

Cultivation and Operations Plan McKnight



Humboldt County Commercial Medical Cannabis Land Use Ordinance

APN 108-151-021-000 1150 Shelter Cover Road, Whitetorn

December 27, 2018 (v2)

Submitted to:



13157

Prepared by:



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I. Preface

This Cannabis Cultivation and Operations Plan (CCOP) is hereby submitted to comply with the California Emergency Regulations for Cannabis Cultivation (CERCC). Compliance is required by CalCannabis Cultivation Licensing which is a division of the California Department of Food and Agriculture (CDFA). The CCOP is required to be in compliance with CERCC Article 2 §8104 General Environmental Protection Measures, Article 2 §8105 Property Diagram, Article 2 §8106(a)(1) Cultivation Plan Requirements, and Article 4 Cultivation Site Requirements §8300 to §8308, as applicable. The following items within the CCOP are regulated by CDFA:

- A. Canopy area(s), including noncontiguous aggregate square footage.
- B. Area(s) outside of the canopy where only immature plants shall be maintained.
- C. Pesticide and other agricultural chemical storage area(s).
- D. On-site processing area(s).
- E. Designated on-site packaging area(s).
- F. Secured area(s) for cannabis waste.
- G. Composting area(s), if composting cannabis waste on site.
- H. Storage area(s) for harvested cannabis.
- I. Compliance with California Water Code §13149 policies for cannabis cultivation.
- J. Compliance with any conditions requested by the California Department of Fish and Wildlife (DFW) and the State Water Resources Control Board (SWCB).
- K. Dark Sky policies to avoid nighttime glare.
- L. Discovery of human remains policies as required by California Health and Safety Code §7050.5.
- M. Renewable energy requirements.
- N. Generators use requirements.

Further, Humboldt County requires a CCOP for a cannabis business permit under Humboldt County Code (HCC) Chapter 3 Division 1 Title III §313 55.4, known as the Commercial Medical Marijuana Land Use Ordinance (CMMLUO). The CMMLUO regulates compliance at the local governmental level to ensure that conditions required under state and local law, or those requested by any agency with jurisdiction, are implemented as proposed within the CCOP. Therefore, the purpose of this CCOP is to identify and outline the methods to be used to meet the minimum requirements for CDFA licensing, Humboldt County Planning and Building Department permitting, and any other local or state requirements.

II. Site Description

Operations are located at APN 108-151-021 on 1150 Shelter Cover Road outside of Whitetorn (Figure 1). It is assessed at forty one and one-half acres (41.5ac), has Timber Production Zone (TPZ) zoning, and been developed for a home site. Sited in the Whitetorn area the project site is fairly accessible from Hungry Gulch Road off of Shelter Cover Road.

A. Site Hydrology

The parcel has elevations between one thousand feet (1,000') and one thousand four hundred feet (1,400') with the project site at the one thousand three hundred twenty feet (1,320') above sea level. Bridge Creek flows through the parcel which is a tributary of the Mattole River. Overall slope of the cultivation area is fairly flat on ridge that is fifteen percent to thirty percent (15%-30%) in slope. The site has been disturbed for a number of years for cultivation related purposes and as a home site.



Figure 1: Project Location Map

B. Zoning

The intent of Humboldt County Zoning Code is to implement the policies and elements of the Humboldt County General Plan. The Code is based upon Principle Zones and has further Combining Zones. All uses and development regulations of the Principal Zone apply in the Combining Zone, except, they are modified by the uses and regulations allowed within the Combining Zone regulations.

Benbow Valley Farms is generally Principally Zoned as Agriculture Exclusive (AE) with a Combining Zone with a Special Building Site of 5 Acres (B-5) on One Hundred Sixty Acres (160). Within the parcel there are also Principally Zoned areas of Timberland Production (TPZ). These zones determine overall development and allow the following:

1. Agriculture Exclusive

- a. Principally Permitted: all agricultural uses, farm dwellings, windmills, greenhouses, silos, tank houses, barns and outbuildings, coops, drainage facilities and structures, roadside agricultural sales, public stables, and other necessary or customary uses.
- b. Uses with a Permit: animal or fur farms, feed lots, auction yards, animal or timber processing plants, irrigation equipment sales and storage, veterinarian hospitals, labor camps, or anything compatible but not enumerated within Zoning Code.

2. Timberland Production

- a. Principally Permitted: growing and harvesting timber, farm dwellings, windmills, greenhouses, silos, tank houses, barns and outbuildings, coops, drainage facilities and structures, roadside agricultural sales, public stables, and other necessary or customary uses.
- b. Uses with a Permit: watershed management, fish and wildlife management, roads, log landings, log storage areas, portable chipper and sawmill, utility transmission infrastructure, grazing and agricultural uses, single family dwelling, temporary labor camp, and public recreational use for profit.

C. Principally Permitted Uses

Principally permitted uses in both zones are similar with the only difference of use is agricultural versus timber production. All agricultural uses found under Principally Permitted shall require a simple "Agricultural Exempt Permit". It shall be necessary to apply for such permitting using the Plot Plan and simple forms from the Humboldt County Building Department for the following items:

- 1. Home.
- 2. Greenhouses.
- 3. Water Tanks up to five thousand gallons (5,000gal).
- 4. Processing facilities (barns).
- 5. Storage sheds.

D. Fisheries

There are many Species of Concern within the project site, some of which have state and federal protection, including Threatened and Endangered Species status. Operations can have an impact to these species at any time due to noncompliance with environmental regulations. These species can be vegetation, aquatic lifeforms, and terrestrial wildlife including the Northern Spotted Owl (*Strix occidentalis caurina*).

