

Nature's Jar, Inc.



# **Cultivation and Operations Plan**

**Nature's Jar, Inc.**

**#11494**

**095-201-005**

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## **Section 1. Description of Cultivation Activities**

### **Cultivation Practices**

The Applicant cultivates cannabis in both an outdoor and light deprivation setting and will pursue a combination permit covering 8,064 square feet of Outdoor cultivation area. The Applicant cultivates outdoors from February through November.

The applicant cultivates all cannabis in an organic matter. 95% of all fertilizers/pesticides/fungicides are organically based. The applicant has an agreement with soilscape solutions to handle fertilizer schedules.

Each spring the applicant takes cuttings/clones from mother plants or purchased nursery plants and rears them outdoors in the nursery till plants are approximately 14" tall. Plants are grown up to 14" and planted in raised beds 12" high by six(6)' wide in light deprivation hoops.

Each June, the applicant takes cuttings/clones from mother plants or purchases plants/ seeds from a nursery. Once grown to 14" the immature plants are moved to their outdoor finishing area.

The Applicant uses a system of bamboo and netting to trellis plants while plants are young along with green ribbon to tie up branches to the bamboo as plants grow heavier and risk breakage. The bamboo is stored outside to be reused every year, the green ribbon and netting get disposed of every winter.

The Applicant manually drapes a black-out tarp over light deprivation hoops, at regular intervals.

Power poles and a power distribution line run through the property providing PG&E on-grid power to the house. No grid power is used at the cultivation site.

## **Section 2. Schedule of Activities During Each Month, Including Projected Generator Use (hours)**

January: NO GENERATOR, PG&E FOR RESIDENTIAL USE  
February: WELL GENERATOR, PG&E FOR RESIDENTIAL USE  
March: WELL GENERATOR, PG&E FOR RESIDENTIAL USE  
April: WELL GENERATOR, PG&E FOR RESIDENTIAL USE  
May: WELL GENERATOR, PG&E FOR RESIDENTIAL USE  
June: WELL GENERATOR or PG&E FOR RESIDENTIAL USE  
July: WELL GENERATOR or PG&E FOR RESIDENTIAL USE  
August: WELL GENERATOR or PG&E FOR RESIDENTIAL USE  
September: WELL GENERATOR or PG&E FOR RESIDENTIAL USE  
October: WELL GENERATOR or PG&E FOR RESIDENTIAL USE  
November: WELL GENERATOR or PG&E FOR RESIDENTIAL USE  
December: NO GENERATOR or PG&E FOR RESIDENTIAL USE

A renewable energy grant has been awarded to the applicant. With this grant the applicant will be able to move off the well generator and install a solar pump to draw water from the well when needed. The grant funds are to be received sometime in 2024. A small solar system will also be built and utilized to power the drying and storage containers.

## **Section 3. Light Deprivation Cultivation Cycles**

The Applicant has one light deprivation cultivation crop and one natural photoperiod cycle. The first cycle is from March to June, the second cycle is from roughly July to November. The Applicant utilizes 6 light deprivation hoops making up a total of 5,000 square feet of cultivation space. Plants are spaced from 14"-22" depending on strain and size of plant when entering the final flowering area. Typically a total of 1,600 to 2,200 plants are used per light deprivation crop, depending on timing, variety and size of plant.

## **Section 4. Description of Water Source, Storage, Irrigation Plan, and Projected Water Usage**

### **Water Source**

Under an agreement with the California Department of Fish and Wildlife (CDFW), the Applicant draws water from three sources. Point of Diversion One (POD-1) on APN

095-201-005, is fed from an unnamed class II stream and tributary to the South Fork of the EEL River.. Water will be diverted at no more than a maximum rate of 3 gallons per minute.

A well permit has been submitted and approved for an irrigation only well on the NW corner of the cultivation area. The well is operating and pumped at no more than 3-5 gallons per minute.

The applicant also utilizes rain water catchment tanks with 7,000 gallons worth of storage.

### **Water Storage**

Water for cultivation is stored in a series of Humboldt rotational moldings brand, above ground, vertical water storage containers. The containers are located on flat level ground in the eastern portion of the parcel. Water is stored in the following volumes and quantities: Two (2) 4,600-gallon water tanks, three (3) 3,500gallon water tanks, 19,700 total gallons of water storage. All storage tanks are equipped with a float valve to shut off diversion when tanks are full to prevent overflow from being diverted when not needed.

