CITY OF CLEARLAKE

DRAFT MITIGATED NEGATIVE DECLARATION

ENVIRONMENTAL ANALYSIS (CEQA)

INITIAL STUDY (IS 2021-05)

Clearlake Harvest Company, LLC.

LOCATED AT:

2250 Ogulin Canyon Road
Clearlake, CA 95422

APN: 010-044-19

September 29, 2021

CALIFORNIA ENVIRONMENTAL QUALITY ACT ENVIRONMENTAL CHECKLIST FORM INITIAL STUDY (IS 2021-05)

1. **Project Title:** Clearlake Harvest Company, LLC **(**Conditional Use Permits to allow a Commercial Cannabis Operation)
2. **Permit Numbers:** CUP 2021-05 (Cannabis Cultivation); CUP 2021-06 (Processing); CUP 2021-07 (Distribution), CUP 2021-08 (Manufacturing); CUP 2021-09 (Retail Delivery), Cannabis Regulatory/Business Permit, and Initial Study, IS 2021-05
3. **Lead Agency Name/Address:** City of Clearlake 14050 Olympic Drive Clearlake, CA 95422
4. **Contact Person:** Mark Roberts – Senior Planner Phone: (707) 994-8201 Email: mroberts@clearlake.ca.us
5. **Project Location(s):** 2250 Ogulin Canyon Road, Clearlake, CA 95422
6. **Assessor Parcel Number (APN):** 010-044-19
7. **Project Sponsor's Name/Address:** Kris Gretsinger PO BOX 2116 Clearlake, CA 95422
8. **Property Owner(s) Name/Address:** Anand Rajendraiah (RSG Clearlake Vista, LLC) 489 Foreridge Drive; Coppell, Texas 75019
9. **Land Use Zoning Designation(s):** "I" Industrial & "CB" Commercial Zoning District
10. **General Plan Designation(s):** Industrial
11. **Supervisor District:** District Two (2)
12. **Average Cross Slope:** Average cross slope is less 20% (approximately)
13. **Earthquake Fault Zone**: Not within a fault zone
14. **Dam Failure Inundation Area**: Not within a Dam Failure Inundation Zone
15. **Flood Zone**: Not located within a known flood zone.
16. **Waste Management**: Onsite Waste Management System

17. Water Access: Onsite Well(s)

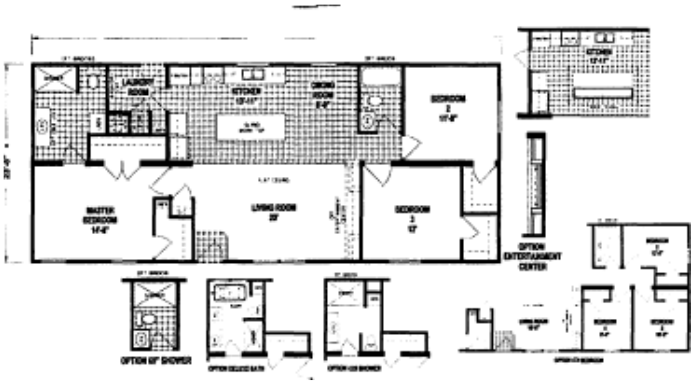
18. Fire Department: Lake County Fire Protection District

19. Description of Project *(Refer to attached Operational Plan for full details)*: The project involves the development of a Commercial Cannabis Operation located at 2185 Ogulin Canyon Road (APN 010-044-17) on parcel approximately 12.95 acres in size. The project site accessible from an existing accessway (located on the south side of Ogulin Canyon Road). The project parcels will have additional access throughout the project parcel.

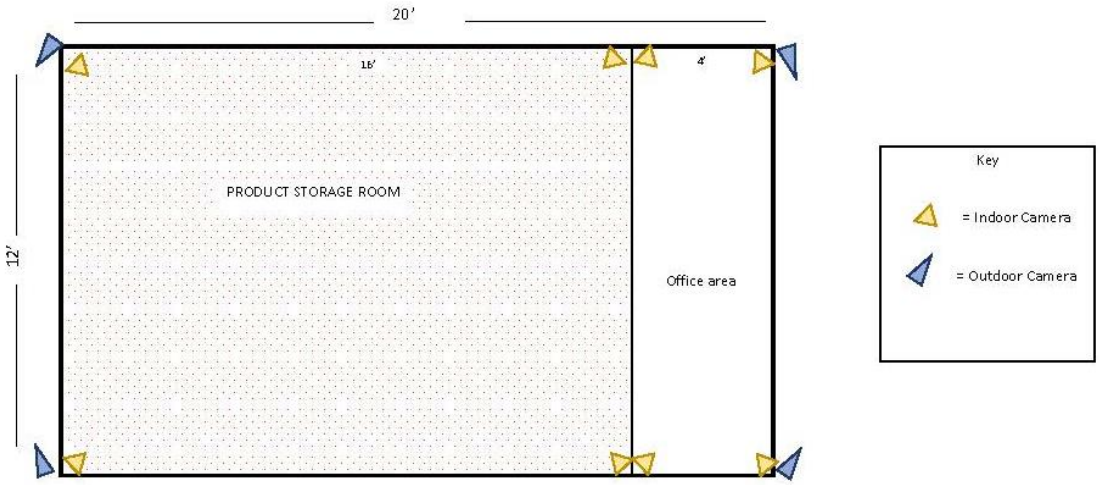
According to the application packet, the development includes but is not limited to the following:

Site One (1): Office Space

- Office Space -There will be no change to the existing trailer on the property. The trailer is a Skyline 24x60 foot trailer. The bedrooms on the below floor plan will be used as offices.

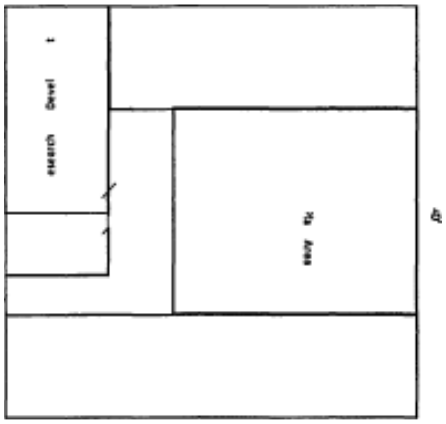


- Retail – Delivery Only (Premises Diagram Below)



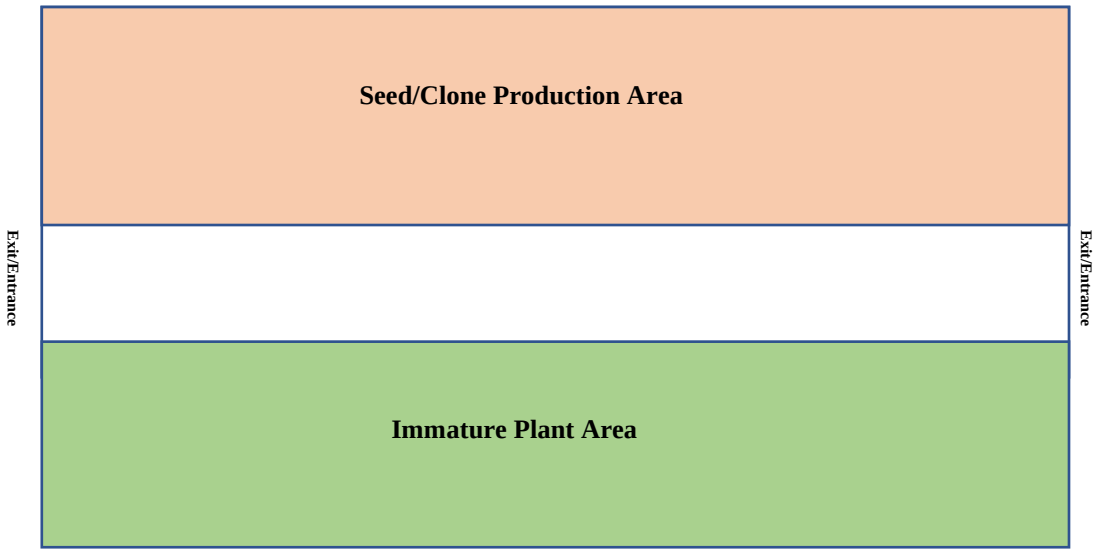
Site 2 - Nursery Operations

- Nursery License – This operation will occur within a 1,600 SQFT Building and be used produce clones, immature plants, seeds, and other products specifically for the planting, propagation, and cultivation of medical cannabis. The nursey operation will occur in a previously disturbed area (concrete slab). Below is an example of what the structure may look like.



Site 3 - Nursery Operations or Processing

- Nursery License - Nurseries produce only clones, immature plants, seeds, and other agricultural products used specifically for the planting, propagation, and cultivation of medical cannabis. The nursey operation will occur in a previously disturbed area (concrete slab). The structure will be approximately 1,600 SQFT in size.



Site 4 - Cultivation Operations

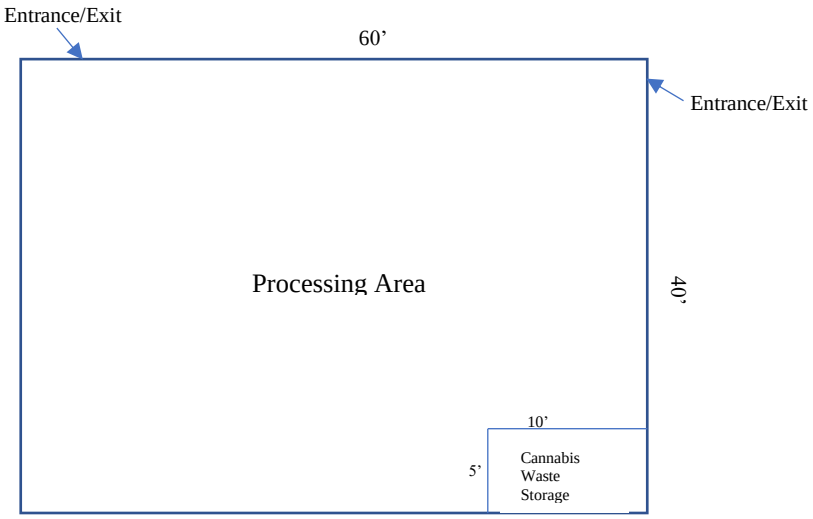
- Small Mixed Light Tier 2 - cannabis cultivation up to 10,000 square feet in a hybrid greenhouse. Below is an example of what the greenhouse may look like.

Site 5 - Cultivation Operations

- Specialty Cottage Mixed Light Tier 2 - cannabis cultivation up to 2,500 square feet in a hybrid greenhouse. Below is an example of what the greenhouse may look like.

Site 6 - Processing Operations

- Processing Operations - Processing operations are auxiliary to a cultivation license. The structure will be used for drying, curing, and trimming the flower. The processing will occur within a structure that is approximately 2,400 SQFT in size (60 ft X 40 ft.). Below is an example of an internal configuration.



Total Area to be disturbed:

- According to the Application Packet, the above operations will occupy approximately 27,500 square feet of area. The total cumulative project will not disturb more than one (1) acre.
- Total Cannabis canopy is approximately 17,500 SQFT

Parking and Operational Plan:

- According to the application packet, the operation anticipates on having up to twenty (20) employees and up to three managers.

SEE NEXT PAGE FOR SITE PLANS

Figure 1: Site Plan Diagram with "No Retail"

Clearlake Harvest Company, LLC
2250 Ogulin Canyon
Clearlake, CA 95422

Zoning: Industrial/Cannabis Overlay
County: Lake
Assessors Parcel No. 010-044-19

PROPERTY DIAGRAM

Scale: 1" = 200'

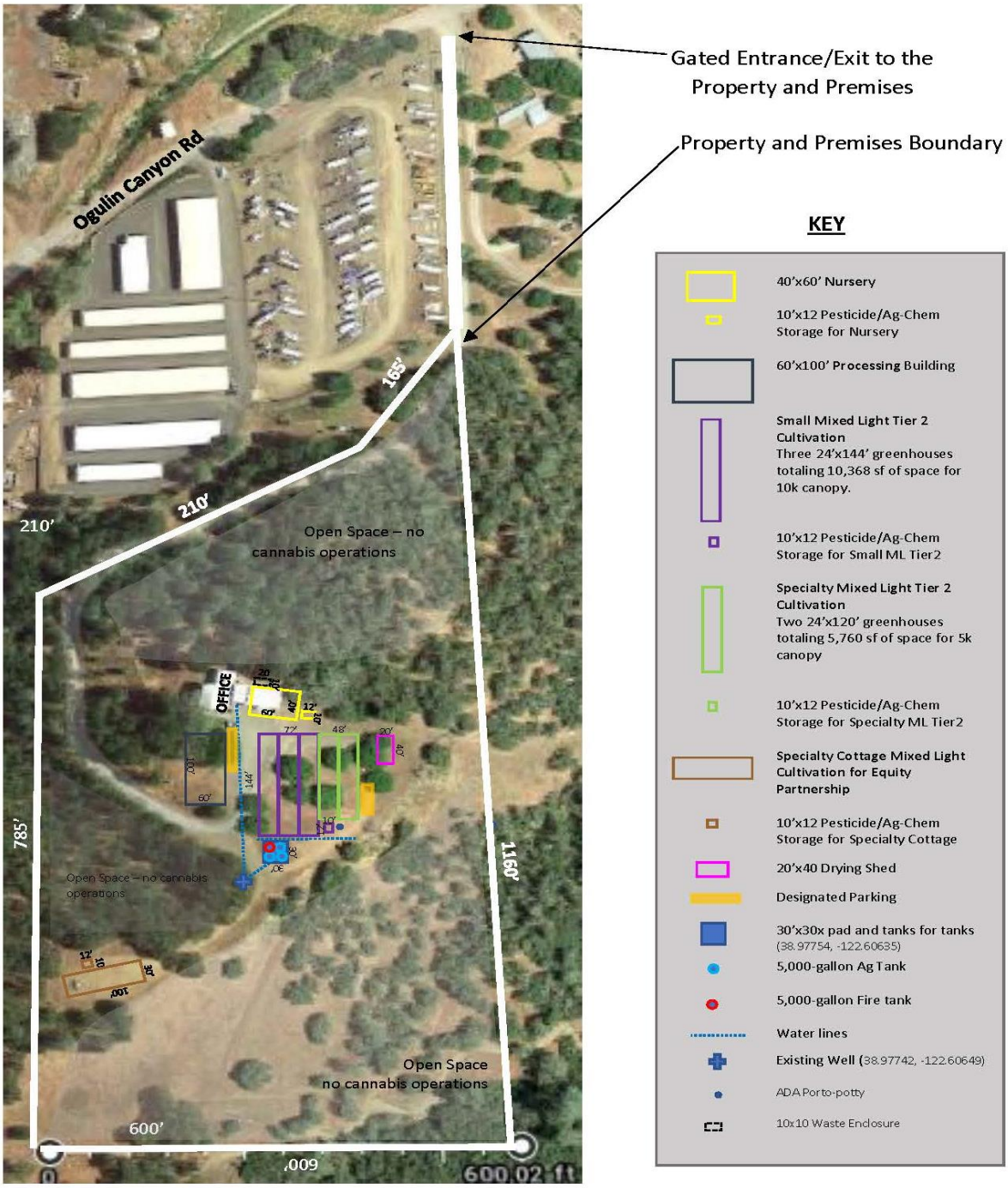


Figure 2: Site Plan Diagram with Full Details

Clearlake Harvest Company, LLC
2250 Ogulin Canyon
Clearlake, CA 95422

Zoning: Industrial/Cannabis Overlay
County: Lake
Assessors Parcel No. 010-044-19

PROPERTY DIAGRAM

Scale: 1" = 200'

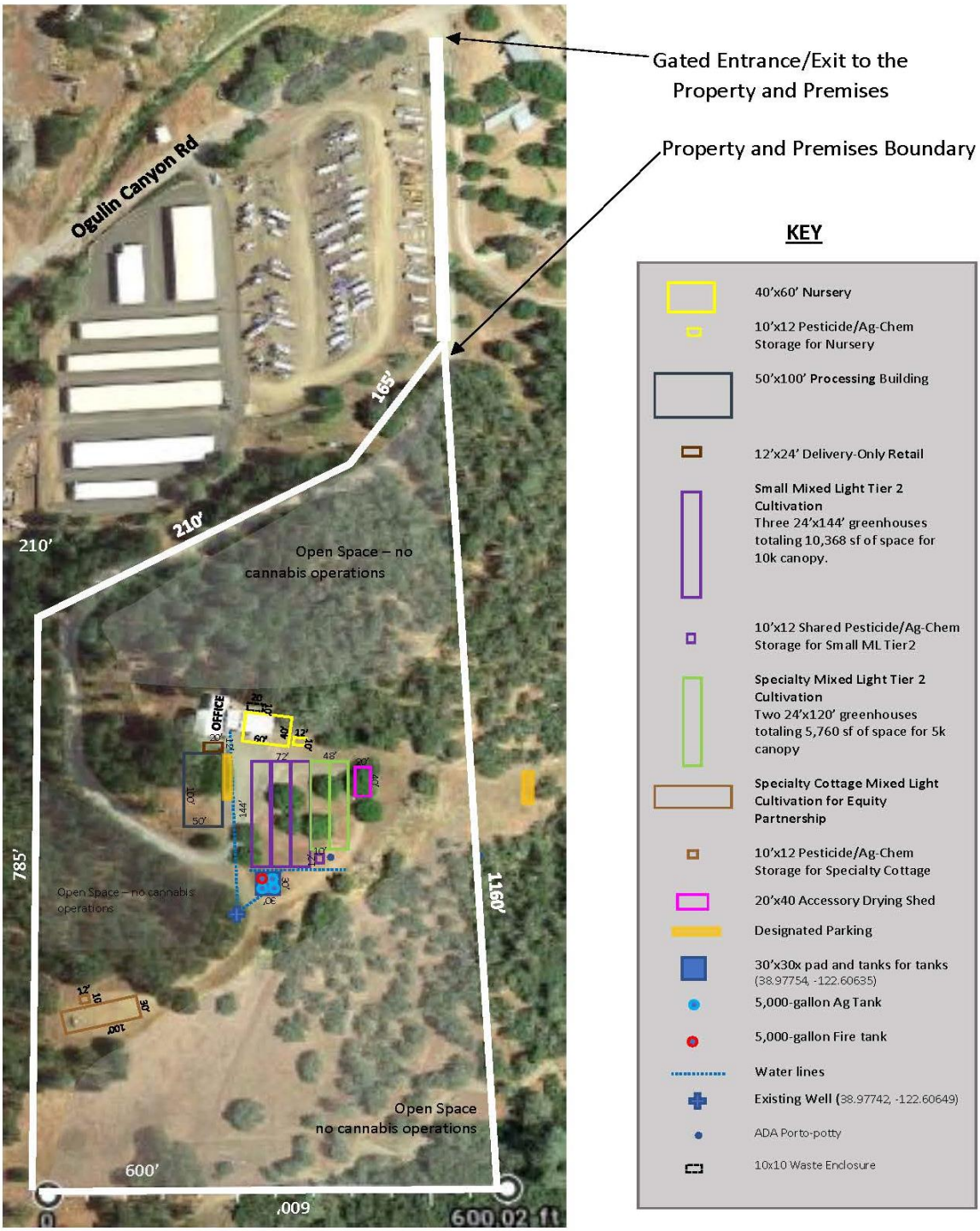


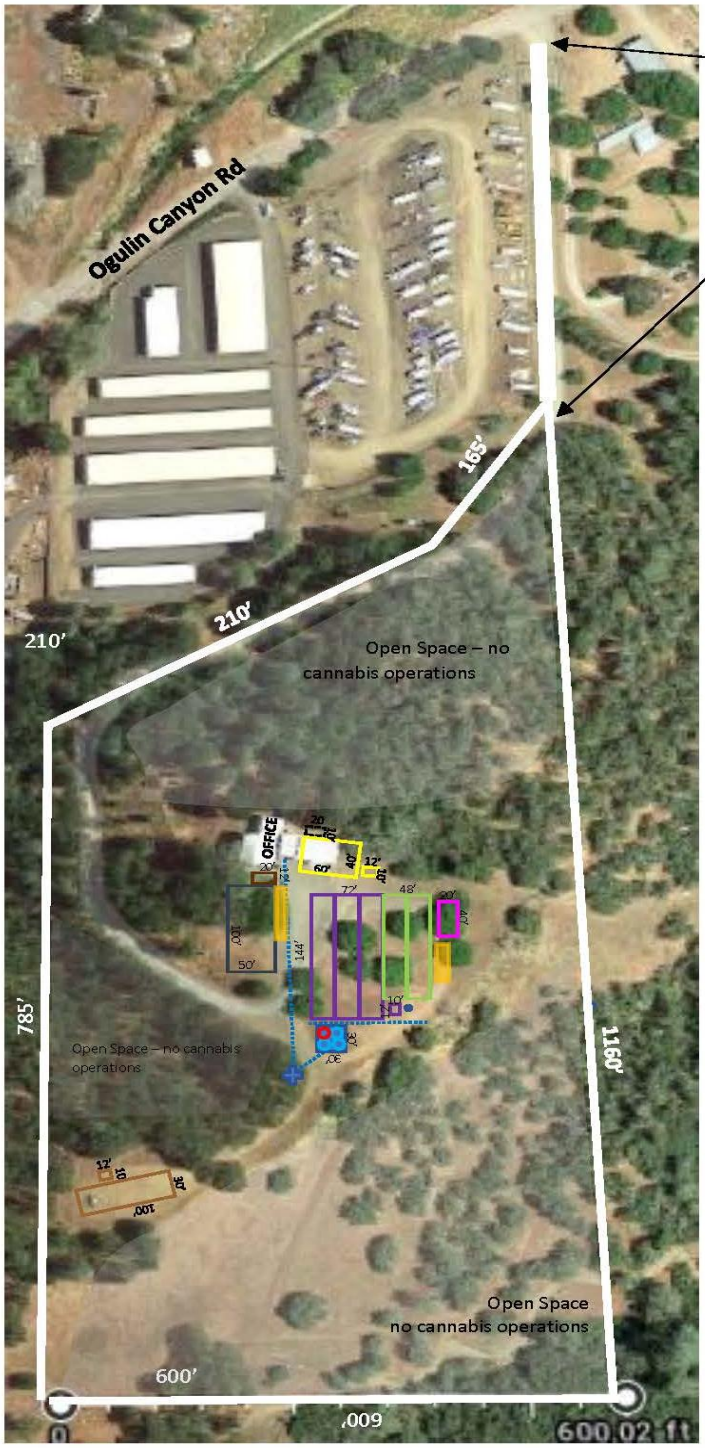
Figure 3: Site Plan Diagram Full Detail with Delivery Only Retail

Clearlake Harvest Company, LLC
2250 Ogulin Canyon
Clearlake, CA 95422

Zoning: Industrial/Cannabis Overlay
County: Lake
Assessors Parcel No. 010-044-19

PROPERTY DIAGRAM

Scale: 1" = 200'



Gated Entrance/Exit to the Property and Premises

Property and Premises Boundary

KEY

- 40'x60' Nursery
- 10'x12 Pesticide/Ag-Chem Storage for Nursery
- 50'x100' Processing Building
- 12'x24' Delivery-Only Retail
- Small Mixed Light Tier 2 Cultivation Three 24'x144' greenhouses totaling 10,368 sf of space for 10k canopy.
- 10'x12 Shared Pesticide/Ag-Chem Storage for Small ML Tier2
- Specialty Mixed Light Tier 2 Cultivation Two 24'x120' greenhouses totaling 5,760 sf of space for 5k canopy
- Specialty Cottage Mixed Light Cultivation for Equity Partnership
- 10'x12 Pesticide/Ag-Chem Storage for Specialty Cottage
- 20'x40 Accessory Drying Shed
- Designated Parking
- 30'x30x pad and tanks for tanks (38.97754, -122.60635)
- 5,000-gallon Ag Tank
- 5,000-gallon Fire tank
- Water lines
- Existing Well (38.97742, -122.60649)
- ADA Porto-potty
- 10x10 Waste Enclosure

20. Environmental Setting and Surrounding Land Uses and Setting:

Environmental Setting: The project site is approximately +/- 12.95 acres on the East side of Ogulin Canyon Road, approximately 1,500 feet from State Route 53. The property was recently developed with a single-family dwelling. Prior to the single-family dwelling, the project parcel was used for small scale honey processing

The proposed project is 378 feet way from the closest waterway - an ephemeral stream in the southeast corner of the property. There is no risk of runoff from operations as the greenhouses will be self-contained. Additionally, the area around the greenhouses will have waddles and any other necessary erosion and wastewater controls. There are no waterway crossing to access the cultivation site. Applicant has filed for a Standard Agreement with Fish and Wildlife and is enrolled in the State Water Board for Cannabis Cultivation.

Surrounding Land Uses:

- The parcels to the **North** have a land use designation of "Industrial" and are either developed commercial uses or are undeveloped.
- The parcels to the **South** are located with the County of Lake jurisdiction.
- The parcels to the **West** have a land use designation of "Industrial" and are developed with commercial/industrial or residential uses.
- There is one parcel to the **East** that has a land use designation of "Industrial". The remaining parcels are located within the County of Lake jurisdiction.

20. Other Public Agencies Whose Approval is Required: **Local Agencies**: City of Clearlake - Community Development (Planning, Building, Public Works); City of Clearlake Police Department, Lake County Fire Protection, Lake County Department of Environmental Health, Lake County Air Quality Management District, Lake County Special Districts, Local Tribal Organizations.

21. **Federal and State Agencies:** Central Valley Regional Water Quality Control Board, CA Department of Fish and Wildlife, Cal-cannabis, Department of Public Health, California Department of Transportation (Caltrans); California Department of Food and Agriculture (CDFA); California Department of Pesticides Regulations, California Bureau of Cannabis Control, CA Dept. of Forestry (Calfire), CA Department of Air Quality, and California Department of Consumer Affairs.

22. **Native American Consultation:**

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) section 21080.3.1?

☒ **Yes** ☐ No

If yes, ensure that consultation and heritage resource confidentiality follow PRC sections 21080.3.1 and 21080.3.2 and California Government Code 65352.4

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Response: Notification of the project was sent to local tribes on ***May 27, 2021,*** for "AB 52" Notification, which allows interested Tribes *[Koi Nation, Middletown Rancheria, Koi Nation of Northern CA; Native American Heritage Commission and Hinthel Env. Resource Consortium (HERC)]* to request tribal consultation within 30 days of receipt of notice. The Community Development Department did not receive an AB 52 Tribal Consultation for this project, nor did we receive controversial comments.

23. **Impact Categories defined by CEQA:** The following documents are referenced information sources and are incorporated by reference into this document and are available for review upon request of the Community Development Department if they have not already been incorporated by reference into this report:

- City of Clearlake General Plan
- City of Clearlake Zoning Code/Municipal Code(s)
- City of Clearlake Housing Element
- City of Clearlake Police Department
- Conditional Use Permit Application Packet and Supplemental Materials
- Hydrology Analysis Prepared By: CHICO Environmental dated August 4th, 2021
- Water Availability Report dated July 2021
- Existing & Proposed Site Plans/Architectural Plans
- California Department of Transportation: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm
- U.S.D.A. Lake County Soil Survey
- Important Farmland Map https://maps.conservation.ca.gov/agriculture/
- Lake County Serpentine Soil Mapping

- California Natural Diversity Database (https://www.wildlife.ca.gov/Data/CNDDB)
- U.S. Fish and Wildlife Service National Wetlands Inventory
- U.S.G.S. Geologic Map and Structure Sections of the Clear Lake Volcanic, Northern California, Miscellaneous Investigation Series, 1995
- Official Alquist-Priolo Earthquake Fault Zone maps for Lake County
- Landslide Hazards in the Eastern Clear Lake Area, Lake County, California, Landslide Hazard Identification Map No. 16, California Department of Conservation, Division of Mines and Geology, DMG Open –File Report 89-27, 1990
- Lake County Watershed Protection District Lake County Groundwater Management Plan - March 31, 2006
- Lake County Health Services Department
- Lake County Assessor/Recorders Office
- Lake County Special District Department
- Lake County Water Resource Department
- Clearlake Waste Solutions
- Clearlake Oaks County Water and Sanitation District
- Local Water District (i.e Golden State Water; Highland Water; Konocti Water)
- Lake County Air Quality Management District (LAQMD)
- Hazardous Waste and Substances Sites List: www.envirostor.dtsc.ca.gov/public
- California Department of Forestry and Fire Protection - Fire Hazard Mapping
- Lake County Fire Protection District
- National Pollution Discharge Elimination System (NPDES)
- Central Valley Regional Water Quality Control Board
- State Water Resources Control Board
- FEMA Flood Hazard Maps
- 2010 Lake County Regional Transportation Plan, Dow & Associates, October 2010
- Cal Recycle Solid Waste Information System http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx
- Cal Cannabis (via Dept. of Food and Agriculture)
- California Water Resources Control Board California Department of Fish & Wildlife (CDFW
- California Department of Pesticides Regulations
- California Department of Public Health
- California Bureau of Cannabis Control.
- California Department of Consumer Affairs
- Written comments received from public agencies.
- PG&E
- Site visit
- CalEMod Air Quality Data

Figure 4 – Regional Map

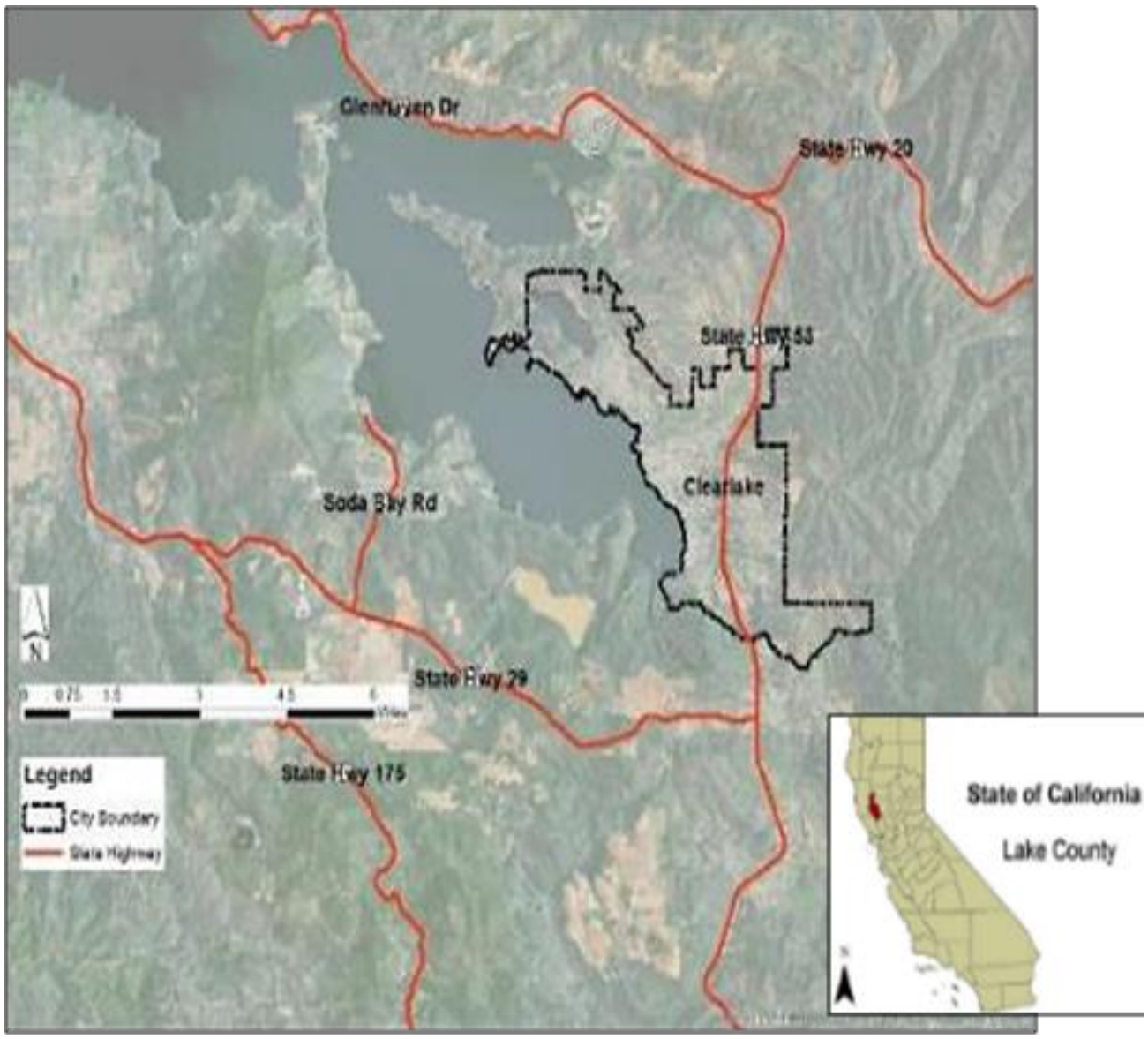


Figure 5. Land Use Zoning Overlay Districts

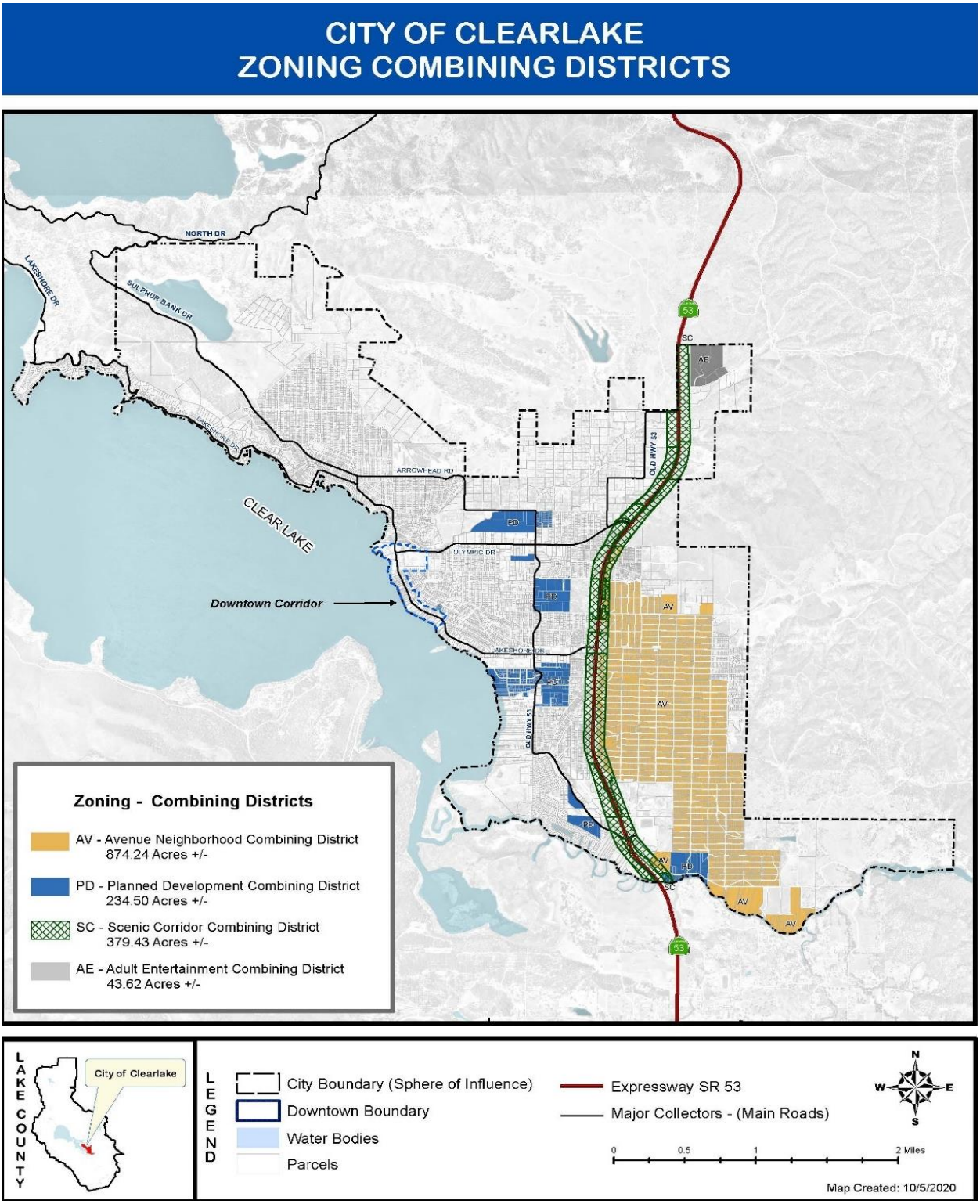


Figure 6 - Site Photos

Existing Residential Structure – to be proposed to be converted to an indoor nursery

Proposed Greenhouse Area

Proposed Greenhouse Area within Study Area #2

Study Area # 4

24. Initial Study Attachment

- Attachment A – Application Packet/Operational Plan
- Attachment B – Biological Assessment/Report
- Attachment C – Hydrology Analysis, prepared by Chico Environmental Science and Planning dated August 4, 2021
- Attachment D – Agency Comments
- Attachment E - Mitigation Monitoring Reporting Program (MMRP)
- Attachment F - Air Quality Analysis

Environmental Factors Effected: The environmental sections checked below would be potentially affected by this project in an adverse manner, including at least one environmental issue/significance criteria that is "potentially significant impacts" as indicated by the analysis in the following evaluation of environmental impacts.

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

DETERMINATION: (To be completed by the lead Agency)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ **I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.**

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared By: Mark Roberts **Title: Senior Planner**

Signature: _____ **Date: _____**

Alan Flora – City Manager
City of Clearlake, California

SECTION 1 - EVALUATION OF ENVIRONMENTAL IMPACTS:

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

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

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

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

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

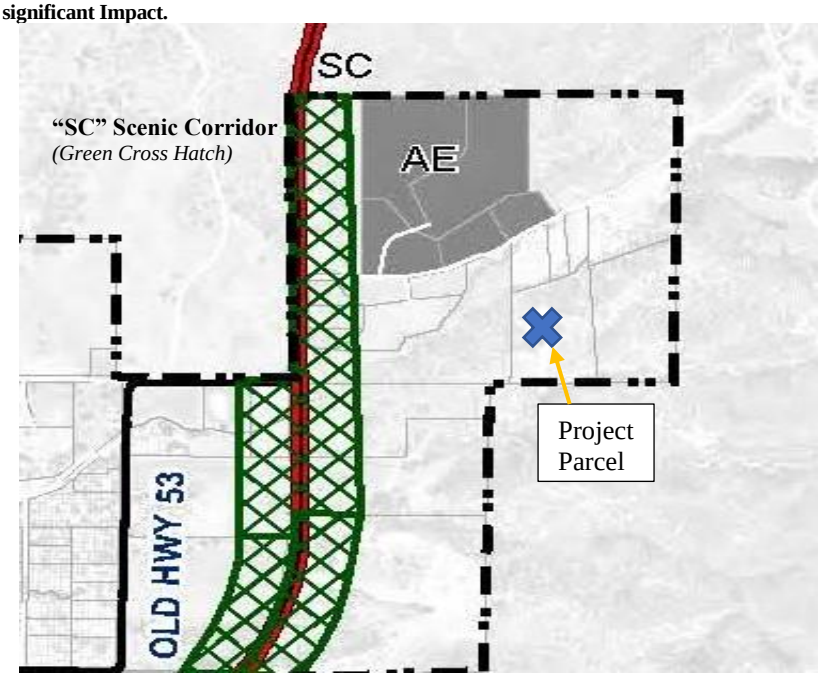
7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

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

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

IMPACT CATEGORIES KEY:

- **1 = Less Than Significant with Mitigation Incorporation**
- **2 = Less Than Significant Impact**
- **3 = No Impact**
- **4 = Potentially Significant Impact**
- **5 = Analyzed in Prior EIR**
- **6 = Substantially Mitigated by Uniformly Applicable Development Policies/Standards**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION I. AESTHETICS *Except as provided in Public Resources Code Section 21099, would the project:*							
a) Have a substantial adverse effect on a scenic vista that is visible from a city scenic corridor?	☐	☒	☐	☐	☐	☐	The project site is in the outskirts of the City of Clearlake (City), in Lake County (County), CA and is *not* located within a known scenic vista/corridor. The nearest scenic vista/corridor is along Highway 53, which is greater than 1,500 feet away from the project site (Refer to "SC" Map below". All development would occur greater than 50 feet from the front property line (along Ogulin Canyon Road). Additionally, the commercial cannabis operation will occur within enclosed structures. Lighting impacts are addresses in d below. **Therefore, then project will not have a substantial adverse effect on a scenic vista that is visible from a city scenic corridor. Less than significant Impact.** 
b) Substantially damage scenic resources that is visible from a City Corridor, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐	☐	☐	The project is not located within a known scenic vista/corridor and will not substantially damage scenic resources that is visible from a City Corridor, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. All development will occur greater than 50 feet from the property line (along Olguin Canyon Road) will not require the removal of trees and/or rock outcroppings or historic structures. Vegetative ground cover and/or grasses will be removed for development. **Less than significant Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☒	☐	☐	☐	☐	The project will not conflict with applicable any General Plan policies or zoning regulations governing scenic quality. The project is not located within a scenic vista/corridor. Additionally, a cannabis operation is an allowable use upon securing a conditional use permit pursuant to the City of Clearlake Municipal Code. **Less than significant impact.**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	~~☐~~	~~☒~~ ~~☐~~	☐	☐	☐	☐	The commercial cannabis operation will occur within enclosed structures with minimal lighting used during evening/nighttime hours. The Security Plan shows the use and general locations of security lighting, but there are no details of the lighting design shown in the plans. In accordance with Mitigation Measure AES-1, a detailed lighting plan will need to be submitted for review and approval by City staff. The lighting plan will need to demonstrate that the project will not result in an adverse light glare impact. All lighting will be directed downwards and shielded and shall adhere to the City's lighting design standards. s. **Therefore, with the following incorporated Mitigation Measure all potential impacts have been reduced to less than significant levels.** **Mitigation Measure:** **AES-1 All outdoor lighting shall be directed downwards and shielded onto the project site and not onto adjacent properties. All lighting shall comply and adhere to all federal, state and local agency requirements, including all requirements in darksky.org. (Refer to the City's Design and Construction Standards).**
SECTION 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 Dept. 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 the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board.* *Would the project:*							
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐	☐	☐	The project parcel is categorized as *"Grazing Land".* Grazing lands is a collective term used by the USDA-Natural Resources Conservation Service (NRCS) for rangeland, pastureland, grazed forestland, native and naturalized pasture, hay land, and grazed cropland. Although grazing is generally a predominant use on grazing lands, the term is also applied independently of any actual use for grazing. Grazing land is also described as land used primarily for production of forage plants maintained or manipulated primarily through grazing management. However, the commercial cannabis operation is an allowable use upon securing a Conditional Use Permit Use Permit pursuant to the City of Clearlake Municipal Code. **Therefore, the commercial cannabis operation will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring. No Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐	☐	☐	The project parcels have a land use zoning designation of "I" Industrial, and "CB" Cannabis Commercial Zoning. A commercial cannabis operation will not conflict with the existing zoning destinations for agricultural use(s) and/or a Williamson Act Contract. Additionally, a commercial cannabis operation is an allowable use within the above Zoning Designations upon securing a Conditional Use Permit Pursuant to the City of Clearlake's Municipal Code(s). **No Impact.**
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))?	☐	☐	☒	☐	☐	☐	The project will not conflict with existing zoning for, or cause the 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)]. **No Impact**
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐	☐	The operation will not result in the result in the loss of forest land and/or convert forest land to non-forest use. **No Impact**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐	☐	The project will not involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural uses or the conversion of forest land to non-forest uses. a commercial cannabis operation is an allowable use with the I" Industrial, and "CB" Commercial Zoning upon securing a Conditional Use Permit Use Permit Pursuant to the City of Clearlake's Municipal Code(s). **No Impact**
SECTION III. AIR QUALITY *Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.* *Would the project:*							
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐	☐	☐	The project is located in the Lake County Air Basin (LCAB). The State and federal Clean Air Acts mandate the reduction and control of certain air pollutants. Under these Acts, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for certain "criteria pollutants." As part of the project comment process, the City circulated this project proposal to the Lake County Air Quality Control District (LCAQCD), to no comments have been received to the date of this report preparation. As shown in Table 1, the LCAB is in attainment status for each criteria pollutant, meaning that the LCAB is in compliance with the established ambient air quality standards for the criteria pollutants. Lake County Air Basin is one of only nine regions in California to have never exceeded the maximum ozone standard, and the only air basin to meet the standard for visibility reducing particles. Clearlake, located in LCAB, is currently in attainment of all State and Federal Ambient Air Quality Standards. The project will not result in air quality impacts that exceed the Bay Area Air Quality Management District (BAAQMD. In 2008, the California Air Resource Board released a summary of the estimated annual average emissions rates in the Lake County Air Basin, including stationary, area wide, and mobile source emissions. The main stationary source of total organic gas (TOG) emissions is electric fuel combustion. Carbon Monoxide (CO) is mostly coming from mobile emissions sources. Motorized boats and light duty passenger vehicles and trucks make up two-thirds of the mobile source CO emissions, and one half of the total CO emissions in the Air Basin. Finally, unpaved roads were the largest source of particulate matter (PM) in the County. According to the report, the main stationary source of total organic gas (TOG) emissions is electric fuel combustion. The main mobile source was recreational boats, and the main area-wide source was solvent evaporation from consumer products. More than half of area wide PM emissions come from travel on unpaved roads within the City (General Plan Background report, 2013). Table 1 presents Federal and State Air Quality Attainment Status, 2011 Pollutant State Standard Federal Standards for criteria air quality pollutants.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.

Table 1. Clearlake Federal and State Air Quality Attainment Status, 2011

Pollutant	State Standard	Federal Standard
PM 2.5	Attainment	Unclassified/ Attainment
Carbon Monoxide	Attainment	Unclassified/ Attainment
Nitrogen Monoxide	Attainment	Unclassified/ Attainment
Sulfur Dioxide	Attainment	Unclassified/ Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/ Attainment
Hydrogen Sulfide	Attainment	
Visibility Reducing Particles	Attainment	

Local air districts and CARB monitor ambient air quality to assure that air quality standards are met, and if they are not met, to develop strategies to meet the standards. LAAQMD regulates air quality in the LCAB and is responsible for attainment planning related to criteria air pollutants. While the LCAQMD does not have an air quality management plan, the LCAQMD refers to the Bay Area Air Quality Management District (BAAQMD) guidelines to evaluate thresholds of significance for general guidance It is noted, however, that the District has not formally adopted these as the area's threshold of significance, and leaves the determination of level of significance to each local agency for determination.

Table 2. BAAQMD Recommended Thresholds of Significance

Pollutant	Construction Phase lb./ day	Operation Phase lbs./ day	Operation Phase tons/yr.
Rog	54	54	10
NOx	54	54	10
PM-10 (Exhaust	82	82	15
PM-2.5 (Exhaust	54	54	10
GHG	None	None	1,100 MTCO2 (e) or 4.6 MTCO 2 (e)/ SP/ Yr.

Air quality impacts from new projects consider both construction-related and operation-related activities. Construction-related activities could result in the generation of dust, Toxic Air Contaminants (TAC) and other emissions from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Project construction will also be required to comply with all applicable LCAQMD rules and regulations. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time can result in greater health risks.

The analysis of air quality impacts conforms to the methodologies recommended in the BAAQMD Guidelines; therefore, construction and operational emissions generated by the proposed project are analyzed separately. Project air pollutant emissions were quantified using the California Emissions Estimator Model (CalEEMod, Version 2020.40) and results are provided in Attachment G. Construction emissions would be less than significant on a daily basis, but shows some annual increases which are not significant. (see Table 3 below)

Table 3. Maximum Unmitigated Project Construction-Related Emissions (lbs./day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	46.56	54	**NO**
NO_X	14.36	54	**NO**
PM_{10}	6.02	82	**NO**
$PM_{2.5}$	3.17	54	**NO**
Source: CalEEMod Version 2020.40 (see Attachment G). Emission results in the model are in tons and then converted to pounds for the purpose of this table.			

Also as shown on Table 4, once operational, the project would not exceed air quality thresholds of significance annually during operation.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.

Table 4. Maximum Operational-Related Emissions (lbs./day)

Pollutant	Proposed Project Emissions	Threshold of Significance	Exceeds Threshold?
ROG	0.0942	54	**NO**
NO_X	0.0646	54	**NO**
PM_{10}	0.0364	82	**NO**
$PM_{2.5}$	0.136	54	**NO**
Source: CalEEMod Version 2020.40 refer to Attachment G).			

On the basis of the air modeling conducted, the project will not exceed the Bay Area Air Quality Management District (BAAQMD) air quality impact thresholds the criteria pollutants. Although the City has not adopted specific air quality impact thresholds of significance, using the BAAQMD criteria and threshold, the project will not result in a significant adverse air quality impact. **Therefore, with the following incorporated Mitigation Measure all potential impacts have been reduced to less than significant levels.**

Mitigation measures:

AIR 1: Construction activities shall be conducted with adequate dust suppression methods, including watering during grading and construction activities to limit the generation of fugitive dust or other methods approved by the Lake County Air Quality Management District. Prior to initiating soil removing activities for construction purposes, the applicant shall pre-wet affected areas with at least 0.5 gallons of water per square yard of ground area to control dust.

AIR 2: Driveways, access roads and parking areas shall be surfaced in a manner so as to minimize dust. The applicant shall obtain all necessary encroachment permits for any work within the right-of-way. All improvement shall adhere to all applicable federal, State and local agency requirements.

AIR 3: Any disposal of vegetation removed as a result of lot clearing shall be lawfully disposed of, preferably by chipping and composting, or as authorized by the Lake County Air Quality Management District and the Lake County Fire Protection District.

AIR-4. During construction activities, the applicant shall remove daily accumulation of mud and dirt from any roads adjacent to the site.

AIR-5. Grading permits shall be secured for any applicable activity from the Community Development Department, Building Division. Applicable activities shall adhere to all grading permit conditions, including Best Management Practices. All areas disturbed by grading shall be either surfaced in manner to minimize dust, landscaped or hydro seeded. All BMPs shall be routinely inspected and maintained for lifer of the project.

AIR-6 All refuse generated by the facility shall be stored in approved disposal/storage containers, and appropriately covered. Removal of waste shall be on a weekly basis so as to avoid excess waste. All trash receptacles/containers shall remain covered at all times to prevent fugitive odors and rodent infestation. An odor control plan shall be submitted for review and approval by the City In accordance with the Zoning Code. Odor control shall be maintained to an acceptable level at all times.

AIR-7 An odor control plan shall be submitted for review and approval by the City that complies with the City's Zoning Code. Odor control shall be maintained at all times so that odor from cannabis operations on the site will not be detected outside structures. This plan shall include enhanced carbon filtering to ensure compliance with the Code.

AIR-8 Any demolition or renovation is subject to the Federal National Emissions Standard for Hazardous Air Pollutants (NESHAP) for asbestos in buildings requires asbestos inspections by a Certified Asbestos Consultant for all major renovations and all demolition. An Asbestos Notification Form with the Asbestos inspection report must be submitted to the district at least 14 days prior to beginning any demolition work. The applicant must contact the district for more details and proper approvals. Regardless of asbestos content or reporting requirements all demolition and renovation activities should use adequate water/ amended water to prevent dust generation and nuisance conditions.