Species of most concern regarding operations and direct impacts are salmon found within local rivers and streams (Figure 2). These species require clean, cool, and flowing river conditions to survive. Local fisheries which are dependent upon water quality for spawning and rearing include:

- 1. Fall-run California Coast Chinook salmon (Oncorhynchus tshawytscha)
- 2. Southern Oregon Northern California coho salmon (O. kisutch)
- 3. Winter-run and summer-run North California Coast steelhead (O. mykiss)
- 4. Resident rainbow trout (O. mykiss)
- 5. Anadromous coastal cutthroat trout (O. clarkii)
- 6. Pacific Lamprey (Entosphenus tridentatus)
- 7. Green sturgeon (Acipenser medirostris)

Operations can potentially have a direct impact upon the water quality of the Class II stream. This in turn affects the salmonid fishery of the Eel River. Impacts to the Eel River fishery can be created through a number of ways including:

- 1. Diversion during forbearance period which directly reduces in-stream flows and increase temperatures for juvenile rearing habitat.
- 2. Diversion rates higher than allowed which reduce instream flows needs for seasonal migration and spawning.
- 3. Infiltration of nutrients beyond the crop root zone into the stream which contribute to in-stream algae blooms and reduce dissolved oxygen levels.
- 4. Improper implementation of sediment and erosion control measures can result in increased water turbidity damaging fish gills and covering up spawning gravels.
- 5. Improper use and storage of hazardous materials which can cause environmental spills and contamination.

The impacts listed above are only a few of the way's operations can have a direct impact upon the environment. The fisheries in the area have evolved to a life cycle that is timed with the local water cycle of rain from late fall to early spring (Figure 4). Water use for seasonal cannabis operations are in direct opposition to the salmonid fishery life cycle which is protected by state and federal law.

Therefore, it shall be a primary concern that project operations minimize and mitigate impacts to the local environment. How this shall be accomplished is through the implementation of all requests made by the SWB or DFW. All requirements shall be adhered as found within permits, including discharge and water forbearance periods, development of environmentally responsive business policies and procedures, and regular monitoring with recording of on-site conditions.

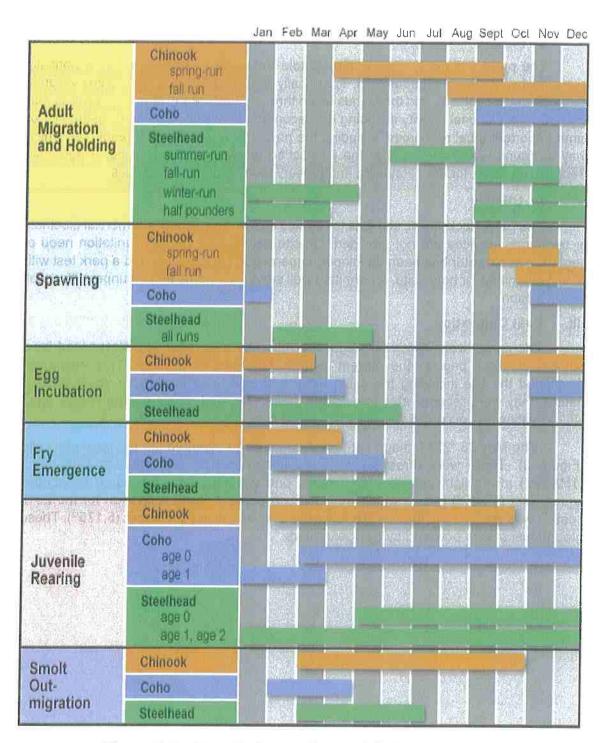


Figure 2: Northern California Salmon Life Cycle Calendar

Source: http://www.trrp.net/wordterrain/wp-content/uploads/2017/07/fishresources1.gif

E. Historic Resources

The project site is located in the Mattole Valley area. This area was historically occupied by Southern Athapaskans, specifically the Mattole Tribe, who were violently exterminated by settlers, and their lands taken through force. Many areas are historic with unknown sites of past activity including displacement, homicide, hunting or gathering, or other important tribal resources; including the parcel. Any and all tribal resources which may be found would come under the jurisdiction of the Bear River Tribe, a Federally Recognized Tribe, for the cataloging and preservation of historic resources.

F. Utilities

The parcel lacks basic services for utilities as it is remote and commercial electrical or telephone services are not provided. On-site services for human sanitation need of septic for wastewater has been developed unpermitted for the cabin and a perk test with permit submitted for home site. A permitted well serves the home and an unpermitted well for cultivation.

III. Past Cultivation

The parcel was utilized for illegal cultivation by a squatter who trespassed for a number of years prior to the current owner's purchase of the site. This trespasser developed the site including the cabin, well, and cultivation area. After years of legal battles, they were recently able to evict the trespasser, and regain control of their land. No cultivation has occurred since eviction of the trespasser.

The May 28, 2014 image set from Google Earth captured the trespass grow site (Figure 3). There were three (3) clustered fifteen feet by one hundred fifteen feet (15'X115') mixed light greenhouses totaling one thousand seven hundred twenty-five square feet (1,725'2) in size which were full sun outdoor. Total cultivation for the 2015 season was equal to five thousand one hundred seventy-five square feet (5,175'2). These greenhouses were powered by gas generators.



Figure 3: May 28, 2015 - Google Earth Imagery

IV. Operations Plan

The following Cultivation and Operations Plan is to identify and outline the methods to be used to meet the minimum requirements for CDFA licensing, Humboldt County Planning and Building Department permitting, and any other local or state requirements related to cannabis production. These methods shall be requirements of maintaining compliance with local and state regulatory agencies. Strict adherence to development and implementation of the project site as stated shall be of the utmost importance.

A. Discovery of Human Remains or Archeological Resources

California Health and Safety Code §7050.5 requires operations to cease in the advent of the discovery of human remains. Further, Humboldt County requires cessation of activities should archeological resources be inadvertently found. There are potential to find such remains or resources due to the history of the area. Disturbance without notification, with intent to possess or to maliciously destroy such items, carries the weight of the law, including and not limited to, felony charges.

The following actions shall immediately occur upon the discovery of human remains or archeological resources:

1. Human Remains

 a. Operations shall immediately cease in the advent of the discovery of human remains.

