MAJOR USE PERMIT APPLICATION PACKAGE

APPLICANT
Akwaaba, LLC

PROJECT LOCATION
11795 North Drive
Clearlake Park, CA 95424

PROJECT PARCEL
Lake County APN 010-019-15

TABLE OF CONTENTS

PROJECT DESCRIPTION

Akwaaba, LLC ("Akwaaba") is seeking a Major Use Permit from the County of Lake for a proposed Outdoor Commercial Cannabis Cultivation Operation at 11795 North Drive near Clearlake Park, CA on Lake County APN 010-019-15 (Project Parcel). Akwaaba's proposed cultivation operation will be composed of two A-Type 3 "Medium Outdoor" cultivation areas, with a combined total canopy area of 73,560 ft^2, and an A-Type 2B "Small Mixed-Light" cultivation area, with a total canopy area of 9,720 ft^2. Additionally, Akwaaba is applying for an Early Activation of Use Permit for 43,560 ft^2 of outdoor cultivation/ canopy area and 4,860 ft^2 of mixed-light cultivation/canopy area. The total cultivation area of the proposed cannabis cultivation operation (as defined in Chapter 21, Article 27 of the Lake County Code), including the combined cultivation/canopy areas, a 1,800 ft^2 Metal Barn (proposed Drying & Harvest Storage Facility), and a 160 ft^2 Metal Shipping/Storage Container (proposed Pesticide & Agricultural Chemicals Storage Area) is 85,240 ft^2. The Project Parcel has been enrolled for coverage under the State Water Resources Control Board's Cannabis General Order (WQ-2019-0001-DWQ) since October 30th, 2020.

The Project Property is composed of two parcels totaling approximately 97 acres (Lake County APNs 010-019-10 and 15), both of which are owned by Akwaaba, LLC. The Project Parcel is located just west of the City of Clearlake, along the spine of Sulphur Bank Ridge, and is accessed via North Drive and Crestview Drive. The Project Property has been improved with a metal barn and a groundwater well. A private gravel and native soil surfaced access road winds through the Project Parcel, connecting North Drive to Crestview Drive through the Project Parcel. Metal gates control access to the private gravel and native soil surfaced access road from North Drive and Crestview Drive. There are no watercourses, wetlands, or watercourse crossings on the Project Parcel. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°.

Development of the proposed cultivation operation will occur in two phases. The first phase will occur in 2021 under an Early Activation of Use Permit, and will not involve any construction, grading, or vegetation removal. The second phase will occur in 2022, after a Major Use Permit for Commercial Cannabis Cultivation has been obtained, and will require some vegetation removal, including 12 mature blue oak trees (+6" DBH). A 30-acre No Development Zone will be established in the northern half of the Project Parcel, to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation. Sixty (60) Blue Oak saplings will be planted, cared for, and protected in the southern half of the Project Property for seven years, to mitigate for the loss of 12 Blue Oak trees within the area of the proposed cultivation operation. Additionally, four Konocti manzanita have been identified on the Project Parcel. No disturbance/development is proposed within 100 feet of the Konocti Manzanita, and a 50-foot buffer will be marked and maintained around the Konocti Manzanita.

The cultivation season for Akwaaba's proposed outdoor cultivation operation will begin on April 15th and end on November 15th of each year. All cannabis waste generated from the proposed cultivation operation will be chipped and composted onsite. Composted cannabis waste will be stored in a designated composting area, until it is incorporated into the growing medium of the cultivation areas, as an organic soil amendment. All agricultural chemicals (fertilizers, amendments, pesticides, and petroleum products) will be stored within a proposed 20-foot metal shipping/storage container (Pesticide & Agricultural Chemicals Storage Area).

The proposed outdoor cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. Locking metal gates will control access to the proposed cultivation/canopy areas, and the metal gates will be locked whenever Akwaaba's cultivation personnel are not present. The growing medium of the proposed cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric and plastic nursery pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water and to conserve water resources.

Akwaaba will adhere to the inventory tracking and recording requirements of the California Cannabis Track-and-Trace (CCTT) system. All staff will be trained in the requirements of the CCTT system, and a member of Akwaaba's managerial staff will be the designated track-and-trace system administrator. The designated track-and-trace system administrator will complete an initial training provided by the California Department of Food and Agriculture and will participate in ongoing training as required. All cannabis transfers/movement will be reported through the CCTT system, and a track-and-trace system administrator will supervise all tasks with high potential for diversion/theft.

Mixed-Light Cultivation/Canopy Areas ("Low Hoops")

The proposed mixed-light canopy areas will be located within 6-foot wide and 90-foot long rudimentary hoop house structures, that are less than 7 feet tall, and commonly referred to as "Low Hoops". The Low Hoops will be composed of 2" PVC pipes with 6-mil polyethylene glaze, supported by rebar (driven into the ground 18 inches deep), and wooden cross members. No mechanical, electrical, or plumbing will be installed within or around the Low Hoops. As described above, the Low Hoops do not fall under the jurisdiction of the State of California nor County of Lake Building Code, and therefore do not require a Building Permit.

SITE PLANS AND MAPS

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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 Facility Layout

Sheet 9 – Erosion and Sediment Control Plan

Sources: Esri, HERE, Garmin, Intermap, increment P 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, USDA, NRCS

Lake County, CA

Akwaaba Farms

Web AppBuilder for ArcGIS

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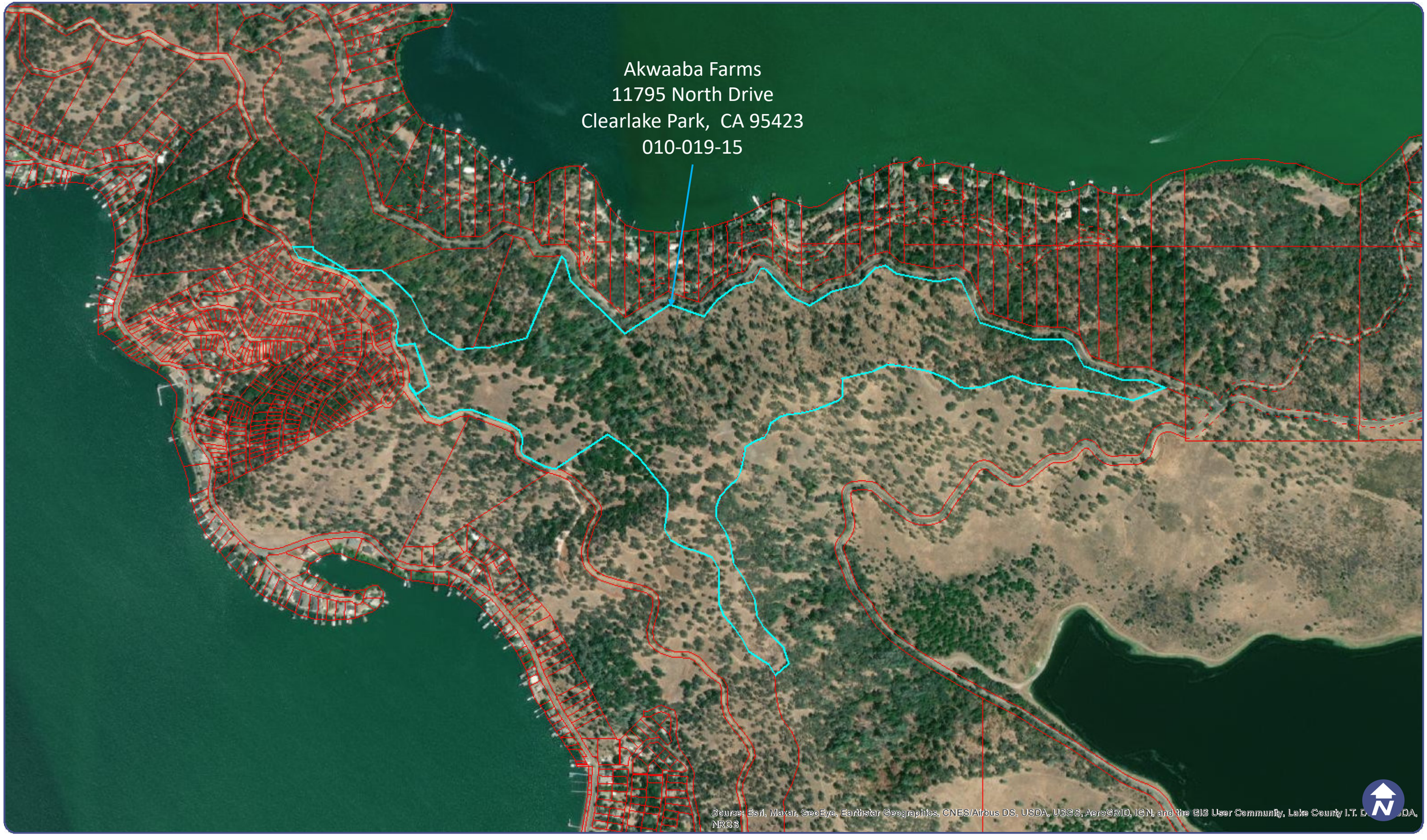
Print Date: 3/23/2021



Lake County, CA

Akwaaba Farms

Web AppBuilder for ArcGIS

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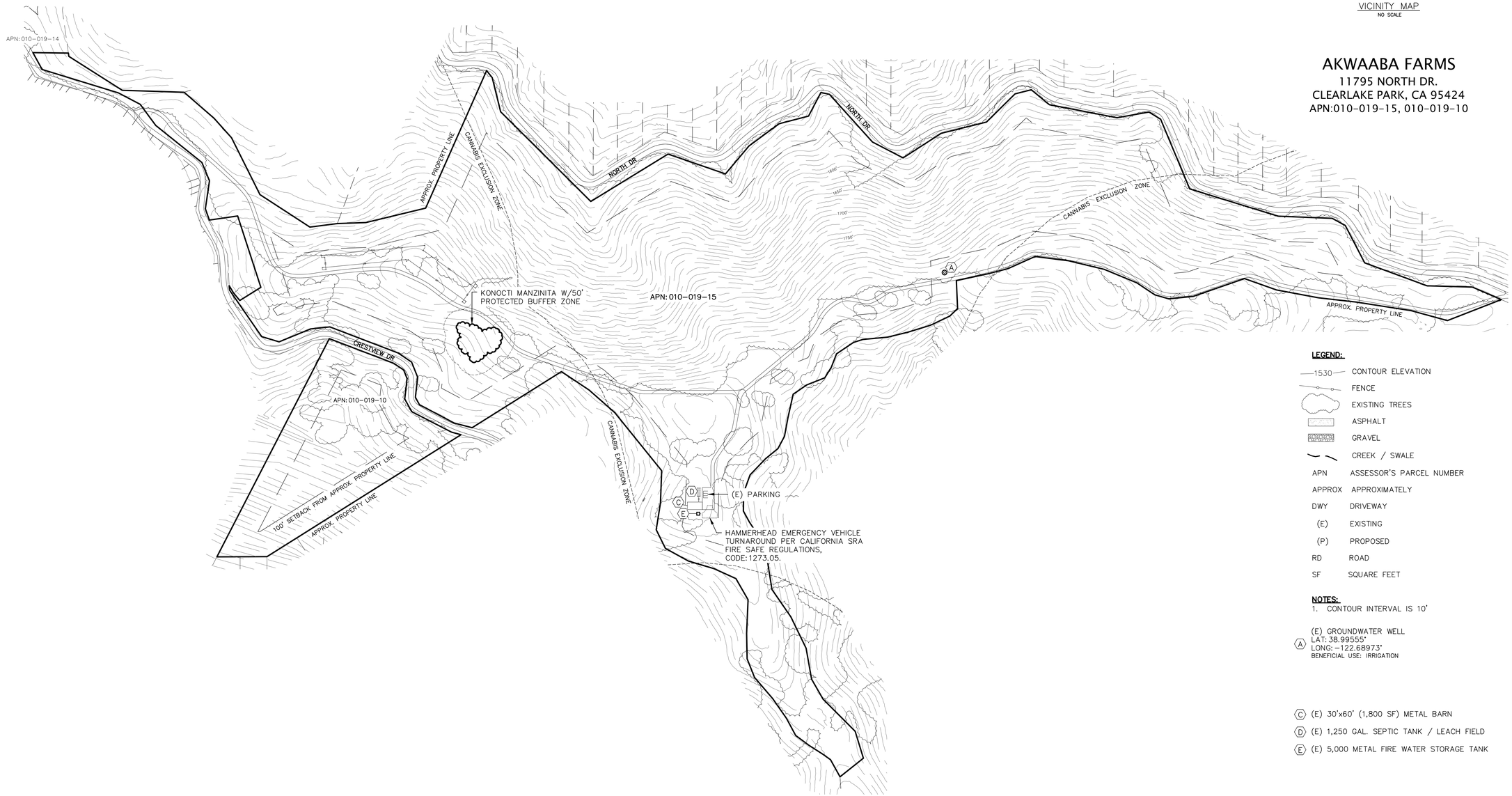


VICINITY MAP
NO SCALE

AKWAABA FARMS

11795 NORTH DR.
CLEARLAKE PARK, CA 95424
APN:010-019-15, 010-019-10

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	EXISTING TREES
	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 10'

(A) (E) GROUNDWATER WELL
LAT: 38.99555°
LONG: -122.68973°
BENEFICIAL USE: IRRIGATION

(C) (E) 30'x60' (1,800 SF) METAL BARN

(D) (E) 1,250 GAL. SEPTIC TANK / LEACH FIELD

(E) (E) 5,000 METAL FIRE WATER STORAGE TANK

EXISTING CONDITIONS SITE PLAN

GRAPHIC SCALE

200 0 100 200
(IN FEET)
1 inch = 200 ft.

Revisions:

REALM ENGINEERING
CIVIL ENGINEERING, SURVEYING & PLANNING
1767 MARKET STREET SUITE c
REDDING, CA. 96001
530-526-7493

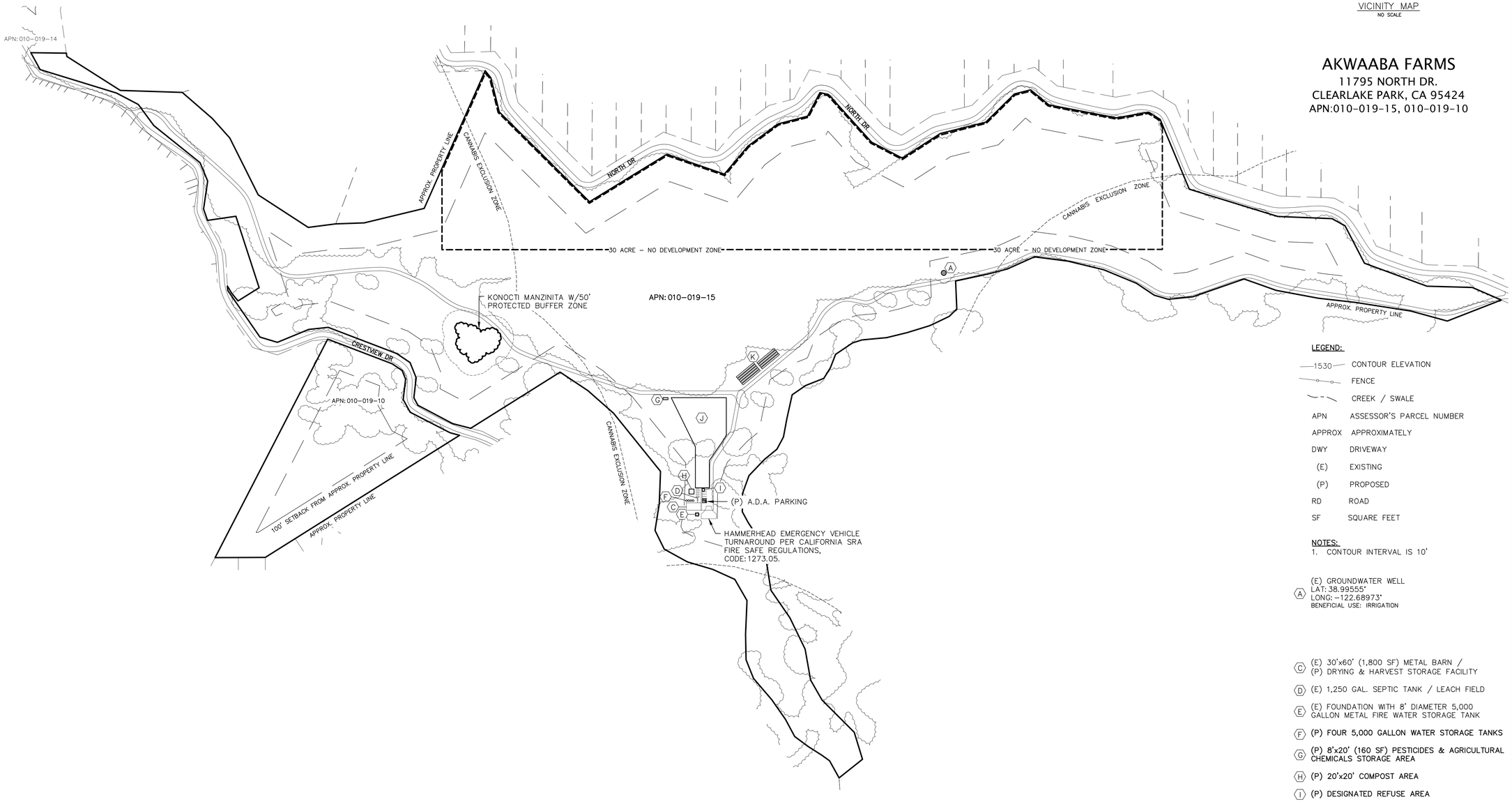
PLANS PREPARED UNDER THE SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER
JASON B. VINE
No. 67800
EXP. 06/30/21
CIVIL
STATE OF CALIFORNIA

EXISTING CONDITIONS SITE PLAN

APN:010-019-15, 010-019-10 & 010-019-14
11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

PLOTTED BY: ---
DATE PLOTTED: 6/01/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1



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(F) (P) FOUR 5,000 GALLON WATER STORAGE TANKS

(G) (P) 8'x20' (160 SF) PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(H) (P) 20'x20' COMPOST AREA

(I) (P) DESIGNATED REFUSE AREA

(J) (P) 43,560 SF OUTDOOR CULTIVATION / CANOPY AREA

(K) (P) NINE 6'x90' (540 SF) MIXED-LIGHT CANOPY AREAS (LOW HOOPS)

PROPOSED CONDITIONS SITE PLAN- PHASE I

GRAPHIC SCALE
200 0 100 200
(IN FEET)
1 inch = 200 ft.

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CLEARLAKE, CA 95422
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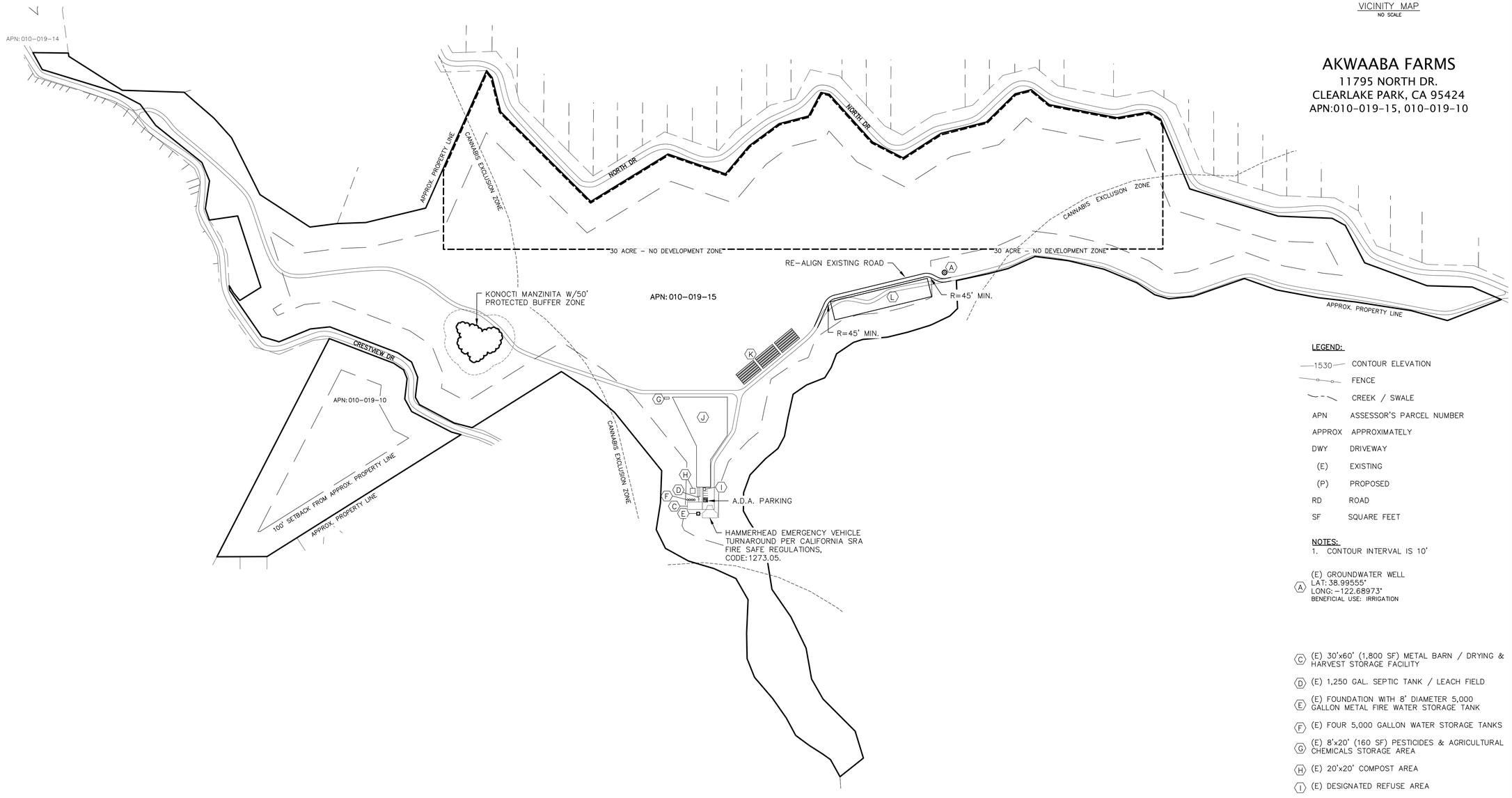

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NO SCALE

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(K) (P) EIGHTEEN 6'X90' (540 SF) MIXED-LIGHT CANOPY AREAS (LOW HOOPS)

(L) (P) 75'X400' (30,000 SF) OUTDOOR CULTIVATION / CANOPY AREA

PROPOSED CONDITIONS SITE PLAN- PHASE II

GRAPHIC SCALE
200 0 100 200
(IN FEET)
1 inch = 200 ft.

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PROPOSED CONDITIONS SITE PLAN - PHASE II

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11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

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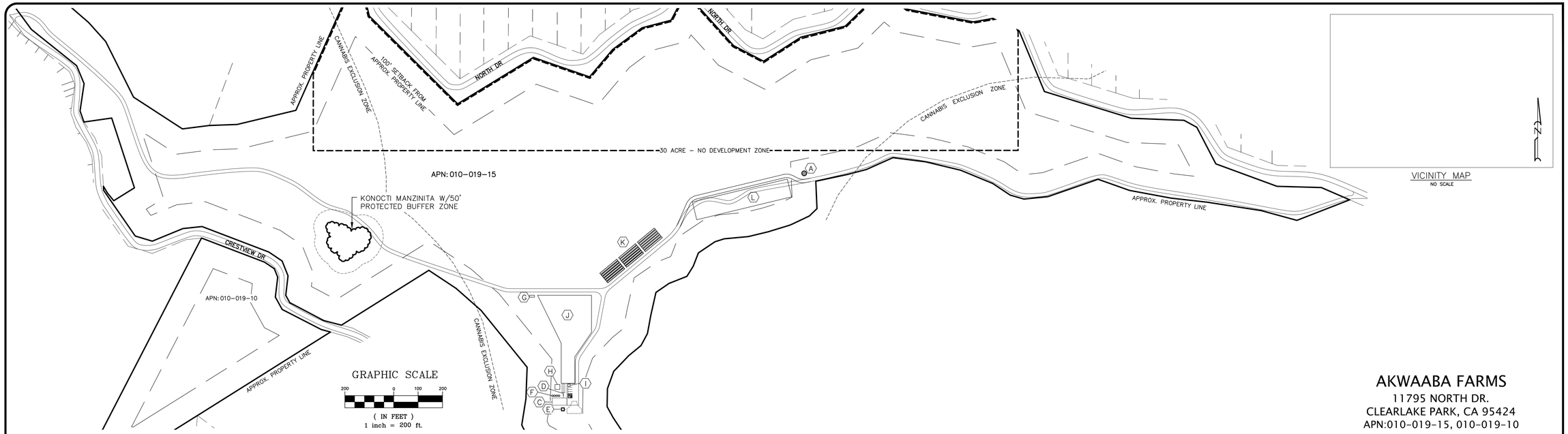

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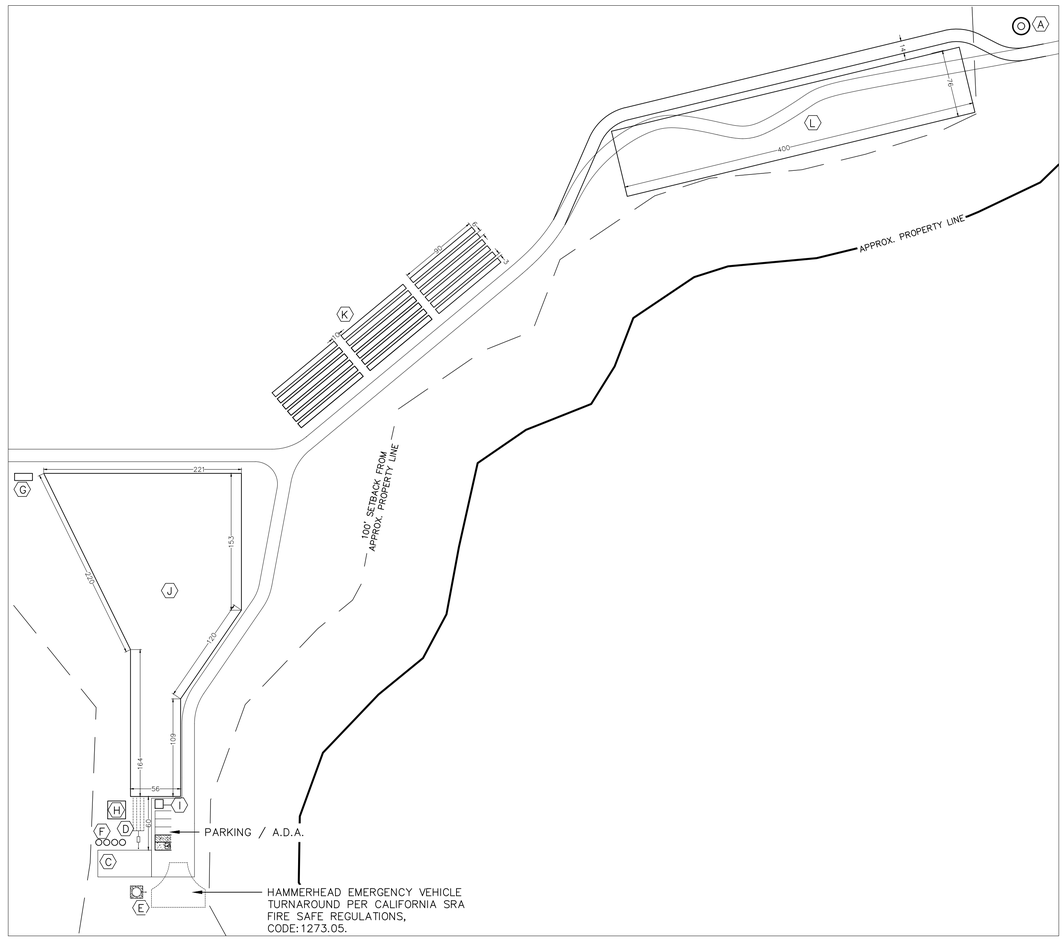

CULTIVATION SITE PLAN WITH CANOPY

GRAPHIC SCALE
80 0 40 80
(IN FEET)
1 inch = 80 ft.

