

ATTACHMENT 1B

Cultivation and Operations Plan

Teodora Petrova PLN-11949-CUP

Operations Plan Addendum

Location: 1925 Old Somerville Creek Rd. Garberville, CA 95542

APN: 222-083-007

Project Description

The revised project includes Two cultivation areas consisting of nine (9) greenhouses and one (1) ancillary propagation greenhouse. There are currently seven (7) existing flowering greenhouses with a total canopy of 13,100ft². Applicant is proposing to add two more flowering greenhouses for a total canopy of 15,000ft², and a 1,500ft² propagation greenhouse. This will allow the applicant to utilize all the historical cultivation area prior to January 1, 2016. Please see Cultivation area verification below.

Ancillary propagation area will consist of one greenhouse for a total of 1,500 ft² with light assist for the propagation of vegetative plants. Propagation area greenhouse will employ light shielding techniques such as black out tarps with secured ends.

All cannabis will be harvested and dried in the existing 30' X 50' (1,500ft²) drying room on site. The dried cannabis will be processed onsite within the same building, which also acts as secured harvest storage.

Irrigation Water use for this project estimated to be 128,667.5-gallons. Irrigation water is sourced from a groundwater well.

Land Features

All Cannabis is grown in flats that existed before the applicant bought the property. In the past, small equipment was used to aid in shaping and contouring existing flats on the land.

Access to Property

The site is located on Old Somerville Creek Road, off Old Briceland Rd. in the Briceland Area. Personal driveway is shared with no additional neighbors. To access property from Eureka CA, via Highway 101; Follow US-101 S to Redwood Dr. Take exit 642 from US-101 S, (63.2 mi.) Continue onto Redwood Dr. (1.8 mi.) Turn right onto Briceland Road. Follow Briceland road for 5.7 miles to Briceland. Turn left onto Old Briceland Rd. (0.2 mi. Turn right onto Old Somerville Creek Rd. Follow Old Somerville Creek rd. 2.3 mi. to destination. 1925 Old Somerville Creek Rd.

Proximity

The nearest neighboring properties are 614 ft to the north and 416 to the south from the cultivation sites. There are no schools, school bus stops, public parks, public lands, hiking trails or tribal resources within 600 ft of the property.

Equipment/ Power

This is a mixed light cultivation operation, with processing to occur on site. The energy utilized by the applicant will be for ancillary cannabis activities including but not limited to:

- Drying room implements dehumidifiers, fans and lights for visibility
- Water and air pumps for fertilizer
- Atomizer (for foliage feeding and pest/disease), and
- Supplemental lighting in the propagation greenhouses
- Supplemental lighting in the flowering greenhouses

Power for this parcel is being provided by a diesel generator.

Petroleum Based/ Fuel Products

Project site will not store any Hazardous Waste in threshold beyond domestic use. If any additional storage of hazardous waste becomes necessary, an appropriate application will be filed with DHHS.

Any above ground storage tanks and containers shall be provided with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. All five-gallon gasoline cans are stored with secondary containment inside of garage or similar enclosure on flat, stable areas. The applicants will implement spill prevention, control, and countermeasures (SPCC). There are no underground storage tanks on the property. All petroleum products on property are stored with secondary containment inside of a shed or similar enclosure on flat, stable areas.

Solid Waste/ Recycling

Solid waste and recycling shall be stored in a location and manner that prevents its discharge to receiving waters and prevents any leachate or contact water from entering or percolating to receiving waters. All solid waste and recycling are stored in cans with lids on a stable, flat area. The cans are secured to exclude wildlife. Solid waste and recycling shall be disposed of at an authorized municipal waste transfer station. It will be taken to by personal vehicle, i.e. truck, 1-3 times per week depending on garbage accumulation.

Solid Waste and Recyclables Disposal

Redway Transfer Station
California Conservation Camp Rd.
Redway, CA 95560707-923-3944
<https://www.recology.com/recology-eel-river/redway-transfer-station/>

Amended Cultivation Plan

Cultivation Site

This project will consist of two (2) cultivation areas totaling 15,000 ft². these areas are consisting of 7,160ft², and 7,840ft² of mixed light cultivation respectively in each area. An additional 1,500 ft² of propagations space will also be utilized. All cannabis will be grown in greenhouses. All cannabis is harvested and dried on site.