- b. The Humboldt County Sherriff Department shall be notified at (707) 445-7251.
- c. The Humboldt County Coroner shall be notified at (707) 445-7242.
- d. The Bear River Tribal Heritage Preservation Office shall be notified at (707) 733-1900.
- e. The Humboldt County Planning Department shall be notified at (707) 445-7541.

2. Archeological Resources

- a. Operations shall immediately cease in the advent of the discovery of archeological resources, including but not limited to:
 - i. Obsidian or chert tools such as arrowheads, axes, knives, or spears.
 - ii. Obsidian or chert flakes.
 - iii. Stone tools.
 - iv. Groundstone artifacts.
 - v. Locally darkened midden soils.
- b. The Bear River Tribal Heritage Preservation Office shall be notified at (707) 733-1900.
- c. The Humboldt County Planning Department shall be notified at (707) 445-7541.

The following are recommendations:

- 1. Voluntarily undertake an archeological resources survey performed by a Licensed and Qualified Archaeologist.
 - a. A copy should be provided to the Humboldt County Planning Department and any requesting agency.
 - b. A copy should be kept on-site at all times.

B. Owner Operated Farm Plan

Operations shall be an "Owner Operated Farm". At no time shall operations utilize the service of employees including outside temporary help on a contractual basis. Therefore, Benbow Valley Farms is exempt from MCRSA §19322(a)(6), MCRSA §19322(a)(9), and the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 as it is not an "Agricultural Employer".

Operations shall implement safety protocols to protect health and safety, property, and the environment through adequate planning and training relevant to specific operations including, and not limited to, the following:

- 1. State Water Board compliance with all measures identified within the *Water* Resources Protection Plan (WRPP) shall be implemented.
- 2. Track & Trace with training in accordance with the policies of County of Humboldt and State of California.
- 3. **Private Applicator Certification** shall be undertaken with the Humboldt County Agricultural Commissioner.

- 4. Potable water shall be provided by the on-site well.
- 5. Human wastewater shall be managed by on-site permitted septic systems.
- 6. Equipment required for the safe handling of cannabis shall readily be available on-site at all times.
 - a. All personal equipment shall meet all local and state requirements while being OSHA compliant.
 - b. OSHA certified safety glasses (tinted and clear), hats, disposable and reusable gloves, disposable face masks, and filtered respiratory protection shall be on-site and used as required.
 - c. Training in the use of personal protective equipment shall be undertaken on an annual basis.
- 7. **Standard Operating Procedures** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable County of Humboldt and State of California regulations. Additionally, this plan shall incorporate:
 - a. Dark Sky Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all Humboldt County and State of California regulations.
 - b. **Policies concerning CPR & 1**st **Aid** shall be developed and implemented.
 - i. 1st Aid Station(s) shall be provided on-site.
 - c. Fire prevention meeting CalFire Fire Safe standards shall be incorporated and implemented.
 - A minimum of five thousand-gallons (5,000gal) of water shall be dedicated for CalFire Fire Safe purposes and not connected to the Cultivation Area.
 - ii. A minimum of two (2) dry chemical fire extinguishers shall be maintained and certified on an annual basis with a twenty-pound (20lb) capacity in easily accessible locations.
- 8. *Transportation Plan* shall be developed, implemented, and a written copy on premises at all times in accordance with all County of Humboldt and State of California regulations:
- Receiving and Inventory Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable County of Humboldt and State of California regulations.
- 10. Processing and Packaging Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable County of Humboldt and State of California regulations.
- 11. Security Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable County of Humboldt and State of California regulations.

- 12. **Pesticide Management Plan** shall be developed with training for **Private Applicator Certification**, and a written copy of the plan and certification shall be on premises at all times in accordance with all applicable Humboldt County and State of California regulations.
- 13. Cannabis Waste Management Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County and State of California regulations.

C. Schedule of Operations

Operations are proposing a light depravation cycle to take advantage of a host of environmental factors and ease of operations. The cultivation cycle shall consist of a six (6) month period with two (2) harvests. Record keeping of past water use was not undertaken and the projection (Figure 4) is an estimate based up three hundred seventy-three gallons (373gal) per day during the peak of summer in August.

		Table 1:	Applicant's So	chedule of Acti	vities	
Mont h	Propagation	Vegetating	Flowering	Cultivation	Processing	Projected Usage in Gallons
Jan						0gal
Feb						0gal
Mar						0gal
Apr	Х					0gal
May	X	Х				4,043 gal
Jun	Х	X	Х			5,589 gal
Jul		Х	Х	X	Х	9,240 gal
Aug		X	Х	11 121 22 22		11,551 gal
Sep			X	Х		11,178 gal
Oct			X		Х	8,085 gal
Nov						0gal
Dec						0gal
Total	3 Months	4 Months	5 Months	2 Harvests	Twice	49,686gal

Projected Water Usage

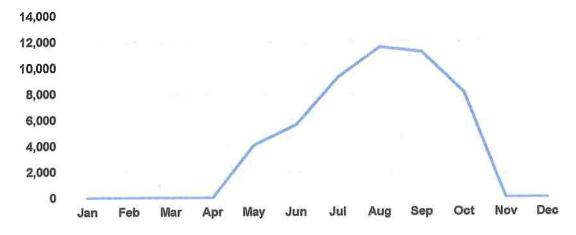


Figure 4: Estimated Water Usage Graph

D. Water Source Plan

The cultivation shall require a different source of water as the well cannot be repaired with a sanitary seal. It is proposed to install a new well to meet the needs of the operation as the underlying geology is sandstone and a known aquifer with high potential of success. To power the well pump shall require a solar panel array and battery system.

The project shall utilize the following Water Source:

- 1. A well shall be drilled by a licensed well driller who shall file all permitting with the Humboldt County Department of Environmental Health.
- 2. Solar power and battery system shall meet all regulatory requirements, including electrical, which shall be submitted for permitting through the Humboldt County Building Department.

