



ALOHA TOP SHELF, LLC
CULTIVATION AND OPERATIONS MANUAL
HUMBOLDT COUNTY, CA

COMMERCIAL CANNABIS
CULTIVATION FACILITIES

PREPARED FOR:



Revised August 2021

**Cultivation and Operations Manual
For
Aloha Top Shelf, LLC**

Proposed Medical Cannabis Cultivation Facilities

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OPERATIONS MANUAL

ALOHA TOP SHELF, LLC

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1. PROJECT SUMMARY

1.1. PROJECT OBJECTIVE

Aloha Top Shelf, LLC is proposing to permit existing cannabis cultivation activities in accordance with the County of Humboldt's (County) *Commercial Medical Marijuana Land Use Ordinance* (CMMLUO). The project requires a Conditional Use Permit for approximately 34,500 square feet (sf) of outdoor cannabis cultivation. The project includes the permitting of existing and proposed facilities appurtenant to the cultivation including, greenhouses, an ancillary nursery, and a proposed cultivation facility for drying and curing. Trimming would occur off-site; water is proposed to be sourced from a permitted groundwater well and a second proposed groundwater well. The applicant aims to become fully compliant with State and Local cultivation regulations.

1.2. SITE DESCRIPTION

The Project is located at parcel number APN 522-026-007 just northwest of the community of Willow Creek at latitude of 40.9792 and longitude of -123.7583. The subject parcel is approximately 212 acres in size (per the County of Humboldt's WebGIS). The parcel is on a ridge at an elevation at 3,900 feet and drains to the east. The site has a rugged landscape that host dense hardwood forest intermixed with oak and other species. Development has taken place in the north-west corner of the parcel and the southwest.

1.3. LAND USE

The subject property has a General Plan designation of Timber as identified by the Humboldt County General Plan and is zoned Timber Production Zone (TPZ). The surrounding parcels are zoned Agricultural Exclusive (AE), and Timber Production Zone (TPZ).

1.4. STATE AND LOCAL COMPLIANCE

1.4.1. STATE OF CALIFORNIA COMMERCIAL CANNABIS ACTIVITY LICENSE

The applicant holds commercial cannabis activity licenses from the Department of Cannabis Control.

1.4.2. STATE WATER RESOURCES CONTROL BOARD

The water source for the project will be supplied by a permitted groundwater well (permit # 11/12-0972) through the Humboldt County Division of Environmental Health and a proposed groundwater well, if deemed hydrologically disconnected from surface waters. No diversion of surface waters is proposed, and accordingly the filing of water rights with the State of California Water Resources Control Board is not required for the project.

1.4.3. NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

The former property owner was previously enrolled with the North Coast Regional Water Quality Control Board (NCRWQCB) for coverage under Tier 2 of Order No. 2015-0023 *Waiver of Waste Discharge Requirements and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects in the North Coast Region* (WDID Number 180102111205TRC105). A Water Resources Protection Plan was developed for the project by Timberland Resources Consultants, a third party approved program for NCRWQB, and has been implemented for activities associated with onsite cultivation.

Aloha Top Shelf, LLC transitioned to coverage under the State Water Resources Control Board General Order WQ 2019-0001-DWQ General Waste Discharge Requirements and Waiver of Discharge Requirements for Dischargers of Waste Associated with Cannabis Cultivation Activities. The transition

occurred prior to July 1, 2019. Additionally, a Site Management Plan was developed by NorthPoint Consulting and has been furnished to the North Coast Regional Water Quality Control Board (WDID 1_12CC418792).

1.4.4. HUMBOLDT COUNTY BUILDING DEPARTMENT

All necessary building permits will be obtained from the Humboldt County Building Department for all existing and proposed structures and supporting infrastructure upon approval of the Conditional Use Permit.

