

**PROPERTY MANAGEMENT PLAN  
FOR THE PROPOSED CANNABIS CULTIVATION OPERATION AT  
425 & 550 VOIGT ROAD, LAKEPORT, CALIFORNIA**

Preparation Date:  
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Prepared for:  
County of Lake

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## 1.0 INTRODUCTION

This Property Management Plan has been prepared to fulfill the requirements of **Ordinance No. 3084, an Ordinance Amending Chapter 21, Article 27 of the Lake County Code Pertaining to Commercial Cannabis Cultivation**.

This Property Management Plan, and all the sub-plans, have been prepared using the guidance that is listed in Subsection 5 of the proposed amendments to Chapter 21, Article 27 of the Lake County Code. Ordinance No. 3084 describes the Plan as follows:

*“All permittees shall prepare a Property Management Plan. The intent of said plan is to identify and locate all existing cannabis and non-cannabis related uses on the property, identify and locate all proposed cannabis and non-cannabis related uses on the property, and describe how all cannabis and non-cannabis related uses will be managed in the future. The property management plan shall demonstrate how the operation of the commercial cannabis cultivation site will not harm the public health, safety, and welfare or the natural environment of Lake County. “*

Note that Ordinance No. 3084 modifies and reduces the contents of the Property Management Plan. However, in another part of Ordinance 3073, specifically Section 4, Subsection 2 (i) (d) (11v), it states that the applicant must prepare a “Written Description”:

*“A statement of the applicant’s proposal for solid waste disposal, vegetative waste disposal, storm water management, fish and wildlife protection, water resources protection, energy use, water use, pest management, fertilizer use, property management, grading, organic farming, and protection of cultural resources.”*

Since these written description requirements are the same contents of the Property Management Plan described in Ordinance No. 3073, the format used for this Plan is the guidance provided by Ordinance No. 3084. Thus, this Property Management Plan fulfills the requirements of both Ordinance No. 3073 and Ordinance No. 3084.

This Plan is intended to be a “living” document, updated as necessary, such that when operational activities or processes are modified or replaced, the applicable sub-plans are revised to reflect these changes. Relevant sub-plans should also be amended whenever the goals of the Plan are not met, whenever a significant pollution event or other non-compliance event occurs, or whenever a violation notice is issued.

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## 2.0 PROJECT LOCATION AND DESCRIPTION

This is a combined 46.5-acre property at 425 & 500 Voigt Road, Lakeport, CA. (APN(s) 008-043-02 & 008-032-11)), zoned A-WW-Aa –accessed off Voigt Road via Highland Springs Road, which is located at the south western edge of the parcels. (see *map exhibits within the Site Management Plan*). The project site is located approximately one and one-half (1.5) mile distance from Highway 29 and approximately one (1) mile distance from Highway 175. The parcel is not located within the Cannabis Cultivation Exclusion Zone.

The topography is mostly flat with gentle slopes and swales found in the southern portion. The elevation ranges from approximately 1,400 feet to 1,470 feet above mean sea level. Drainage runs west, and eventually flows into Thompson Creek, thence Clear Lake. Prior land uses were rural residential and a vineyard. There is an existing residence on the property, but not a part of this operation. The surrounding land uses are private estates with corrals, open space, vineyards, and orchards. The property is located within the Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately cold winters.

Cannabis cultivation operations planned at 425 & 500 Voigt Road, Lakeport, in Lake County, California are to establish and operate a Commercial Cannabis Cultivation business (for Adult-Use) on the 46.5-acre combined parcel of land. The zoning allows for this use and allows for the collation of permits under the current ordinance, with a Major Use Permit for the project.

The Project proposes to cultivate 44,000 square feet of mature canopy within an operational area of 1.5 acres. Plants will be grown via mixed light in greenhouses that are equipped with filtrations systems that prevents the movement of odors, pesticides, and other air borne contaminates out of or into the structure. Plants will be watered using automated irrigation. Nutrients will be delivered to plants by using a fertilizer injection system. Existing ancillary facilities consist of a single 4,950-square-foot shed for material storage. The existing residence and shed will not be used for the cannabis operation. Existing roads will be used to access the operational areas.

The proposed cultivation project sites will not require the removal of any trees or bushes. The completely vacant field is naturally level and ready for grading and construction. Upon approval of a Major Use Permit, greenhouse construction will commence. A full project description is included with this submittal.

The greenhouse operations will be operating seven days a week; 9am to 5pm Monday through Friday; and 12-5 pm Saturday and Sunday. Deliveries are anticipated 2-4 per day by way of pickup trucks. During development, there will be two shifts of workers with approximately 2-8 people per shift. After project set up there will be one shift of 5-8 people, dependent on whether harvesting is occurring. During peak growing season and harvesting, two shifts may be necessary to meet the work demands. The cultivation Project will require obtaining an A-3 Type 3 Medium Mixed Light Tier 2 and a M-Type 3 Outdoor State license to operate.

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Sufficient parking will be provided for all employees/staff on the grow site near the greenhouses. Power for the operations will be via electrical service through PGE which will also operate the security system. Existing service may need to be expanded to meet the cultivation site needs.

The water source for the cultivation site will be from an existing well. Documentation pertaining to the well is in the Water Analysis Study/Well documentation included with this submittal.

A security system will be installed per code. In order to take measures to prevent access to the grow operations, protect the safety of the employees, and prevent loss or theft of cannabis products, a security measures plan is discussed within this document further on, and will be implemented on the property. A video surveillance system will be installed per code for the grow sites. As required by the code, the cultivation sites will be completely fenced-in with six-foot high fences.

Supplies that will be needed for this project such as fencing, will be purchased from local area businesses which will inject revenue into the local economy. Workers will be sought out from the local community pool to fill the job needs.

All required information for the property management plan, storm water management plan, pest management, vegetative waste disposal, solid waste disposal, protection of cultural resources, grounds procedure management, organic farming, growing medium management and energy use are being provided with this application for County to review; and use in the preparation of the Initial Study for the project.

#### Development Schedule:

It is anticipated that the grow project will be implemented as early as possible after determination of the Major Use Permit application. An application for "Early Activation" has been applied for with the previous applicant with the Use Permit application.

### **3.0 GRADING**

Lake County Grading Ordinance (Chapter 30 of the Lake County Code) states that a grading permit is needed if the volume is 50 cubic yards or more or if 1 acre of native vegetation is cleared.

Grading of approximately 7,000 SF will be necessary to be graded for the 6,000 SF building therefore a grading permit will first be obtained. Every spring, the garden area will be tilled. An erosion and sediment control plan have been created and will be implemented for this project. Should extensive grading be planned, the erosion and sediment control plan should be updated.