AIR-9 Construction activities that involve pavement, masonry, sand, gravel, grading, and other activities that could produce airborne particulate should be conducted with adequate dust controls to minimize airborne emissions. A dust mitigation plan may be required should the applicant fail to maintain adequate dust controls.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							AIR-10. All engines must notify LCAQMD prior to beginning construction activities and prior to engine Use. Mobile diesel equipment used for construction and/or maintenance must be in compliance with State registration requirements. All equipment units must meet Federal, State and local requirements. All equipment units must meet RICE NESHAP/ NSPS requirements including proper maintenance to minimize airborne emissions and proper record-keeping of all activities, all units must meet the State Air Toxic Control Measures for CI engines and must meet local regulations. **AIR-11. Site development, vegetation disposal, and site operation shall not create nuisance odors or dust. During the site preparation phase, the district recommends that any removed vegetation be chipped and spread for ground cover and erosion control. Burning of debris/construction material is not allowed on commercial property, materials generated from the commercial operation, and waste material from construction debris, must not be burned as a means of disposal.** **AIR-12. Significant dust may be generated from increase vehicle traffic if driveways and parking areas are not adequately surfaced. Surfacing standards should be included as a requirement in the use permit to minimize dust impacts to the public, visitors, and road traffic. At a minimum, the district recommends chip seal as a temporary measure for primary access roads and parking. Paving with asphaltic concrete is preferred and should be required for long term occupancy. All areas subject to semi-truck / trailer traffic should require asphaltic concrete paving or equivalent to prevent fugitive dust generation. Gravel surfacing may be adequate for low use driveways and overflow parking areas; however, gravel surfaces require more maintenance to achieve dust control, and permit conditions should require regular palliative treatment if gravel is utilized. White rock is not suitable for surfacing (and should be prohibited in the permit) because of its tendency to break down and create excessive dust. Grading and re-graveling roads should utilizing water trucks if necessary, reduce travel times through efficient time management and consolidating solid waste removal/supply deliveries, and speed limits.**
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?	☒	☐	☐	☐	☐	☐	**See Response to Section III(a). Therefore, all potential impacts have been reduced to less than Significant Impacts with the incorporated Mitigation Measures AIR-1 through AIR-12.**
c) Result/ expose sensitive receptors and/or substantial number of people to emissions that create objectionable odors.	☒	☐	☐	☐	☐	☐	Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. Operation of the proposed project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the project; nor would the project attract additional mobile sources that spend long periods queuing and idling at the site. Onsite project emissions would not result in significant concentrations of pollutants at nearby sensitive receptors. Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The proposed project is not located within an area designated by the State of California as likely to contain naturally-occurring asbestos (Department of Conservation [DOC] 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos. A carbon monoxide (CO) "hot spot" would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight hour standard of 9 ppm were to occur. Based on the project's anticipated generation of 107 daily trips on average, localized air quality impacts related to mobile source emissions would not be a concern as there is there is no likelihood of the project traffic exceeding CO significant threshold values. **See Response to Section III(a). Therefore, all potential impacts have been reduced to less than Significant Impacts with the incorporated Mitigation Measures AIR-1 through AIR-12.**
SECTION IV. BIOLOGICAL RESOURCES *Would the project:*							
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a	☒	☐	☐	☐	☐	☐	A Biological Assessment prepared by Jacobszoon & Associates, INC, dated May 6, 2021 (Attachment D – Biological Assessment/Report), for the purpose of obtaining a City of Clearlake Commercial Cannabis Conditional Use Permit. The project site is located approximately 3 miles Northeast of Clearlake within Section 14, Township 13N, Range 7W, Mount Diablo Base and Meridian, in the Lower Lake USGS 7.5-minute quadrangle at 2250 Ogulin Canyon Rd Clearlake,

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?							CA, 95422, APN: 010-044-190 (Appendix D: Map 1: Vicinity; Map 2: Parcel Map). A site visit was conducted on April 19, 2021, for proposed areas for development in relation to cannabis. The purpose of this study was to identify and map areas within the parcel that are potential sensitive natural communities and to locate special-status plants and special-status animal habitats to determine if they would be directly or potentially impacted by the existing project or any proposed expansions. The Study Area referred to within this report comprises a combined area of approximately 12.97 acres and includes a residential structure, two graded areas, an area containing ornamental mulberry trees proposed for removal for greenhouse development, and a Class III watercourse. (Appendix C: Photographs: Photos: 1-5; Appendix D: Map 3: Study Area). The Study Area is divided into five (5) study areas based generally on geographic arrangement, biological communities present and/or land use (see Appendix D: Map 3, Study Area): • Study Area 1 consists of the residential structure that is intended for use as an office with a nursery located within the garage. • Study Area 2 consists of a proposed cultivation location where the island of mulberry trees centered in the driveway. A 10,000 square foot greenhouse is proposed for development. • Study Area 3 consists of a graded area adjacent to the proposed 10,000 square foot greenhouse that will contain a small processing building. • Study Area 4 consists of a 75,000 square foot area proposed to house either 25,000 or 30,000 square feet of greenhouse for cultivation. • Study Area 5 consists of a Class III watercourse spanning the southeast corner of the parcel. The report includes the following: • Regulations and Project Description (Section 2) • Field Survey Methodology (Section 3) • Study Area Setting (Section 4) • Field Survey Results (Section 5) • Assessment Summary and Recommendations (Section 6) • Tables of Special-Status Plants and Wildlife within CNDDB nine quads (Appendix A) • List of Species Observed (Appendix B) • Representative Photographs of Study Area (Appendix C) • Supporting Maps (Appendix D) • Supporting Documents (Appendix E) *Field Survey Summary:* The biological resource assessment is designed to identify sensitive communities within the Study Area and determine the existence or potential occurrence for special-status species. The assessment is also designed to address the potential for cumulative impacts to biological resources that may occur as a result of the project and to make recommendations to reduce or mitigate potential impacts. The biological resource assessment includes the analysis and comparison of existing habitat conditions within the Study Area and the documented range and habitat requirements of sensitive plant and wildlife species described in CDFW's California Wildlife Habitat Relationships System (CWHR). According to the report, Jacobszoon & Associates Inc. environmental technician Becca Cosmero conducted a biological resource assessment of the Study Area on April 19, 2021, consisting of approximately three (3). Special Status Animals: No special status animal species were observed within the Study Area during the biological site assessment. *Amphibians* No special-status amphibian species were observed within the Study Area during the biological site assessment. *Reptiles:* Future development within the Study Area does not have the potential to impact special-status reptile species. No special-status reptiles were observed during the biological site assessment. *Avifauna* The existing cultivation areas and watercourses do not have the potential to impact any special-status avifauna species Watercourse:

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							There is one unnamed Class III watercourse spanning the southeastern corner of the parcel that was dry upon observation during the biological site assessment. This watercourse has historically been dry for approximately a decade. *Wetland Determination:* According to the biological assessment no potential wetland features were identified during the site inspection. *Wildlife Corridors:* No significant impacts to migratory corridors for amphibian, aquatic, avian, mammalian, or reptilian species is expected as a result of the proposed cannabis development. *Critical Habitat:* The Study Area does not contain and is not adjacent to critical habitat for any Federal or State-listed species The California Department of Fish & Wildlife filing fee shall be submitted as required by California Environmental Quality Act (CEQA) statute, Section 21089(b) and Fish and Game Code Section 711.4. The fee should be paid within five (5) days of approval of the mitigated negative declaration at the Lake County Clerk's Office. Once fees have been paid, the applicant shall submit a copy of all documentation to the City of Clearlake, verifying the fees have been paid. Said permit shall not become valid, vested or operative until the fee has been paid. Upon reviewing the Biological Resource Assessment all substantial adverse impacts, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service have been reduced. **Therefore, with the following incorporated Mitigation Measure all potential impacts have been reduced to less than significant levels.** **Mitigation Measures:** **BIO -1. Prior to construction activities, the applicant shall have a qualified biologist conduct a nesting bird survey within fourteen (14) days of initial ground disturbance or construction if it occurs between March 1st and August 31st.** **BIO-2: Prior to construction activities, the applicant shall have a qualified biologist conduct visual encounter/inspection for the Long Eared Myotis bat. If one is observed, the California Department of Fish and Wildlife shall be notified.** **BIO-3: All future expansion and/or development associated with the operation shall be located outside threw NFHL 100-year Flood Zone, including the State Water Resource Control Board required setbacks.** **BIO-4: Prior to ground disturbance, the applicant shall have a qualified biologist conducts seasonally botanical survey in accordance with the Biological Assessment prepared by Jacobszoon & Associates, INC, dated May 6, 2021.** **BIO-5. If additional activities are proposed that may result in take of a listed species, agency personnel from CDFW and SFWS shall further analyze the potential impacts and provide technical assistance for any listed species. If required, guidelines for these reconnaissance surveys should be followed in accordance to the CDFW Survey and Monitoring Protocols and Guidelines, which can be located here:** https://www.wildlife.ca.gov/conservation/survey-protocols. **BIO-6: If any work occurs within a known watercourse with the potential to impact aquatic resources, the applicant shall be in compliance with the California Departments of Fish and Wildlife Streambed Alteration Agreement.** **BIO-7: If suitable roosting habitat for special-status bats will be affected by project activities, a qualified wildlife biologist shall conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction.** • ***Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). Visual surveys will include trees within 0.25 mile of project activities.***

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☐	☐	According to the Biological Assessment prepared by Jacobszoon & Associates, INC, dated May 6, 2021, the project will not have a substantial adverse effect on any riparian habitat and/or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. **Less than significant impact.**
c) Have a substantial adverse effect on state or federally protected wetlands (including, not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐	☐	☐	According to the Biological Assessment prepared by Jacobszoon & Associates, INC, dated May 6, 2021, the project will not have a substantial adverse effect on state or federally protected wetlands (including, not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. **Less than significant impact.**
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?	☐	☒	☐	☐	☐	☐	According to the Biological Assessment prepared by Jacobszoon & Associates, INC, dated May 6, 2021, 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. **Less than significant impact.**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐	☐	The project will have minimal to no conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. However, the project may require the removal of a small cluster of grasses and/or vegetation/trees. Prior to tree removal, the applicant shall obtain a Tree Removal Permit from the City of Clearlake and if Oak Trees are to be removed, they shall be replaced in accordance with Section 18-40.050 of the City of Clearlake Municipal Code. **Less than Significant Impact.**
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?	☐	☒	☐	☐	☐	☐	The project will not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. However, the project may require the removal of Oak Trees. **Less Than Significant Impact**
SECTION V. CULTURAL RESOURCES *Would the project:*							
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☒	☐	☐	☐	☐	☐	An evaluation of the potential for historical, cultural, tribal, or paleontological resources on the project site and in the vicinity of the project a cultural resource investigation was conducted by John W. Parker, Ph.D. of Archaeological Research dated April 23, 2021. This investigation included records searches, consultation with Native American tribes, and a site reconnaissance. According to the investigation, while several project improvements are planned for the project site, based on archival research and fieldwork, it did not indicate the existence of any cultural resources in the proposed project area.. However, the possibility still exists that historic, cultural, paleontology, or tribal resources, could be discovered during project construction, resulting in a significant impact related to causing a substantial adverse change in the significance of a historical resource. According to the report, it is unlikely that undiscovered cultural sites will be encountered during project development. However, it is recommended that work in the immediate vicinity of a find be suspended, and a Registered Professional Archaeologist called to evaluate the find according to California Environmental Quality Act (CEQA) Guidelines. **Therefore, with the following incorporated Mitigation Measure all potential impacts have been reduced to less than significant levels.** **<u>Mitigation Measures:</u>** **CUL-1 During construction activities, if any subsurface archaeological remains are uncovered, all work shall be halted within 100 feet of the find and the applicant shall retain a qualified cultural resources consultant from the City's approved list of consultants to identify and investigate any subsurface historic remains and define their physical extent and the nature of any built features or artifact-bearing deposits. Significant historic cultural**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							materials may include finds from the late 19th and early 20th centuries including structural remains, trash pits, isolated artifacts, etc. **CUL-2 The cultural resource consultant's investigation shall proceed into formal evaluation to determine their eligibility for the California Register of Historical Resources. This shall include, at a minimum, additional exposure of the feature(s), photo-documentation and recordation, and analysis of the artifact assemblage(s). If the evaluation determines that the features and artifacts do not have sufficient data potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists – e.g., there is an intact feature with a large and varied artifact assemblage – it will be necessary to mitigate any Project impacts. Mitigation of impacts might include avoidance of further disturbance to the resources through Project redesign. If avoidance is determined to be infeasible, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during Project excavation or testing, curation may be an appropriate mitigation. This language of this mitigation measure shall be included on any future grading plans and utility plans approved by the City for the Project.** **CUL-3 If human remains are encountered, no further disturbance shall occur within 100 feet of the vicinity of the find(s) until the Lake County Coroner has made the necessary findings as to origin (California Health and Safety Code Section 7050.5). Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Lake County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then identify the "most likely descendant(s)", which parties agree will likely be the Koi Nation based upon the Tribe's ancestral ties to the area and previous designation as MLD on projects in the geographic vicinity. The landowner shall engage in consultations with the most likely descendant (MLD). The MLD will make recommendations concerning the treatment of the remains within 48 hours as provided in Public Resources Code 5097.98.**
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	☒	☐	☐	☐	☐	☐	There are no known or mapped significant archaeological resources on this site. **However, to ensure the protection of Cultural Resources, all potential impacts to Cultural resources have been reduced to less than significant with the incorporated mitigation measure CUL-1 through CUL-3 in Section V(a).**
c) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐	☐	☐	If human remains are to be discovered, all work shall halt immediately and the applicant and/or their designee shall contact the City of Clearlake Police Department, the Lake County Sheriff's Office, the overseeing tribal organizations and the City of Clearlake – community Development Department. **However, to ensure the protection of Cultural Resources, all potential impacts to Cultural resources have been reduced to less than significant with the incorporated mitigation measure CUL-1 through CUL-3 in Section V(a).**
SECTION VI. ENERGY *Would the project:*							
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☒	☐	☐	☐	☐	The proposed energy usage for this operation is minimal; energy use may include but is not limited to the security system; well pump(s); septic pumps (if necessary); lighting for structures, lighting fixtures and/or power as needed. The proposed use would not result in potentially significant environmental impacts due to wasteful, inefficient or unnecessary consumption of energy resources during project development or operations. An "Energy Usage Plan" is included in the Business Operation Plan which indicates that the project will use a mixture of full sun/outdoor cultivation, mixed light, and indoor cultivation. The property will likely be provided by solar power energy source; however, PG&E is likely proposed depending on feasibility. Use of electricity provided by PG&E for indoor cannabis cultivation may require a commercial/agricultural account. When indoor cultivation operations are initiated, this Energy Use subplan should be updated, and energy calculations performed. Approximately (16) 1,000-watt fixtures will be installed across the two greenhouses (approximately under 25 watts per square foot). For the outdoor cultivation operation, a small solar-powered electrical system may be installed to power low voltage items such as security cameras, and water pumps for drawing groundwater and mixing liquid fertilizers into the irrigation systems. All energy usage will adhere to all Federal, State and local agency requirements regarding energy use. Additionally, the applicant will obtain and maintained all necessary permits. **Less than Significant Impact**
b) Conflict with or obstruct a state or local plan for	☐	☐	☒	☐	☐	☐	The proposed commercial cultivation operations would not conflict with or obstruct an energy plan. The proposed use would adhere to all Federal, State and local agency requirements. **No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
renewable energy or energy efficiency?							
SECTION VII. GEOLOGY AND SOILS *Would the project:*							
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	☐	☒	☐	☐	☐	☐	The project will not directly and/or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the following: i) Earthquake Faults • There are no mapped earthquake faults on or adjacent to the subject site. ii-iii) Seismic Ground Shaking and Seismic–Related Ground Failure, including liquefaction. • The mapping of the site's soil indicates that the soil is stable and not prone to liquefaction. iv) Landslides • According to the Landslide Hazard Identification Map prepared by the California Department of Conservation, Division of Mines and Geology, the project parcel soil is considered "generally stable" and not located within and/or adjacent to an existing known "landslide area". Project design shall incorporate Best Management Practices (BMPs) to the maximum extent practicable to prevent or reduce discharge of all construction or post construction pollutants into the County storm drainage system. BMPs include scheduling of activities, erosion and sediment control, operation and maintenance procedures and other measures in accordance City of Clearlake Municipal Code(s). **Less Than Significant Impact**
b) Result in substantial soil erosion or the loss of topsoil?	☒	☐	☐	☐	☐	☐	The project is not anticipated to result in substantial soil erosion or the loss of topsoil. However, it may be necessary to grade approximately +/- 3,000 cubic yards of soil for project development. All disturbance will occur onsite, and no soil will be exported and/or imported. The applicant shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State and local agency requirements. The project shall adhere to all Federal, State, and local agencies requirements. • *Phipps Complex, 30-50% slopes (soil unit 197): This map unit is on uplifted, dissected hills. These soils are susceptible to slumping and gullying. This soils classification is very deep, well drained and has a slow permeability. The average water capacity is 6.0 to 12 inches, with rapid runoff and the hazard for erosion is severe. The shrink well potential is high.* **Therefore, with the following incorporated Mitigation Measure all potential impacts have been reduced to less than significant levels.** **Mitigation Measures:** **GEO-1: Prior to any ground disturbance and/or operation, the applicant shall submit Erosion Control and Sediment Plans to the Community Development Department for review and approval. The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system.** • ***Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. The natural background level is the level of erosion that currently occurs from the area in a natural, undisturbed state. Vegetative cover and water bars shall be used as permanent erosion control after project installation.***

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							GEO-2: Prior to any ground disturbance, (if applicable), the applicant shall submit and obtain a Grading Permit from the Community Development in accordance with the City of Clearlake Municipal code(s). **GEO-3: The applicant shall monitor the site during the rainy season including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed. Said measures shall be maintained for life of the project and replace/repaired when necessary.**
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-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐	☐	☐	According to the soil survey of Lake County, prepared by the U.S.D.A., the soil at the site is considered *"generally stable"* and there is little to no potential for landslide, subsidence, debris flows, liquefaction, or collapse. The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. **Less Than Significant Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐	☐	☐	According to the soil survey of Lake County, California prepared by the U.S.D.A, the soils discussed above in Section has a shrink-swell potential of "low to high". Therefore, the commercial cannabis operation will have minimal to no substantial direct or indirect risks to life or property. The applicant will adhere to all Federal, State and local agency requirements, including all requirements in the City of Clearlake's Municipal Code(s). **Less Than Significant Impact**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☒	☐	☐	☐	☐	The project parcel is currently vacant, when development occurs, the cannabis operation shall adhere to all applicable Federal, State and local agency requirements regarding wastewater disposal systems, (i.e., connecting to public/private sewer facilities and/or onsite waste management systems (septic). **Less Than Significant Impact**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐	☐	☐	Disturbance of paleontological resources or unique geologic features is not anticipated. **However, to ensure the protection of cultural resources including unique paleontological resource or site(s) or unique geologic features with the incorporated mitigation measures in Section V (cultural resources) all potential impacts have been reduce to less than significant levels with the incorporated mitigation measures CUL-1 and CUL-5.**
SECTION VIII. GREENHOUSE GAS EMISSIONS *Would the project:*							
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐	☐	☐	Air quality impacts, including Carbon Dioxide emissions from the project, which contribute to global warming, need to be analyzed using the current guidelines or procedures specified by the local air district or the Air Resources Board. Calculations of CO2¬, CH4, and N2O emissions are provided to identify the magnitude of potential project effects. This analysis focuses on CO2¬, CH4, and N2O since these comprise 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that the project would emit in the greatest quantities. Fluorinated gases, such as HFC, PFCs, and SF6 were not used in this analysis, as they are primarily associated with industrial processes and the proposed project involves retail development and does not include an industrial component. Emissions of all GHGs are converted into metric tons of carbon dioxide equivalent (MT of CO2e), which presents the volume of GHGs equivalent to the global warming effect of CO2. While minimal amounts of other GHGs, such as chlorofluorocarbons (CFC), would be emitted, they would not substantially add to the calculated CO2e quantities. Calculations are based on the California Air Pollution Control Officers Association (CAPCOA) CEQA & Climate Change white paper (CAPCOA 2008). The Lake County Air Quality Management District (LCAQMD) does not have an air quality management plan. However, the LCAQMD refers to the Bay Area Air Quality Management District (BAAQMD) guidelines to evaluate thresholds of significance for general guidance (refer excerpts from this document in Attachment F. It is noted, however, that the district has not formally adopted these as the area's threshold of significance and leaves the determination of level of significance to each local agency for determination. Air impact modeling was conducted using CalEEMod.2020.40 Modeling which indicates that the project's construction will result in about 124 metric tons of CO2e during construction (annually) and about 66 metric tons of CO2e annually during operation. These estimates fall below the BAAQMD levels of significance for GHG which is 1,100 metric tons annually. **Less Than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐	☐	☐	This project will not conflict with any adopted plans or policies for the reduction of greenhouse gas emissions. The City of Clearlake is within an 'air attainment' basin. In accordance with the requirements of the Lake County Air Quality Management District, an air permit will be required as a condition of the use permit, prior to issuance of a building permit for the project. **Refer to response in Section VIII(a). Less Than Significant Impact**
SECTION IX. HAZARDS AND HAZARDOUS MATERIALS *Would the project:*							
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☒	☐	☐	☐	☐	☐	Materials associated with the operation, such as gasoline, diesel, carbon monoxide, pesticides, fertilizers and the equipment emissions may be considered hazardous if released into the environment. All hazards and hazardous materials will be stored in accordance to all Federal, State and local agency requirements. All routine construction materials and all materials associated with the proposed cultivation of commercial cannabis shall be transported and disposed of properly in accordance with all applicable Federal, State and local regulations. All hazards and hazardous materials, when not in use, will be stored in their manufacturer's original containers/packaging, undercover, and a minimum of 100 feet from surface water bodies and will be stored in their designated storage area. All required warning signs will be posted, and material safety data sheets (MSDS) will be kept in the area where pesticides are stored. Emergency contact information in the event of pesticide poisoning shall also be posted at the work site including the name, address, and telephone number of emergency medical care facilities. Change areas and decontamination rooms will be available off-site. Prior to any hazards and hazardous materials being applied, the operators will evaluate equipment, weather conditions, and the property to be treated and surrounding areas to determine the likelihood of substantial drift or harm to non-target crops, contamination, or the creation of a health hazard. In an event of a spill or leak, the contaminated soil will be stored, transported, and disposed of consistent with applicable local, state, and federal regulations. **Therefore, with the following incorporated Mitigation Measure all potential impacts have been reduced to less than significant levels.** **<u>Mitigation Measures:</u>** **HAZ-1: All hazardous waste shall not be disposed of on-site without review or permits from Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board. Collected hazardous or toxic waste materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such material.** **HAZ-2: The storage of potentially hazardous materials shall be located at least 100 feet from any existing water well. These materials shall not be allowed to leak into the ground or contaminate surface waters. Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such materials.** **HAZ-3: Any spills of oils, fluids, fuel, concrete, or other hazardous construction material shall be immediately cleaned up. All equipment and materials shall be stored in the staging areas away from all known waterways.** **HAZ- 4: The storage of hazardous materials equals to or greater than fifty-five (55) gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, then a Hazardous Materials Inventory Disclosure Statement/Business Plan shall be submitted and maintained in compliance with requirements of Lake County Environmental Health Division. Industrial waste shall not be disposed of on site without review or permit from Lake County Environmental Health Division or the California Regional Water Quality Control Board. The permit holder shall comply with petroleum fuel storage tank regulations if fuel is to be stored on site.** **HAZ - 5: All equipment shall be maintained and operated in a manner that minimizes any spill or leak of hazardous materials. Hazardous materials and contaminated soil shall be stored, transported, and disposed of consistent with applicable local, state, and federal regulations**.
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous	☒	☐	☐	☐	☐	☐	The project will not 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. All chemicals, pesticides, fertilizer, and other materials associated with the operation shall adhere to all Federal, State, and local agency requirements. **See Response to Section IX(a): Less than Significant Impact with the incorporated mitigation measure HAZ -1 through HAZ-5.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
materials into the environment?							
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐	☐	The proposed project is not located within one-quarter mile of an existing or proposed school. The nearest schools are Pomo Elementary which is approximately 2.37 miles away and Cedar Avenue High School which is approximately 1.57 miles away. **No Impact**
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?	☐	☐	☒	☐	☐	☐	The project site is not listed as a site containing hazardous materials in the databases maintained by the Environmental Protection Agency (EPA), California Department of Toxic Substance, and Control State Resources Water Control Board. **No Impact**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐	☐	☐	The project is not located within two (2) miles of an airport and/or within an Airport Land Use Plan. **No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐	☐	☐	The project would not impair or interfere with an adopted emergency response or evacuation plan. The project has been reviewed by the Lake County Department of Environmental Health, Lake County Special Districts, City of Clearlake Police Department, City of Clearlake's Community Development Department (Building, Public Works, Planning), and the Local Fire Protection District/CalFire for consistency with access and safety standards. The City of Clearlake did not receive any adverse comments. **Less Than Significant Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐	☐	☐	The project will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires as it's within a *"Low to Moderate"* Fire Hazard Severity Zone and within the Lake County Fire Protection District. The project was circulated for review to various agencies, include but not limited to City Engineer, City of Clearlake Police Department, City of Clearlake Building Official/Inspection, Lake County Fire Protection District and the California Department of Transportation (Caltrans). During the project review, no adverse comments were received. The application shall adhere to all current Federal, State and local agency requirements, including all mitigation measures and conditions of approval imposed on such use. **Less Than Significant Impact**
SECTION X. HYDROLOGY AND WATER QUALITY *Would the project:*							
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐	☐	☐	The proposed use will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality as the cultivation will occur within engineered greenhouse. Additionally, according to the Biological Study, the proposed project is +/- 378 feet way from the closest waterway - an ephemeral stream in the southeast corner of the property). There are no waterway crossing to access the cultivation site. The applicant has filed for a Standard Agreement with Fish and Wildlife and is enrolled in the State Water Board for Cannabis Cultivation and has obtained a Notice of Applicability (Water Quality Order WQ-2019-0001-DWQ) with the Central Valley Reginal Water Quality Control Board. Additionally, the to control runoff, the operation will incorporate appropriate Best Management Practices (BMPs) consistent with City code and State Storm Water Drainage Regulations to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State, and local agency requirements. All access roads and parking areas are/will be graveled to prevent the generation of fugitive dust, and vegetative ground cover will be preserved and/or re-established as soon as possible throughout the entire site to filter and infiltrate stormwater runoff from the access roads, parking areas, and the proposed cultivation operation **Less than significant Impact.**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☒	☐	☐	☐	☐	The applicant contracted Chico Environmental to prepare a prepare a Hydrology Report dated August 4, 2021, with Findings to determine groundwater availability to the project parcel. The project parcel is approximately 12.95-acre site is situated in Burns Valley Groundwater Basin, a rural portion of southeastern Lake County, California. The report indicates there is one (1) well approximately 200 feet below ground surface (bgs), with 4 ½ inch casing. The well was installed on December 12, 2005. A well test and system equipment evaluation were conducted on March 31, 2021. The purpose of the report is to determine if the aquifer has sufficient quantity to support outdoor cannabis cultivation for 17,500 square-feet of the 12.95-acre property. The subject property is located in the Coast Range Geomorphic Province of California. The Coast Range is comprised largely of the Franciscan Complex which represents an accretionary complex formed by long-term subduction of an oceanic plate under the western margin of the North American craton. The Franciscan complex is composed of three distinguishable belts: the eastern belt, the central belt, and the coastal belt. Formation of the accretionary complex began during the late Jurassic in the eastern belt and has continued into the Miocene along the western coastal belt. The complex trends NNW and is bounded by the San Andreas Fault to the east and by the coastal range fault to the west. The coast range fault separates the Franciscan complex with the partly coeval Great Valley sequence. The subject property is located in the Coast Range Geomorphic Province of California. The Coast Range is comprised largely of the Franciscan Complex which represents an accretionary complex formed by long-term subduction of an oceanic plate under the western margin of the North American craton. The Franciscan complex is composed of three distinguishable belts: the eastern belt, the central belt, and the coastal belt. Formation of the accretionary complex began during the late Jurassic in the eastern belt and has continued into the Miocene along the western coastal belt. The complex trends NNW and is bounded by the San Andreas Fault to the east and by the coastal range fault to the west. The coast range fault separates the Franciscan complex with the partly coeval Great Valley sequence. The average annual precipitation ranges from 25 inches to 35 inches per year and the average annual air temperature ranges between 55 to 59 °F in the project area. Surface water is limited to ephemeral drainages within the project area. **Groundwater Hydrogeology** Groundwater typically fluctuates between 2-10 feet below ground surface (bgs) from spring to fall. The DWR estimates the usable storage capacity to be 4,000 acre-feet (DWR 1960). Agricultural demand is typically around 14 acre-feet per year. As of 2006, there were 86 domestic wells and 13 irrigation wells in the Burn Valley Basin, with half of the domestic wells measuring less than 75 feet bgs and half of the irrigation wells measuring less than 250 feet bgs. **Groundwater Wells** As of March 2006, there are 86 domestic wells and 13 irrigation wells in the Burns Valley Basin. Approximately half of these domestic wells are shallower than 75 feet deep, and approximately half of the irrigation wells are shallower than 250 feet deep. On December 11, 2005 a domestic well was completed at the subject site. The 200 feet bgs well was drilled with first water encountered at 120 feet bgs and a completed static water level of 125 feet bgs. The estimated yield for the well was 30 gallons per minute. A well performance report from March 2021 shows the static water level of the well is 113.5 feet bgs. After pumping at a rate of 23 gallons per minute for 1.5 hours, the pumping level decreased from 133.5 feet bgs to 143.2 feet bgs. The well returned to 121 feet bgs after 5 minutes of recovery. **Finding Indicate efficient Supply of Water.** According to the report, the 2019 SGMA report rates Burns Valley as a Very Low Priority groundwater basin. Current groundwater data suggests that the Burns Valley Groundwater Basin fully recharges annually. Section 28.1 of the lake County, California – Code of Ordinances - Regulation of the Extraction and Exportation of Groundwater from Lake County. Section 1.11 States: “The County seeks to foster prudent water management practices to avoid significant adverse overdraft-related environmental, social, and economic impacts. It is therefore essential for the protection of the County's important groundwater resources that the County requires a Permit to extract or otherwise capture groundwater for any use outside the County. This chapter requires a Permit for the export and use of groundwater outside the County and is not intended to regulate groundwater in any other way.” Groundwater pumped for irrigation on 2250 Ogulin Canyon will not be used for export out of the County.

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							The ***expected annual water*** use for the cannabis cultivation project would be approximately 511,400 gallons per square foot (gsf) per year with usage including cultivation (455,000 gsf per year), processing (24,000 gsf), and a nursery (32,400 gsf per year). The well yields 30 gallons per minute (15,768,000 gallons per year) and is monitored by a flow through meter (Appendix C). There are no additional impacts on the Burns Valley Basin from the project, nor impacts of water use for this project to the surrounding areas. **Conclusion and Recommendation:** According to the report, the completed well is of sufficient yield to irrigate 17,500 square-feet of cannabis at 2250 Ogulin Canyon. Additionally, it appears that the overlying property possesses a sufficient quantity of groundwater for seasonal irrigation that would not adversely overdraft the Burns Valley Groundwater Basin, affect downgradient groundwater users or other well users in the vicinity. All access roads and parking areas are/will be graveled to prevent the generation of fugitive dust, and vegetative ground cover will be preserved and/or re-established as soon as possible throughout the entire site to filter and infiltrate stormwater runoff from the access roads, parking areas, and the proposed cultivation operation. To control runoff, the operation will incorporate appropriate Best Management Practices (BMPs) consistent with City code and State Storm Water Drainage Regulations to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State, and local agency requirements. **Therefore, the operation will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Less Than Significant Impact**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i) result in substantial erosion or siltation on-site or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted run-off; or iv) impede or redirect flood flows?	☐	☒	☐	☐	☐	☐	The operations will not alter the existing drainage pattern of the site or the area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would in substantial erosion issues, increase the amount of runoff or create or contribute runoff which exceeds the capacity of the existing or planned storm water drainage system. The applicant will implement Best Management Practices (BMPs) in accordance with all applicable federal, State and local agency requirements, including the City of Clearlake's Municipal Code**.** Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. The natural background level is the level of erosion that currently occurs from the area in a natural, undisturbed state. Vegetative cover and water bars shall be used as permanent erosion control after project installation**.** These measures shall be maintained for life of the project. Less Than Significant Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐	☐	☐	The project site is not located in an area of potential inundation by seiche or tsunami. The parcel is not located within a flood zone. In addition, the soils at the project site are generally stable; therefore, is minimal potential to induce mudflows. **No Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐	☐	☐	The project would not conflict with or obstruct any water quality or management plans. Additionally, to control runoff, the operation will incorporate appropriate Best Management Practices (BMPs) consistent with City code and State Storm Water Drainage Regulations to the maximum extent practicable to prevent or reduce discharge of all construction or post-construction pollutants into the local storm drainage system. All grading measure shall adhere to all Federal, State and local agency requirements. Typical BMPs include the placement of straw, mulch, seeding, straw wattles, silt fencing and the planting of native vegetation on all disturbed areas. No silt, sediment or other materials exceeding natural background levels shall be allowed to flow from the project area. The natural background level is the level of erosion that currently occurs from the area in a natural, undisturbed state. Vegetative cover and water bars shall be used as permanent erosion control after project installation**.** These measures shall be maintained for life of the project **Less than Significant.**
SECTION XI. LAND USE AND PLANNING *Would the project:*							
a) Physically divide an established community?	☐	☐	☒	☐	☐	☐	The project is in the outskirts of the city limits, and in close proximity to the County of Lake's Jurisdiction. The surrounding development includes but is not limited to commercial/industrial development and rural residential development. Therefore, the project will not physically divide an established community. Therefore, the project will not physically divide an established community. **No Impact**
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐	☐	☐	The proposed project is consistent with the site's General Plan designation (Industrial) and zoning ("I" Industrial District); therefore, it would not require any amendments to the City's General Plan or zoning ordinance. The project is, however, be subject to a Use Permit, approved by the Planning Commission in accordance with the City of Clearlake Municipal Code. Upon issuance of the Conditional Use Permit and with the incorporated mitigation measures and conditions of approval *(including obtaining and maintaining all necessary Federal, State and local agency permits)*, the project will not conflict with any land use plan or policy intended for avoiding or mitigating an environmental effect(s). Additionally, the California Department of Food & Agriculture (CDFA) is responsible for licensing and regulating cannabis cultivation and enforcements as defined in the Medicinal and Adult Use Cannabis Regulation and Safety Act (MAUCRSA), including regulations related to the cultivation of cannabis. The applicant is required to obtain a license(s) from the CDFA prior to legal cultivation occurring, including all additional Federal, State and local agency permits/license. **Less Than Significant Impact.**
SECTION XII. MINERAL RESOURCES *Would the project:*							
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐	☐	☐	The operation would not result is the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. **No Impact**
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?	☐	☐	☒	☐	☐	☐	The operations would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **No Impact**
SECTION XIII. NOISE & VIBRATIONS *Would the project:*							
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?	☒	☐	☐	☐	☐	☐	Short-term increases in ambient noise levels to uncomfortable levels may be expected during project development, and routine maintenance of the project parcels. There will be vehicles entering and exiting the project premises. The applicant shall adhere to all Federal, State and local agency requirements regarding noise standards. **Therefore, to ensure impacts related to the Noise are minimized, the following mitigation measures have been implemented.** **<u>Mitigation Measures:</u>** **NOI-1: All construction activities including engine warm-up shall be limited to weekdays and Saturday, between the hours of 7:00am and 7:00pm to minimize noise impacts on nearby residents.** **NOI-2: Permanent potential noise sources such as, generators used for power shall be designed and located to minimize noise impacts to surrounding properties.** **NOI-3: During construction noise levels shall not exceed 65 decibels within fifty (50) feet of any dwellings or transient accommodations between the hours of 7:00 AM and 6:00 PM. This threshold can be increased by the Building Inspector or City Engineer have approved an exception in accordance with Section 5-4.4(b)(1) of the City Code. An exception of up to**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							80 decibels may be approved within one hundred (100) feet from the source during daylight hours. Project is expected to result in less than significant impacts with regard to noise and vibration.
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐	☐	The project is not expected to create unusual groundborne vibration due to site development or operation. The low-level truck traffic would create a minimal amount of groundborne vibration. **No Impact**
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐	☐	☐	The project is not located within an airport land use plan or within two (2) miles of a public airport. **No Impact**
SECTION XIV. POPULATION AND HOUSING *Would the project:*							
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐	☐	The project would increase employment in the area that might Induce some increased population growth, however, this growth would be negligible and not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure. **No Impact**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐	☐	☐	The operation will not displace a substantial number(s) of existing people or housing, necessitating the construction of replacement housing elsewhere. **No Impact**
SECTION XV. PUBLIC SERVICES *Would the project:*							
a) 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: • *Fire Protection?* • *Police Protection?* • *Schools?* • *Parks?* • *Other Public facilities*?	☐	☒	☐	☐	☐	☐	The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, and/or need for new or physically altered government facilities.. The projected has been circulated for agency review, including but not limited to Lake County Fire Protection, City of Clearlake Police Department, Local School Districted and the City of Clearlake – Public Works Division. Conditions of Approval have been incorporated to ensure the project adhere to all applicable requirements of the above agencies. • *Fire Protection: The project parcel has adequate fire protection through the Lake County Fire Protection District and CA Department of Forestry and Fire Protection.* • *Police Protection: The [project parcel has adequate police protection through the City of Clearlake Police Department, including the Lake County Sheriff's Office.* • *Schools: The project will not result in substantial adverse impact(s) on the local school district.* • *Parks: The project will not result in substantial adverse impact(s) on the local parks.* • *Other Public Facilities: The project is will not result in substantial adverse impacts on other public facilities* **Less Than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XVI. RECREATION *Would the project:*							
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?	☐	☐	☒	☐	☐	☐	The project will not increase the use of existing neighborhood and regional parks and/or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The project has been reviewed the City of Clearlake Public Works Department, Lake County Fire Protection District and the City of Clearlake Police Department and no adverse comments were received. **No Impact.**
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?	☐	☐	☒	☐	☐	☐	This project does not include recreational facilities and/or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The project has been reviewed the City of Clearlake Public Works Department, Lake County Fire Protection District and the City of Clearlake Police Department and no adverse comments were received. **No Impact.**
SECTION XVII. TRANSPORTATION *Would the project:*							
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐	☐	☐	☐	The subject property is located on the southerly side of Ogulin Canyon Road approximately 1,500-2,000 feet from the intersection with State Route 53. Access to the project site would be by private drive(s) off of Ogulin Canyon Road. The project is estimated to generate some traffic to this area but would not be subject to any known federal plans, policies, regulations, or laws related to transportation and circulation. Caltrans is responsible for planning, designing, constructing, operating, and maintaining all State-owned roadways in Lake County. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the State highway system within the City of Clearlake need to be approved by Caltrans, such as improvements to the intersection of Ogulin Canyon Road and State Route 53. The City of Clearlake is responsible for maintaining all other roadways in the City. The City's 2040 General Plan identifies State Route 53 as an Expressway and Ogulin Canyon Road as a Local Street. Other than planned improvements to State Route 53 by Caltrans, there are no immediate plans to improve Ogulin Canyon Road. As noted in the Trip Generation Summary prepared by W-Trans, it is during harvest time that the project is expected to generate the most trips.

Table 2 – Trip Generation Summary During Harvest

Land Use	Units	Daily		AM Peak			PM Peak		
		Rate	Trips	Trips	In	Out	Trips	In	Out
Near-Term									
General Light Industrial	25 emp	3.05	76	13	11	2	12	3	9
Future									
General Light Industrial	10 emp	3.05	31	5	4	1	5	1	4
Buildout			**107**	**18**	**15**	**3**	**17**	**4**	**13**
Note: emp = employees									

Pursuant to Ordinance Number 247-2020, the City of Clearlake added Article 3-8 to chapter III of the Municipal Code allowing the collection of traffic impacts fees. The development impact fee revenue will be collected and used to cover the cost of capital facilities and infrastructure required to serve new development and growth in the city. However, impact fee revenue cannot be used to cover the operation and maintenance costs of these or any other facilities and infrastructure. A Condition of Approval will be incorporated detailing the amount due per 1,000 square feet. **Less Than Significant Impact**

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☒	☐	☐	☐	☐	Senate Bill (SB) 743 established a change in the metric to be applied in determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a LOS analysis, the change in vehicle miles traveled (VMT) as a result of a project is now the basis for determining CEQA impacts with respect to transportation and traffic. As of the date of this analysis, the city has not yet adopted thresholds of significance related to VMT. As a result, the project related VMT impacts were assessed based on guidance provided by the California

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
							Governor's Office of Planning and Research (OPR) in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory, 2018 and the Lake County Planning Council VMT Regional Baseline Study, 2020. The OPR Technical Advisory identifies several criteria that may be used by jurisdictions to identify certain types of projects that are unlikely to have a significant VMT impact and can be "screened" from further VMT analysis. One of these screening criteria pertains to local-serving retail, which is defined as having fewer than 50,000 square feet of gross floor area. The theory behind these criteria is that while a larger retail project may generate interregional trips that increase a region's total VMT, small retail establishments do not necessarily add new trips to a region, but change where existing customers shop within the region, and often shorten trip lengths. The Lake County Planning Council, VMT Regional Baseline Study includes some recommendations for determining VMT Thresholds of Significance for Clearlake and other local agencies and references the OPR Guidelines of projects of less than 50,000 square feet of retail, as not exceeding a level of VMT significance. The proposed project size is well below the size of a project that would qualify for significant VMT based on screening criteria published by the Office of Planning and Research and based on the Lake County Planning Council VMT Regional Baseline Study, the project can be presumed to result in a less-than-significant transportation impact on VMT. **Less Than Significant Impact**
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐	☐	☐	The operation will not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment. All road improvements shall adhere to all current Federal, State and local agency requirements. The applicant shall obtain and maintain an Encroachment Permit form the City of Clearlake – Public Works Department for any work done within the right-of-way. **Less Than Significant Impact.**
d) Result in inadequate emergency access?	☐	☒	☐	☐	☐	☐	The project is not expected to result in any impact to providing adequate emergency access. The project was circulated for review to City of Clearlake Police Department, Lake County Fire Protection District, California Department of Transportation, Lake County Fire Protection Districts, CA Department of Transportation (Caltrans) and the City of Clearlake Community Development Department (Public Works, Building and Planning) for consistency with all applicable safety regulations and policies. No adverse comments were received. The applicant will obtain all the necessary Federal, State, and local agency permits for any works that occurs with the right-of-way and will be subject to the City's traffic impact fee program. Participation in this program will mitigate any cumulative impacts on the City's transportation system. **Less than Signiant impact**.
SECTION XVIII. TRIBAL CULTURAL RESOURCES *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*							
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k),	☒	☐	☐	☐	☐	☐	According to the Archeological Report prepared for the project site, there are no known 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) onsite. **However, to ensure the protection of Cultural Resources, all potential impacts to Cultural resources have been reduced to less than significant with the incorporated mitigation measure CUL-1 through CUL-3 in Section V(a).**
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐	☐	☐	According to the Archeological Report prepared for the project site, there are no known resources to be determined as a significant resource. **However, to ensure the protection of Cultural Resources, all potential impacts to Cultural resources have been reduced to less than significant with the incorporated mitigation measure CUL-1 through CUL-3 in Section V(a).**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
SECTION XIX. UTILITIES AND SERVICE SYSTEMS *Would the project:*							
a) Require the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, or natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐	☐	☐	The project will not impact existing and/or proposed utility/service infrastructure systems, including but not limited to water/wastewater treatment systems, storm water drainage systems, electric power, natural gas, or telecommunications facilities. The project parcels will be served on an onsite waste management system (septic) and onsite well(s) and have power through PG&E. The applicant will adhere to all necessary federal, state and local agency requirements. **Less Than Significant Impact**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?							The commercial cannabis operation will not expose occupants to potential pollutants concentrations from a wildfire(s) or the uncontrolled spread of a wildfire. The applicant will adhere to all applicable Federal, State and local agency requirements. **Less Than Significant Impact**
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐	☐	☐	The project site is situated in a rural rea of the County within the City Limits of Clearlake and requires an on-site Waste Management System (Septic). The applicant shall adhere to all Federal, State, and local regulations regarding wastewater treatment and water usage requirements. **No Impact**
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?	☐	☒	☐	☐	☐	☐	The Local Lake County landfill(s) has sufficient capacity to accommodate the project's solid waste disposal needs. The operation has been developed to help minimize the generation of waste and for the proper disposal of waste produced during the cultivation and processing of cannabis at the project site. The goal is to prevent the release of hazardous waste into the environment, minimize the generation of cannabis vegetative waste and dispose of cannabis vegetative waste properly, and manage growing medium and dispose of growing medium properly. All employees are required to follow the procedures outlined in this plan. Any deviations from this plan must be immediately brought to the attention of the operations manager(s). **Less Than Significant Impact**
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐	☐	☐	The project parcels will be served by an onsite waste management system (septic) and onsite well(s). All septic systems and/or wells shall be installed and adhere to all applicable Federal, State, and local agency requirements. All vegetative waste will be composted onsite, including all soil from any ground disturbance (if necessary). All other waste will be handled in accordance with all Federal, State, and local agency requirements and brought to a proper facility that is able to process such waste. **Less Than Significant Impact**
SECTION XX. WILDFIRE *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:*							
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐	☐	☐	The property is located within the State Responsibility Area (SRA) and is in a 'Moderate to High' Fire Hazard Severity Zone. The site has an average cross slope is less than 20% and has a moderate fuel load but the cultivation area will be clear of vegetation, including being routinely maintained. The SRA regulations (if applicable) will ensure adequate fire access to and on the property. SRA regulations will also ensure that measures are in place to help prevent fire and the spread of fire should one occur. The property shall maintain fire breaks around all structures, shall adhere to all necessary Federal, State, and local agency requirements. **Less Than Significant Impact**
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?	☐	☒	☐	☐	☐	☐	The project will not exacerbate wildfire risks and/or expose persons to pollutant concentrations in the event of a wildfire in the area. Additionally, the applicant will adhere to all Federal, State, and local fire requirements/regulations, including all mitigation measure and/or conditions of approval imposed on such use. **Less than Significant Impact**

IMPACT CATEGORIES*	1	2	3	4	5	6	All determinations need explanation. Reference to documentation, sources, notes and correspondence.
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?	☐	☒	☐	☐	☐	☐	All infrastructure will be routinely maintained to ensure all Federal, State, and local agency requirements are being satisfied, including all necessary City Codes and/or regulations. Additionally, prior to operation the applicant(s) will make all necessary improvements to the project site, such as access/roadways, fuels breaks, and emergency water source/water tanks. **Less than Significant Impact**
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?	☐	☒	☐	☐	☐	☐	The project area to be developed is not located within the vicinity of known waterways nor is it located within a designated flood zone. Therefore, the risk of flooding/runoff, landslides, slope instability, or drainage changes would not be increased due to this project. **Less Than Significant Impact**
SECTION XXI. MANDATORY FINDINGS OF SIGNIFICANCE							
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐	☐	☐	This project is not anticipated to significantly impact habitat of fish and/or wildlife species or cultural/tribal resources with the incorporated mitigation measures described above. Therefore, there is minimal risk of degradation, and mitigation measures are proposed that would alleviate most or all of the project-related impacts. **With incorporation of Mitigation Measures, the project is not anticipated to significantly impact habitat of fish and/or wildlife species or cultural resources, nor will the project contribute to factors that would harm the environment or add to any wildfire risk.**
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐	☐	☐	All potentially significant impacts have been identified related to, Aesthetics, Air Quality, Biological Resources; Cultural/Tribal Resources; Geology & Soil; Noise & Vibration; and Hazards & Hazardous Materials. These impacts in combination with the impacts of other past, present, and reasonably foreseeable future projects in the vicinity could cumulatively contribute to significant effects on the environment if proper mitigation measures are not put in place. **The implementation of and compliance with all mitigation measures identified in each section as project conditions of approval would avoid or reduce all potential impacts to less than significant levels and would not result in cumulatively considerable environmental impacts**
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐	☐	☐	The proposed project has potential to result in adverse indirect or direct effects on human beings. In particular, risks associated with, Aesthetics, Air Quality, Biological Resources; Cultural/Tribal Resources; Geology & Soil; Noise & Vibration; Hazards & Hazardous Materials and have the potential to impact human beings. **Implementation of and compliance with mitigation measures identified in each section would reduce adverse indirect or direct effects on human beings and impacts to less than significant impact levels.**

INITIAL STUDY SUMMARY: Based on the review of the proposed project site and surrounding area, appropriate mitigation measures were identified to mitigate potentially significant impacts to a level below adversity for Aesthetics, Air Quality, Biological Resources; Cultural/Tribal Resources; Geology & Soil; Noise & Vibration; Hazards & Hazardous. Assuming implementation of the identified measures and standard conditions of project approval of the City of Clearlake and other pertinent agencies, no adverse impacts are anticipated

Attachment A

Application Packet/Operational Plan

City of Clearlake

Application# CB-_____

14050 Olympic Dr. Clearlake, CA 95422 707-994-8201 www.clearlake.ca.us

CANNABIS BUSINESS APPLICATION
For Use Permit and Regulatory Permit

(Please print clearly and fill in/provide all that apply)

Type of Commercial Cannabis Use:

_____ Commercial Cannabis Cultivation
_____ Cannabis Manufacture
_____ Cannabis Distributor
_____ Cannabis Testing Laboratory
_____ Cannabis Nursery
_____ Cannabis Processor

REQUIRED FOR A COMPLETE APPLICATION

{ } Completed and signed Application Forms
{ } Additional Documentation
{ } Initial Application Fee Paid: ($TBD)

Applicant's full name: Clearlake Harvest Company, LLC (Kris Gretsinger)

Applicant's mailing address: PO Box 2116 Clearlake, CA 95422

Applicant's phone number: 510-381-8199 Email: info@chcfarms.com

Applicant's physical home address: 2250 Ogulin Rd Canyon Clearlake, CA 95422

Applicant's tax ID number: 86-3836659

Management/ Community Relations Contact(s) Kris Gretsinger

Applicant's Height: 5'9 Weight: 100 Hair color: Brown Eye color: Brown

Address of proposed business: 2250 Ogulin Canyon Rd, Clearlake, CA 95422

Square footage of proposed building: See attached

Describe the site plan and floor plan (attach additional page if necessary): See attached

Number of Managers/Supervisors: 3 Number of employees: None at the moment. Potential for 20

Names and addresses of anyone who will act as an owner, manager or supervisor of the facility (attach additional page if necessary): See Operations Plan

Describe proposed business and operations (attach additional page if necessary): See Operations Plan

Anticipated gross annual revenues: See Operations Plan

DOCUMENTS TO SUBMIT

Please provide additional information as required in Section 18-12.050, 18-12.060, and Section 5-25 including but not limited to the following:

{ X } 1. Two passport quality, current photographs of the applicant.

{ X } 2. Copy of birth certificate, passport, or valid California Driver's License (not to include an AB60 federally restricted license).

{ X } 3. Sign off by Lake County Fire Protection District permitting the use. Reached out to Fire Marshall Cory Smith and are in communication with the Fire Department.

{ X } 4. The applicant must complete a criminal history check for the State of California and F.B.I. which is approved by the Chief of Police or his designee.

{ X } 5. A sketch or diagram depicting the interior configuration of the premises, including the total floor area, drawn to scale. See attached.

{ X } 6. A site plan drawing depicting the facility and all properties within 600 feet.

{ X } 7. A lighting plan showing existing and proposed exterior and interior lighting placement and levels.

{X } 8. A detailed security plan.

{ X } 9. An odor control plan.

{X } 10. A detailed business plan.

{X } 11. Previous addresses for the past five years.

{ X } 12. Property ownership and lease details.

AGREEMENT

APPLICANT'S SIGNATURE (Attach Notarized documents)

I hereby certify that I will abide by the City of Clearlake's Commercial Cannabis Ordinance No. 200-2017 and this agreement and that the information provided in this application is, to my knowledge, true and correct. I hereby authorize City staff, including the police department, authority to conduct a criminal background check pursuant to California Penal Code Section 11105(b)(11) and 13300(b)(11), which authorizes city authorities to access state and local summary criminal history information for employment, licensing, or certification purposes; and authorizes access to federal level criminal history informtion by transmitting fingerprint images and related information to the Department of Justice to be transmitted to the FBI every person listed as an owner manager or supervisor of the marijuana business must submit fingerprints and other information deemed necessary by the City Manager or his designee for a background check by the Clearlake Police Department. I understand that any material misrepresentation may result in either denial or revocation of dispensary permit.

Applicant's Signature: _____ Date: 5/13/21

FOR OFFICE USE ONLY

APPROVED BY: _____

DATE: _____

{ } Credit Card _____ { } Debit Card _____ { } Money Order { } Cash { } Check # ___

Application for Commercial Cannabis Operations

By Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

2250 Ogulin Canyon Commercial Cannabis Application

1. Introduction
2. City of Clearlake Considerations
    a. Additional Information
    b. General Plan Consistency
    c. Environmental Consideration
    d. Zoning and Regulatory Considerations
    e. Proof of Legal Access
    f. Noise, Traffic, Visual, Geological and Neighborhood Considerations
    g. City of Clearlake Regulatory Compliance Review
3. Vicinity Map
4. Site Plans and preliminary floor plans
5. Business Plan
6. Operations Plan
    a. Security and Lighting Plan
    b. Odor Management Plan
    c. Parking Plan
    d. Employee Safety and Training Plan
    e. Waste Management Plan (both solid and liquid waste)
    f. Pest Management Plan
    g. Materials Plan
    h. SWIPP/Drainage, Erosion & Sediment Control Plan
    i. Grading Plan – if applicable
    j. Water Management Plan
7. Archeological Report
8. Botanical/Biological Report

Attachments

I. Landlord Authorization
II. City of Clearlake Regulatory Compliance Review
III. Security and Lighting Plan
IV. Waste Management Plan
V. Pest Management Plan
VI. SWPPP
VII. City of Clearlake Application

1. INTRODUCTION

Who: Clearlake Harvest Company, LLC (Kris Gretsinger)

Kris Gretsinger: 510-381- 8199
Anand Rajendraiah: 616-634-2617
Erin McCarrick: 707-350-5052 or 605-393-7658

What: The applicant, Kris Gretsinger, is proposing a new cannabis operation that will include a nursery, a processing building, and hybrid greenhouse cannabis cultivation sites. The project is proposed on a 12.95 acre property in Clearlake CA (APN 010-044-19). The property was most recently a single-family dwelling. Prior to that, it was used for small scale honey processing. The surrounding area is zoned industrial and also commercial cannabis in the CB overlay zone.

Proposed cannabis operations will occupy 27,500 square feet of the property and will be on existing flat land. The proposed site for the nursery is on an existing concrete slab.

The total cumulative project will not disturb more than one acre.

Where: 2250 Ogulin Canyon Rd, Clearlake, CA 95422

Why: The applicant currently operates a cannabis distribution company in Clearlake and is looking to expand operations, create more jobs, and increase the tax base for the City of Clearlake.

How/When: The applicant hopes to break ground this year and begin employing a crew of ten people for cultivation and harvest operations this fall. Additionally, applicant plans to facilitate license and growing opportunities for equity candidates this year as part of the Clearlake Social Equity Program.

The members of Clearlake Harvest Company have been involved in numerous fire recovery projects in Lake County and therefore are very committed to fire safety and prevention. Applicant is committed to working with the City of Clearlake, the Clearlake Police Department, the Fire Department, and other State and Local agencies to ensure this company complies by all regulations, including 4290 road compliance and access for all emergency personal.

2. CITY OF CLEARLAKE CONSIDERATIONS

A. Additional Information

Applicant: Clearlake Harvest Company, LLC

Operator:

1. Operator(s)
    a. The name or names of the Operator: Kris Gretsinger
    b. Date of birth: April 24, 1979
    c. Previous addresses for the five (5) years immediately preceding the present.
        i. 2016 – Current: 2035 Kenway Court Lodi, CA 95242
    d. The height, weight, color of eyes and hair.
        i. 5'9, 230 lbs, brown eyes, brown hair
    e. Photographs for identification purposes (photographs shall be taken by the Police Department or provide 2 passport quality photos).
        i. With the City of Clearlake
    f. All business, occupation, or employment for the five (5) years immediately preceding the date of submittal of the application form.
        i. 2020 – Current: Owner/Operator, Clearlake Ventures, LLC. – Clearlake
        ii. 2010 – 2020: Project Manager, Pacific States Environmental – Dublin, CA
    g. The Cannabis Operation business history, including whether the Business Owner and Responsible Parties while previously operating in this or another city, county or state has had a cannabis related license revoked or suspended, the reason therefore, and the business or activity or occupation subsequent to such action of suspension or revocation.
        i. Applicant currently owns and operates a cannabis distribution company in Clearlake, CA. Applicant additionally owned a cannabis cultivation in Mendocino County that was sold to another person. Applicant has never had a cannabis related license revoked or suspended.
2. Tax identification number.
    a. Clearlake Harvest Company, LLC = 86-3836659
3. The address to which notices relating to the application is to be mailed.
    a. PO Box 2116, Clearlake, CA 95422

Application Fee: Submitted

B. General Plan, Land Use and Zoning Compliance Consideration:
The site is designated for Industrial land uses zone in the General Plan and in the Cannabis Combining (CB) zoning, which appears to be consistent with the project.

Additionally, as noted in the vicinity maps, the proposed operation is well beyond 600 feet from any currently sited youth facilities, such as public and private schools. The closest property line is a storage facility that is over 400 feet from the site. The site will not be visible from the road.

C. Environmental Consideration:
The applicant has been determined low risk through both the State Water Resources Control Board and the Department of Fish and Wildlife for this Commercial Cannabis Operations.

The applicant has obtained a biological and archeological report included in this report. The project does may require minor grading and could be considered a Class 5 Categorical Exemption "Minor Alterations in Land Use Limitations" as it does not have a slope of more than 20% and will not result in any major changes in land use or density.

The proposed project is 378 feet way from the closest waterway - an ephemeral stream in the southeast corner of the property. There is no risk of runoff from operations as the greenhouses will be self-contained. Additionally, the area around the greenhouses will have waddles and any other necessary erosion and wastewater controls. There are no waterway crossing to access the cultivation site. Applicant has filed for a Standard Agreement with Fish and Wildlife and is enrolled in the State Water Board for Cannabis Cultivation.

D. Zoning and Regulatory Considerations

Ordinance No. 249-2021 recently amended section 18-43.050 (A) of Chapter 18 of the Municipal Code to re-remove the numerical cap on cannabis businesses located within the boundaries of the Commercial Cannabis Combining District Map.

Use Consistency with the Zoning Code:
The project is located in the Industrial Zoning District and the CB, Commercial Cannabis Combining District. Surrounding uses are mostly comprised of other commercial operations including existing and proposed cannabis operations. There are no youth facilities, churches, schools or parks located nearby. To the applicant's knowledge, there are no inhabited residence within 600 feet.

E. Proof of Legal Access

See attached approval from Anand Rajendraiah on behalf of RSG Clearlake Vista, LLC (the property owner). See Attachment I

F. Noise, Traffic, Visual, Geological and Neighborhood Considerations

The property is isolated and in a low traffic area. There will be very low traffic to and from the property aside from employee vehicles. It is anticipated that the employees will not exceed twenty and that will be over years of growth. If necessary, the applicant will obtain noise, traffic, visual, or neighborhood considerations. The property is not within a Groundwater Sustainability Agency, and therefore does not need a Geological Survey.

