

## **CULTIVATION + OPERATIONS PLAN rev. 24 January 2024**

### 1. Project Description

Cultivation permit for 20,430 sq. ft of pre-existing cannabis. 6,480 sq ft mixed light cultivation (with artificial lighting), and 13,950 sq ft of outdoor cultivation (no artificial lighting). Immature plant area of 2,043 sq ft. Irrigation water source is from a groundwater well. There are six (7) HDPE 5,000-gal water tanks totaling 35,000-gallons of onsite water storage for irrigation. Estimated annual water use for cultivation is approximately 200,000-gallons. Agricultural buildings AG-1 and AG-2 are used for harvest storage and to support farm operations. Propose construction of a new multipurpose building AG-3 to improve facilities and support onsite cannabis operations. Power is sourced from PG+E. Approximately 13,950 square feet of historic cultivation area has been restored.

## 2. Description of Water Source, Storage, Irrigation Plan, and Projected Water Usage

### **WATER SOURCE AND STORAGE:**

Irrigation use water for the commercial cannabis operation onsite comes from permitted groundwater well installed in 2017 (Permit # 17/-0031).

Total current water storage capacity for cultivation is 35,000 gallons. Storage on site currently consists of seven (7) 5,000-gallon tanks. There are also 1 x 3,000-gal domestic tank and 1 x 3,000-gal emergency tank. See site map for locations.

Applicant maintains enrollment and compliance with the State Water Resource Control Board order (**WQ 2019-0001-DWQ**).

### **IRRIGATION PLAN:**

Irrigation water is applied at agronomic rates and does not produce runoff. Irrigation is applied through a pressure- regulated, drip emitter system with timers and hand-watering/regulated fertilizer injector system for feeding applications. Water conservation measures are in place. Time of day watering to reduce evaporative loss. Ground cover and weed barrier is used to minimize weed growth and reduces water loss. Natural soil amendments are used to increase moisture retention.

**PROJECTED WATER USAGE:**

Estimated 200,000 gallons are needed per year for cultivation. The table below shows the estimated water use by month per growing season. Commercial cannabis water use is currently being measured with a meter onsite.

MONTH	GALLONS
JAN	0
FEB	0
MAR	5,000
APR	10,000
MAY	15,000
JUN	19,000
JUL	32,000
AUG	35,000
SEP	42,000
OCT	35,000
NOV	0
DEC	0
TOTAL	193,000

**RESTORATION OF HISTORIC CULTIVATION AREA**

As shown on the site map, there is one historic cultivation area that is no longer used, approximately 13,950 sq ft that was relocated to its current location due to its location in the riparian buffer. The current cultivation site is environmentally superior as it is outside of the riparian setback and has gentler ground slopes (<5%). The historic cultivation area has been remediated and restored – all cultivation infrastructure has been removed and disposed of

properly. The historic cultivation site has been revegetated to more than 80% coverage and has been restored.

### 3. Description of Site Drainage, including Runoff and Erosion Control Measures

Please see the Site Management Plan for in depth information on the Site drainages and erosion control measures being implemented onsite to ensure complete compliance with SWRCB order.

#### **SITE DRAINAGE:**

There are three watercourses located on the property and 3 stream crossings as noted on the site map. Riparian buffers are maintained around streams to minimize potential for impacts to streams.

#### **EROSION CONTROL MEASURES:**

Applicant will seed any bare ground around cultivation and water storage areas with erosion control mix before the onset of winter each year. Applicant cover crops beds to minimize runoff potential. Maintain compliance with all Water Board standards. See the Site Management plan for more information on erosion control measures.

#### **RUNOFF CONTROL MEASURES:**

There is no runoff from Applicant's cultivation activities. Applicant uses drip irrigation, waters at agronomic rates (when hand watering), uses timers to avoid overwatering and

maintains vegetation around cultivation areas and riparian areas to minimize any potential for runoff and sediment transportation to receiving waters. Applicant will re-seed and re vegetate any exposed soils around the cultivation areas and monitor the areas for signs of sediment runoff regularly. If needed applicant will install straw bales and sediment control fencing on slopes or discharge points that may transport sediment to receiving waters.

#### 4. Details of Measures Taken to Ensure Protection of Watershed and Nearby Habitat

##### **PROTECTION OF WATERSHED AND HABITAT:**

Buffers are maintained at natural slope with native vegetation to prevent sediment transport to receiving waters and are of sufficient width to filter wastes from runoff and to maintain essential functions of riparian areas. Riparian areas are protected in a manner that maintains their essential functions.

