2121, LLC
APNs: 308-131-012 and 308-131-020
Cultivation and Operations Manual
Humboldt County, CA

Commercial Cannabis
Cultivation Facilities

Prepared For:

January 2025

Commercial Cannabis Cultivation Facilities
APN: 308-131-012 and 308-131-020

Lead Agency:

Humboldt County Planning Department
3015 H Street
Eureka, CA 95501

Prepared By:

1117 Samoa Blvd.
Arcata, CA 95521
(707) 798-6438

In Consultation with:

2121, LLC
P.O. Box 120
Garberville, CA 95542

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1. PROJECT SUMMARY

1.1. Project Objective

2121, LLC seeks approval for a Conditional Use Permit (CUP) and Coastal Development Permit for a new owner and operator. The proposed project involves 28,656 square feet of existing mixed-light cultivation within an existing greenhouse, and an additional 9,800 square feet of outdoor cultivation within existing hoop houses. The parcel had an existing approved cannabis cultivation operation (PLN-11065-CUP) for the conversion of a commercial flower farm to a commercial cannabis cultivation operation. 2121, LLC's proposal does not include an increase in cultivation size, water use, electrical use, or numbers of required employees. The project is proposed to operate in the existing footprint permit of the previously approved PLN-11065-CUP.

1.2. Site Description

The project is located at 2121 Table Bluff Road, Loleta, CA, on Assessor Parcel Numbers (APNs) 308-131-012 and 308-131-020. The site encompasses a total of 6.53 acres, with an adjoining parcel of 21.59 acres. The terrain is relatively level with a 0-5% slope. The land has been historically used for agricultural purposes, including dairying and pasturage. The site is zoned Agricultural Exclusive with minimum 160-acre parcel sizes and lies within the Coastal Wetlands Special Combining Zones.

1.3. Land Use

The project area is zoned as Agricultural Exclusive (AE-160) and falls under the jurisdiction of the Eel River Area Plan (ERAP). The primary land use surrounding the parcel is agricultural production. Soils on-site are classified as Rohnerville silty loam, and the parcel has been used historically for farming.

1.4. State and Local Compliance

1.4.1. Department of Cannabis Control – CalCannabis

2121, LLC will obtain the necessary licensing for commercial cannabis activities from the California Department of Cannabis Control. The proposed cultivation complies with state regulations.

1.4.2. State Water Resources Control Board – Water Rights

Water for cultivation and domestic use is sourced from a permitted on-site well and recaptured water from the project's dehumidifiers. The project's irrigation method is primarily hand-watering, with projected annual water usage of 266,300 gallons.

No diversionary water source is proposed for this project.

1.4.3. State Water Resources Control Board and North Coast Regional Water Quality Control Board – Water Quality

The project is enrolled in the North Coast Regional Water Quality Control Board's Cannabis Waste Discharge Program as a Tier 2 discharger. The property's stormwater management plan follows best practices to prevent runoff and erosion.

The applicant is enrolled for coverage as a Tier 2, Low Risk (WDID: 1_12CC406605) under the SWRCB General Order WQ 2019-0001-DWQ *General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Dischargers of Waste Associated with Cannabis Cultivation Activities* Order. The purpose of the SWRCB Order is to implement the requirements for waste discharges associated with cannabis cultivation as described in SWRCB's *Cannabis Cultivation Policy – Principles*

and Guidelines for Cannabis Cultivation ("Policy"). Prior to the commencement of cultivation operations, a Site Management Plan will be developed for the property to describe how the discharger is complying with the applicable Best Practicable Treatment or Control (BPTC) Measures listed in Attachment A of the Order/Policy.

The Tier 2, Low Risk discharger status reflects current operations that disturb greater than one acre. The applicant's proposal will keep all cultivation activities out of riparian setbacks to maintain Low Risk status with SWRCB.

1.4.4. Humboldt County Building Department

Upon approval, all necessary building permits will be obtained from the Humboldt County Building Department. Any modifications or expansions will comply with county codes.

1.4.5. Cal Fire

The subject property is located within a State Responsibility Area (SRA) for fire protection. All structures on the property meet the 30-foot SRA setback requirement from property lines. The project proposes a designated fire turn-around and pull-out area for emergency vehicles and one (1) 2,500-gallon water tank dedicated to SRA emergency response. If needed, risers to SRA specifications will be installed for firefighting purposes.