The following are compliance requirements:

- 1. Licensed well driller shall be install a well within a confined aquifer permitted by the Humboldt County Department of Environmental Health.
- 2. Electrical Permit shall be submitted to the Humboldt County Building Department by a Licensed Electrician who shall install solar power system.
- 3. **DFW §1602 LSA** undertaken by a Qualified Professional, such as Registered Professional Forester, Licensed Fishery Biologist, Licensed Geologist, Licensed Hydrologist, or Licensed Engineer.
- 4. Initial Statement of Diversion and Use shall be submitted to the SWCB DWR
- 5. State Water Board compliance with all measures identified within the *WRPP* shall be implemented.
 - a. *Installation of a Water Meter on the Well* which shall be monitored and recorded on a monthly basis with a copy kept on premises at all times.
 - b. Installation of Water Meter on the Outlet of the Water Tanks which shall be monitored and recorded on a monthly basis with a copy kept on premises at all times.
 - c. Irrigation water shall be used at an agronomic rate consistent with
- Standard Operating Procedures shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations.

The following are recommendations:

1. Water Conservation Measures are recommended to be investigated and implemented when feasible, such as drip systems, irrigation timers

set to water after sunset or before sunrise, hygrometers, handheld infrared cameras, and other appropriate technology.

E. Water Storage Plan

Storage shall be used to maintain pressure and act as mixing tanks prior to drip line feeding plants. Total additional storage proposed on site is twenty thousand hundred gallons (20,000gal) in four (4) tanks. There shall be a dedicated fire suppression tank.

The project shall utilize the following minimum Water Storage:

- 1. Fifteen thousand gallons (15,000gal) for cultivation.
- 2. Five thousand gallon (5,000gal) for dedicated fire suppression.

The following are compliance requirements:

- 1. Agricultural Exempt Permits shall be submitted to the Humboldt County Building Department for the water storage tanks.
- 2. **DFW §1602 LSA** undertaken by a Qualified Professional, such as a Registered Forestry Professional, Licensed Fishery Biologist, Licensed Geologist, Licensed Hydrologist, or Licensed Engineer.
- 3. State Water Board compliance with all measures identified within the *WRPP* shall be implemented.
 - a. Installation of a Water Meter on the Well which shall be monitored and recorded on a monthly basis with a copy kept on premises at all times.
 - b. Installation of Water Meter on the Outlet of the Water Tanks which shall be monitored and recorded on a monthly basis with a copy kept on premises at all times.
 - c. Irrigation water shall be used at an agronomic rate consistent with the WRRP.
- 4. Five thousand-gallons (5,000gal) tank shall be dedicated for CalFire Fire Safe purposes and not connected to the Cultivation Area.
 - a. Three inch (3") reflectorized blue dot shall be installed on an address sign upon the gates.
 - b. Three inch (3") reflectorized blue dot shall be installed upon the fire suppression tanks or fire hydrant.
 - c. A two and one-half inch $(2\frac{1}{2})$ or four and one-half inch $(4\frac{1}{2})$ N.H. male fitting for a fire house connection shall be made available on the fire water storage tank or a remote fire hydrant connection with said fitting at least eighteen inches (18) above grade
 - d. The placement of a tank with a hose fitting or a fire hydrant connection shall be between four feet (4') and twelve feet (12') from the roadway.
 - e. Tank and fire hydrant placement shall be at least fifty (50') from buildings.
 - f. Tank and fire hydrant placement shall be at least eight feet (8') from vegetation.

- g. Fire suppression tanks shall be monitored for water level, topped off on a monthly basis if necessary, and a direct connection to the well with shut-off valve provided.
- h. All fire hydrant connections shall be maintained for proper fit and function.
- Standard Operating Procedures shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations.

The following are recommendations:

1. Water Conservation Measures are recommended to be investigated and implemented when feasible, such as drip systems, irrigation timers set to water after sunset or before sunrise, hygrometers, handheld infrared cameras, and other appropriate technology.

F. Cultivation, Power, and Soils Plan

Operations shall bring the cannabis Cultivation Area into full regulatory compliance for commercial use as an "Owner Operated Farm". Although employees shall not be used, proposed development shall meet American with Disability Act (ADA) when advantageous, or, be built in a way to easily retrofit to such standards. The purpose of such development is for general ease of use, potential real estate transfer, or unforeseen change in future operations.

Cultivation shall be a total of four thousand seven hundred fifty square feet (4,750°2) mixed light DEP. Operations shall be powered by solar power and use only high efficiency LED lighting. This source shall require development of a suitable location such as the cabin roof and the hillside clearing north of the parking area. Installation of power shall meet all State and County regulations.

Cannabis cultivated is intended for the adult recreational market for flower and extraction which shall be grown to meet that demand. Product shall either be minimally processed dried plant material conveyed by the farmer to an extraction facility or distributor for packaging. Operations shall meet all local and state regulatory requirements.

Greenhouses shall be constructed upon native soils with cultivation occurring within raised beds. Protection from overuse of inputs and reuse of these soils shall be a key component of operations. All farming shall be certified organic with mixing, tilling, and amending of soils occurring within the raised beds. All fertilizers shall be storage in designated areas as recommended by the manufacturer. Soils shall be reused, composted in a secure area with chipped cannabis waste, and no dumping off-site shall occur. Cover crops hall be utilized when not in cultivation for a month or more to reduce soils loss. Straw and other erosion control methods shall be placed on the ground surrounding the cultivation areas.

There are benefits of water conservation and soils management to operations, the community, Mattole watershed, and salmon fishery. Environmentally friendly good neighbor policies shall be developed and implemented. These include:

- 1. All cultivation shall utilize agricultural soils in raised beds and within the ground utilizing permaculture methods.
- 2. All bare soils shall be covered soils with straw, ground cloth, or cover crop such as clover.
- 3. Operations shall be metered as required by the State Water Board.
- 4. Operations shall utilize drip irrigation controlled by a timer.
- 5. A detailed monthly schedule of watering activities shall be developed and conspicuously posted on-site.
- 6. Soils and vegetated matter shall be reused, composted on-site, and no dumping off-site shall occur.
- 7. Composting shall consist of a dedicated area and vegetated matter shall be chipped into an inconsumable humic mix.
- 8. Other methods of soil and plant moisture analysis may be implemented including the use of hygrometers, infrared cameras, and computerized sensors.

