Services contracted would include the following, at minimum:

- Intrusion alarm response with a guaranteed response time of 30 minutes or better;
- On-call uniformed guard services as a contingency to failing surveillance or alarm infrastructure; and
- 24/7, armed guard coverage during harvest season (winter months).

Site Access/Parking

The site is accessed by a gated driveway from Freshwater Lane; a neighboring property also uses a section of that driveway for ingress and egress to their private residence. Freshwater Lane is a private road that has a shared maintenance agreement between all owners of parcels that access it. The road is narrow (from 14 to 18 feet wide) and partially paved. The paved portion is from Sand Ridge Road to a point approximately 0.5 miles south of Sand Ridge Road, where it becomes a dirt road. It is covered in gravel beyond the intersection of Tumbleweed Road. The project's shared gated driveway is located approximately 1.5 miles south of Sand Ridge Road. The gate is approximately 185 feet inward from Freshwater Lane.

An approximately 7,200-sf gravel parking area was constructed on site after commencement of the environmental analysis and is located adjacent to the north of the proposed buildings. The parking lot provides a total of 15 parking spaces for the project owner(s), employees, and any authorized guests. A site plan with the proposed parking lot was submitted to the County and has been evaluated by the local Fire Department, which found that the parking plan meets standards and provides adequate fire engine access (PRISM 2020).

Construction Schedule

Construction of Phase I would occur immediately upon project approval and acquisition of the required permits from the County and would take approximately 2 months to complete. Construction of Phase II is anticipated to be implemented between 2 to 4 years after project approval.

4.0 PUBLIC REVIEW AND REQUIRED APPROVALS

This IS/MND is being circulated for public and agency review for a 30-day period. Written comments on the IS/MND should be submitted by mail or e-mail to the following:

Aaron Mount, Senior Planner
2850 Fairlane Court
Placerville, CA 95667
Aaron.mount@edcgov.us

Following the close of the written comment period, the IS/MND will be considered by the lead agency (El Dorado County) in a public meeting and will be adopted if it is determined to be in compliance with CEQA.

Public agencies whose approval may be required (e.g., permits, financing approval, or participation agreement) include the following:

- **El Dorado County** – Grading permit, building permits, septic permit, Commercial Cannabis Operating Permit;
- **El Dorado County Fire District** – Building plan review;
- **State of California** – Commercial Cannabis Activity License;
- **California Department of Food and Agriculture** – CalCannabis Cultivation License;

- **State Water Resources Control Board** – Notice of Availability under the Cannabis General Order; and
- **California Department of Fish and Wildlife** – General Permit.

5.0 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 in 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: Aaron Mount Date: 01/12/2021

Printed Name: Aaron Mount, Senior Planner For: El Dorado County

Signature:  Date: 1/12/2021

Printed Name: Chris Perry, Asst Director Planning and Bldg. For: El Dorado County

6.0 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.

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

7.0 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. If the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    a. the significance criteria or threshold, if any, used to evaluate each question; and

    b. the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL IMPACTS

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?			**X**	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				**X**
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 point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			**X**	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			**X**	

Environmental Setting

The project property is situated in the Sierra Nevada foothills, in a transition zone between oak/gray pine woodland and coniferous woodland typical of the western slope of the Sierras, along with several open areas consisting primarily of seasonal forage grasses. The setting is very rural and population density is low; there are no publicly accessible facilities in the vicinity of the project. The project site is accessible from a private road; traffic volume in the area is very low. The project property is visible by rural residences in the area, but the nearest residence is approximately 2,300 feet to the northeast and views would be long-distance.

The project property was undeveloped and sparsely wooded at the start of the environmental analysis and serves as the baseline condition for this CEQA analysis. The project site initially consisted of mixed oak woodland, coniferous woodland, ruderal/disturbed land, and non-native annual grassland. Approximately 14,403 sf of oak canopy have recently been cleared within Site 1 to allow for the implementation of the industrial hemp cultivation operation. Site 1 has also recently been graded and a gravel parking area and well have been constructed to support the industrial (i.e., non-consumable) hemp operation. The applicant plans to grade the Site 2 area after the first rainfall of the autumn/winter period in 2020.

The site consists of mountainous terrain. The elevation ranges from approximately 1,000 feet to 1,830 feet amsl. Drainage within the project site generally runs south, and eventually flows into the Middle Fork Cosumnes River which lies at the bottom of the project property. The property is bound to the north by a rural residential property, to the east and south by the Middle Fork Cosumnes River and wooded land, and to the west by wooded land. The project site was partially burned in the 2014 Sand Fire, but many trees survived, and the more heavily burned areas are showing signs of regeneration (NIC 2020a).

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal regulations are applicable to aesthetics in relation to the proposed project.

State Laws, Regulations, and Policies

In 1963, the California State Legislature established the California Scenic Highway Program, a provision of the Streets and Highways Code, to preserve and enhance the natural beauty of California (Caltrans 2020). The State highway system includes designated scenic highways and those that are eligible for designation as scenic highways.

There are no officially designated State scenic corridors in the vicinity of the project site.

Local Laws, Regulations, and Policies

The County has several standards and ordinances that address issues relating to visual resources. Many of these can be found in the County Zoning Ordinance (Title 130 of the County Code). The Zoning Ordinance consists of descriptions of the zoning districts, including identification of uses allowed by right or requiring a special-use permit and specific development standards that apply in particular districts based on parcel size and land use density. These development standards often involve limits on the allowable size of structures, required setbacks, and design guidelines. Included are requirements for setbacks and allowable exceptions, the location of public utility distribution and transmission lines, architectural supervision of structures facing a state highway, height limitations on structures and fences, outdoor lighting, and wireless communication facilities.

Visual resources are classified as 1) scenic resources or 2) scenic views. Scenic resources include specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually middle ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor.

A list of the County's scenic views and resources is presented in Table 5.3-1 of the El Dorado County General Plan EIR (p. 5.3-3). This list includes areas along highways where viewers can see large water bodies (e.g., Lake Tahoe and Folsom Reservoir), river canyons, rolling hills, forests, or historic structures or districts that are reminiscent of El Dorado County's heritage.

Several highways in El Dorado County have been designated by the California Department of Transportation (Caltrans) as scenic highways or are eligible for such designation. These include U.S. 50 from the eastern limits of the Government Center interchange (Placerville Drive/Forni Road) in Placerville to South Lake Tahoe, all of SR 89 within the County, and those portions of SR 88 along the southern border of the County.

Rivers in El Dorado County include the American, Cosumnes, Rubicon, and Upper Truckee rivers. A large portion of El Dorado County is under the jurisdiction of the United States Forest Service (USFS), which, under the Wild and Scenic Rivers Act, may designate rivers or river sections to be Wild and Scenic Rivers. To date, no river sections in El Dorado County have been nominated for or granted Wild and Scenic River status.

Impact Analysis:

a. **Scenic Vista:** A scenic vista is defined as a viewpoint that provides expansive views of a highly-valued landscape (such as an area with remarkable scenery or a resource that is indigenous to the area) for the benefit of the public. The project property is adjacent to wooded lands in all directions and the Middle Fork Cosumnes River to the east and south, however, these features have not been identified as scenic vistas nor is the project site visible from public viewpoints (El Dorado County 2018). Therefore, while the proposed project would introduce a new cannabis cultivation facility to the project site, it would not result in a substantial adverse effect to a scenic vista. All proposed development would be setback a minimum of

1,000 feet from the Middle Fork Cosumnes River, and the project site is situated hundreds of feet above the river. Impacts would be **less than significant**.

b. **Scenic Resources:** SR 49 is classified as an "Eligible State Scenic Highway – Not Officially Designated" throughout El Dorado County and is located approximately 2.5 miles west of the project site. The nearest officially designated scenic highway is on U.S. 50 between and within the City of Placerville and the Tahoe Basin. This designation occurs approximately 11 miles north of the proposed project area. The project area would not be visible from the scenic highway or the eligible scenic highway; therefore, the project would have **no impact** to scenic resources within the proximity of a State scenic highway.

c. **Visual Character:** The proposed project would result in the construction of a new commercial cannabis cultivation facility. The proposed development may result in a change to the visual character of the site by developing the undeveloped, sparsely wooded land. However, the project site is surrounded by other wooded or sparsely wooded, privately-owned lands and is not visible from public vantage points. Therefore, the construction of the proposed project would not substantially degrade the character of the site or its surroundings or degrade the quality of views from publicly accessible vantage points, and impacts would be **less than significant**.

d. **Light and Glare**: The proposed project would result in the development of new structures, including a proposed solar array system within a 3,000-sf area and solar panels on the roofs of the proposed greenhouses. The solar array modules feature panels that are designed to maximize absorption and minimize the reflection of sunlight to increase electricity production efficiency. To limit reflection, solar panels are constructed of dark, light-absorbing materials and are given an anti-reflective coating or textured surface which can reduce reflectivity to less than four percent of incoming sunlight (EERE 2013). In comparison, the reflectivity of standard glass is over 20 percent.

The proposed project would include the potential for mixed light cultivation within greenhouses, which could result in additional lighting on-site. The mixed light cultivation would be required to be designed and installed to prevent light spillover that could be visible from all property boundaries between sunset and sunrise. The greenhouses for the mixed light cultivation would include black-out tarps to fully shield any light from escaping the greenhouses. Other potential sources of light and glare include external building lighting, parking lot lighting, and building windows. The introduction of new sources of light and glare may contribute to nighttime light pollution and result in impacts to nighttime views in the area. However, with the implementation of the design standards discussed above and the requirement for the project to comply with County design standards and El Dorado County Code of Ordinances (County Code) Section 130.14.170 (Outdoor Lighting), impacts from the introduction of new light and glare would be **less than significant.**

FINDING: The proposed project would result in less than significant or no impacts to scenic vistas, scenic resources, the visual character of the project area, and from new light and glare sources. Additionally, with adherence to the County Code (Section 130.14.170 – Outdoor Lighting), any potential aesthetic impacts from nighttime light pollution would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

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) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				**X**
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))?			**X**	
d. Result in the loss of forest land or conversion of forest land to non-forest use?			**X**	
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?			**X**	

Environmental Setting

There are over 100,000 acres of active farmland in El Dorado County (NIC 2020c). Major crops include fruits, and there are over 80 active vineyards in the County (NIC 2020c). Cattle grazed on rangeland also comprise a considerable portion of the County's agricultural production.

According to the custom Soil Resource Report for this project (NRCS 2020), the following soil map units occur on the project property:

- Mariposa very rocky silt loam, 3 to 50 percent slopes (MbE): covers 15.8 percent of the property;
- Mariposa very rocky silt loam, 50 to 70 percent slopes (MbF): covers 6.8 percent of the property;
- Mariposa-Josephine very rocky loams, 15 to 50 percent slopes (McE): covers 18.1 percent of the property;
- Metamorphic rock land (MmF): covers 55.7 percent of the project property.

Two other map units and a small amount of water also occur on the project property, but they occur along the river banks and outside of the development footprint. All of the map units present are classified as "not prime farmland."

Land cover on the project site includes mixed oak woodland, non-native annual grassland, ruderal/disturbed habitat, and open coniferous woodland in the northwestern corner of the site that survived the 2014 Sand Fire. Some of the

open woodland and grassland habitat may be suitable for grazing. The property had not been recently used for agricultural uses, however, after commencement of this environmental analysis, the project applicant obtained a permit for the County Department of Agriculture and cleared 14,403 sf of oak woodland canopy to plant industrial hemp on Site 1.

Commercial timber harvest on this property would not likely be viable due to low stocking and the fact that the majority of trees are of non-commercial species. Timber harvesting has historically been a major component of El Dorado County's economy (NIC 2020c), and although some commercial timber harvesting remains in the County, the vast majority is accomplished in elevations greater than those found on the project site because of their more favorable conditions for commercial species.

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal regulations are applicable to agricultural and forestry resources in relation to the proposed project.

State Laws, Regulations, and Policies

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP), administered by the California Department of Conservation (CDC), produces maps and statistical data for use in analyzing impacts on California's agricultural resources (CDC 2018). FMMP rates and classifies agricultural land according to soil quality, irrigation status, and other criteria. Important Farmland categories are as follows (CDC 2019a):

> ***Prime Farmland:*** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.
>
> ***Farmland of Statewide Importance:*** Farmland similar to Prime Farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Farmland of Statewide Importance must have been used for irrigated agricultural production at some time during the 4 years before the FMMP's mapping date.
>
> ***Unique Farmland***: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. These lands are usually irrigated but might include non-irrigated orchards or vineyards, as found in some climatic zones. Unique Farmland must have been cropped at some time during the 4 years before the FMMP's mapping date.
>
> ***Farmland of Local Importance:*** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The soils present on the project site are not representative of any of these classifications (NRCS 2020).

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965 (commonly referred to as the Williamson Act) allows local governments to enter into contracts with private landowners for the purpose of preventing conversion of agricultural land to non-agricultural uses (CDC 2019b). In exchange for restricting their property to agricultural or related open space use, landowners who enroll in Williamson Act contracts receive property tax assessments that are substantially lower than the market rate.

Z'berg-Nejedly Forest Practice Act

Logging on private and corporate land in California is regulated by the Z'Berg-Nejedly Forest Practices Act (FPA), which took effect January 1, 1974. The act established the Forest Practice Rules (FPRs) and charged the politically-appointed Board of Forestry to oversee their implementation. CAL FIRE works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs. A Timber Harvest Plan (THP) must be prepared by a Registered Professional Forester (RPF) for timber harvest on non-federal timberland, with limited exceptions.

Local Laws, Regulations, and Policies

El Dorado County General Plan Agriculture and Forestry Element

Adopted in 2004 and amended in 2015, this element sets the County's priorities for the continued viability of agricultural and forestry activities. Goals of this element include agricultural land conservation, agricultural production, forest land conservation, and sustainable and efficient forest production (El Dorado County 2015b).

Impact Analysis:

a. **Farmland Mapping and Monitoring Program:** According to the FMMP, no Prime or Unique Farmlands or Farmlands of Statewide Importance have been identified on the project site or project property. As a result, implementation of proposed project would have no impact on Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland) as defined by the FMMP (CDC 2020a). Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland) to non-agricultural use, and there would be **no impact**.

b. **Agricultural Uses:** The project property is zoned as LA-40 and not under Williamson Act Contract. Cannabis cultivation is allowed on parcels zoned LA-40 with County approval of a CCUP. Therefore, the proposed project would not conflict with existing zoning for agricultural use and would not impact any properties under a Williamson Act Contract. Therefore, there would be **no impact**.

c.-d. **Loss of Forest land or Conversion of Forest land:** Wooded habitats on the project site were impacted by the 2014 Sand Fire. Some stands of trees were destroyed by the flames while others were largely untouched by the fire. The remaining/recovering vegetation ranges from undamaged oaks along the ridgetop to fire-scorched trees that are re-sprouting along the slopes (NIC 2020b).

According to PRC Section 4526, "'Timberland'" means land… which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis." El Dorado County is in the Southern Forest District (14 CCR 908-909). Ponderosa pine (*Pinus ponderosa*) is a commercial species in the Southern Forest District[1] (14 CCR 895.1). Though it was recorded on the project property, it was not recorded growing within the development footprint nor in high density (NIC 2020a, b). The project site is not zoned as a Timber Production Zone (TPZ) or other forest land; however, the project site is zoned as LA-40 and designated as NR in the County General Plan. The intent of the LA zone is to provide an area for supporting horticulture, aquaculture, ranching, and grazing. This zone is distinguished from other zoning such as the Planned Agriculture (PA) zone in that it provides limited opportunities for ranch marketing and commercial winery uses and shall generally be applied where those more intensive commercial uses may be undesirable. The County General Plan states that the purpose of the NR land use is

[1] California black oak (*Quercus kelloggii*) is a Group B commercial species in the Southern District, meaning that it is only considered a commercial species if when found on lands where species in Group A (in this case, ponderosa pine) are now growing naturally or have grown naturally in the recorded past. Though black oak was recorded on the project site (NIC 2020b), the lack of record of ponderosa pine or other Group A species in the areas proposed for development should indicate that black oak is not a commercial species for the purposes of this project and the land is not timberland as defined in PRC Section 4526.

to identify areas that contain economically viable resources and protect the economic viability of those resources and those engaged in harvesting/processing of those resources, including forested land.

When the permit application was deemed complete by the County on April 13, 2020, the project property was undeveloped, sparsely wooded land, which serves as the baseline site conditions for this CEQA analysis. Since the permit application was deemed complete by the County, the project applicant has obtained a permit from the County Department of Agriculture to cultivate hemp on-site in the areas that are currently proposed for cannabis cultivation. Current site conditions are reflective of an industrial hemp cultivation operation. Site 1 of the project site was cleared of vegetation, graded, and planted with industrial hemp plants which required the removal of approximately 14,403 sf of oak woodland as documented in the project-specific Oak Resource Technical Report (see Appendix B of this Initial Study). According to the Oak Resource Technical Report, Site 2 is composed mainly of annual grassland and burned chaparral habitat, and the construction of Site 2 would not require the removal of additional oak woodland habitat. Although the proposed project required the removal of 14,403 sf of oak woodland habitat, the project site is not zoned for TPZ or other forest land and does not support trees of a commercial species used to produce lumber and other forest products. Therefore, the proposed project would not conflict with the zoning for, or cause rezoning of, forest land or timberland or result in a substantial loss or conversion of forest land, and impacts would be **less than significant** for questions c) and d).

e. **Conversion of Prime Farmland or Forest Land:** The proposed project would develop 5.5 acres of undisturbed, sparsely wooded land into a cannabis cultivation facility on an approximately 180-acre property, leaving 174.5 acres of the property undeveloped as undisturbed, sparsely wooded land. Implementation of the proposed project would not 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. Therefore, the proposed project would not result in a substantial conversion of agricultural or forest land to non-agricultural or non-forest uses, and impacts would be **less than significant.**

FINDING: The proposed project would not conflict with existing zoning for agricultural use, TPZ, or other forest land, impact any properties under a Williamson Act Contract, or result in a substantial loss or conversion of agricultural land or forest land. Less than significant or no impacts would occur for impacts related to Agriculture and Forestry Resources.

III. AIR QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
c. Expose sensitive receptors to substantial pollutant concentrations?			**X**	
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			**X**	

A project-specific Odor Control Plan was prepared for this project and is included as Appendix A to this Initial Study (NIC 2020d).

Regulatory Setting:

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. The Clean Air Act is implemented by the U.S. Environmental Protection Agency (USEPA) and sets ambient air limits, the National Ambient Air Quality Standards (NAAQS), for the following criteria air pollutants: particulate matter of aerodynamic radius of 10 micrometers or less (PM_{10}), particulate matter of aerodynamic radius of 2.5 micrometers or less ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), ground-level ozone (O_3), sulfur dioxide (SO_2), and lead. Of these criteria pollutants, particulate matter and ground-level O_3 pose the greatest threats to human health. The California Air Resources Board (CARB) sets standards for criteria pollutants in California that are more stringent than the NAAQS and include the following additional contaminants: visibility-reducing particles, hydrogen sulfide (H_2S), sulfates, and vinyl chloride.

USEPA and CARB regulate various stationary sources, area sources, and mobile sources. USEPA has regulations involving performance standards for specific sources that may release toxic air contaminants (TACs), known as hazardous air pollutants (HAPs) at the federal level. In addition, USEPA has regulations involving emission criteria for off-road sources such as emergency generators, construction equipment, and vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also establishes passenger vehicle fuel specifications.

The proposed project is located within the Mountain Counties Air Basin (MCAB), which is comprised of seven air districts: the Northern Sierra Air Quality Management District (NSAQMD), Placer County Air Pollution Control District (APCD), Amador County APCD, Calaveras County APCD, the Tuolumne County APCD, the Mariposa County APCD, and El Dorado County Air Quality Management District (EDCAQMD).

Air quality in the project area is regulated by the EDCAQMD. CARB and local air districts are responsible for overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental

documents required to comply with CEQA. The EDCAQMD regulates air quality through the federal and State Clean Air Acts, district rules, and its permit authority.

The USEPA and State also designate regions as "attainment" (within standards) or "nonattainment" (exceeds standards) based on the ambient air quality. El Dorado County is in nonattainment status for both federal and state O3 standards, for the state PM10 standard, and for the federal 24-hour PM 2.5 standard and is in attainment or unclassified status for all other pollutants (CARB 2019).

Impact Analysis:

a. **Air Quality Plan:** As mentioned previously, the MCAB is currently in non-attainment for O_3 (State and federal ambient standards), PM_{10} (State ambient standard), and $PM_{2.5}$ (federal ambient 24-hour standard). The Sacramento Regional 2008 NAAQS (National Ambient Air Quality Standards) 8-Hour Ozone Attainment Plan and Reasonable Further Progress Plan (Ozone Attainment Plan) was developed for application within the Sacramento region, including the MCAB portion of El Dorado County (EDCAQMD et al. 2017). The EDCAQMD and other Sacramento region air districts have submitted a $PM_{2.5}$ Implementation/Maintenance Plan and Re-Designation Requests to fulfill CAA requirements to re-designate the region from nonattainment to attainment of the $PM_{2.5}$ NAAQS (EDCAQMD et al. 2013).

Projects within the MCAB portion of the County must demonstrate Ozone Attainment Plan consistency with the following four indicators:

1. The project does not require a change in the existing land use designation (e.g., a general plan amendment or rezone), or projected emissions of ROG and NOx from a project are equal to or less than the emissions anticipated for the site if development under the existing land use designation;
2. The project does not exceed the "project alone" significance criteria;
3. The project would be consistent with the control measures for emissions reductions in the Ozone Attainment Plan; and
4. The project complies with all applicable district rules and regulations.

Regarding the first criterion for compliance with the Ozone Attainment Plan, the proposed project does not include uses that would generate a long-term increase in population or require a change in land use designations applied to the project site. Therefore, the project would be consistent with the regional growth forecasts and would not conflict with or exceed the assumptions of the Ozone Attainment Plan.

Regarding the second criterion, as discussed above, MCAB is currently in non-attainment for O_3 (State and federal ambient standards), PM_{10} (state ambient standard), and $PM_{2.5}$ (federal 24-hour ambient standard). As discussed in item b), below, the project would not result in a cumulatively considerable net increase of ozone precursors (ROG or NO_x), PM_{10}, or $PM_{2.5}$.

The third criterion is consistency with control measures in the Ozone Attainment Plan. Most of the control strategies in the Ozone Attainment Plan include measures in the categories of transportation and stationary sources. The non-regulatory control measures include; on-road and off-road mobile incentive programs, and an emerging/voluntary urban forest development program. These are followed by the regulatory control measures, which include; indirect source rules and a variety of stationary and area-wide source control measures. The control measures for reducing mobile source emissions includes the following statewide measures: new engine standards, reducing emissions from in-use fleet, requiring the use of cleaner fuels, supporting the use of alternative fuels, and pursuing long-term advanced technology measures. The project would not conflict with or hinder any of the control measures for emissions reductions in the Ozone Attainment Plan.

The final criterion is compliance with the EDCAQMD rules and regulations. The EDCAQMD has adopted rules designed specifically to address a variety of air quality impacts through measures that construction and operational related air quality emissions. The project would be required by law to comply with all

applicable rules and regulations. Rules designed to control air pollutant emissions, and which may be applicable to the project include:

- Rule 210 related to the discharge of air contaminants;
- Rule 215 related to application of architectural coatings;
- Rule 223 related to fugitive dust;
- Rule 223-1 related to construction related fugitive dust;
- Rule 223-2 related to asbestos; and
- Rule 224 relates to application of cutback or emulsified asphalt for paving.

Notably, pursuant to Rule 223-1, any activities associated with future plans for grading and construction would require a Fugitive Dust Control Plan (FDCP) for grading and construction activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions to a less than significant level.

In summary, the project would not conflict with the growth assumptions for the region, would be consistent with all control measures of the Ozone Attainment Plan, and would comply with applicable EDCAQMD rules. Based on these considerations, the project would not conflict with or obstruct implementation of an applicable air quality plan. The impact would be **less than significant**.

b. **Air Quality Standards and Cumulative Impacts:** The following discussion evaluates the potential for the project's construction and operational emissions to result in a considerable contribution to the region's cumulative air quality impact.

Construction

Construction of the project would result in the addition of pollutants to the local air shed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials and worker vehicles commuting to and from the project site.

The EDCAQMD has adopted screening criteria for determining the significance of a project's construction period ozone precursor and particulate matter emissions in Chapter 4 of the Guide to Air Quality Assessment (EDCAQMD 2002).

> Screening of Construction Equipment Based on Fuel Use: If the average daily diesel fuels use for one quarter (3 months) would be less than 337 gallons (from Table 4.1 in the Guide to Air Quality Assessment), ROG and NO_X emissions from construction equipment may be deemed not significant. If ROG and NOX emissions from diesel equipment are deemed not significant based on fuel usage in Table 4.1, then exhaust emissions of CO and PM10 from construction equipment, and exhaust emissions of all constituents from worker commute vehicles, may also be deemed not significant.
>
> Screening of Fugitive Dust Emissions Based on Incorporation of Mitigation Measures: Mass emissions of fugitive dust PM10 need not be quantified, and may be assumed to be not significant, if the project includes mitigation measures that will prevent visible dust beyond the project property lines, in compliance with Rule 403 of the South Coast Air Quality Management District (included in Appendix C-1 of the Guide to Air Quality Assessment).

The construction equipment required for the project has not been determined at the time of this analysis. The California Emissions Estimator Model (CalEEMod), developed by the California Air Pollution Control Officers Association (CAPCOA) and the California air districts for estimating typical development project emissions, contains lists of equipment required for each activity of typical project construction based on project size. As described in Section 3.0, above, Phase I of the project would encompass approximately 2.5 acres and Phase II would encompass approximately 2.0 acres. The most intense use of heavy construction equipment typically occurs during the grading activity. According to Appendix D of the

CalEEMod Users' Guide, a project with a construction area between 2 and 3 acres would be expected to require a one rubber-tired dozer, one tractor/loader/backhoe, and one grader (CAPCOA 2017) and it is estimated that each piece of equipment would operate for 8 hours per day. The rubber-tired dozer would be the most fuel use intensive piece of construction equipment used during grading. A Caterpillar 824K Wheeled Dozer (405 horsepower) operating under medium intensity burns between 105 and 12.1 gallons of diesel per hour (Caterpillar 2018). Conservatively assuming that all equipment used during grading would burn 12.1 gallons per hours, the average daily diesel fuel use would be approximately 290 gallons, less that the 377 gallons per day screening level. Therefore, project construction emissions of ROG, NO_X and other exhaust constituents would be less than significant.

The EDCAQMD Rule 223-1 requires any construction or construction related activities, including the project construction, to submit a Fugitive Dust Control Plan to the EDCAQMD prior to the start of any construction activity for which a grading permit was issued by El Dorado County (EDCAQMD 2005). The Fugitive Dust Control Plan must identify the project's potential sources of fugitive dust and Best Management Practice (Rule 223-1, Table 1 through 4) or other effective measures for fugitive dust control. As a Condition of Approval, the County would require implementation of all applicable fugitive dust mitigation measures included in Appendix C-1, Tables C.4 and C.5 of the EDCAQMD Guide to Air Quality Assessment. Some of the requirements of these mitigation measures may overlap with the requirements of the EDCAQMD Rule 223-1. With adherence to this Condition of Approval, the project's construction-period emissions of fugitive dust PM_{10} and $PM_{2.5}$ would be less than significant.

Operation

The EDCAQMD has adopted screening criteria for determining the significance of a project's operational ozone precursor emissions in Chapter 5 of the Guide to Air Quality Assessment (EDCAQMD 2002):

> For development projects whose only operational emissions come from increased vehicular traffic, screening based on project size or activity may be used to determine whether the project will exceed the threshold of significance for total emissions from project operation. Table 5.2 of from the Guide to Air Quality Assessment provides size or activity cut-points for various types of land uses that the EDCAQMD has determined, based on conservative assumptions, would, if exceeded, result in emissions above the EDCAQMD's thresholds of significance for ROG and NO_X.

The project's proposed commercial cannabis cultivation facility is not included in Table 5.2 of the Guide to Air Quality Assessment. Examples of the development types and sizes in Table 5.2 includes 230 single-family residences, 620,000 square feet of manufacturing, and 260,000 square feet of general office space. The Onsite Transportation Review for the project concluded that project would generate 60 average daily trips, far less than the expected trip generation for any of the development types listed in Table 5.2. Therefore, the project's operational emissions of ROG and NO_X would be less than significant.

Impact Conclusion

The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard, and impacts would be **less than significant**.

c. **Sensitive Receptors:** The State CEQA Guidelines (14 CCR 15000) identify sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others that are especially sensitive to the effects of air pollutants. Residences, hospitals, schools, and convalescent hospitals are examples of sensitive receptors. The discussion below reviews the significance of emissions within the context of potential impacts to sensitive receptors. No specific sensitive receptors, such as daycare centers, schools, or churches, are located within 1 mile of the project site. There are no residences or habitable structures within a 2,000-foot radius of the project site. The closest sensitive receptors (single-family residences) to the project site are:

- 2,300 feet to the northeast (Unknown address)

- 3,000 feet southwest (5200 Di Arie Road)
- 3,100 feet to the west-southwest (4950 Michaels Mountain Road)
- 3,200 feet to the north (4070 Vintage Lane)
- 3,300 feet to the north-northwest (3501 Freshwater Lane)

There are no daycare centers, schools, or churches, located within 1 mile of the project site.

Criteria Pollutants

Specific adverse health effects on individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables such as cumulative concentrations, local meteorology and atmospheric conditions, and the number and characteristics of exposed individuals (e.g., age, gender). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone are, therefore, the product of emissions generated by numerous sources throughout a region. Emissions of criteria pollutants from vehicles traveling to or from the project site (mobile emissions) are distributed nonuniformly in location and time throughout the region, wherever the vehicles may travel. As such, specific health effects from these criteria pollutant emissions cannot be meaningfully correlated to the incremental contribution from the project.

Toxic Air Contaminants

TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The EDCAQMD recommends an incremental cancer risk threshold of 10 in 1 million (with implementation of best available control technology for toxics). "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard California Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology (OEHHA 2020). In addition, some TACs have non-carcinogenic effects. EDCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects. The TAC that would potentially be emitted during construction activities associated with development of the proposed project would be diesel particulate matter (DPM).

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as DPM. Almost all DPM is 10 microns or less in diameter and 90 percent of DPM is less than 2.5 microns in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, the CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects Due to the relatively short period of construction, the substantial distance to the nearest sensitive receptor, and minimal exhaust PM_{10} emissions generated, project construction would not expose sensitive receptors to substantial concentrations of NOA

Asbestos dust is a known carcinogen and is classified as a TAC by CARB. Naturally occurring asbestos (NOA) most commonly occurs in ultramafic rock (i.e., igneous and metamorphic rock with low silica content) that has undergone partial or complete alteration to serpentine rock (or serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, is associated with ultramafic rock, particularly near geologic faults. Some areas of El Dorado County are known to contain NOA. Earthmoving activities in areas containing NOA could result in potentially significant levels of NOA in fugitive dust. El Dorado County provides a map which shows the locations of known areas of NOA, areas likely to contain NOA, and buffer zones for known and likely NOA areas (El Dorado County 2015a). The project site is not located within any area know or likely to contain NOA, or within any NOA buffer zone. In addition, the project would be required to comply with the EDCAQMD Rule 223-2

(Fugitive Dust - Asbestos Hazard Mitigation) which requires either a site specific Geologic Evaluation, or an Asbestos Dust Mitigation Plan if NOA, serpentine, or ultramafic rock is discovered by the project owner/operator, a professional geologist, or the Air Pollution Control Officer prior to or during construction activity. Therefore, the project construction would not expose sensitive receptors to substantial concentrations of NOA.

Operation of the project would not result in any non-permitted direct emissions of TACs (e.g., those from a stationary source such as diesel generators) or result in substantial diesel vehicle trips (i.e., delivery trucks). Therefore, the project would not result in exposure of sensitive receptors in the vicinity of the project site to substantial TAC concentrations due to operations.

In summary, the project would not expose sensitive receptors to substantial pollutant concentrations, including DPM and NOA, and the impact would be **less than significant**.

d. **Objectionable Odors:** The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contributes to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress, and generate citizen complaints.

Common sources of odors include wastewater treatment plants, landfills, transfer stations, composting facilities, refineries, chemical plants, and food processing plants (EDCAQMD 2002). The proposed project would construct a cannabis cultivation facility. During project construction, exhaust from equipment may produce discernible odors typical of most construction sites. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from the tailpipes of construction equipment. However, such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. There is an increased potential for odor emanating from project operation due to the strong fragrance of cannabis. The El Dorado County Cannabis Ordinance has specific requirements that would assist in reducing odor emanating from the site, including setbacks, fencing, and screenings. Cannabis cultivation is required to be setback a minimum of 800 feet from the property line of the site or public right-of-way and shall be located at least 300 feet from the upland extent of riparian vegetation of any watercourse. An Odor Control Plan was prepared by Natural Investigations Company, Inc. in February of 2020 for the proposed project and is included as Appendix A to this Initial Study. The Odor Control Plan describes the potential sources of odors from the project, outlines an Odor Monitoring Program, and prescribes an Odor Response Program to evaluate and respond to odor complaints. To minimize any potential odor impacts from project operation, the project applicant shall implement all of the recommended measures in the Odor Control Plan as a Condition of Approval. Therefore, impacts associated with odors would be **less than significant.**

FINDING: The proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard or expose sensitive receptors to substantial pollutant concentrations, and impact would be less than significant. With adherence to the EDCAQMD applicable rules and Odor Control Plan, the proposed project would have less than significant impacts on air quality and odors.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		**X**		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			**X**	
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			**X**	
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?		**X**		
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			**X**	
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?				**X**

The biological resources section is based on the project-specific Biological Resources Assessment (BRA) and Oak Resource Technical Report prepared by Natural Investigations Company (NIC 2020a and 2020b) to assess the project's potential impact to federal and State special status plants and wildlife species and their habitats and are included as Appendices B and C of this Initial Study. The results of both reports are summarized in this section.

Environmental Setting:

The project property is located within the cis-montane Sierra Nevada mountains geographic subregion, which is contained within the Sierra Nevada Mountains geographic subdivision of the larger California Floristic Province. This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in Climate Zone 7 - California's Gray Pine Belt, defined by hot summers and mild but pronounced winters without severe winter cold or high humidity. The topography of the Study Area is mountainous. The elevation ranges from approximately 1,000 feet to 1,830 feet amsl.

Prior to the establishment of an industrial hemp cultivation operation, land uses were open space, livestock range, and forest reserve. The surrounding land uses are public lands and private estates with gardens or corrals, open space, and grazing land.

The Biological Resources Assessment (Appendix C) identified the following terrestrial vegetation communities on the property:

- Mixed oak woodland: composition varies across the study site but includes native oaks (blue oak, interior live oak, canyon live oak, California black oak), ponderosa pine, and gray pine. Shrubs include whiteleaf manzanita, yerba santa, and toyon, and are present in varying densities along with grasses and other herbaceous plants that vary with the level of canopy closure. Many of the trees in this area show signs of the 2014 Sand Fire, with some surviving relatively intact and others resprouting.

- Coniferous woodland: located in the northwestern corner of the site, this habitat type also includes trees that survived the Sand Fire. Species characterizing the area include ponderosa pine and California black oak, which form an open canopy above shrubs such as whiteleaf manzanita and a variety of herbs and grasses.

- Ruderal/disturbed: heavily used areas of the site, including graded areas and gravel roads, include few native plants and provide poor quality habitat. They are characterized by an assortment of nonnative weedy, ornamental, and/or invasive vegetation.

- Non-native annual grassland: plants include European annual pasture grasses.

No critical habitat for any federally-listed species occurs within the project property. The California Natural Diversity Database (CNDDB) reported one special-status habitat within the project property: Central Valley Drainage Hardhead/Squawfish Stream.

In El Dorado County, native oak woodlands are a protected habitat (see discussion of oak woodland below). Approximately 14,403 sf of oak woodland was removed from Site 1 to allow for the industrial hemp operation in summer 2020, however, the baseline site condition for this CEQA analysis is reliant on the project site conditions when the cannabis permit application was deemed complete by the County on April 13, 2020. As of April 13, 2020, the project site was undeveloped, sparsely wooded land.

The following animals were observed at the site during the field survey: Botta's pocket gopher, Columbian black-tailed deer, coyote, gray fox, acorn woodpecker, American robin, Anna's hummingbird, sparrow spp., oak titmouse, red-tailed hawk, turkey vulture, western bluebird, and miscellaneous common passerines.

Two rare plants may occur in the project vicinity: Brandegee's clarkia (*Clarkia biloba*) and streambank spring beauty (*Claytonia parviflora*). According to the USFWS, the following species may occur in the vicinity of the project and should be considered: California red-legged frog (*Rana draytonii*), Threatened, and delta smelt (*Hypomesus transpacificus*), Threatened.

Regulatory Setting:

Federal Laws, Regulations, and Policies

Endangered Species Act

The Endangered Species Act (ESA) (16 U.S. Code [USC] Section 1531 *et seq.*; 50 Code of Federal Regulations [CFR] Parts 17 *et seq.*) provides for conservation of species that are endangered or threatened throughout all or a substantial portion of their range, as well as protection of the habitats on which they depend. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species.

Section 9 of the ESA and its implementing regulations prohibit the "take" of any fish or wildlife species listed under the ESA as endangered or threatened, unless otherwise authorized by federal regulations. The ESA defines the term "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in

any such conduct" (16 USC Section 1532). Section 7 of the ESA (16 USC Section 1531 *et seq*.) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. Section 10(a)(1)(B) of the ESA (16 USC 1539 *et seq*.) provides a process by which nonfederal entities may obtain an incidental take permit from USFWS or NMFS for otherwise lawful activities that incidentally may result in "take" of endangered or threatened species, subject to specific conditions. A habitat conservation plan (HCP) must accompany an application for an incidental take permit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC, Chapter 7, Subchapter II) protects migratory birds and their nests and eggs; protected species are on a federal list specific to this act (50 CFR Section 10.13). Most actions that result in take, or the permanent or temporary possession of, a migratory bird constitute violations of the MBTA. The MBTA also prohibits destruction of occupied nests. USFWS is responsible for overseeing compliance with the MBTA.

Bald and Golden Eagle Protection Act

The federal Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), first enacted in 1940, prohibits "taking" bald eagles, including their parts, nests, or eggs. The Act provides civil and criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The definition for "disturb" includes injury to an eagle, a decrease in its productivity, or nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present.

Clean Water Act

Clean Water Act (CWA) section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the aforementioned waters (33 CFR Section 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, vernal pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of U.S. Army Corps of Engineers (USACE) under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of state water quality certification pursuant to Section 401 of CWA.

Section 401 of the CWA requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the U.S. In California, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and its water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that may result in the discharge to waters of the U.S. (including wetlands or vernal pools) must also obtain a Section 401 water quality certification to ensure that any such discharge will comply with the applicable provisions of the CWA.

State Laws, Regulations, and Policies

California Fish and Game Code

The California Fish and Game Code includes various statutes that protect biological resources, including the Native Plant Protection Act of 1977 (NPPA) and the California Endangered Species Act (CESA). The NPPA (California

Fish and Game Code Section 1900-1913) authorizes the Fish and Game Commission to designate plants as endangered or rare and prohibits take of any such plants, except as authorized in limited circumstances.

CESA (California Fish and Game Code Section 2050–2098) prohibits state agencies from approving a project that would jeopardize the continued existence of a species listed under CESA as endangered or threatened. Section 2080 of the California Fish and Game Code prohibits the take of any species that is state listed as endangered or threatened, or designated as a candidate for such listing. California Department of Fish and Wildlife (CDFW) may issue an incidental take permit authorizing the take of listed and candidate species if that take is incidental to an otherwise lawful activity, subject to specified conditions.

California Fish and Game Code Section 3503, 3513, and 3800 protect native and migratory birds, including their active or inactive nests and eggs, from all forms of take. In addition, Section 3511, 4700, 5050, and 5515 identify species that are fully protected from all forms of take. Section 3511 lists fully protected birds, Section 5515 lists fully protected fish, Section 4700 lists fully protected mammals, and Section 5050 lists fully protected amphibians.

Streambed Alteration Agreement

Sections 1601 to 1607 of the California Fish and Game Code require that a Streambed Alteration Application be submitted to CDFW for any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake. The limit of CDFW jurisdiction is subject to the judgment of the Department; currently, this jurisdiction is interpreted to be the "stream zone", defined as "that portion of the stream channel that restricts lateral movement of water" and delineated at "the top of the bank or the outer edge of any riparian vegetation, whichever is more landward".

California Native Plant Protection Act

The California Native Plant Protection Act (California Fish and Game Code Section 1900–1913) prohibits the taking, possessing, or sale of any plants with a state designation of rare, threatened, or endangered (as defined by CDFW). The California Native Plant Society (CNPS) maintains a list of plant species native to California that has low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2001). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

Forest Practice Act

Logging on private and corporate land in California is regulated by the Z'Berg-Nejedly FPA, which took effect January 1, 1974. The act established the FPRs and charged the politically-appointed Board of Forestry to oversee their implementation. CAL FIRE works under the direction of the Board of Forestry and is the lead government agency responsible for approving logging plans and for enforcing the FPRs. A THP must be prepared by a RPF for timber harvest on non-federal timberlands, with limited exceptions.

Local Laws, Regulations, and Policies

The County General Plan also include policies that contain specific, enforceable requirements and/or restrictions and corresponding performance standards that address potential impacts on special-status plant species or create opportunities for habitat improvement. The El Dorado County General Plan designates the Important Biological Corridor (IBC) (Exhibits 5.12-14, 5.12-5 and 5.12-7, El Dorado County, 2003). Lands located within the overlay district are subject to the following provisions, given that they do not interfere with agricultural practices:

- Increased minimum parcel size;
- Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;
- Lower thresholds for grading permits;
- Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;
- Increased riparian corridor and wetland setbacks;

- Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Wildlife);
- Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;
- Building permits discretionary or some other type of "site review" to ensure that canopy is retained;
- More stringent standards for lot coverage, floor area ratio (FAR), and building height; and
- No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).

El Dorado County

EI Dorado County Code and General Plan Policies pertaining to the protection of biological resources would include protection of rare plants, setbacks to riparian areas, and mitigation of impacted oak woodlands. Policy 7.4.4.4 of the General Plan establishes the native oak tree canopy retention and replacement standards. Impacts to oak woodlands have been addressed in the El Dorado County General Plan EIR, available for review online at https://www.edcgov.us/Government/planning/pages/final_environmental_impact_report_%28eir%29.aspx or at El Dorado County Planning Services offices located at 2850 Fairlane Court, Placerville, CA, 95667. Mitigation in the form of General Plan policies has been developed to mitigate impacts to less than significant levels. The County's oak resources reporting and impact mitigation requirements are outlined in El Dorado County's Oak Resources Management Plan (ORMP) and codified in County Ordinance No. 5061.

El Dorado County Oak Resources Conservation Ordinance (No. 5061)

The El Dorado County Oak Resources Conservation Ordinance was adopted to establish standards for implementing the County's ORMP. The Ordinance protects native oak resources as oak canopy or as an individual tree and states that an impact is defined for individual native oak trees as the physical destruction, displacement or removal of a tree or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means. For oak woodlands, tree and land clearing apply when they are associated with land development, including, but not limited to, grading, clearing, or otherwise modifying land for roads, driveways, building pads, landscaping, utility easements, fire-safe clearance and other development activities. If a project is determined to have an impact to individual native oak trees or oak woodlands the project is required to mitigate for that impact through one of the following: Pay-in-lieu fee, purchase and deed-restrict oak woodland off-site, or plant replacement oaks on- or off-site.

Impact Analysis:

a. **Special Status Species:** As discussed in the BRA, impacts to potential special-status species were considered based on field survey results and a review of the Federal Endangered and Threatened Species list for El Dorado County and CNDDB. No special-status species were detected within the study area during the field survey. In general, the proposed development areas have a low potential for harboring listed plant species for various reasons. The first being that specialized soils are absent from the site. The dominant habitat type in the project area is non-native grassland and invasive European grasses and forbs which tend to exclude and outcompete native rare plants.

Portions of the project area are in a disturbed and ruderal state because it was subjected to wildfire in 2014 then grubbing for fire breaks and tree replanting. In contrast, undisturbed areas of the project area have a low to moderate potential to support special-status plant species, especially near the river corridor and in woodland habitat. Streams, riparian corridors, and riverine wetlands adjacent to the site (southern border along the Middle Fork Cosumnes River) can sustain aquatic special-status species and diverse wildlife species in general. All proposed development and disturbance areas are at least 400 feet from the nearest ephemeral channel and about 1,000 feet away from the Middle Fork Cosumnes River. The BRA concluded that no direct impacts to special-status species would occur from project implementation. However, special-status species that occur in the vicinity could migrate on to the site or plants could emerge on-site between the time that the field survey was completed and the start of construction. This could result in an adverse impact without mitigation.

No nests or nesting activity were observed in the project area during the field survey, but the project area contains suitable nesting habitat for various bird species due to the presence of trees and poles. If construction activities are conducted during the nesting season, nesting birds could be directly impacted if additional tree removal is needed, and indirectly impacted by noise, vibration, and other construction-related disturbances. Therefore, project construction could cause a potentially significant adverse impact to nesting birds without mitigation. To reduce any potential impacts to special-status species or nesting birds, the project applicant would be required to implement Mitigation Measure BIO-1, Pre-construction Survey for Special-Status Species. With the implementation of Mitigation Measure BIO-1, the proposed project would have a **less than significant impact with mitigation.**

Mitigation Measure BIO-1: Pre-Construction Survey for Special-Status Species

A pre-construction survey for special-status species shall be performed by a qualified biologist prior to project construction to ensure that special-status species are not present. If any listed species are detected, construction shall be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) shall be consulted and project impacts and mitigation reassessed.

If construction or tree removal activities would occur during the nesting season (February 1 through August 31), a pre-construction survey for the presence of special-status bird species or any nesting bird species shall be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFW and/or USFWS shall be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing, the postponement of construction activities or tree removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site.

Monitoring Responsibility: El Dorado County Planning and Building Department.

b, c. **Riparian Habitat and Wetlands:** The BRA determined that no water resources occur within the project site. The project site is located at least 400 feet away from the nearest ephemeral channel and approximately 1,000 feet away from the Middle Fork Cosumnes River. The surrounding area has several ephemeral channels and one perennial channel at the southern border of the project site. There are no wetlands within the project site. Potential adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, the filling of wetlands, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. However, the cultivation areas have been designed with a minimum 400-foot setback from watercourses and are situated on flat ridgetops. With the implementation of these project design avoidance measures, no direct impacts to water resources would occur.

Indirect impacts from project construction could occur from ground disturbance and result in erosion and sedimentation in receiving water bodies. If the total area of ground disturbance from installation of the cultivation operation is 1 acre or more, the cultivator would be required to enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ). Implementation of a project-specific Stormwater Pollution Prevention Plan (SWPPP) and erosion control plan, along with regular inspections, would ensure that construction activities would not pollute receiving waterbodies.

Potential adverse impacts to water resources could occur during operation of cultivation activities through the discharge of sediment or other pollutants (fertilizers, pesticides, human waste, etc.) into receiving waterbodies. However, the project proponent is required to file a Notice of Intent and enroll in Cannabis Cultivation Order WQ 2019-0001-DWQ. Compliance with this order would ensure that cultivation operation would not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight. With the implementation of these required measures, potential impacts to any riparian habitat or other sensitive natural community would be **less than significant.**

d. **Migration Corridors:** El Dorado County indicates that the property is in an "Essential Connectivity Area." The open space within the project property provides unrestricted animal movement, and the river corridor of the Middle Fork Cosumnes River functions as a wildlife corridor and fishery. While the project property may be used by wildlife for movement or migration, the project would not have a significant impact on this movement because it would not block movement and the majority of the open space on the project property would remain undisturbed as only 5.5 acres of this 180-acre property would be developed as part of the proposed project. Implementation of the proposed project would include the installation of security fencing around the cultivation compounds, open space would remain outside of the 3.5- and 2-acre compounds, allowing for free movement. The proposed project has the potential to impact nesting raptors, nesting birds, and other migratory birds. These potential impacts would be mitigated through the implementation of Mitigation Measure BIO-1, and impacts would be **less than significant with mitigation**.

e. **Local Policies:** The Oak Resources Technical Report (Appendix B) found that the Phase I project area contained 14,403 square feet of canopy of oak woodlands that has since been removed to allow for the cultivation of industrial hemp on-site. The applicant obtained an agricultural grading permit through the County Department of Agriculture and is exempt by Zoning Ordinance Policy (County Code 130.39.050.F) from the County's Oak Resources Conservation Ordinance.

Thus, impacts would be **less than significant**.

II. **Adopted Habitat Conservation Plans**: This project would not conflict with the provisions of an adopted Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. There would be **no impact**.

FINDING: No special status species or sensitive habitat were identified on the project site. Implementation of Mitigation Measure BIO-1, Pre-Construction Survey for Special-Status Species, would avoid any potential impacts to special-status species, nesting raptors, nesting birds, or other migratory birds. Compliance with the ORMP would mitigate impacts to protected oak woodland that previously existed on the project site. For this Biological Resources evaluation, impacts would be less than significant with mitigation.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			**X**	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			**X**	
c. Disturb any human remains, including those interred outside of formal cemeteries?			**X**	

A Cultural Resources Assessment was prepared for the project by Tim Spillane, M.A., RPA of Natural Investigations Company (NIC 2020c). The report documented results of a records search of the North Central Information Center (NCIC), consultation with the Native American Heritage Commission (NAHC), and an intensive pedestrian survey of the project site which are summarized below.

Environmental Setting:

The project area is within the ethnographic territory of the Eastern Miwok (also spelled Mi-wuk), who occupied lands extending from the Cosumnes River in the north to the Merced and Chowchilla Rivers in the south, and from the Sierra Nevada mountains and foothills in the east to the Black Hills of the East San Francisco Bay to the west. The Eastern Miwok relied on acorns, pine nuts, game, and fish that were abundant in the area. Villages were built along river valleys in the foothills and along ridges in the mountains; higher elevation sites in the mountains above the snow line served as summer camps. Once gold was discovered in the western Sierras in 1848, European-American settlers flocked to the area and gradually displaced the original inhabitants. Some continued to their traditional lifestyles, but they eventually became more reliant on cash income from farm and ranch labor as competition for natural resources increased. In the first half of the 20th century, the Miwok peoples became increasingly confined to reservations known as rancherias. Though many rancherias in Eastern Miwok territories receive no official recognition by the federal government, seven federally recognized rancherias currently exist that have primarily Eastern Miwok populations.

European American settlement of El Dorado County began in earnest in 1848 with the discovery of gold at Sutter's Mill on the American River. Some mining camps in the area, including El Dorado, developed into permanent towns. Timber harvesting, farming, and ranching developed in the region along with the mines. Eventually, the importance of mining declined, travel became more efficient with the modernization of roads such as U.S. 50 in the 1920s and 30s, and the need for waystations was reduced. Timber production also declined in the early 20th century. The economy in much of El Dorado County became increasingly focused on residential, retail, and recreational uses. Wine production has also seen a rise in the County in the past few decades. Today, the largest industries in the County are health care and social assistance, retail trade, accommodation and food service, and various educational services. There are over 100,000 acres of active farming land, and some of the highest paying industries are utilities, mining, quarrying, oil and gas extraction, as well as manufacturing.

Two historic gold occurrences have been recorded to the northeast of the property boundary. The project site itself has seen very little development or use. Two trails had been constructed through the property by 1891, and a few residences and roads have also been built in the vicinity.

Regulatory Setting:

Federal Laws, Regulations, and Policies

The National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, State, or local level. The criteria for listing in the NRHP include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of history (events);

B. Are associated with the lives of persons significant in our past (persons);

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (architecture); or

D. Have yielded or may likely yield information important in prehistory or history (information potential).

State Laws, Regulations, and Policies

The California Register of Historic Places

The California Register of Historic Places (CRHP) program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for State and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under CEQA. The criteria for listing in the CRHP include resources that:

A. Are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

B. Are associated with the lives of persons important to local, California, or national history.

C. Embody the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values.

D. Have yielded, or have the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The State Office of Historic Preservation sponsors the California Historical Resources Information System (CHRIS), a statewide system for managing information on the full range of historical resources identified in California. CHRIS provides an integrated database of site-specific archaeological and historical resources information. The State Office of Historic Preservation also maintains the California Register of Historical Resources (CRHR), which identifies the State's architectural, historical, archeological, and cultural resources. The CRHR includes properties listed in or formally determined eligible for the National Register and lists selected California Registered Historical Landmarks.

PRC (Section 5024.1[B]) states that any agency proposing a project that could potentially impact a resource listed on the CRHR must first notify the State Historic Preservation Officer, and must work with the officer to ensure that the project incorporates "prudent and feasible measures that will eliminate or mitigate the adverse effects."

California Health and Safety Code Section 7050.5 requires that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Section 5097.98 of the California PRC stipulates that whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The decedents may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

CEQA and State CEQA Guidelines

Section 21083.2 of the State CEQA Guidelines requires that the lead agency determine whether a project may have a significant effect on unique archaeological resources. A unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it:

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

Measures to avoid, conserve, preserve, or mitigate significant effects on these resources are also provided in the State CEQA Guidelines under Section 21083.2.