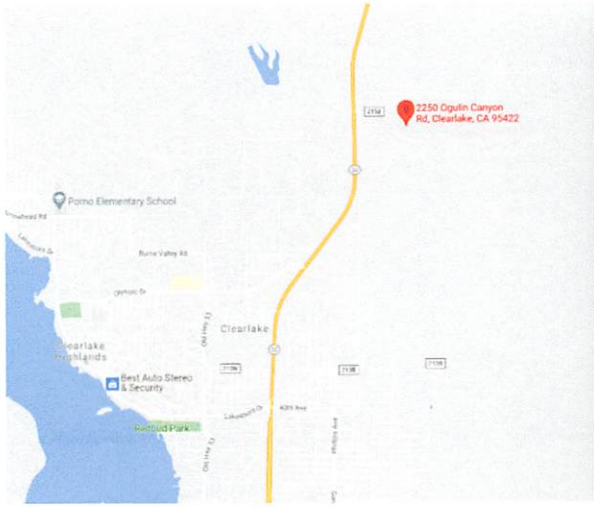
G. City of Clearlake Regulatory Compliance Review

See Attachment II

3. VICINITY MAP

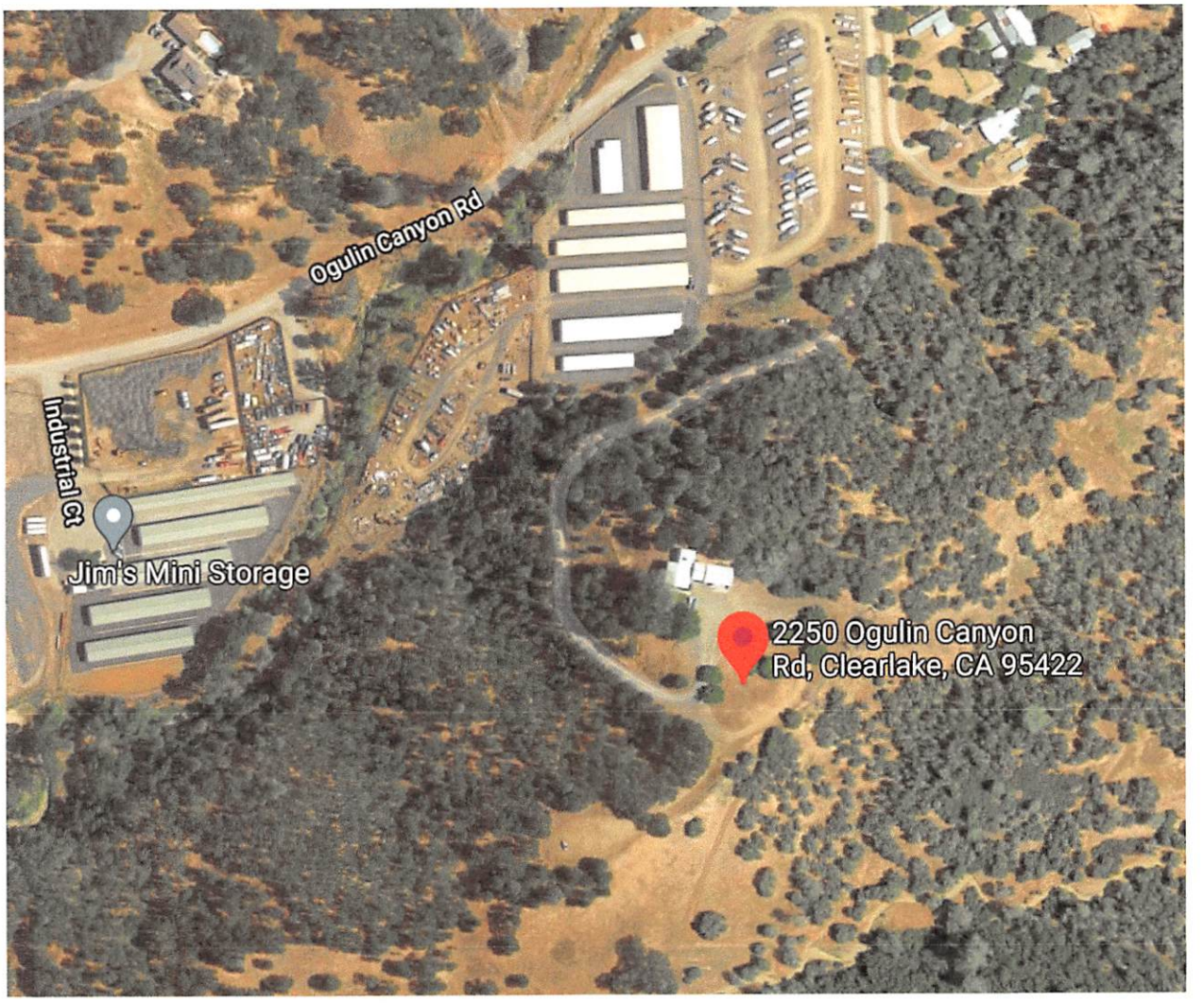
The following maps show the location of the proposed project to surrounding businesses and identifies the closest schools, playgrounds, churches, nurseries.

General location of proposed project



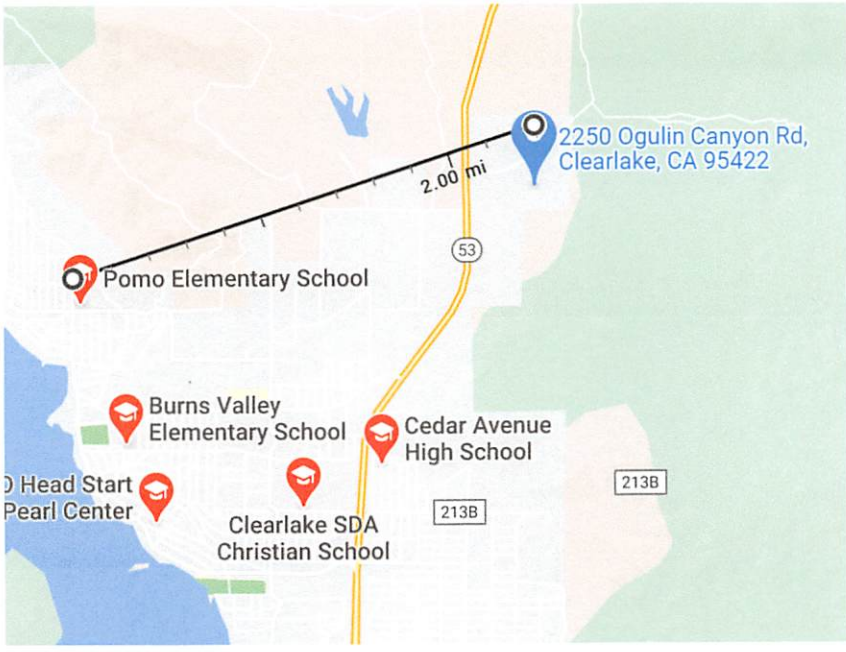
Surrounding area

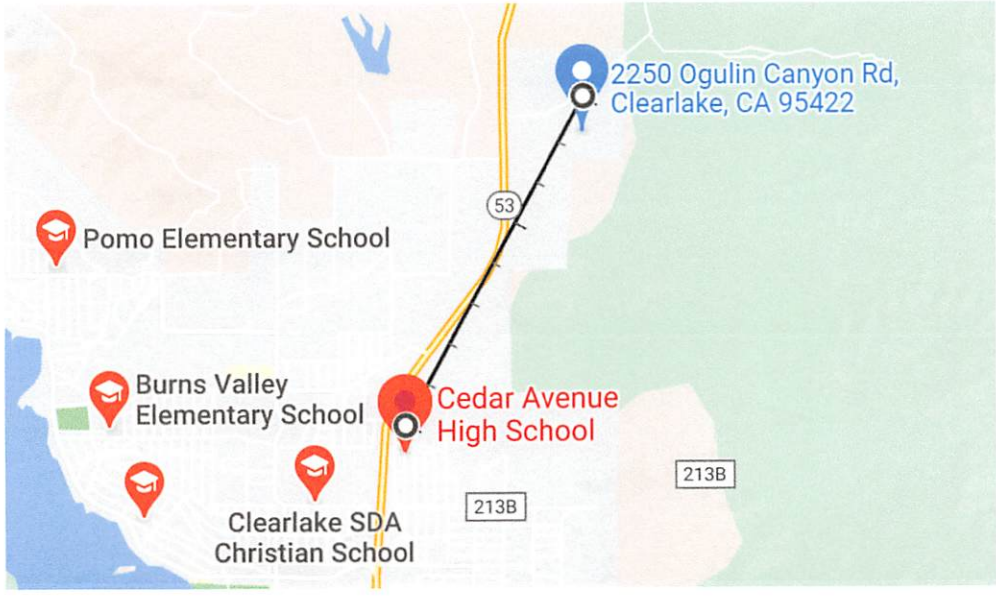
- The surrounding area is industrial to the North, comprised of a dog kennel and storage facility. The areas to the South and East are undeveloped parcels.



Proximity to schools

- Pomo Elementary is 2.37 miles away and Cedar Avenue High School is 1.57 miles away.





Proximity to churches

- Clearlake Church of the Nazarene is the closest church and it 1.2 miles away.

Proximity to childcare

- The Learning House is the closest childcare and it is 1.5 miles away.

4. SITE PLANS AND PRELIMNARY FLOOR PLANS

Site Plan

SITE 1
Office Space

SITE 2
1600 sf Nursery

SITE 3
3000 SF Nursery

SITE 4
10,000 sf Cultivation

SITE 5
2500 sf Cultivation or processing building

SITE 6
2400 sf Processing

SITE 7
5,000 sf Cultivation area with Equity Partners

Total Canopy = 17,500 sf

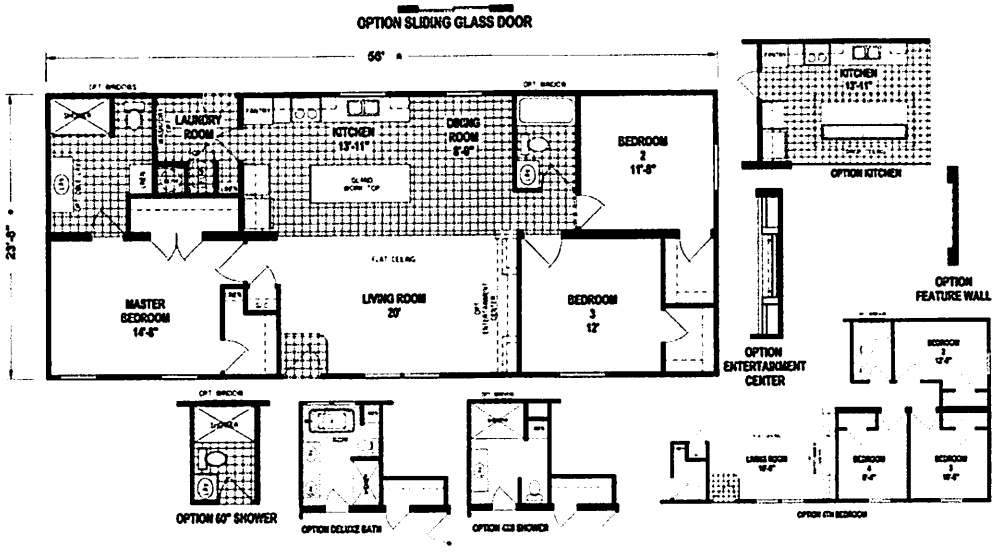
Total Square Footage = 27,500 sf

Newly Disturbed Footage = 25,900 sf

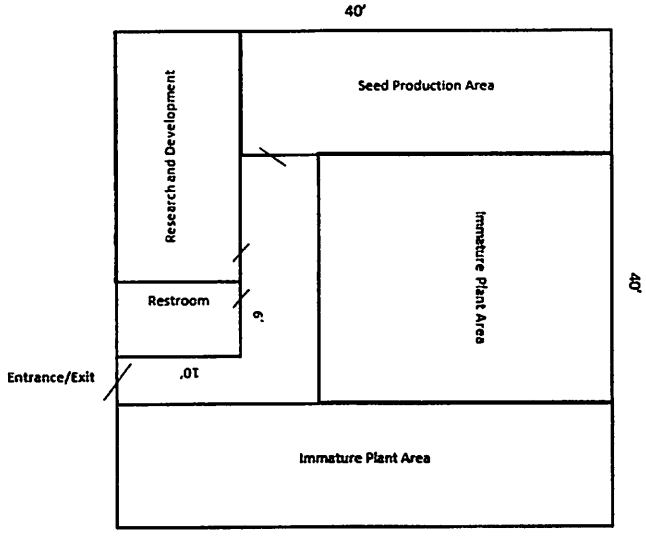
Not to scale

Types of Licenses & Preliminary Floor Plans

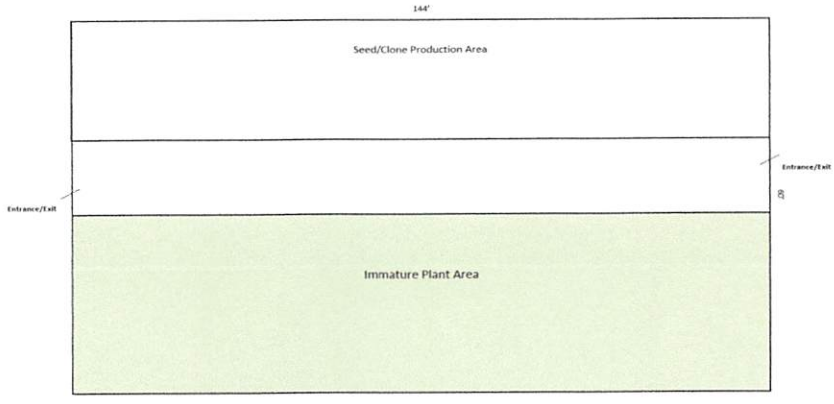
- Site 1 – Office Space
  - *Office Space* – There will be no change to the existing trailer on the property. The trailer is a Skyline 24x60 foot trailer. The bedrooms on the below floor plan will be used as offices.



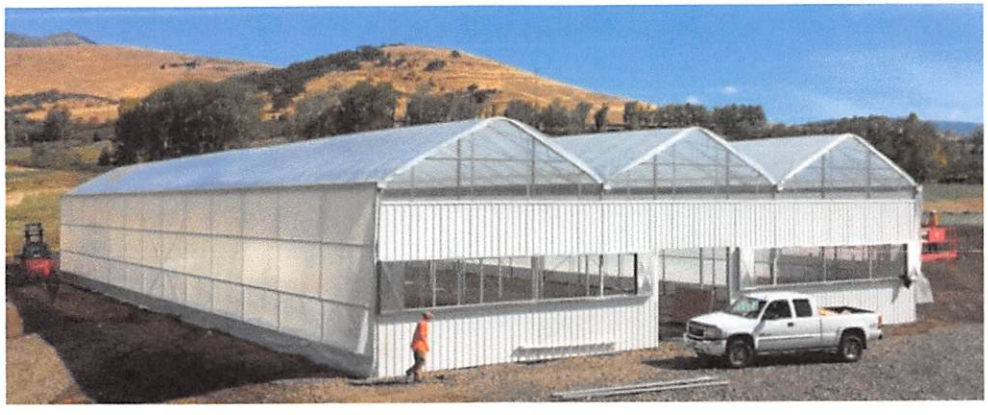
- Site 2 – Nursery Operations
  - *Nursery License* - Nurseries produce only clones, immature plants, seeds, and other agricultural products used specifically for the planting, propagation, and cultivation of medical cannabis.



- Site 3 – Nursery Operations or Processing (see processing layout)
    - *Nursery License* - Nurseries produce only clones, immature plants, seeds, and other agricultural products used specifically for the planting, propagation, and cultivation of medical cannabis.

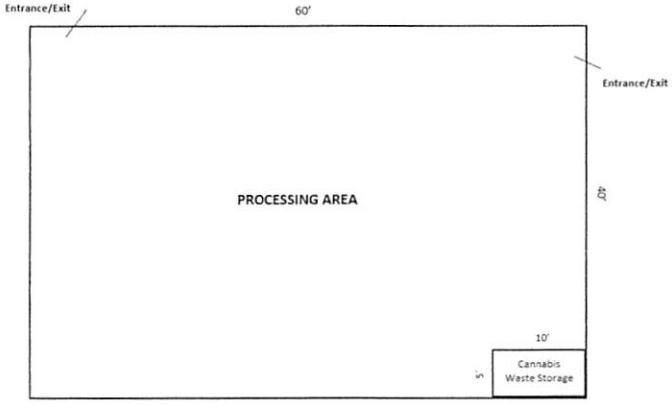


- Site 4 - Cultivation Operations
    - *Small Mixed Light Tier 2* – cannabis cultivation up to 10,000 square feet in a hybrid greenhouse.
        - *See attached information and quote from Fullbloom Greenhouse. Picture of proposed greenhouse below. Full engineered plans available upon payment.*



- Site 5 – Cultivation Operations
    - *Specialty Cottage Mixed Light Tier 2* – cannabis cultivation up to 2,500 square feet in a hybrid greenhouse.
        - *See attached information for the 3000 square foot greenhouse. Picture of proposed greenhouse below. Full engineered plans available upon payment.*

- Site 6 - Processing Operations
    - *Processing Operations* - Processing operations are auxiliary to a cultivation license. The structure will be used for drying, curing and trimming the flower.



- Site 7 – Equity Partner Cultivation Operations

  It is a priority of our organization and operation to build social equity into our business model. We will set aside the following licenses for equity candidates. We will work with the City of Clearlake to identify those individuals that qualify for the developing equity program.

    - *Specialty Cottage Mixed Light Tier 1* – cannabis cultivation up to 2,500 square feet in a hybrid greenhouse.
        - *See attached information for the 3000 square foot greenhouse. Greenhouse is the same as the type on Site5. Full engineered plans available upon payment of greenhouse.*

5. BUSINESS PLAN

Snapshot

The Product:

The primary product and revenue streams for Clearlake Harvest Company is high quality, cleanly grown cannabis for the legal regulated cannabis market in California.

Clearlake Harvest Company will also have a nursery to provide the plants for the cultivation onsite. This nursery will also produce a secondary revenue stream providing unique strains to local cultivators.

The Customer:

Wholesale cannabis buyers – identified.

Sales:

Clearlake Harvest Company has relationships with local distribution companies and wholesale cannabis buyers to purchase bulk flower.

Anticipated Revenue:

More detailed financials available upon request.

10,000 square foot greenhouse revenue:

- Expected yield: A 10,000 square-foot greenhouse can average 40 grams/square foot of canopy, totaling 880 pounds/10,000 square feet of canopy. Our estimates are conservative, forecasting 850 pounds/10,000 square feet.
- Expected revenue: As of May 7, 2021, the U.S. Cannabis Spot Index had the average price of cannabis at $1565/pound. We are taking a very conservative estimate of $850/pound yielding $748,000 per cycle. Clearlake Harvest Company intends on cultivating three cycles/year resulting in yearly revenues of $2,244,000.

Two 2,500 square foot greenhouse revenue:

- Expected yield: This yield is dependent on the equity grower(s) that partners with Clearlake Harvest Company. These greenhouses will be a different variety than the 10,000 square-foot greenhouse and are intended for a standard growing cycle (May – October). The average yield of 40 grams/square foot of canopy can still be used resulting in 220 pounds/2,500 square feet of canopy.
- Expected revenue: Keeping the same conservative estimates of $850/pound, it would result in $187,000/greenhouse, $374,000 total. However, as this is an equity project, there may be other variables to consider as the program is developed.

Nursery revenue:

- As this is not the primary source of revenue, the estimate is based on observational data of need in the community. The peak need for seeds and clones for outdoor season is January – June. The average price of a clone is $10/clone. A modest goal of Clearlake Harvest Company is 5,000 clones/month. Monthly anticipated revenue is $50,000/month for six moths resulting in a yearly revenue of $300,000.

Anticipated Return to Community:
In addition to the hiring of Clearlake Equity Candidates and local employees, Clearlake Harvest Company is committed to purchasing equipment and supplies locally and sourcing local contractors.

TIMELINE

2021

May – July/August

- Apply and go through licensing
- Identify equity partners
- Find contractor and supplier for 10,000 square foot greenhouse and processing building

July/August* – October

- Support equity growers in growing cycle
- Build out processing building
- Build out nursery
- Begin buildout of 10,000 square foot greenhouse

*If licenses are obtained

October – December**

- Process product from equity greenhouses
- Continue buildout of 10,000 square foot greenhouse
- Start propagating clones for 2022

**If licenses are obtained after a possible growing cycle (August/September) focus will be on prepping for first Greenhouse cycle in 2022

2022

March – May/ June – August/ September - November

- 10,000 sf Greenhouse cycle – giving time to ensure greenhouse is up and running

March – October

- 2500 sf Greenhouse cycle

Jan – June

- Sales of clones

6. OPERATIONS PLAN

a. Security and Lighting Plan
b. Odor Management Plan
c. Parking Plan
d. Employee Safety and Training Plan
e. Waste Management Plan (both solid and liquid waste)
f. Pest Management Plan
g. Materials Plan
h. SWIPP/Drainage, Erosion & Sediment Control Plan
i. Grading Plan – if applicable
j. Water Management Plan

General Operations:

The general operations of this commercial cannabis company include

1. Nursery
2. Greenhouse Cultivation
3. Processing Building

Hours of Operation

1. Nursery: 8am – 6pm
2. Greenhouse Cultivation: 7am – 4pm
3. Processing Building: 8am – 6pm

a. Security and Lighting Plan

a. See Attachment III

b. Odor Management Plan

a. When processing and during flowering in the greenhouses, we will use fans and carbon filters to control odor from our premises. The fans and filters will be placed in the corners of the processing facility and greenhouses. The nursery does not need filtration as the immature and non-flowering plants do not produce odor. We will use Phat Carbon filters with 8" fans. http://www.phatfilter.com/phat-filters.

c. Parking Plan

a. Per City of Clearlake Regulations, we will have four and one-half spaces for every 1,000 square feet of gross floor area that is open to the public. In the current plans, there is 1,440 square feet open to the public. Additionally, we will ensure there is adequate parking for the employees. The dimensions of the parking spots adhere to the minimum requirement of 8' for compact, 9' for standard, and 14' for ADA parking spaces.

Parking Sites 1 and 2 will each have one ADA parking spot and 4 standard parking spots.

d. Employee Safety and Training Plan

a. Clearlake Harvest Company (CHC) will abide by all State, Local and Federal laws. CHC will ensure safety standards on the property adhere to OSHA and CalOSHA standards. CHC will stay apprised of all updates to safety standards, mandates, and guidance per OSHA, CalOSHA, State, Local and Federal, including COVID safety standards and operations. Once employees are hired, an IIPP will be created and employee training will be documented and kept on file.

e. Waste Management Plan

a. Cannabis Waste - Attachment IV
    i. See attached Waste Management Plan using the approved form by the California Department of Agriculture (CDFA) Cannabis Department.
    ii. Additionally, see Water Management Plan for information about applicant's adherence to California State Water Resources Control Board Cannabis Policy and Cannabis Cultivation General Order.
b. Solid Waste
    i. Applicant has waste service through Lake County/Clearlake Waste Solutions.
c. Other Waste
    i. Standard and ADA Porto-potties will be provided and serviced through Action Sanitary when there are employees onsite. The office space has a restroom with a permitted septic system on the property.

f. Pest Management Plan

a. See attached Pest Management Plan using the approved form by the California Department of Agriculture (CDFA) Cannabis Department. Attachment V.

g. Materials Plan

a. This item requests a list of all pesticides, fertilizers, and any other hazardous materials that may be used and a storage plan for these materials.
    i. Pesticides are listed in the Pest Management Plan
    ii. There will be minimal fertilizers used. The soil will be above ground in pots inside the greenhouses. Potential fertilizers include Soil from a reputable company, cow manure (manure to be stored according to SWPPP) and various soil amendments to be listed and given to City of Clearlake once operations commence.
    iii. There will be no volume of materials onsite that require a hazardous materials plan. Potential hazards include: gas cans to be stored according to SWPPP and in the largest volume of five-gallon containers; propane tanks in the largest volume of 7.5 gallon containers; and isopropyl alcohol in the largest volume of five-gallon containers. CHC will notify all state and local officials if anything changes.

h. SWPPP/Drainage, Erosion & Sediment Control Plan

a. This total project does not disturb more than one acre of land and therefore does not call for a Storm Water Pollution Prevention Plan (SWPPP). The cannabis and water usage will be contained within a greenhouse and water will be minimal and recycled if possible resulting in minimal runoff.

b. Additionally, every cannabis cultivation applicant must enroll and obtain coverage in the Cannabis Water Discharge Program with the State Water Resources Control Board (SWRCB) and obtain a Lake Streambed Alteration Agreement (LSAA) or obtain a waiver for it through the California Department of Fish and Wildlife (CDFW). The applicant has been determined low risk through both the SWRCB and the CDFW for this Commercial Cannabis Operation. Each State agency, SWRCB and CDFW, requires annual submittal and monitoring. CHC will submit these reports to the City of Clearlake as needed or if requested.

c. CHC is committed to being proactive in environmental compliance and pollution prevention and has prepared attached SWPPP for any construction activity during the build out of this operation. Attachment VI.

i. Grading Plan

a. The applicant does not see the need for a grading plan at this time as proposed location is flat and total project is under one acre.

j. Water Management Plan

Water management is extremely important to CHC, we will adhere to any regulations or recommendations for local and state officials and agencies. As noted below, the applicant is enrolled in the Cannabis Water Discharge Program and will abide by the monitoring required through compliance gages.

a. State Water Resources Control Board

Every cannabis cultivation applicant must enroll and obtain coverage in the Cannabis Water Discharge Program. Clearlake Harvest Company has enrolled in this Program and will adhere to the Cannabis Policy and Cannabis Cultivation General Order. Listed below is information and guidance from the SWRCB website. Clearlake Harvest Company intends to comply with these requirements and guidelines.

i. SWRCB Cannabis Policy: The Cannabis Policy establishes principles and guidelines (requirements) for cannabis cultivation activities to protect water quality and instream flows. The purpose of the Cannabis Policy is to ensure that the diversion of water and discharge of waste associated with cannabis cultivation does not have a negative impact on water quality, aquatic habitat, riparian habitat, wetlands, and springs. The Cannabis Policy requirements are primarily implemented through the Water Boards Cannabis Cultivation General Order and Cannabis SIUR permits in addition to the California Department of Food and Agriculture's Cal Cannabis Cultivation Licensing Program.

1. Cannabis Cultivation Policy Principles and Guidelines for Cannabis Cultivation

ii. SWRCB Cannabis Cultivation General Order: The Cannabis Cultivation General Order is to ensure, to the greatest extent possible, that discharges to waters of the State do not adversely affect the quality and beneficial uses of such waters. The Cannabis Cultivation General Order is a simplified Waste Discharge Requirement (WDR) available to cannabis cultivators to regulate discharges of waste associated with cannabis cultivation. Threats of waste discharge may be from irrigation runoff, over fertilization, pond failure, road construction, grading activities, domestic and cultivation related waste, etc. The Cannabis Cultivation General Order WDRs may be referred to as a "Water Quality Permit" or a "Water Quality Protection Enrollment" by other agencies.

1. Cannabis Cultivation General Order

b. Compliance Gages

CHC has received a quote for purchase and installation of a compliance gage (attached). Below is information regarding the compliance gages from the SWRCB.

i. Online Cannabis Compliance Gage Mapping Tool - The Online Mapping Tool provides cannabis cultivators that divert surface water with a tool to check whether they may divert for cannabis cultivation on a given day.

ii. Cannabis Compliance Gages Website (Cannabis Policy, Attachment A, Section 4)- Provides an overview of the Cannabis Policy's current list of active compliance gages and the associated Tessmann Instream Flow Requirements. Please use the online mapping tool above to determine whether water is available to divert at your point of diversion.

c. Well Capacity and General Water Conservation

i. Applicant has obtained a well report that shows 35 gallons per minute and sufficient recovery. This gpm rate should be sufficient to irrigate 20,000 square feet of canopy. Additionally, applicant will avoid overwatering and utilize the technology available to greenhouse cultivation to monitor soil moisture levels and automate watering. This measure will support the efforts to avoid overwatering.

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:
Consultation Code: 08ESMF00-2021-SLI-1551
Event Code: 08ESMF00-2021-E-04541
Project Name: McCarrick

April 15, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location 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: 08ESMF00-2021-SLI-1551
Event Code: 08ESMF00-2021-E-04541
Project Name: McCarrick
Project Type: AGRICULTURE
Project Description: 12.97 acres
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.97798515,-122.60636132630475,14z

Counties: Lake County, California

Endangered Species Act Species

There is a total of 6 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.

Birds

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/1123

Amphibians

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

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/321

Flowering Plants

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Few-flowered Navarretia *Navarretia leucocephala ssp. pauciflora (=N. pauciflora)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8242	Endangered
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

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

Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

ATTACHMENT I

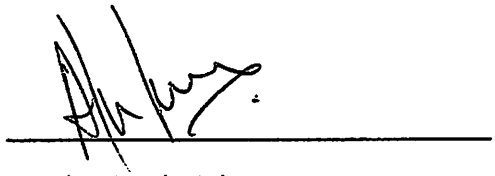
LANDLORD AUTHORIZATION

LANDLORD VERIFICATION

I, Anand Rajendraiah, on behalf of RSG Clearlake Vista, LLC, Landowner and Lessor of the property located at 2250 Ogulin Canyon Road, Clearlake, CA 95422 APN: 010-044-19 (the "Property"), do hereby acknowledge and verify that Clearlake Harvest Company, LLC (hereafter "Lessee") has my express authorization to use the Property for a commercial cannabis business, including but not limited to commercial cannabis cultivation, in accordance with the terms and conditions of the lease for the Property executed by and between myself, as Lessor, and the Lessee (the "Lease").

I can be reached at the contact information below further verification be deemed necessary.

I deciare under penalty of perjury under the laws of the state of California that the foregoing is true and correct.



Anand Rajendraiah

489 Forestridge Drive
Coppell, TX 75019
(916) 201-6078

CALIFORNIA ALL-PURPOSE ACKNOWLEDGEMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

File No: _____

APN No: _____

STATE OF California)SS
COUNTY OF LAKE)

On May 6, 2021 before me, SHARON BASSHAM , Notary Public, personally appeared Anand Rajendraiah

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Sharon Bassham

SHARON BASSHAM
COMM # 2275127
LAKE County
California Notary Public
Comm Exp. Feb 3, 2023

This area for official notarial seal.

OPTIONAL SECTION - NOT PART OF NOTARY ACKNOWLEDGEMENT
CAPACITY CLAIMED BY SIGNER

Though statute does not require the Notary to fill in the data below, doing so may prove invaluable to persons relying on the documents.

- ☐ INDIVIDUAL
- ☐ CORPORATE OFFICER(S) TITLE(S)
- ☐ PARTNER(S) ☐ LIMITED ☐ GENERAL
- ☐ ATTORNEY-IN-FACT
- ☐ TRUSTEE(S)
- ☐ GUARDIAN/CONSERVATOR
- ☐ OTHER

SIGNER IS REPRESENTING:

_____ _____

Name of Person or Entity Name of Person or Entity

OPTIONAL SECTION - NOT PART OF NOTARY ACKNOWLEDGEMENT

Though the data requested here is not required by law, it could prevent fraudulent reattachment of this form.

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED BELOW

TITLE OR TYPE OF DOCUMENT: _____

NUMBER OF PAGES _____ DATE OF DOCUMENT _____

SIGNER(S) OTHER THAN NAMED ABOVE _____

Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

ATTACHMENT II

CITY OF CLEARLAKE REGULATORY COMPLIANCE REVIEW

City of Clearlake Regulatory Compliance Review
Clearlake Harvest Company

Applicant has provided answers to the City of Clearlake Regulatory Compliance Review as listed in the Cannabis Business Application.

a. ***Management and onsite community relations contacts:*** Applicants shall provide the Community Development Department, Fire Department, and Police Department with full contact information for the Person or Persons having management and/or supervision of the cannabis business as well as an onsite community relations contact. Subsequently Cannabis Operators shall provide prompt written notice to the Planning Department, Fire Department, and Police Department of any changes to such contact information.

Applicant Comment:
The principals of Clearlake Ventures are
Kris Gretsinger: 510-381-8199, Onsite Community Relations Contact
Anand Rajendraiah: 616-634-2617
Erin McCarrick: 707-350-5052

Applicant will also provide an updated information/contact sheet to the Community Development Department, Fire Department, and Police Department within 30 days of change.

b. ***Security cameras.*** Security surveillance cameras shall be installed to provide coverage on a twenty-four (24) hour basis of all areas where Cannabis is cultivated, weighed, manufactured, packaged, stored and dispensed in a manner that provides clear and certain identification of individuals. Cameras shall remain in active, operable condition and capable of operating under any lighting condition. Security video must use standard industry format to support criminal investigations and shall be maintained for ninety (90) days.

Applicant Comment:
See "Security and Lighting Plan" in applicant's Operations Plan addressing the requirements of the City of Clearlake and the State of California.

As required by the State of CA, the security camera system will provide twenty-four-hour coverage, maintained for ninety (90) days.

c. ***Alarm system.*** A professionally monitored robbery alarm system shall be installed and maintained in good working condition. The alarm system shall be installed in accordance with Article 5-13 of the Code and shall include sensors to detect entry and exit from all secure areas and windows. Cannabis Operators shall keep the name and contact information of the alarm system installation company as part of the business's onsite books and records.

Applicant Comment:
See "Security and Lighting Plan" in applicant's Operations Plan addressing the requirements of the City of Clearlake and the State of California.

Applicant will engage the services of a third-party security company to install, maintain, and monitor an alarm system that is activated at all times when the business is closed. The system will detect unauthorized entrance at all entry or exit points, and all exterior windows of the premises. It will also detect movement in the licensed premise when the premises is vacant of employees. This system will adhere to the requirements of Clearlake Municipal Code, Ch. V, Art. 5-13, Alarm Systems.

d. ***Limited Access Area:*** A cannabis business shall establish limited access areas accessible only to authorized personnel and enforcement.

Applicant Comment:

Applicant will clearly label Limited Access Areas on site and protect with limited access protocols such as keypad entry and all employees' badges, draft and implement standard operating procedures for entry and exit and establish Limited Access Area is identified in the Security Plan.

e. ***Storage:*** All cannabis on the Permitted Premises shall be stored and secured in a store room, safe, or vault in a manner that prevents diversion, theft, and loss.

Applicant Comment:

All cannabis will be stored in locked and secure locations. Protocols will be put in place to ensure a checklist of putting away cannabis products and securing the location before the close of business each day.

Cannabis and cannabis products will be in the view of and monitored by the security cameras on premises.

f. ***Transportation:*** Each cannabis business shall provide as a part of its security plan a description of its procedures for transportation delivery, and safely and securely transporting Cannabis Products and currency in accordance with state law.

Applicant Comment: Transportation of cannabis and cannabis products will be conducted by a Type 11 licensed cannabis distributor.

g. ***Locks:*** All points of ingress and egress to a cannabis business shall ensure the use of commercial-grade, nonresidential door locks and window locks.

Applicant Comment:

Applicant will ensure all doors of the premises include commercial-grade door locks and that each interior and exterior door of the facility maintains an appropriate level of access control relative to the hierarchy of risk and access restrictions relative to each area of the facility.

h. ***Odor control:*** All cannabis businesses in the City shall be required to incorporate and maintain adequate odor control measures incorporated and maintained such that the odors of cannabis cannot be readily detected from outside of the structure in which the Permitted Premises is located. The Cannabis Operator shall be solely responsible for taking any and all appropriate measures to meet this standard and to install, operate and maintain appropriate odor mitigation measures consistent with the manufacturer's specifications and requirements.

Applicant Comment:

See Odor Control Plan in Operating Plan.

i. *Lighting.* Exterior lighting shall be provided for security purposes in a manner that shall be sufficient to provide illumination and clear visibility to all outdoor areas, including all points of ingress and egress, with minimal spillover on adjacent properties. The lighting shall be stationary, directed away from adjacent properties and public rights of way, and of an intensity compatible with the neighborhood, and in compliance with all illumination standards adopted by the City on a City-wide basis.

Applicant Comment:

See "Security and Lighting Plan" in applicant's Operations Plan addressing all the requirements of the City of Clearlake and the State of California. All lights will comply with the City of Clearlake codes and regulations.

j. Manufacturing – n/a
k. Manufacturing – n/a
l. Manufacturing – n/a
m. Manufacturing – n/a
n. Manufacturing – n/a
o. Manufacturing – n/a

p. Storage:

Applicant Comment:
See Item "h" in this document.

*q. **Odor Control:***

Applicant Comment:
See Item "h" in this document.

r. ***Trash Recycling:*** Provide details of a trash recycling enclosure

Applicant Comment:
See Waste Management Plan.
Applicant serviced by Lake County Waste Solutions for trash and recycling.

s. **Signage:** Other than address signs, no exterior signs would be used for the operation.

Applicant Comment:
Applicant will not display exterior signs.

t. ***Fencing, landscaping, and/or walls:*** Provide details of fencing, landscaping, and/or walls.

Applicant Comment:
See Security and Operations Plans.

u. ***Off-Street Parking:*** Provide details of off-street parking and access, including calculation of required parking in accordance with the Zoning Code.

Applicant Comment: See Parking Plan in Operations Plan.

v. ***Storage:*** Provide details for any outdoor storage.

Applicant Comment: See Item "e" in this document.

Additionally, any additional storage will be met via small storage sheds. Inventory will be given upon request to the Planning Department, Fire Department, and Police Department.

Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

ATTACHMENT III

SECURITY PLAN

SECURITY PLAN

Clearlake Harvest Company (CHC) understands the need to provide safety and security to all their employees. CHC intends to comply with all security requirement outlined in the Bureau of Cannabis Control regulations. CHC will also work to build trust and partnerships with all local law enforcement and City of Clearlake officials.

Applicant has previously engaged in conversation and collaboration with the City of Clearlake Police Department and Chief White to ensure cannabis facilities follow regulations and communication with the police department.

CHC commits to providing any necessary information to the City of Clearlake and the City of Clearlake Police Department as needed and whenever information changes. Currently, the Onsite Community Relations Contact is: Kris Gretsinger: 510-381-8199, Onsite Community Relations Contact.

This security plan addresses the inherent risks in cannabis operations, addresses them, finds solutions, provides lighting and camera information, and commits to adhere to the regulations set by the State of California.

Security Plan Contents:

1. Interior Site Construction Elements
2. Exterior Doors and Windows
3. Intrusion Detection System
4. Video Management System
5. Electronic Access Control System
6. Interior and Exterior Lighting
7. Employee Safety Elements
8. Cash Handling & Safe
9. Product Tracking
10. Fencing
11. State Regulations

1. Interior Site Construction Elements

Clearlake Harvest Company (CHC) will take the following measures to ensure cannabis products are locked and secured inside the premises, that only authorized employees can have access to limited access areas, and developments are up to code.

- Obtain clearance from the City of Clearlake Planning Department, Police Department and Lake County Fire before construction or alteration of existing/new buildings.
- Ensure Processing activities are secure
    - Create a locked and secure drying room
    - Store finished processed cannabis in locked and monitored building

2. Exterior Doors and Windows

- CHC is working with AES Lake County to install a sensor alarm system at all the exterior doors and windows.
- Keypad entry each door.
- Security camera at front door.
- Controlled automatic entry of roll-top door entrance.
- Adherence with all city, county, and state regulations and guidelines for security, lighting, parking, and storage. There will be no outside storage

3. Intrusion Detection System

- CHC is working with local security companies to install a sensor alarm system for any fully enclosed space.
- Authorized employees will undergo training through CHC and chosen security company to follow protocol if an intrusion occurs.

4. Video Management System

- Video management will be performed by a third party vendor for fully enclosed locations. Per CDFA regulations, there will be game cameras for cultivation while cannabis is present on the property.

- Initial Security Camera Placement below:

SECURITY – Camera Placement

SITE 1
Office Space

SITE 2
1600 sf Nursery

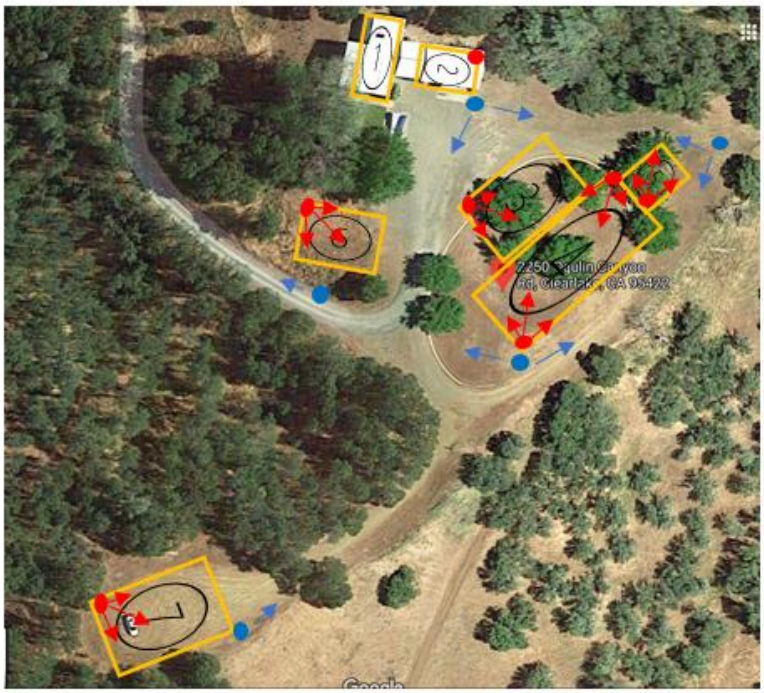
SITE 3
3000 SF Nursery

SITE 4
10,000 sf Cultivation

SITE 5
2500 sf Cultivation or processing building

SITE 6
2400 sf Processing

SITE 7
5,000 sf Cultivation area with Equity Partners



Proposed Interior Camera Location:

Proposed Exterior Camera Location:

General Direction:

5. Electronic Access Control System

- Keypad entry will be at all external doors and the internal door that leads into the fully enclosed cultivation and nursery areas.

6.Interior and Exterior Lighting

- CHC is working with local security companies to install a sensor lighting and ensure the building is up to code for all interior and exterior lighting.
- See diagram below for existing and proposed lighting.

SECURITY – Light Placement

SITE 1
Office Space

SITE 2
1600 sf Nursery

SITE 3
3000 SF Nursery

SITE 4
10,000 sf Cultivation

SITE 5
2500 sf Cultivation or processing building

SITE 6
2400 sf Processing

SITE 7
5,000 sf Cultivation area with Equity Partners

Proposed Exterior Sensor Light Location:

Proposed Exterior Continual Light Location:

7.Employee Safety Elements

- All full time employees will have a Live Scan security clearance through the City of Clearlake Police Department.
- All employees will have name badges
- Only certain employees will have access to the Limited Access Area, which will be accessible by keypad entry.
- All employees will receive training on all security and alarm systems
- All employees will risk mitigation training including the possibility of robbery, physical aggression, or vehicle break-ins.

8.Cash Handling & Safe

- When possible, all monetary transactions will be done digitally through a secure internet application focused on cannabis industry transactions.
- If the use of cash is needed, we will keep a safe onsite and secured to the property. All cash deposits will be deposited at the end of the day.

9.Product Tracking

- Adhere to State of California Track and Trace METRC program for all product. Have video in vehicles and on product storage.
- Daily inventory counts

10.Fencing

- We do not foresee needing any extra fencing unless further required by the City of Clearlake or the State of California.

11.State Regulations

§ 5044. Video Surveillance System.

(a) Each licensed premises shall have a digital video surveillance system with a minimum camera resolution of 1280 × 720 pixels.

(b)The video surveillance system shall at all times be able to effectively and clearly record images of the area under surveillance.

(c) Each camera shall be permanently mounted and in a fixed location. Each camera shall be placed in a location that allows the camera to clearly record activity occurring within 20 feet of all points of entry and exit on the licensed premises, and allows for the clear and certain identification of any person and activities in all areas required to be filmed under subsection

(d) of this section.

(d) Areas that shall be recorded on the video surveillance system include the following:

(1) Areas where cannabis goods are weighed, packed, stored, loaded, and unloaded for transportation, prepared, or moved within the licensed premises;

(2) Limited-access areas;

(3) Security rooms;

(4) Areas storing a surveillance-system storage device with at least one camera recording the access points to the secured surveillance recording area; and

(5) Entrances and exits to the licensed premises, which shall be recorded from both indoor and outdoor vantage points.

(e) Licensed retailers and licensed microbusinesses authorized to engage in retail sales shall also record point-of-sale areas and areas where cannabis goods are displayed for sale on the video surveillance system. At each point-of-sale location, camera placement must allow for the recording of the facial features of any person purchasing or selling cannabis goods, or any person in the retail area, with sufficient clarity to determine identity. Bureau of Cannabis Control Order of Adoption - 40 of 138

(f) Cameras shall record continuously 24 hours per day and at a minimum of 15 frames per second (FPS).

(g) The physical media or storage device on which surveillance recordings are stored shall be secured in a manner to protect the recording from tampering or theft.

(h) Surveillance recordings shall be kept for a minimum of 90 calendar days.

(i) Surveillance recordings are subject to inspection by the Bureau, and shall be kept in a manner that allows the Bureau to view and obtain copies of the recordings at the licensed premises immediately upon request. The licensee shall also send or otherwise provide copies of the recordings to the Bureau upon request within the time specified by the Bureau.

(j) Recorded images shall clearly and accurately display the time and date. Time is to be measured in accordance with the standards issued by the United States National Institute of Standards and Technology.

(k) The video surveillance system shall be equipped with a failure notification system that provides notification to the licensee of any interruption or failure of the video surveillance system or video surveillance-system storage device.

(l) If multiple licensed premises are contained within the same building, a single video surveillance system covering the entire building may be used by all of the licensees under the following conditions:

(1) Each applicant or licensee shall disclose on their premises diagram where the surveillance recordings are stored.

(2) Each applicant or licensee shall include in their security operating procedures, submitted with the application pursuant to section 5002(c)(29)(D) of this division, an explanation of how the video surveillance system will be shared, including who is responsible for monitoring the video footage and storing any video recordings.

(3) All licensees shall have immediate access to the surveillance recordings to produce them pursuant to subsection

(i) of this section.

(4) All licensees shall be held responsible and subject to discipline for any violations of the video surveillance requirements. Authority: Section 26013, Business and Professions Code. Reference: Section 26070, Business and Professions Code.

§ 5046. Locks. A licensee shall ensure that the limited-access areas described in section 5042 of this division can be securely locked using commercial-grade, nonresidential door locks. A licensee shall also use commercial-grade, nonresidential door locks on all points of entry and exit to the licensed premises. Authority: Section 26013, Business and Professions Code. Reference: Section 26070, Business and Professions Code.

§ 5047. Alarm System.

(a) A licensee shall maintain an alarm system as defined in Business and Professions Code section 7590.1(n) at the licensed premises.

(b) A licensee shall ensure a licensed alarm company operator or one or more of its registered alarm agents installs, maintains, monitors, and responds to the alarm system.

(c) Upon request, a licensee shall make available to the Bureau all information related to the alarm system, monitoring, and alarm activity.

(d) If multiple licensed premises are contained within the same building, a single alarm system covering the entire building may be used by all of the licensees under the following conditions:

(1) Each licensee shall include in their security operating procedures, submitted with the application pursuant to section 5002(c)(29)(D) of this division, an explanation of how the alarm system will be shared, including who is responsible for contracting with the alarm company.

(2) All licensees shall have access to and be able to provide the information under subsection (c) of this section.

(3) All licensees shall be held responsible and subject to discipline for any violations of the alarm system requirements. Authority: Section 26013, Business and Professions Code. Reference: Section 26070,

Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

ATTACHMENT IV

WASTE MANAGEMENT PLAN

CalCannabis Cultivation Licensing
Waste Management Plan

☐ On-site composting of waste

☐ Waste hauled by local agency, a waste hauler franchised or contracted by a local agency, or a private waste hauler permitted by a local agency

Name of local agency:

Company name (if applicable):

Company business address:

Primary contact person's name:

Primary contact person's phone number:

☑ Self-haul to one or more of the following:

- ☑ a manned fully permitted solid-waste landfill or transformation facility
- ☑ a manned fully permitted composting facility or manned composting operation
- ☐ a manned fully permitted in-vessel digestion facility or manned in-vessel digestion operation
- ☐ a manned fully permitted transfer/processing facility or manned transfer/processing operation
- ☐ a manned fully permitted chip-and-grind operation or facility

Clearlake Harvest Company
2250 Ogulin Canyon Rd
Clearlake, CA 95422

Waste Management Plan

Waste Management Methods

Self-haul to a manned fully permitted composting facility or manned composting operation

- Waste will be cut up and taken to the facility listed below.
- Any flowering cannabis or cannabis that may contain TCH will be mixed with a medium such as animal bedding or vinegar to render the product useless.

Quackenbush Mountain Resource

16520 Davis St, Clearlake, CA 95422

707- 995-0104

Monday – Saturday: 7:30am – 3pm

Sunday: Closed

Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

ATTACHMENT V

PEST MANAGEMENT PLAN

CalCannabis Cultivation Licensing
Pest Management Plan

Cultural Pest-Management Control Methods

• Engage with neighbors, the State of California, and Mendocino County Ag Department and Cannabis Program to stay up to date on any pesticide information.
• Cultivation area is enclosed in a greenhouse which prevents wildlife interference and reduces pests.
• Cultivation area will be graveled or have a smooth plywood ground cover to keep the area free of weeds and invasive species.
• Staggered planting to reduce plants in the same phase and attracting certain pests at the same time.

Biological Pest-Management Control Methods

• Determine if there are predatory insects on the cultivation site that will naturally take care of the pest.
• Introduce predatory insects if needed.
• Regularly trim plants of diseased leaves or plant parts.
• Maintain and encourage existing predatory insects such as the insidious flower bug.

Chemical Pest-Management Control Methods

• We will try to avoid this as much as possible.
• Use bee friendly pesticides
• All pesticide applications must fully comply with the California Food and Agriculture Code, Division 6 Pest Control Operations and Division 7 Agriculture Chemical; Chapter 1 – 3.6 and California Code of Regulations, Division 6 Pest Control Operations

Chemical(s) to Be Applied at any Stage of Plant Growth

Product Name	Active Ingredient(s)
Trifecta Crop Control	Thyme Oil 14%, Clove Oil 10%, Garlic Oil 9%, Peppermint Oil 4%, Corn Oil 3%, Geraniol 3%, Citric Acid 2%, Rosemary Oil 2%
Regalia CG	Extract of Reynoutria Sachalinensis

Attach additional sheets of paper as needed.

Clearlake Harvest Company, LLC

2250 Ogulin Canyon Rd

Clearlake CA 95422

ATTACHMENT VI

SWPPP

CLEARLAKE HARVEST COMPANY

STORM WATER POLLUTION PREVENTION PLAN

Prepared for

Commercial Cannabis Operations

Located at
2250 Ogulin Canyon Rd
Clearlake, CA 95422

1 INTRODUCTION

Clearlake Harvest Company (CHC) has developed this Storm Water Pollution Prevention Plan (SWPPP) for implementation during construction and operation of the above listed property. This project will involve minor grading, construction of hybrid greenhouses, construction of a processing building and slight modifications to existing structures.

1.1 OBJECTIVES

The objectives of this SWPPP are as follows: (1) identify and evaluate all pollutant sources associated with grading and construction activities that may affect the quality of storm water leaving the site; (2) identify potential non-storm water discharges; (3) identify and implement site-specific Best Management Practices (BMPs) in a timely fashion to reduce, eliminate, or prevent silt-laden stormwater associated with construction activities from leaving the site.

2 SITE DESCRIPTION

This site is located within the City of Clearlake at the above listed location. The climate in the vicinity of the sites is moderate and midrange, with mild, wet winters and warm, dry summers. The average rainfall is approximately 17 inches per year, as measured by the National Weather Service. On average, January is the wettest month.

2.1 CONSTRUCTION ACTIVITIES

The following activities are planned as part of this project:

- Site preparation/mobilization and demobilization
- Clearing and Grubbing
- Material demolition and stockpiling
- Material transportation and off-site disposal as required
- Protection and/or removal of all on-site utilities as specified in the project plans

3 BEST MANAGEMENT PRACTICES

3.1 SITE ESTIMATES

The potential grading zone is approximately 10,000 – 20,000 s.f.

3.2 POLLUTANT SOURCES

The Construction Storm Water General Permit (CSWGP) requires identification of all pollutant sources and material/sediment disturbing activities that may affect the quality of storm water leaving the site (including sediment). This section identifies the potential pollutant sources and describes the specific BMPs chosen to control the pollutant sources listed. Potential storm water pollutant sources from the site include the following:

- Storm water in contact with exposed soil or stockpiles
- Storm water with excessive sediment from wind or water eroded removal surfaces
- Personnel and equipment leaving the site
- Oils, grease and coolants from equipment
- Releases of gasoline/diesel fuel during refueling operations
- Vehicle maintenance and parking area
- Material stored in the equipment storage area

3.3 TOXIC MATERIALS

No toxic and/or hazardous materials are anticipated to be stored at the site. Fuel for heavy equipment will be brought on as needed and not to exceed 10 gallon containers. The fuel tank will remain on the service vehicle during fueling operations or in a secure location.

3.4 EROSION AND SEDIMENT CONTROL

This section describes the minimum Best Management Practices to be implemented to control erosion and sediment at the site.

3.4.1 General Practice

The greatest potential source for introducing sediment load into the storm water discharge at the site is soil or stockpiles exposed to wind or water erosion. BMPs to reduce this potential include:

- Staging and Loading/Unloading Area.
    - The trucks will enter the staging area will be free of debris as will the path. The truck drivers will follow a direct route to the loading/unloading area, load/unload the truck and continue to exit the site as needed.
- The use of silt fences along the site perimeter to protect offsite properties
- Spraying water on areas being graded, staging and loading area, and active areas of the stockpiles if stockpiling is needed.

Details of BMPs including implementation and maintenance are described below.

3.4.1.1 BMPs for Water Erosion

Silt fences, on an as-needed basis, will be installed to minimize sediment from storm water discharge from the site. Silt fences will be constructed of geotextile fabric shall be keyed into the ground and backfilled with gravel. Silt fences will be repaired or replaced when split, torn, slumping or weathered fabric is observed.

3.4.1.2 BMPs for Wind Erosion

Water will be sprayed to suppress dust, when needed, during the removal, treatment, placement, or movement of materials into stockpiles. On days of truck movement water will be supplied each day. Dust control measures will be recorded daily on the field log forms. Over-watering, which could result in excessive runoff will be avoided. While stockpiles are in place, wind erosion and dust generation will be controlled as needed through the use of a cover consisting of Visqueen™.

The removal areas, roadways and operation area will be watered as needed to control dust generation during the dry months. This practice will be continued during the wet season if long-range forecasts indicate extended periods of dry weather.

3.4.1.3 BMPs for Tracking Sediment

No truck will leave the job site when the job site is muddy. Trucks will be dry brushed when needed.

3.4.2 BMPs to Minimize Contact With Storm Water

3.4.2.1 Vehicles and Equipment

Obvious leaks observed coming from equipment will be reported to the CHC management personnel. Absorbent pads will be readily available in the spill kit located at the equipment staging area. On-site equipment will be inspected daily for leaking oil and fluids.

Minor repairs (<1 hour) will be conducted at the site. Major repairs (>1 hour) will be taken out of service and repaired off-site.

Equipment fueling operations will be conducted on-site in the equipment staging area and closely monitored to reduce the potential for a spill. Fuel storage is described in Section 3.3.

To the extent possible, vehicle/equipment cleaning will not be performed on-site.

3.4.2.2 Construction Materials

A supply of materials for construction and maintenance of storm water controls will be delivered and stored at the project site. Materials will be replenished on an as needed basis to minimize the amount of material stored on-site. These materials, including silt fencing, berms, filter fabric, sand bags, lumber, and building materials will be staged in a designated area.

3.4.3 Waste Management and Disposal

BMPs employed to minimize exposure to storm water and wind erosion are described in Section 3.4.1.

Trash will be placed in an on-site receptacle, (such as dumpster or trash can) which will be routinely removed for off-site disposal. Miscellaneous trash and debris around the construction site will be cleared weekly.

During rain events, on-site waste receptacles will be covered.

3.4.4 Pre-construction Control Practices

Pre-construction BMPs will be employed during the site preparation phase to reduce sediment and other pollutants in storm water discharges. Pre-construction BMPs will include the following controls:

- Watering for dust control during site preparation operations will be employed to minimize dust generation.
- Equipment and vehicles entering and exiting the site will be inspected for sediment that may be tracked onto roadways. Observed sediment will be swept from the roadways and placed onsite.
- If needed, chain link fences with lockable gates that limit unauthorized access to the site will control access to the active areas during all phases of construction activities.