LEGEND:

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

NOTES:
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CULTIVATION SITE PLAN WITH CANOPY

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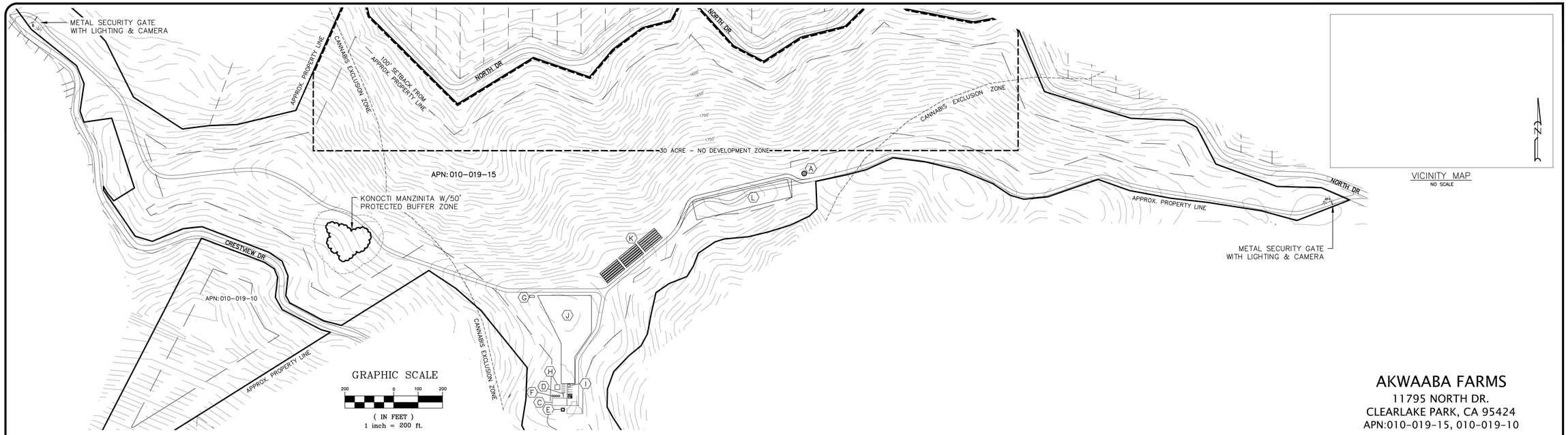

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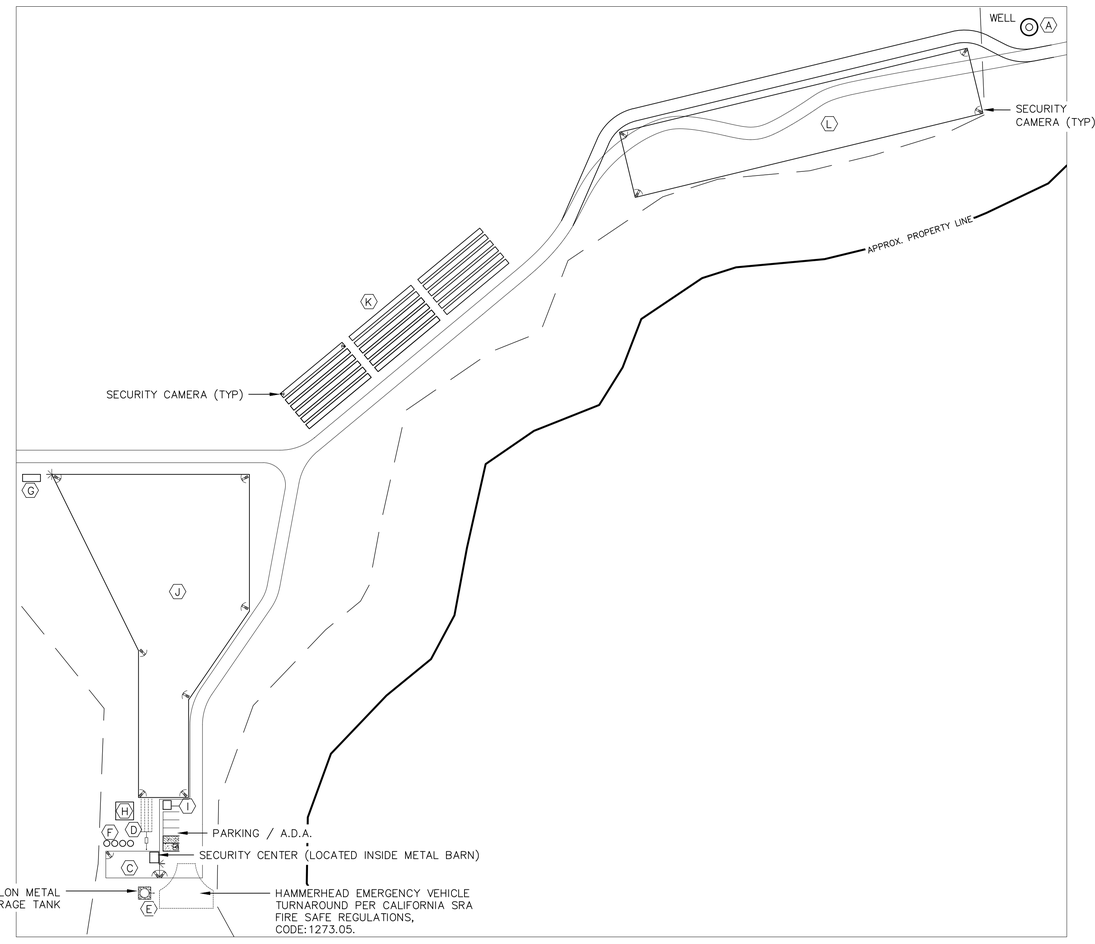

SECURITY SITE PLAN

GRAPHIC SCALE
80 0 40 80
(IN FEET)
1 inch = 80 ft.

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	CREEK / SWALE
	(P) SECURITY CAMERA
	(P) SECURITY LIGHTING
APN	ASSESSOR'S PARCEL NUMBER
APPROX	APPROXIMATELY
DWY	DRIVEWAY
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(P)	PROPOSED
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11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

PLOTTED BY:
DATE PLOTTED: 3/08/21
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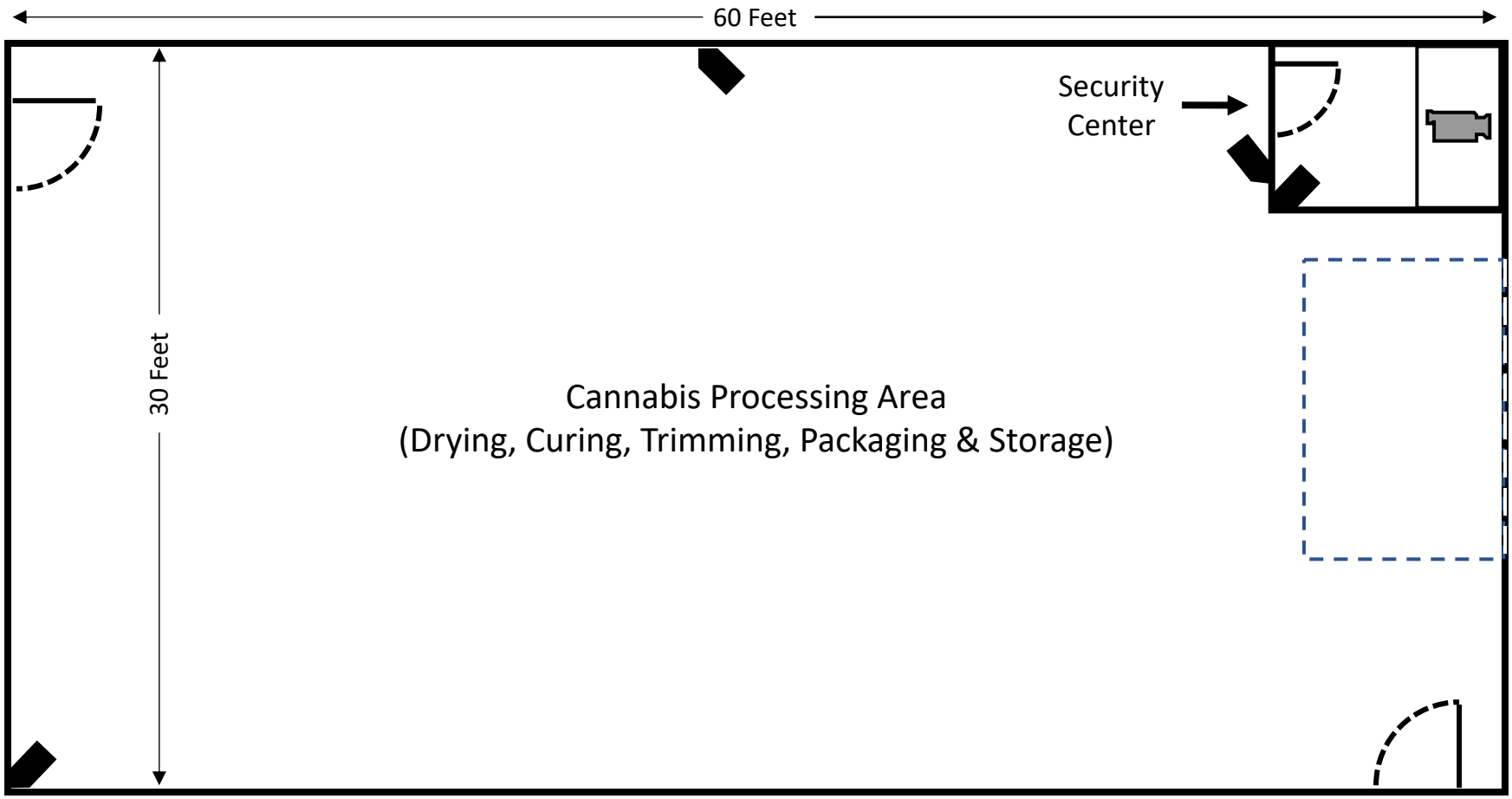
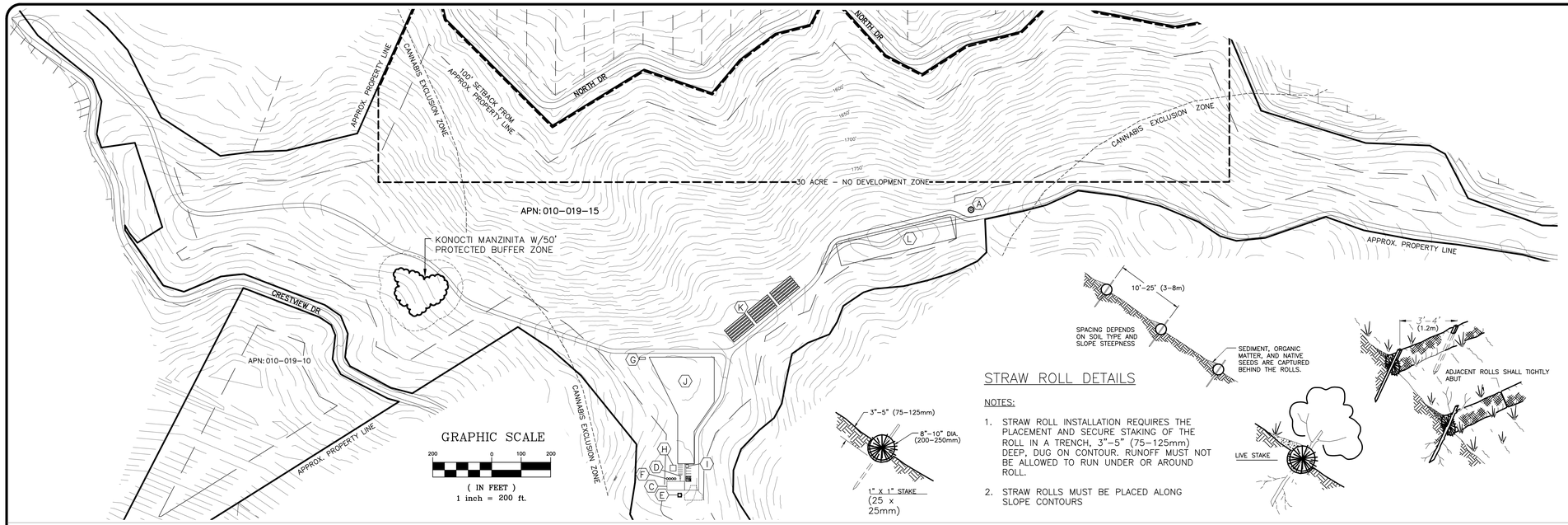
Proposed Processing Facility/Building Layout

(Existing Metal Barn)



Waterproof Surveillance Cameras with 1080p resolution and a 90° field of view. (Arrow indicates direction of view)

Video Surveillance Monitoring and Recording Station



GRAPHIC SCALE

200 0 100 200

(IN FEET)
1 inch = 200 ft.

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

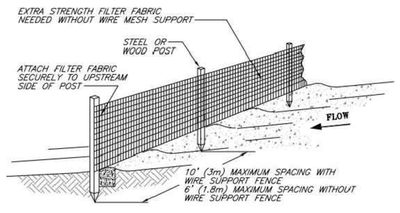
EROSION & SEDIMENT CONTROL NOTES:

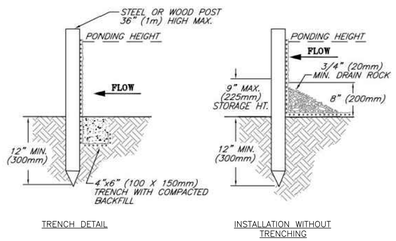
1. CONTRACTOR IS TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPS) TO CONTROL EROSION CONTROL AND REDUCE THE OFF-SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICABLE.
2. EROSION CONTROL BMPS SHALL BE IN PLACE AND MAINTAINED ALL YEAR ROUND.
3. HE CONTRACTOR SHALL FOLLOW THE GUIDELINES FROM THE "CALIFORNIA 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.

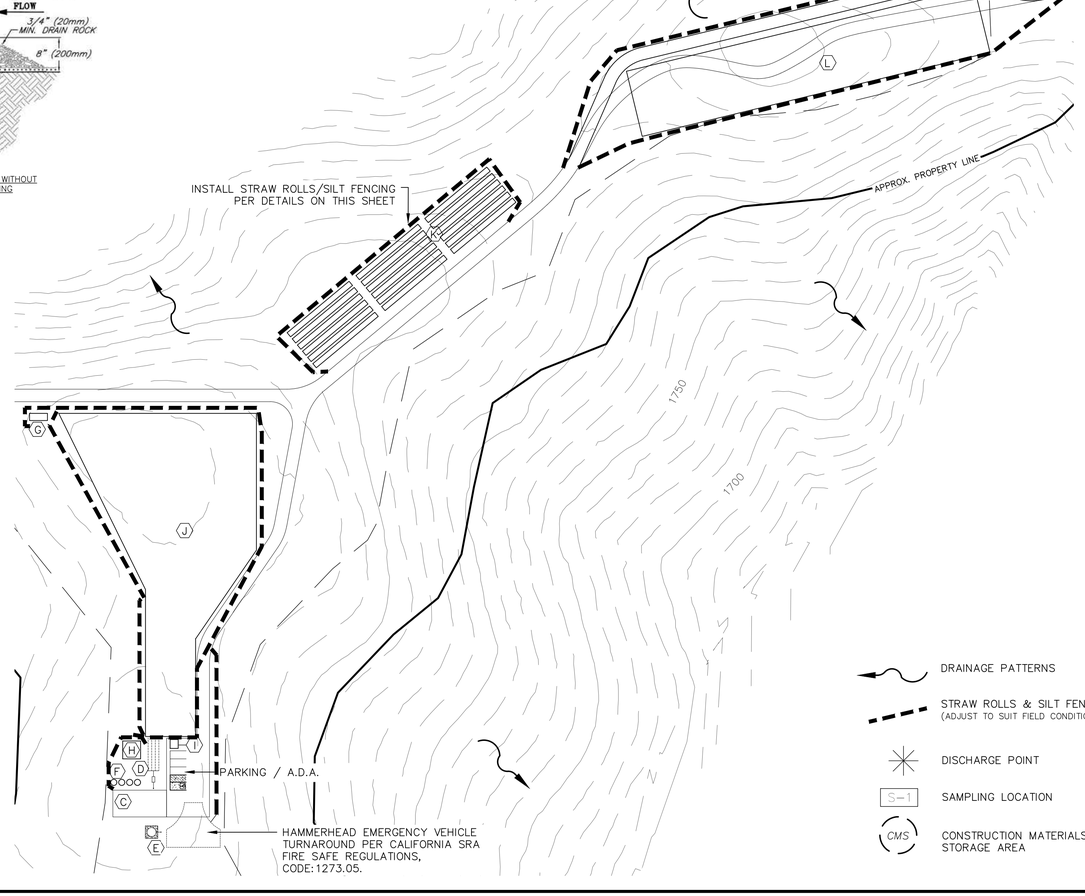
SILT FENCE DETAILS

NOTES:

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT & REPAIR FENCE AFTER EACH STORM EVENT & REMOVE SEDIMENT WHEN NECESSARY.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.







EROSION & SEDIMENT CONTROL PLAN

GRAPHIC SCALE

80 0 40 80

(IN FEET)
1 inch = 80 ft.

AKWAABA FARMS

11795 NORTH DR.
CLEARLAKE PARK, CA 95424
APN:010-019-15, 010-019-10

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	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 10'

(A) (E) GROUNDWATER WELL
LAT: 38.99555°
LONG: -122.68973°
BENEFICIAL USE: IRRIGATION

DRAINAGE PATTERNS

STRAW ROLLS & SILT FENCES (ADJUST TO SUIT FIELD CONDITIONS)

DISCHARGE POINT

S-1 SAMPLING LOCATION

CMS CONSTRUCTION MATERIALS STORAGE AREA

(C) (E) 30'x60' (1,800 SF) METAL BARN / DRYING & HARVEST STORAGE FACILITY

(D) (E) 1,250 GAL. SEPTIC TANK / LEACH FIELD

(E) (E) FOUNDATION WITH 8' DIAMETER 5,000 GALLON METAL FIRE WATER STORAGE TANK

(F) (E) FOUR 5,000 GALLON WATER STORAGE TANKS

(G) (E) 8'x20' (160 SF) PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(H) (E) 20'x20' COMPOST AREA

(I) (E) DESIGNATED REFUSE AREA

(J) (E) 43,560 SF OUTDOOR CULTIVATION / CANOPY AREA

(K) (E) EIGHTEEN 6'X90' (540 SF) MIXED-LIGHT CANOPY AREAS (LOW HOOPS)

(L) (E) 75'X400' (30,000 SF) OUTDOOR CULTIVATION / CANOPY AREA

Revisions:

REALM ENGINEERING
CIVIL ENGINEERING, SURVEYING & PLANNING
1767 MARKET STREET SUITE c
REDDING, CA. 96001
530-526-7493

PLANS PREPARED UNDER THE SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER
JASON B. VINE
No. 67800
EXP. 06/30/21
CIVIL
STATE OF CALIFORNIA

EROSION & SEDIMENT CONTROL PLAN

APNs:010-019-15, 010-019-10 & 010-019-14
11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

PLOTTED BY: ---
DATE PLOTTED: 6/01/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

SECTION – C

AIR QUALITY MANAGEMENT PLAN

Air Quality Management Plan

Purpose and Overview

Akwaaba, LLC (Akwaaba) is seeking a Major Use Permit from the County of Lake, for a proposed commercial cannabis cultivation operation at 11795 North Drive near Clearlake Park, California on Lake County APN 010-019-15 (Project Parcel). Akwaaba's proposed cultivation operation will be composed of two A-Type 3 "Medium Outdoor" cultivation areas and an A-Type 2B "Small Mixed-Light" cultivation area (with a total combined cultivation/canopy area of 83,280 ft^2), a 1,800 ft^2 Drying & Harvest Storage Facility (existing metal barn), and a 160 ft^2 Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage container). The proposed cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°.

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) after harvest. No significant odor impacts are anticipated from the proposed cultivation operation, due to the proposed odor control equipment and practices, and the generous setbacks provided from public roads, property lines, and neighboring residences/outdoor activity areas. The ventilation system of the proposed Drying & Harvest Storage Facility, in which the processing of raw cannabis plant material from the proposed cultivation areas will occur, will be equipped with carbon filters/air scrubbers to mitigate odors emanating from the building. Accurate records of repairs and replacements to the ventilation and odor mitigation system will be maintained and retained onsite for at least three years.

Monitoring and Maintenance

All air filtration and odor mitigation equipment of the proposed cultivation operation will be inspected quarterly to determine if maintenance or replacement is required. The carbon filters/air scrubbers of the proposed Drying & Harvest Storage Facility will be replaced each quarter. Akwaaba's managerial staff will log and maintain accurate records, repairs, and replacements to ventilation and odor mitigation systems, and those records will be maintained onsite for at least three years. Akwaaba's 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

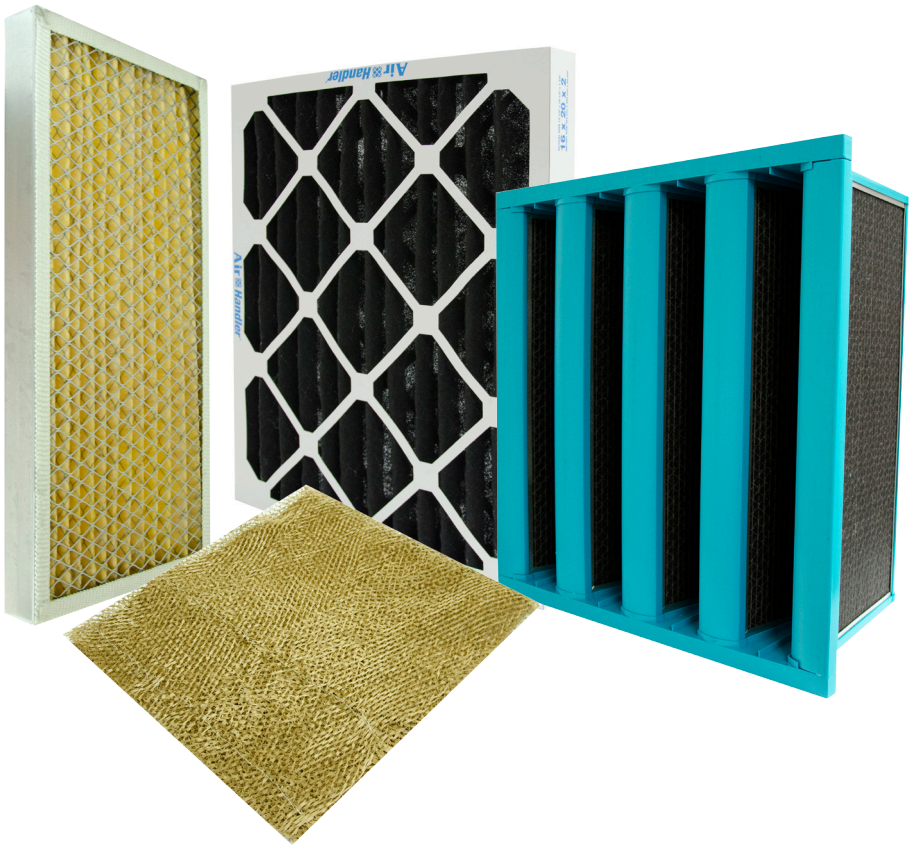
A Community Liaison/Emergency Contact will be made available to Lake County Officials/Staff and the Lake County Sheriff's Office at all times to address any needs or issues that may arise. The Community Liaison/Emergency Contact will be responsible for responding to odor complaints 24 hours a day, seven days a week, including holidays. Akwaaba 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. Akwaaba 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 take action to determine the source of the odor for which the complaint was received (cultivation area(s), Drying & Harvest Storage Facility, or other). Then mitigation methods will be immediately implemented to reduce/eliminate odors from emanating from the source. Depending on the source, mitigation measures include erecting windscreens, servicing and/or upgrading existing odor control filtration and ventilation systems, and/or the installation of additional air pollution/odor control equipment.

Community Liaison/Emergency Contact Information

The Community Liaison/Emergency Contact for the proposed cultivation operation is Ms. Angie DeCoux. Ms. DeCoux's cell phone number is (707) 601-1525, and her email address is AkwaabaFarms@gmail.com. There are no residences within 1,000 feet of the proposed Cultivation Operation. The owners of all properties within 250 feet of the Project Parcel will receive Ms. DeCoux's contact information before development of the proposed cultivation operation occurs.

SPECIALTY FILTRATION



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CARBON PLEAT

- Dual purpose: Filters particulate and absorbs odor
- Effective gas phase filter for intermittent gas applications
- Excellent filter to determine if carbon filters will help remove the odor
- Low pressure drop
- Disposable, easy installation, low service cost
- All filters wrapped and sealed in protective plastic bags to maintain filter viability

DESCRIPTION

The Air Handler Carbon Pleat filters are designed for the control of intermittent odor problems. Carbon pleated filters remove a wide range of odors and common indoor air pollutants. The advanced media has improved capability to absorb nuisance odors.

The fitler's construction consists of pleated, non-woven/ polyester media, impregnanted with an activated carbon. The pleated filter pack is enclosed in a heavy duty, moisture resistant (beverage board) die-cut frame that will not crack, warp or distort under normal operating conditions.

BENEFITS

In some light duty applications, the effectiveness of carbon pleated filters can equal many long-term solutions used for controlling odor problems. Carbon pleated filters can be used as a low cost method to verify the potential effectiveness of carbon for controlling odors. The carbon pleat receives an efficient removal of particulate MERV 6 per ASHRAE Standard 52.2-2007.

APPLICATIONS

The Air Handler Carbon Pleat is well suited for use where gas contaminants are low and/ or intermittent. Provides relief of odors created by cigarette smoke, industrial process, copier, pets and musty areas.

These filters are well suited for use in air make-up systems and re-circulation applications in office buildings, hospitals, airports, food courts and manufacturing facilities.

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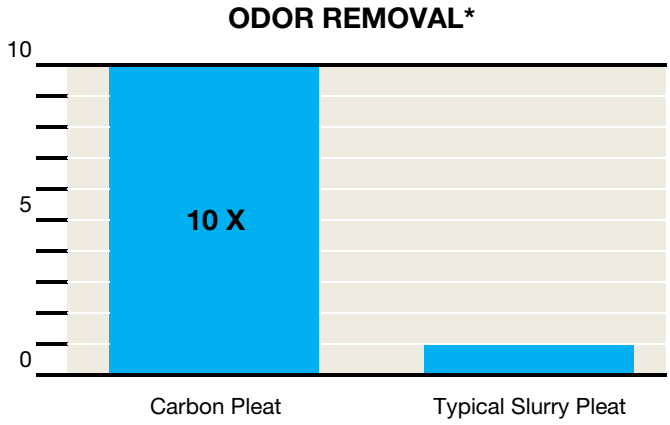
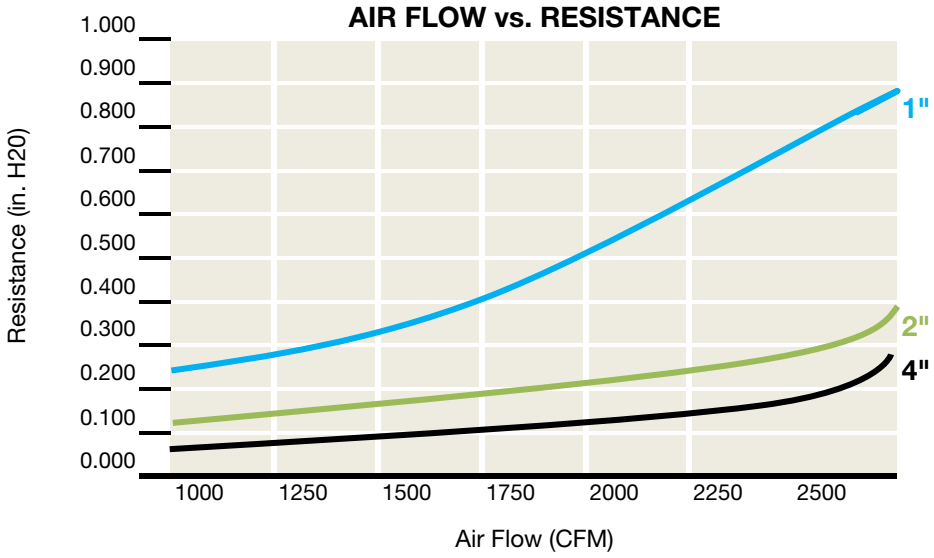
CARBON PLEAT

ODOR REMOVAL



*Amount of gas or odor removed at 50% break through given 880 PPM of Toluene @ 40 (media velocity)



*Results based on 24x24 filter

DIMENSIONS & PART #S

Nominal Size (in.)			Initial Resistance @ 250 FPM ("w.g.)	Initial Resistance @ 500 FPM ("w.g.)	Grainger #
H	W	D			
10	10	1	0.23	0.63	6B915
10	20	1	0.23	0.63	6B914
12	12	1	0.23	0.63	6B912
12	20	1	0.23	0.63	6B911
12	24	1	0.23	0.63	6B910
14	20	1	0.23	0.63	6B907
14	24	1	0.23	0.63	6B905
14	25	1	0.23	0.63	6B904
15	20	1	0.23	0.63	6B902
16	16	1	0.23	0.63	6B900
16	20	1	0.23	0.63	6B899
16	24	1	0.23	0.63	6B896
16	25	1	0.23	0.63	6B894
18	20	1	0.23	0.63	6B891
18	24	1	0.23	0.63	6B890
18	25	1	0.23	0.63	6B887
20	20	1	0.23	0.63	6B886
20	24	1	0.23	0.63	6B883
20	25	1	0.23	0.63	6B880
22	22	1	0.23	0.63	6B877
24	24	1	0.23	0.63	6B876
25	25	1	0.23	0.63	6B873
10	20	2	0.13	0.34	6B913
12	24	2	0.13	0.34	6B909
14	20	2	0.13	0.34	6B906
14	25	2	0.13	0.34	6B903
15	20	2	0.13	0.34	6B901
16	20	2	0.13	0.34	6B898
16	24	2	0.13	0.34	6B895
16	25	2	0.13	0.34	6B893
18	24	2	0.13	0.34	6B889
20	20	2	0.13	0.34	6B885
20	24	2	0.13	0.34	6B882
20	25	2	0.13	0.34	6B879
24	25	2	0.13	0.34	6B875
25	25	2	0.13	0.34	6B872
12	24	4	0.07	0.23	6B908
16	25	4	0.07	0.23	6B892
20	20	4	0.07	0.23	6B884
20	24	4	0.07	0.23	6B881
20	25	4	0.07	0.23	6B878
24	24	4	0.07	0.23	6B874

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CARBON HONEYCOMB

- Dual function: Odor absorption and particulate filtration
- Granular activated carbon to remove odorous and irritating gaseous contaminants
- Honeycomb construction ensures low air flow resistance
- Effective gas phase filtration in a compact design
- Individually wrapped in plastic

DESCRIPTION

These combination particulate and carbon filters are designed for the control of intermittent odor problems in re-circulated air applications.