Section 15064.5 of the State CEQA Guidelines notes that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Substantial adverse changes include physical changes to the historic resource or to its immediate surroundings, such that the significance of the historic resource would be materially impaired. Lead agencies are expected to identify potentially feasible measures to mitigate significant adverse changes in the significance of a historic resource before they approve such projects. Historic resources are those that are:

- Listed in, or determined to be eligible for listing in, the CRHR (PRC Section 5024.1[k]);
- Included in a local register of historic resources (PRC Section 5020.1) or identified as significant in an historic resource survey meeting the requirements of PRC Section 5024.1(g); or
- Determined by a lead agency to be historically significant.

State CEQA Guidelines Section 15064.5 also prescribes the processes and procedures found under Health and Safety Code Section 7050.5 and PRC Section 5097.95 for addressing the existence of, or probable likelihood of,

Native American human remains, as well as the unexpected discovery of any human remains within the project site. This includes consultation with the appropriate Native American tribes.

State CEQA Guidelines Section 15126.4 provides further guidance about minimizing effects to historical resources through the application of mitigation measures. Mitigation measures must be legally binding and fully enforceable.

Impact Analysis:

a. **Historic Resources:** A Cultural Resources Assessment was prepared for the project by Tim Spillane, M.A., RPA of Natural Investigations Company (NIC 2020c). The report documented results of a records search of the North Central Information Center (NCIC), consultation with the Native American Heritage Commission (NAHC), and an intensive pedestrian survey of the project site.

The NCIC records search, which was conducted on January 29, 2020, indicated that one prior study (NCIC Report No. 11213) had been completed that included portions of the project site. The record search and previous study indicated that no cultural resources of any kind have been previously recorded within 0.25 mile of the project property.

The intensive pedestrian survey within the 180-acre project property was conducted by Natural Investigations archaeologist, Phil Hanes, on February 6, 2020. The survey failed to identify any evidence of prehistoric or historic-era use or occupation within the project property. Consultation was undertaken with the NAHC regarding sacred land listings for the property. The results of the search returned by the NAHC on January 29, 2020 were negative for Native American cultural resources in the project vicinity. The Cultural Resources Assessment concluded that there is no indication that the proposed project would impact any historical or archeological resources as defined under CEQA Section 15064.5 (NIC 2020c). Standard Conditions of Approval imposed by the County on the project would address the accidental discovery of any previously unidentified resources during construction and result in project impacts that are **less than significant**.

b. **Archeological Resources:** Based on the absence of significant historical resources/unique archaeological resources/historic properties within the Area of Potential Effect, the report recommends archaeological clearance for the project as presently proposed. Standard Conditions of Approval imposed by the County on the proposed project would address the accidental discovery of any previously unidentified resources during construction and result in project impacts that are **less than significant**.

c. **Human Remains:** The Cultural Resources Assessment prepared for the project, which included a records search and an intensive pedestrian survey of the site, did not find evidence of potential human remains (NIC 2020c). In the unlikely event that human remains are discovered during construction, the County's standard Conditions of Approval requiring compliance with CEQA Guidelines Section 15064.5(e) would result in project impacts that are **less than significant**.

FINDING: With the implementation of standard Conditions of Approval imposed by the County, the proposed project would have a less than significant impact on Cultural Resources.

VI. ENERGY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in potential significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			**X**	
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			**X**	

Environmental Setting:

This section provides an evaluation of existing energy production and consumption conditions, as well as potential energy use and related impacts from the proposed project. The following discussion is consistent with and fulfills the intent of Appendix F Energy, from the State CEQA Guidelines.

The unit of energy used in this section are the British thermal units (BTU) and kilowatt hours (kWh). A BTU is the quantity of heat required to raise the temperature of one pound of water one-degree Fahrenheit (°F) at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and one kWh is equivalent to approximately 3,413-BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; one cubic foot of natural gas is equivalent to approximately 1,050-BTU, and 1-therm represents 100,000-BTU.

California Energy Overview:

Electricity

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, electric service providers and community choice aggregators. In 2017, the California power mix totaled 292,039 gigawatt hours (GWh). In-state generation accounted for 206,336 GWh, or 71 percent, of the State's power mix. The remaining electricity came from out-of-state imports (CEC 2018). Table 1 below provides a summary of California's electricity sources as of 2017.

Natural Gas

Natural gas provides the largest portion of the total in-state capacity and electricity generation in California, with nearly 50 percent of the natural gas burned in California used for electricity generation in 2017. Much of the remainder was consumed in the residential, industrial, and commercial sectors for uses such as cooking, space heating, and as an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year (bcf/year), up from 2,196 bcf/year in 2010 (CEC 2017a).

Table 1
California Electricity Sources 2017

Fuel Type	Percent of California Power (%)
Coal	4.13
Large Hydro	14.72
Natural Gas	33.67
Nuclear	9.08
Oil	0.01
Other (Petroleum Coke/Waste Heat)	0.14
Renewables	29.00

Source: CEC 2018

Transportation Fuels

Transportation accounts for a major portion of California's energy budget. Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (SUVs). In 2015, 15.1 billion gallons of gasoline were sold in California (CEC 2017b). Diesel fuel is the second most consumed fuel in California, used by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats, and farm and construction equipment. In 2015, 4.2 billion gallons of diesel were sold in California (CEC 2017c).

Regulatory Setting:

Federal Laws, Regulations, and Policies

Energy Independence and Security act of 2007

House of Representatives Bill 6 (HR 6), the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs must consume 60 percent less energy than today's bulbs; this requirement would effectively phase out the incandescent light bulb.

Energy Improvement and Extension Act of 2007

The formerly entitled "Renewable Energy and Job Creation Act of 2008," or Division B of HR 1424, was signed into law by President Bush in October 2008. The signed bill contains $18 billion in incentives for clean and renewable energy technologies, as well as for energy efficiency improvements.

State Laws, Regulations, and Policies

California Integrated Energy Policy

Senate Bill 1389, passed in 2002, requires the California Energy Commission (CEC) to prepare an Integrated Energy Policy Report for the governor and legislature every 2 years, and to provide an update in the year between reports. The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research. The 2019 Integrated Energy Policy Report covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California

electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

California Building Standards Code (California Code of Regulations, Title 24)

The 2019 Building Energy Efficiency Standards, comprising Title 24, Parts 1 and 6, of the California Code of Regulations, is mandatory statewide. Local government agencies may adopt and enforce energy efficiency standards for newly constructed buildings, additions, alterations, and repairs provided the California Energy Commission finds that the standards will require buildings to consume no more energy than permitted by Title 24, Part 6. Such local standards may include adopting the requirements of Title 24, Part 6 before their effective date, requiring additional energy conservation measures, or setting stricter energy budgets. Title 24, Part 11 contains additional energy measures that are applicable to the project under the California Green Building Standards Code (CALGreen).

Local Laws, Regulations, and Policies

El Dorado County General Plan

The El Dorado County General Plan Public Services and Utilities Element encourages energy efficiency development within the County by imposing two policies:

- *Policy 5.6.2.1*- Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

- *Policy 5.6.2.2*- All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.

Impact Analysis:

a. **Energy Consumption:** The proposed project would involve the construction of a cannabis cultivation facility. While construction activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel) and electricity/natural gas (directly or indirectly), such consumption would be short-term and temporary and would thus not have the potential to result in wasteful, inefficient, or unnecessary consumption of energy resources. Regarding long-term operation of the project, the proposed project would install a solar array system in a 3,000-sf area to provide energy for the two proposed buildings, and solar panels would be installed on the roofs of the greenhouses to power the supplemental light for the mixed light cannabis cultivation and exhaust fans. The project is expected to source all electricity for operation wholly from solar installed on-site and use of an on-site generator would be limited to power outage events, and if the solar energy system is limited by undetermined weather conditions. The project would be subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Title 24, Part 11, which contains additional energy measures that are applicable to the project under CALGreen. Prior to project approval, the project applicant would be required to ensure that the project would meet Title 24 requirements applicable at that time, as required by State regulations through their plan review process. Therefore, with the development of a renewable energy source and the inherent increase in efficiency of building code regulations, the project would not result in a wasteful use of energy. Impacts related to energy use would be **less than significant**.

b. **Energy Plans and Efficiency Standards:** Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies. Title 24 also includes Part 11, CALGreen. CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and State-owned buildings, as well as schools and hospitals. The proposed project would meet Title 24 and CALGreen standards to reduce energy demand

and increase energy efficiency. Overall, the project would not conflict with existing energy standards and regulations; therefore, impacts during construction and operation of the project would be **less than significant**.

FINDING: With installation of solar renewable energy to power on-site operations and conformance with statewide mandatory energy requirements as outlined in Title 24, Parts 6 and 11, of the California Code of Regulations, the project would have a less than significant impact on energy resources.

VII. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			**X**	
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?				**X**
iv) Landslides?			**X**	
b. Result in substantial soil erosion or the loss of topsoil?			**X**	
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?			**X**	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			**X**	
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?			**X**	
f. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?			**X**	

Environmental Setting

The site is located along the western edge of the Sierra Nevada and consists of mountainous terrain. The elevation ranges from approximately 1,000 feet to 1,830 feet amsl. Drainage within the project site generally runs south, and eventually flows into the Middle Fork Cosumnes River which lies at the bottom of the project property. According to the custom Soil Resource Report for this project (NRCS 2020), the following soil map units occur on the project property:

- Mariposa very rocky silt loam, 3 to 50 percent slopes (MbE): covers 15.8 percent of the property;
- Mariposa very rocky silt loam, 50 to 70 percent slopes (MbF): covers 6.8 percent of the property;
- Mariposa-Josephine very rocky loams, 15 to 50 percent slopes (McE): covers 18.1 percent of the property;
- Metamorphic rock land (MmF): covers 55.7 percent of the project property.

Two other map units and a small amount of water also occur on the project property, but they occur along the riverbanks and outside of the development footprint. MbE and McE have erosion hazard ratings of “severe,” MbF has a rating of “very severe,” and MmF is “not rated.” "Severe" indicates that erosion is very likely and that erosion-

control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical. Site 1 would be located primarily on MmF soils with the northern portion of Site 1 located on MbE soils, and Site 2 would be located primarily on MbE soils with the southern portion located on MbF soils.

Regulatory Setting:

Federal Laws, Regulations, and Policies

National Earthquake Hazards Reduction Act

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) and creation of the National Earthquake Hazards Reduction Program (NEHRP) established a long-term earthquake risk-reduction program to better understand, predict, and mitigate risks associated with seismic events. The following four federal agencies are responsible for coordinating activities under NEHRP: USGS, National Science Foundation (NSF), Federal Emergency Management Agency (FEMA), and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives (NEHRP 2016) are to:

1. Develop effective measures to reduce earthquake hazards;

2. Promote the adoption of earthquake hazard reduction activities by federal, state, and local governments; national building standards and model building code organizations; engineers; architects; building owners; and others who play a role in planning and constructing buildings, bridges, structures, and critical infrastructure or “lifelines”;

3. Improve the basic understanding of earthquakes and their effects on people and infrastructure through interdisciplinary research involving engineering; natural sciences; and social, economic, and decision sciences; and

4. Develop and maintain the USGS seismic monitoring system (Advanced National Seismic System); the NSF-funded project aimed at improving materials, designs, and construction techniques (George E. Brown Jr. Network for Earthquake Engineering Simulation); and the global earthquake monitoring network (Global Seismic Network).

Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State Laws, Regulations, and Policies

Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 *et seq*.) was passed to reduce the risk to life and property from surface faulting in California. The Alquist–Priolo Act prohibits construction of most types of structures intended for human occupancy on the surface traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are “sufficiently active” and “well defined.” Before a project can be permitted, cities and counties are required to have a geologic investigation conducted to demonstrate that the proposed buildings would not be constructed across active faults.

Historical seismic activity and fault and seismic hazards mapping in the project vicinity indicate that the area has relatively low potential for seismic activity (El Dorado County 2003). No active faults have been mapped in the project area, and none of the known faults have been designated as an Alquist-Priolo Earthquake Fault Zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code Sections 2690–2699.6) establishes statewide minimum public safety standards for mitigation of earthquake hazards. While the Alquist–Priolo Act addresses surface fault rupture, the SHMA addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist–Priolo Act. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other seismic hazards, and cities and counties are required to regulate development within mapped seismic hazard zones. In addition, the act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability.

Mapping and other information generated pursuant to the SHMA is to be made available to local governments for planning and development purposes. The State requires: (1) local governments to incorporate site-specific geotechnical hazard investigations and associated hazard mitigation, as part of the local construction permit approval process; and (2) the agent for a property seller or the seller if acting without an agent, must disclose to any prospective buyer if the property is located within a Seismic Hazard Zone. Under the SHMA, cities and counties may withhold the development permits for a site within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

California Building Standards Code

Title 24 CCR, also known as the California Building Standards Code (CBC), specifies standards for geologic and seismic hazards other than surface faulting. These codes are administered and updated by the California Building Standards Commission. CBC specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in California.

Paleontological Resources

The CEQA lead agency having jurisdiction over a project is also responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. Paleontological resource management is also addressed in PRC Section 5097.5, “Archaeological, Paleontological, and Historical Sites.” This statute defines as a misdemeanor any unauthorized disturbance or removal of a fossil site or remains on public land and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. This statute would apply to any construction or other related project impacts that would occur on state-owned or state-managed lands.

Impact Analysis:

a. Seismic Hazards:

i) **Rupture of Fault:** Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake’s seismic waves. The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and pavement structures, and cause failure of overhead as well as underground utilities.

There are no earthquake faults delineated on Alquist-Priolo Fault Zone maps within the project property (CDC 2020b). Since the project property is not traversed by a known active fault and is not within 200 feet of an active fault trace, surface fault rupture is not considered to be a significant hazard for the project site.

The project would not expose people or structures to substantial adverse effects from a fault rupture. Any potential impacts from implementation of the proposed project would be **less than significant.**

ii) **Ground Shaking:** The potential for seismic ground shaking in the project area would be considered low for the reason stated under question i) above. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code (UBC). All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. Project impacts would be **less than significant**.

iii) **Ground Failure:** Because the project site is considered an area with low potential for seismic activity, there is minimal to no potential for seismic-related ground failure, including liquefaction (CDC 2020b). There would be **no impact**.

iv) **Landslide:** The proposed project property contains steep slopes on the southern portion of the property boundary, with elevations ranging from 1,000 to 1,800 feet amsl. These slopes do have landslide potential; however, the proposed project would only develop flat-lying areas of the property that are set back from the steep slopes. All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance. Any potential impacts from implementation of the proposed project would be **less than significant**.

b. **Soil Erosion:** All grading activities on-site would be required to comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance including the implementation of pre- and post-construction BMPs. Implemented BMPs are required to be consistent with the County's California SWPPP issued by the State Water Resources Control Board to eliminate run-off and erosion and implement sediment controls. Any grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the County of El Dorado Grading, Erosion, and Sediment Control Ordinance. Project impacts would be **less than significant**.

c. **Geologic Hazards:** According to the NRCS custom Soil Resource Report for the proposed project, the site is composed of a variety of soils, but the entirety of the project would be developed on soils classified under either the Mariposa or Josephine soil series or on metamorphic rock land (NRCS 2020). The Mariposa and Josephine soils series have erosive qualities on steep slopes while metamorphic rock is typically less erosive, but can weather at the surface level (USDA 2018). The proposed development areas would be graded to ensure that all development would occur on flat surfaces to minimize soil erosion. All grading activities would comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance. Project impacts would be **less than significant**.

d. **Expansive Soils:** Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. The following soils were mapped on the project site: Mariposa-Josephine very rocky loams, 15 to 50 percent slopes (McE); Mariposa very rocky silt loam, 3 to 50 percent slopes (MbF); Metamorphic rock land (MmF); Mariposa very rocky silt loam, 3 to 50 percent slopes (MbE). These soils are well-drained and the Josephine series do have clay materials, meaning the soils have shrink-swell capabilities and the potential to be expansive. However, the proposed project would not include any habitable structures and would require building permits from the El Dorado County Building Department. The proposed buildings would be designed and constructed by a qualified engineer, and with County issuance of building permits following the building plan check review, any potential impacts from development on potentially expansive soils would be **less than significant**.

e. **Septic Capability:** The proposed project would include a septic system and leach field. The property is located in a rural area of El Dorado County where residences rely on septic systems for sewage. Of the soil map units identified on the property, MbE, MbF, and McE have a Septic Tank Absorption Field rating of "very limited." MmF is "not rated." According to the NRCS, "very limited" indicates that the soil has one or more features that are unfavorable for the specified use, however, the proposed septic tank and leach

field would be located on MmF soils which are not rated. Any issues with soil conditions would be accounted for during the design process and would be remediated by the applicant to ensure that the septic tank and leach field perform at an acceptable level. The proposed treatment septic system would be required to meet NSF standards and is subject to County permitting requirements. This impact would be **less than significant**.

f. Paleontological Resource: No previous surveys conducted in the project area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. Additionally, the project site is not located within the Mehrten Formation. Standard Conditions of Approval imposed by the County on the project would address the accidental discovery of any previously unidentified paleontological resources during construction and result in project impacts that are **less than significant**.

FINDING: A review of the soils and geologic conditions on the project site determined that the project would not result in a substantial adverse effect. All grading activities would be required to comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance which would address potential impacts related to soil erosion, landslides, and other geologic impacts. Future development would be required to comply with the Uniform Building Code which would address potential seismic related impacts. For this Geology and Soils resource section, impacts would be less than significant or have no impact.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

Environmental Setting:

Cumulative greenhouse gas (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria air pollutants and TACs are pollutants of regional and local concern (see Section III, Air Quality, above); GHG are global pollutants. The primary land-use related GHG are carbon dioxide (CO_2), methane (CH_4), and nitrous oxides (N_2O). The individual pollutant's ability to retain infrared radiation represents its "global warming potential" and is expressed in terms of CO_2 equivalents; therefore, CO_2 is the benchmark having a global warming potential of 1. CH_4 has a global warming potential of 25 and thus has a 25 times greater global warming effect per metric ton of CH_4 than CO_2. N_2O has a global warming potential of 298. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., MT CO_2e per year). Other GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). While these compounds have significantly higher global warming potentials (ranging in the thousands), these typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

GHG Sources

The primary man-made source of CO_2 is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH_4 are natural gas systems losses (during production, processing, storage, transmission, and distribution), enteric fermentation (digestion from livestock), and landfill off-gassing. The primary source of man-made N_2O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70 percent of countywide GHG emissions). A distant second are residential sources (approximately 20 percent), and commercial/industrial sources are third (approximately 7 percent). The remaining sources are waste/landfill (approximately 3 percent) and agricultural (<1 percent) (EDCAQMD 2020).

Regulatory Setting:

Federal Laws, Regulations, and Policies

At the federal level, USEPA has developed regulations to reduce GHG emissions from motor vehicles and has developed permitting requirements for large stationary emitters of GHGs. On April 1, 2010, USEPA and the National Highway Traffic Safety Administration (NHTSA) established a program to reduce GHG emissions and improve fuel economy standards for new model year 2012-2016 cars and light trucks. On August 9, 2011, USEPA and the NHTSA announced standards to reduce GHG emissions and improve fuel efficiency for heavy-duty trucks and buses.

State Laws, Regulations, and Policies

Executive Order (EO) S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Climate Solutions Act of 2006* (Stats. 2006, ch. 488) (Health & Safety Code, Section 38500 et seq.). AB 32 provided initial direction on creating a comprehensive multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State's long-range climate objectives. One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code, Section 38561(a)) and to update the plan at least once every 5 years.

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050 as set forth in EO S-3-05. Senate Bill (SB) 32 was adopted in 2016, which codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030.

Impact Analysis:

a. **GHG Emissions:** The project would result in GHG emissions associated with short-term construction and long-term operations.

Construction

Construction GHG emissions would be generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, and worker commuting trips. Construction for the proposed project would be short-term and temporary. All construction equipment and commercial trucks would be maintained to meet current emissions standards as required by the CARB. Neither the EDCAQMD nor El Dorado County have adopted criteria or guidance for determining the significance of a project's construction GHG emissions.

Operation

A project's operational GHG sources would be: mobile emissions from vehicles traveling to and from the project site; energy sources from the onsite burning of natural gas or propane and the offsite generation of electricity; water sources from the energy required to source, treat and convey water used by the project; and solid waste sources from emissions associated with the collection, disposal, and decomposition of solid waste. For most development projects, mobile emissions are the dominant source of GHGs.

Neither the EDCAQMD nor El Dorado County have adopted criteria or guidance for determining the significance of a project's operational GHG emissions. Because the project site is located within western El Dorado County and within the SMAQMD jurisdictional boundary, the guidance and screening criteria from the SMAQMD for a land use development project's GHG emissions was used in this analysis. The SMAQMD provides a table of operational screening levels with land uses and sizes below which a project's operational GHG emissions would not be expected to exceed the SMAQMD bight line threshold of 1,100 MT per year of CO_2e. A cannabis cultivation facility is not included in the Operational Screening Levels table. However, the relative sizes of land uses in the table can indicate whether the project's mobile GHG emissions would be significant. Screening levels in the table include 56 single-family residences,

26,000 square feet of regional shopping center, and 65,000 square feet of office building. The Onsite Transportation Review for the project concluded that project would generate 60 average daily trips, far less than the expected trip generation for any of the development types listed in the SMAQMD Operational Screening levels table. The proposed project would include the installation of a solar array system within a 3,000-sf area and on the roofs of the proposed greenhouses. The solar array system would be the only source of electricity for the proposed project aside from limited use of an on-site generator during power outage events, and if the solar energy system is limited by undetermined weather conditions. The project would source water from a solar-powered, on-site well, and the electricity to pump water would come from the solar panels. Therefore, the project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and the impact would be **less than significant**.

b. **GHG Reduction Plans:** The CARB Scoping Plan, approved by CARB in 2008 and updated in 2014 and 2017, provides a framework for actions to reduce California's GHG emissions and requires CARB and other State agencies to adopt regulations and other initiatives to reduce GHGs. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations. Under the Scoping Plan, however, there are several State regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other State agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others. The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. To the extent that these regulations are applicable to the project or its uses, the project would comply with all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in SB 32 and EO S-3-05, respectively. EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis; CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update states the following (CARB 2014):

> This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the Second Update, which states (CARB 2017):

> The Proposed Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and

rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Proposed Plan is developed to be consistent with requirements set forth in AB 32, SB 32, and AB 197.

The project would be consistent with the applicable strategies and measures in the Scoping Plan and is consistent with, and would not impede, the State's trajectory toward the above-described statewide GHG reduction goals for 2030 or 2050. In addition, since the specific path to compliance for the State in regard to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the project would be speculative and cannot be identified at this time. With respect to future GHG targets under SB 32 and EO S-3-05, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet SB 32's 40 percent reduction target by 2030 and EO S-3-05's 80 percent reduction target by 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the State on its trajectory toward meeting these future GHG targets.

Based on the above considerations, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation is required. This impact would be **less than significant**.

FINDING: The proposed project would result in less than significant impacts to GHG emissions, and the project would not conflict with State or local GHG reduction plans or regulations.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			**X**	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			**X**	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				**X**
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?				**X**
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?				**X**
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	
h. Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			**X**	

Regulatory Setting:

Hazardous materials and hazardous wastes are subject to extensive federal, State, and local regulations to protect public health and the environment. These regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, and disposal of hazardous wastes; and require health and safety provisions for workers and the public. The major federal, State, and regional agencies enforcing these regulations are USEPA and the Occupational Safety and Health Administration (OSHA); California Department of Toxic Substances Control (DTSC); California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA); California Governor's Office of Emergency Services (Cal OES); and EDCAQMD.

Federal Laws, Regulations, and Policies

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also called the Superfund Act; 42 USC Section 9601 *et seq.*) is intended to protect the public and the environment from the effects of past hazardous waste disposal activities and new hazardous material spills. Under CERCLA, USEPA has the authority to seek the parties responsible for hazardous materials releases and to ensure their cooperation in site remediation. CERCLA also provides federal funding (through the "Superfund") for the remediation of hazardous

materials contamination. The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) amends some provisions of CERCLA and provides for a Community Right-to-Know program.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 USC Section 6901 *et seq.*), as amended by the Hazardous and Solid Waste Amendments of 1984, is the primary federal law for the regulation of solid waste and hazardous waste in the United States. These laws provide for the "cradle-to-grave" regulation of hazardous wastes, including generation, transportation, treatment, storage, and disposal. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

USEPA has primary responsibility for implementing RCRA, but individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992. DTSC is responsible for implementing the RCRA program in addition to California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law.

Energy Policy Act of 2005

Title XV, Subtitle B of the Energy Policy Act of 2005 (the Underground Storage Tank Compliance Act of 2005) contains amendments to Subtitle I of the Solid Waste Disposal Act, the original legislation that created the Underground Storage Tank (UST) Program. As defined by law, a UST is "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground." In cooperation with USEPA, SWRCB oversees the UST Program. The intent is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. The four primary program elements include leak prevention (implemented by Certified Unified Program Agencies [CUPAs], described in more detail below), cleanup of leaking tanks, enforcement of UST requirements, and tank integrity testing.

Spill Prevention, Control, and Countermeasure Rule

USEPA's Spill Prevention, Control, and Countermeasure (SPCC) Rule (40 CFR, Part 112) apply to facilities with a single above-ground storage tank (AST) with a storage capacity greater than 660 gallons, or multiple tanks with a combined capacity greater than 1,320 gallons. The rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans.

Occupational Safety and Health Administration

OSHA is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

Code of Federal Regulations (14 CFR) Part 77

14 CFR Part 77.9 is designed to promote air safety and the efficient use of navigable airspace. Implementation of the code is administered by the Federal Aviation Administration (FAA). If an organization plans to sponsor any construction or alterations that might affect navigable airspace, a Notice of Proposed Construction or Alteration (FAA Form 7460-1) must be filed (if required). The code provides specific guidance regarding FAA notification requirements.

State Laws, Regulations, and Policies

Safe Drinking Water and Toxic Enforcement Act of 1986 – Proposition 65

The Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65, protects the state's drinking water sources from contamination with chemicals known to cause cancer, birth defects, or other reproductive harm. Proposition 65 also requires businesses to inform the public of exposure to such chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. In accordance with Proposition 65, the California Governor's Office publishes, at least annually, a list of such chemicals. OEHHA, an agency under the California Environmental Protection Agency (CalEPA), is the lead agency for implementation of the Proposition 65 program. Proposition 65 is enforced through the California Attorney General's Office; however, district and city attorneys and any individual acting in the public interest may also file a lawsuit against a business alleged to be in violation of Proposition 65 regulations.

The Unified Program

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. CalEPA and other state agencies set the standards for their programs, while local governments (CUPAs) implement the standards. For each county, the CUPA regulates/oversees the following:

- Hazardous materials business plans;
- California accidental release prevention plans or federal risk management plans;
- The operation of USTs and ASTs;
- Universal waste and hazardous waste generators and handlers;
- On-site hazardous waste treatment;
- Inspections, permitting, and enforcement;
- Proposition 65 reporting; and
- Emergency response.

Hazardous Materials Business Plans

Hazardous materials business plans are required for businesses that handle hazardous materials in quantities greater than or equal to 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet (cf) of compressed gas, or extremely hazardous substances above the threshold planning quantity (40 CFR, Part 355, Appendix A). Business plans are required to include an inventory of the hazardous materials used/stored by the business, a site map, an emergency plan, and a training program for employees. In addition, business plan information is provided electronically to a statewide information management system, verified by the applicable CUPA, and transmitted to agencies responsible for the protection of public health and safety (i.e., local fire department, hazardous material response team, and local environmental regulatory groups).

California Occupational Safety and Health Administration

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations pertaining to the use of hazardous materials in the workplace (CCR Title 8) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about exposure to hazardous substances, and preparation of emergency action and fire prevention plans.

Hazard communication program regulations that are enforced by Cal/OSHA require workplaces to maintain procedures for identifying and labeling hazardous substances, inform workers about the hazards associated with hazardous substances and their handling, and prepare health and safety plans to protect workers at hazardous waste sites. Employers must also make material safety data sheets available to employees and document employee information and training programs. In addition, Cal/OSHA has established maximum permissible radiofrequency RF energy exposure limits for workers (Title 8 CCR Section 5085[b]) and requires warning signs where RF energy might exceed the specified limits (Title 8 CCR Section 5085 [c]).

California Accidental Release Prevention

The purpose of the California Accidental Release Prevention (CalARP) program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. In accordance with this program, businesses that handle more than a threshold quantity of regulated substance are required to develop a risk management plan (RMP). This RMP must provide a detailed analysis of potential risk factors and associated mitigation measures that can be implemented to reduce accident potential. CUPAs implement the CalARP program through review of RMPs, facility inspections, and public access to information that is not confidential or a trade secret.

California Department of Forestry and Fire Protection Wildland Fire Management

The Office of the State Fire Marshal and CAL FIRE administer State policies regarding wildland fire safety. Construction contractors must comply with the following requirements in the Public Resources Code during construction activities at any sites with forest-, brush-, or grass-covered land:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (Public Resources Code Section 4442).
- Appropriate fire-suppression equipment must be maintained from April 1 to December 1, the highest-danger period for fires (Public Resources Code Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (Public Resources Code Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline fueled internal combustion engines must not be used within 25 feet of any flammable materials (Public Resources Code Section 4431).

California Highway Patrol

California Highway Patrol (CHP), along with Caltrans, enforce and monitor hazardous materials and waste transportation laws and regulations in California. These agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP.

Local Laws, Regulations, and Policies

A map of the fuel loading in the County (General Plan Figure HS-1) shows the fire hazard severity classifications of the State Responsibility Areas (SRAs) in El Dorado County, as established by CAL FIRE. The classification system provides three classes of fire hazards: Moderate, High, and Very High. The County's Fire Hazard Ordinance (Chapter 8.08) requires defensible space as described by the State Public Resources Code, including the incorporation and maintenance of a 30-foot fire break or vegetation fuel clearance around structures in fire hazard zones. The County's requirements on emergency access, signing and numbering, and emergency water are more stringent than those required by State law. The Fire Hazard Ordinance also establishes limits on campfires, fireworks, smoking, and incinerators for all discretionary and ministerial developments.

Impact Analysis:

a. **Hazardous Materials:** The proposed project would involve cultivation and propagation of cannabis and construction of various buildings to support the cultivation operation. Hazardous materials associated with the proposed operation of a cannabis cultivation facility include fertilizers, pesticides, solvents, and may include fuels, lubricants, and paint. All hazardous materials used on-site would be stored in the proposed 2,500-sf secured storage room. Any uses of hazardous materials would be required to comply with all applicable federal, State, and local standards associated with the handling and storage of hazardous materials. Prior to any use of hazardous materials, commercial facilities that store reportable quantities of hazardous materials (55 gallons) or generate hazardous waste are required

to obtain a Hazardous Materials Business Plan (HMBP) through Environmental Management – Solid Waste and Hazardous Materials Division of the County. The proposed project would also be subject to the requirements of the Central Valley Regional Water Quality Control Board (CVRWQCB) Cannabis Cultivation Waste Discharge Regulatory Program The CVRWQCB program has "standard conditions" applicable to cannabis operations that address impacts from the storage and use of hazardous materials which include the following requirements:

- Any pesticide or herbicide product application be consistent with product labeling and be managed to ensure that they would not enter or be released into surface or groundwater.
- Petroleum products and other liquid chemicals be stored in containers and under conditions appropriate for the chemical with impervious secondary containment.
- Implementation of spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.

With appropriate storage, handling, and application BMPs that comply with the requirements of the federal, State, and local regulations, it is not anticipated that the use of these materials at the facility would pose a significant hazard. The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and therefore, impacts would be **less than significant**.

b. **Hazardous Conditions:** As discussed under question a), fertilizers, pesticides, lubricants, fuels, solvents, and paint would be stored and used at the site. As described in the proposed project's Cultivation and Operations Plan, all potentially hazardous materials would be properly stored. Use of such materials would be required to comply with all applicable local, State, and federal standards associated with the handling and storage of hazardous materials, including the standard conditions contained in the CVRWQCB Cannabis Cultivation Waste Discharge Regulatory Program. Standard conditions include implementation of spill prevention, control, and countermeasures and the maintenance of appropriate cleanup materials on-site. The project proponent would be required to prepare an HMBP for approval by the County's Environmental Management – Solid Waste and Hazardous Materials Division.

With implementation of appropriate storage, handling, and application BMPs, it is not anticipated that the use of these materials would pose a significant hazard. In the event of reasonably foreseeable upset and accident conditions, it is unlikely that these hazardous materials would be released in a manner that would create a significant hazard to the public or the environment. Project impacts would be **less than significant**.

c. **Hazardous Materials near Schools:** There are no schools within two miles of the project site. The project would be required to ensure that hazardous chemicals and solid wastes are handled per County, State, and federal regulations. As such, the proposed project would have **no impact**.

d. **Hazardous Sites:** The following databases were reviewed for the proposed project and surrounding area to identify potential hazardous contamination sites: the California DTSC EnviroStor database (DTSC 2020a); California DTSC's Hazardous Waste and Substances Site List (DTSC 2020b); and, the U.S. EPA's Superfund National Priorities List (USEPA 2020). Based on review of these databases, the project site is not included on a list of or near any hazardous materials sites pursuant to Government Code Section 65962.5. Therefore, there would be **no impact**.

e. **Aircraft Hazards, Private Airstrips:** According to the County's Zoning Map and the El Dorado County Airport Land Use Compatibility Plan, the project site is not within any airport safety zone or airport land use plan area (EDC ALUC 2012). The project site is not located in the vicinity of a public or private airstrip. As such, the project would not be subject to any land use limitations contained within any adopted Comprehensive Land Use Plan, and there would be no immediate hazard for people working in the project area or safety hazard resulting from airport operations and aircraft over-flights in the vicinity of the project site**.** Therefore, there would be **no impact**.

f. **Emergency Plan:** The El Dorado County Fire District requirements would be incorporated as Conditions of Approval that address site access, adequate fire flow, vegetation and fuel modification, and sprinkler and fire alarm requirements. No applicable emergency plan would be affected by the project as proposed. The proposed project would allow for adequate emergency ingress/egress and drive-aisle widths for interior circulation. The proposed buildings would also be conditioned to require the installation of sprinkler and fire alarms and provide adequate fire flow. Impacts would be **less than significant**.

g. **Wildfire Hazards:** The property boundary and surrounding area were impacted by the 2014 Sand Fire. Some stands of trees were destroyed by the flames while others were largely untouched by the fire (NIC 2020b). The degree of hazard in wildland areas depends on variables like temperature, wind, and moisture, the amount of dryness and arrangement of vegetation, slope steepness, and accessibility to human activities, accessibility of firefighting equipment, and fuel clearance around structures. The County's General Plan Safety Element precludes development in areas of high wildland fire hazard unless such development can be adequately protected from wildland fire hazards as demonstrated in a Fire Safe Plan prepared by a RPF and approved by the local Fire Protection District and/or CAL FIRE. The project site is in an area of high wildland fire hazard pursuant to Figure 5.8-4 of the 2004 County General Plan Draft EIR (El Dorado County 2003). Therefore, a project-specific Fire Safe Plan was prepared by Live Oak Wildfire Solutions in May 2020 (LOWS 2020) (see Appendix D). The Fire Safe Plan found that effective fuel reduction can be obtained with annual mowing and mastication for 200 feet around the proposed structures or to the steep slope break. Then 50 feet should be maintained on each side of the road leaving the property. These measures would be included as Conditions of Approval for the proposed project. The Fire Safe Plan found that the project could pose a threat to human occupants during a wildland fire if early evacuation is not made and recommended that the applicant prepare a written Evacuation Plan which would be included as a Condition of Approval. With conformance with the Fire Safe Plan and County Conditions of Approval, impacts would be **less than significant**.

FINDING: The proposed project would not expose the public or environment to hazards relating to the use, storage, transport, or disposal of hazardous materials. Additionally, conformance with the County's Conditions of Approval would reduce potential wildfire hazards impacts to less than significant. Therefore, impacts would be less than significant or no impact would occur for hazards and hazardous materials.

X. HYDROLOGY AND WATER QUALITY

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

Environmental Setting

The project site receives an average of 32.66 inches of precipitation per year (CNPS 2020). Most precipitation is concentrated in the winter and early spring months, with summers being almost completely dry. The site has mountainous topography, with elevations ranging from approximately 1,000 feet to 1,830 feet amsl. Drainage within the project site generally runs south, and eventually flows into the Middle Fork Cosumnes River which lies at the bottom of the project property (NIC 2020a). The geology of the Western Slope portion of El Dorado County, which the proposed project site is within is principally hard, crystalline, igneous, or metamorphic rock overlain with a thin mantle of sediment or soil. Groundwater in this region is found in fractures, joints, cracks, and fault zones within the bedrock mass. These discrete fracture areas are typically vertical in orientation rather than horizontal as in

sedimentary or alluvial aquifers. Recharge is predominantly through rainfall infiltrating into the fractures. Movement of this groundwater is very limited due to the lack of porosity in the bedrock. Existing demand for groundwater in the vicinity of the site is low given the rural and undeveloped nature of much of the surrounding land. The project site is not located within any mapped 100-year flood areas as shown on Firm Panel Number 06017C1000E, revised September 26, 2008 (FEMA 2008).

Regulatory Setting:

Federal Laws, Regulations, and Policies

Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The key sections pertaining to water quality regulation for the proposed project are CWA Section 303 and Section 402.

Section 303(d) — Listing of Impaired Water Bodies

Under CWA Section 303(d), states are required to identify "impaired water bodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for the development of control plans to improve water quality. USEPA then approves the State's recommended list of impaired waters or adds and/or removes waterbodies.

Section 402—NPDES Permits for Stormwater Discharge

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the NPDES, which is officially administered by USEPA. In California, USEPA has delegated its authority to the SWRCB, which, in turn, delegates implementation responsibility to the nine RWQCBs, as discussed below in reference to the Porter-Cologne Water Quality Control Act.

The NPDES program provides for both general (those that cover a number of similar or related activities) and individual (activity- or project-specific) permits. General Permit for Construction Activities: Most construction projects that disturb 1.0 or more acres are required to obtain coverage under SWRCB's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ). The General Permit requires that the applicant file a public notice of intent to discharge stormwater and prepare and implement a SWPPP. SWPPP must include a site map and a description of the proposed construction activities, demonstrate compliance with relevant local ordinances and regulations, and present a list of BMPs that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to monitor construction activities and report compliance to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

Municipal Stormwater Permitting Program

SWRCB regulates stormwater discharges from municipal separate storm sewer systems (MS4s) through its Municipal Storm Water Permitting Program (SWRCB 2018). Permits are issued under two phases depending on the size of the urbanized area/municipality. Phase I MS4 permits are issued for medium (population between 100,000 and 250,000 people) and large (population of 250,000 or more people) municipalities and are often issued to a group of co-permittees within a metropolitan area. Phase I permits have been issued since 1990. Beginning in 2003, SWRCB began issuing Phase II MS4 permits for smaller municipalities (population less than 100,000).

El Dorado County is covered under two SWRCB Regional Boards. The West Slope Phase II Municipal Separate Storm Sewer Systems (MS4) NPDES Permit is administered by the CVRWQCB (Region Five). The Lake Tahoe Phase I MS4 NPDES Permit is administered by the Lahontan RWQCB (Region Six). The proposed project site falls under the jurisdiction of the CVRWQCB. The current West Slope MS4 NPDES Permit was adopted by the SWRCB

on February 5, 2013. The Permit became effective on July 1, 2013 for a term of five years and focuses on the enhancement of surface water quality within high priority urbanized areas. The Phase II NPDES permit became effective on July 1, 2013. By July 1, 2015, this State-mandated permit required the County to address storm water runoff from new development and redevelopment projects, both during construction and after construction occurs.

On May 19, 2015 the El Dorado County Board of Supervisors formally adopted revisions to the Storm Water Quality Ordinance (Ordinance 4992). Previously applicable only to the Lake Tahoe Basin, the ordinance establishes legal authority for the entire unincorporated portion of the County. The purpose of the ordinance is to 1) protect health, safety, and general welfare, 2) enhance and protect the quality of Waters of the State by reducing pollutants in storm water discharges to the maximum extent practicable and controlling non-storm water discharges to the storm drain system, and 3) cause the use of BMPs to reduce the adverse effects of polluted runoff discharges on Waters of the State.

National Flood Insurance Program

FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities complying with FEMA regulations that limit development in floodplains. The NFIP regulations permit development within special flood hazard zones provided that residential structures are raised above the base flood elevation of a 100-year flood event. Non-residential structures are required either to provide flood proofing construction techniques for that portion of structures below the 100-year flood elevation or to elevate above the 100-year flood elevation. The regulations also apply to substantial improvements of existing structures.

State Laws, Regulations, and Policies

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act), passed in 1969, dovetails with the CWA (see discussion of the CWA above). It established the SWRCB and divided the State into nine regions, each overseen by an RWQCB. SWRCB is the primary State agency responsible for protecting the quality of the State's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303[d]. In general, SWRCB manages water rights and regulates statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires RWQCBs to develop water quality control plans (also known as basin plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, basin plans must be updated every 3 years.

Impact Analysis:

a. **Water Quality Standards:** There is potential for the proposed project to result in degradation of water quality during both the construction and operational phases. Polluted runoff from the project site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and pesticides and fertilizers from the cultivation. The greatest potential source of water contaminants from the proposed development would be from erosion related to construction and from surface pollutants associated with the impervious surfaces on-site following completion of construction. This degradation could result in violation of water quality standards. The project proponent would be required to enrolled under the CVRWQCB Waiver of Waste Discharge Requirements. One of the requirements is to prepare a Water Resource Protection Plan (WRPP), which includes identifying potential sources of water quality violations or waste discharge requirements, corrective actions including implementing and monitoring BMPs, and documenting water usage and timing to ensure the water use is

not impacting water quality objectives and beneficial uses. The project applicant would be required to prepare and implement a WRPP.

The project proposes to construct an on-site waste treatment system (OWTS) to handle sanitary waste. The proposed septic tank and septic leach field would be installed during Phase I of the proposed project. The proposed OWTS would be sufficient to meet the needs of the project at peak staffing levels. The project's proposed septic system requires approval from the County Environmental Management Department, and future improvement plans would be further reviewed for approval by the Department to ensure wastewater disposal does not impact water quality. With implementation of measures required by the WRPP and adherence to the County Code, impacts would be **less than significant**.

b. **Groundwater Supplies:** The project applicant installed a solar-powered well on-site on July 29, 2020 to irrigate the industrial hemp that was planted in the proposed cannabis cultivation areas. The well is 300 feet deep and can provide an initial flow rate of 46 gallons per minute. Depth to first water is 75 feet below the surface. A total drawdown of 260 feet is anticipated, and water level is 40 feet deep in the well. Surrounding the well, the first 0 to 4 feet below the surface is topsoil. From 4 feet to 21 feet is powder shale and from 21 feet to 30 feet is hard slate. The well would be used to supply water for the proposed 2 acres of cannabis cultivation and 1 acre of nursery. The project is estimated to use approximately 1.2 million gallons of water per year for cannabis cultivation. Additionally, the applicant would be required as a Condition of Approval to provide water storage tanks on-site for fire suppression. The well report indicates there is adequate water supply to irrigate the proposed project, and the proposed project would not introduce substantial impervious surfaces that would interfere with groundwater recharge in the area of the proposed project. Therefore, impacts to groundwater supplies and recharge would be **less than significant**.

c-f. **Drainage Patterns:** The site has mountainous topography, with elevations ranging from approximately 1,000 feet to 1,830 feet amsl. Drainage within the project site generally runs south, and eventually flows into the Middle Fork Cosumnes River which lies at the bottom of the project property (NIC 2020a). Project development would occur at elevations above 1,600 feet amsl and would not substantially alter drainage on-site. Dischargers whose projects disturb one (1) or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009 DWQ. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD).A SWPPP is a sediment and erosion control plan that also describes all the construction site operator's activities to prevent stormwater contamination, control sedimentation and erosion, and comply with the requirements of the Clean Water Act. The project would also be required to conform to the El Dorado County Grading, Erosion, and Sediment Control Ordinance (County Code Section 110.14). This includes the use of BMPs to minimize degradation of water quality during construction. With the implementation of the General Permit Order 2009-0009 DWQ, the preparation of a SWPPP for the proposed project, and conformance with County Code, impacts would be **less than significant** for questions c), d), e), and f).

g-j. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas as shown on Firm Panel Number 06017C1000E, revised September 26, 2008, and would not result in the construction of any structures that would impede or redirect flood flows (FEMA 2008). No dams are located in the project area that could result in potential hazards related to dam failures. The project site would not be at risk for tsunami impact as the site is approximately 115 miles inland from the coast. According to USGS, mudflows or debris flows start on steep slopes and travel to canyon bottoms, stream channels, and areas near the outlets of canyons during intense rainfall. Debris flows commonly begin in swales on steep slopes, making areas downslope from the swale particularly hazardous (USGS 2000). As discussed above, the proposed project property boundary contains steep slopes ranging from to 1,000 feet to 1,830 feet amsl, however the proposed project area is located on the higher elevations and flatter areas of the site, ranging from 1,600 feet to 1,760 feet amsl. Due to the high elevation, flat project area and lack of wetlands, the proposed project would not be at significant risk of exposure to mudflows. The project is not located near a lake or large body of standing water, so there is no risk of seiche. Therefore, impacts would be **less than significant** for questions g), h), i), and j).

FINDING: With adherence to federal, State, and local regulations, the proposed project would have a less than significant impact on hydrology and water quality.

XI. LAND USE PLANNING

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Physically divide an established community?				**X**
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?			**X**	

Environmental Setting:

The project property is zoned Limited Agriculture, minimum 40 acres (LA-40) and designated for Natural Resources (NR) in the El Dorado County General Plan. The intent of the LA zone is to provide an area for supporting horticulture, aquaculture, ranching, and grazing. This zone is distinguished from other zoning such as the PA zone in that it provides limited opportunities for ranch marketing and commercial winery uses and shall generally be applied where those more intensive commercial uses may be undesirable. The purpose of the NR land use designation is to identify areas that contain economically viable natural resources and to protect the economic viability of those resources and those engaged in harvesting/processing of those resources. Compatible uses on private land may include agriculture, rangeland, forestry, wildlife management, recreation, water resources development, and support single-family dwellings.

Regulatory Setting:

California State law requires that each city and county adopt a general plan "for the physical development of the city and any land outside its boundaries which bears relation to its planning." Typically, a general plan is designed to address the issues facing the city or county for the next 15-20 years. The general plan expresses the community's development goals and incorporates public policies relative to the distribution of future public and private land uses. The El Dorado County General Plan was adopted in 2004. The County's 2013-2021 Housing Element was adopted in 2013.

Impact Analysis:

a. **Divide Established Community:** The proposed project would involve the development of a cannabis cultivation facility with appurtenant uses located on a privately-owned property within a rural area in southern El Dorado County. The project property is not within or in the vicinity of an established community. Further, the proposed project would not develop any new roadways or involve any development that could divide an established community. Therefore, the project would have **no impact**.

b. **Land Use Consistency:** The proposed project would conform to both the LA-40 zoning and NR land use designation as cannabis is an agricultural use. Additionally, Commercial Cannabis businesses in unincorporated County of El Dorado are required to apply for and obtain a Commercial Cannabis Use Permit (CCUP). Therefore, with County approval of the CCUP, the proposed project would be in conformance with the County Code, and impacts would be **less than significant**.

FINDING: The proposed project would not divide an established community, and with County approval of a CCUP, would be in conformance with the County Code. Therefore, less than significant or no impact to land use and planning goals would occur.

XII. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
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?				**X**

Environmental Setting:

The western portion of El Dorado County is divided into four, 15-minute quadrangles (Folsom, Placerville, Georgetown, and Auburn) mapped by the State of California Division of Mines and Geology showing the location of MRZs. Those areas which are designated MRZ-2a contain discovered mineral deposits that have been measured or indicate reserves calculated. Land in this category is considered to contain mineral resources of known economic importance to the County and/or State. Review of the mapped areas of the County indicates that project site does not contain any mineral resources of known local or statewide economic value.

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to mineral resources and the proposed project.

State Laws, Regulations, and Policies

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Mining and Geology Board identify, map, and classify aggregate resources throughout California that contain regionally significant mineral resources. Designations of land areas are assigned by CDC and California Geological Survey following analysis of geologic reports and maps, field investigations, and using information about the locations of active sand and gravel mining operations. Local jurisdictions are required to enact planning procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans.

The California Mineral Land Classification System represents the relationship between knowledge of mineral deposits and their economic characteristics (grade and size). The nomenclature used with the California Mineral Land Classification System is important in communicating mineral potential information in activities such as mineral land classification, and usage of these terms are incorporated into the criteria developed for assigning mineral resource zones. Lands classified Mineral Resource Zone (MRZ)-2 are areas that contain identified mineral resources. Areas classified as MRZ-2a or MRZ-2b (referred to hereafter as MRZ-2) are considered important mineral resource areas.

Local Laws, Regulations, and Policies

El Dorado County in general is considered a mining region capable of producing a wide variety of mineral resources. Metallic mineral deposits, including gold, are considered the most significant extractive mineral resources. Exhibit 5.9-6 of the General Plan shows the MRZ-2 areas within the County based on designated Mineral Resource (-MR) overlay areas. The -MR overlay areas are based on mineral resource mapping published in the mineral land classification reports referenced above. The majority of the County's important mineral resource deposits are concentrated in the western third of the County. The proposed project site is not located within this region.

According to General Plan Policy 2.2.2.7, before authorizing any land uses within the -MR overlay zone that will threaten the potential to extract minerals in the affected area, the County shall prepare a statement specifying its reasons for considering approval of the proposed land use and shall provide for public and agency notice of such a statement consistent with the requirements of Public Resources Code section 2762. Furthermore, before finally approving any such proposed land use, the County shall balance the mineral values of the threatened mineral resource area against the economic, social, or other values associated with the proposed alternative land uses. Where the affected minerals are of regional significance, the County shall consider the importance of these minerals to their market region as a whole and not just their importance to the County.

Where the affected minerals are of Statewide significance, the County shall consider the importance of these minerals to the State and nation as a whole. The County may approve the alternative land use if it determines that the benefits of such uses outweigh the potential or certain loss of the affected mineral resources in the affected regional, Statewide, or national market.

Impact Analysis:

a, b. **Mineral Resources.** The project site is not mapped as being within an MRZ by the CDC or in the County General Plan (CDC 2001). **No impact** would occur for questions a) and b).

FINDING: No impacts to mineral resources are expected either directly or indirectly from implementation of the proposed project.

XIII. NOISE

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			**X**	
b. Generation of excessive groundborne vibration or groundborne noise levels?			**X**	
c. For a project 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?				**X**

A project-specific Environmental Noise Assessment was prepared by Bollard Acoustical Consultants, Inc and is included as Appendix E to this Initial Study (BAC 2020).

Existing Noise Setting:

The project property is located in a rural area approximately 2.5 miles east of SR 49 and 2.8 miles southeast of the community of Nashville. The ambient noise environment in the immediate project vicinity is defined primarily by sparse traffic on the local roadway network, intermittent aircraft overflight, and natural sounds coming from wildlife, wind, and the Middle Fork Cosumnes River. To quantify the existing ambient noise level environment in the project vicinity, BAC conducted a long-term ambient noise level survey from April 9-12, 2020. The results of the ambient noise survey are summarized below in Table 2.

Table 2
Long-Term Ambient Noise Measurement Results

Date	CNEL, dB	Average Measured Hourly Noise Levels, dB					
		Daytime (7AM-7PM)		Evening (7PM-10PM)		Nightime (10PM-7AM)	
		Leq	Lmax	Leq	Lmax	Leq	Lmax
4/9/2020	43	37	50	38	46	36	41
4/10/2020	46	47	56	40	48	36	45
4/11/2020	44	40	56	40	45	36	42
4/12/2020	44	37	53	40	46	37	46

Source: BAC 2020

As shown in Table 2, the average measured hourly noise levels at the survey location were fairly consistent throughout the monitoring period. Further, the monitoring survey revealed that ambient noise levels in the immediate project vicinity are typical of rural areas.

Background:

Noise Terminology and Metrics

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol LEQ, with a specified duration.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa.

Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1 dBA changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

Groundborne Vibration Terminology and Metrics

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints. Generally, a PPV of less than 0.08 in/sec does not produce perceptible vibration. At 0.10 PPV in/sec, continuous vibrations may begin to annoy people, and it is the level at which there is a risk of architectural damage (e.g., cracking of plaster) to historical buildings and other vibration-sensitive structures. A level of 0.30 PPV in/sec is commonly used as a threshold for risk of architectural damage to standard dwellings (Caltrans 2013).

Regulatory Setting:

El Dorado County General Plan

The El Dorado County General Plan Public Health, Safety, and Noise Element contains Goal 6.5: "Ensure that County residents are not subjected to noise beyond acceptable levels." The following objective and policies from the General Plan would be applicable to the project (El Dorado County 2004):

> Objective 6.5.1: Protection of Noise-Sensitive Development. Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that

would generate noise levels incompatible with those uses and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.

Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6-2 at existing or planned noise sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6-2 for noise sensitive uses.

Policy 6.5.1.11 The standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends, and on federally recognized holidays. Further, the standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to public projects to alleviate traffic congestion and safety hazards.