##### **CULTIVATION RELATED WASTE PROTOCOLS/COMPOST:**

Operation shall implement measures to reduce and/or eliminate cultivation related waste. All plant related material will be composted. Operation shall recycle and reuse or repurpose to the highest degree feasible. All petroleum, chemical, or other hazardous wastes shall be handled appropriately and disposed of at a licensed recycling or disposal facility. All general waste will be placed in garbage cans with lids and stored in the waste storage area to prevent nutrients

from being leached to groundwater or transported to watercourses. Garbage shall be disposed of at least once weekly.

**REFUSE DISPOSAL:**

Applicant has garbage cans equipped with lids to prevent leaching and transport of foreign materials to receiving waters. The cans are stored in the waste storage area as shown on the site plan. Garbage shall be disposed of at least once weekly at a licensed facility. Typically garbage will be hauled to Blocksburg, Fortuna, Eureka, or Redway transfer stations, as appropriate.

**TOILET FACILITIES:**

There is an existing toilet and septic system in the house on the property. There is also a portable toilet onsite to service the cultivation activities. Applicant proposes a septic system west of the processing building AG-3.

4. Protocols for Proper Storage and Use of Fertilizers, Pesticides, and Other Regulated Products

**PESTICIDES:**

Pesticides are stored in the pesticide and fertilizer storage area AG-2. Pesticides will be kept in original containers with labels affixed and kept in secondary containment totes to

further minimize spills from transportation to groundwater or receiving surface waters.

Approved spill proof containers with appropriate warning and information labels will be used to transport pesticides to and from site.

Applicant will maintain and keep personal protective equipment required by the pesticide label in good working order. Coveralls will be washed after use when required.

All required warning signs will be posted and material safety data sheets (MSDS) will be kept in the area where pesticides are stored. Emergency contact information in the event of pesticide poisoning shall also be posted at the work site including the name, address and telephone number of emergency medical care facilities.

Before making a pesticide application, operators will evaluate equipment, weather conditions, and the property to be treated and surrounding areas to determine the likelihood of substantial drift or harm to non-target crops, contamination, or the creation of a health hazard.

**FERTILIZERS:**

Fertilizers will be stored in the on-site pesticide and fertilizer storage area AG-2 which is equipped with a non-permeable floor liner to prevent leaching and transport to surface waters. Applicant will store and use fertilizers according to the protocols it uses for pesticide storage and use. Fertilizers will be kept in secondary containment totes to further prevent leaching.

Applicant will use all fertilizers according to the label and use personal protective equipment as required by the label.

Before making a fertilizer application, operators will evaluate equipment, weather conditions, and the property to be treated and surrounding areas to determine the likelihood of substantial drift or harm to non-target crops, contamination, or the creation of a health hazard.

**SOIL AMENDMENTS:**

Applicant does not store bulk amendments on site. Generally soil amendments are applied immediately upon purchase. Any excess amendments are stored in the pesticide and fertilizer storage area in secondary containment. Operation shall comply with Water Board standards regarding nutrient use and storage.

Before making a soil amendment application, operators will evaluate equipment, weather conditions, and the property to be treated and surrounding areas to determine the likelihood of substantial drift or harm to non-target crops, contamination, or the creation of a health hazard.

**PETROLEUM PRODUCTS AND STORAGE:**

Applicant stores less than 50 gallons of gasoline in 5-gal containers for use in ATVs and other small farm equipment including one back up generator for use on site to be utilized when PG&E is not working or is doing a public safety shutoff. Gas is stored in compliant cans,



and cans are stored in secondary containment. Applicant has a spill- prevention kit on site.  
Applicant will store combustible materials in a different location from petroleum products.

5. Power Source:

**POWER SOURCE + ENERGY USE:**

Power for this cultivation operation is supplied by PG&E. There is a backup generator for use during public safety shut offs and other emergencies.

**LIGHT MANAGEMENT:**

All operations will comply with International Dark Sky Association Standards. No artificial light will escape at a level that is visible from neighboring properties; nor during the darkness period. Solid black out tarps shall be used to contain artificial light inside the Immature Plant Area during nocturnal hours of use, at minimum 30 minutes before sunset and 30 minutes after sunrise.

**STAFFING:**

This operation requires 2 full-time workers during normal cultivation operations. Depending on season and budget an additional one (1) to seven (7) seasonal, short-term workers may be hired for supplemental helping during the busy times of year (i.e. planting and harvest). Portable toilets will service employee needs on the site.