1.4.6. California Department of Fish and Wildlife

A Lake and Streambed Alteration Agreement (LSAA) was notified to the Department of Fish and Wildlife for no jurisdiction items. There are no stream crossings or points of diversion on the parcel. The applicant received a letter dated 11/5/2024 from the Department of Fish and Wildlife stating that a "Notification was not required because your project is not subject to the notification requirement in Fish and Game Code section 1602".

1.4.7. Cultural Resources

If buried archaeological or historical resources are encountered during construction or cultivation activities, the applicant or contractor shall call all work in the immediate area to halt temporarily, and a qualified archaeologist is to be contacted to evaluate the materials. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, dietary bone, and human burials. If human burial is found during construction, state law requires that the County Coroner be contacted immediately. If the remains are found to be those of a Native American, the California Native American Heritage Commission will then be contacted by the coroner to determine appropriate treatment of the remains. The applicant is ultimately responsible for ensuring compliance with this condition.

2. CULTIVATION AND PROCESSING

2.1. Propagation and Initial Transplant

2121, LLC plans to propagate juvenile plants on-site from seeds and mother plants. These will be placed in a designated nursery areas within the 36.5'x97'greenhouse. After an initial propagation phase, cuttings will be transplanted to the final growing beds where they will mature. The initial transplant will occur after plants have developed sufficient root systems, ensuring a successful transfer to full sunlight or mixed-light environments.

For the artificial lighting used to assist with the enhancement of plant growth, the lights will be set on timers that activate ½ hour before sunset daily. Prior to sunset each day, blackout tarps are automatically or manually pulled over the mixed light greenhouses and nursery to prevent all light from escaping. The blackout tarps are constructed out of 2 ply-10-millimeter plastic with internal threading for shear strength.

2.2. Outdoor cultivation Plan

The project involves 28,656 square feet of mixed-light cultivation within existing greenhouses and 9,800 square feet of outdoor cultivation within hoop houses for a total of 38,456 sq. ft. The cultivation cycle is projected to run two to three cycles annually for the hoop houses and mixed light cultivation greenhouses. Greenhouses will utilize blackout tarps and light shielding to comply with local light pollution regulations. The monthly Cultivation Schedule in Appendix C details the cultivation activities associated.

2.3. Irrigation Plan and Schedule

Water is sourced from a permitted on-site well and supplemented during peak demands with the recapture of water the dehumidifiers in the greenhouses. The projected water use is 266,300 gallons annually, with hand-watering as the primary method and drip irrigation used where needed. This method ensures efficient water use and minimizes runoff. The project will store up to 20,000 gallons of water in storage tanks. 20,000 gallons of water storage represent approximately 8 days of storage during peak demand.

2.4. Processing (Harvesting, Drying and Trimming)

Once the plants reach maturity, they will be harvested, dried, and cured on-site in the existing storage shed or greenhouses. Trimming and further processing will occur at a third-party licensed facility. This ensures compliance with local and state processing standards.

2.5. Employee Plan

The applicant is an "agricultural employer" as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 of Division 2 of the Labor Code), and complies with all applicable federal, state and local laws and regulations governing California Agricultural Employers.

2.5.1. Job Descriptions And Employee Summary

- *Agent in Charge*: Responsible for business oversight and management. Responsibilities include, but are not limited to: inventory and tracking, personnel management, record keeping, budget, and liaison with State and County inspectors as needed. This is a part-time to full-time, seasonal position.
- *Lead Cultivator*: Oversight and management of the day to day cultivation of commercial cannabis. Responsibilities include but are not limited to: plant propagation and transplant, soil management, irrigation, fertilization, pesticide management, and harvest activities. This is a full-time, year-round position.

2.5.2. Staffing Requirements

Staffing will fluctuate based on the needs of the operation, with a peak of up to eight (8) employees during the busiest periods.

In addition to the *Agent in Charge*, *Lead Cultivator,* up to two (2) additional full-time workers and four (four) part-time seasonal labor positions. The number of seasonal laborers varies based on the needs of the farm during the cultivation and harvest. During peak operational periods, the operation may require up to eight (8) employees.

