PROPERTY MANAGEMENT PLAN



APPLICANT

Anthony and Matsuki Perkins

PROJECT LOCATION

140 Soda Bay Road

Lakeport, CA 95453

PROJECT PARCEL/PROPERTY

Lake County APNs 008-001-08 & 09

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PROJECT DESCRIPTION

Anthony and Matsuki Perkins are seeking a Major Use Permit from the County of Lake for a proposed commercial cannabis cultivation, manufacturing, and distribution operation at 140 Soda Bay Road near Lakeport, California on Lake County APNs 008-001-08 & 09 (Project Property). The Perkins' proposed commercial cannabis cultivation, manufacturing, and distribution operation will be composed of two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types, an A-Type 6 Non-Volatile Cannabis Manufacturing License Type, and an A-Type 11 Cannabis Distributor License Type. The two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types will be composed of thirty (30) proposed 3,000 ft^2 greenhouses (15 for each license type) and a proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility (metal building) on Lake County APN 008-001-08. The A-Type 6 Non-Volatile Cannabis Manufacturing License Type will also be located within the proposed Processing and Non-Volatile Manufacturing Facility on Lake County APN 008-001-08. The A-Type 11 Cannabis Distributor License Type will be located within a proposed 2,400 ft^2 Distribution Facility (metal building) on Lake County APN 008-001-09. The Project Property has been enrolled for coverage under the State Water Resources Control Board's Cannabis General Order as a Tier 2 Low Risk Discharger since October 23rd, 2020 (WDID: 5S17CC429168).

The 44-acre Agriculture and Service Commercial-zoned Project Property is situated between Clear Lake and Soda Bay Road, and approximately 1,500 feet east of Lakeport, CA. The Project Property is accessed via Soda Bay Road and a private gravel and native soil surfaced access road off of Soda Bay Road. Current and past land uses of the Project Property are/were intensive agriculture (vineyard and industrial hemp cultivation). The Project Parcel has been improved with two groundwater wells, a 24-acre vineyard, and a water storage reservoir. The proposed cultivation area(s) and Processing and Non-Volatile Manufacturing Facility will be established within the footprint of an existing industrial hemp cultivation area/field (Registration #: 17-19-0019G). The Industrial Hemp Registration on the Project Property will be rescinded prior to issuance of any cannabis permits/licenses. The proposed Distribution Facility will be established/constructed ~120 feet north of Soda Bay Road in the southwestern corner of the Project Property, and will be accessed via a proposed paved access road with curb and gutter.

The Project Property is located in the northwestern portion of Big Valley, within the Manning Creek-Frontal Clear Lake Watershed (HUC12). Topography of the Project Property is flat, with elevations ranging between 1,335 and 1,365 feet above mean sea level. Manning Creek, a perennial Class I watercourse, flows from east to west through the southern portion of the Project Property, then from south to north along the western boundary of the Project Property. The gravel and native soil surfaced access road used to access the Project Property from Soda

Bay Road, passes over Manning Creek via a metal bridge with concrete abutments. An unnamed intermittent Class II watercourse forms in the northeast corner of the Project Property, and flows north into Clear Lake. There is also a manmade off-stream water storage reservoir in the northwest corner of the Project Property, which is/will be used to store water for the existing onsite vineyard and proposed cannabis cultivation operation. All cannabis cultivation, manufacturing, and distribution activities will occur more than 150 feet from these surface water bodies.

The cultivation of cannabis will occur within thirty (30) proposed 30' x 100' (3,000 ft^2) steel-framed greenhouse structures with 6 mil polyethylene film coverings and polycarbonate covered end walls, equipped with LED horticultural lights and mechanical light deprivation systems. The growing medium of the proposed cultivation operation will be an imported organic soil mixture in garden beds and nursery pots, with drip and micro-spray irrigation systems (to conserve water resources). Two 10' x 90' (900 ft^2) mixed-light canopy areas will be established within twenty-four of the proposed greenhouse structures, for a total combined mixed-light canopy area of 43,200 ft^2 (two 900 ft^2 canopy areas per flowering greenhouse × 24 flowering greenhouses = 43,200 ft^2 of mixed-light cannabis canopy). Six of the proposed greenhouse structures will contain only immature cannabis plants, including clones, seedlings, and mothers. Two-thirds of the proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility/Building (4,000 ft^2) will be used for the purposes of processing (drying, curing, and trimming), packaging, and storing cannabis cultivated on the Project Property. The rest of the proposed Processing and Non-Volatile Manufacturing Facility/Building (2,000 ft^2) will be used for cannabis manufacturing activities, including CO_2 and solventless extraction.

The proposed flowering greenhouses will each be equipped with sixteen 640-watt LED horticultural lights. Each of the flowering greenhouses will contain 1,800 ft^2 of cannabis canopy with 10,240 watts of supplemental light, giving the proposed cultivation operation an average of 5.69 watts of supplemental light per square foot of canopy area. Therefore, the proposed cannabis cultivation operation is considered to be a Tier 1 Mixed-Light cultivation operation. The proposed greenhouses will be covered with a black plastic film when artificial light is being used, to prevent light from within the greenhouse structures from escaping.

The total cultivation area (as defined in Chapter 21, Article 27 of the Lake County Code) of the proposed cannabis cultivation, manufacturing, and distribution operation, will be 94,120 ft^2, including the thirty proposed 3,000 ft^2 greenhouses, a 120 ft^2 Pesticides & Agricultural Chemicals Storage Area (proposed wooden shed) and 4,000 ft^2 of the proposed Processing and Non-Volatile Manufacturing Facility/Building. All water for the proposed cannabis cultivation, manufacturing, and distribution operation will come from two existing onsite groundwater wells located at

Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209°. The Project Property is serviced by Pacific Gas and Electric's electrical grid. After their Major Use Permit is issued, the Perkins will work with PG&E to obtain a new/improved Utility Service Connection that is adequate to service the proposed cannabis cultivation, manufacturing, and distribution operation.

Distribution

The Perkins' are also seeking to obtain a Type 11 Cannabis Distributor license, so that they may test, package, label, store, and transport cannabis products/goods ready for retail sale. The Perkins' proposed Distribution Facility will be established in the southwest corner of the Project Property, in an area that is zoned C-3 Service Commercial, and which is easily accessed directly from Soda Bay Road. Within the proposed Distribution Facility, there will be separate, designated secure spaces for cannabis products/goods storage, packaging, labeling, and loading activities. Processed cannabis batches and cannabis products batches, will be stored within the Cannabis Goods Storage Area of the proposed Distribution Facility, where they will be securely stored and sampled for testing per State of California requirements and standards. After a cannabis batch or cannabis goods batch has "passed" testing, it will be transferred to the Packaging and Labeling Area of the proposed Distribution Facility, where it will be packaged and labeled in preparation for distribution to State of California licensed Retail and Distribution facilities.

The Perkins' will utilize an unmarked, registered, and insured distribution vehicle/van to transport cannabis to and from their cultivation, manufacturing, and distribution operation. The distribution vehicle will only travel from the Project Property to the premises of licensed cannabis facilities, and back to the Project Property. The distribution vehicle will be locked and secured whenever it is not being loaded or unloaded, and it will never be left unattended while transporting cannabis. The distribution vehicle will be stored within the Loading/Unloading Area of the proposed Distribution Facility when not in use. The Perkins' and their employees will adhere to the reporting requirements of the California Cannabis Track-and-Trace system at all times, to record and report all cannabis transfers and movements.

SITE PLANS AND MAPS

Sheet 1 – Location Map

Sheet 2 – Surrounding Area Aerial

Sheet 3 – Existing Conditions Site Plan

Sheet 4 – Proposed Conditions Site Plan (Phase I)

Sheet 5 – Proposed Conditions Site Plan (Phase II)

Sheet 6 – Cultivation Site Plan with Canopy

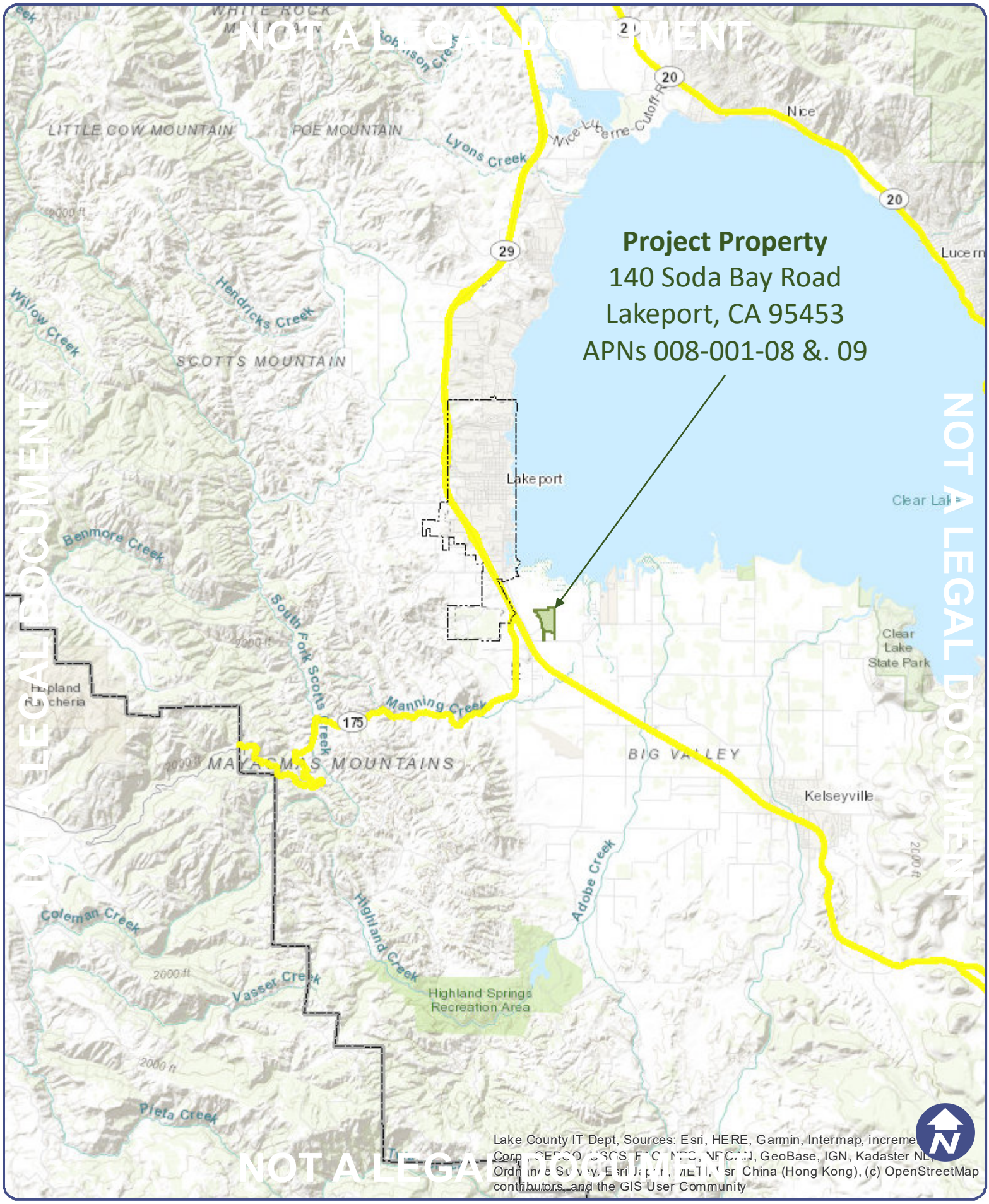
Sheet 7 – Security Site Plan

Sheet 8 – Proposed Processing and Non-Volatile Manufacturing Facility Layout

Sheet 9 – Proposed Distribution Facility Layout

Sheet 10 – Erosion and Sediment Control Plan

NOT A LEGAL DOCUMENT



NOT A LEGAL DOCUMENT
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NOT A LEGAL DOCUMENT

Lake County IT Dept, Sources: Esri, HERE, Garmin, Intermap, increme... Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Lake County, CA

Location Map

Web AppBuilder for ArcGIS

mi
0 2 4

All parcel boundaries are *approximate*. Discrepancies in acreage, shape and location are common.
This map is not the legal survey document to be used in single site determinations. Consult your deed for a legal parcel description.

Print Date: 5/31/2021



Lake County, CA

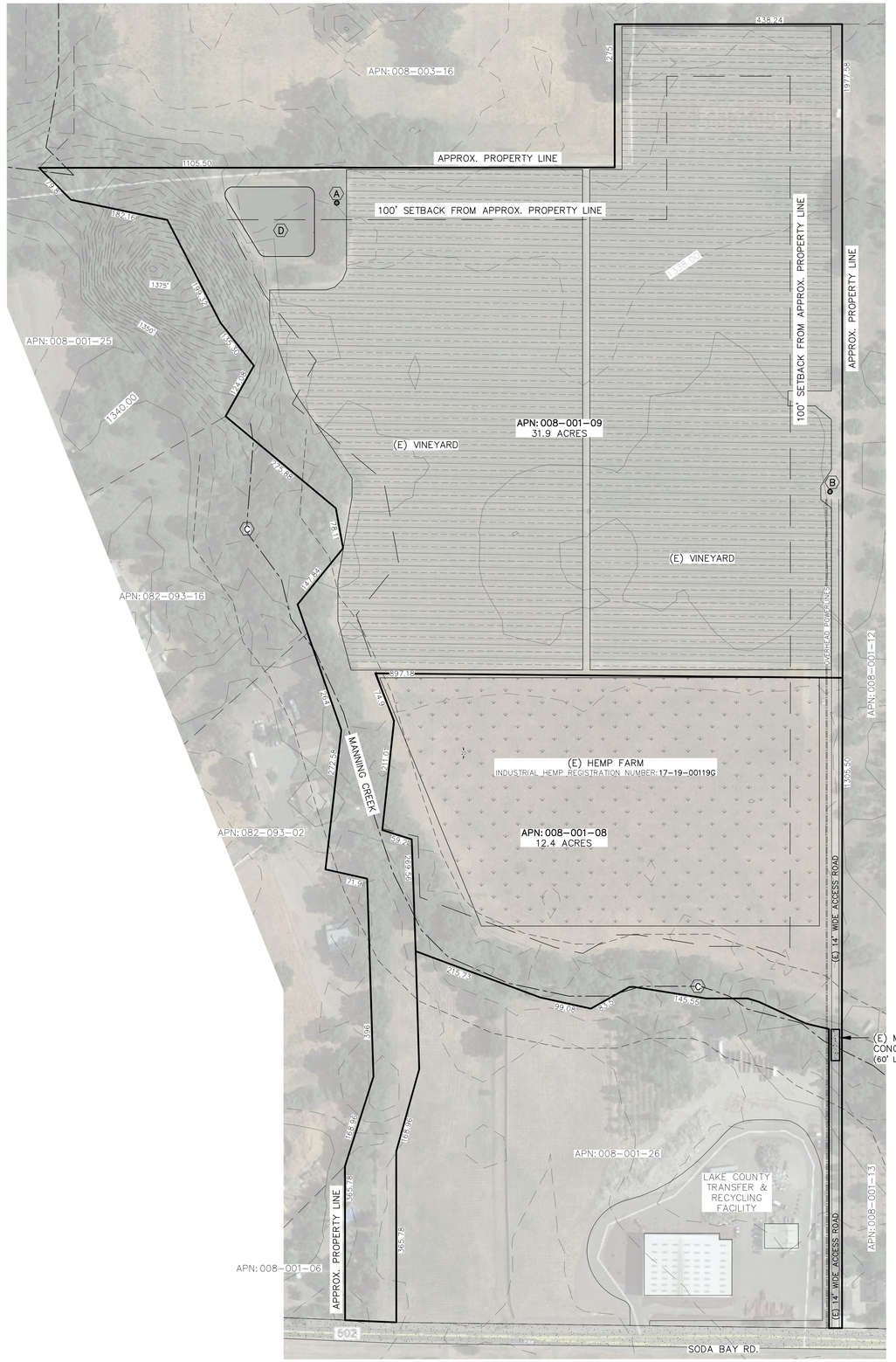
Surrounding Area Aerial

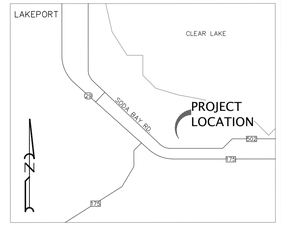
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Print Date: 4/30/2019





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:

1. CONTOUR INTERVAL IS 5'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: -122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
LONG: -122.90209°
BENEFICIAL USE: DRINKING WATER

(C) INTERMITTENT CLASS II WATERCOURSE WITH 100' SETBACK (MANNING CREEK - NHD/DFG WATER ID: 116955052)

(D) WATER STORAGE RESERVOIR

EXISTING CONDITIONS
SITE PLAN

GRAPHIC SCALE

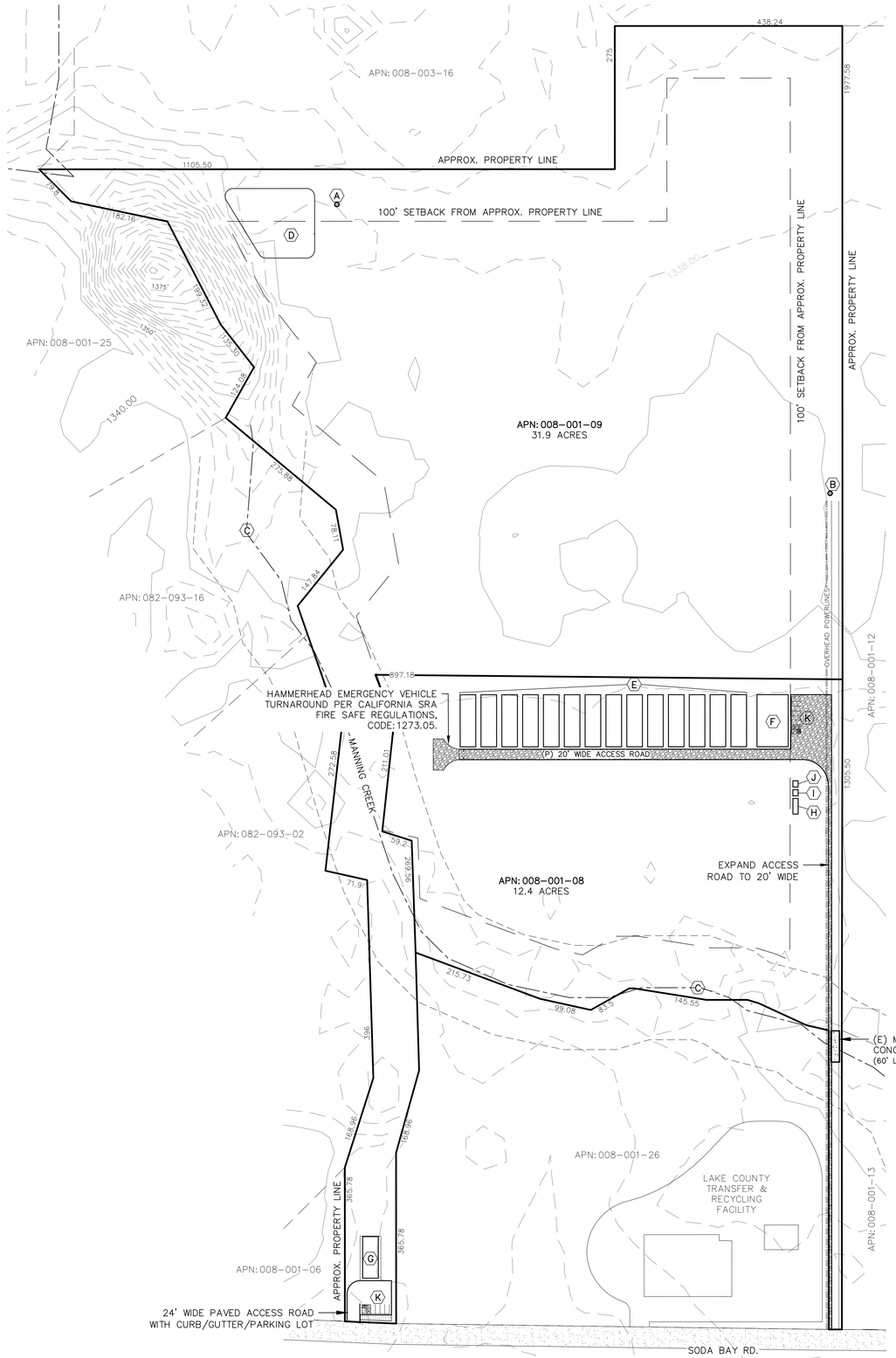
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(IN FEET)
1 inch = 120 ft.

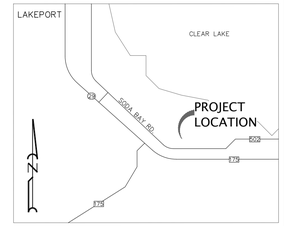
Revisions:

EXISTING CONDITIONS SITE PLAN

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008-001-08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/12/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
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(D) WATER STORAGE RESERVOIR

(E) (P) FOURTEEN - 30'x100' (3,000 SF) GREENHOUSES

(F) (P) 60'x100' (6,000 SF) PROCESSING AND NON-VOLATILE MANUFACTURING FACILITY/BUILDING

(G) (P) 30'X80' (2,400 SF) DISTRIBUTION FACILITY

(H) (P) 10'x30' COMPOST AREA

(I) (P) 10'x12' PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(J) (P) DESIGNATED REFUSE AREA

(K) (P) PARKING / A.D.A.

PROPOSED CONDITIONS
SITE PLAN - PHASE I

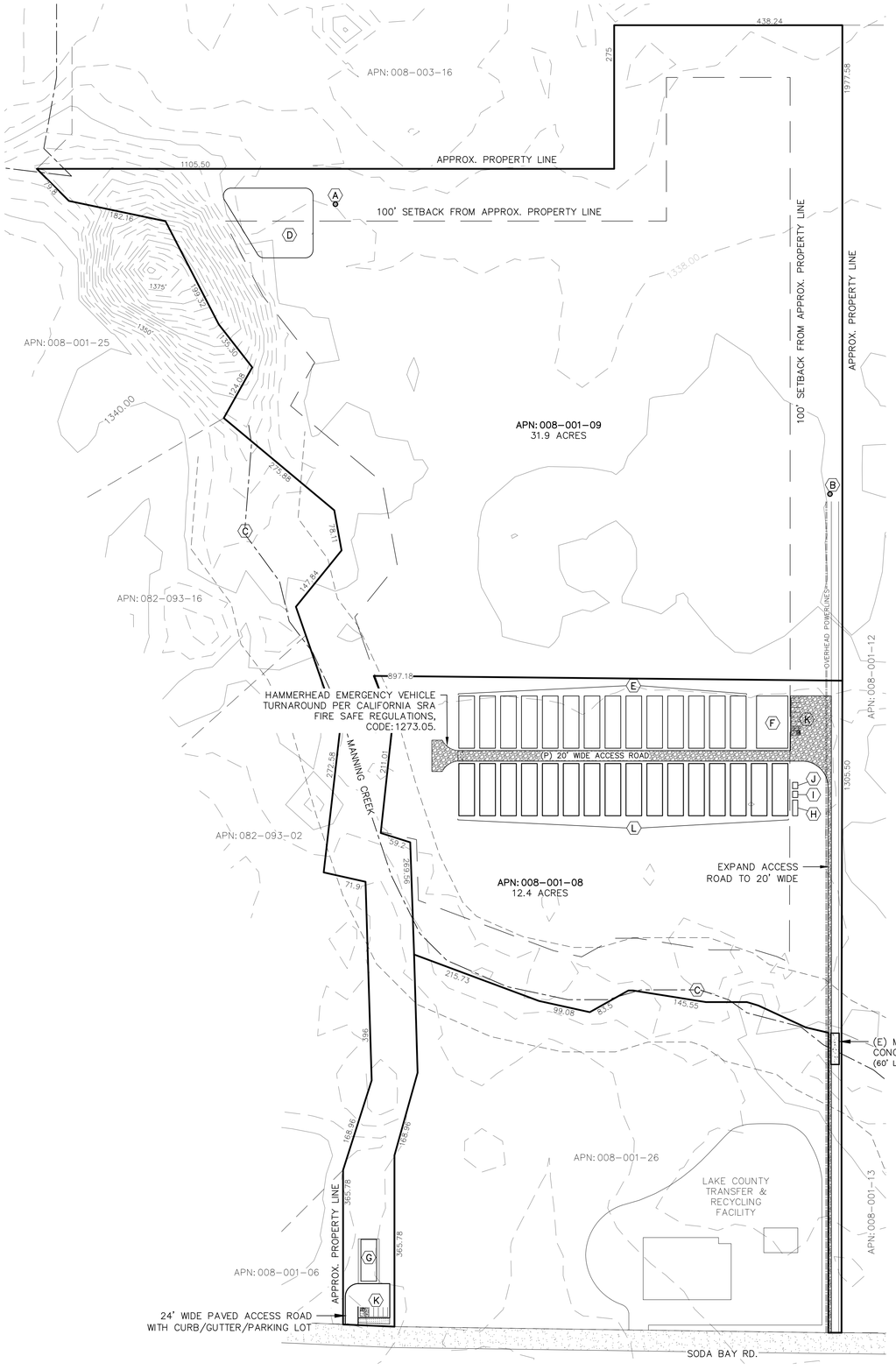
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(IN FEET)
1 inch = 120 ft.

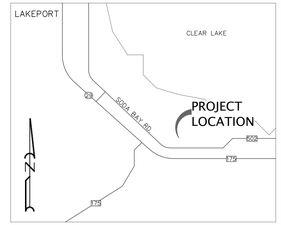
Revisions:

PROPOSED CONDITIONS SITE PLAN - PHASE I

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
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LAKE COUNTY
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PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:

1. CONTOUR INTERVAL IS 2'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: -122.90538
BENEFICIAL USE: IRRIGATION

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LAT: 39.01579°
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(J) (E) DESIGNATED REFUSE AREA

(K) (E) PARKING / A.D.A.

(L) (P) SIXTEEN - 30'X100' (3,000 SF) GREENHOUSES

PROPOSED CONDITIONS
SITE PLAN - PHASE II

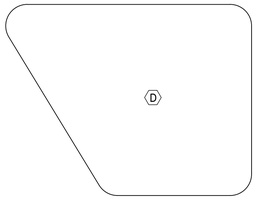
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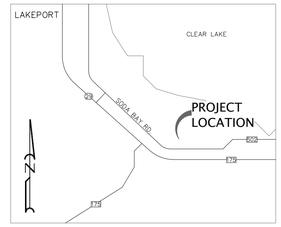
Revisions:

PROPOSED CONDITIONS SITE PLAN - PHASE II

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
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LAKE COUNTY
APN's: 008-001-08 & 09

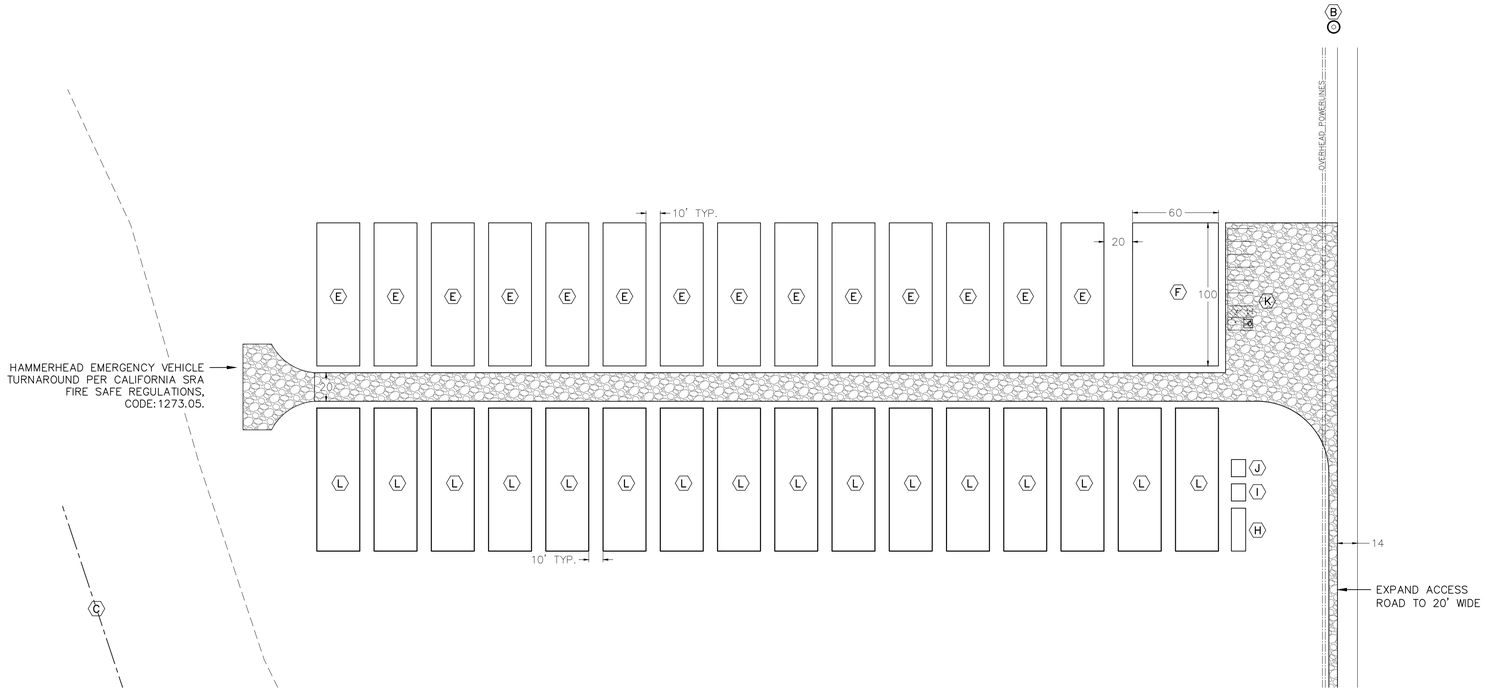
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CADD FILE:
SHEET: 1





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09



LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

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LONG: −122.90538
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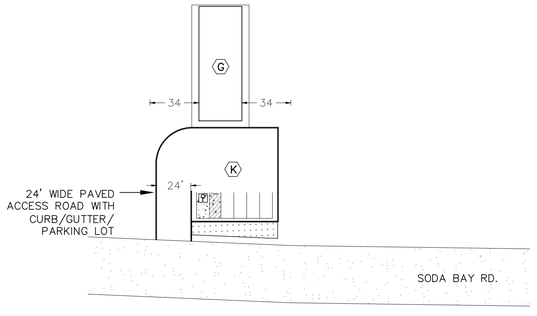
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(L) (P) SIXTEEN – 30'X100' (3,000 SF) GREENHOUSES



CULTIVATION SITE PLAN WITH CANOPY

GRAPHIC SCALE

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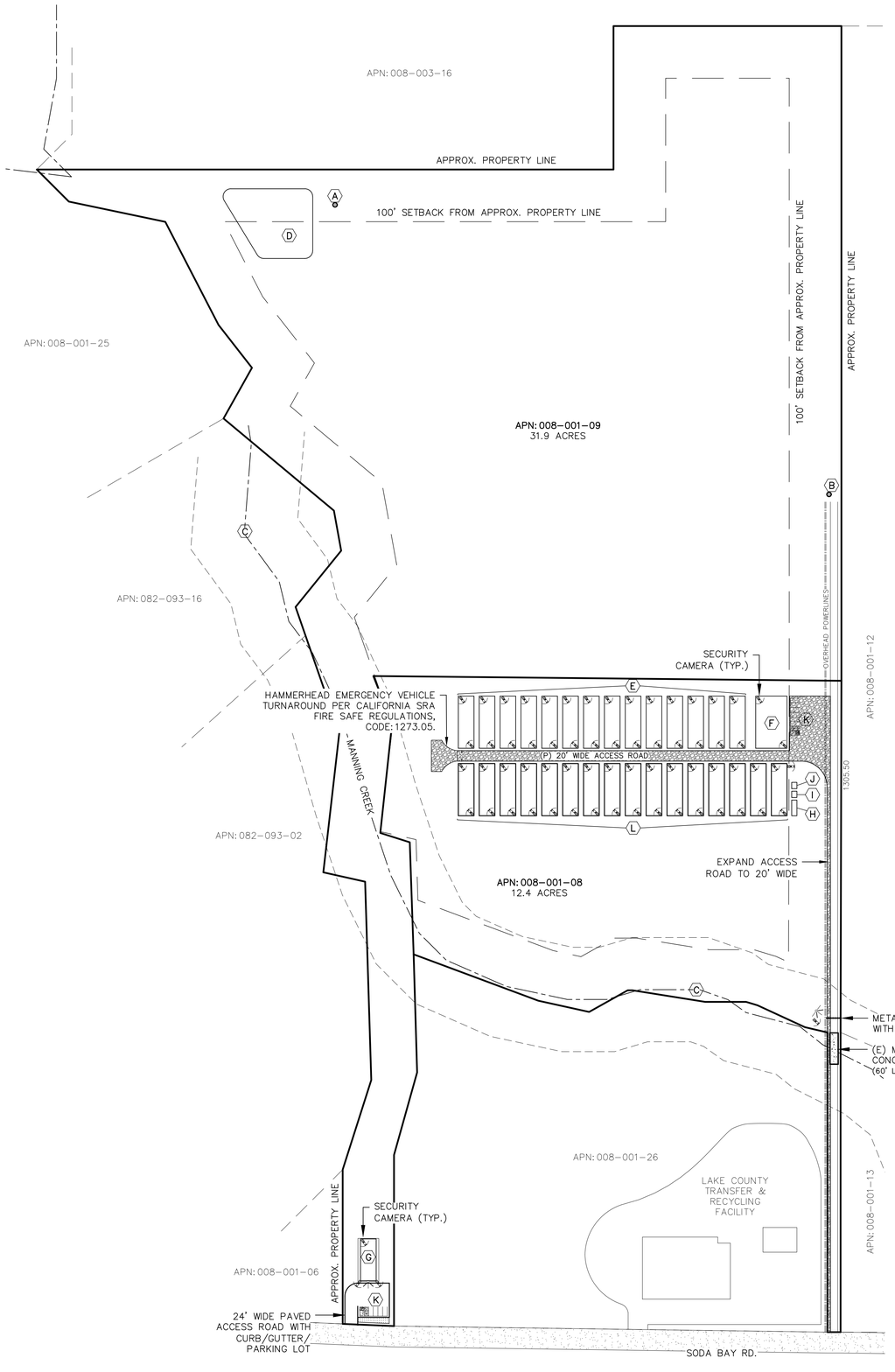
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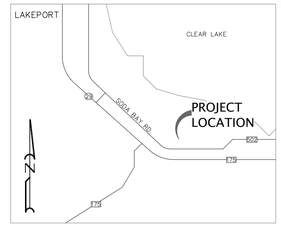
Revisions:

CULTIVATION SITE PLAN WITH CANOPY

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008-001-08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	(P) SECURITY LIGHTS
	(P) SECURITY CAMERAS
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATE
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:
1. CONTOUR INTERVAL IS 20'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: -122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
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(K) (E) PARKING / A.D.A.