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## 4.0 AIR QUALITY MANAGEMENT PLAN

### 4.1 Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Air Quality:

- (a) Intent: All cannabis permittees shall not degrade the County's air quality as determined by the Lake County Air Quality Management District (LCAQMD).*
- (b) In this section permittees shall identify any equipment or activity that which may cause, potentially cause the issuance of air contaminants including odor, and shall identify measures to be taken to reduce, control or eliminate the issuance of air contaminants, including odors.*
- (c) All cannabis permittees shall obtain an Authority to Construct permit pursuant to LCAQMD Rules and Regulations, prior to the construction of the facility described in the Property Management Plan.*
- (d) All cannabis permittees shall obtain Authority to Construct Permit pursuant to LCAQMD Rules and Regulations, if applicable, to operate any article, machine, equipment, or other contrivance which causes or may cause the issuance of an air contaminant.*
- (e) All permittees shall maintain an Authority to Construct or Permit to Operate for the life of the project, until the operation is closed, and equipment is removed.*
- (f) The applicant shall prepare an odor response program that includes (but is not limited to):*
  - a. Designating an individual(s) who is/are responsible for responding to odor complaints 24 hours per day/seven (7) days a week, including holidays.*
  - b. Providing property owners and residents of property within a 1,000-foot radius of the cannabis facility, with the contact information of the individual responsible for responding to odor complaints.*
  - c. Policies and procedures describing the actions to be taken when an odor complaint is received, including the training provided to the responsible party on how to respond to an odor complaint.*
  - d. The description of potential mitigation methods to be implemented for reducing odors, including add-on air pollution control equipment.*
  - e. Contingency measures to mitigate/curtail odor and other emissions in the event the methods described above are inadequate to fully prevent offsite nuisance conditions.*

### 4.2 Air Quality Setting and Potential Pollutant Sources

The project is in the Lake County Air Basin. The Lake County Air Quality Management District (LCAQMD) regulates air quality in Lake County. The U.S. Environmental Protection Agency (EPA) sets acceptable levels for seven air pollutants, and then determines — with the help of states and local air districts — where those standards are or are not met. Lake County currently meets the EPA's health standards for five of those pollutants: carbon monoxide; nitrogen dioxide; sulfur dioxide; lead; and coarse particulates. For the other two — ground-level ozone and fine particulate pollution — Lake County is considered part of a regional non-attainment area. There are no sensitive receptors nearby. The nearest neighbors are a minimum of 300 feet away from the cultivation compounds. Public facilities such as churches and schools are more than 1 mile away.

Short-term grading or construction emissions could include fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities from operation of tractors, tillers, etc., during site preparation. Construction emissions are caused by onsite or offsite activities. Onsite emissions principally consist of exhaust emissions (NOX, CO, ROG, PM10, and PM2.5) from heavy-duty construction equipment, motor vehicle operation, and

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fugitive dust from disturbed soil. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles as well as worker commuter traffic, but they also include road dust (PM10). Only a few persons working for a few days will be needed for site preparation, and such low numbers of man-hours would not generate significant vehicle emissions.

Operational emission sources consist of mobile emissions and area source emissions. Mobile source emissions estimates are derived from motor vehicle traffic from staff commuting. Area source emissions estimates are derived from the consumption of propane, electricity, and consumer products, as well as emissions resulting from landscape maintenance. However, this cultivation operation does not require the use of propane, electricity, or other consumer products. Cultivation operations may generate fugitive dust emissions through ground-disturbing activities such as ground tilling, uncovered soil or compost piles, and vehicle or truck trips on unpaved roads.

Operation of the proposed cultivation operation would generate small amounts of carbon dioxide from operation of small engines, such as tillers, and from vehicular traffic associated with staff commuting. The generation of carbon dioxide would be partially offset by the cultivation of fast-growing plants, which remove carbon dioxide in the air for photosynthesis. This mixed light proposed cultivation operation will consume some electrical energy as well utilize the natural sun for light.

CDFA (2017) concluded that cannabis cultivation activities under the CalCannabis Licensing Program would not generate a substantial number of vehicle trips and would not require intensive use of heavy equipment, and as such, would not degrade air quality or produce significant amounts of greenhouse gasses. CDFA (2017) summarizes the impacts from small cannabis cultivation operations as follows:

*“Despite the potential air quality emission-generating sources described above that are associated with cannabis cultivation activities, it is not anticipated that the Proposed Program would conflict with or obstruct implementation of air quality plans for the numerous reasons outlined below. First, the cannabis cultivation activities under the Proposed Program would not be anticipated to generate a substantial number of vehicle trips (see Section 4.12, Transportation and Traffic) that would affect air quality. In addition, outdoor and mixed-light cultivation activities would generally occur on such small acreages that these activities would often not require intensive use of heavy equipment.”*  
(page 4.3-30)

The CDFA CalCannabis Program concluded that small outdoor Cannabis cultivation operations would not contribute significantly to greenhouse gas emissions because of the limited use of combustion-powered equipment and vehicles and because County ordinances limit the use of generators to emergency use only (CDFA 2017).

## Results / Emissions Estimates

Construction and operational emissions are summarized in the following tables. The results are expressed as a range of potential emissions. To magnify any air quality impacts, the model was

run using the worst-case scenarios, and emissions estimates are reported here using the unmitigated emissions values. The main sources of construction emissions are exhaust from heavy equipment and tailpipe emissions from cars and trucks. In the operational phase, no direct emissions will occur.

Lake County has adopted the Bay Area Air Quality Management District (BAAQMD) thresholds of significance as a basis for determining the significance of air quality and GHG impacts. Air emissions modeling demonstrates that the project, in both the construction phase and the operational phase, will not generate significant quantities of ozone or particulate matter and does not exceed the project-level thresholds established by FRAQMD.

#### Comparison of Daily Construction Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (pounds/day)	BAAQMD Threshold (pounds/day)	Significance
ROG (VOC)	1 to 10	54	Less than significant
NO <sub>x</sub>	10 to 20	54	Less than significant
CO	10 to 30	548	Less than significant
SO <sub>x</sub>	< 1	219	Less than significant
Exhaust PM <sub>10</sub>	1 to 10	82	Less than significant
Exhaust PM <sub>2.5</sub>	1 to 10	54	Less than significant
Greenhouse Gasses (CO <sub>2e</sub> )	2,000 to 3,500	No threshold established	Less than significant

#### Comparison of Daily Operational Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (pounds/day)	BAAQMD Threshold (pounds/day)	Significance
ROG (VOC)	1 to 10	54	Less than significant
NO <sub>x</sub>	1 to 5	54	Less than significant
CO	1 to 10	548	Less than significant
SO <sub>x</sub>	< 1	219	Less than significant
PM <sub>10</sub> (total)	1 to 5	82	Less than significant
PM <sub>2.5</sub> (total)	1 to 5	54	Less than significant
Greenhouse Gasses (CO <sub>2e</sub> )	1 to 20	No threshold established	Less than significant

#### Comparison of Annual Operational Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions (tons/year)	BAAQMD Threshold (tons/year)	Significance
ROG (VOC)	0 to 1	10	Less than significant



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NO <sub>x</sub>	0 to 1	10	Less than significant
CO	0 to 1	100	Less than significant
SO <sub>x</sub>	0 to 1	40	Less than significant
PM <sub>10</sub>	0 to 1	15	Less than significant
PM <sub>2.5</sub>	0 to 1	10	Less than significant
Greenhouse gasses (as CO <sub>2</sub> or methane)	1 to 100	10,000	Less than significant

### 4.3 Permits

According to the Ordinance:

*“All cannabis permittees shall obtain Authority to Construct Permit pursuant to LCAQMD Rules and Regulations, if applicable, to operate any article, machine, equipment or other contrivance which causes or may cause the issuance of an air contaminant, prior to the construction of the facility described in the Property Management Plan. All permittees shall maintain an Authority to Construct or Permit to Operate for the life of the project, until the operation is closed, and equipment is removed.”*

Air permits from the LCAQMD may be necessary to operate these proposed facilities if regulated machines or equipment are used. For Cannabis operations, this is typically limited to the use of electricity generators. No generators are proposed with the project.

No LCAQMD permits are necessary to construct or operate the project as currently designed.

Any LCAQMD permits obtained should be listed in this Plan.