2.5.3. Employee Training and Safety

On-site cultivation, harvesting and drying will be performed by employees trained on each aspect of the procedure including cultivation/harvesting techniques, use of pruning tools, and proper application/storage of pesticides and fertilizers. All cultivation staff will be provided with proper hand, eye, body and respiratory Personal Protective Equipment (PPE). Access to the on-site cultivation and drying facilities will be limited to authorized and trained staff. All employees will be trained in proper safety procedures including fire safety, use of PPE, proper hand washing guidelines, and emergency protocol. Contact information for the local fire department, Cal Fire, Humboldt County Sheriff and Poison Control as well as the Agent in Charge will be posted at the employee restroom. Each employee is provided with a written copy of emergency procedures and contact information. The material safety data sheets are kept on site and accessible to employees.

2.5.4. Toilet and Handwashing Facilities

A temporary portable toilet and handwashing station will be used on site for the seasonal laborers. Cultivation employees will have access to anti-bacterial Liquid Soap and paper hand towels. Work will occur at a distance no greater than 600 feet from the restroom facility.

2.5.5. On Site Housing

There is a residential structure on the project site. The residence is not proposed as part of cultivation operations and will not be associated with the proposed project.

2.5.6. Parking Plan

Parking is proposed to be located near the greenhouse and shop building. Four (4) parking spaces are located near the drying and curing area. (Appendix A).

2.6. Security Plan and Hours of Operation

2.6.1. Facility Security

The cultivation facility is always secured by a locked gate. Access is restricted to authorized personnel only. All structures have lockable doors, and security measures include limited access to the cannabis processing and storage areas. Access to the area is limited to employees and approved personnel including agency staff, consultants, and distributors.

2.6.2. Hours of Operation

Activities associated with cultivation in the greenhouses (watering, transplanting, and harvesting) generally occur during daylight hours. All other activities such as harvesting and drying typically occur no earlier than 8 AM and extend no later than 8 PM.

3. ENVIRONMENT

3.1. Water Source, Storage, and Projected Use

Water is sourced from an on-site well, capable of producing 30 gallons per minute and will be supplemented by the recaptured water from the project's dehumidifier water. Multiple well pump test have been performed and a Groundwater Well Evaluation report has been completed. The report concluded and provided an assessment to demonstrate that utilizing the existing well for the subject project will not impact surrounding wells. Recaptured water will provide approximately 15% (180 gal/day) to 25% (320 gal/day) of the estimated water needs during peak demands of 2,400 gallons per day, every other day. Projected water usage is 266,300 gallons annually. The irrigation method is a combination of drip irrigation with individualized hand-watering, which allows consistent monitoring and minimizes water waste.

Domestic water for the existing home is sourced from the permitted well.

The table below outlines the estimated irrigation water usage for cultivation during a typical year. Variables such as weather conditions and specific cannabis strains will have a slight effect on water use.

The annual water demand is estimated to be approximately 266,300 gallons (6.92 gallons/sq. ft.). Table 1 outlines the estimated irrigation water usage for cultivation during a typical year. Variables such as weather conditions and specific cannabis strains will have a slight effect on water use.

Table 1: Estimated Annual Irrigation Water Usage (gallons)

Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
7,500	7,500	10,000	15,000	30,000	36,000	38,400	38,400	36,000	25,000	15,000	7,500	**266,300**

3.1.1. Dehumidification and Recapture

Dehumidification is critical for this project to mitigate the risk of mold and mildew while creating an optimal greenhouse environment for plant growth. A total of 32 dehumidifiers will be installed throughout the greenhouse areas. Adjusted to Loleta's average conditions (65°F and 78% relative humidity), each dehumidifier can capture up to 15 gallons of water per day under ideal performance. Using a conservative efficiency estimate of 37%, each unit is projected to remove at least 5.6 gallons daily, totaling approximately 180 gallons per day across all dehumidifiers. At a higher efficiency of 66%, the dehumidifiers would recapture 10 gallons per unit per day, resulting in a total of approximately 320 gallons per day.

3.1.2. Site Drainage, Runoff, and Erosion Control

The applicant has enrolled with the State Water Resources Control Board (SWRCB) for coverage under the General Order. A Site Management Plan (SMP) for existing site conditions has been developed.

3.1.3. Stormwater Management Plan

The cultivation activities will take place in the existing structures in an agricultural field on slopes less than 5%. Stormwater management for the remainder of the property is addressed in the SMP, which will also include recommendations for road network maintenance. Existing and proposed structures are located over 50-ft from any watercourses, providing a sufficient buffer to prevent potential sediment or nutrient delivery.