Table 6-2, Noise Level Performance Protection Standards for Noise Sensitive Land Uses Affected by Non- Transportation Sources, of the General Plan establishes noise level standards for sensitive land uses. For rural areas, the noise standard limits are: 50 dBA L_{EQ} and an L_{MAX} of 60 dBA from 7:00 a.m. to 7:00 p.m.; 45 dBA L_{EQ} and an L_{MAX} of 55 dBA from 7:00 p.m. to 10:00 p.m.; and 40 dBA L_{EQ} and an L_{MAX} of 50 dBA from 7:00 a.m. to 7:00 p.m.

Table 6-4, Maximum Allowable Noise Exposure for Non-Transportation Noise Sources in Rural Centers – Construction Noise, of the General Plan establishes construction noise level standards (that occurs outside the hours specified in Policy 6.5.1.11) of: 55 dBA L_{EQ} and an L_{MAX} of 75 dBA from 7:00 a.m. to 7:00 p.m.; 50 dBA L_{EQ} and an L_{MAX} of 65 dBA from 7:00 p.m. to 10:00 p.m.; and 45 dBA L_{EQ} and an L_{MAX} of 60 dBA from 7:00 a.m. to 7:00 p.m.

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100 feet away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

El Dorado County Municipal Code

The El Dorado County Municipal Code, Chapter 9.16, Noise, defines and prohibits loud or raucous noise:

Section 9.16.040 – Loud and raucous noises—Definitions.

Loud and raucous noise means:

1. Any noise made by the motor of any automobile, truck, tractor, motorcycle, or aircraft of any kind not reasonably required in the operation thereof under the circumstances and shall include, but not be limited to, backfiring, motor racing, and the buzzing by airplanes;

2. The sound of the discharge of any explosive except by or with the permission of any appropriate State or local licensing agency;

3. The human voice or any record or recording thereof when amplified by any device whether electrical or mechanical or otherwise to such an extent as to cause it to unreasonably carry on to public or private property or to be heard by others using the public highways, public thoroughfares, or public buildings;

4. Any sound not included in the foregoing, which is of such volume, intensity, or carrying power as to interfere with the peace and quiet of persons upon public or private property or other users of the public highways, thoroughfares, and buildings.

Section 9.16.040 – Loud and raucous noises—Prohibited.

> Except as otherwise provided in this chapter, it is unlawful for any person to willfully make, emit, or transmit or cause to be made, emitted, or transmitted any loud and raucous noise upon or from any public highway or public thoroughfare or from any aircraft of any kind whatsoever, or from any public or private property to such an extent that it unreasonably interferes with the peace and quiet of another's private property.

The El Dorado County Municipal Code, Chapter 130, Zoning, is the El Dorado County Zoning Ordinance and establishes the following regarding noise:

Chapter 130.37 of the County Zoning Ordinance complies with General Plan Goal 6.5 (Acceptable Noise Levels), and supplements County Code Chapter 9.16 (Noise) by establishing standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses. Per Chapter 130.37, "The following noise sources shall be exempt from the standards of this Chapter: I. Construction (e.g., construction, alteration or repair activities) during daylight hours provided that all construction equipment shall be fitted with factory installed muffling devices and maintained in good working order." Table 130.37.060.1 contains noise standards for projects which require an acoustic analysis.

Impact Analysis:

a. Generation of Noise:

Construction

Construction of the project would generate noise from the use of heavy construction equipment. Chapter 130.37 of the County Zoning Ordinance complies with General Plan Goal 6.5 (Acceptable Noise Levels), and supplements County Code Chapter 9.16 (Noise) by establishing standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses.: Per Chapter 130.37, "The following noise sources shall be exempt from the standards of this Chapter: I. Construction (e.g., construction, alteration or repair activities) during daylight hours provided that all construction equipment shall be fitted with factory installed muffling devices and maintained in good working order." : Table 130.37.060.1 contains noise standards for projects which require an acoustic analysis (El Dorado County 2018). The applicant would maintain compliance with the relevant requirements of Chapter 130.37, and construction of the project would not result in the generation of a substantial temporary increase in ambient noise levels in excess of the standards established in the General Plan Noise Element. Therefore, construction noise impacts would be less than significant.

Operation

The project's primary operational source of noise would be from greenhouse exhaust fans. The Environmental Noise Assessment evaluated noise generation from greenhouse exhaust fans. Table 3 shows exhaust fan noise level projections from each individual greenhouse, as well as for the combined fan noise exposure from all proposed greenhouses at the nearest residential receivers (BAC 2020). The combined exhaust fan noise level projections assume that all proposed greenhouse fans would be operating simultaneously – which is considered to be worst-case fan noise exposure at the nearest receivers. The location of the residential receiver locations can be found on Figure 1 of Appendix E.

Table 3
Summary of Predicted Greenhouse Exhaust Fan Noise Exposure at Nearest Receivers

Greenhouse	Distance to Receiver					Predicted Noise Level, Leq (dB)				
	R-1	R-2	R-3	R-4	R-5	R-1	R-2	R-3	R-4	R-5
1	1,760	3,850	3,780	3,760	2,690	25	16	16	16	20
2	1,805	3,835	3,745	3,755	2,725	25	16	16	16	20
3	1,810	3,820	3,710	3,750	2,760	25	16	16	16	20
4	1,830	3,800	3,675	3,745	2,795	25	16	16	16	20
5	1,840	3,785	3,640	3,740	2,830	25	16	16	16	20
6	1,860	3,765	3,605	3,740	2,865	25	16	16	16	20
7	1,870	3,755	3,570	3,730	2,900	25	16	17	16	19
8	1,700	3,740	3,770	3,855	2,700	26	16	16	15	20
9	1,720	3,725	3,750	3,850	2,735	26	16	16	16	20
10	1,740	3,705	3,700	3,845	2,770	26	16	16	16	20
11	1,750	3,690	3,665	3,845	2,805	26	16	16	16	20
12	1,770	3,665	3,630	3,840	2,845	25	16	16	16	20
13	1,800	3,675	3,600	3,820	2,870	25	16	16	16	20
14	1,815	3,665	3,565	3,815	2,910	25	16	17	16	19
15	2,400	4,240	3,300	3,200	3,235	22	14	18	18	18
16	2,430	4,245	3,260	3,185	3,270	22	14	18	18	18
17	2,460	4,245	3,230	3,170	3,300	21	14	18	18	18
18	2,485	4,255	3,200	3,150	3,340	21	14	18	18	18
19	2,510	4,265	3,165	3,135	3,370	21	14	18	18	17
20	2,540	4,265	3,130	3,120	3,405	21	14	18	18	17
21	2,560	4,270	3,100	3,100	3,440	21	14	19	19	17
22	2,595	4,275	3,065	3,090	3,470	21	14	19	19	17
23	2,615	4,280	3,030	3,075	3,510	21	14	19	19	17
24	2,650	4,290	3,000	3,060	3,540	21	14	19	19	17
25	2,675	4,290	2,970	3,045	3,575	20	14	19	19	17
26	2,705	4,295	2,935	3,030	3,610	20	14	19	19	16
27	2,345	4,160	3,260	3,280	3,235	22	14	18	18	18
28	2,375	4,165	3,225	3,260	3,270	22	14	18	18	18
29	2,400	4,165	3,210	3,250	3,305	22	14	18	18	18
30	2,430	4,170	3,175	3,235	3,340	22	14	18	18	18

Greenhouse	Distance to Receiver					Predicted Noise Level, Leq (dB)				
	R-1	R-2	R-3	R-4	R-5	R-1	R-2	R-3	R-4	R-5
31	2,455	4,175	3,140	3,125	3,370	22	14	18	18	17
32	2,485	4,175	3,115	3,205	3,405	21	14	18	18	17
33	2,510	4,180	3,075	3,185	3,440	21	14	19	18	17
34	2,540	4,190	3,045	3,170	3,470	21	14	19	18	17
35	2,570	4,200	3,015	3,155	3,505	21	14	19	18	17
36	2,600	4,200	2,980	3,140	3,540	21	14	19	18	17
37	2,620	4,200	2,945	3,130	3,570	21	14	19	18	17
38	2,650	4,205	2,915	3,115	3,610	21	14	19	18	16
Combined – 38 fans	2,150	4,000	3,360	3,440	3,000	39	31	33	33	35
County Rural Daytime Noise Level Standard, Leq (dB)						**50**				
County Rural Evening Noise Level Standard, Leq (dB)						**45**				
County Rural Nightime Noise Level Standard, Leq (dB)						**40**				

Source: BAC 2020

As indicated in Table 3, the calculated combined noise exposure from the proposed 38 greenhouse exhaust fans is would not exceed the applicable El Dorado County General Plan daytime, evening, and nighttime noise standards (BAC 2020). Therefore, on-site project operational noise would be less than significant.

The project would also result in operational off-site transportation noise from vehicles traveling to and from the project site. According to the On-Site Transportation Review, the project is anticipated to generate 60 average daily trips (Prism 2020). All project-related traffic would access Freshwater Land from Sand Ridge Road. The On-Site Transportation Review includes one week of traffic counts on Sand Ridge Road, 500 feet east SR 49, completed in April 2020. The traffic counts show average daily traffic of 577. In typical noisy environments, changes in sound levels of 1 to 2 dBA are generally not perceptible. A sound level change of 3 dBA is considered a barely perceptible increase and a sound level change of 5 dBA is considered a readily perceptible increase (Caltrans 2009). Due to the logarithmic nature of the decibel scale, a doubling of sound levels is an increase in 3 dBA. Therefore, in order for traffic noise to increase by 3 dBA (a barely perceptible increase), the traffic volume would have to double. The project's addition of up to 60 vehicles to the existing 577 vehicles per day would not double the traffic volume and would not result in a significant increase in ambient noise level.

Impact Summary

With adherence to the County Condition of Approval to restrict the hours of construction, the project would not result in 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, and the impact would be **less than significant**.

b. **Excessive Groundborne Vibration and Noise Levels:** Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted to implement the proposed project. A possible source of vibration during general project construction activities would be a vibratory roller used for soil and aggregate compaction. A large vibratory roller would create approximately 0.210 inch per second PPV at a distance of 25 feet (Caltrans 2013). The closest vibration sensitive land use would be approximately 1,850 feet from the construction activity. At this distance, groundbourne vibration from the project's construction equipment would be imperceptible. Once operational, the project would not be a source of substantial groundbourne vibration. Therefore, the project would not result in generation of excessive groundborne vibration levels, and the impact would be **less than significant**.

c. **Aircraft Noise:** The project is not located within an airport land use plan or in the immediate vicinity of a private airstrip. The closest airport to the project site is the Placerville Airport, approximately 10 miles

north of the project site. Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airports, and there would be **no impact**.

FINDING: With adherence to the County Condition of Approval to restrict construction hours, the project would not result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards. The project would not result in generation of excessive groundborne vibrations levels. The project would not expose people residing or working in the project area to excessive noise levels from airports.

XIV. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?			**X**	
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				**X**

Regulatory Setting:

No federal or State laws, regulations, or policies apply to population and housing and the proposed project.

Local Laws, Regulations, and Policies

The El Dorado County General Plan (adopted 2004) limits residential density on lands designated for NR. Up to one single family dwelling unit per 40 acres is allowed on NR lands outside of timber production areas (the project site is not located within an area that produces commercial timber). In October of 2013, the El Dorado County Board of Supervisors adopted the 2013-2021 Housing Element to the Adopted General Plan.

Impact Analysis:

a. **Population Growth:** The proposed project does not include the construction of any new homes; however, it does include the construction of a cannabis cultivation facility that could create a limited number of new jobs in the region. While the addition of new employment opportunities could increase the County's population, it is anticipated that the new employees would likely be existing residents of the County or surrounding area that would commute to the project site. As such, the proposed project would not induce substantial population growth or result in a demand for new housing. The impact is **less than significant**.

b. **People or Housing Displacement:** There are no residences located on the project property, and therefore, no existing housing or residents would be displaced by the proposed project. **No impact** would occur.

FINDING: There proposed project would not induce substantial growth either directly or indirectly and would not displace housing or residents. Less than significant or no impact would occur to population and housing.

XV. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Fire protection?			**X**	
b. Police protection?			**X**	
c. Schools?			**X**	
d. Parks?			**X**	
e. Other government services?			**X**	

Regulatory Setting:

No relevant federal laws, regulations, or policies are applicable to this section.

State Laws, Regulations, and Policies

California Fire Code

The California Fire Code (Title 24 CCR, Part 9) establishes minimum requirements to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of CCR contains requirements for fire safety during construction and demolition.

California Public Resources Code Division 4: Forests, Forestry and Range and Forage Lands

The project is located in a High Fire Hazard Severity Zone of a State Responsibility Area. SRAs are defined by California PRC Section 4102 as areas of the State in which CAL FIRE has determined that the financial responsibility for preventing and suppressing fires lies with the State of California. SRAs are lands in California where CAL FIRE has legal and financial responsibility for wildfire protection. SRA lands typically are unincorporated areas of a county, are not federally owned, have wildland vegetation cover, have housing densities lower than three units per acre, and have watershed or range/forage value.

California PRC Sections 4291 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Requirements regarding hazardous vegetation and fuel management are also contained in Sections 4906 and 4907 of the CFC.

California PRC Section 4290 requires CAL FIRE to adopt regulations implementing minimum fire safety standards for defensible space that would be applicable to lands within the SRA and lands within very high FHSZs. Additional regulations regarding defensible space can be found in Title 14, Sections 1270.00 *et seq*. of the California Code of Regulations.

Impact Analysis:

a. **Fire Protection:** The proposed project is located within an SRA, but the El Dorado County Fire District provides structural fire protection services and emergency services to the project site. The project would be subject to review by the Fire District to ensure all required fire protection measures are incorporated into the building plans. The project site is located in a partially developed part of the County that currently receives fire service. While a new cannabis cultivation facility project could potentially require fire services, it would not result in the need for new fire personnel or facilities, as existing levels of fire service can be provided adequately with existing personnel out of existing facilities. Additionally, Fire Department fees would be collected as part of the building permit process. Therefore, the impact is **less than significant**.

b. **Police Protection:** Law enforcement services for the project area are provided by the El Dorado County Sheriff. Development of the project site could potentially result in a need for police protection services to respond to any potential incidents that may occur at the site. However, the project site is located in a developed part of the County that currently receives police service. The proposed project prepared a security plan to ensure the site is adequately secured . As discussed in that plan, the proposed project would include the employment of a private security contractor, a digital video surveillance system, and a locked and gated compound among other security protocols (Carroll 2020). With the current law enforcement services in the area and the implementation of measures discussed in the Security Plan, the proposed project would not result in a substantial impact to police protection in the area and the impact would be **less than significant**.

c-e. **Schools, Parks, and Government Services:** Operation of the proposed project would not induce population growth that would substantially contribute to increased demand on schools, parks, or other governmental services that could, in tum, result in the need for new or expanded facilities. Therefore, the project's impact to these services would be **less than significant** for questions c), d), and e).

FINDING: The project would not result in a significant increase of public services to the project. Any increased demand to services would be addressed through the payment of established impact fees and impacts to public services would be less than significant.

XVI. RECREATION

	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

National Trails System

The National Trails System Act of 1968 authorized The National Trails System (NTS) in order to provide additional outdoor recreation opportunities and to promote the preservation of access to the outdoor areas and historic resources of the nation. The Appalachian and Pacific Crest National Scenic Trails were the first two components, and the System has grown to include 20 national trails.

The National Trails System includes four classes of trails:

1. National Scenic Trails (NST) provide outdoor recreation and the conservation and enjoyment of significant scenic, historic, natural, or cultural qualities. The Pacific Coast Trail falls under this category. The Pacific Coast Trail passes through the Desolation Wilderness area along the western plan area boundary.

2. National Historic Trails (NHT) follow travel routes of national historic significance. The National Park Service has designated two National Historic Trail (NHT) alignments that pass through El Dorado County, the California National Historic Trail, and the Pony Express National Historic Trail. The California Historic Trail is a route of approximately 5,700 miles including multiple routes and cutoffs, extending from Independence and Saint Joseph, Missouri, and Council Bluffs, Iowa, to various points in California and Oregon. The Pony Express NHT commemorates the route used to relay mail via horseback from Missouri to California before the advent of the telegraph.

3. National Recreation Trails (NRT) are in, or reasonably accessible to, urban areas on federal, State, or private lands. In El Dorado County, there are 5 NRTs.

State Laws, Regulations, and Policies

The California Parklands Act

The California Parklands Act of 1980 (Public Resources Code Section 5096.141-5096.143) recognizes the public interest for the state to acquire, develop, and restore areas for recreation and to aid local governments to do the same. The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

The California state legislature approved the California Recreational Trail Act of 1974 (Public Resources Code Section 2070-5077.8) requiring that the Department of Parks and Recreation prepare a comprehensive plan for California trails. The California Recreational Trails Plan is produced for all California agencies and recreation providers that manage trails. The Plan includes information on the benefits of trails, how to acquire funding, effective stewardship, and how to encourage cooperation among different trail users.

The 1975 Quimby Act (California Government Code Section 66477) requires residential subdivision developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances to cities and counties for parkland dedication or in-lieu fees paid to the local jurisdiction. Quimby exactions must be roughly proportional and closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. The exactions only apply to the acquisition of new parkland; they do not apply to the physical development of new park facilities or associated operations and maintenance costs.

The County implements the Quimby Act through §16.12.090 of the County Code. The County Code sets standards for the acquisition of land for parks and recreational purposes, or payments of fees in lieu thereof, on any land subdivision. Other projects, such as ministerial residential or commercial development, could contribute to the demand for park and recreation facilities without providing land or funding for such facilities.

Local Laws, Regulations, and Policies

The 2004 El Dorado County General Plan Parks and Recreation Element establishes goals and policies that address needs for the provision and maintenance of parks and recreation facilities in the county, with a focus on providing recreational opportunities and facilities on a regional scale, securing adequate funding sources, and increasing tourism and recreation-based businesses. The Recreation Element describes the need for 1.5 acres of regional parkland, 1.5 acres of community parkland, and 2 acres of neighborhood parkland per 1,000 residents. Another 95 acres of park land are needed to meet the General Plan guidelines.

Impact Analysis:

a, b. **Parks and Recreational Services:** The proposed project would not include any increase in permanent population that would contribute to increased demand on recreation facilities or contribute to increased use of existing facilities such that physical deterioration of the facility would occur. The proposed project would be located in rural, southern El Dorado County, and the closest park is Pioneer Park, located approximately 6 miles northeast of the site. The proposed project would have no impact on this facility or others in the vicinity of the site. Impacts to recreation would be **less than significant**.

FINDING: No significant impacts to park or recreational facilities would result from implementation of the proposed project.

XVII. TRANSPORTATION

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			**X**	
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			**X**	
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				**X**
d. Result in inadequate emergency access?			**X**	

Project-specific transportation studies were prepared by a traffic engineer from Prism Engineering and are included as Appendix F. Results from the study are summarized in this section.

Environmental Setting:

The project site is accessed by a gated driveway from Freshwater Lane; a neighboring property also uses a section of that driveway for ingress and egress. Freshwater Lane is a private road that has a shared maintenance agreement between all owners of parcels that access it. The road is narrow (from 14 to 18 feet wide) and partially paved. The paved portion is from Sand Ridge Road to a point approximately 0.5 mile south of Sand Ridge Road, where it becomes a dirt road. It is covered in gravel beyond the intersection of Tumbleweed Road. Sand Ridge Road proceeds west to its nexus with State Route 49, which runs straight north and south in this area. The project site is located approximately 30 minutes' drive (approximately 16.6 miles) southeast of Shingle Springs and approximately 25 minutes' drive (approximately 17.4 miles) south of Placerville.

The project's shared gated driveway is located approximately 1.5 miles south of Sand Ridge Road. The gate is approximately 185 feet inward from Freshwater Lane. The total distance from the project driveway to SR 49 is 4.2 miles and is a 12-minute drive.

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to transportation/traffic and the proposed project.

State Laws, Regulations, and Policies

Caltrans manages the state highway system and ramp interchange intersections. This State agency is also responsible for highway, bridge, and rail transportation planning, construction, and maintenance.

Local Laws, Regulations, and Policies

According to the transportation element of the County General Plan, Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions. Level of Service is defined in the latest

edition of the Highway Capacity Manual (Transportation Research Board, National Research Council). There are some roadway segments that are excepted from these standards and are allowed to operate at LOS F, although none of these are located in the Lake Tahoe Basin. According to Policy TC-Xe, "worsen" is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project:

A. A two percent increase in traffic during a.m., p.m. peak hour, or daily
B. The addition of 100 or more daily trips, or
C. The addition of 10 or more trips during the a.m. or p.m. peak hour.

Impact Analysis:

a. **Conflict with Transportation Plan:** A transportation study was prepared for the proposed project by Prism Engineering (Appendix F to this Initial Study). The study area includes roadways State Route 49, Sand Ridge Road, and Freshwater Lane. Study intersections include State Route 49 / Sand Ridge Road and Sand Ridge Road / Freshwater Lane.

The project is expected to generate a total of 60 daily trips under the most conservative estimate, with roughly 6.7% or 4 trips occurring during the p.m. peak hour. The peak hour volume on Sand Ridge Road is only 52 vehicles per hour in the pm peak hour (6:00 p.m.). Vehicles accessing the site would travel primarily via SR 49; a sufficient level of sight distance exists on both directions of SR 49 to spot a car turning from or onto Sand Ridge Road. Similarly, sight distance is sufficient to allow safe turns from and onto Freshwater Lane. Given the already low traffic volume in the area, the small number of increased trips resulting from the project would not result in a significant impact.

Given the rural nature of the site, the low population density of the area, the low traffic volumes existing, and the low increases anticipated, bicycle or pedestrian use of public roadways would not be impeded. For context, only five accidents occurred in the project vicinity in the previous five years, and none involved pedestrians or bicycles. Therefore, the proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities, and impacts would be **less than significant**.

b. **Vehicle Miles Travelled (VMT):** Current direction regarding methods to identify VMT and comply with State requirements is provided by the California Governor's Office of Planning and Research (OPR) December 2018 publication, Technical Advisory on Evaluating Transportation Impacts in CEQA. This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Again, OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Government Code Section 65035 ["It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs."].) OPR provides this direction for small projects:

> Screening Threshold for Small Projects: Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact.

Conservatively, after full project buildout is complete and during the most intensive harvesting period of the year, the On-Site Transportation Review estimated a maximum number of 60 trips per day. This includes any expected seasonal workers who will only be utilizing the site for a very limited portion of the year. Delivery and supply trips are expected to be made with vans or light trucks and are expected to add an average of less than one trip per day.

Given the low level of existing traffic volume in the area, the adequacy of existing infrastructure to accommodate additional volume, and the fact that daily trips per day will be below the OPR's threshold of 110, the project's impact would be **less than significant**.

c. **Design Hazards:** No design features associated with the proposed project would increase hazards. No changes would be made to existing public roads, and sufficient line of sight and low traffic volumes exist in the area to safely accommodate vehicles travelling to and from the project site. Further, although the project is a farming operation, no farm vehicles or equipment (e.g., tractors) would be transported on public roads, as the site will be a small, self-contained operation. **No impact** would occur.

d. **Emergency Access:** The proposed project site would have adequate access for emergency vehicles. Additionally, the project was reviewed by the Fire District for the adequacy of the interior project road circulation and availability of adequate emergency ingress and egress in the project design. Additionally, the On-Site Transportation Review concluded that the proposed parking lot on-site would provide adequate space for a fire engine to turn around. The Fire District did not respond with any concerns pertaining to the proposed project's emergency ingress and egress capabilities as it was shown on the submitted site plan. Therefore, impacts would be **less than significant**.

FINDING: The proposed project would not exceed traffic or VMT thresholds, introduce hazardous transportation design features, or obstruct emergency vehicle access, and impacts to transportation would result in less than significant or no impacts.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:				
a) 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:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			**X**	
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			**X**	

Environmental Setting:

Formal invitations to participate in AB 52 consultation on the proposed project was sent by the County to nine tribal representatives on April 20, 2020. The representatives included:

- Pamela Cubbler, Colfax-Todds Valley Consolidated Tribe
- Sara Setshwaelo, Ione Band of Miwok Indians
- Cosme Valdez, Nashville-El Dorado Miwok
- Regina Cuellar, Shingle Springs Band of Miwok Indians
- Don Ryberg, T'si-Akim Maidu
- Gene Whitehouse, United Auburn Indian Community of the Auburn Rancheria
- Darrel Cruz, Washoe Tribe of Nevada and California
- Raymond Hitchcock, Wilton Rancheria
- Erin Young, El Dorado County Wopumnes Nisenan-Mewuk Nation

Mariah Mayberry with Wilton Rancheria provided a written response via email on May 12, 2020. Ms. Mayberry requested a record search, cultural survey, and a site visit. County Senior Planner, Aaron Mount, provided Ms. Mayberry with a copy of the draft cultural resources report on May 12, 2020. Following receipt of the draft cultural resources report, Ms. Mayberry responded via email on May 14, 2020 requesting a site visit. A request was made by phone for the Wilton Rancheria to contact the property owner directly to schedule a site visit. No further correspondence was received from the Wilton Rancheria.

Katie Solorio, Administrative Assistant, and Kara Perry, Site Protection Manager, with Shingle Springs Band of Miwok Indians, provided a written response on May 14, 2020. Ms. Perry noted that the Shingle Springs Band of Miwok Indians were not aware of any known cultural resources on the site but requested any and all completed record searches and cultural survey reports in the letter attachment in the email from Ms. Solorio. County Senior Planner, Aaron Mount, provided Ms. Solorio with a copy of the draft cultural resources report on May 14, 2020.

Anna Starkey, Cultural Regulatory Specialist of the United Auburn Indian Community of the Auburn Rancheria, provided a written response via email on May 21, 2020. Ms. Starkey requested review of project area photographs and the draft cultural resources report. County Senior Planner, Aaron Mount, provided Ms. Starkey with a copy of the draft cultural resources report on May 26, 2020. Following receipt of the draft cultural resources report, Ms. Starkey responded via email on May 27, 2020 stating that the only areas subject to direct and indirect impacts do not

include culturally sensitive areas, and there is no need for a site visit. However, Ms. Starkey provided language to be included as a Condition of Approval in this Tribal Cultural Resources (TCR) section.

The tribes did not provide any information about TCRs in the project area to the County, thereby concluding AB 52 consultation.

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to Tribal Cultural Resources (TCRs) and the proposed project.

State Laws, Regulations, and Policies

Assembly Bill (AB) 52

AB 52, which was approved in September 2014 and effective on July 1, 2015, requires that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe. The bill, chaptered in CEQA Section 21084.2, also specifies that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment.

Defined in Section 21074(a) of the Public Resources Code, TCRs are:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or
    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074 as follows:

- A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and

- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a TCR if it conforms with the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TRCs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

Impact Analysis:

a.i),ii) **Tribal Cultural Resources.** As noted above, formal invitations to participate in AB 52 consultation on the proposed project was sent by the County to nine tribal representatives on April 20, 2020. Three of the nine tribes provided written responses requesting a records search, cultural resources report, aerial photographs

of the site, and/or a site visit. All three tribes were provided with a copy of the cultural resources report and granted permission to set up a site visit with the project applicant, if desired. None of the tribes provided any information about TCRs in the project area to the County, thereby concluding AB 52 consultation. The United Auburn Indian Community of the Auburn Rancheria provided the following language to be included as a Condition of Approval:

> **"**If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find. A Tribal Representative from culturally affiliated tribes shall be immediately notified and shall determine if the find is a TCR (PRC Section 21074). The Tribal Representative will make recommendations regarding the treatment of the discovery. Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign.
>
> Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied.
>
> The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary."

With adherence to the Condition of Approval above, the potential impact from inadvertent discovery of TCRs would be **less than significant.**

FINDING: With adherence to the Condition of Approval above, the potential impact from inadvertent discovery of TCRs would be less than significant.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunication facilities, the construction or relation of which could cause significant environmental effects?			**X**	
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry or multiple dry years?			**X**	
c. Result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the providers existing commitments?			**X**	
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?			**X**	
e. Comply with federal, state and local management and reduction statutes and regulations related to solid waste?			**X**	

Regulatory Setting:

Federal Laws, Regulations, and Policies

Energy Policy Act of 2005

The Energy Policy Act of 2005, intended to reduce reliance on fossil fuels, provides loan guarantees or tax credits for entities that develop or use fuel-efficient and/or energy efficient technologies (USEPA 2014). The act also increases the amount of biofuel that must be mixed with gasoline sold in the United States (USEPA 2014).

State Laws, Regulations, and Policies

California Integrated Waste Management Act of 1989

The California Integrated Waste Management Act of 1989 (Public Resources Code, Division 30) requires all California cities and counties to implement programs to reduce, recycle, and compost wastes by at least 50 percent by 2000 (Public Resources Code Section 41780). The state, acting through the California Integrated Waste Management Board (CIWMB), determines compliance with this mandate. Per-capita disposal rates are used to determine whether a jurisdiction's efforts are meeting the intent of the act.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act of 1991 (Public Resources Code Sections 42900-42911) requires that all development projects applying for building permits include adequate, accessible areas for collecting and loading recyclable materials.

California Integrated Energy Policy

Senate Bill 1389, passed in 2002, requires the CEC to prepare an Integrated Energy Policy Report for the governor and legislature every 2 years, and to provide an update in the year between reports. The report analyzes data and provides policy recommendations on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewable energy, and public interest energy research. The 2019 Integrated Energy Policy Report covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.

Title 24–Building Energy Efficiency Standards

The CALGreen (CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR (CBSC 2019). The current 2019 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

Urban Water Management Planning Act

California Water Code Sections 10610 *et seq.* requires that all public water systems providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet per year (AFY), prepare an urban water management plan (UWMP).

Impact Analysis:

a. **Construction of New/Expansion of Existing Utilities**: A solar-powered water well was constructed on-site on July 29, 2020 to provide the water supply for irrigation for the industrial hemp cultivation operation and would be the primary source of water for irrigation for the proposed cannabis cultivation operation that is planned to replace the current hemp cultivation. The proposed project would also include the installation of an on-site septic system with leach field and solar array system within a 3,000-sf area to provide power to the two proposed buildings. The greenhouses would be powered by rooftop solar panel to be installed on each greenhouse. The construction of these utilities would involve minor soil disturbance and would not result in significant impacts. The proposed project would not require relocation or expansion of existing utilities. Therefore, the proposed project would have a **less than significant impact**.

b. **Sufficient Water Supply:** As noted above, the water supply for the proposed project would come from solar-powered water well that was constructed on-site on July 29, 2020 to provide the water supply for irrigation for the industrial hemp cultivation operation and would be the primary source of water for irrigation for the proposed cannabis cultivation operation that is planned to replace the current hemp cultivation. Additionally, water storage tanks have been installed on-site for additional irrigation water supply and fire suppression. The proposed project is anticipated to demand approximately 1.2 million gallons of water per year. The well is 300 feet deep and can provide an initial flow rate of 46 gallons per minute. The well report indicates there is adequate water supply to irrigate the proposed project, and impacts would be **less than significant**.

c. **Wastewater Treatment:** There are no public wastewater treatment systems serving the project site. As discussed above, the proposed project would construct a private wastewater system which would include a

septic tank and leach field. At final buildout of the proposed project, the site would accommodate 11 full-time employees and 9 part-time employees. The proposed septic system would be required to meet NSF standards and is subject to County permitting requirements. This impact would be **less than significant**.

d,e. **Solid Waste Disposal and Requirements:** El Dorado Disposal distributes municipal solid waste to Forward Landfill in Stockton and Kiefer Landfill in Sacramento. Pursuant to El Dorado County Environmental Management Solid Waste Division staff, both facilities have sufficient capacity to serve the County. The Forward Landfill was last inspected on 9/29/2020 and the Kiefer Landfill was last inspected on 8/18/2020, both inspections determined that the facilities had no violations or areas of concern (CalRecycle 2020). Recyclable materials are distributed to a facility in Benicia, and green wastes are sent to a processing facility in Sacramento. County Ordinance No. 4319 requires that new development provide areas for adequate, accessible, and convenient storing, collecting, and loading of solid waste and recyclables. On-site solid waste collection would be handled through the local waste management contractor and would be stored in a covered trash enclosure. Impacts would be **less significant** for questions d) and e).

FINDING: No significant utility and service system impacts would be expected with the project, either directly or indirectly, and impacts would be less than significant.

XX. WILDFIRE

Would the project:				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			**X**	
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?			**X**	
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities: that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			**X**	
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?			**X**	

Environmental Setting:

The proposed project site is bound to the north by a rural residential property, to the east and south by the Middle Fork Cosumnes River and wooded land, and to the west by wooded land. The project site is within an SRA, and according to CAL FIRE mapping, the project site is within a high fire hazard zone. The project site was partially burned in the 2014 Sand Fire and according to the project applicant, was used as a staging area for CAL FIRE.

Regulatory Setting:

Federal Laws, Regulations, and Policies

No federal laws, regulations, or policies apply to this section, as the project site is on nonfederal land.

State Laws, Regulations, and Policies

The project is located in a High Fire Hazard Severity Zone of a State Responsibility Area. SRAs are defined by California PRC Section 4102 as areas of the State in which CAL FIRE has determined that the financial responsibility for preventing and suppressing fires lies with the State of California. SRAs are lands in California where CAL FIRE has legal and financial responsibility for wildfire protection. SRA lands typically are unincorporated areas of a county, are not federally owned, have wildland vegetation cover, have housing densities lower than three units per acre, and have watershed or range/forage value.

California PRC Sections 4291 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed. Vegetation that is more than 30 feet from the building, less than 18 inches high, and important for soil stability, may be maintained; as may single specimens of trees or other vegetation that is maintained so as to manage fuels and not form a means of rapid fire transmission from other nearby vegetation to a structure. Requirements regarding hazardous vegetation and fuel management are also contained in Sections 4906 and 4907 of the CFC.

California PRC Section 4290 requires CAL FIRE to adopt regulations implementing minimum fire safety standards for defensible space that would be applicable to lands within the SRA and lands within very high FHSZs. Additional regulations regarding defensible space can be found in Title 14, Sections 1270.00 *et seq*. of the California Code of Regulations.

Local Laws, Regulations, and Policies

Given that the project is in SRA, no additional local laws or policies apply regarding defensible space or wildfire prevention.

Impact Analysis:

a. As discussed under question g) in Section IX, Hazards and Hazardous Materials, the project applicant would be required to prepare and implement an evacuation plan in the case of an emergency as a Condition of Approval. With adherence to the Condition of Approval, impacts would be **less than significant**.

b, d. Because the project site is within an SRA high fire hazard severity zone, a project-specific Fire Safe Plan was prepared for the proposed project and is included as Appendix D to this Initial Study. The Fire Safe Plan determined implementation of the proposed project would not alter any roadways, access points, or otherwise degrade traffic operations and access to the area in such a way as to interfere with an emergency response or evacuation plan. There are no proposed residences associated with the project. The proposed project would be required to adhere to all fire prevention and protection requirements and regulations of El Dorado County including the El Dorado County Fire Hazard Ordinance and the Uniform Fire Code, as applicable. Pertinent measures include, but are not limited to, the use of equipment with spark arrestors and non-sparking tools during project activities. The project applicant would also be required to develop the project structures to meet 'defensible space' requirements as specified under Objective 6.2.1 of the Safety Element of the El Dorado County General Plan. As a Condition of Approval, the proposed project would be required to annually mow and masticate 200 feet around all structures or to the steep slope break. Additionally, the applicant would be required to maintain 50 feet on each side of the road leaving the property.

The On-Site Transportation Review concluded that the proposed parking lot on-site would provide adequate space for a fire engine to turn around. The project has been reviewed by the El Dorado Fire Protection District and CAL FIRE and is not anticipated to exacerbate wildfire risks. The proposed project is located adjacent to sloping terrain, but all proposed developments would be located on flat graded pads. All grading activities on-site would be required to comply with the El Dorado County Grading, Erosion, and Sediment Control Ordinance. Therefore, the project would not pose a significant landslide risk in post-fire conditions. Additionally, the site is not located within any mapped 100-year flood areas as show on Firm Panel Number 06017C1000W, and due to the site's high elevation and upslope location to the surrounding topography, the site would not be at risk of post-fire flooding. Therefore, project impacts would be **less than significant** for questions b) and d).

c. **Installation or Maintenance of Infrastructure.** As discussed under question g) in Section IX, Hazards and Hazardous Materials, the Fire Safe Plan found that effective fuel reduction can be obtained with annual mowing and mastication for 200 feet around the proposed structures or to the steep slope break. Then 50 feet should be maintained on each side of the road leaving the property. These measures would be included as Conditions of Approval for the proposed project. However, the proposed project would not include or require the installation or maintenance of additional infrastructure that would exacerbate fire risk. Therefore, impacts would be **less than significant**.

FINDING: As conditioned and with adherence to the County Code and CAL FIRE requirements, wildfire impacts would be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			**X**	
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			**X**	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			**X**	

Impact Analysis:

a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment. As conditioned or mitigated, and with adherence to County permit requirements, this project would not have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history, pre-history, or tribal cultural resources. Any impacts from the project would be **less than significant** due to the design of the project and required standards that would be implemented prior to project construction or with the building permit processes and/or any required project specific improvements on the property.

b. Cumulative impacts are defined in Section 15355 of the State CEQA Guidelines as *two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.*

No other cannabis operations or other developments are proposed or anticipated in the vicinity of the project site. Due to the small size of the proposed project, types of activities proposed, and site-specific environmental conditions, which have been disclosed in the Project Description and analyzed in Sections I through XX, there would be no significant impacts anticipated related to aesthetics, agriculture and forestry resources, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards/hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire that would be cumulatively considerable. Mitigation measures for the proposed project would reduce potential impacts related biological resources such that no contributions to

cumulative impacts would be expected. Therefore, the proposed project would not contribute to potentially significant cumulative impacts, and impacts would be **less than significant**.

c. As conditioned and with compliance with the County Code, the proposed project would be anticipated to have a less than significant project-related environmental effect on human beings, either directly or indirectly. Therefore, impacts would be **less than significant**.

FINDINGS: The proposed project would not result in significant environmental impacts, exceed applicable environmental standards, or significantly contribute to cumulative environmental impacts.

8.0 INITIAL STUDY PREPARERS

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Appendix A

Odor Control Plan

ODOR CONTROL PLAN
FOR THE CANNABIS CULTIVATION OPERATION AT
3029 FRESHWATER LANE, EL DORADO, CALIFORNIA

Preparation Date:
February 7, 2020

Prepared for:
County of El Dorado

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1.0 INTRODUCTION / REGULATORY SETTING

El Dorado County's Ordinance No. 5110. Outdoor and Mixed-Light Cultivation of Commercial Cannabis Sec. 130.41.200, Part 5.D.) regulates odors as follows:

"*The cultivating, drying, curing, processing, and storing of cannabis shall not adversely affect the health, safety, or enjoyment of property of persons residing near the property on which cannabis is cultivated or processed due to odor that is disturbing to people of normal sensitivity. Any cannabis odor shall not be equal or greater than a 7 dilution threshold ("DT") when measured by the County with a field olfactometer at the property line on which the cannabis is cultivated or processed for a minimum of two olfactometer observations not less than fifteen minutes apart within a one hour period ("7 DT one hour"). If the odor from cannabis cultivating, drying, curing, processing, or storing violates this subsection, the permittee must reduce the odor below the 7 DT one hour at property line threshold within the time required by the County. Notwithstanding the prior issuance of a permit, the County may require installation of one or more odor control options, which may include but are not limited to the use of a greenhouse or hoop house that includes activated carbon filtration or equivalent odor abatement control equipment on the air exhaust, a vapor-phase odor control system, increasing the required setback, growing fewer plants, or growing only low odor cannabis strains. Installation of certain odor control options may require a permit. Any such notice requiring the use of one or more odor control options will provide a deadline for completion and the dilution threshold will be retested upon expiration of that deadline. The continued odor in excess of 7 DT one hour upon retesting will constitute a violation of this section subject to enforcement, abatement, and revocation of a Commercial Cannabis Use Permit and Commercial Cannabis Annual Operating Permit under Section 130.41.100 and Article 5, Section 130.54.090 (Revocation or County Mandated Modification of a Permit*)."

The goal of this plan is to ensure that odors are controlled at the facility such that they do not create a nuisance for neighbors or sensitive receptors. This plan is intended to be a "living" document, updated as necessary, such that when operational activities or processes are modified or replaced, the plan is revised to reflect these changes. Relevant sections should also be amended whenever the goals of the plan are not met, whenever a significant nuisance odor event or other non-compliance event occurs, or whenever a violation notice is issued.

Note that this plan does not cover other potential air pollution sources and their control, such as emissions from electrical generators, Cannabis product manufacturing, etc. The El Dorado County Air Quality Control District regulates such emissions.

2.0 FACILITY INFORMATION

The facility is a proposed cannabis cultivation operation on a 180 acre property at 3029 Freshwater Lane, El Dorado, California. The property consists of 2 parcels: APN 046-071-011 (139.5 acres) and APN 046-071-010 (40.0 acres). The property is accessed by a private graveled road off of Freshwater Lane (see exhibits).

The project consists of two phases, although only Phase I will be implemented immediately. Phase I is a Cannabis cultivation facility encompassing about 2.5 acres of land. This phase consists of:

- a cultivation compound of approximately 84,791 square feet with approximately 1157 planting stations with a mature Cannabis canopy of approximately 30,000 square feet.
- solar array area (1,500 square feet; dimensions of 20 feet by 75 feet)
- greenhouse (5,000 square feet; dimensions of 100 feet by 50 feet)
- main building with office, storage, and drying/processing rooms (5,000 square feet; dimensions of 100 feet by 50 feet)
- septic tank and leachfield
- a new well
- parking area with 15 spaces at end of existing driveway / material storage area (50 feet by 150 feet)

To implement Phase I, some trees will need to be removed and some ground clearing and minor grading will need to occur.

Phase II will be located nearby and will consist of a second cultivation area of approximately 2 acres. This phase may expand the Cannabis canopy and have mixed-light cultivation capabilities. This phase will be constructed sometime in the future.

3.0 ENVIRONMENTAL SETTING AND PREVAILING WINDS

The Study Area is located within the cis-montane Sierra Nevada mountains geographic subregion, which is contained within the Sierra Nevada Mountains geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in Climate Zone 7 - California's Gray Pine Belt, defined by hot summers and mild but pronounced winters without severe winter cold or high humidity (Sunset, 2020). The topography of the Study Area is mountainous. The elevation ranges from approximately 1,000 feet to 1,830 feet above mean sea level

Drainage runs south, and eventually flows into the Middle Fork Cosumnes River. Prior to the establishment of this cultivation operation, land uses were open space, livestock range, and forest reserve. The surrounding land uses are public lands and private estates with gardens or corrals, open space, and grazing land.

The project site is located in the County of El Dorado, which lies within the Mountain Counties Air Basin (MCAB). The climate of the MCAB is influenced by the foothill and mountainous terrain unique to the counties included in the MCAB. El Dorado County is bordered by the Sacramento Valley to the west and the Nevada State line to the east with the western portion of the County consisting of rolling Sierra Nevada foothills, and the central and eastern portion of the County consisting of granite peaks reaching up to 10,000 feet in elevation.

In canyon areas, winds follow a typical diurnal pattern of upslope during the day and downslope during the night (U.S Forest Service). Canyon winds are those that move up or down a canyon; slope winds are those that move up or down the slope of a mountain. These diurnal winds result from the uneven heating and cooling of sloped surfaces by the sun as it traverses the sky during the day, the thermal inertia of bedrock, and resulting pressure differentials (American Meteorology Society). Daytime thermal up-canyon winds prevail in the first half of the day. In the afternoon, winds may reverse and go down-canyon due to cooling at the canyon walls. Locally, prevailing winds are dictated by the mountainous topography; upcanyon and downcanyon winds along the Middle Fork Cosumnes River will be dominant. Secondary winds will be slope winds (see Exhibits).

4.0 AMBIENT ODOR SOURCES

In the vicinity of the proposed project, very few odor sources were identified. In the vicinity, no specific commercial or industrial facilities were identified that could contribute to the existing odor environment, except for the possible presence of Cannabis gardens. Inferred odor sources consist of the following: occasional burning of brush piles; volatile organic chemicals released from flowering plants in spring and from resin-bearing chaparral on hot days; Cannabis gardens on lands in the vicinity. There is a vineyard 3,000 feet to the southwest of the project area (C.G. Di Arie Vineyard & Winery) that could emit odors from chemical spraying or fertilizer applications.

During the site visit on the day of January 31, 2020, no odors were noted on the property.

5.0 SENSITIVE RECEPTORS

No specific sensitive receptors, such as daycare centers, schools, or churches, are located within 1 mile of the Project Area. There are no residences or habitable structures within a 2,000 foot radius of the Project Area.

There nearest residents are:

- 3,300 feet to the north-northwest of the Project Area there is a residence and business (American Industrial Electric) at 3501 Freshwater Lane; this property, or the adjacent property, has a garden that may contain Cannabis
- 3,100 feet to the west-southwest, there is a residence at an unknown address (approximately 4950 Michaels Mountain Road)
- 2300 feet to the northeast there is at residence at an unknown address (on Freshwater Lane)
- 3200 feet to the north, there is a residence at an unknown address (approximately 4070 Vintage Lane); this property has a garden that may contain Cannabis
- 3,000 feet to the southwest of the project area, there are residences at an approximate address of 5200 Di Arie Road, Mt. Aukum, that may be associated with C.G. Di Arie Vineyard & Winery

6.0 FACILITY ODOR SOURCES

The cannabis industry can impact air quality in two predominant operations: plant growth cultivation and Cannabis-infused product manufacturing facilities. At cultivation facilities, the natural growth of Cannabis plants releases a distinctive odor, especially in the flowering phase.

This odor is made up of a suite of volatile organic compounds (VOCs), the majority of which are chemicals called terpenes. Specific odorous terpenes in Cannabis are isoprene, pinene, carene, limonene, myrcene, and terpinolene (Denver Dept. of Health and Environment 2018). Odors are also generated during harvesting, drying, trimming, and curing. At manufacturing facilities, the evaporation of solvents and other processes in the production cycle result in different kinds of VOC emissions (Denver Dept. of Health and Environment 2018).

Cannabis facilities can also emit odors from other activities, such as:

- the operation of gasoline or diesel-powered electric generators
- composting
- soil preparation and addition of soil additives
- application of fertilizers, especially manures or guanos
- foliar application/spraying of chemicals
- burning of solid waste
- improperly functioning sanitary disposal systems (pit latrines, chemical toilets, composting toilets, or septic tanks and leachfields)

For the proposed project, it was not possible to identify specific odor sources or measure the strength of these odor sources because the facilities have not yet been constructed.

No significant odor impacts are anticipated from the proposed cultivation operation, due to the following reasons:

- the fact that Cannabis product manufacturing is not proposed
- hoophouses and greenhouses will restrict the release of odors
- the limited population in the vicinity and the absence of residences within 2,000 feet of the project area
- the relatively small size of the cultivation operation
- the large setbacks from roads and neighboring residences
- County requirements for fencing and visual screens, which function as partial barriers to odor transport
- wind dilution/dispersal effects and topographic shielding.

Note that as designed, the facility is 500 feet from the nearest property line. This distance should be sufficient to dilute any odors generated; an 800-foot setback is not necessary.

7.0 ODOR MONITORING PROGRAM

A credible odor monitoring program has the following components: standard monitoring practices; objective (non-biased) and repeatable measurement methods; and qualified odor observers (trained inspectors) (McGinley and McGinley 2004).

7.1. Standard Monitoring Practices

Standard monitoring practices consist of four elements: monitoring protocol; area map (see Exhibits); monitoring route; and a standard data collection forms. See Hamel et al. (2004) for odor sampling design plans and data interpretation guidance.

7.2. Methodology

Methods were adapted from Hamel et al (2004). Odor measurements will be recorded at each monitoring station. Using a field olfactometer, the odor strength will be measured as Dilution to Threshold (D/T) ratios, a dimensionless measure of odor concentration. Other odor parameters will be recorded, including descriptions of the odor's character, intensity, and offensiveness, and weather conditions.

7.2.1. Odor Measurements and Nose Calibrations

A field olfactometer dynamically dilutes the ambient air with carbon-filtered air in discrete "dilution ratios". The U.S. Public Health Service method defined the dilution ratio (or dilution factor) as "Dilution-to-threshold" or D/T (Huey et al. 1960). The Dilution-to-threshold is a measure of the number of dilutions needed to dilute the odor to the threshold. The method for calculating the "Dilution-to-threshold is = D/T = Volume of odor free (filtered) air / Volume of odorous air.

Odor strength for this study was determined using a Nasal Ranger Field Olfactometer (St. Croix Sensory, Lake Elmo, Minnesota). The Nasal Ranger measures odor D/T values of 2, 4, 7, 15, 30, and 60. An air flow sensor allows the user to use a standard inhalation rate. In order to standardize the olfactometer measurements, all users must have their noses (i.e., their sense of smell) calibrated to determine their olfactory threshold or level of odor sensitivity (i.e., standardized nasal chemosensory test). The calibration employs a blind experiment where the subject must differentiate between random samples that have either a blank or standardized concentrations of an odiferous chemical such as n-butanol. The test is repeated until the subject reaches their threshold (i.e., they cannot detect the odor).

7.2.2. Odor Characterization

Odors encountered in the field will be characterized by description, offensiveness, and intensity. Odors will be rated in intensity and in offensiveness as either low, moderate, or high. Odor description can employ an odor descriptor wheel: St. Croix Sensory, Inc. has developed an odor descriptor wheel for use for environmental odors. Odor intensity can be measured in the ambient air by trained observers using either an odor intensity referencing scale (see ASTM E544-99) or a field olfactometer.

7.2.3. Locations of Odor Measurements

In order to determine what conditions are conducive to high odors, sampling can be deliberately carried out under a variety of weather conditions and times of day. Odor data can be taken at the property boundary, the nearest road, or the nearest house. Measurements can be taken upwind and downwind of the odor source in order to characterize the odor plume line.

To reduce the chances of higher concentration odors being missed due to fluctuations in wind speed, wind direction, or other odor-affecting factors, three or more D/T readings can be taken at each measurement location. All readings will be documented, but only the highest reading is typically used for data analysis.

7.2.4. Weather Conditions

Weather conditions will be recorded using a weathermeter. Data collected typically consists of: wind direction, average wind speed, maximum wind speed, temperature, relative humidity, and barometric pressure. Atmospheric conditions, such as presence of clouds, flog, or precipitation, are also typically recorded.

7.2.5. Requirements of the Ordinance

Ordinance No. 5110 states that it is a violation if odors are detected at the property boundary twice in the same hour after the odorous air has been diluted with 7 or more volumes of odor-free air. This means that if the olfactometer user detects the odor at the position D/T = 7 or higher at or beyond the property line (twice within an hour but at least 15 minutes apart), then the facility is in violation of the odor statute.

8.0 ODOR RESPONSE PROGRAM

8.1. Odor Episode and Complaint

McGinley and McGinley (2004) define an odor episode that becomes a citizen complaint as having four components (in order of importance): character/offensiveness; strength; duration; and frequency. The cumulative effect of these four parameters creates a nuisance experience and the resulting citizen complaint.

8.2. Responsible Individuals and Notification Channels

The following individual(s) are responsible for responding to odor complaints are:

- Lee Tannenbaum – CEO, phone 650.515.2484
- Cynthia Tannenbaum – CFO, phone 408.757.7835

These individual(s) are responsible for responding to odor complaints 24 hours per day/seven (7) days a week, including holidays.

Property owners and residents of property within a 2,000 foot radius of the Cannabis facility can be provided with the contact information of the individual(s) responsible for responding to odor complaints.

8.3. Response Procedure

This facility will develop policies and procedures describing the actions to be taken when an odor complaint is received, including the training provided to the responsible party on how to respond to an odor complaint.

When an odor complaint is received, it will be forwarded to the manager responsible for odor control. The complaint will be logged, including time and type of complaint, the location of the odor reception, and contact info of the person making the complaint. The incident will be investigated and the problem identified. The manager will visit the site or facility in question, take odor measurements, determine any deficiencies in the odor control system (where applicable), and identify remedies. These remedies should be implemented immediately. The

manager will prepare a written response and send it by certified mail to the citizen who made the complaint. The correspondence should acknowledge the complaint, describe the incident, and identify what remedial actions were taken. Each odor complaint will be logged in a master odor complaint log book.

9.0 ODOR MITIGATION

9.1. Ordinance-specific Requirements that May Mitigate Odors

The Ordinance has requirements that will assist in odor mitigation, including setbacks, fencing, and screenings; setbacks allow for odor dilution and screening can function as barriers to odor transport. Sec. 130.41.200, subsection 5.C. requires that "*outdoor or mixed-light cultivation of commercial cannabis shall be setback a minimum of 800 feet from the property line of the site or public right-of-way and shall be located at least 300 feet from the upland extent of the riparian vegetation of any watercourse*." Sec. 130.41.200, subsection 5.G. requires that "*Cannabis shall be screened from public view so that no part of a plant can be seen from an adjacent street or adjacent parcel. Screening shall be accomplished by enclosure within a greenhouse or hoop house or by use of fencing or vegetation. All greenhouses, hoop houses, and fences shall comply with all building and zoning codes and any other applicable law or regulation. Greenhouses and hoop houses are the preferred means of screening*." Sec. 130.41.200, subsection 5.H. requires that "*Areas where cannabis is cultivated, the premises on which cannabis is cultivated, or a portion thereof that includes the cultivation area shall be secured by a minimum six-foot high solid wood or chain link wildlife exclusionary fence, such as cyclone or field game fencing, with locked gates built in compliance with building and zoning codes. All gates shall be lockable and remain locked at all times except to provide immediate entry and exit. A chain link fence is not sufficient for screening. Fencing may not be covered with plastic or cloth except that neutral-colored shade cloth may be used on the inside of the fence*."