The project shall utilize the following Cultivation Area:

- 1. Two (2) twenty-five feet by ninety-five feet (25'X95') mixed light DEP greenhouses totaling two thousand three hundred seventy-five square feet (2,375'2) each.
 - a. Cultivation shall occur in raised beds and utilize LED lighting after development of power.
- 2. Eight feet by ten feet (8'x10') shed to store fertilizers and pesticides.
- 3. All greenhouses shall meet the following requirements:
 - a. Be wired by a Licensed Electrician under permit.
 - b. Not be air conditioned or actively heated.
 - c. Not be lighted.
 - d. Utilize electrical ventilation fans.
 - e. Utilize timers for fans.
 - f. Utilize Light Deprivation (DEP) covers.

The following are compliance requirements:

- 1. Agricultural Exempt Permits shall be submitted to the Humboldt County Building Department for the greenhouses and fertilizer storage sheds.
- 2. Electrical Permit shall be submitted to the Humboldt County Building Department by a Licensed Electrician who shall install solar power system.
- 3. Greenhouse construction shall occur after April 15 as required by Humboldt County Building Department.

- 4. State Water Board compliance with all measures identified within the *Water Resources Protection Plan (WRPP)* shall be implemented.
- DFW §1602 LSA undertaken by a Qualified Professional, such as a Registered Professional Forester, Licensed Fishery Biologist, Licensed Geologist, Licensed Hydrologist, or Licensed Engineer.
- 6. Dark Sky Plan shall be developed and implemented.
 - a. Greenhouses shall utilize DEP covers.
 - b. Nursery lighting shall utilize timers.
 - c. A sunrise/sunset calendar shall be posted on-site.
 - d. Artificial lighting shall not be visible from outside of the nurseries at night after sunset or before sunrise.
 - e. Standard Operating Procedures that incorporate a Dark Sky Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all Humboldt County and State of California regulations.
- 7. **Track & Trace** in accordance with the policies of County of Humboldt and State of California.
 - a. Unique Identifier Designations (UID) are required for each mature plant.
 - b. A unique harvest batch name shall be created and associated with all UIDs for each individual plant, or portion thereof, contained in the harvest batch.
 - c. UIDs shall be attached to the main stem and placed in a position so it is visible within clear view standing next to a mature plant.
 - d. UIDs shall be kept free from dirt and debris.
 - UIDS are prohibited from being removed from the mature plant to which it was attached and assigned until the plant is harvested, destroyed or disposed.
 - f. Cannabis plants maintained outside of the designated Cultivation Area are prohibited from flowering. Should plants outside of the canopy area(s) begin to flower, a UID shall be applied, the plants shall be moved to the designated Cultivation Area without delay and reported in the Track-and-Trace system.
- 8. Fertilizers stored in designated areas and maintained per manufacturer recommendations,
- Cannabis Waste Management Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County and State of California regulations.
- 10. Pesticide Management Plan shall be developed by a Qualified Professional, with training for Private Applicator Certification, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County and State of California regulations.
- 11. *Private Applicator Certification* shall be undertaken with the Humboldt County Agricultural Commissioner.

- 12. **Standard Operating Procedures** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 13. Transportation Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations;
- 14. Receiving and Inventory Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 15. **Processing and Packaging Plan** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 16. Security Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.

G. Nursery Plan

Cultivation shall be supported by an on-site Appurtenant Nursery Area. This area shall occur separately where only immature plants shall only be maintained outside of the canopy area. These high efficiency LED lit and climate-controlled areas shall meet Humboldt County Building Code and California Electrical Code for the use of electrical outlets for electric oil heaters, dehumidifiers, fans, and light fixtures.

The project shall utilize the following Appurtenant Nursery Area:

- 1. Fifteen feet by fifty feet (15'X50') seven hundred fifty square feet (750'2 appurtenant nursery greenhouse.
- 2. Existing cabin shall have a room converted to a mother and cloning room.
- 1. All greenhouses shall meet the following requirements:
 - a. Be wired by a Licensed Electrician under permit.
 - b. May be actively or passively heated.
 - c. Not be air conditioned.
 - d. Utilize fans for ventilation.
 - e. Utilize low wattage efficiency lighting as feasible.
 - f. Utilize timers for lighting and fans.
 - a. Utilize DEP covers.

All compliance requirements as listed for the Cultivation Area are applicable to the Appurtenant Nursery Area.

H. Processing Plan and Wastewater Management

Operations shall be based upon greenhouses with a dual season harvest utilizing LED lighted DEP. Harvested product is intended to either be processed by a licensed extractor which shall be picked up frozen, or, flowers dried then trimmed with packaging

within the existing cabin. The initial step of processing shall occur with on-site bucking within greenhouses and drying of raw cannabis within the secure temperature and humidity-controlled cabin.

Facilities and water pumps shall be powered by solar generated on-site including the cabin roof. Within the cabin there is a restroom connected to an unpermitted septic system. The home site has a permitted septic system connected to the residence which is not part of the proposal.

The project shall utilize the following Processing Facilities:

1. Existing sixteen hundred square feet (1,600'2) forty feet by forty feet (40'x40') building with restroom connected to septic and two (2) standard parking spots.