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SECURITY SITE PLAN

GRAPHIC SCALE
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(IN FEET)
1 inch = 120 ft.

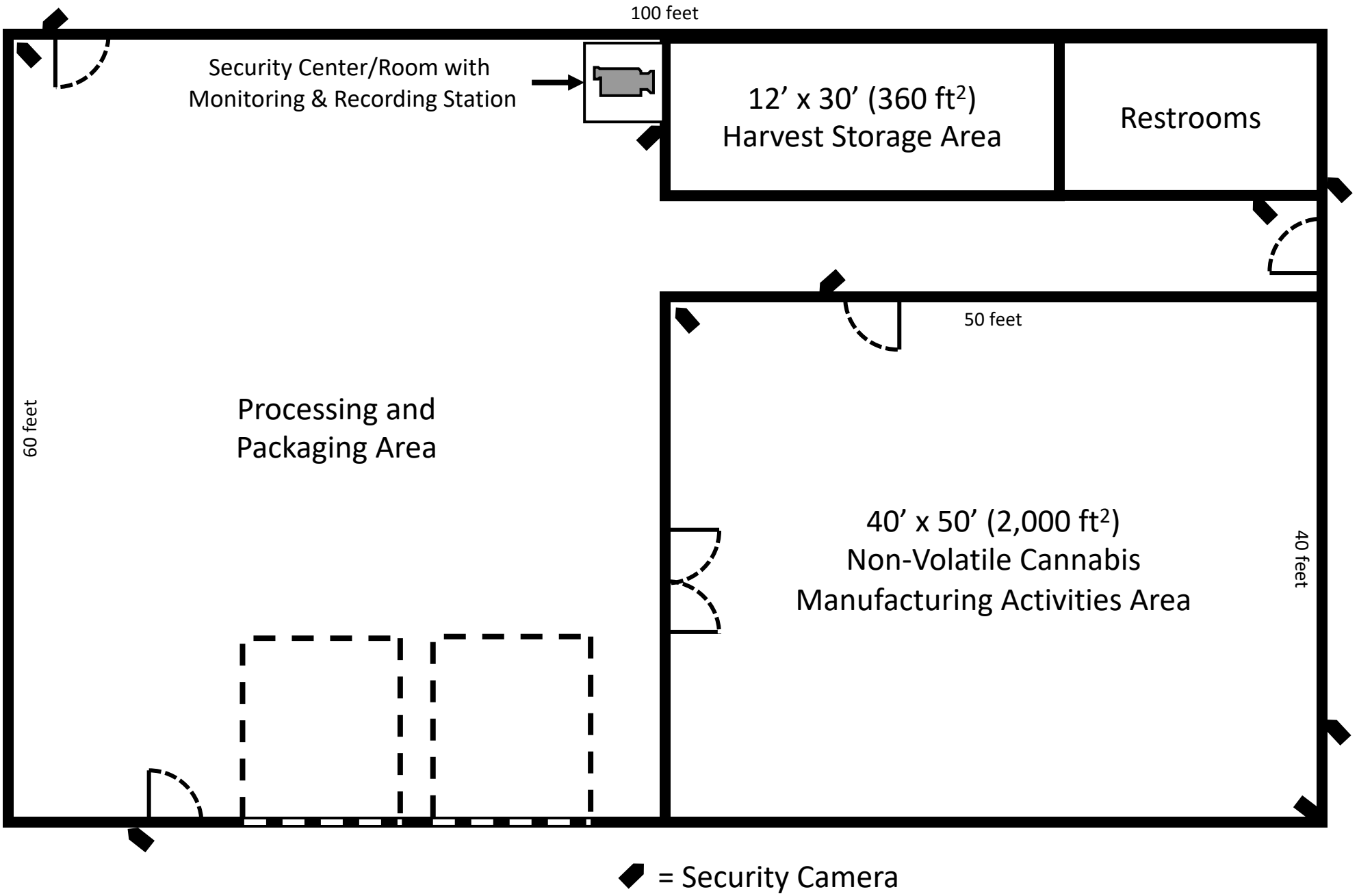
Revisions:

SECURITY SITE PLAN

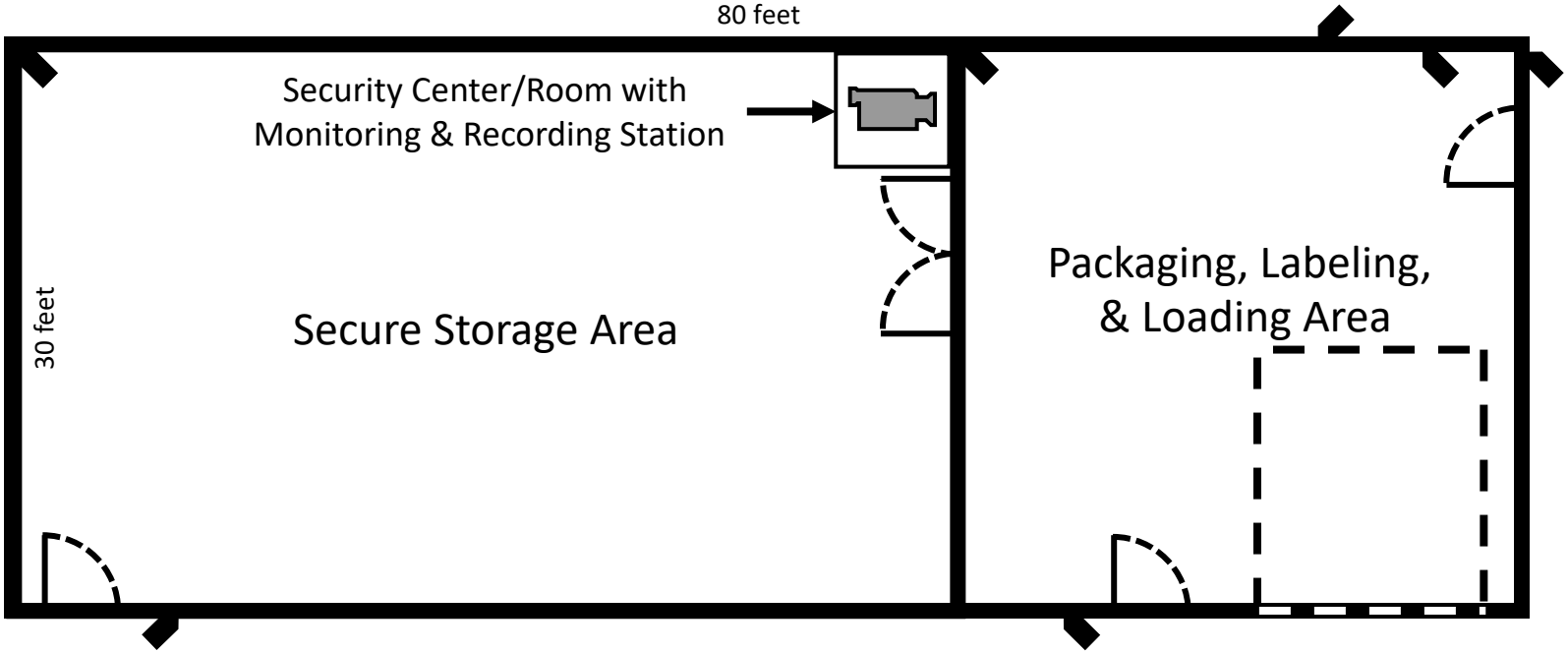
ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
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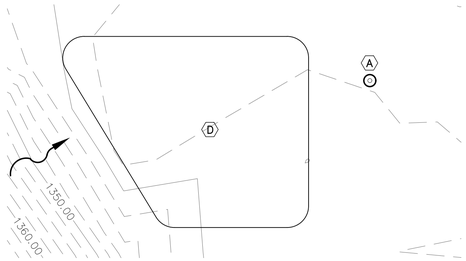
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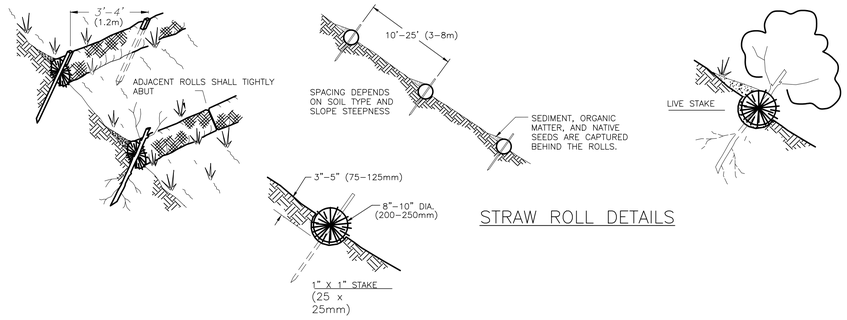
PROPOSED PROCESSING & NON-VOLATILE MANUFACTURING FACILITY LAYOUT



PROPOSED DISTRIBUTION FACILITY LAYOUT







STRAW ROLL DETAILS

NOTES:

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"–5" (75–125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
2. STRAW ROLLS MUST BE PLACED ALONG SLOPE CONTOURS

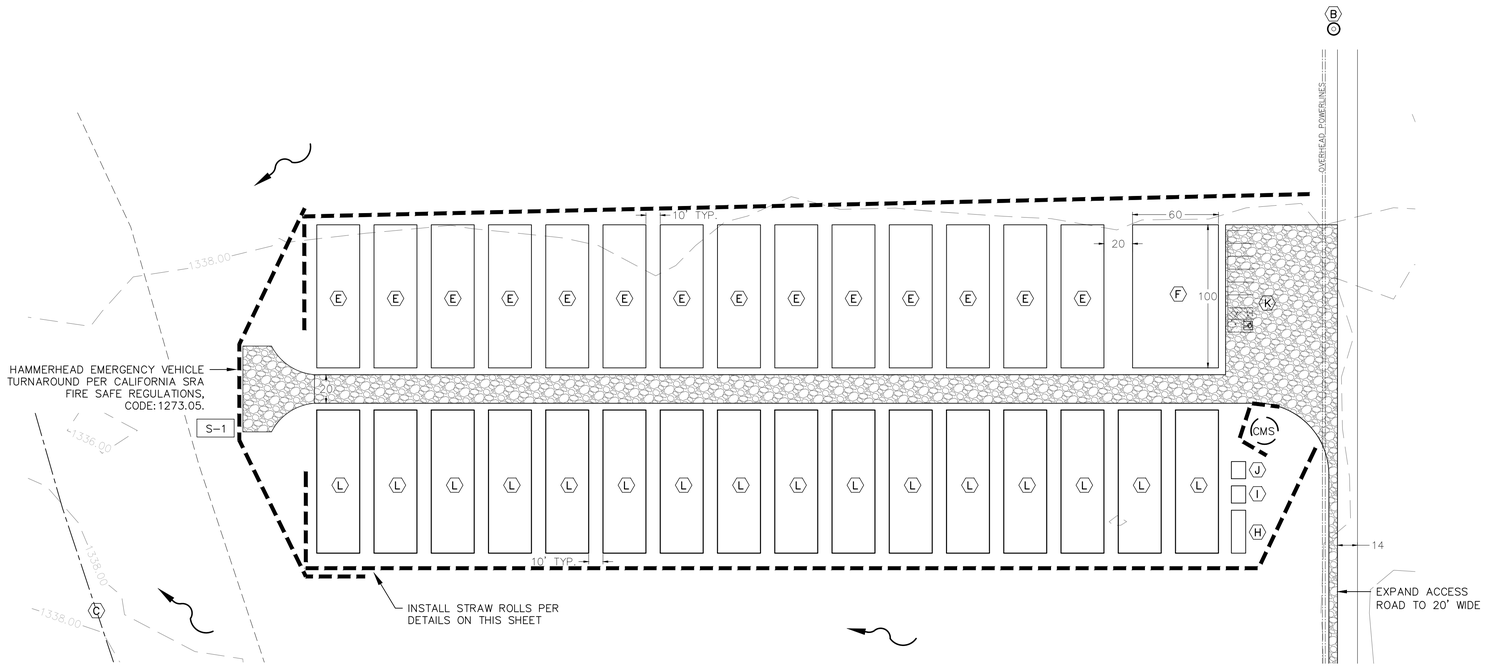
DRAINAGE PATTERNS

STRAW ROLLS (ADJUST TO SUIT FIELD CONDITIONS)

DISCHARGE POINT

S–1 SAMPLING LOCATION

CMS CONSTRUCTION MATERIALS STORAGE AREA



LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:

1. CONTOUR INTERVAL IS 5'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: –122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
LONG: –122.90209°
BENEFICIAL USE: DRINKING WATER

(C) INTERMITTENT CLASS II WATERCOURSE WITH 100' SETBACK (MANNING CREEK – NHD/DFG WATER ID: 116955052)

(D) WATER STORAGE RESERVOIR

(E) (E) FOURTEEN – 30'x100' (3,000 SF) GREENHOUSES

(F) (E) 60'x100' (6,000 SF) PROCESSING AND NON–VOLATILE MANUFACTURING FACILITY/BUILDING

(G) (E) 30'x80' (2,400 SF) DISTRIBUTION FACILITY

(H) (E) 10'x30' COMPOST AREA

(I) (E) 10'x12' PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(J) (E) DESIGNATED REFUSE AREA

(K) (E) PARKING / A.D.A.

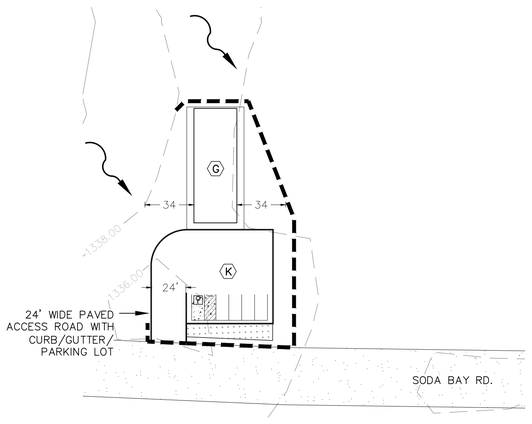
(L) (P) SIXTEEN – 30'X100' (3,000 SF) GREENHOUSES

EROSION & SEDIMENT CONTROL PLAN

GRAPHIC SCALE

50 0 25 50

(IN FEET)
1 inch = 50 ft.



EROSION & SEDIMENT CONTROL NOTES:

1. CONTRACTOR IS TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPS) TO CONTROL EROSION CONTROL AND REDUCE THE OFF–SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICABLE.
2. EROSION CONTROL BMPS SHALL BE IN PLACE AND MAINTAINED ALL YEAR ROUND.
3. HE CONTRACTOR SHALL FOLLOW THE GUIDELINES FROM THE "CALIFORNIA STORMWATER BMP HANDBOOK" FOR THE MEASURES SHOWN OR STATED ON THESE PLANS.
4. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE QUALIFIED SWPPP PRACTITIONER (QSP).
6. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO ANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF LAKE COUNTY.
7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
8. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMPS, AS WELL AS, ANY CORRECTIVE CHANGES TO THE BMPS OR EROSION AND SEDIMENT CONTROL PLAN.
9. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE.
10. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY OR AS NECESSARY.
11. ANY LOOSE GROUND FROM EXCAVATING GRADING OPERATIONS SHALL BE SECURED PRIOR TO ANY RAIN EVENT. STRAW OR TARP ALL DISTURBED OR EXCAVATED GROUND.
12. CONTRACTOR SHALL PLACE GRAVEL BAGS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE GRAVEL BAGS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
13. AS A MINIMUM, ALL GRADED AREAS AND EXPOSED SOIL WITHIN THE PROJECT SHALL BE SEEDED PER THE REQUIREMENTS OF LAKE COUNTY.
14. DUST GENERATION MUST BE MINIMIZED AND A WATER TRUCK MUST BE AVAILABLE ON–SITE FOR ADEQUATE DUST CONTROL.

Revisions:

EROSION & SEDIMENT CONTROL PLAN

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008–001–08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

SECTION – C

AIR QUALITY MANAGEMENT PLAN

Air Quality Management Plan

Purpose and Overview

Anthony and Matsuki Perkins are seeking a Major Use Permit from the County of Lake for a proposed commercial cannabis cultivation, manufacturing, and distribution operation at 140 Soda Bay Road near Lakeport, California on Lake County APNs 008-001-08 & 09 (Project Property), composed of two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types, an A-Type 6 Non-Volatile Cannabis Manufacturing License Type, and an A-Type 11 Cannabis Distributor License Type. The two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types will be composed of thirty (30) proposed 3,000 ft^2 greenhouses (15 for each license type) and a proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility (metal building). The A-Type 6 Non-Volatile Cannabis Manufacturing License Type will be located within the proposed Processing and Non-Volatile Manufacturing Facility, as well. The A-Type 11 Cannabis Distributor License Type will be located within a proposed 2,400 ft^2 Distribution Facility (metal building) ~120 feet north of Soda Bay Road in the southwestern corner of the Project Property.

The proposed cultivation areas will be located within 30' x 100' steel-framed greenhouse structures, with 6 mil polyethylene film coverings and polycarbonate covered end walls, equipped with LED horticultural lights and mechanical light deprivation systems. The growing medium of the proposed cultivation operation will be an imported organic soil mixture in garden beds and nursery pots, with drip and micro-spray irrigation systems (to conserve water resources). All water for the proposed cannabis cultivation, manufacturing, and distribution operation will come from two existing onsite groundwater wells located at Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209°.

This Air Quality Management Plan (AQMP) is designed to promote the health, safety, welfare and environmental quality of the community, operational staff, and the Project Property. In-line with the directives of the Lake County Air Quality Management District, this AQMP includes measures to monitor and evaluate the performance of the plan, as well as ensure that all data and information is reported to the County of Lake and the proper local agencies. This AQMP identifies equipment and activities that may cause odor, contaminates, or other air quality hazards, and measures that operational staff will be required to follow to mitigate/minimize the amount of air pollution and particulates generated from the proposed cultivation operation. This AQMP also includes an Odor Response Program that establishes responsible parties and procedures for operational staff to follow in the event of an odor complaint.

Equipment or Activities that May Cause the Issuance of Air Contaminants

The following sources are anticipated to be the most significant emitters of odor, air pollutants, and particles from the proposed cultivation operation. However, no single source or combined sources are anticipated to be harmful or detrimental to neighboring residences or the community of Lake County.

Gasoline and Diesel Powered Equipment: The proposed cultivation operation will generate small amounts of carbon dioxide from the operation of small gasoline engines (tillers, weed eaters, lawnmowers, etc…) and from vehicular traffic associated with staff commuting. The generation of carbon dioxide is partially offset by the cultivation of plants, which remove carbon dioxide in the air for photosynthesis.

Fugitive Dust: The proposed cultivation operation may generate fugitive dust emissions through ground-disturbing activities, uncovered soil or compost piles, and vehicle or truck trips on unpaved roads. Fugitive dust will be controlled by applying gravel or crushed rock to the primary access roads and parking areas of the Project Property, by delaying ground disturbing activities until site conditions are not windy, by wetting soils with a mobile water tank and hose during ground disturbing activities, and by eliminating and/or covering soil stockpiles.

Odors: Cannabis cultivation can generate objectionable odors, particularly when the plants are mature/flowering in the cultivation area(s) or when being processed (drying, curing, trimming, and grading) after harvest. Cyclical planting and harvesting practices will be implemented within the Mixed-Light cultivation areas to reduce the amount of mature/flowering plants, and the amount of cannabis being processed, at any given time. The ventilation systems of the proposed Processing and Non-Volatile Manufacturing Facility, as well as the proposed Distribution Facility, will be equipped with carbon filters/air scrubbers to mitigate odors emanating from the building.

No significant odor impacts are anticipated from the proposed cannabis cultivation, manufacturing, and distribution operation due to generous setbacks from public roads, property lines, and neighboring residences/outdoor activity areas, as well as the odor mitigation measures outlined above.

Monitoring and Maintenance

All air filtration and odor mitigation equipment of the proposed cultivation, manufacturing, and distribution operation will be inspected quarterly to determine if maintenance or replacement is required. The carbon filters/air scrubbers of the proposed Processing and Non-Volatile Manufacturing Facility, as well as the proposed Distribution Facility, will be replaced each quarter. Accurate records will be logged of repairs and replacements to/of the ventilation and odor mitigation systems, and those records will be maintained onsite for at least three years.

Managerial staff will review all documentation pertaining to the performance of this AQMP annually, to determine if the risk of nuisance odors or other air contaminants are within acceptable tolerances, or if they can be mitigated further by implementing new best management practices or advanced mechanical systems. All data and information will be made available to Lake County and/or Lake County Air Quality Management District officials upon request.

Odor Response Program

A Community Liaison/Emergency Contact will be made available to Lake County Officials/Staff and the Lake County Sheriff's Office at all times to address any needs or issues that may arise. The Community Liaison/Emergency Contact will be responsible for responding to odor complaints 24 hours a day, seven days a week, including holidays. The Perkins will provide the name, cell phone number, and email address of the Community Liaison/Emergency Contact to all interested County Departments, Law Enforcement Officials, and neighboring property owners and residents. The Perkins will encourage neighboring residents to contact the Community Liaison/Emergency Contact to resolve any operating problems before contacting County Officials/Staff.

When an odor complaint is received, the Community Liaison/Emergency Contact will immediately halt all odor producing activities on the Project Property and take action to determine the source of the odor for which the complaint was received. Then mitigation methods will be immediately implemented to reduce/eliminate odors from emanating from the source. Depending on the source, mitigation measures include adding high pressure misting systems on the exhaust fans of the proposed greenhouses, servicing and/or upgrading the odor control filtration and ventilation systems of the proposed Processing/Manufacturing and Distribution Facilities, and/or the installation of additional air pollution/odor control equipment. High pressure misting systems work by forcing water through specialized nozzles to create micron water droplets that attract particles and increase ambient humidity around the cultivation area, reducing offsite drift (example attached). If necessary, an odor neutralizing solution can be added to the water supply of the high pressure misting systems to neutralize any odors emanating from the proposed cultivation area(s).

Community Liaison / Emergency Contact

The Community Liaison/Emergency Contact for the proposed cannabis cultivation, manufacturing, and distribution operation is Mr. Anthony "Tony" Perkins. Tony's cell phone number is (714) 588-4916, and his email address is ncdnb@hotmail.com. The residents and owners of all properties neighboring the Project Property, will have Tony's contact information before cannabis cultivation, manufacturing, or distribution activities begin.

SECTION – D

CULTURAL RESOURCES EVALUATION

SECTION – E

BIOLOGICAL RESOURCES ASSESSMENT

BIOLOGICAL RESOURCES ASSESSMENT

270 & 140 SODA BAY ROAD [APN 008-001-09 & 008-001-08]
LAKE COUNTY, CALIFORNIA

PREAPRED FOR:

California Cannabis Consultants
270 Soda Bay Road
Kelseyville, California 95453

PREPARED BY:

Pinecrest Environmental Consulting Inc.
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PROJECT № CCC018

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JULY 21, 2019

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this reconnaissance-level Biological Resources Assessment (BRA) is to evaluate the existence of special-status species (SSS) and/or habitats, as well as assess the potential for SSS listed in Appendix A to occur on or near the site of commercial cultivation activities, pursuant to applicable regulations from County of Lake and the State of California. This BRA also analyzes the potential for jurisdictional wetlands and other waters of the U.S. to exist onsite, and classifies landforms that may potentially convey sediment to waters of the U.S. including dry creeks, washes, swales, gullys, and other erosional features. Also included is a set of Best Management Practices (BMPs) that are adapted from a variety of sources including State Water Resources Control Board *Cannabis* General Order No. WQ 2017-0023-DWQ and other state and local ordinances.

1.2 PROJECT SUMMARY

The proposed project involves permitting of a commercial *Cannabis* cultivation facility on two parcels located at 270 and 140 Soda Bay Road in unincorporated Lake County between the towns of Lakeport and Kelseyville (Figure 1). The proposed cultivation area is located immediately south of and adjacent to the existing vineyard block, in a grassland area, near the border between the parcels. The parcels can be accessed via graded gravel road that extends to the north off of Soda Bay Road. The road is contained in a narrow strip of parcel approximately 22 feet wide by 550 feet long that is in good condition and connects Soda Bay Road with the parcel proper (Figure 8). There is one stream crossing onsite, a rail car bridge (Figure 7) that crosses Manning Creek, a perennial Class I watercourse (Figure 11). There are no areas that appear to be jurisdictional wetlands or streamcourses except for potential fringing wetland associated with the riparian corridor of Manning Creek. The project as designed should have no impact on sensitive species or habitats if the measures described in Appendix D are implemented to the greatest extent practicable.

1.3 LOCATION

1.3.1 Site Overview

The project site is located at 270 and 140 Soda Bay Road in unincorporated Lake County, 1.8 miles south of Lakeport, 4.2 miles northwest of Kelseyville, and 12 miles east of Hopland (Figure 1). The parcels are located in Section 31, Township 14 North, Range 9 West, on the USGS Lakeport 7.5 minute quad (Figure 2). The proposed cultivation area is located in the center of the parcels at latitude 39.0148, and longitude -122.9038. The northern parcel ("north parcel") is designated Assessor's Parcel Number (APN) 008-001-09, measures 31.9 acres, and is almost entirely planted to vineyard (Figure 10). The southern parcel ("south parcel") is designated APN 008-001-08, measures 21.41

acres, and is mostly annual grassland. Both parcels are split zoned AE/AO, are under the jurisdiction of the Central Valley (Region 5) Regional Water Quality Control Board (RWQCB), and the North-Central Region (District 2) of the California Department of Fish & Wildlife (CDFW).

1.3.2 Federal Critical Habitat

Federal Critical Habitat (FCH) is designated by the U.S. Fish & Wildlife Service (USFWS) and provides special protections for habitats considered important for long-term population persistence of endangered or threatened species. There is no FCH onsite for any animal or plant species. The nearest FCH is located 10.9 miles to the southeast of the project parcel for Slender Orcutt grass (*Orcuttia tenuis*) near Bogg's Lake. The next nearest species with designated FCH is Steelhead (*Oncorhynchus mykiss*) located 12 miles to the west in the Russian River near Hopland. There is no other FCH within 15 miles of the project parcel.

1.3.3 CNDDB Occurrences

Special-status species (SSS) are those species that receive special protections under either local, State, or Federal law and include both State and Federally Endangered and Threatened species of animals and plants, as well as candidate listing species and other species or populations of special concern for which additional information is required. The California Natural Diversity Database (CNDDB) provides information on most known SSS occurrences in the State of California. A description of the habitat requirements and likelihood of occurrence of potential SSS on the project parcel based the CNDDB database, published scientific literature, and the expertise of PEC staff, is provided in Appendix A, with all SSS known from a 5 mile radius around the project parcel highlighted. Additionally, map-based representation of all of the SSS within a 5 mile radius around the project site is provided in Appendix B.

There is one known occurrence of special-status animal species whose polygon overlaps with the project parcel, an occurrence of Blennosperma vernal pool andrenid bee (*Andrena blennospermatis*) centered on the grassland just to the north of the project parcel, and whose polygon overlaps with the north parcel (Appendix C). The next nearest known occurrence of special-status animal species is Osprey (*Pandion haliaetus*), observed in 1993 on the bank of Clear Lake, located 0.2 miles north of the parcel. The next nearest known occurrences are three aquatic species known from Clear Lake approximately 0.2 miles north of the parcel: Clear Lake Hitch (*Lavinia exilicauda chi*), Sacramento perch (*Archoplites interruptus*), and Brownish dubiraphian riffle beetle (*Dubiraphia brunnescens*). The next nearest known animal species are American badge (*Taxidea taxus*) and tricolored blackbird (*Agelaius tricolor*), located 1.3 miles northwest of the parcel near Lakeport. The next nearest known occurrence of special status animal species is an indistinct locality of Western pond turtle (*Emys marmorata*) somewhere in the USGS Kelseyville 7.5 minute quad, which comes as close as 1.7 miles southeast of the project parcel. There are also occurrences of Western pond turtle 5.4 miles south of the parcel in Adobe Creek.