3.1.4. Erosion Control

The SMP will include erosion and sediment control best practicable treatment controls (BPTCs) designed to prevent, contain, and reduce sources of sediment. Additionally, the SMP will include site-specific corrective actions to ensure property maintenance and erosion control.

3.2. Watershed and Habitat Protection

A Biological Assessment was not completed due to the lack of ground disturbance associated with the project. PLN-11065 Conditional Use Permit found that the same project was consistent where the General Plan (Eel River Area Plan), Open Space Plan and Open Space Action Program. Evidence which supports making the General Plan Conformance Finding and stated:

"The project site exhibits upland characteristics as shown by the 2017 National Wetland Inventory (NWI) mapping. A review of the Eel River Area Plan Resources map and County GIS shows that an adjacent parcel to the west the project parcel contains seasonally flooded palustrine wetland. This is approximately 800 feet away from the project activities. There are no sensitive or critical habitats on the project parcel.

According to the California Natural Diversity Database (CNDDB) Resource Map maintained by the California Department of Fish and Wildlife (CDFW), there are two (2) listed special-status or threatened species in the vicinity of the subject parcel. Habitat for Northern Spotted Owl exists in the project vicinity (approximately 3.45 miles away) but as no generators (except as an emergency back-up) are proposed the noise impacts on NSO from the project will be well below the thresholds that could cause disturbance of the species."

The project will require all light from the nursery or mixed light greenhouses shall be attenuated so that it does not create a new source of light or glare that could adversely impact local wildlife. Proposed activities would not increase ambient noise by greater than 3 decibels. Additionally, adherence to the Site Management Plan will ensure that erosion control and sediment capture BPTC measures are in place to prohibit water quality degradation of the nearby river.

3.3. Invasive Vegetative Species Control Plan

Once proposed cultivation activities commence, the cultivation area will be monitored for invasive species. If invasive species are located, hand tools (shovels, weed wrenches, trowels, or hand saws) may be used to remove them. The exact rate and method of invasive species removal will be determined based on the species identified. The areas of disturbance shall be surveyed and maintained twice each year, at a minimum, as part of the invasive species control plan.

The following is a partial list of websites to be used for proper identification and treatment:

1. https://calflora.org//
2. https://plants.usda.gov/java/
3. https://www.cal-ipc.org/
4. https://www.cal-ipc.org/solutions/
5. http://www.rareplants.cnps.org/
6. https://www.wildlife.ca.gov/Conservation/Plants#22064102-california-native-plant-information
7. http://ucjeps.berkeley.edu/
8. http://wetland-plants.usace.army.mil/nwpl_static/v33/home/home.html
9. https://www.fws.gov/invasives/partnerships.html

3.4. Materials Management Plan

Cultivation, harvesting, and drying shall be performed by employees trained on each aspect of the procedure, including cultivation and harvesting techniques, the use of pruning tools, and proper application/storage of pesticides/ and fertilizers. All cultivation and processing staff are provided with proper hand, eye, body and respiratory Personal Protective Equipment (PPE). Access to the onsite cultivation, drying and processing facilities are limited to authorized and trained staff. The mixing of fertilizers in small storage tanks is solely conducted in a designated area (to be determined) where the mix will not enter surface waters. For young plants, the mix is applied via watering wand and mature plants are fertigated at agronomic rates by drip emitters or hand watering methods. Spent soil is amended and reused as needed. The application of any agricultural chemical products will be conducted according to the manufacturer's recommendation.

Employees are trained on usage and handling procedures of associated equipment and cleaning procedures. Chemicals and hazardous materials are only used with equipment as recommended by manufacturers. Cleaning will occur regularly with instructions based on the manufacturer's recommendations. All cleaning materials will be put away and stored properly within secondary containment when not in use and hazardous containers will be properly disposed of. Additionally, if there are any spills on site, there will be a spill kit with sorbent pads that will be accessible.

On-site inventory is kept for all chemicals. Chemicals are used and stored based on manufacturer's recommendations and requirements. Any materials required for use of chemicals will be provided to employees. The material safety data sheets (MSDS) are kept on site and accessible to employees.