The following are compliance requirements:

- Electrical Permit shall be submitted to the Humboldt County Building Department by a Licensed Electrician who shall install solar power system.
- 2. Licensed Engineer shall perform a Humboldt County Road Evaluation Report. Should grading of over fifty yards (<50yd) of material or be located on a slope greater than fifteen percent (<15%) then the following applies:
 - a. Grading plan for internal roads which shall be designed by a licensed and qualified engineer to meet a minimum Category 2 Road Standard.
 - b. Grading permit shall be submitted to the Humboldt County Building Department.
 - c. Road construction shall be undertaken by a licensed and qualified contractor between April 15 to October 31.
- 3. *Track & Trace* in accordance with the policies of County of Humboldt and State of California.
- 4. Cannabis Waste Management Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County and State of California regulations.
- 5. Processing and Packaging Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable County of Humboldt and State of California regulations. Additionally, this plan shall incorporate:
 - a. Processed and dried cannabis procedure for weighing, packaging, labeling, and deposited in accordance with all applicable County of Humboldt and State of California requirements.
 - b. All work surfaces and equipment maintained in a clean and sanitary condition in accordance with all applicable County of Humboldt and State of California requirements.

- c. Prevention practices against the contamination or growth of E.coli, mold, mildew, or other microbiological agent upon or within processed cannabis.
- d. Nitrile gloves and paper facemasks shall be used at all times.
- e. Hyenine policies for the use and maintenance of face and hand protection equipment in good operable condition.
- f. Hands washing methods policies to minimize activities which may introduce contamination.
- 6. *Transportation Plan* shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations;
 - a. Shall incorporate a road maintenance plan to maintain compliance with road standards required by Humboldt County, CalFire, and SWB.
- 7. Receiving and Inventory Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 8. **Processing and Packaging Plan** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- Security Pian shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.

I. Road Plan

Operations shall require that roads are suitable for commercial agricultural use. CalFire and Humboldt County prefer a Category 4 Road Standard which is twenty feet (20') wide, two (2) lane, on a slope less than sixteen percent (>16%), inside curve radius of fifty feet (50'), and forty feet (40') radius turnarounds or forty feet (40') Slip-T turnarounds. Should the physical landscape not allow for a two (2) lane road then Humboldt County and CalFire minimums standard are fourteen feet (14') wide with turnouts every four hundred feet (400'). On-site parking shall be required to occur in dedicated off-street locations and roadways clear at all times for emergency vehicle access.

The project shall utilize the following for Roads:

- 1. Humboldt County and CalFire Category 2 minimum road standards shall be met.
- 2. Any ROW entrances shall be to code requirements for approach and departure.
- 3. Gates shall have a three inch (3") red reflector on both sides.
- 4. A KNOX box located at the gates shall provide emergency vehicle access.

- 5. Emergency vehicle turnarounds shall be marked with white reflectors and remain clear at all times.
- 6. The driveway shall always be clear and accessible at all times.
- 7. All off-street parking spots shall measure ten feet by twenty feet (10'x20') minimum.

The following are compliance requirements for the Roads:

- 1. Licensed Engineer shall perform a Humboldt County Road Evaluation Report.
- 2. Humboldt County and CalFire Category 2 minimum road standards shall be met.
- 3. Should grading of over fifty yards (<50yd) of material or be located on a slope greater than fifteen percent (<15%) then the following applies:
 - a. Grading plan which shall be designed by a licensed and qualified engineer.
 - b. Grading permit which shall be submitted to the Humboldt County Building Department.
 - c. Road construction shall be undertaken by a licensed and qualified contractor between April 15 to October 31.
- 4. State Water Board compliance with all measures identified within the Water Resources Protection Plan (WRPP) shall be implemented.
- 5. DFW §1602 LSA undertaken by a Qualified Professional, such as a Registered Forestry Professional, Licensed Fishery Biologist, Licensed Geologist, Licensed Hydrologist, or Licensed Engineer.
- 6. *Transportation Plan* shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations;
 - Shall incorporate a road maintenance plan to maintain compliance with road standards required by Humboldt County, CalFire, and SWB.
- Receiving and Inventory Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 8. **Processing and Packaging Plan** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- Security Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.

J. Solid and Organic Waste Plan

An Integrated Waste Management Plan to control cannabis and solid waste shall occur by implementation of a Cannabis Waste Management Plan (CWMP). Due to project

site remoteness the CWMP shall focus on self-haul of solid waste and recycling. Cannabis waste shall be chipped on-site, composted in an approved manner (Figure 9), and utilize land disposal by mixing into cultivation soils. The State of California and Humboldt County require that the project be in compliance with the California Integrated Waste Management Act through the use of a CWMP.

All cannabis waste shall be stored in a secure waste receptacle, or secured area, and disposed of in accordance with local and state regulations, CERCC, and CWMP. Cannabis waste shall be chipped and disposed of in a static aerated or windrow compost pile (Figure 5). Public access to the designated cannabis waste receptacle or area shall be strictly prohibited. All commercial solid waste shall be stored separately from cannabis waste in disposal bins secure from wildlife and watershed discharge, divided out from trash and recyclables, and disposed in accordance local and state regulations, CERCC, and CWMP. All hazardous waste regulated by the Integrated Pest Management Plan shall be dispose of properly utilizing protocols within that plan in compliance with all local and state regulations.

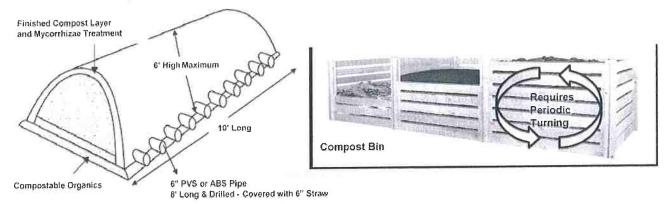


Figure 5: Static Aerated and Windrow Compost Piles Example

The following are compliance requirements for Solid Waste Management:

- 1. Installation of a Static Aerated Compost Pile and/or Windrow Compost.
- 2. State Water Board compliance with all measures identified within the *Water Resources Protection Plan (WRPP)* shall be implemented.
- 3. *Track & Trace* in accordance with the policies of County of Humboldt and State of California.
- 4. Hazardous Materials Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County. State of California, and Federal regulations.
- Cannabis Waste Management Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County and State of California regulations.

