



## LOST COAST ELIXIRS LLC CULTIVATION, OPERATIONS, AND SECURITY PLAN

### 1. Description of Water Source, Storage, Irrigation Plan, and Projected Water Usage

**WATER SOURCE AND STORAGE:** The primary source of irrigation water on the property is one permitted well. The well has output sufficient to meet engineered calculations for the project. The well is plumbed to hard plastic tanks totaling 411,500 gallons of storage capacity which are dedicated to cultivation activities. Applicant also has a 50,000 gallon pioneer tank that is dedicated to domestic use. Tanks are labeled to indicate whether they are potable. Additionally rain catchment features will be added in 2022 to collect up to 20,000 gallons of water.

Applicant has also submitted a Lake and Streambed Alteration Notification (LSAA) to the California Department of Fish and Wildlife (CDFW) for two existing diversions from springs located at the head of a Class III watercourse that is a tributary to Eubank Creek. The norther diversion is a wooden spring box which diverts water via gravity through a ¾ inch poly pipe to a 2,500 gallon storage tank. This spring diversion will be used solely for domestic purposes. The LSAA proposes to allow direct diversion at 200 gallons of water per day. The second diversion is located approximately 100 feet to the south. It is a 6-inch perforated plastic pipe of unknown length that is situated horizontally into the side of the hill in a shallow depression. The LSAA agreement is going to be renewed September 2022.

**IRRIGATION PLAN:** Applicant will irrigate cannabis plants at agronomic rates. Irrigation will be applied via a drip irrigation system. Applicant will water during the morning or late afternoon/early evenings when temperatures are cooler to minimize evaporative loss.

Applicant hand waters plants after every top dressing. For mixed light cultivation, Applicant applies top dressing three (3) times per crop run. For outdoor cultivation, Applicant top dresses approximately every two weeks. Applicant utilizes native soils and natural amendments to promote soil density and aid water retention. Applicant will apply mulch over drip irrigation system to prevent or minimize evaporative loss.

For mixed light cultivation, Applicant applies nutrients once per week throughout the growing season. Nutrients are mixed in tanks with a release valve on the underside of the tanks to completely flush residual nutrients which are then re-mixed and reused in subsequent feedings.

For outdoor cultivation, Applicant applies nutrients to plants every four to seven days throughout the growing season. Nutrients are mixed in tanks with a release valve on the underside of the mixing tanks to completely flush residual nutrients which are re-mixed and reused in subsequent feedings.

**PROJECTED WATER USAGE:** Applicant will be cultivating approximately 23,854 sq ft of cannabis, pursuant to a conditional use permit. Applicant anticipates using approximately 13,238 gallons per week during the high season (May – Sept) while the whole operation is growing. During the low season (Oct – April) use will be approximately 1980 gallons per week when only mixed light greenhouses will be operating. Below is a breakdown by month of applicant’s total water needs:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
7920	7920	7920	31,956	55,992	55,992	55,992	55,992	55,992	31,956	7920	7920

The above figures are weather dependent and are only estimated water usage totals. Applicant has installed flow meters at all critical points to measure actual yearly water usage. The total estimated use is 383,472 gallons annually. During the dry season (Apr – Oct) when forbearance will be used, use is estimated to be 343,872 gallons. Water storage provides 90% of water needed during the dry season. Additional storage is planned to be installed before the next dry season. The applicant has over 100% forbearance storage during the dry months. Additionally, the applicant is facilitating rain catchment features on the buildings throughout the property. This is an added water source outside of the well use and will be utilized prior to well use whenever possible. It should be feasible to utilize up to 20,000 gallons.

2. Description of Site Drainage, including Runoff and Erosion Control Measures

**SITE DRAINAGE:** There are approximately seven class III drainages and one class II drainage on the property. Applicant has installed ditch relief culverts along the main driveway of the premises to improve site drainage along this road. Although there is an existing ditch relief culvert along the segment of the main road where the proposed culvert will be installed, the addition of the proposed ditch relief culvert will evenly disperse ditch runoff prior to it extending downslope and potentially connecting to a watercourse. The culvert is proposed to be approximately 15 inch in diameter.

Just to the east of the existing ditch relief culvert is a rock lined drainage channel that extends form the outlet of a “French Drain” that drains the eastern cultivation area. The rock lined drainage extends downslope for approximately 100 feet and ends just above the head of a class III watercourse. This drainage is hydrologically disconnected from the watercourse to the extent feasible.