1.4.5. CAL FIRE

A 3-acre conversion was completed in 2013 with exemption number 1-13EX-066-HUM. The subject property is located within a State Responsibility Area (SRA) for fire protection. Several improvements are proposed in order to meet SRA requirements, including designating a fire turn-around and pull-out area for emergency vehicles, and management of trees and vegetation around existing structures to maintain the required 100-foot defensible space. All structures on the property meet the 30-foot SRA setback requirement from property lines. If required by Cal Fire, a 2,500-gallon water tank with a riser to SRA specifications will be installed in addition to the hydrant.

1.4.6. CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The applicant has submitted a non-jurisdictional items notification to California Department of Fish and Wildlife (CDFW). If required, the applicant will submit the proposed groundwater well to CDFW for review. If CDFW deems the well as jurisdictional, the applicant proposed to build out storage to meet forbearance restrictions.

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. NURSERY PROPAGATION AND INITIAL TRANSPLANT

The proposed 3,450 sf ancillary nursery will allow Aloha Top Shelf, LLC to propagate clones from mother plants or purchase already rooted clones or seeds from a permitted nursery location. Initial planting of clones will occur in 3 1/2" square pots to 1-gallon containers. Seeds are started in 4" pots and transplanted into 3-gallon containers. Plants are kept in the proposed nursery greenhouse. The juvenile plants are irrigated using hand watering methods. After 3-5 weeks, the plants are then transplanted to the raised garden beds in the greenhouses or the outdoor smart pots.

2.2. OUTDOOR CULTIVATION PLAN AND SCHEDULE

Light-deprived cultivation will occur in eighteen (18) greenhouses totaling 34,500 sf. The greenhouse will consist of metal tubing covered with a woven poly translucent opaque tarp. Light deprivation will

be used to produce up to two (2) flowering harvests per year; one in early July, and another in October. The monthly Cultivation Schedule in Appendix C details the cultivation activities associated with the outdoor operation for a typical two cycle year.

2.3. IRRIGATION PLAN AND SCHEDULE

Irrigation and fertigation of plants occurs using a combination of top-feed hand watering methods and drip emitters. Juvenile plants will be hand watered as needed. Aloha Top Shelf, LLC maintains that irrigation and fertigation is more efficiently managed via hand watering, allowing for daily inspection of each plant by the cultivator and tailored irrigation and nutrient application depending on the needs of each individual juvenile plant. Once plants are transplanted into the raised beds or smart parts a pumped watering system is used. Tubing is running the length of the beds with drip emitters placed at the base of the plant. Each emitter delivers the right amount of water directly to the base of the plants. The monthly Cultivation Schedule in Appendix C details the irrigation activities associated with all cultivation.

2.4. HARVESTING, DRYING, AND TRIMMING

Plants that are ready for harvest have their flowering branches removed and suspended in the proposed drying building which are equipped with ventilation fans. Plants are dried using dehumidifiers, and the drying process takes approximately one week, at which time the flowers are bucked into manageable buds and placed in storage bins. The storage bins allow safe transportation to an off-site processing facility. Trimming will be done off-site at a licensed processing facility.

2.5. EMPLOYEE PLAN

Aloha Top Shelf, LLC is an “agricultural employer” as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 (commencing with Section 1140) 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 medical cannabis. Responsibilities include, but are not limited to: plant propagation and transplant, soil management, irrigation, fertilization, pesticide management, and harvest activities. This is a part-time to full-time, seasonal position.
- *Assistant Cultivator*: Provides support to the *Lead Cultivator* in their day to day duties and takes the lead role during times when the *Lead Cultivator* may be off site.
- *Seasonal Laborer*: Provides cultivation, harvesting, and processing support including trim machine operation and hand-finish trimming. This is a part-time to full-time, seasonal position.

2.5.2. STAFFING REQUIREMENTS

In addition to the *Agent in Charge*, *Lead Cultivator*, and *Assistant Cultivator* positions, up to three (3) part-time seasonal labor positions are employed. The number of seasonal laborers varies based on the needs of the farm during the cultivation, harvest and processing seasons. During the peak harvest and processing season, there are an estimated total of six (6) employees on site.