Additionally, "no trespassing" signs will be posted on the fences near access points to inform visitors that access is prohibited.

3.5 NON-STORM WATER MANAGEMENT

This SWPPP describes BMPs that reduce or eliminate pollutants in storm water leaving the site.

3.6 MAINTENANCE, INSPECTION, AND REPAIR OF STRUCTURAL CONTROLS

Throughout the active construction activities, daily inspections will be conducted to ensure that the BMPs are in place and are effective. Routine inspection and maintenance procedures will be conducted, and documented on a Construction Site Inspection Form, by a CHC representative to ensure the following:

- Erosion and excessive material/sediment displacement has not occurred.
- Erosion has not damaged silt fences or containment berm, or other equivalent containment devices.
- Erosion has not damaged open exposed removal surfaces.
- Sediment has not blocked silt fences or containment berm, or other equivalent containment devices.
- Surface water is not significantly ponding on the site.
- Site access is secure.
- Site entrance and exit routes are clean and free of sediment.
- BMPs are adequate and maintained to minimize/eliminate polluted storm water from leaving the site.

A log documenting the SWPPP measures inspected and implemented will be prepared when stormwater is encountered onsite. During periods of non-active construction, weekly inspections of the site will be

conducted and recorded. These records will be kept at the field office and will be provided if requested. Detailed inspections will be conducted prior to anticipated storm events of 0.25 inches or greater, and as soon as possible following significant storm events and every 24 hours during extended storm events. An extended storm event is any precipitation last more than 24 hours. Detailed inspections of the material/sediment stockpiles and site will ensure the integrity of stockpile covers, berms, silt fences, to verify that the site fencing is in place, that gates are locked, and that warning signs are visible. A sample Construction Site Inspection Form is included in Attachment 1. The inspection checklist can be modified, as needed to ensure effective implementation of the SWPPP.

In case of washouts, the washout materials will be collected and placed back onsite and the area will be covered appropriately. In cases where Visqueen™ or cover materials has visible rips longer than six inches and wider than ¼-inch will be sealed with membrane patches, covered with sand bags or replaced.

Additional materials and equipment to replace or repair structural controls will be stored in a designated material storage area.

3.7 SWPPP AMENDMENT PROCEDURE

Amendment of the SWPPP is required "whenever there is a change in construction or operations which may affect the discharge of pollutants to surface water, groundwater, or municipal separate storm sewer systems." Additionally, if notified by the RWQCB to amend this SWPPP as a result of violation of the General Permit of insufficient reduction of sediment-laden storm water runoff leaving the site, CHC will make the necessary amendment within a timely manner.

All amendments to the SWPPP must be documented. An amendment form (Attachment 1) provides space to document the specific amendment, describe the purpose of the amendment, which was responsible for the amendment and their contact information. All amendments shall be dated and attached directly to the SWPPP.

3.8 SPILL PREVENTION AND CONTROL

CHC officers are trained to contain and control minor spills. A hazardous materials spill kit including a polyethylene overpack, clay absorbent, spill booms, absorbent pads and shovels will be kept readily available at the project site. Cleanup of minor spills will be initiated immediately following the occurrence of a spill event. Emergency contact numbers in the event of a spill are presented below:

COMPANY TELEPHONE CONTACT PERSON

Kris Gretsinger-510-381-8199

Erin McCarrick-707-350-5052

3.8.1 Minor Spills

The main goal of a minor spill kit at the site is to contain the spread of the spill. The following procedures will be implemented by on-site CHC personnel in the event of a minor spill:

- If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (i.e. absorbent pads, cat litter, and/or rags).
- If the spill occurs in dirt area, contain the spill by constructing an earthen dike, dig up the impacted soil and place in material stockpile for disposal.
- If the spill occurs during rain, cover the impacted area to avoid runoff.
- Record all steps taken to report and contain the spill.

3.8.2 Major spills

Major spills are not anticipated to occur at the site. However in the event of a major spill, CHC personnel will notify emergency response authorities of the incident. Emergency response telephone numbers are provided in the following table.

ORGANIZATION	*PHONE NUMBER*
National Response Center	(800) 424-8802
Office of Emergency Services	(800) 852-7550
United States Environmental Protection Agency-Region IX spill phone	(415) 744-2000
Hazardous Material Response	911
Clearlake Police Department	911

ORGANIZATION	*PHONE NUMBER*
Emergency Number	= 911

For Non-Emergency Contacts at the site use the following information:

CalFire/Clearlake Fire Department: (707) 994-0733

Lake County Office of Environmental Health : (707) 263-1164

3.9 POST-CONSTRUCTION STORM WATER MANAGEMENT

Post-construction storm water control practices consistent with Conceptual Storm Water Pollution Prevention Plan for the site will be initiated by CHC and owners of the land.

3.10 EMPLOYEE TRAINING

SWPPP training, provided to employee and contractor personnel, is conducted prior to the personnel commencing the site work or whenever the plan is significantly revised. This training provides an overview of the SWPPP and includes detailed discussions of (1) the potential sources of storm water pollution at the site; (2) the management practices employed to reduce pollutants in storm water; and (3) storm water inspection requirements.

SWPPP training is provided to all site personnel who are responsible for implementing this plan and conducting storm water inspections. Training is commensurate with job responsibilities and includes informal and formal training, as necessary. All training, field-related and administrative, will be documented.

3.11

3.12 MONITORING

3.12.1 General Plan Summary

CHC will maintain daily on-site presence during active construction activities to ensure compliance with this SWPPP. Compliance with the SWPPP will include implementing the BMPs, visual inspections,

3.12.2 Site Inspections

Daily inspection documenting that the SWPPP measures have been inspected and implemented will be prepared as needed. The following areas will be inspected: material/sediment stockpiles, site entrance/exit points for sediment tracking, erosion and sediment BMPs, and site access controls. Detailed inspections of

material/sediment stockpiles and the site will ensure the integrity of stockpile covers, berms, silt fences, to verify that the site fencing is in place, that gates are locked and warning signs are visible. Copies of the inspection forms are presented in Attachment B-1.

ATTACHMENT 1
SWPPP FORMS
STORM WATER POLLUTION PREVENTION PLAN AMENDMENTS

Amendment 1

Date: _____ Revised By: _____

Sections(s) Revised: _____

Purpose of Revision: _____

_____

_____

Contact Info of Revisor: _____

Amendment 2

Date: _____ Revised By: _____

Sections(s) Revised: _____

Purpose of Revision: _____

_____

_____

Contact Info of Revisor: _____

Amendment 3

Date: _____ Revised By: _____

Sections(s) Revised: _____

Purpose of Revision: _____

_____

_____

Contact Info of Revisor: _____

CONSTRUCTION SITE INSPECTION FORM
Inspected by: Project:
Date: Address:
Inspection: □□Dry Weather
□□Before Storm Event
□□After Storm Event
□□Extended Storm Period – Once each 24 hrs.
Weather Information (Best guess estimate)
(a). Beginning of storm event:
(b). Duration of event:
(c). Time elapsed since last storm:
(d). Approximate amount of rainfall:
Description of storm water characteristics (color, smell, visible debris, etc.):
ACTIONS RECOMMENDED OR REQUIRED, IF APPLICABLE.
Corrective Maintenance Required? Yes □□No □
Summary (Identify inadequate BMPs and related repair(s)/corrective action(s) recommended, if applicable):
Date Corrective Maintenance Completed?
Are any changes to SWPPP necessary? Yes □□No □
If Yes: SWPPP Amendment Number:
Date Amended:
Inspector's Signature Title
CONSTRUCTION SITE INSPECTION FORM
Identify any critical areas, inadequate BMPs, required repairs, etc. on attached figures.
EROSION AND SEDIMENT CONTROLS YES NO COMMENTS N/A
Are the control measures called for on grading and erosion control plans installed on the site in the proper locations?
Are all on-site operational storm drain inlets protected from sediment inflow?
Are sediment control measures (traps, filters, barriers, etc.) being maintained effectively?
Are temporary soil stockpiles covered to prevent erosion?
Are stockpiles of other granular materials covered, contained or bermed to prevent erosion?
Is there any evidence of erosion (rills, gullies, etc.) on cut or fill slopes or at the outlets of drains or swales?
Is there any evidence of sediment or sediment-laden runoff leaving the site?
Is there evidence of dewatering effluent leaving the site (other than permitted discharges)?
Is there any evidence of sediment, debris or mud deposits or public roads or rights-of-way near the site access points?
Are there any areas of bare, unprotected soil that require stabilization to prevent erosion?
Do any seeded or landscaped areas require maintenance, irrigation or fertilization to provide more effective cover?
CONSTRUCTION SITE INSPECTION FORM
CHEMICAL AND WASTE CONTROLS YES NO COMMENTS N/A
Are chemicals (paints, fuels, concrete mix, fertilizers, etc.) being stored properly and prevented from contacting storm water?
Are waste products (building materials, wood, sheet metal, broken concrete or paving, paints, etc.) being disposed of properly or recycled?
Are storm drain inlets in the vicinity of the site protected from inflow during saw cutting, sealing and paving, and building washing operations? Is all heavy equipment parked in a designated area, well away from storm drain inlets?

If equipment must be repaired or maintained on site, are drip pans, absorbent pads, berms, or other methods used to prevent contamination of soil or runoff?
Are spill cleanup materials stockpiled close to hazardous material storage areas?
Are spills being cleaned up properly and promptly (using dry cleaning methods, as appropriate)?
Are there adequate trash receptacles for containing solid wastes generated on site, and are they covered during the rainy season?
Are toxic materials being stored on site? If yes, are all materials properly listed in SWPPP Appendix?
Is there any evidence of chemical spills or leaks (stains, sludge, etc.) on site?
Is there any evidence of chemicals, contaminated runoff, litter, or blowing debris or dust leaving the site?

CONSTRUCTION SITE INSPECTION FORM
CHEMICAL AND WASTE CONTROLS YES NO COMMENTS N/A

Is there any evidence of chemical wastes, slurries, wash waters, vehicles, fluids, or other discharges entering storm drain inlets?
Is there any evidence of lawn clippings, pruning waste or yard waste being disposed of in the street, gutters or storm drain inlets?

OTHER COMMENTS:

I herby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated into Specification Number 1926A, is in compliance with the Contract drawings and specifications, can be installed in the allocated spaces, and is submitted for District (record/approval)

Certified by: _____ Date: _____

2185 Ogulin Canyon Road
Water Availability Analysis
June 2021

The subject property is a 21.25-acre parcel located at 2185 Ogulin Canyon Road in Clearlake, California (APN 010-044-17).

The proposed project is a cannabis processing and cultivation facility with 10,000 ft.^{2} of manufacturing, processing, distribution buildings (2 buildings - 5,000 ft.^{2} each), a 3,000 ft.^{2} office and retail delivery building, and ten (10) - 25' x 75' mixed light cultivation greenhouses.

A. Water for both domestic and irrigation uses will be delivered from an existing permitted water well. The well is approximately 375 feet deep and has a capacity of 80 gallons per minute (see attached well report).
B. The water system will use ground water pumped from the well directly into five (5) - 10,000-gallon water tanks for distribution to the building(s) plumbing system and to the greenhouses for irrigation. Additional water tanks may be installed in the area of the greenhouses if necessary.
C. A water meter will be installed in the water system and consumption will be logged daily. Water use efficiency will be analyzed for the previous year and a water budget will be generated for each upcoming grow cycle.
D. The California Department of Food and Agriculture (CDFA) in 2017 reported the following regarding the water use for cannabis. "According to Hammon et al. (2015), water use requirements for outdoor (mixed light) cannabis production (25-35 inches per year) are generally in line with water use for other agricultural crops, such as corn (20-25 inches per year), alfalfa (30-40 inches per year), tomatoes (15-25 inches per year), peaches (30-40 inches per year), and hops (20-30 inches per year).
E. The following water use estimate is from the CDFA - CalCannabis Environmental Impact Report (CDFA 2017) = 3,000 gallons per day for 1 acre of cannabis canopy. The combined land area associated with the 10 proposed greenhouses is less than .5 acre. The daily requirement is about 1 gallon of water per minute for .5 acres of cannabis canopy. Using 1,500 gallons per day for .5 acre of cannabis canopy, 300 grow days annually, the annual irrigation water demand for the project is estimated to be 450,000 gallons per year.
F. Water demand for the light industrial - warehouse and distribution uses is estimated using the Florida Department of Revenue (FDOR) database of property-based information for every parcel of land in the state. This database is publicly available free of charge from the FDOR website. This data indicates that a 13,000 square foot light industrial use will use slightly over 11,000 gallons of water per month or 132,000 gallons/year.
G. The estimated total water demand for the project is 582,000 gallons per year (450,000 gallons+132,000 gallons). The yield of the well on the property is 80 gallons per minute,

with a capacity in excess of 9.9 million gallons per year (40 hours/week x 52 weeks/year x 80 gallons/minute).

H. The facility will implement water conservation practices, including:
- Selection of plant varieties that are suitable for mixed light cultivation.
- The use of driplines and drip emitters (instead of spray irrigation).
- Mulch to reduce evaporation.
- Water application rates modified from data from soil moisture meters and weather monitoring.
- Rooftop rainwater collection (where feasible and permitted).
- Shutoff valves on hoses and water pipes.
- Daily visual inspections of irrigation systems.
- Immediate repair of leaking or malfunctioning equipment.
- Water metering and budgeting.
- Practices to prevent discharges from water supply equipment.
- Water application rates minimized as necessary to prevent runoff and water equipment leaks repaired immediately.
- Water filtration systems to be installed.
- Tanks will supply gravitational head to the irrigation system. PVC pipes will deliver the water to the plants.
- Mixing tanks will be used to mix liquid fertilizers, which will then be injected into the irrigation system supply lines.
- At each planting station, black polyvinyl flexible tubes and drip emitters will be used to irrigate the plants.

I. Groundwater – The following information is from: ***Lake County Watershed Protection District Lake County Groundwater Management Plan - March 31, 2006 - page 2-24 to 27.*** The project site is in the Burns Valley Groundwater Basin.

Burns Valley Basin is in the Shoreline Inventory Unit. The Franciscan Formation borders the Burns Valley Basin on the north, Clear Lake borders the basin on the west, and the Cache Formation borders the basin on the south and east.

Water-Bearing Formations:

Quaternary Alluvium

The valley lowlands contain stream channel gravel and adjacent floodplain deposits. These lowland deposits are Quaternary Alluvium and are composed of silt, sand, and gravel. The southern end of the valley has a maximum thickness of approximately 50 feet (DWR 2003). Groundwater in this formation is unconfined and typically provides water for domestic use.

Quaternary Terrace Deposits

Quaternary Terrace Deposits have been deposited on the sides of the alluvial plain in the Burns Valley Basin. The terrace deposits are approximately 15 feet above the valley floor and slope up the valley to a similar elevation as the foothill exposures of the Cache Formation. Groundwater in this formation is not well understood.

Lower Lake Formation

The Lower Lake Formation, consisting of lake deposits, underlies the alluvial and terrace deposits in the Burns Valley Basin. The formation consists of fine sands, silts, and thick interbeds of marl and limestone (Rymer 1981) and has a maximum thickness of 200 feet (DWR 2003). The formation has low permeability and provides water to wells at up to a few hundred gallons per minute (DWR 2003).

Groundwater Hydrogeology

The Watershed Protection District monitors one well in the Burns Valley Basin. The monitoring well indicates that groundwater levels fluctuate from 2 feet below ground surface in the spring to 10 feet below ground surface in the fall. The well also indicates that water levels rose in the Burns Valley Basin in 1981-1983. No information on groundwater movement is available. DWR estimates the useable storage capacity to be 1,400-acre feet (DWR 1960). Average-year agricultural groundwater demand in the Burns Valley basin is approximately 14 acre-feet per year.

Groundwater Quality/Inelastic Land Surface Subsidence

DWR monitors a number of wells for water quality in the Burns Valley Basin. Monitoring is not extensive enough to determine trends in groundwater quality nor the overall character of groundwater in the basin. Information was not available from DHS for the High Valley Groundwater Basin. Current information regarding inelastic land surface subsidence is unavailable.

Groundwater Wells

There are 86 domestic wells and 13 irrigation wells in the Burns Valley Basin. Approximately 50 percent of domestic wells are shallower than 75 feet deep, and approximately 50 percent of irrigation wells are shallower than 250 feet deep.

Conclusion - Water Availability

There is adequate water availability for the 2185 Ogulin Canyon Road Cannabis Processing and Cultivation Project.

June 15, 2021

Richard Knoll Consulting
825 South Main Street
Lakeport, California 95453
707-349-0639
richardk2255@hotmail.com

COUNTY OF LAKE
HEALTH SERVICES DEPARTMENT
Division of Environmental Health
922 Bevins Court, Lakeport, CA 95453-9739
Telephone 707/ 263-1164 FAX: 263-1681

Denise Pomeroy
Health Services Director

Erin Gustafson
Public Health Officer

Jasjit Kang
Environmental Health Director

SEAL WITHOUT WITNESS

Permit Number: WE 5569 AG

Site Address: 2185 Ogulin Canyon Rd. clearlake CA

Assessor's Parcel No: 010 - 044 - 17

Owner Name: Ogulin Hills Holdings

Date: 4-1-21

REASON FOR SEAL WITHOUT WITNESS:

☐ **Emergency Seal – Explain:** _____

☒ **Inspector unable to witness**

☐ **Other:** _____

IMPERMEABLE LAYER in which annular space terminates:

21' **at a depth of** 23' **feet.**

SEALANT USED: Bentonite clay with concrete cap
METHOD OF PLACEMENT: Poor Down Hole Mix concrete cap

I hereby certify that I have installed the annular seal in accordance with the provisions of the Lake County Well Ordinance and unless otherwise specified in the Lake County Well Ordinance, with the California Department of Water Resources Bulletin 74-81 or as modified by subsequent revisions or supplements.

DRILLING CONTRACTOR SIGNATURE: _____

COMPANY: Will Peterson Well Drilling **LICENSE NO:** 1009053

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

Page 1 of 1

Owner's Well Number 1

Date Work Began 3/24/2021 Date Work Ended 3/25/2021

Local Permit Agency Environmental Health

Permit Number WE 5569 AG Permit Date 2/22/2021

State of California
Well Completion Report

Refer to Instruction Pamphlet

No. XXXXXX

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation: ● Vertical ○ Horizontal ○ Angle Specify

Drilling Method: Air Rotary Drilling Fluid: na

Depth from Surface Feet	to Feet	Description: Describe material, grain size, color, etc
0	40	Brown Clay, some gravel
40	380	cemented Franciscan gravels

Total Depth of Boring 380 Feet

Total Depth of Completed Well 375 Feet

Well Owner

Name Oguln Hills Holdings

Mailing Address 637 Lindaro St. Ste 201

City San Rafael State CA Zip 94901

Well Location

Address 2185 Oguln Canyon Rd.

City Clearlake County Lake

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

Datum Dec. Lat. Dec. Long.

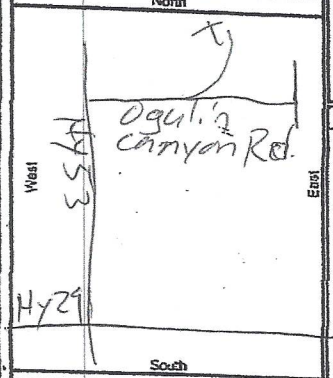
APN Book 010 Page 044 Parcel 17

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)

North



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

● New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "Destruction"

Planned Uses

● Water Supply
☐ Domestic ☐ Public
☒ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 280 (Feet below surface)

Depth to Static Water Level 280 (Feet) Date Measured 3/25/21

Estimated Yield * 80 (GPM) Test Type Air Lift

Test Length 2 (Hours) Total Drawdown (Feet)

*May not be representative of a well's long term yield.

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (inches)	Type	Material	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size If Any (inches)
0	280	9	F480	PVC	1/4"	4 1/2	na	na
280	375	9	F480	PVC	1/4"	4 1/2	PERF	.035

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	1	Concrete	Seal
1	23	bentonite	Seal
23	375	5/16 Pea	gravel pack

Attachments

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analyses
☐ Other

Attach additional information, if needed.

Certification Statement

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief

Name Will Peterson Well Drilling
Person, Firm or Corporation

P.O. Box 1095 Kelseyville CA 95451
Address City State

Signed [signature] 4-1-21
C-57 Licensed Water Well Contractor Date Signed

1009053
C-57 License Number

DWR 188 REV 1/2005

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

OWNER

OGULIN HILLS HOLDINGS, LLC
BRIAN D. PENSACK
637 LINDARD ST., SUITE 201
SAN RAFAEL, CA 94901

SITE PLAN DATA

AREA OF PROPERTY	21.25 ACRES TOTAL
ZONING	C-4 CITY OF CLEARLAKE
FLOOD ZONE	X

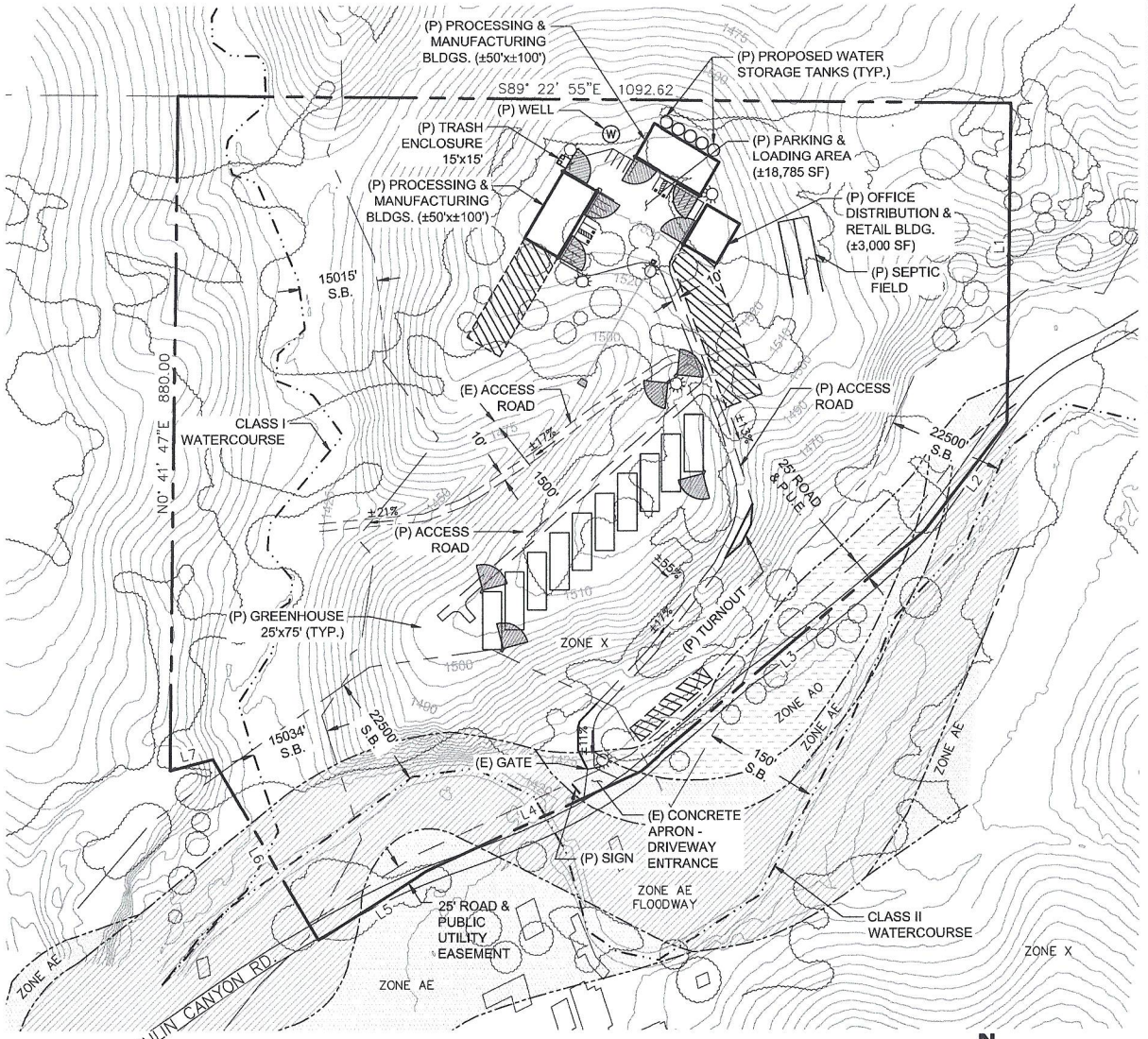
NOTES

1) THIS IS NOT A BOUNDARY SURVEY. ALL LOT LINES SHOWN ARE BASED ON A.P.N. MAP.

Parcel Line Table		
Line #	Length	Direction
L1	417.23	N0° 43' 08"E
L2	176.50	N37° 35' 16"E
L3	487.57	S50° 02' 51"W
L4	310.04	N65° 13' 21"E
L5	167.51	S57° 33' 36"W
L6	273.07	N30° 16' 00"W
L7	57.82	N75° 56' 03"E

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- (P) ACCESS ROAD/DRIVEWAY
- (E) ACCESS ROAD/DRIVEWAY
- (E) TREE/BRUSH LINE
- FEMA FLOOD ZONE BOUNDARY
- (P) THERMAL CAMERA
- (P) LIGHT POLE
- (P) BUILDINGS
- (P) GREENHOUSES
- AREA FOR FUTURE BUILDINGS
- ZONE AE
- ZONE AE FLOODWAY
- ZONE AO
- ZONE X



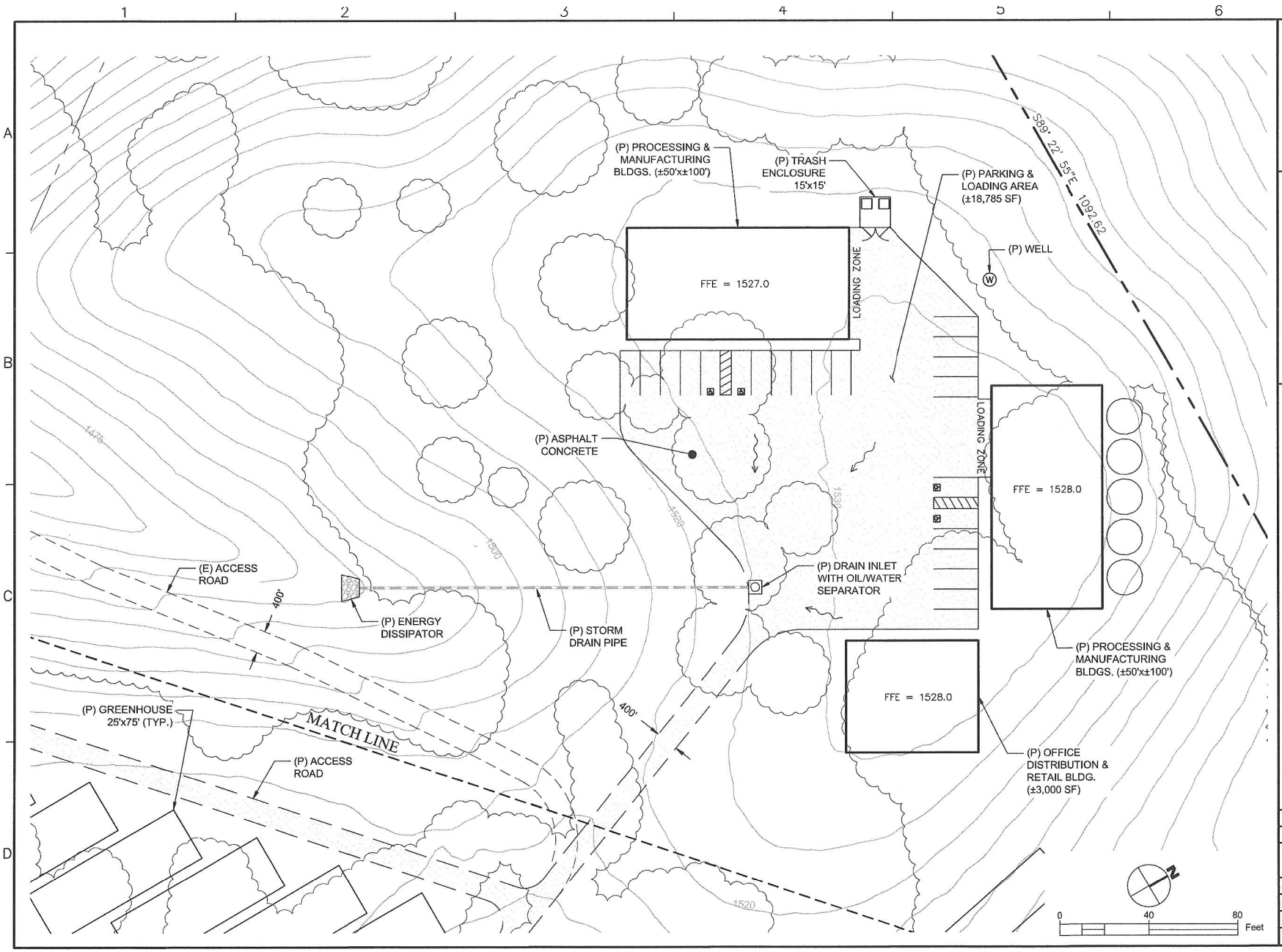
SUBMITTED TO:
CITY OF CLEARLAKE
COMMUNITY DEVELOPMENT DEPT.
14050 OLYMPIC DRIVE
CLEARLAKE, CA 95422

VanDerWall Engineering, Inc.
PO BOX 431
KELSEYVILLE, CA 95451
707-279-4887

Ogulin Cannabis Facilities
SITE PLAN
APN: 010-044-17
2185 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

DATE	DEC 2020
PROJ	20-60
DWG	
SHEET	1 OF 2



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VanDerWall Engineering, Inc.
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KELSEYVILLE, CA 95451
707-279-4887

Ogulin Cannabis Facilities

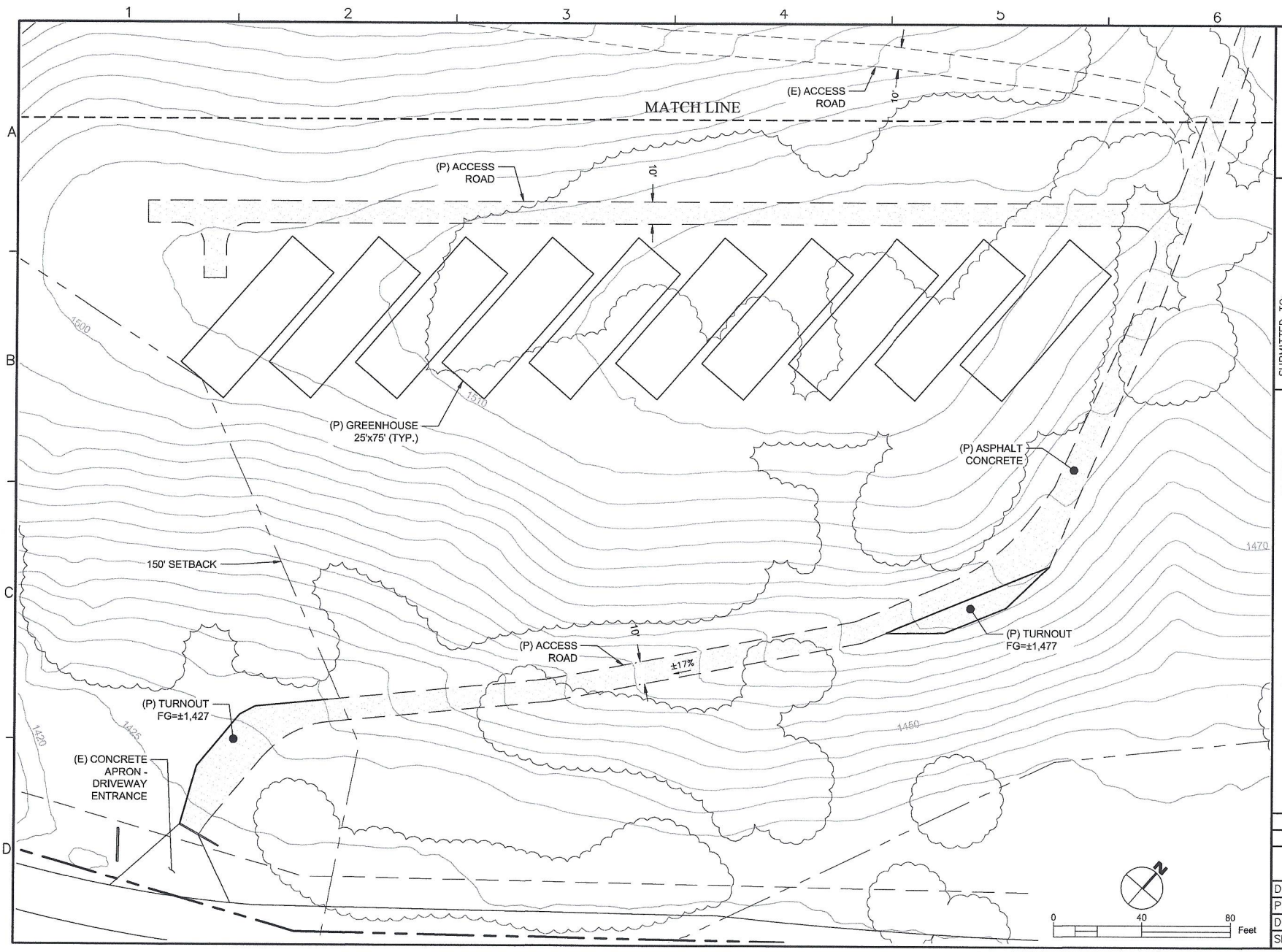
PRELIMINARY GRADING PLAN

APN: 010-044-17

2185 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	DEC 2020
PROJ	20-60
DWG	
SHEET	2 OF 4



SUBMITTED TO:
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Ogulin Cannabis Facilities

PRELIMINARY GRADING PLAN
APN: 010-044-17
2185 Ogulin Canyon Road
CLEARLAKE, CALIFORNIA

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

DATE	DEC 2020
PROJ	20-60
DWG	
SHEET	3 OF 4

Attachment B - Biological Assessment

JACOBSZOON & ASSOCIATES, INC.

natural resource planning & management

Biological Assessment Report

Prepared For:

Erin McCarrick
2250 Ogulin Canyon Road
Clearlake, CA 95422

APN: 010-044-190

Prepared by Jacobszoon & Associates, Inc.

Becca Cosmero
Environmental Technician
becca@jaforestry.com

Date: May 6, 2021

117 Clara Ave. Ukiah, California 95482
707-485-5544 www.jaforestry.com fax: 707-485-5577

Table of Contents

Section 1.0: Introduction

This biological assessment was prepared by Jacobszoon and Associates Inc. for Erin McCarrick for the purpose of obtaining a City of Clearlake commercial cannabis permit and CalCannabis State cultivation license. The project site is located approximately 3 miles Northeast of Clearlake within Section 14, Township 13N, Range 7W, Mount Diablo Base and Meridian, in the Lower Lake USGS 7.5-minute quadrangle at 2250 Ogulin Canyon Rd Clearlake, CA, 95422, APN: 010-044-190 (Appendix D: Map 1: Vicinity; Map 2: Parcel Map). A site visit was conducted on April 19, 2021 for proposed areas for development in relation to cannabis.

The purpose of this study was to identify and map areas within the parcel that are potential sensitive natural communities and to locate special-status plants and special-status animal habitats to determine if they would be directly or potentially impacted by the existing project or any proposed expansions. The Study Area referred to within this report comprises a combined area of approximately 12.97 acres and includes a residential structure, two graded areas, an area containing ornamental mulberry trees proposed for removal for greenhouse development, and a Class III watercourse. (Appendix C: Photographs: Photos: 1-5; Appendix D: Map 3: Study Area).

The Study Area is divided into five (5) study areas based generally on geographic arrangement, biological communities present and/or land use (see Appendix D: Map 3, Study Area):

- Study Area 1 consists of the residential structure that is intended for use as an office with a nursery located within the garage.
- Study Area 2 consists of a proposed cultivation location where the island of mulberry trees centered in the driveway. A 10,000 square foot greenhouse is proposed for development.
- Study Area 3 consists of a graded area adjacent to the proposed 10,000 square foot greenhouse that will contain a small processing building.
- Study Area 4 consists of a 75,000 square foot area proposed to house either 25,000 or 30,000 square feet of greenhouse for cultivation.
- Study Area 5 consists of a Class III watercourse spanning the southeast corner of the parcel.

This report includes the following:

- Regulations and Project Description (Section 2)
- Field Survey Methodology (Section 3)
- Study Area Setting (Section 4)
- Field Survey Results (Section 5)
- Assessment Summary and Recommendations (Section 6)
- Tables of Special-Status Plants and Wildlife within CNDDB nine quads (Appendix A)
- List of Species Observed (Appendix B)
- Representative Photographs of Study Area (Appendix C)
- Supporting Maps (Appendix D)
- Supporting Documents (Appendix E)

Section 2.0: Regulations and Descriptions

2.1 Regulatory Setting

In addition to the requirements of the City of Clearlake's Ordinance, the project shall comply with Federal, State, and local regulations designed to protect sensitive natural resources. The following natural resources are protected under one or more of several Federal and/or State regulations and should be considered when designing and/or implementing the proposed project within the Study Area:

Essential Fish Habitat: protected through changes to the Magnuson-Stevens Fishery Conservation and Management Act to maintain sustainable fisheries in the United States, administered by National Marine Fisheries Service (NMFS):

- Includes habitats (rivers, creeks, estuaries) that may support anadromous fish (fish migrating from ocean habitat into freshwater river habitat), as well as commercially and/or ecologically valuable fishes.

Local Regulations: The City of Clearlake's Marijuana Dispensary Regulations (Article 5-20 Sec. 1-27) stipulates and outlines rules set forth by the City Council for the purpose of the cultivation of cannabis.

- The City of Clearlake Code Ordinance No. 201-2017, Amending Article 5-20 of the Clearlake Municipal Code provides parameters for commercial cannabis cultivation within the City and definitions dispensary, medical marijuana collective, and bud tending room. Additionally, the Ordinance describes subcategories including but not limited to Enforcement, Development, Standards and Restrictions, Permits Required, and Development Standards for the cultivation of commercial cannabis within the City.

Streams, Lakes, and Riparian Habitat: protected under the California Fish and Game Code (CFGC), administered by the California Department of Fish and Wildlife (CDFW):

- Includes creeks and rivers (bodies where water flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life), and vegetation adjacent to and associated with (riparian habitat).

Waters of the State: protected under the State Water Resources Control Board (SWRCB) Cannabis General Order (CANGO).

Waters of the U.S.: protected under the Clean Water Act (CWA), administered by the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps):

- Includes wetlands, streams, rivers, and other aquatic habitats meeting the guidance issued by the Corps.

2.2 Natural Communities and Sensitive Natural Communities

Sensitive Natural Communities: protected under the California Fish and Game Code (CFGC), administered by California Department of Fish and Wildlife (CDFW 2020):

- Includes terrestrial vegetation or plant communities that are ranked by NatureServe and considered "threatened" or "endangered" by CDFW, lists of such are included in *List of Vegetation Alliances and Associations* (CDFW 2020).

2.3 Special-Status Species

Special-status Plant and Wildlife Species including Critical Habitat: protected under one or more of the Federal Endangered Species Act (ESA), California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), administered by the U.S. Fish and Wildlife Service (USFWS), and/or CDFW:

- Includes plants listed under the ESA and/or CESA, or those plants ranked by the California Native Plant Society (CNPS) as Rank 1, 2, 3 and 4.

- Includes wildlife listed under the ESA and/or CESA, and wildlife listed by CDFW as Species of Special Concern, Fully Protected Species, and/or Special-status including Invertebrates, Birds of Conservation Concern listed by USFWS, Species of Concern listed by National Marine Fisheries Service (NMFS), Western Bat Working Group (WBWG).

Section 3.0: Field Survey Methodology

3.1 Assessment Methods

The biological resource assessment is designed to identify sensitive communities within the Study Area and determine the existence or potential occurrence for special-status species. The assessment is also designed to address the potential for cumulative impacts to biological resources that may occur as a result of the project and to make recommendations to reduce or mitigate potential impacts.

The biological resource assessment includes the analysis and comparison of existing habitat conditions within the Study Area and the documented range and habitat requirements of sensitive plant and wildlife species described in CDFW's California Wildlife Habitat Relationships System (CWHR).

Jacobszoon & Associates Inc. environmental technician Becca Cosmero conducted a biological resource assessment of the Study Area on April 19, 2021, consisting of approximately three (3). The Study Area was assessed to document: (1) the on-site plant communities, (2) existing conditions and their ability to provide suitable habitat for any special-status plant or wildlife species, and (3) if sensitive biological communities (e.g. wetlands, vernal pools) are present.

Plant species observed during the site assessment were recorded and are listed in Appendix B. Plants listed in Appendix B were identified using *The Jepson Manual: Vascular Plants of California 2nd Edition* (Baldwin et al. 2012) to the taxonomic level necessary to determine rarity.

The names provided in this biological assessment report follow *The Jepson Flora Project* (JFP 2020). It is important to note the assessment was conducted outside of the blooming period for some plants within the vicinity of the Study Area and does not constitute a full and seasonally appropriate botanical assessment.

3.2 Database and Resource Descriptions

Prior to conducting field surveys, available reference materials were reviewed, including the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) *Web Soil Survey,* the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), the Foster Mountain 7.5' USGS quadrangle topographic maps, and the most recent available aerial imagery. The 100-year flood zone was assessed using the Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer (NFHL). The location of streams and watercourses within the project vicinity were reviewed using datasets from California Streams and the California Department of Forestry and Fire Protection (CAL FIRE).

Existing vegetative communities were reviewed using CDFW's Vegetation Classification and Mapping Program (VegCAMP) data for the potential existence and location of sensitive biological communities including Mendocino Cypress (*Hesperocyparis pygmaea*) and related sensitive vegetation. Where VegCAMP data was not available, existing vegetative communities were reviewed using USDA Forest Service Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) data.

Databases queried for the occurrence of special-status species include the USFWS Information for Planning and Consultation (IPaC), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (online edition, v8-03 0.39), and the California Department of Fish and Wildlife California Natural Diversity Database (CNDDB) Spotted Owl Data Viewer, RareFind and Quick Viewer processed and unprocessed data (online edition, v5.96.99). The CNDDB consists of mapped overlays of all known populations of sensitive plants and wildlife. The database is continually updated with new sensitive species population data.

The CNPS database produces a list of sensitive plants that have population occurrences registered within the scoping range. Various habitat characteristics are included with each listed species, including location of the Study Area with regard to the geographic range of sensitive plant species, location(s) of known populations of sensitive plant species as mapped in the CNDDB, soils of the Study Area, elevation, presence/absence of special habitat features (vernal pools, serpentine/volcanic soils, etc.) and plant communities existing within the Study Area.

While use of the CNPS inventory does not eliminate the need for an in-season botanical survey, it can, when used in conjunction with other information, provide a strong indication of the suitability of a site as habitat for sensitive plant species. The CNDDB consists of mapped overlays of all known populations of sensitive plants and wildlife (Appendix D, Map 6: CNDDB Vicinity). The database is continually updated with new sensitive species population data.

California Wildlife Habitat Relationships (CWHR) Predicted Habitat Suitability is a dataset accessed through CNDDB BIOS Commercial/Spotted Owl Viewer that represents areas of suitable habitat within species' documented ranges. Examination of the CWHR dataset was applied when: 1) the data is available for the species of concern, and 2) when there is a moderate to high potential for an animal to occur on or within 100 feet of the Study Area. CWHR examines whether the areas being examined in the biological assessment is habitat which *may* support a species of special concern. Habitat suitability ranks of Low (less than 0.34), Medium (0.34-0.66) and High (greater than 0.66) suitability are based on the mean expert opinion suitability value for each habitat type for breeding, foraging, and cover (CDFW 2021).

3.3 Database Resource Assessment

A scoping of the CNDDB and CNPS Inventory of Rare and Endangered Plants was performed to identify existing and historical occurrences of special status species and sensitive terrestrial communities within the project vicinity.

The scoping extended to nine quads surrounding and including the Lower Lake 7.5-minute USGS Quadrangle and included the Lower Lake, Benmore Canyon, Clearlake Highlands, Wilson Valley, Clearlake Oaks, Wilbur Springs, Whispering Pines, Middletown, Jericho Valley 7.5-minute USGS Quadrangles. In addition, a 0.25-mile radius scoping area was completed for the identification of northern spotted owl (*Strix occidentalis caurina*, NSO) Activity Centers. No spotted owl territories (Activity Centers) are located within the 0.25-mile buffer.

Prior to the site visit, the databases listed above were accessed to determine whether sensitive biological communities, special-status species or other sensitive areas were documented within the vicinity of the Study Area (Appendix D: Map 6: CNDDB Vicinity). During the site visit, existing habitat conditions were evaluated and used to assess the potential for presence of special-status species. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

- No Potential: Habitat on and adjacent to the Study Area is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Study Area is unsuitable or of very poor quality. The species is not likely to be found on-site.
- Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Study Area is suitable. The species has a moderate probability of being found on-site.
- High Potential: All the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the Study Area is highly suitable. The species has a high probability of being found on-site.
- Present: Species is observed on the site or has been recorded (i.e. CNDDB) on-site recently.

A complete list of all special-status species and communities listed in the nine-quad scoping of the CNDDB and CNPS as well as those listed in an official USFWS IPaC search of the project area is included in Appendix A: Scoping Table of Special-Status Species and Communities and Potential to occur within the Study Area, and in supporting documents within Appendix E.

3.4 Biological Communities

Biological communities present within the Study Area were classified based on existing plant community descriptions described by Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986), USDA Forest Service Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) system, and the Manual of California Vegetation Online Edition (MCV2 Alliances, CNPS 2021b).

However, in some cases it may be necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

The currently accepted vegetation classification system for the state that is standardly used by CDFW, CNPS, and other state and federal agencies, organizations, and consultants for survey and planning purposes is the *Manual of California Vegetation* (MCV; Sawyer, Keeler-Wolf, and Evans 2009). Unlike Holland, this vegetation classification system is based on the standard National Vegetation Classification System (NVCS) and includes alliances (a floristically defined vegetation unit identified by its dominant and/or characteristic species) and associations (the finer level of classification beneath alliance).

Although the CNDDB still maintains records of some of the old Holland vegetation types, these types are no longer the accepted standard, and the CDFW Vegetation Classification and Mapping Program (VegCAMP) has published more recent vegetation lists for the state based on a standardized vegetation classification system that is currently being developed for California and which is consistent with the MCV classification system. Global and state rarity rankings have been assigned for various types on the recent VegCAMP lists.

3.4.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other Federal, State, and local laws, regulations, and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species, and are described in Section 5.1.

3.4.2 Sensitive Biological Communities

Sensitive biological communities include those that are listed in CNDDB as well as MCV2 alliances or associations with state ranks of S1-S3. Aquatic resources (e.g. watercourses, ponds, wetlands, vernal pools, etc.) are also considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Sources for assessing sensitive terrestrial or aquatic natural communities include *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), *List of Vegetation Alliances* (CDFW, 2020), *A Manual of California Vegetation* (CNPS 2021b), California Streams, USFWS National Wetlands Inventory (NWI), and National Flood Hazard Layer (NFHL).

Sensitive Natural Communities

CDFW considers any MCV2 alliance or association with a state rank of S1-S3 a sensitive natural community. Global and state rankings are defined below.

Global Ranking:

- ♣ G1-Critically Imperiled: At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- ♣ G2-Imperiled: At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- ♣ G3-Vulnerable: At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- ♣ G4-Apparently Secure: Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- ♣ G5-Secure: Common; widespread and abundant.

State Ranking:

- ♣ S1-Critically Imperiled: Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
- ♣ S2-Imperiled: Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
- ♣ S3-Vulnerable: Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
- ♣ S4-Apparently Secure: Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
- ♣ S5-Secure: Common, widespread, and abundant in the state.

Critical Habitat

Critical habitat is a term defined by the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. Federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species, but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

Aquatic Resources

Watercourses and other waterbodies were classified using guidance from the *California Forest Practice Rules 2020* (FPR). Wetlands are determined using the USFWS National Wetland Inventory (NWI) database and are defined in the 1987 USACE Wetlands Delineation Manual as "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas. Wet areas are areas with observed hydrophytic vegetation and/or other hydrologic indicators that suggest the area is influenced by ponding or flooding for a significant amount of time throughout the growing season. Wet areas should be given the same protections as wetlands for the purposes of this assessment until a wetland delineation is conducted to confirm the presence and extent of wetlands.

3.5 Special-status Species

Special-status plants (native, vascular and non-vascular) and animals assessed are of limited abundance in California, with known occurrence or distribution in Mendocino County, and were derived from the following lists:

- Federal listed or threatened or endangered plants or species of concern (FT, FE, FSC)
- California State listed or rare, threatened, or endangered plants or species of concern (SR, ST, SE, SP, SSC)
- Board of Forestry Sensitive (BFS)
- California Department of Fish and Wildlife (CDFW) Status animals: Fully Protected, Species of Special Concern and Watch List (FP, SSC, WL)
- California Native Plant Society Rare Plant Rank (CRPR) list 1A species (plants presumed extirpated in California, and either rare or extinct elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 1B species (plants rare, threatened or endangered in California and elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 2A species (plants presumed extirpated in California but more common elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 2B species (plants rare, threatened, or endangered in California but more common elsewhere)
- California Native Plant Society Rare Plant Rank (CRPR) list 3 (plants which more information is needed- a review list)

- California Native Plant Society Rare Plant Rank (CRPR) list 4 (plants of limited distribution – a watch list)

Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, is rare, threatened, and/or endangered under the following definitions:

> A species, subspecies, or variety of plant is **"endangered"** when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is **"threatened"** when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is **"rare"** when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its habitat continues to deteriorate.

The site assessment is intended to identify the presence or absence of suitable habitat for special-status species known to occur within the Study Area. The site visit does not constitute a full season protocol-level survey and is not intended to determine the actual presence or absence of a species. If a special-status species is observed during the site visit, its presence will be recorded and discussed. All plant and wildlife species observed were recorded and are included in Appendix B.

Section 4.0: Study Area Setting

4.1 Climate and Hydrology

The project site is located approximately 3 miles northeast of Clearlake, CA within Section 11, Township 16N, Range 13W, Mount Diablo Base Meridian, in the Lower Lake USGS 7.5-minute quadrangle at 2250 Ogulin Canyon Road Clearlake, California 95422, APN: 010-044-190 (Appendix D: Map 1: Vicinity). The Study Areas contain one (1) Class III watercourse within the Kelsey Creek-Clearlake watershed (HUC 10-1802011603). The average annual precipitation falls between 25 to 35 inches, the average annual air temperature falls between 55 to 59 degrees F, and the average frost-free period ranges around 160 to 200 days.

4.2 Topography and Soils

The Study Area is located at approximately 880-1,680 feet in elevation and is underlain by three (3) soil mapping units, according to the United States Department of Agriculture, Natural Resources Conservation Service's *Web Soil Survey*: Manzanita Loam, 15 to 25 percent slopes (Map Unit Symbol 161); Phipps complex, 15 to 30 percent slopes (Map Unit Symbol 196); Phipps complex, 30 to 50 percent slopes (Map Unit Symbol 197). (Appendix D: Map 7, Soil Map). A description of the soil series are as follows:

Manzanita Loam, 15 to 25 percent slopes (Map Unit Symbol 161): This map unit covers 0.1 acres of the parcel and consists of very deep, well drained soils formed in alluvium. Permeability of this soil series is slow with an available water capacity from 7.5 to 10.5 inches. These soils have a severe hazard for erosion with rapid surface runoff. The elevation range is 1400 to 1600 feet in elevation.

Phipps complex, 15 to 30 percent slopes (Map Unit Symbol 196): This map unit covers about 0.1 percent of the parcel and consists of about 60 percent Phipps clay loam, loamy substratum, and 15 percent Phipps loam. Phipps clay loam and Phipps loam are deep, well-drained oils formed in alluvium. Permeability of this soil series is slow with an available water capacity from 8 to 12 inches. These soils have a severe hazard for erosion with rapid surface runoff. The subsoil has a high shrink-swell potential. These soils occur on uplifted, dissected hills and are susceptible to slumping and gullying. Native vegetation is mostly oaks and annual grasses. Included in this unit are small areas of Forbesville and Bally soils as well as small areas of olive grey clay soils that form deep, wide cracks when dry. The elevation range is 1100 to 2000 feet in elevation.

Phipps complex, 30 to 50 percent slopes (Map Unit Symbol 197): This map unit covers much of the property spanning 12.8 acres of the parcel. This map unit consists of about 50 percent Phipps clay loam, loamy substratum, and 15 percent Phipps loam. Included in this unit are small areas of Forbesville and Bally soils with small areas of olive gray clayey soils that form deep, wide cracks when dry. These soils occur on uplifted, dissected hills and are susceptible to slumping and gullying. Permeability of this soils series is slow with an available water capacity from 8 to 12 inches. These soils have a severe hazard for erosion with rapid surface runoff. Vegetation is mostly oaks and annual grasses such as wild oat or soft chess. The elevation range is 1100 to 2000 feet in elevation.

4.3 Biota and Land Use

Regionally, the Study Area has historically been used primarily for watershed and wildlife habitat, as well as for recreation areas and livestock grazing (USDA Web Soil Survey, 2021). The native vegetation is mostly interior live oak with scattered gray pine with sloped hillsides of annual grasses and forbs.

Section 5 provides a detailed account of the biological communities found on-site, including sensitive and non-sensitive biological communities and additionally the special-status flora and fauna with potential to occur within the Study Area.

Section 5.0: Field Survey Results

5.1 Biological Communities

The Study Area and immediate surroundings were assessed during a site visit on April 19, 2021 to determine local biological communities present and develop a comprehensive list of all plant and wildlife species observed. Biological communities referred to in this report include Holland 1986 descriptions, USFS CALVEG classifications, and the Manual of California Vegetation (MCV2) alliance descriptions.

Holland Descriptions:

The Study Area is within Blue Oak Woodland and Valley and Foothill Grassland habitat as best classified by the habitat classification system described by Holland 1986. Descriptions of these habitat types are as follows:

- Blue Oak Woodland: Highly variable woodland dominated by *Quercus douglasii,* usually including other oaks and *Pinus sabiniana*. Stands vary from open savannas with grassy understories to dense woodlands with shrubby understories. Usually found below 3000-4000 feet. Interdigitates on more mesic sites at lower elevations with Valley and Foothill Grasslands, where it is largely confined to north slopes and canyons.

- Valley and Foothill Grassland: Introduced, annual Mediterranean grasses and native herbs. On most sites the native bunch grass species, such as needle grass, have been largely or entirely supplanted by introductions. Stands rich in natives usually found on unusual substrates, such as serpentinite or somewhat alkaline soils.

USFS CALVEG Classifications:
According to USDA Forest Service CALVEG mapping delineation, the regionally dominant vegetation type within the Study Area is comprised of Annual Grasses & Forbs, Blue Oak, and Gray Pine (Appendix D: Map 4: CALVEG Classification). Descriptions of these vegetation types are as follows:

- Annual Grasses and Forbes: Small areas of dry grasslands are found scattered extensively throughout private lands and intermixed with agriculturally managed sites across the Coast Ranges. Species include introduced and native annual grasses such as Brome (*Bromus spp*.), Bluegrass (*Poa spp*.), Wildoats *(Avena spp*.), Fescue (*Vulpia spp*.), Dogtail (*Cynosurus spp*.), Barley (*Hordeum murinum*), Needlegrass (*Nasella spp*.), Oatgrass (*Danthonia spp*.), and a variety of forbs such as Checker Mallow (*Sidalcea spp*.), Brodiaea (*Brodiaea spp*.), Wild Hyacinth (*Dipterostemon spp*.), Yampah (*Perideridia spp*.) and Mariposa Lily (*Calochortus spp*.). Oregon White Oak (*Quercus garryana*) stands are often adjacent to some upland annual grasslands.