The next nearest known occurrence of special status animal species is Red-bellied newt (*Taricha rivularis*) observed in 1960 located 3.1 miles east of the project parcel near Mostin Road. The next nearest known occurrence of special status animal species is California calasellus (*Calasellus*

californicus) observed in 1932 located 3.4 miles southeast of the project parcel near Kelseyville. The next nearest known occurrence of special-status animal species is Foothill Yellow-Legged Frog (*Rana boylii*; FYLF) observed in 1956 located 4.8 miles north of the project parcel in McDowell Creek. There are no other special-status animal species known from within 5 miles of the project site.

There is one known occurrence of special-status plant species whose polygon overlaps with the project parcel, an occurrence of Serpentine cryptantha (*Cryptantha dissita*) observed in 1943, centered approximately 0.3 miles offsite to the west near Highway 29 (Appendix C). The next nearest known occurrence of special-status plant species is Colusa layia (*Layia septentrionalis*) observed in 2016 located 0.2 miles west of the project parcel along Highway 29. Also at this locality is an occurrence of Bent-flowered fiddleneck (*Amsinckia lunaris*) observed in 2011. The next nearest known occurrence of special-status plant species is Glandular Western flax (*Hesperolinon adenophyllum*) observed in 1978 located 0.5 miles southwest of the project parcel near Ackley Cutoff.

The next nearest known occurrence of special-status plant species is Watershield (*Brasenia schreberi*) observed in 1892 located 1.4 miles northwest of the project parcel near Kelseyville. The next nearest known occurrence of special-status plant species is Small-flowered calycadenia (*Calycadenia micrantha*) observed in 2003 located 1.8 miles south of the parcel near Manning Creek. The next nearest known occurrence of special-status plant species is Oregon checkerbloom (*Sidalcea oregana* ssp. *hydrophila*) observed in 1932 located 3.1 miles southeast of the parcel near Bell Hill Road. There are no other known occurrences within 3 miles of the project parcel (Appendix C).

1.3.4 Landforms & Water Features

The parcels encompass flat fields near the south shore of Clear Lake, to the east of the Manning Creek riparian corridor (Figure 1). The maximum elevation of the parcels is 1,365 feet above sea level near the northwest parcel boundary next to the vineyard pond (Figure 3). The minimum elevation is 1,335 feet above sea level in the far northeast corner of the parcel where the headwaters of a small Class II drainage abuts the parcel (Figure 2). Most of the parcel is flat, with slopes between 0% and 2%, as measured by Suunto PM5 handheld clinometer.

Precipitation falling onsite eventually mostly infiltrates locally due to the lack of upslope watersheds and the flat slope of the parcel. Water eventually flows west towards Manning Creek, a Class I perennial watercourse that flows north along the western parcel boundary. After flowing offsite through fields and swamps for approximately 0.6 miles Manning Creek empties into Clear Lake (Figure 3). Some water in the far northeast corner of the parcel also flows east towards a channelized Class I/II watercourse that flows east for 0.12 miles before turning north and entering Clear Lake.

From the spillway of the Cache Creek Dam, Cache Creek flows east through the inner Coast Ranges for 51 miles before emerging into the Central Valley near Esparto. From there Cache Creek continues east for 28 miles before entering the Yolo Bypass west of the City of Sacramento. From there water flows south into the Sacramento River which flows south for approximately 40 miles before emptying into Suisun Bay and the Pacific Ocean.

1.3.5 Existing Structures

The parcel contains no residences or other permanent structures including storage sheds and outbuildings. There are utility poles onsite (Figure 6) and a rail car bridge (Figure 7) but no other development. There is also a vineyard stock/irrigation pond in the far northwest corner of the north parcel. Access is controlled by metal gate that extends across the rail car bridge (Figure 6). The dirt and gravel road is in good condition and encircles the two parcels, and also crosses the center of the property (Figure 10) near where the proposed cultivation area is to be located. The south parcel is mostly ruderal grassland and has a well located just to the northwest of the rail car bridge but does not look used currently and may not be functional. The north parcel is almost entirely planted with irrigated grapevines and is served by a well located in the northwest portion of the parcel near the irrigation pond. Irrigation is achieved via black 1" drip line.

1.3.6 Regional Land Uses

Land uses in the vicinity of the project parcel are primarily vineyards, orchards, irrigated hayfields, rural residences, light industrial development, and swamps. There is also the Mission Rancheria located immediately to the east. To the west is light industrial development. To the south is more vineyards and light commercial development, and to the north are hayfields and marshland and eventually the south shore of Clear Lake (Figure 1).

1.4 METHODS

1.4.1 Records Search & Literature Review

Based on a review of the literature and relevant databases, we compiled a list of special-status plant and animal species that are known to occur in Lake County or that occupy habitats that are known to be present on or near the project site (Appendix A). Sources of information referenced include the California Department of Fish & Wildlife (CDFW) *California Natural Diversity Database* (CNDDB 2019), U.S. Fish and Wildlife Service Environmental Conservation Online System (USFWS 2019), the California Native Plants Society (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2018), the CDFW *Habitat Relationships System* (HRS), and the knowledge of PEC staff familiar with the species and habitats of Lake County.

Additional information on sensitive habitats including wetlands was obtained from the USFWS National Wetlands Inventory (NWI 2019), and the County of Lake Geographic Information System Portal (Lake Co. 2019). Plant species included here are state or federal endangered or threatened species, and/or considered rare by CDFW, and/or are recognized as special-status species (SSS) by CNPS or CDFW. Animal species included here are designated as State or Federally Endangered or Threatened, and/or CDFW species of special concern (SSC), and/or CDFW fully protected species (FPS). In addition, nests of most native bird species, regardless of their regulatory status, are protected from take or harassment under the U.S. Migratory Bird Treaty Act (MBTA) and relevant sections of the California Fish & Wildlife Code.

1.4.2 Field Surveys

A wildlife and botanical survey was conducted at the site on May 29, 2019. The weather was sunny with a light breeze. The temperature at the time of the survey was 81 degF, with relative humidity of 43%, as measured by Kestrel 3000 handheld weather station. Approximately 6" of rain fell in the preceding month which is higher than average (NWS 2019), thus all of the vegetation was green and most perennial and annual plant species were flowering. Starting with the central, most easily accessible portion of the property closest to the proposed cultivation area, the entire project site was surveyed on foot by PEC Senior Biologist Dr. Christopher T. DiVittorio, recording the location and identity of all plant and animal species encountered. Plant voucher specimens were taken of any species that were not identifiable in the field, and that were not likely to be special-status. The vast majority of species were identifiable at the time of the survey, although some had to be identified based on vegetative parts. Photographs and voucher specimens were taken of any plants that were identified solely based on vegetative characters.

The field survey was conducted by dividing the outdoor portions of the parcel into zones and cataloging all of the species found in each zone. Each zone was surveyed by walking in parallel lines until the whole zone was covered. Notes were also taken in each zone documenting the general site characteristics and current land uses, as well as any surface erosional features that may require remediation. Botanical specimens were taken back to the laboratory for identification if identification was not possible in the field. If species were not flowering at the time of the survey and morphological characteristics indicated that the species may be special-status, notes were made for a follow-up visit. Birds and nests were identified by call and with binoculars. Vocalizations, scat, tracks, feathers, burrows, nests, and molts were used for identification of animals present onsite. Any onsite aquatic habitats were observed for a minimum of ten minutes without movement in order to observe animals that may hide when approached.

2.0 RESULTS

2.1 NATURAL COMMUNITIES IN THE EVALUATION AREA

Using field surveys, a review of published literature, and the knowledge of PEC staff, all of the natural communities present on and around the project site were assessed. Regionally, the dominant vegetation type is cultivated vineyards and orchards, lesser proportions of hayfields and light commercial (Figure 4). Along the banks of Clear Lake are freshwater emergent marsh habitat, and along the tributaries to Clear Lake are *Salix* riparian woodland.

2.2 NATURAL COMMUNITIES WITHIN THE PROJECT SITE

The parcel consists of approximately 50% developed vineyard, 35% mixed annual grassland, and 15% riparian woodland (Figure 5). The riparian corridor of Manning Creek is well developed and contains numerous riparian trees and a diverse understory. Aquatic insects and some algal mats were observed in the creek. The remainder of the parcel is either active vineyard with very low plant cover other than grapevines and so is not treated below separately from the *Bromus* annual grassland category. The specific community descriptions below are organized based on the zones that were surveyed, and the floristic results presented in Appendix B.

2.2.1 *Bromus* Annual Grassland

The majority of the parcel is ruderal grassland dominated by non-native species from the genera *Bromus* and *Festuca* (Figure 9). Non-native herbaceous species observed onsite include soft chess (*Bromus hordeaceous*), ripgut brome (*Bromus diandrus*), Italian rye (*Festuca perennis*), Zorro fescue (*Festuca myuros*), wild oats (*Avena barbata*), dogstail grass (*Cynosurus echinatus*), little rattlesnake grass (*Briza minor*), foxtail chess (*Hordeum murinum*), hairgrass (*Aira caryophyllea*), Harding grass (*Phalaris aquatica*), medusahead (*Elymus caput-medusae*), nit grass (*Gastridium phleoides*), Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*), prickly lettuce (*Lactuca serriola*), big heron bill (*Erodium botrys*), spring vetch (*Vicia sativa*), English plantain (*Plantago lanceolata*), field parsley (*Torilis arvensis*), Klamathweed (*Hypericum perforatum*), smooth cat's ear (*Hypochaeris glabra*), chickweed (*Stellaria media*), black mustard (*Brassica nigra*), sheep sorrel (*Rumex acetocella*), bur clover (*Medicago polymorpha*), wild geranium (*Geranium molle*), turkey mullein (*Croton setiger*), rose clover (*Trifolium hirtum*), sweet clover (*Melilotus albus*), pineapple weed (*Matricaria discoidea*), goat's beard (*Tragopogon dubius*), and Fuller's teasel (*Dipsacus fullonum*).

Native herbaceous species observed onsite include common yarrow (*Achillea millefolium*), harvest brodiaea (*Brodiaea elegans*), annual lupine (*Lupinus bicolor*), blue dicks (*Dichelostemma capitatum*), ladies' tobacco (*Gnaphalium californicum*), blue eyed grass (*Sisyrinchium bellum*), bird's foot trefoil (*Acmispon americanus*), Western buttercup (*Ranunculus occidentalis*), red ribbons (*Clarkia*

concinna), mugwort (*Artemisia douglasiana*), and willow herb (*Epilobium densiflorum*). Tree species observed along fencelines that are not part of the riparian zone surrounding Manning Creek include Valley oak (*Quercus lobata*) to 48", Black oak (*Quercus kelloggii*) to 26", and Interior live oak (*Quercus wislizeni*) to 20".

2.2.1 *Salix* Riparian Woodland

In addition to many of the species mentioned above, areas near the riparian corridor of Manning Creek (Figure 11) included canopy trees such as Oregon ash (*Fraxinus latifolia*), White alder (*Alnus rhombifolia*), Oregon oak (*Quercus garryana*), Narrowleaf willow (*Salix exigua*), Black willow (*Salix gooddingii*), and Pacific willow (*Salix lasiandra*). Herbaceous species in the riparian corridor include miner's lettuce (*Claytonia perfoliata*), common bedstraw (*Galium aparine*), Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobium*), bracken fern (*Pteridium aquilinum*), California grape (*Vitis californica*), American vetch (*Vicia americana*), pennyroyal (*Mentha pulegium*), and California rose (*Rosa californica*).

2.3 WILDLIFE

Numerous wildlife species were observed both directly and indirectly. Species observed onsite include common crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), blue heron (*Ardea herodias*), red-winged blackbird (*Agelaius phoeniceus*), California towhee (*Melozone crissalis*), house sparrow (*Passer domesticus*), turkey vulture (*Cathartes aura*), gray squirrel (*Sciurus griseus*), pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), mule deer (*Odocoileus hemionus*), Western fence lizard (*Sceloporous occidentalis*), and Western bumblebee (*Bombus occidentalis*).

2.4 WETLANDS & STREAMS

Streams and watercourses onsite were classified according to the three-tier method used by the California Department of Forestry & Fire Protection (CALFIRE 2017) and included as a reference in Appendix E. Jurisdictional streamcourses are mapped in Figure 3. According to these criteria, there is one named perennial Class I watercourses, Manning Creek, that flows generally north by northwest along the western property line in a densely wooded riparian corridor. The channel bottom is downcut approximately 10 feet but the channel is stable and does not appear to be eroding and is composed of gravel and fines. The rail car bridge crosses Manning Creek in the far southeast corner of the parcel (Figure 7) and exhibits concrete footings that appear to be stable. There is a second jurisdictional watercourse in the far northeastern corner of the north parcel that runs briefly along the northern property line before passing offsite and quickly entering Clear Lake. There is also one artificial water feature, a vineyard settling/irrigation pond (Figure 3) measuring approximately 0.45 surface acres created by earthen berm and surrounded by trees.

Potential wetlands onsite were assessed based on the likelihood to satisfy the three-tier wetland delineation criteria used by the Army Corps of Engineers *Wetland Delineation Manual* (ACOE

1987). There are no locations onsite that appear to satisfy the ACOE criteria for wetlands, although a protocol-level wetland delineation was not performed. There are no locations onsite that appear to be jurisdictional wetlands based on the absence of any areas near the proposed cultivation areas that exhibit satisfactory cover of hydrophytic vegetation or that exhibit signs of wetland hydrology such as spring seeps or ponding. There is also no apparent wetland vegetation associated with the vineyard pond. There may however be fringing wetlands associated with the Manning Creek riparian corridor, although in any case these would be subsumed within the 150 foot setbacks required for Class I watercourses.

2.5 SOILS & LOCAL GEOMORPHOLOGY

The parent materials are typical of inner Coast Range mountains of the Lake County subtype, with highly dissected valleys cut into soft Franciscan sediments, with abundant volcanic extrusive and intrusive formations (USGS 1985). There are no serpentine or other ultramafic rock types onsite and no serpentine derived soils. There are no alkalai or vernal pool soil types onsite. Local formations the southwest portions of the site including the potential cultivation area and most of the riparian corridor are mapped as well-drained Still gravelly loam (#234/233), with lesser proportions of Cole (3%), Kelsey (2%), Lupoyoma (2%), and Talmage (2%) formations. It is considered prime farmland if irrigated, contains average proportion of hydric soils of 2%, and rarely floods. The soil order is classified as a fine-loamy, mixed, thermic Cumulic Haploxerol, composed of alluvium derived from sandstone and shale. Most of the remainder of the site including the north and eastern portions of the vineyard are mapped as Cole variant clay loam with a calcareous substratum (#125), with lesser proportions of Still (7%) and unnamed (7%) sediments.

3.0 SUMMARY & CONCLUSIONS

No special-status plant species were observed during the surveys performed at the site in May 2019. No impacts are predicted for any of the State or Federal special-status plant species in Appendix A based on lack of actual sightings, and lack of suitable habitat in the proposed cultivation activity areas. Activities are largely proposed to be limited to non-native dominate grassland with few native species. The occurrence of special-status plant species (Serpentine cryptantha) that overlaps with the project parcel was not observed onsite nor is it anticipated to find suitable habitat onsite due to the lack of serpentine derived soils or outcrops. Other species observed in the vicinity of the project parcel such as Colusa layia were also not observed during appropriately timed surveys. Furthermore, there are no wetlands, vernal pools, serpentine outcrops, or other special habitat types near the proposed cultivation area that possess a high likelihood of containing special-status plant species.

No special-status animal species were observed during the surveys performed at the site in May 2019. No impacts are predicted for any State or Federal special-status animal species in Appendix A due to the lack of actual observations and lack of suitable habitat near the proposed redevelopment sites. The nearest occurrence of Foothill yellow-legged frog (FYLF) is 4.8 miles west from the project parcel, although there is potential habitat in Manning Creek, although no animals are known from Manning Creek. Due to the existence of suitable amphibian breeding habitat in Manning Creek, and the existence of suitable estivation habitat in the south parcel, it is recommended that a monitor clear the area prior to ground disturbance and also monitor during grading. Other species that may exist onsite such as Western pond turtle and Vernal pool andrenid bee should not be impacted by the proposed cultivation due to lack of suitable habitat in the project area.

No impacts are predicted for sediment discharge to watercourses or wetlands due to the absence of water conveyances that could potentially transport sediment into waters of the US. The riparian corridor surrounding Manning Creek is very dense and there are no bare ground routes for sediment to travel; all routes for sediment to travel from the vineyard or proposed cultivation area pass through intact grass or other vegetation. The one area that might need remediation are the edges of the rail car bridge where the rail car meets the dirt roadway. These edges may need to be reinforced with native plantings and seeded with native grasses to prevent erosion during the rainy season. Additional erosion control measures described in Appendix D are recommended, and we encourage the use of native, locally-sourced vegetation along road cuts and anywhere soil stabilization is required in the future.

4.0 REGULATORY FRAMEWORK

4.1 FEDERAL ENDANGERED SPECIES ACT

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered species under the federal Endangered Species Act (FESA). The USFWS also maintains a list of 'proposed' species and candidate species that are not legally protected under the FESA, but are often included in their review of a project as they may become listed in the near future. The FESA protects listed animal species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands. Pursuant to the requirements of the FESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed threatened or endangered species (plants and animals) may be present in the project area and determine whether the proposed project may affect such species. Any activities that could result in the take of a federally-listed species will require formal consultation with the USFWS.

4.2 CALIFORNIA ENDANGERED SPECIES ACT

The California Endangered Species Act (CESA) protects any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species (California Fish and Wildlife Code 2070). Take of state-listed species requires a permit from CDFW, which is granted only under strictly limited circumstances. Additionally, the CDFW maintains lists of "species of special concern" that are defined as animal species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed or proposed endangered or threatened species may be present in the project area and determine whether the proposed project may result in a significant impact on such species.

4.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Wildlife Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts, if it finds that the species meets the criteria of a threatened or endangered species.

4.4 CLEAN WATER ACT

Under Section 404 of the federal Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and, depending on the circumstances, may also be subject to Corps jurisdiction. In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Minor amounts of fill are sometimes covered by Nationwide Permits, which were established to streamline the permit process for projects with "minimal" impacts on wetlands or other waters of the U.S. An Individual Permit is required for projects that result in more than a minimal impact on jurisdictional areas. The Individual Permit process requires evidence that fill of jurisdictional areas has been minimized to the extent "practicable" and provides an opportunity for public review of the project.

4.5 CALIFORNIA WATER QUALITY REGULATORY PROGRAMS

Pursuant to Section 401 of the federal Clean Water Act and the state's Porter-Cologne Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB sometimes asserts jurisdiction over wetlands that the Corps does not (e.g. certain isolated wetlands) and may impose mitigation requirements even if the Corps does not. The CDFW also exerts jurisdiction over the bed and banks of watercourses and water bodies according to provisions of Section 1601to1603 of the Fish and Wildlife Code. The Fish and Wildlife Code requires a Stream Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body.