2.5.3. EMPLOYEE TRAINING AND SAFETY

On site cultivation, harvesting, and drying or freezing, is performed by employees trained on each aspect of the procedure including: cultivation and harvesting techniques and use of pruning tools; proper application and storage of pesticides and fertilizers; and correct harvesting methods. 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.

All employees are trained on proper safety procedure including fire safety; use of rubber gloves and respirators; proper hand washing guidelines; and protocol in the event of an emergency. 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 (MSDS) are kept on site and accessible to employees.

2.5.4. TOILET AND HANDWASHING FACILITIES

Portable toilets will be brought on-sites. A handwashing station will be available for employees near the Drying/Storage structure.

2.6. SECURITY PLAN AND HOURS OF OPERATION

2.6.1. FACILITY SECURITY

The main access road has two gates that are locked at all times. Restricted access signs are posted conspicuously at the entry gates along with security cameras.

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 processing typically occur no earlier than 8am and extend no later than 8pm.

3. ENVIRONMENT

3.1. WATER SOURCE AND PROJECTED WATER USE

The water source for the project will be supplied by a permitted groundwater well and a proposed groundwater well, if deemed hydrologically disconnected from surface waters. No diversion of surface waters is proposed. Water for the proposed cannabis activities is projected to be approximately 525,000 gallons annually. 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.

Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
0	0	0	50,000	70,000	95,000	95,000	95,000	70,000	50,000	0	0	525,000

3.2. WATER STORAGE

The applicant currently has an existing groundwater well that will be supplemented by an additional proposed groundwater well. The applicant will properly secure all required well permits for the proposed well and the Well Completion Report will be submitted to the Planning Department once it is completed. If the well is deemed hydrologically connected, the applicant will obtain the proper

permits and adhere to forbearance restrictions. Additionally, if the proposed well is deemed hydrologically connected, the applicant proposes to install additional water storage tanks.

3.3. SITE DRAINAGE, RUNOFF, AND EROSION CONTROL

Aloha Top Shelf, LLC has enrolled for coverage under the General Order (Order No. 2019-0001-DWQ) and a Site Management Plan (SMP) has been developed utilizing best management practices (BMP's) in accordance with Attachment A of the Order. The drainage and erosion control measures described below are referenced from the SMP.

3.3.1. SITE DRAINAGE AND RUNOFF

Site investigation for the development of the Site Management Plan (SMP) was done by NorthPoint Consulting. Drainage and runoff was addressed in the SMP by identifying areas of the roads that are in need of drainage improvements, including rolling dips, ditch relief culverts, and resurfacing of the road. These corrective actions are to reduce sediment delivery to prevent road drainage from entering the water system on the property.

3.3.2. EROSION CONTROL

The Site Management Plan (SMP) includes erosion and sediment control BMP's designed to prevent, contain, and reduce sources of sediment. The SMP also includes corrective actions to reduce sediment delivery. Additionally, the SMP requires mulch piles and spoils from any grading to be stored in a designated location away from watercourse.

3.4. WATERSHED AND HABITAT PROTECTION

Adherence to the SMP ensures that the watershed and surrounding habitat are protected. The cultivation activities and associated structures are over 60 feet from the nearest surface waters, an ephemeral Class III drainage which lies upslope of the cultivation area. This setback distance in conjunction with a subgrade location provides a suitable buffer between the cultivation operation and potential habitat. Additionally, site development and maintenance activities utilize BPTC measures in accordance with the State Water Resources Control Board's recommendations. Any grading and earthwork activities will be conducted by a licensed contractor in accordance with approved grading permits and the SMP. Add in something about how to minimize noise from generators.