Honeycomb style filters are designed to remove a wide range of pollutants. The 1" honeycomb filters are constructed using 0.5" honeycomb with a 0.5" pre-filter pad. The 2" honeycomb filters are constructed using 0.75" of honeycomb with a 1" pre-filter pleat offering medium efficiency.

BENEFITS

The activated carbon presented in the honeycomb filter acts like a porous sponge, collecting and retaining certain chemical compounds on its surface. The ability of activated carbon to absorb a gas or vapor is called its activity.

Carbon used in these filters has a minimum carbon tetrachloride (CCL4) activity of 60% which means it will absorb 60% of its own weight of CCL4 vapor under a standard set of conditions.

Max. Temp. - 150°F

APPLICATIONS

Dual purpose activated Carbon Honeycomb filters are designed to eliminate general odor problems where concentration levels are not extremely heavy. These combination filters offer medium particulate filtration along with an absorbent carbon for fume and odor removal.

The honeycomb style filters are used extensively in office buildings, hospitals, airports, food courts and manufacturing facilities.

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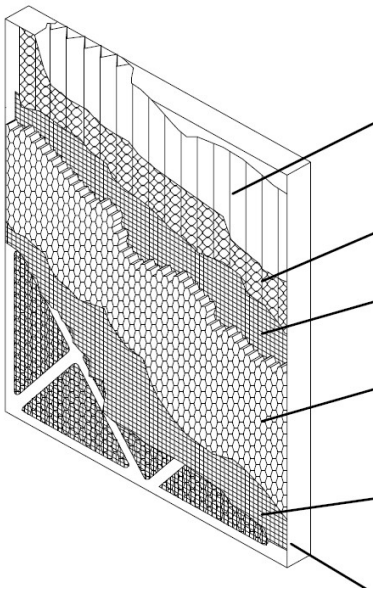
CARBON HONEYCOMB

ODORS REMOVED

- Cooking Odors
- Sewer Odors
- Gasoline Fumes
- Environmental Tobacco Smoke
- Most Volatile Organic Compound (VOC) Odors

FILTER ADVANCEMENTS



*NOTE: for 1" version a poly pad and no expanded metal replace the pleat media

DIMENSIONS & PART #S

0.5" POLY PRE-FILTER

50% Carbon Fill (with Pre-Filter)			
H	W	D	Grainger #
10	10	1	6B869
10	20	1	6B868
12	12	1	6B866
12	20	1	6B865
12	24	1	6W735
14	20	1	6B864
14	24	1	6B862
14	25	1	6B861
15	20	1	6B859
16	16	1	6B857
16	20	1	6W736
16	24	1	6B856
16	25	1	6W737
18	20	1	6B854
18	24	1	6B853
18	25	1	6B851
20	20	1	6W738
20	24	1	6B850
20	25	1	6W739
22	22	1	6B848
24	24	1	6W740
25	25	1	6B847

1" PLEATED PRE-FILTER

50% Carbon Fill (with Pre-Filter)			
H	W	D	Grainger #
10	20	2	6B867
12	24	2	6W741
14	20	2	6B863
14	25	2	6B860
15	20	2	6B858
16	20	2	6W742
16	24	2	6B855
16	25	2	6W743
18	24	2	6B852
20	20	2	6W744
20	24	2	6B849
20	25	2	6W754
24	24	2	6W746
25	25	2	6B846

0.5" POLY PRE-FILTER

1" PLEATED PREFILTER

H	W	D	50% Carbon Fill (No Pre-Filter) Grainger #	100% Carbon Fill (No Pre-Filter) Grainger #	100% Carbon Fill (with Pre-Filter) Grainger #
10	20	1	2JTW5	2JUA5	2JTR1
12	24	1	2JTW7	2JTR3	2JUT6
14	20	1	2JTW9	2JUA7	2JTR5
14	25	1	2JTX2	2JUA9	2JTR7
15	20	1	2JTX4	2JUC2	2JTR9
16	20	1	2JTX6	2JUC4	2JTT2
16	25	1	2JTX8	2JUC6	2JTT4
20	20	1	2JTY7	2JUC8	2JTT6
20	25	1	2JTY1	2JUD1	2JTT8
24	24	1	2JTY3	2GJD5	2JTU1
25	25	1	2JTY5	2JUD3	2JTU3
12	24	2	2GJD9	2JUD5	2JTU5
16	20	2	2JTY9	2JUD7	2JTU7
16	25	2	2JTZ2	2JUD9	2JTU9
18	24	2	2JTZ4	2JUF2	2JTV2
20	20	2	2JTZ6	2JUF4	2JTV4
20	24	2	2JTZ8	2JUF6	2JTV6
20	25	2	2JUA1	2JUF8	2JTV8
24	24	2	2GJE4	2JTD2	2JTW1
25	25	2	2JUA3	2JUH1	2JTW3

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FP GAS PHASE

- Improve indoor air quality through effective removal of contaminants, odors and gases
- Available with activated carbon for adsorption, potassium permanganate for chemisorption, or a 50/50 blend of both
- 100% fill for maximum single pass efficiency and longer service life

DESCRIPTION

The Air Handler FP Gas Phase filter is designed to remove a wide range of odors and common indoor air pollutants at high air flows. Constructed of heavy-duty galvanized steel and plastic, with 3/4" honeycomb media packs, the FP Gas Phase filter can be willed with one of two media or a blend of the two to fit any application.

BENEFITS

The FP Gas Phase filter provides effective odor removal with just a moderate increase in pressure drop.

Using 60% CTC activated carbon, potassium permanganate on zeolite, or a blend of the two, the FP Gas Phase filter removes a broad spectrum of compounds including Volatile Organic Compounds (VOC's), vehicle exhaust, sulfur compounds, ammonia and formaldehyde.

APPLICATIONS

These filters are used in commercial and industrial applications when odors and gases need to be removed to protect people, processes, equipment or artifacts.

With a standard header, it can be used in existing HVAC systems, easily retrofitted or specified for new construction. The dual direction design allows for a front or reverse mount installation, without a reduction in filter performance.

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FP GAS PHASE

DIMENSIONS & PERFORMANCE DATA

ACTIVATED CARBON (100%)			
Contaminants Removed by Activated Carbon			
Acetone	Gasoline	Naphtha	Perchloroethylene
Nitrobenzene	Pyridine	Chlorobenzene	Methyl Chloroform
Chloroform	Paint Fumes	Toluene	Methyl Ethyl Ketone
Benzene	Ozone	Styrene	Methylene Chloride

H	W	D	Initial Resistance @ 500 FPM ("w.g.)	Media Weight	Shipping Weight	Grainger #
12	24	12	0.51	11	16	2GGY7
20	24	12	0.51	20	27	2GGZ2
24	24	12	0.51	32	32	2GGV7

POTASSIUM PERMANGANATE (100%)			
Contaminants Removed by Potassium Permanganate Impregnated Media			
Acetylene	Amines	Mercaptans	Nitrogen Oxides
Alcohols	Ammonia	Sulfur Oxides	

H	W	D	Initial Resistance @ 500 FPM ("w.g.)	Media Weight	Shipping Weight	Grainger #
12	24	12	0.36	14	19	2GHA1
20	24	12	0.36	26	33	2GHA5
24	24	12	0.36	32	40	2GHA9

ACTIVATED CARBON / POTASSIUM PERMANGANATE BLEND (100%)			
Contaminants Removed by Activated Carbon / Potassium Permanganate Blend			
Acetic Acid	Cooking Odors	Butyric Acid	Chlorine Dioxide
Urea	Chlorine	Isoproanol	Sodium Thiosulfate
Trichloroethylene	Auto Exhaust	Tobacco Smoke	Cleaning Compounds
Animal Odors	Diesel Fumes		

H	W	D	Initial Resistance @ 500 FPM ("w.g.)	Media Weight	Shipping Weight	Grainger #
12	24	12	0.36	13	18	2GGY3
20	24	12	0.36	23	30	2GGZ6
24	24	12	0.36	28	37	2GGX8

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NESHAP / EPA METHOD 319

The EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) mandated that a new filtration test method be established to determine the efficiency of a filter to remove hazardous pollutants from paint overspray. The EPA guidelines went into effect on September 1, 1998 and continue to set the standard for paint overspray collection systems today. The test method to determine compliance is Test Method 319.

PREFERRED 1ST STAGE

PAINT FILTER PAD

Paint Filter Pad, Polyester media with ECXL style. The media is multilayered, with finer fiber structures downstream in order to enhance depth loading capacity. The multiple layers will avoid face loading as it captures overspray paint with a downstream tackifier.

APPROVED 2-STAGE SYSTEM

2 POCKET BAG FILTER

The recommended 2-stage system consists of a prefilter paint arrestor pad followed by a two pocket bag filter. This two pocket bag filter exceeds the approved EPA Method 319 testing requirements with or without the prefilter pad. The 2-pocket filter is self-sealing and has self supporting pockets. The Media construction is a multi-layered gradient density structure to maximize paint collection and retention.

APPROVED 3-STAGE SYSTEM

5 POCKET BAG FILTER

The recommended 3-stage system consists of a prefilter pad, a 2 pocket filter bag, followed by the EPA Method 319 approved 5 pocket bag filter. The 5 pocket bag filter is self sealing and exceeds the testing requirements with or without the pre-filter pad and two pocket filter bag. The media construction is multi-layered with the downstream layer consisting of a high efficiency synthetic media.

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NESHAP / EPA METHOD 319

DIMENSIONS & PART #S

Nominal Size (in.)			2-Pocket Bag
H	W	D	Grainger #
20	20	15	4YKR4
20	25	15	4YKR5
24	24	15	4YKR6

Nominal Size (in.)			5-Pocket Bag
H	W	D	Grainger #
20	20	12	4YKR1
20	25	12	4YKR2
24	24	12	4YKR3

PERFORMANCE COMPARISON 2-STAGE FILTER

Liquid Challenge - Oleic Acid			
Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>2.2um	>10%	55.40%	41%
>4.1um	>50%	81.30%	87%
>5.7um	>90%	92.40%	96%

Solid Challenge - KCl			
Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>2.2um	>10%	55.40%	41%
>4.1um	>50%	81.30%	87%
>5.7um	>90%	92.40%	96%

Initial dP @ 120 FPM Air Handler - 0.045”

Initial dP @ 120 FPM ATI - 0.13”

PERFORMANCE COMPARISON 3-STAGE FILTER

Liquid Challenge - Oleic Acid			
Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>0.42um	>65%	83.50%	75%
>1.0um	>80%	95.00%	87%
>2.0um	>95%	99.10%	99%

Solid Challenge - KCl			
Particle Size	EPA 319 Requirement	Air Handler Actual	ATI Actual
>0.70um	>75%	93.80%	88%
>1.1um	>85%	97.80%	92%
>2.5um	>95%	99.50%	98%

Initial dP @ 120 FPM Air Handler - 0.22”

Initial dP @ 120 FPM ATI - 0.28”

The lower initial dP results in longer life and lower operating costs.

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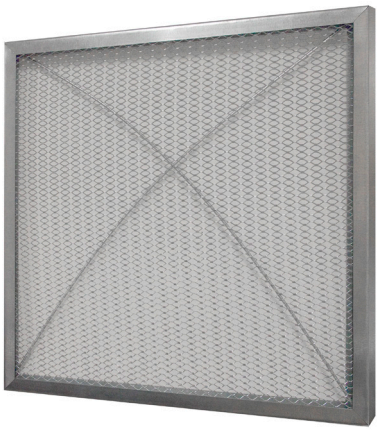
FILTER ACCESSORIES

PAD HOLDING FRAMES

Air Handler Pad Holding Frames are reusable. Permanent pad holding frames are constructed around a 24-gauge steel frame. The downstream side is 16-gauge, 1" x 1" welded wire. A hinged gate makes changing the pad easy, quick and safe.



DIMENSIONS & PART #S

H	W	D	Grainger #
10	10	1	6B730
10	20	1	6B729
12	12	1	5W082
12	20	1	6B727
12	24	1	5W081
14	20	1	6B725
14	25	1	6B723
15	20	1	6B721
16	16	1	6B719
16	20	1	5W080
16	24	1	6B718
16	25	1	5W079
18	18	1	5W078
18	20	1	6B716
18	24	1	5W077
18	25	1	6B714
20	20	1	5W076
20	24	1	6B713

H	W	D	Grainger #
20	25	1	5W075
22	22	1	5W074
24	24	1	5W073
25	25	1	5W083
10	20	2	6B728
12	24	2	6B726
14	20	2	6B724
14	25	2	6B722
15	20	2	6B720
16	20	2	5W072
16	24	2	6B717
16	25	2	5W071
18	24	2	6B715
20	20	2	5W070
20	24	2	6B712
20	25	2	5W069
24	24	2	6B711
25	25	2	6B710

AIR FILTER HOLDING FRAMES

Air Handler Filter Holding Frames are used to construct "built-from-scratch" filter banks for air handling systems. They may be bolted or riveted together utilizing matching holes on frames. Combined with a variety of holding clips, they can accept most 1", 2", 4", 6" and 12" supported filters and non-supporting pocket filters.

H	W	D	Case Qty.	Grainger #
24	24	3	8	6B731
20	24	3	8	6B732
12	24	3	8	6B733

For our complete line of filters, visit grainger.com/airhandler

Find it at Grainger.

Air Handler®

Clear the air. Ease your mind.

FILTER ACCESSORIES

GASKETING FOR AIR FILTERS

Air Handler Filter Gasketing consists of black neoprene foam construction with adhesive backing. Excellent resistant to chemicals, maximum temperature of 220°F. Used to seal filters and avoid air by-pass.

DIMENSIONS & PART #S

W	L	D	Grainger #
13/16"	75'	1/8"	6C523
13/16"	50'	1/4"	6C524

FILTER HOLDING CLIPS

Air Handler Filter Holding Clips keep all types of air filters firmly fastened within frames. Install using hand tools only - no rivets or bolts necessary. See chart below to match air filter to proper clip.

All pigtail clips are galvanized steel and all spring clips are stainless steel.

Case quantity equals 12

DIMENSIONS & PART #S

Clip Style	To Hold	No. Required	Grainger #
1" Pigtail	1" Header	4	5E904
2" Pigtail	2" Filter	2	5E905
3" Pigtail	2" Prefilter to a filter w/ header	4	5E906
4" Pigtail	4" Filter	4	5E907
6" Spring	6" Rigid or Box	4	5E908
12" Spring	12" Rigid or Box	4	5E909

Pigtail Clip

Spring Clip

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Air Handler®

Clear the air. Ease your mind.

SECTION – D

CULTURAL RESOURCES EVALUATION (CONFIDENTIAL)

SECTION – E

BIOLOGICAL RESOURCES ASSESSMENT

BIOLOGICAL RESOURCES ASSESSMENT FOR THE AKWAABA LLC CANNABIS CULTIVATION OPERATION AT 11795 NORTH DRIVE, CLEARLAKE, CALIFORNIA

Prepared: September 30, 2020
Revised: December 27, 2020

Prepared by:

Tim Nosal, MS and G.O. Graening, PhD
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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted a biological resources assessment for a proposed cannabis cultivation operation on a 97-acre property (2 parcels: APNs 010-019-15 and -10) at 11795 North Drive, Clearlake, in Lake County, California. For this assessment, the Project Area was defined as the entire 97-acre property, which was also the boundary of the Study Area. The Study Area is defined to identify biological resources adjacent to the Project Area, and is the area subject to potential indirect effects from Project implementation.

Akwaaba, LLC ("Akwaaba") is seeking a Major Use Permit from the County of Lake for a proposed Outdoor Commercial Cannabis Cultivation Operation on the 88-acre parcel (APN 010-019-15; Project Parcel). Akwaaba's proposed cultivation operation will be composed of four (4) A-Type 3 Medium Outdoor cultivation/canopy areas, with a total combined cultivation/canopy area of 174,240 square feet. Additionally, Akwaaba is applying for an Early Activation of Use Permit for 50,000 square feet of the total proposed 174,240 square feet cultivation/canopy area. The total cultivation area of the proposed cannabis cultivation operation, including the combined cultivation/canopy areas, a 1,440 square feet Metal Barn (proposed Drying & Harvest Storage Facility), and a 160 square foot Metal Shipping/Storage Container (proposed Pesticide & Agricultural Chemicals Storage Area), is 175,840 square feet.

The Project Property has been improved with a metal barn, and a groundwater well. A private gravel and native soil surfaced access road winds through the Project Parcel, connecting North Drive to Crestview Drive through the Project Parcel. Metal gates control access to the private gravel and native soil surfaced access road from North Drive and Crestview Drive. There are no watercourses, wetlands, or watercourse crossings on the Project Parcel. The existing onsite groundwater well (38.99555°, -122.68973°) will serve as the sole water source for the proposed cultivation operation.

Development of the proposed cultivation operation will occur in three phases. The first phase will occur in 2021 under an Early Activation of Use Permit, and will not involve any construction, grading, or vegetation removal. The second and third phases will occur in 2022 and 2023 (respectively), after a Major Use Permit for Commercial Cannabis Cultivation has been obtained, and will require some vegetation removal, including ~30 mature blue oak trees (+6" DBH). A 30-acre No Development Zone will be established in the northern half of the Project Parcel, to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation. Five oak trees will be planted and cared for until established, within the No Development Zone for each oak tree removed, to mitigate for their loss within the area of the proposed cultivation operation. Additionally, a special-status plant, Konocti Manzanita, has been identified in the western half of the Project Parcel. No disturbance/development is proposed within 500 feet of the Konocti Manzanita, and a 50- foot buffer will be marked and maintained around the Konocti Manzanita.

The cultivation season for Akwaaba's proposed outdoor cultivation operation will begin on April 15th and end on November 15th of each year. The proposed outdoor cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. Locking metal gates will control access to the proposed cultivation/canopy areas, and the metal gates will be locked whenever Akwaaba's cultivation personnel are not present. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All cannabis waste generated from the proposed cultivation operation will be chipped and composted onsite. Composted cannabis waste will be stored in the designated composting area, until it is incorporated into the soilless growing medium of the cultivation areas, as an organic soil amendment. All agricultural chemicals (fertilizers,

amendments, pesticides, and petroleum products) will be stored within a proposed 20-square foot metal shipping/storage container (Pesticide & Agricultural Chemicals Storage Area).

Variance – Phase III

The third phase of proposed site/project development is the establishment of 44,240 square feet of outdoor cultivation/canopy area in the western half of the Project Parcel, within 1,000 feet of a Substandard Older Subdivision Combining District (Cannabis Exclusion Zone). To use this area, Lake County must grant a variance. Akwaaba will submit a Variance Application as soon as a Lake County Planner has been assigned to their Major Use Permit Application.

Project Timeline

If Akwaaba is able to obtain an Early Activation of Use Permit for the 50,000 square feet of outdoor cultivation/canopy area planned under Phase I prior to April 1st, 2021, then they will begin preparing for planting on April 15th, 2021 (after the appropriate State Cultivation Licenses have been obtained).

1.2. PURPOSE AND SCOPE OF ASSESSMENT

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

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

- Compile all readily-available historical biological resource information about the Study Area;
- Spatially query state and federal databases for any occurrences of special-status species or habitats within the Study Area and vicinity;
- Perform a reconnaissance-level field survey of the Study Area, including photographic documentation;
- Inventory all flora and fauna observed during the field survey;
- Characterize and map the habitat types present within the Study Area, including any potentially-jurisdictional water resources;
- Evaluate the likelihood for the occurrence of any special-status species;
- Assess the potential for the Project to adversely impact any sensitive biological resources;
- Recommend mitigation measures designed to avoid or minimize Project-related impacts; and
- Prepare and submit a report summarizing all of the above tasks.

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

1.3. REGULATORY SETTING

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

1.3.1. Special-status Species Regulations

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

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

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

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

California Environmental Quality Act (CEQA) (Public Resources Code §15380) defines "rare" in a broader sense than the definitions of threatened, endangered, or fully protected. Under the CEQA definition, CDFW can request additional consideration of species not otherwise protected. CEQA requires that the impacts of a project upon environmental resources must be analyzed and assessed using criteria determined by the lead agency. Sensitive species that would qualify for listing but are not currently listed

may be afforded protection under CEQA. The CEQA Guidelines (§15065) require that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines (§15380) provide for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 are typically considered rare under CEQA. California "Species of Special Concern" is a category conferred by CDFW on those species that are indicators of regional habitat changes or are considered potential future protected species. While they do not have statutory protection, Species of Special Concern are typically considered rare under CEQA and thereby warrant specific protection measures.

1.3.2. Water Resource Protection

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

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

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

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

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

Streambed Alteration Agreement. Projects that require a Streambed Alteration Agreement may also require a CWA 404 Section Permit and/or CWA Section 401 Water Quality Certification.

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

The State Water Resources Control Board's Order WQ 2019-0007-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities protects receiving water bodies from water-quality impacts associated with cannabis cultivation using a combination of Best Management Practices, buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

1.3.3. Tree Protection

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

Lake County does not have a specific ordinance protecting native trees. However, under the Cannabis Ordinance 3084, Section 4, Subsection iii) Prohibited Activities (a) Tree Removal, Lake County restricts tree removal as follows:

> *"The removal of any commercial tree species as defined by the California Code of Regulations section 895.1, Commercial Species for the Coast Forest District and Northern Forest District, and the removal of any true oak species (Quercus species) or Tan Oak (Notholithocarpus species) for the purpose of developing a cannabis cultivation site should be avoided and minimized. This shall not include the pruning of any such tree species for the health of the tree or the removal of such trees if necessary for safety or disease concerns."*

During the permitting process, Lake County requires mitigation for the removal of protected trees; typical mitigation is tree replacement at a ratio of 2:1 or 3:1.

2. ENVIRONMENTAL SETTING

The Study Area is located within the Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in Climate Zone 7 - California's Gray Pine Belt, defined by hot summers and mild but pronounced winters without severe winter cold or high humidity (Sunset, 2020). The Study Area is located just west of the City of Clearlake, along the spine of Sulphur Bank Ridge, and is accessed via North Drive and Crestview Drive. The topography of the Study Area consists of a ridge top with moderate to steeply sloping sides. The elevation ranges from approximately 1,580 feet to 1,890 feet above mean sea level. Drainage runs north, south and east, and eventually flows into either Clear Lake or Borax Lake. Prior to the establishment of this cultivation operation, land uses were open space. The surrounding land uses are private estates and open space.

3. METHODOLOGY

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

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

- Any readily-available previous biological resource studies pertaining to the Study Area or vicinity
- Aerial photography of the Study Area (current and historical)
- United States Geologic Service 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- USFWS National Wetland Inventory
- USDA Natural Resources Conservation Service soil survey maps
- California Natural Diversity Database (CNDDB), electronically updated monthly by subscription
- USFWS species list (IPaC Trust Resources Report).

3.2. FIELD SURVEY

Consulting biologist Tim Nosal, MS. conducted a reconnaissance-level field survey on September 15, 2020. Weather conditions were warm and sunny with a light breeze. A variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDB within the vicinity of the Study Area and those species on the USFWS species list (Appendix 1).

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

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

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

3.3. MAPPING AND OTHER ANALYSES

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

4. RESULTS

4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

All plants detected during the field survey of the Study Area are listed in Appendix 2. The following animals were detected within the Study Area during the field survey: northwestern fence lizard (*Sceloporus occidentalis occidentalis*); western sagebrush lizard (*Sceloporus graciosus gracilis*); Botta's pocket gopher (*Thomomys bottae*); Columbian black-tailed deer (*Odocoileus hemionus columbianus*); coyote (*Canis latrans*); gray fox (*Urocyon cinereoargenteus*); raccoon (*Procyon lotor*); western gray squirrel (*Sciurus griseus*); Anna's hummingbird (*Calypte anna*); black phoebe (*Sayornis nigricans*); California quail (*Callipepla californica*); California scrub jay (*Aphelocoma californica*); California towhee (*Melozone crissalis*); mourning dove (*Zenaida macroura*); northern flicker (*Colaptes auratus*); Nuttall's woodpecker (*Picoides nuttallii*); oak titmouse (*Baeolophus inornatus*); red-winged blackbird (*Agelaius phoeniceus*); turkey vulture (*Cathartes aura*); western bluebird (*Sialia mexicanus*); white-breasted nuthatch (*Sitta carolinensis*); wild turkey (*Meleagris gallopavo*); and other common songbirds.

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITAT TYPES

4.2.1. Terrestrial Vegetation Communities

The Study Area contains 1 terrestrial vegetation community: Blue Oak Woodland. This vegetation community is discussed here and is delineated in the Exhibits.

> **Blue Oak Woodland:** One habitat is found within the Study Area: blue oak woodland. Although the canopy density and composition of the woodland changes with the slope and aspect, the dominant tree across the landscape is blue oak (*Quercus douglasii*). Other trees found within the canopy include gray pine (*Pinus sabiniana*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*) and oracle oak (*Quercus* x *morehus*). The oracle oak is a hybrid between the California black oak and the interior live oak, and can be found along the ridge top near the center of the parcel. Several shrubs are common within the understory, including common manzanita (*Arctostaphylos manzanita* spp. *manzanita*), poison-oak (*Toxicodendron diversilobum*) and birch leaf mountain mahogany (*Cercocarpus betuloides*). The herbaceous layer within the oak woodland consists of a variety of grasses and herbs, including wild oats (*Avena* spp.), Pacific fescue (*Festuca microstachys*), bromes (*Bromus* spp.), California melic grass (*Melica californica*), blue wild rye (*Elymus glaucus*), whiskerbrush (*Leptosiphon ciliatus*) and miniature lupine (*Lupinus bicolor*). This vegetation type can be classified as the Holland Type "Blue Oak Woodland" or as "*Quercus douglasii-Quercus wislizeni-Pinus sabiniana*" (CDFW 2020).

4.2.2. Wildlife Habitat Types

Wildlife habitat types were classified using CDFW's Wildlife Habitat Relationship System. The Study Area contains the following wildlife habitat type: Blue Oak Woodland.

4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Project Area or the surrounding Study Area. The CNDDB reported no special-status habitats within the Project Area or surrounding Study Area. The CNDDB reported the following special-status habitats in a 10-mile radius outside of the Study Area: Clear Lake Drainage Resident Trout Stream; Clear Lake Drainage Cyprinid/Catostomid Stream; Clear Lake Drainage Seasonal Lakefish Spawning Stream; Northern Basalt Flow Vernal Pool; Northern Volcanic Ash Vernal Pool; Coastal and Valley Freshwater Marsh and Great Valley Mixed Riparian Forest.

No special-status habitats were detected within the Project Area or surrounding Study Area during the field survey.