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FIGURE 1: REGIONAL LOCATION

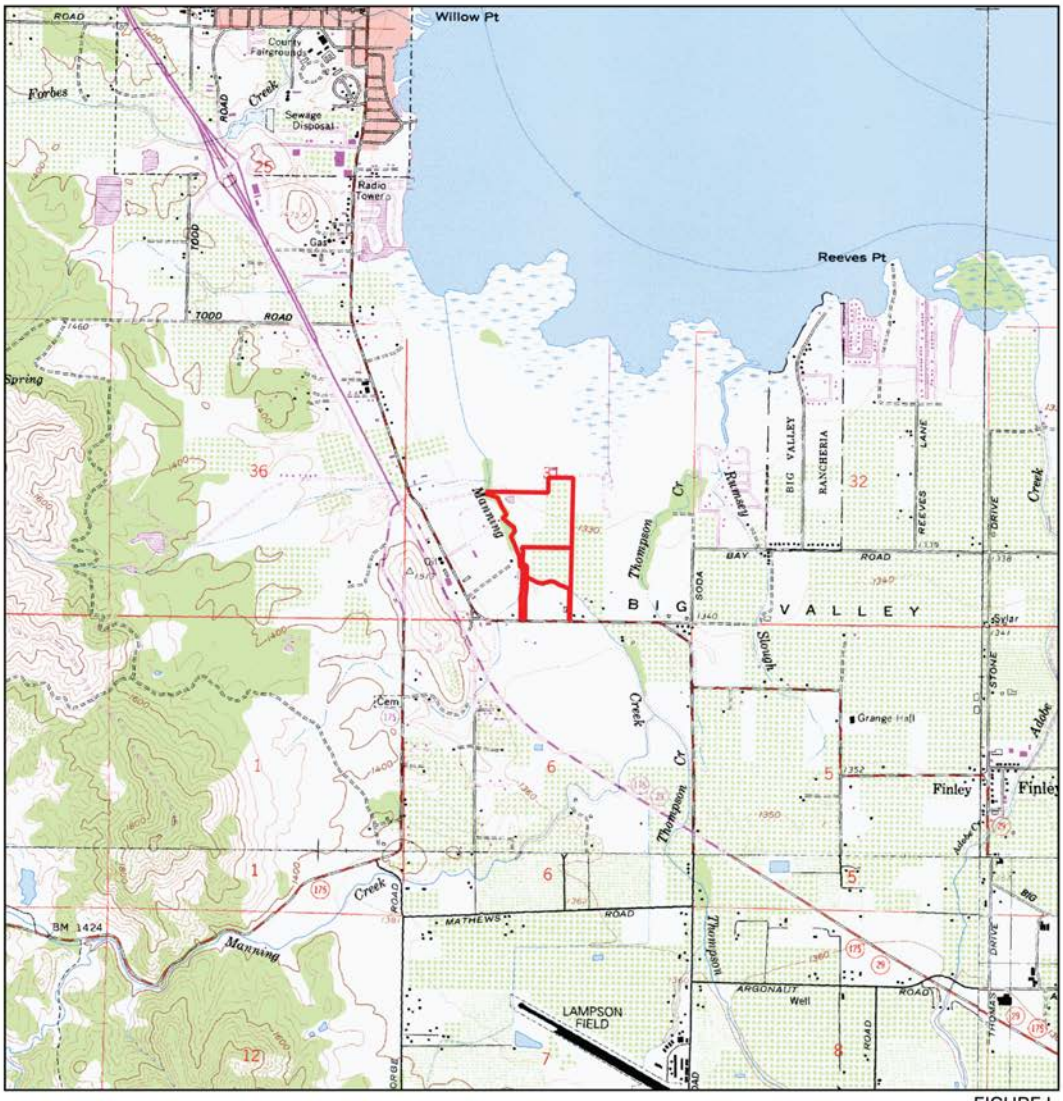


FIGURE I

Pinecrest Environmental Consulting

N

0 750 1500 m

Project Parcel

SOURCES: USGS Topographic Map

APN 008-001-09 & 008-001-08
Regional Topography

FIGURE 2: 40 FOOT CONTOURS

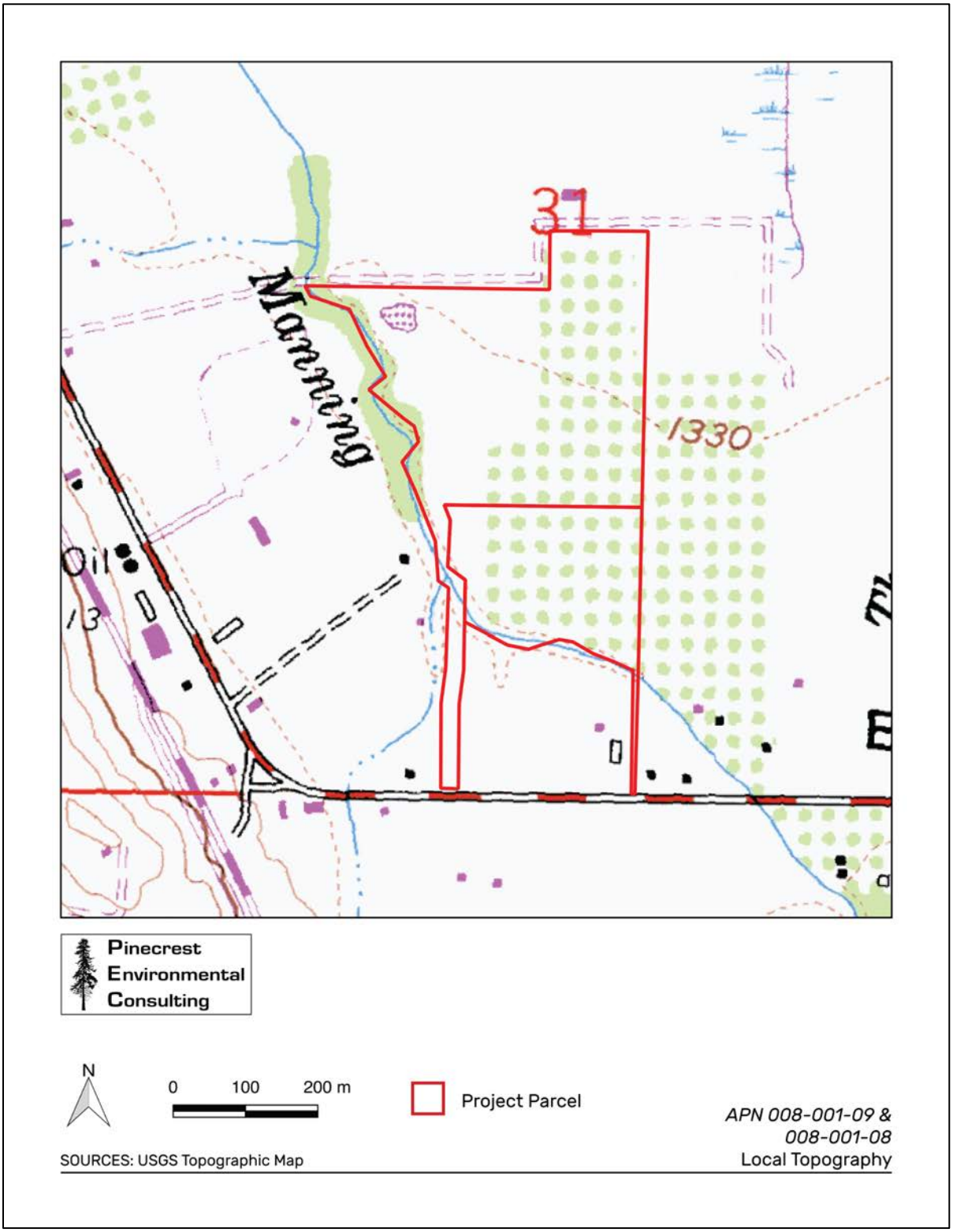


FIGURE 3: WATER FEATURES

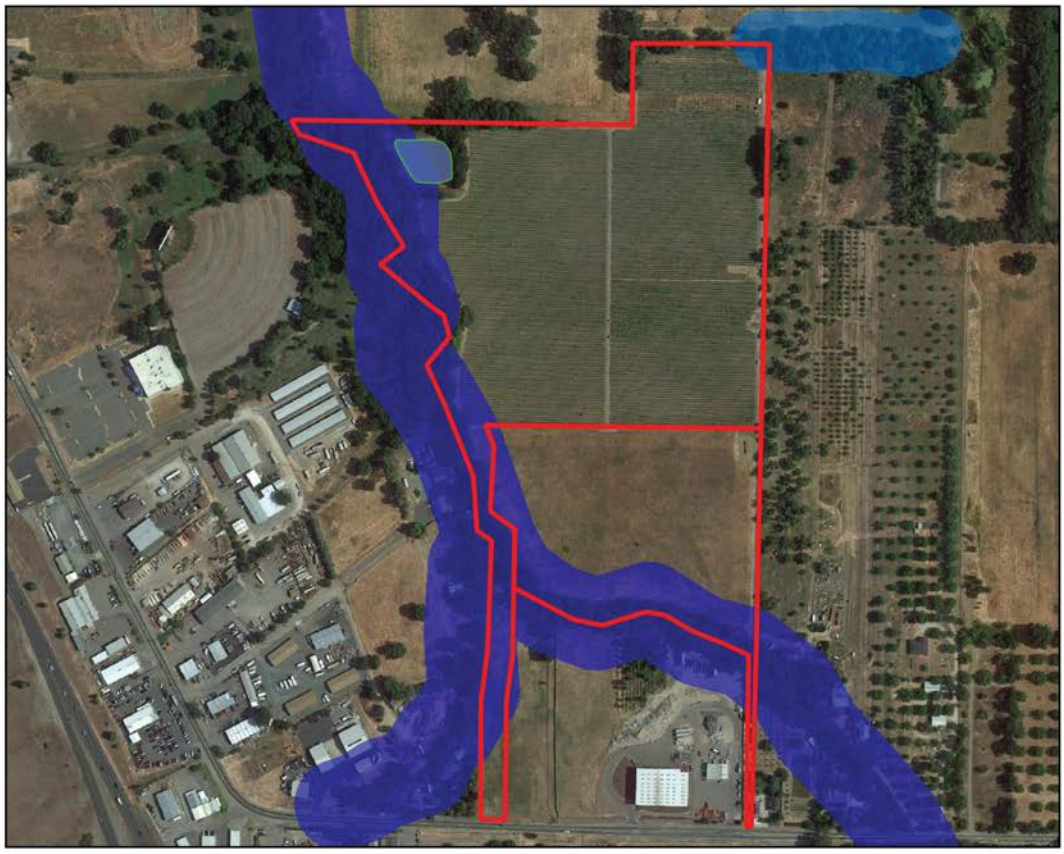


FIGURE III

Pinecrest Environmental Consulting

Vineyard Pool

Class I 150' Riparian Buffer

Class II 100' Riparian Buffer

Project Parcel

N

0 100 200 m

SOURCES: ESRI World Ortho Imagery; CalFish

APN 008-001-09 & 008-001-08
Site Plan

FIGURE 4: REGIONAL COMMUNITY TYPES

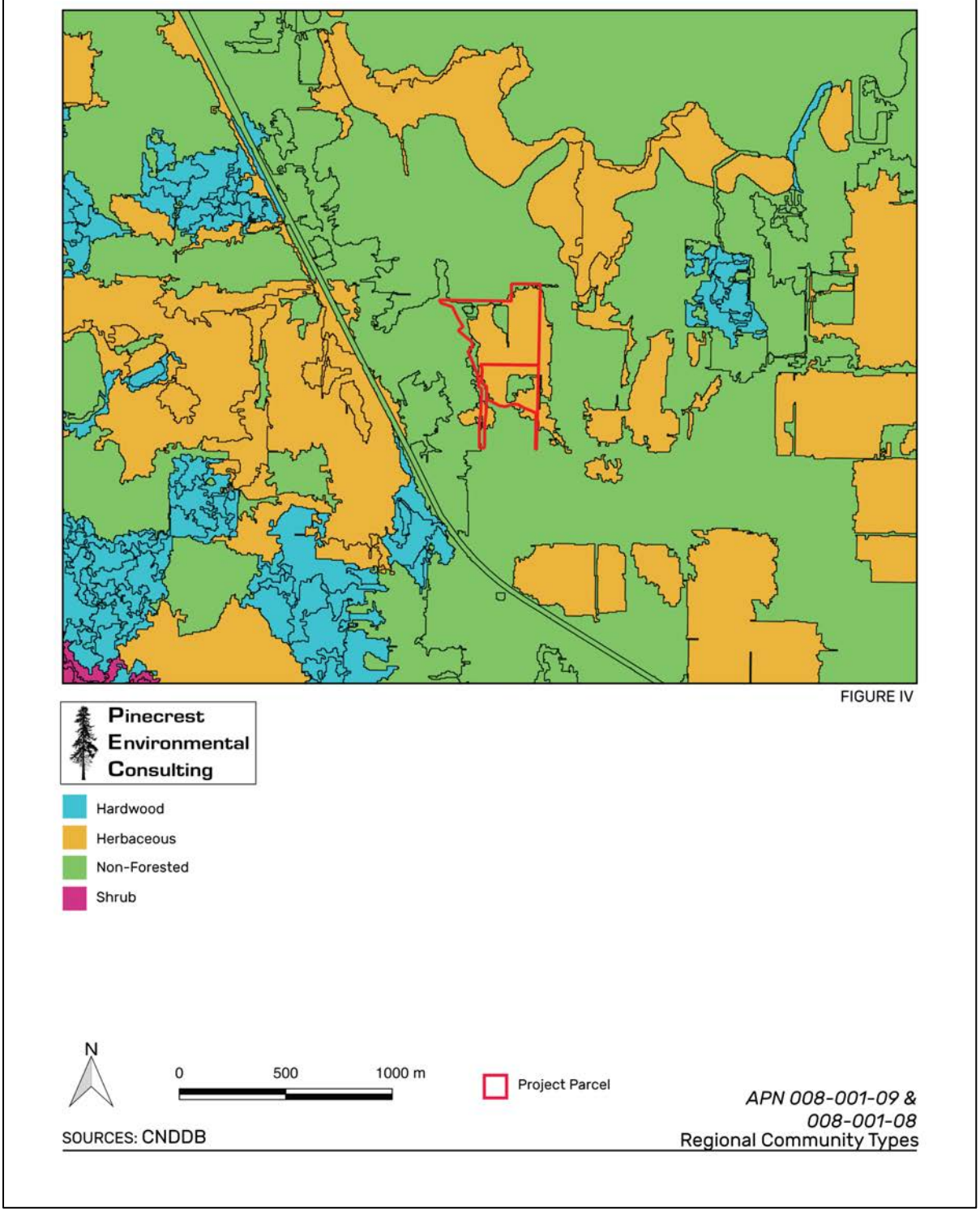


FIGURE 5: ONSITE PLANT COMMUNITIES

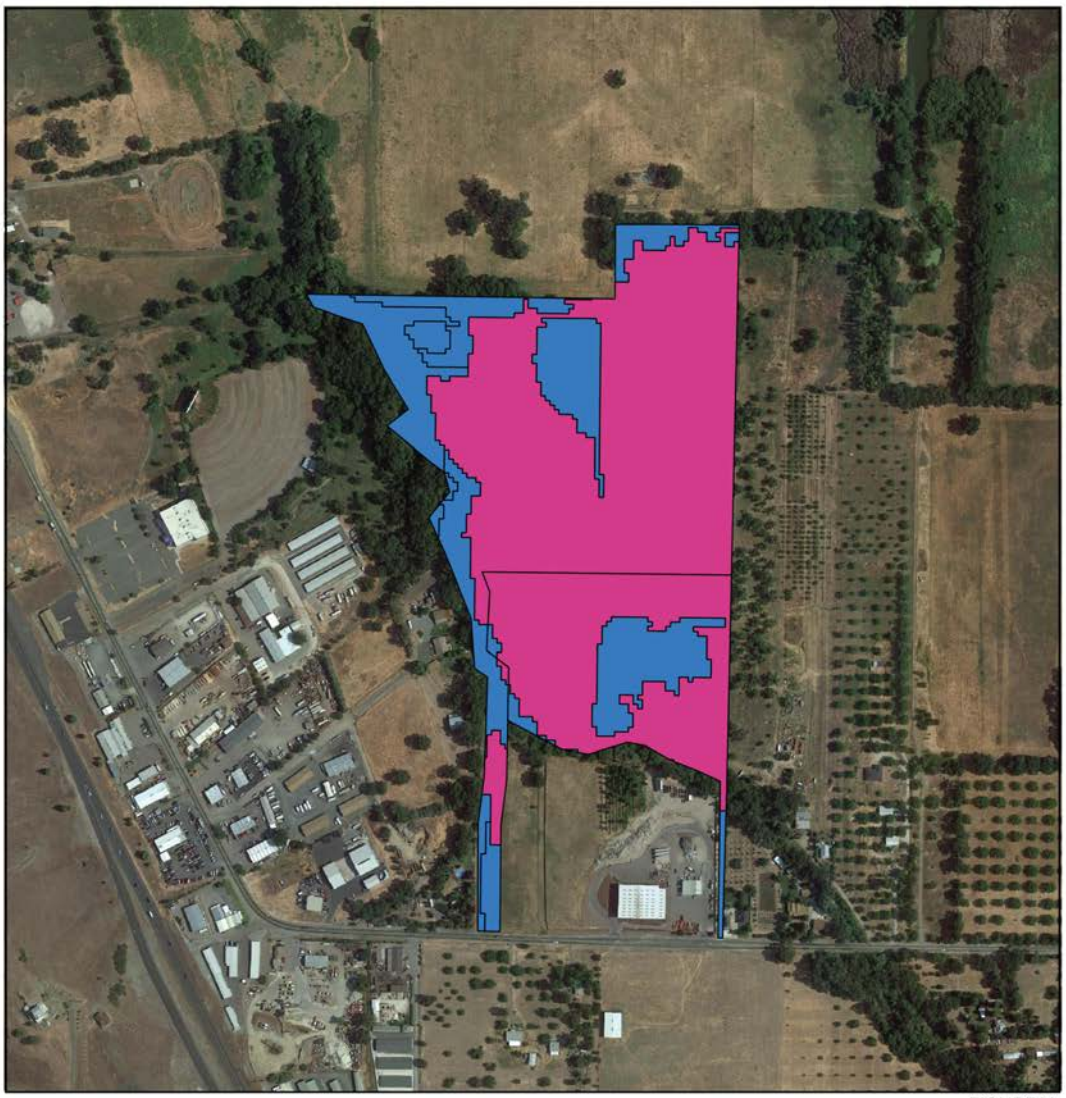


FIGURE V

Pinecrest Environmental Consulting

N

0 100 200 m

Herbaceous

Non-forested

APN 008-001-09 & 008-001-08
Onsite Plant Communities

SOURCES: ESRI World Ortho Imagery; CNDDB

FIGURE 6: PHOTOGRAPH OF ACCESS GATE & UTILITY POLE



Pinecrest
Environmental
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6425 Telegraph Ave. #8 Oakland, CA 94609
105 Morris St. Suite 104 Sebastopol, CA 95472

APN 008-001-09 & 008-001-08

SOURCES: Pinecrest Environmental

270 & 140 Soda Bay Road, Kelseyville, CA 95453

FIGURE 7: PHOTOGRAPH OF RAIL CAR BRIDGE



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APN 008-001-09 & 008-001-08

SOURCES: Pinecrest Environmental

270 & 140 Soda Bay Road, Kelseyville, CA 95453

FIGURE 8: PHOTOGRAPH OF ACCESS ROAD



Pinecrest Environmental Consulting

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SOURCES: Pinecrest Environmental

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FIGURE 9: PHOTOGRAPH OF ANNUAL GRASSLAND



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APN 008-001-09 & 008-001-08

SOURCES: Pinecrest Environmental

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FIGURE 10: PHOTOGRAPH OF VINEYARD ACCESS



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APN 008-001-09 & 008-001-08

SOURCES: Pinecrest Environmental

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FIGURE 11: PHOTOGRAPH OF MANNING CREEK



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Oakland, CA 94609 Sebastopol, CA 95472

SOURCES: Pinecrest Environmental

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APPENDIX A: SPECIAL-STATUS SPECIES CONSIDERED

The following is a list of special-status plant and animal species generated based on knowledge of the species and habitats of Lake County by PEC staff, from various State and Federal databases, and from the California Natural Diversity Database (CNDDB). CNDDB occurrences within 5 miles of the project site are shown in bold.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
PLANTS			
Adobe lily (*Fritillaria pluriflora*)	—/—/1B.2	Valley grasslands, foothill woodland	Low: Some grassland habitat exists onsite.
Alkalai milk-vetch (*Astragalus tener* var. *tener*)	—/—/1B.2	Valley grasslands, alkali sinks	None: No suitable alkalai habitat exists onsite.
Anthony peak lupine (*Lupinus antoninus*)	—/—/1B.2	Montane forest	None: No suitable montane habitat exists onsite.
Baker's manzanita (*Arctostaphylos bakeri* ssp. *bakeri*)	—/—/1B.1	Serpentine chaparral	None: No serpentine habitat exists onsite.
Baker's meadowfoam (*Limnanthes bakeri*)	—/ST/1B.1	Vernal pools, freshwater wetland	Very Low: No suitable wetland habitat exists onsite.
Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)	—/—/1B.1	Vernal pools	Very Low: No vernal pool habitat exists onsite.
Beaked tracyina (*Tracyina rostrata*)	—/—/1B.2	Valley grassland, foothill woodland	Very Low: Some grassland habitat exists onsite.
Bent flowered fiddleneck (*Amsinckia lunaris*)	**—/—/1B.2**	**Valley grassland, foothill woodland**	**Medium: Some suitable grassland habitat exists onsite. Nearest occurrence is 0.2 miles west of the parcel near CA-29.**
Big scale balsamroot (*Balsamorhiza macrolepis*)	—/—/1B.2	Valley grassland, foothill woodland	Low: Some grassland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Bogg's Lake hedge-hyssop (*Gratiola heterosepala*)	**—/—/1B.2**	**Vernal pools, lake margins**	**None: No suitable wetland habitat exists onsite. Nearest occurrence is 3.5 miles southeast of the parcel near Kelseyville.**
Bolander's horkelia (*Horkelia bolanderi*)	—/—/1B.2	Yellow pine forest, grassland	Very Low: No suitable forest habitat exists onsite.
Brandegee's eriastrum (*Eriastrum brandegeeae*)	**—/—/1B.1**	**Clearings in chaparral**	**None: No chaparral habitat exists onsite. Nearest occurrence is 4.7 miles southeast of the parcel near Kelseyville.**
Bristly sedge (*Carex comosa*)	—/—/2B.1	Freshwater marsh, riparian	None: No suitable wetland habitat exists onsite.
Brownish beaked-rush (*Rhynchospora capitellata*)	—/—/2B.2	Freshwater marsh, riparian	None: No suitable wetland habitat exists onsite.
Burke's goldfields (*Lasthenia burkei*)	FE/SE/1B.1	Vernal pools	Very Low: No suitable vernal pool habitat exists onsite.
California alkalai grass (*Puccinellia simplex*)	—/—/1B.2	Alkalai sink	None: No alkalai wetland habitat exists onsite.
California beaked-rush (*Rhynchospora californica*)	—/—/1B.1	Freshwater wetlands	None: No suitable wetland habitat exists onsite.
California satintail (*Imperata brevifolia*)	—/—/2B.1	Chaparral	None: No suitable chaparral habitat exists onsite.
Calistoga ceanothus (*Ceanothus divergens*)	—/—/1B.2	Chaparral	Very Low: No chaparral habitat exists onsite.
Cascade downingia (*Downingia willamettensis*)	—/—/2B.2	Vernal pool	Very Low: No vernal pool habitat exists onsite.
Clara Hunt's milk vetch (*Astragalus claranus*)	—/—/1B.1	Chaparral, grassland	Very Low: No chaparral habitat exists onsite.
Cobb Mountain lupine (*Lupinus sericatus*)	—/—/1B.2	Chaparral, pine forest	Very Low: No chaparral habitat exists onsite.
Colusa layia (*Layia septentrionalis*)	**—/—/1B.2**	**Chaparral, valley grassland**	**High: Some suitable grassland habitat exists onsite. Nearest occurrence is 0.2 miles offsite to the west near CA-29.**

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*)	—/—/1B.2	Grassland, coastal scrub	Very Low: Some grassland habitat exists onsite.
Deep scarred cryptantha (*Cryptantha excavata*)	—/—/1B.1	Foothill woodland	Very Low: Some grassland habitat exists onsite.
Dimorphic snapdragon (*Antirrhinum subcordatum*)	—/—/4.3	Serpentine chaparral	None: No serpentine habitat exists onsite.
Drymaria-like western flax (*Hesperolinon drymarioides*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Dwarf downingia (*Downingia pusilla*)	—/—/2B.2	Vernal pools, freshwater wetland	None: No vernal pool habitat exists onsite.
Dwarf soaproot (*Chlorogalum pomeridianum* var. *minus*)	—/—/1B.2	Serpentine chaparral	None: No serpentine chaparral habitat exists onsite.
Eel-grass pondweed (*Potamogeton zosteriformis*)	—/—/2B.2	Freshwater lakes, ponds	None: No suitable pond habitat exists onsite.
Few-flowered navarretia (*Navarretia leucocephala* ssp. *pauciflora*)	**FE/ST/1B.1**	**Vernal pools, grassland**	**Medium: Some grassland habitat exists onsite. Nearest occurrence is 4.7 miles southeast of the parcel near Kelseyville.**
Franciscan onion (*Allium peninsulare* var. *franciscanum*)	—/—/1B.2	Grassland	Very Low: Some grassland habitat exists onsite.
Freed's jewelflower (*Streptanthus brachiatus* ssp. *hoffmanii*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Geysers panicum (*Panicum acuminatum* var. *thermale*)	—/—/1B.2	Chaparral, wetlands	Low: No chaparral habitat exists onsite.
Glandular western flax (*Hesperolinon adenophyllum*)	**—/—/1B.2**	**Chaparral**	**Low: No suitable chaparral habitat exists onsite. Nearest occurrence is 0.5 miles southwest of the parcel near Ackley Cutoff.**
Grassleaf water plantain (*Alisma gramineum*)	—/—/2B.2	Wetland, riparian	Low: Some suitable riparian habitat exists onsite.
Green jewelflower (*Streptanthus hesperidis*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Greene's narrow-leaved daisy (*Erigeron greenei*)	—/—/1B.2	Serpentine grassland	None: No serpentine habitat exists onsite.
Hall's harmonia (*Harmonia hallii*)	—/—/1B.2	Chaparral, grassland	Low: Some grassland habitat exists onsite.
Hoffman's bristly jewelflower (*Streptanthus glandulosus* spp. *hoffmanii*)	—/—/1B.3	Chaparral, foothill woodland	Very Low: Some chaparral habitat exists onsite.
Holly-leaved ceanothus (*Ceanothus purpureus*)	—/—/1B.2	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*)	—/—/1B.2	Foothill woodland	Very Low: Some woodland habitat exists onsite.
Jepson's coyote thistle (*Eryngium jepsonii*)	—/—/4.2	Wetlands and vernal pools	Very Low: No vernal pool habitat exists onsite.
Jepson's leptosiphon (*Leptosiphon jepsonii*)	—/—/1B.2	Chaparral, serpentine grassland	None: No serpentine chaparral habitat exists onsite.
Jepson's milk-vetch (*Astragalus rattanii* var. *jepsonianus*)	—/—/1B.2	Chaparral, serpentine grassland	Very Low: No suitable chaparral habitat exists onsite.
Kenwood marsh checkerbloom (*Sidalcea oregana* ssp. *valida*)	FE/SE/1B.1	Freshwater wetlands	None: No suitable wetland habitat exists onsite.
Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*)	**—/—/1B.3**	**Chaparral, foothill woodland**	**Low: No suitable chaparral habitat exists onsite. Nearest occurrence is 5.0 miles east of the parcel in Clear Lake State Park.**
Kruckeberg's jewelflower (*Streptanthus morrisonii* ssp. *kruckebergii*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Lake County stonecrop (*Sedella leiocarpa*)	—/—/1B.1	Rock outcrops	Very Low: No rock outcrop habitat exists onsite.
Lake County western flax (*Hesperolinon didymocarpum*)	—/SE/1B.2	Serpentine grasslands	None: No suitable serpentine habitat exists onsite.
Legenere (*Legenere limosa*)	—/—/1B.1	Vernal pool, freshwater wetland	None: No suitable vernal pool habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Loch Lomond button-celery (*Eryngium constancei*)	FE/SE/1B.1	Vernal pool, freshwater wetland	None: No suitable vernal pool habitat exists onsite.
Many-flowered navarretia (*Navarretia leucocephala* spp. *plieantha*)	FE/SE/1B.2	Vernal pools	Very Low: No vernal pool habitat exists onsite.
Marsh checkerbloom (*Sidalcea oregana* ssp. *hydrophila*)	**—/—/1B.2**	**Freshwater wetland, riparian**	**Medium: Some suitable riparian habitat exists onsite. Nearest occurrence is 3.1 miles southeast of the parcel near Bell Hill Road.**
Mayacamas popcornflower (*Plagiobothrys lithocaryus*)	**—/—/A1**	**Foothill woodland, valley grassland**	**Very Low: Presumed extinct. Last observed 1884 located 1.5 miles north of the site near present-day Lakeport.**
Milo Baker's lupine (*Lupinus milo-bakeri*)	—/—/1B.1	Foothill woodland	None: No suitable woodland habitat exists onsite.
Morrison's jewelflower (*Streptanthus morrisonii* ssp. *morrisonii*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Mt. St. Helena morning-glory (*Calystegia collina* ssp. *oxyphylla*)	—/—/4.2	Serpentine chaparral	None: No serpentine habitat exists onsite.
Napa bluecurls (*Trichostema ruygtii*)	**—/—/1B.2**	**Chaparral, grassland**	**Medium: Some grassland habitat exists onsite. Nearest occurrence is 3.4 miles southeast of the parcel near Kelseyville.**
Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*)	—/—/1B.1	Chaparral	Very Low: Some marginally suitable woodland habitat exists onsite.
Napa false indigo (*Amorpha californica* var. *napensis*)	—/—/1B.2	Forest, woodland	Very Low: Some marginally suitable woodland habitat exists onsite.
Narrow-anthered brodiaea (*Brodiaea leptandra*)	—/—/1B.2	Foothill woodland, grassland	Very Low: Some grassland habitat exists onsite.
North Coast semaphore grass (*Pleuropogon hooverianus*)	—/—/1B.1	Freshwater wetland, vernal pools	None: No suitable vernal pool habitat exists onsite.
Northern California black walnut (*Juglans hindsii*)	—/—/1B.1	Riparian	Medium: Some suitable riparian habitat exists onsite.
Northern meadow sedge (*Carex praticola*)	—/—/2B.2	Freshwater wetlands	None: No suitable wetland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Nuttall's ribbon-leaved pondweed (*Potamogeton epihydrus*)	—/—/2B.2	Ponds and lakes	None: No suitable pond habitat exists onsite.
Oregon polemonium (*Polemonium carneum*)	—/—/2B.2	Coastal scrub, yellow pine forest	None: No suitable habitat exists onsite.
Oval-leaved viburnum (*Viburnum ellipticum*)	—/—/2B.3	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Pappose tarplant (*Centromadia parryi* ssp. *parryi*)	—/—/1B.2	Grassland, wetland	Low: Some grassland habitat exists onsite.
Pennell's bird's beak (*Cordylanthus tenuis* ssp. *capillaris*)	FE/SR/1B.2	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*)	—/—/1B.2	Grassland, chaparral	Very Low: Parasitic plant, typical host plants not known from the property.
Pink creamsacs (*Castilleja rubicundula* var. *rubicundula*)	—/—/1B.2	Grasslands	Low: Some grassland habitat exists onsite.
Porter's navarretia (*Navarretia paradoxinota*)	—/—/1B.3	Grasslands, wetlands	Very Low: Some grassland habitat exists onsite.
Raiche's manzanita (*Arctostaphylos stanfordiana* ssp. *raichei*)	—/—/1B.1	Serpentine chaparral	None: No serpentine chaparral habitat exists onsite.
Rincon Ridge ceanothus (*Ceanothus confusus*)	—/—/1B.1	Chaparral, foothill grassland	Very Low: No suitable chaparral habitat exists onsite.
Rincon Ridge manzanita (*Arctostaphylos stanfordiana* ssp. *decumbens*)	—/—/1B.1	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Round-leaved filaree (*California macrophylla*)	—/—/1B.2	Foothill grassland	Low: Some grassland habitat exists onsite.
Saline clover (*Trifolium hydrophilum*)	—/—/1B.2	Wetland, riparian	None: No suitable wetland habitat exists onsite.
San Joaquin spearscale (*Extriplex joaquinana*)	—/—/1B.2	Shadscale scrub, valley grassland	None: No alkalai scrub habitat exists.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Santa Rosa horkelia (*Horkelia tenuiloba*)	—/—/1B.2	Chaparral	Low: No suitable chaparral habitat exists onsite.
Sebastopol meadowfoam (*Limnanthes vinculans*)	FE/SE/1B.1	Freshwater wetland, vernal pools	None: No suitable vernal pool habitat exists onsite.
Serpentine cryptantha (*Cryptantha dissita*)	**—/—/1B.2**	**Serpentine chaparral**	**Very Low: No serpentine habitat exists onsite. Nearest occurrence is 0.3 miles west of the project parcel.**
Serpentine daisy (*Erigeron serpentinus*)	—/—/1B.3	Serpentine chaparral	None: No serpentine chaparral habitat exists onsite.
Sharsmith's western flax (*Hesperolinon sharsmithiae*)	—/—/1B.2	Chaparral	Very Low: No suitable chaparral habitat exists onsite.
Slender Orcutt grass (*Orcuttia tenuis*)	FT/SE/1B.1	Grassland, freshwater wetlands	Very Low: Some unsuitable grassland habitat exists onsite.
Small-flowered calycadenia (*Calycadenia micrantha*)	**—/—/1B.2**	**Foothill grassland**	**Medium: Some suitable grassland habitat onsite. Nearest occurrence is 1.8 miles south of the parcel near Manning Creek.**
Small groundcone (*Kopsiopsis hookeri*)	—/—/2B.3	Redwood forest	None: No suitable forest habitat exists onsite.
Snow Mountain buckwheat (*Eriogonum nervulosum*)	—/—/1B.2	Serpentine outcrops	None: No serpentine outcrop habitat exists onsite.
Socrates Mine jewelflower (*Streptanthus brachiatus* ssp. *brachiatus*)	—/—/1B.2	Serpentine outcrops	None: No serpentine habitat exists onsite.
Sonoma beardtongue (*Penstemon newberryi* var. *sonomensis*)	—/—/1B.3	Chaparral	Very Low: No chaparral habitat exists onsite.
Sonoma ceanothus (*Ceanothus sonomensis*)	—/—/1B.2	Chaparral	Very Low: No chaparral habitat exists onsite.
Thin-lobed horkelia (*Horkelia tenuiloba*)	—/—/1B.2	Chaparral	Very Low: Some chaparral habitat exists onsite.
Three-fingered morning glory (*Calystegia collina* ssp. *tridactylosa*)	—/—/1B.2	Serpentine grassland	Very Low: No serpentine habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Two-carpellate Western flax (*Hesperolinon bicarpellatum*)	—/—/1B.2	Chaparral	Low: No suitable chaparral habitat exists onsite.
Vine Hill ceanothus (*Ceanothus foliosus* var. *vineatus*)	—/—/1B.1	Chaparral	Very Low: Some chaparral habitat exists onsite.
Vine Hill manzanita (*Arctostaphylos densiflora*)	—/SE/1B.1	Chaparral	Very Low: Some chaparral habitat exists onsite.
Watershield (*Brasenia schreberi*)	**—/—/2B.3**	**Pond, wetland**	**None: No pond habitat exists in the project area. Nearest occurrence is 1.5 miles north of the parcel near Lakeport.**
White beaked-rush (*Rhynchospora alba*)	—/—/2B.2	Wetlands, freshwater marsh	None: No suitable wetland habitat exists onsite.
White flowered rein orchid (*Piperia candida*)	—/—/1B.2	Yellow pine forest	None: No suitable forest habitat exists onsite.
Wolly meadowfoam (*Limnanthes floccosa* ssp. *floccosa*)	—/—/4.2	Vernal pools	None: No vernal pool habitat exists onsite.
MOSSES, LICHENS & LIVERWORTS			
Angel's hair lichen (*Ramalina thrausta*)	—/—/2B.1	Old growth conifer and hardwood forests	None: No suitable forest habitat exists onsite.
Coastal triquetrella (*Triquetrella californica*)	—/—/1B.2	Forest, woodland	Very Low: Some woodland habitat exists onsite.
Elongate copper moss (*Mielichhoferia elongata*)	—/—/4.3	Forest, woodland	Very Low: Some woodland habitat exists onsite.
Methuselah's beard lichen (*Dolichousnea longissima*)	—/—/4.2	Old growth conifer and hardwood forests	None: No forest habitat exists onsite.
Slender silver moss (*Anomobryum julaceum*)	—/—/4.2	Rocky substrates in forests, riparian	Very Low: Some riparian habitat exists onsite.
Torren's grimmia (*Grimmia torenii*)	—/—/1B.3	Forest, woodland	Very Low: Some woodland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
FISH			
Chinook Salmon Coastal California DPS (*Oncorhynchus kisutch*)	FT/SE/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
Clear Lake Drainage Resident Rainbow trout (*Oncorhynchus mykiss*)	FE/SE/—	Freshwater streams, open ocean and estuaries	Low: Some suitable habitat exists onsite in Manning Creek, but not near the project area.
Clear Lake hitch (*Lavinia exilicauda chi*)	**FE/SE/—**	**Freshwater lakes and streams**	**Medium: Some suitable habitat exists onsite in Manning Creek, but not near the project area. Nearest occurrence is 0.18 miles north of the parcel in Clear Lake.**
Coho Salmon Central California Coast ESU (*Oncorhynchus kisutch*)	FE/SE/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
Sacramento perch (*Archoplites interruptus*)	**—/SSC/—**	**Low gradient sloughs and lakes**	**Medium: Some suitable habitat exists onsite in Manning Creek, but not near the project area. Nearest occurrence is 0.18 miles north of the parcel in Clear Lake.**
Sacramento splittail (*Pogonichthys macrolepidotus*)	—/SSC/—	Low gradient freshwater streams	None: No suitable streams exist onsite.
Steelhead Central California Coast DPS (*Oncorhynchus mykiss irideus*)	FT/—/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
Steelhead Northern California DPS (*Oncorhynchus mykiss irideus*)	FT/—/—	Freshwater streams, open ocean and estuaries	None: No suitable streams exist onsite.
AMPHIBIANS & REPTILES			
California giant salamander (*Dicamptodon ensatus*)	—/SSC/—	Wetlands and riparian areas	Very Low: No suitable wetland habitat exists onsite. Some poor quality estivation habitat onsite. Species is not known from the region.
California red-legged frog (*Rana draytonii*)	FT/SSC/—	Vernal pools, seasonal pools, stock ponds, and associated grasslands	None: No suitable pond or wetland habitat exists onsite for breeding. Some low quality estivation habitat exists.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
California tiger salamander (*Ambystoma californiense*)	FT/SSC/—	Ponds, streams, drainages, and associated uplands	None: No suitable pond or wetland habitat exists onsite. Some low quality estivation habitat exists onsite.
Foothill yellow-legged frog (*Rana boylii*)	**—/SSC/—**	**Wetlands, riparian, streams and ponds**	**Very Low: Some suitable breeding habitat onsite in Manning Creek. Some poor quality estivation habitat in the grassland portion of the site. Nearest occurrence is 4.8 miles west of the project parcel in McDowell Creek.**
Red bellied newt (*Taricha rivularis*)	—/SSC/—	Woodland streams, riparian corridors	Very Low: Some suitable stream habitat exists onsite, although not near the project area.
Western pond turtle (*Emys marmorata*)	**—/SSC/—**	**Slow-moving creeks, streams, ponds, rivers, ditches.**	**Low: No pond habitat exists onsite however some poor quality stream habitat exists. Nearest occurrence is 1.7 miles south of the parcel somewhere in Kelseyville 7.5 minute quad. Also several localities 5.4 miles south in Adobe Creek, and others regionally.**
INVERTEBRATES			
Behren's silverspot butterfly (*Speyeria zerene behrensii*)	FE/SSC/—	Coastal prairie	None: Requires blue violet to reproduce; none onsite.
Borax Lake cuckoo wasp (*Hedychridium milleri*)	**—/SSC/—**	**Lakes and streams**	**None: No suitable lake or stream habitat exists onsite. Nearest occurrence is 10.8 miles east of the parcel in Borax Lake.**
Brownish dubiraphian riffle beetle (*Dubiraphia brunnescens*)	**—/SSC/—**	**Freshwater lakes and streams**	**Low: Some suitable habitat exists in Manning Creek. Nearest occurrence is 0.18 miles north of the parcel in Clear Lake.**
California brackishwater snail (*Tryonia imitator*)	—/SSC/—	Brackish wetlands	None: No suitable wetland habitat exists onsite.
California floater (*Anodonta californiensis*)	—/SSC/—	Freshwater ponds, streams	None: No suitable stream habitat exists onsite.
California freshwater shrimp (*Syncaris pacifica*)	FE/SE/—	Freshwater ponds	None: No suitable pond habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
California linderiella (*Linderiella occidentalis*)	—/SSC/—	Vernal pools	None: No vernal pool habitat exists onsite.
Clear Lake pyrg (*Pyrgulopsis ventricosa*)	—/SSC/—	Freshwater streams	None: No suitable stream habitat exists onsite.
Crotch bumble bee (*Bombus crotchii*)	—/SSC/—	Grassland, chaparral	Medium: Some grassland habitat exists onsite.
Leech's skyline diving beetle (*Hydroporus leechi*)	—/SSC/—	Freshwater ponds	None: No suitable pond habitat exists onsite.
Myrtle silverspot butterfly (*Speyeria zerene myrtleae*)	FE/SSC/—	Coastal prairie, chaparral	None: Requires western dog violet for reproduction; none onsite.
Monarch butterfly California overwintering Population #1 (*Danaus plexippus*)	—/SSC/—	Large trees required for roosting.	Low: Some suitable trees for roosting onsite.
Obscure bumble bee (*Bombus caliginosus*)	**—/SSC/—**	**Grassland, foothill woodland, chaparral**	**Medium: Some grassland habitat exists onsite. Nearest locality is 9.3 miles west of the project parcel near Parson's Creek.**
Opler's longhorn moth (*Adela oplerella*)	—/SSC/—	Usually associated with *Platystemon* (creamcups)	None: No suitable host plants onsite.
Oregon floater (*Anodonta oregonensis*)	—/SSC/—	Large freshwater streams	None: No suitable stream habitat exists onsite.
Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*)	—/SSC/—	Freshwater lakes and ponds	None: No suitable pond habitat exists onsite.
Sonoma zerene fritillary (*Speyeria zerene sonomensis*)	—/SSC/—	Grasslands and meadows with *Viola* plants	None: Requires *Viola* for reproduction; none onsite.
Western bumblebee (*Bombus occidentalis*)	—/SSC/—	Grassland	Medium: Some grassland habitat exists onsite.
Wilbur Springs shorebug (*Saldula usingeri*)	—/SSC/—	Ponds	None: No suitable pond habitat exists onsite.
Vernal pool andrenid bee (*Andrena blennospermatis*)	**—/SSC/—**	**Upland areas near vernal pools**	**Medium: No suitable vernal pool habitat exists onsite although some grassland habitat exists. Nearest occurrence is immediately adjacent parcel to the north.**

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
BIRDS			
American perigrine falcon (*Falco peregrinus anatum*)	—/SSC/—	Forages in open grasslands, nests in trees	Medium: Some suitable nesting and foraging habitat exists.
Bank swallow (*Riparia riparia*)	FE/SE/—	Typically found near lakes and streams	None: No suitable stream habitat exists onsite.
Bald eagle (*Haliaeetus leucocephalus*)	—/SSC/—	Forages over open lakes and streams	Very Low: No suitable foraging or nesting habitat exists onsite.
Bell's sage sparrow (*Artemisiospiza belli belli*)	**—/SSC/—**	**Cliff faces near water**	**Medium: Some suitable woodland habitat exists onsite. Nearest locality is 5.8 miles south of the parcel near Highland Creek.**
Black swift (*Cypseloides niger*)	—/SSC/—	Cliff faces near water	None: No suitable stream habitat exists onsite.
Burrowing owl (*Athene cunicularia*)	—/SSC/—	Grasslands with ground squirrel burrows	Very Low: Some suitable grassland habitat exists but lacks ground squirrel burrows.
California black rail (*Laterallus jamaicensis coturniculus*)	FE/SE/—	Coastal salt marshes and mudflats	None: No suitable salt marsh habitat exists onsite.
California horned lark (*Eremophila alpestris actia*)	—/SSC/—	Herbaceous vegetation, chaparral	None: No suitable scrub or chaparral habitat exists onsite.
Cooper's hawk (*Accipiter cooperii*)	—/WL/—	Forages over open grassland.	Low: Some suitable foraging habitat exists onsite. No suitable nesting habitat.
Ferruginous hawk (*Buteo regalis*)	—/SSC/—	Forages over open grassland. Nests in old-growth trees.	Low: Little suitable foraging habitat exists onsite. No suitable nesting habitat.
Golden eagle (*Aquila chrysaetos*)	—/SSC/—	Forages over open grassland. Nests in old-growth trees.	Low: Some suitable foraging habitat. Some poor nesting habitat.
Grasshopper sparrow (*Ammodramus savannarum*)	—/SSC/—	Forages over open grassland.	Low: Some suitable foraging and nesting habitat exists onsite.
Great blue heron (*Ardea herodias*)	**—/SSC/—**	**Nests in trees, forages in wetlands and grasslands**	**Low: Some marginal foraging and nesting habitat exists onsite. Nearest occurrence is 7.1 miles north of the parcel near Nice-Lucerne Cutoff.**

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Great egret (*Ardea alba*)	—/SSC/—	Nests in trees, forages in wetlands and grasslands	Low: Some marginal foraging and nesting habitat exists onsite.
Marbled murrelet (*Brachyramphus marmoratus*)	FT/SE/—	Old growth coniferous forest	Very Low: No suitable forest habitat exists onsite.
Northern goshawk (*Accipiter gentilis*)	—/SSC/—	Coniferous forest	None: No suitable forest habitat exists onsite.
Osprey (*Pandion haliaetus*)	**—/WL/—**	**Areas with fish**	**Low: No suitable foraging habitat onsite. Some poor quality roosting habitat. No nesting habitat. Nearest occurrence is 0.17 miles north of the parcel on the shore of Clear Lake.**
Prairie falcon (*Falco mexicanus*)	—/SSC/—	Forages over grasslands	Medium: Some suitable nesting and foraging habitat exists onsite.
Purple martin (*Progne subis*)	FE/SE/—	Insectivorous, nests in cavities	Medium: Some suitable nesting habitat onsite. Some suitable foraging habitat onsite.
Ridgway's rail (*Rallus obsoletus obsoletus*)	FE/SE/—	Mudflats and tidal sloughs	None: No suitable tidal habitat exists onsite.
Salt marsh common yellowthroat (*Geothlypis trichas sinuosa*)	—/SSC/—	Forages in grasslands and nests in dense freshwater marshes	Very Low: No suitable nesting habitat exists. Some suitable foraging habitat.
Sharp-shinned hawk (*Accipiter striatus*)	—/SSC/—	Forest and woodland	Very Low: Some suitable nesting and foraging habitat exists onsite.
Tricolored blackbird (*Agelaius tricolor*)	**—/SSC/—**	**Forages in grasslands and nests in freshwater marshes**	**Low: Some suitable nesting and foraging habitat exists onsite. Nearest known occurrence is 1.4 miles north of the parcel in Lakeport.**
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	—/SE/—	Woodland, riparian	Low: Some suitable nesting habitat exists. Some suitable foraging habitat.
White-tailed kite (*Elanus leucurus*)	—/CFP/—	Prefers to nest in marshes next to deciduous forests.	Low: Some suitable nesting and foraging habitat exists onsite.
Yellow breasted chat (*Icteria virens*)	—/SSC/—	Dense shrubby growth, grasslands	Low: Some suitable grassland habitat exists onsite.