9.2. Administrative Controls

When the facility is constructed and operational, this section should describe activities such as building management responsibilities (e.g., isolating odor-emitting activities from other areas of the buildings through closing doors and windows). This section should describe the organizational responsibilities and the roles of the staff members who will be trained about odor control; the specific administrative and engineering activities that the training will encompass; and the frequency, duration, and format of the training (e.g., 60 minute in-person training of X staff, including the importance of closing doors and windows and ensuring exhaust and filtration systems are running as required). This section should include a description of the records that will be maintained (e.g., records of purchases of replacement carbon, performed maintenance tracking, documentation and notification of malfunctions, scheduled and performed training sessions, and monitoring of administrative and engineering controls). Any examples of facility recordkeeping forms should be included as appendices to this plan.

9.3. Engineering Controls

If odors become problematic, engineering controls may need to be implemented. The cultivation operation should be analyzed to determine the source of odor emission and any concentrating effects. Mitigation can include some combination of the following:

- Windscreens could be erected that could partially contain odors within the cultivation compound.
- Powerful fans could be installed to guide air flow in the opposite direction.
- Alterations to atmospheric controls (temperature, air exchange, humidity) using dehumidifier, HVAC system, and/or fans.
- A high-pressure atomizing system could be installed on the perimeter. This system generates a water vapor (aerosol) that binds with the volatile compounds from Cannabis (terpenes) and makes them heavier, and then they drop out of the air.
- Biofiltration is a technology in the research phase that uses filters made of an organic medium such as wood chips that are inoculated with bacteria and consume odorous molecules. Biofiltration may be successful at treating biodegradable VOCs, but it requires a large footprint and careful operation control.
- Odor absorbing neutralizers: use oils and liquids from plant compounds and mist them into the exhaust air at cultivation facilities to neutralize odorous VOCs. Contact your odor control supplier about the effectiveness of VOC reduction as it will vary (20%-90%) by product and contact time.
- Masking and counteractive agents: use of chemical odor control technologies that are misted at the cultivation facility's exhaust. The use of these agents may be subject to air quality regulations.
- An ozone generator. Ozone destroys volatile compounds upon contact. Ozone generators: are mostly used for sanitization purposes and have also been used in industrial settings to control strong odors. These generators are harmful to humans and can damage or destroy crops because they are a direct emission source of ozone pollution, therefore ozone generators are not recommended as a best practice for odor control (Denver Dept. of Health and Environment 2018).
- Charcoal (or activated carbon) filtration is an effective odor neutralizer for indoor cultivation operations. Air is mechanically drawn through the charcoal filters, then the Cannabis chemicals are bound to the carbon, and then clean air is expelled from the greenhouse.

If engineering controls are necessary, this section should include technical system design, a description of technical process(es), and an equipment maintenance plan. The system design should describe the odor control technologies that are installed and operational at the facility (e.g., carbon filtration) and to which odor-emitting activities, sources, and locations they are applied (e.g., bud room exhaust).

This section should describe the activities being undertaken to ensure the odor mitigation system remains functional, the frequency with which such activities are performed, and the role/title(s) of the personnel responsible for such activities (e.g., when trimming activities are conducted, X personnel are responsible for isolating the trim room from non-odorous areas of the facility and for ensuring the exhaust system is operational and routed through odor mitigation systems).

The maintenance plan should include a description of the maintenance activities that are performed, the frequency with which such activities are performed, and the role/title(s) of the personnel responsible for maintenance activities. The activities should serve to maintain the odor mitigation systems and optimize performance (e.g., change carbon filter, every 6 months, carried out by the facility manager).

9.3.6. Carbon Filtration

Carbon filtration is currently the best control technology for reducing VOC emissions from cannabis cultivation facilities. Carbon filters are simple to install, inexpensive, effective, and reliable when properly maintained and replaced. These filters work by using an absorption process where porous carbon surfaces chemically attract and trap VOCs along with other gas phase contaminants. Depending on the filter system, carbon filtration can remove 50% - 98% of VOCs. As the filter ages, less carbon surface area is available to trap VOCs; at this point the filter will need to be replaced. Depending on the filter load, most carbon filters will last 6-12 months in a commercial cultivation environment and should be replaced according to the manufacturer's recommendations (Denver Dept. of Health and Environment 2018).

Carbon filters can operate as stand-alone units that clean and recirculate the air, or can be integrated into the HVAC system. Typically, carbon filters are at their peak performance when positioned at the highest point in your grow space where heat accumulates. High humidity levels hinder filter performance so this control technology is better suited for facilities with environmental controls. An effective filtration system must be properly sized according to the space needed for volume and air-flow requirements. Maintaining an optimal environment can require multiple filters. Carbon filters can be used in combination with other odor control technologies (Denver Dept. of Health and Environment 2018)

10.0 LITERATURE CITED AND FURTHER READING

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Denver Department of Public Health and Environment. 2018. Cannabis Environmental Best Management Practices. 71 pp.

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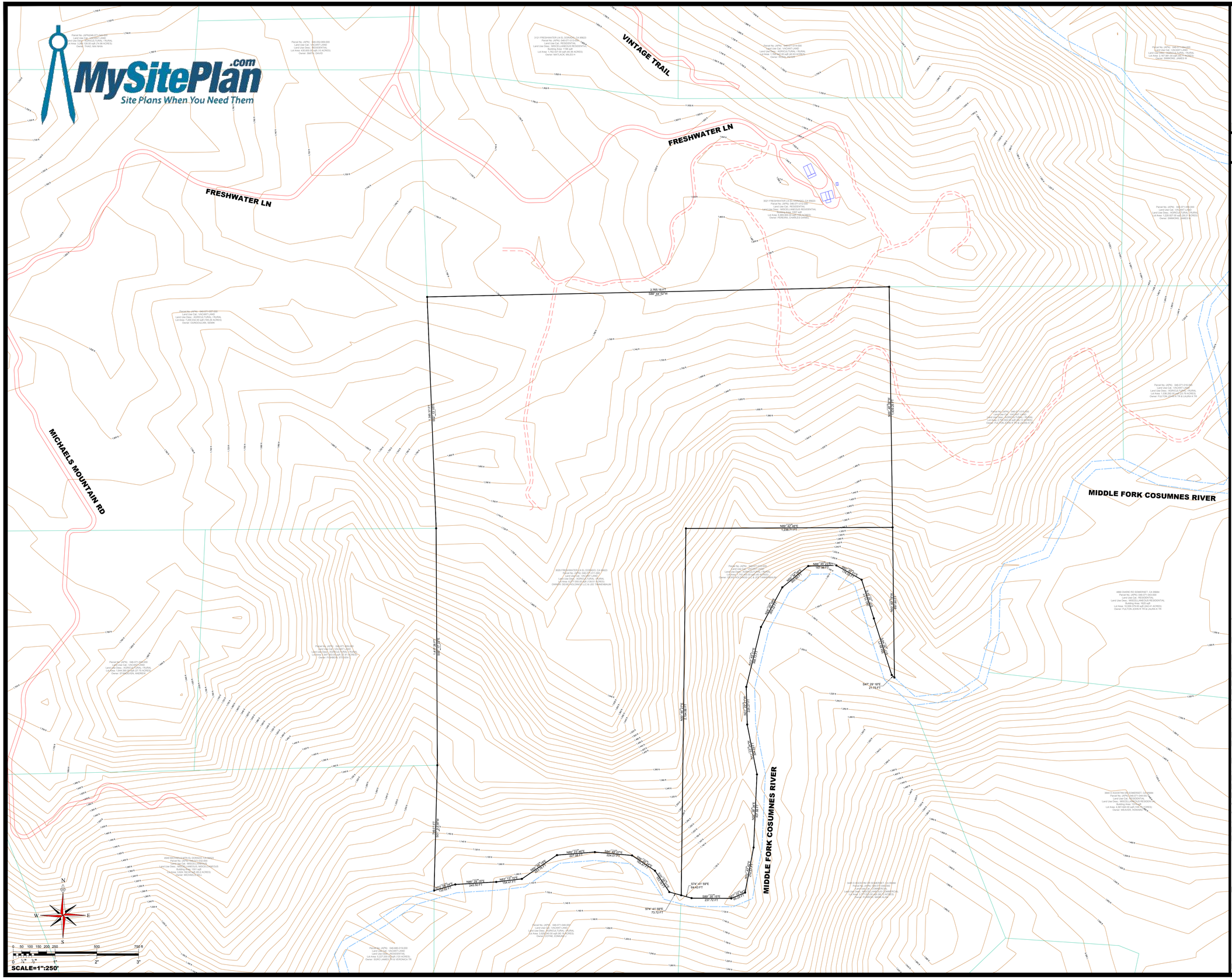
Hamel, K.C., L. Walters, C. Sulerud, and M.A. McGinley. 2004. Land application odor control case study. Water Environment Federation Residuals and Biosolids Management Conference, Salt Lake City, Utah, February 2004. 16 pp.

McGinley, M.A., and C.M. McGinley. 2004. Developing a credible odor monitoring program. Proceedings of the American Society of Agricultural Engineers, 2004 Annual Conference, Ottawa, Ontario, Canada, August 2004. 13 pp.

MAPS AND EXHIBITS



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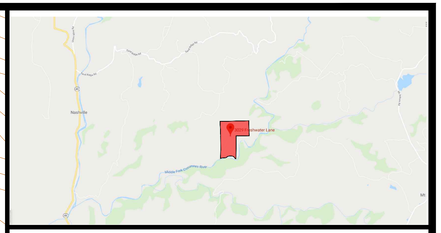

VICINITY MAP

EXISTING SITE PLAN

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AREA:6,077,055.00 sqft (139.51 acres)
&
FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
AREA:1,742,00.00 sqft (40.00 acres)

3029 FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-011-000
AREA:6,077,055.00 sqft (139.51 acres)
LEGAL INFORMATION: **SEC 5 8 11**
ZONING (ASSESSOR): **RE**
BOOK: **46** PAGE:**07** LOT:**11**
LAND USE CATEGORY: **VACANT LAND**
LAND USE DESCRIPTION: **AGRICULTURAL / RURAL**
OWNER NAME: **DEXIE HOLDINGS LLC & LEE TANNENBAUM**
OWNER ADDRESS:
4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682

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OWNER ADDRESS:
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PHONE: 650-515-2484
EMAIL: lee.tannenbaum@gmail.com

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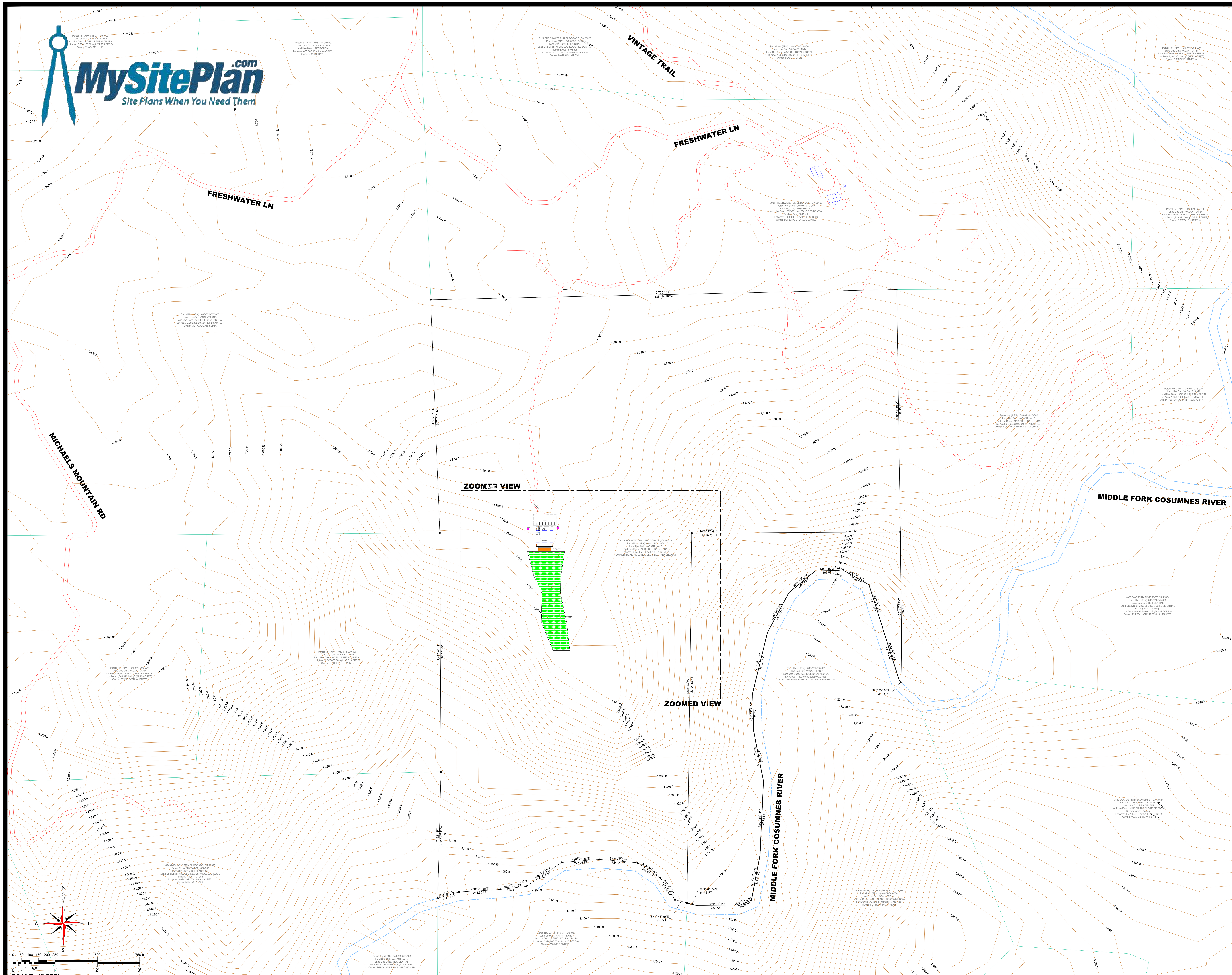

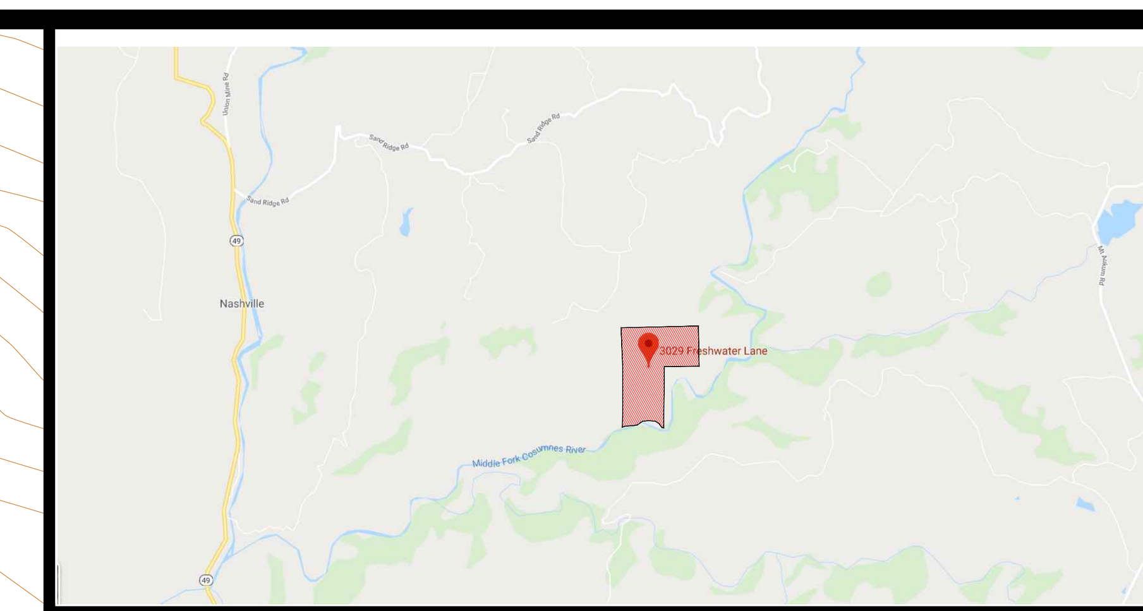

VICINITY MAP

PROPOSED SITE PLAN

3029 FRESHWATER LN EL DORADO, CA 95623

PARCEL#:046-071-011-000

AREA:6,077,055.00 sqft (139.51 acres)

&

FRESHWATER LN EL DORADO, CA 95623

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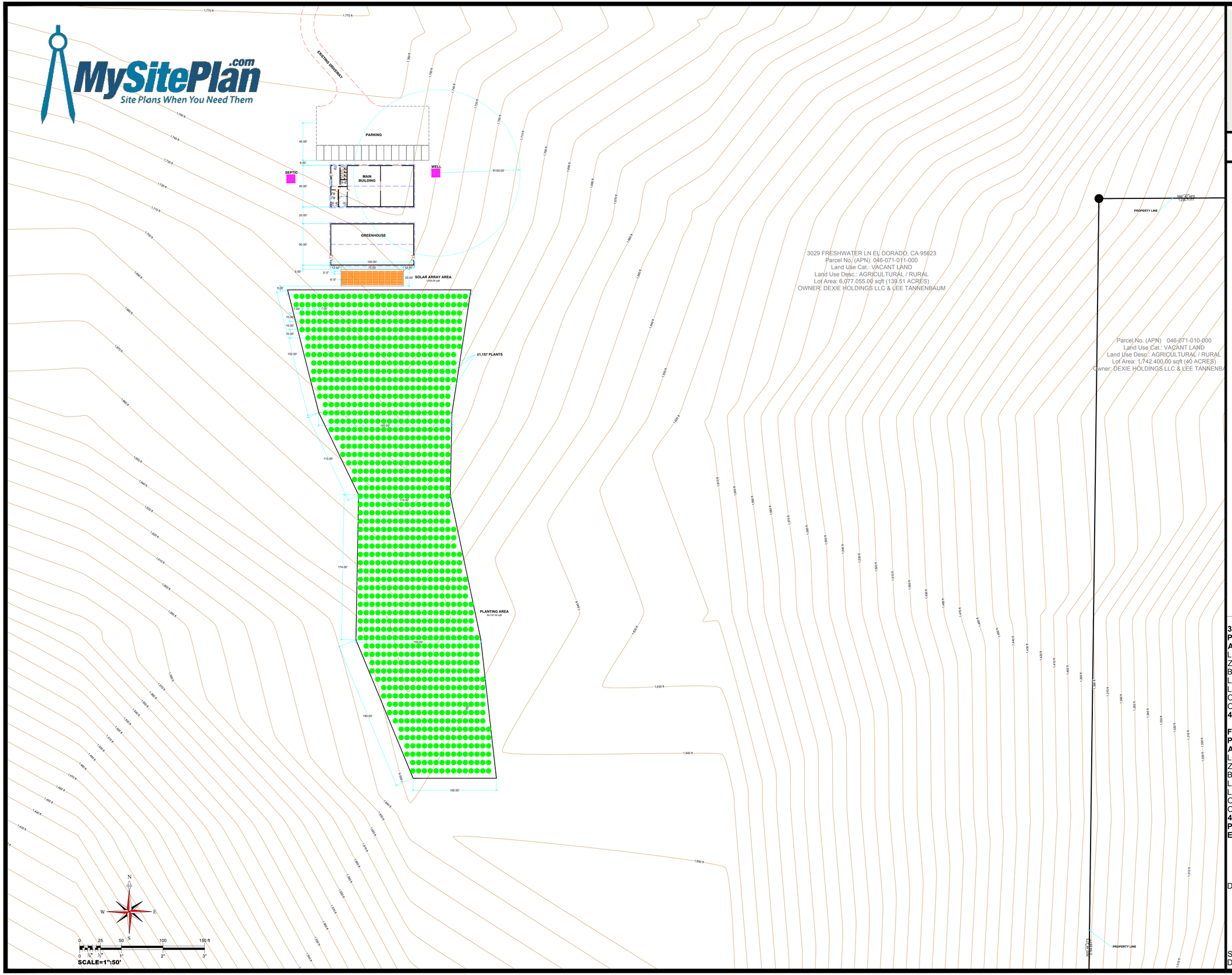

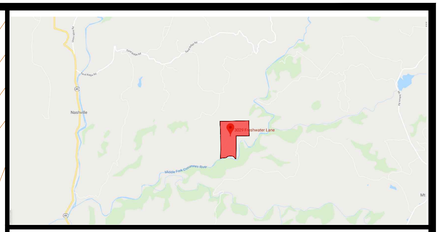

VICINITY MAP

PROPOSED SITE PLAN BUILDING AREA

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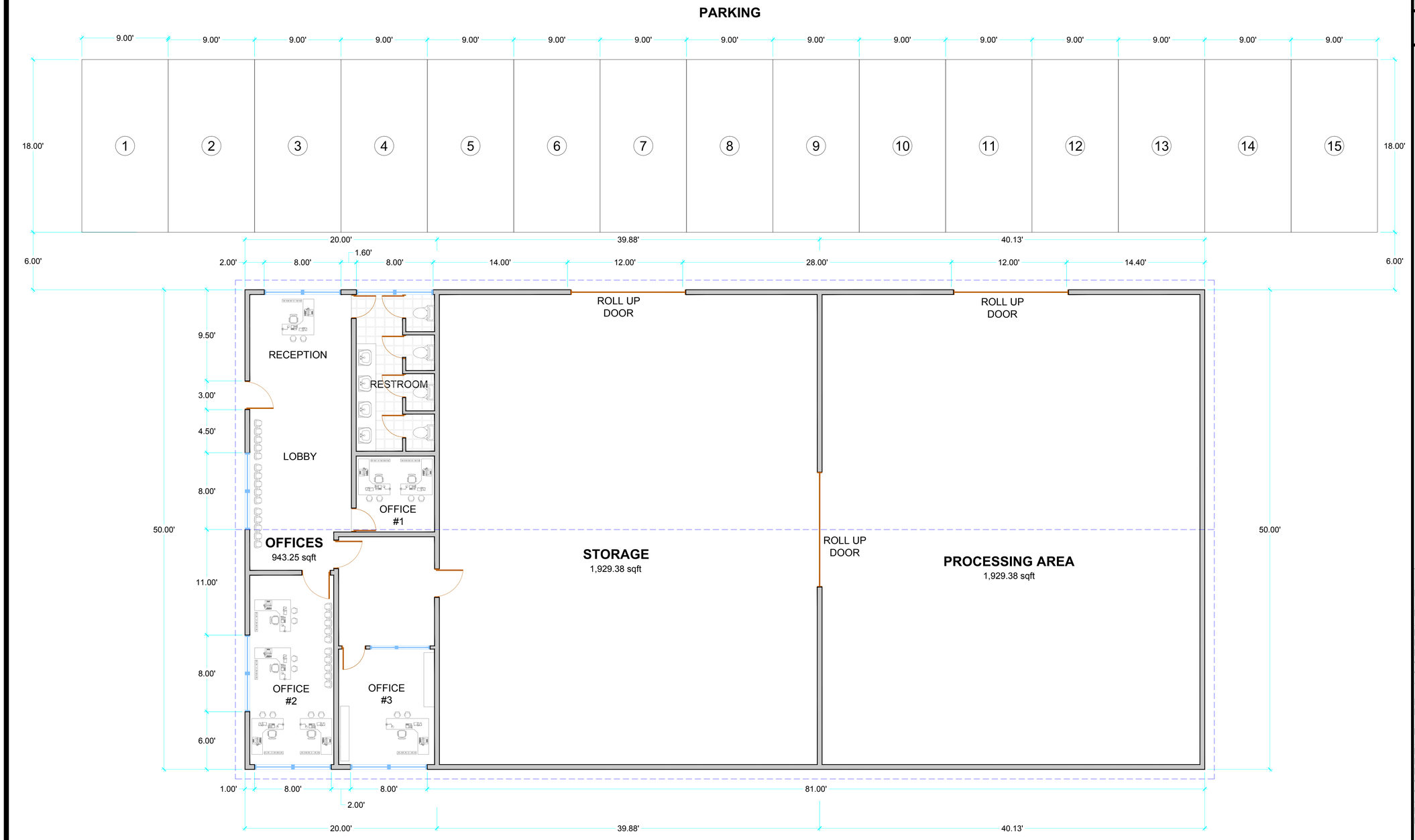

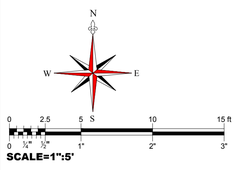

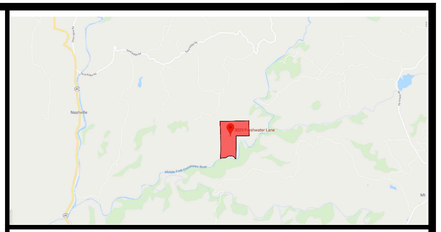

VICINITY MAP

PROPOSED FLOOR PLAN
OFFICE, WAREHOUSE & STORAGE BUILDING

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AREA:6,077,055.00 sqft (139.51 acres)
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PHONE: 650-515-2484
EMAIL: lee.tannenbaum@gmail.com

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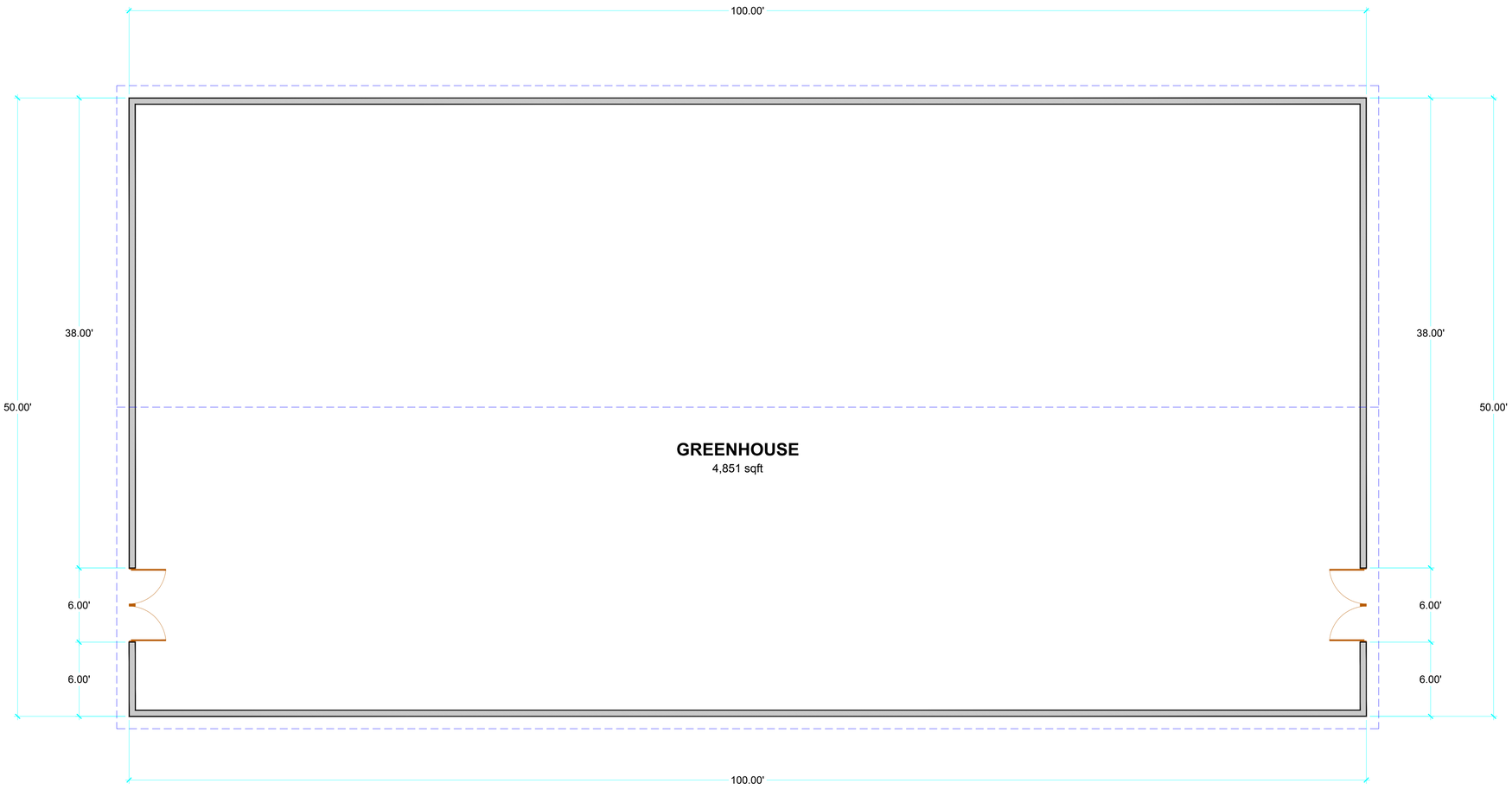

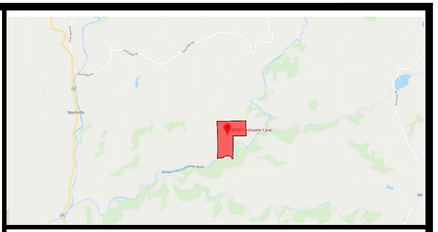

VICINITY MAP

PROPOSED FLOOR PLAN
GREENHOUSE

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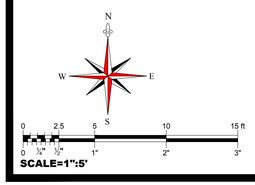
DESIGNED BY:



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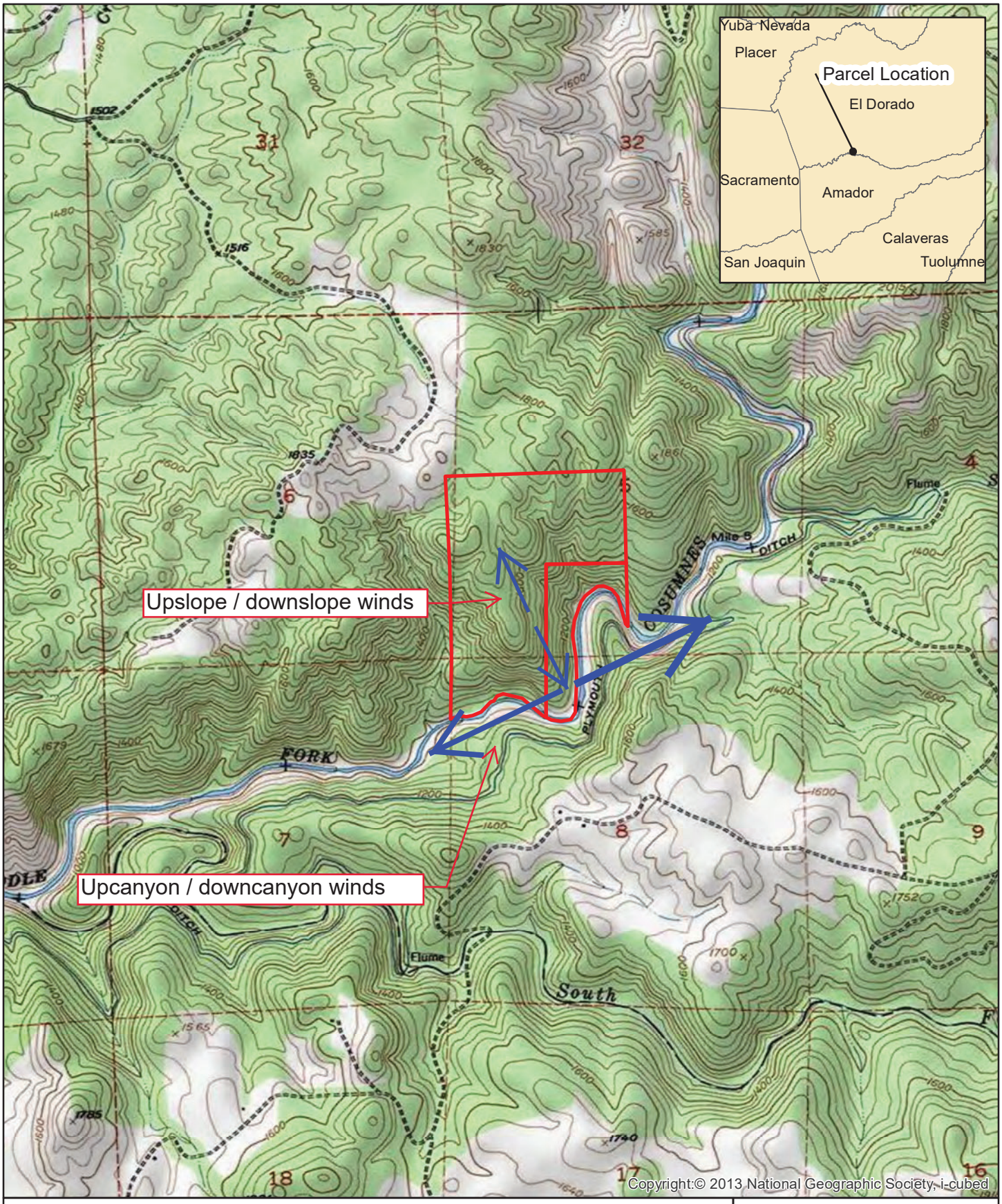


Parcel Location

0 0.5 1 Kilometers

0 0.5 1 Miles

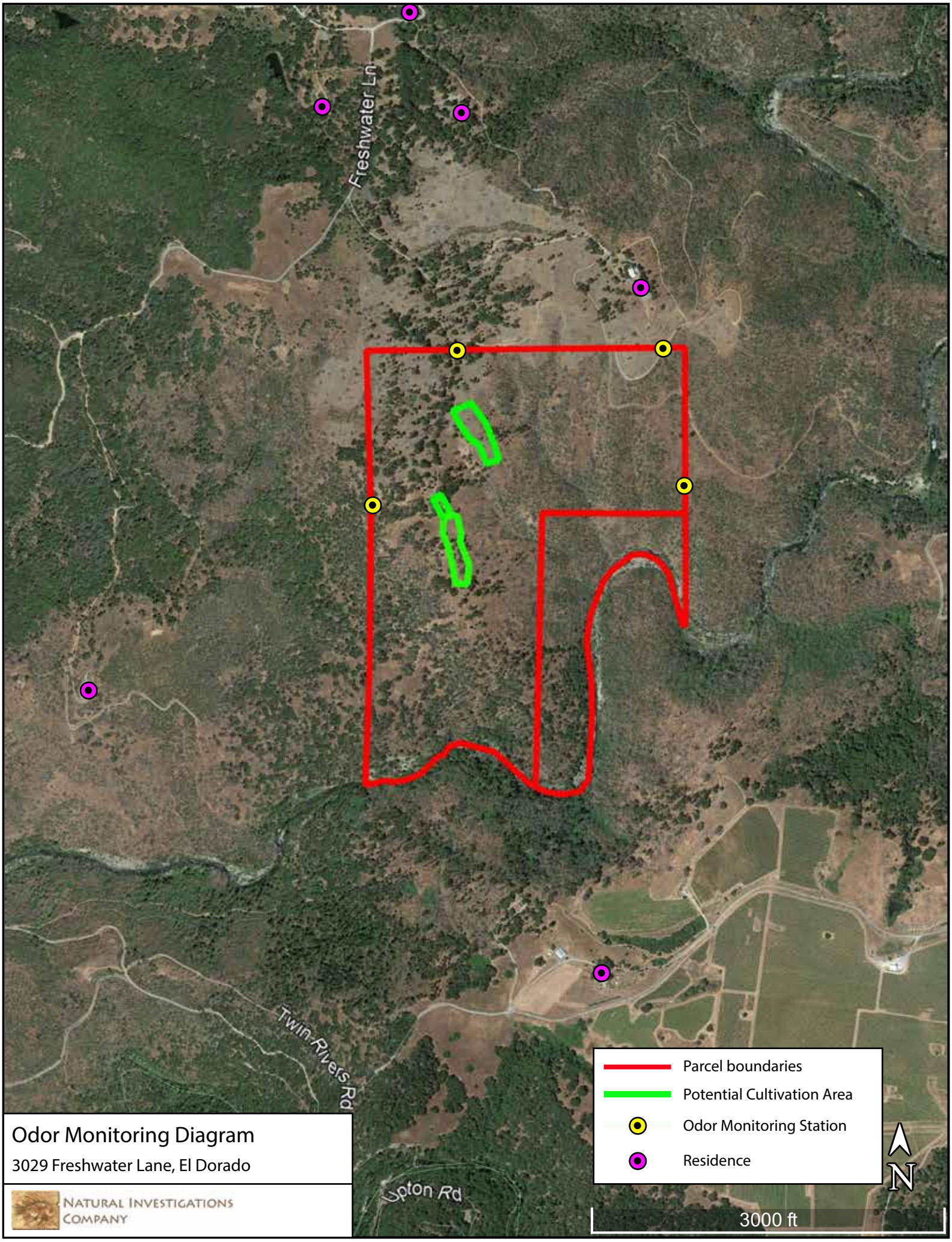
1:24,000

3029 Freshwater Lane
Wind Direction Map

Natural Investigations Company

Map Date 1/27/2020

Fiddletown 1949 Quadrangle Photoinspected 1973:Township 8N, Range 11E, Section 5,6,7,8



Odor Monitoring Diagram

3029 Freshwater Lane, El Dorado

Natural Investigations Company

ODOR MEASUREMENT DATA FORM

Natural Investigations Company

Odor Measurement Data Collection Form

Date: _____

Project Name: _____

Monitor Name: _____ Signature: _____

Weather Conditions

Wind speed & direction
temperature
relative humidity
Precipitation
Visibility
barometric pressure

Odor Measurements

Time	Station # / Location	D/T							Description	Offensiveness	Intensity	Comments
		<2	2	4	7	15	30	60				

ODOR COMPLAINT LOG

NASAL RANGER® FIELD OLFACTOMETER
OPERATION MANUAL VERSION 6.2

Insert here or bind separately

Appendix B

Oak Resources Technical Report

February 6, 2020

Oak Resources Technical Report for the Cannabis Cultivation Project at 3029 Freshwater Lane, El Dorado.

Introduction

The County of El Dorado (County) required an oak resources technical report to comply with the Oak Resources Conservation Ordinance Number 5061 for a proposed cannabis cultivation operation on a 180 acre property at 3029 Freshwater Lane, El Dorado, California. The property consists of 2 parcels: APN 046-071-011 (139.5 acres) and APN 046-071-010 (40.0 acres). The property is accessed by a private graveled road off of Freshwater Lane (see exhibits).

The project consists of two phases, although only Phase I will be implemented immediately. Phase I is a Cannabis cultivation facility encompassing about 2.5 acres of land. This phase consists of:

- a cultivation compound of approximately 84,791 square feet with approximately 1157 planting stations with a mature Cannabis canopy of approximately 30,000 square feet.
- solar array area (1,500 square feet; dimensions of 20 feet by 75 feet)
- greenhouse (5,000 square feet; dimensions of 100 feet by 50 feet)
- main building with office, storage, and drying/processing rooms (5,000 square feet; dimensions of 100 feet by 50 feet)
- septic tank and leachfield
- a new well
- parking area with 15 spaces at end of existing driveway / material storage area (50 feet by 150 feet)

To implement Phase I, some trees will need to be removed and some ground clearing and minor grading will need to occur.

Phase II will be located nearby and will consist of a second cultivation area of approximately 2 acres. This phase may expand the Cannabis canopy and have mixed-light cultivation capabilities. This phase will be constructed sometime in the future. This phase does not require the removal of trees.

For this assessment, the Project Area was defined as the 2.5-acre Phase I area and this area was the subject of the impact analysis. Phase II does not require the removal of oak trees or canopy.

Note that this technical report did not assess whether the property, land use, or proposed project was eligible for exemptions or mitigation reductions that are defined in the Ordinance.

Methods

El Dorado County's Oak Conservation Ordinance requires the inventory of oak resources and the mitigation for the removal of oak resources. Oak Resources consist of oak woodlands, individual native oak trees, and heritage trees. If Oak Resources are to be removed, an Oak Tree or Oak Woodland Removal Permit is required. This requires preparation of an Oak Resources Technical Report and a code compliance certificate verifying that no protected oak trees have been impacted within two years prior to the permit application.

Tree width was measured using a girth tape, according to the Ordinance: "*The measurement of the diameter of the tree in inches, specifically four (4) feet six (6) inches above natural grade on the uphill*

side of the tree. In the case of trees with multiple trunks, the diameter of all stems (trunks) at breast height shall be combined to calculate the diameter at breast height of the tree."

Oak Resources on the Property were assessed for the following categories (quoted from the Ordinance):

- Individual Native Oak Tree(s): Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring greater than 6 but less than 36 inches dbh, or with a multiple trunk with an aggregate trunk diameter measuring greater than 10 inches dbh and is not a Heritage Tree

- Heritage Trees: Any live native oak tree of the genus *Quercus* (including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), Oregon oak (*Quercus garryana*), oracle oak (*Quercus x morehus*), or hybrids thereof) with a single main trunk measuring 36 inches dbh or greater, or with a multiple trunk with an aggregate trunk diameter measuring 36 inches or greater.

- Oak Woodland(s): An oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover (California Fish and Game Code Section 1361).

Tim Nosal performed the canopy measurements and tree inventory in his capacity as a certified arborist (Int'l Society of Arboriculture license #WE-12038A) on January 31, 2020. Arborist survey methods followed standards of the International Society of Arboriculture (ISA) and the County of El Dorado's Oak Resources Conservation Ordinance. The following texts were consulted for botanical identification, as needed: Pavlik (1991), Stuart and Sawyer (2001), Lanner (2002), Baldwin et al. (2012), and University of California at Berkeley (2020a,b).

Recent aerial photographs of the Property were groundtruthed during the site visit to determine which canopy shapes and colors corresponded to species of oak trees (genus *Quercus*), versus other types of vegetation (e.g. conifers or large shrubs). Where practical, the canopy cover was delineated using a global positioning system (GPS) receiver. The canopy cover was digitized by importing GPS data and heads-up digitizing ortho-rectified aerial photography marked-up during the field survey. Geographical information system software (ArcGIS / ArcMap, ESRI, Inc.) was used to calculate total acreage of the oak canopy and any project impacts (when architectural drawings were provided to us, or when the project was staked in the field).

Results of Tree Inventory and Canopy Mapping

Individual Native Oak Trees

The applicant wished to mitigate using oak woodland measurements, so Individual Native Oak Trees in the Project Area were not inventoried at this time.

Heritage Trees

The Project Area does not contain any Heritage Trees.

Oak Woodlands

Woodland habitats within the property were impacted to varying degrees by the 2014 Sand Fire. Some stands of trees were destroyed by flames while others were largely untouched by fire. The

remaining/recovering vegetation ranges from undamaged oaks along the ridgetop to fire-scorched trees that are re-sprouting along the slopes. Areas dominated by trees can be further described as mixed oak woodland or mixed conifer woodland. The composition of the mixed oak woodland varies across the property. Dominant canopy species include blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), California black oak, ponderosa pine and gray pine (*Pinus sabiniana*). The shrub layer within this habitat is comprised of whiteleaf manzanita, yerba santa, and toyon (*Heteromeles arbutifolia)*. The understory within the oak woodland varies with the density of the canopy, with grasses dominating in the open canopy, and lemonade berry (*Rhus trilobata*), lemon balm (*Melissa officinalis*) and tall sock destroyer (*Torlis arvensis*) common as the canopy begins to close.

The oak canopy measurements determined the following:

- The Phase I Project Area contains 14,403 square feet (3,572 + 10,831 sq. ft.) of oak woodlands.
- The Phase II Project Area contains no oak woodlands and no individual oak trees.
- The Phase III Project Area (defined currently as only the pavilion / wedding overlook) will not impact any trees or canopy, as these project features will be built around the oak resources and use the oak resources as part of the aesthetic setting.

IMPACT ASSESSMENT AND MITIGATION

The Ordinance defines impacts as follows: "*For Individual Native Oak Trees, the physical destruction, displacement or removal of a tree or portions of a tree caused by poisoning, cutting, burning, relocation for transplanting, bulldozing or other mechanical, chemical, or physical means. For oak woodlands, tree and land clearing associated with land development, including, but not limited to, grading, clearing, or otherwise modifying land for roads, driveways, building pads, landscaping, utility easements, fire-safe clearance and other development activities*."

The Phase I Project Area contains 14,403 square feet (3,572 + 10,831 sq. ft.) of oak woodlands that may need to be removed.

Impacts to oak woodlands are typically mitigated through in-lieu fee payment to the County's Oak Woodland Conservation Fund. The per-acre fee is approximately $8,285. Alternative mitigation may be used such as replacement planting or oak woodlands conservation (either on-site or off-site through fee title or conservation easement). Methods of mitigation can also be combined. Mitigation ratios depend on the percentage of woodlands impacted on a development site and range from 1:1 for impacts less than 50 percent and 2:1 for impacts over 75 percent.

If replacement plantings are used for mitigation, the plantings must follow the guidelines of the County's Oak Resources Management Plan, which specifies the planting ratios according to type (acorn, tree size) and maintenance requirements.

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this Arborist Report and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

Signed:  Dated: *February 6, 2020*

REPORT AUTHOR

G. O. Graening, PhD, MSE

Dr. G. O. Graening is a consulting arborist certified by the International Society of Arboriculture (Certification # WE-6725A) since 2003. Certification may be verified on the Internet at the ISA website (http://www.isa-arbor.com/certification/verifyCredential/index.aspx). Dr. Graening also holds a Ph.D. in Biology and a Master of Science degree in Biological and Agricultural Engineering. Dr. Graening has 22 years of experience in environmental assessment and research, including the performance of numerous arborist surveys, appraisals, and design of tree mitigation plans.