- Blue Oak Alliance: Blue Oak (*Quercus douglasii*) dominates this low elevation interior hardwood type, which generally occurs below about 2,700 feet in elevation. This type has been mapped most abundantly in the Clear Lake hills and valleys. It grades into the gray pine (*Pinus sabiniana*) alliance at its higher elevations. Other typical associates include Oregon white oak (*Q. garryana*), California black oak (*Q. kelloggii*), and low elevation shrubs such as chamise (*Adenostoma fasciculatum*), shrub oaks (*Quercus spp.*), and annual and perennial grasses.

- Gray Pine Alliance: Stands in which gray pine (*Pinus sabiniana*) is the dominant conifer are typically diverse and very open with a mixture of hardwoods such as Blue oak (*Quercus douglasii*), Oregon white oak (*Quercus garryana*), canyon live oak (Q*uercus chrysolepis*), Pacific madrone (*Arbutus menziesii*) and low elevation chaparral shrubs such as chamise (*Adenostoma fasciculatum*), shrub oaks (*Quercus spp*.), whiteleaf and common manzanitas (*Arctostaphylos viscida, A. manzanita)* and wedgeleaf ceanothus (*Ceanothus cuneatus*). Annual grasslands are sometimes found adjacent to gray pine stands and may form the ground layer in open stands. These are often associated with ultramafic soils.

MCV2 Alliances:
Biological communities observed were classified using the Manual of California Vegetation Online Edition (MCV2 Alliances, CNPS 2021b) (Appendix D: Map 5: MCV2 Alliance Classification). Three (3) MCV2 Alliance communities were observed on site:

- *Quercus douglasii* Forest and Woodland Alliance
- *Cercocarpus montanus* Shrubland Alliance
- *Nasella spp.-Melica spp.* Herbaceous Alliance

Please refer to Appendix C (Photographs: Photos: 6-10) for photographs of each MCV2 Alliance community. Detailed descriptions of these communities are as follows:

- *Quercus douglasii* Forest and Woodland Alliance (Blue Oak Woodland): *Quercus douglasii* (blue oak) is dominant or co-dominant in tree canopy with *Aesculus californica, Juniperus californica, Pinus sabiniana, Quercus agrifolia, Quercus lobata, Quercus wizlizeni.*
    - Vegetation Layers: Trees <20 m with conifers < 35 m; canopy is intermittent to continuous or savanna-like. Shrub layer is sparse to intermittent. Herbaceous layer is sparse or grassy and forbs are present seasonally.
    - Membership Rules:
        - *Quercus douglasii* >50% relative cover in the tree canopy, other hardwoods or conifers may be <30% relative cover in tree canopy.
    - Global Rarity Rank: G4
    - State Rarity Rank: S4

- *Cercocarpus montanus* Shrubland Alliance (Birch leaf mountain mahogany chaparral): *Cerocarpus montanus* is dominant or co-dominant in the shrub or small tree canopy with *Adenostoma fasciculatum, Adenostoma sparsifolium, Arctostaphylos glandulosa, Arctostaphylos glauca, Artemisia californica, Ceanothus crassifolius, Ceanothus cuneatus, Cercocarpus montanus ≥ 30% relative cover, and other chaparral shrubs may be equally important in cover, including Adenostoma fasciculatum and Ceanothus spinosus*.
    - Vegetation Layers: Shrubs < 5 meters; canopy is single or two tiered and open to continuous. Herbaceous layer is sparse or grassy.
    - Membership Rules:
        - Both *C. montanus* and *Eriogonum fasciculatum* between 30 and 60% relative cover in the shrub canopy.
        - *Cercocarpus montanus* > 30% relative cover with no other shrub species exceeding it in cover, or *C. montanus* and *Arctostaphylos glauca* with equal relative cover.
        - *Cercocarpus montanus* > 30% relative cover, and other chaparral shrubs may be equally important cover, including *Adenostoma fasciculatum* and *Ceanothus spinosus*.
    - Global Rank Rarity: G5
    - State Rank Rarity: S4

- *Nasella spp.-Melica spp.* Herbaceous Alliance (Needle grass- Melic grassland): *Melica californica, Melica torreyana, Nassella cernua, Nassella lepida* and/or *Nassella pulchra* is dominant or characteristically present in the herbaceous layer with other perennial grasses and herbs including *Aristida ternipes, Astragalus spp., Avena spp., Bromus spp., Calamagrostis koelerioides, Calochortus spp., Calystegia spp., Chlorogalum pomeridianum, Clarkia spp., Corethrogyne filaginifolia, Croton setigerus, Cryptantha spp., Daucus pusillus, Dichelostemma capitatum, Elymus glaucus, Eriogonum spp., Erodium spp., Eschscholzia californica, Festuca californica, Hirschfeldia incana, Holocarpha virgata, Hordeum brachyantherum, Koeleria macrantha, Lasthenia spp., Plantago spp., Poa secunda, Sanicula spp., Sisyrinchium bellum, Trifolium spp.* and/or *Vulpia spp.* Emergent trees and shrubs may be present at low cover .
    - Vegetation Layers: Herbs <1 mete; cover is open to continuous.
    - Membership Rules:
        - *Nassella pulchra* > 5% absolute cover as a characteristic to dominant species in the herbaceous layer.
        - *Nassella pulchra* usually > 10% relative cover of the herbaceous layer.
        - *Nassella pulchra* or *Nassella cernua* is characteristically present in the herbaceous layer with at least 2% absolute cover.
        - *Nassella pulchra* or other *Nassella sp*. has a clear presence in the stand with > 5% absolute cover in the herbaceous layer.
        - *Nassella cernua* > 30% relative cover in the herbaceous layer as a characteristic grass.
        - *Melica californica* and/or *Nassella pulchra* > 30% relative cover in the herbaceous layer. Other species including *Achnatherum lemmonii, Avena spp., Bromus spp., Hemizonia congesta, Lolium perenne, Plantago erecta,* and/or *P. lanceolata* may intermix as dominant, co-dominant or characteristic taxa in associations of this alliance.
        - *Melica torreyana* > 30% relative cover in the herbaceous layer and is commonly associated with serpentinite soils.
    - Global Rarity Rank: G3
    - State Rarity Rank: S3

A complete list of all plant and wildlife species observed within the Study Area was compiled during the site visit on April 19, 2021. The list of species observed is included in Appendix B: List of Species Observed. Biological communities observed within the Study Area during the site visit were classified using the MCV2 classification system and mapped, shown in Appendix D (Map 5: MCV2 Alliance Classifications).

5.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other Federal, State, and local laws, regulations, and ordinances. The Study Area is comprised of two (2) non-sensitive biological community, as classified under the MCV2 system:

• *Quercus douglasii* Forest and Woodland Alliance (Blue Oak Woodland): This community is the dominant habitat type occurring throughout the parcel and represents the margins of each Study Area. Global Rarity Ranking: G4; State Rarity Ranking: S4.

• *Cercocarpus montanus* Shrubland Alliance (Birch leaf mountain mahogany chaparral): Small stands of this alliance can be found along the margins of the dried Class III watercourse. Global Rarity Ranking: G5; State Rarity Ranking: S4.

Descriptions of these communities are listed above in section 5.1, Biological Communities, and include the Manual of California Vegetation (MCV2) alliance descriptions.

5.1.2 Sensitive Biological Communities

Sensitive biological communities include those that are listed in CNDDB as well as observed MCV2 alliances or associations with state ranks of S1-S3 and are listed on CDFW's *List of California Sensitive Natural Communities* (CDFW 2020). Aquatic resources (e.g. watercourses, ponds, wetlands, vernal pools, etc.) are also considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Two (2) sensitive biological communities were observed during the on-site assessment including purple needlegrass (*Nasella pulchra*) grassland and a Class III watercourse.

Sensitive Terrestrial Communities:

There was one (1) sensitive terrestrial community observed on site during the biological assessment on April 19, 2021. Sensitive terrestrial communities observed within the vicinity of the Study Areas are listed and discussed below:

- *Nasella spp.- Melica spp.* Herbaceous Alliance (Needle grass-Melic grass Grassland): This community represents the open grassland habitat found adjacent to Study Area 4 and 5 and comprising much of the grassland present within the property. Global Rarity Ranking: G3; State Rarity Ranking: S3.

Sensitive Mesic/Aquatic Communities:

Aquatic resources, communities, and habitats (e.g. watercourses, ponds, wetlands, vernal pools, etc.) are considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Aquatic habitats present within the Study Area could provide suitable aquatic or riparian habitats for sensitive flora and fauna.

One sensitive aquatic community is present within the Study Area and was observed and mapped on-site (Appendix D: Map 3, Study Area; Map 9, Aquatic Resource Protections). Watercourses and other waterbodies are classified using guidance from *the California Forest Practice Rules 2020* (FPR).

Watercourses: An unnamed Class III channel spans the southeastern corner of the parcel. This watercourse has historically been dry for approximately a decade. This watercourse contains a dry gravelly bottom and is surrounded by a blue oak woodland, grassland, and pockets of birch leaf mountain mahogany chaparral.

Recommendations to avoid or mitigate potential impacts to aquatic resources are discussed in Section 6.0, Assessment Summary and Recommendations.

5.2 Special-status Species

5.2.1 Special-status Plant Species

Upon review of the resource databases listed in Section 3.2, forty-one (41) special-status plant species have been documented within the vicinity of the Study Area. Please refer to Appendix A for a table of all special-status plant species which occur within a nine-quad search surrounding the Study Area and additional discussion of the potential for each species to occur within the Study Area. Special-status species documented within five miles of the Study Area are depicted in the CNDDB Vicinity map (Appendix D: Map 6, CNDDB Vicinity).

Of the forty-one (41) special-status plant species within the vicinity of the Study Area, twenty-one (21) special-status plant species have a moderate to high potential to occur within the Study Area. The remaining twenty (20) special-status plant species documented within the vicinity of the Study Area are unlikely to occur or do not have the potential to occur due to one or more of the following reasons:

- Hydrologic conditions (e.g., vernal pools, riverine) necessary to support the special-status plant species are not present within the Study Area.
- Edaphic conditions (soils, e.g., rocky outcrops, serpentinite) necessary to support the special-status plant species are not present within the Study Area.
- Topographic conditions (e.g., montane) necessary to support the special-status plant species are not present within the Study Area.
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present within the Study Area.
- Associated vegetation communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present within the Study Area.
- The Study Area is geographically isolated (e.g., outside of required elevations, coastal environment) from the documented range of the special-status plant species.
- Ecological conditions (last recorded observations, human-made or natural disturbance) have encroached on species to a point to cause presumed extinction.

The habitat requirements for the twenty-one (21) special-status plant species with moderate or high potential to occur within the Study Area is described in the table below:

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Plants			
bent-flowered fiddleneck *Amsinckia lunaris* Rank 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. Elevation ranges from 10 to 2609 feet (3 to 795 meters). An annual herb, the blooming period is from Mar-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
twig-like snapdragon *Antirrhinum virga* Rank 4.3	Chaparral, lower montane coniferous forest, often found in rocky openings. *A. virga* has a serpentine affinity (2.8, moderate). Elevation ranges from 328 to 6611 feet (100 to 2015 meters). A perennial herb, the blooming period is from Jun-Jul.	**Moderate Potential.** The Study Area contains marginal areas representing chaparral habitat with a gravelly-dry creek bottom amongst gray pine woodland that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
Konocti manzanita *Arctostaphylos stanfordiana ssp. elegans* Rank 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest, often on volcanic soils. Elevation ranges from 738 to 6004 feet (225 to 1830 meters). A shrub, the blooming period is from Mar-May.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland) within the elevation range for this species to utilize.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei* Rank 1B.1	Chaparral, lower montane coniferous forest (openings), rocky, serpentine sites, often on slopes and ridges. *A. stanfordiana* ssp. *raichei* has a serpentine affinity (2.6, moderate). Elevation ranges from 1591 to 3511 feet (485 to 1070 meters). A perennial evergreen shrub, the blooming period is from Feb-Apr.	**Moderate Potential.** The Study Area contains marginal areas of chaparral habitat along a gray pine woodland that may be supportive of this species; however, serpentine does not occur throughout the Study Areas.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Brewer's milk-vetch *Astragalus breweri* Rank 4.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland. Often in grassy flats, meadows moist in spring, and open slopes in chaparral. Commonly on or near volcanic or serpentine sites. *A. breweri* has a serpentine affinity (3.2, moderate). Elevation ranges from 296 to 2395 feet (90 to 730 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland, foothill grassland, with pockets of chaparral species) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Rattan's milk-vetch *Astragalus rattanii var. rattanii* Rank 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, often found on open grassy hillsides, gravelly flats in the valleys and gravel bars of stream beds. Elevation ranges from 99 to 2707 feet (30 to 825 meters). A perennial herb, the blooming period is from Apr-Jul.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and grassy hillsides) for this species to utilize.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
big-scale balsamroot *Balsamorhiza macrolepis* Rank 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, sometimes on serpentine (ultramafic). *B. macrolepis* has a serpentine affinity (2.5, strong indicator). Elevation ranges from 115 to 4807 feet (35 to 1465 meters). A perennial herb, the blooming period is from Mar-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species to utilize. Serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
small-flowered calycadenia *Calycadenia micrantha* Rank 1B.2	Chaparral, valley and foothill grassland, meadows and seeps, often found on rocky talus or scree, sparsely vegetated areas, roadsides and sometimes on serpentine. Elevation ranges from 1427 to 4610 feet (435 to 1405 meters). An annual herb, the blooming period is from Jun-Sep.	**Moderate Potential.** The Study Area does these habitat components along the margins of the dry watercourse and may therefore be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
pink creamsacs *Castilleja rubicundula var. rubicundula* Rank 1B.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, often in openings of chaparral or grasslands, sometimes on serpentine. Elevation ranges from 66 to 3002 feet (20 to 915 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Calistoga ceanothus *Ceanothus divergens* Rank 1B.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, often found in openings of chaparral or grasslands, sometimes on serpentine. Elevation ranges from 66 to 3002 feet (20 to 915 meters). *C. divergens* has a serpentine affinity (2.0, moderate). A shrub, the blooming period is from Feb-Apr.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
deep-scarred cryptantha *Cryptantha excavate* Rank 1B.1	Cismontane woodland, often found on sandy, gravelly, dry streambanks. Elevation ranges from 591 to 1231 feet (180 to 375 meters). An annual herb, the blooming period is from Apr-May.	**Moderate Potential.** The dry gravelly watercourse within the Study Area contains cismontane woodland margins and may be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta* Rank 1B.2	Valley and foothill grassland, often in fallow fields, sometimes along roadsides. *H. congesta* ssp. *congesta* has a weak serpentine affinity (1.3, weak). Elevation ranges from 17 to 1706 feet (5 to 520 meters). An annual herb, the blooming period is from Apr-Nov.	**Moderate Potential.** The Study Area contains grassland and roadsides that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Colusa layia *Layia septentrionalis* Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, scattered colonies in fields and grassy slopes in sandy or serpentine soil. Elevation ranges from 49 to 3609 feet (15 to 1100 meters). An annual herb, the blooming period is from Apr-May.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
bristly leptosiphon *Leptosiphon acicularis* Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 181 to 4922 feet (55 to 1500 meters). An annual herb, the blooming period is from Apr-Jul.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and grassland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Jepson's leptosiphon *Leptosiphon jepsonii* Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland often found in open-to-partially shaded grassy slopes on volcanic soil or the periphery of serpentine substrates (ultramafic). Elevation ranges from 181 to 2805 feet (55 to 855 meters. An annual herb, the blooming period is from Mar-May.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and grassland slopes) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Milo Baker's lupine *Lupinus milo-bakeri* Rank 1B.1	Cismontane woodland, valley and foothill grassland, often along roadsides, in ditches, dry gravelly areas along roads and along small streams. Elevation ranges from 1247 to 1411 feet (380 to 430 meters). An annual herb, the blooming period is from Jun-Sept.	**Moderate Potential.** The Study Area contains cismontane woodland with grasslands, roadsides, and gravelly dry stream banks that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
Mt. Diablo cottonweed *Micropus amphiboles* Rank 3.2	Valley and foothill grassland, cismontane woodland, chaparral, broadleaved upland forest, often on bare, grassy, or rocky slopes. Elevation ranges from 148 to 2707 feet (45 to 825 meters). The blooming period is Mar-May.	**Moderate Potential.** The Study Area contains grassland and woodland habitat occurring on slopes that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
cotula navarretia *Navarretia cotulifolia* Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland, often on adobe soils. Elevation ranges from 13 to 6004 feet (4 to 1830 meters). An annual herb, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains cismontane woodland and grassland within the elevation range that is supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
Jepson's navarretia *Navarretia jepsonii* Rank 4.3	Chaparral, valley and foothill grassland, cismontane woodland, often found on habitat edges, drying flats and sometimes on serpentine (ultramafic). Elevation ranges from 558 to 2805 feet (175 to 855 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area contains many habitat edges between the gravelly dry watercourse and cismontane or grassland habitat that may be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Keck's checkerbloom *Sidalcea keckii* Rank 1B.1	Cismontane woodland, valley and foothill grassland, often on grassy slopes in blue oak (*Quercus douglasii*) woodland or sometimes on serpentine-derived clay soils. Elevation ranges from 279 to 1657 feet (85 to 505 meters). *S. keckii* has a serpentine affinity (3, moderate). An annual herb, the blooming period is from Apr-May.	**Moderate Potential.** The Study Areas occur within a rolling blue oak woodland with conifers and grassland throughout that is supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
oval-leaved viburnum *Viburnum ellipticum* Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 706 to 4593 feet (215 to 1400 meters). A shrub, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.

No special-status plant species were observed within the Study Area during the Biological Assessment.

5.2.2 Special-status Animal Species

A total of thirty-eight (38) special-status wildlife species have been documented within the vicinity of the Study Area. Please refer to Appendix A for a table of all special-status wildlife species which occur within the vicinity of the Study Area and discussion of the potential for each species to occur within the Study Area. Special-status species documented within five miles of the Study Area are depicted in the CNDDB Vicinity map (Appendix D: Map 6, CNDDB Vicinity).

Of the thirty-eight (38) special-status wildlife species within the vicinity of the Study Area, fourteen (14) special-status wildlife species recorded have a moderate to high potential to occur within the Study Area. The remaining twenty-four (24) special-status wildlife species documented within the vicinity of the Study Area are unlikely to occur or do not have the potential to occur due to one or more of the following reasons:

- Aquatic Habitats (e.g., streams, rivers, vernal pools) necessary to support special-status wildlife species are not present within the Study Area.
- Vegetation Habitats (e.g., forested area, riparian, grassland) that provide nesting and/or foraging resources necessary to support special-status wildlife species are not present within the Study Area.
- Physical Structures and Vegetation (e.g., caves, old-growth trees) that provide nesting, cover, and/or foraging habitat necessary to support special-status wildlife species are not present within the Study Area.
- Host Plants (e.g., *Cirsium sp.*) that provide larval and nectar resources necessary to support special-status wildlife species are not present within the Study Area.
- Historic and Contemporary Disturbance (e.g., cattle grazing, agriculture) deter the presence of the special-status wildlife species from occupying the Study Area.
- The Study Area is outside the documented nesting range of special-status wildlife species.

The fourteen (14) special-status wildlife species with moderate or high potential to occur within the Study Area are described in the table below.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Amphibians			
California giant salamander *Dicamptodon ensatus* CDFW: SSC IUCN: NT	*Dicamptodon ensatus* occur south of the Mendocino County line. *D. ensatus* occur in meadows and seeps, north coast coniferous forest and riparian forested habitats in or near clear, cold permanent and semi-permanent streams and seepages. Adults leave terrestrial habitats to reproduce, and both the reproduction and larval stages are aquatic with breeding occurring mostly in the spring.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Medium (0.66) suitability for this species and may provide suitable migration habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
red-bellied newt *Taricha rivularis* CDFW: SSC IUCN: LC	*T. rivularis* inhabits coastal forests, typically in redwood (*Sequoia sempervirens*) forest habitat although also found in other forest types (hardwood etc.). Adults are terrestrial and fossorial. Transformed juveniles leave aquatic environments and go into hiding in underground shelters, often until ready to reproduce. Breeding occurs in streams often with relatively strong flows.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species and may provide suitable migration habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Recommendations for this species are described in Section 6.0.
Avifauna			
Cooper's hawk *Accipiter cooperii* CDFW: WL IUCN: LC	*A. cooperii* are forest and woodland birds, often in open, interrupted or marginal woodlands; however, they can be found in cismontane woodland, riparian forest/woodland and upper montane coniferous forested habitats. Nest sites mainly in riparian growths of deciduous trees (i.e., canyon bottoms on river flood plains) and in oak woodland habitat.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, The Study Area falls within High (0.55-0.67) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. It is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between Mar and Aug 31.
golden eagle *Aquila chrysaetos* BLM: S CDF: S CDFW: FP, WL IUCN: LC USFWS: BCC	*A. chrysaetos* inhabit rolling foothills, mountain areas, sage-juniper flats and desert. This species frequently nests in cliff-walled canyons and large trees in open areas.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (0.77) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
prairie falcon *Falco mexicanus* CDFW: SS IUCN: LC USFWS: BCC	Prairie falcons breed in open country wherever they find bluffs and cliffs to nest on, including alpine habitat to about 11,000 feet. Breeding habitats include grasslands, shrub steppe desert, areas of mixed shrubs and grasslands, or alpine tundra that supports abundant ground squirrel or pika (*Ochotona princeps*) populations. Winter habitat includes grasslands, sage scrub, dry-farmed wheat fields, irrigated cropland, and cattle feedlots.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.
osprey *Pandion haliaetus* CDF: S CDFW: WL IUCN: LC	*P. haliaetus* are strictly associated with large, fish-bearing waters, primarily in ponderosa pine and mixed conifer stands. Foraging habitat consists of open, clear waters, rivers, lakes, reservoirs, estuaries, lagoons, swamps, marshes, and bays. Diet consists almost exclusively live fish. Large trees, snags, and blown-out treetops are used for cover and nesting. Nests are located on or near the tops of trees, snags, cliffs, or human-made structures.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.
purple martin *Progne subis* CDFW: SSC IUCN: LC	*P. subis* often inhabit tall old-growth trees or snags in coniferous forests with multilayered canopy and are second-cavity nesters using old woodpecker cavities, crevices in rocks, trees and cactus. Typically, *P. subis* forage in open areas near water.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low to High (0.11-0.89) suitability for this species. There are woodpecker cavities present that may be utilized by this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Insects			
western bumble bee *Bombus occidentalis* State: CE USFS: S Xerces: IM	*B. occidentalis* are generalist pollinators and occur in a variety of habitat types, mainly open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows, as well as along stream banks and roadsides or other disturbed areas. Typically nests underground in abandoned rodent burrows or other cavities. Rangewide, example food plants of *Bombus occidentalis* include *Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago*, and *Trifolium.*	**Moderate Potential.** The Study Area contains open grassy habitat with nearby shrubs and foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
Mammals			
pallid bat *Antrozous pallidus* BLM: S CDFW: SSC IUCN: LC USFS: S WBWG: H	*A. pallidus* are found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roosting sites include crevices in rocky outcrops and cliffs, caves, mines, basal hollows in large conifers and various human structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (0.66-0.77) suitability for this species and does not provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
Townsend's big-eared bat *Corynorhinus townsendii* BLM: S CDFW: SSC IUCN: LC USFS: S WBWG: H	*C. townsendii* is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest, basal hollows in large conifers. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Low (0.33) to Moderate (0.66) suitability for this species and does provide open foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.

SPECIES	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Western Red Bat *Lasiurus blossevillii* CDFW:SSC IUCN:LC WBWG:H	*L. blossevillii* roosts primarily in trees, often 2-40ft above the ground from sea level through mixed conifer forests. Typical habitats include cismontane woodland, lower montane coniferous forest, riparian forests and woodlands. This species prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.66) suitability for this species. There are suitable mosaics of trees adjacent to the Study Areas that may support this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
hoary bat *Lasiurus cinereus* CDFW: SSC IUCN: LC WBWG: M	*L. cinereus* are yearlong residents of Mendocino County. This bat is one of the few bats knows to both migrate south for winter and to hibernate locally. Hoary bat daytime roosts are typically dense foliage of medium to large sized trees. This bat occupies a variety of habitats including dense forest, forest edges, coniferous forests, deserts, and broadleaf forests.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.55) to High (1) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
long-eared myotis *Myotis evotis* CDFW: SSC BLM:S IUCN: LC WBWG: M	*M. evotis* is found in all brush, woodland and forested habitats from sea level to approximately 9,000 feet in elevation. Foraging occurs along habitat edges, in open spaces and over water. This species prefers coniferous woodlands and forests, and roosts primarily in caves. Nursery colonies are often found within buildings, crevices, spaces under bark and snags.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Medium (0.66) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** No signs of bat presence were observed within the Study Area. Visual encounter surveys are recommended prior to development. If *L. blossevillii* are observed CDFW shall be notified.
fringed myotis *Myotis thysanodes* BLM: S CDFW: SSC IUCN: LC USFS: S WBWG: H	*M. thysanodes* are widespread in California, occurring in a wide variety of habitats including pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally found at 1300-2200m elevations (4000-7000ft). They forage around streams, lakes, and ponds. Typical roosting habitat include caves, mine tunnels, rock crevices and old buildings.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of High (0.77) suitability for this species and does provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.

No special status animal species were observed within the Study Area during the biological site assessment.

Section 6.0: Assessment Summary and Recommendations

6.1 Biological Communities

The Study Area is comprised predominantly of two (2) non-sensitive biological communities, one (1) sensitive terrestrial community determined during an on-site biological assessment on April 19, 2021 (Appendix D: Map 5, MCV2 Alliance Classifications; Map 10: Aquatic Resource Protections).

Non-Sensitive Communities:
Under the MCV2 alliance classification system, a site visit on April 19, 2021 determined that non-sensitive communities within the Study Area are best classified as *Quercus douglasii* Forest and Woodland Alliance (Blue Oak Woodland) & *Cercocarpus montanus* Shrubland Alliance (Birch leaf mountain mahogany chaparral). Detailed descriptions of these biological communities are discussed in section 5.1. There are no recommendations for non-sensitive communities.

Sensitive Terrestrial Communities:
Sensitive biological communities include those that are listed in CNDDB as well as observed MCV2 alliances or associations with state rarity ranks of S1-S3 and are listed on CDFW's *List of California Sensitive Natural Communities* (CDFW 2020). Under the MCV2 alliance classification system, a site visit on April 19, 2021 determined that the sensitive terrestrial community observed adjacent to Study Areas 4 and 5 is best classified as *Nasella spp.- Melica spp.* Herbaceous Alliance (Needle grass-Melic grass Grassland). Detailed descriptions of these biological communities are discussed in section 5.1.

There are no recommendations for this sensitive terrestrial community.

Sensitive Aquatic Communities:
Aquatic resources, communities, and habitats (e.g. watercourses, ponds, wetlands, vernal pools, etc.) are considered sensitive biological communities and are afforded special protections under CEQA and other Federal, State, and local laws, regulations, and ordinances. Aquatic habitats present within the Study Area could provide suitable aquatic or riparian habitats for sensitive flora and fauna. All existing cannabis cultivation on the parcel should be located outside of the State Water Resources Control Board's (SWRCB) setbacks and the NFHL 100-year flood zone to protect aquatic resources (Appendix D: Map 8: National Flood Hazard, Map 9: National Wetland Inventory, Map 10: Aquatic Resource Protections).

Watercourse: There is one unnamed Class III watercourse spanning the southeastern corner of the parcel that was dry upon observation during the biological site assessment. This watercourse has historically been dry for approximately a decade.

Recommendations for watercourses are listed below:

- It is recommended that all earthwork adjacent to any watercourse adhere to standard methods of erosion and sediment control and, if possible, to complete all work while the channel is dry to reduce sediment load downstream.
- It is recommended that any work within a watercourse with the potential to impact aquatic resources be conducted in compliance with s CDFW's Lake and Streambed Alteration Agreement.
- It is recommended that future expansions or development associated with this project be located outside of the NFHL 100-year flood zone as well as SWRCB setbacks.

6.2 Special-status Species

Twenty-one (21) special-status plant species and fourteen (14) special-status wildlife species have a moderate or high potential to occur within the Study Area based on habitat present. No special status plant or wildlife species were observed within the Study Area during the biological site assessment.

6.2.1 Special-status Plant Species

Fourteen (14) special status plant species have a moderate or high potential to occur within the Study Area: Purdy's onion (*Allium fimbriatum purdyi*), bent-flowered fiddleneck (*Amsinkia lunaris*), dimorphic snapdragon (*Antirrhinum subcordatum*), twig-like snapdragon (*Antirrhinum virga*), Knocti manzanita (*Arctostaphylos stanfordiana elegans*), Raiche's manzanita (*Arctostaphylos stanfordiana raichei*), Brewer's milk-vetch (*Astragalus breweri*), Rattan's milk-vetch (*Astragalus rattanii rattanii*), big-scale balsamroot (*Balsamorhiza macrolepis*), small-flowered calycadenia (*Calycadenia micrantha*), four-petaled pussypaws (*Calyptridium quadripetalum*), pink creamsacs (*Castilleja rubicundula rubicundula*), Calistoga ceanothus (*Ceanothus divergens*), deep-scarred cryptantha (*Cryptantha excavate*), congested-headed hayfield tarplant (*Hemizonia congesta congesta*), Colusa layia (*Layia septentrionalis*), bristly leptosiphon (*Leptosiphon acicularis*), Jepson's leptosiphon (*Leptosiphon jepsonii*), Milo Baker's lupine (*Lupinus milo-bakeri*), Mt. Diablo cottonweed (*Micropus amphiboles*), cotula navarretia (*Navarretia cotulifolia*), Jepson's navarretia (*Navarretia leucocephala bakeri*), Keck's chekerbloom (*Sidalcea keckii*), oval-leaved viburnum (*Viburnum ellipticum*).

No special-status species were observed during the biological site assessment. The biological site visit was conducted during the blooming period for some but not all species with potential to occur and does not constitute a full season protocol-level botanical survey. It is recommended that further botanical surveys during the appropriate blooming period for the above-listed species (May – November) be conducted prior to any groundbreaking activities for any future proposed development in an effort to reduce incidental take of any sensitive or native species within the Study Area.

6.2.2 Special-status Wildlife Species

Seventeen (17) special-status wildlife species have a moderate or high potential to occur within the Study Area, including: Cooper's hawk (*Accipiter cooperii),* golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), osprey (*Pandion haliaetus*), purple martin (*Progne subis*), western bumblebee (*Bombus occidentalis),* pallid bat (*Antrosous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), long-eared myotis (*Myotis eyotis*), and fringed myotis (*Myotis thysanodes*). While these special-status species have the potential to occur within the Study Area, none were observed during the biological site assessment.

Amphibians

No special-status amphibian species were observed within the Study Area during the biological site assessment.

Avifauna

The existing cultivation areas and watercourses do not have the potential to impact any special-status avifauna species. Avifauna species observed during the biological survey include: California scrub jay, wild turkey, song sparrow, acorn woodpecker, American crow (Appendix B: List of Species Observed). Future development within the Study Area may have the potential to significantly impact bird species such as Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), osprey (*Pandion haliaetus*), purple martin (*Progne subis*), if present.

Most non-game bird species in California are protected under the Migratory Bird Treaty Act (MBTA) which prohibits the deliberate destruction of active nests belonging to protected species. Groundbreaking activities, specifically vegetation removal, and mechanical noise within the Study Area during avian breeding periods could significantly impact nesting bird species.

Recommendations for special-status avian species and migratory bird species are listed below:

- It is recommended that any active bird nest not be removed, relocated, or otherwise disturbed for any purpose until all fledglings have left the nest.
- It is recommended that nesting bird surveys be conducted by a qualified biologist prior to the commencement of any activity that results in the removal of vegetation during nesting bird season. Nesting bird season is between March 1st and August 31st of any year.

No special-status avifauna species were observed within the Study Area during the biological site assessment.

Fish

The Study Area does not contain any fish bearing watercourses or waterbodies.

Insects

One (1) special-status insect species, Western bumble bee (*Bombus occidentalis*), has a moderate potential to occur within the Study Area. If a special-status insect nest is observed, it is recommended that active nests not be removed, relocated, or otherwise disturbed until the nest becomes inactive.

Recommendations for special-status insect species are listed below:

- If special-status insect nests are observed, it is recommended that active nests not be removed, relocated, or otherwise disturbed until the nest becomes inactive.

No special-status insects or nests were observed within the Study Area during the biological site assessment.

Mammals

Future development within the Study Area has the potential to impact mammalian species, particularly pallid bat (*Antrosous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), long-eared myotis (*Myotis eyotis*), and fringed myotis (*Myotis thysanodes*) for which there is suitable habitat present within the Study Area.

Project activities within the areas proposed for cannabis development will not have any physical effects on roosting habitat for special-status bat species. However, special-status bat species such as *L. cinereus* may be especially sensitive to noise disturbance associated with project activities. It is recommended that if evidence of bat roosts is observed (i.e. bat guano, ammonia odor, grease stained cavities) around trees or structures, pre-construction bat surveys should be conducted by a qualified biologist to address any potential occurrence of this species.

Recommendations for special-status bat species:

- It is recommended that if evidence of bat roosts are observed (i.e. bat guano, ammonia odor, grease stained cavities) around trees or structures, pre-construction bat surveys should be conducted by a qualified biologist to address any potential occurrence of this species.
- If suitable roosting habitat for special-status bats will be affected by project activities, a qualified wildlife biologist will conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). Visual surveys will include trees within 0.25 mile of project activities.

No special-status mammals or roosts were observed during the biological site assessment.

Reptiles

Future development within the Study Area does not have the potential to impact special-status reptile species. No special-status reptiles were observed during the biological site assessment.

6.3 Wildlife Corridors

No change to foraging or wintering habitat for migratory birds is expected because of the existing cultivation or proposed expansions. Additionally, no significant impacts to migratory corridors for amphibian, aquatic, avian, mammalian, or reptilian species is expected as a result of the proposed cannabis development.

6.4 Critical Habitat

The Study Area does not contain and is not adjacent to critical habitat for any Federal or State-listed species (Appendix E: USFWS IPAC Official Species List).

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Sincerely,

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Appendix A: Table of Potential for Special-Status Plants and Wildlife within the Study Area