- Standard Operating Procedures shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 7. *Transportation Plan* shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations;
- 8. Receiving and Inventory Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- Processing and Packaging Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- 10. Security Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.

The following are recommendations:

1. Utilize aerated static pile compost to reduce manual labor of operations.

V. Site Drainage, Runoff, and Erosion Control Measures

A. Site Drainage

The site is located above Bridge Creek which flows through the parcel to the Mattole River. The main road to the farm is Shelter Cove Road which is a county maintained road. To access the site Hungry Gulch Road is utilized which may require an upgrade to meet regulatory requirements In general, the cultivation areas are on the same contour, and just below this area the ridge slopes off.

B. Runoff and Erosion Control Measures

The project has the potential to impact the local watershed and therefore shall be minimizing discharge to surface waters and anadromous fisheries of the Mattole River. The following erosion control measures are proposed to be implemented:

- 1. Internal policies shall minimize discharge from farm related activities.
- 2. The driveway shall be graveled and meet CalFire SRA and/or Humboldt County Public Works requirements.
- 3. Soil beds within the enclosed greenhouses shall be contained and methods implemented to reduce soils loss to the outside.
- Cover crops shall be utilized.
- 5. Straw and other erosion control methods shall be placed on the ground surrounding the cultivation areas.

VI. Watershed and Nearby Habitat Protection

The project shall be utilizing the following to ensure protection of the watershed and nearby habitat:

- 1. A grading plan shall be developed by a licensed qualified engineer and submitted to the Humboldt County Building Department.
- 2. Implementation of the grading plan and permit shall be by a licensed and qualified contractor under permit.
- 3. Internal policies shall minimize farm related activity discharge to the watershed.
- 4. Compost bin shall be self-contained.
- 5. Trash and recycling bins shall be secured and dumped at a local transfer
- Cover crops shall be utilized.

VII. Soil Management and/or Permaculture Methods

The project shall construct greenhouses in beds within the soil and place any growth medium in pots within raised beds. Protection from overuse of inputs and reuse of these soils shall be a key component of operations. Operations shall protect this resource through the following means:

- 1. All farming on-site shall be certified organic.
- 2. Cultivation shall occur in raised beds or in the ground.
- 3. Mixing, tilling, and amending of soils shall occur within the beds.
- 4. Soils shall be reused, composted on-site, and no dumping off-site shall occur.
- 5. Composting shall consist of a dedicated area and be secure. Cultivation vegetative materials shall be chipped back into the compost pile.
- 6. Cover crops shall be utilized when not in cultivation for a month or more to reduce soils loss.

VIII. Fertilizers, Pesticides, or Other Regulated Products

A. Storage Protocols

Operations shall be a certified organic farm. There shall not be any use of regulated products such as pesticides or herbicides. The following storage protocols shall be met:

- 1. A permanent storage outbuilding be constructed with shelf and floor space for products to be stored according to manufacturer requirements.
- 2. Clean-up and containment protocols shall be developed and implemented to minimize discharge.
- 3. Clean-up and containment equipment shall be maintained in good operating condition on-site at all times.
- Safe handling practices and protocols shall be developed for using cleanup and containment equipment.

B. Fertilizers and Amendments Utilized

Operations shall be a certified organic farm utilizing the following certified organic amendments and fertilizers in Table 2.

. Bat Guano	6. Fishbone	11. MycoApply Endo Ultra *
2. Bone Meal	7. Grape Compost	13. Neem Meal
. Cascade Worm Castings	8. Gypsum	14. Phytamin Fish 3-2-0*
. Crab Shell	9. Kelp Meal	15. Seabird Guano
. Epsom Salt	10. Kickstart 6-1-2*	16. Shrimp Meal

C. Pesticides

Operations shall be a certified organic farm that requires minimal pest management, though, there may be situations requiring the potential use of any the following agriculturally exempt products in Table 3.

Table 3: Legal Pest Management Practices for M	Pest or Disease
Azadirachtin	Aphids, Whiteflies, Fungus Gnats, Leafminers, Cutworms
Bacillus subtilis QST	Root Diseases, Powdery Mildew
Bacillus thuringiensis subsp. aizawai or kurstaki	Moth Larvae (E.G., Cutworms, Budworms, Borer)
Bacillus thuringiensis subsp. Israelensis	Fly Larvae (E.G., Fungus Gnats)
Beauveria bassiana	Whiteflies, Aphids, Thrips
Cinnamon oil	Whiteflies
Gliocladium virens	Root Diseases
Horticultural Oils (Petroleum Oil)	Mites, Aphids, Whiteflies, Thrips; Powdery Mildew
Insecticidal Soaps (Potassium Salts of Fatty Acids)	Aphids, Whiteflies, Cutworms, Budworms
Iron phosphate, sodium ferric EDTA	Slugs And Snails
Neem Oil	Mites; Powdery Mildew
Potassium bicarbonate; sodium bicarbonate	Powdery Mildew
Predatory nematodes	Fungus Gnats
Rosemary + peppermint essential oils	Whiteflies
Sulfur	Mites, Flea Beetles
Trichoderma harzianum	Root Diseases
Active ingredients that are exempt from residue tolerar	nce requirements and either exempt from registration
requirements or registered for a use broad enough to i	include use on marijuana.
http://www.waterboards.ca.gov/water issues/programs	s/enforcement/docs/cannabis enfrcmnt/pest mgmt
practices.pdf	

IX. Family Operations and Safety Practices

A. Family Operations

The operation shall be a family owned and operated business. At no time shall operations utilize the service of employees. Therefore Applicant is exempt from MCRSA §19322(a)(6), MCRSA §19322(a)(9), and the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 as it is not an "Agricultural Employer"...