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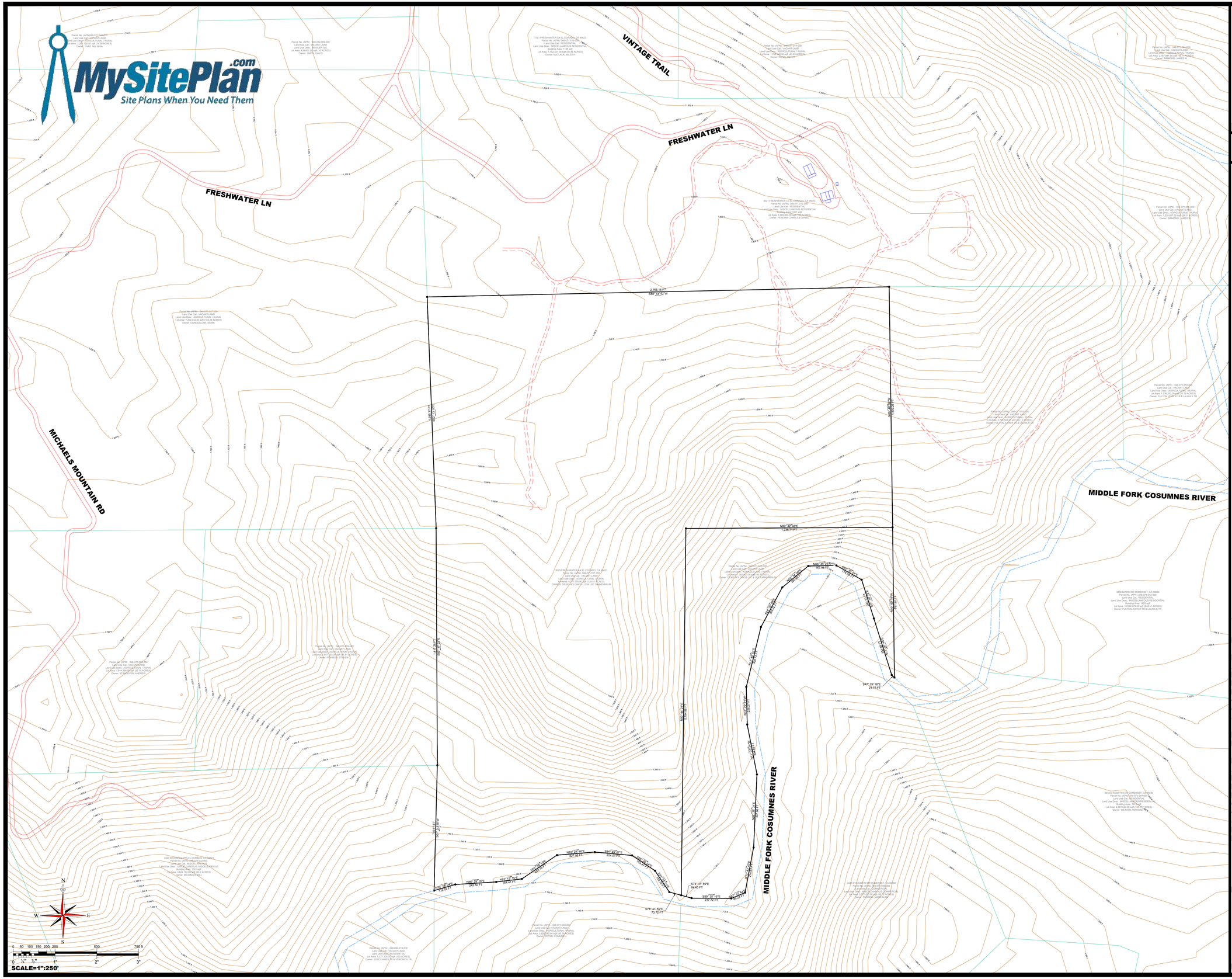
EXHIBITS



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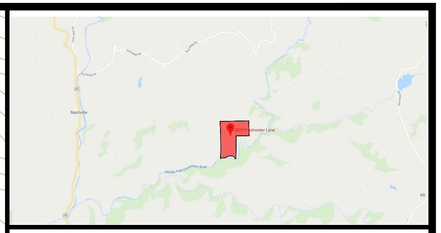

VICINITY MAP

EXISTING SITE PLAN

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&
FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
AREA:1,742,00.00 sqft (40.00 acres)

3029 FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-011-000
AREA:6,077,055.00 sqft (139.51 acres)
LEGAL INFORMATION: **SEC 5 8 11**
ZONING (ASSESSOR): **RE**
BOOK: **46** PAGE:**07** LOT:**11**
LAND USE CATEGORY: **VACANT LAND**
LAND USE DESCRIPTION: **AGRICULTURAL / RURAL**
OWNER NAME: **DEXIE HOLDINGS LLC & LEE TANNENBAUM**
OWNER ADDRESS:
4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682

FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
AREA:1,742,000.00 sqft (40.00 acres)
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OWNER NAME: **DEXIE HOLDINGS LLC & LEE TANNENBAUM**
OWNER ADDRESS:
4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682
PHONE: 650-515-2484
EMAIL: lee.tannenbaum@gmail.com

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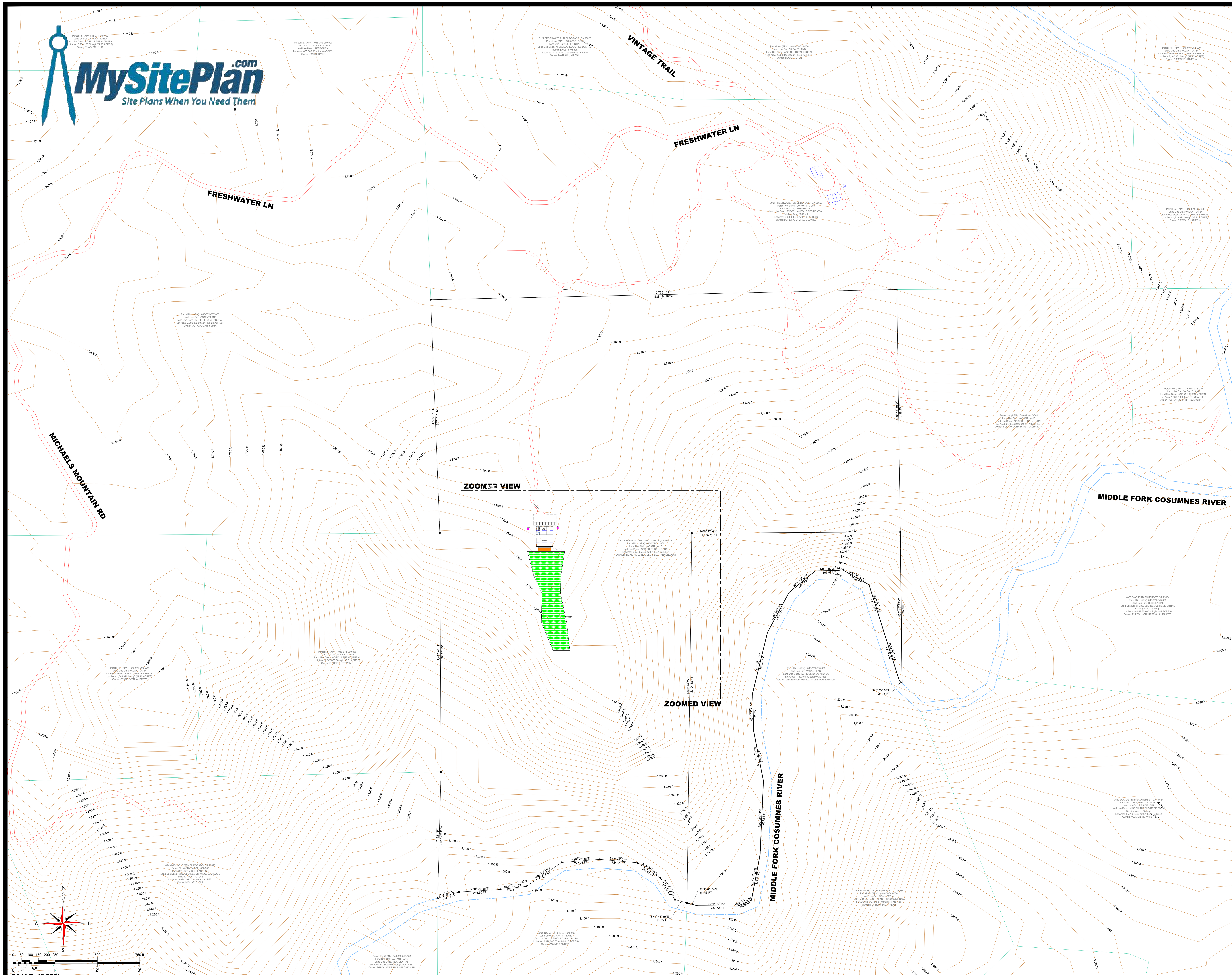

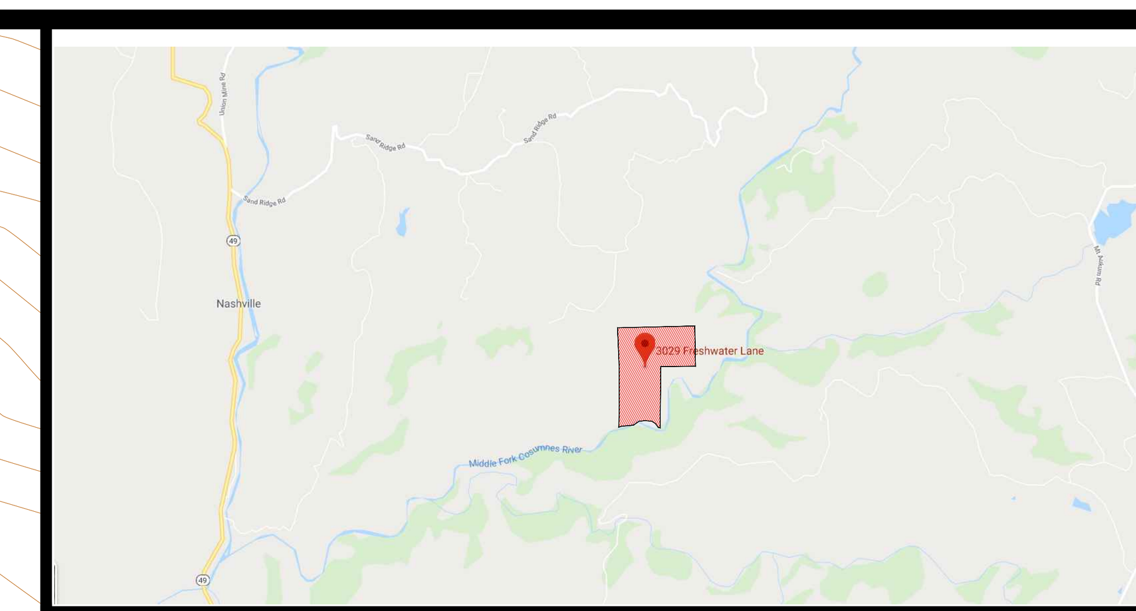

VICINITY MAP

PROPOSED SITE PLAN

3029 FRESHWATER LN EL DORADO, CA 95623

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&

FRESHWATER LN EL DORADO, CA 95623

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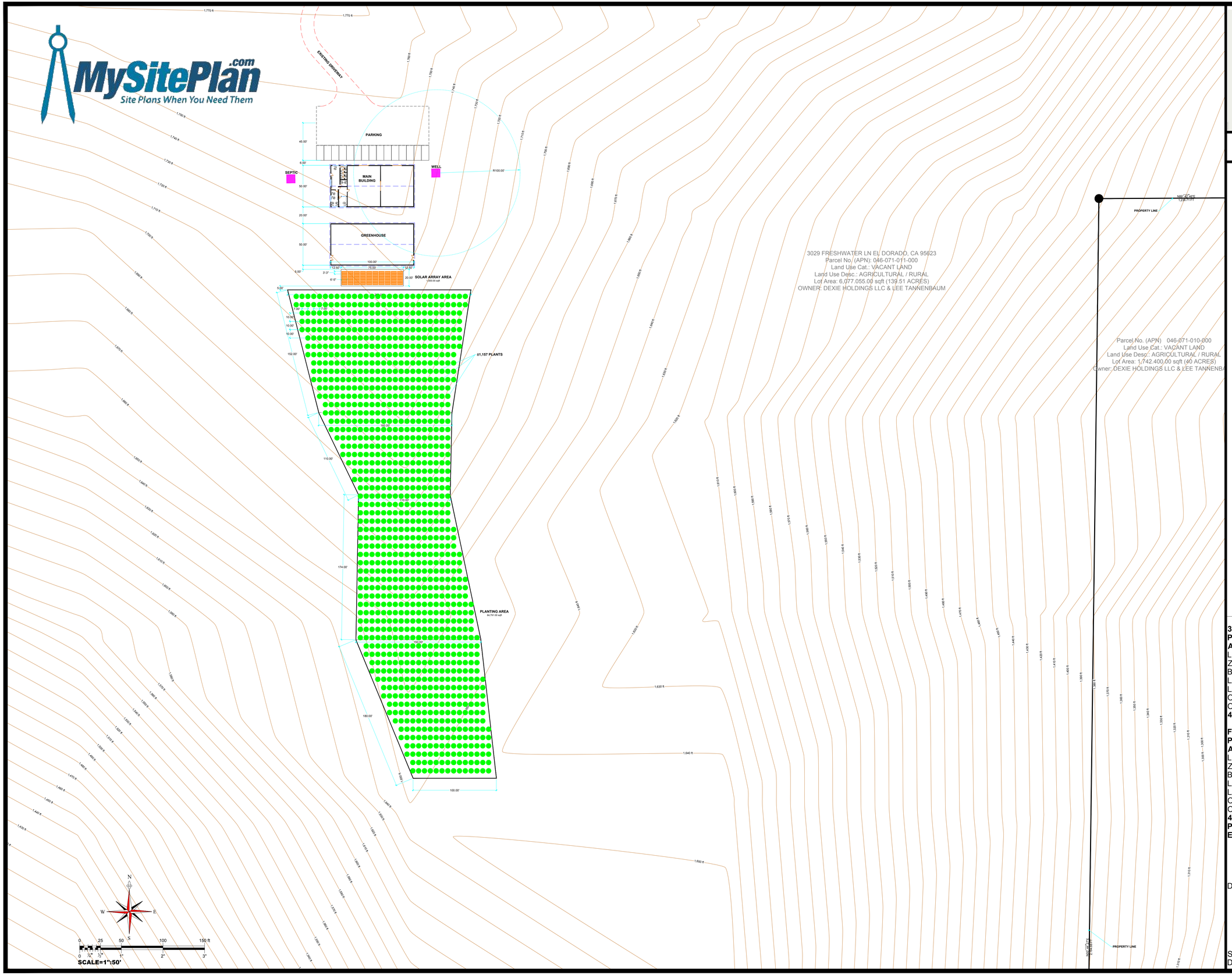

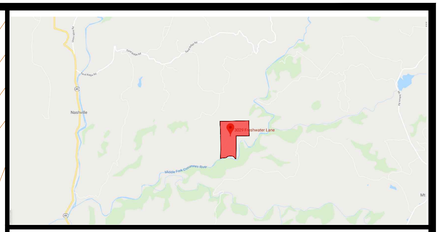

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PROPOSED SITE PLAN BUILDING AREA

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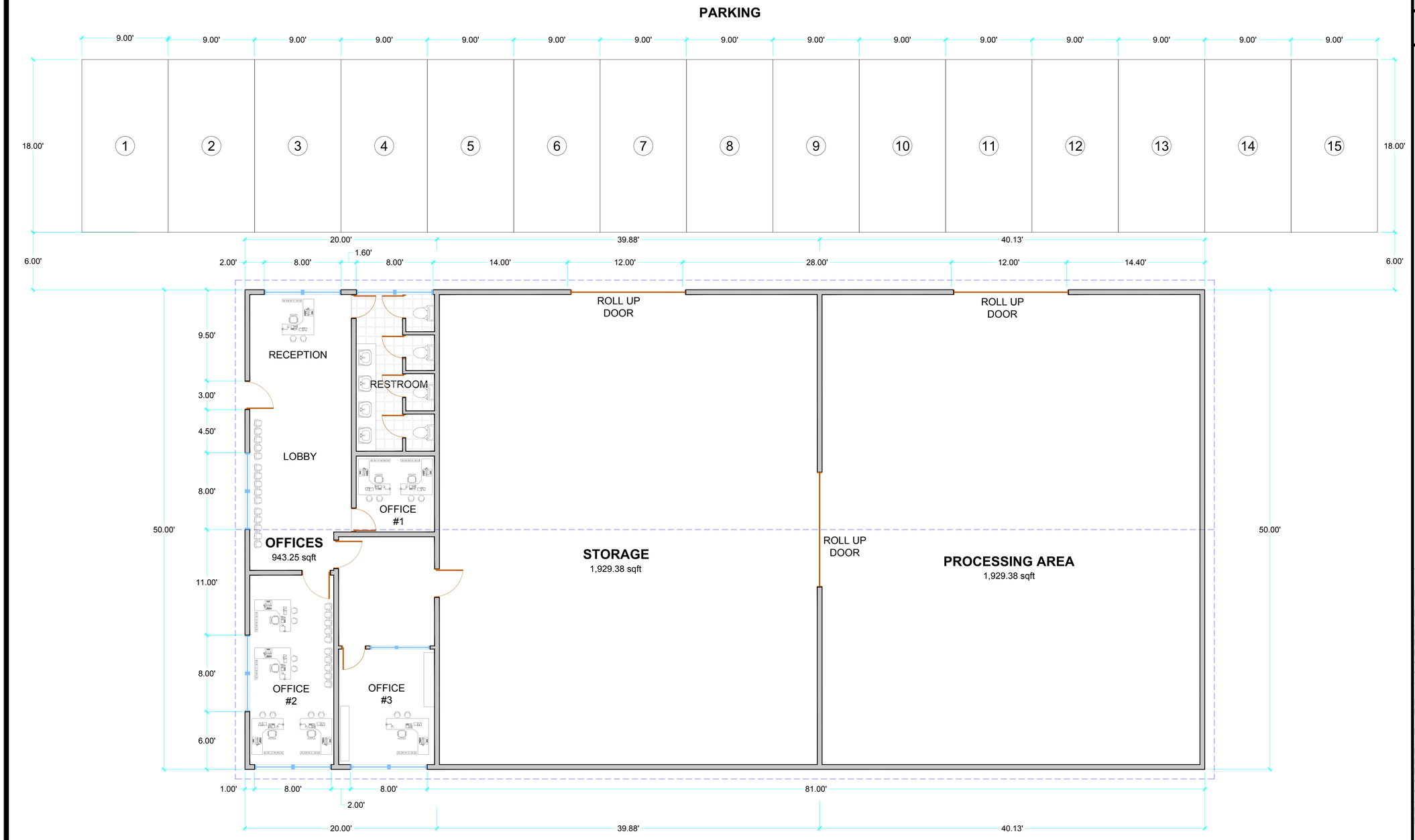

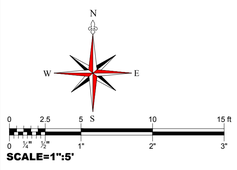

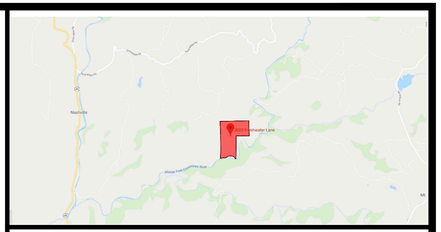

VICINITY MAP

PROPOSED FLOOR PLAN
OFFICE, WAREHOUSE & STORAGE BUILDING

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PHONE: 650-515-2484
EMAIL: lee.tannenbaum@gmail.com

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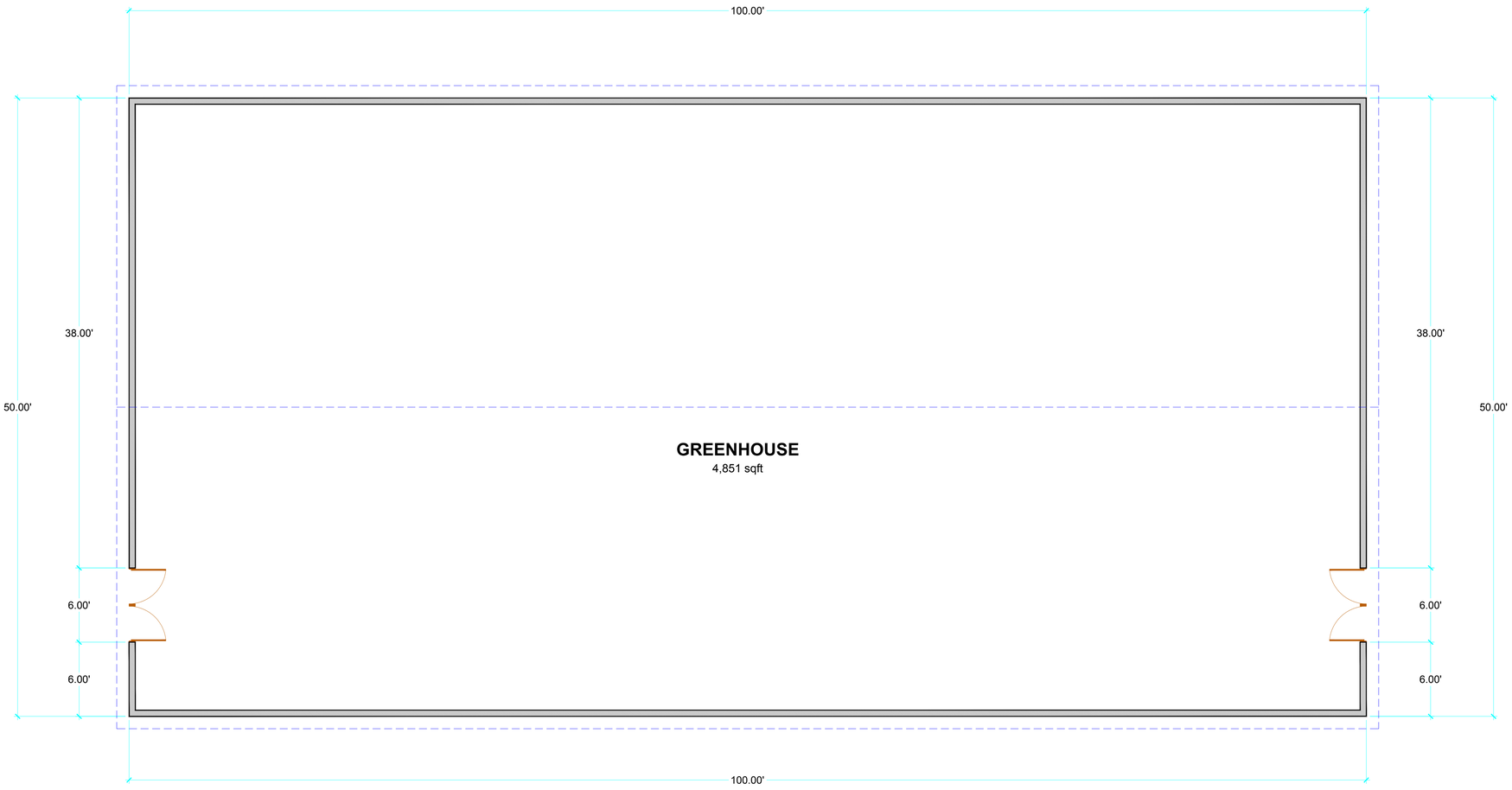

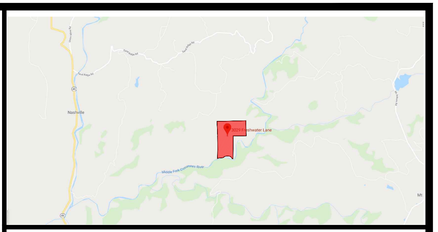

VICINITY MAP

PROPOSED FLOOR PLAN
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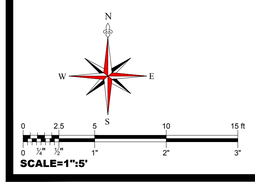

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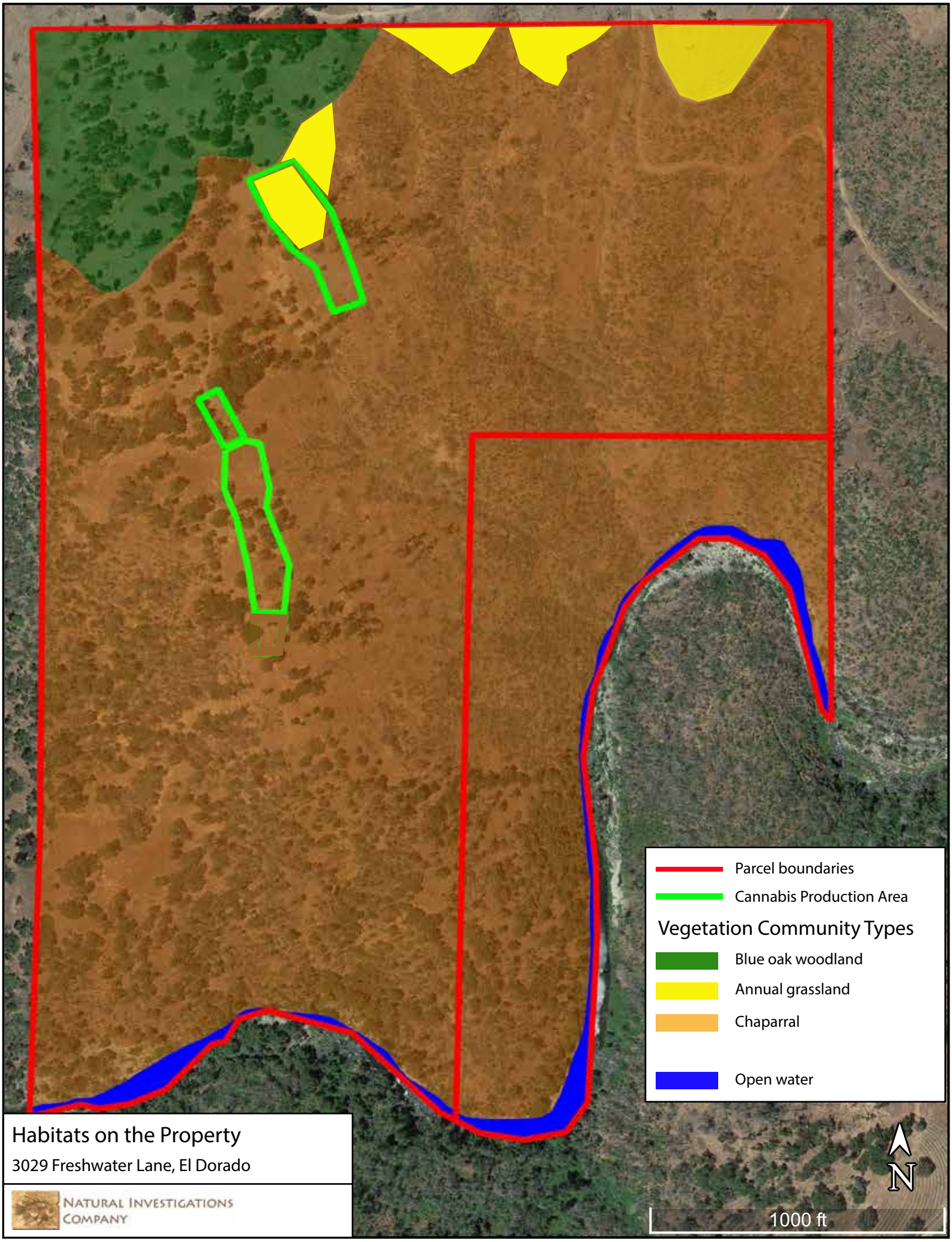
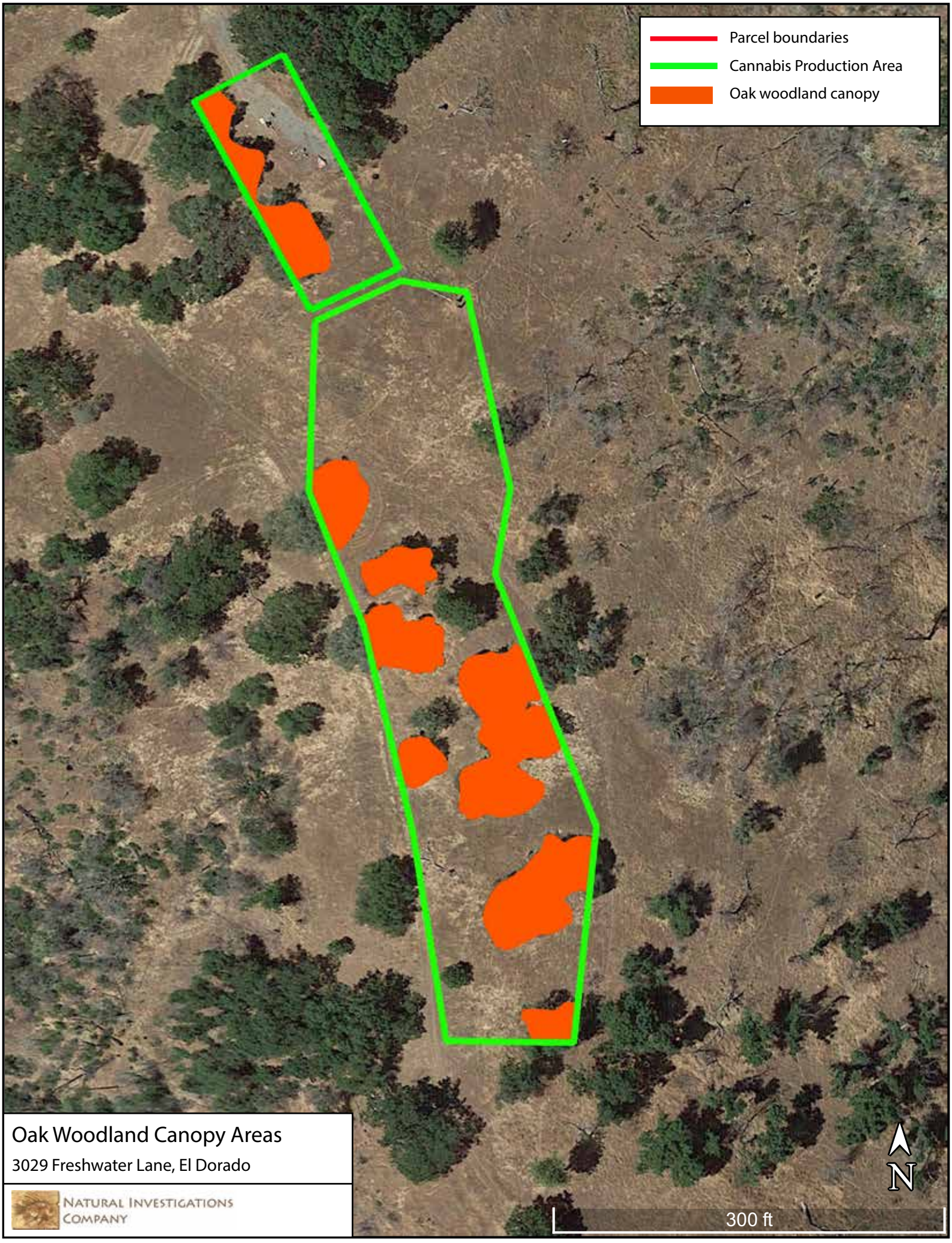


Habitats on the Property

3029 Freshwater Lane, El Dorado

Natural Investigations Company



Oak Woodland Canopy Areas

3029 Freshwater Lane, El Dorado

Natural Investigations Company


Parcel boundaries
Cannabis Production Area
Oak woodland canopy
Note: There is no oak woodland canopy in this project area
Oak Woodland Canopy Areas
3029 Freshwater Lane, El Dorado
Natural Investigations Company
N
300 ft

Appendix C

Biological Resources Assessment

BIOLOGICAL RESOURCES ASSESSMENT FOR THE CANNABIS CULTIVATION OPERATION AT 3029 FRESHWATER LANE, EL DORADO, CALIFORNIA

February 7, 2020
Revised May 13, 2020

Prepared by:

G.O. Graening, PhD and Tin Nosal, MS
Natural Investigations Company, Inc.
3104 O Street, #221, Sacramento, CA 95816

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM

TABLE OF CONTENTS

1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological resources assessment for a proposed cannabis cultivation operation on a 180 acre property at 3029 Freshwater Lane, El Dorado, California. The property consists of 2 parcels: APN 046-071-011 (139.5 acres) and APN 046-071-010 (40.0 acres). The property is accessed by a private graveled road off of Freshwater Lane (see exhibits).

The project consists of two phases, although only Phase I will be implemented immediately. Phase I is a Cannabis cultivation facility encompassing about 2.5 acres of land. This phase consists of:

- a cultivation compound of approximately 84,791 square feet with approximately 1157 planting stations with a mature Cannabis canopy of approximately 30,000 square feet.
- solar array area (1,500 square feet; dimensions of 20 feet by 75 feet)
- greenhouse (5,000 square feet; dimensions of 100 feet by 50 feet)
- main building with office, storage, and drying/processing rooms (5,000 square feet; dimensions of 100 feet by 50 feet)
- septic tank and leachfield
- a new well
- parking area with 15 spaces at end of existing driveway / material storage area (50 feet by 150 feet)

To implement Phase I, some trees will need to be removed and some ground clearing and minor grading will need to occur.

Phase II will be located nearby and will consist of a second cultivation area of approximately 2 acres. This phase may expand the Cannabis canopy and have mixed-light cultivation capabilities. This phase will be constructed sometime in the future.

For this assessment, the Project Area was defined as the 2.5-acre Phase I area and the 2-acre Phase II area, and this 4.5-acre area was the subject of the impact analysis. The entire 180-acre parcel was defined as the Study Area. The Study Area is defined to identify biological resources adjacent to the Project Area, and is the area subject to potential indirect effects from Project implementation.

1.2. PURPOSE AND SCOPE OF ASSESSMENT

This Biological Resources Assessment was prepared to assist in compliance with the California Environmental Quality Act and the state and federal Endangered Species Acts. This assessment also functions to fulfill requirements for obtaining enrollment (a Notice of Applicability) in the State Water Resources Control Board's Order WQ 2019-0001-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order).

This assessment provides information about the biological resources within the Study Area, the regulatory environment affecting such resources, any potential Project-related impacts upon these resources, and finally, to identify mitigation measures and other recommendations to reduce the significance of these impacts. The specific scope of services performed for this assessment consisted of the following tasks:

- Compile all readily-available historical biological resource information about the Study Area;
- Spatially query state and federal databases for any occurrences of special-status species or habitats within the Study Area and vicinity;
- Perform a reconnaissance-level field survey of the Study Area, including photographic documentation;
- Inventory all flora and fauna observed during the field survey;

- Characterize and map the habitat types present within the Study Area, including any potentially-jurisdictional water resources;
- Evaluate the likelihood for the occurrence of any special-status species;
- Assess the potential for the Project to adversely impact any sensitive biological resources;
- Recommend mitigation measures designed to avoid or minimize Project-related impacts; and
- Prepare and submit a report summarizing all of the above tasks.

The scope of services does not include other services that are not described in this Section, such as formal aquatic resource delineations or protocol-level surveys for special-status species.

1.3. REGULATORY SETTING

The following section summarizes some applicable regulations of biological resources on real property in California.

1.3.1. Special-status Species Regulations

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service implement the Federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from "take" (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation. Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

The California Endangered Species Act of 1970 (CESA) (California Fish and Game Code §2050 *et seq*., and CCR Title 14, §670.2, 670.51) prohibits "take" (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for state-listed species. Under CESA, California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of threatened and endangered species designated under state law (CFG Code 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any state-listed species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation.

California Fish and Game Code Sections 4700, 5050, and 5515 designates certain mammal, amphibian, and reptile species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The California Native Plant Protection Act of 1977 (CFG Code §1900 *et seq*.) requires CDFW to establish criteria for determining if a species or variety of native plant is endangered or rare. Section 19131 of the code requires that landowners notify CDFW at least 10 days prior to initiating activities that will destroy a listed plant to allow the salvage of plant material.

Many bird species, especially those that are breeding, migratory, or of limited distribution, are protected under federal and state regulations. Under the Migratory Bird Treaty Act of 1918 (16 USC §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbances must be reduced or eliminated during the nesting cycle. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs. Fish and Game Code §3511 designates certain bird species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The Bald and Golden Eagle Protection Act (16 USC §668) specifically protects bald and golden eagles from harm or trade in parts of these species.

California Environmental Quality Act (CEQA) (Public Resources Code §15380) defines "rare" in a broader sense than the definitions of threatened, endangered, or fully protected. Under the CEQA definition, CDFW can request additional consideration of species not otherwise protected. CEQA requires that the impacts of a project upon environmental resources must be analyzed and assessed using criteria determined by the lead agency. Sensitive species that would qualify for listing but are not currently listed may be afforded protection under CEQA. The CEQA Guidelines (§15065) require that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines (§15380) provide for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 are typically considered rare under CEQA. California "Species of Special Concern" is a category conferred by CDFW on those species that are indicators of regional habitat changes or are considered potential future protected species. While they do not have statutory protection, Species of Special Concern are typically considered rare under CEQA and thereby warrant specific protection measures.

1.3.2. Water Resource Protection

Real property that contains water resources are subject to various federal and state regulations and activities occurring in these water resources may require permits, licenses, variances, or similar authorization from federal, state and local agencies, as described next.

The Federal Water Pollution Control Act Amendments of 1972 (as amended), commonly known as the Clean Water Act (CWA), established the basic structure for regulating discharges of pollutants into "waters of the United States". Waters of the US includes essentially all surface waters, all interstate waters and their tributaries, all impoundments of these waters, and all wetlands adjacent to these waters. CWA Section 404 requires approval prior to dredging or discharging fill material into any waters of the US, especially wetlands. The permitting program is designed to minimize impacts to waters of the US, and when impacts cannot be avoided, requires compensatory mitigation. The US Army Corps of Engineers (USACE) is responsible for administering Section 404 regulations. Substantial impacts to jurisdictional wetlands may require an Individual Permit. Small-scale projects may require only a Nationwide Permit, which typically has an expedited process compared to the Individual Permit process. Mitigation of wetland impacts is required as a condition of the CWA Section 404 Permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

Under CWA Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. The California State Water Resources Control Board is responsible for administering CWA Section 401 regulations.

Section 10 of the Rivers and Harbors Act of 1899 requires approval from USACE prior to the commencement of any work in or over navigable Waters of the US, or which affects the course, location, condition or capacity of such waters. Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use, as a means to transport interstate or foreign commerce up to the head of navigation. Rivers and Harbors Act Section 10 permits are required for construction activities in these waters.

California Fish and Game Code (§1601 - 1607) protects fishery resources by regulating "*any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake*." CDFW requires notification prior to commencement, and issuance of a Lake or Streambed Alteration Agreement, if a proposed project will result in the alteration or degradation of ''waters of the State". The limit of CDFW jurisdiction is subject to the judgment of the Department; currently, this jurisdiction is interpreted to be the "stream zone", defined as "*that portion of the stream channel that restricts lateral movement of water*" and delineated at "*the top of the bank or the outer edge of any riparian vegetation, whichever is more landward*". CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Streambed Alteration Agreement. Projects that require a Streambed Alteration Agreement may also require a CWA 404 Section Permit and/or CWA Section 401 Water Quality Certification.

For construction projects that disturb one or more acres of soil, the landowner or developer must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ).

The State Water Resources Control Board's Order WQ 2019-0001-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities protects receiving water bodies from water-quality impacts associated with cannabis cultivation using a combination of Best Management Practices, buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

1.3.3. Tree Protection

At the State level, in areas inside timberland, any tree removal is subject to the conditions and requirements set forth in the Z'berg-Nejedly Forest Practice Act and the California Forest Practice Rules. If development of a project will result in the removal of commercial tree species, one of the following permits is needed: Less than 3 Acre Conversion Exemption; Christmas Tree; Dead, Dying or Diseased, Fuelwood, or Split Products Exemption; a Public Agency, Public and Private Utility Right of Way Exemption; a Notice of Exemption from Timberland Conversion Permit for Subdivision; or an Application for Timberland Conversion Permit.

El Dorado County's Oak Resources Conservation Ordinance (No. 5061) protects native oak resources as oak canopy or as individual trees. An Oak Resources Technical Report is needed to quantify the oak resource and any project impacts. An Oak Woodland / Oak Tree Removal Permit is needed before oaks can be removed for project construction.

2. ENVIRONMENTAL SETTING

The Study Area is located within the cis-montane Sierra Nevada mountains geographic subregion, which is contained within the Sierra Nevada Mountains geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in Climate Zone 7 - California's Gray Pine Belt, defined by hot summers and mild but pronounced winters without severe winter cold or high humidity (Sunset, 2020). The topography of the Study Area is mountainous. The elevation ranges from approximately 1,000 feet to 1,830 feet above mean sea level

Drainage runs south, and eventually flows into the Middle Fork Cosumnes River. Prior to the establishment of this cultivation operation, land uses were open space, livestock range, and forest reserve. The surrounding land uses are public lands and private estates with gardens or corrals, open space, and grazing land.

3. METHODOLOGY

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

Prior to conducting the field survey, the following information sources were reviewed:

- Any readily-available previous biological resource studies pertaining to the Study Area or vicinity
- United States Geologic Service (USGS) 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- Aerial photography of the Study Area
- California Natural Diversity Database (CNDDB), electronically updated monthly by subscription
- USFWS species list (IPaC Trust Resources Report)
- Query of California Native Plant Society's online database—Inventory of Rare and Endangered Plants of California.

3.2. FIELD SURVEY

Consulting biologist Tim Nosal, MS. conducted a reconnaissance-level field survey on January 31, 2020. Weather conditions were cool and breezy. A variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDB within the vicinity of the Study Area and those species on the USFWS species list (Appendix 1).

When a specimen could not be identified in the field, a photograph or voucher specimen (depending upon permit requirements) was taken and identified in the laboratory using a dissecting scope where necessary. Dr. Graening holds the following scientific collection permits: CDFW Scientific Collecting Permit No. SC-006802; and CDFW Plant Voucher Specimen Permit 09004. Tim Nosal holds CDFW Plant Voucher Specimen Permit 2081(a)-16-102-V. Taxonomic determinations were facilitated by referencing museum specimens or by various texts, including the following: Powell and Hogue (1979); Pavlik (1991); (1993); Brenzel (2012); Stuart and Sawyer (2001); Lanner (2002); Sibley (2003); Baldwin et al. (2012); Calflora (2020); CDFW (2020b,c); NatureServe 2020; and University of California at Berkeley (2020a,b).

The locations of any special-status species sighted were marked on aerial photographs and/or georeferenced with a geographic positioning system (GPS) receiver. Habitat types occurring in the Study Area were mapped on aerial photographs, and information on habitat conditions and the suitability of the habitats to support special-status species was also recorded. The Study Area was also informally

assessed for the presence of potentially-jurisdictional water features, including riparian zones, isolated wetlands and vernal pools, and other biologically-sensitive aquatic habitats

3.3. MAPPING AND OTHER ANALYSES

Locations of species' occurrences and habitat boundaries within the Study Area were digitized to produce the final habitat maps. The boundaries of potentially jurisdictional water resources within the Study Area were identified and measured in the field, and similarly digitized to calculate acreage and to produce informal delineation maps. Geographic analyses were performed using geographical information system software (ArcGIS 10, ESRI, Inc.). Vegetation communities (assemblages of plant species growing in an area of similar biological and environmental factors), were classified by Vegetation Series (distinctive associations of plants, described by dominant species and particular environmental setting) using the CNPS Vegetation Classification system (Sawyer and Keeler-Wolf, 1995). Informal wetland delineation methods consisted of an abbreviated, visual assessment of the three requisite wetland parameters (hydrophytic vegetation, hydric soils, hydrologic regime) defined in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). Wildlife habitats were classified according to the CDFW's California Wildlife Habitat Relationships System (CDFW, 2020c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2020), Calflora (2020); CDFW (2020a,b,c); and University of California at Berkeley (2020a,b).

4. RESULTS

4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

All plants detected during the field survey of the Study Area are listed in Appendix 2. The following animals were detected within the Study Area during the field survey: Botta's pocket gopher (*Thomomys bottae*); Columbian black-tailed deer (*Odocoileus hemionus columbianus*); coyote (*Canis latrans*); gray fox (*Urocyon cinereoargenteus*); acorn woodpecker (*Melanerpes formicivorus*); American robin (*Turdus migratorius*); Anna's hummingbird (*Calypte anna*); cedar waxwing (*Bombycilla cedrorum*); sparrow (Emberizidae); oak titmouse (*Baeolophus inornatus*); red-tailed hawk (*Buteo jamaicensis*); turkey vulture (*Cathartes aura*); western bluebird (*Sialia mexicanus*); and common songbirds.

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

4.2.1. Terrestrial Vegetation Communities

The Study Area contains five terrestrial vegetation communities. These vegetation communities are discussed here and are delineated in the Exhibits. Aquatic vegetation communities are discussed in the section on jurisdictional waters.

Mixed Oak Woodland: Tree dominated habitats within the Study Area were variously impacted by the 2014 Sand Fire. Some stands of trees were destroyed by flames while others were largely untouched by fire. The remaining/recovering vegetation ranges from undamaged oaks along the ridgetop to fire-scorched trees that are re-sprouting along the slopes. Areas dominated by trees can be further described as mixed oak woodland. The composition of the mixed oak woodland varies across the Study Area. Dominant canopy species include blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), canyon live oak (*Quercus chrysolepis*), California black oak, ponderosa pine and gray pine (*Pinus sabiniana*). The shrub layer within this habitat is comprised of whiteleaf manzanita, yerba santa, and toyon (*Heteromeles arbutifolia)*. The understory within the oak woodland varies with the density of the canopy, with grasses dominating in the open canopy, and lemonade berry (*Rhus trilobata*), lemon balm (*Melissa officinalis*) and tall sock destroyer (*Torlis arvensis*) common as the canopy begins to close. This vegetation can be classified as "*Quercus* (*agrifolia, douglasii, garryana, kelloggii, lobata, wislizeni*) Forest Alliance (Sawyer et al, 2009)" or as the Holland Type "Oak Forest".

Coniferous woodland. Most of the trees in the northwestern corner of the Study Area appears to have survived the 2014 fire. However, the partially charred bark on the trees and small shrubs serve as evidence that the fire moved through this portion of the Study Area. The habitat in this corner is characterized by an open woodland of ponderosa pine (*Pinus ponderosa*) and California black oak (*Quercus kelloggii*) with an understory of regenerating whiteleaf manzanita (*Arctostaphylos viscida*), blue wildrye (*Elymus glaucus*), hedgehog dogtail grass (*Cynosurus echinoides*) and other herbs and grasses. This vegetation can be classified as "*Pinus ponderosa* forest alliance (Sawyer et al. 2009)" or as the Holland Type "Westside Ponderosa Pine Forest".

Ruderal/Disturbed. These areas consist of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads, or structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species or ornamental plants lacking a consistent community structure. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

Non-native Annual Grassland. The California Annual Grassland Series (Sawyer and Keeler-Wolf, 1995) consists of open fields of non-native pasture grasses and weedy forbs. These annual grasslands

have replaced native habitats of perennial bunchgrasses or foothill chaparral. Mowing or grazing disturbances, rather than periodic wildfires, typically keep this plant community from undergoing successional changes to woodland or back to perennial grassland. Plant species common in this community include European annual grasses (*Avena, Bromus, Hordeum,* and *Festuca*).

4.2.2. Wildlife Habitat Types

Wildlife habitat types were classified using CDFW's Wildlife Habitat Relationship System. The Study Area contains the following wildlife habitat types: Annual Grassland, Barren, and Montane Hardwood.

4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Study Area. No special-status habitat was detected within the Study Area: the stream corridor of Middle Fork Cosumnes River. The CNDDB reported one special-status habitats within the Study Area: Central Valley Drainage Hardhead/Squawfish Stream. The CNDDB reported one special-status habitat in a 10-mile radius outside of the Study Area: Central Valley Drainage Hardhead/Squawfish Stream.

In El Dorado County, native oak woodlands are a protected habitat (see El Dorado County's Oak Resources Conservation Ordinance No. 5061). Native oak woodland is present within the Study Area. An Oak Resources Technical Report was prepared for this project:

- Natural Investigations Co. 2020. Oak Resources Technical Report for 3029 Freshwater Lane, El Dorado.

4.2.4. Habitat Plans and Wildlife Corridors

Wildlife movement corridors link remaining areas of functional wildlife habitat that are separated primarily by human disturbance, but natural barriers such as rugged terrain and abrupt changes in vegetation cover are also possible. Wilderness and open lands have been fragmented by urbanization, which can disrupt migratory species and separate interbreeding populations. Corridors allow migratory movements and act as links between these separated populations.

El Dorado County indicates that the property is in an "Essential Connectivity Area" The open space within the Study Area provides unrestricted animal movement, and the river corridor of the Middle Fork Cosumnes River functions as a wildlife corridor and fishery. The Study Area is not located within any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

4.3. LISTED SPECIES AND OTHER SPECIAL-STATUS SPECIES

For the purposes of this assessment, "special status" is defined to be species that are of management concern to state or federal natural resource agencies, and include those species that are:

- Listed as endangered, threatened, proposed, or candidate for listing under the Federal Endangered Species Act;
- Listed as endangered, threatened, rare, or proposed for listing, under the California Endangered Species Act of 1970;
- Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);
- Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
- Designated as a species of special concern by CDFW;
- Plants considered to be rare, threatened or endangered in California by the California Native Plant Society (CNPS); this consists of species on Lists 1A, 1B, and 2 of the CNPS Ranking System; or
- Plants listed as rare under the California Native Plant Protection Act.

4.3.1. Reported Occurrences of Listed Species and Other Special-status Species

A list of special-status plant and animal species that have occurred within the Study Area and vicinity was compiled based upon the following:

- Any previous and readily-available biological resource studies pertaining to the Study Area;
- Informal consultation with USFWS by generating an electronic Species List (Information for Planning and Conservation website at https://ecos.fws.gov/ipac/); and
- A query of the CNPS online Inventory
- A spatial query of the CNDDB.

CNPS lists 2 rare plants in the vicinity (Fiddletown Quadrangle): Brandegee's clarkia (*Clarkia biloba*), Rank 4.2; and streambank spring beauty (*Claytonia parviflora*), rank 4.2. An additional 28 species are listed from the surrounding 8 quadrangles. Table 1 lists these species and analyzed their probability of occurrence in the Project Areas.

The CNDDB was queried and any reported occurrences of special-status species were plotted in relation to the Study Area boundary using GIS software (see exhibits). The CNDDB reported no special-status species occurrences within the Study Area. Within a 5-mile buffer of the Study Area boundary, the CNDDB reported several special-status species occurrences, summarized in Table 2. A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1). This list is generated using a regional and/or watershed approach and does not necessarily indicate that the Study Area provides suitable habitat. The following listed species should be considered in the impact assessment:

- Amphibians
    - California Red-legged Frog (*Rana draytonii*) Threatened

- Fishes
    - Delta Smelt (*Hypomesus transpacificus*) Threatened

Table 1. Special-status Plants Reported by CNPS in the Vicinity of the Study Area

Scientific Name	Common Name	CRPR	Habitat	Micro Habitat	Probability to Occur in Project Area
Allium jepsonii	Jepson's onion	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	Serpentinite or volcanic	Unlikely. Chaparral and forest habitat not present. Soils are not ultramafic or volcanic.
Arctostaphylos myrtifolia	Ione manzanita	1B.2, FT	Chaparral, Cismontane woodland	acidic, Ione soil, clay or sandy	Unlikely. Chaparral habitat not present. Soils are not acidic, ultramafic, or volcanic.
Arctostaphylos nissenana	Nissenan manzanita	1B.2	Closed-cone coniferous forest, Chaparral	rocky	Unlikely. The only manzanita detected in the Study Area is Whiteleaf manzanita (*A. viscida*)
Balsamorhiza macrolepis	big-scale balsamroot	1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland	sometimes serpentinite	Unlikely. Chaparral habitat not present. Soils are not ultramafic or volcanic.
Bolandra californica	Sierra bolandra	4.3	Lower montane coniferous forest, Upper montane coniferous forest	mesic, rocky	Unlikely. Forest and rocky habitat is absent.
Bryum chryseum	brassy bryum	4.3	Chaparral (openings), Cismontane woodland, Valley and foothill grassland	no data	Unknown. Chaparral habitat not present. Unsure if microclimates are present. Mosses were mostly absent during site survey.
Calochortus clavatus var. avius	Pleasant Valley mariposa lily	1B.2	Lower montane coniferous forest (Josephine silt loam and volcanic)	no data	Unlikely. Forest habitat not present. Soils are not Josephine or volcanic.
Calystegia stebbinsii	Stebbins' morning-glory	1B.1, CE, FE	Chaparral (openings), Cismontane woodland	gabbroic or serpentinite	Unlikely. Chaparral habitat not present. Soils are not ultramafic or volcanic.
Carex xerophila	chaparral sedge	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	serpentinite, gabbroic	Unlikely. Chaparral and forest habitat not present. Soils are not ultramafic or volcanic.
Ceanothus fresnensis	Fresno ceanothus	4.3	Cismontane woodland (openings), Lower montane coniferous forest	no data	Unlikely. Chaparral and forest habitat not present. Soils are not ultramafic or volcanic.
Ceanothus roderickii	Pine Hill ceanothus	1B.1, FE	Chaparral, Cismontane woodland	Serpentinite or gabbroic.	None. Chaparral habitat not present. Soils are not serpentine or gabbroic.
Chlorogalum grandiflorum	Red Hills soaproot	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	serpentinite, gabbroic and other soils	Unlikely. Chaparral and forest habitat not present. Soils are not serpentine or gabbroic.
Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	often roadcuts	Unlikely. Requisite habitats are not present in Project Areas, especially after wildfire and firefighting disturbances removed woodland and forest habitat. Chaparral not present.
Clarkia virgata	Sierra clarkia	4.3	Cismontane woodland, Lower montane coniferous forest	no data	Low to moderate. Woodland habitat is present near Project Areas.
Claytonia parviflora ssp. grandiflora	streambank spring beauty	4.2	Cismontane woodland	rocky	Unlikely. Rocky habitat is absent in Project Areas
Crocanthemum suffrutescens	Bisbee Peak rush-rose	3.2	Chaparral	Often gabbroic or lone soil; often burned or disturbed areas	Unlikely. Chaparral and forest habitat not present. Soils are not gabbroic or lone.

Scientific Name	Common Name	CRPR	Habitat	Micro Habitat	Probability to Occur in Project Area
Erigeron miser	starved daisy	1B.3	Upper montane coniferous forest (rocky)	no data	Unlikely. Forest and rocky habitat is not present.
Eriogonum apricum var. prostratum	Irish Hill buckwheat	1B.1, CE, FE	Chaparral (openings, Ione soil)	no data	Unlikely. Chaparral habitat not present. Soils are not gabbroic or Ione.
Eryngium pinnatisectum	Tuolumne button-celery	1B.2	Cismontane woodland, Lower montane coniferous forest, Vernal pools	mesic	Unlikely. No vernal pools are found in Study Area; no forest habitat.
Fremontodendron decumbens	Pine Hill flannelbush	1B.2, FE	Chaparral, Cismontane woodland	gabbroic or serpentinite, rocky	Unlikely. Chaparral habitat not present. Soils are not gabbroic or serpentine.
Galium californicum ssp. sierrae	El Dorado bedstraw	1B.2, FE	Chaparral, Cismontane woodland, Lower montane coniferous forest	gabbroic	None. Chaparral and Gabbroic soils not present.
Horkelia parryi	Parry's horkelia	1B.2	Chaparral, Cismontane woodland	Ione formation and other soils	Unlikely. Chaparral habitat not present. Soils are not gabbroic or Ione.
Lilium humboldtii ssp. humboldtii	Humboldt lily	4.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	openings	Low to moderate. Woodland habitat is present near Project Areas.
Navarretia myersii ssp. myersii	pincushion navarretia	1B.1	Vernal pools	often acidic	None. There are no vernal pools in the Study Area.
Navarretia prolifera ssp. lutea	yellow bur navarretia	4.3	Chaparral, Cismontane woodland	no data	Low to moderate. Chaparral habitat not present.
Packera layneae	Layne's ragwort	1B.2, FT	Chaparral, Cismontane woodland	serpentinite or gabbroic, rocky	Unlikely. Chaparral and rocky habitat not present. Soils are not gabbroic or serpentine.
Sphenopholis obtusata	prairie wedge grass	2B.2	Cismontane woodland, Meadows and seeps	mesic	Low. Woodland habitat is present, but not wet meadows or seeps.
Trichostema rubisepalum	Hernandez bluecurls	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Vernal pools	Volcanic or serpentinite, gravelly	Unlikely. Vernal pools and serpentine soils are not present; no forest present.
Viburnum ellipticum	oval-leaved viburnum	2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	no data	Low to moderate. Woodland habitat is present near Project Areas.
Wyethia reticulata	El Dorado County mule ears	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	clay or gabbroic	Unlikely. Chaparral and forest habitat not present. Soils are not gabbroic.

*Definitions of Status Codes: CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; and CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere. FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; CE = California State listed as endangered; CT = California State listed as threatened.

Table 2. Special-status Species Reported by CNDDB in the Vicinity of the Study Area

Common Name Scientific Name	Status*	General Habitat*	Microhabitat**	Probability to Occur in Project Area
California red-legged frog *Rana draytonii*	FT/CSSC	Lowlands & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Low probability. Project areas contain no water resources and are 400 ft away from ephemeral channels and 1000 ft away from perennial channel. Steep slopes and hostile terrain separate project areas from suitable habitat in Cosumnes River.
Foothill yellow-legged frog *Rana boylii*	CCT/CSSC	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats.	Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	Low probability. Project areas contain no water resources and are 400 ft away from ephemeral channels and 1000 ft away from perennial channel. Steep slopes and hostile terrain separate project areas from suitable habitat in Cosumnes River.
Great gray owl *Strix nebulosa*	CE	Resident of mixed conifer or red fir forest habitat, in or on edge of meadows.	Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.	None. All trees were burned, and no large diameter snags or cool microclimate present.
Bank swallow *Riparia riparia*	CT	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Low probability. Project area does not contain suitable habitat. Suitable habitat is 1,000 ft away in Cosumnes River.
Tricolored blackbird *Agelaius tricolor*	CT/CSSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California.	Requires open water, protected nesting substrate, & foraging area with insect prey within a few km of the colony.	Low probability. Project area does not contain suitable habitat. Suitable habitat is 1,000 ft away in Cosumnes River.
Fisher - West Coast DPS *Pekania pennanti*	CT/CSSC	Intermediate to large-tree stages of coniferous forests & deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs & rocky areas for cover & denning. Needs large areas of mature, dense forest.	None. All trees were burned, and no large forest or cover is present.
Western pond turtle *Emys marmorata*	CSSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, be	Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying	None. Project area does not contain suitable habitat. Suitable habitat is 1,000 ft away in Cosumnes River.
Grady's Cave amphipod *Stygobromus gradyi*	CSSC	Known only from central California.	Known only from springs and caves in the Mother Lode karst region.	None. No springs, caves, or karst present within Study Area.
Tulare cuckoo wasp *Chrysis tularensis*	CSSC	No data.	No data.	Unlikely. These parasitoids require specific hosts and microclimates.
Cosumnes stripetail *Cosumnoperla hypocrena*	CSSC	Found in intermittent streams on western slope of Central Sierra Nevada foothills in American & Cosumnes River basins.		None. Project area does not contain suitable habitat. Suitable habitat is 1,000 ft away in Cosumnes River.
Nissenan manzanita *Arctostaphylos nissenana*	1B.2	Closed-cone coniferous forest, chaparral.	Usually on metamorphics, associated w/ other chaparral species. 450-1100 m.	Unlikely. The only manzanita detected in the Study Area is Whiteleaf manzanita (*A. viscida*)

Brandegee's clarkia *Clarkia biloba ssp. brandegeeae*	4.2	Chaparral, cismontane woodland, lower montane coniferous forest.	Often in roadcuts. 75-915 m.	Unlikely. Requisite habitats are not present in Project Areas, especially after wildfire and firefighting disturbances removed woodland and forest habitat. Chaparral not present.