3.5. MONITORING AND REPORTING

Monitoring will be conducted to confirm the effectiveness of corrective measures listed in the SMP and determine if the site meets all of the BPTC Measures as per Attachment A of the Order. The Site Management Plan provides more details regarding Monitoring and Reporting. New Earth Farms, LLC. staff track all water use and maintain accurate records of fertilizer applications. This information will be reported annually to the State Water Resources Control Board by March 1st of each year.

3.6. ENERGY AND GENERATOR USE

Aloha Top Shelf, LLC will limit the use of the generator to an as needed basis following all guidelines set up by Humboldt County and the State of California. The applicant currently has a 3,500-Watt Super Quiet Invertor but intends to transition to solar. The generator will remain on site as backup. Generators will be stored inside the cultivation facility and kept off the ground with the 5-gallon gasoline containers. Secondary containment for spill prevention will be implemented.

3.7. USE AND STORAGE OF REGULATED PRODUCTS

3.7.1. BEST MANAGEMENT PRACTICES

Best Management Practices (BMP's) are employed when storing, handling, mixing, application and disposal of all fertilizers, pesticides and fungicides. All nutrients, pesticides and fungicides are located in a storage room in the proposed facility, and contained within water tight, locked and labeled containers in accordance with manufactures instruction. Application rates will be tracked and reported with the end of the year monitoring report required in the Water Resources Protection Plan (WRPP). Employees responsible for application are trained to handle, mix, apply or dispose of pesticides/fungicides with proper hand, eye body and respiratory protection in accordance with the manufacturer's recommendations. See the WRPP for complete BMP specifications for the use and storage of regulated products. Compost tea is brewed on site out of a variety of ingredients depending on plant strain, size, and stage of growth.

3.7.2. FERTILIZERS

Nutrients and biological inoculants used for cultivation and quantity kept on site:

- Green Bicycles Amendments
- Green Bicycles Tea Mix

See Appendix B - *Regulated Products Resource List* for product details.

3.7.3. PESTICIDES AND FUNGICIDES

Pesticides and fungicides used for cultivation include:

- Bonide
- Bio War
- Tripecta

See Appendix B - *Regulated Products Resource List* for product details.

3.7.4. FUELS AND OILS

Fuels and oils stored on site include:

- Gasoline -Five to Ten: five (5) gallon canisters

3.8. WASTE MANAGEMENT PLAN

3.8.1. SOLID WASTE MANAGEMENT

Trash and recycling containers will be located at the proposed drying structure. The containers are situated to prevent storm water contamination and leachate from entering or percolating to receiving waters. With the proposed processing facility, the containers will be enclosed within a fenced area to prevent animal intrusion. Solid waste and recycling is hauled off-site to the proper disposal facility.

3.8.2. CULTIVATION WASTE AND SOIL MANAGEMENT

Cultivated vegetative matter such as root balls, branches and leaves are composted at a designated area. Spent potting soil is stored in a designated contained and covered area that is lined to prevent any soil erosion or nutrient seepage. Soils are analyzed using industry standard soil testing procedures and after consultation are amended and reused. Any used pots will be collected and stored in a designated storage area for the winter. All packaging from soil amendments and fertilizers will be collected and disposed at an appropriate waste disposal facility.

4. PRODUCT MANAGEMENT

4.1. PRODUCT TESTING AND LABELING

Once operational, samples will be selected from individual harvested cannabis strains and will be tested by a licensed third-party lab in accordance with State and local standards.

4.2. PRODUCT INVENTORY AND TRACKING

Aloha Top Shelf, LLC will enroll in the California Cannabis Track & Trace (CCTT) METRC program and comply with all METRC regulations after a state cultivation license is granted from the California Department of Food and Agriculture

4.3. TRANSPORTATION AND DISTRIBUTION

Transportation will be handled by a third-party, contracted, licensed transporter/distributor in accordance with State and Local regulations. All merchantable product will be distributed through licensed medical cannabis dispensaries. Prior to moving packages from the on-site holding facility to another physical location, a transport manifest will be created by the distributor/transporter and will include:

- Product ID numbers and product weight
- Route to be travelled
- Origin and destination addresses
- Time of departure
- Time of arrival

The Agent in Charge and the Processing Manager are responsible for performing a physical inventory of all packages being transported and ensuring that the physical inventory coincides with the transport manifest. Journey Aquarian is enrolled in the California Cannabis Track & Trace (CCTT) METRC program and complies with all METRC regulations.