A water storage/conservation grant has been awarded to the applicant. The applicant plans on installing a rain water catchment system that feeds an additional 50,000 gallons of hard water storage in (10) 5,000 gallon hard plastic tanks. Funds for this grant are set to be distributed in 2024.

### **Irrigation Plan**

The Applicant applies water at agronomic rates through straw covered drip lines and only applies as much water as needed. Implementing water conservation measures, irrigating at agronomic rates, applying organic fertilizers at agronomic rates and applying organic pesticides/ fungicides according to the label specifications, straw mulching, cover crops in the off season and maintaining stable soil and growth media should serve to minimize the amount of runoff and the concentration of chemicals in that water.

Water for irrigation is connected through a series of planned water lines and water storage containers. Storage containers are filled through pumping or gravity fed diversion. To fill water storage containers, water from POD-1 is pumped through a 1" poly-flex water line to one 3,500gallon water storage tank. From this location it is gravity fed to the remaining water tanks. Water tanks are regulated and released through the float valve system.

In the event that irrigation runoff occurs, measures shall be in place to treat, control, and contain the runoff to minimize the pollutant loads in the discharge. Irrigation runoff shall be managed so that any entrained constituents, such as fertilizers, fine sediment and suspended organic particles, and other oxygen consuming materials are not discharged to nearby watercourses.

**Water Usage**

The Applicant has an efficient water usage plan designed to conserve as much water as possible. Watering can occur once every day, or once every 5 days, depending on plant size, weather, time of year and plants individual need.

Water usage for cultivation activities varies by month with minimal usage during the early part of the year, increasing in May through August, and dropping back down in September through November.

**Table 1 - Cultivation and Water Usage**

Month	Stage of Cultivation				Cultivation Space per Stage	Water Usage
	Flowering	Cloning	Vegging	Harvesting		
January		x			Nursery space	250 gallons/month
February		x	x		Nursery space	250 gallons/month
March			x		Light deprivation hoops/ Nursery space	1,000 gallons/month
April	x				Light deprivation hoops/ Nursery space	5,000 gallons/month
May	x			X	Light deprivation hoops/ Nursery space	10,000 gallons/month
June		x	x	X	Light deprivation hoops/ Nursery space	15,000 gallons/month
July			x		Light deprivation hoops/ Nursery space	10,000 gallons/month
August	x				Light deprivation hoops/ Nursery space	10,000 gallons/month

September	x			X	Light deprivation hoops/ Nursery space	10,000 gallons/month
October	x			X	Light deprivation hoops/ Nursery space	5,000 gallons/month
November				X	Light deprivation hoops/ Nursery Space	2,000 gallons/month
December		x			Light deprivation space/ Nursery space	250 gallons/month

## Section 5. Soil Management

Soil for cultivation is either in beds in light deprivation hoops or in the full sun outdoor cultivation area. Soilscape solutions foundational formula is top-dressed on the soil. Soil is stored in existing beds and re-amended in both light deprivation and Outdoor cultivation areas, imported soil for cultivation purposes is generally minimized. When necessary, exhausted soil shall be composted on flat level ground, outside of, and more than 150 feet from a watercourse. Along with being covered with plastic, exhausted piles will be lined with straw wattle or some sort of stop barrier to prevent run-off. Soil bags and other garbage are collected, contained, and disposed of at an appropriate facility, including for recycling where available.

Fertilizers, potting soils, compost, and other soils and soil amendments are stored in locations and in a manner in which they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater.

## Section 6. Description of Site Drainage, Including Runoff and Erosion Control Measures

One unnamed drainage occurs on site, with a class II watercourse. No run-off from cultivation watering flows into the ground. Timberland Resource Consultants' third party evaluation did not observe any discharge to watercourses during recent site visits.

Cannabis cultivation occurs at least 100 feet away from the Class II watercourse, per Water Board's specifications (*see Site Plan*). 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.

## **Section 7. Measures Taken to Ensure Protection of Watershed and Nearby Habitat**

The applicant is enrolled in the Regional Water Quality Control Board's Waiver of Waste Discharge program. A Water Resource Protection Plan (WRPP) has been approved, and Timberland Resource Consultants has determined that the cultivation areas are outside of the Humboldt County Streamside Management Areas per Order R1-2015-0023.

## **Section 8. Protocols for Proper Storage and Use of Fertilizers, Pesticides, and Regulated Products**

### **Storage**

All pesticides, soil amendments, and fertilizers are stored in a sealed nutrient storage tote (*see Site Plan*) in their original containers and with original product labels. Bagged and boxed materials are stored on pallets and will not be allowed to accumulate on the ground.