Cultivation Areas

Cultivation Area	Cultivation Type	Cultivation Area	Structure Sizing
1	Mixed Light Greenhouses	7,160 ft ²	Qty 1- 35' x 116' (4,060ft ² GH 1) Qty 1- 20' x 60' (1,200ft ² GH 2) Qty 1- 20' x 50' (1,000ft ² GH 8) Proposed Qty 1- 20' x 45' (900ft ² GH 9) Proposed
2	Mixed Light Greenhouses	7,840 ft ²	Qty 1- 32' x 118' (3,776ft ² GH 3) Qty 1- 32' x 92' (2,944ft ² GH 4) Qty 1- 8' x 50' (400ft ² GH 5) Qty 1- 8' x 40' (320ft ² GH 6) Qty 1- 8' x 50' (400ft ² GH 7)
Total Flowering Area		15,000 ft ²	9 Mixed Light Flowering Greenhouses
Ancillary Area	Propagation Space	1,500 ft ²	QTY 1 15' x 100' Propagation Greenhouse

Cannabis Garden 1- This area contains one (1) 35' x 116' (4,060ft²) mixed light greenhouse, one (1) 20' x 60' (1,200ft²) mixed light greenhouse, one (1) proposed 20' x 50' (1,000ft²) mixed light greenhouse, and one (1) proposed 20' x 45' (900ft²) Total canopy in this cultivation area is 7,160ft².

Cannabis Garden 2- This area contains one (1) 32' x 118' (3,776ft²) mixed light greenhouse, and one (1) 32' X 92' (2,944ft²) mixed light greenhouse, one (1) 8' x 50' (400ft²) mixed light greenhouse, one (1) 8' x 40' (320ft²) mixed light greenhouse, and one (1) 8' x 50' (400ft²) mixed light greenhouse. Total canopy in this cultivation area is 7,840ft².

Propagation Space- This area contains one (1) 15' X 100' (1,500ft²) vegetative Greenhouse for a total of 1,500ft² of propagation space.

Water Storage Facilities

Storage Facility	Capacity	Type	Point of Use	Water Source
Water Tank	1,100 gallons	HDPE Storage Tank	Domestic	Spring Diversion
Water Tank	2,500 gallons	HDPE Storage Tank	SRA Fire Tank	Well
Water Tank	1,500 gallons	HDPE Storage Tank	Irrigation Storage	Well
Water Tank	5 qty @ 3,000-gal. ea. 15,000 gallons total	HDPE Storage Tanks	Irrigation Storage	Well
Water Tank	8 qty@ 2,500-gal.ea. 20,000-gallons total	HDPE Storage Tanks	Irrigation Storage	Well

Ancillary Cannabis Facilities

Facility	Size	Purpose
Agricultural Storage Building	12' x 16' (192ft ²)	Pesticide and fertilizer storage
Existing Shed	30' x 50' (1,500ft ²)	Drying/processing/harvest storage

Immature Plants

Each spring the Applicant takes cuttings or clones from mother plants and rears them in propagation greenhouse till plants are ready to be moved to flowering greenhouses. Immature plants will be cultivated in one (1) greenhouse. Artificial lights will facilitate plant growth and hinder plants from moving into flowering stages ahead of cultivation schedule. All lighting will be shielded with black out tarps and checked daily for light leaks.

Cultivation Cycles

The Applicant cultivates in light deprivation greenhouses in two cycles from April to October. The first cycle is from April to July, the second cycle is from roughly July to October. The Applicant uses supplemental light inside the propagation greenhouse to start plants. The Applicant also uses supplemental light inside the flowering greenhouses, at regular intervals to supplement natural sunlight. All greenhouses will be equipped with fans.

There are companion plants, native grasses and indigenous plants that grow in the garden and around the area to also help control any type of run off. There are no signs of wastewater runoff or erosion in these gardens. Hay is also spread around the area and on the topsoil. The water line as well as manifolds and fittings will be checked on a regular basis for leak or cracks.

Processing Plan

Harvest

Cannabis will be harvested using gloves and clean tools. All cannabis will be hung to dry in the drying room. Dehumidifiers and fans will aid drying in the building. Cannabis will be dried for 10-14 days on lines in these areas depending on weather. The rooms will have proper ventilation, fans, and dehumidifiers to maintain proper environment. Moldy cannabis will be removed and destroyed using county and state approved procedures for holding and destroying unwanted product.