### 4.4 Dust Management

Cultivation operations may generate fugitive dust emissions through ground-disturbing activities such as ground tilling, uncovered soil or compost piles, and vehicle or truck trips on unpaved roads. Mitigation measures that can be used to control dust will be implemented and Staff will be informed of speed limits and dust pollution. The roadways may be clearly marked for limited speed to control dust. Dusty road segments can be armored with gravel or asphalt. A road maintenance program should be implemented. On tilled earth and stockpiles, fugitive dust can be controlled by wetting the soil with a mobile water tank and hose, or by delaying ground disturbing activities until site conditions are not windy. Water applications may be concentrated during the late summer and early fall months, when soils have the lowest moisture content or when winds are severe. BMP Fact Sheets WE-1: Wind Erosion Control and NS-1: Water Conservation Practices will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding and water equipment leaks will be repaired immediately. During windy conditions (forecast or actual wind conditions of 25 miles per hour or greater), dust control may be applied to disturbed areas, including haul roads, to adequately control wind erosion. BMP Factsheet WM-3: Stockpile Management will be implemented using silt fences and plastic covers to prevent wind dispersal of sediment from stockpiles. The minimum amount of water should be used: refer to BMP Factsheet NS-1: Water Conservation Practices.

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## 4.5 Odor Response Program

According to the Ordinance:

- "a. Designating an individual(s) who is/are responsible for responding to odor complaints 24 hours per day/seven (7) days a week, including holidays.*
- b. Providing property owners and residents of property within a 1,000-foot radius of the cannabis facility, with the contact information of the individual responsible for responding to odor complaints.*
- c. Policies and procedures describing the actions to be taken when an odor complaint is received, including the training provided to the responsible party on how to respond to an odor complaint.*
- d. The description of potential mitigation methods to be implemented for reducing odors, including add-on air pollution control equipment.*
- e. Contingency measures to mitigate/curtail odor and other emissions in the event the methods described above are inadequate to fully prevent offsite nuisance conditions."*

The individual that is responsible for responding to odor complaints is:

- Jennifer Berg (707) 293-8009

The possible nearest property owners or residents within a 1,000-foot radius of the subject cannabis property are:

- APN(s):008-043-030; -230; -150; -130; -160, Lakeport, CA.

When an odor complaint is received, it will be forwarded to the manager responsible for odor control. The incident will be logged, including time and type of complaint, the location of the odor reception, and contact info of the person making the complaint. The incident will be investigated, and the problem identified. The manager will visit the site or facility in question and determine any deficiencies in the odor control system (where applicable) and identify remedies. These remedies should be implemented immediately. The manager will prepare a written response and send it by certified mail to the person who made the complaint. The correspondence should acknowledge the complaint, describe the incident, and identify what remedial actions were taken. Each odor complaint will be logged in a master odor complaint logbook.

### 4.5.1 Odor Mitigation

Cannabis cultivation, especially during the flowering phase, generates volatile compounds (terpenes) that some people find objectionable. No significant odor impacts are anticipated from this cultivation operation, due to the limited population in the area, the size of the cultivation operation, the setbacks from roads and property lines, and wind dilution/dispersal effects.

If odors become objectionable to neighbors, odor mitigation must be implemented. The cultivation operation should be analyzed to determine the source of odor emission and any concentrating effects. Mitigation can include some combination of windscreens or powerful fans, an ozone generator, or a high-pressure atomizing system could be installed on the perimeter. This system generates a water vapor (aerosol) that binds with the volatile compounds from Cannabis (terpenes). Charcoal filtration is the most effective odor neutralizer for indoor cultivation operations. Air is mechanically drawn through the charcoal filters and then expelled from the greenhouse if need be. However, since the proposed operations are within

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greenhouses with air dehumidifying systems; to address odor issues, odor issues are anticipated to be minimal.

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## 5.0 CULTURAL RESOURCES

### 5.1 Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Cultural Resources:

- (a) Intent: All permittees shall protect the cultural, historical, archaeological, and paleontological resources on the lot of record where the permitted activity is located.*
- (b) The Department shall consult with appropriate Tribe regarding the potential of such resources being located on the lot of record.*
- (c) Based on that consultation, the Department may require a cultural resource study of the property to determine the extent such resources exist on the lot of record.*
- (d) Based on that study and in consultation with the appropriate Tribe(s), the Department may require the inclusion in this section.*
- (e) This section shall include:*
  - a. Detailed procedures on actions to take if such resources are found.*
  - b. Describe the procedures to be followed if cultural, historical, archaeological, and paleontological resources are found on the property.*

### 5.2 Cultural Resources Assessment

A Cultural Resources Assessment was prepared for this project and is included with this submittal and prepared by:

- Tim Spillane, MA, RPA and Dylan Stapleton, MA, RPA, of Natural Investigations Company; Prepared March 2021.

Cultural resources literature searches were conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University to determine if prehistoric or historic cultural resources were previously recorded within the project area, the extent to which the project area had been previously surveyed, and the number and type of cultural resources within a 0.25-mile radius of the project limits. A literature search was completed by the Northwest Information Center on February 11, 2021. The archival search of the archaeological and historical records, national and state databases, and historic maps included:

- National Register of Historic Places: listed properties
- California Register of Historical Resources: listed resources
- Historic Property Data File (HPDF) for Lake County
- Archaeological Determinations of Eligibility (ADOE)
- California Inventory of Historical Resources
- California Historical Landmarks
- California Points of Historical Interest

The CHRIS records search indicates that no prior cultural resource studies have been completed which included any portion of the project area studied, though one study has been completed within a .25 mile record search radius. (completed in 2003). Field search provided no indication of subsurface archaeological remains found in rodent burrows or other areas of minor ground disturbance during the field survey.

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Therefore, no cultural resources potentially eligible to the CHRIS were identified within the project area because of this investigation. No further treatment of the identified resources is recommended. The SLF search returned negative results for Native American resources in the vicinity of the Project.

Geoarchaeological analysis finds that based on site-specific variables, including the age of the underlying landform and extent of past ground-disturbances, the potential for the discovery of archaeological deposits, including buried archaeological sites, materials, or features, by implementation of the Project is low.

### **5.3 Protective measures**

Protective measures consist primarily of minimizing ground disturbance, especially in sensitive areas. For this property, sensitive areas are areas that have not previously been tilled or graded, and primarily those areas that are near streams. Note that the riparian zones of streams are also protected under various federal, state, and county regulations. Another protective measure is worker awareness training. During training events, workers should be made aware of the regulations protecting cultural resources, the location of sensitive areas, and indicators of buried historic or archaeological resources or human remains, such as fragments of bone, shells, or pottery, unusual odors or staining of soil, building foundations, etc.

### **5.4 Inadvertent Discovery Work Plan**

An Inadvertent Discovery Work Plan is only required by the County for properties known to have cultural resources. No cultural resources are known to occur within, or adjacent to, the cultivation areas. Nevertheless, Inadvertent Discovery Measures are provided here and will be implemented, and are taken directly from the California Department of Food and Agriculture's Program Environmental Impact Report (2017) prepared for the CalCannabis Cultivation Licensing program:

*“Existing cultivation activities themselves would generally have limited potential for adverse impacts on cultural resources. However, cultivation may involve excavation within soil that has not been disturbed previously. As such, while considered unlikely, excavation could encounter buried historic or archaeological resources or human remains. A mitigation measure—CR-1—was added that would ensure that any unexpected discoveries of cultural resources during cultivation do not result in significant impacts.*

*It is also considered unlikely that cultivation itself would result in modification or demolition of historic structures that could affect the characteristics that make the building eligible for listing in the CRHR; such impacts would be more likely to occur as part of site development and, as a result, would be evaluated by the local agency during its approval process for site development. In addition, the CalCannabis Licensing Program's environmental protection measures related to cultural resources, specifically the accidental discovery of human remains (Section 8313[c] of the proposed regulations),*

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*would require applicants to halt cultivation activities and implement Health and Safety Code Section 7050.5 if human remains were discovered.*

The project as presently designed is not expected to have an adverse effect on cultural resources. Based on the negative results of the CHRIS and SLF searches, as well as the negative findings of the field survey and geoarchaeological analysis, there is no indication that the Project will impact any historical resources as defined under CEQA Section 15064.5, unique archaeological resources as defined under CEQA Section 21083.2(g), or known Native American resources. For these reasons, no further cultural resources work is recommended at this time.