At the southwest cultivation sites, Applicant, in conjunction with its engineer, is currently planning, permitting, and reconfiguring a developed slump to improve drainage and hydrologically disconnect drainage and runoff from an existing class III watercourse below this area. The green houses in the cultivation area will be rain guttered and piped off the terrace surfaces and drainage will be incorporated into these reconfigured slopes as approved by the NCRWQCB and DFW, with which Applicant is in active communications as of this writing. Construction of rock lined drainage ditches may be incorporated into these re-configured terrace slopes at locations determined by Applicant’s engineer.

Near the residence on the property, Applicant has installed a 24-inch diameter culvert that drains storm water from the developed areas surrounding the house, a graded parking area, and terraced slopes that is collected by two storm drain drop inlets and connected via an underground culvert that outlets northeast of the fuel storage shed as shown on the site plan. Drainage flows over a heavily rock armored cut bank face above the 24-inch culvert inlet and energy dissipation boulders were placed below the outlet at the time of installation. This drainage runs to a bench slope which divides and disperses flows. This flow is hydrologically disconnected to the extent feasible and does not pose significant threats of erosion or sediment transport. Applicant will consult with Timberland Resource Consultants to avoid any heavy erosion or gullyng that takes place in this area.

**EROSION CONTROL MEASURES:** The roads on Applicant's parcel are adequately maintained and rockered and are free of erosion. A section where the slope is greatest is paved. Ditch relief culverts along Applicant's roads are adequately sized to disperse flows and rock armored to prevent erosion and sediment transport to receiving waters. Roads have adequate drainage features to minimize and prevent erosion along inside ditches and at outlets.

At erodible fill points along roads and developed areas, Applicant has installed erosion control netting. Applicant has also installed rolling dips along roads to redirect drainage away from erodible fill slopes and has implemented rock cobble, straw wattles, and silt fencing at the bottom of fill slopes to armor their bases. Rock armor is placed to fill in any eroded gullies that may form along these fill slopes and has reinforced these areas with erosion control jute netting. Applicant has vegetated fill slopes which has begun to become established and placed straw mulch on exposed soils on fresh fill faces.

Areas adjacent to rock lined drainage ditches have been equipped with jute netting and covered with straw to further minimize erosion.

Applicant will monitor property for potential erosion and consult with, and implement recommendations by, Timberland Resource Consultants to minimize erosion on site.

**RUNOFF CONTROL MEASURES:** Applicant irrigates at agronomic rates that does not result in runoff. Cultivation areas are located at least 50 feet from all class III watercourses and 100 feet from all class II watercourses on the property thereby preventing

To control runoff, Applicant has installed runoff control features around the cultivation areas and roads and will continue to do so as permitting efforts require. Ditch relief culverts disperse flows to prevent gullyng and connectivity to watercourses. Gutters and "French Drains" around the cultivation areas channel runoff to stable areas that pose little threat of erosion or sediment transport to receiving waters. Energy dissipaters have been installed at outlets of relief ditches and culverts to disperse flows and control runoff from reaching watercourses on site. Applicant will continue to consult with, and implement recommendations by, Timberland Resource Consultants to minimize threats posed by runoff from developed areas and cultivation sites.

### 3. Details of Measures Taken to Ensure Protection of Watershed and Nearby Habitat

**PROTECTION OF WATERSHED AND HABITAT:** Applicant maintains the minimum required setbacks of 50 feet for cultivation activities from class III watercourses and minimum setbacks of 100 feet from all class II watercourses on the property. Buffers between developed areas and watercourses remain undeveloped and heavily vegetated with native trees and brush and are sufficiently wide enough to filter any discharges from production lands. Riparian buffers are excluded from operations and protected in a manner that maintains their essential functions.

Fill slopes along the edges of the eastern most cultivation sites may impede the established riparian buffer. To remedy this, Applicant has installed erosion control netting on the face of the fill that extends into the buffer. Applicant will revegetate this area with native grasses and shrubs and armor toe outs with rock. Cultivation areas themselves maintain the 50-foot buffer. The areas identified are excluded from operations and protected in a manner that maintains their essential functions.

**CULTIVATION RELATED WASTE PROTOCOLS:** Applicant is implementing measures to minimize or eliminate cultivation related waste on the property. Applicant stores spent growth medium or cultivation related waste on-site. The soil pile is contained with wattle and is covered outside of the summer months to prevent run off. This occurs once soils are removed from the mixed light cultivation areas after the third run of mixed light cultivation, and after harvest of outdoor cannabis. Periodically soil is removed and transferred to Redway Transfer station so that waste does not build up.