Curing

Curing will take place after cannabis is dried on the lines. Cannabis will be visually checked for mold then placed into plastic totes for curing. During this time the bins will be checked for mold and moisture consistency. Curing cannabis will be stored in drying/processing building. Moldy or defective cannabis will be removed and destroyed using county and state approved procedures for holding and destroying unwanted product.

Processing

Cannabis Trimming will occur as cannabis becomes ready from curing process. Trimming will physically take place onsite in drying/processing building (see on map) with plenty of ventilation and fresh air. The Applicant plans to process the cannabis himself with the aid of trim machines. If needed, he will hire 1-3 employees or contractors to help. Processed cannabis will be bagged into turkey bags or sealed bags to be held until a distributor is ready. The trim or remaining leaves from processed cannabis, will be bagged into contractor bags to be stored until needed, sold, or destroyed in the legal manner.

Processing- Employees and Contractors

Employees will be seasonal and subcontracted as possible. Employees and contractors will have access to parking, spacious work zone, clean supplies for task, hand washing areas with soap, bathroom with sink and flushing toilet and break area. Fresh spring water is available, but workers are encouraged to bring their own drinking water. All areas are kept clean and in good condition All employees and/ or contractors will have access to personal safety equipment to meet the needs of the job for example, face mask, gloves, Tyvek suits, safety glasses, rubber boot covers etc. There are no worker sleeping quarters on site. Workers are encouraged to carpool to work daily, and applicant intends to mitigate any additional traffic on Old Somerville Creek Rd., by reducing his own travel during times he has workers.

Worker Safety Practices

Safety protocols will be implemented to protect the health and safety of employees. All employees shall be provided with adequate safety training relevant to their specific job functions, which may include:

- Employee accident reporting

- Security breach

- Fire prevention

- Emergency Numbers

Materials handling policies

Use of protective clothing such as long sleeve shirts, brimmed hats, and sunglasses. Each garden site and or processing area have the following emergency equipment:

- Personal protective equipment including gloves and respiratory protection are provided where necessary

- Fire extinguisher

- First Aid Kit

- Snake Bite/Bee Sting Kit

- Eye Washing Kit

Comply with all applicable federal, state, and local laws and regulations governing California Agricultural Employers, which may include federal and state wage and hour laws, CAL/OSHA, OSHA, California Agricultural Labor Relations Act, and the Humboldt County Code (including the Building Code).

Monthly Cultivation Site Activities

Month	Activities
January	Finish processing of fall harvest, trimming and storage. Plan new year. Mow cover crop. Check greenhouses for issues/fix. Check water lines, tanks and all equipment for repairs or damages. Make plan for repairs.
February	Work on trenches/and holes for plants layer more compost in beds. Treat compost if necessary. Finishing processing last year's crop if still necessary.
March	Get clones from other permitted grow operation. Transplant and move into greenhouse with seedlings. Amend beds, fix fences, service equipment, make plan for independent contractors i.e.; painting, fence building, greenhouse fixing, etc.
April	Amend and start turning beds, prep dirt and supplies for greenhouse plants Add nematodes compost for pest prevention. Mid- April move first round of plants to greenhouses. Weed whacking, mowing, and brush cleanup.
May	Spray with preventive sulfur. Treat with biodynamic preparations for pest control and mold control. Greenhouse plants switched into flower using a blackout cover mid-late May. Turn beds, fix/ replace and clean drip emitters, check timers. Double check all water systems for leaks and clogs. Put out sound sensors for rodents.
June	Regular feeding schedule of compost teas adhered to. Pests are dealt with as they arise with oils, nematodes and predator mites from compost. Procure next round of plants from licensed nursery.
July	Harvest greenhouse mid-month, replant with new clones from a permitted nursery. Treat plants with preventive measures. Harvested flowers to hang in drying area then to be cured and hand trimmed per processing plan.
August	Finish processing July's harvest. Monitor water supply, check lines and all areas for insect/ animal disturbance.
September	Prepare for Harvest. Clean and prepare lines and drying spaces in drying room. Clean all supplies and purchase new items needed. Harvest, cure and trim as outlined above in processing plan.
October	Harvest greenhouses. Process as outlined above. Pull all root-balls, pack hay and cover crop seeds on beds. Pull drip system. Check all equipment and tools for leaks and damages before storing for winter. Store all supplies possible, cleanup site.
November	Finish harvesting plants if necessary. Winterize water system, greenhouses, and sheds. Clean up drying rooms remove all lines and debris. Put away all supplies i.e. fans, dehumidifiers. Continue processing cannabis as outlined above.
December	Start amendments for winter. Prep all water and water storage system for shut down. Clean all garden implements. Put all left over supplies away. Driveway fixing, other farm/garden maintenance.