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Yellow rail (*Coturnicops noveboracensis*)	—/SSC/—	Breeds in marshes, forages in wet meadows	None: No suitable marsh habitat exists onsite.
Yellow warbler (*Coturnicops noveboracensis*)	—/SSC/—	Riparian, shrubland, farmland	Low: Some suitable riparian habitat exists onsite.
MAMMALS			
American badger (*Taxidea taxus*)	**—/SSC/—**	**Open grassland habitats with plenty of prey**	**Low: Insufficient habitat complexity exists for this territorial animal. Nearest occurrence is 1.4 miles northwest of the project parcel in Lakeport.**
Big free-tailed bat (*Nyctinomops macrotis*)	—/SSC/—	Forages over open areas, roots in trees or caves	None: Some suitable foraging habitat. No suitable roosts in project area.
Fisher (*Pekania pennanti*)	**—/SSC/—**	**Forages and breeds primarily in forests**	**Very Low: No suitable forest habitat exists onsite. Nearest occurrence is 6.9 miles northwest of the parcel near Willow Creek.**
Fringed myotis (*Myotis thysanodes*)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	Very Low: Some suitable foraging habitat. No suitable roosts in project area.
Hoary bat (*Lasiurus cinereus*)	—/SSC/—	Forages over open areas, roots in trees or caves at high altitude	Very Low: Foraging limited to high altitudes. No suitable roosts in the project area.
Long-eared myotis (*Myotis evotis*)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	Very Low: Some suitable foraging habitat. No suitable roosts in project area.
Long-legged myotis (*Myotis volans*)	—/SSC/—	Roosts in caves or buildings and forages in open habitats	None: Some foraging habitat. No suitable roosts in project area.
North American porcupine (*Erethizon dorsatum*)	**—/SSC/—**	**Require rocky areas or trees for dens, abundant open space for foraging**	**Very Low: Some suitable foraging habitat. No suitable den habitat. Nearest occurrence is 9.2 miles southeast of the parcel along CA-29 near Ely Flat.**
Pallid bat (*Antrozous pallidus*)	**—/SSC/—**	**Common in open dry habitats with rocky areas for roosting**	**Low: Some foraging habitat exists. No suitable roosts in the project area. Nearest occurrence is 9.7 miles southwest near Pieta Creek.**

Taxon	Status[1] Fed/State/CNPS	Habitat	Potential to Occur Within the Project Area
Silver haired bat (*Lasionycteris noctivagans*)	**—/SSC/—**	**Nocturnal, migratory, solitary, roosts in tree cavities**	**Medium: Some suitable trees exist for roosting. Some foraging habitat exists. Nearest occurrence is 7.3 miles north of the project parcel near the town of Nice.**
Sonoma tree vole (*Arborimus pomo*)	—/SSC/—	Old growth Douglas fir canopies	None: No suitable forest habitat exists onsite.
Townsend's big-eared bat (*Corynorhinus townsendii*)	**—/SSC/—**	**Hibernate in mines or caves, roost in man made structures and caves**	**Very Low: Few man-made structures exist suitable for roosting. Some habitat for foraging. Nearest occurrence is 6.5 miles southwest of the parcel near McDowell Valley.**
Western red bat (*Lasiurus blossevillii*)	—/SSC/—	Forages over open areas, roots in trees or caves	Very Low: No suitable roosting habitat. Some suitable foraging habitat.
Yuma myotis (*Myotis yumanensis*)	—/SSC/—	Forages over open areas, roots in trees or caves	Very Low: No suitable nesting habitat exists onsite. Some suitable foraging habitat exists onsite.
HABITATS			
Coastal & Valley Freshwater Marsh (CVFM)	—	—	None: No marsh habitat exists onsite.
Northern Hardpan Vernal Pool (NHVP)	—	—	None: No hardpan vernal pool habitat exists onsite.
Northern Vernal Pool (NVP)	—	—	None: No vernal pool habitat exists onsite.
Sycamore Alluvial Woodland (SAW)	—	—	None: No woodland habitat exists onsite.
Valley Needlegrass Grassland (VNG)	—	—	Low: Some grassland habitat exists onsite.
Valley Oak Woodland (VOW)	—	—	None: No valley oaks exist onsite.
Valley Sink Scrub (VSS)	—	—	None: No sink habitat exists onsite.

[1] Status:

Federal
FE = Federally Endangered Species
FT = Federally Threatened Species

State
SE = State Endangered Species
ST = State Threatened Species
SSC = California Species of Special Concern
CFP = California Fully Protected Species

CNPS (applies to plants only)
List 1B = plants considered rare, threatened, or endangered in California and elsewhere
List 2B = plants rare, threatened or endangered in California, but more common elsewhere
List 3 = plant is likely rare but more information is required
List 4 = plants of limited distribution

[2] USFWS

APPENDIX B: SPECIES ENCOUNTERED

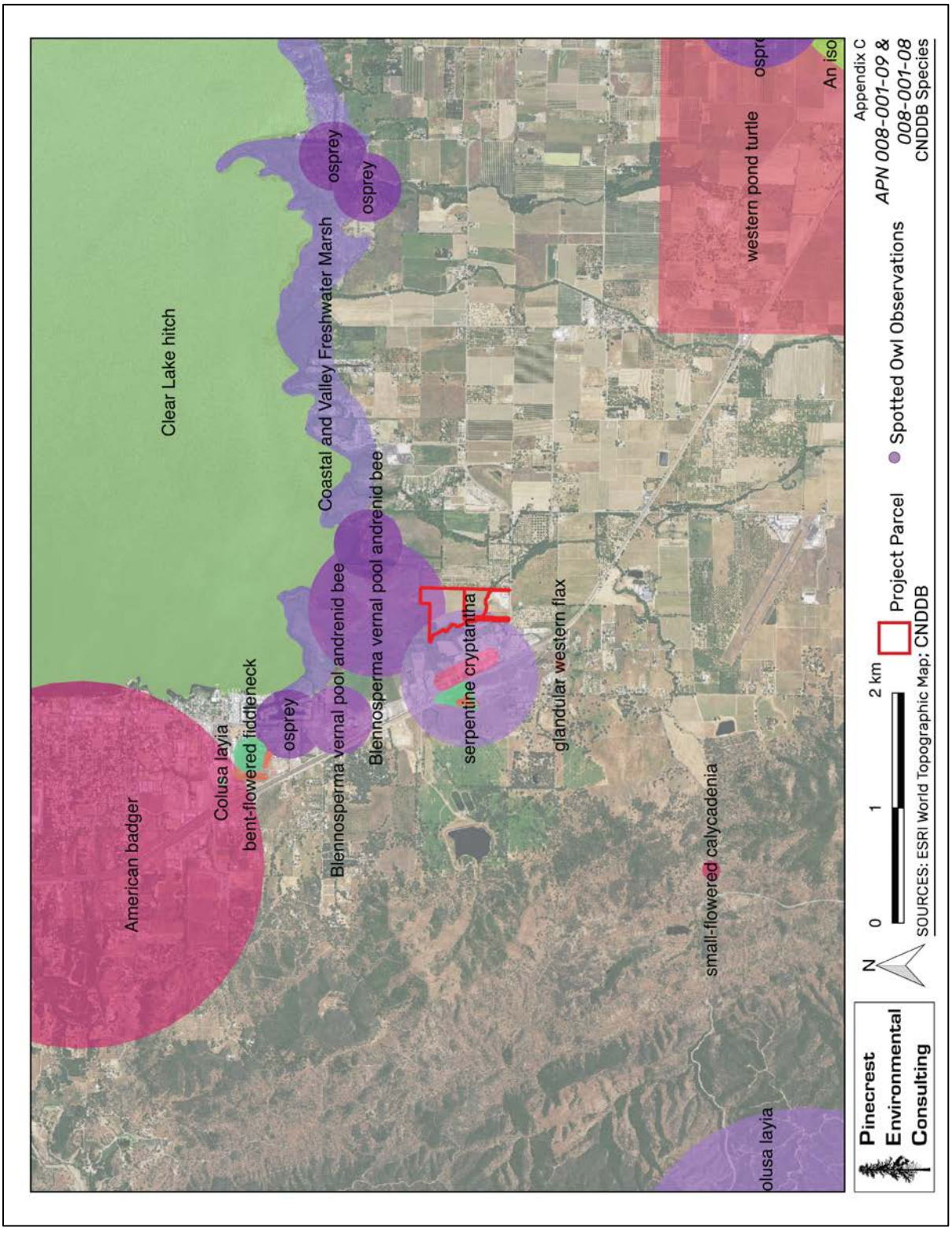
This list contains a list of all of the plants and animals observed onsite within the study area during the site visit on March 14, 2019. Any special-status species (SSS) are denoted in bold with an asterisk. No SSS species were directly observed at the time of the survey.

PLANTS
Achillea millefolium
Acmispon americanus
Aira caryophyllea
Alnus rhombifolia
Artemisia douglasiana
Avena barbata
Brassica nigra
Briza minor
Brodiaea elegans
Bromus diandrus
Bromus hordeaceous
Carduus pycnocephalus
Cirsium vulgare
Clarkia concinna
Claytonia perfoliata
Croton setiger
Cynosurus echinatus
Dichelostemma capitatum
Dipsacus fullonum
Elymus caput-medusae
Epilobium densiflorum
Erodium botrys
Festuca
Festuca myuros
Festuca perennis
Fraxinus latifolia
Galium aparine
Gastridium phleoides
Geranium molle
Gnaphalium californicum
Hordeum murinum
Hypericum perforatum
Hypochaeris glabra
Lactuca serriola
Lupinus bicolor

Matricaria discoidea
Medicago polymorpha
Melilotus albus
Mentha pulegium
Phalaris aquatica
Plantago lanceolata
Pteridium aquilinum
Quercus garryana
Quercus kelloggii
Quercus lobata
Quercus wislizeni
Ranunculus occidentalis
Rosa californica
Rubus armeniacus
Rumex acetocella
Salix exigua
Salix gooddingii
Salix lasiandra
Sisyrinchium bellum
Stellaria media
Torilis arvensis
Toxicodendron diversilobium
Tragopogon dubius
Trifolium hirtum
Vicia americana
Vicia sativa
Vitis californica

ANIMALS
Agelaius phoeniceus
Ardea herodias
Bombus occidentalis
Cathartes aura
Corvus brachyrhynchos
Melozone crissalis
Microtus californicus
Odocoileus hemionus
Passer domesticus
Sceloporous occidentalis
Sciurus griseus
Thomomys bottae
Zenaida macroura

APPENDIX C: CNDDB OCCURRENCES MAP



APPENDIX D: CANNABIS CULTIVATION BEST MANAGEMENT PRACTICES

Best management practices (BMPs) are designed to prevent, minimize, and control the discharge of waste and pollutants associated with site operations and maintenance for the aforementioned project. Many of these BMPs are considered enforceable conditions under State Water Resources Control Board *Cannabis* General Order No. WQ 2017-0023-DWQ.

D.1 CANNABIS CULTIVATION

- Pesticide and fertilizer storage facilities shall be located outside of the riparian corridor setbacks for structures.
- Pesticide and fertilizer storage facilities shall not be located within 100 feet of a wellhead, or within 50 feet of identified wetlands.
- Pesticide and fertilizer storage facilities shall be adequate to protect pesticide and fertilizer containers from the weather.
- Store all bags and boxes of pesticides and fertilizers off the ground on pallets or shelves.
- If the structure does not have an impermeable floor, store all liquid pesticides and fertilizers on shelves capable of containing spills or provide appropriate secondary containment.
- Routinely check for leaks and spills.
- Have spill cleanup kit onsite to be able to respond to any leaks or spills.
- Inspect planting stock for pests and diseases prior to planting.
- Avoid planting stock with pests and disease and notify the supplier of the planting stock of the infestation.
- Comply with all pesticide laws and regulations as enforced by the California Department of Pesticide Regulation and County Agricultural Commissioner.
- For pesticides with the signal word CAUTION that have listed food uses, comply with all pesticide label directions as they pertain to personal protective equipment, application method, and rate, environmental hazards, longest reentry intervals and greenhouse and indoor use directions.
- For all other pesticides, use must comply with all label requirements including site and crop restrictions.
- Prior to the use of any registered pesticide on *Cannabis*, Operator Identification Number should be obtained from the County Agricultural Commissioner if required.
- Submit monthly pesticide use reports to the County Agricultural Commissioner if required.

- Prior to applying fertilizers, evaluate irrigation water, soils, growth media, and plant tissue to optimize plant growth and avoid over fertilization.
- Apply fertilizers at label rates and no higher.
- Do not apply fertilizers in a way that will result in runoff that may contaminate ground or surface water or escape via airborne drift or fugitive dust.
- Observe riparian corridor setbacks for agricultural cultivation as applicable. These shall be maintained as "no touch" areas and demarcated with appropriate flagging.
- The removal of vegetation is prohibited within riparian setback areas.
- No equipment, vehicles, or other materials shall be stored in the riparian setback areas.
- Composting areas shall not be located in the riparian setback areas.
- Irrigation must be conducted in a manner that does not result in runoff from the cultivated area.
- Any water tanks or storage facilities must obtain permits from the local City or County planning department where required.
- The use of membrane based water bladders is prohibited.
- If using an irrigation system, inspect for and repair leaks prior to planting each year and continuously during the season.
- Irrigation systems shall be equipped with a backflow prevention devices and shutoff valves.
- Recycle or properly dispose of all plastic bags, containers, and irrigation materials.
- Properly dispose of green waste in a manner that does not discharge pollutants to a watercourse. This may be accomplished by composting, chipping, and/or shredding.
- The method of green waste disposal must be documented.
- Used growth medium (soil and other organic medium) shall be handled to minimize or prevent discharge of soil and residual nutrients and chemicals to watercourses. Proper disposal could include incorporating into garden beds, spreading on a stable surface and re-vegetating, storage in watertight dumpsters, or covering with tarps or plastic sheeting prior to proper disposal.
- The method of disposal of growth medium must be documented.
- Compost piles are to be located outside of riparian setbacks for agricultural cultivation and in a manner that will not discharge pollutants to a watercourse.
- If necessary, construct a berm or install fiber roll around compost area to prevent runoff or use straw wattles around perimeter.
- Cover compost piles with tarp or impermeable surface prior to fall rains and continuously throughout the rainy season.
- Leave a vegetative barrier along the property boundary and interior watercourses to act as a pollutant filter.
- Avoid soil disturbance between November 1 and April 15 and during times of active precipitation.

- All exposed and disturbed soil must be covered with a minimum of 2 inches of mulch, such as straw, bark, wood chips, etc., by November 15. Alternatively, establish a thick cover crop over disturbed areas composed of native species.
- Erosion control materials shall be available on site at all times in the form of straw, mulch, wattles, silt fencing, erosion control fabrics, sand bags, or other materials adequate to cover areas of disturbed soil or incipient erosion events.
- In the event of a forecast storm event likely to produce runoff, apply mulch, wattles, or other erosion prevention measures to the disturbed areas prior to rain event.
- Any grading or drainage conducted as part of site preparation shall have permits from local County or City agencies if required.

D.2 EROSION & SEDIMENT CONTROL

- Erosion control and sediment detention devices and materials shall be incorporated into the cleanup/restoration work design and installed prior to the end of project work and before the beginning of the rainy season or any predicted rain events.
- Any continuing, approved project work conducted after October 15 shall have erosion control measures completed and up-to-date.
- All erosion control measures shall be inspected daily during severe rain events.
- Erosion control materials shall be, at minimum, stored on-site at all times during approved project work between May 1 and October 15.
- Approved project work within the 5-year flood plain shall not begin until all temporary erosion controls (straw bales or silt fences that are effectively keyed-in) are installed downslope of cleanup/restoration activities.
- Native species appropriate to the local habitat shall be used for all revegetation purposes. Non-invasive, non-persistent grass species (e.g., barley grass) may be used for their temporary erosion control benefits to stabilize disturbed slopes and prevent exposure of disturbed soils to rainfall.
- Upon work completion, all exposed soil present in and around the cleanup/restoration sites shall be stabilized within 7 days.
- The disturbed area will be minimized at all times to only that which is essential for the completion of the project.
- Provide temporary cover over disturbed areas that are not currently being worked on.
- Heavy equipment shall not be used in flowing water.
- Use of heavy equipment shall be avoided or minimized in a channel bottom with rocky or cobbled substrate.
- Heavy equipment shall not introduce chemicals or foreign sediment to the channel (e.g., remove mud from tracks or cover channel work area with plastic sheeting prior to heavy equipment entry).
- When heavy equipment is used, any woody debris and stream bank or streambed vegetation

disturbed shall be replaced to a pre-project density with native species appropriate to the site.

- When possible, existing ingress or egress points shall be used or work shall be performed remotely from the top of the creek banks.
- Divert runoff away from unprotected slopes or loose soils using a combination of mats, geotextiles, silt fencing, wattling, check dams, sediment basins, vegetated buffers, or rock armor.
- Deploy appropriate erosion control measures such as silt fencing or straw wattles around all temporary exposed piles or soil or surface disturbances.
- All temporary exposed piles or soil or surface disturbances shall have tarping and sand bags or other stabilization materials deployed in order to prevent discharge of sediments in the event of a rain or wind event.
- Geotechnical fabric shall be deployed on all exposed dirt surfaces with a slope of greater than 15% and staked in place during ground disturbing activities, and silt fencing deployed on slopes of greater than 15% where appropriate.
- Sand bags, straw bales, or other devices shall be placed at appropriate locations near and alongside the roadsides and swales in anticipation of large storm events.
- Bioswales and cultivation areas including parking areas shall be maintained free of trash including empty soil and pesticide or fertilizer containers.
- Locations of sediment sources shall be identified during rain events and mitigated where appropriate.
- Protect ditch inlets and outlets from erosion using rock armor.
- Silt fencing shall be installed downstream of rock piles, stockpiles, and temporary soils storage areas.
- Desilting or retention basins shall be installed if the capacity of the natural percolation exceeds the inputs during routine storm events.
- Sediment traps shall be used on all exposed driveway surfaces where natural vegetation is not able to be established.
- Exposed unvegetated surfaces will be graveled where appropriate.
- Rock placed for slope protection shall be the minimum necessary to avoid erosion, and shall be part of a design that provides for native plant revegetation and minimizes bank armoring.
- Soil exposed as a result of project work, soil above rock riprap, and interstitial spaces between rocks shall be revegetated with native vegetation by live planting, seed casting, or hydroseeding prior to the rainy season of the year work is completed.
- Avoidance of earthwork on steep slopes and minimization of cut/fill volumes, combined with proper compaction, shall occur to ensure the area is resilient to issues associated with seismic events and mass wasting. If cracks are observed, or new construction is anticipated, consultation with a qualified professional is recommended.
- Culvert fill slopes shall be constructed at a 2:1 slope or shall be armored with rock.

- If it is necessary to conduct work in or near a live stream, the work space shall be isolated to avoid project activities in flowing water.
- Any spoils associated with site maintenance shall be placed in a stable location where it cannot enter a watercourse.
- Sidecasting shall be minimized and shall be avoided on unstable areas or where it has the potential to enter a watercourse.
- Entrance to the project site shall be maintained in a condition that will prevent tracking or flowing of sediment into the public right-of-way.
- All sediment spilled, dropped, washed, or tracked onto the public right-of-ways shall be removed immediately.
- When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-ways.
- When wheel washing is required, it shall be done in an area stabilized with crushed stone that drains into a sediment trap fitted with appropriate erosion control measures.
- To control surface water runoff in and around cultivation areas use fiber rolls or wattling and stake appropriately and perpendicular to the flow path.
- Cover crops should be utilized on all exposed slopes that are not able to be protected by other means.
- Cover crops should be native species as described in the associated biological resources report.
- Rip compacted soils prior to placing spoils to prevent the potential for ponding under the spoils that could result in spoil site failure and subsequent sedimentation.
- Compact and contour stored spoils to mimic the natural slope contours and drainage patterns to reduce the potential for fill saturation and failure.
- Ensure that spoil materials are free of woody debris, and not placed on top of brush, logs or trees.
- Inspect all roads and culverts regularly for blockages.

D.3 WATER USE & POLLUTION

- Ensure that all appropriate water rights permits are filed with the State Water Resources Control Board.
- Notify the California Department of Fish and Wildlife by submitting a Lake and Streambed Alteration (LSA) notification package if the proposed activities involve substantial diversion from or alteration of the bed or bank of a stream or other waterbody.
- Ensure that all water storage features are permitted from the Department of Water Rights if necessary.
- All refueling and pesticide and chemical storage and transfer shall occur greater than 100 feet away from any swales, creeks, or natural areas.

- All refueling and pesticide and chemical storage and transfer shall occur on top of an impermeable metal or other fabric mat that is no less than 2 inches high on all sides and capable of completely containing any spillage.
- Concrete truck and other vehicles shall not be washed out in natural areas or directly onto soil and shall be washed out into a metal or other impermeable basin and disposed of properly such that no water is discharged to the soil.
- All waste shall be kept in plastic drums with tight fitting lids so that water is not able to make contact with the contents and potentially leach to the environment.
- All pesticide sprays shall occur on windless nights for outdoor facilities.
- Chemical or fertilizer wastes shall never be disposed of into swales or creeks and shall be contained inside closed-roof facilities and designated with appropriate labeling until it is possible to dispose of properly.
- Septic leach fields and graywater mulch fields shall be maintained free of large vegetation and not used for aboveground storage that may impact their proper functioning.
- Chemical contamination (fuel, grease, oil, hydraulic fluid, solvents, etc.) of water and soils is prohibited during routine equipment operation and maintenance.
- The use or storage of petroleum-powered equipment shall be accomplished in a manner that prevents the potential release of petroleum materials into waters of the state (Fish and Game Code 5650).
- Schedule excavation and grading activities for dry weather periods.
- Designate a contained area for equipment storage, short-term maintenance, and refueling. Ensure it is located at least 50 feet from waterbodies.
- Inspect vehicles for leaks and repair immediately.
- Clean up leaks, drips and other spills immediately to avoid soil or groundwater contamination.
- Conduct major vehicle maintenance and washing offsite.
- Ensure that all spent fluids including motor oil, radiator coolant, or other fluids and used vehicle batteries are collected, stored, and recycled as hazardous waste offsite.
- Ensure that all construction debris is taken to appropriate landfills and all sediment disposed of in upland areas or offsite, beyond the 100-year floodplain.
- Use dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) whenever possible. If necessary for dust control, use only a minimal amount of water.
- Sweep up spilled dry materials immediately.
- Separate organic material (e.g., roots, stumps) from the dirt fill and store separately. Place this material in long-term, upland storage sites, as it cannot be used for fill.
- Spoils shall not be placed or stored in locations where soils are wet or unstable, or where slope stability could be adversely affected.
- Do not locate spoil piles in or immediately adjacent to wetlands and watercourses.

- Store spoil piles in a manner (e.g. cover pile with plastic tarps and surround base of pile with straw wattle) or location that would not result in any runoff from the spoil pile ending up in wetlands and watercourses.
- Keep temporary disposal sites out of wetlands, adjacent riparian corridors, and ordinary high water areas as well as high risk zones, such as 100-year floodplain and unstable slopes.
- Conduct operations on a size and scale that considers available water sources and other water use and users in the planning watershed.
- Implement water conservation measures such as rainwater catchment systems, drip irrigation, mulching, or irrigation water recycling where possible.
- Hauled water utilized for irrigation shall be documented via receipt or similar, and show the date, name, and license plate of the water hauler, and the quantity of water purchased.
- If using a water storage tank, do not locate the tank in a flood plain or next to equipment that generates heat. Locate the tank so it is easy to install, access, and maintain.
- Vertical tanks should be installed according to manufacturer's specifications and placed on firm, compacted soil that is free of rocks/sharp objects and capable of bearing the weight of the tank and its maximum contents.
- Install float valves on tanks to prevent them from overflowing.
- Place proper lining or sealing in ponds to prevent water loss.

D.4 ROAD MAINTENANCE & GENERAL CONSTRUCTION

- Always limit work to the appropriate work date windows considering wet weather, migratory bird and other biological and environmental constrains that may be placed on the project.
- Proper design and location of roads and other features is critical to ensuring that a road or other feature be adequately drained and is best accomplished through consultation with a qualified professional.
- Placement of temporary access roads, staging areas, and other facilities shall avoid or minimize disturbance to habitat.
- If inspection identifies surface rills or ruts, then surfacing and drainage likely needs maintenance. Consultation should be made with a licensed professional to design appropriate erosion control strategies.
- Design of roads should allow for sheet flow of water and use water bars and rolling dips to break up slope length.
- Vehicle speed shall be kept to a maximum of 10 mph while onsite to minimize dust generation.
- All unvegetated and unpaved roadways and vehicle turnarounds shall be graveled to a depth of not less than 1" in order to prevent dust and sediment entrainment.

- Applicant will use geotechnical fabric or similar materials on exposed slopes, and distribute weed-free straw mulch wherever possible on exposed surfaces on the perimeter of all graded roads and graveled areas.
- Roads and the berms alongside all roads shall be maintained free of headcuts, gullies, stutter bumps, and other erosion features capable of discharging sediment to adjacent grassland areas.
- Roads will be graveled with clean rock whenever required to prevent dust and sediment erosion during the wet season.
- Whenever possible, road maintenance activities shall be performed from May 1 to October 15.
- Work performed outside of this window should take extra precautions for winter weather erosion control prevention beyond that which is described in this Plan.
- A 48 hour advance forecast for rain shall trigger a temporary cessation of work, and all soils piles will need to be covered and secured with sandbags or other materials.
- Placement of temporary access roads, staging areas, and other facilities shall avoid or minimize disturbance to habitat.
- Whenever feasible, finished grades shall not exceed 1.5:1 side slopes. In circumstances where final grades cannot achieve 1.5:1 slope, additional erosion control or stabilization methods shall be applied as appropriate for the project location.
- Spoils and excavated material not used during project activities shall be removed and placed outside of 100-year floodplains.
- Upon completion of grading, slope protection of all disturbed sites shall be provided prior to the rainy season through a combination of permanent vegetative treatment, mulching, geotextiles, and/or rock, or equivalent.
- Position vehicles and other apparatus so as to not block emergency vehicle access.
- After construction is complete, all storm drain systems and culverts shall be inspected and cleared of accumulated sediment and debris.
- Sediment barriers including wattles and silt fencing should be checked for sediment accumulation following each significant rainfall and sediment removed or the feature replaced as needed.
- Road drainage shall be discharged to a stable location away from a watercourse.
- Use sediment control devices, such as check dams, sand/gravel bag barriers, and other acceptable techniques, when it is neither practical nor environmentally sound to disperse ditch water immediately before the ditch reaches a stream.
- Within areas with potential to discharge to a watercourse (i.e. within riparian areas of at least 200 feet of a stream) road surface drainage shall be filtered through vegetation, slash, or other appropriate material or settled into a depression with an outlet with adequate drainage.