\*In the event that a cultural resource is inadvertently discovered during Project activities, work must be halted within 30 feet of the find and a qualified archaeologist (36 CFR Part 61) notified immediately so that an assessment of its potential significance can be undertaken.

Encountering Native American remains although unlikely, if human remains are encountered, all work must stop in the immediate vicinity of the discovered remains and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the Coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains is provided.

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## 6.0 ENERGY USAGE

### 6.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Energy Usage:

*(a) Intent: Permittees shall minimize energy usage.*

*(b) In this section permittees shall:*

- a. Provide energy calculation as required by the California Building Code*
- b. Identify energy conservation measures to be taken and maintained including providing proof of compliance with CCR Title 3, Division 8, Chapter 1, Section 8305 the Renewable Energy Requirements.*
- c. If alternative energy sources are to be used, describe those sources and the amount of electricity that will be provided.*
- d. For indoor cannabis cultivation licensees, ensure that electrical power used for commercial cannabis activity shall be provided by any combination of the following:
  - (1) On-grid power with 42 percent renewable source. (2) Onsite zero net energy renewable source providing 42 percent of power. (3) Purchase of carbon offsets for any portion of power above 58 percent not from renewable sources. (4) Demonstration that the equipment to be used would be 42 percent more energy efficient than standard equipment, using 2014 as the baseline year for such standard equipment.**
- e. Describe what parameters will be monitored and the methodology of the monitoring program.*

The Ordinance also identifies these prohibited activities that are relevant to this sub-plan:

*“The indoor or mixed-light cultivation of cannabis shall not rely on a personal gasoline, diesel, propane, or similar fuels, powered generator as a primary source of power and shall only allow properly permitted (when applicable) generators for temporary use in the event of a power outage or emergency that is beyond the permittee’s control.”*

### 6.2. Energy Calculations

The CDFW CalCannabis Program states the following:

*“Outdoor cultivation utilizes natural daylight for photosynthesis, although cultivators may have use artificial lighting to maintain immature plants as a source for propagation. Outdoor cultivation operations typically start the plants indoors or in greenhouses before moving them outside during the summer months. Under the Proposed Program, it is anticipated that this cultivation type would have the least lighting needs, compared to indoor, mixed-light, and nursery operations.”*

*“Note that lighting may be used for propagation under any of the Proposed Program’s license types, although for outdoor licenses, this is permissible only to maintain immature plants as a source for propagation.”*

*“Outdoor cultivation is conducted without the use of artificial lighting for plant growth, with the exception that artificial lighting is permissible to maintain immature plants as a source or plant propagation (CDFA 2017).”*

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The proposed cultivation operation has a current service hookup to PG&E. The electric will power the security cameras and well water pumps for the cannabis operations. The proposed project will be mixed light (greenhouse) cultivation operations. Additional electrical upgrade may be necessary for the site operations.

### **6.3. Energy Conservation Measures**

A combination of the following energy conservation measures may be employed at this operation:

- use of solar power where electricity is needed, and use of high-efficiency storage batteries, such as lithium-ion
- use of passive solar energy techniques such as proper site selection, overhanging eaves, tree canopy cover, etc.
- use of LED lights or other high-efficiency lighting
- use of hand tools instead of power tools

### **6.4. Alternative Energy Sources**

As stated, the operation will be supplied by an electrical source.



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## 7.0 FERTILIZER USAGE

### 7.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Fertilizer Usage:

*(a) Intent: To ensure consistency fertilizer storage and use with the other sections of the property management plan.*

*(b) This section shall describe how cultivation and nursery permittees will comply with the following fertilizer application and storage protocols:*

- a. Comply with all fertilizer label directions;*
- b. Store fertilizers in a secure building or shed;*
- c. Contain any fertilizer spills and immediately clean up any spills;*
- d. Apply the minimum amount of product necessary;*
- e. Prevent offsite drift;*
- f. Do not spray directly to surface water or allow fertilizer product to drift to surface water. Spray only when wind is blowing away from surface water bodies;*
- g. Do not apply fertilizer when they may reach surface water or groundwater; and*
- h. The use of fertilizer shall not be located within 100 feet of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland, or vernal pool. For purposes of determining the edge of Clear Lake, the setback shall be measured from the full lake level of 7.79 feet on the Rumsey Gauge.*

*(c) This section shall include a map of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool on the lot of record of land or within 100 feet of the lot of record and a 100-foot setback from any identified spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool.*

*(d) Describe what parameters will be monitored and the methodology of the monitoring program.*

A Site Management Plan was prepared for this project and is included in this submittal, which Plan includes the required maps:

- Hurvitz Environmental's/Site Management Plan for the Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California.

A Nitrogen Management Plan was prepared for this project and is included within the Site Management Plan.

- Hurvitz Environmental's/Nitrogen Management Plan for the Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California.

### 7.2. Inventory of Fertilizers

Importation of soil is anticipated for the project. Estimate amounts TBD.

### 7.3. Storage and Handling Protocols

The dry fertilizers in 50-pound bags and if needed liquid fertilizers in 1 to 5-gallon jugs, will be transported to the site by staff as needed.

Liquid or granular fertilizers can be mixed with water in the mixing tanks. Water will be utilized to water plants via an automated irrigation system within the mixed light greenhouses. Nutrients will be delivered to plants by using a fertilizer injector system.

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Should bulk fertilizers need to be stockpiled, they will be covered with a tarp and secured with ropes and weights. Fertilizers will be stored in a stormproof shed or Conex container so that stormwater is not contaminated. Fertilizers will be properly labeled, and open containers sealed when stored. Personal protective equipment will be used by staff when handling fertilizers and other chemicals, such as safety glasses, gloves, dust mask or respirator, boots, and pants and long-sleeved shirt. Fertilizers will be handled and applied according to their instructions. The following fertilizer application and storage protocols will be implemented:

- Comply with all label directions;
- Store chemicals in a secure building or shed to prevent access by wildlife;
- Contain any chemical leaks and immediately clean up any spills;
- Apply the minimum amount of product necessary;
- Prevent offsite drift;
- Do not apply chemicals when pollinators are present;
- Do not spray directly to surface water or allow chemical product to drift to surface water.

#### **7.4. Monitoring Program**

The monitoring program for fertilizers is incorporated into the Stormwater Monitoring Program. In general, the monitoring program consists of regular inspections of chemical storage areas, the immediate cleanup of any spilled products, recordkeeping of quantities and types of fertilizers used, and employee training and personal protection.

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## 8.0 FISH AND WILDLIFE PROTECTION

### 8.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Fish and Wildlife Protection:

- (a) *Intent: To minimize adverse impacts on fish and wildlife.*
- (b) *In this section permittees shall include:*
- a. *A description of the fish and wildlife that are located on or utilize on a seasonal basis the lot of record where the permitted activity is located.*
  - b. *A description of the habitats found on the lot of record.*
  - c. *A description of the watershed in which the permitted activity is located.*
  - d. *Describe how the permittee will minimize adverse impacts on the fish and wildlife.*
  - e. *A map showing the location of any conservation easements or wildlife corridors proposed.*

The Ordinance also identifies these prohibited activities that are relevant to this sub-plan:

*“Tree Removal. The removal of any commercial tree species as defined by the California Code of Regulations section 895.1, Commercial Species for the Coast Forest District and Northern Forest District, and the removal of any true oak species (Quercus species) or Tan Oak (Notholithocarpus spices) for the purpose of developing a cannabis cultivation site should be avoided and minimized. This shall not include the pruning of any such tree species for the health of the tree or the removal of such trees if necessary, for safety or disease concerns.”*

Note also that the removal of commercial tree species requires either a Timberland Conversion Permit from California Department of Forestry and Fire Protection for the conversion of timberland greater than 3 acres, or an exemption for the conversion of timberland less than 3 acres.