Pre-existing Map 2014 Imagery

APN - 222-083-007



Property Boundary



Pre-existing Canopy Area



1" = 300'



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Water Storage and Usage

Current Water use for this site is approximately 203,167.5-gallons. The current water use for the cannabis is approx. 128,667.5-gallons. Domestic water use is expected to be approx. 74,500-gallons. This water use is an estimate to the best of my knowledge. Projected irrigation water use for the project is 171,467.5-gallons for completed project with additional greenhouses. The irrigation water source for this operation was historically an existing groundwater well. This plan will switch the water source to his already permitted spring diversion with water right H505220. The applicant will have enough water storage to forbear water diversion during the diversion period. Domestic water is sourced from domestic spring S025403.

There is currently a total of 16 (sixteen) HDPE water storage tanks on the parcel. There are 9 (nine) 2,500-gallon HDPE Water storage tanks, 5 (five) 3,000-gallon HDPE water storage tanks, 1 (one) 1,500-gallon HDPE water storage tank, and 1 (one) 1,100-gallon HDPE water storage tanks for a total of 40,100-gallons of water storage. Tank configuration will be one 2,500-gallon HDPE water storage tank for Firefighting use, (filled from well), one 1,100-gallon HDPE water storage tank for Domestic use (filled from domestic spring) eight 2,500-gallon HDPE water storage tanks, five 3,000-gallon HDPE water storage tanks, and one 1,500-gallon HDPE water storage tank (filled from spring diversion) for Irrigation use. The applicant scored well in the Water Conservation Grant Program, and the grant will pay for an additional 80,000-gallons in HDPE tank storage for a total of 120,100-gallons in water storage. This will allow the applicant to completely forbear from water use during the dry season.

Storage Facility	Capacity	Type	Point of Use	Water Source
Water Tank	1,100 gallons	HDPE Storage Tank	Domestic	Spring Diversion
Water Tank	2,500 gallons	HDPE Storage Tank	SRA Fire Tank	Well
Water Tank	1,500 gallons	HDPE Storage Tank	Irrigation Storage	Spring diversion
Water Tank	5 qty @ 3,000-gal. ea. 15,000 gallons total	HDPE Storage Tanks	Irrigation Storage	Spring Diversion
Water Tank	8 qty@ 2,500-gal. ea. 20,000-gallons total	HDPE Storage Tanks	Irrigation Storage	Spring Diversion
Water Tank	16 qty@ 5,000-	HDPE storage tanks	Irrigation Storage	Spring Diversion

	gal./ea 80,000- gallons total			
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Water Discharge

All cannabis cultivation activities occur at least 200 feet away from the Class II watercourse. Cultivation fertilizer holding tanks exceed 200 ft setback from nearest water source.

In all cultivation areas mulched organic matter will be spread on topsoil to help with evaporation and runoff. Heavy amounts of peat moss and coco coir are also amended into soil periodically to prevent runoff from fertilizer. Cannabis cultivation will employ drip irrigation to prevent run off from watering. All poly-flex irrigation water lines are anchored, located up and out of drainages, and sited in a responsible way so as not to impede water flow through stream channels.

Monthly Water Use Table

Month	Current Cannabis Use in Gallons	Projected Cannabis Use In Gallons	Domestic Use
January	0	0	6,000
February	0	0	6,000
March	0	0	6,000
April	10,667.5	16,467.5	6,000
May	13,500	21,000	6,000
June	19,000	25,500	6,000
July	23,500	30,500	6,000
August	23,500	30,500	6,000
September	22,000	24,500	6,000
October	16,500	23,000	6,000
November	0	0	6,000
December	0	0	8,500
Total	128,667.5	171,467.5	74,500

I have read and keep a copy in my binder of the “Best Management Practices of Waste Resulting from Cannabis Cultivation and Associated Activities or operations with Similar Environmental Risk”, “Performance Standards for all CMMLUO Cultivation and Processing Operations” and the “Legal Pest Management practices for Marijuana Growers in California”. I intend to practice the guidelines set forth by these documents to help ensure my compliance with laws. I also intend to be flexible with county and state officials, make changes as necessary and upgrade my property to comply. Please feel free to contact me for any more information.