D.5 SWALE & VEGETATION MANAGEMENT

- The work area shall be restored to pre-project work condition or better.
- Any stream bank area left barren of vegetation as a result of cleanup/restoration activities shall be stabilized by seeding, replanting, or other means with native trees, shrubs, and/or grasses appropriate to the site prior to the rainy season in the year work was conducted.
- Ensure that vegetated swales are properly formed, allow moderate velocity water passage without causing sediment entrainment, and are otherwise functioning properly.
- Create and expand vegetated bioswales where necessary, should additional construction or road maintenance be required, in order to maintain flow without scour.
- All bioswales and other drainage features requiring revegetation will be seeded with native vegetation and lawns and hedgerows maintained in good health and watered in dry years.
- Vegetation including grasses shall be mowed as necessary to create fire breaks and to prevent the accumulation of fuels that would be able to sustain a ground fire.
- All vegetation shall be surveyed on foot once a year by staff and new outbreaks of any invasive weeds identified by the California Invasive Plant Council as noxious or invasive to be removed by the owner or qualified landscaping professionals.
- Channels and swales that show evidence of overland flow and scour (e.g. bare of vegetation) shall be seeded with native grasses such as *Stipa pulchra*, *Hordeum brachyantherum*, *Elymus glaucus*, and *Bromus carinatus*, and kept vegetated at all times.
- If shrubs and non-woody riparian vegetation are disturbed, they shall be replaced with similar native species appropriate to the site.
- Disturbance to native shrubs, woody perennials or tree removal on the streambank or in the stream channel shall be avoided or minimized.
- If riparian trees over six inches dbh (diameter at breast height) are to be removed, they shall be replaced by native species appropriate to the site at a 3:1 ratio.
- Where physical constraints in the project area prevent replanting at a 3:1 ratio and canopy cover is sufficient for habitat needs, replanting may occur at a lesser replacement ratio.
- Vegetation planting for slope protection purposes shall be timed to require as little irrigation as possible for ensuring establishment by the commencement of the rainy season.
- The spread or introduction of exotic plant species shall be avoided to the maximum extent possible by avoiding areas with established native vegetation during cleanup/restoration activities, restoring disturbed areas with appropriate native species, and post-project monitoring and control of exotic species.
- Removal of invasive exotic species after construction activities is strongly recommended. Mechanical removal (hand tools, weed whacking, hand pulling) of exotics shall be done in preparation for establishment of native plantings.
- Where permanent soil stabilization is required a locally-appropriate mix of native grass species shall be used such as a mix containing *Nassella pulchra*, *Hordeum brachyantherum*, *Elymus glaucus*, and *Bromus carinatus* or as described in the site's Biological Resources Assessment.

- Entire cultivation site shall be seeded and maintained as a permanent non-tilled cover crop during non-usage times. Straw mulch shall be used where native seeding is not practicable.
- Use mulches (e.g. wood chips or bark) in cultivation areas that do not have ground cover to prevent erosion and minimize evaporative loss.
- Mulch shall be applied at a rate of 4000 lbs / acre and seeding shall be applied to achieve 70% cover in the first year or approximately 200 lbs / acre.
- Annual inspections for the purpose of assessing the survival and growth of revegetated areas and the presence of exposed soil shall be conducted for three years following project work.
- Dischargers and/or their consultant(s) or third party representative(s) shall note the presence of native/non-native vegetation and extent of exposed soil, and take photographs during each inspection.
- Dischargers and/or their consultant(s) or third party representative(s) shall provide the location of each work site, pre- and post-project work photos, diagram of all areas revegetated and the planting methods and plants used, and an assessment of the success of the revegetation program in the annual monitoring report as required under relevant state and local water board regulations.

D.6 IRRIGATION & CULTIVATION MANAGEMENT

- Cultivation-related waste shall be stored in a place where it will not enter a stream.
- Soil bags and other garbage shall be collected, contained, and disposed of at an appropriate facility, including for recycling where available.
- Pots shall be collected and stored where they will not enter a waterway or create a nuisance.
- Plant waste and other compostable materials be stored (or composted, as applicable) at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwaters.
- Imported soil for cultivation purposes shall be minimized. In the event that containers (e.g. grow bags or grow pots) are used for cultivation, reuse of soil shall be maximized to the extent feasible.
- Spent growth medium (i.e. soil and other organic medium) shall be handled to minimize discharge of soil and residual nutrients and chemicals to watercourses. Proper handling of spent soil could include incorporating into garden beds, spreading on a stable surface and revegetation, storage in watertight dumpsters, covering with tarps or plastic sheeting prior to proper disposal.
- Trash containers of sufficient size and number shall be provided and properly serviced to contain the solid waste generated by the project.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.

- Use lined bins or dumpsters to reduce leaking of liquid waste. Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash. Consider using refuse containers that are bear-proof and/or secure from wildlife.
- Refuse shall be removed from the site on a frequency that does not result in nuisance conditions, transported in a manner that they remain contained during transport, and the contents shall be disposed of properly at a proper disposal facility.
- Ensure that human waste disposal systems do not pose a threat to surface or ground water quality or create a nuisance. Onsite treatment systems should follow applicable County ordinances for human waste disposal requirements, consistent with the applicable tier under the State Water Resources Control Board Onsite Waste Treatment System Policy.
- Install buffer strips, bioswales, or vegetation downslope of cultivation areas to filter runoff of chemicals from irrigation.
- Irrigate at rates to avoid or minimize runoff.
- Regularly inspect and repair leaks in mains and laterals, in irrigation connections, or at the ends of drip tape and feeder lines.
- Design irrigation system to include redundancy (i.e., safety valves) in the event that leaks occur, so that waste of water is prevented and minimized.
- Recapture and reuse irrigation runoff (tailwater) where possible, through passive (gravity-fed) or active (pumped) means.
- Construct retention basins for tailwater infiltration; percolation medium may be used to reduce pollutant concentration in infiltrated water. Constructed treatment wetlands may also be effective at reducing nutrient loads in water.
- Ensure that drainage and/or infiltration areas are located away from unstable or potentially unstable features.
- Regularly replace worn, outdated or inefficient irrigation system components and equipment.
- Leave a vegetative barrier along the property boundary and interior watercourses to act as a pollutant filter.
- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Evaluate irrigation water, soils, growth media, and plant tissue to optimize plant growth and avoid over-fertilization.
- All chemicals shall be stored in a manner, method, and location that ensures that there is no threat of discharge to waters of the State.
- Products shall be labeled properly and applied according to the label.
- Use integrated pest management strategies that apply pesticides only to the area of need, only when there is an economic benefit to the grower, and at times when runoff losses are least likely.
- Periodically calibrate pesticide application equipment.

- Use anti-backflow devices on water supply hoses, and other mixing/loading practices designed to reduce the risk of runoff and spills.
- Petroleum products shall be stored with a secondary containment system such as a pan or a tub
- Throughout the rainy season, any temporary containment facility shall have a permanent cover and side-wind protection, or be covered during non-working days and prior to and during rain events.
- Materials shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to rain events.
- Have proper chemical and fertilizer storage instructions posted at all times in an open and conspicuous location.
- Prepare and keep a spill prevention and cleanup plan onsite when dealing with any hazardous materials.
- Keep ample supply of appropriate spill clean-up material near storage areas.
- Plant cover crops to boost soil fertility, improve soil texture, and protect from storm caused sediment runoff.

APPENDIX E: STREAM CLASSIFICATION CRITERIA

The following stream classification criteria were copied form the California Department of Forestry & Fire Protection *Forest Practice Rules* (CALFIRE 2017) and is widely used by many state and local agencies. Most state and local jurisdictions require setbacks of 50, 100, and 150 feet from Class III, II, and I streams, respectively, although greater setbacks may be required in some jurisdictions.

Watercourse – a natural or artificial channel through which water flows.

- Perennial watercourse (Class I*):
  1. In the absence of diversions, water is flowing for more than nine months during a typical year,
  2. Fish always or seasonally present onsite or includes habitat to sustain fish migration and spawning, and/or
  3. Spring: an area where there is concentrated discharge of ground water that flows at the ground surface. A spring may flow any part of the year. For the purpose of this Policy, a spring does not have a defined bed and banks.
- Intermittent watercourse (Class II*):
  1. In the absence of diversions, water is flowing for three to nine months during a typical year,
  2. Provides aquatic habitat for non-fish aquatic species,
  3. Fish always or seasonally present within 1,000 feet downstream, and/or
  4. Water is flowing less than three months during a typical year and the stream supports riparian vegetation.
- Ephemeral watercourse (Class III*): In the absence of diversion, water is flowing less than three months during a typical year and the stream does not support riparian vegetation or aquatic life. Ephemeral watercourses typically have water flowing for a short duration after precipitation events or snowmelt and show evidence of being capable of sediment transport.
- Other watercourses (Class IV*): Class IV watercourses do not support native aquatic species and are man-made, provide established domestic, agricultural, hydroelectric supply, or other beneficial use.

*Except where more restrictive, stream class designations are equivalent to the Forest Practice Rules Water Course and Lake Protection Zone definitions (California Code of Regulations, title 14, Chapter 4. Forest Practice Rules, Subchapters 4, 5, and 6 Forest District Rules, Article 6 Water Course and Lake Protection).

SECTION – F

GROUNDS MANAGEMENT PLAN

Grounds Management Plan

Purpose and Overview

Anthony and Matsuki Perkins are seeking a Major Use Permit from the County of Lake for a proposed commercial cannabis cultivation, manufacturing, and distribution operation at 140 Soda Bay Road near Lakeport, California on Lake County APNs 008-001-08 & 09 (Project Property), composed of two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types, an A-Type 6 Non-Volatile Cannabis Manufacturing License Type, and an A-Type 11 Cannabis Distributor License Type. The two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types will be composed of thirty (30) proposed 3,000 ft^2 greenhouses (15 for each license type) and a proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility (metal building). The A-Type 6 Non-Volatile Cannabis Manufacturing License Type will be located within the proposed Processing and Non-Volatile Manufacturing Facility, as well. The A-Type 11 Cannabis Distributor License Type will be located within a proposed 2,400 ft^2 Distribution Facility (metal building) ~120 feet north of Soda Bay Road in the southwestern corner of the Project Property.

The proposed cultivation areas will be located within 30' x 100' steel-framed greenhouse structures, with 6 mil polyethylene film coverings and polycarbonate covered end walls, equipped with LED horticultural lights and mechanical light deprivation systems. The growing medium of the proposed cultivation operation will be an imported organic soil mixture in garden beds and nursery pots, with drip and micro-spray irrigation systems (to conserve water resources). All water for the proposed cannabis cultivation, manufacturing, and distribution operation will come from two existing onsite groundwater wells located at Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209°.

This Grounds Management Plan is intended to ensure that the Project Property is well maintained in order to protect the public health, safety and welfare, as well as the natural environment of Lake County. This Grounds Management Plan outlines how the Perkins and their employees will properly store agricultural chemicals and equipment, manage solid waste, maintain roads and defensible space, and prevent the attraction, harborage, and proliferation of pests and diseases due to unsanitary conditions.

Chemicals Storage and Effluent

Chemicals stored and used at/by the proposed cultivation operation include fertilizers/nutrients, pesticides, and petroleum products (Agricultural Chemicals) and chemical sanitation products necessary to maintain a sterile work environment inside the proposed Processing/Manufacturing and Distribution Facilities. All agricultural chemicals, when not in use, will be stored in their manufacturer's original containers/packaging, undercover, and at least 150 feet from surface

water bodies inside the proposed Pesticides and Agricultural Chemicals Storage Area (proposed wooden shed). Sanitation products will be stored in their manufacturer's original containers/packaging within secure metal cabinets inside the proposed Processing/Manufacturing and Distribution Facilities. Spill containment and cleanup equipment will be maintained within the proposed Pesticides and Agricultural Chemicals Storage Area and Processing/Manufacturing and Distribution Facilities. No effluent is expected to be produced by the proposed cultivation operation.

Solid Waste Management

The types of solid waste that will be generated from the proposed cannabis cultivation, manufacturing, and distribution operation include gardening materials and wastes (such as used plastic seedling pots and spent plastic fertilizer/pesticide bags and bottles) and general litter from staff/personnel. All solid waste will be stored in bins with secure fitting lids, located directly adjacent to the proposed Processing/Manufacturing and Distribution Facilities. At no time will the bins be filled to a point that their lids cannot fit securely. Solid waste from the bins will be deposited into a trailer ("dump trailer"), and hauled away to a Lake County Integrated Waste Management facility, at least every seven (7) days/weekly. The closest Lake County Integrated Waste Management facility to the proposed cultivation operation is the Lake County Waste Solutions Transfer Station and Recycling Center. Most, if not all, of the solid waste and recyclables generated by proposed commercial cannabis cultivation operation can and will be deposited there.

Site Maintenance

When not in use, all equipment will be stored in its proper designated area upon completion of the task for which the equipment was needed. Any refuse created during the work day will be placed in the proper waste disposal receptacle at the end of each shift, or at a minimum upon completion of the task assigned. Any refuse which poses a risk for contamination or personal injury will be disposed of immediately. 100 feet of defensible space will be established and maintained around the proposed cultivation operation for fire protection and to ensure safe and sanitary working conditions. Areas of defensible space will be mowed and trimmed regularly around the cultivation, manufacturing, and distribution operation to provide for visibility and security monitoring. Access roads and parking areas will be graveled and/or paved to prevent the generation of fugitive dust, and vegetative ground cover will be preserved throughout the entire site to filter and infiltrate stormwater runoff from access roads, parking areas, and the proposed cultivation operation.

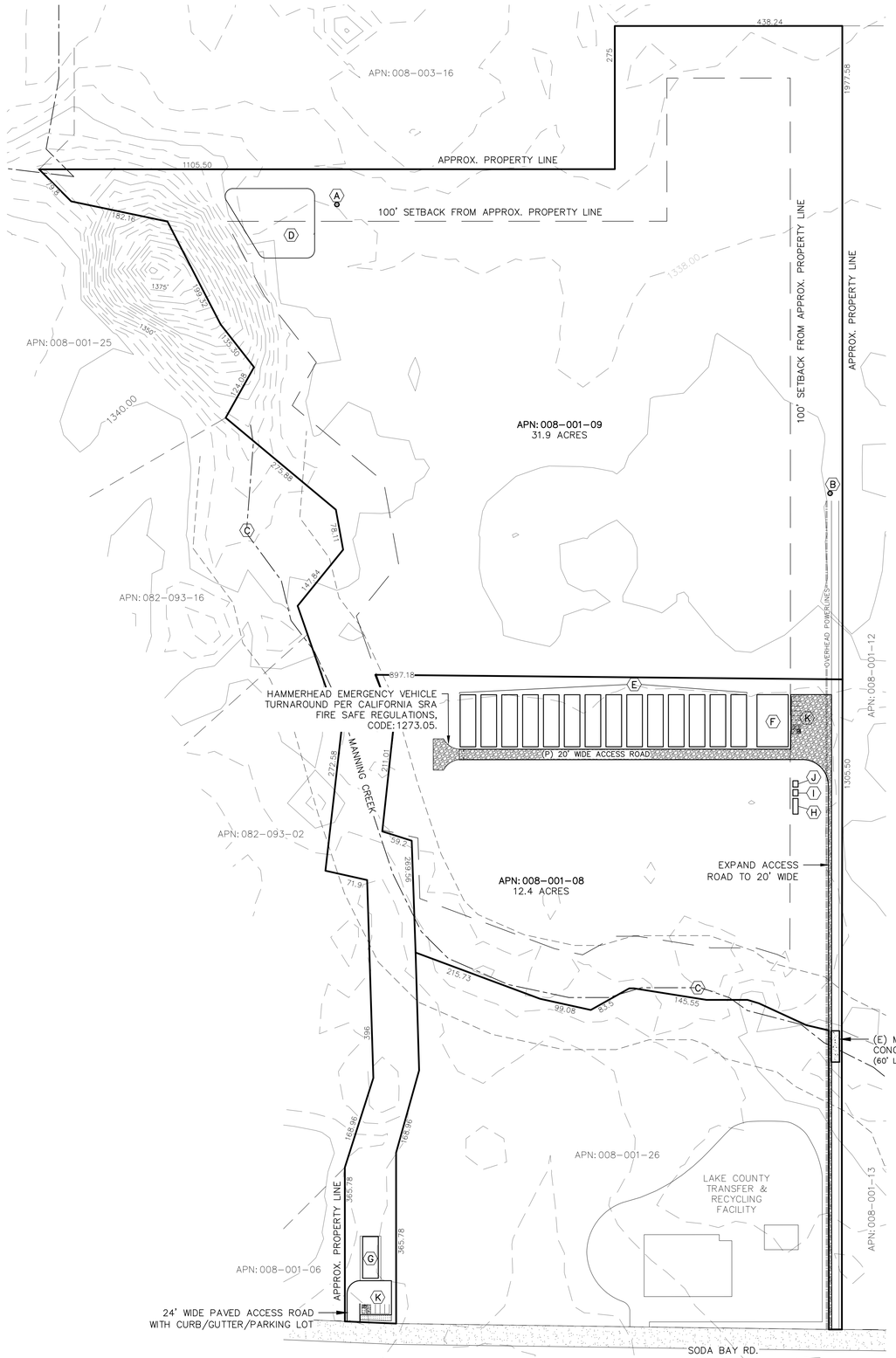
Restrooms/washrooms, that discharge to a Lake County-permitted onsite wastewater treatment system (septic) designed by a licensed civil engineer with the capacity to handle/treat the anticipated wastewater discharges from the proposed cultivation, manufacturing, and

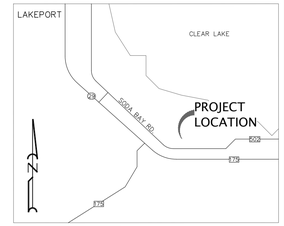
distribution operation, will be established within the proposed Processing/Manufacturing and Distribution Facilities. Staff will have access to the restrooms/washrooms of the proposed Processing/Manufacturing and Distribution Facilities whenever they are onsite.

Emergency Vehicle Access and Fire Safe Infrastructure

The Project Property is located within the Lakeport Fire Protection District. The Perkins will consult with the Lakeport Fire Protection District to establish the necessary infrastructure for fire suppression and emergency vehicle access. At a minimum, the following improvements will be established/developed:

- All access roads and parking areas will either be paved or covered with 6" of gravel to establish a surface capable of supporting fire apparatus weighing at least 75,000 pounds.
- Access roads will be widened to +20' and emergency vehicle turnaround areas will be established to provide easy ingress and egress for large emergency vehicles.
- The address(s) of the proposed cultivation, manufacturing, and distribution operation will be displayed on metal rectangles mounted to metal posts in a location that is visible and legible from at least 100 feet in both directions from Soda Bay Road. The numbers of the address(es) will be reflectorized, of a contrasting color (to the color of the metal rectangle), and have a height of at least 4 inches with 0.5 stroke.
- 5,000-gallon metal fire water storage tanks will be established adjacent to the proposed Processing/Manufacturing and Distribution Facilities. The metal fire water storage tanks will be connected to 2-foot high hydrants/fire valves equipped with 4-inch National Hose male thread and cap. The location of the hydrant/fire valve will be identified with a +3" reflectorized blue marker mounted to a 4-foot tall/high metal post.
- No flammable vegetation will be allowed within 30 feet of the buildings/structures, metal fire water storage tanks, and hydrants/fire valves of the proposed cultivation, manufacturing, and distribution operation.
- 100 feet of defensible space will be maintained around the proposed cultivation, manufacturing, and distribution operation, by regularly mowing grasses to a maximum height of 4 inches, creating and maintaining space between shrubs and trees, and by removing all tree branches and other ladder fuels within 6 feet of the ground surface.





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:

1. CONTOUR INTERVAL IS 5'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: -122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
LONG: -122.90209°
BENEFICIAL USE: DRINKING WATER

(C) INTERMITTENT CLASS II WATERCOURSE WITH 100' SETBACK (MANNING CREEK - NHD/DFG WATER ID: 116955052)

(D) WATER STORAGE RESERVOIR

(E) (P) FOURTEEN - 30'x100' (3,000 SF) GREENHOUSES

(F) (P) 60'x100' (6,000 SF) PROCESSING AND NON-VOLATILE MANUFACTURING FACILITY/BUILDING

(G) (P) 30'X80' (2,400 SF) DISTRIBUTION FACILITY

(H) (P) 10'x30' COMPOST AREA

(I) (P) 10'x12' PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(J) (P) DESIGNATED REFUSE AREA

(K) (P) PARKING / A.D.A.

PROPOSED CONDITIONS
SITE PLAN - PHASE I

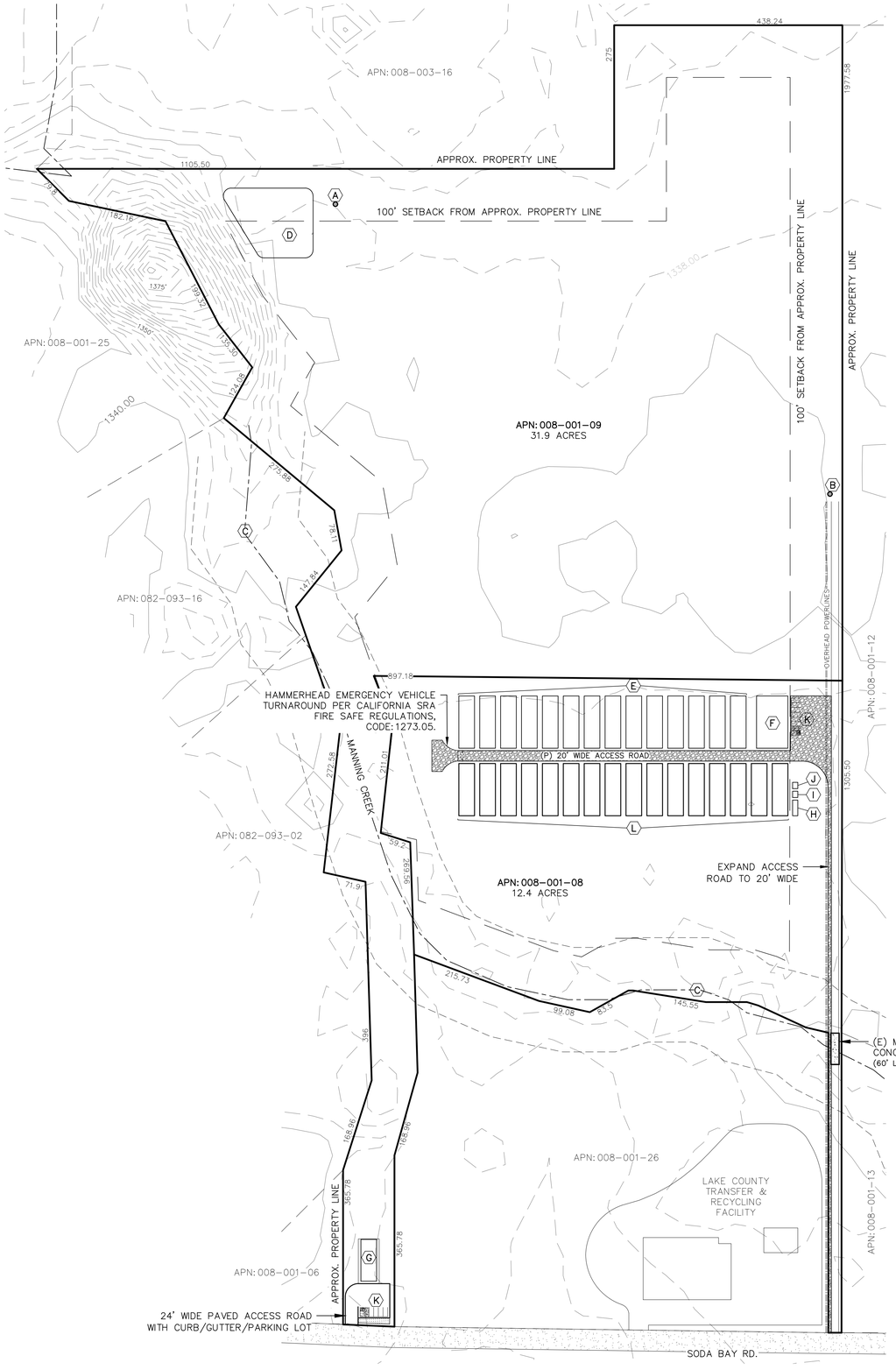
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(IN FEET)
1 inch = 120 ft.

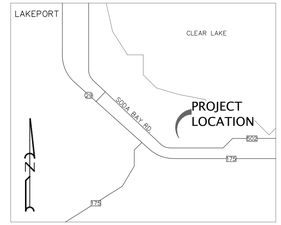
Revisions:

PROPOSED CONDITIONS SITE PLAN - PHASE I

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008-001-08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:

1. CONTOUR INTERVAL IS 2'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: -122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
LONG: -122.90209°
BENEFICIAL USE: DRINKING WATER

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(J) (E) DESIGNATED REFUSE AREA

(K) (E) PARKING / A.D.A.

(L) (P) SIXTEEN - 30'X100' (3,000 SF) GREENHOUSES

PROPOSED CONDITIONS
SITE PLAN - PHASE II

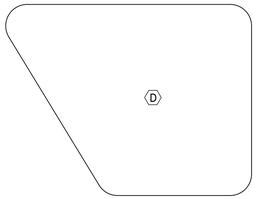
GRAPHIC SCALE
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(IN FEET)
1 inch = 120 ft.

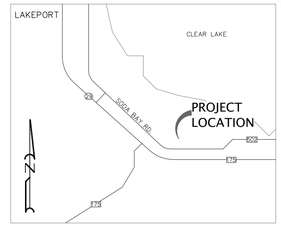
Revisions:

PROPOSED CONDITIONS SITE PLAN - PHASE II

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008-001-08 & 09

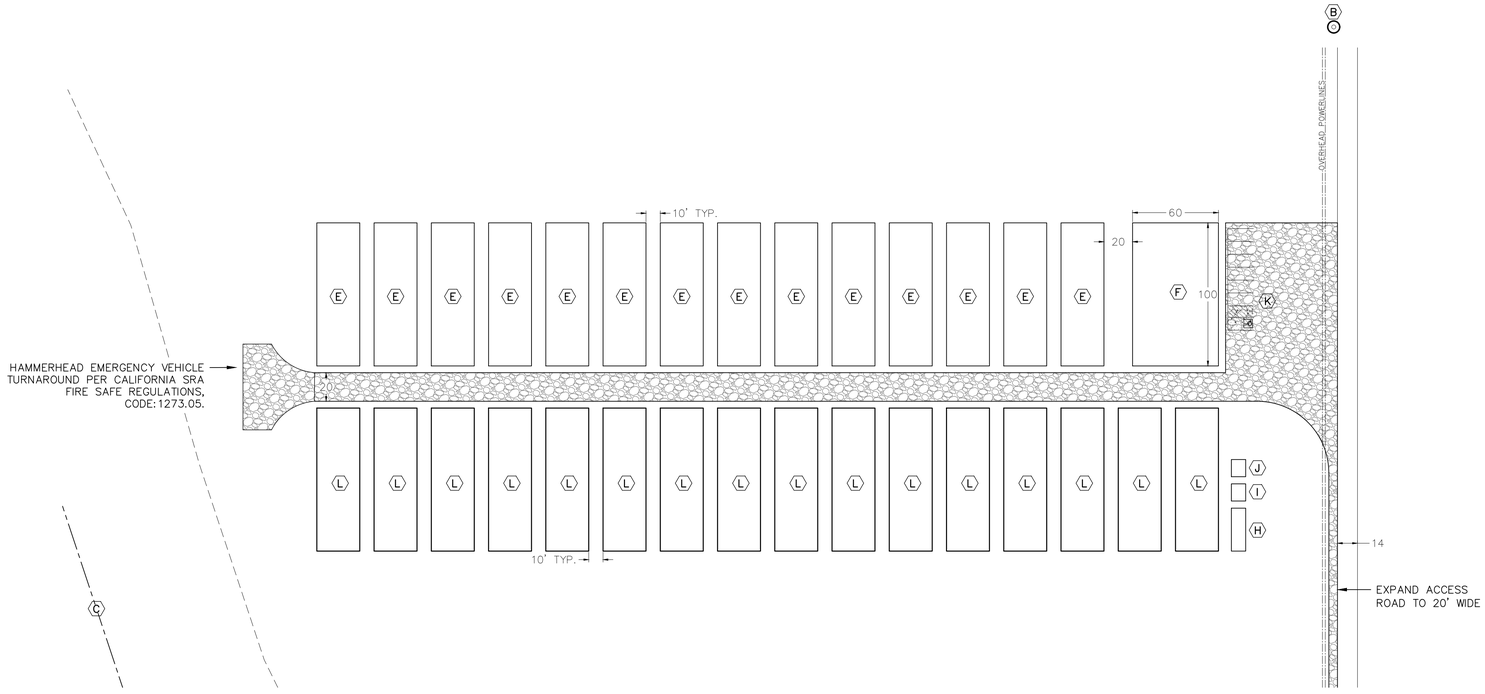
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DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09



LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

(A) (E) GROUNDWATER WELL
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BENEFICIAL USE: IRRIGATION

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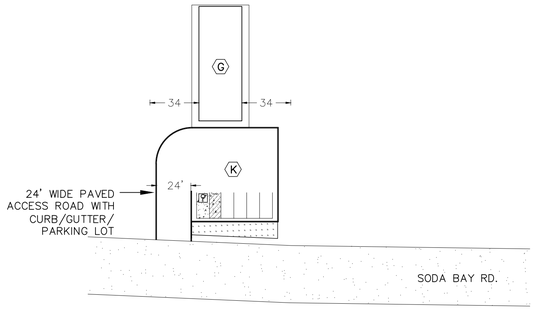
(H) (E) 10'x30' COMPOST AREA

(I) (E) 10'x12' PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(J) (E) DESIGNATED REFUSE AREA

(K) (E) PARKING / A.D.A.

(L) (P) SIXTEEN – 30'X100' (3,000 SF) GREENHOUSES



CULTIVATION SITE PLAN WITH CANOPY

GRAPHIC SCALE

50 0 25 50

(IN FEET)
1 inch = 50 ft.

Revisions:

CULTIVATION SITE PLAN WITH CANOPY

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008-001-08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

SECTION – G

SECURITY MANAGEMENT PLAN

Security Management Plan

Purpose and Overview

Anthony and Matsuki Perkins are seeking a Major Use Permit from the County of Lake for a proposed commercial cannabis cultivation, manufacturing, and distribution operation at 140 Soda Bay Road near Lakeport, California on Lake County APNs 008-001-08 & 09 (Project Property), composed of two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types, an A-Type 6 Non-Volatile Cannabis Manufacturing License Type, and an A-Type 11 Cannabis Distributor License Type. The two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types will be composed of thirty (30) proposed 3,000 ft^2 greenhouses (15 for each license type) and a proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility (metal building). The A-Type 6 Non-Volatile Cannabis Manufacturing License Type will be located within the proposed Processing and Non-Volatile Manufacturing Facility, as well. The A-Type 11 Cannabis Distributor License Type will be located within a proposed 2,400 ft^2 Distribution Facility (metal building) ~120 feet north of Soda Bay Road in the southwestern corner of the Project Property.

The proposed cultivation areas will be located within 30' x 100' steel-framed greenhouse structures, with 6 mil polyethylene film coverings and polycarbonate covered end walls, equipped with LED horticultural lights and mechanical light deprivation systems. The growing medium of the proposed cultivation operation will be an imported organic soil mixture in garden beds and nursery pots, with drip and micro-spray irrigation systems (to conserve water resources). All water for the proposed cannabis cultivation, manufacturing, and distribution operation will come from two existing onsite groundwater wells located at Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209°.

The purpose of this Security Management Plan (SMP) is to minimize criminal activity, provide for safe and secure working environments, protect private property and prevent damage to the environment. This SMP includes a description of the security measures that will be implemented at/by the proposed cultivation operation to prevent unauthorized access and theft or diversion of cannabis, a description of the proposed video surveillance system, and protocols that will be followed to ensure overall site security.