The following Biological Site Assessment was prepared for the proposed project and is included with this submittal:

- G.O. Graening, PhD and Tim Nosal, MS/Natural Investigations Company. Biological Site Assessment for the proposed Cannabis Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California. Prepared January 27, 2021.

### 8.2. Description of Fish & Wildlife, Habitats, and Watersheds

#### 8.2.1. Fish and Wildlife

A reconnaissance-level field survey was conducted at the site on January 19, 2021. A complete coverage, variable-intensity pedestrian survey was performed, and modified to account for differences in terrain, vegetation density, and visibility. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDDB within the vicinity of the Study Area and those species on the USFWS species list (Appendix 1 of the Bio Assessment). When a specimen could not be identified in the field, a photograph or voucher specimen (depending upon permit requirements) was taken and identified in the laboratory using a dissecting scope where necessary.

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During the field survey, no special-status species were detected within the Project Area or the surrounding Study Area.

The vineyards, annual grasslands and oak woodland within the Study Area have a low potential for harboring special-status plant species due to the dominance of aggressive non-native grasses and forbs and constant disturbance from agricultural activities.

A list of special-status plant and animal species that have occurred within the Study Area and vicinity was compiled based upon the following: • Any previous and readily-available biological resource studies pertaining to the Study Area; • Informal consultation with USFWS by generating an electronic Species List (Information for Planning and Conservation website at <https://ecos.fws.gov/ipac/>); and • A spatial query of the CNDDDB.

**SPECIAL STATUS SPECIES CONSIDERED** (page 10) of the Biological Assessment prepared for the project, provides the list of SS species considered.

**SPECIES ENCOUNTERED** (pages 11-13) of the Biological Assessment prepared for the project, provides the list of species encountered in the survey.

## **8.2.2. Habitats**

### ***Vegetation Communities***

All plants detected during the field survey of the Study Area are listed in Appendix 2 of the Bio Assessment.

The following animals were detected within the Study Area during the field survey: northwestern fence lizard (*Sceloporus occidentalis occidentalis*); black-tailed jackrabbit (*Lepus californicus*); Botta's pocket gopher (*Thomomys bottae*); coyote (*Canis latrans*); American crow (*Corvus brachyrhynchos*); California quail (*Callipepla californica*); California towhee (*Melospiza crissalis*); common raven (*Corvus corax*); dark-eyed junco (*Junco hyemalis*); marsh hawk (*Circus cyaneus*); mourning dove (*Zenaidura macroura*); northern mockingbird (*Mimus polyglottos*); sparrow (*Emberizidae*); turkey vulture (*Cathartes aura*); western bluebird (*Sialia mexicana*); and other common songbirds

The Assessment showed that the Study Area contained the following terrestrial vegetation communities: Disturbed/Developed, Annual Grassland, Vineyard, Oak Woodland, Riparian, and Freshwater Marsh.

### ***Wildlife Habitats***

Wildlife habitat types were classified using CDFW's Wildlife Habitat Relationship System. The Study Area contains the following wildlife habitat types: Urban; Barren; Vineyard; Annual Grassland; Valley Oak Woodland; Blue Oak Woodland; Valley Foothill Riparian; Fresh Emergent Wetland and Riverine.

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The Assessment found that no critical habitat for any federally-listed species occurs within the Project Area or the surrounding Study Area. The CNDDDB reported no special-status habitats within the Project Area or surrounding Study Area.

No designated wildlife corridors exist within or near the Study Area. No fishery resources exist in or near the Study Area. The Study Area is not located within any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

### **8.2.3. Watershed**

The Property is surrounded by private land and open space. The parcel is not located in a medium- or high-priority groundwater basin as designated by the California Department of Water Resources (DWR).

## **8.3. Fish & Wildlife Impact Avoidance and Minimization Measures**

### **8.3.1. Periodic Biological Monitoring and Worker Training**

When workers are made aware of the importance of biological resources, they are better able to avoid resource impacts. When possible, periodically include environmental / biological information in your safety meetings or other staff meetings. Make workers aware that impacts to biological resources cause work delays and may result in serious penalties. Establish an effective communication chain to report any potential resource questions or conflicts to the cultivation manager, who can contact the on-call consulting biologist.

Should any biological issues arise please contact:

- Project Biologist, Tim Nosal, 916-452-5442/ Natural Investigations Company.

### **8.3.2. Protection of Waterbodies and Sensitive Habitats**

The USFWS National Wetland Inventory reported no water features within the Project Study Area, but the Inventory did report the following water features within the Study Area (see Exhibits): 1 *riverine feature*.

The field survey determined that the Project Area does not contain any channels or wetlands. The following water features were detected within the larger Study Area during the field survey (see Exhibits):

- 4 ephemeral (Class III) watercourses
- 3 wetlands
- 2 freshwater ponds
- 1 riparian

There are no vernal pools or other isolated wetlands in the Study Area

Note that if the total area of ground disturbance required for construction activities of the cultivation operation is greater than 1 acre, the landowner or cultivator will need to enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction

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Activity (Construction General Permit, 2009-0009-DWQ) and implement a storm water pollution prevention plan.

If operational activities occur near sensitive habitats, it is recommended that signage and/or fencing be erected that identifies the resource and limits entry to these areas. Security fencing that surrounds the cultivation compounds can function as wildlife exclusion devices. It is recommended that fencing be constructed to prevent passage of wildlife through the fencing.

Implementation of the project does not conflict with any county or municipal policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or another approved governmental habitat conservation plan. The Property is not within the coverage area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan.

### **8.3.3. Operational Best Management Practices**

The implementation of best management practices during construction and operations will ensure that biological resources are protected. The following are suggested practices and rules to be implemented and located within Appendix F of the Assessment:

- Restrict vehicular traffic to existing access roads whenever possible.
- Reduce vehicle speeds, especially on roadways.
- Minimize water usage
- Do not litter: litter attracts animals.
- Do not feed wildlife. Pets are not allowed within operational areas.
- No hunting or collecting of any animals or plants.
- Use tobacco products only in approved areas.
- Check under tires and equipment for resting animals.
- Use only designated toilet facilities.
- Implement an effective pollution prevention plan. By ensuring that potential pollutants, such as sediment and petroleum products, do not contaminate waterways or natural habitats, biological resources will be better protected.

## **8.4. Maps**

The required maps are provided within the Biological Assessment document.