*Definitions of Status Codes: FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; FPT = Federally proposed for listing as threatened; FC = Candidate for Federal listing; MB = Migratory Bird Act; CE = California State listed as endangered; CT = California State listed as threatened; CSSC = California species of special concern; CR = California rare species; CFP = California fully protected species; CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; and CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere. Global Ranking: G1 = Critically Imperiled; G2 = Imperiled; G3 = Vulnerable. State Ranking: S1 = Critically Imperiled; S2 = Imperiled; S3 = Vulnerable.
**Copied verbatim from CNDDB, unless otherwise noted.

4.3.2. Listed Species or Special-status Species Observed During Field Survey

During the field survey, no special-status species were detected within the Study Area.

4.3.3. Potential for Listed Species or Special-status Species to Occur in the Study Area

The species identified by queries of databases by CNPS, CNDDB, and USFWS were analyzed for their potential to occur within the Project Areas; the results are summarized in Table 1 and Table 2. Many of the rare plants reported in the vicinity of the Study Area require specialized soils: acidic, high clay, gabbroic, serpentine, or otherwise ultramafic, Ione, Josephine, volcanic, etc. These soils do not occur in the Study Area. USDA Soil Web maps the following soils in the Study Area, all of which derive from residuum weathered from metamorphic rock, schist, or slate:

- McE: Mariposa-Josephine very rocky loams, 15 to 50 percent slopes
- MbF: Mariposa very rocky silt loam, 3 to 50 percent slopes
- MmF; Metamorphic rock land
- MbE Mariposa very rocky silt loam, 3 to 50 percent slopes

In general, the Project Areas have a low potential for harboring listed plant species for various reasons. As discussed previously, specialized soils are absent. The dominant habitat type in the Project Area is non-native grassland, and the invasive European grasses and forbs tend to exclude and outcompete native rare plants. The Project Areas are in a disturbed and ruderal state because they were subjected to wildfire, then grubbing for fire breaks and tree replantings.

In contrast, undisturbed areas of the Study Area have a low to moderate potential to support special-status plant species, especially near the river corridor and in woodland habitat. Streams, riparian corridors, and riverine wetlands within the Study Area (at the southern border) can sustain aquatic special-status species and diverse wildlife species in general.

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

An informal assessment for the presence of potentially-jurisdictional water resources within the Study Area was also conducted during the field survey.

For purposes of this biological site assessment, non-wetland waters were classified using the California Forest Practice Rules. The California Forest Practice Rules define a Class I watercourse as 1) a watercourse providing habitat for fish always or seasonally, and/or 2) providing a domestic water source; a Class II watercourse is 1) a watercourse capable of supporting non-fish aquatic species, or 2) a watercourse within 1000 feet of a watercourse that seasonally or always has fish present; a Class III watercourse is a watercourse with no aquatic life present and that shows evidence of being capable of transporting sediment to Class I and Class II waters during high water flow conditions.

The USFWS National Wetland Inventory (see Appendix 1) reported 1 water feature within the Study Area: the Middle Fork Cosumnes River

The Project Area contains no water resources. The following water features were detected within the Study Area during the field survey (see Exhibits): several ephemeral channels (Class III Watercourses) and the Middle Fork Cosumnes River. Apart from riverine wetlands within the Middle Fork Cosumnes River, there are no wetlands in the Study Area.

5. IMPACT ANALYSES AND MITIGATION MEASURES

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known biological resources within the Study Area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level.

5.1. IMPACT SIGNIFICANCE CRITERIA

The significance of impacts to biological resources depends upon the proximity and quality of vegetation communities and wildlife habitats, the presence or absence of special-status species, and the effectiveness of measures implemented to protect these resources from Project-related impacts. As defined by CEQA, the Project would be considered to have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a special-status species in local or regional plans, policies, or regulations, or by USFWS or CDFW
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by USFWS or CDFW
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- 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
- Conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved governmental habitat conservation plan.

5.2. IMPACT ANALYSIS

The following discussion evaluates the potential for Project-related activities to adversely affect biological resources. The Project boundaries were digitized and then overlaid on the habitat map using GIS to quantify potential impacts.

5.2.1. Potential Direct / Indirect Adverse Effects Upon Special-status Species

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

No special-status species were detected within the Study Area during the field survey. In general, the Project Areas have a low potential for harboring listed plant species for various reasons. As discussed previously, specialized soils are absent. The dominant habitat type in the Project Area is non-native grassland, and the invasive European grasses and forbs tend to exclude and outcompete native rare plants. The Project Areas are in a disturbed and ruderal state because they were subjected to wildfire, then grubbing for fire breaks and tree replantings.

In contrast, undisturbed areas of the Study Area have a low to moderate potential to support special-status plant species, especially near the river corridor and in woodland habitat. Streams, riparian

corridors, and riverine wetlands within the Study Area (at the southern border) can sustain aquatic special-status species and diverse wildlife species in general. The Project Areas are at 400 feet away from the nearest ephemeral channel and about 1,000 feet away from the Cosumnes River. No direct impacts to special-status species are expected from project implementation. However, special-status species that occur in the vicinity could migrate on to, or plants emerge from, the Study Area between the time that the field survey was completed and the start of construction. This is a potentially-significant impact before mitigation.

The Study Area contains suitable nesting habitat for various bird species because of the presence of trees and poles. However, no nests or nesting activity was observed in the project area during the field survey. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by removal of trees or utility poles, and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact.

Recommended Mitigation Measures

A pre-construction survey for special-status species should be performed by a qualified biologist to ensure that special-status species are not present. If any listed species are detected, construction should be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) should be consulted and project impacts and mitigation reassessed. With the implementation of this mitigation measure, adverse impacts upon special-status species would be reduced to a less-than-significant level.

If construction activities would occur during the nesting season (usually March to September), a pre-construction survey for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFW and/or USFWS should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. With the implementation of this mitigation measure, adverse impacts upon special-status bird species and nesting birds would be reduced to a less-than-significant level.

5.2.2. Potential Direct / Indirect Adverse Effects Upon Special-status Habitats or Natural Communities or Corridors

- *Will the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The Study Area is not within any designated listed species' critical habitat. The Project Areas do not contain any special-status habitats. The surrounding Study Area contains one terrestrial special-status habitat: riparian corridors along the watercourses. Project implementation will not impact any special-status habitats, as large setbacks from watercourses were incorporated into site planning.

Recommended Mitigation Measures

No mitigation is necessary.

5.2.3. Potential Direct / Indirect Adverse Effects On Jurisdictional Water Resources

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

The Project Area has no water resources; the Project Area is at least 350 feet away from the nearest ephemeral channel and about 1,000 feet away from the Cosumnes River. The surrounding Study Area has several ephemeral channels and one perennial channel at the southern border. There are no wetlands within the Study Area. Potential adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, the filling of wetlands, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. However, the cultivation areas have been designed with a minimum 350-foot setback from watercourses and situated on flat ridgetops. Because of these avoidance measures, no direct impacts to water resources will occur.

Indirect impacts from project construction could occur from ground disturbance and resulting erosion and sedimentation in receiving water bodies. If the total area of ground disturbance from installation of the cultivation operation is 1 acre or more, the Cultivator does must enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ). Implementation of a stormwater pollution prevention plan, and erosion control plan, along with regular inspections, will ensure that construction activities do not pollute receiving waterbodies.

Potential adverse impacts to water resources could occur during operation of cultivation activities resources by discharge of sediment or other pollutants (fertilizers, pesticides, human waste, etc.) into receiving waterbodies. However, the project proponent must file a Notice of Intent and enroll in Cannabis Cultivation Order WQ 2019-0001-DWQ. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

Recommended Mitigation Measures

No impacts were identified, and therefore no mitigation measures are proposed.

5.2.4. Potential Impacts to Wildlife Movement, Corridors, etc.

- *Will the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

El Dorado County indicates that the property is in an “Essential Connectivity Area” The open space within the Study Area provides unrestricted animal movement, and the river corridor of the Middle Fork Cosumnes River functions as a wildlife corridor and fishery. While the Study Area may be used by wildlife for movement or migration, the Project would not have a significant impact on this movement because it would not block movement and the majority of the open space in the Study Area would still be available. Implementation of the proposed project would necessitate erection of security fences around the cultivation compounds. These fences do not allow animal movement and may act as a local barrier to

wildlife movement. However, the fenced cultivation areas are surrounded by open space, allowing wildlife to move around these fenced areas. Thus, implementation of the proposed project is a less than significant impact upon wildlife movement. Implementation of the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Recommended Mitigation Measures

No mitigation is necessary.

5.2.5. Potential Conflicts With Ordinances, Habitat Conservation Plans, etc.

- *Will the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- *Will the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

In El Dorado County, native oak woodlands are a protected habitat (see El Dorado County's Oak Resources Conservation Ordinance No. 5061). Native oak woodland is present within the Study Area. Commercial tree species are also present within the Study Area. Construction of the project may require the removal of trees protected by El Dorado County and CalFire. This is a potentially significant impact before mitigation.

The project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or another approved governmental habitat conservation plan. The Study Area is not within the coverage area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

Recommended Mitigation Measures

An Oak Resources Technical Report was prepared for this project (Natural Investigations Co. 2020). El Dorado County's Oak Resources Conservation Ordinance (No. 5061) requires compensatory mitigation for the removal of oak tree canopy or individual oak trees. Mitigation ratios are specified in the Ordinance. The project proponent has a variety of mitigation options: they may pay an in-lieu fee, purchase and deed-restrict oak woodland land offsite, or plant replacement oaks on-site or off-site. An Oak Woodland / Oak Tree Removal Permit is needed before oaks can be removed for project construction.

If development of the project will result in the removal of commercial tree species, one of the following permits is needed: Less than 3 Acre Conversion Exemption; Christmas Tree; Dead, Dying or Diseased, Fuelwood, or Split Products Exemption; a Public Agency, Public and Private Utility Right of Way Exemption; a Notice of Exemption from Timberland Conversion Permit for Subdivision; or an Application for Timberland Conversion Permit.

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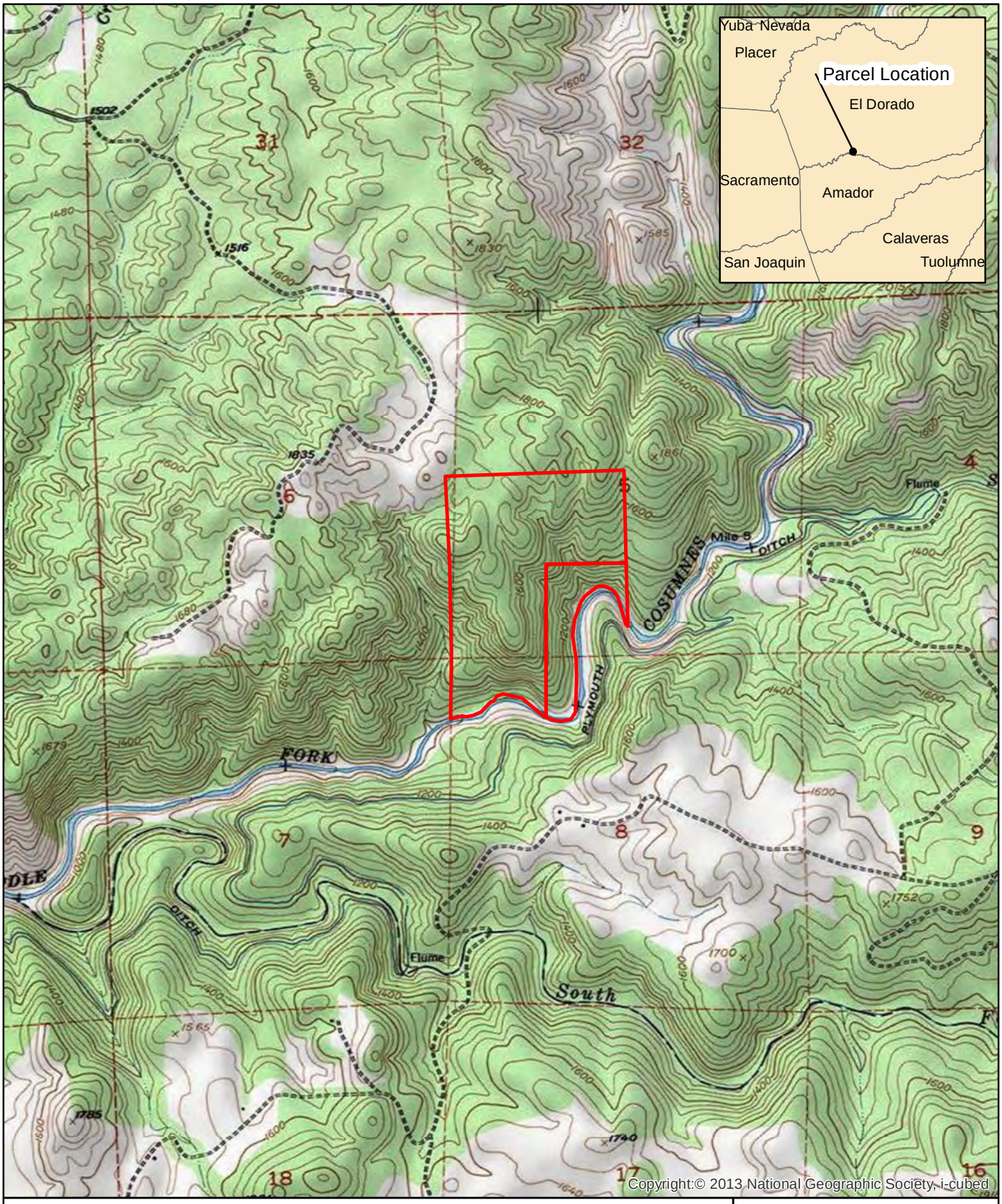
EXHIBITS



Parcel Location

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0 0.5 1 Miles

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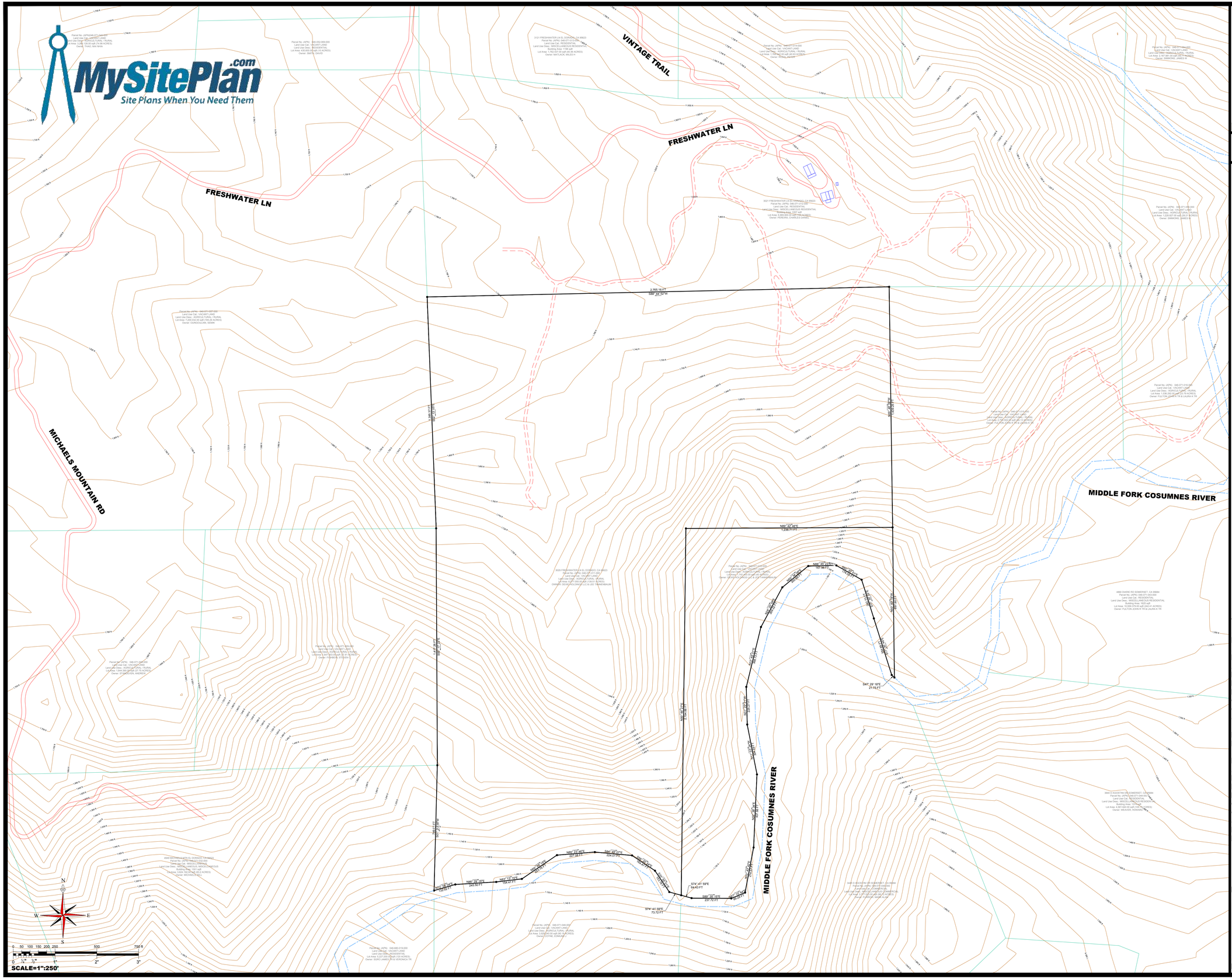
3029 Freshwater Lane
Parcel Location Map

Natural Investigations Company

Map Date 1/27/2020

Fiddletown 1949 Quadrangle Photoinspected 1973:Township 8N, Range 11E, Section 5,6,7,8



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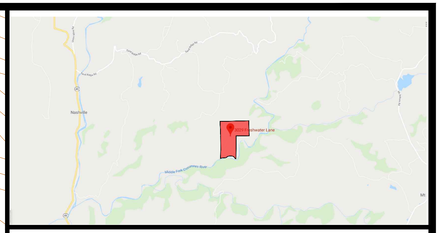

VICINITY MAP

EXISTING SITE PLAN

3029 FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-011-000
AREA:6,077,055.00 sqft (139.51 acres)
&
FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
AREA:1,742,00.00 sqft (40.00 acres)

3029 FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-011-000
AREA:6,077,055.00 sqft (139.51 acres)
LEGAL INFORMATION: **SEC 5 8 11**
ZONING (ASSESSOR): **RE**
BOOK: **46** PAGE:**07** LOT:**11**
LAND USE CATEGORY: **VACANT LAND**
LAND USE DESCRIPTION: **AGRICULTURAL / RURAL**
OWNER NAME: **DEXIE HOLDINGS LLC & LEE TANNENBAUM**
OWNER ADDRESS:
4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682

FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
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4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682
PHONE: 650-515-2484
EMAIL: lee.tannenbaum@gmail.com

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DATE: NOVEMBER 2.019

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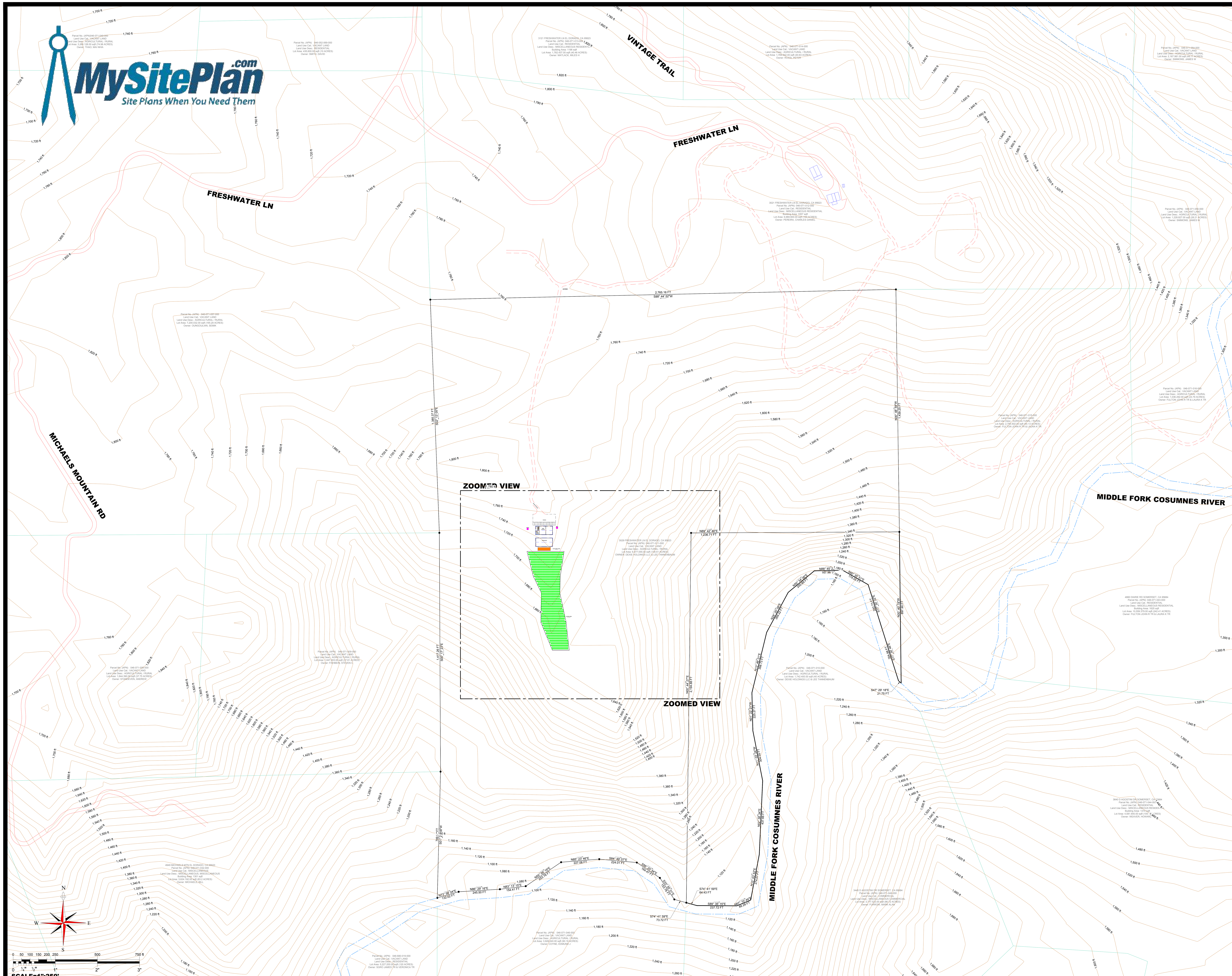

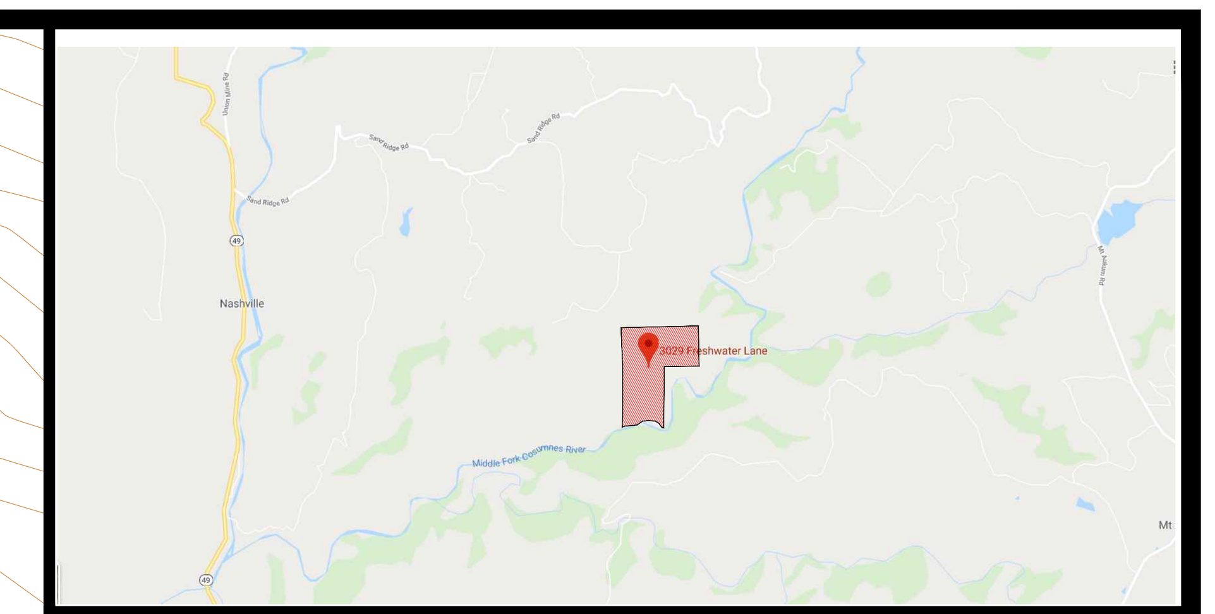

VICINITY MAP

PROPOSED SITE PLAN

3029 FRESHWATER LN EL DORADO, CA 95623

PARCEL#:046-071-011-000

AREA:6,077,055.00 sqft (139.51 acres)

&

FRESHWATER LN EL DORADO, CA 95623

PARCEL#:046-071-010-000

AREA:1,742,00.00 sqft (40.00 acres)

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EMAIL: lee.tannenbaum@gmail.com

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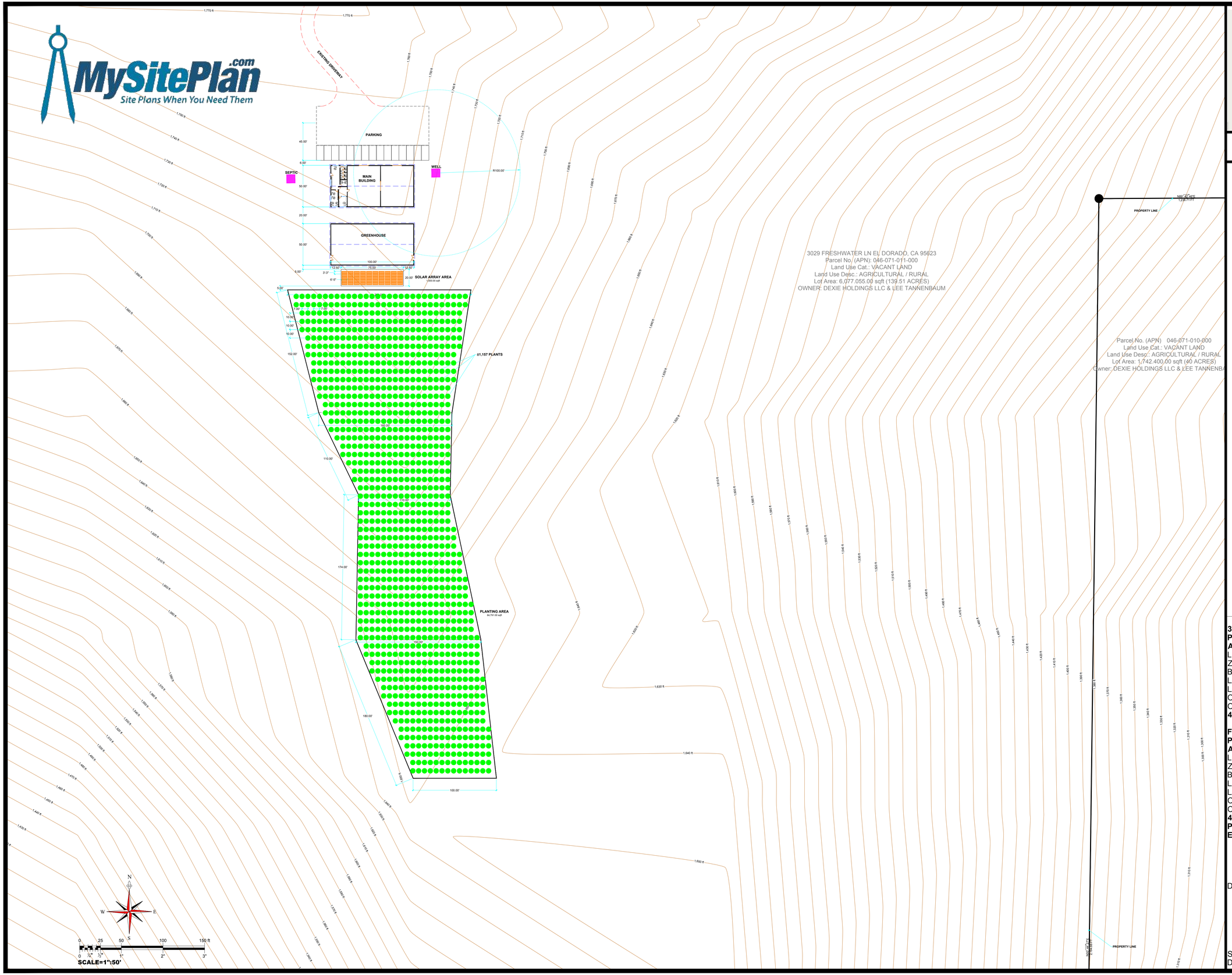
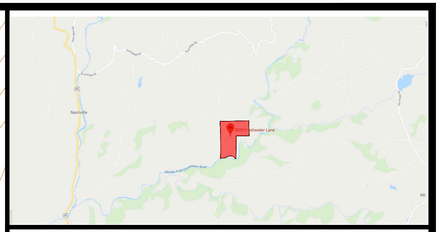
SCALE:1":250'
DATE: NOVEMBER 2.019





VICINITY MAP

PROPOSED SITE PLAN BUILDING AREA

3029 FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-011-000
AREA:6,077,055.00 sqft (139.51 acres)
&
FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
AREA:1,742,00.00 sqft (40.00 acres)

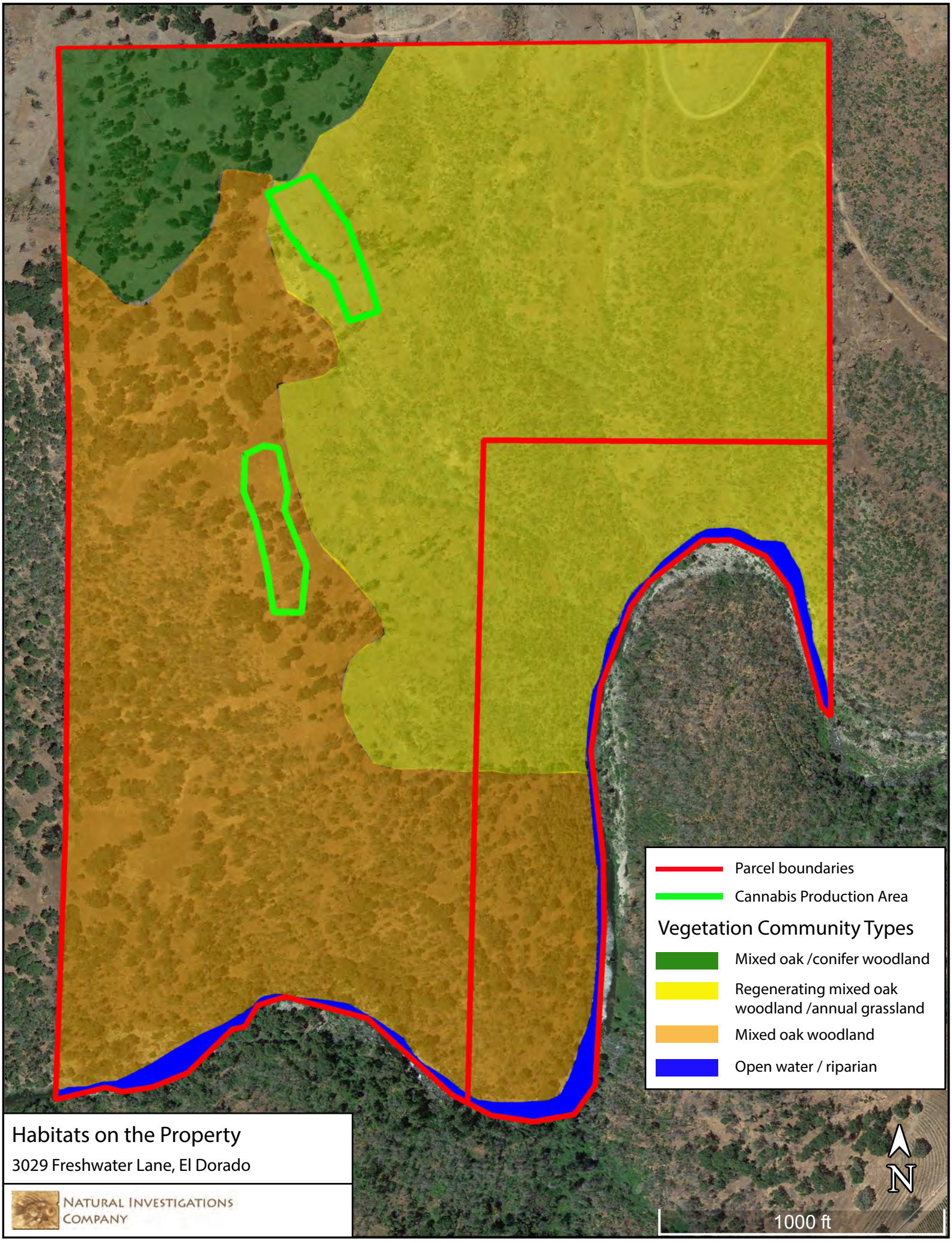
3029 FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-011-000
AREA:6,077,055.00 sqft (139.51 acres)
LEGAL INFORMATION: **SEC 5 8 11**
ZONING (ASSESSOR): **RE**
BOOK: **46** PAGE:**07** LOT:**11**
LAND USE CATEGORY: **VACANT LAND**
LAND USE DESCRIPTION: **AGRICULTURAL / RURAL**
OWNER NAME: **DEXIE HOLDINGS LLC & LEE TANNENBAUM**
OWNER ADDRESS:
4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682

FRESHWATER LN EL DORADO, CA 95623
PARCEL#:046-071-010-000
AREA:1,742,000.00 sqft (40.00 acres)
LEGAL INFORMATION: **SEC 5 8 11**
ZONING (ASSESSOR): **RE**
BOOK: **46** PAGE:**07** LOT:**11**
LAND USE CATEGORY: **VACANT LAND**
LAND USE DESCRIPTION: **AGRICULTURAL / RURAL**
OWNER NAME: **DEXIE HOLDINGS LLC & LEE TANNENBAUM**
OWNER ADDRESS:
4241 VEGA LOOP, SHINGLE SPRINGS, CA, 95682
PHONE: 650-515-2484
EMAIL: lee.tannenbaum@gmail.com

DESIGNED BY: MySitePlan.com Site Plans When You Need Them

SCALE:1":50'
DATE: NOVEMBER 2.019

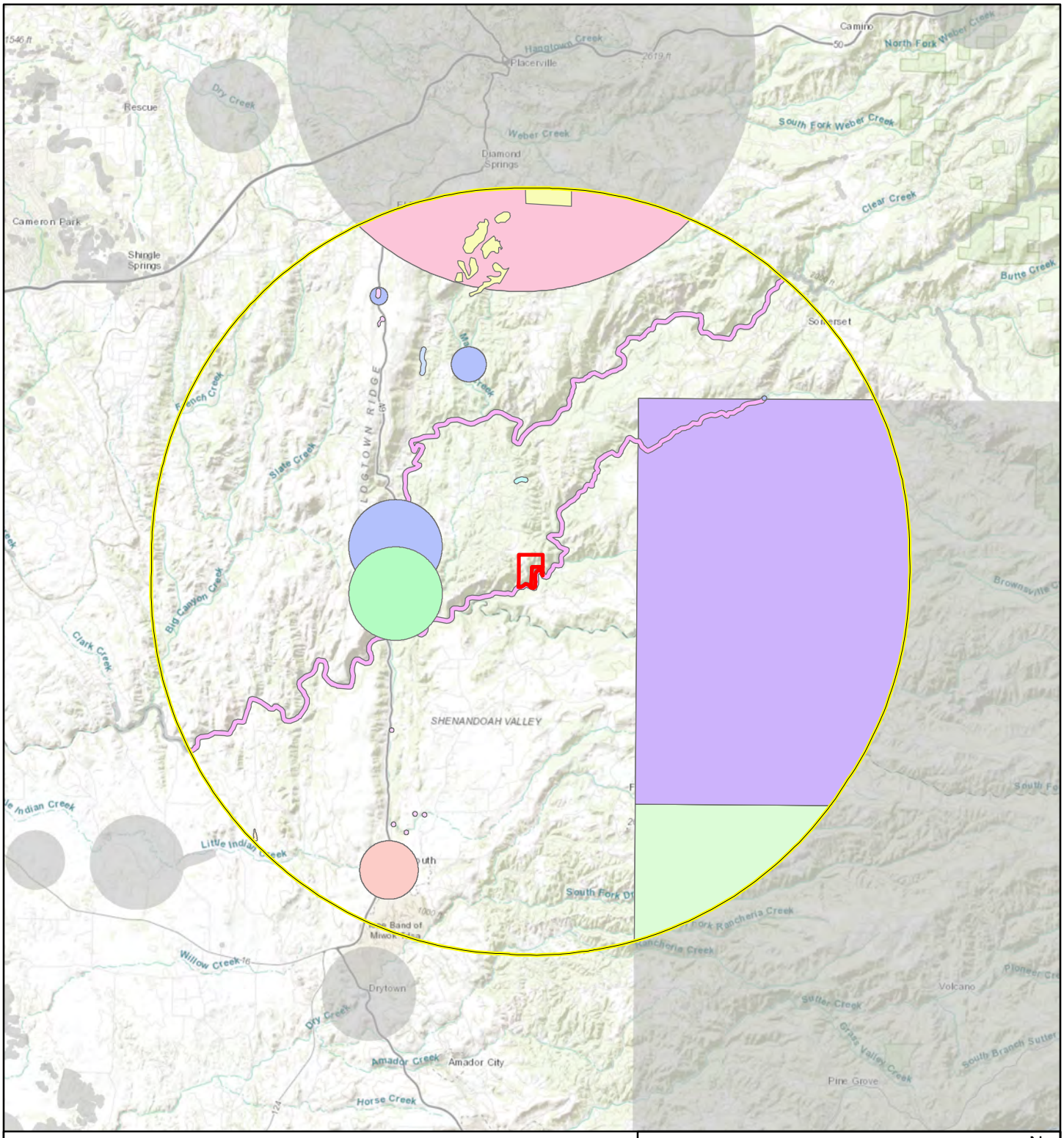
REVISION #:	SHEET #:
4	3



Habitats on the Property

3029 Freshwater Lane, El Dorado

Natural Investigations Company



10 Mile Buffer Project Location

1:190,000 1 inch = 3 miles

0 3 6 Miles

N

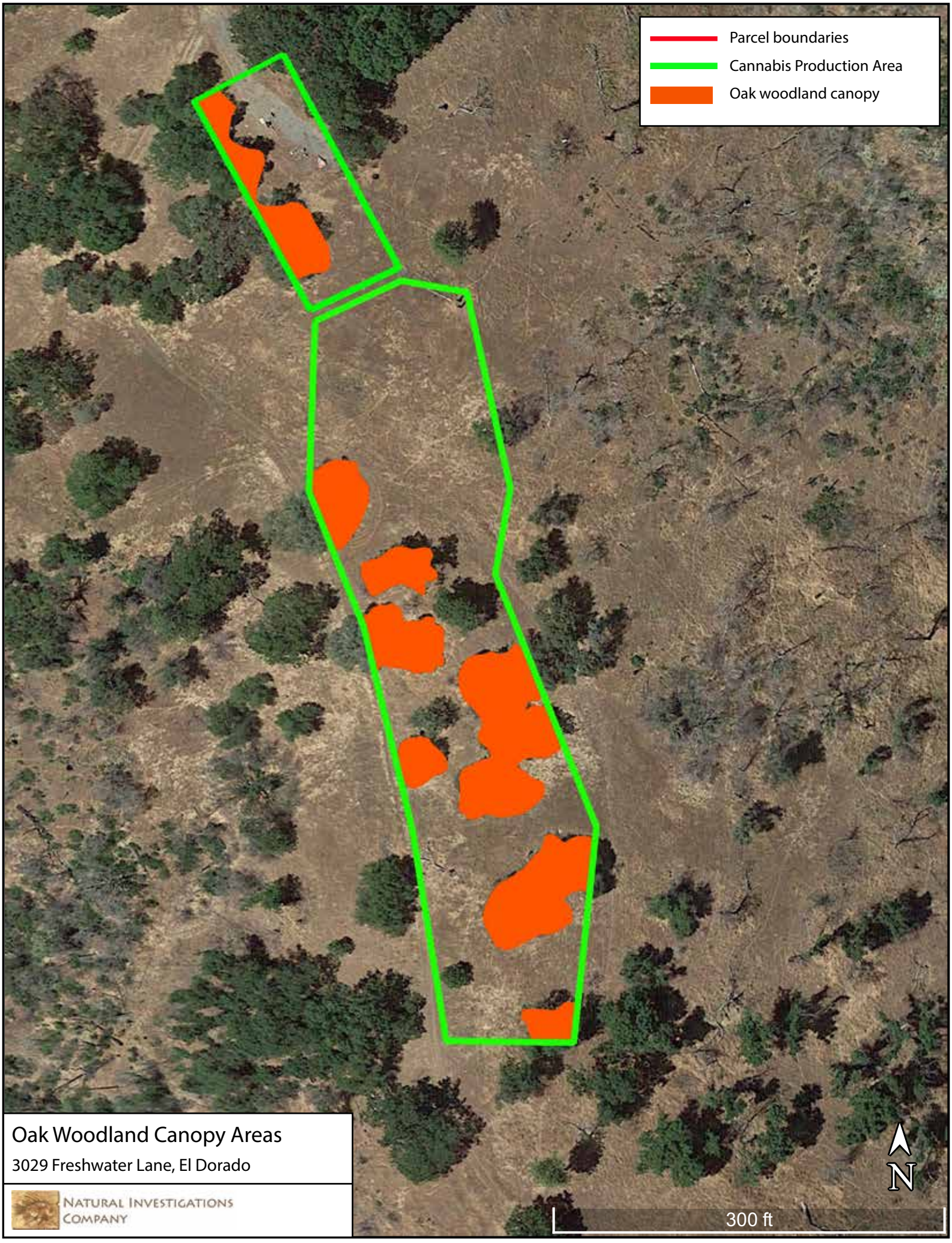
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist inshowing features discussed in an attached document. Natural Investigations Company can not guarantee the accuracy and content of electronic files.The master file is stored by Natural Investigations Company and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.Data Sources: California Department of Fish and Wildlife. 2020. RareFind 5.x, California Natural Diversity Data Base. Biogeographic Data Branch, Sacramento, California.
(updated monthly by subscription service)

Special-Status Species Occurrences Map

3029 Freshwater Lane

Fiddletown 1949 Quadrangle Photoinspected 1973:
Township 8N, Range 11E, Section 5,6,7,8

NATURAL INVESTIGATIONS CO.
www.NaturalInvestigations.com

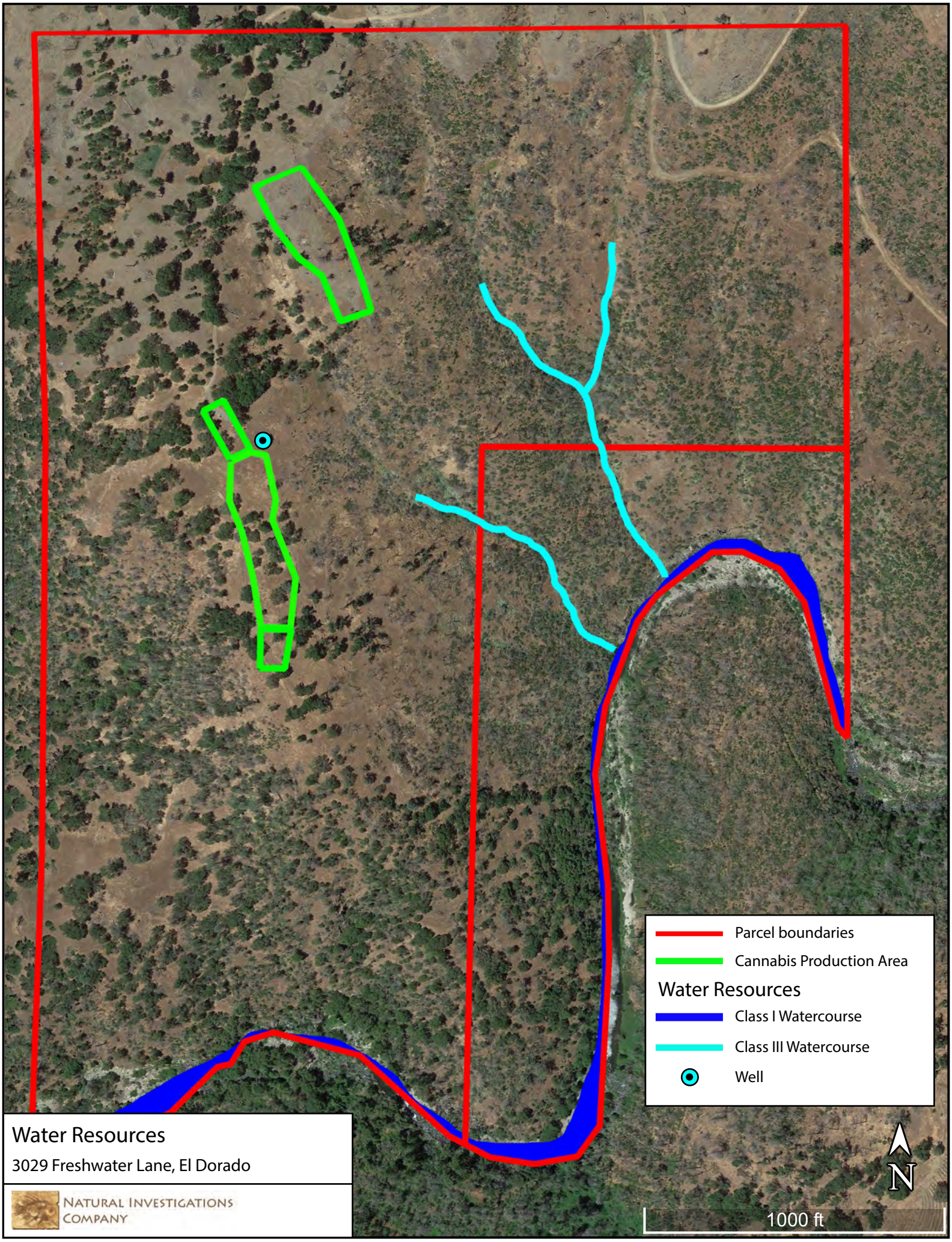


Oak Woodland Canopy Areas

3029 Freshwater Lane, El Dorado

Natural Investigations Company

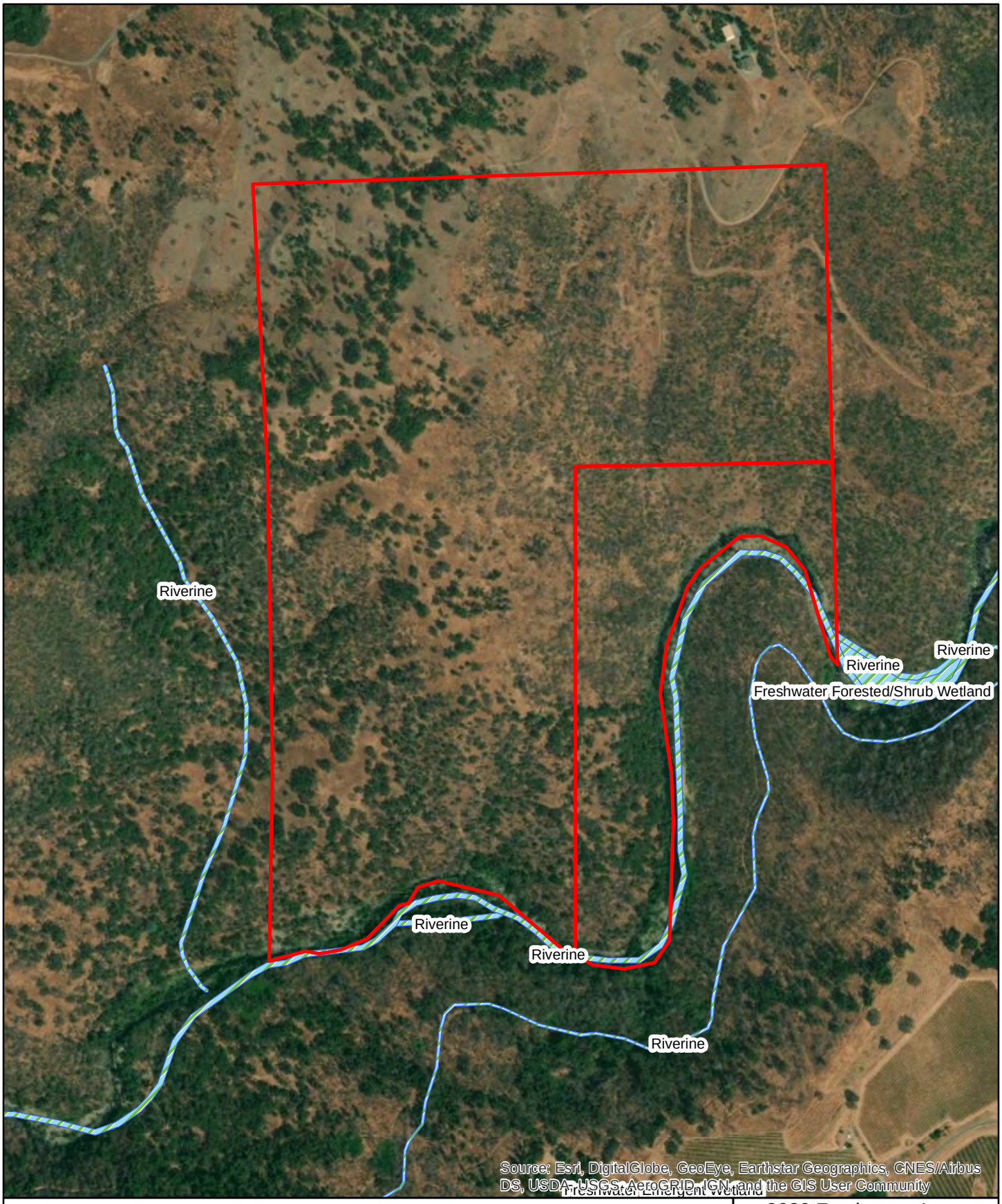

Parcel boundaries
Cannabis Production Area
Oak woodland canopy
Note: There is no oak woodland canopy in this project area
Oak Woodland Canopy Areas
3029 Freshwater Lane, El Dorado
Natural Investigations Company
N
300 ft



Water Resources

3029 Freshwater Lane, El Dorado

Natural Investigations Company



Parcel Location

Wetlands and Channels

0 200 400 Meters

0 750 1,500 Feet

1:7,500

3029 Freshwater Lane
National Wetlands Inventory
Features Map

Natural Investigations Company

Map Date 1/27/2020

Fiddletown 1949 Quadrangle Photoinspected 1973:Township 8N, Range 11E, Section 5,6,7,8

APPENDIX 1: USFWS SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: January 27, 2020
Consultation Code: 08ESMF00-2020-SLI-0872
Event Code: 08ESMF00-2020-E-02779
Project Name: 3029 Freshwater Lane

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2020-SLI-0872

Event Code: 08ESMF00-2020-E-02779

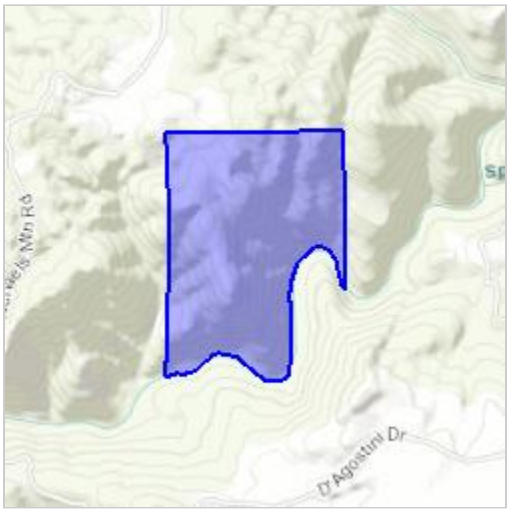
Project Name: 3029 Freshwater Lane

Project Type: ** OTHER **

Project Description: Bio Assessment

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.57132790534612N120.79408799920503W



Counties: El Dorado, CA

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2891
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/321

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX 2: CHECKLIST OF PLANTS DETECTED IN THE STUDY AREA

Appendix 2:

Plants Observed at 3029 Freshwater Lane, El Dorado, January 31, 2020

Common Name	Scientific Name
Yarrow	*Achillea millefolium*
California buckeye	*Aesculus californicus*
Pearly everlasting	*Anaphalis margaritacea*
Whiteleaf manzanita	*Arctostaphylos viscida*
Wild oat	*Avena fatua*
False brome	*Brachypodium distachyon*
Brodiaea	*Brodiaea sp.*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceus*
Calochortus	*Calochortus sp.*
Western morning glory	*Calystegia occidentalis*
Italian thistle.	*Carduus pycnocephalus*
Maltese star thistle	*Centaurea melitensis*
Wavy leaved soap plant	*Chlorogalum pomeridianum*
Clarkia	*Clarkia sp.*
Miner's lettuce	*Claytonia perfoliata*
Dove weed	*Croton setiger*
Hedgehog dogtail grass	*Cynosurus echinoides*
Stinkwort	*Dittrichia graveolens*
Medusahead grass	*Elymus caput-medusae*
Blue wildrye	*Elymus glaucus*
Yerba santa	*Eriodictyon californicum*
Fillaree	*Erodium cicutarium*
Poppy	*Eschscholzia sp.*
California fescue	*Festuca californica*
Bedstraw	*Galium sp.*
Toyon	*Heteromeles arbutifolia*
Klamath weed	*Hypericum perforatum*
Rush	*Juncus sp.*
Prickly lettuce	*Lactuca serriola*
Flax	*Linum sp.*
Navarretia	*Navarretia sp.*
Nemophila	*Nemophila sp.*
Goldback fern	*Pentagramma triangularis*
Yampah	*Perideridia sp.*
American mistletoe	*Phoradendron leucarpum*
Ponderosa pine	*Pinus ponderosa*
Gray pine	*Pinus sabiniana*
English plantain	*Plantago lanceolata*
Blue oak	*Quercus douglasii*
California black oak	*Quercus kelloggii*
Interior live oak	*Quercus wislizeni*
Oracle oak	*Quercus x morehus*
Buttercup	*Ranunculus sp.*
Sheep sorrel	*Rumex acetosella*
Sanicle	*Sanicula sp.*
Sidalcea	*Sidalcea sp.*
Milk thistle	*Silybum marinum*
Tall sock destroyer	*Torilis arvensis*

Poison-oak	*Toxicodendron diversilobum*
Salsify	*Tragopogon sp.*
Clover	*Trifolium sp.*
Spring vetch	*Vicia sativa*
Narrowleaf mule ears	*Wyethia angustifolia*
Woolly mule's ears	*Wyethia mollis*

APPENDIX 3: SITE PHOTOS















Appendix D

Fire Plan

live oak
WILDFIRE SOLUTIONS
Professional Forestry Consulting
Logging & Land Management

John Pickett, RPF #2976

2235 Catalina Dr., South Lake Tahoe, CA 96150
(775) 220-7675 jpickettRPF@gmail.com

RE: Fire Plan for the Parcels 046-071-010 and 046-071-011

Introduction

Cybele Holdings, Inc. owns Parcels 046-071-010 and 046-071-011 with the intention of developing commercial buildings on the property. The development of commercial enterprises in El Dorado County require the development of a fire safety plan of sufficient detail to demonstrate that the property can be adequately protected from wildland fire. A fire plan is an evaluation of the existing vegetation, slope, aspect, elevation, weather and fire history to determine the potential for dangerous fires to threaten the property.