4.2.4. Habitat Plans and Wildlife Corridors

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

No designated wildlife corridors exist within or near the Study Area. No fishery resources exist in or near the Study Area; the nearest is Clear Lake. Although there are no designated wildlife corridors, the open space within the Study Area allows for unrestricted animal movement. The Study Area is not located within any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

4.3. LISTED SPECIES AND OTHER SPECIAL-STATUS SPECIES

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

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

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

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

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

The CNDDB was queried and any reported occurrences of special-status species were plotted in relation to the Study Area boundary using GIS software (see exhibits).

The CNDDB reported the following special-status species occurrences within the Study Area: eel-grass pondweed (*Potamogeton zosteriformis*); watershield (*Brasenia schreberi*) and Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*). The CNDDB has mapped occurrences of these species within the Study Area; however, the exact location of these occurrences is not known. Suitable aquatic habitat for eel-grass pondweed and watershield is not found within the Study Area. Suitable volcanic soil habitat for Konocti manzanita is not found within the Study Area; however, several plants along the ridgetop have been tentatively identified as this species.

Within a 10-mile buffer of the Study Area boundary, the CNDDB reported several special-status species occurrences, summarized in the following table.

A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1). This list is generated using a regional and/or watershed approach and does not necessarily indicate that the Study Area provides suitable habitat. The following listed species should be considered in the impact assessment:

- Northern Spotted Owl (*Strix occidentalis caurina*) Threatened
- Yellow-billed Cuckoo (*Coccyzus americanus*) Threatened
- California Red-legged Frog (*Rana draytonii*) Threatened
- Delta Smelt (*Hypomesus transpacificus*) Threatened
- Burke's Goldfields (*Lasthenia burkei*) Endangered
- Few-flowered Navarretia (*Navarretia leucocephala ssp. pauciflora)* Endangered
- Lake County Stonecrop (*Parvisedum leiocarpum)* Endangered
- Loch Lomond Coyote Thistle (*Eryngium constancei)* Endangered
- Many-flowered Navarretia (*Navarretia leucocephala ssp. plieantha)* Endangered
- Slender Orcutt Grass (*Orcuttia tenuis*) Threatened

Migratory birds should also be considered in the impact assessment.

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

Common Name Scientific Name	Status*	General Habitat**	Microhabitat**
Red-bellied newt *Taricha rivularis*	CSSC	Found in coastal woodlands and redwood forests along the coast of Northern California	A stream or river dweller. Larvae retreat into vegetation and under stones during the day.
California giant salamander *Dicamptodon ensatus*	CSSC	Mendocino and Lake Counties south to Santa Cruz and Santa Clara Counties.	Wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.
Foothill yellow-legged frog *Rana boylii*	CCT/CSSC	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats.	Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.
Osprey *Pandion haliaetus*	CWL	Ocean shore, bays, fresh-water lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
Golden eagle *Aquila chrysaetos*	CFP/CWL	Rolling foothills, mountain areas, sage-juniper flats, & desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
Prairie falcon *Falco mexicanus*	CWL	Inhabits dry, open terrain, either level or hilly.	Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT/CE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.
Purple martin *Progne subis*	CSSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, & Monterey pine.	Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.
Clear Lake hitch *Lavinia exilicauda chi*	CT	Found only in clear lake, lake co, and associated ponds. Spawns in streams flowing into clear lake.	Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in the vegetation.
Sacramento perch *Archoplites interruptus*	CSSC	Historically found in the sloughs, slow-moving rivers, and lakes of the central valley.	Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.
Long-eared myotis *Myotis evotis*	CSSC	Found in all brush, woodland & forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands & forests.	Nursery colonies in buildings, crevices, spaces under bark, & snags. Caves used primarily as night roosts.
Fringed myotis *Myotis thysanodes*	CSSC	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer.	Uses caves, mines, buildings or crevices for maternity colonies and roosts.
Hoary bat *Lasiurus cinereus*	CSSC	Prefers open habitats or habitat mosaics, with access to trees for cover & open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Western red bat *Lasiurus blossevillii*	CSSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests.	Prefers habitat edges & mosaics with trees that are protected from above & open below with open areas for foraging.
Townsend's big-eared bat *Corynorhinus townsendii*	CSSC	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls & ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Pallid bat *Antrozous pallidus*	CSSC	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
North American porcupine *Erethizon dorsatum*	CSSC		
Western pond turtle *Emys marmorata*	CSSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams & irrigation ditches, usually with aquatic vegetation, be	Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying
An isopod *Calasellus californicus*	CSSC	Known from Lake, Napa, Marin, Santa Cruz and Santa Clara counties.	
Brownish dubiraphian riffle beetle *Dubiraphia brunnescens*	CSSC	Aquatic; known only from the NE shore of Clear Lake, Lake County.	Inhabits exposed, wave-washed willow roots.
Ricksecker's water scavenger beetle	CSSC	Aquatic.	

Common Name Scientific Name	Status*	General Habitat**	Microhabitat**
*Hydrochara ricksecker*i			
Obscure bumble bee *Bombus caliginosus*	CSSC	Open grassy coastal prairies and Coast Range meadows. Nesting occurs underground as well as above ground in abandoned bird nests.	Food plants include *Ceanothus, Cirsium, Clarkia, Keckiella, Lathyrus, Lotus, Lupinus, Rhododendron, Rubus, Trifolium,* and *Vaccinium.*
Borax Lake cuckoo wasp *Hedychridium milleri*	CSSC	Endemic to central California. Only collection is from the type locality.	External parasite of wasp and bee larva.
Clear Lake pyrg *Pyrgulopsis ventricosa*	CSSC	Restricted to Seigler Creek drainage in the south end of the Clear Lake Basin.	Freshwater.
Toren's grimmia *Grimmia torenii*	1B.3	Cismontane woodland, lower montane coniferous forest, chaparral.	Openings, rocky, boulder and rock walls, carbonate, volcanic. 325-1160 m.
Loch Lomond button-celery *Eryngium constancei*	FE/CE/1B.1	Vernal pools.	Volcanic ash flow vernal pools. 460-855 m.
Small-flowered calycadenia *Calycadenia micrantha*	1B.2	Chaparral, valley and foothill grassland, meadows and seeps.	Rocky talus or scree; sparsely vegetated areas. Occasionally on roadsides; sometimes on serpentine. 5-1500 m.
Pappose tarplant *Centromadia parryi ssp. parryi*	1B.2	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland.	Vernally mesic, often alkaline sites. 2-420m.
Burke's goldfields *Lasthenia burkei*	FE/CE/1B.1	Vernal pools, meadows and seeps.	Most often in vernal pools and swales. 15-600 m.
Colusa layia *Layia septentrionalis*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 145-1095m.
Hall's harmonia *Harmonia hallii*	1B.2	Chaparral.	Serpentine hills and ridges. Open, rocky areas within chaparral. 500-900 m.
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Cismontane woodland, valley and foothill grassland.	50-500m.
Serpentine cryptantha *Cryptantha dissita*	1B.2	Chaparral.	Serpentine outcrops. 330-730m.
Watershield *Brasenia schreberi*	2B.3	Freshwater marshes and swamps.	Aquatic from water bodies both natural and artificial in California.
Cascade downingia *Downingia willamettensis*	2B.2	Cismontane woodland, valley and foothill grasslands.	Lake margins and vernal pools.
Legenere *Legenere limosa*	1B.1	Vernal pools.	In beds of vernal pools. 1-880 m.
Oval-leaved viburnum *Viburnum ellipticum*	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	215-1400 m.
Lake County stonecrop *Sedella leiocarpa*	FE/CE/1B.1	Valley and foothill grassland, vernal pools, cismontane woodland.	Level areas that are seasonally wet and dry out in late spring; substrate usually of volcanic origin. 365-790 m.
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	1B.1	Chaparral, lower montane coniferous forest.	Rocky, serpentine sites. Slopes and ridges. 450-1000 m.
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 m.
Jepson's milk-vetch *Astragalus rattanii var. jepsonianus*	1B.2	Cismontane woodland, valley and foothill grassland, chaparral.	Commonly on serpentine in grassland or openings in chaparral. 180-1000 m.
Anthony Peak lupine *Lupinus antoninus*	1B.2	Upper montane coniferous forest, lower montane coniferous forest.	Open areas with surrounding forest; rocky sites. 1220-2285 m.
Napa bluecurls *Trichostema ruygtii*	1B.2	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest.	Often in open, sunny areas. Also has been found in vernal pools. 30-590m.
Woolly meadowfoam *Limnanthes floccosa ssp. floccosa*	4.2	Chapparal, cismontane woodland, valley and foothill grassland, vernal pools.	Vernally wet areas, ditches, and ponds. 60-1335 m.
Glandular western flax *Hesperolinon adenophyllum*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soils; generally found in serpentine chaparral. 150-1315 m.
Two-carpellate western flax *Hesperolinon bicarpellatum*	1B.2	Serpentine chaparral.	Serpentine barrens at edge of chaparral. 60-1005 m.

Common Name Scientific Name	Status*	General Habitat**	Microhabitat**
Marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	1B.2	Meadows and seeps, riparian forest.	Wet soil of streambanks, meadows. 1100-2300 m.
Brandegee's eriastrum *Eriastrum brandegeeae*	1B.1	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 425-840 m.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	Vernal pools and swales; adobe or alkaline soils. 5-1740 m.
Few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE/CT/1B.1	Vernal pools.	Volcanic ash flow, and volcanic substrate vernal pools. 400-855 m.
Many-flowered navarretia *Navarretia leucocephala ssp. plieantha*	FE/CE/1B.2	Vernal pools.	Volcanic ash flow vernal pools. 30-950 m.
Rincon Ridge ceanothus *Ceanothus confusus*	1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland.	Known from volcanic or serpentine soils, dry shrubby slopes. 75-1065 m.
Bolander's horkelia *Horkelia bolanderi*	1B.2	Lower montane coniferous forest, chaparral, meadows, valley and foothill grassland.	Grassy margins of vernal pools and meadows. 450-1100 m.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	CE/1B.2	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 10-2375 m.
Adobe-lily *Fritillaria pluriflora*	1B.2	Chaparral, cismontane woodland, foothill grassland.	Usually on clay soils; sometimes serpentine. 60-705 m.
California satintail *Imperata brevifolia*	2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps (alkali), riparian scrub.	Mesic sites, alkali seeps, riparian areas. 0-1215 m.
Slender Orcutt grass *Orcuttia tenuis*	FT/CE/1B.1	Vernal pools.	Often in gravelly pools. 35-1760 m.
Eel-grass pondweed *Potamogeton zosteriformis*	2B.2	Marshes and swamps.	Ponds, lakes, streams. 0-1860 m.

*Definitions of Status Codes: FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; FPT = Federally proposed for listing as threatened; FC = Candidate for Federal listing; MB = Migratory Bird Act; CE = California State listed as endangered; CT = California State listed as threatened; CR = California rare species; CCE= California candidate for listing as Endangered; CCT= California candidate for listing as Threatened; CSSC = California species of special concern; CWL= California Watch List; CFP = California fully protected species; CBR = Considered but Rejected; CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere; and CNPS List 4 = CNPS Watch List: Plants of limited distribution.
** Copied verbatim from CNDDB.

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

During the field survey one plant was tentatively identified as a special-status species within the Study Area: Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*).

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

The blue oak woodland within the Study Area has a moderate potential for harboring special-status plant species due to the lack of disturbance and abundance of native shrubs, grasses and forbs. There are no non-wetland water resources, such as watercourses, within the Study Area that can sustain aquatic special-status species.

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

The USFWS National Wetland Inventory reported no water features within the Project Area or the surrounding Study Area (see Exhibits).

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

The field survey determined that the Project Area and the surrounding Study Area do not contain any channels or wetlands. There are no vernal pools or other isolated wetlands in the Study Area.

5. IMPACT ANALYSES AND MITIGATION MEASURES

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

5.1. IMPACT SIGNIFICANCE CRITERIA

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

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

5.2. IMPACT ANALYSIS

The following discussion evaluates the potential for Project-related activities to adversely affect biological resources. The Project boundaries were digitized and then overlaid on the habitat map using GIS to quantify potential impacts. Historical aerial photos were also analyzed for changes in land use.

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

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

During the field survey, no listed species or special-status species were observed within the Project Area. One special-status plant species was detected within the Study Area (in the area marked, see Exhibits). Oak woodland habitat within the Project Area may provide suitable habitat for additional special status plant species. This is a potentially significant impact before mitigation.

Special-status bird species were reported in databases (CNDDB and USFWS) in the vicinity of the Project Area. The Project Area, and adjacent trees, contain suitable nesting habitat for various bird species. However, no occupied nests were observed during the field survey. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact to nesting birds.

Recommended Mitigation Measures

If Konocti manzanita is present within project areas, it should be preserved or transplanted to another portion of the property that will never be developed; periodic waterings and other plant health maintenance activities should be performed for at least 3 years. The project has been designed to avoid the Konocti manzanita; a "no disturbance/development zone" is proposed, and is defined by placing a 50-foot buffer around the special-status plant, with some combination of marking, fencing, and signage. this avoidance measure will reduce any impacts to Konocti manzanita to a less than significant level.

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

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

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

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

The Project Area and surrounding Study Area are not within any designated listed species' critical habitat. The Study Area does not contain channels, wetlands or isolated wetlands. The Project Area does not contain terrestrial special-status habitats. Implementation of the project will require some vegetation removal and the conversion of oak woodland habitat, including the removal of approximately 30 mature blue oak trees. To compensate for any project impacts, a 30-acre No Development Zone will be established in the northern half of the Project Parcel, to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation. Five oak trees will be planted and cared for until established, within the No Development Zone for each oak tree removed, to mitigate for their loss within the area of the proposed cultivation operation. These mitigation measures will reduce project impacts upon habitat loss to a less than significant level.

Recommended Mitigation Measures

No mitigation is necessary.

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

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

There are no water resources within the Project Area or Study Area.

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

Potential adverse impacts to water resources could occur during operation of cultivation activities resources by discharge of sediment or other pollutants (fertilizers, pesticides, human waste, etc.) into receiving waterbodies. However, the project proponent must file a Notice of Intent and enroll in Cannabis Cultivation Order WQ 2019-0007-DWQ. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices (BMPs), buffer zones, sediment and erosion controls, site management plans, inspections and reporting, and regulatory oversight.

Cultivators who enroll in the State Water Board's Waste Discharge Requirements for Cannabis Cultivation Order WQ 2019-0007-DWQ must comply with the Minimum Riparian Setbacks, as summarized in the following table. The Project would be considered to have a significant adverse impact on jurisdictional water resources if it would be non-compliant with these requirements. The minimum riparian setbacks apply to all land disturbance, cannabis cultivation activities, and facilities (e.g., material or vehicle storage, diesel powered pump locations, water storage areas, and chemical toilet placement). The proposed project is compliant with the setback requirements of Cannabis Cultivation Order WQ 2019-0007-DWQ.

Minimum Riparian Setbacks

Common Name	Watercourse Class	Distance
Perennial watercourses, waterbodies (e.g. lakes, ponds), or springs	I	150 ft.
Intermittent watercourses or wetlands	II	100 ft.
Ephemeral watercourses	III	50 ft.
Man-made irrigation canals, water supply reservoirs, or hydroelectric canals that support native aquatic species	IV	Established riparian zone vegetation

Recommended Mitigation Measures

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

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

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

No wildlife corridors exist within or near the Study Area. Implementation of the proposed project would necessitate erection of security fences around the cultivation compounds. These fences do not allow animal movement and may act as a local barrier to wildlife movement. However, the fenced cultivation areas are surrounded by open space, allowing wildlife to move around these fenced areas. Thus, implementation of the proposed project is a less than significant impact upon wildlife movement. Implementation of the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Recommended Mitigation Measures

No mitigation is necessary.

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

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

Construction of the project may require the removal of trees protected by Lake County and Cal Fire. This is a potentially significant impact before mitigation.

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

Recommended Mitigation Measures

Implementation of the project will require the conversion of oak woodland habitat, including the removal of approximately 30 mature blue oak trees. To compensate for any project impacts, a 30-acre No Development Zone will be established in the northern half of the Project Parcel, to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation. Five oak trees will be planted and cared for until established, within the No Development Zone for each oak tree removed, to mitigate for their loss within the area of the proposed cultivation operation. These mitigation measures will reduce project impacts upon tree resources to a less than significant level.

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

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EXHIBITS

Parcel Location

0 0.5 1 Kilometers

0 0.5 1 Miles

1:24,000

11795 North Drive
Parcel Location Map

Natural Investigations Company

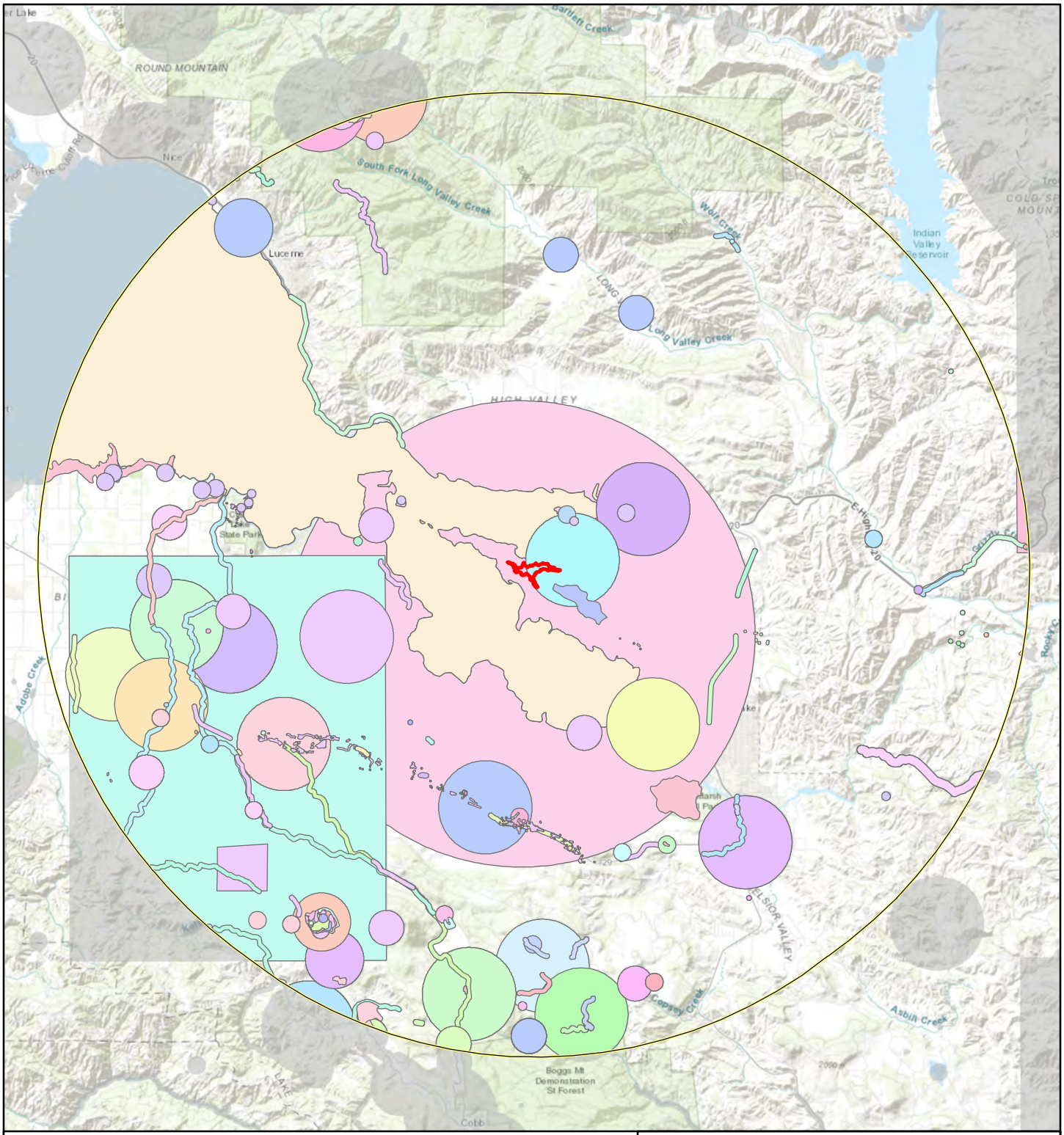
Map Date 9/4/2020

Clearlake Highlands 1993 Quadrangle:Township 13N, Range 7W, Section 7,12

Habitat Types

11795 North Drive, Clearlake

Natural Investigations Company



Parcel Location 10 Mile Buffer

1:190,000 1 inch = 3 miles

0 3 6 Miles

N

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

Special-Status Species Occurrences Map

11795 North Drive

Clearlake Highlands 1993 Quadrangle:
Township 13N, Range 7W, Section 7,12

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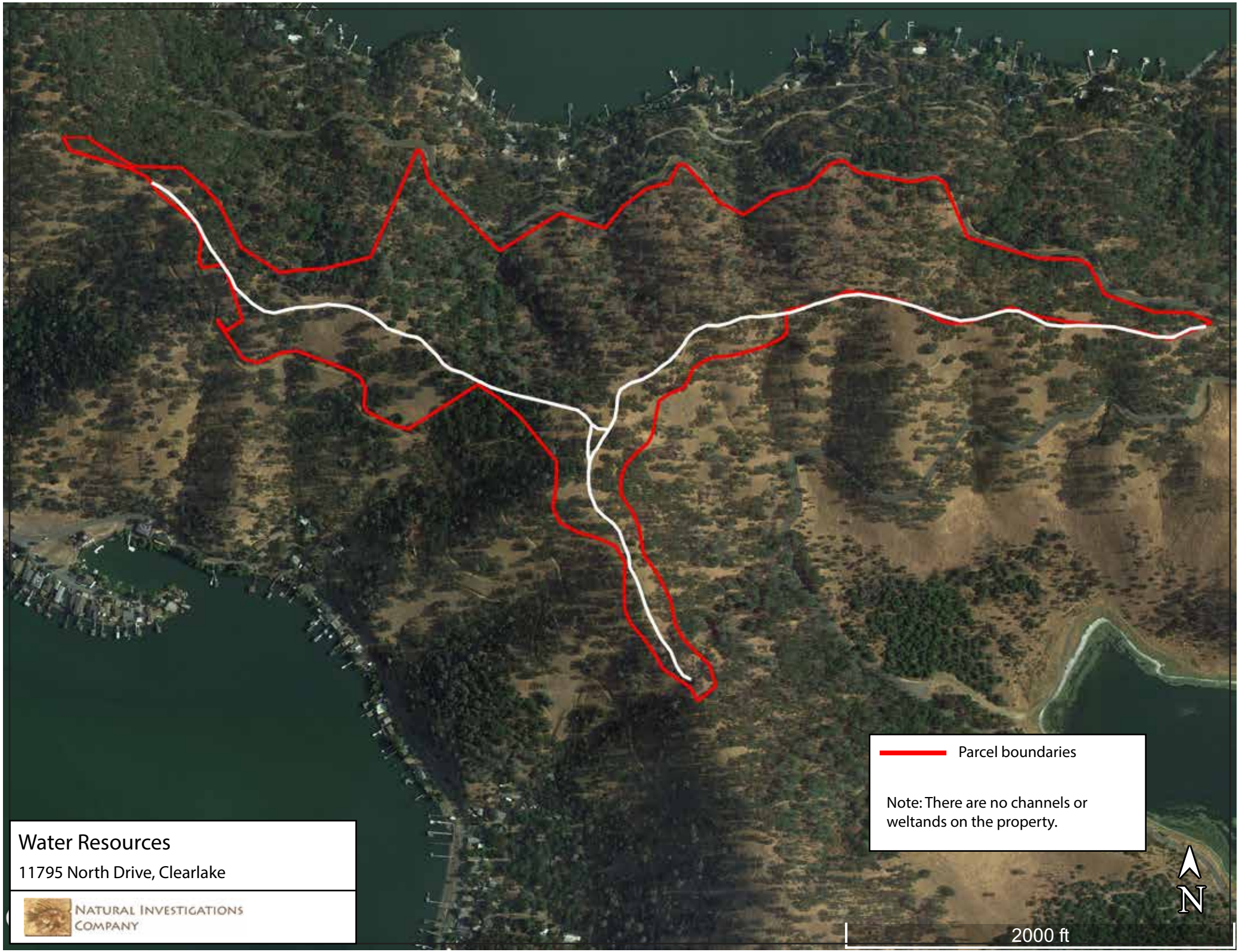

Water Resources

11795 North Drive, Clearlake

Natural Investigations Company

Parcel Location

Wetlands and Chanels

0 250 500 Meters

0 1,000 2,000 Feet

1:10,000

11795 North Drive
National Wetlands Inventory
Features Map

Natural Investigations Company

Map Date 9/4/2020

Clearlake Highlands 1993 Quadrangle:Township 13N, Range 7W, Section 7,12

APPENDIX 1: USFWS SPECIES LIST

United States Department of the Interior

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

In Reply Refer To: September 04, 2020
Consultation Code: 08ESMF00-2020-SLI-2824
Event Code: 08ESMF00-2020-E-08658
Project Name: 11795 North Drive

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 08ESMF00-2020-SLI-2824

Event Code: 08ESMF00-2020-E-08658

Project Name: 11795 North Drive

Project Type: ** OTHER **

Project Description: Bio Assessment

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.99382122718327N122.69321080347258W

Counties: Lake, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

---

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

Birds

NAME	STATUS
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Flowering Plants

NAME	STATUS
Burke's Goldfields *Lasthenia burkei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Few-flowered Navarretia *Navarretia leucocephala ssp. pauciflora (=N. pauciflora)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8242	Endangered
Lake County Stonecrop *Parvisedum leiocarpum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2263	Endangered
Loch Lomond Coyote Thistle *Eryngium constancei* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5106	Endangered
Many-flowered Navarretia *Navarretia leucocephala ssp. plieantha* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2491	Endangered
Slender Orcutt Grass *Orcuttia tenuis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

Critical habitats

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

APPENDIX 2: CHECKLIST OF PLANTS DETECTED IN THE STUDY AREA

Appendix 2:

Plants Observed at 11795 North Road, Clearlake on September 15, 2020

Common Name	Scientific Name
California buckeye	*Aesculus californicus*
Fiddleneck	*Amsinckia sp.*
Pine dwarf mistletoe	*Arceuthobium campylopodum*
Konocti manzanita?	*Arctostaphylos manzanita ssp. elegans c.f.*
Common manzanita	*Arctostaphylos manzanita ssp. manzanita*
Wild oat	*Avena barbata*
Slender wild oat	*Avena fatua*
Coyote brush	*Baccharis pilularis*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceus*
Madrid brome	*Bromus madritensis*
Poverty brome	*Bromus sterilis*
Italian thistle	*Carduus pycnocephalus*
Maltese star thistle	*Centaurea melitensis*
Yellow star thistle	*Centaurea solstitialis*
Western redbud	*Cercis occidentalis*
Birch leaf mountain mahogany	*Cercocarpus betuloides*
Dogtail grass	*Cynosurus echinoides*
Larkspur	*Delphinium sp.*
Blue wild rye	*Elymus glaucus*
California fescue	*Festuca californica*
Pacific fescue	*Festuca microstachys*
Sixweeks rattail fescue	*Festuca myuros*
Two-petaled ash	*Fraxinus dipetala*
Bedstraw	*Galium sp.*
Great Valley gum plant	*Grindelia camporum*
Toyon	*Heteromeles arbutifolia*
Wall barley	*Hordeum murinum*
Iris	*Iris sp.*
Whiskerbrush	*Leptosiphon ciliatus*
Miniature lupine	*Lupinus bicolor*
Slender tarplant	*Madia gracilis*
California melic grass	*Melica californica*
Slender cottonweed	*Micropus californicus*
Sunkbush	*Navarretia squarrosa*
Windmill pink	*Petrorhagia dubia*
American mistletoe	*Phoradendron leucarpum*
Gray pine	*Pinus sabiniana*
Popcorn flower	*Plagiobothrys sp.*
Bluegrass	*Poa sp.*
Blue oak	*Quercus douglasii*
California black oak	*Quercus kelloggii*
Oracle oak	*Quercus x morehus*
Hollyleaf redberry	*Rhamnus ilicifolia*
Blue elderberry	*Sambucus nigra ssp. caerulea*
Pacific sanicle	*Sanicula crassicaulis*
Purple needlegrass	*Stipa pulchra*
Tall sock destroyer	*Torilis arvensis*
Poison oak	*Toxicodendron diversilobum*

APPENDIX 3: SITE PHOTOS

















































BOTANICAL SURVEY REPORT
FOR THE
AKWAABA LLC CANNABIS CULTIVATION OPERATION AT
11795 NORTH DRIVE, CLEARLAKE, CALIFORNIA

June 12, 2021

Prepared by:

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

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM

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1. PROJECT LOCATION AND DESCRIPTION

Natural Investigations Company conducted botanical field surveys for a proposed cannabis cultivation operation on a 97-acre property (2 parcels: APNs 010-019-15 and -10) at 11795 North Drive, Clearlake, in Lake County, California. Akwaaba, LLC ("Akwaaba") is seeking a Major Use Permit from the County of Lake for a proposed Outdoor Commercial Cannabis Cultivation Operation on the 88-acre parcel (APN 010-019-15; Project Parcel). Akwaaba's proposed cultivation operation will be composed of four (4) A-Type 3 Medium Outdoor cultivation/canopy areas, with a total combined cultivation/canopy area of 174,240 square feet. Additionally, Akwaaba is applying for an Early Activation of Use Permit for 50,000 square feet of the total proposed 174,240 square feet cultivation/canopy area. The total cultivation area of the proposed cannabis cultivation operation, including the combined cultivation/canopy areas, a 1,440 square feet Metal Barn (proposed Drying & Harvest Storage Facility), and a 160 square foot Metal Shipping/Storage Container (proposed Pesticide & Agricultural Chemicals Storage Area), is 175,840 square feet.