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## 9.0 OPERATIONS MANUAL

### 9.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section that is an Operations Manual:

- (a) *Intent: To describe the operating procedures of the commercial cannabis cultivation site to ensure compliance with the use permit, protect the public health, safety, and welfare, as well as the natural environment of Lake County.*
- (b) *This section shall include the following:*
1. *Authorization for the County, its agents, and employees, to seek verification of the information contained within the development permit or use permit applications, the Operations Manual, and the Operating Standards at any time before or after development or use permits are issued;*
  2. *A description of the staff screening processes;*
  3. *The hours and days of the week when the facility will be open;*
  4. *Description of measures taken to minimize or offset the carbon footprint from operational activities;*
  5. *Description of chemicals stored, used and any effluent discharged as a result of operational activities.*
- (c) *Grounds.*
- (1) *The permittee shall establish and implement written procedures to ensure that the grounds of the premises controlled by the permittee are kept in a condition that prevents the contamination of components and cannabis products. The methods for adequate maintenance of the grounds shall include at minimum:*
    - i. *The proper storage of equipment, removal of litter and waste, and cutting of weeds or grass so that the premises shall not constitute an attractant, breeding place, or harborage for pests.*
    - ii. *The proper maintenance of roads, yards, and parking lots so that these areas shall not constitute a source of contamination in areas where cannabis products are handled or transported.*
    - iii. *The provision of adequate draining areas in order to prevent contamination by seepage, foot-borne filth, or the breeding of pests due to unsanitary conditions.*
    - iv. *The provision and maintenance of waste treatment systems so as to prevent contamination in areas where cannabis products may be exposed to such a system's waste or waste by-products.*
  - (2) *If the lot of record is bordered by grounds outside the applicant's control that are not maintained in the manner described in subsections (a) through (d) of this section, inspection, extermination, and other reasonable care shall be exercised within the lot of record in order to eliminate any pests, dirt, and/or filth that pose a source of cannabis product contamination.*
- (d) *Any other information as may be requested by the Director and/or by the Planning Commission.*

The Ordinance also identifies these prohibited activities that are relevant to this sub-plan:

*"All lights used for cannabis related permits including indoor or mixed light cultivation of cannabis shall be fully contained within structures or otherwise shielded to fully contain any light or glare involved in the cultivation process. Artificial light shall be completely shielded between sunset and sunrise."*

As this Operational Manual is refined and expanded, it may be modified.

### 9.2. Operational Information

#### 9.2.1. Authorization of County Visits

One of the conditions of County licensing is that the cultivator give authorization for the County, its agents, and employees, to verify the information contained within the development permit or use permit applications, the Operations Manual, and the Operating Standards, at any time before or after development or use permits are issued.

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### **9.2.2. Staff Screening Process**

The staff screening process will consist, at a minimum of criminal reports / background checks; in-person interviews; and the requirement that all applicants must provide a comprehensive resume and contact information of several references.

### **9.2.3. Hours of Operation**

This cultivation operation is closed to the public. Visitation is only allowed when specific permission is granted.

The cultivation operation hours of operation are:

Monday, through Friday 9am to 5pm.

Saturday, and Sunday, from 12 to 5 p.m.

### **9.2.4. Other Information**

Measures that will be taken to minimize or offset the carbon footprint from operational activities are:

- energy-saving measures (see Energy Usage subsection)
- water-saving measures (see Water Use subsection)
- solid waste reduction measures (see Waste Management subsection)
- air emissions reduction measures
- proper site selection, use of existing contours instead of mass grading
- cultivation of fast-growing plants, which remove carbon dioxide from the air and fix it in plant biomass

The description of chemicals stored and used, and any effluent discharged as a result of operational activities is found in the Fertilizer subsection, the Pesticide subsection, the Hazardous Waste Management portion of the Waste Management subsection, and the Stormwater Management Subsection.

## **9.3. Groundskeeping**

Good housekeeping measures will be implemented. The grounds will be inspected at least once per day and any litter picked up. Trash containers will be emptied when full. Roads will be maintained so that significant erosion does not occur. This may include wetting dusty roads, armoring with gravel or asphalt, patching holes, and maintaining drainage features. Weeds and grasses will be controlled by mulching or by cutting with a lawnmower or line trimmer. Drainage ditches and swales will regularly be mowed and cleaned, including the removal of litter, debris, and sediment. Containers and ditches will be drained so that mosquitos do not breed. Areas inside cultivation compounds can be graveled or paved to prevent foot-borne filth. Live traps may be deployed to remove rodents from operational areas. Disposable coveralls (e.g. Tyvek) can be used to increase sanitation levels and reduce vectoring of mites and other pests.

Property maintenance will follow Best Management Practices. The following CASQA Industrial and Commercial Handbook BMP Fact Sheets are applicable:



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- BG-40 Landscape Maintenance
  - SC-41 Building & Grounds Maintenance
  - SC-40: Contaminated or Erodible Areas
  - SC-43 Parking Area Maintenance
  - SC-44 Drainage System Maintenance

Waste will be responsibly managed as specified in the Waste Management subsection.

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## 10.0 PEST MANAGEMENT

### 10.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Pest Management:

*(a) Intent: To ensure consistency pest management with the other sections of the property management plan.*

*(b) This section shall describe how cultivation and nursery permittees will comply with the following pesticide application and storage protocols:*

*a. All pesticide applications must fully comply with the California Food and Agriculture Code, Division 6 Pest Control Operations and Division 7 Agriculture Chemical; Chapter 1 – 3.6 and California Code of Regulations, Division 6 Pest Control Operations.*

*b. These pesticide laws and regulations include but are not limited to:*

*i. Comply with all pesticide label directions;*

*ii. Store chemicals in a secure building or shed to prevent access by wildlife;*

*iii. Contain any chemical leaks and immediately clean up any spills;*

*iv. Prevent offsite drift;*

*v. Do not apply pesticides when pollinators are present;*

*vi. Do not allow drift to flowering plants attractive to pollinators;*

*vii. Do not spray directly to surface water or allow pesticide product to drift to surface water. Spray only when wind is blowing away from surface water bodies;*

*viii. Do not apply pesticides when they may reach surface water or groundwater; and*

*ix. Only use properly labeled pesticides.*

*x. The use of pesticides shall not be located within 100 feet of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool. For purposes of determining the edge of Clear Lake, the setback shall be measured from the full lake level of 7.79 feet on the Rumsey Gauge.*

*c. This section shall include a map of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool on the lot of record of land or within 100 feet of the lot of record and a 100 foot setback from any identified spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool.*

The Ordinance also identifies these prohibited activities that are relevant to this sub-plan:

*“The use of any pesticide that has been banned for use in the state is prohibited.”*

A Site Management Plan was prepared for this project and is included with this submittal:

**10.2.** Hurvitz Environmental Services, Inc /Site Management Plan for the Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California.

### 10.3. Inventory of Pesticides

Under state and federal law, a pesticide is any substance intended to control, destroy, repel, or otherwise mitigate a pest. Any organism that causes damage or economic loss, or transmits or produces disease, may be the target pest. Pests can be insects or animals (e.g. mice), unwanted plants (weeds) or organisms that cause plant diseases. “Pesticide” is an umbrella term that includes many kinds of chemicals—natural and synthetic. A pesticide is any substance intended to control, destroy, repel, or attract a pest. Any living organism that causes damage, economic loss, and/or transmits or produces disease may be the target pest. Some common pesticides include insecticides, herbicides, rodenticides, molluscicides, fungicides, repellents,

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disinfectants, and sanitizers. (California Department of Pesticide Regulation fact sheet, available at <http://www.cdpr.ca.gov/>).

At this cultivation operation, pests will be controlled by employing only approved, organic-certified pesticides. Weeds will be controlled using a line trimmer or mulch; herbicides will not be used. Live traps will be used for rodents.

Note that the Department of Pesticide Regulation has developed a brief synopsis of appropriate pesticide usage called Legal Pest Management Practices for Marijuana Growers in California which can be found as Attachment D in Order R5-2015-0113. Currently, no regulated pesticides are registered for use on Cannabis. Therefore, commercial cultivators are limited to only using pesticides that are exempt from residue-tolerance requirements and are either: (1) registered and labeled for a use that is broad enough to include use on cannabis (e.g., unspecified green plants), or (2) exempt from registration requirements as a minimum-risk pesticide under FIFRA Section 25(b). The CA Department of Pesticide Regulation lists allowable pesticides in their publication “Legal Pest Management Practices for Marijuana Growers in California.”