Dead and harvested plant waste is composted near the cultivation areas. The plant material is stored in containers until it can be composted, which is located away from any watercourses and poses little threat of escapement. The compost area is contained with fencing. Any cultivation related wastes that contain residues or pollutants, if any, will be stored on concrete surfaces in the on-site residence or sheds with impermeable floor surfaces to ensure that those materials do not leach into surface water or groundwater.

All empty bags, containers, or pots are stored near the house in covered garbage containers such that they will not enter or be blown into surface waters and will be removed from site as outlined above and disposed of.

**REFUSE DISPOSAL:** Wildlife proof cans with lids are located on concrete surfaces outside of the on-site residence and at most cultivation sites on impermeable surfaces to prevent leaching into surface or groundwater. The frequency of pickup and delivery to disposal facilities is 1-2 times weekly.

**HUMAN WASTE:** Sewage disposal on the property are two functioning septic systems on the property. One is connected to the house; the other is connected to the garage/shop. Both septic systems are permitted by Humboldt County. Applicant provided permits for the septic system with



his application. The septic system on the property is sized appropriately for the anticipated use as a cultivation site. Additionally, a portable toilet and handwashing station have been installed on the property for convenience.

4. Protocols for Proper Storage and Use of Fertilizers, Pesticides, and Other Regulated Products

**PESTICIDES:** Applicant uses minimal chemical pesticides or herbicides. Applicant employs an integrated pest management system that employs bio-pesticides and predator attractant plants to eliminate the need for conventional pesticides. Pesticides will be stored in storage sheds equipped with impermeable floor surfaces in secondary containment totes to prevent leaching into ground water or percolating to receiving waters. Approved spill proof containers with appropriate warning and information labels used to transport pesticides to and from cultivation areas. Applicant will maintain and keep personal protective equipment required by the pesticide label in good working order. Coveralls will be washed after all use when required.

All required warning signs will be posted and material safety data sheets (MSDS) will be kept in the area where pesticides are stored. Emergency contact information in the event of pesticide poisoning shall also be posted at the work site including the name, address and telephone number of emergency medical care facilities.

Before making a pesticide application, operators will evaluate equipment, weather conditions, and the property to be treated and surrounding areas to determine the likelihood of substantial drift or harm to non-target crops, contamination, or the creation of a health hazard.

**FERTILIZERS:** Fertilizers are stored in the storage sheds on the property. Covered stations, with appropriate side protection are also located in the cultivation areas for fertilizers that are in constant use. Fertilizers are applied per labels and applied at agronomic rates. Applicant will follow the pesticide use protocols as stated above for fertilizer applications. Reactive fertilizers are stored separately from pesticides or other reactive chemicals. Material safety data sheets (MSDS) are properly posted in all storage areas and at cultivation sites.

**SOIL AMENDMENTS:** Soil amendments are stored in the storage container. Applicant will follow use protocols as outlined in the pesticide protocols section. A list of soil amendments and fertilizers are attached hereto.

**POWER SOURCES AND PETROLEUM PRODUCTS AND STORAGE:** Electricity for the operation is provided by two 220 kw diesel generators. Diesel generators are housed within a fully enclosed, permanent generator shed on the property. The walls have been insulated to prevent noise levels from exceeding 60 decibels at 100 feet from the shed. The Applicant tested the noise level and will continue to monitor the noise levels to ensure it stays within a compliant level. The shed is equipped with a cement floor and a large secondary containment tank that is large enough for the contents of fuel inside of the generator. Fuel storage for the generator is in a large metal fuel tank, equipped with secondary containment and housed within a permanent shed dedicated to fuel

storage. Fuel storage tanks are equipped with permanent secondary containment. Side wind protection and covering throughout the rainy season is provided for the fuel storage tanks located adjacent to the fuel storage shed. Back-up generators are stored on the property for emergency use during the event of a power loss or during maintenance of the primary generators. In the event of a change to state or local ordinances, alternative energy sources will be sought to power the operation.

5. Description of Cultivation Activities (outdoor, mixed light)

**CULTIVATION ACTIVITIES:** Applicant is proposing existing mixed light cultivation with cultivation area of approximately 7710 sq ft. Applicant is also proposing existing outdoor cultivation with cultivation area of approximately 16,144 sq ft. The total canopy is 23,854 sq ft. Immature plant area and propagation space are 2746 sq ft – approximately 11% of the canopy. The immature plant area consists of three small hoop houses that will be used to stage small plants going into greenhouses, one greenhouse to house the mother plants and small vegging plants, and a small propagation area to cut clones as needed.