The Property has been improved with a metal barn, and a groundwater well. A private gravel and native soil surfaced access road winds through the Property, connecting North Drive to Crestview Drive through the Property. Metal gates control access to the private gravel and native soil surfaced access road from North Drive and Crestview Drive. There are no watercourses, wetlands, or watercourse crossings on the Property. The existing onsite groundwater well will serve as the sole water source for the proposed cultivation operation.

Development of the proposed cultivation operation will occur in three phases. The first phase will occur in 2021 under an Early Activation of Use Permit, and will not involve any construction, grading, or vegetation removal. The second and third phases will occur in 2022 and 2023 (respectively), after a Major Use Permit for Commercial Cannabis Cultivation has been obtained, and will require some vegetation removal, including 18 mature blue oak trees (+6" DBH). A 30-acre No Development Zone will be established in the northern half of the Project Parcel, to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation. Five oak trees will be planted and cared for until established, within the No Development Zone for each oak tree removed, to mitigate for their loss within the area of the proposed cultivation operation. Additionally, a special-status plant, Konocti Manzanita, has been identified in the western half of the Project Parcel. No disturbance/development is proposed within 500 feet of the Konocti Manzanita, and a 50-foot buffer will be marked and maintained around the Konocti Manzanita.

The cultivation season for Akwaaba's proposed outdoor cultivation operation will begin on April 15th and end on November 15th of each year. The proposed outdoor cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. Locking metal gates will control access to the proposed cultivation/canopy areas, and the metal gates will be locked whenever Akwaaba's cultivation personnel are not present. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All cannabis waste generated from the proposed cultivation operation will be chipped and composted onsite. Composted cannabis waste will be stored in the designated composting area, until it is incorporated into the soilless growing medium of the cultivation areas, as an organic soil amendment. All agricultural chemicals (fertilizers, amendments, pesticides, and petroleum products) will be stored within a proposed 20-square foot metal shipping/storage container (Pesticide & Agricultural Chemicals Storage Area).

Variance – Phase III

The third phase of proposed site/project development is the establishment of 44,240 square feet of outdoor cultivation/canopy area in the western half of the Project Parcel, within 1,000 feet of a Substandard Older Subdivision Combining District (Cannabis Exclusion Zone). To use this area, Lake County must grant a variance. Akwaaba will submit a Variance Application as soon as a Lake County Planner has been assigned to their Major Use Permit Application.

Project Timeline

If Akwaaba is able to obtain an Early Activation of Use Permit for the 50,000 square feet of outdoor cultivation/canopy area planned under Phase I prior to April 1st, 2021, then they will begin preparing for planting on April 15th, 2021 (after the appropriate State Cultivation Licenses have been obtained)

2. BIOLOGICAL SETTING

The Property is located within the Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Property and vicinity is in Climate Zone 7 - California's Gray Pine Belt, defined by hot summers and mild but pronounced winters without severe winter cold or high humidity (Sunset, 2020). The Property is located just west of the City of Clearlake, along the spine of Sulphur Bank Ridge, and is accessed via North Drive and Crestview Drive. The topography of the Property consists of a ridge top with moderate to steeply sloping sides. The elevation ranges from approximately 1,580 feet to 1,890 feet above mean sea level. Drainage runs north, south and east, and eventually flows into either Clear Lake or Borax Lake. Prior to the establishment of this cultivation operation, land uses were open space. There is extensive land disturbance (grubbing and/or grading) on the Property. The landowner stated that is was for previously-approved County permits for water lines, septic and building construction. The surrounding land uses are private estates, recreation, and open space.

3. SURVEY METHODOLOGY

Survey methodology followed the following protocols:

- California Department of Fish and Wildlife. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities.

- U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Sacramento Fish and Wildlife Office, Sacramento, California. 2 pp.

- California Native Plant Society. 2001. CNPS botanical survey guidelines.

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

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

- Aerial photography of the Project Area (current and historical)
- United States Geologic Service 7.5 degree-minute topographic quadrangles
- USFWS National Wetland Inventory
- USDA Natural Resources Conservation Service soil survey maps
- California Natural Diversity Database (CNDDB), electronically updated monthly by subscription
- California Native Plant Society's database *Inventory of Rare and Endangered Plants of California* (online edition).

The following reference sites were visited: Deemed not necessary.

3.2. FIELD SURVEYS

Dates of botanical field surveys (indicating the botanical field surveyor(s) that surveyed each area on each survey date), and total person-hours spent: Tim Nosal, MS., September 15, 2020, majority of day; April 6, 2021, half day; June 8, 2021, half day.

> Note: The qualifications of the botanical field surveyors and report authors are summarized at the end of this report.

Description of Survey Area: The 6-acre survey area was the combined project areas (the cultivation areas, plus the proposed drying & harvest storage facility and metal shipping/storage container) plus a buffer of several hundred feet.

Note: A map of the survey area relative to the project area is shown in the Exhibits.

A variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible taxa observed were recorded in a field notebook. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDB within the vicinity of the Project Area and those species on the CNPS or USFWS species lists.

Taxa were identified to the taxonomic level necessary to determine whether or not they are a special status plant. When a specimen could not be identified in the field, a photograph was taken and/or a specimen was pressed and identified in the laboratory using a dissecting scope where necessary. Dr. Graening holds the following scientific collection permits: CDFW Scientific Collecting Permit No. SC-006802; and CDFW Plant Voucher Specimen Permit 09004. Tim Nosal holds CDFW Plant Voucher Specimen Permit 2081(a)-16-102-V. Taxonomic determinations were facilitated by referencing museum specimens or by various texts, including the following: Powell and Hogue (1979); Pavlik (1991); (1993); Brenzel (2012); Stuart and Sawyer (2001); Lanner (2002); Sibley (2003); Baldwin et al. (2012); Calflora (2021); CDFW (2021b,c); NatureServe 2021; and University of California at Berkeley (2021a,b).

3.3. MAPPING AND OTHER ANALYSES

The locations of any special-status species or vegetation communities sighted were marked on aerial photographs and/or georeferenced with a geographic positioning system (GPS) receiver. Vegetation community types occurring in the Survey Area were mapped on aerial photographs, and information on habitat conditions and the suitability of the habitats to support special-status species was also recorded. Locations of any species' occurrences and sensitive natural community boundaries detected within the Project Area were digitized to produce the final maps. Geographic analyses were performed using geographical information system software (ArcGIS 11, ESRI, Inc.). Vegetation communities (assemblages of plant species growing in an area of similar biological and environmental factors), were classified by Vegetation Series (distinctive associations of plants, described by dominant species and particular environmental setting) using the CNPS Vegetation Classification system (Sawyer and Keeler-Wolf, 1995). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2021), Calflora (2021); CDFW (2021a,b,c); and University of California at Berkeley (2021a,b).

3.4. Previous Studies

The following previous studies have been performed:

- Natural Investigations Co. 2020. Biological Resources Assessment for the AKWAABA LLC Cannabis Cultivation Operation at 11795 North Drive, Clearlake, California.

Natural Investigations Company conducted a botanical survey during the biological resources assessment. No special-status plant species were detected within the Project Area but one was detected on the surrounding Property: Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*).

3.5. List of Sensitive Natural Communities with Potential to Occur in the Region

According to the results of a spatial query of the CNDDB, there are no reported no special-status habitats within the Project Area or surrounding Property boundary. Within the surrounding region (County-level), the CNDDB has mapped the following special-status habitats: Serpentine Bunchgrass; Northern Volcanic Ash Vernal Pool; Coastal and Valley Freshwater Marsh; Northern Basalt Flow Vernal Pool; Northern Volcanic Ash Vernal Pool; Northern Interior Cypress Forest; and Northern Vernal Pool.

Within the surrounding region, the following California Sensitive Natural Communities occur (listed in higher-order primary life forms: CDFG 2003; CDFW 2019):

- 32.000.00 Coast Scrub
  - 32.xxx.xx scrub with dominant *Artemisia*, Baccharis, *Eriogonum*, etc.
- 37.000.00 Chaparral
  - 37.1xx.xx Chamise Chaparral [*Adenostoma fasciculatum*]
  - 37.2xx.xx Chaparral with *Ceanothus* as principal indicator
  - 37.3xx.xx Chaparral with Manzanita [*Arctostaphylos* spp.] as principal indicator
  - 37.4xx.xx Chaparral with Oak [*Quercus* spp.] as principal indicator
- 40.000.00 Grass & Herb Dominated Communities
  - 41.xxx.xx Native Grassland
- 42.000.00 Non-native Grassland
  - certain rare associations
- 44.000.00 Vernal pools
  - all associations
- 45.000.00 Meadow and seeps not dominated by grasses
  - 45.11x.xx *Carex* marsh, meadow
  - 45.2xx.xx *Eleocharis* marsh, meadow
- 52.000.00 Marsh
  - all associations
- 60.000.00 Riparian and bottomland habitat
  - all associations
- 71.000.00 Oak Woodlands and Forests
  - 71.100.15 *Quercus agrifolia – Quercus garryana – Quercus kelloggii*
  - 71.060.xx Coast live oak woodland and forest
  - 71.050.xx Canyon live oak forest and woodland
  - 71.020.xx Blue oak woodland and forest
  - 71.070.xx Engelmann oak woodland and forest
  - 71.040.xx Valley oak woodland and forest
  - 71.080.xx Interior live oak woodland and forest
- 72.000.00 Upland Walnut Woodlands and Forests [*Juglans* spp.]
- 73.000.00 Tanoak Forest and Woodland
- 73.200.00 Pacific Madrone [*Arbutus menziesii*]
- 74.000.00 California bay forest and woodland
- 75.000.00 California Buckeye Woodland [*Aesculus* californica]
- 80.000.00 Coniferous Upland Forest and Woodland
  - various associations of *Calocedrus*, *Pinus*, or *Abies*

Some of these sensitive natural communities could occur specifically in the Project Area, and specifically, the following:

- 71.000.00 Oak Woodlands and Forests
    - 71.020.xx Blue oak woodland and forest

3.6. List of Special Status Plants with Potential to Occur in the Region

A list of special-status plant species with potential to occur in the region was compiled based upon the following:

- A spatial query of the CNDDB using a 10-mile buffer around the Property boundary.
- A 9-quadrangle query of the California Native Plant Society's database *Inventory of Rare and Endangered Plants of California* (online edition).

The databases were queried and any reported occurrences of special-status species were plotted in relation to the Project Area boundary using GIS software (see exhibits). The CNDDB reported the following special-status species occurrences within the Property: eel-grass pondweed (*Potamogeton zosteriformis*); watershield (*Brasenia schreberi*); and Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*). However, the exact location of these occurrences is not known. Suitable aquatic habitat for eel-grass pondweed and watershield is not found within the Property. Suitable volcanic soil habitat for Konocti manzanita is not found within the Study Area; however, several plants along the ridgetop have been tentatively identified as this species. Within a 10-mile buffer of the Property boundary, the CNDDB reported several special-status species occurrences, summarized in the Appendix.

Soils found within the Study Area are derived from sandstone, shale and sedimentary parent material. No soils derived from volcanic or serpentine rocks are mapped in or adjacent to the Study Area. The following table lists plant species with suitable habitat (oak woodland) present within the Project Area.

List of Special-status Species Whose Habitat Requirements Occur in the Project Area and Their Blooming Periods

Common Name Scientific Name	Status*	General Habitat	Microhabitat
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Cismontane woodland, valley and foothill grassland.	50-500m.
Oval-leaved viburnum *Viburnum ellipticum*	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	215-1400 m.
Napa bluecurls *Trichostema ruygtii*	1B.2	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest.	Often in open, sunny areas. Also has been found in vernal pools. 30-590m.
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 m.

4. RESULTS

4.1. LIST OF PLANT TAXA DETECTED DURING FIELD SURVEY(S)

All plant taxa detected during the botanical field surveys are listed in the Appendix. During the botanical field survey, no special-status plant taxa were detected within the Project Area. However, one special-status species may have been detected on the surrounding Property: Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*), and specifically, 4 individual shrubs. Many of the manzanita were readily identified as common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*). Several plants were difficult to identify and had characteristics of both common manzanita and Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*). These specimens did not flower or fruit this year. Tentative identification was based upon old fruit found at the base of the shrubs. Four Konocti manzanita shrubs adjacent to the Project Area have been flagged (see Exhibits). It is unlikely that other special-status plant species are present within the Project Area.

Deposition locations of voucher specimens: n/a

4.2. LIST OF VEGETATION COMMUNITIES DETECTED DURING FIELD SUVERY(S)

The Property contains 1 terrestrial vegetation community: Blue Oak Woodland. This vegetation community is discussed here and is delineated in the Exhibits.

> **Blue Oak Woodland:** One habitat is found within the Study Area: blue oak woodland. Although the canopy density and composition of the woodland changes with the slope and aspect, the dominant tree across the landscape is blue oak (*Quercus douglasii*). Other trees found within the canopy include gray pine (*Pinus sabiniana*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*) and oracle oak (*Quercus* x *morehus*). The oracle oak is a hybrid between the California black oak and the interior live oak, and can be found along the ridge top near the center of the parcel. Several shrubs are common within the understory, including common manzanita (*Arctostaphylos manzanita* spp. *manzanita*), poison-oak (*Toxicodendron diversilobum*) and birch leaf mountain mahogany (*Cercocarpus betuloides*). The herbaceous layer within the oak woodland consists of a variety of grasses and herbs, including wild oats (*Avena* spp.), Pacific fescue (*Festuca microstachys*), bromes (*Bromus* spp.), California melic grass (*Melica californica*), blue wild rye (*Elymus glaucus*), whiskerbrush (*Leptosiphon ciliatus*) and miniature lupine (*Lupinus bicolor*). This vegetation type can be classified as the Holland Type "Blue Oak Woodland" or as "*Quercus douglasii-Quercus wislizeni-Pinus sabiniana*" (CDFW 2020).

More specifically, the following terrestrial natural communities occur in the Project Area (as categorized by CDFW 2019):

- 42.040.000 California Annual Grassland
- 71.000.00 Oak Woodlands and Forests
    - 71.020.xx Blue oak woodland and forest
- 11300 Disturbed Habitat

The dominant species are as follows, in order of greatest abundance: Blue oak (*Quercus douglasii*), brome grasses (*Bromus* spp.), wild oat (*Avena* sp.).

During the field survey, the following sensitive vegetation communities were detected within the Project Area:

- 71.020.xx Blue oak woodland and forest

4.3. Adequacy of Botanical Field Survey(s)

Potential for a false negative botanical field survey: Highly unlikely since an early-season, mid-season, and late-season botanical field survey was performed and many target genera are conspicuous.

Did climatic conditions affect the botanical field survey results? There were no unusual climatic conditions.

Did the timing of botanical field surveys affect the comprehensiveness of botanical field surveys? Much of the project area has been cleared of vegetation, including cultivation areas and locations for roads and other infrastructure. No species of *Viburnum* or *Trichostema* were observed within the Project Area. Identifying features from these two genera would have been apparent during the survey dates. One species of *Amsinckia* was observed within the property. Flowers were present, allowing for identification to the level of species. The *Amsinckia* was determined to be common fiddleneck (*Amsinckia menziesii*).

Since an early-season, mid-season, and late-season botanical field survey was performed, the assessment was extremely comprehensive.

5. POTENTIAL PROJECT IMPACTS AND MITIGATION

The project proponents and cultivators implemented mitigation by design. Mitigation has been employed in the design phase by inventorying sensitive habitats and water resources on the Property and then avoiding sensitive habitats, where possible, in selection of cultivation compound locations and sizes. Areas identified by biologists as sensitive habitats (rare plant areas) were also removed from consideration. The project design also includes vegetative buffers between cultivation compounds and sensitive habitats, and an erosion control plan and pollution prevention plan will be implemented. Implementation of the project will require the clearing of approximately 6 acres of oak woodland and annual grassland habitat. Vegetation clearing includes the removal of approximately 30 mature blue oak trees. In conjunction with County planners, mitigation measures have been identified for loss of oak woodland habitat and individual oak trees.

5.1. Special-status Plant Populations

During the botanical field survey, no special-status plant taxa were detected within the Project Area. However, one special-status species was detected on the surrounding Property: Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans*), and specifically, 4 individual shrubs. The locations are near, but outside of, the Project Area. The project proponents have established a 'No disturbance/development' buffer of 500 feet of these Konocti Manzanitas, and fencing at a 50-foot radius will be marked and maintained around the Konocti Manzanitas. These avoidance measures will reduce any impacts to Konocti manzanita to a less than significant level. No other special-status plant species were observed within the Property. It is unlikely that special status plant species are present within the Project Area. Additional special status plant surveys are not deemed necessary.

Indirect impacts could occur from the loss of suitable habitat for regionally-occurring special-status species. Only a fraction of the regionally-occurring special-status species can utilize the habitat type in the Project Area (blue oak woodland). Nevertheless, project implementation will have a less-than significant impact upon habitat loss because the habitat conversion will occur on only 6 percent of the Property and a 30-acre oak woodland preserve will be created. This leaves the vast majority of the natural habitats undisturbed on the Property. For these reasons, project implementation will have a less than significant indirect or cumulative impact upon special-status species.

5.2. Sensitive Natural Communities

Project implementation will have a less-than significant impact upon sensitive natural communities for numerous reasons. The Project Area does contain one sensitive natural community type: 71.020.xx Blue Oak Woodland And Forest. Implementation of the project will require the clearing of approximately 6 acres of oak woodland and the removal of 30 mature blue oak trees. In consultation with County planners, the project proponents have offered to mitigate at a 5 to 1 ratio for both the loss of oak woodland habitat and individual oak trees. A 30-acre preserve (No Development Zone) will be established in the northern half of the Property to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation (see Exhibits). For each oak tree removed, five oak trees will be planted and cared for until establishment within the No Development Zone. The habitat conversion will occur on only 6 percent of the Property, with the vast majority of oak woodland communities on the Property protected and left undisturbed. For these reasons, project implementation will have a less than significant impact (direct, indirect, and cumulative) upon sensitive natural communities.

6. QUALIFICATIONS OF BOTANICAL FIELD SURVEYORS AND REPORT AUTHORS

G.O. GRAENING, Ph.D., M.S.E.
Dr. Graening holds a PhD in Biological Sciences and a Master of Science in Biological and Agricultural Engineering. Dr. Graening is an adjunct Professor at California State University at Sacramento, and is an active researcher in the area of conservation biology; his publication list is available online at http://www.csus.edu/indiv/g/graeningg/pubs.htm. Dr. Graening is also a Certified Arborist (ISA # WE-6725A). Dr. Graening has 24 years of experience in environmental assessment, including previous employment with The Nature Conservancy, Tetra Tech Inc., and CH2M Hill, Inc.

TIMOTHY R. D. NOSAL, M.S.
Mr. Nosal holds a B.S. and M.S. in Biological Sciences. Mr. Nosal has statewide experience performing sensitive plant and animal surveys in addition to terrestrial vegetation investigations. Mr. Nosal has over 25 years of experience in botanical surveys, environmental assessment, and teaching with employers that include California Department of Fish and Wildlife, State Water Resources Control Board, American River College, MTI College and Pacific Municipal Consultants. Mr. Nosal has intensive experience with the flora of the Pine Hill region includes leading numerous field trips exploring the botany of the region, co-authoring a fuel management plan for Pine Hill, and a Master's thesis on Stebbins's morning glory (*Calystegia stebbinsii*), an endangered plant of this region.

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EXHIBITS

Parcel Location

0 0.5 1 Kilometers

0 0.5 1 Miles

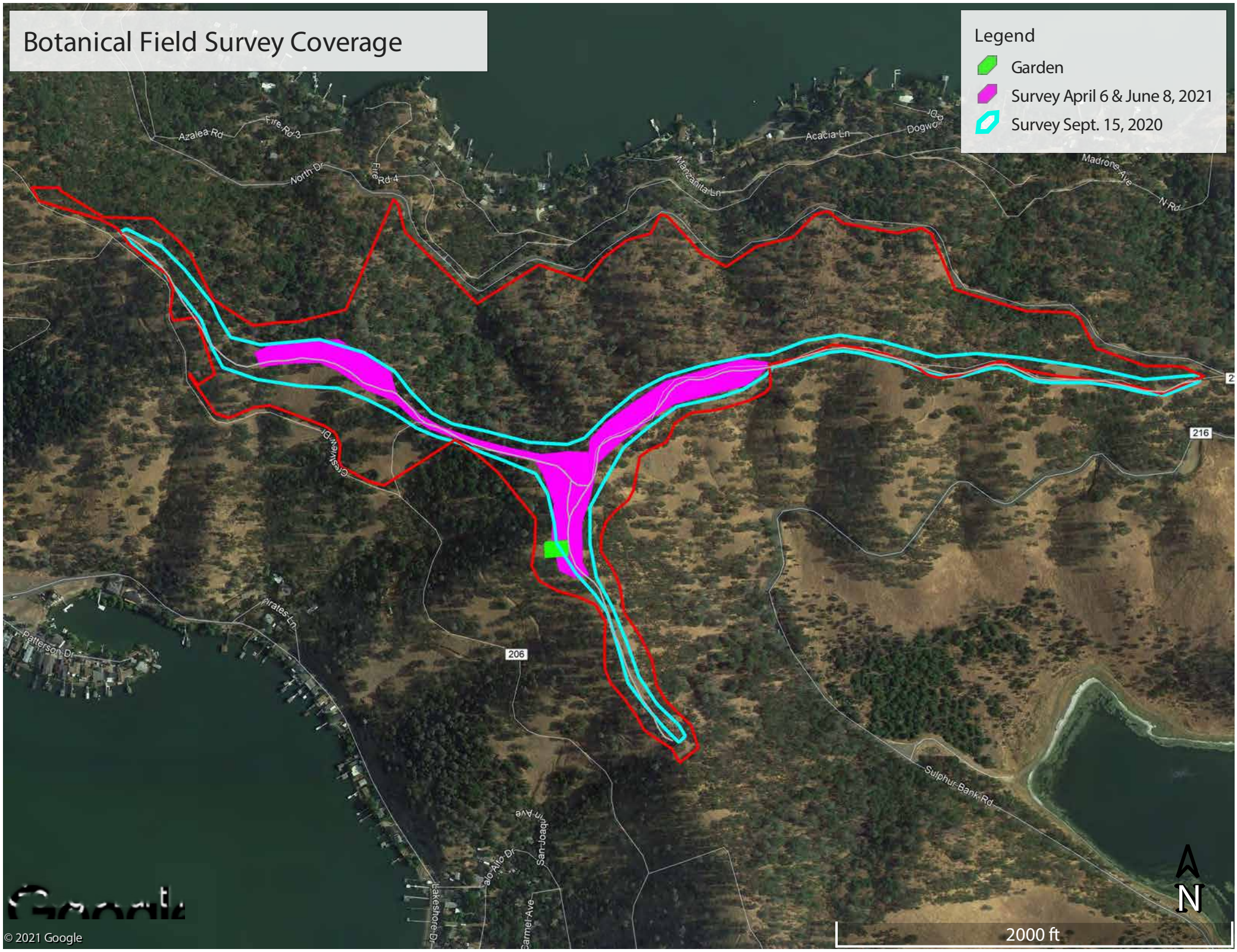
1:24,000

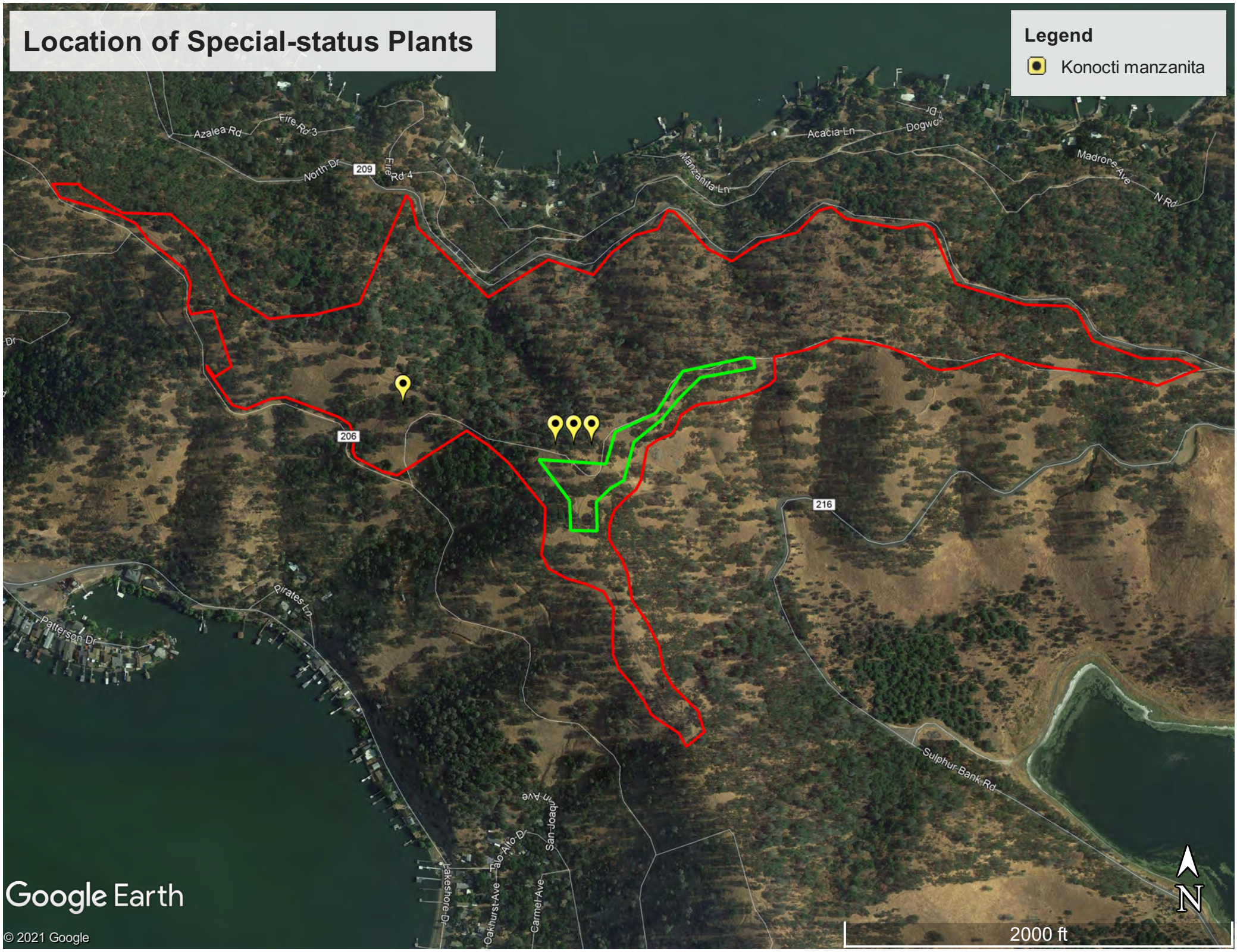
11795 North Drive
Parcel Location Map

Natural Investigations Company

Map Date 9/4/2020

Clearlake Highlands 1993 Quadrangle:Township 13N, Range 7W, Section 7,12

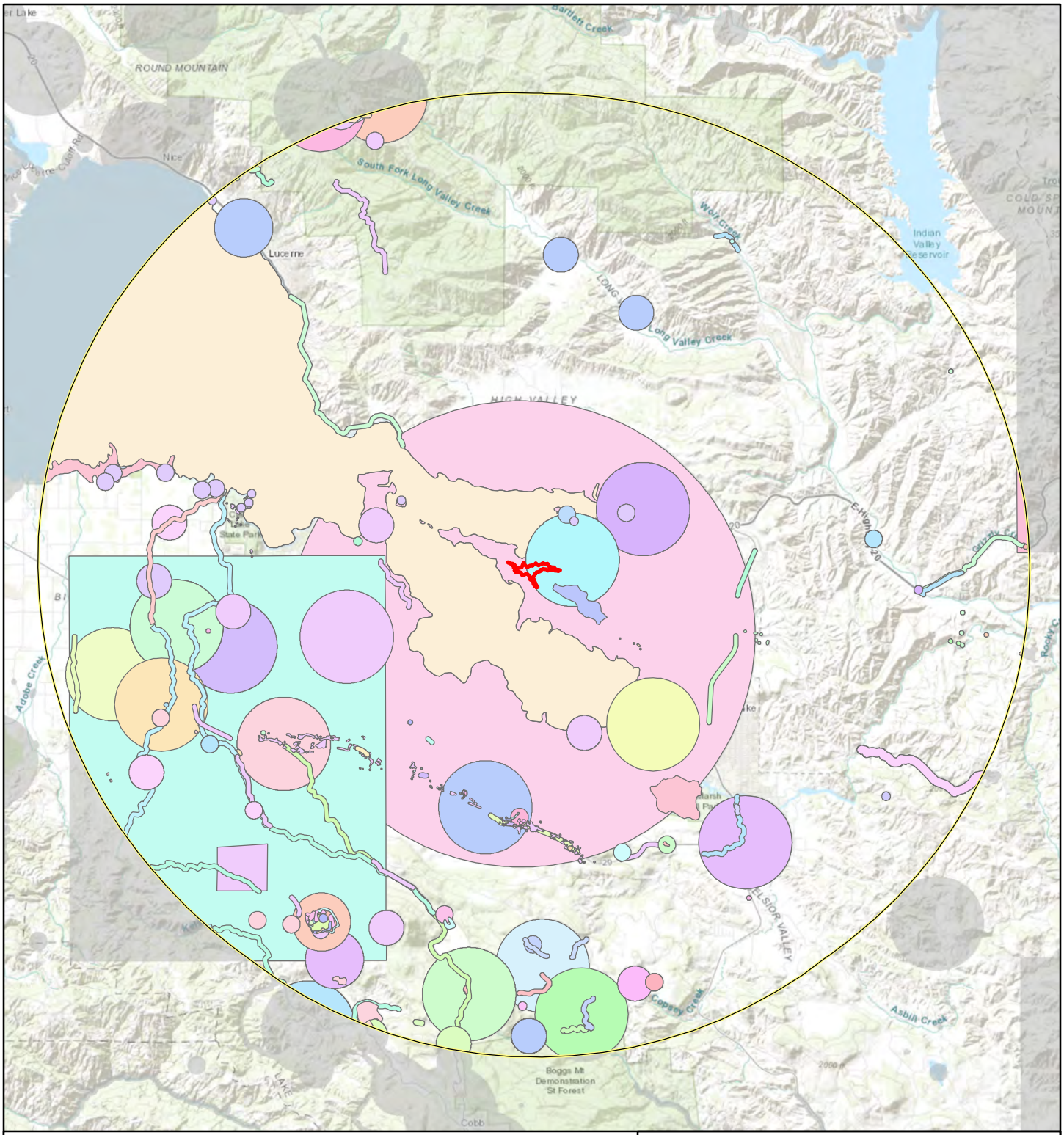

Botanical Field Survey Coverage
Legend
Garden
Survey April 6 & June 8, 2021
Survey Sept. 15, 2020
Azalea Rd
Fire Rd 3
North Dr
Fire Rd 4
Acacia Ln
Manzanita Ln
Madrone Ave
N Rd
216
206
Pirates Ln
Patterson Dr
Sulphur Bank Rd
Lakeshore Dr
Carmel Ave
N
2000 ft
© 2021 Google


