ATTACHMENT 1B

Cultivation and Operations Plan

Apps# 11928

***(Updated)* CMMLUO SITE/OPERATIONS OVERVIEW**

APN: 212-201-009

Project Description: The applicant is seeking Humboldt County Planning Division approval to allow continued mixed light cannabis cultivation up to 11,500 ft^2 (recognized in a previously approved Interim Permit) and development of a 1,200 ft^2 propagation nursery on the subject parcel. Cultivation is proposed to occur within three (3) greenhouses as shown on the site plan included

The applicant acknowledges that the commercial cannabis activity approval being sought is subject to compliance with all other applicable Humboldt County zoning and land use regulations, as well as other applicable provisions of the Humboldt County Code and applicable state laws. Determination of compliance will require multi-agency review of proposed activity/development described in the aforementioned special permit and, may also require site inspections by personnel from various governmental agencies.

If development and/or activities on the subject parcel are determined to be out of compliance with any an agreement may be formulated between the applicant and relevant agency or agencies, whereby operations may continue under a *"Provisional Clearance or Permit"* and corrective action is initiated to achieve compliance under agreed upon terms.

Parcel Informotion: The subject parcel (212-201-009) is approximately 40 acres and is zoned TPZ.

Topography/Landscape: The parcel is situated on a forested southeasterly hillside mostly covered with native tree species.

Surface Water Features: Rain Catchment pond and Class II & III watercourses. Features related to cultivation activities have been addressed in a Water Resources Protection Plan and a CDFW 1600 Agreement.

Roads/Stream Crossings/Easements: A significant portion of corrective work related to stream crossings has been completed under CDFW Agreement 1600-2016-0057-R1

Utilities: **Electrical power is supplied from A 25 KW Generator**. The residence is served by a conventional septic system and domestic propane.

Water Supply: **Domestic water is sourced from a surface water diversion** (addressed in aforementioned CDFW Agreement). Irrigation water is sourced from a Rain Catchment pond. A water management description and a water use table are included. A Notice of Receipt for Cannabis Small Irrigation Use Registration is included.

Water Storage: Rain Catchment Pond (348,864 gallons). Five (5) – 2,500 gallon plastic tanks.

Bladders shall be removed and an additional 15,000 gallons of plastic tank storage is proposed.

Cultivation Area(s): Mixed light cultivation is proposed in existing greenhouses as shown on the site plan included.

34' x 112'

34' x 110'

34' x 104'

The existing total greenhouse square footage – 11,084 will be increased to total 11,500 ft^2 by extending each existing greenhouses approximately 4 feet in length.

Proposed Propagation Nursery 34' x 35'= 1,190 ft^2

Cultivation areas and surrounding ground surfaces were evaluated in the development of a site-specific Water Resources Protection Plan (WRPP) prepared by Timberland Resource Consultants. Where necessary, the WRPP prescribes corrective measures to address conditions which may adversely impact water resources and establishes a timeline in which to achieve compliance with RWQCB Order No. R1-2015-0023. Corrective measures prescribed in the WRPP do not preclude the need for Cultivation Areas or other manmade features to be brought into compliance with all applicable state and local grading, excavation and erosion/sediment control requirements.

Peak Water Demand: The peak monthly water demand anticipated to maintain cultivation during the warmest summer months is 45,000gallons/month. Water usage will be monitored and recorded by use of in-line totalizing flow meters in accordance with applicable regulations.

	Gallons
March	7,000
April	13,000
May	20,000
June	35,000
July	40,000
August	45,000
September	35,000
October	17,000

Irrigation Method(s): **Irrigation is accomplished by top-feed hand watering which allows operators to** carefully monitor water/fertilizer application rates. Mulch is carefully placed as a top dressing to optimize soil water retention.

Irrigation Runoff/Erosion control: Irrigation runoff from the cultivation area(s) is minimized by carefully monitoring liquid application rates to individual plants which in turn - prevents any overwatering or residual discharge of nutrient solutions outside of the "targeted" root zone. In the unlikely event that residual discharge did occur, it would be absorbed upon contact with permeable soil surrounding the cultivation area. Cultivation activities are limited to the immediate cultivation area and conducted so materials are kept confined. The ground surface within and around the cultivation area is formed, managed and monitored year-round to prevent any movement of entrained constituents such as fine sediment, fertilizer or other organic particles beyond the cultivation area.

Watershed Protection: Watershed Protection is accomplished through implementation of BMP's and corrective measures prescribed in a site-specific Water Resources Protection Plan developed by Timberland Resource Consultants, RWQCB approved Third Party Program Administrator.

Once enrolled under R1-2015-0023, participants are required to engage in ongoing monitoring, reporting and maintenance including periodic site inspections and reviews of operational practices to ensure regulatory requirements related to the following items are being met.

Site maintenance, erosion control, and drainage features	*Stream crossing maintenance*
Riparian and wetland protection and management	*Spoils management*
Water storage and use	*Irrigation runoff*
Fertilizers and soil amendments	*Pesticides and herbicides*
Petroleum products and other chemicals	*Cultivation-related wastes*
Refuse and human waste	

Additionally, participants ensure that management measures and controls are effectively protecting water resources, and that any newly developing problems representing a water quality concern are identified and corrected quickly.