#### **10.4 Pesticide Application and Storage Protocols**

Note that the Department of Pesticide Regulation has developed a brief synopsis of appropriate pesticide usage called *Legal Pest Management Practices for Marijuana Growers in California* which can be found as Attachment D in Order R5-2015-0113. Currently, no pesticides are registered for use on Cannabis. Therefore, commercial cultivators are limited to only using pesticides that are exempt from residue-tolerance requirements and are either: (1) registered and labeled for a use that is broad enough to include use on cannabis (e.g., unspecified green plants), or (2) exempt from registration requirements as a minimum-risk pesticide under FIFRA Section 25(b).

The CDFA CalCannabis Program describes pesticide use as follows:

*“Although California Department of Pesticide Regulation (CDPR) is responsible for managing California’s statewide pesticide regulatory program, the local enforcement of pesticide use regulations is delegated to County Agricultural Commissioners (CACs). With oversight by CDPR, CACs plan and develop county programs and regulate pesticide use to ensure that applicators comply with label directions and pesticide laws and regulations (CDPR 2011). CACs oversee pesticide use reporting, promote best management practices, and monitor field applications, and they may assist in cleanup of accidental pesticide spills.*

*CACs inspect operations and records of growers, nonagricultural (including industrial and institutional) applicators, pest control dealers, agricultural pest control advisers (PCAs), farm labor contractors, and government agencies for compliance with worker protection standards and other pesticide safety requirements. CACs, assisted by CDPR, investigate incidents in which pesticides harm agricultural workers, people nearby, and the environment, including environmental damage (such as fish or wildlife kills) and water quality contamination. When an enforcement action is needed, CACs have the option to revoke or suspend the right of a company to do business in their county or to issue civil or criminal penalties (CDPR 2011)....License and certificate types issued by CDPR under*

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*the pesticide regulatory program include, but are not limited to, the following (CDPR 2017).....*

*Because there are no restricted-use pesticides registered for use on cannabis, application of pesticides for cannabis cultivation would not require any type of license or certificate. Cultivators, however, may obtain a QAC or QAL, or private applicator certificate, or hire individuals with these credentials, in order to avail themselves of information such as proper mixing, loading, and application techniques and selection and use of personal protective equipment. Cannabis cultivators would not necessarily be required to obtain the services of a PCA but, nonetheless, may choose to do so in order to get professional advice on pest control.” (CDFA 2017)*

Cultivators must comply with pesticide laws and regulations as enforced by the Department of Pesticide Regulation. The CDFA CalCannabis Licensing Program has the following pesticide application and storage protocols, which will be implemented:

- (1) Comply with all pesticide label directions;
- (2) Store chemicals in a secure building or shed to prevent access by wildlife;
- (3) Contain any chemical leaks and immediately clean up any spills;
- (4) Apply the minimum amount of product necessary to control the target pest;
- (5) Prevent offsite drift;
- (6) Do not apply pesticides when pollinators are present;
- (7) Do not allow drift to flowering plants attractive to pollinators;
- (8) Do not spray directly to surface water or allow pesticide product to drift to surface water. Spray only when wind is blowing away from surface water bodies;
- (9) Do not apply pesticides when they may reach surface water or groundwater; and
- (10) Only use properly labeled pesticides. If no label is available consult the Department of Pesticide Regulation.

Pesticides will be used according to the instructions on the label or the material safety data sheets (MSDS). County regulations also apply to listed pesticides. Pesticides will be stored in a stormproof shed or Conex container so that stormwater is not contaminated. Chemicals will be properly labeled and open containers sealed when stored. When handling chemicals, staff will use personal protective equipment such as safety glasses, gloves, dust mask or respirator, boots, pants, and long-sleeved shirt. Pesticides will not be applied on windy days or within 24 hours of a forecasted rain event.

#### **10.4. Maps**

The required maps are provided in the Site Management Plan.

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## 11.0 SECURITY

### 11.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Security:

*(a) Intent: To minimize criminal activity, provide for safe and secure working environments, protect private property, and to prevent damage to the environment. The Applicant shall provide adequate security on the premises, as approved by the Sheriff and pursuant to this section, including lighting and alarms, to ensure the safety of persons and to protect the premises from theft.*

*(b) Security Plan. This section shall include at a minimum:*

*a. A description of the security measures to be taken to:*

*(1) Prevent access to the cultivation site by unauthorized personnel and protect the physical safety of employees. This includes, but is not limited to:*

*i. Establishing physical barriers to secure perimeter access and all points of entry (such as locking primary entrances with commercial-grade, non-residential door locks, or providing fencing around the grounds, driveway, and any secondary entrances including windows, roofs, or ventilation systems);*

*ii. Installing a security alarm system to notify and record incident(s) where physical barriers have been breached;*

*iii. Establishing an identification and sign-in/sign-out procedure for authorized personnel, suppliers, and/or visitors;*

*iv. Maintaining the premises such that visibility and security monitoring of the premises is possible; and*

*v. Establishing procedures for the investigation of suspicious activities.*

*(2) Prevent theft or loss of cannabis and cannabis products. This includes but is not limited to:*

*i. Establishing an inventory system to track cannabis material and the personnel responsible for processing it throughout the cultivation process;*

*ii. Limiting access of personnel within the premises to those areas necessary to complete job duties, and to those time-frames specifically scheduled for completion of job duties;*

*iii. Supervising tasks or processes with high potential for diversion (including the loading and unloading of cannabis transportation vehicles); and*

*iv. Providing designated areas in which personnel may store and access personal items.*

*(3) Identification of emergency contact(s) that is/are available 24 hours/seven (7) days a week including holidays. The plan shall include the name, phone number and facsimile number or email address of an individual working on the commercial cultivation premises, to whom notice of problems associated with the operation of the commercial cultivation establishment can be provided. The commercial cultivation establishment shall keep this information current at all times. The applicant shall make every good faith effort to encourage neighborhood residents to call this designated person to resolve operating problems, if any, before any calls or complaints are made to the County.*

*(4) The permittee shall maintain a record of all complaints and resolution of complaints and provide a tally and summary of issues the annual Performance Review Report.*

*(5) A description of fences, location of access points, and how access is controlled.*

*(6) Video Surveillance.*

*i. At a minimum, permitted premises shall have a complete digital video surveillance system with a minimum camera resolution of 1280 X 1080 pixel. The video surveillance system shall be capable of recording all pre-determined surveillance areas in any lighting conditions.*

*ii. The video surveillance system shall be capable of supporting remote access by the permittee.*

*iii. To the extent reasonably possible, all video surveillance cameras shall be installed in a manner that prevents intentional obstruction, tampering with, and/or disabling.*

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iv. Areas that shall be recorded on the video surveillance system include, but are not limited to, the following:

- a. The perimeter of the cannabis cultivation site and cannabis nursery,
  - b. Areas where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises;
  - c. Areas where cannabis is destroyed;
  - d. Limited-access areas;
  - e. Security rooms;
  - f. Areas containing surveillance-system storage devices, in which case, at least one camera shall record the access points to such an area; and
  - g. The interior and exterior of all entrances and exits to the cannabis cultivation sites and cannabis nursery including all buildings where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises.
- v. The surveillance system shall record continuously 24 hours per day and at a minimum of 30 frames per second.
- vi. All exterior cameras shall be waterproof, I-66 minimum.
- vii. All interior cameras shall be moisture proof.
- viii. Cameras shall be color capable.
- ix. Video management software shall be capable of integrating cameras with door alarms.
- x. Video recordings shall be digital.
- xi. Thermal technology shall be use for perimeter fencing.
- xii. All cameras shall include motion sensors that activates the camera when motion is detected.
- xiii. In areas with inadequate lighting for the cameras being used, sufficient lighting shall be provided to illuminate the camera's field of vision.
- xiv. All recording shall be located in secure rooms or areas of the premises in an access and environment-controlled environment which is separate from the room where the computer and monitoring equipment is located.
- xv. All surveillance recordings shall be kept on the applicant's recording device or other approved location for a minimum of 30 days.
- xvi. All video surveillance recordings are subject to inspection by the Department and shall be copied and sent, or otherwise provided, to the Department upon request.
- xvii. The video recordings shall display the current date and time of recorded events. Time is to be measured in accordance with the U.S. National Institute Standards and Technology standards. The displayed date and time shall not significantly obstruct the view of recorded images.