Location of Special-status Plants
Legend
Konocti manzanita
Azalea Rd
Fire Rd 3
North Dr
209
Fire Rd 4
Acacia Ln
Manzanita Ln
Madrone Ave
N Rd
206
216
Pirates Ln
Patterson Dr
Sulphur Bank Rd
Lakeshore Dr
Oakhurst Ave
Tule Alto Dr
Carmel Ave
Google Earth
© 2021 Google
N
2000 ft

Habitat Types

11795 North Drive, Clearlake

Natural Investigations Company



Parcel Location 10 Mile Buffer

1:190,000 1 inch = 3 miles

0 3 6 Miles

N

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

Special-Status Species Occurrences Map

11795 North Drive

Clearlake Highlands 1993 Quadrangle:
Township 13N, Range 7W, Section 7,12

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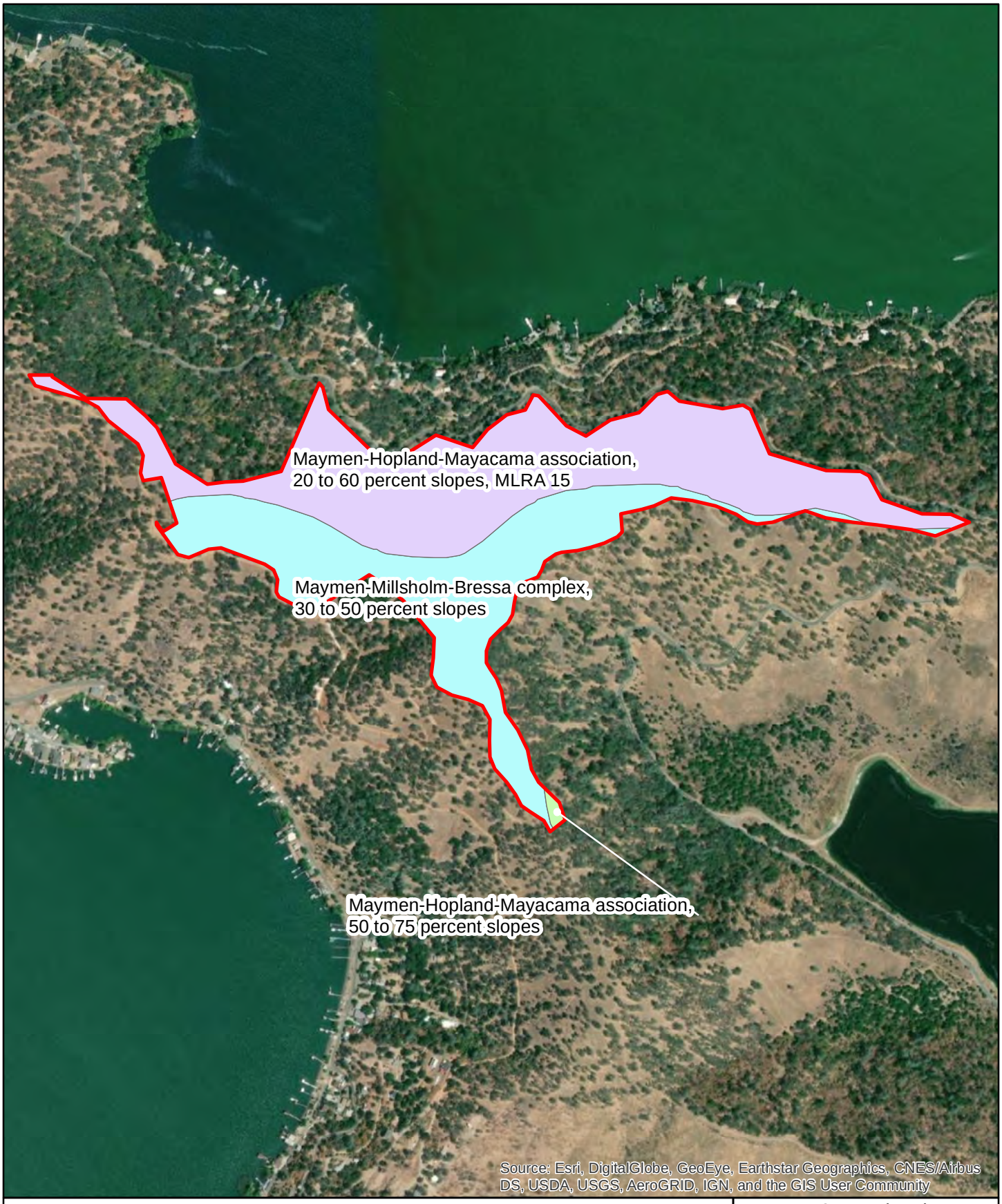


Parcel Location

0 250 500 Meters

0 1,000 2,000 Feet

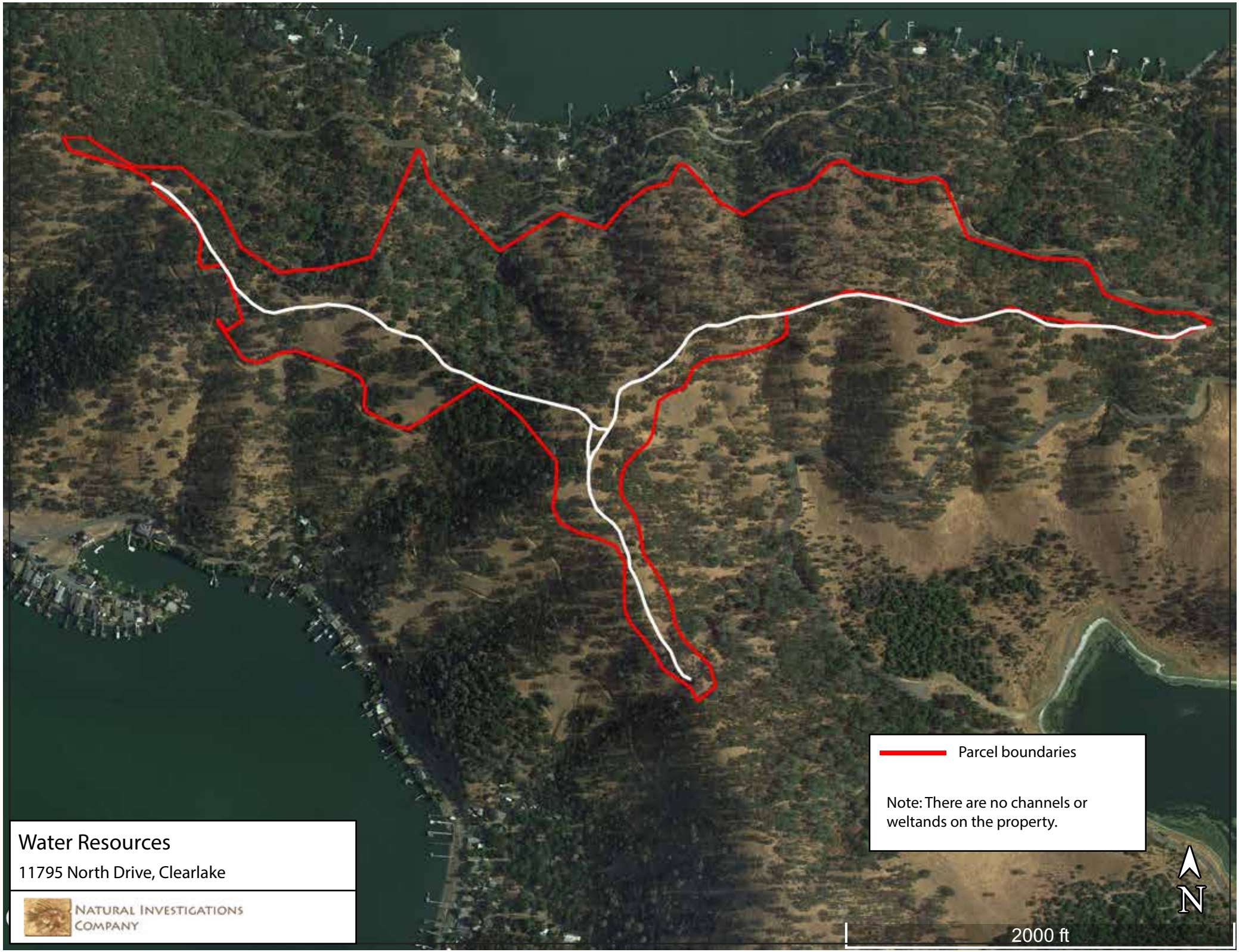
1:10,000

11795 North Drive
USDA Soils Map

Natural Investigations Company

Map Date 9/4/2020

Clearlake Highlands 1993 Quadrangle:Township 13N, Range 7W, Section 7,12



Water Resources

11795 North Drive, Clearlake

Natural Investigations Company

APPENDIX: CNDDB AND CNPS SPECIES LISTS

Special-status Species Reported by CNDDB in the Vicinity of the Project Area

Common Name Scientific Name	Status*	General Habitat	Microhabitat
Toren's grimmia *Grimmia torenii*	1B.3	Cismontane woodland, lower montane coniferous forest, chaparral.	Openings, rocky, boulder and rock walls, carbonate, volcanic. 325-1160 m.
Loch Lomond button-celery *Eryngium constancei*	FE/CE/1B.1	Vernal pools.	Volcanic ash flow vernal pools. 460-855 m.
Small-flowered calycadenia *Calycadenia micrantha*	1B.2	Chaparral, valley and foothill grassland, meadows and seeps.	Rocky talus or scree; sparsely vegetated areas. Occasionally on roadsides; sometimes on serpentine. 5-1500 m.
Pappose tarplant *Centromadia parryi ssp. parryi*	1B.2	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland.	Vernally mesic, often alkaline sites. 2-420m.
Burke's goldfields *Lasthenia burkei*	FE/CE/1B.1	Vernal pools, meadows and seeps.	Most often in vernal pools and swales. 15-600 m.
Colusa layia *Layia septentrionalis*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 145-1095m.
Hall's harmonia *Harmonia hallii*	1B.2	Chaparral.	Serpentine hills and ridges. Open, rocky areas within chaparral. 500-900 m.
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Cismontane woodland, valley and foothill grassland.	50-500m.
Serpentine cryptantha *Cryptantha dissita*	1B.2	Chaparral.	Serpentine outcrops. 330-730m.
Watershield *Brasenia schreberi*	2B.3	Freshwater marshes and swamps.	Aquatic from water bodies both natural and artificial in California.
Cascade downingia *Downingia willamettensis*	2B.2	Cismontane woodland, valley and foothill grasslands.	Lake margins and vernal pools.
Legenere *Legenere limosa*	1B.1	Vernal pools.	In beds of vernal pools. 1-880 m.
Oval-leaved viburnum *Viburnum ellipticum*	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	215-1400 m.
Lake County stonecrop *Sedella leiocarpa*	FE/CE/1B.1	Valley and foothill grassland, vernal pools, cismontane woodland.	Level areas that are seasonally wet and dry out in late spring; substrate usually of volcanic origin. 365-790 m.
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	1B.1	Chaparral, lower montane coniferous forest.	Rocky, serpentine sites. Slopes and ridges. 450-1000 m.
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest.	Volcanic soils. 395-1615 m.
Jepson's milk-vetch *Astragalus rattanii var. jepsonianus*	1B.2	Cismontane woodland, valley and foothill grassland, chaparral.	Commonly on serpentine in grassland or openings in chaparral. 180-1000 m.
Anthony Peak lupine *Lupinus antoninus*	1B.2	Upper montane coniferous forest, lower montane coniferous forest.	Open areas with surrounding forest; rocky sites. 1220-2285 m.
Napa bluecurls *Trichostema ruygtii*	1B.2	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest.	Often in open, sunny areas. Also has been found in vernal pools. 30-590m.
Woolly meadowfoam *Limnanthes floccosa ssp. floccosa*	4.2	Chapparal, cismontane woodland, valley and foothill grassland, vernal pools.	Vernally wet areas, ditches, and ponds. 60-1335 m.
Glandular western flax *Hesperolinon adenophyllum*	1B.2	Chaparral, cismontane woodland, valley and foothill grassland.	Serpentine soils; generally found in serpentine chaparral. 150-1315 m.
Two-carpellate western flax *Hesperolinon bicarpellatum*	1B.2	Serpentine chaparral.	Serpentine barrens at edge of chaparral. 60-1005 m.
Marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	1B.2	Meadows and seeps, riparian forest.	Wet soil of streambanks, meadows. 1100-2300 m.

Brandegee's eriastrum *Eriastrum brandegeeae*	1B.1	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 425-840 m.
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	Vernal pools and swales; adobe or alkaline soils. 5-1740 m.
Few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE/CT/1B.1	Vernal pools.	Volcanic ash flow, and volcanic substrate vernal pools. 400-855 m.
Many-flowered navarretia *Navarretia leucocephala ssp. plieantha*	FE/CE/1B.2	Vernal pools.	Volcanic ash flow vernal pools. 30-950 m.
Rincon Ridge ceanothus *Ceanothus confusus*	1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland.	Known from volcanic or serpentine soils, dry shrubby slopes. 75-1065 m.
Bolander's horkelia *Horkelia bolanderi*	1B.2	Lower montane coniferous forest, chaparral, meadows, valley and foothill grassland.	Grassy margins of vernal pools and meadows. 450-1100 m.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	CE/1B.2	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 10-2375 m.
Adobe-lily *Fritillaria pluriflora*	1B.2	Chaparral, cismontane woodland, foothill grassland.	Usually on clay soils; sometimes serpentine. 60-705 m.
California satintail *Imperata brevifolia*	2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps (alkali), riparian scrub.	Mesic sites, alkali seeps, riparian areas. 0-1215 m.
Slender Orcutt grass *Orcuttia tenuis*	FT/CE/1B.1	Vernal pools.	Often in gravelly pools. 35-1760 m.
Eel-grass pondweed *Potamogeton zosteriformis*	2B.2	Marshes and swamps.	Ponds, lakes, streams. 0-1860 m.

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

**Copied verbatim from CNDDB, unless otherwise noted.

Special-status Species Reported by CNPS in the Vicinity of the Project Area (9-quadrangle Query)

Common name *Scientific name*	**Status**	**Bloom**	**Habitat**
Bent-flowered fiddleneck *Amsinckia lunaris*	1B.2	Mar-Jun	Coastal bluff scrub, Cismontane woodland, Valley and foothill grassland
Dimorphic snapdragon *Antirrhinum subcordatum*	4.3	Apr-Jul	Chaparral, Lower montane coniferous forest
Twig-like snapdragon *Antirrhinum virga*	4.3	Jun-Jul	Chaparral, Lower montane coniferous forest
Coast rockcress *Arabis blepharophylla*	4.3	Feb-May	Broadleafed upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub
Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	1B.3	(Jan)Mar-May(Jul)	Chaparral, Cismontane woodland, Lower montane coniferous forest
Raiche's manzanita *Arctostaphylos stanfordiana ssp. raichei*	1B.1	Feb-Apr	Chaparral, Lower montane coniferous forest (openings)
Serpentine milkweed *Asclepias solanoana*	4.2	May-Jul(Aug)	Chaparral, Cismontane woodland, Lower montane coniferous forest
Brewer's milk-vetch *Astragalus breweri*	4.2	Apr-Jun	Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (open, often gravelly)
Cleveland's milk-vetch *Astragalus clevelandii*	4.3	Jun-Sep	Chaparral, Cismontane woodland, Riparian forest
Jepson's milk-vetch *Astragalus rattanii var. jepsonianus*	1B.2	Mar-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Mexican mosquito fern *Azolla microphylla*	4.2	Aug	Marshes and swamps (ponds, slow water)
Watershield *Brasenia schreberi*	2B.3	Jun-Sep	Marshes and swamps (freshwater)
Indian Valley brodiaea *Brodiaea rosea ssp. rosea*	CE/3.1	May-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Valley and foothill grassland
Serpentine reed grass *Calamagrostis ophitidis*	4.3	Apr-Jul	Chaparral (open, often north-facing slopes), Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland
Pink star-tulip *Calochortus uniflorus*	4.2	Apr-Jun	Coastal prairie, Coastal scrub, Meadows and seeps, North Coast coniferous forest
Four-petaled pussypaws *Calyptridium quadripetalum*	4.3	Apr-Jun	Chaparral, Lower montane coniferous forest
Mt. Saint Helena morning-glory *Calystegia collina ssp. oxyphylla*	4.2	Apr-Jun	Chaparral, Lower montane coniferous forest, Valley and foothill grassland
Three-fingered morning-glory *Calystegia collina ssp. tridactylosa*	1B.2	Apr-Jun	Chaparral, Cismontane woodland
Northern meadow sedge *Carex praticola*	2B.2	May-Jul	Meadows and seeps (mesic)
Pink creamsacs *Castilleja rubicundula var. rubicundula*	1B.2	Apr-Jun	Chaparral (openings), Cismontane woodland, Meadows and seeps, Valley and foothill grassland
Rincon Ridge ceanothus	1B.1	Feb-Jun	Closed-cone coniferous forest, Chaparral, Cismontane woodland

Common name *Scientific name*	**Status**	**Bloom**	**Habitat**
Ceanothus confusus			
Calistoga ceanothus *Ceanothus divergens*	1B.2	Feb-Apr	Chaparral (serpentinite or volcanic, rocky)
Dwarf soaproot *Chlorogalum pomeridianum var. minus*	1B.2	May-Aug	Chaparral (serpentinite)
Tracy's clarkia *Clarkia gracilis ssp. tracyi*	4.2	Apr-Jul	Chaparral (openings, usually serpentinite)
Serpentine collomia *Collomia diversifolia*	4.3	May-Jun	Chaparral, Cismontane woodland
Serpentine bird's-beak *Cordylanthus tenuis ssp. brunneus*	4.3	Jul-Aug	Closed-cone coniferous forest, Chaparral, Cismontane woodland
Serpentine cryptantha *Cryptantha dissita*	1B.2	Apr-Jun	Chaparral (serpentinite)
Swamp larkspur *Delphinium uliginosum*	4.2	May-Jun	Chaparral, Valley and foothill grassland
Cascade downingia *Downingia willamettensis*	2B.2	Jun-Jul(Sep)	Cismontane woodland (lake margins), Valley and foothill grassland (lake margins), Vernal pools
Brandegee's eriastrum *Eriastrum brandegeeae*	1B.1	Apr-Aug	Chaparral, Cismontane woodland
Greene's narrow-leaved daisy *Erigeron greenei*	1B.2	May-Sep	Chaparral (serpentinite or volcanic)
Snow Mountain buckwheat *Eriogonum nervulosum*	1B.2	Jun-Sep	Chaparral (serpentinite)
Loch Lomond button-celery *Eryngium constancei*	FE/CE/1B.1	Apr-Jun	Vernal pools
Adobe-lily *Fritillaria pluriflora*	1B.2	Feb-Apr	Chaparral, Cismontane woodland, Valley and foothill grassland
Boggs Lake hedge-hyssop *Gratiola heterosepala*	CE/1B.2	Apr-Aug	Marshes and swamps (lake margins), Vernal pools
Toren's grimmia *Grimmia torenii*	1B.3		Chaparral, Cismontane woodland, Lower montane coniferous forest
Hall's harmonia *Harmonia hallii*	1B.2	Apr-Jun	Chaparral (serpentinite)
Congested-headed hayfield tarplant *Hemizonia congesta ssp. congesta*	1B.2	Apr-Nov	Valley and foothill grassland
Glandular western flax *Hesperolinon adenophyllum*	1B.2	May-Aug	Chaparral, Cismontane woodland, Valley and foothill grassland
Two-carpellate western flax *Hesperolinon bicarpellatum*	1B.2	May-Jul	Chaparral (serpentinite)
Lake County western flax *Hesperolinon didymocarpum*	CE/1B.2	May-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland
Sharsmith's western flax	1B.2	May-Jul	Chaparral

Common name *Scientific name*	**Status**	**Bloom**	**Habitat**
Hesperolinon sharsmithiae			
Bolander's horkelia *Horkelia bolanderi*	1B.2	(May)Jun-Aug	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland
California satintail *Imperata brevifolia*	2B.1	Sep-May	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub
Burke's goldfields *Lasthenia burkei*	FE/CE/1B.1	Apr-Jun	Meadows and seeps (mesic), Vernal pools
Colusa layia *Layia septentrionalis*	1B.2	Apr-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Legenere *Legenere limosa*	1B.1	Apr-Jun	Vernal pools
Bristly leptosiphon *Leptosiphon acicularis*	4.2	Apr-Jul	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland
Jepson's leptosiphon *Leptosiphon jepsonii*	1B.2	Mar-May	Chaparral, Cismontane woodland, Valley and foothill grassland
Woolly meadowfoam *Limnanthes floccosa ssp. floccosa*	4.2	Mar-May(Jun)	Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pools
Napa lomatium *Lomatium repostum*	4.3	Mar-Jun	Chaparral, Cismontane woodland
Cobb Mountain lupine *Lupinus sericatus*	1B.2	Mar-Jun	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest
Heller's bush-mallow *Malacothamnus helleri*	3.3	May-Jul	Chaparral (sandstone), Riparian woodland (gravel)
Mt. Diablo cottonweed *Micropus amphibolus*	3.2	Mar-May	Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland
Elongate copper moss *Mielichhoferia elongata*	4.3		Broadleafed upland forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Subalpine coniferous forest
Little mousetail *Myosurus minimus ssp. apus*	3.1	Mar-Jun	Valley and foothill grassland, Vernal pools (alkaline)
Cotula navarretia *Navarretia cotulifolia*	4.2	May-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Jepson's navarretia *Navarretia jepsonii*	4.3	Apr-Jun	Chaparral, Cismontane woodland, Valley and foothill grassland
Baker's navarretia *Navarretia leucocephala ssp. bakeri*	1B.1	Apr-Jul	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools
Few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	FE/CT/1B.1	May-Jun	Vernal pools (volcanic ash flow)
Many-flowered navarretia *Navarretia leucocephala ssp. plieantha*	FE/CE/1B.2	May-Jun	Vernal pools (volcanic ash flow)
Porter's navarretia *Navarretia paradoxinota*	1B.3	May-Jun(Jul)	Meadows and seeps

Common name *Scientific name*	**Status**	**Bloom**	**Habitat**
Slender Orcutt grass *Orcuttia tenuis*	FT/CE/1B.1	May-Sep(Oct)	Vernal pools
Geysers panicum *Panicum acuminatum var. thermale*	CE/1B.2	Jun-Aug	Closed-cone coniferous forest, Riparian forest, Valley and foothill grassland
Sonoma beardtongue *Penstemon newberryi var. sonomensis*	1B.3	Apr-Aug	Chaparral (rocky)
Michael's rein orchid *Piperia michaelii*	4.2	Apr-Aug	Coastal bluff scrub, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest
Eel-grass pondweed *Potamogeton zosteriformis*	2B.2	Jun-Jul	Marshes and swamps (assorted freshwater)
Lake County stonecrop *Sedella leiocarpa*	FE/CE1B.1	Apr-May	Cismontane woodland, Valley and foothill grassland, Vernal pools
Cleveland's ragwort *Senecio clevelandii var. clevelandii*	4.3	Jun-Jul	Chaparral (serpentinite seeps)
Marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	1B.2	(Jun)Jul-Aug	Meadows and seeps, Riparian forest
Bearded jewelflower *Streptanthus barbiger*	4.2	May-Jul	Chaparral (serpentinite)
Socrates Mine jewelflower *Streptanthus brachiatus ssp. brachiatus*	1B.2	May-Jun	Closed-cone coniferous forest, Chaparral
Freed's jewelflower *Streptanthus brachiatus ssp. hoffmanii*	1B.2	May-Jul	Chaparral, Cismontane woodland
Hoffman's bristly jewelflower *Streptanthus glandulosus ssp. hoffmanii*	1B.3	Mar-Jul	Chaparral, Cismontane woodland, Valley and foothill grassland (often serpentinite)
Green jewelflower *Streptanthus hesperidis*	1B.2	May-Jul	Chaparral (openings), Cismontane woodland
Three Peaks jewelflower *Streptanthus morrisonii ssp. elatus*	1B.2	Jun-Sep	Chaparral (serpentinite)
Kruckeberg's jewelflower *Streptanthus morrisonii ssp. kruckebergii*	1B.2	Apr-Jul	Cismontane woodland (serpentinite)
Marsh zigadenus *Toxicoscordion fontanum*	4.2	Apr-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps
Napa bluecurls *Trichostema ruygtii*	1B.2	Jun-Oct	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland, Vernal pools
Saline clover *Trifolium hydrophilum*	1B.2	Apr-Jun	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools
Oval-leaved viburnum *Viburnum ellipticum*	2B.3	May-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest

APPENDIX: LIST OF PLANT TAXA DETECTED IN THE PROJECT AREA AND IMMEDIATE VICINITY

A list of all plant taxa occurring in the project area, with all taxa identified to the taxonomic level necessary to determine whether or not they are a special status plant;

Plants Observed at 11795 North Road, Clearlake on September 15, 2020, April 6, 2021 and June 8, 2021