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Amphibians				
California giant salamander *Dicamptodon ensatus*	CDFW: SSC IUCN: NT	*Dicamptodon ensatus* occur south of the Mendocino County line. *D. ensatus* occur in meadows and seeps, north coast coniferous forest and riparian forested habitats in or near clear, cold permanent and semi-permanent streams and seepages. Adults leave terrestrial habitats to reproduce and both the reproduction and larval stages are aquatic with breeding occurring mostly in the spring.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area does not rank in suitability for this species. There are not watercourses with water present on the property.	**Not Present.** This species was not observed during the biological assessment on April 19, 2021.
foothill yellow-legged frog *Rana boylii*	BLM: S CDFW: SSC IUCN: NT USFS: S	*R. boylii* occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats. Occupied streams are often partly shaded, low gradient, and dominated by coarse, unconsolidated rocky substrates. Adults breed and tadpoles develop in slow water velocity habitats. Dispersing juvenile and adult frogs will seek refugia in Class II streams pre-and-post breeding.	**Unlikely.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Low (0.33) suitability for this species and does not provide suitable habitat for this species. The Class III watercourse spanning the southern boundary of the parcel has not supported running water in approximately ten years according to previous landowner.	**Not Present.** This species was not observed during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
California red-legged frog *Rana draytonii*	FT CDFW: SSC IUCN: VU	California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds) containing shorelines with extensive vegetation. Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This ranid frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions.	**Unlikely.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Low (0.33) suitability for this species and does not provide suitable habitat for this species.	**Not Present.** This species was not observed during the biological assessment.
red-bellied newt *Taricha rivularis*	CDFW: SSC IUCN: LC	*T. rivularis* inhabits coastal forests, typically in redwood (*Sequoia sempervirens*) forest habitat although also found in other forest types (hardwood etc.). Adults are terrestrial and fossorial. Transformed juveniles leave aquatic environments and go into hiding in underground shelters, often until ready to reproduce. Breeding occurs in streams often with relatively strong flows.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area does not rank in suitability for this species. There are not watercourses with water present on the property.	**Not Present.** This species was not observed during the biological assessment on April 19, 2021.
Avifauna				
Cooper's hawk *Accipiter cooperii*	CDFW: WL IUCN: LC	*A. cooperii* are forest and woodland birds, often in open, interrupted, or marginal woodlands; however, they can be found in cismontane woodland, riparian forest/woodland and upper montane coniferous forested habitats. Nest sites mainly in riparian growths of deciduous trees (i.e., canyon bottoms on river flood plains) and in oak woodland habitat.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, The Study Area falls within High (0.55-0.67) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. It is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between Mar and Aug 31.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
golden eagle *Aquila chrysaetos*	BLM: S CDF: S CDFW: FP, WL IUCN: LC USFWS: BCC	*A. chrysaetos* inhabit rolling foothills, mountain areas, sage-juniper flats and desert. This species frequently nests in cliff-walled canyons and large trees in open areas.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (0.77) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.
western snowy plover *Charadrius alexandrinus nivosus*	FT CDFW: SSC NABCI: RWL USFWS: BCC	*C. alexandrinus nivosus* inhabit barren to sparsely vegetated sandy beaches, salt pond levees, Great Basin standing waters, wetlands and shores of large alkali lakes. Nesting habitat consists of sandy, gravelly or friable soils usually within a natural or scraped depression on dry ground. Diet consists of terrestrial and aquatic invertebrates.	**No Potential.** According to the CWHE Predicted Habitat Suitability Map, the Study Area is outside the known distribution range for this species.	**Not Present.** This species was not observed during the biological assessment on April 19, 2021.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT SE BLM: S USFS: S USFWS: BCC	*C. americanus occidentalis* use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. This species makes their nests along horizontal branches or the fork of a tree or large shrub, often between 3 to 90 feet (1 to 28 meters).	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area is outside the known distribution range for this species.	**Not Present.** This species was not observed during the biological assessment; there are no further recommendations.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
prairie falcon *Falco mexicanus*	CDFW: SSC IUCN: LC USFWS: BCC	Prairie falcons breed in open country wherever they find bluffs and cliffs to nest on, including alpine habitat to about 11,000 feet. Breeding habitats include grasslands, shrub steppe desert, areas of mixed shrubs and grasslands, or alpine tundra that supports abundant ground squirrel or pika (*Ochotona princeps*) populations. Winter habitat includes grasslands, sage scrub, dry-farmed wheat fields, irrigated cropland, and cattle feedlots.	**High Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.
bald eagle *Haliaeetus leucocephalus*	BLM: S CDF: S CDFW: FP IUCN: LC USFS: S USFWS: BCC	*H. leucocephalus* require large bodies of water or free-flowing rivers with abundant fish and adjacent snags, cliffs, or perches. Perches are often high in large-limbed trees on snags, broken-topped trees, or on rocks near water. Nests are found in large, old-growth, or dominant live trees with open branches. Nest stands frequently have less than 40% canopy, with some foliage shading the nest, and are within a mile of a permanent water source. In the winter, they roost communally in dense, sheltered, remote conifer stands often within 10 to 12 miles from feeding areas. In winter, bald eagles can also be seen in dry, open uplands if there is access to open water for fishing.	**Unlikely.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Low (0.22) suitability for this species and does not provide suitable habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
osprey *Pandion haliaetus*	CDF: S CDFW: WL IUCN: LC	*P. haliaetus* are strictly associated with large, fish-bearing waters, primarily in ponderosa pine and mixed conifer stands. Foraging habitat consists of open, clear waters, rivers, lakes, reservoirs, estuaries, lagoons, swamps, marshes, and bays. Diet consists almost exclusively live fish. Large trees, snags, and blown-out treetops are used for cover and nesting. Nests are located on or near the tops of trees, snags, cliffs, or human-made structures.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low (0.11) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.
purple martin *Progne subis*	CDFW: SSC IUCN: LC	*P. subis* often inhabit tall old-growth trees or snags in coniferous forests with multilayered canopy and are second-cavity nesters using old woodpecker cavities, crevices in rocks, trees and cactus. Typically, *P. subis* forage in open areas near water.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Low to High (0.11-0.89) suitability for this species. There are woodpecker cavities present that may be utilized by this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
northern spotted owl *Strix occidentalis caurina*	FT, ST CDF: S IUCN: NT NABCI: YWL	*S. occidentalis caurina* are year-round residents in dense, structurally complex forests, primarily with old-growth conifers. Nests on snags and within tree cavities, and often is associated with existing structures (old raptor nests, squirrel nests and *A. pomo* nests).	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area does not provide suitable habitat for this species.	**Not Present.** This species was not observed during the biological assessment on April 19, 2021.Prior to construction activities, it is recommended that nesting bird surveys are performed within 14 days of initial ground disturbance or vegetation removal, if construction is proposed to occur between March 1 and August 31.
Fish				
Sacramento perch *Archoplites interruptus*	CDFW: SSC AFS: TH	*A. interruptus* prefer sloughs and slow-flowing streams, existing in Clear Lake and Alameda Creek/Calaveras Reservoir and Sonoma Reservoir in the Russian River watershed. Sacramento perch are most often found in warm reservoirs and ponds where summer temperature range from 18-28°C.	**No Potential.** The required habitat (Class I watercourses) is not located within or adjacent to the Study Area. The Study Area does not provide suitable habitat for this species.	**Not Present.** This species was not observed during the biological assessment.
Delta smelt *Hypomesus transpacificus*	FT CE AFS: TH IUCN: EN	*H. transpacificus* is a small fish, endemic to California and only occurs in the San Francisco estuary. The Delta Smelt life cycle follows the four seasons-spring spawning in fresh water, summer migration/rearing in the low salinity zone, fall maturation in the low salinity zone, and winter upstream migration shortly before spawning.	**No Potential.** The required habitat (Class I watercourses) is not located within or adjacent to the Study Area. The Study Area does not provide suitable habitat for this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Clear Lake tule perch *Hysterocarpus traskii lagunae*	CDFW: SSC	*H. traskii lagunae* are endemic to three (3) highly altered lakes (Clear Lake, Lower Blue Lake, and Upper Blue Lake); however, it is expected that they are only commonly found in Upper Blue Lake. Clear Lake and Lower Blue Lake are typically warm (summer temperatures 25-28°C) and shallow, with primarily sandy or soft bottom substrates. Upper Blue Lake is similar but is also clearer and colder. A key habitat requirement of *H. traskii lagunae* is cover, especially for pregnant females and small juveniles. This species is typically found in small shoals in deep (3+ m) tule beds, among rocks (especially along steep rocky shores), or among the branches of fallen trees.	**No Potential.** The required habitat (Class I watercourses) is not located within or adjacent to the Study Area. The Study Area does not provide suitable habitat for this species.	**Not Present.** There are no recommendations for this species.
Clear Lake hitch *Lavinia exilicauda chi*	ST AFS: VU USFS: S	*L. exilicauda chi* are found exclusively in Clear Lake, Lake County, and associated ponds. This species spawns in tributary streams flowing into Clear Lake. Individuals over 80 days old (4-5 cm SL) are often found in the limnetic zone of Clear Lake; juveniles occupy near-shore shallow waters with protective aquatic vegetation. *L. exilicauda chi* requires clean, fine-to-medium gravel substrate for spawning and egg-laying, in lower reaches of intermittent tributary streams, mostly in sections that dry up in summer.	**No Potential.** The required habitat (Class I watercourses) is not located within or adjacent to the Study Area. The Study Area does not provide suitable habitat for this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Mollusks				
western ridged mussel *Gonidea angulata*	CDFW: SSC	*G. angulata* inhabits cold creeks and streams from low-to-mid elevations that are seasonally and not continuously turbid. *G. angulata* requires a host species to reproduce and disperse and can be found in diverse substrates from firm mud to coarse particles. Documented fish hosts for this species include hardhead (*Mylopharodon conocephalus*), pit sculpin (*Cottus pitensis*), and Tule perch (*Hysterocarpus traski*).	**No Potential.** The required habitat (Class I watercourses) is not located within or adjacent to the Study Area. The Study Area does not provide suitable habitat for this species.	**Not Present.** There are no recommendations for this species.
Clear Lake pyrg *Pyrgulopsis ventricosa*	CDFW: SSC	*P. ventricosa* inhabits springs and small spring-fed streams, where it is found on vegetation. It was historically widespread in the Clear Lake region but currently it is restricted to the Seigler Creek drainage in the south end of the Clear Lake basin.	**No Potential.** The required habitat (Class I watercourses) is not located within the Seigler Creek drainage.	**Not Present.** There are no recommendations for this species.
Insects				
western bumble bee *Bombus occidentalis*	State: CE USFS: S Xerces: IM	The habitat for this species is described as open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. typically nests underground in abandoned rodent burrows or other cavities Rangewide, example food plants of *Bombus occidentalis* include *Ceanothus, Centaurea, Chrysothamnus, Cirsium, Geranium, Grindellia, Lupinus, Melilotus, Monardella, Rubus, Solidago*, and *Trifolium.*	**Moderate Potential.** The Study Area contains open grassy habitat with nearby shrubs and foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
brownish dubiraphian riffle beetle *Dubiraphia brunnescens*	CDFW: SSC	Found within the Upper Cache watershed (HUC 18020116+) within Lake county, CA, the brownish dubiraphian riffle beetle occurs in shallow water among submerged roots of various species of aquatic plant life (including *Salex sp.*) and on rocky shores.	**No Potential.** The Study Area does not contain running water and is not located within the Upper Cache watershed.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
Borax Lake cuckoo wasp *Hedychridium milleri*	CDFW: SSC	The Borax Lake cuckoo wasp are found in the vicinity of Borax Lake in Lake County. They fly mainly in the hottest and driest months of summer, preferring subtropical and Mediterranean climates. They favor dry areas and sandy soils.	**No Potential.** The Study Area is not located near Borax Lake.	**Not Present.** There are no recommendations for this species.
Wilbur Springs minute moss beetle *Ochthebius recticulus*		This species is located in moss or accumulations of moist/wet dead leaves and sticks/twigs along the margins of streams, rivers, sinkholes, poos and ponds.	**No Potential.** The Study Area does not contain moist or wet habitat that would support this species.	**Not Present.** There are no recommendations for this species.
Wilbur Springs shore fly *Paracoenia calida*	CDFW: SSC	This species is found only in hot sulphur springs (Wilbur Hot Springs).	**No Potential.** The Study Area is not located within the vicinity of Wilbur Hot Springs.	**Not Present.** There are no recommendations for this species.
Wilbur Springs shorebug *Saldula usingeri*		This species occurs in springs and creeks with high concentrations of sodium, chloride, and lithium, such as soda springs. It is found only on the wet substrate of spring outflows.	**No Potential.** The Study Area does not contain springs or creeks to support this species.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Ricksecker's water scavenger beetle *Hydrochara rickseckeri*	CDFW: SSC	*H. rickseckeri* habitat is considered unknown, and individuals have been observed in artificial ponds as well as vernal ponds. Adults of the species are capable of flight; however, are aquatic by nature. All known collection records (CNDDB) are from 27 December to 30 July (most in April and May), which would correspond to when vernal pools are most likely to contain water.	**No Potential.** The required habitat (vernal pools) is not located within or adjacent to the Study Area.	**Not Present.** There are no recommendations for this species.
Mammals				
pallid bat *Antrozous pallidus*	BLM: S CDFW: SSC IUCN: LC USFS: S WBWG: H	*A. pallidus* are found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roosting sites include crevices in rocky outcrops and cliffs, caves, mines, basal hollows in large conifers and various human structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential..** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (0.66-0.77) suitability for this species and does not provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Townsend's big-eared bat *Corynorhinus townsendii*	BLM: S CDFW: SSC IUCN: LC USFS: S WBWG: H	*C. townsendii* is associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest, basal hollows in large conifers. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Low (0.33) to Moderate (0.66) suitability for this species and does provide open foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
silver-haired bat *Lasionycteris noctivagans*	CDFW: SSC IUCN: LC WBWG: M	*L. noctivagans* is primarily a coastal and montane forest dweller, feeding over streams, ponds, and open brushy areas. This species roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks. Additionally, *L. noctivagans* requires a water sources for drinking.	**No Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area does not rank in suitability for this species. Montane forest with streams are not present within the Study Area.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
western red bat *Lasiurus blossevillii*	CDFW: SSC IUCN: LC WBWG: H	*L. blossevillii* roosts primarily in trees, often 2-40ft above the ground from sea level through mixed conifer forests. Typical habitats include cismontane woodland, lower montane coniferous forest, riparian forests and woodlands. This species prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.66) suitability for this species. There are suitable mosaics of trees adjacent to the Study Areas that may support this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
hoary bat *Lasiurus cinereus*	CDFW: SSC IUCN: LC WBWG: M	*L. cinereus* are one of the few bats knows to both migrate south for winter and to hibernate locally. Hoary bat daytime roosts are typically dense foliage of medium to large sized trees. This bat occupies a variety of habitats including dense forest, forest edges, coniferous forests, deserts, and broadleaf forests.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within Moderate (0.55) to High (1) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
long-eared myotis *Myotis evotis*	CDFW: SSC BLM:S IUCN: LC WBWG: M	*M. evotis* is found in all brush, woodland and forested habitats from sea level to approximately 9,000 feet in elevation. Foraging occurs along habitat edges, in open spaces and over water. This species prefers coniferous woodlands and forests, and roosts primarily in caves. Nursery colonies are often found within buildings, crevices, spaces under bark and snags.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of Medium (0.66) suitability for this species and may provide suitable foraging habitat for this species.	**Not Observed.** No signs of bat presence were observed within the Study Area. Visual encounter surveys are recommended prior to development. If *L. blossevillii* are observed CDFW shall be notified.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
fringed myotis *Myotis thysanodes*	BLM: S CDFW: SSC UCN: LC USFS: S WBWG: H	*M. thysanodes* are widespread in California, occurring in a wide variety of habitats including pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally found at 1300-2200m elevations (4000-7000ft). They forage around streams, lakes, and ponds. Typical roosting habitat include caves, mine tunnels, rock crevices and old buildings.	**Moderate Potential.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within a range of High (0.77) suitability for this species and does provide suitable foraging habitat for this species.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
Reptiles				
western pond turtle *Emys marmorata*	BLM: S CDFW: SSC IUCN: VU USFS: S	*E. marmorata* are associated with permanent ponds, lakes, streams, stock ponds, marshes, seasonal wetlands, artificial areas including reservoirs or irrigation ditches, or permanent pools along intermittent streams in a wide variety of habitats. This species requires basking sites in the aquatic environment or upland, grassy openings with loose soil for nesting and overwintering. Nest sites can be found from 100-500 meters from aquatic habitat.	**Unlikely.** According to the CWHR Predicted Habitat Suitability Map, the Study Area falls within High (1) suitability for this species; however, there are no permanent water features within or adjacent the Study Area for this species to utilize.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.
Plants				
Purdy's onion *Allium fimbriatum* var. *purdyi*	Rank 4.3	Cismontane woodland, chaparral, often found in open, rocky places, usually in serpentine chaparral. *A. fimbriatum* var. *purdyi* has a moderate serpentine affinity of 5.4. Elevation ranges from 985 to 1969 feet (300 to 600 meters). A perennial herb (bulb), the blooming period is from Apr-Jun.	**Unlikely.** The Study Area is located within the elevation range and contains cismontane woodland that may support this species; however, no serpentine soils are present.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
bent-flowered fiddleneck *Amsinckia lunaris*	Rank 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. Elevation ranges from 10 to 2609 feet (3 to 795 meters). An annual herb, the blooming period is from Mar-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
dimorphic snapdragon *Antirrhinum subcordatum*	Rank 4.3	Chaparral, lower montane coniferous forest, generally on serpentine or shale (ultramafic) in foothill woodland or chaparral on south and west-facing slopes. *A. subcordatum* has a strong serpentine affinity of 4.3. Elevation ranges from 607 to 2625 feet (185 to 800 meters). An annual herb, the blooming period is from Apr-Jul.	**Unlikely.** The Study Area contains foothill woodland habitat within the elevation range that may support this species, however, there are no serpentine soils that occur within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
twig-like snapdragon *Antirrhinum virga*	Rank 4.3	Chaparral, lower montane coniferous forest, often found in rocky openings. *A. virga* has a moderate serpentine affinity of 2.8. Elevation ranges from 328 to 6611 feet (100 to 2015 meters). A perennial herb, the blooming period is from Jun-Jul.	**Moderate .** The Study Area contains marginal areas representing chaparral habitat with a gravelly-dry creek bottom amongst gray pine woodland that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
coast rockcress *Arabis blepharophylla*	Rank 4.3	Broadleaved upland forest, coastal prairie, coastal scrub, coastal bluff scrub, often found on rocky sites. Elevation ranges from 10 to 3609 feet (3 to 1100 meters). A perennial herb, the blooming period is from Feb-May.	**No Potential.** The Study Area does not provide coastal range habitat supportive of this species.	**Not Present.** There are no recommendations for this species.
modest rockcress *Arabis modesta*	Rank 4.3	Chaparral, lower montane coniferous forest; intergrades with *A. oregana*. Often on moist shaded banks, slopes, rocky canyon walls, talus, or basaltic bluffs. Perennial herb, the blooming period is Mar-Jul.	**Unlikely.** The Study Area does not provide moist shaded slopes or canyon walls to support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Oregon rockcress *Arabis oregana*	Rank 4.3	Yellow pine forest, chaparral; often on moist granitic soil, rocky hillsides, and steep banks. A perennial herb, the blooming period is May-June.	**No Potential.** The Study Area does not provide coastal range habitat supportive of this species.	**Not Present.** There are no recommendations for this species.
Konocti manzanita *Arctostaphylos stanfordiana* ssp. *elegans*	Rank 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest, often on volcanic soils. Elevation ranges from 738 to 6004 feet (225 to 1830 meters). A shrub, the blooming period is from Mar-May.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland) within the elevation range for this species to utilize.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Raiche's manzanita *Arctostaphylos stanfordiana* ssp. *raichei*	Rank 1B.1	Chaparral, lower montane coniferous forest (openings), rocky, serpentine sites, often on slopes and ridges. *A. stanfordiana* ssp. *raichei* has a moderate serpentine affinity of 2.6. Elevation ranges from 1591 to 3511 feet (485 to 1070 meters). A perennial evergreen shrub, the blooming period is from Feb-Apr.	**Moderate Potential.** The Study Area contains marginal areas of chaparral habitat along a gray pine woodland that may be supportive of this species; however, serpentine does not occur throughout the Study Areas.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
serpentine milkweed *Asclepias solanoana*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, typically growing on serpentine soils and confined to clearings and gentle slopes with southern exposure. *A. solanoana* has a strong serpentine affinity of 6.0. Elevation ranges from 755 to 6103 feet (230 to 1860 meters). A perennial herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does not provide serpentine soils necessary to support this species.	**Not Present.** There are no recommendations for this species.
Brewer's milk-vetch *Astragalus breweri*	Rank 4.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland. Often in grassy flats, meadows moist in spring, and open slopes in chaparral. Commonly on or near volcanic or serpentine sites. *A. breweri* has a moderate serpentine affinity of 3.2. Elevation ranges from 296 to 2395 feet (90 to 730 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland, foothill grassland, with pockets of chaparral species) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Cleveland's milk-vetch *Astragalus clevelandii*	Rank 4.3	Chaparral, cismontane woodland, riparian forest, ultramafic seeps and creeks; sandy stream banks, gravel bars moist in spring, hillside seeps on slopes. *A. clevelandii* has a strong serpentine affinity of 6.1. Elevation ranges from 656 to 4922 feet.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland and sandy creek banks) for this species to utilize; however, serpentine soil is not present	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Jepson's milk-vetch *Astragalus rattanii* var. *jepsonianus*	Rank 1B.2	Cismontane woodland, valley and foothill grassland, chaparral, commonly on serpentine (ultramafic) in grasslands or in openings of chaparral. *A. rattanii* var. *jepsonianus* has a moderate serpentine affinity of 4.3. Elevation ranges from 574 to 3297 feet (175 to 1005 meters). An annual herb, the blooming period is from Mar-Jun.	**Low Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Rattan's milk-vetch *Astragalus rattanii* var. *rattanii*	Rank 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, often found on open grassy hillsides, gravelly flats in the valleys and gravel bars of stream beds. Elevation ranges from 99 to 2707 feet (30 to 825 meters). A perennial herb, the blooming period is from Apr-Jul.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and grassy hillsides) for this species to utilize.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
big-scale balsamroot *Balsamorhiza macrolepis*	Rank 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, sometimes on serpentine (ultramafic). *B. macrolepis* has a moderate serpentine affinity of 2.5. Elevation ranges from 115 to 4807 feet (35 to 1465 meters). A perennial herb, the blooming period is from Mar-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species to utilize. Serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
watershield *Brasenia schreberi*	Rank 2B.3	Freshwater marshes and swamps. Aquatic, known from water bodies both natural and artificial. Elevation ranges from 3 to 7152 feet (1 to 2180 meters). A perennial rhizomatous herb (aquatic), the blooming period is from Jun-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Indian Valley brodiaea *Brodiaea rosea*	Rank 3.1 CE	Closed-cone coniferous forest, chaparral cismontane woodland, valley and foothill grassland, often on serpentine gravelly creek bottoms, meadows and swales. *B. rosea* has a moderate serpentine affinity of 5.5. Elevation ranges from 1116 to 3921 feet (340 to 1195 meters). A perennial herb (bulb), the blooming period is from May-Jun.	**Low Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted.
serpentine reed grass *Calamagrostis ophitidis*	Rank 4.3	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grasslands, often on serpentine, rocky sites (ultramafic). Elevation ranges from 296 to 3494 (90-1065 meters).	**Low Potential.** The Study Area contains foothill grasslands with pockets of chaparral species within the elevation range along the margins of the watercourse.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
pink star-tulip *Calochortus uniflorus*	Rank 4.2	Coastal scrub, coastal prairie, north coast coniferous forest, meadows and seeps. Seasonally moist meadows, sometimes within coastal scrub or forested habitats. *C. uniflorus* has a weak serpentine affinity of 1.7. Elevation ranges from 33 to 3511 feet (10 to 1070 meters). A perennial herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
small-flowered calycadenia *Calycadenia micrantha*	Rank 1B.2	Chaparral, valley and foothill grassland, meadows and seeps, often found on rocky talus or scree, sparsely vegetated areas, roadsides and sometimes on serpentine. Elevation ranges from 1427 to 4610 feet (435 to 1405 meters). An annual herb, the blooming period is from Jun-Sep.	**Moderate Potential.** The Study Area does these habitat components along the margins of the dry watercourse and may therefore be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
four-petaled pussypaws *Calyptridium quadripetalum*	Rank 4.3	Chaparral, lower montane coniferous forest, sandy or gravelly areas. *C. quadripetalum* has a moderate serpentine affinity of 4.6 Elevation ranges from 1034 to 6693 feet (315 to 2040 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area does these habitat components along the margins of the dry watercourse as well as within and may therefore be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Mt. Saint Helena morning-glory *Calystegia collina* ssp. *oxyphylla*	Rank 4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland, often along serpentine barrens, slopes and hillsides (ultramafic). *C. collina* ssp. *oxyphylla* has a strong serpentine affinity of 5.6. Elevation ranges from 919 to 3314 feet (280 to 1010 meters). A perennial herb (rhizomatous), the blooming period is from Apr-Jun.	**Unlikely.** The Study Area supports foothill grassland that may support this species; however, serpentine soils do not occur throughout the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
three-fingered morning-glory *Calystegia collina* ssp. *tridactylosa*	Rank 1B.2	Chaparral, cismontane woodland, often on rocky, gravelly openings on serpentine substrates (ultramafic). This species has a moderate serpentine affinity of 4.5. Elevation ranges from 1985 to 2313 feet (605 to 705 meters). A perennial herb, the blooming period is from Apr-Jun.	**Low Potential.** The Study Area does provide suitable habitat for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
northern meadow sedge *Carex praticola*	Rank 2B.2	Meadows and seeps, wetlands, moist to wet meadows. Elevation ranges from 49 to 10499 feet (15 to 3200 meters). A perennial grass-like herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
pink creamsacs *Castilleja rubicundula* var. *rubicundula*	Rank 1B.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, often in openings of chaparral or grasslands, sometimes on serpentine. Elevation ranges from 66 to 3002 feet (20 to 915 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Rincon Ridge ceanothus *Ceanothus confusus*	Rank 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, known from volcanic or serpentine soils, dry shrubby slopes. *C. confusus* has a weak serpentine affinity of 1.3. Elevation ranges from 492 to 4200 feet (150 to 1280 meters). A shrub, the blooming period is from Feb-Jun.	**Low Potential.** The Study Area does not contain many of the habitat requirements for this species, and serpentine soils do not exist within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Calistoga ceanothus *Ceanothus divergens*	Rank 1B.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, often found in openings of chaparral or grasslands, sometimes on serpentine. Elevation ranges from 66 to 3002 feet (20 to 915 meters). *C. divergens* has a weak serpentine affinity of 2.0. A shrub, the blooming period is from Feb-Apr.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and foothill grassland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
pappose tarplant *Centromadia parryi* ssp. *parryi*	Rank 1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland, vernally mesic sites, often found in alkaline areas. Elevation ranges from 0 to 1640 feet (0 to 500 meters). An annual herb, the blooming period is from May-Nov.	**Low Potential.** The Study Area contains areas of foothill grassland that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
dwarf soaproot *Chlorogalum pomeridianum* var. *minus*	Rank 1B.2	Chaparral; often found on serpentine sites (ultramafic). Elevation ranges from 394 to 4003 feet (120 to 1220 meters). *C. pomeridianum* var. *minus* has a strong serpentine affinity of 6.1. A perennial herb (bulb), the blooming period is from May-Aug.	**No Potential.** The Study Area does not provide suitable serpentine habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Tracy's clarkia *Clarkia gracilis* ssp. *tracyi*	Rank 4.2	Chaparral, openings, usually on serpentine soils. *C. gracilis* ssp. *tracyi* has a moderate serpentine affinity of 5.0. Elevation ranges from 214 to 2133 feet (65 to 650 meters). An annual herb, the blooming period is from Apr-Jul.	**Low Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
serpentine collomia *Collomia diversifolia*	Rank 4.3	Chaparral, cismontane woodland, often on rocky or gravelly sites (ultramafic). *C. diversifolia* has a strong serpentine affinity of 5.6. Elevation ranges from 985 to 1969 feet (300 to 600 meters). An annual herb, the blooming period is from May-Jun.	**No Potential.** The Study Area does provide serpentine habitat for this species.	**Not Present.** There are no recommendations for this species.
serpentine bird's-beak *Cordylanthus tenuis* ssp. *brunneus*	Rank 4.3	Chaparral, closed-cone coniferous forest, cismontane woodland, often along barren, rocky serpentine soil (ultramafic). *C. tenuis* ssp. *brunneus* has a moderate serpentine affinity of 5.1. Elevation ranges from 1559 to 3002 feet (475 to 915 meters). An annual herb (hemiparasitic), the blooming period is from Jul-Aug.	**Unlikely.** The Study Area does provide serpentine habitat for this species but is located within cismontane woodland.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
serpentine cryptantha *Cryptantha dissita*	Rank 1B.2	Chaparral, serpentine outcrops (ultramafic). *C. dissita* has a moderate serpentine affinity of 4.4. Elevation ranges from 443 to 2412 feet (135 to 735 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
deep-scarred cryptantha *Cryptantha excavate*	Rank 1B.1	Cismontane woodland, often found on sandy, gravelly, dry streambanks. Elevation ranges from 591 to 1231 feet (180 to 375 meters). An annual herb, the blooming period is from Apr-May.	**Moderate Potential.** The dry gravelly watercourse within the Study Area contains cismontane woodland margins and may be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
swamp larkspur *Delphinium uliginosum*	Rank 4.2	Chaparral, valley and foothill grassland, often found in moist drainages, meadows and creek beds on mesic ultramafic substrates. *D. uliginosum* has a strong serpentine affinity of 5.7. Elevation ranges from 1116 to 2002 feet (340 to 610 meters). A perennial herb, the blooming period is from May-Jun.	**No Potential.** The Study Area does not provide moist suitable serpentine habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Cascade downingia *Downingia willamettensis*	Rank 2B.2	Cismontane woodland (lake margins), valley and foothill grasslands (lake margins), vernal pools. Elevation ranges from 49 to 3642 feet (15 to 1110 meters). An annual herb, the blooming period is from Jun-Jul.	**Low Potential.** The Study Area is located a few miles from the margins of Clear Lake within cismontane woodland interspersed with grasslands within this species elevation distribution.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
marsh horsetail *Equisetum palustre*	Rank 3	Marshes and swamps, wetland. Elevation ranges from 148 to 3281 feet (45 to 1000 meters). A fern (rhizomatous), the blooming period is from Jun-Aug.	**No Potential.** The Study Area is not located within any wetland habitats supportive to this species.	**Not Present.** There are no recommendations for this species.
Brandegee's erastrum *Eriastrum brandegeeae*	Rank 1B.1	Chaparral, cismontane woodland, on barren volcanic soils, often in open areas. Elevation ranges from 1345 to 2773 feet (410 to 845 meters). An annual herb, the blooming period is from Apr-Aug.	**Low Potential.** The Study Area contains marginal habitat supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Tracy's eriastrum *Eriastrum tracyi*	Rank 3.2	Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 1300 to 3300 feet (400-1000 meters). An annual herb, the blooming period is from May-Jul.	**Low Potential.** The Study Area contains marginal habitat supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
Green's narrow-leaved daisy *Erigeron greenei*	Rank 1B.2	Chaparral, serpentine and volcanic substrates, generally in shrubby vegetation. Elevation ranges from 296 to 2740 feet (90 to 835 meters). A perennial herb, the blooming period is from May-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Snow Mountain buckwheat *Eriogonum nervulosum*	Rank 1B.2	Chaparral, ultramafic, dry serpentine outcrops, balds and barrens. *E. nervulosum* has a strongserpentine affinity of 6.2. Elevation ranges from 1460 to 6906 feet (445 to 2105 meters). A perennial herb (rhizomatous), the blooming period is from Jun-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Loch Lomond button-celery *Eryngium constancei*	Rank 1B.1	Volcanic ash flow vernal pools, wetlands. Elevation ranges from 1509 to 2805 feet (460 to 855 meters). An annual or perennial herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
bare monkeyflower *Erythranthe nudata*	Rank 4.3	Chaparral, cismontane woodland, moist areas, often along drainages and roadsides in serpentine seeps. *E. nudata* has a strong serpentine affinity of 5.6. Elevation ranges from 820 to 2297 feet (250 to 700 meters). An annual herb, the blooming period is from May-Jun.	**No Potential.** The Study Area does not provide serpentine soils or moist areas supportive of this species.	**Not Present.** There are no recommendations for this species.
San Joaquin spearscale *Extriplex joaquinana*	Rank 1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland/ alkaline. Elevation ranges from 3-2505 feet (1-835 meters). An annual herb, the blooming period is from Apr-Oct.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
adobe-lily *Fritillaria pluriflora*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, usually on clay soils, sometimes serpentine (ultramafic). *F. pluriflora* has a weak serpentine affinity of 2.4. Elevation ranges from 148 to 3101 feet (45 to 945 meters).	**Low Potential.** The study area contains grassland dispersed throughout cismontane woodland that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Purdy's fritillary *Fritillaria purdyi*	Rank 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, usually on serpentine. *F. fritillary* has a moderateserpentine affinity of 4.5. Elevation ranges from 574 to 7399 feet (175 to 2255 meters). A perennial bulbiferous herb, the blooming period is from Mar-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	Rank 1B.2	Marshes and swamps (freshwater), vernal pools, often found in clay soils, usually in vernal pools or sometimes lake margins. Elevation ranges from 13 to 7907 feet (4 to 2410 meters). An annual herb, the blooming period is from Apr-Aug.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Toren's grimmia *Grimmia torenii*	Rank 1B.3	Cismontane woodland, lower montane coniferous forest, chaparral, often found in openings, rocky, boulder and rock walls, carbonate, volcanic. Elevation ranges from 1067 to 3806 feet (325 to 1160 meters). A moss, no distinct blooming period.	**Low Potential.** The Study Area contains marginal habitat supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Hall's harmonia *Harmonia hallii*	Rank 1B.2	Chaparral, serpentine hills and ridges, open, rocky areas within chaparral (ultramafic). *H. hallii* has a strong serpentine affinity of 6.1. Elevation ranges from 1099 to 3101 feet (335 to 945 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
serpentine sunflower *Helianthus exilis*	Rank 4.2	Chaparral, cismontane woodland, often in serpentine seeps (ultramafic). *H. exilis* has a strong serpentine affinity of 5.7. Elevation ranges from 492 to 5004 feet (150 to 1525 meters). An annual herb, the blooming period is from Jun-Nov.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
congested-headed hayfield tarplant *Hemizonia congesta* ssp. *congesta*	Rank 1B.2	Valley and foothill grassland, often in fallow fields, sometimes along roadsides. *H. congesta* ssp. *congesta* has a weak serpentine affinity of 1.3. Elevation ranges from 17 to 1706 feet (5 to 520 meters). An annual herb, the blooming period is from Apr-Nov.	**Moderate Potential.** The Study Area contains grassland and roadsides that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
glandular western flax *Hesperolinon adenophyllum*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, serpentine soils, generally found in serpentine chaparral. *H. adenophyllum* has a strong serpentine affinity of 5.7. Elevation ranges from 1395 to 4413 feet (425 to 1345 meters). An annual herb, the blooming period is from May-Aug.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
two-carpellate western flax *Hesperolinon bicarpellatum*	Rank 1B.2	Serpentine barrens at edges of chaparral. *H. bicarpellatum* has a strong serpentine affinity of 6.2. Elevation ranges from 574 to 2707 feet (175 to 825 meters). An annual herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Lake County western flax *Hesperolinon didymocarpum*	Rank 1B.2	Serpentine barrens at edges of chaparral. *H. bicarpellatum* has a strong serpentine affinity of 6.2. Elevation ranges from 574 to 2707 feet (175 to 825 meters). An annual herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
drymaria-like western flax *Hesperolinon drymarioides*	Rank 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland, often on serpentine soils, mostly within chaparral (ultramafic). *H. drymarioides* has a strong serpentine affinity of 6.1. Elevation ranges from 1313 to 3609 feet (400 to 1100 meters). An annual herb, the blooming period is from May-Aug.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Sharsmith's western flax *Hesperolinon sharsmithiae*	Rank 1B.2	Chaparral, often on serpentine substrates (ultramafic). Elevation ranges from 591 to 2198 feet (180 to 670 meters). An annual herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Bolander's horkelia *Horkelia bolanderi*	Rank 1B.2	Lower montane coniferous forest, chaparral, meadows and seeps, valley and foothill grassland, often found in grassy margins of vernal pools and meadows. Elevation ranges from 1493 to 2805 feet (455 to 855 meters). A perennial herb, the blooming period is from Jun-Aug.	**Low Potential.** The Study Area supports grassy areas amongst conifer species that may support this species; however, much of the habitat is dry.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
California satintail *Imperata brevifolia*	Rank 2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean Desert scrub, meadows and seeps (alkali), riparian scrub, found on mesic sites, alkali seeps and in riparian areas. Elevation ranges from 10 to 4905 feet (3 to 1495 meters). A perennial grass, the blooming period is from Sep-May.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Northern California black walnut *Juglans hindsii*	Rank 1B.1	Riparian forest, riparian woodland. Elevation ranges from 0 to 1444 feet (0 to 440 meters). A tree, the blooming period is from Apr-May.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Burke's goldfields *Lasthenia burkei*	Rank 1B.1	Found in vernal pools and swales, meadows and seeps. Elevation ranges from 49 to 1969 feet (15 to 600 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Contra Costa goldfields *Lasthenia conjugens*	Rank 1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodlands, often found in swales and low depressions in open grassy areas. Elevation ranges from 4 to 1477 feet (1 to 450 meters). An annual herb, the blooming period is from Mar-Jun.	**Low Potential.** The Study Area contains grasslands throughout cismontane woodland that may support this species; however, no swales or low depressions occur throughout the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Colusa layia *Layia septentrionalis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, scattered colonies in fields and grassy slopes in sandy or serpentine soil. Elevation ranges from 49 to 3609 feet (15 to 1100 meters). An annual herb, the blooming period is from Apr-May.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
legenere *Legenere limosa*	Rank 1B.1	Vernal pools, wetland. Elevation ranges from 4 to 3297 feet (1 to 1005 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
bristly leptosiphon *Leptosiphon acicularis*	Rank 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 181 to 4922 feet (55 to 1500 meters). An annual herb, the blooming period is from Apr-Jul.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and grassland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Jepson's leptosiphon *Leptosiphon jepsonii*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland often found in open-to-partially shaded grassy slopes on volcanic soil or the periphery of serpentine substrates (ultramafic). Elevation ranges from 181 to 2805 feet (55 to 855 meters. An annual herb, the blooming period is from Mar-May.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland and grassland slopes) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
woolly meadowfoam *Limnanthes floccosa* ssp. *floccosa*	Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland, vernal pools, often in vernally mesic areas, ditches and ponds. Elevation ranges from 197 to 4380 feet (60 to 1335 meters). An annual herb, the blooming period is from Mar-May.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland and grassland) for this species to utilize; however, vernally mesic areas are not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Hoover's lomatium *Lomatium hooveri*	Rank 4.3	Chaparral, cismontane woodland, serpentine soils or rarely on volcanics. *L. hooveri* has a strong serpentine affinity of 5.9. Elevation ranges from 985 to 2904 feet (300 to 885 meters). A perennial herb, the blooming period is from Apr-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Napa lomatium *Lomatium repostum*	Rank 4.3	Chaparral, cismontane woodland, often found in rocky areas on volcanic or serpentine soils with mixed chaparral and California black oak (*Quercus kelloggii*) woodland communities (ultramafic). *L. repostum* has a moderate serpentine affinity of 3.2. Elevation ranges from 296 to 2723 feet (90 to 830 meters). A perennial herb, the blooming period is from Mar-Jun.	**Low Potential.** The Study Area contains some cismontane woodland that may support this species; however, serpentine soils do not occur throughout the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Milo Baker's lupine *Lupinus milo-bakeri*	Rank 1B.1	Cismontane woodland, valley and foothill grassland, often along roadsides, in ditches, dry gravelly areas along roads and along small streams. Elevation ranges from 1247 to 1411 feet (380 to 430 meters). An annual herb, the blooming period is from Jun-Sept.	**Moderate Potential.** The Study Area contains cismontane woodland with grasslands, roadsides, and gravelly dry stream banks that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
Cobb Mountain lupine *Lupinus sericatus*	Rank 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, broadleaved upland forest, often found in stands of knobcone pine (*Pinus attenuata*)-oak woodland on open wooded slopes in gravelly soils, sometimes on serpentine. Elevation ranges from 394 to 4561 feet (120 to 1390 meters). A perennial herb, the blooming period is from Mar-Jun.	**Low Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Heller's bush-mallow *Malacothamnus helleri*	Rank 3.3	Chaparral, riparian woodland, often on sandstone or gravel substrates. Elevation ranges from 1001 to 2084 feet (305 to 635 meters). A shrub, the blooming period is from Jun-Aug.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Mt. Diablo cottonweed *Micropus amphibolus*	Rank 3.2	Valley and foothill grassland, cismontane woodland, chaparral, broadleaved upland forest, often on bare, grassy, or rocky slopes. Elevation ranges from 148 to 2707 feet (45 to 825 meters). The blooming period is Mar-May.	**Moderate Potential.** The Study Area contains grassland and woodland habitat occurring on slopes that may support this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19.
elongate copper moss *Mielichhoferia elongata*	Rank 4.3	Cismontane woodland, often grows on very acidic, metamorphic rock or substrate, usually in higher potions of fens. Substrates often are naturally enriched with heavy metals (e.g. copper) such as mine tailings. Elevation ranges from 17 to 3560 feet (5 to 1085 meters). A moss, there is no distinct blooming period.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, acidic rock or substrates are not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
little mousetail *Myosurus minimus* ssp. *apus*	Rank 3.1	Vernal pools, valley and foothill grassland, wetland, alkaline soils. Elevation ranges from 66 to 2100 feet (20 to 640 meters). An annual herb, the blooming period is from Mar-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
cotula navarretia *Navarretia cotulifolia*	Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland, often on adobe soils. Elevation ranges from 13 to 6004 feet (4 to 1830 meters). An annual herb, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area contains cismontane woodland and grassland within the elevation range that is supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Jepson's navarretia *Navarretia jepsonii*	Rank 4.3	Chaparral, valley and foothill grassland, cismontane woodland, often found on habitat edges, drying flats and sometimes on serpentine (ultramafic). Elevation ranges from 558 to 2805 feet (175 to 855 meters). An annual herb, the blooming period is from Apr-Jun.	**Moderate Potential.** The Study Area contains many habitat edges between the gravelly dry watercourse and cismontane or grassland habitat that may be supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	Rank 1B.1	Cismontane woodland, meadows and seeps, vernal pools and swales, valley and foothill grassland, lower montane coniferous forest, adobe or alkaline soils. Elevation ranges from 10 to 5512 feet (3 to 1680 meters). An annual herb, the blooming period is from Apr-Jul.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, adobe or alkaline soils are not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
few-flowered navarretia *Navarretia leucocephala* ssp. *pauciflora*	Rank 1B.1	Vernal pools, volcanic ash flow and volcanic substrate within and adjacent to vernal pools. Elevation ranges from 1395 to 2805 feet (425 to 855 meters). An annual herb, the blooming period is from May-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
many-flowered navarretia *Navarretia leucocephala* ssp. *plieantha*	Rank 1B.2	Vernal pools, volcanic ash flow vernal pools (wetlands). Elevation ranges from 99 to 3002 feet (30 to 915 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
adobe navarretia *Navarretia nigelliformis ssp. nigelliformis*	Rank 4.2	Valley and foothill grassland vernally mesic, vernal pools sometimes. Clay, sometimes serpentinite. Elevation ranges from 30 to 3280 feet (10-1000 meters). An annual herb, the blooming period is from Apr- Jun. NCoRI, SNF, The, GV, SCoR.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
shining navarretia *Navarretia nigelliformis ssp. radians*	Rank 1B.2	Cismontane woodland, valley and foothill grassland, vernal pools. Sometimes clay. Elevation ranges from 200 to 3280 feet (65-1000 meters). An annual herb, the blooming period is from May- Jul. SCoR.	**Low Potential.** The Study Area has marginal habitat supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.
Porter's navarretia *Navarretia paradoxinota*	Rank 1B.3	Meadows and seeps, openings, vernally mesic, often found in drainages, sometimes on serpentine (ultramafic). Elevation ranges from 574 to 2871 feet (175 to 875 meters). An annual herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
slender Orcutt grass *Orcuttia tenuis*	Rank 1B.1	Vernal pools, wetlands often on gravelly substrates. Elevation ranges from 82 to 5758 feet (25 to 1755 meters). An annual grass, the blooming period is from May-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Howell's broomrape *Orobanche valida* ssp. *howellii*	Rank 4.3	Chaparral, often on rocky or volcanic slopes in open chaparral (ultramafic), also reported on *Garrya fremontii* and *Quercus chrysolepis*. *O. valida* ssp. *howellii* has a moderate serpentine affinity of 3.4. Elevation ranges from 591 to 5709 feet (180 to 1740 meters). A perennial herb (parasitic), the blooming period is from Jun-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Geysers panicum *Panicum acuminatum* var. *thermale*	Rank 1B.2	Closed-cone coniferous forest, riparian forest, valley and foothill grassland, wetland, usually around moist, warm soil in the vicinity of hot springs. Elevation ranges from 1793 to 8104 feet (455 to 2470 meters). A perennial grass, the blooming period is from Jun-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Sonoma beardtongue *Penstemon newberryi* var. *sonomensis*	Rank 1B.3	Chaparral, crevices in rock outcrops and talus slopes. Elevation ranges from 591 to 4610 feet (180 to 1405 meters). A perennial herb, the blooming period is from Apr-Aug.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Michael's rein orchid *Piperia michaelii*	Rank 4.2	Coastal bluff scrub, coastal scrub, cismontane woodland, chaparral, closed-cone coniferous forest, lower montane coniferous forest, mudstone and humus, generally dry sites. Elevation ranges from 10 to 3002 feet (3 to 915 meters). A perennial herb, the blooming period is from Apr-Aug.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
wine-colored tufa moss *Plagiobryoides vinosula*	Rank 4.2	Cismontane woodland, meadows and seeps, Mojavean Desert scrub, pinyon and juniper woodland, riparian woodland, often found on granitic rock or granitic soil along seeps and streams, sometimes clay. Elevation ranges from 788 to 2198 feet (240 to 670 meters). A moss, there is no distinct blooming period.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
eel-grass pondweed *Potamogeton zosteriformis*	Rank 2B.2	Marshes, swamps, wetlands, ponds, lakes and streams. Elevation ranges from 296 to 7005 feet (90 to 2135 meters). An annual herb (aquatic), the blooming period is from Jun-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
California alkali grass *Puccinellia simplex*	Rank 1B.2	Meadows and seeps, chenopod scrub, valley and foothill grassland, vernal pools, often found in vernally mesic sites including sinks, flats and lake margins. Elevation ranges from 4 to 3002 feet (1 to 915 meters). An annual grass, the blooming period is from Mar-May.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Lake County stonecrop *Sedella leiocarpa*	Rank 1B.1	Valley and foothill grassland, vernal pools, cismontane woodland, typically in vernally mesic depressions in volcanic outcrops. Elevation ranges from 1690 to 2100 feet (515 to 640 meters). An annual herb, the blooming period is from Apr-May.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland and grassland) for this species to utilize; however, vernally mesic depressions in volcanic outcrops are not present.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
Cleveland's ragwort *Senecio clevelandii* var. *clevelandii*	Rank 4.3	Chaparral often found on mesic serpentine soils (ultramafic), along creeks and in moist meadows. *S. clevelandii* var. *clevelandii* has a strong serpentine affinity of 5.8. Elevation ranges from 1198 to 2953 feet (365 to 900 meters). The blooming period is Jun-Jul.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
Keck's checkerbloom *Sidalcea keckii*	Rank 1B.1	Cismontane woodland, valley and foothill grassland, often on grassy slopes in blue oak (*Quercus douglasii*) woodland or sometimes on serpentine-derived clay soils. Elevation ranges from 279 to 1657 feet (85 to 505 meters). *S. keckii* has a moderate serpentine affinity of 3.0. An annual herb, the blooming period is from Apr-May.	**Moderate Potential.** The Study Areas occur within a rolling blue oak woodland with conifers and grassland throughout that is supportive of this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.
marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	Rank 1B.2	Meadows and seeps, riparian forest, wet soils along streambanks. Elevation ranges from 1493 to 6660 feet (455 to 2030 meters). A perennial herb, the blooming period is from Jul-Aug.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Socrates Mine jewelflower *Streptanthus brachiatus* ssp. *brachiatus*	Rank 1B.2	Chaparral, closed-cone coniferous forest, serpentine sites in chaparral (ultramafic). *S. brachiatus* ssp. *brachiatus* has a strong serpentine affinity of 5.6. Elevation ranges from 1985 to 6398 feet (605 to 1950 meters). A perennial herb, the blooming period is from May-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Freed's jewelflower *Streptanthus brachiatus* ssp. *hoffmanii*	Rank 1B.2	Chaparral, cismontane woodland, on serpentine rock outcrops, primarily in geothermal development areas. *S. brachiatus* ssp. *brachiatus* has a strong serpentine affinity of 6.1. Elevation ranges from 1591 to 3412 feet (485 to 1040 meters). A perennial herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Present.** There are no recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
green jewelflower *Streptanthus hesperidis*	Rank 1B.2	Chaparral, cismontane woodland, openings in chaparral or woodlands, serpentine, rocky sites (ultramafic). *S. hesperidis* has a strong serpentine affinity of 6.0. Elevation ranges from 788 to 2510 feet (240 to 765 meters). An annual herb, the blooming period is from May-Jul.	**No Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Present.** There are no recommendations for this species.
Three Peaks jewelflower *Streptanthus morrisonii ssp. elatus*	Rank 1B.2	Chaparral, serpentine barrens, outcrops and talus (ultramafic). Elevation ranges from 788 to 2412 feet (240 to 735 meters). *S. morrisonii ssp. elatus* has a strong serpentine affinity of 6.1. A perennial herb, the blooming period is from Jun-Sep.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
Kruckeberg's jewelflower *Streptanthus morrisonii* ssp. *kruckebergii*	Rank 1B.2	Cismontane woodland on scattered serpentine outcrops near the Lake/Napa County line (ultramafic). *S. morrisonii* ssp. *kruckebergii* has a strong serpentine affinity of 6.1. Elevation ranges from 788 to 2182 feet (240 to 665 meters). A perennial herb, the blooming period is from Apr-Jul.	**No Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Present.** There are no recommendations for this species.
marsh zigadenus *Toxicoscordion fontanum*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, marshes and swamps, vernally moist or marshy areas; often on serpentine sites. *T. fontanum* has a moderate serpentine affinity of 3.8. Elevation ranges from 50 to 3281 feet (15 to 1000 meters). A perennial herb, the blooming period is from Apr-Jul.	**Unlikely.** The Study Area does provide suitable habitat (cismontane woodland) for this species to utilize; however, serpentine soil is not present within the Study Area.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RECOMMENDATIONS
two-fork clover *Trifolium amoenum*	Rank 1B.1 FE	Coastal bluff scrub, Valley and foothill grassland (sometimes serpentinite). Elevation ranges from 15-1360 feet (5-415 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
saline clover *Trifolium hydrophilum*	Rank 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools (mesic, alkaline sites). Elevation ranges from 4 to 1099 feet (1 to 335 meters). An annual herb, the blooming period is from Apr-Jun.	**No Potential.** The Study Area does not provide suitable habitat for this species to utilize.	**Not Present.** There are no recommendations for this species.
oval-leaved viburnum *Viburnum ellipticum*	Rank 2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 706 to 4593 feet (215 to 1400 meters). A shrub, the blooming period is from May-Jun.	**Moderate Potential.** The Study Area does provide suitable habitat (cismontane woodland) for this species.	**Not Observed.** This species was not observed within the Study Area during the biological assessment on April 19, 2021. It is recommended that a seasonally appropriate botanical survey be conducted before any groundbreaking activities.

TERRESTRIAL OR AQUATIC COMMUNITY	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA AND RECOMMENDATIONS
Central Valley Drainage Rainbow Trout/Cyprinid Stream	This aquatic community does not occur within the parcel.	**No Potential.** Central Valley Drainage Rainbow Trout/Cyprinid Stream aquatic community does not exist within the Study Area. **Not Present.** No further recommendations.
Clear Lake Drainage Resident Trout Stream	This aquatic community does not occur within the parcel. The property has not contained watercourses with flowing water in approximately a decade.	**No Potential.** Clear Lake Drainage Resident Trout Stream aquatic community does not exist within the Study Area. **Not Present.** No further recommendations.

TERRESTRIAL OR AQUATIC COMMUNITY	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA AND RECOMMENDATIONS
Coastal and Valley Freshwater Marsh	Coastal and valley freshwater marsh is classified as several different alliances including the Typha (*T. angustifolia, T. domingensis, T. latifolia*) alliance (cattail marshes*), Schoenoplectus acutus* alliance (hardstem bulrush marsh), and *Schoenoplectus californicus* alliance (California bulrush marsh). It is classified as a freshwater emergent wetland as described in *A Guide to the Wildlife Habitats of California*. Coastal and valley freshwater marsh is characterized by erect, rooted herbaceous hydrophytes (water-adapted plants). All emergent wetlands are flooded frequently so that the roots of vegetation are saturated or submerged in water. Vegetation is generally about 6 feet tall and may vary from small clumps of vegetation to large areas. Coastal and valley freshwater marsh is a nontidal, flooded, depressional wetland type and is considered a palustrine emergent semi-permanently flooded (PEMF) wetland.	**No Potential.** Coastal and Valley Freshwater Marsh habitat does not exist within the Study Area. **Not Present.** No recommendations.
Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest is classified as several distinct Alliances by Sawyer et al. (2009) including *Acer negundo* Alliance, *Fraxinus latifolia* Alliance, *Populus fremontii – Fraxinus velutina – Salix gooddingii* Alliance, *Salix gooddingii* Alliance, *Salix gooddingii – Salix laevigata* Alliance, *Salix laevigata* Alliance, and *Salix lucida* ssp. *lasiandra* Alliance.	**No Potential.** Great Valley Mixed Riparian Forest habitat does not exist within the Study Area. **Not Present.** No recommendations.
Northern Basalt Flow Vernal Pool	The Northern Volcanic Ash Vernal Pool terrestrial community cannot be categorized by any distinct MCV2 Alliances and does not occur within the parcel, or within the region. The closest recorded location of this terrestrial community is greater than five (5) miles from the Study Area.	**No Potential.** Northern Basalt Flow Vernal Pool habitat does not exist within the Study Area. **Not Present.** No recommendations.

TERRESTRIAL OR AQUATIC COMMUNITY	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA AND RECOMMENDATIONS
Northern Interior Cypress Forest	Description: An open, fire-maintained scrubby "forest" similar to Knobcone Pine Forest but dominated by one of several Cupressus species. These stands may be as much as 15m tall, but usually are lower. Site Factors: On dry, rocky, sterile, often ultramafic soils, frequently associated with Serpentine Chaparral. Integrades on less sever sites with Upper Sonoran Mixed Chaparral, Montane Chaparral, or Knobcone Pine Forest; and on more mesic site with Mixed Evergreen Forest or Montane Coniferous Forest. Characteristic Species: *Cupressus Abramsiana* (Santa Cruz Mountains, on sandstone), *C. Bakeri* (Cascade and northern Sierra Nevada, on serpentine or aerated basic sites), *C. Macnabiana* (North Coast Ranges and northern Sierra Nevada, on serpentine), *C. Sargentii* (North and South Coast ranges, on serpentine), *Pinus attenuata*, *Quercus durata* Distribution: Scattered through the Siskiyou Mountains, North and South Coast Ranges, Cascades and northern Sierra Nevada. Combining the four species into a single element is open to question, but does reflect a common pattern of occurring on serpentine or other sterile substrate and moisture status intermediate between mesic Coastal Closed Cone Conifer Forests and xeric Southern Interior Cypress Forests.	**No Potential.** Northern Interior Cypress Forest habitat does not exist within the Study Area. **Not Present.** No recommendations.
Northern Volcanic Ash Vernal Pool	The Northern Volcanic Ash Vernal Pool terrestrial community cannot be categorized by any distinct MCV2 Alliances and does not occur within the parcel. The closest recorded location of this terrestrial community is approximately a half mile (0.5) from the Study Area.	**No Potential.** Northern Volcanic Ash Vernal Pool habitat does not exist within the Study Area. **Not Present.** No recommendations.

TERRESTRIAL OR AQUATIC COMMUNITY	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA AND RECOMMENDATIONS
Serpentine Bunchgrass	Description: An open grassland dominated by perennial bunchgrasses. Total cover typically is low, but is markedly dominated by native species (usually much more so than in Valley Needlegrass Grassland or Non-native Grasslands. Site Factors: Restricted to serpentine sites. Characteristic Species: *Bromus hordeaceus, Calamagrostis ophiditis, Eschscholtzia californica, Pestuca grayii, Hemizonia luzulaefolia, Lotus subpinnatus, Melica californica, Poa scabrella, Stipa cernua, S. lepida, S. pulchra, Vulpia microstachys* Distribution: Scattered widely through the Coast Ranges, less common in the Sierra Nevada and southern California mountains.	**No Potential.** Serpentine Bunchgrass habitat does not exist within the Study Area. **Not Present.** No recommendations.
Wildflower Field	Description: An amorphous grab bag of herb-dominated types noted for conspicuous annual wildflower displays. Dominance varies from site to site and from year to year at a particular site. Site Factors: Usually on fairly poor sites (droughty, low in nutrients), associated with Grasslands or Oak Woodlands on surrounding, more productive sites. Characteristic Species: *Eschscholtzia californica, Gilia bicolor, Layia platyglossa, Lupinus bicolor, Orthocarpus attenuatus, O. purpurasens.* Distribution: Valleys and foothills of the California Floristic Province except the north coast (too wet) and desert (too dry) regions. Below about 2000 ft in the north, 4000-5000 ft in the south.	**High Potential.** Wildflower habitat may exist along the margins of each study area. Much of the parcel is characterized as Annual Grasses and Forbs by CALVEG and may therefore host a variety of wildflower species. **Not Present.** No recommendations.

Abbreviation	Organization
FC	Federal Candidate
FE	Federal Endangered
FT	Federal Threatened
FPE	Federally Proposed for listing as Endangered
FPT	Federally Proposed for listing as Threatened
FPD	Federally Proposed for delisting
SC	State Candidate
SE	State Endangered
ST	State Threatened
SCE	State Candidate for listing as Endangered
SCT	State Candidate for listing as Threatened
SCD	State Candidate for delisting
Rank 1A	CRPR Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	CRPR Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2B	CRPR Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CRPR Rank 3: Plants about which CNPS needs more information (a review list)
Rank 4	CRPR Rank 4: Plants of limited distribution

Potential to Occur:
No Potential. Habitat on and within 100 feet adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and within 100 feet adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or within 100 feet adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or within 100 feet adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:
Present. Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.
Not Present. Species is assumed to not be present due to a lack of key habitat components.
Not Observed. Species was not observed during surveys.

Abbreviation	Organization
AFS_EN	American Fisheries Society - Endangered
AFS_TH	American Fisheries Society - Threatened
AFS_VU	American Fisheries Society – Vulnerable
BLM_S	Bureau of Land Management – Sensitive
BCC	USFWS Birds of Conservation Concern
CDF_S	Calif. Dept. of Forestry & Fire Protection – Sensitive
CDFW_SSC	Calif. Dept. of Fish & Wildlife – Species of Special Concern
CDFW_FP	Calif. Dept. of Fish & Wildlife – Fully Protected
CDFW_WL	Calif. Dept. of Fish & Wildlife – Watch List
IUCN_CR	IUCN – Critically Endangered
IUCN_EN	IUCN – Endangered
IUCN_NT	IUCN – Near Threatened
IUCN_VU	IUCN – Vulnerable
IUCN_LC	IUCN – Least Concern
IUCN_DD	IUCN – Data Deficient
IUCN_CD	IUCN – Conservation Dependent
NABCI_RWL	North American Bird Conservation Initiative – Red Watch List
NABCI_YWL	North American Bird Conservation Initiative – Yellow Watch List
NMFS_SC	National Marine Fisheries Service – Species of Concern
USFS_S	U. S. Forest Service - Sensitive
USFWS_BCC	U. S. Fish & Wildlife Service Birds of Conservation Concern
WBWG_H	Western Bat Working Group – High Priority
WBWG_MH	Western Bat Working Group – Medium-High Priority
WBWG_M	Western Bat Working Group – Medium Priority
WBWG_LM	Western Bat Working Group – Low-Medium Priority
Xerces: CI	Xerces Society – Critically Imperiled
Xerces: IM	Xerces Society – Imperiled
Xerces: VU	Xerces Society – Vulnerable
Xerces: DD	Xerces Society – Data Deficient

Ultramafic (serpentine) Affinity

	≥ 5.5	strict endemic	taxa with 95% of their occurrences on ultramafics
< 5.5	≥ 4.5	broad endemic	taxa with 85-94% of their occurrences on ultramafics
< 4.5	≥ 3.5	transition from broad endemic to strong indicator	taxa with 75-84% of their occurrences on ultramafics
< 3.5	≥ 2.5	strong indicator	taxa with 65-74% of their occurrences on ultramafics
< 2.5	≥ 1.5	weak indicator	taxa with 55-64% of their occurrences on ultramafics
< 1.5	≥ 1.0	weak indicator / indifferent	

Appendix B: List of Species Observed

Scientific Name	Common Name
Achillea milliefolium	yarrow
Achyrachaena mollis	blow wives
Acmispon americanus	Bird's foot trefoil
Acmispon glaber	deer weed
Adenostoma fasciculatum	chamise
Allium serra	Jeweled onion
Amsonckia menziesii	common fiddleneck
Anthriscus caucalis	bur churvil
Arctostaphylos manzanita	common manzanita
Arctostaphylos SPP	whiteleaf mananita
Avena fatua	wild oats
Brassica rapa	field mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft chess brome
Calachortus leutus	Yellow Mariposa lily
Capsella bursa-pastoris	Shepherd's purse
Carduus pycnocephalus	Itlaian thistle
Ceanothus cuneatus	buckbrush ceanothus
Centaurea solstitalis	yellow-star thistle
Cercocarpus betuloides	birchleaf mountain mahogany
Chlorogalum pomeridianum	wavy leaf soaproot
Clarkia purpurea	winecup clarkia
Claytonia perfoliata	Miner's lettuce
Collinsia heterophylla	chinese houses
Collinsia sparsiflora	blue-eyed mary
Cryptantha micrantha	redroot cryptantha
Cynoglossum grande	Pacific hound's tongue
Cynosurus echinatus	dogtail grass
Delphinium variegatum	royal larkspur
Dichelostemma capitatum	blue dicks
Elymus glaucus	blue wild rye
Epilobium minutum	little willowherb
Erodium cicutarium	stork's bill
Eucalyptus globulus	blue gum eucalyptus
Galium aparine	catchweed bedstraw
Hemizonia congesta	hayfield tarweed
Hordeum brachyantherum	meadow barley
Lepidium nitidum	shining pepperweed
Leptosiphon bicolor	true babystars
Lolium perennis	rye grass

Lomatium dissectum	fernleaf biscuitroot
Lupinus bicolor	Miniature lupine
Madia gracilis	grassy tarweed
Matricaria discoidea	Pineapple weed
Micropus californicus	q-tips
Morus alba	Mullberry
Phacelia imbricata	mountain phacelia
Pinus sabiniana	Foothill Pine
Plagiobothrys nothofulvus	popcorn flower
Plantago erecta	dot seed plantain
Plectritis macrosera	longhorn seablush
Poa bulbosa	bulbous meadow-grass
Populus fremontii	Cottonwood
Primula hendersonii	Henderson's shooting star
Quercus douglasii	Blue Oak
Ramalina meziesii	lichen
Rosa x alba	cultivated rose
Sanicula crassicaulis	pacific sanicle
Silene laciniata	cardinal cachfly
Stipa pulchra	needlegrass
Syringa vulgaris	common lilac
Thysanocarpus radians	fringepods
Toxicodendron diversilobum	Poison oak
Trifolium willdenovii	wildcat clover
Triteleia laza	Ithurial's spear
Vicia villosa	purple vetch
Vinca major	periwinkle
Viscum album	mistletoe
Vulpia myuros	ratttail fescue
Whipplea modesta	modesty
Wyethia angustifolia	Mules ear

Wildlife	
Avifauna	
Melozone crissalis	California towhee
Aphelocoma californica	California scrub jay
Meleagris gallopavo	wild turkey
Melanerpes formicivorus	Acorn woodpecker
Corvus brachyrhynchos	American Crow
Zonotrichia leucophrys	White Crowned Sparrow
Reptiles	
Sceloporus occidentalis	Western fence lizard

Appendix C: Photographs

Photo 1: Residential Structure within Study Area 1 is proposed to be converted to an indoor nursery.

Date: April 19, 2021

Photo 2: Proposed greenhouse area within Study Area 2.

Date: April 19, 2021

Photo 3: Graded area representing Study Area 4.

Date: April 19, 2021

Photo 4: Class III watercourse representing Study Area 5.

Date: April 19, 2021

Photo 5: Class III watercourse contains a low-grade creek bottom consisting mostly of rocky substrate and surrounded by chaparral and Blue oak woodland.

Date: April 19, 2021

Photo 6: Blue Oak Woodland is the dominate habitat type spanning the property.

Date: April 19, 2021

Photo 7: Facing up access road leading to Study Areas. The property consists of annual grassland and blue oak woodland.

Date: April 19, 2021

Photo 8: Pockets of common manzanita exist within the Blue Oak woodland.

Date: April 19, 2021

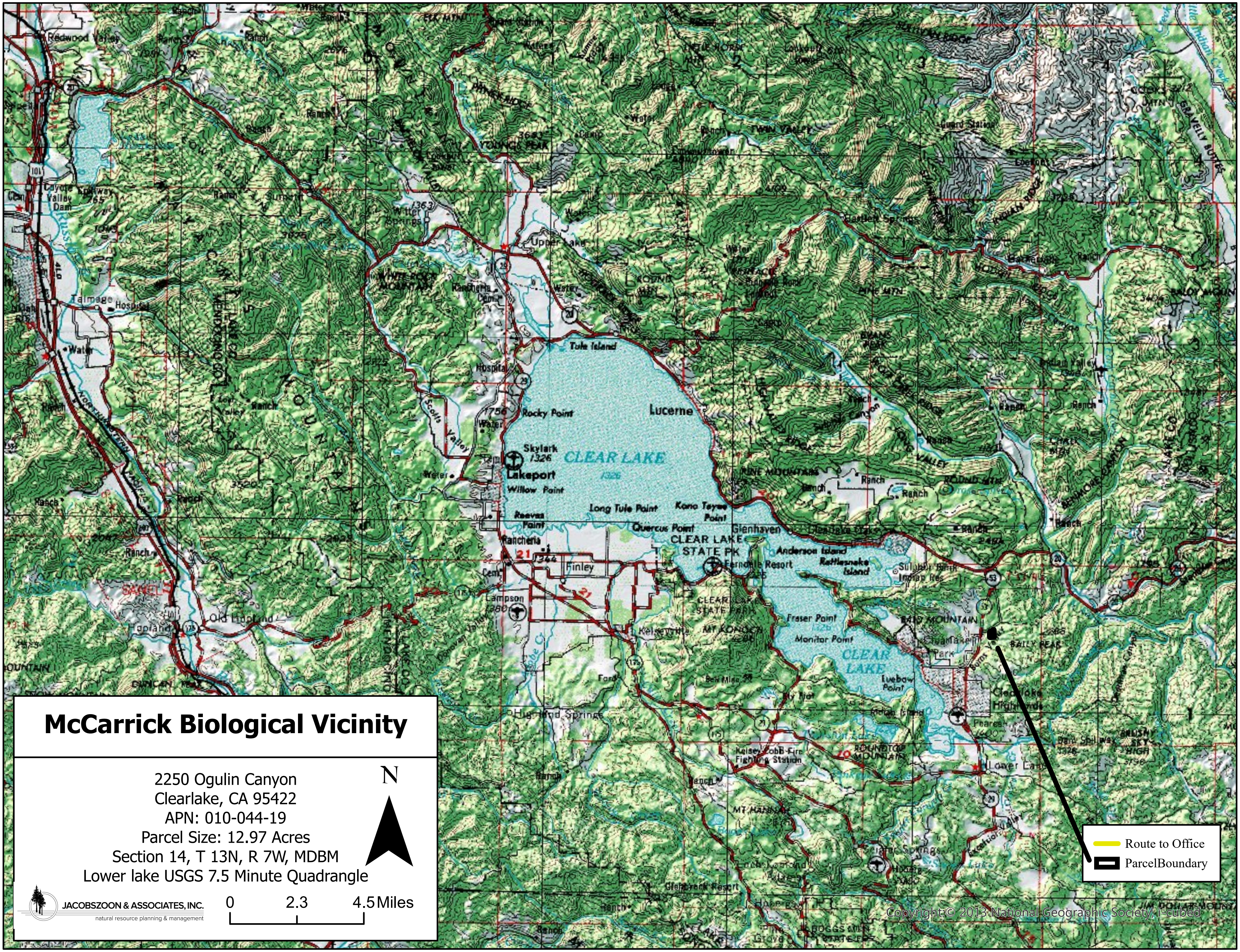
Photo 9: Annual Grassland surrounding Study Area 4.

Date: April 19, 2021

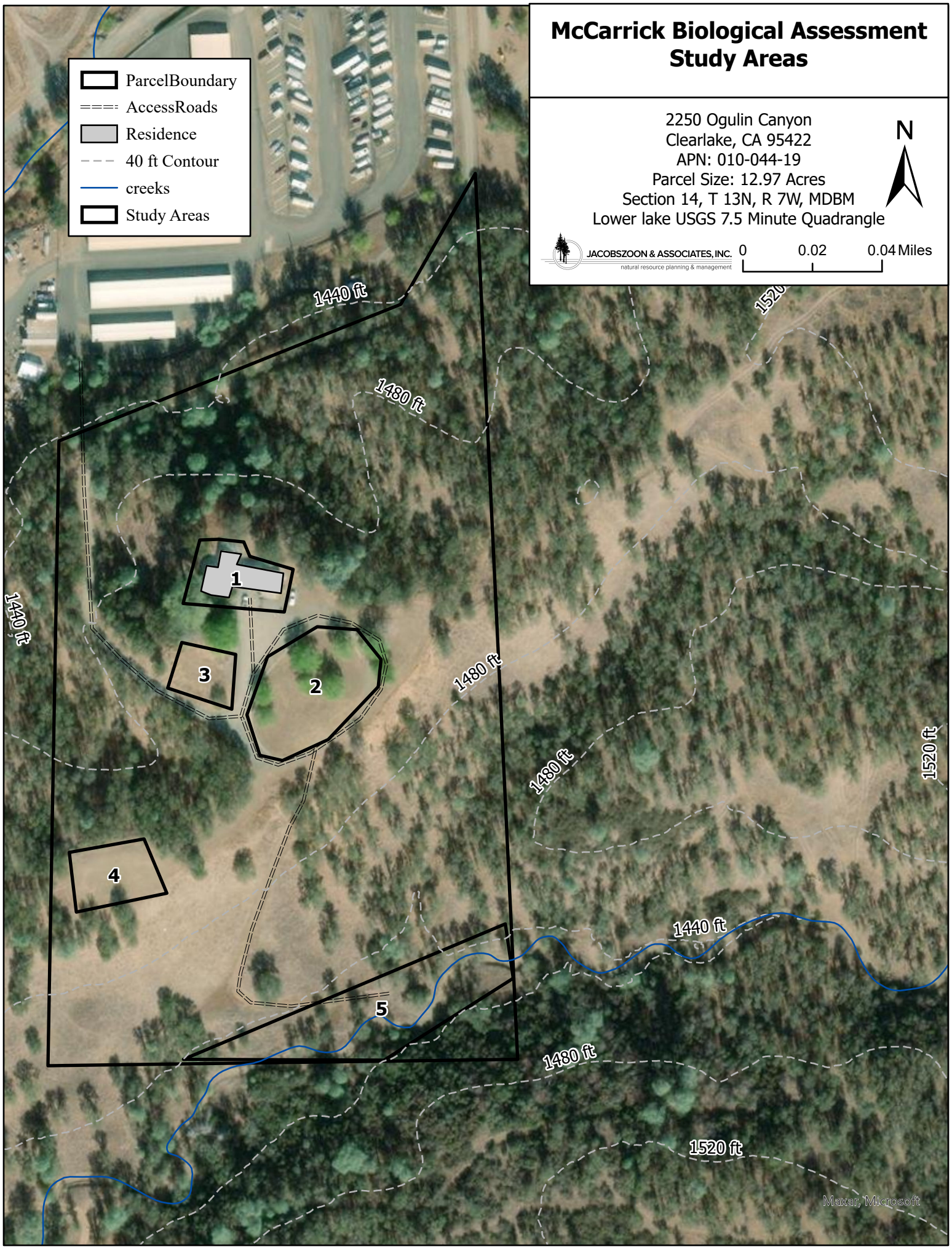
Photo 10: Birchleaf mountain mahogany habitat can be found dispersed among the Blue Oak woodland in drier areas co-habitating with common manzanita and buckbrush ceanothus.