Applicant will comply with all applicable federal, state, and local laws and regulations governing California agricultural employers.

Applicant will follow all performance standards outlined in Humboldt County's Commercial Medical Marijuana Land Use Ordinance ("CMMLUO") with respect to cultivation activities, including developing employee safety protocols which include: 1) an emergency action response plan and spill prevention protocols; 2) employee accident reporting and investigation policies; 3) fire prevention policies; 4) maintenance of Material Safety Data Sheets (MSDS); 5) materials handling policies; 6) job hazard analyses; and 7) personal protective equipment policies. Applicant will ensure that all safety equipment is in good and operable condition, and provide employees with training on the proper use of safety equipment.

Applicant will post and maintain an emergency contact list which includes: 1) operation manager contacts; 2) emergency responder contacts; and 3) poison control contacts.

## 6. Schedule of Activities During Each Month of the Growing and Harvesting Season

### Cultivation Activities

Outdoor Cultivation activities include 1 cycle per year of outdoor cultivation utilizing natural sunlight only (full-term, sun grown) and also may include light deprivation techniques with 2 harvests. Plants are propagated onsite with the use of natural and supplemental lighting in the immature plant areas. Mixed light cultivation areas may use artificial lighting depending on time of year and will comply with all light management standards at all times. Mixed light cultivation areas may yield one (1) to four (4) harvests depending on farm budget as well as crop market conditions.

The immature plant areas for cultivation are located in AG-1 in a 15'x30' propagation room and a greenhouse located to the north of the outdoor cultivation area that is approximately 1,582 sq ft for a total of 2,034 sq ft of immature plant area.

The greenhouses have pervious floors (bare soil) and are in compliance with Humboldt County Code Section 314-43.1.3.2. They do not contain perimeter foundation, do not have improved floors and do not have improved footpaths.

**Typical Monthly schedule of Cultivation Activities:**

The schedule below reflects full use of mixed light cultivation. The operator may choose to cultivate anywhere between one (1) and four (4) harvests in the mixed light area depending on farm budget and crop market conditions.

Month	Mixed Light Activities	Outdoor Activities
January	Sea of green: Immature plant activities. Planting.	No activity.
February	Harvest. Sea of green: Farm operation and maintenance	No activity.
March	Sea of green: Site Preparation.	Site Preparation.
April	Sea of green: Immature plant activities. Planting.	Immature plant activities.
May	Harvest - Sea of green: Transplanting and site maintenance	Transplanting and site maintenance
June	Farm operation and maintenance. Sea of green - Immature plant activities	Farm operation and maintenance
July	Farm operation and maintenance. Harvest	Farm operation and maintenance.
August	Farm operation and maintenance. Sea of green - plant	Farm operation and maintenance.
September	Farm operation and maintenance.	Farm operation and maintenance.
October	Harvest	Full Term - Harvest
November	Curing / Processing/ Packaging. Clean up + Winterization.	
December	Sea of Green -Immature plant activities.	No activity.

## **PROCESSING PLAN**

Plants are harvested and dried in the outbuilding (AG-1, AG-2) with use of portable dehumidifiers and fans. Curing takes place in a climate-controlled environment. The finished product is then moved to the secured Harvest Storage location. Once the proposed agricultural building is completed (AG-3) Harvest storage, processing, packaging and other farm operations will be conducted in the new building.

Depending on market conditions, the operator may opt to conduct processing operations offsite, processing onsite, or may opt to not process at all (crop direct to extraction without processing). All operations will comply with any and all pertinent regulations.

Direct to Extraction (no processing) – crop or portion of crop sold direct to extraction with no processing required.

Offsite Processing – crop or portion of crop sent to licensed processing facility in compliance with all required regulations and documentation.

Onsite Processing – crop or portion of crop processed onsite in the outbuilding (AG-1) utilizing trim machine. Any onsite processing will comply with all required safety and sanitation practices will be followed including frequent handwashing, and the wearing of gloves and masks.

Any processing activities conducted onsite will follow all applicable regulations and requirements as stated by all agencies with jurisdiction.

## **SECURITY FEATURES**

All access roads have gates with locks. The property has a perimeter fencing. “No Trespassing” signs are posted at various points along the perimeter of the property. Finished product is stored in a locked area away from the processing area. All doors and windows, including greenhouse doors are lockable.

To ensure the non-diversion of product, Applicant participates in the California track and trace program.