B. Safety Practices

Operations and processing shall implement safety protocols to protect the health and safety of its family members and customers, with adequate safety training relevant to their specific job functions, which may or may not include:

- 1. Drinking Water and Wastewater
 - a. The on-site well connection shall provide potable water and bottled water may also be provided.
 - b. On site septic shall provide sanitary service after meeting all regulatory requirements.
- 2. Emergency Action Response Planning
 - a. Family members shall be encouraged to receive training and certification in basic CPR & 1st Aid.
 - b. A CPR & 1st Aid Kit Station shall be provided on-site.
 - c. A working phone connection or emergency call button shall be connected to a monitored security system.
- 3. Fire Prevention
 - a. A fire monitoring system may be installed, as it is not a necessity, due to minimal site development.
 - b. There shall be on-site a minimum of two (2) dry chemical fire extinguisher with a twenty pound (20lb) capacity in easily accessible locations.
 - c. Fire extinguishers shall be maintained and certified on an annual basis.
 - d. A minimum of a two thousand gallon (2,000gal) up to a maximum of five thousand gallon (5,000gal) water tank shall be developed.
- 4. Hazard Communication Policies, Including Maintenance of Material Safety Data Sheets (MSDS)
 - a. Training in the proper handling of all hazardous materials in the advent any are ever used.
 - b. In the advent that any regulated substances are ever used MSDS shall be posted visibly on-site at all times.
- 5. Materials Handling Policies
 - a. All handling of cannabis shall meet all MAUCRSA and Humboldt County Code requirements.
 - b. Training in the handling of cannabis and other related on-site materials shall occur on an annual basis.

c. Equipment required for the safe handling of cannabis shall be provided and readily available on-site.

6. Job Hazard Analyses

- a. An independent risk assessment shall be undertaken within one (1) year.
- b. Implementation of the risk assessment to reduce job hazards shall be undertaken to the greatest extent possible.
- 7. Personal Protective Equipment Policies; Including Respiratory Protection
 - a. All personal equipment shall meet all MAUCRSA, OSHA, and Humboldt County Code requirements.
 - b. Applicant shall provide certified safety glasses (tinted and clear), hats, disposable and reusable gloves, disposable face masks, and filtered respiratory protection as needed.
 - c. Training in the use, expectations, and access to personal protective equipment shall be provided on an annual basis.

X. Processing Practices and Plan

A. Processing Practices

Operations shall implement and practice the following Processing Practices onsite at all times:

- 1. All work surfaces and equipment shall be maintained in a clean and sanitary condition meeting all MAUCRSA and Humboldt County Code requirements.
- 2. Prevention practices shall be implemented against the contamination or growth of E.coli, mold, mildew, or other microbiological agent upon or within processed cannabis.
- 3. Nitrile gloves and paper facemasks shall be used at all times.
- 4. Facemasks and gloves shall be in good operable condition.
- 5. Hands shall be sufficiently clean using sanitary methods of soap and hot water before initially handling cannabis, after using a restroom, or taking part in an activity which may introduce contamination.

B. Processing Plan

Processing of cultivated cannabis shall consist of:

- 1. Harvesting of cannabis is anticipated to occur twice a year.
- 2. Drying shall occur within the cabin.
- 3. Processing shall occur within cabin and be undertaken by hand or with the use of trim machines.
- Processed and dried cannabis shall be weighed, packaged, labeled, and distributed to licensed dispensaries or distributors, as allowable under California law and Humboldt County Code, and shall adapt as changes occur.

C. Parking and Road Usage

Activities that shall have minimal impact to roads with no increase in traffic and usage than currently exists. The following shall be undertaken to minimize traffic:

- 1. The roadway shall meet all CalFire SRA and/or Humboldt County Public Works Department requirements.
- 2. The entrance shall be engineered according to Humboldt County Code requirements for approach and departure.

XI. Security Plan

Operations are intended to be conducted securely. At all times shall operations be visibly obscured, discreet, nor draw attention. The purpose of operational security is to avoid being a nuisance activity which could attract burglary, robbery, or diversion of cannabis for unlawful use.

The following are Security Measures:

- A. Operations shall be secured by a fence at least six feet (6') in height with a locking gate utilizing a commercial grade lock.
 - 1. Fencing over six feet (<6') shall require a Humboldt County Building Permit.
- B. Internet monitored security and fire system may be installed, if feasible, and accessible only to permitted individuals on the premises.
- C. Digital video surveillance system, if feasible, with 1280×720 resolution connected through the internet 24/7 to a licensed alarm monitoring company.
- D. Passive audible trespasser alarm system may be installed.
- E. Cameras may be installed.
- F. Video recording system shall be installed within the processing facilities, if self-transporting, as per California Bureau of Cannabis Control regulations.
 - 1. Permanently mounted in a fixed location as noted on licensing site map.
 - 2. Pointed at all entry and exit access points from both inside and outside.
 - 3. Record within twenty feet (20') of those access points.
 - Spaces where cannabis products are weighed, packed, stored, loaded/unloaded for transportation, prepared, or moved within the premises.
 - 5. Rooms in which surveillance system storage or recordings are kept.
- G. Locks shall be installed.
 - 1. Commercial-grade, non-residential door locks at all points of entry and exit.
 - 2. It is recommended that alarmed lock systems be considered to ensure restricted access.
- H. Any security personnel employed must possess a valid Guard Card and be compliant with the California Department of Consumer Affairs.

The following are compliance requirements for Security:

- A. Electrical Permit shall be submitted to the Humboldt County Building Department by a Licensed Electrician who shall install solar power system.
- B. *Track & Trace* in accordance with the policies of County of Humboldt and State of California.
- C. Permit to Operate the generator obtained from the Local Air District.
- D. Cannabis Waste Management Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable Humboldt County and State of California regulations.
- E. **Standard Operating Procedures** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- F. *Transportation Plan* shall be developed, implemented, and a written copy on premises at all times in accordance with all State of California regulations;
- G. **Receiving and Inventory Plan** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- H. Processing and Packaging Plan shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.
- I. **Security Plan** shall be developed, implemented, and a written copy on premises at all times in accordance with all applicable State of California regulations.