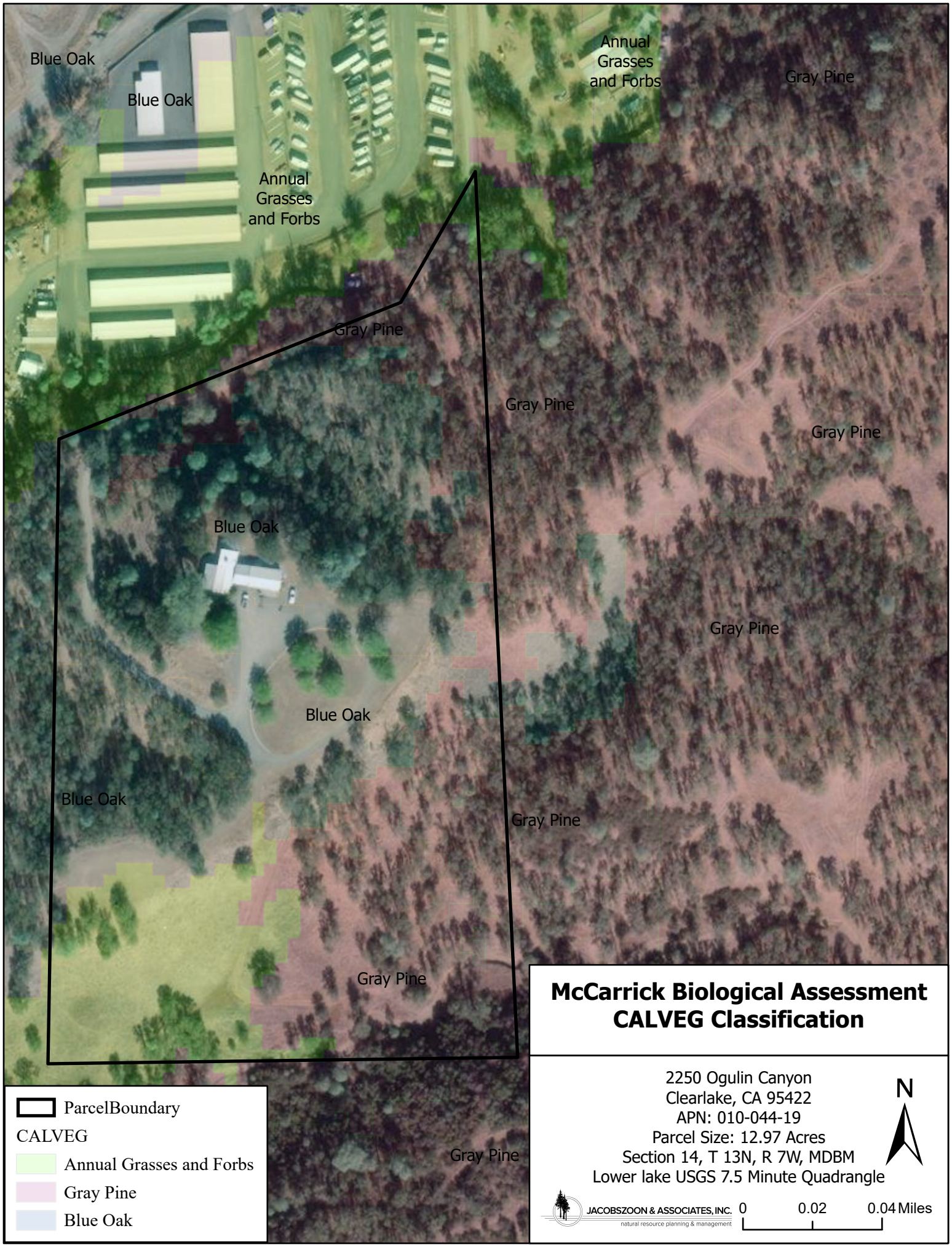
Date: April 19, 2021

Appendix D: Maps


McCarrick Biological Vicinity
2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle
N
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management
0
2.3
4.5 Miles
Route to Office
ParcelBoundary
CLEAR LAKE
Lakeport
Lucerne
Upper Lake
Finley
Kelseyville
Glenhaven
Clearlake Park
Lower Lake
Copyright:© 2013 National Geographic Society, i-cubed


McCarrick Biological Assessment
2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle
N
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management
0
0.02
0.04 Miles
ParcelBoundary
AccessRoads
Residence
40 ft Contour
creeks
Watercourse Buffer
1440 ft
1480 ft
1520 ft
Maxar, Microsoft


McCarrick Biological Assessment
Study Areas
2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle
N
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management
0
0.02
0.04 Miles
ParcelBoundary
AccessRoads
Residence
40 ft Contour
creeks
Study Areas
1440 ft
1480 ft
1520 ft
1
2
3
4
5
Maxar, Microsoft



McCarrick Biological Assessment
CALVEG Classification

2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle

N

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

0 0.02 0.04 Miles

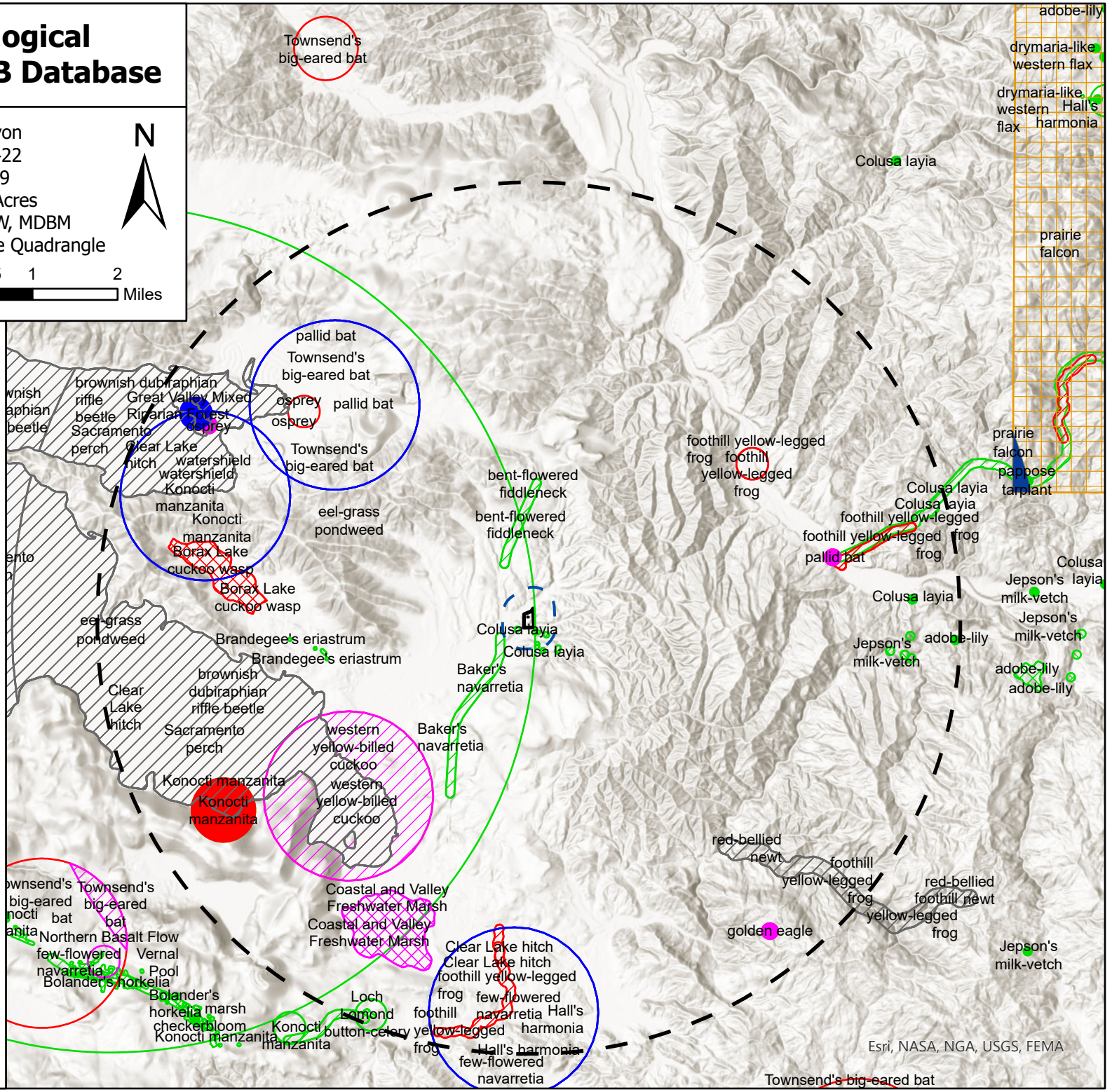
McCarrick Biological Assessment CNDDB Database

2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

N

0 0.5 1 2
Miles



- ParcelBoundary
- 5 mile buffer
- 0.25 mile buffer

CNDDB

Symbology

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

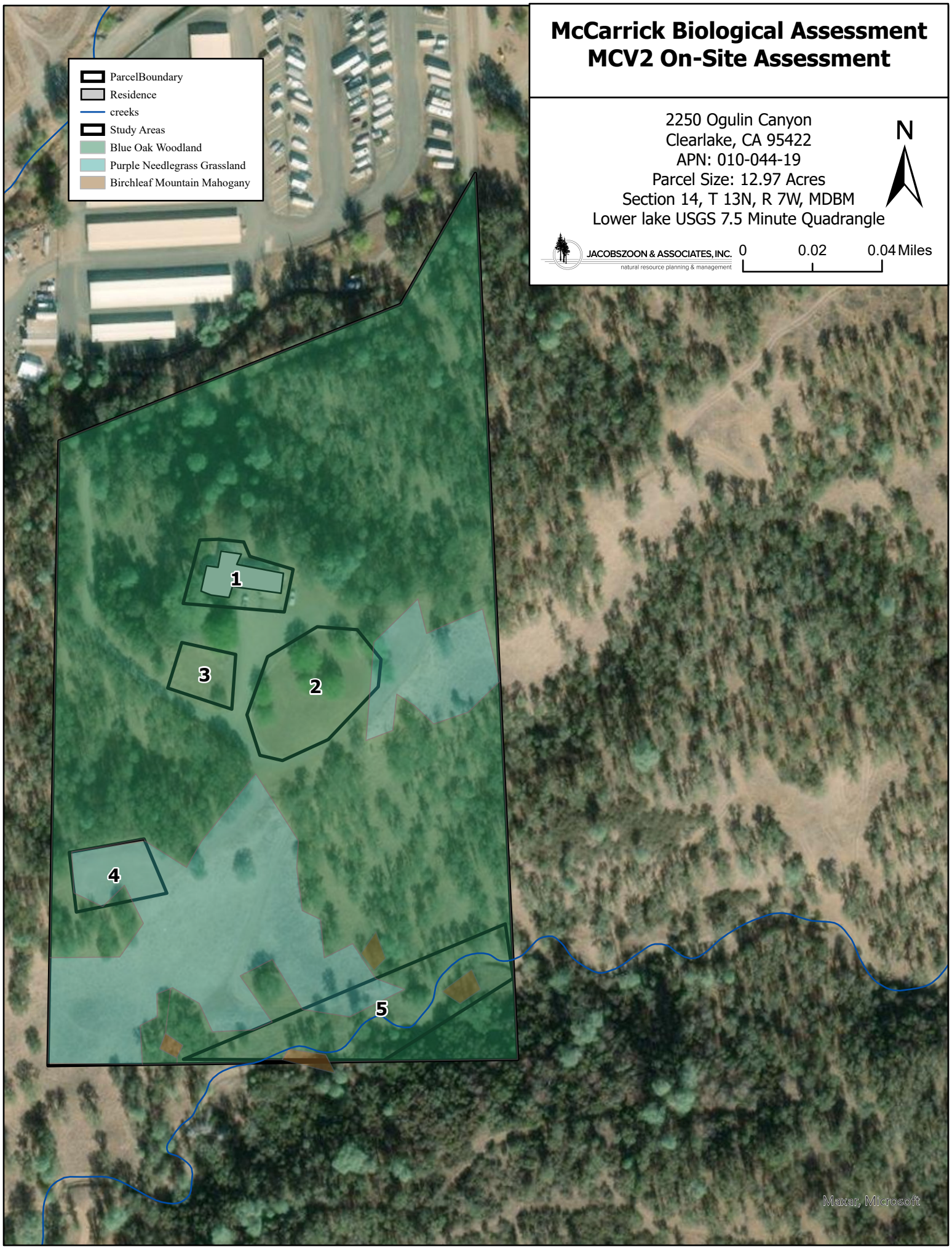
McCarrick Biological Assessment
MCV2 On-Site Assessment

2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle

N

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

0 0.02 0.04 Miles



Soil Map—Lake County, California
(McCarrick)

Map Scale: 1:2,120 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lake County, California
Survey Area Data: Version 17, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 2, 2019—Jul 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
161	Manzanita loam, 15 to 25 percent slopes	0.1	0.9%
196	Phipps complex, 15 to 30 percent slopes	0.0	0.1%
197	Phipps complex, 30 to 50 percent slopes	12.8	99.0%
Totals for Area of Interest		**13.0**	**100.0%**

McCarrick Biological National Flood Hazard

2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle

N

0 260 520 Feet

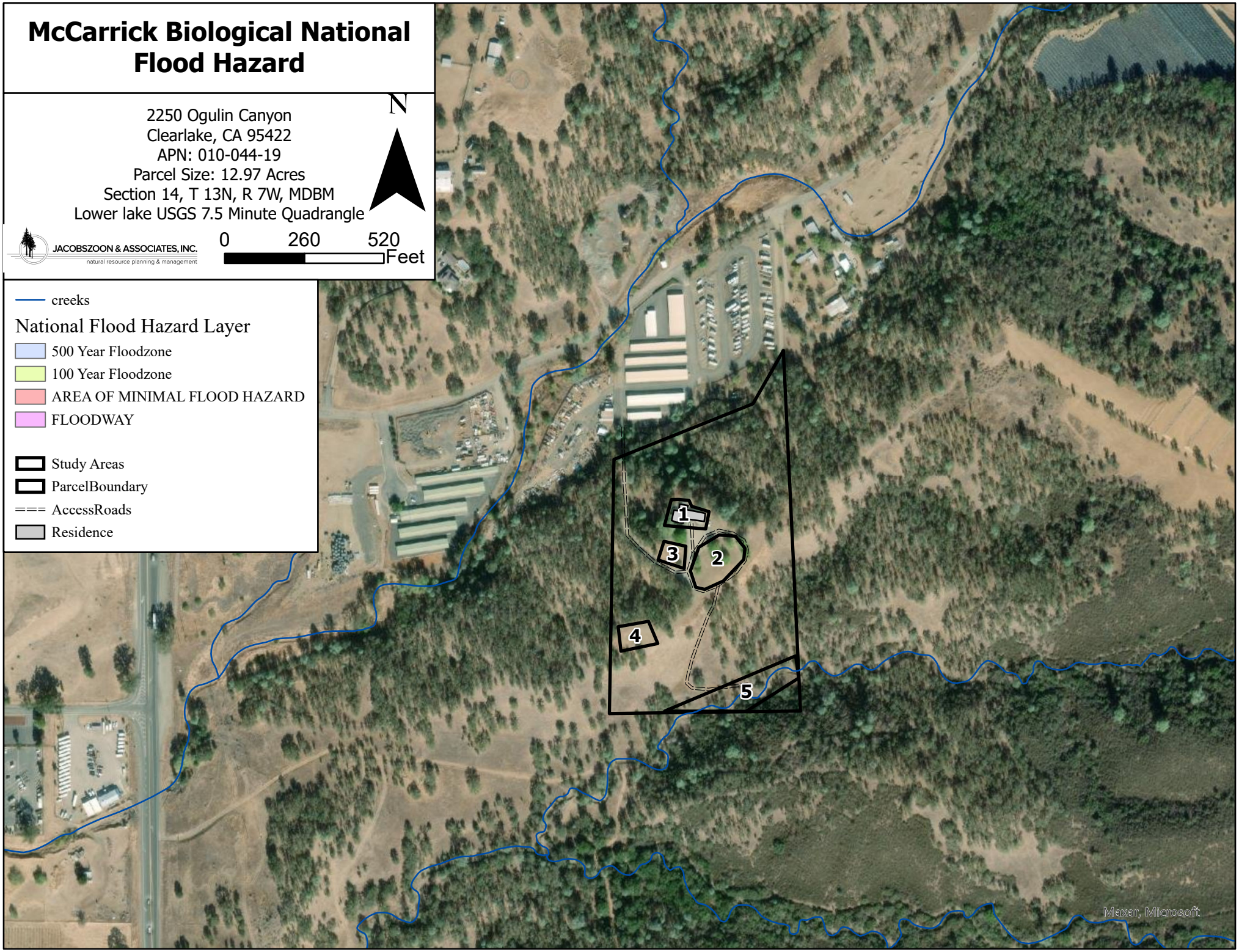
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

creeks

National Flood Hazard Layer

500 Year Floodzone
100 Year Floodzone
AREA OF MINIMAL FLOOD HAZARD
FLOODWAY

Study Areas
ParcelBoundary
AccessRoads
Residence



McCarrick Biological National Wetland Inventory

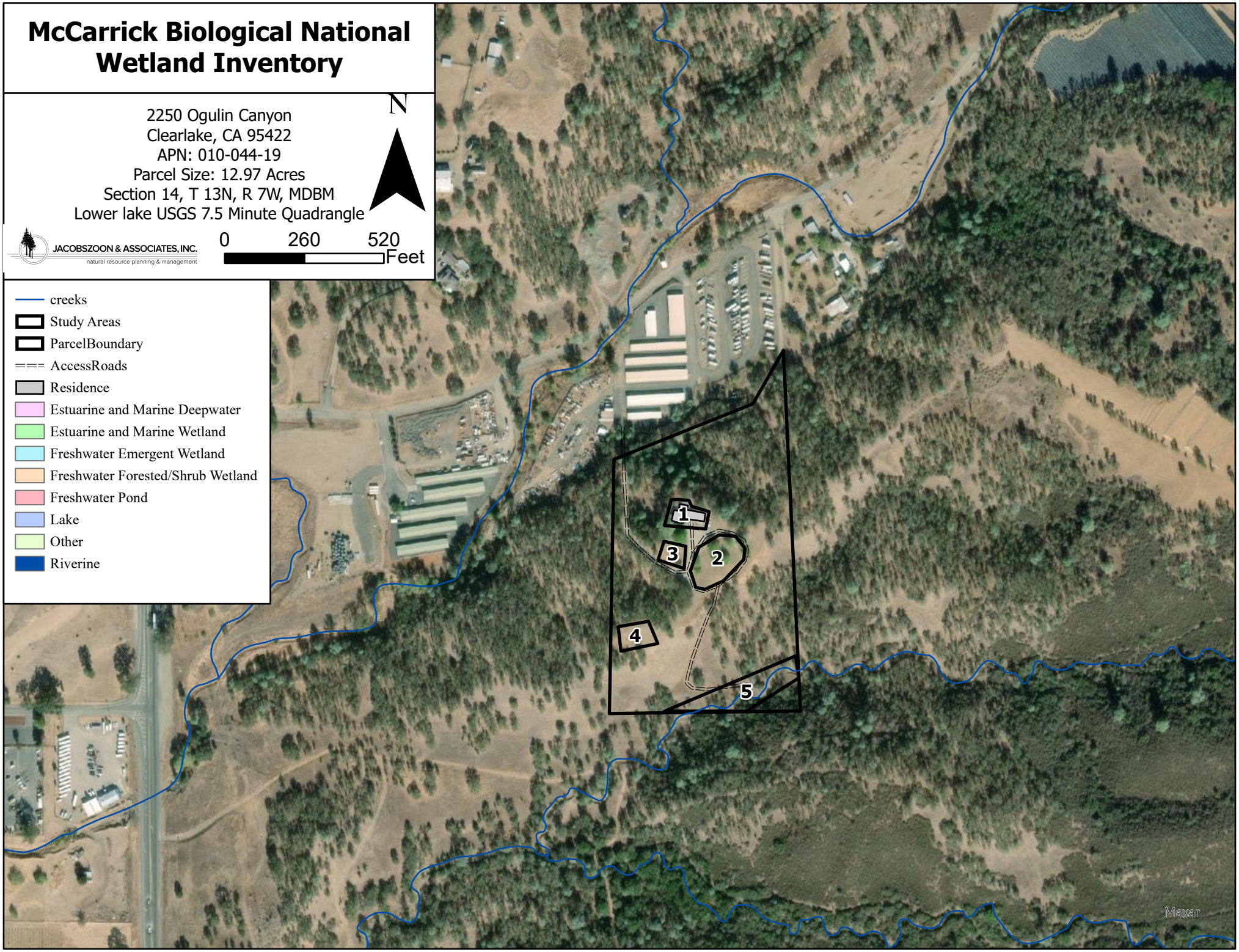
2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle

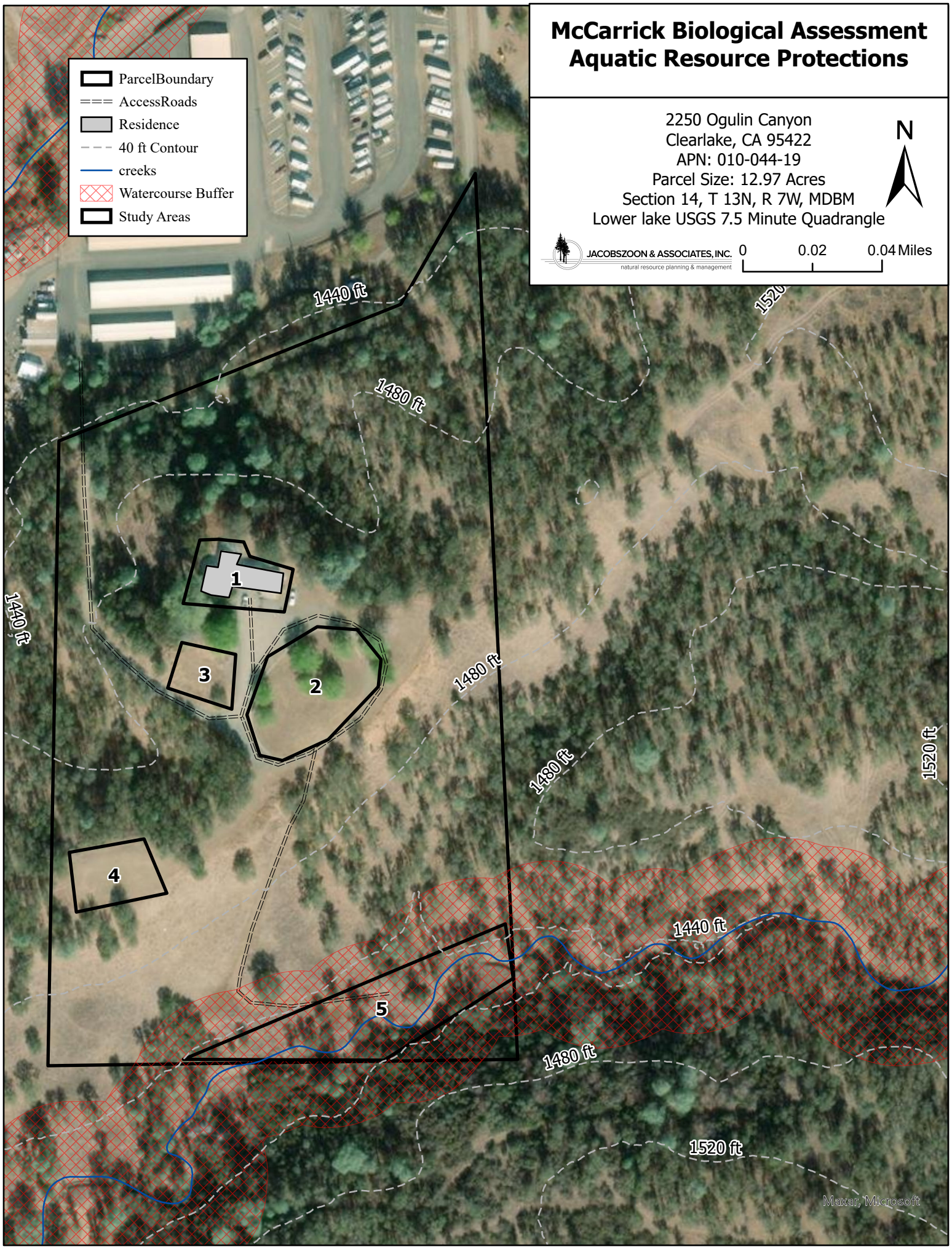
N

0 260 520 Feet

JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management

- creeks
- Study Areas
- ParcelBoundary
- AccessRoads
- Residence
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine




McCarrick Biological Assessment
Aquatic Resource Protections
2250 Ogulin Canyon
Clearlake, CA 95422
APN: 010-044-19
Parcel Size: 12.97 Acres
Section 14, T 13N, R 7W, MDBM
Lower lake USGS 7.5 Minute Quadrangle
N
JACOBSZOON & ASSOCIATES, INC.
natural resource planning & management
0
0.02
0.04 Miles
ParcelBoundary
AccessRoads
Residence
40 ft Contour
creeks
Watercourse Buffer
Study Areas
1
2
3
4
5
1440 ft
1480 ft
1520 ft
Maxar, Microsoft

Appendix E: Supporting Documents

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

101 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3912216, 3912215, 3912214, 3812286, 3812285, 3812284, 3812276 3812275 and 3812274;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium fimbriatum var. purdyi	Purdy's onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	4.3	S3	G4G5T3
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Antirrhinum subcordatum	dimorphic snapdragon	Plantaginaceae	annual herb	Apr-Jul	4.3	S3	G3
Antirrhinum virga	twig-like snapdragon	Plantaginaceae	perennial herb	Jun-Jul	4.3	S3?	G3?
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	4.3	S4	G4
Arabis modesta	modest rockcress	Brassicaceae	perennial herb	Mar-Jul	4.3	S3	G3
Arabis oregana	Oregon rockcress	Brassicaceae	perennial herb	May	4.3	S3	G3G4Q
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	(Jan)Mar-May(Jul)	1B.3	S3	G5T3
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.1	S2	G3T2
Asclepias solanoana	serpentine milkweed	Apocynaceae	perennial herb	May-Jul(Aug)	4.2	S3	G3
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	4.2	S3	G3
Astragalus clevelandii	Cleveland's milk-vetch	Fabaceae	perennial herb	Jun-Sep	4.3	S4	G4
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S3	G4T3
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	perennial herb	Apr-Jul	4.3	S4	G4T4
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Brodiaea rosea ssp. rosea	Indian Valley brodiaea	Themidaceae	perennial bulbiferous herb	May-Jun	3.1	S2	G2

Calamagrostis ophitidis	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	4.3	S3	G3
Calochortus uniflorus	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	4.2	S4	G4
Calyptridium quadripetalum	four-petaled pussypaws	Montiaceae	annual herb	Apr-Jun	4.3	S4	G4
Calystegia collina ssp. oxyphylla	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	4.2	S3	G4T3
Calystegia collina ssp. tridactylosa	three-fingered morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	1B.2	S1	G4T1
Carex praticola	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	2B.2	S2	G5
Castilleja rubicundula var. rubicundula	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
Ceanothus confusus	Rincon Ridge ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Jun	1B.1	S1	G1
Ceanothus divergens	Calistoga ceanothus	Rhamnaceae	perennial evergreen shrub	Feb-Apr	1B.2	S2	G2
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	annual herb	May-Nov	1B.2	S2	G3T2
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Chlorogalum pomeridianum var. minus	dwarf soaproot	Agavaceae	perennial bulbiferous herb	May-Aug	1B.2	S3	G5T3
Clarkia gracilis ssp. tracyi	Tracy's clarkia	Onagraceae	annual herb	Apr-Jul	4.2	S3	G5T3
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	May-Jun	4.3	S4	G4
Cordylanthus tenuis ssp. brunneus	serpentine bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug	4.3	S3	G4G5T3
Cryptantha dissita	serpentine cryptantha	Boraginaceae	annual herb	Apr-Jun	1B.2	S2	G2
Cryptantha excavata	deep-scarred cryptantha	Boraginaceae	annual herb	Apr-May	1B.1	S1	G1
Delphinium uliginosum	swamp larkspur	Ranunculaceae	perennial herb	May-Jun	4.2	S3	G3
Downingia willamettensis	Cascade downingia	Campanulaceae	annual herb	Jun-Jul(Sep)	2B.2	S2	G4
Equisetum palustre	marsh horsetail	Equisetaceae	perennial rhizomatous herb	unk	3	S1S3	G5
Eriastrum brandegeeae	Brandegee's eriastrum	Polemoniaceae	annual herb	Apr-Aug	1B.1	S1	G1Q
Eriastrum tracyi	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	3.2	S3	G3Q
Erigeron greenei	Greene's narrow-leaved daisy	Asteraceae	perennial herb	May-Sep	1B.2	S3	G3
Eriogonum nervulosum	Snow Mountain buckwheat	Polygonaceae	perennial rhizomatous herb	Jun-Sep	1B.2	S2	G2
Eryngium constancei	Loch Lomond button-celery	Apiaceae	annual / perennial herb	Apr-Jun	1B.1	S1	G1
Erythranthe nudata	bare monkeyflower	Phrymaceae	annual herb	May-Jun	4.3	S4	G4
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2S3	G2G3

Fritillaria purdyi	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	4.3	S4	G4
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss		1B.3	S2	G2
Harmonia hallii	Hall's harmonia	Asteraceae	annual herb	Apr-Jun	1B.2	S2?	G2?
Helianthus exilis	serpentine sunflower	Asteraceae	annual herb	Jun-Nov	4.2	S3	G3
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S2	G5T2
Hesperolinon adenophyllum	glandular western flax	Linaceae	annual herb	May-Aug	1B.2	S2S3	G2G3
Hesperolinon bicarpellatum	two-carpellate western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2
Hesperolinon didymocarpum	Lake County western flax	Linaceae	annual herb	May-Jul	1B.2	S1	G1
Hesperolinon drymarioides	drymaria-like western flax	Linaceae	annual herb	May-Aug	1B.2	S2	G2
Hesperolinon sharsmithiae	Sharsmith's western flax	Linaceae	annual herb	May-Jul	1B.2	S2	G2Q
Horkelia bolanderi	Bolander's horkelia	Rosaceae	perennial herb	(May)Jun-Aug	1B.2	S1	G1
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	2B.1	S3	G4
Juglans hindsii	Northern California black walnut	Juglandaceae	perennial deciduous tree	Apr-May	1B.1	S1	G1
Lasthenia burkei	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	1B.1	S1	G1
Layia septentrionalis	Colusa layia	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	4.2	S4?	G4?
Leptosiphon jepsonii	Jepson's leptosiphon	Polemoniaceae	annual herb	Mar-May	1B.2	S2S3	G2G3
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	4.2	S3	G4T4
Lomatium hooveri	Hoover's lomatium	Apiaceae	perennial herb	Apr-Jul	4.3	S3	G3
Lomatium repostum	Napa lomatium	Apiaceae	perennial herb	Mar-Jun	4.3	S3	G3
Lupinus milo-bakeri	Milo Baker's lupine	Fabaceae	annual herb	Jun-Sep	1B.1	S1	G1Q
Lupinus sericatus	Cobb Mountain lupine	Fabaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Malacothamnus helleri	Heller's bush-mallow	Malvaceae	perennial deciduous shrub	May-Jul	3.3	S3	G3Q
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss		4.3	S4	G5
Myosurus minimus ssp. apus	little mousetail	Ranunculaceae	annual herb	Mar-Jun	3.1	S2	G5T2Q
Navarretia cotulifolia	cotula navarretia	Polemoniaceae	annual herb	May-Jun	4.2	S4	G4
Navarretia jepsonii	Jepson's navarretia	Polemoniaceae	annual herb	Apr-Jun	4.3	S4	G4
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2

Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.1	S1	G4T1
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.2	S1	G4T1
Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	Polemoniaceae	annual herb	Apr-Jun	4.2	S3	G4T3
Navarretia nigelliformis ssp. radians	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	1B.2	S2	G4T2
Navarretia paradoxinota	Porter’s navarretia	Polemoniaceae	annual herb	May-Jun(Jul)	1B.3	S2	G2
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
Orobanche valida ssp. howellii	Howell's broomrape	Orobanchaceae	perennial herb (parasitic)	Jun-Sep	4.3	S3	G4T3
Panicum acuminatum var. thermale	Geysers panicum	Poaceae	annual / perennial herb	Jun-Aug	1B.2	S2	G5T2Q
Penstemon newberryi var. sonomensis	Sonoma beardtongue	Plantaginaceae	perennial herb	Apr-Aug	1B.3	S2	G4T2
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	4.2	S3	G3
Plagiobryoides vinosula	wine-colored tufa moss	Bryaceae	moss		4.2	S2	G3G4
Potamogeton zosteriformis	eel-grass pondweed	Potamogetonaceae	annual herb (aquatic)	Jun-Jul	2B.2	S3	G5
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
Sedella leiocarpa	Lake County stonecrop	Crassulaceae	annual herb	Apr-May	1B.1	S1	G1
Senecio clevelandii var. clevelandii	Cleveland's ragwort	Asteraceae	perennial herb	Jun-Jul	4.3	S3	G4?T3Q
Sidalcea keckii	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	1B.1	S2	G2
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	Malvaceae	perennial herb	(Jun)Jul-Aug	1B.2	S2	G5T2
Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewelflower	Brassicaceae	perennial herb	May-Jun	1B.2	S1	G2T1
Streptanthus brachiatus ssp. hoffmanii	Freed's jewelflower	Brassicaceae	perennial herb	May-Jul	1B.2	S2	G2T2
Streptanthus hesperidis	green jewelflower	Brassicaceae	annual herb	May-Jul	1B.2	S2	G2
Streptanthus morrisonii ssp. elatus	Three Peaks jewelflower	Brassicaceae	perennial herb	Jun-Sep	1B.2	S1	G2T1
Streptanthus morrisonii ssp. kruckebergii	Kruckeberg's jewelflower	Brassicaceae	perennial herb	Apr-Jul	1B.2	S1	G2T1
Toxicoscordion fontanum	marsh zigadenus	Melanthiaceae	perennial bulbiferous herb	Apr-Jul	4.2	S3	G3
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3	S3?	G4G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 15 April 2021].

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Glossary

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About the Rare Plant Program
CNPS Home Page
About CNPS
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The Calflora Database
The California Lichen Society
California Natural Diversity Database
The Jepson Flora Project
The Consortium of California Herbaria
CalPhotos

Questions and Comments
rareplants@cnps.org

Attachment C – Hydrology Analysis, prepared by Chico Environmental Science and Planning dated August 4, 2021

REPORT OF FINDINGS - HYDROLOGY ANALYSIS

Site Information:
2250 Ogulin Canyon
Clearlake, CA 95422
APNs: 010-044-19

Prepared for:
Clearlake Harvest Company

Prepared by:
Chico Environmental Science & Planning
333 Main Street, Suite 260
Chico, CA 95928
(530) 899-2900

Prepared: August 4, 2021

1.0 INTRODUCTION

Chico Environmental prepared this Report of Findings to determine groundwater availability at 2250 Ogulin Canyon in Clearlake, CA ("subject property" or "site"). The approximately 12.95-acre site is situated in Burns Valley Groundwater Basin, a rural portion of southeastern Lake County, California **(Figure 1).** One 200 feet below ground surface (bgs), 4 ½ inch casing diameter domestic groundwater well is located on APN 010-044-19. The well was installed on December 12, 2005. A well test and system equipment evaluation were conducted on March 31, 2021. The purpose of this investigation is to determine if the aquifer has sufficient quantity to support outdoor cannabis cultivation for 17,500 square-feet of the 12.95-acre property.

2.0 BACKGROUND

Chico Environmental conducted a site visit to the site on July 28, 2021 **(Appendix A)**. Chico Environmental reviewed Well Completion Reports within Lake County from DWR **(Appendix B)**. Chico Environmental also reviewed Lake County groundwater ordinances, the California State Sustainable Groundwater Management Act (SGMA), geology maps **(Figure 2)**, topography maps **(Figure 3)** and groundwater well locations **(Figure 4).**

3.0 GEOLOGY

The subject property is located in the Coast Range Geomorphic Province of California. The Coast Range is comprised largely of the Franciscan Complex which represents an accretionary complex formed by long-term subduction of an oceanic plate under the western margin of the North American craton. The Franciscan complex is composed of three distinguishable belts: the eastern belt, the central belt, and the coastal belt. Formation of the accretionary complex began during the late Jurassic in the eastern belt and has continued into the Miocene along the western coastal belt. The complex trends NNW and is bounded by the San Andreas Fault to the east and by the coastal range fault to the west. The coast range fault separates the Franciscan complex with the partly coeval Great Valley sequence.

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Faulting occurred in Mendocino County, lowering an area in the Coast Ranges. This area became filled with gravels and sands from creeks in the mountains and became the Cache Formation. Toward the end of the Cache Formation's deposition, faulting created a depression that combined with lava flows created the basin that contains Clear Lake. Volcanic activity occurred intermittently through the Pleistocene with the extrusion of a number of separate lava flows, beginning the deposition of the Clear Lake Pleistocene Volcanics,

including Mount Konocti and the surrounding area. Other depressions and valleys in the Coast Ranges began to be filled with sands, silts and gravels carried by streams, resulting in the deposition of alluvial basins.

The Burns Valley Basin is in the southeastern portion of Lake County and is the Shoreline Inventory Unit. It is bordered by the Franciscan Formation to the north, Clear Lake to the west and the Cache Formation to the south and east. There are three water-bearing formations in the Burns Valley Basin, including Quaternary Alluvium, Quaternary Terrace Deposits and Lower Lake Formation. Quaternary alluvium occurs in the valley lowlands and consist of silt, sand and gravel. This layer is thickest in the southern portion of the basin at approximately 50 feet. Groundwater from this layer is used for domestic use and is unconfined.

Quaternary Terrace Deposits occur on the sides of the alluvial plain at approximately 15 feet above the valley floor. Further research is necessary to qualify groundwater in this formation. The Lower Lake Formation consists of lake deposits underlying the alluvial and terrace deposits. It mainly consists of fine sands, silts and thick interbeds of marl and limestone. The maximum thickness is 200 feet and has low permeability. Groundwater from this layer can be pumped at a few hundred gallons per minute.

4.0 Hydrology

The average annual precipitation ranges from 25 inches to 35 inches per year and the average annual air temperature ranges between 55 to 59 °F in the project area. Surface water is limited to ephemeral drainages within the project area.

Groundwater Hydrogeology

Groundwater typically fluctuates between 2-10 feet below ground surface (bgs) from spring to fall. The DWR estimates the usable storage capacity to be 4,000 acre-feet (DWR 1960). Agricultural demand is typically around 14 acre-feet per year. As of 2006, there were 86 domestic wells and 13 irrigation wells in the Burn Valley Basin, with half of the domestic wells measuring less than 75 feet bgs and half of the irrigation wells measuring less than 250 feet bgs.

Groundwater Wells

As of March 2006, there are 86 domestic wells and 13 irrigation wells in the Burns Valley Basin. Approximately half of these domestic wells are shallower than 75 feet deep, and approximately half of the irrigation wells are shallower than 250 feet deep.

On December 11, 2005 a domestic well was completed at the subject site. The 200 feet bgs well was drilled with first water encountered at 120 feet bgs and a completed static water level of 125 feet bgs. The estimated yield for the well was 30 gallons per minute.

A well performance report from March 2021 shows the static water level of the well is 113.5 feet bgs. After pumping at a rate of 23 gallons per minute for 1.5 hours, the pumping level decreased from 133.5 feet bgs to 143.2 feet bgs. The well returned to 121 feet bgs after 5 minutes of recovery.

5.0 FINDINGS

2250 Ogulin Canyon has approximately 12.95 acres of surface land that is located over loosely consolidated gravel deposits in the Burns Valley (Figure 3).

The 2019 SGMA report rates Burns Valley as a Very Low Priority groundwater basin. Current groundwater data suggests that the Burns Valley Groundwater Basin fully recharges annually.

Section 28.1 of the lake County, California – Code of Ordinances - Regulation of the Extraction and Exportation of Groundwater from Lake County. Section 1.11 States:

"The County seeks to foster prudent water management practices to avoid significant adverse overdraft-related environmental, social, and economic impacts. It is therefore essential for the protection of the County's important groundwater resources that the County requires a Permit to extract or otherwise capture groundwater for any use outside the County. This chapter requires a Permit for the export and use of groundwater outside the County and is not intended to regulate groundwater in any other way."

Groundwater pumped for irrigation on 2250 Ogulin Canyon will not be used for export out of the County.

The expected annual water use for the cannabis cultivation project would be 511,400 gallons per square foot (gsf) per year with usage including cultivation (455,000 gsf per year), processing (24,000 gsf), and a nursery (32,400 gsf per year). The well yields 30 gallons per minute (15,768,000 gallons per year) and is monitored by a flow through meter **(Appendix C)**.

There are no additional impacts on the Burns Valley Basin from the project, nor impacts of water use for this project to the surrounding areas.

6.0 CONCLUSIONS AND RECOMMENDATIONS

It is Chico Environmental's opinion that the completed well is of sufficient yield to irrigate 17,500 square-feet of cannabis at 2250 Ogulin Canyon. Additionally, it appears that the overlying property possesses a sufficient quantity of groundwater for seasonal irrigation that would not adversely overdraft the Burns Valley Groundwater Basin, affect downgradient groundwater users or other well users in the vicinity.

7.0 QUALIFICATIONS AND SIGNATURE

I am a Professional Geologist with the State of California. Chico Environmental has performed this assessment under my supervision in accordance with generally accepted environmental practices and procedures, as of the date of this report. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area. The conclusions contained within this assessment are based upon site conditions readily observed or were reasonably ascertainable and present at the time of the site inspection.

The conclusions and recommendations stated in this report are based upon personal observations made by employees of Chico Environmental and upon information provided by others. I have no reason to suspect or believe that information provided is inaccurate.

John Lane, P.G. No. 7717
Chico Environmental Science & Planning
jlane@chicoenvironmental.com
(530) 899-2900

8.0 REFERENCES

Cardwell, G.T., 1958. Geology and Ground Water in the Santa Rosa and Petaluma Valley Areas, Sonoma County, California. USGS Water Supply Paper 1427.

Cardwell, G.T., 1958. Geology and Ground Water in the Santa Rosa and Petaluma Valley Areas, Sonoma County, California. USGS Water Supply Paper 1427.

Camp Dresser and McKee, In Cooperation with the California Department of Water Resources, Northern District, Lake County Watershed Protection District Lake County Groundwater Management Plan March 31th, 2006.

Jennings, C.W., Strand, R.G., and Rogers, T.H., 1977, Geologic map of California: California Division of Mines and Geology, scale 1:750,000

Monitoring Plan Lake County, California by Lake County Watershed Protection District California Statewide Groundwater Elevation Monitoring System, March 20, 2012.

United States Geological Survey, 2018. Lower Lake Quadrangle, Calif., 1:24,000 Scale Topographic Map.

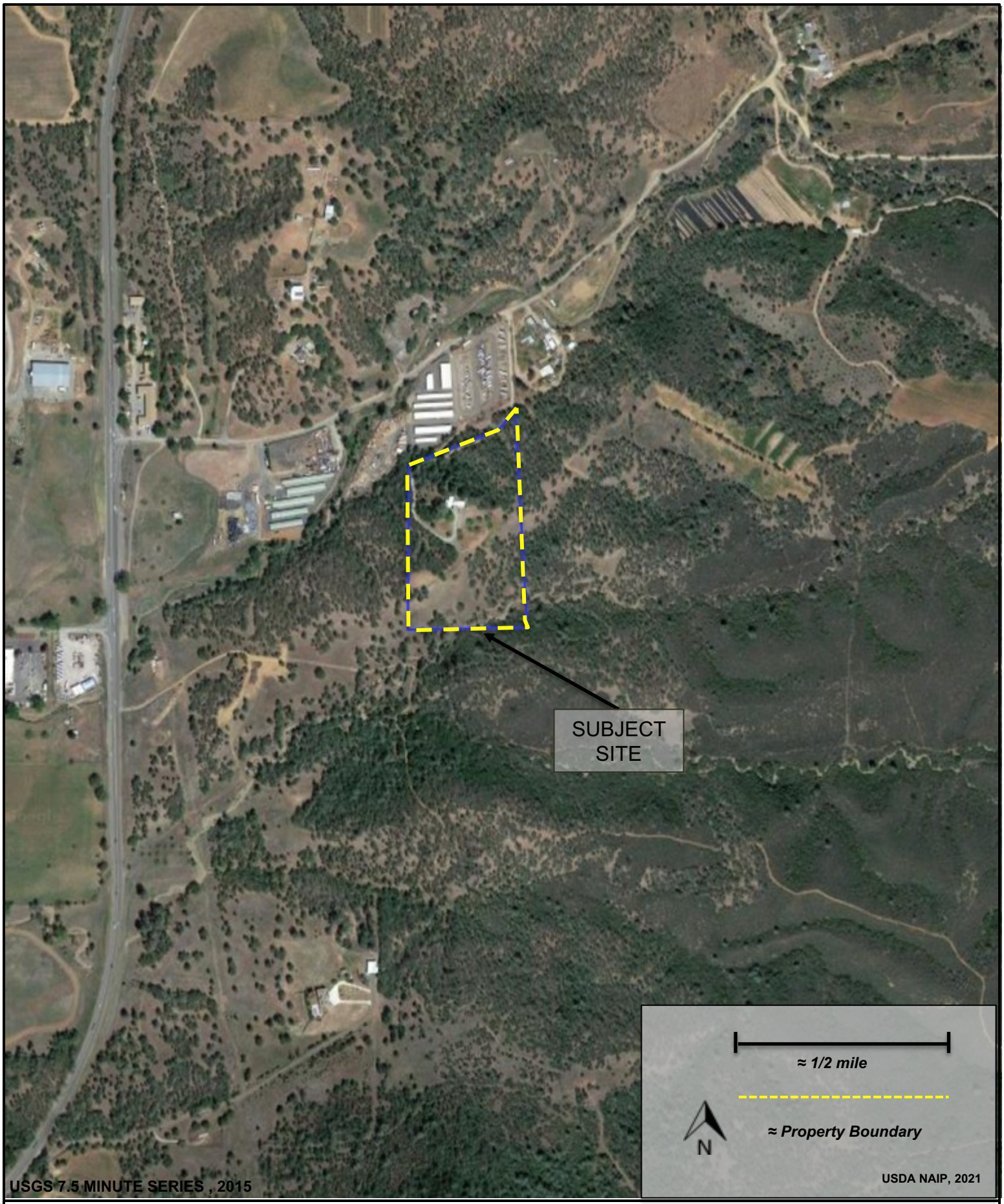
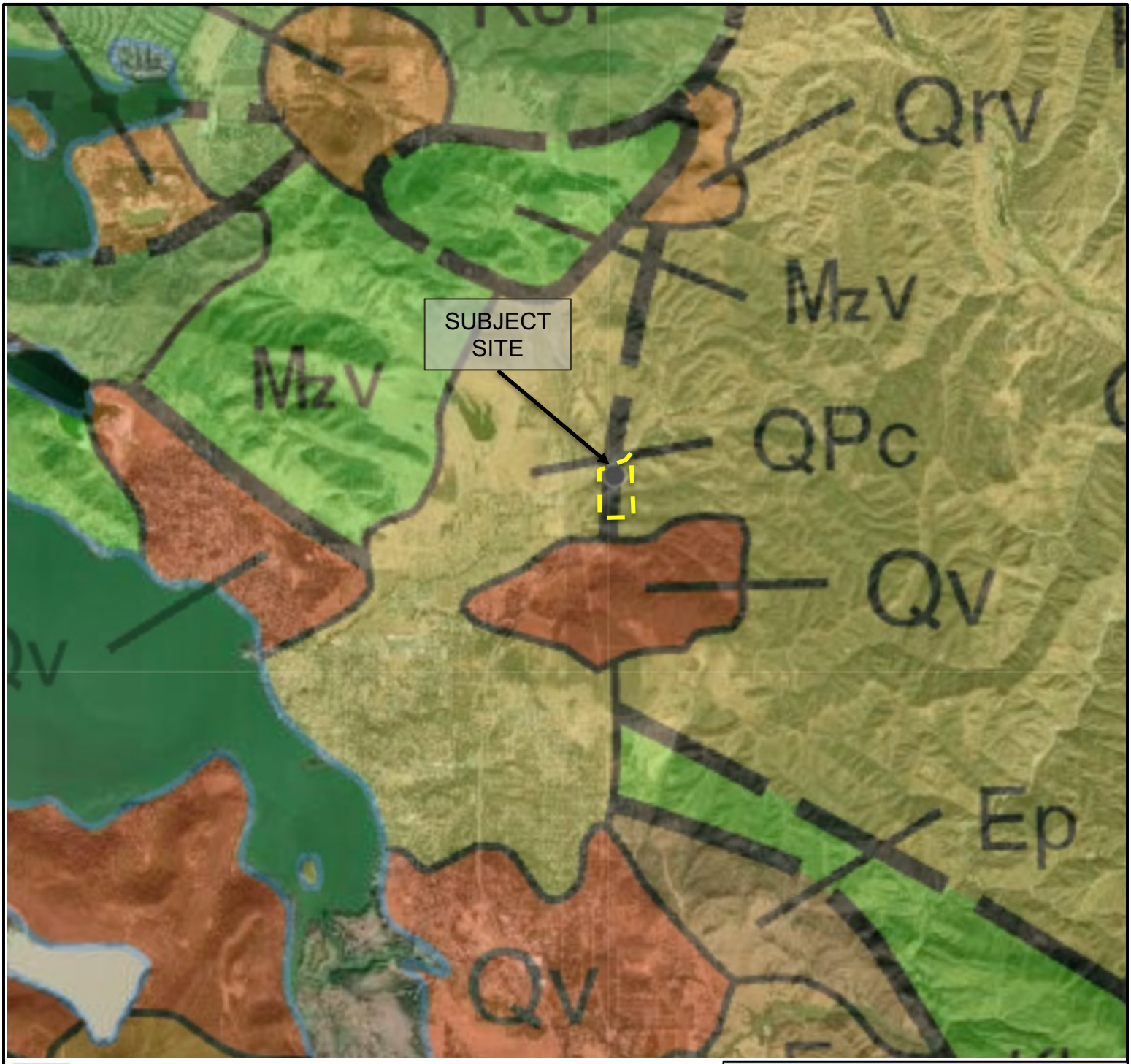


FIGURE 1: GENERAL LOCATION MAP
2250 Ogulin Canyon
Clearlake, CA 95422

CHICO environmental



Qv	Quaternary volcanic flow rocks; minor pyroclastic deposits
Q	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated
QPc	Pleistocene and/or Pliocene sandstone, shale, and gravels deposits; mostly loosely consolidated
Mzv	Undivided Mesozoic volcanic and metavolcanic rocks. Andesite and rhyolite flow rocks, greenstone, volcanic breccia and other pyroclastic rocks; in part strongly metamorphosed. Includes volcanic rocks of Franciscan Complex: basaltic pillow lava, diabase, greenstone, and minor pyroclastic rocks

N

≈ 2 miles

≈ Property Boundary

FIGURE 2: SITE GEOLOGY
2250 Ogulin Canyon
Clearlake, CA 95422

CHICO environmental

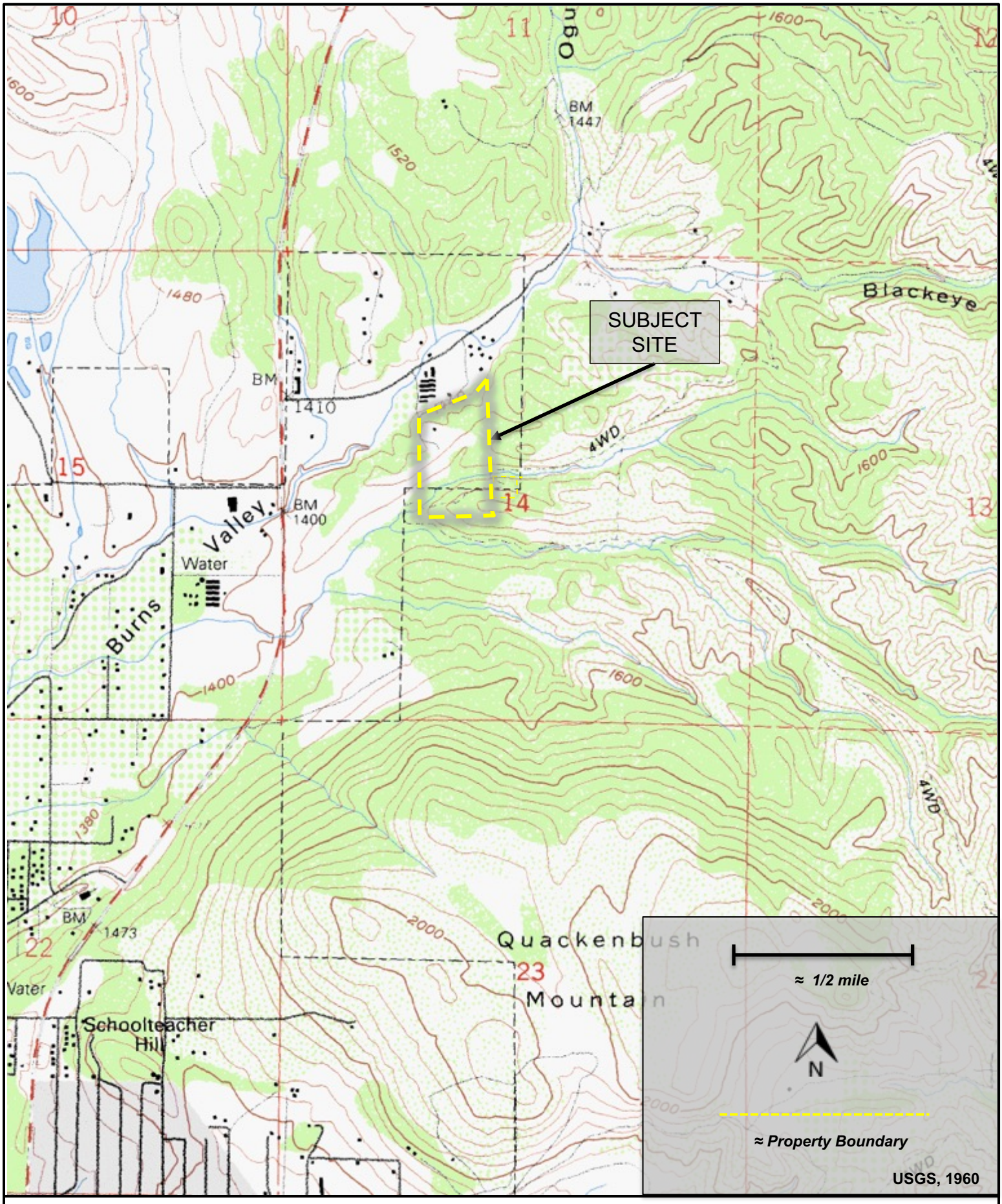


FIGURE 3: TOPOGRAPHIC MAP
2250 Ogulin Canyon
Clearlake, CA 95422

CHICO environmental

	WCR1980-006392	WCR1999-008659	WCR2017-005234
Well depth (ft)	110	240	372
Water depth (ft)	-	-	225

FIGURE 4: WELL MAP
2250 Ogulin Canyon
Clearlake, CA 95422

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APPENDIX A: SITE PHOTOGRAPHS

SITE PHOTOGRAPHS – July 28, 2021
2250 Ogulin Canyon
Clearlake, CA 95422

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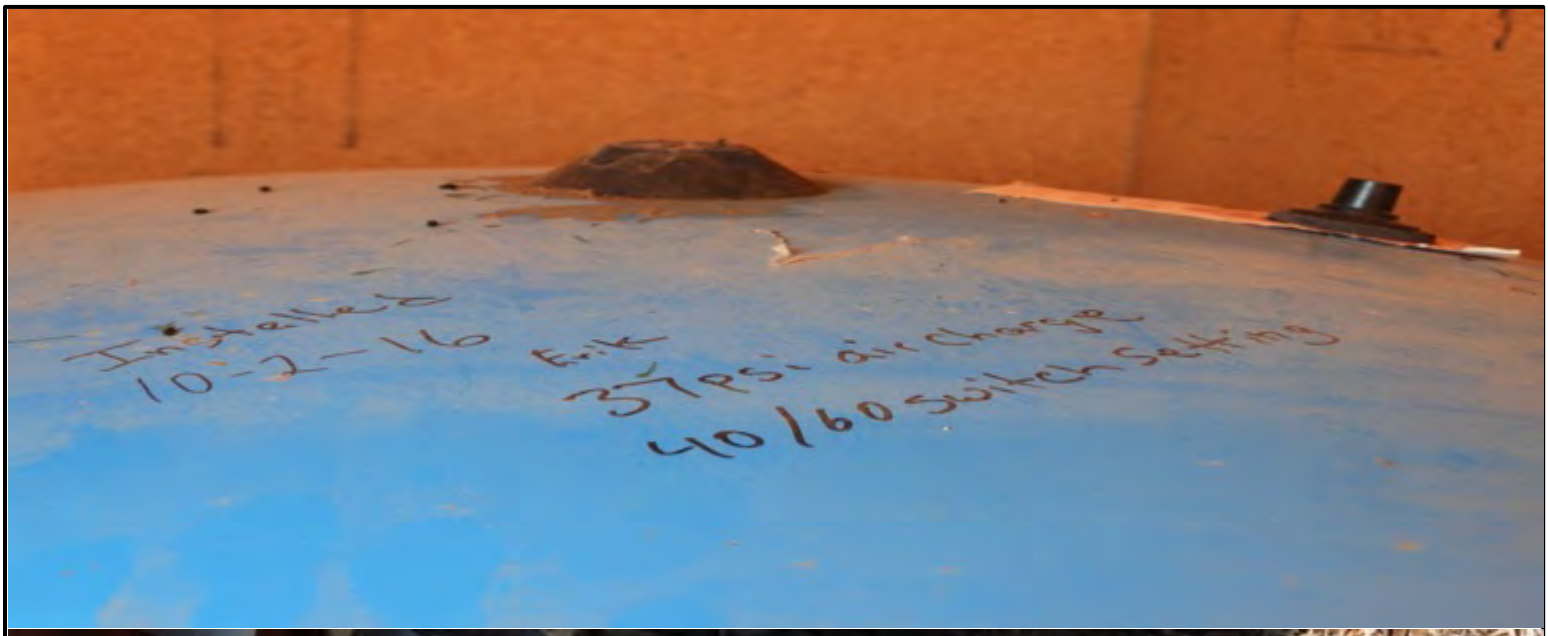

SITE PHOTOGRAPHS – July 28, 2021
2250 Ogulin Canyon
Clearlake, CA 95422

CHICO environmental

SITE PHOTOGRAPHS – July 28, 2021
2250 Ogulin Canyon
Clearlake, CA 95422

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APPENDIX B: WELL COMPLETION REPORTS