Applicant plants mixed light greenhouses on a rotational basis year-round. As stated above, Applicant powers mixed light greenhouses with an on-site generator and uses propane heating to cultivate during winter months. Applicant will completely shield mixed light greenhouses so that no light escapes. Applicant will comply with the International Dark Sky Standards lighting guidelines as provided for in the Commercial Medical Marijuana Land Use Ordinance’s (“CMMLUO”) performance standards. Employees record the times that greenhouses are covered and/or uncovered on a daily basis. Sunrise and sunset times are monitored daily. See attachment A. Additionally, an automatic timer is set to shut off all lighting at the time of sunset, in the event of an emergency where lights cannot be covered.

Applicant will transition to renewable energy sources once required. A solar power system exists on the property for domestic use. A backup generator is onsite for domestic power loss. Applicant will expand the solar power system for cultivation purposes within ten years or when required by county and/or state regulations. PG&E is not available in the area, however if that changes, Applicant will seek renewable energy from PG&E in addition to solar power.

Applicant will be hiring between three to ten employees for the cultivation operation. During the winter months, when Applicant will only be conducting mixed light operations, Applicant will have 3-4 employees on site tending cultivation areas. During the summer months, when Applicant will be conducting both mixed light and full-term outdoor cultivation, Applicant will be hiring approximately ten employees. Applicant will seek to encourage employees to car pool to and from the cultivation site to minimize traffic to and from the sites. Applicant expects peak travel time to and from the cultivation site to be between 6 A.M. and 7 A.M. and 5 P.M. to 6 P.M. Applicant will stagger start and end times for employees to minimize peak traffic during those times. It is anticipated that 2-6 trips will be made daily.

Applicant will follow all performance standards outlined in Humboldt County's Commercial Medical Marijuana Land Use Ordinance ("CMMLUO") with respect to cultivation activities, including developing employee safety protocols which include: 1) an emergency action response plan and spill prevention protocols; 2) employee accident reporting and investigation policies; 3) fire prevention policies; 4) maintenance of Material Safety Data Sheets (MSDS); 5) materials handling policies; 6) job hazard analyses; and 7) personal protective equipment policies. Applicant will ensure that all safety equipment is in good and operable condition and provide employees with training on the proper use of safety equipment.

Applicant will post and maintain an emergency contact list which includes: 1) operation manager contacts; 2) emergency responder contacts; and 3) poison control contacts. All cultivation activities will be charted and calendared and visibly posted in the cultivation facilities.

The employees will have access to safe drinking water, toilets and handwashing facilities that comply with applicable federal, state, and local laws and regulations at all times. To ensure safety, all water tanks are labeled as Potable or Non-Potable.

#### 6. Schedule of Activities During Each Month of the Growing and Harvesting Season

##### January

- Mixed Light
  - Vegetate clones onsite
  - Check irrigation
  - Prepare beds
  - Begin rotating plants from nursery into mixed light greenhouse
  - Pot vegetated clones prior to next month's planting
  - Harvest run of plants started in October/November of last year

##### February

- Mixed Light
  - Planting first run of mixed light plants in greenhouse
  - Vegetate clones in on-site nursery
  - Begin irrigation via drip system to flowering plants
  - Feeding application once per week
  - Trellis and maintain plants

##### March

- Mixed Light
  - Pot vegetated plants
  - Feeding application once per week
  - Irrigation every six to ten days

##### April

- Mixed Light

- Vegetate clones in on-site nursery
- Harvest run of mixed light plants
- Transplant run of mixed light into flowering greenhouses
- Pot vegetated plants
- Feeding application once per week
- Trellis and maintain plants
- Full Term Outdoor
  - Rotate clones to larger pots from vegging greenhouse
  - Amend soils
  - Install irrigation drip system

#### May

- Mixed Light
  - Pot vegetated plants
  - Feeding application once per week
  - Irrigation every other day
  - Check irrigation
  - Re-amend beds using composted materials on site
- Full Term Outdoor
  - Prepare mature clones for planting
  - Amend soils
  - Install drip irrigation

#### June

- Mixed Light
  - Vegetate clones in on-site nursery
  - Check irrigation
  - Irrigation every other day
  - Feeding application once per week
  - Train and maintain plants
- Full Term Outdoor
  - Plants mature clones in larger pots
  - Install trellis system for mature plants
  - Irrigation begins
  - Top dresses and hand waters once per month

#### July

- Mixed Light
  - Harvest run plants at the end of the month
  - Rotate next run of vegetated clones to flowering greenhouses
  - Vegetate clones in on-site nursery
  - Pot vegetated plants
  - Feeding application once per week
  - Irrigation every other day