Secured Entry and Access

The Project Property is accessed via Soda Bay Road and a private gravel and native soil surfaced access road off of Soda Bay Road. Locking metal gates will control access to the project Property from Soda Bay Road. All gates will be closed and secured with heavy duty chains and commercial grade padlocks outside of core operating/business hours (8am to 6pm) and whenever the Perkins or their managerial staff are not present.

The doors of the buildings/structures of the proposed cultivation, manufacturing, and distribution operation will be secured with commercial grade locks whenever the Perkins or their staff are not present. The proposed Processing/Manufacturing and Distribution Facilities will be equipped with alarm systems that cover all possible entry points. The alarm system will notify off-site security monitors and the Perkins in the event of a breach. All entry/access points will be equipped with security lights and cameras capable of recording the face of each person that enters and exits the buildings.

100 feet of defensible space (vegetation management) will be established and maintained around the proposed cultivation areas and associated facilities for fire protection and to provide for visibility and security monitoring. Motion-sensing alarms and security lights will be installed at the metal gates controlling access to the proposed cultivation, manufacturing, and distribution operation, to alert personnel when someone/something has entered onto the premises. Motion-sensing security lights and cameras will be installed above the entrances/exits to the proposed greenhouses, as well as on all external corners of the proposed Processing/Manufacturing and Distribution Facilities. All lighting will be fully shielded, downward casting and will not spill over onto other properties or the night sky.

Personnel will be instructed to notify managerial staff immediately if/when suspicious activity is detected. Managerial staff will investigate the suspicious activity for potential threats, issues, or concerns. Managerial staff will contact the Lake County Sheriff's Office immediately if/when a threat is detected. When a visitor arrives at the proposed cultivation, manufacturing, and distribution operation via the main entrance during core operating/business hours, they will be immediately greeted by a member of the Perkins' managerial staff. The staff member will verify the visitor's identification and appropriate documentation/credentials. They will then be assigned an escort to show the visitor to the appropriate area(s), in accordance to their approved itinerary. No visitors will ever be left unattended.

Video Surveillance

The Perkins will use a color capable closed-circuit television (CCTV) system with a minimum camera resolution of 1080p at a minimum of 30 frames per second to record activity in all sensitive areas. All cameras will be equipped with motion sensing technology to activate the cameras when motion is detected, and all cameras (exterior and interior) will be waterproof. The CCTV system will feed into a Monitoring and Recording Stations inside Security Rooms within the proposed Processing/Manufacturing and Distribution Facilities, where video from the CCTV system will be digitally recorded. Video recordings will display the current date and time, and all recordings will be kept a minimum of 90 days, and 7 years for any corresponding reported incidents caught on tape. Video management software of the Monitoring and Recording Stations will be capable of supporting remote access, and will be equipped with a failure notification systems that immediately notify the Perkins and their managerial staff of any interruptions or failures. All sensitive areas covered by the video surveillance system will have adequate lighting to illuminate the camera's field of vision.

Proposed camera placements can be found on the accompanying Security Site Plan. Areas that will be covered by the CCTV system include:

- Perimeter of the proposed cultivation, manufacturing, and distribution operation;
- Interior and exterior of all entryways and exits to the proposed greenhouses (cultivation areas), Processing/Manufacturing, and Distribution Facilities; and
- Interior and exterior of the proposed Security Centers (within the proposed Processing/Manufacturing, and Distribution Facilities).

Diversion/Theft Prevention

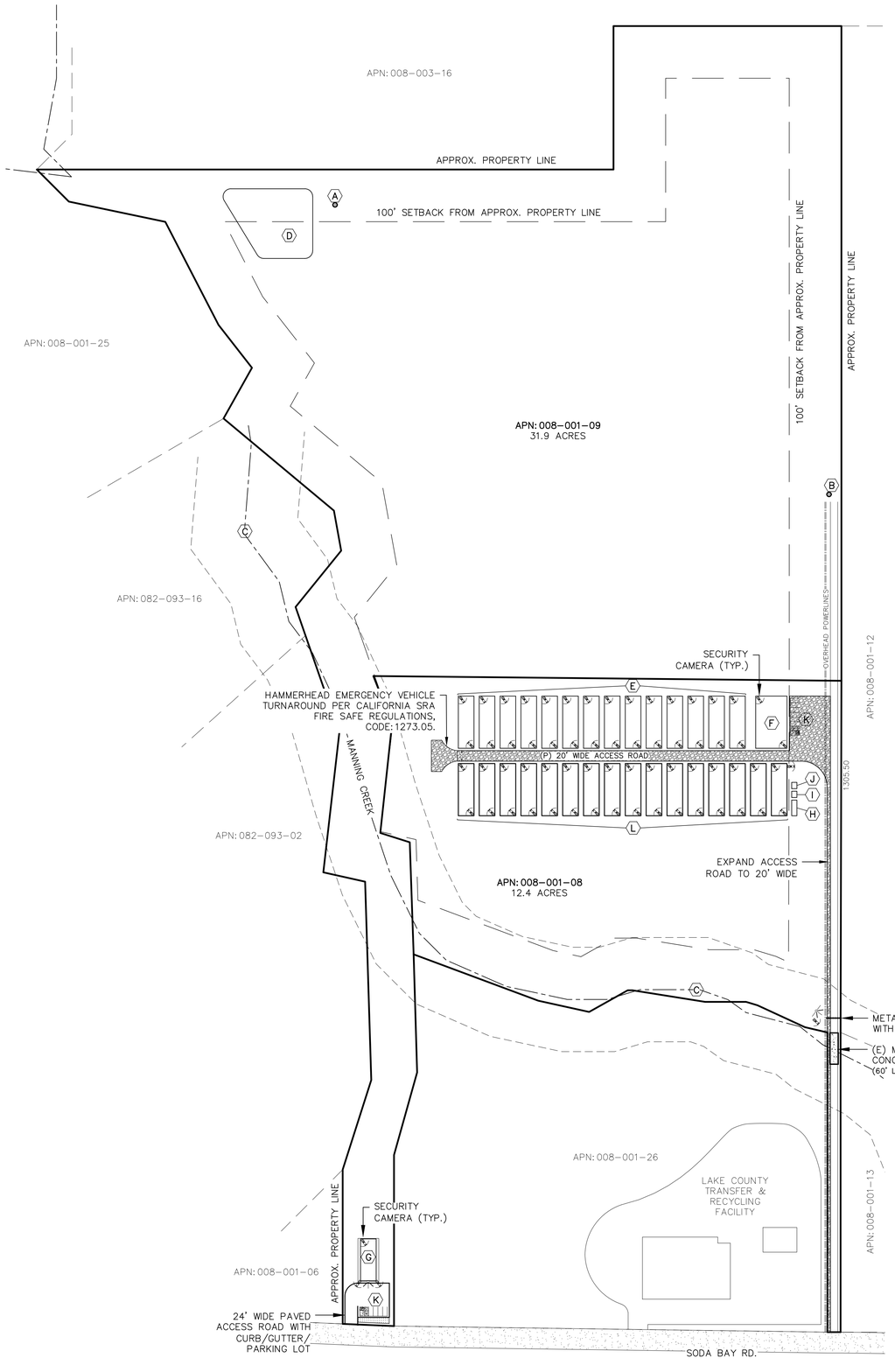
All personnel will be required to undergo a criminal background check with the Lake County Sheriff's Office. Visitors and personnel will be required to sign-in and sign-out each day, and record the areas in which they worked and the tasks they were assigned. Personnel will be required to store personal items (except for food, water, and drinks) in their vehicles throughout their shift.

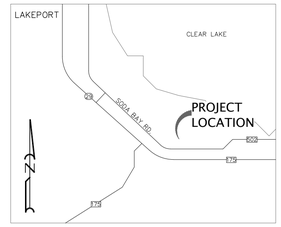
The Perkins and their staff will adhere to the inventory tracking and recording requirements of the California Cannabis Track-and-Trace (CCTT) system. All personnel will be trained in the requirements of the CCTT system, and all cannabis transfers/movement will be reported through the CCTT system. At least one member of Perkins' managerial staff will be a designated track-and-trace system administrator. A track-and-trace system administrator will supervise all tasks with high potential for diversion/theft, and will document which personnel took part in the task(s). In the event of any diversion/theft, law enforcement and the appropriate licensing authority will be notified within 24 hours of discovery.

Community Liaison and Emergency Contact

A Community Liaison/Emergency Contact will be made available to Lake County Officials/Staff and the Lake County Sheriff's Office at all times to address any needs or issues that may arise. The Perkins will provide the name, cell phone number, and email address of the Community Liaison/Emergency Contact to all interested County Departments, Law Enforcement Officials, and neighboring property owners and residents. The Perkins will encourage neighboring residents to contact the Community Liaison/Emergency Contact to resolve any problems before contacting County Officials. When a complaint is received, the Community Liaison/Emergency Contact will document the complainant and the reason for the complaint, then take action to resolve the issue (see the Odor Response Program in the Air Quality section of this Property Management Plan for odor related complaints/issues). A tally and summary of complaints/issues will be provided in the Perkins' annual Performance Review Report.

The Community Liaison/Emergency Contact for the proposed cannabis cultivation, manufacturing, and distribution operation is Mr. Anthony "Tony" Perkins. Tony's cell phone number is (714) 588-4916, and his email address is ncdnb@hotmail.com. The residents and owners of all properties neighboring the Project Property, as well as the Lake County Sheriff's Office, will have Tony's contact information before cannabis cultivation, manufacturing, or distribution activities begin.





VICINITY MAP
NO SCALE

140 SODA BAY RD.
LAKEPORT, CA 95433
LAKE COUNTY
APN's: 008-001-08 & 09

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	(P) SECURITY LIGHTS
	(P) SECURITY CAMERAS
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATE
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:
1. CONTOUR INTERVAL IS 20'

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LAT: 39.01739°
LONG: -122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
LONG: -122.90209°
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(C) INTERMITTENT CLASS II WATERCOURSE WITH 100' SETBACK (MANNING CREEK - NHD/DFG WATER ID: 116955052)

(D) WATER STORAGE RESERVOIR

(E) (E) FOURTEEN - 30'x100' (3,000 SF) GREENHOUSES

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(J) (E) DESIGNATED REFUSE AREA

(K) (E) PARKING / A.D.A.

(L) (P) SIXTEEN - 30'X100' (3,000 SF) GREENHOUSES

SECURITY SITE PLAN

GRAPHIC SCALE
120 0 60 120
(IN FEET)
1 inch = 120 ft.

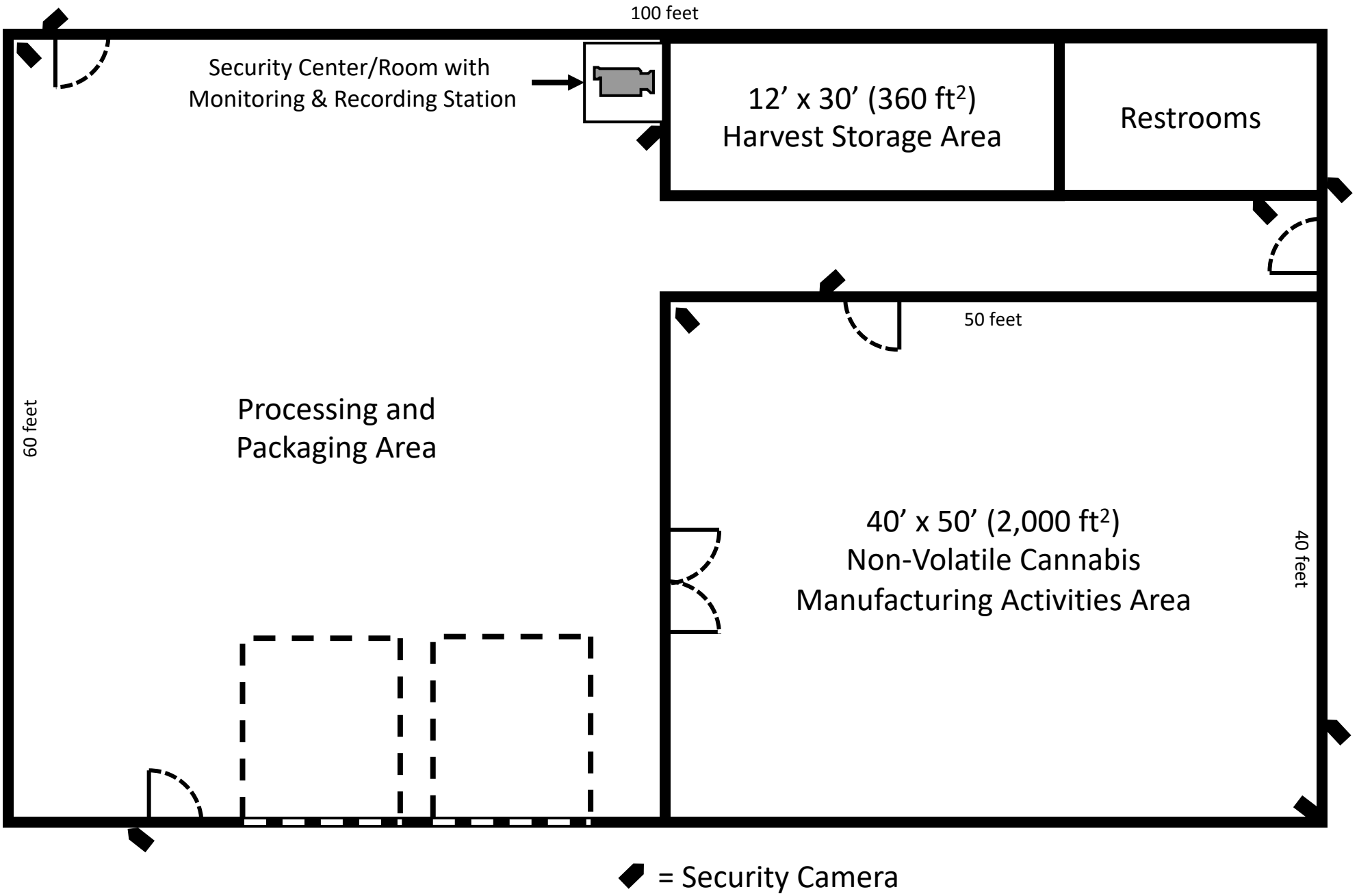
Revisions:

SECURITY SITE PLAN

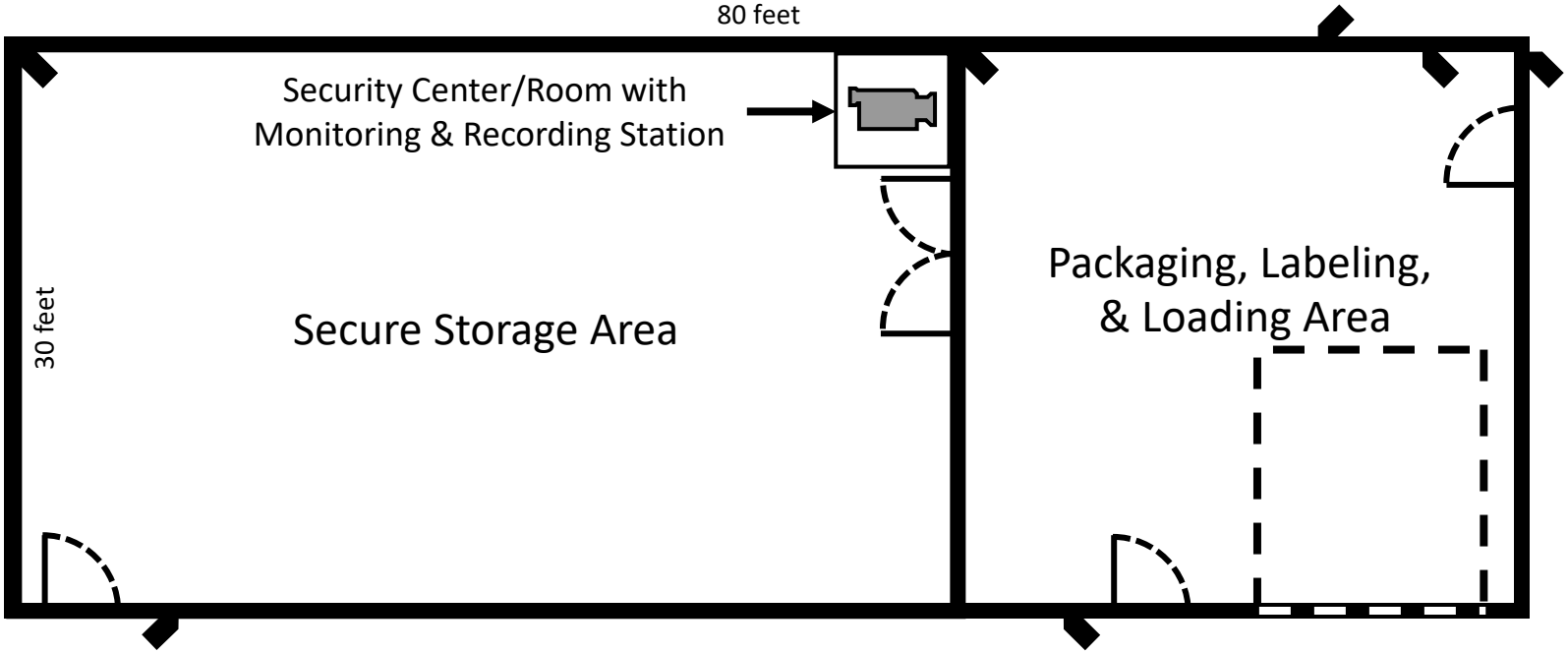
ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008-001-08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

PROPOSED PROCESSING & NON-VOLATILE MANUFACTURING FACILITY LAYOUT



PROPOSED DISTRIBUTION FACILITY LAYOUT



SECTION – H

STORM WATER MANAGEMENT PLAN

Storm Water Management Plan

Purpose and Overview

Anthony and Matsuki Perkins are seeking a Major Use Permit from the County of Lake for a proposed commercial cannabis cultivation, manufacturing, and distribution operation at 140 Soda Bay Road near Lakeport, California on Lake County APNs 008-001-08 & 09 (Project Property), composed of two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types, an A-Type 6 Non-Volatile Cannabis Manufacturing License Type, and an A-Type 11 Cannabis Distributor License Type. The two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types will be composed of thirty (30) proposed 3,000 ft^2 greenhouses (15 for each license type) and a proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility (metal building). The A-Type 6 Non-Volatile Cannabis Manufacturing License Type will be located within the proposed Processing and Non-Volatile Manufacturing Facility, as well. The A-Type 11 Cannabis Distributor License Type will be located within a proposed 2,400 ft^2 Distribution Facility (metal building) ~120 feet north of Soda Bay Road in the southwestern corner of the Project Property.

The proposed cultivation areas will be located within 30' x 100' steel-framed greenhouse structures, with 6 mil polyethylene film coverings and polycarbonate covered end walls, equipped with LED horticultural lights and mechanical light deprivation systems. The growing medium of the proposed cultivation operation will be an imported organic soil mixture in garden beds and nursery pots, with drip and micro-spray irrigation systems (to conserve water resources). All water for the proposed cannabis cultivation, manufacturing, and distribution operation will come from two existing onsite groundwater wells located at Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209°.

The intent/purpose of this Storm Water Management Plan is to protect the water quality of the surface and stormwater management systems managed by Lake County, and to evaluate the impact on downstream property owners. The proposed cultivation operation will increase the impervious surface area of the Project Property by approximately 103,320 ft^2 (5.4% of the Project Property) through the installation/construction of thirty 3,000 ft^2 greenhouse structures, a 120 ft^2 wooden shed (Pesticides & Agricultural Chemicals Storage Area), a 6,000 ft^2 metal building on a concrete slab (proposed Processing and Non-Volatile Manufacturing Facility), a 2,400 ft^2 metal building on a concrete slab (proposed Distribution Facility), and ~2,400 ft^2 of paved road and parking area associated with the proposed Distribution Facility. The parking lot associated with the proposed Processing and Non-Volatile Manufacturing Facility, will have a permeable gravel surface, and the proposed ADA parking space will be constructed of permeable pavers.

The Perkins will focus on low impact development (LID) and "green" stormwater management infrastructure to achieve permanent stabilization post site development as quickly as possible. LID practices utilizing "green" infrastructure will manage storm water by minimizing impervious

surfaces, maintaining, preserving, and enhancing existing vegetation, and by using natural systems to filter and infiltrate stormwater into the ground. LID with "green" storm water infrastructure is cost competitive with traditional storm water management infrastructure/practices, while providing numerous other long-term benefits, such as improved water quality, ecosystem enhancement, and preserved/improved aesthetics. The stormwater management measures outlined in this Storm Water Management Plan meet and/or exceed the requirements of the Lake County Storm Water Management Ordinance (Chapter 29 of the Lake County Ordinance Code).

Receiving Water Bodies and Infrastructure

The Project Property is located in the northwestern portion of Big Valley, within the Manning Creek-Frontal Clear Lake Watershed (HUC12). Topography of the Project Property is flat, with elevations ranging between 1,335 and 1,365 feet above mean sea level. Manning Creek, a perennial Class I watercourse, flows from east to west through the southern portion of the Project Property, then from south to north along the western boundary of the Project Property. An unnamed intermittent Class II watercourse forms in the northeast corner of the Project Property, and flows north into Clear Lake. There is also a manmade off-stream water storage reservoir in the northwest corner of the Project Property, which is/will be used to store water for the existing onsite vineyard and proposed cannabis cultivation operation. All cannabis cultivation, manufacturing, and distribution activities will occur more than 150 feet from these surface water bodies.

The Project Property is accessed via Soda Bay Road and a private gravel and native soil surfaced access road off of Soda Bay Road. The gravel and native soil surfaced access road used to access the Project Property from Soda Bay Road, passes over Manning Creek via a metal bridge with concrete abutments. This is the only watercourse crossing on the Project Parcel. Stormwater runoff from the structures of the proposed cultivation, manufacturing, and distribution operation will be discharged to the surrounding grassy fields and vineyard areas, where it will infiltrate into the porous soils of the Project Property. Development of the proposed cultivation operation, with the implementation of the LID practices and erosion and sediment control measures outlined below, should not increase the volume of stormwater discharges from the Project Property onto adjacent properties or flood elevations downstream.

Ground Disturbance and Grading

Soils on the Project Property in the area of the proposed cultivation, manufacturing, and distribution operation are identified as Cole variant clay loam and Still gravelly loam by the NRCS Web Soil Survey (attached), and characterized as well-drained gravelly and clay loams derived from alluvium. The proposed cultivation, manufacturing, and distribution operation will increase the impervious surface area of the Project Property by approximately 103,320 ft^2 (5.4% of the

Project Property) through the installation/construction of thirty 3,000 ft^2 greenhouse structures, a 120 ft^2 wooden shed, a 6,000 ft^2 metal building on a concrete slab, a 2,400 ft^2 metal building on a concrete slab, and ~2,400 ft^2 of paved road and parking area. The parking lot associated with the proposed Processing and Non-Volatile Manufacturing Facility, will have a permeable gravel surface, and the proposed ADA parking space will be constructed of permeable pavers.

The majority of the ground disturbance associated with development of the proposed cultivation, manufacturing, and distribution operation will occur within the footprint of an existing onsite vineyard and industrial hemp farm. Approximately one acre of non-native annual grassland will be disturbed to develop the proposed Distribution Facility with associated paved access road and parking area. Stormwater runoff from the proposed Distribution Facility and associated paved access road and parking area, will discharge to well-vegetated areas surrounding and adjacent to the proposed cultivation, manufacturing, and distribution operation.

Erosion and Sediment Control Measures

Established vegetation within and around the proposed cultivation operation will be maintained/protected to the extent possible, as a permanent erosion and sediment control measure. All cannabis cultivation, manufacturing, and distribution related structures will be located more than 150 feet from the nearest surface water bodies, and stormwater runoff from the structures will be discharged to the well-vegetated buffers surrounding the proposed cultivation, manufacturing, and distribution operation to filter and/or remove any sediment, nutrients, and/or pesticides mobilized by stormwater runoff, and prevent those pollutants from reaching nearby surface water bodies.

A native grass seed mixture and certified weed-free straw mulch will be applied at a rate of two tons per acre to all areas of the exposed soil prior to November 15th of each year, until permanent stabilization has been achieved. Straw wattles will be installed and maintained throughout the proposed cultivation operation per the attached Erosion & Sediment Control Site Plan following site development, until permanent stabilization has been achieved. If areas of concentrated stormwater runoff begin to develop, additional erosion and sediment control measures will be implemented to protect those areas and their outfalls. The Perkins and/or their managerial staff will conduct monthly monitoring inspections to confirm that this operation is in compliance with California Water Code/SWRCB's Cannabis General Order.

Regulatory Compliance (Stormwater)

The Project Parcel was enrolled for coverage under the State Water Resources Control Board's Cannabis General Order (Order No. WQ-2019-0001-DWQ), as a Tier 2 Low Risk Discharger in October of 2020. Site Management and Nitrogen Management Plans will be developed for the proposed cultivation operation, and submitted to the Central Valley Regional Water Quality

Control Board (CVRWQCB) for review, prior to planting. Each year, prior to March 1st, an Annual Monitoring Report will be prepared and submitted to the CVRWQCB, demonstrating measures taken over the course of the previous year to comply with the Cannabis General Order.

The stormwater management measures outlined above meet or exceed the requirements of the Lake County Storm Water Management Ordinance (Chapter 29 of the Lake County Ordinance Code). Development of the proposed cultivation, manufacturing, and distribution operation, with the implementation of the LID practices and erosion and sediment control measures outlined above, coupled with the porous soils of the Project Property, should not increase the volume of stormwater discharges from the Project Property onto adjacent properties or flood elevations downstream.

Storm Water Management Monitoring and Reporting

The following are the Monitoring and Reporting Requirements for the proposed cannabis cultivation operation from the Cannabis General Order:

- Winterization Measures Implementation
- Tier Status Confirmation
- Third Party Identification (if applicable)
- Nitrogen Application (Monthly and Total Annual)

An Annual Report shall be submitted to the State Water Quality Control Board by March 1st of each year. The Annual Report shall include the following:

1. Facility Status, Site Maintenance Status, and Storm Water Runoff Monitoring.
2. The name and contact information of the person responsible for operation, maintenance, and monitoring.

A letter transmitting the annual report shall accompany each report. The letter shall summarize the numbers and severity of violations found during the reporting period, and actions taken or planned to correct the violations and prevent future violations. The transmittal letter shall contain the following penalty of perjury statement and shall be signed by the Discharger or the Discharger's authorized agent:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

The Perkins will adhere to these monitoring requirements to maintain compliance with the Cannabis General Order, and will be happy to provide a copy of their Annual Monitoring Report to Lake County Officials if requested.

Cannabis Vegetative Material Waste Management

Cannabis Waste

"Cannabis waste" is an organic waste, as defined in Section 42649.8(c) of the Public Resources Code. Cannabis waste generated from the proposed cannabis cultivation operation will be limited to cannabis plant leaves and stems. All other parts of cannabis plants cultivated at this site will be transferred to a State of California-licensed Distributor for distribution to State of California-licensed Retailers, Manufacturers, and other Distributors. The proposed cannabis cultivation operation should generate approximately 400 pounds of dried cannabis waste each year. All cannabis waste will be composted onsite.

Cannabis Waste Composting

All cannabis waste generated from the proposed cultivation operation will be composted on-site and in compliance with Title 14 of the California Code of Regulations at Division 7, Chapter 3.1. Cannabis waste will be ripped/shredded and placed in the designated composting areas. In the designated composting areas, cannabis waste will be composted until it is incorporated into the soils of the proposed outdoor cultivation/canopy areas as a soil amendment.

Cannabis Waste Records/Documentation

Cannabis waste generated from the proposed cannabis cultivation operation will be identified, weighed, and tracked while onsite. All required information pertaining to cannabis waste will be entered into the State of California Cannabis Track-and-Trace (CCTT) system. The Perkins and their managerial staff will maintain accurate and comprehensive records regarding cannabis waste generation that will account for, reconcile, and evidence all activity related to the generation or disposition of cannabis waste. All records will be kept on-site for seven (7) years and will be made available during inspections.

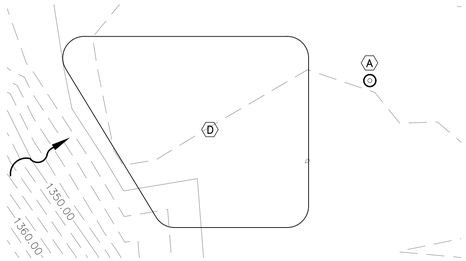
Growing Medium Management

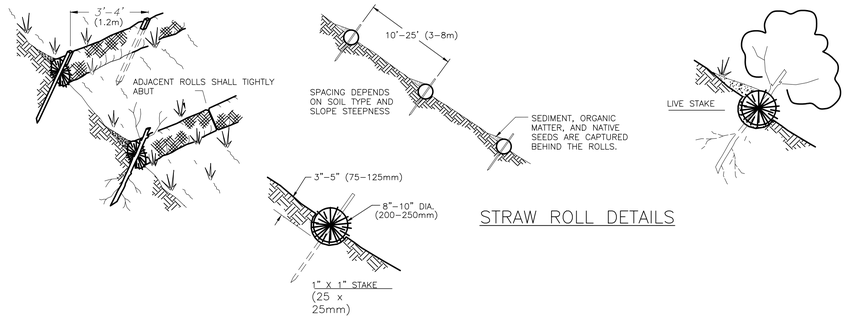
Growing Medium Overview

The growing medium of the proposed cannabis cultivation/canopy areas will composed of an above grade organic soilless growing medium (composed mostly of composted forest material), in garden beds and nursery pots. The organic soilless growing medium of each garden bed/pot will be amended and reused annually. The Perkins will only use low salt fertilizers, so that salts do not accumulate within the organic soilless growing medium of the proposed cultivation areas, rendering it unusable.

Growing Medium Waste

Ideally, the growing medium of the cultivation areas will be amended and reused each year/cultivation season. In the event of a root and/or soil borne pest infestation, the infested soil will be removed from the cultivation area(s), quarantined, treated with a pesticide that targets the infestation and that is approved for use in cannabis cultivation by the California Department of Food and Agriculture, then incorporated with compost in the designated composting area. After composting, the treated soil will be reintroduced to the proposed outdoor cultivation area as a soil amendment. No growing medium waste should be generated from the proposed cannabis cultivation operation (all growing medium should be recycled/reused).