The *Multiquip* 25 kw *WhisperWatt* generator used is located at least 300 feet from any neighboring property line; as such, the expected noise level (based on specifications/calculations included) at the nearest property line is 33.7 Db. The generator usage shall be brought into compliance with all applicable regulatory requirements.

Blackout tarps shall be securely placed over mixed light greenhouses to prevent light spillage. The placement of tarps will be carefully executed so the tarps are secure and stay in place in the event of wind or wildlife disturbance. Tarps shall remain in place at all times lights are in use between one (1) hour prior to sunset until 30 minutes following sunrise.

Fertilizers, Pesticides, and other Regulated products:

List and describe machinery and equipment used for cultivation and associated activities:

Generator, Back-up generator, fans, dehumidifier

Describe equipment service and maintenance; including where it is done.

Equipment service/maintenance is done by qualified service providers in Redway or Garberville.

List and describe petroleum products and automotive fluids used onsite.

Diesel – 1,000 gallon above ground tank.

List and describe compressed gases, cleaners, solvents and sanitizers; indicate amounts normally stored and how/where they are stored. Domestic propane tank. Household cleaners in retail amounts stored in house.

Fertilizers, Pesticides, other Regulated products: The fertilizers/amendments listed below are used at the start of the grow season; only quantities needed are purchased and brought to the site. They are stored within a locking barn equipped with an impermeable floor. Annual reporting of fertilizer/amendment use is required under RWQCB Order No. R1-2015-0023 and the data is provided on page 4, Appendix C (RWQCB Order No. R1-2015-0023).

Mixing of the products listed below takes place only within a small area near cultivation sites and the products are kept protected from accidental spillage or disturbance from wildlife while mixing takes place. If any leftover product remains it will be kept in original packaging and be stored on shelves inside of the barn.

Products	The products listed are primarily used at the start of the cultivation season. Any product remaining after initial start-up is kept securely protected in original packaging/containers atop pallets inside the barn. Quantities of products stored should not exceed 500 pounds at any particular time.
Maxsea -50 gal	
Cal -Mag – 5 gal	
Big Gro – 50 gal	
Azomite	
Stutzmen Chicken Manure	
Neem Oil - stored in 1 quart container on shelf inside barn in original container	
Azatrol - stored in 5 gal. container on shelf inside barn in original container	

The applicant acknowledges that the storage and/or use of certain materials in specified volumes and/or weights will be subject to regulation through Humboldt County Division of Environmental Health CUPA and may require registration with the California Environmental Reporting System (CERS). Submittal of inventories for certain materials, documentation of emergency and training procedures, maintenance of hazardous waste disposal records, obtaining an EPA generator ID number may be required as well as periodic site inspections.

Cultivation related wastes are sorted such that compostable materials are recycled/composted onsite within a small area equipped with perimeter and top containment to prevent unwanted movement of materials due to weather conditions or animals/pests. Other materials, unsuitable for composting, are stored in conventional trash containers with tight fitting lids and hauled to an approved transfer station as needed. If it becomes necessary, exhausted soil will be removed from cultivation beds and carefully mixed and spread over native soils on level ground at select locations to initiate microbial reconditioning and prevent unwanted constituent migration. Spent growth medium containing inorganic substances such as perlite, will be stored in weatherproof containers and hauled to an approved waste facility as needed

Human Waste: The residence on the parcel is served by a conventional septic tank/leach-field system. The residence is in close proximity to all cultivation activities.

Cultivation Operations/Practices: The applicant anticipates two (2) harvest cycles per season utilizing Black Out tarps. At certain times **there may be up to 3 family members** in addition to the applicant involved with the operation; they will stay in the residence.

		Ave. Hr. Light Use
January	*No cultivation activity – monitor site for erosion control etc.*	
February	*No cultivation activity – ongoing site monitoring and winter maintenance*	
March	*Prepare garden beds, initiate propagation, ensure site maintenance up-to-date*	6
April	*Initiate 1st round starts, general maintenance of infrastructure etc.*	6
May	*Ongoing garden care, site maintenance*	
June	*Ongoing garden care and site maintenance- initiate light dep*	
July	*Ongoing garden care, start 1st round harvest, dry*	
August	*Complete 1st round harvest, initiate 2nd round cultivation cycle*	
September	*Ongoing garden care, site maintenance*	
October-December	*Ongoing garden care-harvest 2nd round and full term, initiate site cleanup. Winterization BMP's implemented*	

Processing: Plants are harvested at peak ripeness and immediately transferred to the Barn where they are hung to dry. Natural air flow may be supplemented with household fans and dehumidifiers to aid the drying. Trimming of dried plants will occur at a licensed off-site processing facility.

Security: Access to the subject parcel is restricted by placement of locked metal gates at entrance roads. The owner/applicant or other residents are usually onsite and the cultivation areas are fenced. There is a dog normally present onsite also.