Well Completion Reports

WCR Numb	Legacy Log N	Well Locat	City	County N	Local Permit Agency	Permit D	Region Office	Planned Use/Former U	Driller Name	Decimal Lat	Decimal Lon	Towns	Rang	Secti	Baseline Me	APN	Date Work E	Total Complete	Top Of Perforate	Bottom of Perforat	Casing Dia	Drilling Met	Fluid	Static Water	Total Draw	Test T	Pump Test L	Well Yi	Well Yield Unit of Measure
WCR1979-0	84086			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.976345	-122.62182	13N	07W	15	Mount Diablo		10/31/1979	92				Other not sp	Other not specified						
WCR1977-0	118714			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		10/31/1977	50				Other not sp	Other not specified						
WCR1975-0	156524			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		6/30/1975	58				Other not sp	Other not specified						
WCR2008-0	1075153			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WATER DEVELOPMENT CORPORATION	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-187	1/29/2008	25	10	25	2	Auger							
WCR2001-0	733316			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	1/21/2001	20	5	20	2	Other not sp	Other not specified						
WCR1976-0	153322			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.96135	-122.6035	13N	07W	23	Mount Diablo		9/30/1976	61				Other not sp	Other not specified						
WCR2001-0	761881			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990501	-122.60314	13N	07W	11	Mount Diabl	10-3-33	3/21/2001	220	115	195	10	Direct Rotar	Air					300	GPM
WCR1975-0	45229			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HUMMEL WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diablo		3/31/1975	43				Other not sp	Other not specified						
WCR1976-0	141538			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		6/30/1976	40				Other not sp	Other not specified						
WCR1982-0	177913			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domestic		38.976345	-122.62182	13N	07W	15	Mount Diablo		12/13/1982	60	30	60	6	Direct Rotar	Air					50	GPM
WCR1998-0	705602			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diabl	10-53-24	11/3/1998	245			6							160	GPM
WCR2006-0	1093076			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	010-042	6/8/2006	160	100	160	4	Direct Rotar	Air					75	GPM
WCR1966-0	94333			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.961708	-122.64075	13N	07W	21	Mount Diablo		7/31/1966	35				Other not sp	Other not specified						
WCR1986-0	177973			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		1/31/1986	120				Other not sp	Other not specified						
WCR1981-0	228689			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.975973	-122.60328	13N	07W	14	Mount Diablo		10/31/1981	361				Other not sp	Other not specified						
WCR1955-0	294			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	NUTTING AND JENSEN DRILLING	38.96135	-122.6035	13N	07W	23	Mount Diablo		6/30/1955	85				Other not sp	Other not specified						
WCR1776-0	249			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	WORD, A H	38.961728	-122.62198	13N	07W	22	Mount Diablo			120				Other not sp	Other not specified						
WCR1982-0	177914			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domestic		38.976345	-122.62182	13N	07W	15	Mount Diablo		12/12/1982	70	30	70	6	Direct Rotar	Air					30	GPM
WCR1990-0	302043			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-84-17	2/28/1990	95	85	95		Other not sp	Other not specified					50	GPM
WCR1999-0	719754A			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-42-2	6/29/1999	65			2	Other not sp	Other not specified						
WCR2009-0	E0089841			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/23/2009												
WCR2002-0	778136			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	6/2/2002	20	5	20	2	Other not sp	Other not specified						
WCR2006-0	1089141			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.990501	-122.60314	13N	07W	11	Mount Diabl	100-003	10/1/2006	260	220	260	4	Direct Rotar	Air					100	GPM
WCR1978-0	134455			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.961708	-122.64075	13N	07W	21	Mount Diablo		5/31/1978	60				Other not sp	Other not specified						
WCR1985-0	177953			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/30/1985	120				Other not sp	Other not specified						
WCR2004-0	1072815			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	040-032	12/8/2004	20	5	20	2	Auger							
WCR2004-0	1075333			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	40-82-38	10/27/2004	95	75	95	6	Direct Rotar	Air					100	GPM
WCR1996-0	445212			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diabl	10-48-9	5/16/1996	190	150	190	4	Direct Rotar	Bentonite					18	GPM
WCR2005-0	1096338			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-077	4/21/2005	120	60	120	8	Direct Rotar	Air					40	GPM
WCR1980-0	84153			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.961728	-122.62198	13N	07W	22	Mount Diablo		8/31/1980	230				Other not sp	Other not specified						
WCR2006-0	1093074			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	HERMAN LARRY DRILLING CO	38.975973	-122.60328	13N	07W	14	Mount Diabl	010-053	6/6/2006	400	340	400	4	Direct Rotar	Air					100	GPM
WCR2000-0	713337			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-344-1	10/4/2000	75	35	75	5	Direct Rotar	Air					10	GPM
WCR1996-0	62946	71 SHADY	ROS	Marin	Marin County Environmental Health Services		DWR North Central R	Water Supply Domesti	FORSTER PUMP & ENGINEERIN FORSTER PU	38.966944	-122.56139	01N	06W	5	Mount Diabl	73-97-32	7/1/1996	300	50	300	4						24	7	GPM
WCR1977-0	119154			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		9/30/1977	70				Other not sp	Other not specified						
WCR1989-0	211099			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-361-6	8/31/1989	32				Other not sp	Other not specified						
WCR1966-0	107939			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	PETERSEN LES DRILLING & PUMP INC	38.961728	-122.62198	13N	07W	22	Mount Diablo		11/30/1966	53				Other not sp	Other not specified						
WCR1976-0	128696			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HUTTON J W	38.990848	-122.64026	13N	07W	9	Mount Diablo		2/29/1976	100				Other not sp	Other not specified						
WCR1991-0	369635			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-345-6	10/31/1991	146	106	146		Other not sp	Other not specified		134			15	GPM
WCR1996-0	476977			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	B & F DRILLING INC	38.961708	-122.64075	13N	07W	21	Mount Diablo		10/28/1996	20	5	20	2	Auger							
WCR1984-0	177924			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		11/30/1984	60				Other not sp	Other not specified						
WCR2009-0	E0089843			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/22/2009												
WCR2003-0	756793			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	010-042	8/25/2003	140	110	140	4	Direct Rotar	Air					35	GPM
WCR2011-0	E0141627			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR2000-0	746348			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-56	5/15/2000	500	200	440	10	Direct Rotar	Air					75	GPM
WCR2004-0	1075322			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976292	-122.64042	13N	07W	16	Mount Diabl	10-36-11	9/2/2004	140	100	140	6	Direct Rotar	Air					150	GPM
WCR1980-0	84076			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domestic		38.975973	-122.60328	13N	07W	14	Mount Diabl	10-44-X	3/26/1980	110	70	110	5	Direct Rotar	Air		70			20	GPM
WCR1987-0	184033			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.96135	-122.6035	13N	07W	23	Mount Diablo		9/30/1987	155				Other not sp	Other not specified						
WCR1977-0	119158			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		9/30/1977	85				Other not sp	Other not specified						
WCR1974-0	116343			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		3/31/1974	46				Other not sp	Other not specified						
WCR1973-0	20868			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.976345	-122.62182	13N	07W	15	Mount Diablo		3/31/1973	165				Other not sp	Other not specified						
WCR2001-0	733301			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	1/21/2001	20	15	20	2	Other not sp	Other not specified						
WCR1981-0	228072			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.96135	-122.6035	13N	07W	23	Mount Diabl	10-21-17	4/5/1981	290	250	290	4	Direct Rotar	Air		195			15	GPM
WCR1999-0	719601			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diabl	39-481-5	6/23/1999	30	15	30	2	Auger							
WCR2000-0	713379			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976292	-122.64042	13N	07W	16	Mount Diabl	10-36-3	1/31/2000	165	125	165	6	Direct Rotar	Air					100	GPM
WCR2009-0	1074905			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961728	-122.62198	13N	07W	22	Mount Diabl	010-053	12/10/2009	220	200	220	4	Direct Rotar	Air					75	GPM
WCR1979-0	66932			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		1/24/1979	65	25	65	8	Other not sp	Other not specified					40	GPM
WCR1991-0	302090			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976292	-122.64042	13N	07W	16	Mount Diabl	10-41-13	6/30/1991	320	200	320		Other not sp	Other not specified					20	GPM
WCR1995-0	405499			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-351-2	7/28/1995	60	40	60	4	Direct Rotar	Air					40	GPM
WCR2000-0	784726			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	12/26/2000	20	5	20	2	Other not sp	Other not specified						
WCR2011-0	E0141619			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/6/2011												
WCR1990-0	302047			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976292	-122.64042	13N	07W	16	Mount Diabl	10-37-8	5/31/1990	90	50	90		Other not sp	Other not specified					20	GPM
WCR1977-0	119162			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		9/30/1977	100				Other not sp	Other not specified						
WCR1976-0	141474A			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		5/31/1976	48				Other not sp	Other not specified						
WCR1996-0	445211			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diabl	40-126-1	5/9/1996	70	43	63	4	Direct Rotar	Air					30	GPM
WCR2011-0	E0141626			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR1971-0	41178			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HUMMEL WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diablo		2/28/1971	64				Other not sp	Other not specified						
WCR1991-0	302035			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-345-8	3/31/1991	125				Other not sp	Other not specified					20	GPM
WCR2006-0	937876			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	010-003	8/7/2006	400			6	Direct Rotar	Air					100	GPM
WCR2010-0	950498			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-082	8/5/2010	90	75	90	4	Direct Rotar	Air					100	GPM
WCR1971-0	12505			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		9/30/1971	59				Other not sp	Other not specified						
WCR1995-0	555494			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diabl	10-48-9	9/4/1995	183	143	183	4	Direct Rotar	Air					30	GPM
WCR1999-0	705609			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diabl	10-48-10	6/22/1999	240			6	Direct Rotar	Air					245	GPM
WCR1981-0	135261			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	DARRAH DRILLING	38.960913	-122.56619	13N	06W	19	Mount Diablo		7/31/1981	139				Other not sp	Other not specified						
WCR2011-0	E0141604			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR2009-0	E0089845			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/23/2009												
WCR1977-0	118717			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		10/31/1977	70				Other not sp	Other not specified						
WCR1977-0	110380			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		7/31/1977	83				Other not sp	Other not specified						
WCR1968-0	18672			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		9/30/1968	63				Other not sp	Other not specified						
WCR2000-0	784725			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	12/26/2000	20	5	20	2	Other not sp	Other not specified						
WCR1999-0	822359			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Test Well	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-55	10/12/1999	350				Direct Rotar	Air					100	GPM
WCR1983-0	236854			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.961728	-122.62198	13N	07W	22	Mount Diabl	10-34-X	12/31/1982	148	68	148	5	Direct Rotar	Air		50			7	GPM
WCR1991-0	211523			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-36-1	6/30/1991	261	181	261		Other not sp	Other not specified		110			30	GPM
WCR1978-0	104985			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		4/30/1978	85				Other not sp	Other not specified						
WCR1977-0	18722			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	GIESE DAVID WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diablo		8/31/1977	130				Other not sp	Other not specified						
WCR1977-0	3294			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		4/30/1977	97				Other not sp	Other not specified						
WCR1987-0	210839			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		6/30/1987	158				Other not sp	Other not specified						
WCR1989-0	264346			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-73-1	7/31/1989	100				Other not sp	Other not specified						
WCR2009-0	E0089848			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/22/2009												
WCR1991-0	211537			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-73-14	7/31/1991	78	38	78		Other not sp	Other not specified		69			35	GPM
WCR1999-0	719602			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-10	6/24/1999	30	15	30	2	Auger							
WCR2001-0	761871			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	010-003	2/11/2001	260			10	Direct Rotar	Air					650	GPM
WCR2017-0	e0345527	1756 Oguli	Clea	Lake	Lake County Health Services Department - En	3/10/201	DWR Northern Regio	Water Supply Domesti	WILL PETERSON WELL DRILLING	38.98748	-122.59618	13N	07W	11	Mount Diabl	010-055	3/13/2017	372	292	372	4.5	Other Air Rotary		225		Air Lift	2	50	GPM
WCR1999-0	719620			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.976292	-122.64042	13N	07W	16	Mount Diabl	10-5-66	6/28/1999	30	15	30	2	Auger							
WCR1994-0	493673			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Public	LARRY HELWEGE LAKE COUNTY DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-42-9	1/31/1994	200	100	200		Other not sp	Other not specified		180			1000	GPM
WCR1980-0	79856			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		8/31/1980	50				Other not sp	Other not specified						
WCR1999-0	822361			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Test Well	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-52	10/11/1999	375				Direct Rotar	Air					135	GPM
WCR1993-0	304356			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-530-X	3/31/1993	18	2	17		Other not sp	Other not specified						
WCR1997-0	62964	140 LAGUN	ROS	Marin	Marin County Environmental Health Services		DWR North Central R	Other Unused	FORSTER PUMP & ENGINEERIN FORSTER PU	38.961944	-122.56139	01N	06W	5	Mount Diabl	73-201-1	8/14/1997												
WCR1976-0	147756			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	CAMPBELL WATER WELL CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		3/31/1976	30				Other not sp	Other not specified						
WCR2011-0	E0141617			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR2014-0	951434			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.990838	-122.62173	13N	07W	10	Mount Diabl	010-042	4/24/2014	220	108	208	4	Direct Rotar	Air						
WCR1966-0	107942			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	PETERSEN LES DRILLING & PUMP INC	38.961728	-122.62198	13N	07W	22	Mount Diablo		11/30/1966	51				Other not sp	Other not specified						
WCR1979-0	83632			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/30/1979	75				Other not sp	Other not specified						
WCR1984-0	177925			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		11/30/1984	185				Other not sp	Other not specified						
WCR2011-0	950507			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-064	1/17/2011	98	78	98	4	Direct Rotar	Air					50	GPM
WCR1977-0	11403			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	LOUISE P BOUSCAL DOUSE AND DRILL	38.976292	-122.64042	13N	07W	16	Mount Diablo		1/31/1977	70				Other not sp	Other not specified						
WCR1985-0	177951			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		7/31/1985	120				Other not sp	Other not specified						
WCR1976-0	141529			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/30/1976	61				Other not sp	Other not specified						
WCR2002-0	756166			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-375-2	6/17/2002	180	100	180	6	Direct Rotar	Air					75	GPM
WCR2011-0	E0141624			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/6/2011												
WCR2011-0	E0141625			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR1993-0	324281			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	COBB MOUNTAIN ENGINEERING	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-345-1	6/30/1993	120	20	118		Other not sp	Other not specified					10	GPM
WCR1976-0	30853			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		10/31/1976	72				Other not sp	Other not specified						
WCR1974-0	116072			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		6/30/1974	43	24	44		Other not sp	Other not specified					30	GPM
WCR1976-0	141539			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/30/1976	75				Other not sp	Other not specified						
WCR1981-0	234100			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/15/1981	80	40	80	4	Direct Rotar	Air		30			15	GPM
WCR1977-0	36672			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	JUMMY LEE DELAP POINTS WEST DRILLING	38.976292	-122.64042	13N	07W	16	Mount Diablo		1/31/1977	175				Other not sp	Other not specified						
WCR1991-0	369639			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-48-8	10/31/1991	110	90	110		Other not sp	Other not specified		87			40	GPM
WCR1991-0	369640			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-48-8	10/31/1991												
WCR1993-0	304355			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		12/31/1992	19				Other not sp	Other not specified						

WCR2006-0	1089186			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.990128	-122.58457	13N	07W	12	Mount Diabl	010-003	10/19/2006	165	125	165	4	Direct Rotar	Air					20	GPM
WCR2004-0	1075334			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	40-82-37	10/27/2004	95	75	95	6	Direct Rotar	Air					100	GPM
WCR1776-0	243			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	HUMMEL WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diablo			172				Other not sp	Other not specified						
WCR2000-0	746349			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-52	5/15/2000	400			10	Direct Rotar	Air					700	GPM
WCR1999-0	522753			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	GARY S. JOHNSON ENVIRONET CONSULTIN	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-55-52	7/7/1999	20	5	20	2	Auger							
WCR1965-0	80317			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	R AND B DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diablo		5/31/1965	57				Other not sp	Other not specified						
WCR1977-0	36671			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	JUMMY LEE DELAP POINTS WEST DRILLING	38.976292	-122.64042	13N	07W	16	Mount Diablo		1/31/1977	150				Other not sp	Other not specified						
WCR1970-0	20853			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.961708	-122.64075	13N	07W	21	Mount Diablo		5/31/1970	136				Other not sp	Other not specified						
WCR1991-0	302096			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961728	-122.62198	13N	07W	22	Mount Diabl	39-446-2	9/30/1991	335	215	335		Other not sp	Other not specified					25	GPM
WCR2014-0	951425			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	039-344	1/7/2014	116	36	116	9	Other not sp	Other not specified					12	GPM
WCR2000-0	761868			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-52	9/14/2000	380	170	380	10	Direct Rotar	Air					2000	GPM
WCR2006-0	1093073			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.975559	-122.58477	13N	07W	13	Mount Diabl	010-053	6/5/2006	240	200	240	4	Direct Rotar	Air					50	GPM
WCR2006-0	1089142			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.990501	-122.60314	13N	07W	11	Mount Diabl	100-003	10/1/2006	380	360	380	4	Direct Rotar	Air					6	GPM
WCR2006-0	1089188			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.990128	-122.58457	13N	07W	12	Mount Diabl	010-003	10/19/2006	403	363	403	4	Direct Rotar	Air					42	GPM
WCR2011-0	E0141621			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/6/2011												
WCR1979-0	66476			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976292	-122.64042	13N	07W	16	Mount Diablo		4/30/1979	85				Other not sp	Other not specified						
WCR1976-0	141527			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		6/30/1976	69				Other not sp	Other not specified						
WCR2006-0	1089187			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	039-344	10/16/2006	103	83	103	4	Direct Rotar	Air					20	GPM
WCR1932-0	247			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	BROWN, RICHARD	38.961708	-122.64075	13N	07W	21	Mount Diablo		12/31/1931	25				Other not sp	Other not specified						
WCR1976-0	141535			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		6/30/1976	60				Other not sp	Other not specified						
WCR1978-0	104845			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.961708	-122.64075	13N	07W	21	Mount Diablo		6/30/1978	50				Other not sp	Other not specified						
WCR2011-0	E0141607			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR2007-0	1093138			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.975973	-122.60328	13N	07W	14	Mount Diabl	010-05-0	4/26/2007	180	140	180	4	Direct Rotar	Air					60	GPM
WCR1979-0	56265			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		10/31/1979	75				Other not sp	Other not specified						
WCR1993-0	304395			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-15	12/31/1992	19	4	19		Other not sp	Other not specified						
WCR1999-0	522755			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	GARY S. JOHNSON ENVIRONET CONSULTIN	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-55-52	7/7/1999	20	5	20	2	Auger							
WCR1996-0	445164			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-341-2	7/4/1996	95	65	95	4	Direct Rotar	Air		50			25	GPM
WCR1990-0	333319			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-333-2	10/31/1990	92	52	92		Other not sp	Other not specified		75			36	GPM
WCR2008-0	e0082829	930 SIR FR SAN		Marin	Marin County Environmental Health Services		DWR North Central R	Monitoring	RSI RSI	38.98	-122.56	02N	06W	31	Mount Diabl	6-61-31	10/6/2008	20	10	20	2	Auger	Not Availabl	10					
WCR1977-0	110258			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		6/30/1977	60				Other not sp	Other not specified						
WCR1996-0	445213			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-591-1	5/30/1996	58	38	58	4	Direct Rotar	Air		29			12	GPM
WCR2006-0	1093077			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	010-042	6/11/2006	300	180	300	4	Direct Rotar	Air					40	GPM
WCR2002-0	778135			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	6/2/2002	20	5	20	2	Other not sp	Other not specified						
WCR2002-0	778137			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	6/3/2002	20	5	20	2	Other not sp	Other not specified						
WCR2016-0	e0313360	14030 E La Clea		Lake	Lake County Health Services Department - En	12/15/20	DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.974862	-122.65003	13N	07W	17	Mount Diabl	010-041	3/30/2016	99	59	99	5	Direct Rotar	Air	60	99	Air Lift	3	20	GPM
WCR2007-0	E064181			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diabl	039-077	10/31/2007	97	55	95	5	Direct Rotar	Bentonite		97			40	GPM
WCR2007-0	1080452			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.975973	-122.60328	13N	07W	14	Mount Diabl	010-044	8/9/2007	200	40	200	4	Direct Rotar	Bentonite					50	GPM
WCR2000-0	785091			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-52	9/14/2000	380	170	380	10	Direct Rotar	Air					2000	GPM
WCR2009-0	1074880			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	010-042	3/19/2009		140	220	4							60	GPM
WCR1967-0	107756			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/30/1967	30				Other not sp	Other not specified						
WCR1999-0	719754			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-42-2	6/29/1999	65	25	65	2	Auger							
WCR2008-0	1075154			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WATER DEVELOPMENT CORPORATION	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-187	3/4/2008	25	10	25	2	Auger							
WCR1981-0	234007			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-322-1	5/31/1981	73	40	73	4	Direct Rotar	Air					15	GPM
WCR2000-0	228021			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.990128	-122.58457	13N	07W	12	Mount Diabl	010-021	12/31/1999	240	200	240	4	Direct Rotar	Air						
WCR2010-0	950504			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-082	9/20/2010	70	51	70	4	Direct Rotar	Air					100	GPM
WCR1776-0	241			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	HUMMEL WELL DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diablo			80				Other not sp	Other not specified						
WCR1976-0	93465			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.976345	-122.62182	13N	07W	15	Mount Diablo		8/31/1976	175				Other not sp	Other not specified						
WCR2004-0	1075332			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	40-82-39	10/27/2004	95	75	95	6	Direct Rotar	Air					100	GPM
WCR1991-0	369646			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	MC MULLEN DAN WELL DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diabl	39-374-1	10/31/1991												
WCR1977-0	11402			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	LOUISE P BOUSCAL DOUSE AND DRILL	38.976292	-122.64042	13N	07W	16	Mount Diablo		12/31/1976	80				Other not sp	Other not specified						
WCR1999-0	705610			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diabl	10-48-5	6/11/1999	230	180	230	4	Direct Rotar	Air					14	GPM
WCR2006-0	1093075			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.990501	-122.60314	13N	07W	11	Mount Diabl	010-003	6/7/2006	107	67	107	4	Direct Rotar	Air					50	GPM
WCR1980-0	79881			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		9/30/1980	228				Other not sp	Other not specified						
WCR2003-0	770134			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diabl	39-321-1	8/14/2003	170	70	170	6	Auger			70			7	GPM
WCR2000-0	713341			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.990128	-122.58457	13N	07W	12	Mount Diabl	10-3-11	11/7/2000	170	150	170	6	Direct Rotar	Air					200	GPM
WCR2002-0	778138			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	6/3/2002	20	5	20	2	Other not sp	Other not specified						
WCR2011-0	E0141622			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR2008-0	e0082830	930 SIR FR SAN		Marin	Marin County Environmental Health Services		DWR North Central R	Monitoring	RSI RSI	38.98	-122.56	02N	06W	31	Mount Diabl	6-61-31	10/6/2008	20	7	20	2	Auger	Not Availabl	7					
WCR2013-0	963040			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diabl	010-053	6/27/2013	358	272	352	4	Direct Rotar	Air					200	GPM
WCR1982-0	228377			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.960971	-122.58496	13N	07W	24	Mount Diablo		7/31/1982	115				Other not sp	Other not specified						
WCR1978-0	60261			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.961708	-122.64075	13N	07W	21	Mount Diablo		10/31/1978	40				Other not sp	Other not specified						
WCR1977-0	20707			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	JUMMY LEE DELAP POINTS WEST DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diablo		4/30/1977	100				Other not sp	Other not specified						
WCR1968-0	11421			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		1/31/1968	63				Other not sp	Other not specified						
WCR1971-0	58688			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		9/30/1971	59				Other not sp	Other not specified						
WCR1978-0	133921			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	ATEC DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diablo		8/31/1978	80				Other not sp	Other not specified						
WCR1994-0	493685			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Public	LARRY HELWEGE LAKE COUNTY DRILLING	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-42-9	1/31/1994	255	80	255		Other not sp	Other not specified		240			350	GPM
WCR1999-0	705617			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.96135	-122.6035	13N	07W	23	Mount Diabl	10-53-8	10/28/1999	240	200	240	4	Direct Rotar	Air					55	GPM
WCR2000-0	729439			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	10-26-31	3/20/2000	20	5	20	2	Auger							
WCR2004-0	1072816			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	040-032	12/8/2004	20	5	20	2	Auger							
WCR1976-0	141478A			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		5/31/1976	71				Other not sp	Other not specified						
WCR1976-0	11452			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.961708	-122.64075	13N	07W	21	Mount Diablo		10/31/1976	54				Other not sp	Other not specified						
WCR2011-0	E0141623			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	GREGG DRILLING & TESTING INC	38.961708	-122.64075	13N	07W	21	Mount Diabl	040-033	11/7/2011												
WCR2010-0	950503			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	039-082	9/16/2010	96	76	96	4	Direct Rotar	Air					100	GPM
WCR1981-0	13363			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	R AND B DRILLING	38.975973	-122.60328	13N	07W	14	Mount Diablo		6/30/1981	70				Other not sp	Other not specified						
WCR1999-0	522754			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	CLEAR HEART CONSTRUCTION	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-55-52	7/7/1999	20	5	20	2	Auger							
WCR2009-0	E0089842			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/22/2009												
WCR1776-0	252			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	WORD, A H	38.961728	-122.62198	13N	07W	22	Mount Diablo			60				Other not sp	Other not specified						
WCR1988-0	210974			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		8/31/1988	91				Other not sp	Other not specified						
WCR1980-0	84016			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.976345	-122.62182	13N	07W	15	Mount Diablo		6/30/1980	125				Other not sp	Other not specified						
WCR1991-0	428890			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	E. LOVISONE LOVISONE WL DRG*VINTAGE W	38.961728	-122.62198	13N	07W	22	Mount Diabl	39-374-2	7/31/1991	100				Other not sp	Other not specified					50	GPM
WCR2001-0	728313			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.96135	-122.6035	13N	07W	23	Mount Diabl	10-53-11	1/23/2001	493	233	493	6	Direct Rotar	Air		486			16	GPM
WCR2008-0	1075152			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WATER DEVELOPMENT CORPORATION	38.990128	-122.58457	13N	07W	12	Mount Diabl	039-187	1/29/2008	25	10	25	2	Auger							
WCR1776-0	245			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Unknown	HUMMEL WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diablo			177				Other not sp	Other not specified						
WCR1979-0	56420			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		8/31/1979	100				Other not sp	Other not specified						
WCR1981-0	229138			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976292	-122.64042	13N	07W	16	Mount Diablo		6/30/1981	150				Other not sp	Other not specified						
WCR2005-0	756828			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diabl	039-463	12/14/2005	67	47	67	4	Other not sp	Other not specified					20	GPM
WCR2009-0	E0089844			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/23/2009												
WCR1979-0	66991			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		3/31/1979	65				Other not sp	Other not specified						
WCR2000-0	713342			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-77-35	10/23/2000	60	75	95	6	Direct Rotar	Air					20	GPM
WCR1979-0	66934			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		12/31/1978	85				Other not sp	Other not specified						
WCR1981-0	234006			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-322-9	5/31/1981	65	20	65	4	Direct Rotar	Air		60			15	GPM
WCR1974-0	97382			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		5/31/1974	44				Other not sp	Other not specified						
WCR1966-0	107940			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	PETERSEN LES DRILLING & PUMP INC	38.961728	-122.62198	13N	07W	22	Mount Diablo		11/30/1966	53				Other not sp	Other not specified						
WCR1972-0	97407			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961728	-122.62198	13N	07W	22	Mount Diablo		9/30/1972	41				Other not sp	Other not specified						
WCR1995-0	555488			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-162-2	9/21/1995	23			6	Other not sp	Other not specified						
WCR1989-0	211098			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-361-6	8/31/1989	53				Other not sp	Other not specified						
WCR1979-0	56440			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		9/30/1979	208				Other not sp	Other not specified						
WCR1966-0	107941			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	PETERSEN LES DRILLING & PUMP INC	38.961728	-122.62198	13N	07W	22	Mount Diablo		11/30/1966	45				Other not sp	Other not specified						
WCR2001-0	733300			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	1/22/2001	30	20	30	2	Other not sp	Other not specified						
WCR1996-0	445165			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-341-2	6/25/1996	42			8	Other not sp	Other not specified						
WCR1993-0	414688			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-77-25	12/31/1992	100	80	100		Other not sp	Other not specified					25	GPM
WCR1994-0	211332			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	39-345-7	2/28/1994	130	67	127		Other not sp	Other not specified		65			60	GPM
WCR1963-0	70603			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	R AND B DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diablo		5/31/1963	75				Other not sp	Other not specified						
WCR1976-0	141485			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		5/31/1976	82				Other not sp	Other not specified						
WCR1976-0	141133			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		7/31/1976	66				Other not sp	Other not specified						
WCR1977-0	20708			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	JUMMY LEE DELAP POINTS WEST DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diablo		4/30/1977	98				Other not sp	Other not specified						
WCR1989-0	264341			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.96135	-122.6035	13N	07W	23	Mount Diablo		7/31/1989	300				Other not sp	Other not specified						
WCR2007-0	938046			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	010-003	5/23/2007												
WCR1977-0	3296			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		4/30/1977	80				Other not sp	Other not specified						
WCR1980-0	103992			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	FISCH BROS DRILLING INC	38.961728	-122.62198	13N	07W	22	Mount Diablo		8/31/1980	80				Other not sp	Other not specified						
WCR2009-0	E0089847			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/22/2009												
WCR2011-0	950518			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.975973	-122.60328	13N	07W	14	Mount Diabl	010-053	6/30/2011	240	200	240	4	Direct Rotar	Air					60	GPM
WCR1979-0	66994			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		3/31/1979	90				Other not sp	Other not specified						
WCR2001-0	733315			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring		38.961708	-122.64075	13N	07W	21	Mount Diabl	40-32-16	1/22/2001	30	20	30	2	Other not sp	Other not specified						
WCR1999-0	522752			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Monitoring	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diabl	10-26-31	7/25/1999	20	5	20	2	Auger							
WCR2012-0	963006			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.990128	-122.58457	13N	07W	12	Mount Diabl	010-055	5/10/2012	420	320	420	4	Direct Rotar	Air					25	GPM
WCR2000-0	746267			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	RICKY CANEPA CANEPA AND SONS INC	38.961728	-122.62198	13N	07W	22	Mount Diabl	10-53-29	6/9/2000	339	180	338	8	Direct Rotar	Air					700	GPM
WCR1979-0	67000			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		4/30/1979	70				Other not sp	Other not specified						
WCR1991-0	369645			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diabl	39-374-1	10/31/1991	68	48	68		Other not sp	Other not specified		41			30	GPM
WCR1999-0	822358			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Test Well	RICKY CANEPA CANEPA AND SONS INC	38.990838	-122.62173	13N	07W	10	Mount Diabl	10-3-5	10/12/1999	550				Direct Rotar	Air					75	GPM
WCR1991-0	349830			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.961708	-122.64075	13N	07W	21	Mount Diabl	39-73-26	1/31/1991	90	50	90		Other not sp	Other not specified		40			80	GPM
WCR2013-0	963046			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Water Supply Irrigation	MC MULLEN DAN WELL DRILLING	38.961728	-122.62198	13N	07W	22	Mount Diabl	010-034	5/6/2013	60	40	60	4	Direct Rotar	Air					20	GPM
WCR2009-0	E0089846			Lake	Lake County Health Services Department - Environmen		DWR Northern Regio	Other Destroyed		38.961708	-122.64075	13N	07W	21	Mount Diablo		3/23/2009												

WCR2006-0	1096367			Lake	Lake County Health Services Department - Environmen	DWR Northern Regior	Water Supply Domesti	HERMAN LARRY DRILLING CO	38.975973	-122.60328	13N	07W	14	Mount Diabl	010-044	2/10/2006	200	120	200	4	Direct Rotar	Air							30	GPM
WCR1976-0	141482A			Lake	Lake County Health Services Department - Environmen	DWR Northern Regior	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diablo		5/31/1976	62				Other not sp	Other not specified								
WCR2000-0	756810			Lake	Lake County Health Services Department - Environmen	DWR Northern Regior	Water Supply Domesti	MC MULLEN DAN WELL DRILLING	38.976292	-122.64042	13N	07W	16	Mount Diabl	010-036	9/18/2000	220	180	220	4	Direct Rotar	Air							15	GPM
WCR1999-0	713856			Lake	Lake County Health Services Department - Environmen	DWR Northern Regior	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976345	-122.62182	13N	07W	15	Mount Diabl	10-42-20	6/17/1999	200	80	200	5	Direct Rotar	Bentonite							10	GPM
WCR1979-0	58419			Lake	Lake County Health Services Department - Environmen	DWR Northern Regior	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.976292	-122.64042	13N	07W	16	Mount Diablo		8/31/1979	75				Other not sp	Other not specified								
WCR1975-0	116794			Lake	Lake County Health Services Department - Environmen	DWR Northern Regior	Water Supply Domesti	WEEKS DRILLING AND PUMP CO	38.961708	-122.64075	13N	07W	21	Mount Diablo		4/30/1975	43	14	45		Other not sp	Other not specified							20	GPM

Attachment D – Agency Comments

COUNTY OF LAKE
Health Services Department
Environmental Health Division
922 Bevins Court
Lakeport, California 95453-9739
Telephone 707/263-1164
FAX 707/263-1681

Denise Pomeroy
Health Services Director

Gary Pace, MD
Interim Public Health Officer

Craig Wetherbee
Environmental Health Director

Promoting an Optimal State of Wellness in Lake County

September 9, 2021

Will Peterson Well Drilling
P.O. Box 695
Kelseyville, CA 95451

RE: APN 010-044-21
2160 Ogulin Canyon Road, Clearlake, CA

To Whom It May Concern:

On September 9, 2021, our office performed a Field Clearance to validate the existing system for water well (permit #WE-5718 AG) issuance.

However, at the time of the Field Inspection, our office observed several structures, which include a barn, sheds, an unknown structure with a sprayed painted sign on the ground identifying it as a grey water system, and a single family dwelling with septic system (permit #3402-S) with spray paint identifying the septic tank. There were structures/kennels on property (for what appeared to be a previous Clear Lake Kennel business).

The single family dwelling with septic system (permit #3402-S) septic tank appeared to be modified. The septic tank had new plastic risers without permit from our office for the minor repairs. One side of the risers has a 4 inch radius drilled hole and a ½ inch PVC pipe sticking out of the riser lid; this makes the septic tank not water and vapor tight.

Furthermore, the single family dwelling with the unknown grey water system and/or septic system leads directly to the flood plain/channel in the back. Measurement were made from the septic tank to the flood plain/channel bank, and it was about 56 feet. There is also a large amount of refuse/trash in the flood plain/channel.

Our office will sign off on the well permit and honored the Multiple Use Permits (UP 2021-23 through 28) after the following items below are met:

1. Based on the today's observation, a minor repair permit will be required from our office to ensure the existing septic tank is water and vapor proof.
2. The existing septic system must be exposed (top of the existing septic tank must be accessible; and the ends of the leachlines exposed).

3. The unknown structure with the grey water system must demonstrate and provide a grey water permit from the City of Clearlake Community Development or meet our new septic system requirement.
4. The unknown structure with the grey water system might need to obtain a septic tank/system abandonment permit from our office if grey water permit is not available.
5. Provide a scale overview map with everything on the property including the proposed well to be drilled (permit #WE-5718 AG).
6. Please remove all the refuse/trash inside the flood plain/channel.

Please contact this office at (707) 263-1164 if you have any questions regarding this report.

Sincerely,

Pheakdey (Pack-a-day) Preciado, R.E.H.S.
Environmental Health Specialist

cc: City of Clearlake, Community Development: Code Enforcement and Planning Division
Ogulin Hills Holdings LLC, 637 Lindaro Street, Suite 201, San Rafael CA 94901

Attachment E - Mitigation Monitoring Reporting Program (MMRP)

City of Clearlake
Mitigation Monitoring Reporting Program (MMRP) Checklist

Project Name: Clearlake Harvest Company, LLC **(**Conditional Use Permits to allow a Commercial Cannabis Operation)

Location: 2250 Ogulin Canyon Road, Clearlake, CA 95422; further described as Assessor parcel Number (APN) 010-044-19-000

File Numbers:

- *Conditional Use Permit -CUP 2021-05 (Cannabis Cultivation); CUP 2021-06 (Processing) CUP 2021-07 (Distribution), CUP 2021-08 (Manufacturing); CUP 2021-09 (Retail Delivery)*
- *Cannabis Regulatory/Business Permit*
- *Initial Study, IS 2021-05 (CEQA)*
- *Cannabis Business/Regulatory Permit and Development Agreement*

Approval Date: _____ Neg. Dec.: Mitigated Negative Declaration

The mitigation measures outlined below were incorporated into the approval for this project in order to reduce potentially significant environmental impacts to a level of insignificance. A completed and signed checklist for each mitigation measure indicates that this mitigation measure has been complied with and implemented and fulfills the City's monitoring pursuant to Section 15097 of the CEQA Guidelines.

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
AES-1		All exterior lighting shall incorporate down-light shielding and other designs to avoid excessive light bleed off site and to avoid excessive night sky lighting glare in accordance with the Zoning Code.		
AIR-1	Air Quality	Construction activities shall be conducted with adequate dust suppression methods, including watering during grading and construction activities to limit the generation of fugitive dust or other methods approved by the Lake County Air Quality Management District. Prior to initiating soil removing activities for construction purposes, the applicant shall pre-wet affected areas with at least 0.5 gallons of water per square yard of ground area to control dust.		
AIR-2	Air Quality	Driveways, access roads and parking areas shall be surfaced in a manner to minimize dust. Driveway approaches shall be constructed of concrete and built to minimum City of Clearlake standards.		
AIR-3.	Air Quality	The burning of construction debris is prohibited. Any disposal of vegetation removed as a result of lot clearing shall be lawfully disposed of, preferably by chipping and composting, or as authorized by the Lake County Air Quality Management District and the Lake County Fire Protection District.		
AIR 4.	Air Quality	During construction activities, the applicant shall remove daily accumulation of mud and dirt from any roads adjacent to the site (Hwy 53).		
AIR 5.	Air Quality	Grading permits shall be secured for any applicable activity from the Community Development Department, Building Division. Applicable activities shall adhere to all grading permit conditions, including Best Management Practices. All areas disturbed by grading shall be either surfaced in manner to minimize dust, landscaped or hydro seeded.		
AIR-6.	Air Quality	All refuse generated by the facility shall be stored in approved disposal/storage containers, and appropriately covered. Removal of waste shall be on a weekly basis so as to avoid excess waste. All trash receptacles/containers shall remain covered at all times to prevent fugitive odors and rodent odor control plan shall be submitted for review and approval by the City In accordance with the Zoning Code. Odor control shall be maintained to an acceptable level at all times.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
BIO-1.	Biological Resources	Prior to construction activities, the applicant shall have a qualified biologist conduct a nesting bird survey within fourteen (14) days of initial ground disturbance or construction if it occurs between March 1st and August 31st.		
BIO-2.	Biological Resources	Prior to construction activities, the applicant shall have a qualified biologist conduct visual encounter/inspection for the Long Eared Myotis bat. If one is observed, the California Department of Fish and Wildlife shall be notified.		
BIO-3.	Biological Resources	All future expansion and/or development associated with the operation shall be located outside threw NFHL 100-year Flood Zone, including the State Water Resource Control Board required setbacks.		
BIO-4.	Biological Resources	Prior to ground disturbance, the applicant shall have a qualified biologist conducts seasonally botanical survey in accordance with the Biological Assessment prepared by Jacobszoon & Associates, INC, dated May 6, 2021.		
BIO-5.	Biological Resources	If additional activities are proposed that may result in take of a listed species, agency personnel from CDFW and SFWS shall further analyze the potential impacts and provide technical assistance for any listed species. If required, guidelines for these reconnaissance surveys should be followed in accordance to the CDFW Survey and Monitoring Protocols and Guidelines, which can be located here: https://www.wildlife.ca.gov/conservation/survey-protocols.		
BIO-6	Biological Resources	If any work occurs within a known watercourse with the potential to impact aquatic resources, the applicant shall be in compliance with the California Departments of Fish and Wildlife Streambed Alteration Agreement.		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
BIO-7	Biological Resources	If suitable roosting habitat for special-status bats will be affected by project activities, a qualified wildlife biologist shall conduct surveys for special-status bats during the appropriate time of day to maximize detectability to determine if bat species are roosting near the work area no less than 7 days and no more than 14 days prior to beginning ground disturbance and/or construction. Survey methodology may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat, bat sign (e.g., guano), or use of ultrasonic detectors (e.g., Anabat, etc.). Visual surveys will include trees within 0.25 mile of project activities.		
CUL-1.	Cultural and Tribal	During construction activities, if any subsurface archaeological remains are uncovered, all work shall be halted within 100 feet of the find and the applicant shall retain a qualified cultural resources consultant from the City's approved list of consultants to identify and investigate any subsurface historic remains, and define their physical extent and the nature of any built features or artifact-bearing deposits. Significant historic cultural materials may include finds from the late 19th and early 20th centuries including structural remains, trash pits, isolated artifacts, etc.		
CUL-2.	Cultural and Tribal	The cultural resource consultant's investigation shall proceed into formal evaluation to determine their eligibility for the California Register of Historical Resources. This shall include, at a minimum, additional exposure of the feature(s), photo-documentation and recordation, and analysis of the artifact assemblage(s). If the evaluation determines that the features and artifacts do not have sufficient data potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists – e.g., there is an intact feature with a large and varied artifact assemblage – it will be necessary to mitigate any Project impacts. Mitigation of impacts might include avoidance of further disturbance to the resources through Project redesign. If avoidance is determined to be infeasible, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
		the California Historical Resources Regional Information Center. Archeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code. If an artifact must be removed during Project excavation or testing, curation may be an appropriate mitigation. This language of this mitigation measure shall be included on any future grading plans and utility plans approved by the City for the Project.		
CUL-3.	Cultural and Tribal	If human remains are encountered, no further disturbance shall occur within 100 feet of the vicinity of the find(s) until the Lake County Coroner has made the necessary findings as to origin (California Health and Safety Code Section 7050.5). Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Lake County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then identify the "most likely descendant(s)", which parties agree will likely be the Koi Nation based upon the Tribe's ancestral ties to the area and previous designation as MLD on projects in the geographic vicinity. The landowner shall engage in consultations with the most likely descendant (MLD). The MLD will make recommendations concerning the treatment of the remains within 48 hours as provided in Public Resources Code 5097.98.		
GEO-1	Geology and Soils	The project shall incorporate Best Management Practices (BMPs) consistent with the City Code and the State Storm Water Drainage Regulations to the maximum extent practicable to prevent and/or reduce discharge of all construction or post-construction pollutants into the local storm drainage system.		
GEO-2	Geology and Soils	Prior to any ground disturbance, (if applicable), the applicant shall submit and obtain a Grading Permit from the Community Development in accordance with the City of Clearlake Municipal code(s).		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
GEO-3	Geology and Soils	The applicant shall monitor the site during the rainy season including post-installation, application of BMPs, erosion control maintenance, and other improvements as needed. Said measures shall be maintained for life of the project and replace/repaired when necessary.		
HAZ-1.	Hazards and Hazardous Materials	All hazardous waste shall not be disposed of on-site without review or permits from Environmental Health Department, the California Regional Water Control Board, and/or the Air Quality Board. Collected hazardous or toxic waste materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such material..		
HAZ-2.	Hazards and Hazardous Materials	The storage of potentially hazardous materials shall be located at least 100 feet from any existing water well. These materials shall not be allowed to leak into the ground or contaminate surface waters. Collected hazardous or toxic materials shall be recycled or disposed of through a registered waste hauler to an approved site legally authorized to accept such materials.		
HAZ-3.	Hazards and Hazardous Materials	Any spills of oils, fluids, fuel, concrete, or other hazardous construction material shall be immediately cleaned up. All equipment and materials shall be stored in the staging areas away from all known waterways.		
HAZ-4.	Hazards and Hazardous Materials	The storage of hazardous materials equals to or greater than fifty-five (55) gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, then a Hazardous Materials Inventory Disclosure Statement/Business Plan shall be submitted and maintained in compliance with requirements of Lake County Environmental Health Division. Industrial waste shall not be disposed of on site without review or permit from Lake County Environmental Health Division or the California Regional Water Quality Control Board. The permit holder shall comply with petroleum fuel storage tank regulations if fuel is to be stored on site.		
HAZ-5.	Hazards and Hazardous Materials	All equipment shall be maintained and operated in a manner that minimizes any spill or leak of hazardous materials. Hazardous materials and contaminated soil shall be stored, transported, and disposed of consistent with applicable local, state, and federal regulations		

Mitigation Measure	Type	Monitoring Shown on Department Plans	Verified Implementation	Remarks
NOS-1.	Noise	All construction activities including engine warm-up shall be limited to weekdays and Saturday, between the hours of 7:00am and 7:00pm to minimize noise impacts on nearby residents.		
NOS-2.	Noise	Permanent potential noise sources such as, generators used for power shall be designed and located to minimize noise impacts to surrounding properties.		
NOS-3.	Noise	During construction noise levels shall not exceed 65 decibels within fifty (50) feet of any dwellings or transient accommodations between the hours of 7:00 AM and 6:00 PM. This threshold can be increased by the Building Inspector or City Engineer have approved an exception in accordance with Section 5-4.4(b)(1) of the City Code. An exception of up to 80 decibels may be approved within one hundred (100) feet from the source during daylight hours. Project is expected to result in less than significant impacts with regards to noise and vibration.		

Explanation of Headings

Type = Project (mitigation for this specific project), ongoing, and/or cumulative.
Monitoring Department = Department or agency responsible for monitoring a particular mitigation measure.
Shown on Plans = When a mitigation measure is shown on the construction plans, this column must be initialed and dated.
Verified Implementation = When mitigation measure has been implemented, this column must be initialed and dated.
Remarks = Area for describing status of ongoing mitigation measure, or other information.

Attachment F - Air Quality Analysis

Attachment F
Clearlake Harvest Company Initial Study
2250 Ogulin Canyon Road

This air modeling was conducted on September 19, 2021, using CalEEMod 2020 4.0.

There were no project description characteristics listed in the model that were an exact fit to this project. Therefore, a 10,000 square foot industrial facility was used for this project which had similar trip and use characteristics to apply to this project. Attached is the model findings.

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	10.00	1000sqft	0.23	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	67
Climate Zone	1			**Operational Year**	2022
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Road Dust -

Area Coating -

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Demolition -

Table Name	Column Name	Default Value	New Value

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021					2.9000e-004	0.0000	2.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.1159				1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.1159**				**2.9000e-004**	**0.0000**	**2.9000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021					2.9000e-004	0.0000	2.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.1159				1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.1159**				**2.9000e-004**	**0.0000**	**2.9000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO	NBio-CO2	Total CO2	CH4	N20	CO2e

Percent Reductio n	**0.00**	**0.0 0**	**0.0 0**	**0.0 0**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.0 0**	**0.00**	**0.00**	**0.0 0**	**0.0 0**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**12-20-2021**	**3-19-2022**	0.1159	0.1159
		Highest	0.1159	0.1159

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10 Total	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0507	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Energy	1.9000e-004	1.7100e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	5.7616	5.7616	6.7000e-004	1.1000e-004	5.8112
Mobile	0.0459	0.0701	0.3920	5.5000e-004	0.0481	7.6000e-004	0.0488	0.0129	7.1000e-004	0.0136	0.0000	51.1800	51.1800	4.4900e-003	3.2200e-003	52.2526
Waste						0.0000	0.0000		0.0000	0.0000	2.5171	0.0000	2.5171	0.1488	0.0000	6.2360
Water						0.0000	0.0000		0.0000	0.0000	0.7337	1.1577	1.8914	0.0755	1.8000e-003	4.3169
Total	**0.0968**	**0.0718**	**0.3935**	**5.6000e-004**	**0.0481**	**8.9000e-004**	**0.0490**	**0.0129**	**8.4000e-004**	**0.0137**	**3.2507**	**58.0995**	**61.3503**	**0.2295**	**5.1300e-003**	**68.6169**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0507	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.00000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Energy	1.9000e-004	1.7100e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.00000	5.7616	5.7616	6.7000e-004	1.1000e-004	5.8112
Mobile	0.0459	0.0701	0.3920	5.5000e-004	0.0481	7.6000e-004	0.0488	0.0129	7.1000e-004	0.0136	0.00000	51.1800	51.1800	4.4900e-003	3.2200e-003	52.2526
Waste						0.0000	0.0000		0.0000	0.0000	2.5171	0.0000	2.5171	0.1488	0.0000	6.2360
Water						0.0000	0.0000		0.0000	0.0000	0.7337	1.1577	1.8914	0.0755	1.8000e-003	4.3169
Total	**0.0968**	**0.0718**	**0.3935**	**5.6000e-004**	**0.0481**	**8.9000e-004**	**0.0490**	**0.0129**	**8.4000e-004**	**0.0137**	**3.2507**	**58.0995**	**61.3503**	**0.2295**	**5.1300e-003**	**68.6169**

	FCC	NCx	CC	SC2	Fug	Exh	PM1	Fug	Exh	PM2	Bio	NBi	Tot	CH4	N2O	CC2
Per	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	3/3/2022	3/9/2022	5	5	
2	Building Construction	Building Construction	10/7/2021	2/23/2022	5	100	
3	Demolition	Demolition	9/20/2021	10/1/2021	5	10	
4	Grading	Grading	10/5/2021	10/6/2021	5	2	
5	Paving	Paving	2/24/2022	3/2/2022	5	5	
6	Site Preparation	Site Preparation	10/2/2021	10/4/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,000; Non-Residential Outdoor: 5,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor

Trips and VMT

Phase	Offroad	Work	Ven	Haul	Wor	Ven	Haul	Wor	Ven	Haul
Archi			0.0	0.0	10	7				
Buildi			2.0	0.0	10	7				
Dem			0.0	0.0	10	7				
Gradi			0.0	0.0	10	7				
Pavin			0.0	0.0	10	7				
Site			0.0	0.0	10	7				

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Archit. Coa	0.159					0.00000	0.00000		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

ting																		
Total	**0.1**					**0.0**	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Unmitigated
Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Archit. Coating	0.1159					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1**					**0.0**	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

3.3 Building Construction - 2021

Unmitigated
Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					2.9000e-004	0.0000	2.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**2.9**	**0.0**	**2.9**	**7.0**	**0.0**	**7.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					2.9000e-004	0.0000	2.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Worker						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total						**2.9**	**0.0**	**2.9**	**7.0**	**0.0**	**7.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

3.3 Building Construction - 2022

<u>Unmitigated Construction Off-Site</u>

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr											MT/yr					
Hauling						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor						1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**1.70**	**0.00**	**1.70**	**4.00**	**0.00**	**4.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e			
Cat	tons/yr										MT/yr								
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
Vendor	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Worker						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total						**1.7**	**0.0**	**1.7**	**4.0**	**0.0**	**4.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

3.4 Demolition - 2021

Unmitigated Construction Off-Site

		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr											MT/yr					
Hauling						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor						0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Work						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

er					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

3.5 Grading - 2021

Unmitigated
Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Unmitigated
Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

3.6 Paving - 2022

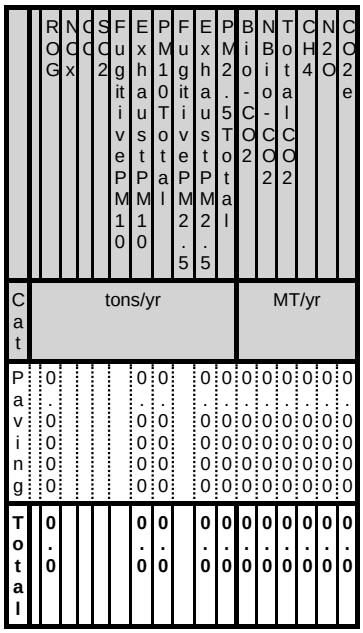
Unmitigated
Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0**					**0.0**	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Unmitigated
Construction Off-Site

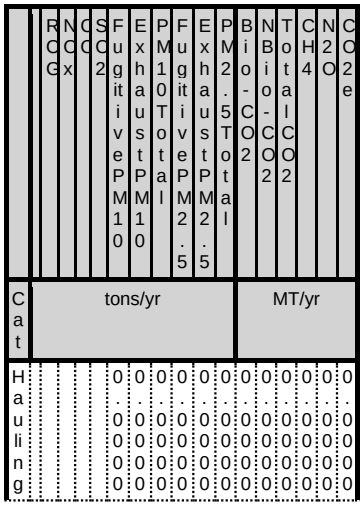
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction On-Site



Cat	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0**					**0.0**	**0.0**		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction Off-Site



Cat	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor					0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Worker					0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Total					**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.7 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Fugitive Dust					0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Total					**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Unmitigated
Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Cat	tons/yr										MT/yr					
Hauling					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vendor					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Worker					0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Total					**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0459	0.0701	0.3920	5.5000e-004	0.0481	7.6000e-004	0.0488	0.0129	7.1000e-004	0.0136	0.0000	51.1800	51.1800	4.4900e-003	3.2200e-003	52.2526
Unmitigated	0.0459	0.0701	0.3920	5.5000e-004	0.0481	7.6000e-004	0.0488	0.0129	7.1000e-004	0.0136	0.0000	51.1800	51.1800	4.4900e-003	3.2200e-003	52.2526

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

Manufacturing	39.30	64.20	50.90	129,960	129,960
Total	39.30	64.20	50.90	129,960	129,960

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.447993	0.068263	0.190544	0.162475	0.057163	0.010407	0.008547	0.005883	0.000437	0.000000	0.038470	0.001253	0.008567

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.9045	3.9045	6.3000e-004	8.0000e-005	3.9431
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.9045	3.9045	6.3000e-004	8.0000e-005	3.9431
NaturalGas Mitigated	1.9000e-004	1.7100e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8571	1.8571	4.0000e-005	3.0000e-005	1.8681
NaturalGas Unmitigated	1.9000e-004	1.7100e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8571	1.8571	4.0000e-005	3.0000e-005	1.8681

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	34800	1.9000e-004	1.7100e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8571	1.8571	4.0000e-005	3.0000e-005	1.8681
Total		**1.9000e-004**	**1.7100e-003**	**1.4300e-003**	**1.0000e-005**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.8571**	**1.8571**	**4.0000e-005**	**3.0000e-005**	**1.8681**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	34800	1.9000e-004	1.7100e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8571	1.8571	4.0000e-005	3.0000e-005	1.8681
Total		**1.9000e-004**	**1.7100e-003**	**1.4300e-003**	**1.0000e-005**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.8571**	**1.8571**	**4.0000e-005**	**3.0000e-005**	**1.8681**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use		Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	tons/yr	MT/yr			
Manufacturing	42200		3.9045	6.3000e-004	8.0000e-005	3.9431
Total			**3.9045**	**6.3000e-004**	**8.0000e-005**	**3.9431**

Mitigated

	Electricity Use		Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	tons/yr	MT/yr			
Manufacturing	42200		3.9045	6.3000e-004	8.0000e-005	3.9431
Total			**3.9045**	**6.3000e-004**	**8.0000e-005**	**3.9431**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0507	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Unmitigated	0.0507	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0391					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Total	**0.0507**	**0.0000**	**9.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0000**	**1.9000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0391					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Total	**0.0507**	**0.0000**	**9.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0000**	**1.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

		Total CO2	CH4	N2O	CO2e
Category	tons/yr	MT/yr			
Mitigated		1.8914	0.0755	1.8000e-003	4.3169
Unmitigated		1.8914	0.0755	1.8000e-003	4.3169

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr	MT/yr			
Manufacturing	2.3125 / 0		1.8914	0.0755	1.8000e-003	4.3169
Total			**1.8914**	**0.0755**	**1.8000e-003**	**4.3169**

Mitigated

	Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr	MT/yr			
Manufacturing	2.3125 / 0		1.8914	0.0755	1.8000e-003	4.3169
Total			**1.8914**	**0.0755**	**1.8000e-003**	**4.3169**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

		Total CO2	CH4	N2O	CO2e
	tons/yr	MT/yr			
Mitigated		2.5171	0.1488	0.0000	6.2360
Unmitigated		2.5171	0.1488	0.0000	6.2360

8.2 Waste by Land Use

Unmitigated

	Waste Disposed		Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr	MT/yr			
Manufacturing	12.4		2.5171	0.1488	0.0000	6.2360
Total			**2.5171**	**0.1488**	**0.0000**	**6.2360**

Mitigated

	Waste Disposed		Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr	MT/yr			
Manufacturing	12.4		2.5171	0.1488	0.0000	6.2360
Total			**2.5171**	**0.1488**	**0.0000**	**6.2360**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number