This report builds on the exceptional Biological Assessment performed by Natural Investigations Company and included by reference into this fire plan.

Parcel Description

Vegetation

The subject parcels combined are 180 acres and are the area of analysis in this fire plan. The parcel is generally widely spaced oaks with non-native annual grasses and chaparral. The parcels burned in the 1951 Jameson Fire and burned again in the 2014 Sand Fire. The fire return interval will now likely decrease due to non-native species, drought and climate change. Many oaks were killed during the Sand Fire and the snags remain across the landscape. There are also many live healthy and thriving oaks and pines that are thrifty and healthy. The grass chaparral mixture is defined as a Grass / Shrub Fuel Model 2(GS2) as described in *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model. General Technical Report RMRS-GTR-153, Scott and Burgen.*

Slope and Aspect

Slope and aspect combine to create the topographical influences of fire on a slope. The project area has generally south facing slopes. These south facing slopes are perfectly aligned for solar radiation to heat and dry vegetation and is moderately well aligned with the southwest winds that drive explosive fire growth in the local area. The steep slopes also promote the pre-heating of fuels and thus the rate and direction of spread. Additionally, south facing slopes have longer burn periods during the diurnal cycle due to solar drying.

Elevation

Elevation has an important influence on fire behavior by influencing the amount and timing of precipitation as well determining exposure to prevailing winds or extreme fire behavior. The subject parcel ranges from approximately 1,000 feet to 1,800 feet in elevation. This elevation is characterized as having hot dry summers with distinct seasons and moderately cool winter with precipitation falling as rain and averaging 30 inches per year. Rainfall in amounts to influence fire behavior is rare after May and fire season begins in earnest as early as June. This leaves a long hot summer with dry fuel.

Weather

Local weather drives fire behavior in the Sierra Nevada. El Dorado County is both exposed to dangerous Diablo winds when low pressure off the coast of California and high pressure over the Great Basin result in strong, dry winds from the northeast. The subject parcel will be exposed to northeast winds several times each Fall but these winds are unlikely to drive extreme fire weather. The subject parcels will be exposed to strong upslope winds during much of the fire season because of the effects of solar radiation. Fires are likely to exhibit moderate rates of spread with moderate flame lengths during diurnal wind and fuel driven fires. The Sand Fire was exactly this, a fuel and topographically driven fire with strong diurnal wind influence. On the morning of the fire humidities were very low ranging from 8-13 percent with light east winds increasing to over 18 miles per hour from the southwest during the afternoon. This wind pattern drove very high rates of spread with dangerous runs during late afternoon. The subject parcel is also exposed to strong southwest winds from approaching low pressure systems

live oak
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(775) 220-7675 jpickettRPF@gmail.com

as they drop from the Gulf of Alaska. During these events winds will pick up from the southwest and prior to the arrival of moisture there can be a very low humidity dry slot for up to a day prior to the arrival of increased humidities and wetting precipitation. During this period fires can grow explosively.

Fire Hazard on the Subject Parcels
The subject parcel is exposed to considerable hazard from grass and brush fueled wildfires. The GS2 fire model burns with high rates of spread but with moderate flame lengths. An additional hazard is the dead oak from the Sand Fire that will be major ember producers during wildland fires. And while this is an active fuel model, it is also relatively easy to moderate this hazard by reducing fuels near structures, clearing around evacuation routes and then using methods to reduce the total tonnage of biomass available to burn.

Mitigations
Dr. Jack Cohen of the U.S. Forest Service's Rocky Mountain Research Station made the statement in his definition of the home ignition zone that "it is a homes construction and immediate surroundings that will determine a homes probability of ignition, not its site on a fire prone landscape." From his research we now moderate exposure to fire hazard by working in three zones around the structures and other areas with human habitation. The GS2 fire model is brush and grass driven with only moderate flame lengths. In this fuel model reducing fuel for a boundary of 200 feet or to the slope break will effectively limit the preheating of structures on the property. In many fuel types it is necessary to reduce fuels up to 300 feet on steep slopes, but this is not likely to lead to substantial reductions in risk on the subject parcel.

Fuel Break Around Structures
Clearing an effective fuel break on GS2 fuel types is as simple as mowing, masticating or otherwise cutting the grass and brush to ground level each May.

- The timing of the cutting of annual grasses can favor the establishment of low fire hazard perennial grasses with superior wildlife and grazing value. It is recommended that the landowners contact the local El Dorado County Resource Conservation District ECRCD for information about converting flashy annual grasses to valuable bunch grass.

Oak trees vary in flammability with canyon live oak burning with great energy and blue oak rarely burning except in chaparral form. Spacing oaks with 10 feet between canopies will reduce the potential for ignition. It is also true that establishing blue oak will greatly reduce the rate with which the brush grow and will again favor bunch grass over non-native annuals. Blue oaks do not regenerate well in grazing regimes, so again it is valuable to consult with the El Dorado County Conservation District on methods to promote blue oak regeneration.

Defensible Space
Defensible space around the structures is going to be critically important because of the likely ember production from dead oak on the property and in the Sand Fire scar. Defensible space is divided into three zones. The wildland fuel zone, the Lean, Clean and Green Zone and Non-combustible zone.

- The wildland fuel zone should effectively extend 200 feet or to the slope break from the structure with the annual mowing of grasses and brush.
- The Lean, Clean and Green Zone extends from the structure to 30 feet. This zone must be mowed when grasses or brush are greater than 4 inches tall. No flammable vegetation may be present.

- The non-combustible zone extends from the structure to five feet. The subject parcel will be subject to massive ember wash during the next wildland fire. The maintenance of a non-combustible zone in

live oak
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John Pickett, RPF #2976
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(775) 220-7675 jpickettRPF@gmail.com

combination with fire safe venting and Class A roofing is the primary mitigation for ember ignition. Ember ignition generally occurs when embers strike a wall or fall in wind vertices and accumulate at the bottom of the wall or in an inside corner of the structure. If there is any flammable material in this area the structure will be at increased risk. This area should likely be graveled in and treated with herbicide so that no vegetation can grow in this area. No leaf litter should be allowed to accumulate.

Evacuation Routes

The subject parcel is cannot be made safe for humans during a wildland fire event and therefore early evacuation along safe routes is necessary. This is again relatively easy in a GS2 fuel model by mowing or masticating any fuels annually for 50 feet from both road edges. Oak trees should be thinned to create 10 foot spacing and only thrifty trees should remain near the evacuation routs.

Evacuation Planning

It is recommended that a written evacuation plan should be created for the subject parcel. During fire season and particularly on red flag days people should be able to monitor local news and look for smoke in the region of the property. If there is smoke anywhere near the historic Sand Fire scar, people should leave the property and crest the ridge to the north while awaiting further information. A meeting area should be established, and workers shown where to assemble for further evacuation instructions. The Fire Marshal can help review a general evacuation plan.

Conclusion

The project area is in a high fire hazard area with grass and native chaparral composing the primary fuel types with scattered pockets of thick oak and other areas with oak snags from the Sand Fire. The fuel model for the parcel is a GS2 which supports high rates of spread with only moderate flame lengths. Effective fuel reduction can be obtained with annual mowing and mastication for 200 feet around the structure or to the steep slope break. Then 50 feet should be maintained on each side of the road leaving the property. The proposed measures will effectively protect structures on the property, but safety for people can only be guaranteed with early and effective evacuation.

Signed _____ 5-19-2020
John Pickett, RPF #2967

Appendix E

Environmental Noise Assessment

Environmental Noise Assessment

Cannabis Cultivation Greenhouse Fan Operations

El Dorado County, California

BAC Job # 2020-065

Prepared For:

Cybele Holdings, Inc.

Attn: Lee Tannenbaum
Cybele Holdings, Inc.

Prepared By:

Bollard Acoustical Consultants, Inc.

Dario Gotchet, Senior Consultant

November 18, 2020

BOLLARD
Acoustical Consultants

Introduction

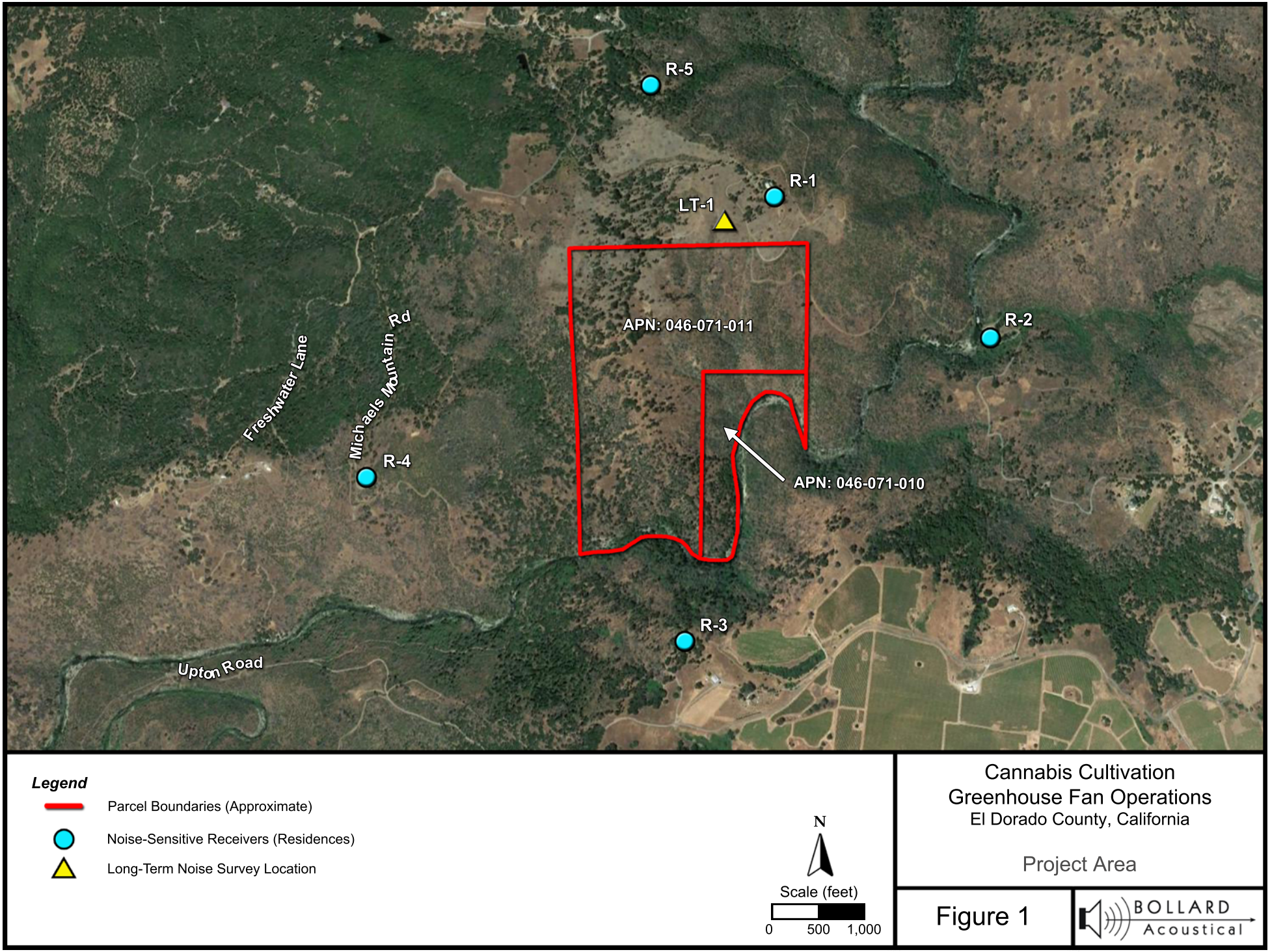
The project proposes a cannabis cultivation operation on a 180-acre property located at 3029 Freshwater Lane in El Dorado County, CA (APN's: 046-071-010 and 046-071-011). The project would include the construction of greenhouses on both parcels identified above, with an exhaust fan operating at each greenhouse. The project site location is shown on Figure 1, with the proposed site plans shown on Figures 2-4.

Due to the potential noise generation of the project, the County of El Dorado has requested an environmental noise assessment to ensure that the applicable noise standards are satisfied. In response to this request, the project applicant has retained Bollard Acoustical Consultants, Inc. (BAC) to prepare this noise assessment. Specifically, the purposes of this assessment are to quantify the noise generation of the project greenhouse exhaust fans at the nearest off-site residential uses, to compare those noise levels against the applicable El Dorado County noise standards and baseline noise levels in the area, and to recommend noise mitigation measures for any identified potentially significant noise impacts associated with the greenhouse fan usage.

Noise Fundamentals and Terminology

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and thus are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Appendix A contains definitions of Acoustical Terminology. Figure 5 shows common noise levels associated with various sources.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighting the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

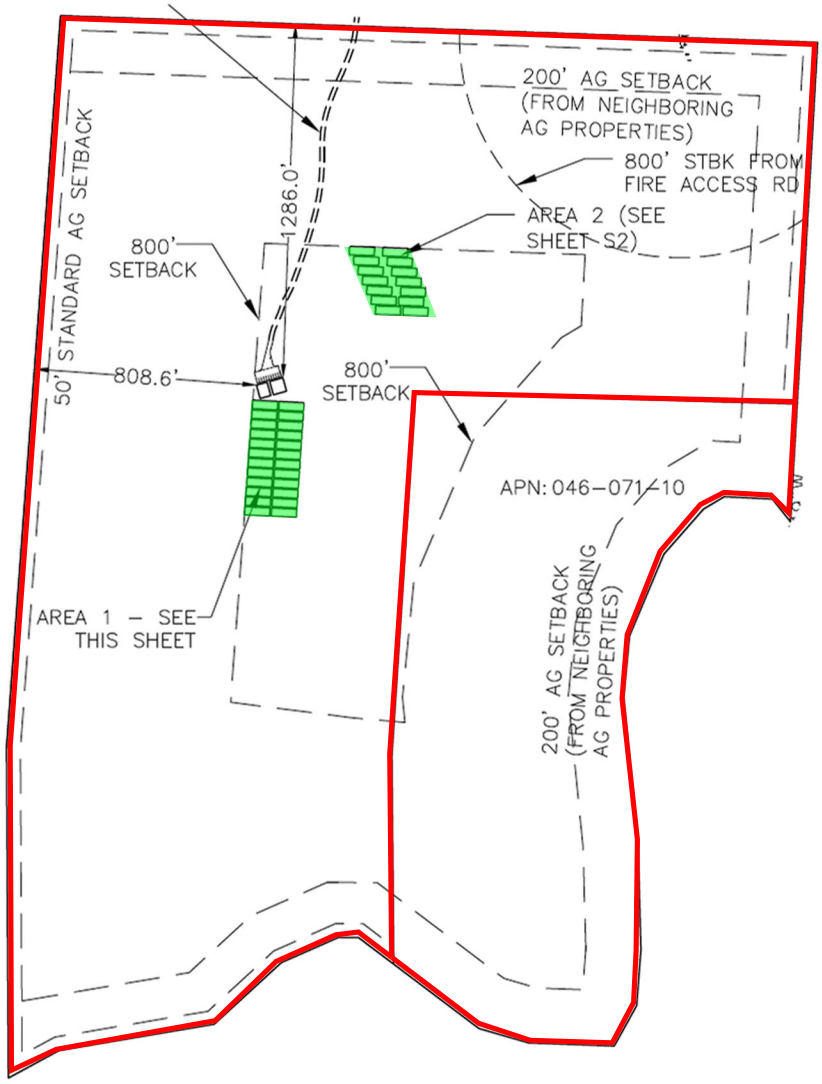


Cannabis Cultivation
Greenhouse Fan Operations
El Dorado County, California

Project Area

Figure 1

BOLLARD Acoustical



Legend

Parcel Boundaries (Approximate)

Project Grow Sites (Locations of Greenhouses)

N

Scale (feet)

0 400 800

Cannabis Cultivation
Greenhouse Fan Operations
El Dorado County, California

Site Plan - Project Property

Figure 2

BOLLARD Acoustical

Legend

- Project Greenhouses
- Project Buildings

N

Scale (feet)

0 50 100

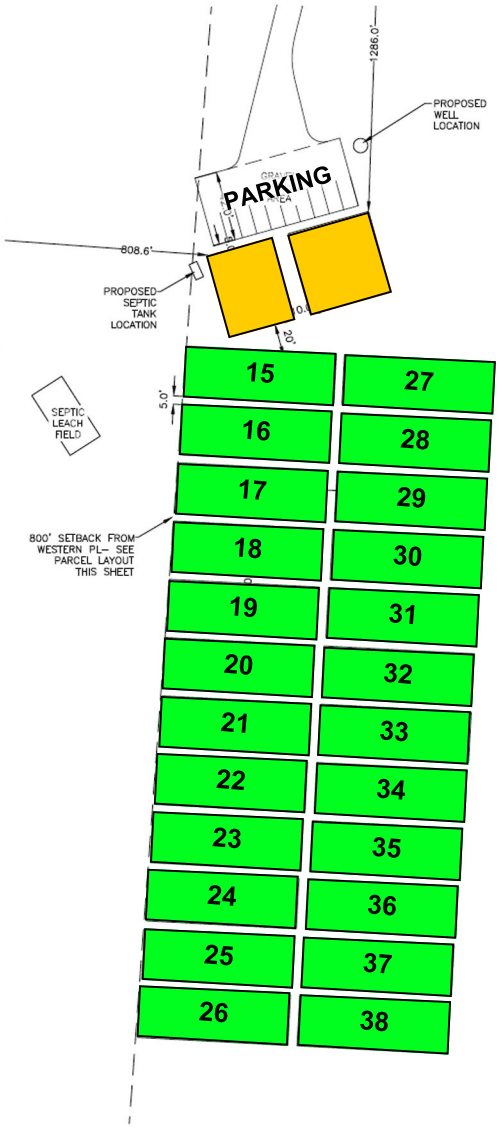
Cannabis Cultivation
Greenhouse Fan Operations

El Dorado County, California

Site Plan - North Grow Site

Figure 3

BOLLARD Acoustical



Legend

- Project Greenhouses
- Project Buildings

N

Scale (feet)

0 50 100

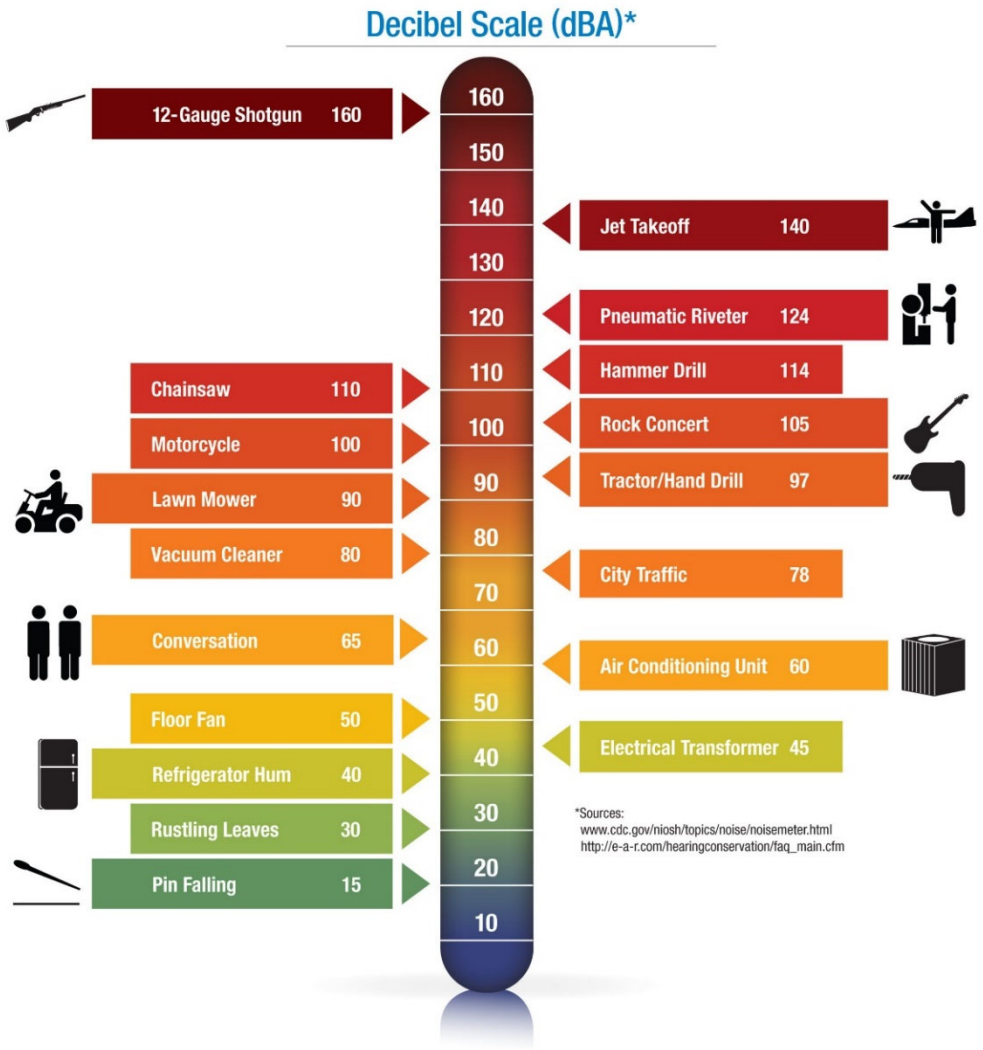
Cannabis Cultivation
Greenhouse Fan Operations
El Dorado County, California

Site Plan - South Grow Site

Figure 4

BOLLARD Acoustical

Figure 5
Noise Levels Associated with Common Noise Sources



Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}) over a given time period (usually one hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighting applied to noise occurring during nighttime (10 p.m. to 7 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn}-based noise standards are commonly used to assess noise impacts associated with traffic, railroad, and aircraft noise sources.

Existing Ambient Noise Environment in the Project Vicinity

The ambient noise environment in the immediate project vicinity is defined primarily by sparse traffic on the local roadway network, intermittent aircraft overflights, and natural sounds (e.g., wind in trees, wildlife activities, etc.). To generally quantify the existing ambient noise level environment in the project vicinity, BAC conducted a long-term (96-hour) ambient noise level survey from April 9-12, 2020. The long-term noise survey location is shown on Figure 1, identified as site LT-1. Photographs of the noise survey location are provided in Appendix B.

A Larson-Davis Laboratories (LDL) Model LxT precision integrating sound level meter was used to complete the long-term noise level measurement survey. The meter was calibrated immediately before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4). The results of the long-term ambient noise survey are shown numerically and graphically in Appendices C and D (respectively) and are summarized below in Table 1.

Table 1
Summary of Long-Term Ambient Noise Measurement Results – April 9-12, 2020[1]

			Average Measured Hourly Noise Levels, dB					
			Daytime (7AM-7PM)		Evening (7PM-10PM)		Nighttime (10 PM-7AM)	
Site[2]	Date	CNEL, dB	L_{eq}	L_{max}	L_{eq}	L_{max}	L_{eq}	L_{max}
LT-1	4/9/20	43	37	50	38	46	36	41
	4/10/20	46	47	56	40	48	36	45
	4/11/20	44	40	56	40	45	36	42
	4/12/20	44	37	53	40	46	37	46

[1] Detailed summaries of the noise monitoring results are provided in Appendices C and D.
[2] Long-term ambient noise monitoring location is identified on Figure 1.
Source: Bollard Acoustical Consultants, Inc. (2020)

As shown in Table 1, the average measured hourly noise levels at the survey location were fairly consistent throughout the monitoring period. Further, the monitoring survey revealed that ambient noise levels in the immediate project vicinity are typical of rural areas.

Criteria for Acceptable Noise Exposure

El Dorado County General Plan Noise Element

The Noise Element of the El Dorado County General Plan (Chapter 6) contains policies to ensure that County residents are not subjected to noise beyond acceptable levels. The General Plan policies which are applicable to this evaluation are reproduced below:

Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 2 (General Plan Table 6-2) at existing or planned noise-sensitive uses, an acoustical analysis shall be

required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 2 for noise-sensitive uses.

Policy 6.5.1.13 When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration:

A. In areas in which ambient noise levels are in accordance with the standards in Table 2 (General Plan Table 6-2), increases in ambient noise levels caused by new non-transportation noise sources that exceed 5 dBA shall be considered significant; and

B. In areas in which ambient noise levels are not in accordance with the standards in Table 2 (General Plan Table 6-2), increases in ambient noise levels caused by new non-transportation noise sources that exceed 3 dBA shall be considered significant.

Table 2
Noise Level Performance Standards for Noise-Sensitive Land Uses Affected by Non-Transportation Sources

	Daytime (7AM to 7PM)		Evening (7PM to 10PM)		Nighttime (10PM to 7AM)	
Noise Level Descriptor	**Community**	**Rural**	**Community**	**Rural**	**Community**	**Rural**
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum Level, L_{max} dB	70	60	60	55	55	50

-Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

-The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

-In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence.

Source: El Dorado County General Plan, Noise Element, Table 6-2.

Noise Standards Applicable to the Project

Because the project parcel and adjacent parcels are located within in a rural area of El Dorado County, the *rural* noise standards shown in Table 2 would be applicable to the project. Pursuant to the footnote contained in Table 2, the County's exterior noise level limits shall be applied at a point 100 feet from away from a residence in rural areas. In addition, because exhaust fans typically generate sustained steady-state noise levels, the El Dorado County General Plan hourly average (L_{eq}) noise level standard would be most applicable to project greenhouse exhaust fan noise exposure. Finally, Policy 6.5.1.13(B) states that in areas in which ambient noise levels are not in accordance with the standards of Table 2, increases in ambient noise levels caused by new

non-transportation noise sources that exceed 3 dBA shall be considered significant. However, based on the results from the ambient noise level survey conducted within the project vicinity (Table 1), the County's noise level limits are not currently being exceeded.

Based on the information provided above, the unadjusted rural noise level limits contained in Table 2 were applied to the project greenhouse exhaust fans and applied at a point 100 feet from the nearest off-site residences. The nearest identified off-site existing residences are illustrated as receivers R-1 through R-5 on Figure 1.

Reference Noise Level for Proposed Project Exhaust Fans

The project proposes the construction of greenhouses that will be equipped with exhaust fans for the purposes of climate control. According to the project applicant, the exhaust fan model proposed for installation within the greenhouses is a Schaefer 54" Galvanized Light Trap Box Exhaust Fan (Model 545B2G-LT). Based on reference noise level data obtained from the manufacturer's website (Schaefer/Pinnacle Climate Technologies), this specific exhaust fan model has a reference noise level of 73 dBA at a distance of 10 feet. The manufacturer's noise level data specification sheet for the proposed exhaust fan model is provided as Appendix E. According to the project applicant, each of the proposed greenhouses will be equipped with one (1) Schaefer Model 545B2G-LT exhaust fan.

Evaluation of Project Greenhouse Exhaust Fan Noise Generation

According to the project site plans, the project proposes the installation of greenhouses within two grow sites: one site north and south of the main buildings. Figures 2-4 show the locations of the grow sites, greenhouses, and buildings. As indicated in Figures 3 and 4, the site plans shown a total of 38 greenhouses. For the purposes of this analysis, the greenhouses were assigned numeric values, which are also indicated on Figures 3 and 4.

To quantify the noise levels generated from project greenhouse exhaust fans, BAC utilized reference noise level data indicated in the equipment manufacturer's specification sheet (Appendix E) with information obtained from the project applicant. The reference noise level data were projected to the nearest identified residences assuming spherical spreading of sound from the source to the receiver (i.e., 6 decibel decrease for each doubling of distance from the noise source). In addition, an additional offset for atmospheric absorption of -1.5 dB per thousand feet was applied to the computations. The results of those projections at the nearest identified off-site residences (receivers R-1 through R-5) are summarized in Table 3.

The Table 3 data show exhaust fan noise level projections from each individual greenhouse, as well as for the combined fan noise exposure from 38 greenhouses at the nearest residential receivers. The combined exhaust fan noise level projections assume that all proposed greenhouse fans would be operating simultaneously – which is considered to be worst-case fan noise exposure at the nearest receivers.

Table 3
Summary of Predicted Greenhouse Exhaust Fan Noise Exposure at Nearest Receivers[1]

	Distance to Receiver[2]					Predicted Noise Level, L_{eq} (dB)				
Greenhouse	**R-1**	**R-2**	**R-3**	**R-4**	**R-5**	**R-1**	**R-2**	**R-3**	**R-4**	**R-5**
1	1,760	3,850	3,780	3,760	2,690	25	16	16	16	20
2	1,805	3,835	3,745	3,755	2,725	25	16	16	16	20
3	1,810	3,820	3,710	3,750	2,760	25	16	16	16	20
4	1,830	3,800	3,675	3,745	2,795	25	16	16	16	20
5	1,840	3,785	3,640	3,740	2,830	25	16	16	16	20
6	1,860	3,765	3,605	3,740	2,865	25	16	16	16	20
7	1,870	3,755	3,570	3,730	2,900	25	16	17	16	19
8	1,700	3,740	3,770	3,855	2,700	26	16	16	15	20
9	1,720	3,725	3,750	3,850	2,735	26	16	16	16	20
10	1,740	3,705	3,700	3,845	2,770	26	16	16	16	20
11	1,750	3,690	3,665	3,845	2,805	26	16	16	16	20
12	1,770	3,665	3,630	3,840	2,845	25	16	16	16	20
13	1,800	3,675	3,600	3,820	2,870	25	16	16	16	20
14	1,815	3,665	3,565	3,815	2,910	25	16	17	16	19
15	2,400	4,240	3,300	3,200	3,235	22	14	18	18	18
16	2,430	4,245	3,260	3,185	3,270	22	14	18	18	18
17	2,460	4,245	3,230	3,170	3,300	21	14	18	18	18
18	2,485	4,255	3,200	3,150	3,340	21	14	18	18	18
19	2,510	4,265	3,165	3,135	3,370	21	14	18	18	17
20	2,540	4,265	3,130	3,120	3,405	21	14	18	18	17
21	2,560	4,270	3,100	3,100	3,440	21	14	19	19	17
22	2,595	4,275	3,065	3,090	3,470	21	14	19	19	17
23	2,615	4,280	3,030	3,075	3,510	21	14	19	19	17
24	2,650	4,290	3,000	3,060	3,540	21	14	19	19	17
25	2,675	4,290	2,970	3,045	3,575	20	14	19	19	17
26	2,705	4,295	2,935	3,030	3,610	20	14	19	19	16
27	2,345	4,160	3,260	3,280	3,235	22	14	18	18	18
28	2,375	4,165	3,225	3,260	3,270	22	14	18	18	18
29	2,400	4,165	3,210	3,250	3,305	22	14	18	18	18
30	2,430	4,170	3,175	3,235	3,340	22	14	18	18	18
31	2,455	4,175	3,140	3,215	3,370	22	14	18	18	17
32	2,485	4,175	3,115	3,205	3,405	21	14	18	18	17
33	2,510	4,180	3,075	3,185	3,440	21	14	19	18	17
34	2,540	4,190	3,045	3,170	3,470	21	14	19	18	17
35	2,570	4,200	3,015	3,155	3,505	21	14	19	18	17
36	2,600	4,200	2,980	3,140	3,540	21	14	19	18	17
37	2,620	4,200	2,945	3,130	3,570	21	14	19	18	17
38	2,650	4,205	2,915	3,115	3,610	21	14	19	18	16
Combined – 38 fans	2,150	4,000	3,360	3,440	3,000	**39**	**31**	**33**	**33**	**35**
County Rural Daytime Noise Level Standard, L_{eq} (dB)								**50**		
County Rural Evening Noise Level Standard, L_{eq} (dB)								**45**		
County Rural Nighttime Noise Level Standard, L_{eq} (dB)								**40**		

[1] Receiver locations are shown on Figure 1. Locations of proposed greenhouses are shown on Figures 3 & 4.

[2] Distances scaled from individual greenhouses to receivers using the project site plans and El Dorado County parcel viewing application (GOTNET). Distances for combined fan noise exposure measured from the effective noise center of both north and south grow sites to receivers.

Source: Bollard Acoustical Consultants, Inc. (2020)

As indicated in Table 3, the calculated combined noise exposure from a total of 38 greenhouse exhaust fans (worst-case noise exposure) is predicted to satisfy the applicable El Dorado County General Plan daytime, evening, and nighttime hourly average (L_{eq}) noise level limits at the nearest identified residential receivers.

It should be noted that shielding provided by intervening topography, which was not accounted for in this analysis, would likely further reduce project greenhouse fan noise levels at the nearest receivers. Nonetheless, based on the results presented in Table 3, no further consideration of project greenhouse exhaust fan noise mitigation measures would be warranted for the project.

Conclusions & Recommendations

Based on the equipment noise level data and analyses presented above, project-related greenhouse exhaust fan noise exposure is expected to satisfy the applicable El Dorado County General Plan daytime, evening, and nighttime noise level limits at the closest identified off-site noise-sensitive uses (existing residences). In addition, the project is not predicted to result in a substantial increase in ambient noise levels at the nearest residences in the project vicinity. As a result, no additional greenhouse exhaust fan noise mitigation measures would be warranted for this project.

These conclusions are based on the equipment noise level data and assumptions cited herein and on the project site plans shown on Figures 2-4. Any substantive revisions to the project site plans or proposed operations could cause actual noise levels to vary relative to those predicted herein. BAC is not responsible for such revisions.

This concludes BAC's environmental noise assessment of the greenhouse exhaust fans associated with the proposed cannabis cultivation operation at 3029 Freshwater Lane in El Dorado County, California. Please contact BAC at (916) 663-0500 or dariog@bacnoise.com with comments or questions regarding this evaluation.

Appendix A
Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of an acoustic signal.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Decibel or dB Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Frequency The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.

IIC Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.

L_{dn} Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

L_{eq} Equivalent or energy-averaged sound level.

L_{max} The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Masking The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.

Noise Unwanted sound.

Peak Noise The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.

RT_{60} The time it takes reverberant sound to decay by 60 dB once the source has been removed.

STC Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.

Legend

A Facing Receiver R-1 (Northeast)

B Facing East

C Facing Southeast

D Facing South

LT-1: 38°34'36.35" N, 120°47'30.06" W

Note: Long-term noise monitoring completed on April 9-12, 2020.

Cannabis Cultivation Greenhouse Fan Operations

El Dorado County, California

Photographs of Long-Term Noise Survey Location

Appendix B

BOLLARD Acoustical

Appendix C-1
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Thursday, April 9, 2020

Hour	Leq	Lmax	L50	L90
12:00 AM	35	39	34	33
1:00 AM	37	41	37	35
2:00 AM	36	41	35	33
3:00 AM	34	40	34	31
4:00 AM	32	37	32	30
5:00 AM	32	41	32	30
6:00 AM	39	46	38	35
7:00 AM	39	51	38	37
8:00 AM	39	58	37	34
9:00 AM	37	51	36	34
10:00 AM	37	53	36	35
11:00 AM	36	48	36	33
12:00 PM	36	50	35	33
1:00 PM	36	51	34	32
2:00 PM	35	47	34	32
3:00 PM	32	45	31	29
4:00 PM	30	40	30	28
5:00 PM	40	55	34	31
6:00 PM	36	56	34	32
7:00 PM	38	53	37	34
8:00 PM	40	43	40	36
9:00 PM	37	42	36	33
10:00 PM	37	46	36	33
11:00 PM	37	41	36	33

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	40	30	37	39	32	36
Lmax (Maximum)	58	40	50	46	37	41
L50 (Median)	40	30	35	38	32	35
L90 (Background)	37	28	33	35	30	33

Computed Ldn, dB	43
% Daytime Energy	69%
% Nighttime Energy	31%

GPS Coordinates	38°34'36.35"N
	120°47'30.06"W

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Appendix C-2
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Friday, April 10, 2020

Hour	Leq	Lmax	L50	L90
12:00 AM	36	41	36	33
1:00 AM	36	39	35	33
2:00 AM	35	44	34	33
3:00 AM	31	48	29	28
4:00 AM	33	50	32	29
5:00 AM	34	40	34	30
6:00 AM	37	50	35	33
7:00 AM	57	88	37	35
8:00 AM	38	55	35	32
9:00 AM	36	54	33	31
10:00 AM	33	51	31	30
11:00 AM	40	58	34	31
12:00 PM	41	62	35	32
1:00 PM	36	49	35	33
2:00 PM	37	53	36	33
3:00 PM	40	56	35	33
4:00 PM	35	49	35	33
5:00 PM	36	46	36	34
6:00 PM	39	50	38	36
7:00 PM	39	53	38	36
8:00 PM	41	47	41	40
9:00 PM	40	44	40	36
10:00 PM	38	41	37	36
11:00 PM	38	48	37	35

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	57	33	46	38	31	36
Lmax (Maximum)	88	44	54	50	39	45
L50 (Median)	41	31	36	37	29	34
L90 (Background)	40	30	34	36	28	32

Computed Ldn, dB	46
% Daytime Energy	95%
% Nighttime Energy	5%

GPS Coordinates	38°34'36.35"N
	120°47'30.06"W

Appendix C-3
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Saturday, April 11, 2020

Hour	Leq	Lmax	L50	L90
12:00 AM	36	39	36	32
1:00 AM	34	38	33	33
2:00 AM	35	39	34	33
3:00 AM	35	38	35	34
4:00 AM	35	38	35	33
5:00 AM	34	48	34	33
6:00 AM	37	53	35	33
7:00 AM	37	54	35	34
8:00 AM	36	48	35	33
9:00 AM	45	75	36	34
10:00 AM	38	54	35	33
11:00 AM	37	54	36	34
12:00 PM	37	48	36	34
1:00 PM	39	56	36	34
2:00 PM	39	61	35	34
3:00 PM	36	55	35	33
4:00 PM	37	50	36	34
5:00 PM	43	64	37	35
6:00 PM	39	57	38	36
7:00 PM	39	49	39	37
8:00 PM	41	44	40	39
9:00 PM	39	42	38	37
10:00 PM	38	43	38	37
11:00 PM	38	46	38	36

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	45	36	40	38	34	36
Lmax (Maximum)	75	42	54	53	38	42
L50 (Median)	40	35	37	38	33	35
L90 (Background)	39	33	35	37	32	34

Computed Ldn, dB	43
% Daytime Energy	79%
% Nighttime Energy	21%

GPS Coordinates	38°34'36.35"N
	120°47'30.06"W

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Appendix C-4
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Sunday, April 12, 2020

Hour	Leq	Lmax	L50	L90
12:00 AM	38	43	38	36
1:00 AM	37	43	37	34
2:00 AM	36	42	35	34
3:00 AM	34	41	33	32
4:00 AM	38	46	37	34
5:00 AM	35	58	34	32
6:00 AM	36	53	34	32
7:00 AM	36	49	35	33
8:00 AM	35	54	33	32
9:00 AM	38	60	35	32
10:00 AM	35	48	34	32
11:00 AM	35	53	34	33
12:00 PM	36	47	35	33
1:00 PM	43	68	36	33
2:00 PM	37	52	36	34
3:00 PM	36	51	35	32
4:00 PM	36	47	35	33
5:00 PM	36	49	35	32
6:00 PM	37	55	34	32
7:00 PM	40	47	38	33
8:00 PM	41	47	41	39
9:00 PM	39	42	39	38
10:00 PM	38	42	38	37
11:00 PM	38	42	38	37

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	43	35	38	38	34	37
Lmax (Maximum)	68	42	51	58	41	46
L50 (Median)	41	33	36	38	33	36
L90 (Background)	39	32	33	37	32	34

Computed Ldn, dB	44
% Daytime Energy	68%
% Nighttime Energy	32%

GPS Coordinates	38°34'36.35"N
	120°47'30.06"W

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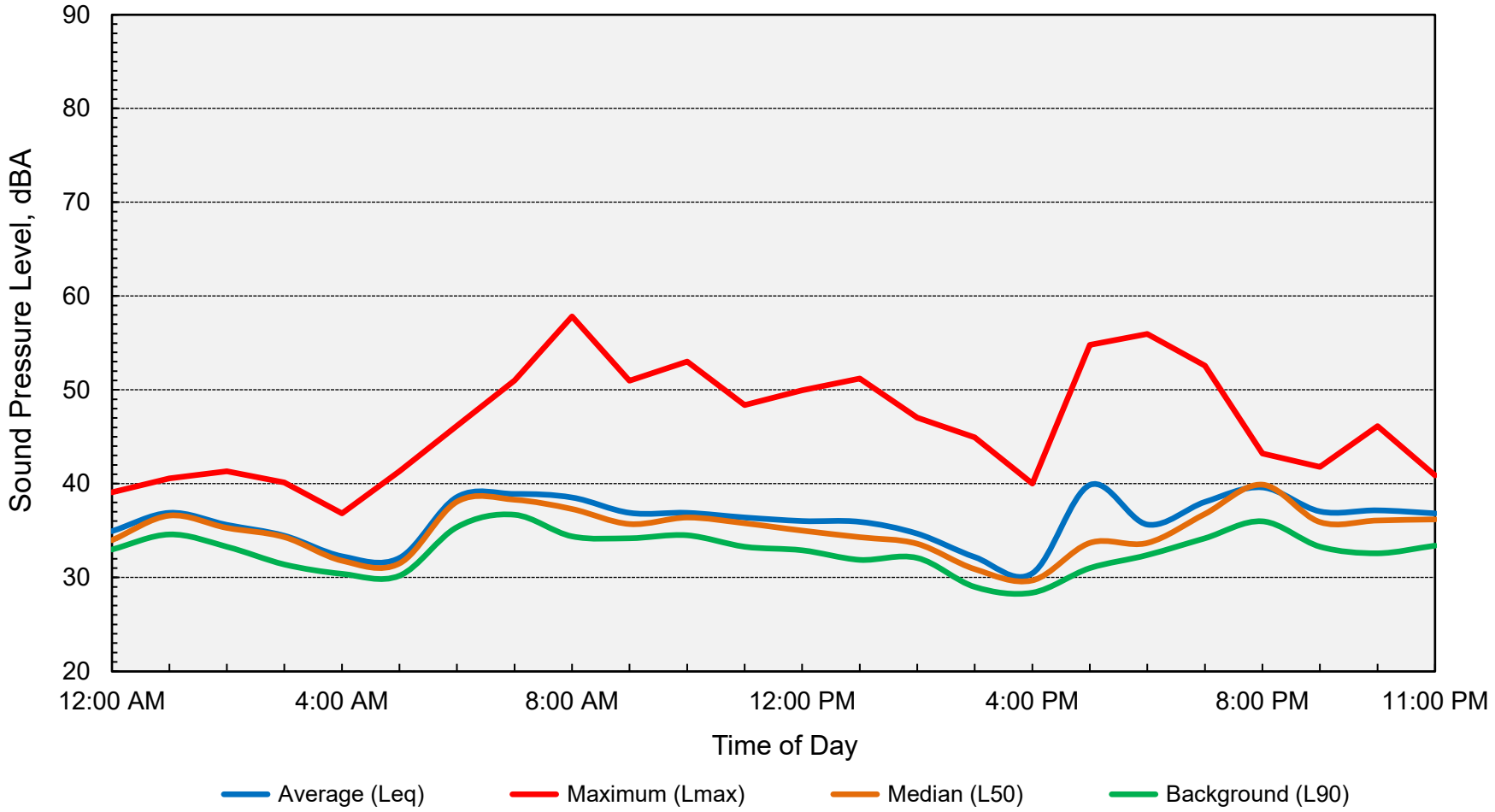
Appendix D-1
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Thursday, April 9, 2020



Computed Ldn = 43 dB

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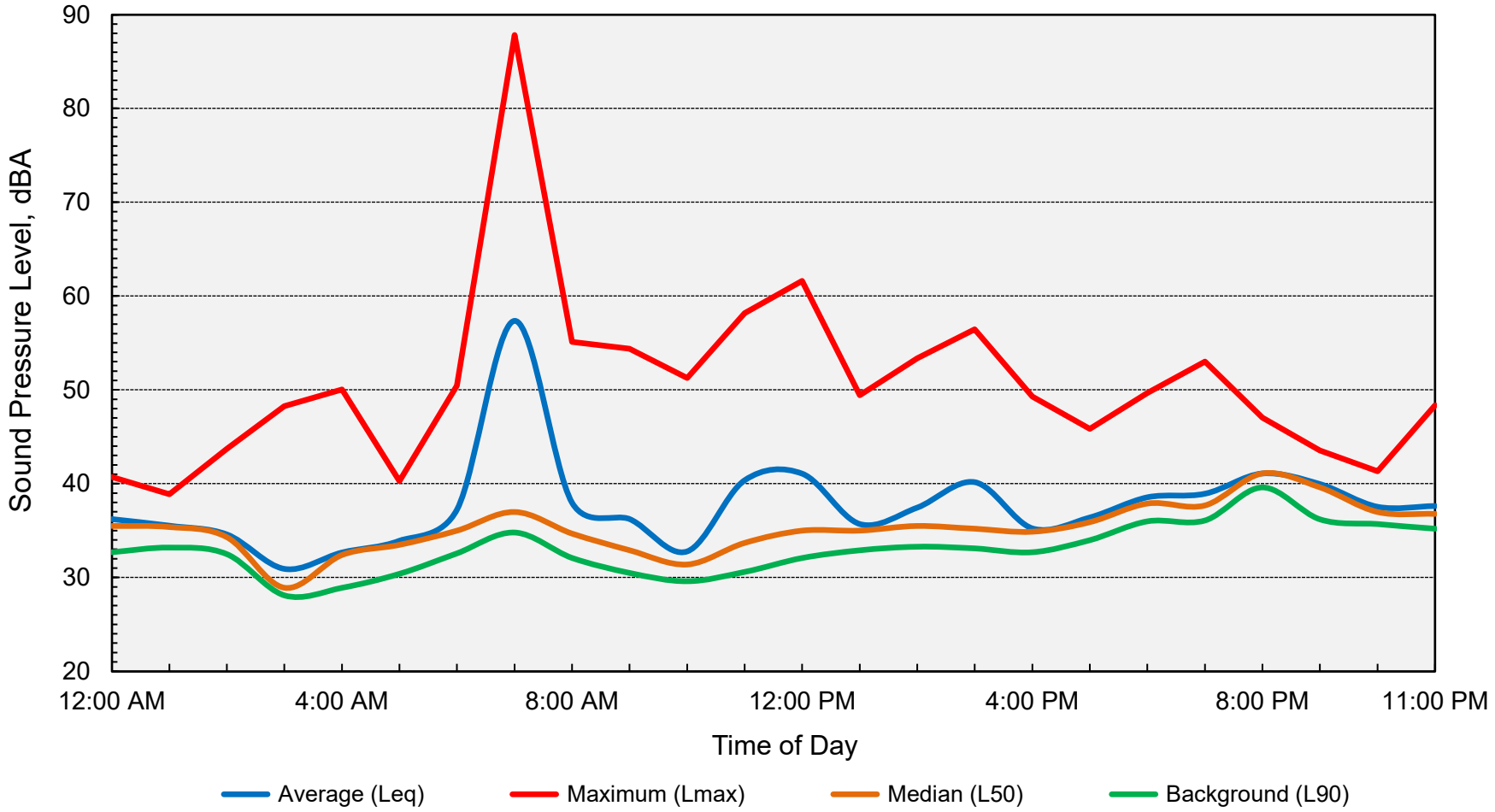
Appendix D-2
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Friday, April 10, 2020



Computed Ldn = 46 dB

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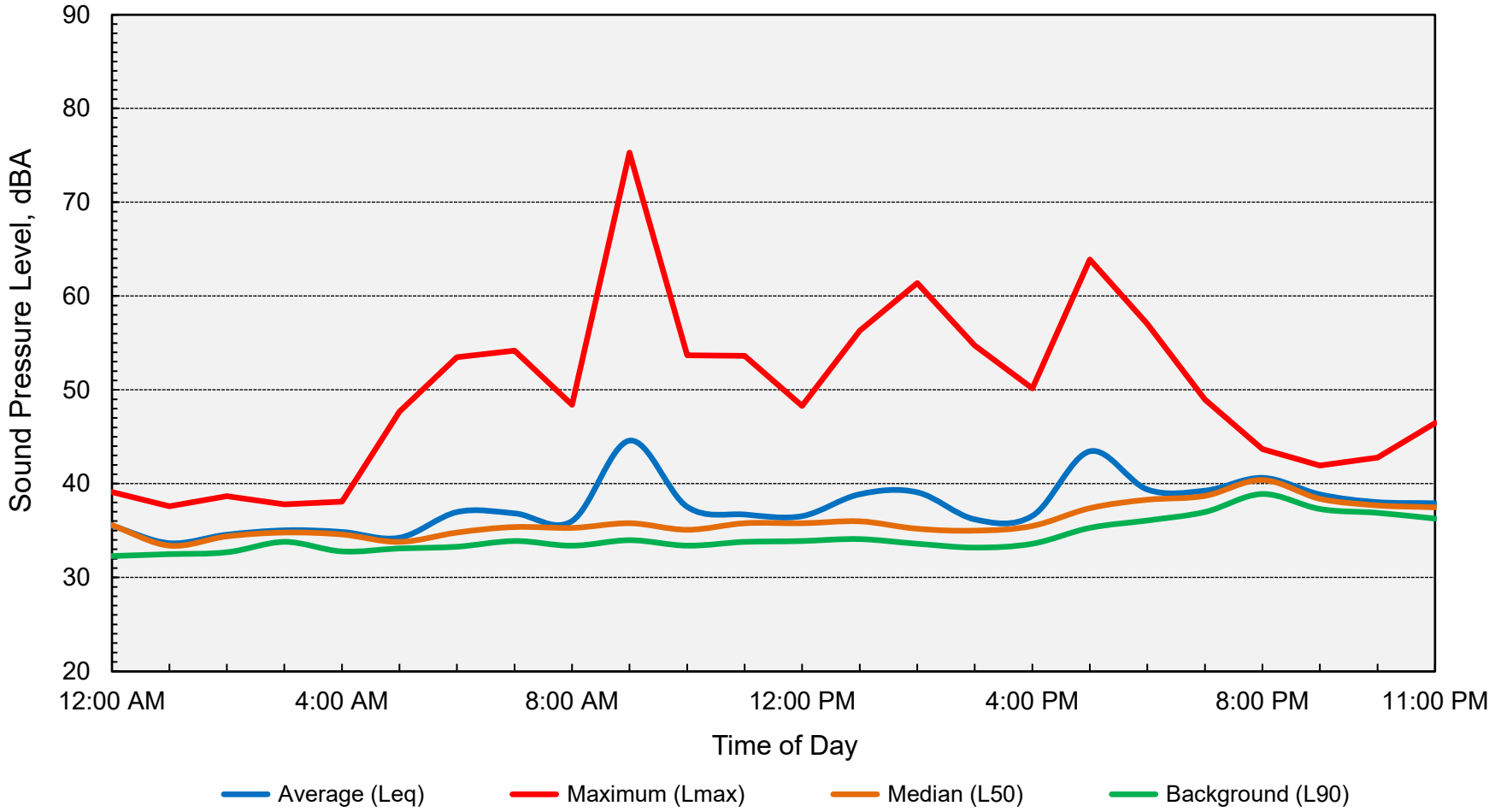
Acoustical Consultants

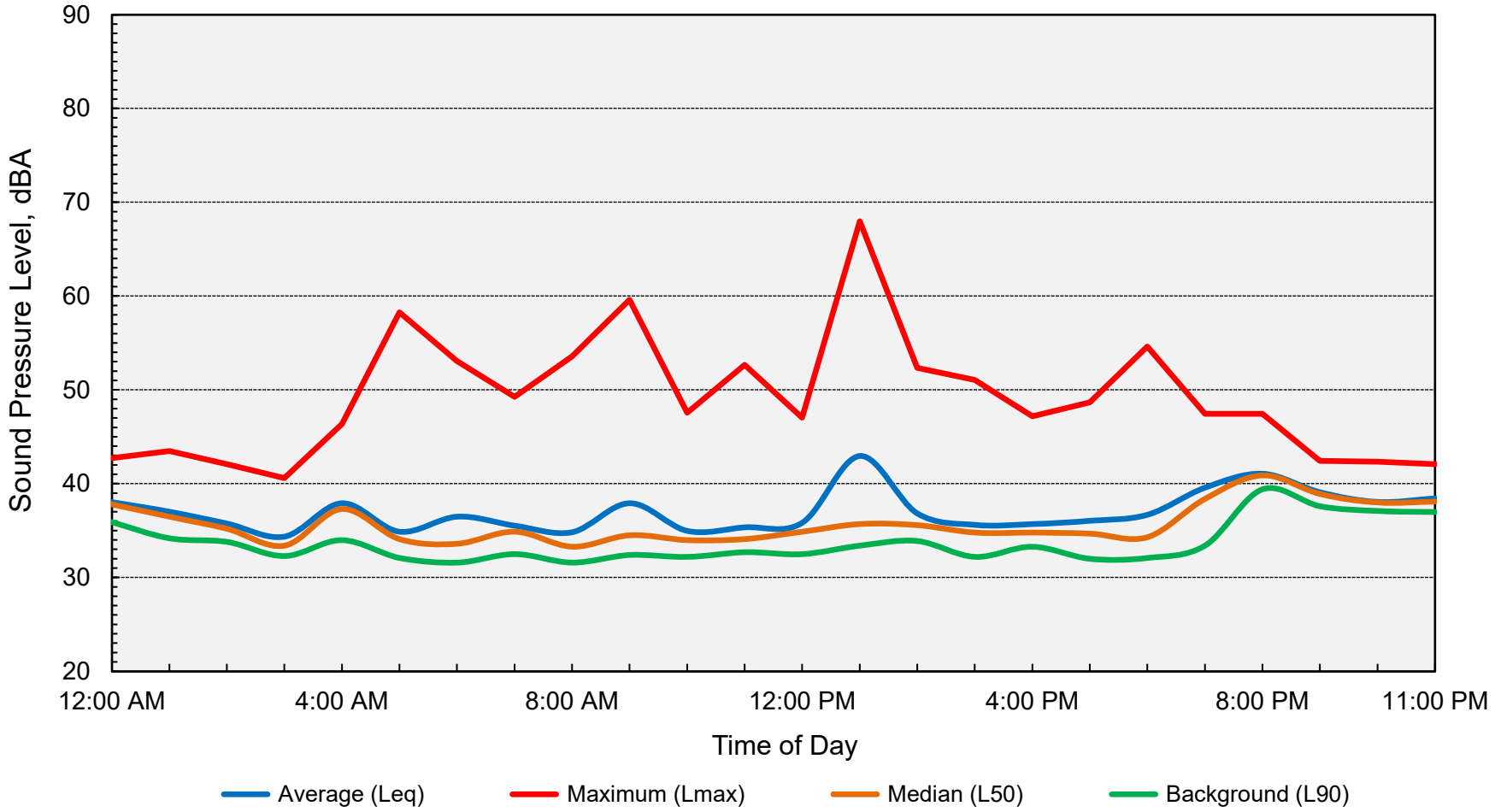
Appendix D-3
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Saturday, April 11, 2020



Computed Ldn = 43 dB

BOLLARD
Acoustical Consultants

Appendix D-4
Ambient Noise Monitoring Results
Greenhouse Fan Noise Assessment - El Dorado County, California
Sunday, April 12, 2020



Computed Ldn = 44 dB

BOLLARD
Acoustical Consultants

Appendix E

SCHAEFER

545B2G-LT

54" Galvanized Light Trap Box Exhaust Fan

Blade Color :	Gray	Guard Spacing (inches) :	1 - 2
Blade Material :	Galvanized Steel	Housing Color :	Gray
CFM (free air) :	31300	Housing Material :	Galvanized Steel
CFM Range (Free Air) :	>30000	Nameplate Amps :	9.5
Component Certifications :	Motor - UL/CSA	Number of Wings :	5
Cord :	Not included	Oscillating :	No
Country of Origin :	US	Phase :	1
Diameter (inches) :	54	Power (hp) :	2
Display Name :	545B2G-LT	Product Color :	Metallic
Drive Type :	Belt	Rough-in Dimensions :	61" x 62"
Enclosure :	TEAO	Sound Level (dBA @ 10') :	73
Fixed or Portable :	Fixed	Speed Control Compatible :	No
Frequency (Hz) :	60	Speeds :	1
Guard Color :	Metallic	VFD Compatible :	No
Guard Material & Coating :	Galvanized Steel	Voltage :	230

Appendix F

Transportation Studies

On Site Transportation Review

Cybele Holdings, Inc. Freshwater Project

Located In El Dorado County

Prepared for:

Cybele Holdings, Inc.
4241 Vega Loop
Shingle Springs, CA. 95667

September 24, 2020

ON SITE TRANSPORTATION REVIEW
Authored by:
Grant P. Johnson, TE

PRISM ENGINEERING

Traffic Engineering & Transportation Planning

This OSTR has been prepared and certified by Grant P. Johnson, TE, Principal. Lic #1453

Table of Contents

Overview of OSTR Process

On the El Dorado County website under information pertaining to an On Site Transportation Review[1] (OSTR), the following items have been identified in a process that needs to be assessed in the OSTR:

> *"If an OSTR is required, the following information shall be evaluated and the findings signed and stamped by a registered Traffic Engineer or Civil Engineer, and shall be included with the project submittal.*
>
> The list below has also been augmented with an additional section on calculating the estimated Vehicle Miles Traveled (VMT) for the project for the with and without project scenario.