STRAW ROLL DETAILS

NOTES:

1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"–5" (75–125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
2. STRAW ROLLS MUST BE PLACED ALONG SLOPE CONTOURS

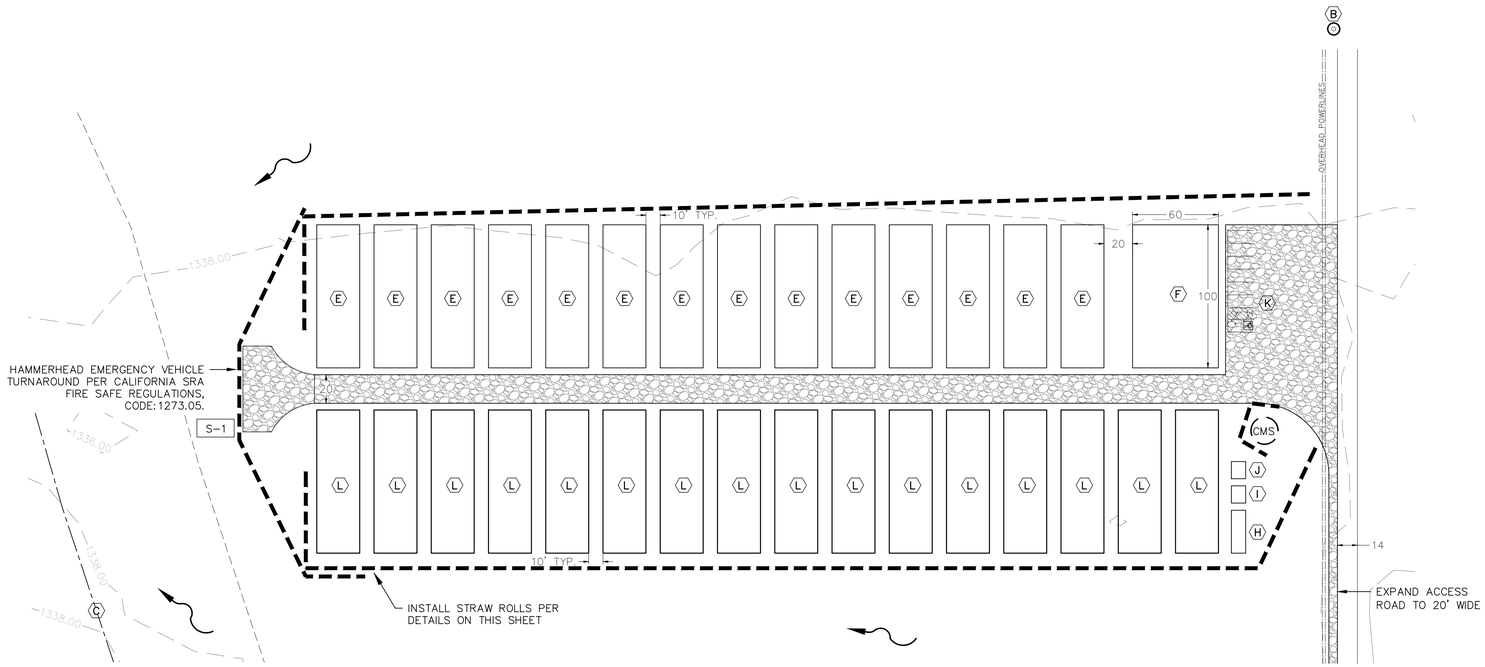
DRAINAGE PATTERNS

STRAW ROLLS (ADJUST TO SUIT FIELD CONDITIONS)

DISCHARGE POINT

S–1 SAMPLING LOCATION

CMS CONSTRUCTION MATERIALS STORAGE AREA



LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	ASPHALT
	GRAVEL
	CREEK / SWALE
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
(E)	EXISTING
(P)	PROPOSED
RD	ROAD
SF	SQUARE FEET

NOTES:

1. CONTOUR INTERVAL IS 5'

(A) (E) GROUNDWATER WELL
LAT: 39.01739°
LONG: –122.90538
BENEFICIAL USE: IRRIGATION

(B) (E) GROUNDWATER WELL
LAT: 39.01579°
LONG: –122.90209°
BENEFICIAL USE: DRINKING WATER

(C) INTERMITTENT CLASS II WATERCOURSE WITH 100' SETBACK (MANNING CREEK – NHD/DFG WATER ID: 116955052)

(D) WATER STORAGE RESERVOIR

(E) (E) FOURTEEN – 30'x100' (3,000 SF) GREENHOUSES

(F) (E) 60'x100' (6,000 SF) PROCESSING AND NON–VOLATILE MANUFACTURING FACILITY/BUILDING

(G) (E) 30'x80' (2,400 SF) DISTRIBUTION FACILITY

(H) (E) 10'x30' COMPOST AREA

(I) (E) 10'x12' PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(J) (E) DESIGNATED REFUSE AREA

(K) (E) PARKING / A.D.A.

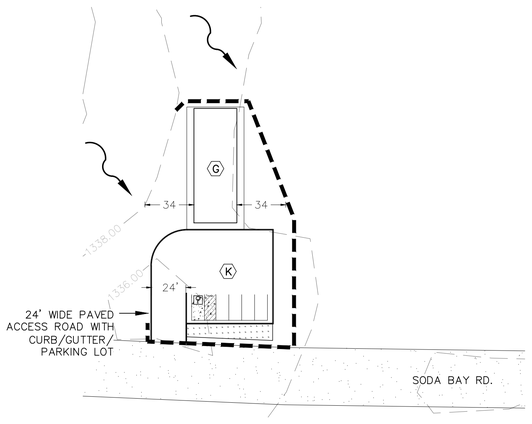
(L) (P) SIXTEEN – 30'X100' (3,000 SF) GREENHOUSES

EROSION & SEDIMENT CONTROL PLAN

GRAPHIC SCALE

50 0 25 50

(IN FEET)
1 inch = 50 ft.



EROSION & SEDIMENT CONTROL NOTES:

1. CONTRACTOR IS TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPS) TO CONTROL EROSION CONTROL AND REDUCE THE OFF–SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICABLE.
2. EROSION CONTROL BMPS SHALL BE IN PLACE AND MAINTAINED ALL YEAR ROUND.
3. HE CONTRACTOR SHALL FOLLOW THE GUIDELINES FROM THE "CALIFORNIA STORMWATER BMP HANDBOOK" FOR THE MEASURES SHOWN OR STATED ON THESE PLANS.
4. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE QUALIFIED SWPPP PRACTITIONER (QSP).
6. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO ANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF LAKE COUNTY.
7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
8. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMPS, AS WELL AS, ANY CORRECTIVE CHANGES TO THE BMPS OR EROSION AND SEDIMENT CONTROL PLAN.
9. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE.
10. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY OR AS NECESSARY.
11. ANY LOOSE GROUND FROM EXCAVATING GRADING OPERATIONS SHALL BE SECURED PRIOR TO ANY RAIN EVENT. STRAW OR TARP ALL DISTURBED OR EXCAVATED GROUND.
12. CONTRACTOR SHALL PLACE GRAVEL BAGS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE GRAVEL BAGS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
13. AS A MINIMUM, ALL GRADED AREAS AND EXPOSED SOIL WITHIN THE PROJECT SHALL BE SEEDED PER THE REQUIREMENTS OF LAKE COUNTY.
14. DUST GENERATION MUST BE MINIMIZED AND A WATER TRUCK MUST BE AVAILABLE ON–SITE FOR ADEQUATE DUST CONTROL.

Revisions:

EROSION & SEDIMENT CONTROL PLAN

ANTHONY & MATSUKI PERKINS
140 SODA BAY RD
LAKEPORT, CA 95453
LAKE COUNTY
APN's: 008–001–08 & 09

PLOTTED BY: ---
DATE PLOTTED: 5/28/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1



Map Scale: 1:4,750 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

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: May 8, 2019—May 10, 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
125	Cole variant clay loam, calcareous substratum	28.3	35.1%
233	Still loam, stratified substratum	29.2	36.3%
234	Still gravelly loam	22.9	28.4%
256	Water	0.2	0.2%
Totals for Area of Interest		**80.6**	**100.0%**

23 October 2020

WDID: 5S17CC429168

DISCHARGER/LANDOWNER
Anthony Perkins
2331 Cynthia Court
Costa Mesa, CA 92627

NOTICE OF APPLICABILITY, WATER QUALITY ORDER WQ-2019-0001-DWQ, ANTHONY PERKINS, APN 008-001-080-000, 008-001-090-000, LAKE COUNTY

Anthony Perkins (hereafter "Discharger and Landowner") submitted information through the State Water Resources Control Board's (State Water Board's) online portal on 23 September 2020, for discharges of waste associated with cannabis cultivation related activities. Based on the information provided, the Discharger self-certifies the cannabis cultivation activities are consistent with the requirements of the State Water Board *Cannabis Cultivation Policy- Principles and Guidelines for Cannabis Cultivation* (Policy), and the *General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities*, Order No. WQ-2019-0001-DWQ (General Order). This letter provides notice that the Policy and General Order are applicable to the site as described below. You are hereby assigned waste discharge identification (WDID) number **5S17CC429168**.

The Discharger is responsible for all applicable requirements in the Policy, General Order, and this Notice of Applicability (NOA), including submittal of all required reports. The Discharger is the sole person with legal authority to, among other things, change information submitted to obtain regulatory coverage under the General Order; request changes to enrollment status, including risk designation; and terminate regulatory coverage. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) will hold the Discharger liable for any noncompliance with the Policy, General Order, and this NOA, including non-payment of annual fees.

1. FACILITY AND DISCHARGE DESCRIPTION

The information submitted by the Discharger states the disturbed area is equal to or greater than 2,000 square feet and less than 1 acre (43,560 square feet), no portion of the disturbed area is within the setback requirements, no portion of the disturbed area is located on a slope greater than 30 percent, and the cannabis cultivation area is less than 1 acre.

Based on the information submitted by the Discharger, the cannabis cultivation activities are classified as Tier 1, low risk.

2. SITE-SPECIFIC REQUIREMENTS

The Policy and General Order are available on the Internet at http://www.waterboards.ca.gov/cannabis. The Discharger shall ensure that all site operating personnel know, understand, and comply with the requirements contained in the Policy, General Order, this NOA, and the Monitoring and Reporting Program (MRP, Attachment B of the General Order). Note that the General Order contains standard provisions, general requirements, and prohibitions that apply to all cannabis cultivation activities.

The application requires the Discharger to self-certify that all applicable Best Practicable Treatment or Control (BPTC) measures are being implemented, or will be implemented by the onset of the winter period (November 15 - April 1), following the enrollment date.

3. TECHNICAL REPORT REQUIREMENTS

The following technical report(s) shall be submitted by the Discharger as described below:

1. A *Site Management Plan* must be submitted within 90 days of applying for enrollment in the General Order; this deadline falls on **22 December 2020**. For more information on the requirements to submit a *Site Management Plan*, see General Order Provision C.1.a, and Attachment A, Section 5. Attachment D of the General Order provides guidance on the contents of a *Site Management Plan*. . For more information on the requirements to submit a *Site Management Plan*, see General Order Provision C.1.a, and Attachment A, Section 5. Attachment D of the General Order provides guidance on the contents of a *Site Management Plan*. Dischargers that cannot implement all applicable BPTC measures by the onset of the winter period, following their enrollment date, shall submit to the appropriate Central Valley Water Board a *Site Management Plan* that includes a time schedule and scope of work for use by the Central Valley Water Board in developing a compliance schedule as described in Attachment A of the General Order. You are not required to use a Qualified Professional for developing the *Site Management Plan.* However, you are required to submit the *Site Management Plan* to Central Valley Water Board staff for approval prior to any site development.
2. *A Site Closure Report* must be submitted 90 days prior to permanently ending cannabis cultivation activities and seeking to rescind coverage under the Conditional Waiver. The *Site Closure Report* must be consistent with the requirements of General Order Provision C.1.e., and Attachment A, Section 5. Attachment D of the General Order provides guidance on the contents of the *Site Closure Report.*

4. MONITORING AND REPORTING PROGRAM

The Discharger shall comply with the Monitoring and Reporting Program (MRP). Attachment B of the General Order provides guidance on the contents for the annual reporting requirement. Annual reports shall be submitted to the Central Valley Water Board by March 1 following the year being monitored. The Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Central Valley Water Board's Executive Officer or the State Water Board's Chief Deputy Director, or Deputy Director.

5. ANNUAL FEE

According to the information submitted, the discharge is classified as Tier 1, low risk with the current annual fee assessed at $600. The fee is due and payable on an annual basis until coverage under this General Order is formally rescinded. To rescind coverage, the Discharger must submit a Notice of Termination, including a *Site Closure Report* at least 90 days prior to termination of activities and include a final MRP report.

6. TERMINATION OF COVERAGE UNDER THE GENERAL ORDER & REGIONAL WATER BOARD CONTACT INFORMATION

Cannabis cultivators that propose to terminate coverage under the Conditional Waiver or General Order must submit a Notice of Termination (NOT). The NOT must include a *Site Closure Report* (see Technical Report Requirements above), and Dischargers enrolled under the General Order must also submit a final monitoring report. The Central Valley Water Board reserves the right to inspect the site before approving a NOT. Attachment C includes the NOT form and Attachment D of the General Order provides guidance on the contents of the *Site Closure Report.*

If the Discharger cannot comply with the General Order, or will be unable to implement an applicable BPTC measure contained in Attachment A by the onset of the winter period each year, the Discharger shall notify Central Valley Water Board staff by telephone at 530-224-4845 so that a site-specific compliance schedule can be developed.

All monitoring reports, submittals, discharge notifications, and questions regarding compliance and enforcement should be directed to centralvalleyredding@waterboards.ca.gov or 530-224-4845.

(for) Patrick Pulupa,
Executive Officer

JF: mb

cc via email: Kevin Porzio, State Water Resources Control Board, Sacramento
Mark Roberts, Lake County Planning Department, Lakeport

SECTION – I

WATER USE MANAGEMENT PLAN

Water Use Management Plan

Purpose and Overview

Anthony and Matsuki Perkins are seeking a Major Use Permit from the County of Lake for a proposed commercial cannabis cultivation, manufacturing, and distribution operation at 140 Soda Bay Road near Lakeport, California on Lake County APNs 008-001-08 & 09 (Project Property), composed of two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types, an A-Type 6 Non-Volatile Cannabis Manufacturing License Type, and an A-Type 11 Cannabis Distributor License Type. The two A-Type 3B "Medium Mixed-Light Tier 1" Cultivation License Types will be composed of thirty (30) proposed 3,000 ft^2 greenhouses (15 for each license type) and a proposed 6,000 ft^2 Processing and Non-Volatile Manufacturing Facility (metal building). The A-Type 6 Non-Volatile Cannabis Manufacturing License Type will be located within the proposed Processing and Non-Volatile Manufacturing Facility, as well. The A-Type 11 Cannabis Distributor License Type will be located within a proposed 2,400 ft^2 Distribution Facility (metal building) ~120 feet north of Soda Bay Road in the southwestern corner of the Project Property.

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This Water Use Management Plan (WUMP) is designed to conserve Lake County's water resources and to ensure that the proposed cultivation operation's water use practices are in compliance with applicable County, State, and Federal regulations at all times. This WUMP focuses on designing a water efficient delivery system and irrigation practices, and the appropriate and accurate monitoring and reporting of water use practices. Also included in this WUMP is a description of the Water Resources of the Project Property, and a Water Availability Analysis.

Description of Water Resources

Surface Water

The Project Property is located in the northwestern portion of Big Valley, within the Manning Creek-Frontal Clear Lake Watershed (HUC12). Topography of the Project Property is flat, with elevations ranging between 1,335 and 1,365 feet above mean sea level. Manning Creek, a perennial Class I watercourse, flows from east to west through the southern portion of the Project Property, then from south to north along the western boundary of the Project Property. An unnamed intermittent Class II watercourse forms in the northeast corner of the Project Property, and flows north into Clear Lake. There is also a manmade off-stream water storage reservoir in the northwest corner of the Project Property, which is/will be used to store water for the existing onsite vineyard and proposed cannabis cultivation operation. All cannabis cultivation, manufacturing, and distribution activities will occur more than 150 feet from these surface water bodies.

Groundwater

Soils on the Project Property in the area of the proposed cultivation, manufacturing, and distribution operation are identified as Cole variant clay loam and Still gravelly loam by the NRCS Web Soil Survey (attached), and characterized as well-drained gravelly and clay loams derived from alluvium. The United States Geological Survey Map of the Ukiah Quadrangle defines the area in the vicinity of the Project Property as Alluvium. The Project Property is located in the northwestern portion of the Big Valley Groundwater Basin/Scotts Valley Groundwater Management Plan Area, as identified in the 2006 Lake County Groundwater Management Plan. There are two existing groundwater wells on the Project Property, located at Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209°, which will serve as the primary water sources for the proposed cannabis cultivation operation.

Water Resources Protection

The Perkins will maintain existing, naturally occurring, riparian vegetative cover (e.g., trees, shrubs, and grasses) in aquatic habitat areas to the maximum extent possible to maintain riparian areas for streambank stabilization, erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, wildlife support, and to minimize waste discharges. Access roads and parking areas will be paved or 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, manufacturing, and distribution operation.

Restrooms/washrooms, that discharge to a Lake County-permitted onsite wastewater treatment system (septic) designed by a licensed civil engineer with the capacity to handle/treat the anticipated wastewater discharges from the proposed cultivation, manufacturing, and distribution operation, will be established within the proposed Processing/Manufacturing and

Distribution Facilities. Staff will have access to the restrooms/washrooms of the proposed Processing/Manufacturing and Distribution Facilities whenever they are onsite. The Project Property was enrolled for coverage under the State Water Resources Control Board's Cannabis General Order (Order No. WQ-2019-0001-DWQ), as a Tier 2 Low Risk Discharger in October of 2020. Site Management Plans will be developed for the proposed cultivation, manufacturing, and distribution operation, and submitted to the Central Valley Regional Water Quality Control Board (CVRWQCB) for review, prior to planting. Each year, prior to March 1st, an Annual Monitoring Report will be prepared and submitted to the CVRWQCB, demonstrating measures taken over the course of the previous year to comply with the Cannabis General Order. The Perkins will maintain compliance with the Cannabis General Order for the protection of water resources for as long as the proposed cultivation operation is operating.

Water Sources and Storage

The existing onsite groundwater wells located at Latitude 39.01739° & Longitude -122.90538° and Latitude 39.01579° & Longitude -122.90209° will serve as the primary water sources for the proposed cultivation operation. NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meters and Well Watch 670 sonic water level meters equipped with data logging capabilities, will be installed on the water supply groundwater wells, to monitor the volume of water coming from the wells and the water level in the wells. Following installation of this equipment, a 4-hour well performance test will be performed to thoroughly evaluate the production capacity of the well.

The manmade off-stream water storage reservoir in the northwest corner of the Project Property is capable of storing +4 acre feet (+1,303,000 gallons) of water. The Perkins fill the manmade off-stream water storage reservoir with water from the groundwater well located at Latitude 39.01579° & Longitude -122.90209°. When they fill the manmade off-stream water storage reservoir, they pump this well at +300 gallons per minute for several hours, without any interruptions/disruptions in production. Water stored within the reservoir will be available for the cannabis cultivation operation if and when it is needed.

Irrigation

From the CalCannabis Cultivation Licensing Program's Final Programmatic Environmental Impact Report (PEIR):

"According to Hammon et al. (2015), water use requirements for outdoor 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). In a study of cannabis cultivation in Humboldt County, approximate water use for an outdoor cultivation site was

27,470 gallons (0.08 acre-feet) per year on average and ranged from approximately 1,220 to 462,000 gallons per year (0.004 to 1.4 acre-feet), with the size of the operation being a major factor in this range. Annual water uses for a greenhouse operation averaged approximately 52,300 gallons (0.16 acre-feet) and ranged from approximately 610 to 586,000 gallons (0.002 to 1.8 acre-feet) annually (Butsic and Brenner 2016). During a field visit conducted by technical staff to an outdoor cultivation site, one cultivator reported using approximately 75,000 gallons (0.23 acre-feet) for 1 year's entire cannabis crop (approximately 66 plants), or approximately 1,140 gallons per plant per year."

The Perkins' proposed cultivation practices are similar to commercial heirloom tomato production, with an estimated water use requirement of 35 inches per year. The proposed mixed-light cannabis cultivation area is 90,000 ft^2 with an expected total annual water use requirement of ~6 acre-feet or ~1,955,000 gallons. The following table presents the expected water use of the proposed cultivation operation by month during the cultivation season in gallons and acre-feet.

March	April	May	June	July	August	September	October	November	December
65,170	130,340	195,510	260,680	195,510	260,680	260,680	260,680	195,510	130,340
0.2	0.4	0.6	0.8	0.06	0.8	0.8	0.8	0.6	0.4

In addition to the two existing onsite groundwater wells, the Perkins will use the +4 acre-foot (+1,303,000 gallons) manmade off-stream water storage reservoir to provide additional stored water for irrigation purposes/uses. The Perkins will also establish two 5,000-gallon metal fire water storage tanks on the Project Property to store and provide water for the fire protection/suppression needs of the proposed cultivation, manufacturing, and distribution operation. Water will be pumped from the existing onsite groundwater wells and manmade off-stream water storage reservoir to the irrigation systems of the proposed cultivation/canopy areas via PVC water supply lines. The water supply lines will be equipped with safety valves, capable of shutting off the flow of water so that waste of water and runoff is prevented/minimized when leaks occur and the system needs repair, and inline water meters compliant with California Code of Regulations, Title 23, Division 3, Chapter 2.7. The Perkins will maintain daily water meter readings records for a minimum of five years, and will make those records available to Water Boards, CDFW, and Lake County staff upon request.

Water Availability Analysis

The existing onsite groundwater wells will serve as the primary water source for the proposed cultivation operation, with the +4 acre-foot manmade off-stream water storage reservoir serving as a backup water source. NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meters and a Well Watch 670 sonic water level meters equipped with data logging capabilities, will be installed on the groundwater wells to monitor volume of water coming from this wells and the water level in the wells. The groundwater well located at Latitude 39.01579° & Longitude -122.90209° is pumped each year at +300 gallons per minute for several hours to fill

the manmade off-stream water storage reservoir, without any interruptions/disruptions in production. The peak anticipated daily demand for water of the proposed cultivation operation is ~8,690 gallons per day, which equates to a need for the water supply well to produce at least 6.1 gallons per minute over a 24 hour period. There is little doubt that the existing onsite groundwater wells will be able to produce at least 6.1 gallons per minute on the hottest driest days in the latest part of the summer when irrigation water is needed most. Additionally, the proposed cultivation, manufacturing, and distribution operation will have more than a million gallons of stored water, ready for use should it be needed.

Water Conservation

Per the Water Conservation and Use requirements outlined in the SWRCB's Cannabis General Order, the following Best Practical Treatment and Control (BPTC) measures will be implemented to conserve water resources:

- Regularly inspect the entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks.
- Apply weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss.
- Implement water conserving irrigation methods (drip or trickle and micro-spray irrigation).
- Maintain daily records of all water used for irrigation of cannabis. Daily records will be calculated by using a measuring device (inline water meter) installed on the main irrigation supply line between the water storage area and cultivation areas.
- Install float valves on all water storage tanks to keep them from overflowing onto the ground.

Monitoring and Reporting

NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meters and Well Watch 670 sonic water level meters equipped with data logging capabilities, will be installed on the existing water supply groundwater wells of the Project Property. Inline water meters compliant with California Code of Regulations, Title 23, Division 3, Chapter 2.7 will be installed on the main water supply lines running between the wells and the proposed cultivation/canopy areas. The Perkins will record daily water meter and water level readings, and will maintain those records onsite for a minimum of five years. The Perkins will make those records available to Water Boards, CDFW, and Lake County staff upon request.

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do Not Fill In

№ 128707

State Well No. CONFIDENTIAL LOG

Other Wells Water Code Sec. 13752

(2) LOCATION OF WELL:

County Lake Owner's number, if any

Township, Range, and Section 14N, 7W, 31

Distance from cities, roads, railroads, etc. 1/4 mile N Soda Bay ROAD ON E. Side of PROPERTY

(3) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Destroying ☐

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☒ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Other ☐

(6) CASING INSTALLED:

STEEL: OTHER:
SINGLE ☒ DOUBLE ☐

From ft.	To ft.	Diam.	~~Gage~~ or Wall
0	72	12 IN	.250
82	88	12 IN	.250

If gravel packed

Diameter of Bore	From ft.	To ft.

Size of shoe or well ring:

Size of gravel:

Describe joint Butt weld

(7) PERFORATIONS OR SCREEN:*

Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
72	82			

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes ☒ No ☐ To what depth 10 ft.

Were any strata sealed against pollution? Yes ☐ No ☒ If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing Neat Cement

(9) WATER LEVELS:

Depth at which water was first found, if known 15 ft.

Standing level before perforating, if known ft.

Standing level after perforating and developing 25 ft.

(10) WELL TESTS: Bail Test

Was pump test made? Yes ☐ No ☒ If yes, by whom?

Yield: 385 gal./min. with 90 ft. drawdown after 1 hrs.

Temperature of water COOL Was a chemical analysis made? Yes ☐ No ☒

Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG:

Total depth 100 ft. Depth of completed well 88 ft.

Formation: *Describe by color, character, size of material, and structure*

0 - 9	Soil	ft.
9 - 12	Sticky Blue Clay	
12 - 40	Sandy Blue Clay	
40 - 52	Blue Clay + Gravel	
52 - 72	Sticky Blue Clay	
72 - 78	Cemented Gravel - Blue	
78 - 78½	Volcanic Gravel	
78½ - 82	Blue Gravel	
82 - 100	Blue Clay - Sandy	

* 10 Ft. Johnson Watermark 304 Stainless Steel Screen 200 Slot

CONFIDENTIAL LOG
Water Code Sec. 13752

Work started 10-11 19 74, Completed 10-18 19 74

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Willits Drilling
(Person, firm, or corporation) (*Typed or printed*)

Address 100 South Street
Willits, CA 95490

[SIGNED] [signature] (Well Driller)

License No. 304165 Dated 10-19, 19 74

SKETCH LOCATION OF WELL ON REVERSE SIDE

67139-780 8-72 30M TRIP ⓘT OSP

FORM 115

INVESTIGATION

LAKE COUNTY

14N/9W-31Q

SHEET 1

NUMBER 14N/9W-31Q1

DIVISION OF WATER RESOURCES
DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

WELL LOG

LOCAL DESIGNATION

LOG

Number [illegible] 13752

LOCATION

OWNER

SKETCH 118

DATE COMPLETED 1943

DIAMETER OF CASING 12"

DRILLED BY Hummel

SOURCE OF INFORMATION OWNER

INSPECTED WHILE DRILLING SEE FILE NO.

SURFACE ELEVATION [illegible] Estimated

DEPTH	ELEVATION OF BOTTOM OF STRATUM	MATERIAL	THICKNESS FEET	% VOIDS	ABSOLUTE VOIDS FEET	TOTAL VOIDS FEET
0-75		Blue clay				
75-107		Blue sand & gravel				

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY R.T. Bean DATE 1948

97566 9-32 15M CALIFORNIA STATE PRINTING OFFICE

State No. 14N/9W-31Q1

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WELL DATA

Owner _____ State No. _____
Address _____ Other No. _____
Tenant _____
Address _____

Type of Well: Hydrograph ☐ Key ☐ Index ☐ Semiannual ☐
Location: County Lake Basin Kelseyville No. _____
U.S.G.S. Quad. Lakeport Quad. No. 5-19C
_____ ¼ _____ ¼ Section _____, Twp. _____, Rge. _____ MD SB H Base & Meridian
Description On N bank Manning Cr. 0.13 mi N and 0.10 mi W of bridge on Hwy 29 over Manning Cr. In metal PH.

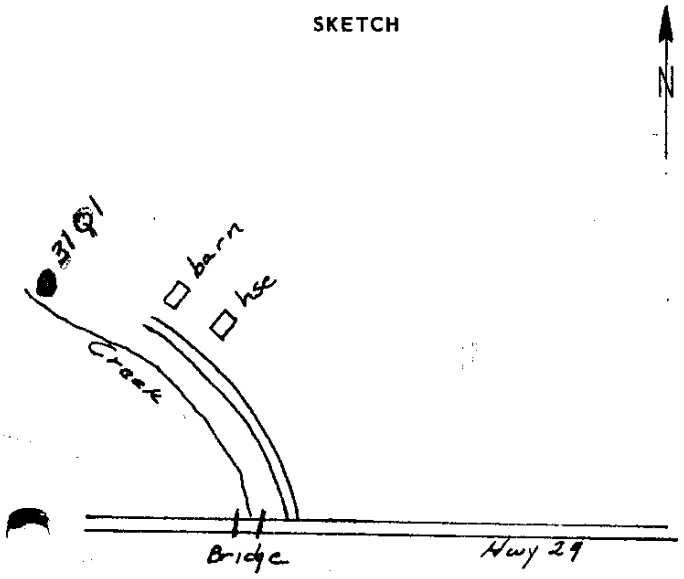
Reference Point description _____

which is _____ ft. above / below land surface. Ground Elevation _____ ft.
Reference Point Elev. _____ ft. Determined from _____
Well: Use Irr unused Condition _____ Depth 107 ft.
Casing, size 12 in., perforations _____

Measurements By: DWR ☐ USGS ☐ USBR ☐ County ☐ Irr. Dist. ☐ Water Dist. ☐ Cons. Dist. ☐
Chief Aquifer: Name _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Type of Material _____ Perm. Rating _____ Thickness _____
Gravel Packed? Yes ☐ No ☐ Depth to Top Gr. _____ Depth to Bot. Gr. _____
Supp. Aquifer _____ Depth to Top Aq. _____ Depth to Bot. Aq. _____
Driller Humme/
Date drilled 1943 Log, filed SFBD-Lake County Logs open (1) X confidential (2) _____
Equipment: Pump, type _____ make _____
Serial No. _____ Size of discharge pipe _____ in.
Power, Kind _____ Make _____
H. P. _____ Motor Serial No. _____
Elec. Meter No. _____ Transformer No. _____
Yield 365 G.P.M. Pumping level _____ ft.

Water Analysis: Min. (1) _____ San. (2) _____ H.M. (3) _____
Water Levels available: Yes (1) _____ No _____
Period of Record: Begin 10-28-49 End _____
Collecting Agency: DWR
Prod. Rec. (1) _____ Pump Test (2) _____ Yield (3) _____

SKETCH



REMARKS

6/62 PH locked

Recorded by: _____
Date _____

Dist. R. P. to Water	Water Elev.	Obser.
Canal	Measure	WWP
Pumphouse	Locked.	"
"	"	"
"	"	"
"	"	"

NO. 3 V. Reynolds D.W.R.# 1493 D

OTHER #

METER #

REF. POINT:

Pumphouse locked

Pump test Sta. 70036

ELEV. OF REF. POINT:

1A

Elev. Ref. Pt.

Date	Time	Tape Readings: Ref. Pt.	Tape Readings: Water Surface	Dist. RP To Water Surface	Observer and Remarks

STATE OF CALIFORNIA, DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES
WELL DATA

Owner | Our No. 14 9 31 Q1

Address | Location

Tenant | Other No.

Address

Location and Description On N bank Manning Creek .13 miles N and .10 miles W of bridge on State Highway 29 over Manning Creek (marked Thompson Cr erron.)

Description of reference point Pumphouse locked

Ref. Pt. Elev. How Determined

Use Irr. | Elev. of ground

Capacity of well 365 gpm | Drawdown

Depth 107' | Size of casing 12"

Chief aquifer

Driller Humme)

Date completed 1943 | Distance to water

Kind and size of pump

Kind of power | Horsepower

Log obtained Yes Where obtainable

SKETCH SHOWING LOCATION OF WELL

Log
0-75' blue clay
75-107 blue sand & gravel

9-48 4M (1) SPO

Elev. Ref. Pt.

Date	Time	Tape Readings Ref. Pt.	Tape Readings Water Surface	Dist. RP To Water Surface	Observer and Remarks
24-49		Locked			TMS.
15-49		″			TMS.
3-50		″			TMS.
31-50		″			TMS.

Elev. Ref. Pt.

Date	Time	Tape Readings Ref. Pt.	Tape Readings Water Surface	Dist. RP To Water Surface	Observer and Remarks

SECTION – J

SITE PHOTOS



Existing Metal Gate Controlling Access to Project Property (north view)



Metal Bridge with Concrete Abutments Over Manning Creek (south view)



Metal Bridge with Concrete Abutments Over Manning Creek (northwest view)



Existing Hemp Farm / Area of Proposed Cannabis Cultivation Operation (west view)



Existing Vineyard of Project Property (west view)



Existing Onsite Manmade Off-stream Water Storage Reservoir (northeast view)