Common Name	**Scientific Name**
Yarrow	*Achillea millefolium*
Short-podded lotus	*Acmispon brachycarpus*
Lotus	*Acmispon sp.*
California buckeye	*Aesculus californicus*
Mountain dandelion	*Agoseris heterophylla*
Mountain dandelion	*Agoseris sp.*
Common fiddleneck	*Amsinckia menziesii*
Pine dwarf mistletoe	*Arceuthobium campylopodum*
Konocti manzanita*	*Arctostaphylos manzanita ssp. elegans c.f.*
Common manzanita	*Arctostaphylos manzanita ssp. manzanita*
Slender wild oat	*Avena barbata*
Wild oat	*Avena fatua*
Coyote brush	*Baccharis pilularis*
Black mustard	*Brassica nigra*
Kale	*Brassica oleracea*
Brodiaea	*Brodiaea sp.*
Ripgut brome	*Bromus diandrus*
Soft chess	*Bromus hordeaceus*
Madrid brome	*Bromus madritensis*
Poverty brome	*Bromus sterilis*
Red maids	*Calandrinia ciliata*
Italian thistle	*Carduus pycnocephalus*
Maltese star thistle	*Centaurea melitensis*
Yellow star thistle	*Centaurea solstitialis*
Common mouse-eared chickweed	*Cerastium fontanum*
Western redbud	*Cercis occidentalis*
Birchleaf mountain mahogany	*Cercocarpus betuloides*
Wavy leaf soap plant	*Chlorogalum pomeridianum*
Clarkia	*Clarkia sp.*
Clarkia	*Clarkia sp.*
Narrow leaved miner’s lettuce	*Claytonia parviflora*
Hillside collinsia	*Collinsia sparsiflora*
Sand pygmy weed	*Crassula connata*
Pacific houndstooth	*Cynoglossum grande*
Dogtail grass	*Cynosurus echinatus*
Larkspur	*Delphinium sp.*
Blue dicks	*Dichelostemma capitatum (=Dipterostemon capitatus)*
Medusa-head grass	*Elymus caput-medusae*
Squirreltail grass	*Elymus elymoides*
Blue wild rye	*Elymus glaucus*
Broad leaved filaree	*Erodium botrys*
Red-stemmed filaree	*Erodium cicutarium*
White stem filaree	*Erodium moschatum*
Foothill poppy	*Eschscholzia caespitosa*
California poppy	*Eschscholzia californica*

Common Name	Scientific Name
Brome fescue	*Festuca bromoides*
California fescue	*Festuca californica*
Pacific fescue	*Festuca microstachys*
Rattail sixweeks grass	*Festuca myuros*
Two-petaled ash	*Fraxinus dipetala*
Bedstraw	*Galium aparine*
Climbing bedstraw	*Galium porrigens*
Bedstraw	*Galium sp.*
Dove's foot geranium	*Geranium molle*
Bird's eye gilia	*Gilia tricolor*
Great Valley gum plant	*Grindelia camporum*
Toyon	*Heteromeles arbutifolia*
Wall barley	*Hordeum murinum*
Common barley	*Hordeum vulgare*
Iris	*Iris sp.*
Shining peppergrass	*Lepidium nitidum*
Whisker brush	*Leptosiphon ciliatus*
California cottonrose	*Logfia filaginoides*
Miniature lupine	*Lupinus bicolor*
Lupine	*Lupinus sp.*
Scarlet pimpernel	*Lysimachia arvensis*
Slender madia	*Madia gracilis*
California man-root	*Marah fabacea*
Pineapple weed	*Matricaria discoidea*
California burclover	*Medicago polymorpha*
California melic grass	*Melica californica*
Little California melica	*Melica imperfecta*
Slender cottonweed	*Micropus californicus*
Silverpuffs	*Microseris sp.*
Slender phlox	*Microsteris gracilis*
Sunkbush	*Navarretia squarrosa*
Canyon nemophila	*Nemophila heterophylla*
Windmill pink	*Petrorhagia dubia*
American mistletoe	*Phoradendron leucarpum*
Gray pine	*Pinus sabiniana*
Rusty popcorn flower	*Plagiobothrys nothofulvus*
Popcorn flower	*Plagiobothrys sp.*
Dwarf plantain	*Plantago erecta*
English plantain	*Plantago lanceolata*
Shortspur seablush	*Plectritis congesta*
Bulbous bluegrass	*Poa bulbosa*
Bluegrass	*Poa sp.*
Henderson's shooting star	*Primula hendersonii*
Blue oak	*Quercus douglasii*
California black oak	*Quercus kelloggii*
Interior live oak	*Quercus wislizeni var. wislizeni*
Oracle oak	*Quercus x morehus*
Hollyleaf redberry	*Rhamnus ilicifolia*

Common Name	Scientific Name
Blue elderberry	*Sambucus nigra ssp. caerulea*
Poison sanicle	*Sanicula bipinnata*
Pacific sanicle	*Sanicula crassicaulis*
Shepherd's needle	*Scandix pecten-veneris*
Windmill pinks	*Silene gallica*
Milk thistle	*Silybum marinum*
Tumble mustard	*Sisymbrium altissimum*
Hedge mustard	*Sisymbrium officinale*
Blue-eyed grass	*Sisyrinchium bellum*
Chickweed	*Stellaria media*
Purple needlegrass	*Stipa pulchra*
Needlegrass	*Stipa sp.*
Fringepod	*Thysanocarpus curvipes*
Showy fringepod	*Thysanocarpus radians*
Tall sock destroyer	*Torilis arvensis*
Poison oak	*Toxicodendron diversilobum*
Olive clover	*Trifolium olivaceum*
Clover	*Trifolium sp.*
Tomcat clover	*Trifolium willdenovii*
Ithuriel's spear	*Triteleia laxa*

*Observed specimens of *Arctostaphylos manzanita* at this location did not produce flowers or fruit during winter or spring 2020/2021. Flowers and fruit are required to make a positive identification of these species. Old fruit found near the base of some manzanita shrubs had characteristics of both common manzanita (free nutlets) and Konocti manzanita (fused nutlets). Plants will be afforded protection as if they were the rare Konocti manzanita (*Arctostaphylos manzanita* ssp. *elegans* CNPS 1B.1).

APPENDIX: SITE PHOTOS

















































SECTION – F

GROUNDS MANAGEMENT PLAN

Grounds Management Plan

Purpose and Overview

Akwaaba, LLC (Akwaaba) is seeking a Major Use Permit from the County of Lake, for a proposed commercial cannabis cultivation operation at 11795 North Drive near Clearlake Park, California on Lake County APN 010-019-15 (Project Parcel). Akwaaba's proposed cultivation operation will be composed of three A-Type 2 "Medium Outdoor" cultivation areas and an A-Type 2B "Small Mixed-Light" cultivation area (with a total combined cultivation/canopy area of 83,280 ft^2), a 1,800 ft^2 Drying & Harvest Storage Facility (existing metal barn), and a 160 ft^2 Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage container). The proposed cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°.

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 Akwaaba's 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 Drying & Harvest Storage Facility. All agricultural chemicals, when not in use, will be stored in their manufacturer's original containers/packaging, undercover, and at least 100 feet from surface water bodies inside the proposed Pesticides and Agricultural Chemicals Storage Area (proposed metal shipping/storage container). Sanitation products will be stored in their manufacturer's original containers/packaging within a secure cabinet inside the proposed Drying & Harvest Storage Facility. Spill containment and cleanup equipment will be maintained within the proposed Pesticides and Agricultural Chemicals Storage Area and Drying & Harvest Storage Facility. 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 cultivation 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 Drying & Harvest Storage Facility. 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 Eastlake Landfill is the closest Lake County Integrated Waste Management facility to the project site. Most, if not all, of the solid waste generated by the proposed cultivation operation can and will be deposited at this facility.

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 operation to provide for visibility and security monitoring. Access roads and parking areas will be graveled 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. Staff will have access to the restrooms/washrooms of the proposed Drying & Harvest Storage Facility whenever they are onsite.

Compliance with SRA Fire Safe Regulations

The Project Property is located within the Lake County Fire Protection District and the California Board of Forestry and Fire Protection (CALFIRE) State Responsibility Area (SRA). As such, the proposed cultivation operation must comply with SRA Fire Safe Regulations, and Akwaaba will establish/develop the following improvements to adhere to those regulations. Please see the attached Fire Map for a graphic representation of the existing/proposed improvements referenced below.

Emergency Access and Egress

An existing private gravel and native soil surfaced access road winds through the Project Parcel, connecting North Drive to Crestview Drive through the Project Parcel. The existing access road is 12 to 14 feet wide with less than 16 percent grade. Akwaaba gravel has been applied to the access road's surface for its entire length, so as to establish an aggregate surface capable of supporting fire apparatus weighing at least 75,000 pounds. Akwaaba will also adhere to one direction of travel on the private gravel access road, from North Drive to Crestview Drive (please see the attached "Fire Map"). A 20-foot wide spur road will connect the proposed Drying & Harvest Storage Facility to the private gravel access road. A hammerhead at the end of the 20-foot wide spur road provides adequate emergency vehicle turnaround space.

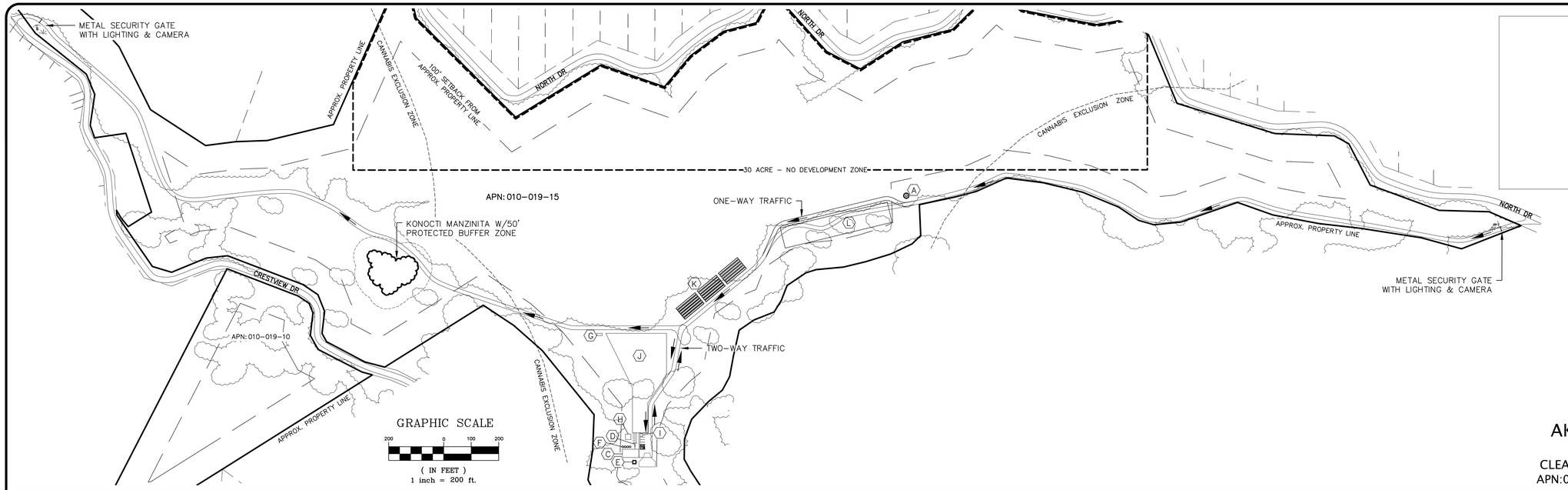
Signing and Building Numbering

The address of the Project Parcel (and the proposed cultivation operation) will be displayed on a metal rectangle mounted to a metal post in a location that is visible and legible from at least 100 feet in both directions from the North Drive and Crestview Drive. The numbers of the address 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.

Emergency Water Supply & Defensible Space

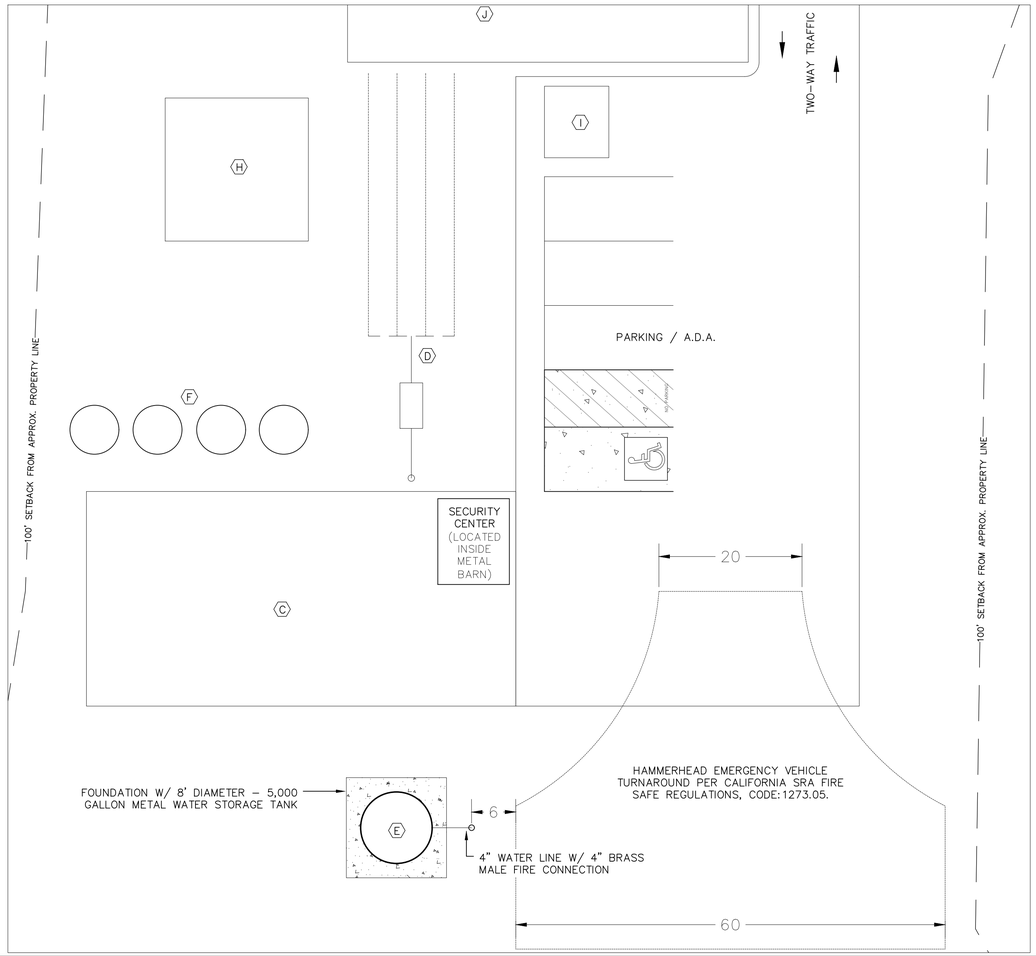
Akwaaba will establish a 5,000-gallon metal fire water storage tank adjacent to the proposed Drying & Harvest Storage Facility. The metal fire water storage tank will be connected to a 2-foot high hydrant/fire valve equipped with 4-inch National Hose male thread and cap, located approximately 6 feet west of the spur road used to access the proposed Drying & Harvest Storage Facility (please see the attached "Fire Map"). 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.

Akwaaba will remove all flammable vegetation within 30 feet of the structures, cultivation areas, and metal fire water storage tank and hydrant/fire valve of the proposed cultivation operation. 100 feet of defensible space will be maintained around the proposed cultivation 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.



AKWAABA FARMS

11795 NORTH DR.
CLEARLAKE PARK, CA 95424
APN:010-019-15, 010-019-10



FIRE MAP

GRAPHIC SCALE
10 0 5 10
(IN FEET)
1 inch = 10 ft.

LEGEND:

1530	CONTOUR ELEVATION
	FENCE
	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 10'

(A) (E) GROUNDWATER WELL
LAT: 38.99555°
LONG: –122.68973°
BENEFICIAL USE: IRRIGATION

(C) (E) 30'x60' (1,800 SF) METAL BARN / DRYING & HARVEST STORAGE FACILITY

(D) (E) 1,250 GAL. SEPTIC TANK / LEACH FIELD

(E) (E) FOUNDATION WITH 8' DIAMETER 5,000 GALLON METAL FIRE WATER STORAGE TANK

(F) (E) FOUR 5,000 GALLON WATER STORAGE TANKS

(G) (E) 8'x20' (160 SF) PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(H) (E) 20'x20' COMPOST AREA

(I) (E) DESIGNATED REFUSE AREA

(J) (E) 43,560 SF OUTDOOR CULTIVATION / CANOPY AREA

(K) (E) EIGHTEEN 6'X90' (540 SF) MIXED-LIGHT CANOPY AREAS (LOW HOOPS)

(L) (E) 75'X400' (30,000 SF) OUTDOOR CULTIVATION / CANOPY AREA

Revisions:

REALM ENGINEERING
CIVIL ENGINEERING, SURVEYING & PLANNING
1767 MARKET STREET SUITE c
REDDING, CA. 96001
530-526-7493

PLANS PREPARED UNDER THE SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER
JASON B. VINE
No. 67800
EXP. 06/30/21
CIVIL
STATE OF CALIFORNIA

FIRE MAP

APNs:010-019-15, 010-019-10 & 010-019-14
11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

PLOTTED BY: ---
DATE PLOTTED: 6/01/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

SECTION – G

SECURITY MANAGEMENT PLAN

Security Management Plan

Purpose and Overview

Akwaaba, LLC (Akwaaba) is seeking a Major Use Permit from the County of Lake, for a proposed commercial cannabis cultivation operation at 11795 North Drive near Clearlake Park, California on Lake County APN 010-019-15 (Project Parcel). Akwaaba's proposed cultivation operation will be composed of three A-Type 2 "Medium Outdoor" cultivation areas and an A-Type 2B "Small Mixed-Light" cultivation area (with a total combined cultivation/canopy area of 83,280 ft^2), a 1,800 ft^2 Drying & Harvest Storage Facility (existing metal barn), and a 160 ft^2 Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage container). The proposed cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°.

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. This SMP is also designed to be compliant with the regulations for cannabis cultivation authored by the CDFA's CalCannabis Licensing program, as well as the regulations established by the California Bureau of Cannabis Control for state-licensed cannabis businesses.

Secured Entry and Access

A private gravel and native soil surfaced access road winds through the Project Parcel, connecting North Drive to Crestview Drive through the Project Parcel. Metal gates will control access to the private access roads of the Project Parcel from North Drive and Crestview Drive. All gates will be closed and locked outside of core operating/business hours (8am to 6pm) and whenever Akwaaba's managerial staff are not present.

6-foot woven wire fences will be erected around the proposed cultivation/canopy areas. Privacy Screen/Cloth will be installed on the fences where necessary to screen the cultivation area from public view. Posts will be set into the ground at not more than 10-foot intervals, and terminal posts will be set into concrete footings. Secured entry and access to the cultivation area(s) will be controlled via locking gates that will be locked whenever Akwaaba's managerial staff are not

present. All gates will be secured with heavy duty chains and commercial grade padlocks. Only approved managerial staff will be able to unlock the gates of the Project Parcel.

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 operation, to alert personnel when someone/something has entered onto the premises. Motion-sensing security lights will be installed on all external corners of the proposed cultivation areas. 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. Akwaaba's managerial staff will investigate the suspicious activity for potential threats, issues, or concerns. Akwaaba's 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 operation via the main entrance during core operating/business hours, they will be immediately greeted by a member of Akwaaba's 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

Akwaaba 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 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 Station inside the Security Room within the proposed Drying & Harvest Storage Facility, 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 Station will be capable of supporting remote access, and will be equipped with a failure notification system that immediately notifies Akwaaba's 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/canopy areas;
- Interior and exterior of all entryways and exits to the proposed Drying & Harvest Storage Facility; and
- Interior of each room of the proposed Drying & Harvest Storage Facility, including the proposed the Security Center.

Diversion/Theft Prevention

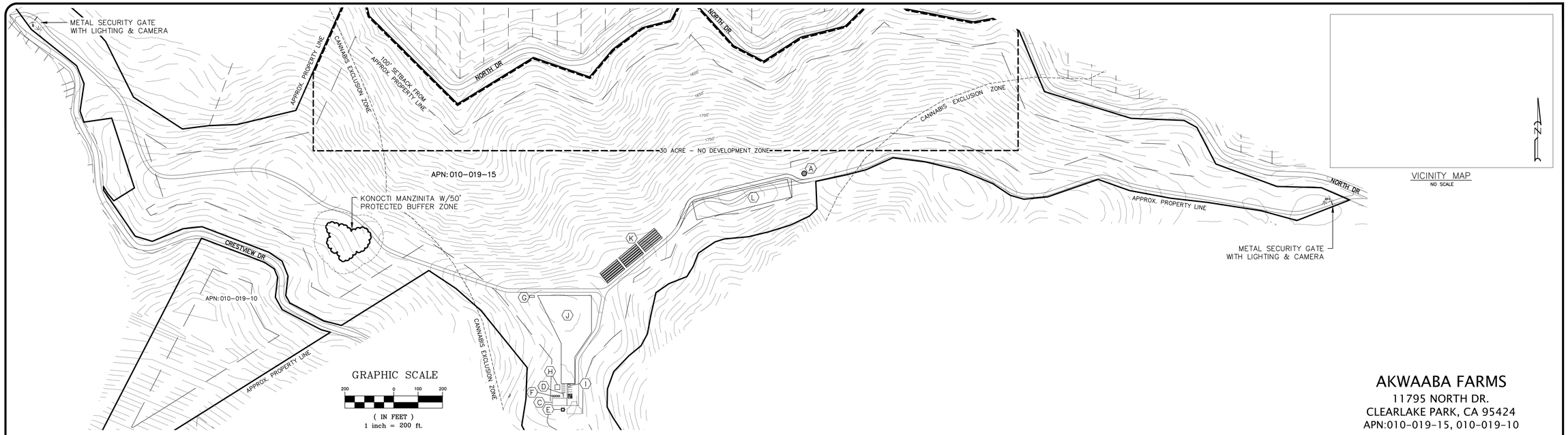
All personnel will be required to undergo a criminal background check with the Lake County Sheriff's Office. Visitors and personnel will be required to sign-in and sign-out each day, and record the areas in which they worked and the tasks they were assigned. Personnel will be required to store personal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

Akwaaba 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 Akwaaba's 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

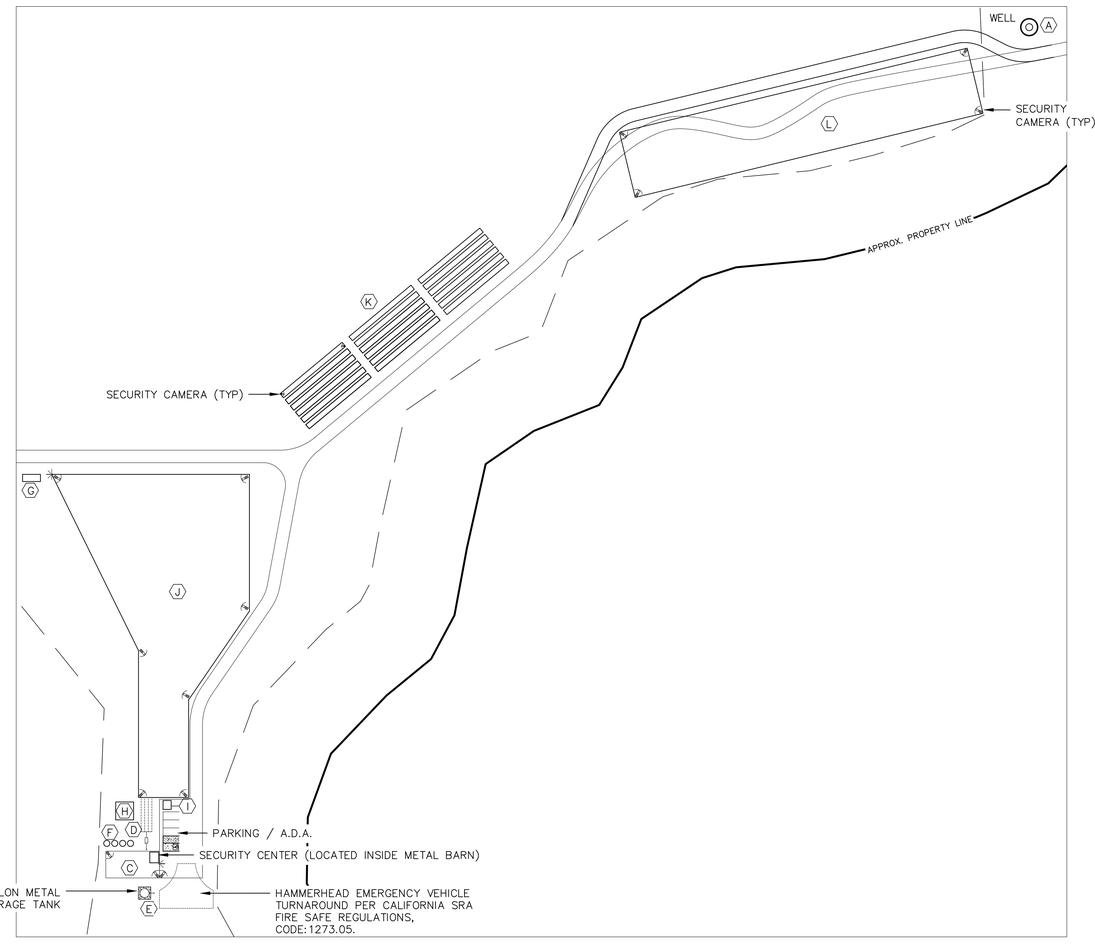
A Community Liaison/Emergency Contact will be made available to Lake County Officials/Staff and the Lake County Sheriff's Office at all times to address any needs or issues that may arise. Akwaaba will provide the name, cell phone number, and email address of the Community Liaison/Emergency Contact to all interested County Departments, Law Enforcement Officials, and neighboring property owners and residents. Akwaaba 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 California Paradise's annual Performance Review Report.

The Community Liaison/Emergency Contact for the proposed cultivation operation is Ms. Angie DeCoux. Ms. DeCoux's cell phone number is (707) 601-1525, and her email address is AkwaabaFarms@gmail.com.



VICINITY MAP
NO SCALE

AKWAABA FARMS
11795 NORTH DR.
CLEARLAKE PARK, CA 95424
APN:010-019-15, 010-019-10



SECURITY SITE PLAN

GRAPHIC SCALE
80 0 40 80
(IN FEET)
1 inch = 80 ft.