Appendix A: Site Plan

APN: 522-026-007



Appendix B: References

Bass, Ronald E., Kenneth M. Bogdan, and Terry Rivasplata. 2013. CEQA Desktop. Point Arena, CA; Solano Book Press. Page 44.

California Code of Regulations. Health and Safety Code Section 11357-11362.9.
<<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=11001-12000&file=11357-11362.9>> Date accessed: July 16, 2014.

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County of Humboldt. *Medical Marijuana Land Use Ordinance (MMLUO) – Phase IV, Commercial Cultivation, Processing, Manufacturing and Distribution of Cannabis for Medical Use* (Staff Report to the Board of Supervisors). January 26, 2016. <<https://humboldt.legistar.com/Calendar.aspx>> Date accessed: March 28, 2016.

North Coast Regional Water Quality Control Board. 2016. *Cannabis Cultivation Waste Discharge Regulatory Program*. http://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/. Date accessed: March 28, 2016.

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<<http://www.boe.ca.gov/news/pdf/173.pdf>>

State of California. Guidelines for the Security and Non-Diversion of Marijuana Grown for Medical Use. August 2008.
<http://www.ag.ca.gov/cms_attachments/press/pdfs/n1601_medicalmarijuanaguidelines.pdf>

**Cultivation Plan Addendum for
Parcel #522-026-007 / APP# 11167
Aloha Top Shelf, LLC**

[The following sections are modifications to the cultivation plan previously submitted for this application.]

2.1 Nursery Propagation and Initial Transplant

The proposed 3,448.8 square feet of ancillary nursery will allow Aloha Top Shelf, LLC to propagate clones from mother plants or purchase already rooted clones or seeds from a permitted nursery location.

2.2 Outdoor Cultivation Plan

Light-deprived cultivation will occur in eighteen (18) greenhouses totaling 35,000 square feet. The greenhouses will consist of metal tubing covered with a woven poly translucent opaque tarp. Light deprivation will be used to produce up to two (2) flowing harvest per year; one in early July, and another in October.

2.4 Harvesting, Drying and Trimming

Plants that are ready for harvest have their flowing branches removed and suspended in the existing storage containers equipped with ventilation fans. There are plans to eventually construct a drying structure to replace the containers. Plants are dried using dehumidifiers and the drying process takes approximately one week, at which time the flowers are bucked into manageable buds and placed in storage bins. The storage bins allow safe transportation to an off-site processing facility. Trimming will be done off-site at a licensed processing facility.

3.1 Water Source and Projected Water Use

Annual water usage is projected to be approximately 190,000 gallons provided by two permitted groundwater wells. 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.

Jan	Feb	Mar	Apr	May	June
0	0	0	10,000	25,000	35,000

July	Aug	Sept	Oct	Nov	Dec
40,000	40,000	30,000	10,000	0	0

3.2 Water Storage

The site currently has the capacity to store 17,500 gallons in water tanks. The applicant has received DCC grant funds and will implement an additional 78,000 gallons of water storage. The chart below details existing and proposed water storage.

Water Storage Type	Size (Gallons)	Number	Total (Gallons)
Existing Poly Water Tank	5,000	1	5,000
Existing Poly Water Tank	3,000	4	12,000
Existing Poly Water Tank	500	1	500
Proposed Poly Water Tank	5,000	15	75,000
Proposed Poly Water Tank	3,000	1	3,000
Total			95,500

3.6 Energy and Generator Use

The site is reliant on a 3.8kW solar array as the primary energy source. No generators are used for any cultivation activities.