All hazardous waste will be stored within secondary containment. Additionally, a log will be kept in order to keep the volume of hazardous waste accounted for. Fertilizers and pesticides are being stored in a separate location from petroleum products. The aforementioned products will be located within secondary containment in a storage shed. No rodenticides will be used on site. At the end of the season, any unused liquid products are stored in secondary containment and will be applied the following year. Before unused products are stored at the end of the season, an employee will take inventory on the volumes and products. Additionally, all waste will be properly disposed of off-site and the correct facility. All trash, empty product containers, and recycling are hauled off-site bi-weekly to nearest licensed waste management facility.

Appropriate BPTC measures are being utilized when storing, handling, mixing, applying, and disposing of all fertilizers, pesticides, herbicides, rodenticides, or any other hazardous materials. Each year an inventory is conducted prior to the beginning of the grow season and necessary products are delivered to the site as needed.

3.5. Soils Management Plan

The applicant is proposing to plant all cultivation in raised beds that allow the plant to reach the native soil within the greenhouse structures. The applicants will account for and keep records of annual and seasonal volumes of soil imported and exported on and off site. Any purchased soils will be reamended for use the following year. During the wet season, any soil piles will be located in a flat area outside of riparian setbacks and winterized, likely with a tarp underneath the pile and straw wattles located around the pile to prevent leachate from entering surface waters. Potential spent soils will be properly disposed of off-site at an appropriate facility.

3.6. Hazardous Waste Statement

There are no hazardous materials mapped onsite. The site has been historically utilized for residential property and agricultural uses. A search of the EnviroSTOR database shows no GeoTracker Cleanup Programs on-site.

3.7. Energy Plan

The cultivation facility is powered by Pacific Gas & Electric (PG&E), and a backup generator is available for emergency use. All generators used will comply with noise and air quality standards.

3.8. Waste Management

3.8.1. Cultivation

Organic cultivation-related waste, including root balls, branches, and leaves will be hauled off site to a green waste management facility as needed. Trash and recycling from cannabis operations, including empty soil or fertilizer bags, liquid fertilizer bottles, cultivation supplies, etc., will be taken to the nearest waste management facility as needed.

3.8.2. Sewage Disposal Plan

An existing septic system serves the residence and the processing building. The existing residence not proposed to be use as part of the commercial cannabis activities. Cultivation employees will have access to anti-bacterial Liquid Soap and paper hand towels. Work will occur at a distance no greater than 1,200 feet from the restroom facility.

4. PRODUCT MANAGEMENT

4.1. Product Testing and Labeling

Samples will be selected from individual harvested cannabis strains and tested by a licensed third-party lab in accordance with State and local standards. The finished product is labeled and will include tracking ID's provided by the California Cannabis Track-and-Trace (CCTT) METRC system.

4.2. Product Inventory and Tracking

The applicants will follow all regulations and requirements set by the CCTT-METRC system. After approval of state licenses related to the proposed cultivation, the applicants will request credentials and order unique identifiers (UIDs) which will be assigned to each immature lot, flowering plant, and distinct cannabis product.

4.3. Transportation and Distribution

Transportation will be handled by a licensed transporter/distributor in accordance with State and Local regulations. All merchantable products will be distributed through licensed commercial cannabis dispensaries. The CCTT-METRC system will be used for all transactions with distributors or transporters.

APPENDIX B: CULTIVATION ACTIVITIES SCHEDULE

Item	Description	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Drainage, Runoff, and Erosion Control	Winterization (storage of pots/greenhouse covers)												
	Temporary Erosion Control BMP's (straw, seeding, fiber rolls, etc)												
	Road maintenance												
	Culvert and inboard ditch maintenance/inspection		X										
	Cultivation waste hauled off site												
	Cover soil beds and seed/straw with cover crop												
Irrigation Activities	Irrigation of juvenile plants /clones												
	Irrigation of flowering plants												
Pre-cultivation Activities	Transplant cuttings into pots												
	Transplant clones into beds												
	Amend soil in greenhouses												
	Import new cultivation soil												
Outdoor Cultivation and Harvest Schedule	Outdoor Cultivation Cycle												
	Harvest activities												
Drying and Processing	Drying activities												
	Trimming activities (Will take place offsite)												
Staffing Presence	Agent in Charge												
	Lead Cultivator												
	Seasonal Laborors												

APPENDIX C: REFERENCES

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