### **Usage and Regulated Products**

Fertilizers and soil amendments are applied and used per packaging instructions and at proper agronomic rates. Cultivation areas are maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest.

The Applicant only utilizes products not illegal to use on cannabis. The main products the applicant uses are Soilscape Solutions products and Regalia. Regalia is a naturally existing, plant derived immune system stimulant that is used as a fungicide. The Applicant will protect workers from exposure to pesticides and follow appropriate State pesticide use guidelines. The regalia is mixed with water and applied using a hose sprayer. Sprayer wears a full body Tyvek protective suit and air canister mask. Starting in March, fungal control is applied to all cultivation areas every fifteen days for vegging plants and moving to every 30 days when plants move to flowering. Petroleum products and other chemicals are stored in their original container on shelves at the house porch.

## **Section 9. Processing Plan & Employee Safety Protocols**

### **Processing**

The Applicant is currently utilizing off site processing. Drying for harvest currently is happening in the harvest drying container.

To prevent mildew growth on cannabis, the Applicant uses dehumidifiers and fans along with spraying Regalia during cultivation. Employees handling cannabis will have access to facemasks and gloves to do their job function. Employees will wash their hands sufficiently or use gloves during processing. Fresh drinking water is provided through a water delivery service. An emergency contact list and safety training will be provided for all employees.

The applicant will use a dehumidifier and (8) eight oscillating fans to keep humidity and temperature optimal to reduce chances of mold and retain high quality. During hot periods, an air conditioning unit may be used in addition to fans and dehumidifiers. The material is hung using 6" trellis net.

### **Bathroom**

The Applicant currently has one portable toilet located near the cultivation site that is serviced one time per month.

### **Safety Protocols**

Nature's Jar, Inc wants to keep all employees working in the safest possible environment. To achieve this goal, employees must do their part by following these safety rules.

1. All persons shall follow these practices and render every possible aid to safe operations.
2. Horseplay, scuffling, fighting and other acts which tend to have an adverse influence on the safety or well-being of the employees are prohibited.
3. Work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
4. During trimming, keep hands out of the line of the trimming scissors.
5. Keep your work area clean, free of debris, electrical cords and other hazards.
6. Immediately clean up spilled liquids.
7. Always notify all other individuals in your area who might be endangered by the work you are doing.
8. Do not operate equipment that you are not familiar with. Do not attempt to use such equipment until you are fully trained and authorized.
9. Do not block exits, fire doors, aisles, fire extinguishers, first aid kits, emergency equipment, electrical panels, or traffic lanes.



10. Do not leave tools, materials, or other objects on the floor that might cause others to trip and fall.
11. Do not stretch any cords across aisles that may present a tripping hazard.
12. Always follow safe lifting procedures when lifting any object and get help for heavy loads.
  - Bend your knees, not your back.
  - Keep the load close to the body.
  - Keep your back straight.
  - Lift with your legs. Do not lift and twist.

## **EMERGENCY PROCEDURES**

### **In Case of a Fire**

- Call 911 or the nearest fire department. The responsibility for fighting fires is with professional fire fighters.
- Confine the fire by closing doors
- Do not break windows.
- Alert anyone in danger. Check all work areas to ensure that everyone has been alerted.
- Activate alarm, if there is one.
- Evacuate the building via the nearest safe exit.
- Meet at the pre-designated location after evacuating the building.
- Account for all coworkers.
- Be alert for approaching emergency vehicles. If you think they may not be able to find the farm, post someone on the road.
- Use a fire extinguisher only if you have been trained in safe use.
- Fire extinguishers are properly located for easy access in all greenhouses, the main house and storage sheds.

### **In Case of Earthquake**

- DUCK & COVER – under a heavy table, desk or in a doorway, away from glass.
- Crouch and protect your head.
- Stay away from windows and doors.
- Stay outdoors if you are outdoors.
- *After an earthquake:*
- Weigh the risks before you do anything.
- Be prepared for aftershocks.
- Minor quakes - Stay where you are.
- Major quakes. – Exit calmly. Meet at the designated location. If evacuation is not possible, stay where you are until help arrives.
- Do not use the telephone, except in an emergency.

## **Section 10. Security Plan**

### **Security**

Currently all sheds and structures are pad lockable. Entrance to the property is through a locked gate and the property is fenced; there are multiple people on site and or a large dog at any given time.