LEGEND:

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

NOTES:
1. CONTOUR INTERVAL IS 10'

(A) (E) GROUNDWATER WELL
LAT: 38.99555°
LONG: –122.68973°
BENEFICIAL USE: IRRIGATION

(C) (E) 30'x60' (1,800 SF) METAL BARN / DRYING & HARVEST STORAGE FACILITY

(D) (E) 1,250 GAL. SEPTIC TANK / LEACH FIELD

(E) (E) FOUNDATION WITH 8' DIAMETER 5,000 GALLON METAL FIRE WATER STORAGE TANK

(F) (E) FOUR 5,000 GALLON WATER STORAGE TANKS

(G) (E) 8'x20' (160 SF) PESTICIDES & AGRICULTURAL CHEMICALS STORAGE AREA

(H) (E) 20'x20' COMPOST AREA

(I) (E) DESIGNATED REFUSE AREA

(J) (E) 43,560 SF OUTDOOR CULTIVATION / CANOPY AREA

(K) (E) EIGHTEEN 6'X90' (540 SF) MIXED–LIGHT CANOPY AREAS (LOW HOOPS)

(L) (E) 75'X400' (30,000 SF) OUTDOOR CULTIVATION / CANOPY AREA

Revisions:

REALM ENGINEERING
CIVIL ENGINEERING, SURVEYING & PLANNING
1767 MARKET STREET SUITE c
REDDING, CA. 96001
530-526-7493

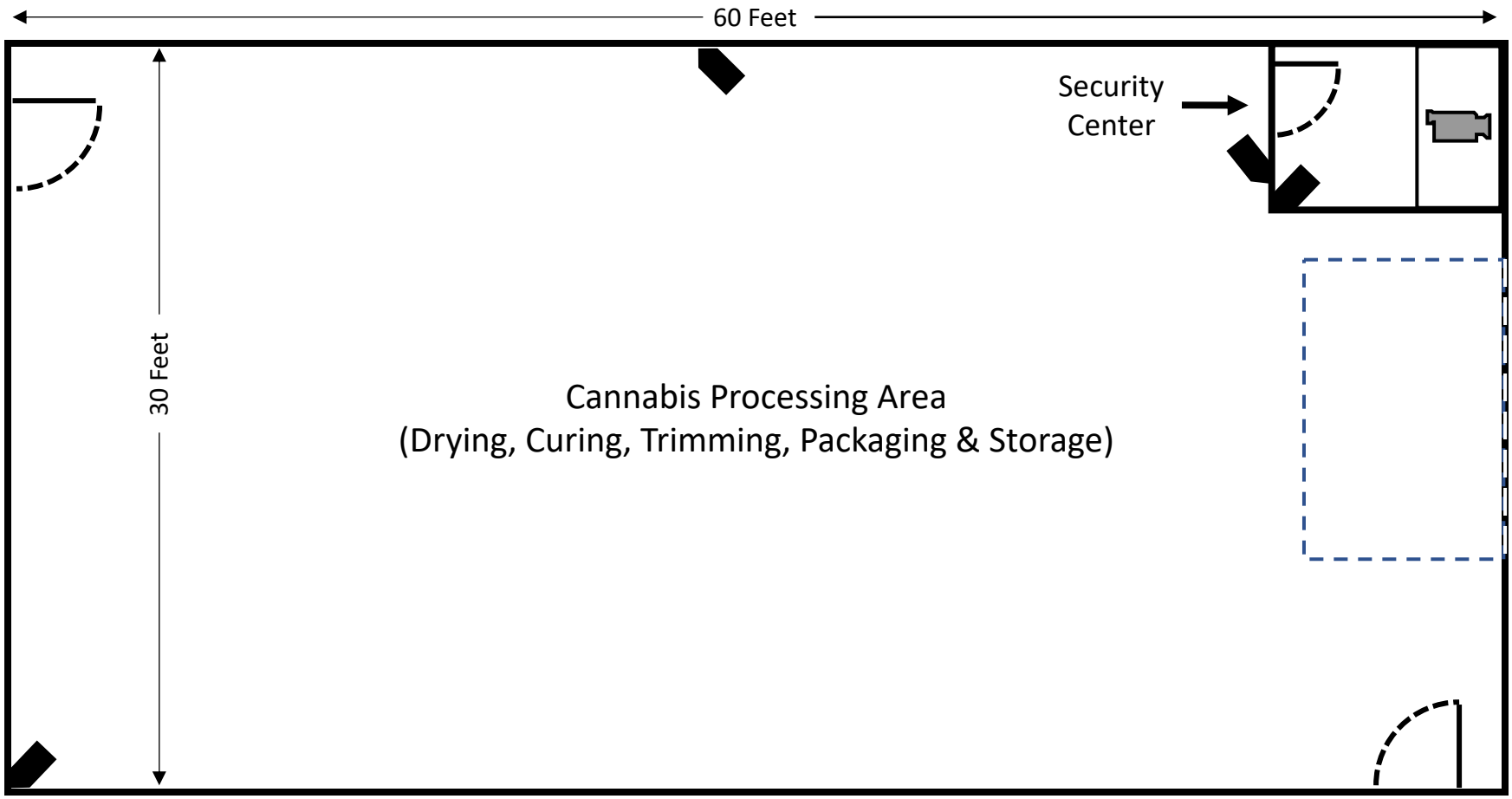
PLANS PREPARED UNDER THE SUPERVISION OF:
REGISTERED PROFESSIONAL ENGINEER
JASON B. VINE
No. 67800
EXP. 06/30/21
CIVIL
STATE OF CALIFORNIA

SECURITY SITE PLAN
APNs:010-019-15, 010-019-10 & 010-019-14
11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

PLOTTED BY:
DATE PLOTTED: 3/08/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

Proposed Processing Facility/Building Layout

(Existing Metal Barn)



Waterproof Surveillance Cameras with 1080p resolution and a 90° field of view. (Arrow indicates direction of view)

Video Surveillance Monitoring and Recording Station

SECTION – H

STORM WATER MANAGEMENT PLAN

Storm Water Management Plan

Purpose and Overview

Akwaaba, LLC (Akwaaba) is seeking a Major Use Permit from the County of Lake, for a proposed commercial cannabis cultivation operation at 11795 North Drive near Clearlake Park, California on Lake County APN 010-019-15 (Project Parcel). Akwaaba's proposed cultivation operation will be composed of three A-Type 2 "Medium Outdoor" cultivation areas and an A-Type 2B "Small Mixed-Light" cultivation area (with a total combined cultivation/canopy area of 83,280 ft^2), a 1,800 ft^2 Drying & Harvest Storage Facility (existing metal barn), and a 160 ft^2 Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage container). The proposed cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°.

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 Parcel by approximately 160 ft^2, or less than 0.1% of the Project Parcel, through the installation of an 8' X 20' Pesticide & Agricultural Chemicals Storage Area (metal shipping/storage container). The proposed outdoor cultivation/canopy areas will not increase the impervious surface area of the Project Parcel and should not increase the volume of runoff from the Project Site. The proposed parking lot will have a permeable gravel surface, and the proposed ADA parking space will be constructed of permeable pavers.

Akwaaba 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 Parcel is located along the spine of Sulphur Bank Ridge, near the base of a large peninsula that extends out into Clear Lake. The western extent of the large peninsula is known as Sulphur Bank Point. There are no watercourses or other surface water bodies (including wetlands and vernal pools) on the Project Parcel. Stormwater runoff from the Project Parcel flows north, south, and east, into ephemeral drainages that discharge into Clear Lake (north and south) or Borax Lake (east). All areas of the proposed cultivation operation will be located more than 100 feet from any surface waterbody.

The Project Property is accessed via North Drive and Crestview Drive. A private gravel and native soil surfaced access road winds through the Project Parcel, connecting North Drive to Crestview Drive through the Project Parcel. There are no watercourse crossings on the private access road. Stormwater runoff from the Project Parcel, passes under Crestview Drive, North Drive, and Sulphur Bank Drive via County-maintained culverted watercourse crossings. Development of the proposed cultivation operation, with the implementation of the LID practices and erosion and sediment control measures outlined below, will not increase the volume of stormwater discharges from the Project Property onto adjacent properties or flood elevations downstream.

Ground Disturbance and Grading

Soils of the Project Parcel in the area of the proposed cultivation operation are identified as the Maymen-Millsholm-Bressa complex by the NRCS Web Soil Survey (attached), and characterized as well-drained gravelly and clay loams derived from residuum weathered from sedimentary rock. The proposed cultivation operation will increase the impervious surface area of the Project Parcel by approximately 160 ft^2, or less than 0.1% of the Project Parcel, through the installation of an 8' X 20' Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage containers). The proposed outdoor cultivation/canopy areas will not increase the impervious surface area of the Project Property and should not increase the volume of runoff from the Project Site. The proposed parking lot will have a permeable gravel surface, and the proposed ADA parking space will be constructed of permeable pavers.

Development of the proposed cultivation operation will occur in two phases. The first phase will occur in 2021 under an Early Activation of Use Permit, and will not involve any construction, grading, or vegetation removal. The second phase will occur in 2022, after a Major Use Permit for Commercial Cannabis Cultivation has been obtained, and will require some vegetation removal, including 12 mature blue oak trees (+6" DBH). A 30-acre No Development Zone will be established in the northern half of the Project Parcel, to mitigate for the six acres of the Blue Oak Woodland habitat disturbed as a result of developing the proposed cultivation operation. Additionally, sixty (60) Blue Oak saplings will be planted, cared for, and protected in the southern half of the Project Property for seven years, to mitigate for the loss of 12 Blue Oak trees within the area of the proposed cultivation 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 structures and cultivation areas will be located more than 100 feet from the nearest surface water bodies, and stormwater runoff from the structures and cultivation areas will be discharged to the well-vegetated buffers surrounding the proposed cultivation 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 and silt fences 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. Akwaaba's 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 operation, with the implementation of the LID practices and erosion and sediment control measures outlined above, will 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."

Akwaaba will adhere to these monitoring requirements to maintain compliance with the Cannabis General Order, and will be happy to provide a copy of his 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 Processors and Manufacturers. The proposed cannabis cultivation operation should generate approximately 300 pounds of dried cannabis waste each cultivation season (April 15th through November 15th). 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. Akwaaba 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.

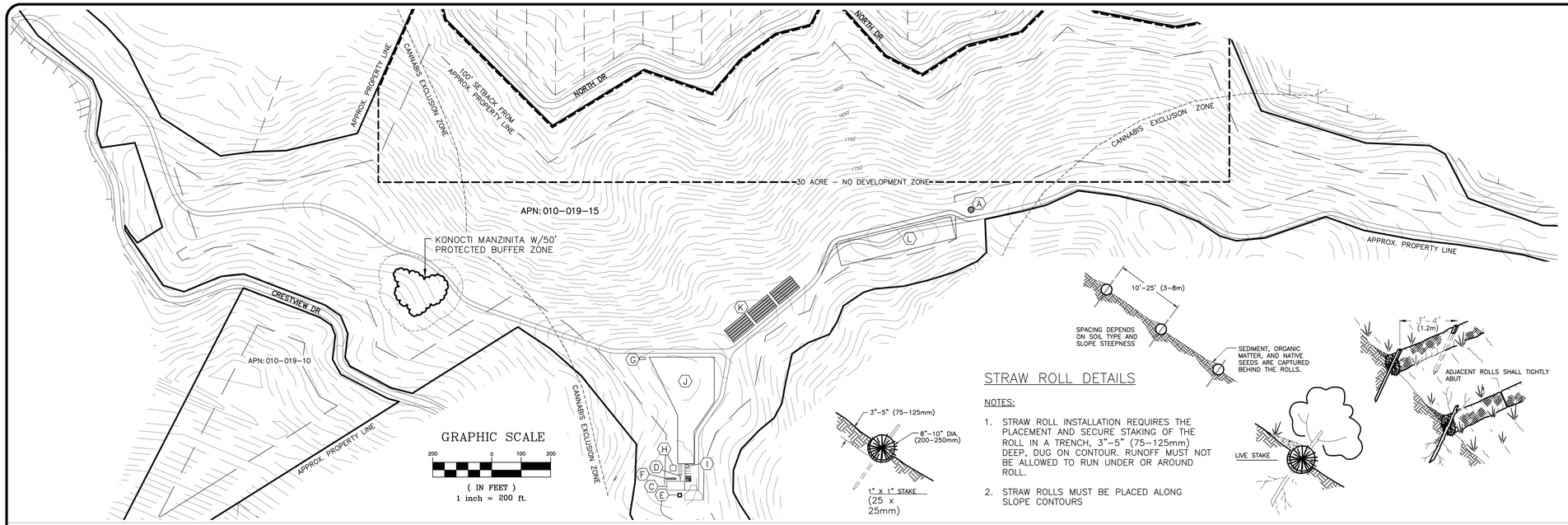
Growing Medium Management

Growing Medium Overview

The growing medium of the proposed outdoor cannabis cultivation/canopy area will composed of an above grade organic soilless growing medium (composed mostly of composted forest material), in aboveground planters (plastic and cloth garden pots). The organic soilless growing medium of each garden pot will be amended with compost, composted manure, worm castings, and vermiculite (only when needed to achieve the desired soil density), and reused annually. Akwaaba 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).



GRAPHIC SCALE

200 0 100 200

(IN FEET)
1 inch = 200 ft.

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

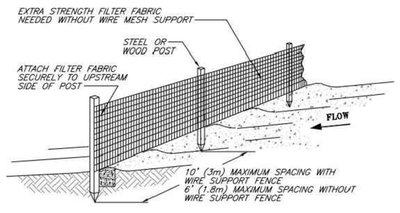
EROSION & SEDIMENT CONTROL NOTES:

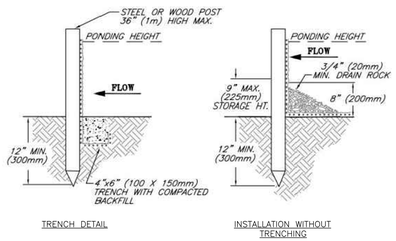
1. CONTRACTOR IS TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPS) TO CONTROL EROSION CONTROL AND REDUCE THE OFF-SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICABLE.
2. EROSION CONTROL BMPS SHALL BE IN PLACE AND MAINTAINED ALL YEAR ROUND.
3. HE CONTRACTOR SHALL FOLLOW THE GUIDELINES FROM THE "CALIFORNIA 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.

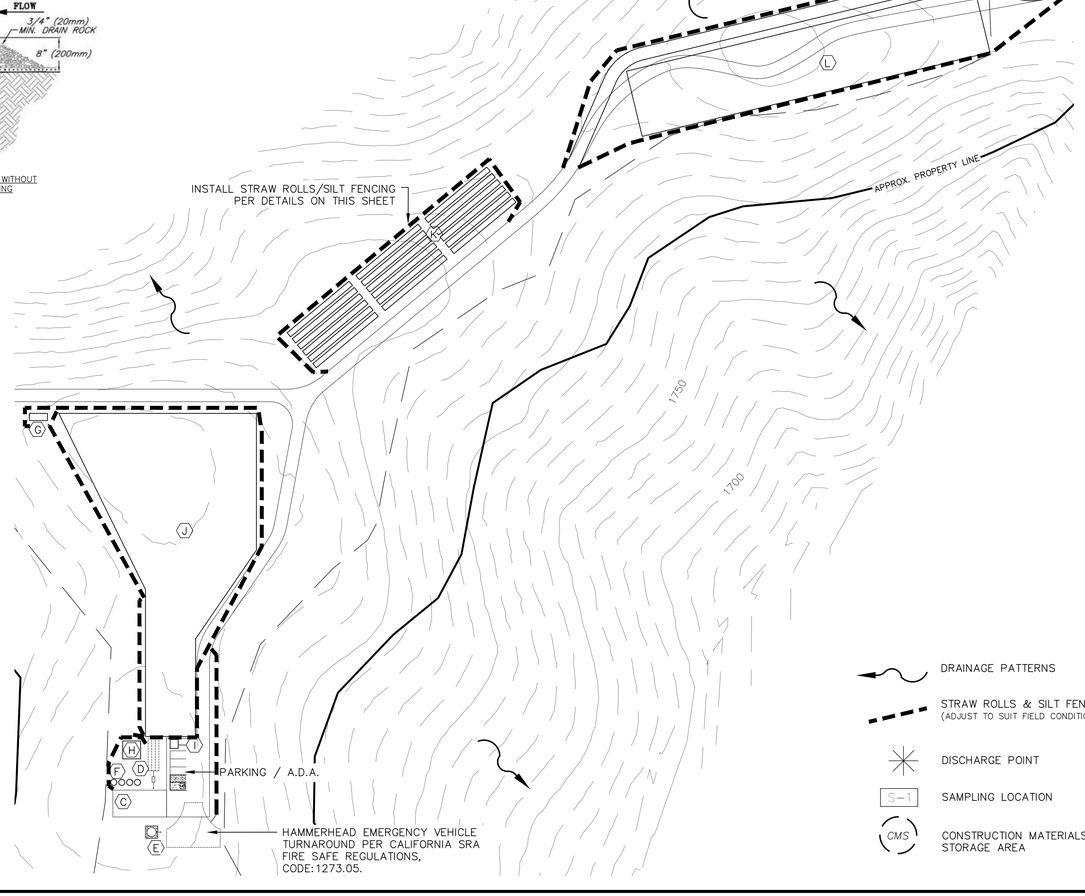
SILT FENCE DETAILS

NOTES:

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT & REPAIR FENCE AFTER EACH STORM EVENT & REMOVE SEDIMENT WHEN NECESSARY.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.







EROSION & SEDIMENT CONTROL PLAN

GRAPHIC SCALE

80 0 40 80

(IN FEET)
1 inch = 80 ft.

AKWAABA FARMS

11795 NORTH DR.
CLEARLAKE PARK, CA 95424
APN:010-019-15, 010-019-10

LEGEND:

1530	CONTOUR ELEVATION
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NOTES:
1. CONTOUR INTERVAL IS 10'

(A) (E) GROUNDWATER WELL
LAT: 38.99555°
LONG: -122.68973°
BENEFICIAL USE: IRRIGATION

DRAINAGE PATTERNS

STRAW ROLLS & SILT FENCES (ADJUST TO SUIT FIELD CONDITIONS)

DISCHARGE POINT

S-1 SAMPLING LOCATION

CMS CONSTRUCTION MATERIALS STORAGE AREA

(C) (E) 30'x60' (1,800 SF) METAL BARN / DRYING & HARVEST STORAGE FACILITY

(D) (E) 1,250 GAL. SEPTIC TANK / LEACH FIELD

(E) (E) FOUNDATION WITH 8' DIAMETER 5,000 GALLON METAL FIRE WATER STORAGE TANK

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530-526-7493

PLANS PREPARED UNDER THE SUPERVISION OF:

REGISTERED PROFESSIONAL ENGINEER
JASON B. VINE
No. 67800
EXP. 06/30/21
CIVIL
STATE OF CALIFORNIA

EROSION & SEDIMENT CONTROL PLAN

APNs:010-019-15, 010-019-10 & 010-019-14
11795 NORTH DRIVE
CLEARLAKE, CA 95422
LAKE COUNTY

PLOTTED BY: ---
DATE PLOTTED: 6/01/21
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: 1

Central Valley Regional Water Quality Control Board

30 October 2020 WDID: 5S17CC428962

DISCHARGER/LANDOWNER
Angie DeCoux
Akwaaba, LLC
P.O. Box 777
Clearlake Park, CA 95423

NOTICE OF APPLICABILITY, WATER QUALITY ORDER WQ-2019-0001-DWQ, ANGIE DECOUX, APN 010-019-150-000, LAKE COUNTY

Angie DeCoux (hereafter "Discharger and Landowner") submitted information through the State Water Resources Control Board's (State Water Board's) online portal on 29 August 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 **5S17CC428962**.

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 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 or equal to 1 acre.

Based on the information submitted by the Discharger, the cannabis cultivation activities are classified as Tier 2, low risk.

2. SITE-SPECIFIC REQUIREMENTS

The Policy and General Order are available on the Internet at (http://www.waterboards.ca.gov/water_issues/programs/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 **27 November 2021**. 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 2, low risk with the current annual fee assessed at $1000. 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

Akwaaba, LLC (Akwaaba) is seeking a Major Use Permit from the County of Lake, for a proposed commercial cannabis cultivation operation at 11795 North Drive near Clearlake Park, California on Lake County APN 010-019-15 (Project Parcel). Akwaaba's proposed cultivation operation will be composed of three A-Type 2 "Medium Outdoor" cultivation areas and an A-Type 2B "Small Mixed-Light" cultivation area (with a total combined cultivation/canopy area of 83,280 ft^2), a 1,800 ft^2 Drying & Harvest Storage Facility (existing metal barn), and a 160 ft^2 Pesticide & Agricultural Chemicals Storage Area (proposed metal shipping/storage container). The proposed cultivation areas will be enclosed with 6-foot tall galvanized woven wire fences, covered with privacy screen/mesh where necessary to screen the cultivation/canopy areas from public view. The growing medium of the proposed outdoor cultivation/canopy areas will be an imported organic soilless growing medium (composed mostly of composted forest material) in aboveground fabric pots. Akwaaba will use drip and micro-spray irrigation systems to deliver irrigation water to the aboveground fabric pots, and to conserve water resources. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°.

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 Parcel is located along the spine of Sulphur Bank Ridge, near the base of a large peninsula that extends out into Clear Lake. The western extent of the large peninsula is known as Sulphur Bank Point. There are no watercourses or other surface water bodies (including wetlands and vernal pools) on the Project Parcel. Stormwater runoff from the Project Parcel flows north, south, and east, into ephemeral drainages that discharge into Clear Lake (north and south) or Borax Lake (east). All areas of the proposed cultivation operation will be located more than 100 feet from any surface waterbody.

Groundwater

Soils of the Project Parcel in the area of the proposed cultivation operation are identified as the Maymen-Millsholm-Bressa complex by the NRCS Web Soil Survey (attached), and characterized

as well-drained gravelly and clay loams derived from residuum weathered from sedimentary rock. The United States Geological Survey Map of the Santa Rosa Quadrangle defines the area in the vicinity of the Project Property as the Franciscan Complex, composed mostly of sandstone, shale, conglomerate, chert, greenstone, and metagraywacke. The Project Property is not located within any of the 13 groundwater basins/source areas identified in the 2006 Lake County Groundwater Management Plan. All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°. This groundwater well was drilled in November of 2020, through shale, chert, and sand stone, to a depth of 660 feet below ground surface. This well had an estimated yield of 80 gallons per minute at the time it was drilled.

Water Resources Protection

Akwaaba 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 are/will be graveled to prevent the generation of fugitive dust, and vegetative ground cover will be preserved and/or re-established as soon as possible throughout the entire site to filter and infiltrate stormwater runoff from the access roads, parking areas, and the proposed cultivation operation. Personnel will have access to the restroom/washroom facilities of the proposed Drying & Harvest Storage Facility at all times when onsite.

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. California Paradise 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

All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°. In late 2020, when this well was drilled, it had an estimated yield of 80 gallons per minute. On May 29th, 2021 an NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meter and a Well Watch 670 sonic water level meter equipped with data logging capabilities, were installed on the groundwater well. Immediately following installation of this equipment, an 8-hour pump test was performed to thoroughly evaluate the production capacity of the well using a small electrical pump that had previously been installed in the well. The small electrical pump could only produce 12 gallons per minute at a depth of 600 feet below ground surface. During the pump test, the water level in the

well only dropped four feet and remained static for the duration of the 8-hour pump test (please see the attached report from Will Peterson Well Drilling). Within 30 minutes after pumping of the well ceased, the water level in the well rebounded to 600 feet below ground surface (100% recovery). The results and conclusions of this test indicate that the existing onsite groundwater well is capable of producing at least 12 gallons per minute.

Akwaaba will install at least four 5,000-gallon heavy-duty plastic water storage tanks on the Project Parcel to provide additional stored water for irrigation purposes/uses. Akwaaba may develop additional water storage on the Project Parcel should it be needed to support the irrigation and fire protection needs of the proposed cultivation operation.

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."

Akwaaba's proposed cultivation practices are similar to commercial tomato or hops production, with an estimated water use requirement of 25 inches per year. Akwaaba's proposed cannabis cultivation/canopy area is 83,280 ft^2 with an expected total annual water use requirement of 1,296,900 gallons (a little less than 4 acre-feet). The cultivation season for the proposed cultivation operation will begin in April and end in November of each year. The following table presents the expected water use of the proposed cultivation operation by month during the cultivation season in gallons and acre-feet.

April	May	June	July	August	September	October	November
32,585	65,170	162,925	260,680	293,270	260,680	195,510	32,585
0.1	0.2	0.5	0.8	0.9	0.8	0.6	0.1

Akwaaba will install at least four 5,000-gallon heavy-duty plastic water storage tanks on the Project Property to provide additional stored water for irrigation purposes/uses. Akwaaba may develop additional water storage on the Project Parcel should it be needed to support the irrigation and fire protection needs of the proposed cultivation operation. The water storage tanks will be

equipped with float valves to shut off the flow water from the well and prevent the overflow and runoff of irrigation water when full. Water will be pumped from the water storage tanks to the irrigation systems of the proposed cultivation/canopy areas via HDPE 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. Akwaaba 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. The irrigation systems of the proposed cultivation/canopy area will be composed of PVC piping, black poly tubing, and drip tapes/lines.

Water Availability Analysis

All water for the proposed cultivation operation will come from the existing onsite groundwater well located at Latitude: 38.99555° and Longitude: -122.68973°. In late 2020, when this well was drilled, it had an estimated yield of 80 gallons per minute. On May 29th, 2021 an NSF/ANSI 61 compliant positive displacement mechanical brass totalizing meter and a Well Watch 670 sonic water level meter equipped with data logging capabilities, were installed on the groundwater well. Immediately following installation of this equipment, an 8-hour pump test was performed to thoroughly evaluate the production capacity of the well using a small electrical pump that had previously been installed in the well. The small electrical pump could only produce 12 gallons per minute at a depth of 600 feet below ground surface. During the pump test, the water level in the well only dropped four feet and remained static for the duration of the 8-hour pump test (please see the attached report from Will Peterson Well Drilling). Within 30 minutes after pumping of the well ceased, the water level in the well rebounded to 600 feet below ground surface (100% recovery). The results and conclusions of this test indicate that the existing onsite groundwater well is capable of producing at least 12 gallons per minute. The peak anticipated daily demand for water of the proposed cultivation operation is ~9,776 gallons per day, which equates to a need for the water supply well to produce at least 6.8 gallons per minute over a 24 hour period. There is little doubt that the water supply groundwater well will be able to produce at least 6.8 gallons per minute on the hottest driest days in the latest part of the summer when irrigation water is needed most. Additionally, Akwaaba will develop at least 20,000 gallons of water storage capacity on the property, and there is an additional existing onsite secondary/backup groundwater well on the property, should it be needed to supplement Akwaaba's available water resources.

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 meter and a Well Watch 670 sonic water level meter equipped with data logging capabilities, have been installed on the existing water supply groundwater well. Inline water meters compliant with California Code of Regulations, Title 23, Division 3, Chapter 2.7 have also been installed on the main water supply line running between the existing onsite groundwater well and the storage tanks of the proposed cultivation operation. Akwaaba's staff will record daily water meter and water level readings, and will maintain those records onsite for a minimum of five years. Akwaaba will make those records available to Water Boards, CDFW, and Lake County staff upon request.

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

File Original with DWR

Page 1 of 1

Owner's Well Number: 1

Date Work Began 11-19-20 Date Work Ended 11-24-20

Local Permit Agency LAKE County Environmental Health

Permit Number WE5481 Permit Date 11-18-20

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. XXXXXXX

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ● Vertical ○ Horizontal ○ Angle Specify

Drilling Method Air Rotary Drilling Fluid —

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	200	Brown Shale
200	250	Red/Green Chert
250	420	Brown/Black Shale with Sandstone Stringers
420	480	Chert
480	520	Greenstone/Black Shale
520	660	Sandstone

Total Depth of Boring 665 Feet

Total Depth of Completed Well 660 Feet

Well Owner

Name Quincy Jackson

Mailing Address P.O. Box 777

City Clearlake Park State CA Zip 95424

Well Location

Address 11295 North Drive

City Clearlake Park County LAKE

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

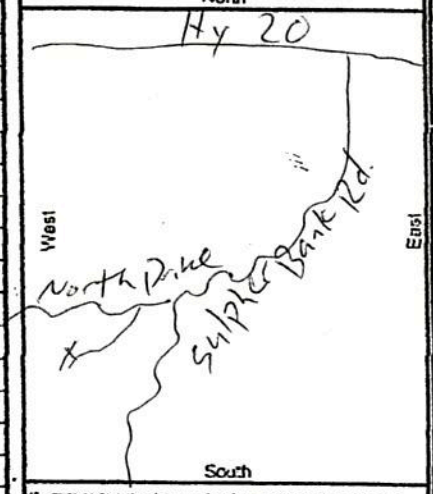
Datum ___ Dec. Lat. ___ Dec. Long. ___

APN Book 010 Page 019 Parcel 15

Township ___ Range ___ Section ___

Location Sketch

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



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

Activity

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

Planned Uses

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

Water Level and Yield of Completed Well

Depth to first water 580' (Feet below surface)

Depth to Static Water Level ___ (Feet) Date Measured 11-23-20

Estimated Yield * 80 (GPM) Test Type Air Lift

Test Length 2 HRS (Hours) Total Drawdown ___ (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	40	9"	F480	PVC	sch 40	5"	Blank	—
40	580	7 3/4"	F480	PVC	sch 40	5"	Blank	—
580	660	7 3/4	F480	PVC	sch 40	5"	Perf.	.032"

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	1	Concrete	SEAL
1	22	Bentonite	
22	660	5/16 Pea	Gravel Pack

Attachments

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

Attach additional information, if exists

Certification Statement

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

Name Will Peterson Well Drilling

Person, Firm or Corporation

P.O. Box 695 Kelseyville CA 95451

Address City State Zip

Signed [signature] 11-24-20 100905

C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

WILL PETERSON WELL DRILLING

Quincy Jackson
11795 North Drive
Clearlake Park. CA 95424

6/1/2021

To whom this may concern,

The static water level was 600’ below surface before test began. The static level dropped to 604’ for a drawn down of 4’ after 30 minutes @ 12 GPM.

We pumped 12 GPM for 8 hours. During the test the static never went past 604’ below the surface. Once the pump was stopped the well recharged the static to 600’ below surface in 5 minutes.

The static was rechecked 24 hours from the end of the test and static level was at 600’ below surface.

Feel free to call us with any questions at (707) 277-0103 or (707) 272-1121.

Sincerely,

Will Peterson Well Drilling
Lic#1009053

PO Box 695
Kelseyville, CA
95451

PHONE (707) 277-0103
FAX (707) 277-0103
EMAIL William.peterson707@yahoo.com
WEBSITE www.willpetersonwelldrilling.com

SECTION – J

SITE PHOTOS

Access Road and Proposed Cultivation Areas “L” and “K” (west view)

Access Road and Proposed Cultivation Area “J” (west view)

Proposed Cultivation Area “J” (southeast view)

Proposed Drying & Harvest Storage Area/Existing Metal Barn (south view)

Existing Onsite Groundwater Well

ENO Scientific Well Watch 670 Sonic Water Level Meter on Groundwater Well