- Trellis and maintain plants
- Full Term Outdoor
  - Applicant monitors plant growth
  - Pruning plants and plant maintenance
  - Irrigation
  - Applicant top dresses and hand waters once per month

#### August

- Mixed Light
  - Feeding application once per week
  - Irrigation other day
  - Remove soils and re-apply soils to bed
- Full Term Outdoor
  - Applicant monitors plant growth
  - Pruning plants and plant maintenance
  - Irrigation
  - Applicant top dresses and hand waters once per month

#### September

- Mixed Light
  - Vegetate clones in on-site nursery
  - Pot vegetated plants
  - Feeding application once per week
  - Irrigation every other day
  - Trellis and maintain plants
- Full Term Outdoor
  - Applicant monitors plant growth
  - Pruning and plant maintenance
  - Irrigation
  - Begin Harvesting

#### October

- Mixed Light
  - Begin harvesting run of vegetated plants
  - Rotate in next year's run of vegetated clones into flowering greenhouse
  - Feeding application once per week
  - Irrigation
- Full Term Outdoor
  - Continues harvesting flower

#### November

- Mixed Light
  - Vegetate clones in on-site nursery

- Finish Harvest
- Pot vegetated plants
- Feeding application once per week
- Irrigation
- Full Term Outdoor
  - Harvest complete; transferred off-site to process
  - Clean up cultivation site and winterize

#### December

- Mixed Light
  - Vegetate clones in on-site nursery
  - Pot vegetated plants
  - Feeding application once per week
  - Irrigation
  - Trellis and maintain plants

#### 7. Processing Plan

**PROCESSING PLAN:** Applicant will be processing on-site but will identify an off-site permitted processing facility for future processing operations as soon as that information becomes available. Currently, processing occurs in a two-story existing Ag building (1,440 square feet).

#### 8. Security Plan

**SECURITY FEATURES:** Applicant has installed various security measures to safeguard cultivation sites and prevent nuisance from occurring on the property. Applicant has installed locked key gate across main entrance of property road. Applicant's parcel is located off the main arterial roads and the only drivers on the private road are Applicant's employees. Applicant has installed security cameras in and around the cultivation areas with video backup to protect against unauthorized access.

To ensure the non-diversion of product, Applicant has enrolled in the METRC program in conjunction with the provisional state licenses (CCL18-0002605, CCL18-0002606) that have been issued.

Attachment A – Cover/Uncover Log

Date	Sunrise	Uncover	Sunset	Cover	Employee
5/1/2022	6:13:23 AM		8:10:54 PM		
5/2/2022	6:12:10 AM		8:11:55 PM		
5/3/2022	6:10:59 AM		8:12:55 PM		
5/4/2022	6:09:48 AM		8:13:56 PM		
5/5/2022	6:08:39 AM		8:14:56 PM		
5/6/2022	6:07:31 AM		8:15:55 PM		
5/7/2022	6:06:25 AM		8:16:55 PM		
5/8/2022	6:05:20 AM		8:17:54 PM		
5/9/2022	6:04:16 AM		8:18:53 PM		
5/10/2022	6:03:14 AM		8:19:52 PM		
5/11/2022	6:02:14 AM		8:20:50 PM		
5/12/2022	6:01:15 AM		8:21:48 PM		
5/13/2022	6:00:17 AM		8:22:46 PM		
5/14/2022	5:59:21 AM		8:23:43 PM		
5/15/2022	5:58:27 AM		8:24:39 PM		
5/16/2022	5:57:34 AM		8:25:36 PM		
5/17/2022	5:56:43 AM		8:26:31 PM		
5/18/2022	5:55:54 AM		8:27:26 PM		
5/19/2022	5:55:06 AM		8:28:20 PM		
5/20/2022	5:54:21 AM		8:29:14 PM		
5/21/2022	5:53:36 AM		8:30:07 PM		
5/22/2022	5:52:54 AM		8:30:59 PM		
5/23/2022	5:52:14 AM		8:31:51 PM		
5/24/2022	5:51:35 AM		8:32:41 PM		
5/25/2022	5:50:58 AM		8:33:31 PM		
5/26/2022	5:50:23 AM		8:34:20 PM		
5/27/2022	5:49:50 AM		8:35:08 PM		
5/28/2022	5:49:18 AM		8:35:55 PM		
5/29/2022	5:48:49 AM		8:36:41 PM		
5/30/2022	5:48:22 AM		8:37:26 PM		
5/31/2022	5:47:56 AM		8:38:10 PM		