1. *Existence of any current traffic problems in the local area such as a high-accident location, non-standard intersection or roadway, or an intersection in need of a traffic signal*
2. *Proximity of proposed site driveway(s) to other driveways or intersections*
3. *A. Adequacy of vehicle parking relative to both the anticipated demand and zoning code requirements B. Estimated Trip Distribution and VMT Calculations, with and without project*
4. *Adequacy of the project site design to fully satisfy truck circulation and loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day*
5. *Adequacy of the project site design to provide at least a 25 foot minimum required throat depth (MRTD) at project driveways, include calculation of the MRTD*
6. *Adequacy of the project site design to convey all vehicle types*
7. *Adequacy of sight distance on-site*
8. *Queuing analysis of "drive-through" facilities"*

This report satisfies the requirements of the OSTR process by including a section for each of the eight items listed above, in the pages that follow.

[1] https://www.edcgov.us/Government/dot/Documents/TIS_Initial_Determination_Form.pdf

Description of Project

The Cybele Holdings, Inc., Freshwater Project consists of agricultural farm uses for cannabis cultivation / production. The project site is located in the rural mountainous areas of El Dorado County, in a secluded area, and is planning to cultivate 2 acres of cannabis canopy under year-round greenhouse protection.

The project consists of two parcels: 046-071-010 (40 acres), and 046-071-011 (140 acres), which are currently vacant land but are zoned LA-40 which allows for the construction of two single family residence homes on each parcel, or for agricultural uses. The address of the project site for these two parcels is 3029 Freshwater Lane, and both are accessible through the same gated driveway coming off of Freshwater Lane that is a shared driveway easement with another existing single family residence home (a different 180 acre parcel).

Freshwater Lane is a private road that has a shared maintenance agreement between all owners of parcels that access this Freshwater Lane, and where costs to maintain the road are shared equally between owners as written in their parcel map descriptions. The road is narrow, and the width varies between 14 and 18 feet, and is partially paved. The paved portion is from Sand Ridge Road to a point approximately 0.5 miles south of Sand Ridge Road where Freshwater Lane becomes a dirt road, covered in gravel after the intersection of Tumbleweed Road.

The project's shared gated driveway is located approximately 1.5 miles south of Sand Ridge Road. The gate is approximately 185 feet inward from Freshwater Lane (so that there is 185 feet of throat length for the driveway). The total distance from the project driveway to SR 49 is 4.2 miles, and is a 12 minute drive.

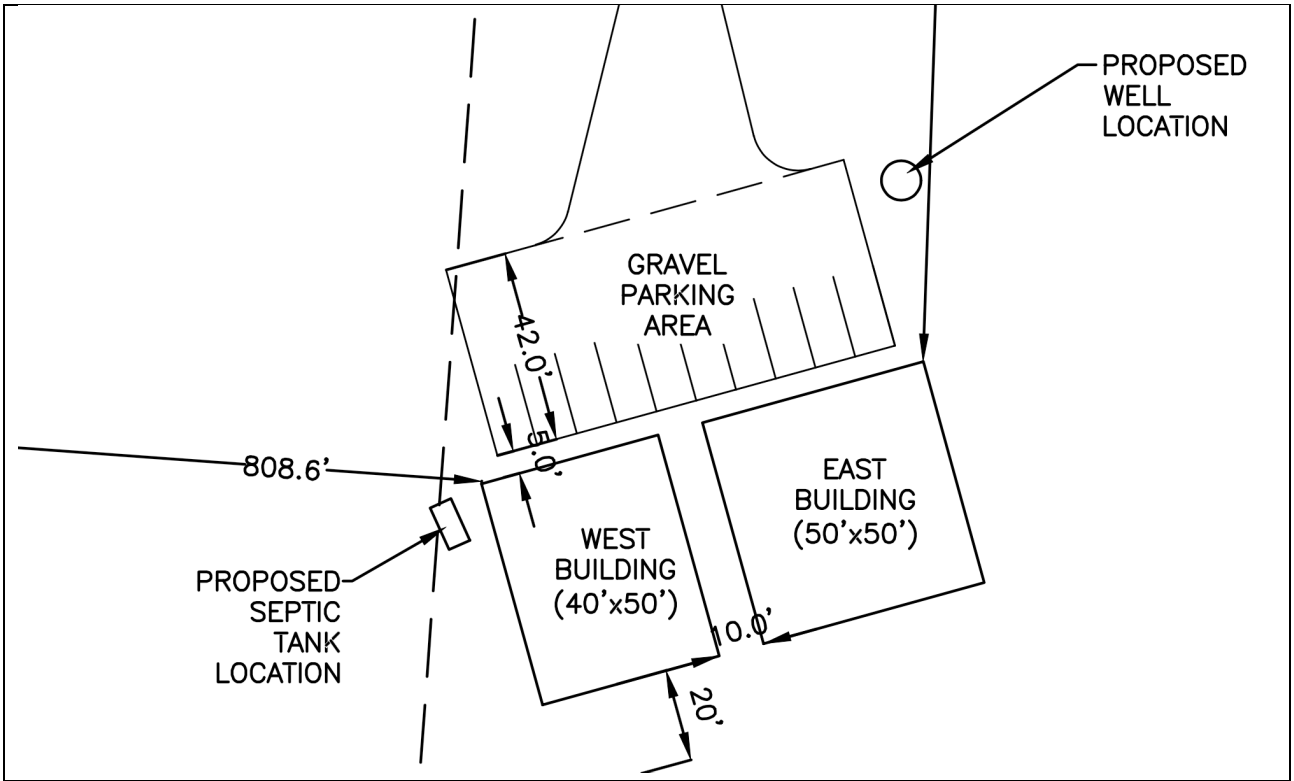


FIGURE 1. SITE PLAN BUILDING STRUCTURES AND PARKING LOT AREA

A total of 4,500 square feet of permanent building structure is proposed on the project site. Figure 1 shows the plan line for the building structures proposed along with the parking lot area. This will be two building structures, adjacent to each other and separated by a 10 foot buffer. The first structure (west building) is for project offices and some sleeping quarters for harvest time employees, and will be 2,000 square feet. The second structure (east building) will be 2,500 square feet used for storage. Internal uses are broken down as follows:

- 1,000 SQ FT is for Office (1st building)
- 1,000 SQ FT is for Harvest Employee Sleep Quarters (1st building)
- 2,500 SQ FT is for Secure Storage (2nd building)

The project consists of agricultural farm uses for cannabis production, and will have no customers on site. Owners and employees who work on the farm site will arrive to the farm work site in no more than 4 cars on any one day. Employees will pick up and deliver work related products every two weeks or every month, depending on need (max two delivery, pickup days per month. It is estimated that there would be a 30 miles round trip on any of these pickup/deliveries.

There will be no large delivery trucks to the site, but there will be on occasion a small delivery vehicle bringing growing supplies (not daily). The project owners, after obtaining a distribution license, will use a panel van to go out to get supplies as needed. During harvest time, there will be deliveries of products only to manufacturers/retail stores. During Year 1, and during the months of November-January, this panel truck is anticipated to go out once a week. As the business grows (years 3-5), the site will become a year round growth operation (3 crops/year), so the delivery of product will increase to 3 times a year (instead of just between November and January).

Larger truck traffic will only be during initial construction. This activity will include grading equipment (one trip in and one trip out), delivery of building materials and greenhouse(s), and there will be daily construction workers for 2 months until the project is built. There will be no large truck traffic (until more greenhouses are added in future years) and then it will complete as the project farm site will be built out. The crop, as noted above can be handled with small trucks. If trucks do come for deliveries, this would occur during the weekday, during normal business hours. These would be small panel vans, UPS size or small farm trucks (from local feed/growing supply places).

Parking Lot Evaluation

The parking lot area proposed on the site plan submitted to the County has been evaluated by the local Fire Department and found to be adequate for turn around capability for their vehicles. The lot is approximately 42 feet x 90 feet, and has adequate room for a large truck to perform a three point turn around. A typical fire truck is 32 feet long, 10 feet wide, and has a wheelbase axle separation of about 17 feet[2]. This means that it has a high level of maneuverability in tighter constrained areas because the front and rear bumpers extend approximately 7 feet beyond the wheels. This allows these vehicles to make tighter turns, and within a 40 foot width area in the

[2] https://www.amherstma.gov/DocumentCenter/View/24390/SUB2014-01-The-Retreat-Prelim-Subdiv-Fire-Dept-Apparatus-Dimensions?bidId= (Fire truck dimensions and specs typical of numerous jurisdictions)

parking lot and the extra wide parking lot throat allowing for a turning radius of , there is more than enough room to turn around.

Figure 2 shows a typical large fire truck making a 3 point turn around, and this was conservatively analyzed using an inside 40 foot turn radius, even though a 32 foot long fire truck can have an inside turn radius as little as 25 feet. The figure illustrates that the fire truck can, even with a 40 foot inside radius path, easily navigate the 3 point turnaround path without the need of encroaching on any of the parking spaces. The yellow arrow is the first movement, the green arrow the 2nd movement, and the blue arrow is the 3rd exit movement.

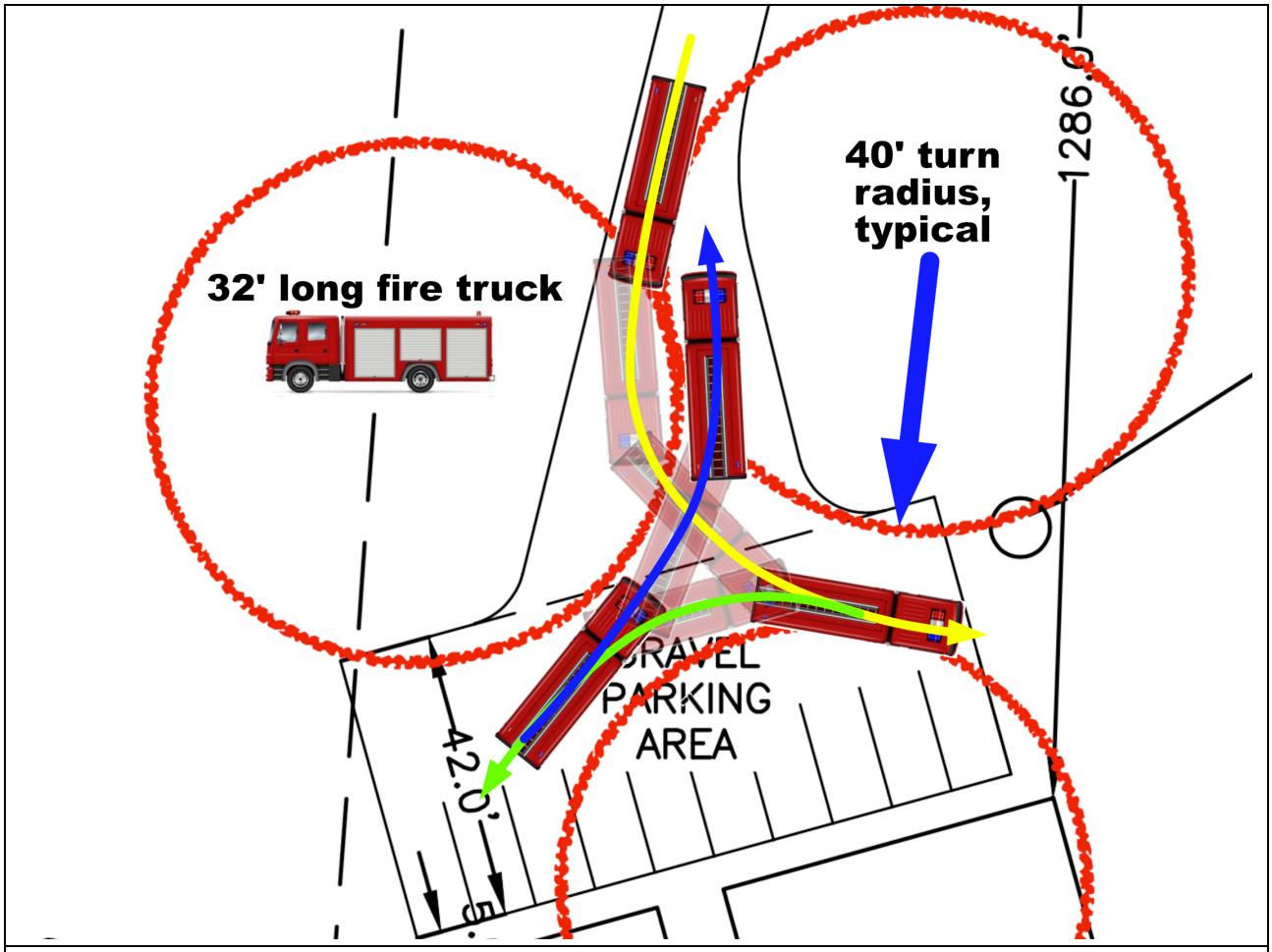


FIGURE 2. 32' LONG FIRE TRUCK, 3-POINT TURN AROUND MANEUVER, OK.

OSTR Item #1: Existence of any current traffic problems in the local area such as a high-accident location, non-standard intersection or roadway, or an intersection in need of a traffic signal

Traffic Accident History.

Over a five year period from Jan 1, 2015 to Dec 31, 2019, there were five accidents in the vicinity of the SR 49 and Sand Ridge Road intersection, with only two of these accidents taking place at the intersection. One of the non-intersection accidents was nearly a mile to the east of the intersection on Sand Ridge Road, where a vehicle ran off the road and hit a fixed object. Figure 3 is an accident location map showing the location and type for each of these five accidents, one fatal and the other four being injury accidents. Figure 3 also shows the detailed information about each accident. There were no accidents in 2016, 2018, or 2019. The dates of the accidents are shown in Table 1 below:

Table 1. Traffic Accident History Summary (*5 years, 2015-2019*)

Date of Accident	Type of Accident	Location of Accident	Injury or Fatal	Case ID
May 9, 2015	Rear End	SR 49 30' n/o Sand Ridge	Injury	6917180
June 2, 2015	Hit Object	Sand Ridge 4752' e/o SR 49	Injury	90476171
January 17, 2017	Hit Object	SR 49 1050' s/o Sand Ridge	Injury	90376908
June 2, 2017	Head On	SR 49 at Sand Ridge	Injury	6945766
September 7, 2017	Hit Object	SR 49 623' s/o Sand Ridge	Fatal	90572304

Source: SWITRS and TIMS Interface[3]

A brief summary of Table 1, which corresponds to Figure 3, is that there were two accidents at the intersection of SR 49 and Sand Ridge Road, one **rear end** accident five years ago on May 9, 2015, and another **head-on** collision on June 2, 2017. Both accidents were injury accidents but no fatalities. The other three accidents happened at locations that were more than 600 feet away from the intersection, and were all "**hit object**" accidents, two with injuries and one was fatal. The fatal **hit object** accident was located on SR 49 1050' south of the Sand Ridge intersection, where a pickup truck was traveling northbound on SR 49. The highway is straight at this location, and there are no obstructions on either side of the road. There are several trees on the side of the road.

Based on this information, the traffic accident situation does not have any repeating patterns, and all seem to be entirely separate and independent from each other, primarily due to driver error. The traffic control devices installed on the roadways in the vicinity of the SR 49 / Sand Ridge Road intersection are installed according to standard CAMUTCD guidelines and regulation.

Accident Analysis

PRISM Engineering referenced the *County of El Dorado Transportation Division, Annual Accident Location Study 2017, APRIL 12, 2018* (see left) in developing the accident summary information for the study area roadways. This document showed one accident for 2017 on Sand Ridge Road, not enough to establish any accident pattern.

[3] https://tims.berkeley.edu TIMS | SWITRS GIS Map By SafeTREC, UC Berkeley

Intersection accident rates are expressed as Accidents per Million Vehicles Entering (Acc/MEV) the intersection. Since the daily volume is 2,200 cars on SR 49, and 640 ADT on Sand Ridge Road, the total combined daily volume entering the intersection of SR 49 and Sand Ridge Road is 2840 per day. Over a five year period, the total volume entering the intersection would be 5x365x2840=5,183,000, and there were two accidents during the same time period. Using the Acc/MEV equation, this accident rate is calculated as:

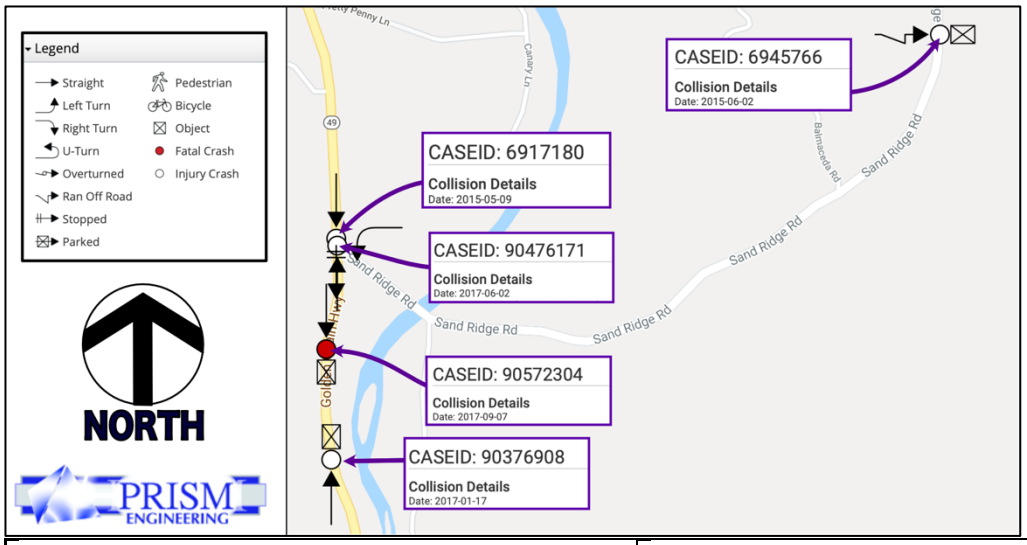
2 accidents/5.183M vehicles = 0.39

This 0.39 accident rate is far less than the 1.0 value set forth in the El Dorado County accident rate thresholds for an intersection.

The accidents summarized in this section, overall do not meet the minimum thresholds to be a "Location Requiring Further Investigation," also because there:

- Must be a site with 3 or more accidents in a single year *(Not the case)*
- Two or more accidents, one being fatal in a single year *(Not the case at any single location)*
- Sites with two or more in a single year, two or more with motorcycles within 0.25 mile section *(Not the case)*
- Sites with two or more in a single year, two or more with bicycles within 0.25 mile section *(Not the case)*
- Sites with two or more in a single year, two or more with pedestrians within 0.25 mile section *(Not the case)*
- Sections of homogeneous roadway with five (5) or more accidents of a similar type occurring within a quarter-mile section during a single year *(Not the case)*.

Based on these findings, no recommendations are made to mitigate based on traffic accident history.



CASEID: 6917180

Collision Details
Date: 2015-05-09
Severity: 4 - Injury (Complaint of Pain)
Pedestrian: N
Bicycle: N
Motorcycle: N
Truck: N

Collision Location
Primary: RT 49
Secondary: SAND RIDGE RD
Intersection: N
Offset Distance & Direction: 30.00 N
Highway: Y
Route: 49
Postmile: 2.810
Crash Type: Rear End

Party 1
Movement: Proceeding Straight
Direction: South
Party Type: Driver
Vehicle Type: Passenger Car/Wagon

Party 2
Movement: Stopped
Direction: South
Party Type: Driver
Vehicle Type: Pickup or Panel Truc

CASEID: 90476171

Collision Details
Date: 2017-06-02
Severity: 4 - Injury (Complaint of Pain)
Pedestrian: N
Bicycle: N
Motorcycle: N
Truck: N

Collision Location
Primary: SR-49 N/B
Secondary: SAND RIDGE RD
Intersection: Y
Offset Distance & Direction: 0.00
Highway: N
Route:
Postmile:
Crash Type: Head-On

Party 1
Movement: Making Left Turn
Direction: West
Party Type: Driver
Vehicle Type: Passenger Car/Wagon

Party 2
Movement: Proceeding Straight
Direction: North
Party Type: Driver
Vehicle Type: Passenger Car/Wagon

CASEID: 90572304

Collision Details
Date: 2017-09-07
Severity: 1 - Fatal
Pedestrian: N
Bicycle: N
Motorcycle: N
Truck: N

Collision Location
Primary: STATE ROUTE 49
Secondary: SAND RIDGE RD
Intersection: N
Offset Distance & Direction: 623.00 S
Highway: Y
Route: 49
Postmile:
Crash Type: Hit Object

Party 1
Movement: Crossed Into Opposing Lane
Direction: South
Party Type: Driver
Vehicle Type: Passenger Car/Wago

CASEID: 90376908

Collision Details
Date: 2017-01-17
Severity: 4 - Injury (Complaint of Pain)
Pedestrian: N
Bicycle: N
Motorcycle: N
Truck: N

Collision Location
Primary: SR-49 (GOLDEN CHAIN HWY)
Secondary: SAND RIDGE RD
Intersection: N
Offset Distance & Direction: 1056.00 S
Highway: Y
Route: 49
Postmile:
Crash Type: Hit Object

Party 1
Movement: Proceeding Straight
Direction: North
Party Type: Driver
Vehicle Type: Pickup or Panel Truck

CASEID: 6945766

Collision Details
Date: 2015-06-02
Severity: 3 - Injury (Other Visible)
Pedestrian: N
Bicycle: N
Motorcycle: N
Truck: N

Collision Location
Primary: SAND RIDGE RD
Secondary: RT 49
Intersection: N
Offset Distance & Direction: 4752.00 E
Highway: N
Route:
Postmile:
Crash Type: Hit Object

Party 1
Movement: Ran Off Road
Direction: East
Party Type: Driver
Vehicle Type: Pickup or Panel Truck

Source: TIMS and SWITRS

FIGURE 3. ACCIDENT LOCATION MAP -- JAN 1,2015 TO DEC 31,2019 (5 YEARS)

OSTR Item #2: Proximity of proposed site driveway(s) to other driveways or intersections

Since the project site is near the end of a long rural forest road (Freshwater Lane), there are no situations where this 180 acre combined project property will have a driveway that is proximate to or in conflict with any other driveway in the vicinity of the project site. This OSTR item is not an issue with the proposed project location and setting.

OSTR Item #3A: Adequacy of vehicle parking: anticipated demand, zoning code req.

The project site is very large (180 acres total). Parking space is ample for at least 10 cars, but there are only 4 employees. There will be no customers coming to the site, as it is primarily a farm operation, with green house covering the cannabis crop. Occasionally, up to three times a year for a couple of weeks at a time, there will be need for the additional parking spaces when temporary employees are staying, or for occasional visitors, etc.

OSTR Item #3B: Estimated Trip Generation and Trip Distribution

At the outset of this OSTR, there were no established trip generation rates available for specific cannabis cultivation farming, and as a result PRISM Engineering was tasked by the County DOT to collect data pertaining to similar uses, so that a basis could be formed to develop a specific trip generation rate for the Cybele Holdings Freshwater Project. Data was collected at two similar cannabis cultivation sites in northern California, and this data and summary is contained in the Appendix of this report[4].

County DOT reviewed this survey data, and in conjunction with review of several other sources of similar data, developed the specific trip generation rate to use in this study. It is very similar in bottom-line results to the survey (22.3 trips vs 27.7 trips), but is based on a comparison to the ITE 110 Light Industrial trip generation rate, modified for use in assessing cannabis farm sites, and based on the number of square feet of the specific permanent structure/building on the site. The project site total building square footage used was 4,500 square feet, as shown in Table 2A below. The trip rate for the number of employees at ultimate buildout of the project is also given in Table 2A, and this results in 60 daily trips, which is also below the Policy TC-Xe threshold of 100 daily trips. The result in the last column of Table 2A is that the daily trip generation of the project is calculated to be below 100 trips per day (22.3 trips per day for the 4,500 square footage metric, or 60 trips per day based on the worst case seasonal harvest time employee count of 20 employees). Either way, a formal traffic impact study requirement is ***not*** triggered based on the threshold of 100 daily trips.

[4] Result of survey: 27.7 daily trips per 2 acres of cannabis cultivation canopy. See Appendix for details.

Table 2A. Trip Generation Summary of Project, KSF* vs Employees

ITE Trip Generation Manual Trip Generation Period (110 Light Industrial)	ITE Trip Generation Rate per KSF GFA	KSF of Facility	Trips	Threshold Policy TC-Xe	Conclusion
daily	**4.96**	**4.5**	**22.3**	100	*22.3 < 100, traffic study not triggered*
a.m. peak hour	0.70	4.5	3.2	10	
p.m. peak hour	0.63	4.5	2.8	10	

ITE Trip Generation Manual Trip Generation Period	ITE Trip Generation Rate per EMPLOYEE	Number of EMPLOYEES	Trips	Threshold Policy TC-Xe	Conclusion
daily	3	20	60	100	60 < 100

*Source: El Dorado County DOT and PRISM Engineering. *KSF=1,000 square feet*

Detailed Project Operations Description

The project applicant has described the anticipated specific project operations as it relates to traffic, which would be a much smaller amount than shown in the table above, and this narrative is provided in the following sentences for reference. The regular project traffic anticipated is 3 to 4 cars from employees arriving each day in the first two years. Thereafter at buildout, six regular full time employees will be on the site full time as shown in Table 2B below. This will also be followed by a security detail of 5 employees in separate shifts, for a total of 11 regular employees, and 9 additional temporary employees during seasonal harvest (total of 20 employees, *worst case*).

Table 2B. Employee Activity for Project, Long Term Buildout

	REGULAR EMPLOYEE											TEMP
ACTIVITY	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12-20**
Cannabis Production	X	X	X	X	X	X						
Cannabis Storage	X	X	X									
Administrative	X	X	X									
Sales	X											
Distribution	X											
Processing	X	X	X	X	X	X						
Cultivation/Seasonal Harvest	X	X	X	X	X	X						XXXXXXXXX
Cultivation Maintenance	X	X	X	X	X	X						
Security							X	X	X	X	X	

Source: Cybele Holdings, Inc., and PRISM Engineering.

Occasionally there will be small delivery trucks, but not on a regular daily basis. There will be no customers to the farm site, as it will not be open to the public. There may be occasional inspections from the Fire Department, or

from the local Sheriff (rare), but all other traffic will be the limited employee commute related traffic and occasional errands/deliveries or picking up of product, but not on a regular daily basis.

Because of the project site's very remote location on a rough unpaved road, no frequent daily outside travel is anticipated (such as to go to lunch, etc. because the travel time alone would take at least an hour to the nearest commercial establishment). Figure 4 shows the location of the project with Google Map travel times super-imposed on the map to and from the project site and Shingle Springs, to and from Placerville, and to and from the Diamond Springs area. The travel time from the project site to the SR 49 highway at Sand Ridge Road intersection is 12 minutes. From that intersection it can be seen on the figure that the travel time to Shingle Springs is an additional 18 minutes. From this same intersection to Placerville instead the travel time is an additional 17 minutes. Also from the same intersection to the Diamond Springs area the additional travel time would be 12 minutes. Therefore, the combined one-way time from the project site to Shingle Springs is 30 minutes, to the Diamond Springs area is 24 minutes or more, and to the Placerville area this total travel time is 29 minutes or more. A round-trip travel time would be at least an hour in any case, making the probability of "lunch break" travel to food locations at those destinations a half an hour away unlikely, since it would result in an hour long round-trip travel time, expiring the time for the lunch break in travel time alone. Lunches are anticipated to be eaten on site.

The peak our volume on Sand Ridge Road is only 52 vehicles per hour in the pm peak hour (see Appendix). The project is anticipated to add 3 or 4 vehicles in a single direction inbound in the am peak hour, and 3 or 4 vehicles outbound in the pm peak hour. Any traffic impact is considered negligible and insignificant since the adjacent street volumes are already so low.

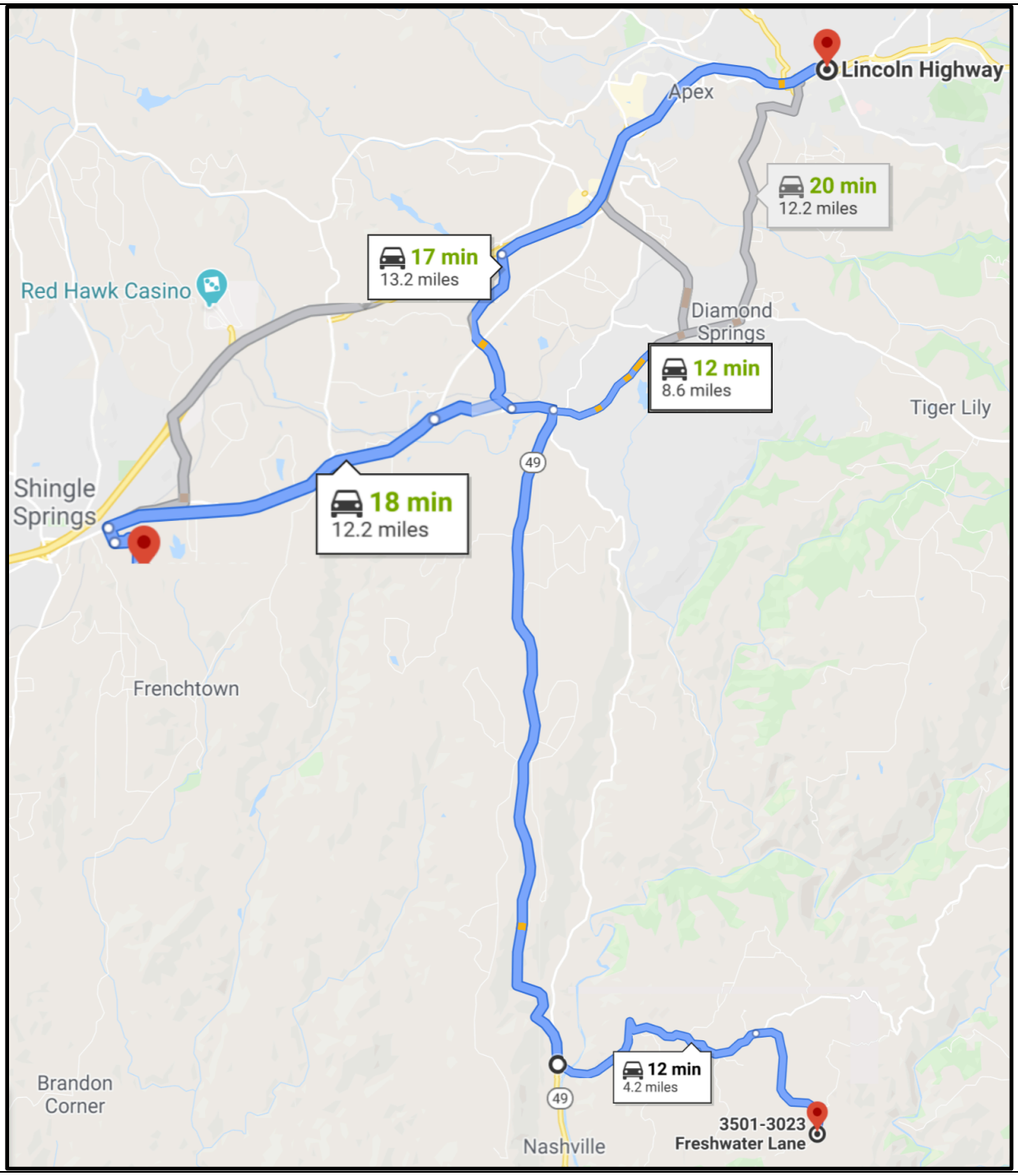


FIGURE 4. ANTICIPATED PROJECT TRAFFIC TRAVEL ROUTES AND TRAVEL TIMES.

OSTR Item #4: Adequacy of the project site design: truck circulation, loading demand on-site, when the anticipated number of deliveries and service calls may exceed 10 per day

The OSTR guideline thresholds for deliveries and service calls is that the project must not exceed 10 per day, or the site has to be evaluated for adequacy of truck circulation. Since the project will not have daily deliveries and service calls even on a daily basis, this 10 trip per day threshold cannot be met. The project site is adequate to satisfy all future truck circulation and loading demands, as all such occasional activity will take place entirely on the large 140 acre site, and any delivery trucks will be of small size (panel trucks, etc.).

OSTR Item #5: Adequacy of the project site design to provide at least a 25 foot minimum required throat depth (MRTD) at project driveways, include calculation of the MRTD

There is a gate to the entrance to the property located at 3029 Freshwater Lane signpost along Freshwater Lane just past the No Trespassing sign. The gate is located off of the Freshwater Lane dirt road approximately 185 feet in from the fork in the road (see Figure 5).

FIGURE 5. PROJECT ENTRANCE DRIVEWAY, DRIVEWAY THROAT DISTANCE

OSTR Item #6: Adequacy of the project site design to convey all vehicle types

The two parcels proposed for the project (180 acres total) have an address of 3029 Freshwater Lane. This driveway is able to convey construction equipment as needed during the initial construction phase of building the structures (such as greenhouses) on the site. There will be a parking lot / turn around area where a truck can easily turn around, as well as a loop road going around the green houses.

OSTR Item #7: Adequacy of sight distance on-site

A detailed sight distance analysis was conducted by Grant Johnson, TE at the intersection of SR 49 and Sand Ridge Road. Even though this is approximately 4 miles away from the project site itself, this intersection represents the location where the project might have an impact to sight distance safety, if the sight distance situation were to be found deficient.

As part of the sight distance evaluation, a video recording of the driver's actual sight distance was made to document the real-world condition of how far a driver can see in front of them. It is assumed in sight distance evaluation that the relevant distance is the distance that travels a straight line from one driver's eye to the other driver's eye. This ensures that the stopping sight distance is relevant to how each driver sees the other driver in a real world condition. If there are any trees or bushes obscuring this direct line of sight, then this would be a potential sight distance deficiency if the distance available is less than the approved thresholds as outlined in the Caltrans criteria. Figure 6 shows the Caltrans stopping sight distance table.

There is no set speed limit on this section of SR 49, because the highway has so many sharp curves in high frequency, with some of these curves set with aa 15 mph warning sign. The speeds of traffic along SR 49 in the vicinity of the Sand Ridge Road intersection range between 40 mph and 50 mph, as the highway has horizontal curves within hundreds of feet of the intersection in both directions. In our field observations and vehicle drive-through, it was observed that, using a small car, a comfortable driving speed on SR 49 in this location was 45 mph.

The safe stopping sight distance criteria listed in the Caltrans Design Manual are based on certain assumptions in human driving behavior relating to "perception" time, and "reaction" time, along with a deceleration time once the driver's foot is on the brake and pressing. The design standards of the American Association of State Highway and Transportation Officials (AASHTO) allow 1.5 seconds for perception time and 1.0 second for reaction time[5], a total of 2.5 seconds before the vehicle even begins to slow down. The Highway Design Manual's *Table 201.1, Sight Distance Standards*, is based on the 2.5 second AASHTO formula.

A 45 mph speed requires a stopping sight distance of 360 feet as per the Caltrans standards shown in Table 201.1, Sight distance Standards (based on AASHTO formula.)

[5] Joseph E. Badger, Human Factors: Perception and Reaction, at 1-2

Northbound Direction of SR 49.

PRISM Engineering found that there was 600 feet of available sight distance driver's eye for a NB SR 49 vehicle to drivers' eye of a vehicle stopped at the Sand Ridge Road stop sign. This is more than adequate stopping sight distance, since the minimum required is 360 feet for 45 mph and 430 feet for 50 mph.

Southbound Direction of SR 49.

PRISM Engineering found that there was 500 feet of available sight distance driver's eye for a SB SR 49 vehicle to drivers' eye of a vehicle stopped at the Sand Ridge Road stop sign. This is more than adequate stopping sight distance, since the minimum required is 360 feet for 45 mph and 430 feet for 50 mph.

In the case of a SR 49 SB vehicle approaching another SR 49 SB vehicle who is stopped in the road waiting to make a left turn onto Sand Ridge Road (a very rare situation given the low traffic volumes), there is more than 600 feet of sight distance available, even with the vertical curve that partially obscures the pavement of the intersection.

Table 201.1
Sight Distance Standards

Design Speed[1] (mph)	Stopping[2] (ft)	Passing (ft)
10	50	---
15	100	---
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

(1) See Topic 101 for selection of design speed.
(2) For sustained downgrades, refer to advisory standard in Index 201.3

CHAPTER 200
GEOMETRIC DESIGN AND STRUCTURE STANDARDS

Topic 201 - Sight Distance

Index 201.1 - General

Sight distance is the continuous length of highway ahead, visible to the highway user. Four types of sight distance are considered herein: passing, stopping, decision, and corner. Passing sight distance is used where use of an opposing lane can provide passing opportunities (see Index 201.2). Stopping sight distance is the minimum sight distance for a given design speed to be provided on multilane highways and on 2-lane roads when passing sight distance is not economically obtainable. Stopping sight distance also is to be provided for all users, including motorists and bicyclists, at all elements of interchanges and intersections at grade, including private road connections (see Topic 504, Index 405.1, & Figure 405.7). Decision sight distance is used at major decision points (see Indexes 201.7 and 504.2). Corner sight distance is used at intersections (see Index 405.1, Figure 405.7, and Figure 504.3J).

FIGURE 6. CALTRANS STOPPING SIGHT DISTANCE STANDARDS FOR VARIOUS SPEEDS

The vehicle can still be clearly seen, and given the prevailing speeds, even if it were 55 mph, there is ample stopping sight distance available (55 mph requires only 500 feet of sight distance). Figure 7 shows drivers point of views for the sight distance analysis.

SR 49 in Southbound Direction

SB SR 49 Sight Distance at crest of vertical curve. This shot is taken at 500 feet back of intersection and the pavement of the intersection is clearly visible. A car stopped to make a left turn can be completely seen. The minimum sight distance needed to stop for a vehicle at this location going 55 mph is 500 feet. Prevailing speeds at this location, however, are about 45-50 mph, and only 430 feet of stopping sight distance is needed.

SR 49 in Northbound Direction

NB SR 49 Sight Distance at is affected by both a horizontal and slight vertical curve. This shot is taken at 600 feet back of intersection and a pickup truck turning left into Sand Ridge Road is completely visible. Even a car stopped on the WB approach to make a left turn can be completely seen. The minimum sight distance needed to stop for a vehicle at this location going 45 mph is 360 feet. Prevailing speeds at this location are about 45-50 mph, and only 430 feet of stopping sight distance is needed.

FIGURE 7. SIGHT DISTANCE SURVEYS, SR 49 SOUTHBOUND AND NORTHBOUND

There are no sight distance issues on the SR 49 highway at this location.

An additional sight distance evaluation was made for the intersection of Sand Ridge Road and Freshwater Lane, a neighborhood street intersection with stop control for Freshwater Lane only. Figure 8 shows two views of this intersection from the driver's perspective (PRISM Engineering windshield mounted camera view).

Sand Ridge Road looking East at Freshwater Lane

Sand Ridge Road looking West at Freshwater Lane

FIGURE 8. SIGHT DISTANCE SURVEY FOR FRESHWATER LANE AT SAND RIDGE ROAD

Figure 8 photos show that there is adequate sight distance in both directions of Sand Ridge Road at the intersection of Freshwater Lane, with more than 250 feet of clear sight distance for the driver approaching the Freshwater Lane intersection in either direction. According to the Caltrans stopping sight distance criteria outlined in Figure 6, only 150 feet of stopping sight distance is needed for a 25 mph road. Even speeds of 35 mph can be safely accommodated for 250 feet, however, 35 mph speeds cannot be maintained continuously on Sand Ridge Road as there are many curves which require significant reductions to speed to navigate the turns safely. Fortunately, there are no curves near the intersection of Freshwater Lane which would create a sight distance challenge for drivers. All drivers exiting the stop-sign controlled Freshwater Lane must exercise due care, as they do at all intersections, but the speeds on Sand Ridge Road are generally low because the road is narrow, and in my experience evaluating the road by driving it, vehicles typically slow down to 10 mph to even pass each other on Sand Ridge Road. Drivers are primed while driving Sand Ridge Road to exercise due caution as a default.

OSTR Item #8:
Queuing analysis of "drive-through" facilities"

This project will not have drive-through facilities, and is a low-traffic impact farm use. The site is gated and will not be open to the public.

Appendix

Appendix: Trip Generation Survey for Similar sized Cannabis Cultivation Projects (2 acre growing sites).

A weeklong traffic count was taken at driveway locations for two cannabis cultivation locations starting on June 19, 2020 and ending June 25, a full 7 day, 24 hour, hourly count summary at both locations. The summary of these two locations is shown below. The daily average from the survey was 27.7 trips per 2 acres of canopy site.

Location	# of 2880 SF Green houses	# of Acres of Canopy	Daily Trips Total M	T	W	T	F	S	S	Daily Trips **WEEKDAY** Average	Daily Trips **WEEKEND** Average	Daily Trips **WEEKLY** Average
Farm #1: Esparto	6	2	10	67	24	22	24	10	6	29.4	8.0	23.3
Farm #2: Dunnigan	6	2	28	28	30	16	28	15	12	26.0	13.5	22.4
Totals	**12**	**4**	**38**	**95**	**54**	**38**	**52**	**25**	**18**	**55.4**	**21.5**	**45.7**
Daily Trips per Greenhouse										**4.6**	**1.8**	**3.8**
Daily Trips per 2 ac of canopy (maxed out limit)										**27.7**	**10.8**	**22.9**

For ITE Trip Rates comparison purposes to a 2 ac canopy site:

Daily Trips per ***2 ac of Light Industrial*** (ITE 110) @ 51.8 daily trips/ac	**103.6**
Daily Trips per ***2 ac of Manufacturing*** (ITE 140) @ 38.9 daily trips/ac	**77.8**

SUMMARY:

Proposed Project will have 1 greenhouse in first two years, then gradually to 6 greenhouses, each being the typical 2,880 SF in size.

Based on this, the project will have 4.6 daily trips on a weekday, and 1.8 on a weekend in the 1st two years, and gradually build up to 27.7 per day with full buildout.

This new trip generation rate for ***cannabis farming is approximately 27% of the Light Industrial*** *ITE daily trip rate, and* ***36% of the ITE Manufacturing*** *daily rate.*

Appendix: Traffic Count for Sand Ridge Road in El Dorado County

EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION

Count Summary Beginning: April 4, 2019

Count Station:	1100082	Counter ID:	60
City/Town:	Somerset	Mile Post:	**0.10**
Road Name:	**Sand Ridge Road**	Location:	**500 Ft. E. of S.R. 49**
Lanes:	2	Direction:	Combined

Date	7	8	9	10	4	5	6	Weekly	Wk Day
Day / Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Average	Avg.
100	4	3	2	1	1	3	2	2	2
200	3	0	0	2	1	2	0	1	1
300	3	0	1	1	0	1	0	1	1
400	0	3	1	0	1	1	2	1	1
500	6	7	12	11	10	8	1	8	10
600	6	19	18	18	18	11	4	13	17
700	17	26	25	33	25	24	14	23	27
800	7	47	57	44	42	52	19	38	48
900	23	33	28	37	31	22	19	28	30
1000	25	37	29	27	35	35	27	31	33
1100	23	35	32	32	34	36	43	34	34
1200	44	35	24	30	33	54	36	37	35
1300	38	34	26	41	30	33	49	36	33
1400	35	42	33	47	40	56	43	42	44
1500	34	50	44	35	37	49	36	41	43
1600	37	53	48	50	45	48	34	45	49
1700	29	44	49	34	47	47	54	43	44
1800	32	54	54	56	51	43	38	47	52
1900	19	36	36	43	40	36	38	35	38
2000	24	21	24	39	33	43	26	30	32
2100	21	11	26	20	19	25	16	20	20
2200	7	10	10	13	12	13	10	11	12
2300	4	5	3	6	4	8	12	6	5
2400	4	2	1	4	4	8	6	4	4
Totals	445	607	583	624	593	658	529	577	613
AM Peak Hr	12:00	8:00	8:00	8:00	8:00	12:00	11:00	8:00	8:00
AM Count	44	47	57	44	42	54	43	38	48
PM Peak Hr	1:00	6:00	6:00	6:00	6:00	2:00	5:00	6:00	6:00
PM Count	38	54	54	56	51	56	54	47	52

TOTAL ADT: 613

VMT MEMORANDUM

For

Cybele Holdings, Inc. Freshwater Project

Located In El Dorado County

Prepared for:

Cybele Holdings, Inc.
4241 Vega Loop
Shingle Springs, CA. 95667

September 24, 2020

This VMT Memorandum
Authored by:
Grant P. Johnson, TE

PRISM ENGINEERING

Traffic Engineering & Transportation Planning

This Memorandum has been prepared and certified by Grant P. Johnson, TE, Principal. Lic #1453

Description of Project

The Cybele Holdings, Inc., Freshwater Project consists of agricultural farm uses for cannabis production. It is located in the rural mountainous areas of El Dorado County, secluded, and is planned to cultivate 2 acres of cannabis under greenhouse protection. The two parcels for the project consist of: 046-071-010 (40 acres), and 046-071-011 (140 acres) which are currently vacant land but zoned LA-40 located at 3029 Freshwater Lane.

The trip generation of the project was developed in the On Site Transportation Review (OSTR) prepared for El Dorado County DOT dated September 24, 2020. In that report the following trip generation calculations shown in Table 1 were documented for both square footage as well as number of employees.

TABLE 1. TRIP GENERATION SUMMARY OF PROJECT, KSF* OR EMPLOYEES

ITE Trip Generation Manual Trip Generation Period (110 Light Industrial)	ITE Trip Generation Rate per KSF GFA	KSF of Facility	Trips	Threshold Policy TC-Xe	Conclusion
daily	**4.96**	**4.5**	**22.3**	100	*22.3 < 100, traffic study not triggered*
a.m. peak hour	0.70	4.5	3.2	10	
p.m. peak hour	0.63	4.5	2.8	10	
ITE Trip Generation Manual Trip Generation Period	**ITE Trip Generation Rate per EMPLOYEE**	**Number of EMPLOYEES**	**Trips**	**Threshold Policy TC-Xe**	**Conclusion**
daily	3	20	60	100	60 < 100

*Source: El Dorado County DOT and PRISM Engineering. *KSF=1,000 square feet*

It can be seen from Table 1 that the project will generate a maximum of 60 daily trips based on using the employee metric in the calculation. Since 60 trips is less than the 100 daily trips threshold set forth in the County's Policy TC-Xe, which if exceeded would trigger the need for a full traffic study instead of OSTR.

VMT Significance Determination

The California Office of Planning and Research (OPR) Technical Advisory provides this direction concerning the evaluation of impacts for Vehicle Miles Traveled (VMT) for a project:

> *Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.*
>
> *Per OPR's Technical Advisory, this determination is based on the following:*
>
> *CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).). Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.*

This Memorandum details our findings of VMT transportation impacts based on trip generation of the project being estimated to be 60 trips per day (for 20 employees, the maximum total during seasonal harvest). This is based on a project description and site plan, as well as said / stated business operations (by applicant) for the cannabis farm cultivation project, and as detailed in the OSTR dated September 24, 2020. Our findings conclude that the project will generate "110 or fewer trips" per day, and in fact only will generate 60 or less trips per day.

Conclusion

The project does not have a significant impact on vehicle miles traveled or transportation impact.