(7) Fences

- i. All commercial cannabis cultivation sites shall be enclosed by a fence. The fence shall include, at a minimum, the following: Posts set into the ground. The posts may be steel tubing, timber or concrete and may be driven into the ground or set in concrete. End, corner, or gate posts, commonly referred to as "terminal posts", must be set in concrete footing or otherwise anchored to prevent leaning under the tension of a stretched fence. Posts set between the terminal posts shall be set at intervals not to exceed 10 feet. A top horizontal rail is required between all posts. The fence shall be attached to the posts and top horizontal rail.
- ii. No barbed wire, razor wire or similar design shall be used.
- iii. The cultivation area shall be screened from public view. Methods of screen may include, but is not limited to, topographic barriers, vegetation, or solid (opaque) fences.

The Ordinance also identifies these prohibited activities that are relevant to this sub-plan:

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*“All lights used for cannabis related permits including indoor or mixed light cultivation of cannabis shall be fully contained within structures or otherwise shielded to fully contain any light or glare involved in the cultivation process. Artificial light shall be completely shielded between sunset and sunrise.*

*Security lighting shall be motion activated and all outdoor lighting shall be shielded and downcast or otherwise positioned in a manner that will not shine light or allow light glare to exceed the boundaries of the lot of record upon which they are placed.”*

## **11.2. Security Measures**

General security measures will consist of the following:

- A security plan, updated as needed
- staff screening process
- personnel rules and responsibilities (to be incorporated into a employee handbook in the future)
- physical barriers, including signage, road gates, security fencing with locked gates, and commercial-grade locks on all interior doors
- an alarm system that can notify security personnel and record incidents where physical barriers have been breached;
- theft and loss control program
- video surveillance system.

The Security Officer(s) for the cultivation site are:

- Jennifer Berg (707) 293-8009

Any complaints or problems associated with the operation of the commercial cultivation establishment will be directed to the Security Officer. The Security Officer should make every good faith effort to encourage neighborhood residents to call the designated Security Officer to resolve operating problems, if any, before any calls or complaints are made to the County. The Security Officer should maintain a record of all complaints and resolution of complaints and provide a tally and summary of issues the annual Performance Review Report. The Staff Screening Process is described in the Operations Manual subsection of this Plan.

Personnel rules and responsibilities are as follows:

- Comply with the rules of the Security Plan
- Sign in when entering the facility and sign out when exiting the facility
- Report suspicious activity
- Do not carry any weapons
- Do not engage in lengthy conversation with the public or respond directly to complaints: direct all such concerns to the Security Officer.
- Only authorized vehicles are allowed in operational areas.
- Do not bring backpacks or other unnecessary storage devices that might complicate the theft control program.
- Do not enter restricted areas unless authorized to do so.

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The cultivation operation is accessed off Voigt Road off of Highland Springs Road. Dense vegetation obscures the view of the cultivation compounds from public view. The cultivation site will be fully secured with 6-foot tall deer-fencing.

The cultivation operations are closed to the public. Visitation is only allowed when specific permission is granted. All staff, all suppliers, all product transporters, and all visitor must sign the log in / log out sheet. Signage will be posted that states that the operational areas have restricted access and are closed to the public. The signage will not advertise the presence of Cannabis products.

### **11.3. Theft and Loss Control**

The County requires an inventory system to track Cannabis material and personnel handling the material. This requirement will be fulfilled by following the requirements of the CalCannabis Licensing Program, which creates a Track-and Trace System. Sections 8401 through 8405 (quoted in part) state:

*“The Department shall establish a track-and-trace system for unique identifiers of cannabis and nonmanufactured cannabis products, which all licensees shall use. Each licensee shall report in the track-and-trace system the disposition of immature and mature plants, as required by Section 8402 of this Chapter, and nonmanufactured cannabis products on the licensed premises and any transfers associated with commercial cannabis activity between licensees.*

*(a) The licensee is responsible for the accuracy and completeness of all data and information entered into the track-and- trace system. Data entered into the track-and-trace system is assumed to be accurate and can be used to take enforcement action against the licensee if not corrected.*

*(b) Attempts to falsify or misrepresent data or information entered into the track-and-trace system is a violation and subject to enforcement.*

*(c) Each licensee shall use the track-and-trace system for recording all applicable commercial cannabis activities. Each licensee shall do all of the following activities:*

*(1) Establish an account in the track-and-trace system prior to engaging in any commercial cannabis activities associated with their license and maintain an active account while licensed;*

*(2) Designate at least one of the owners or the responsible party named in the application to be the track-and-trace system administrator....”*

For this cultivation site, the Track-And-Trace System Administrators are:

- Jennifer Berg
- the Security Consultant TBD

Personnel will be granted access within the premises to only those areas necessary to complete job duties, and to those timeframes specifically scheduled for completion of job duties. There will be supervision of tasks or processes with a high potential for diversion (including the loading and unloading of cannabis transportation vehicles). Supervision may include video surveillance and/or the requirement that the Security Officer or their designee be present.

### **11.4. Video Surveillance**

Each cultivation site will have a comprehensive digital video surveillance system. Each camera will have the following specifications:



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- minimum resolution of 1080 pixels
  - digitally record continuously 24 hours per day and at a minimum of 30 frames per second, color.
  - exterior cameras shall be waterproof, I-66 minimum.
  - interior cameras shall be moisture proof.
  - display the current date and time of recorded events
  - interior cameras shall have motion sensors that activates the camera when motion is detected.
  - sufficient lighting shall be provided to illuminate the camera's field of vision
  - thermal (infra-red) motion sensing technology shall be use for perimeter fencing.

The video management software shall be capable of integrating cameras with door alarms. The video surveillance system shall be capable of recording all pre-determined surveillance areas in any lighting conditions. The video surveillance system shall be capable of supporting remote access by the permittee. To the extent reasonably possible, all video surveillance cameras shall be installed in a manner that prevents intentional obstruction, tampering with, and/or disabling.

Areas that shall be recorded on the video surveillance system include, but are not limited to, the following:

- a. The perimeter of the cannabis cultivation site and cannabis nursery,
- b. Areas where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises;
- c. Areas where cannabis is destroyed;
- d. Limited-access areas;
- e. Security rooms;
- f. Areas containing surveillance-system storage devices, in which case, at least one camera shall record the access points to such an area; and
- g. The interior and exterior of all entrances and exits to the cannabis cultivation sites and cannabis nursery including all buildings where cannabis or cannabis products are weighed, packed, stored, quarantined, loaded and/or unloaded for transportation, prepared, or moved within the premises.

All recording shall be located in a secure area on the premises, in an access and environment-controlled environment which is separate from the room where the computer and monitoring equipment is located. All surveillance recordings shall be kept on the applicant's recording device or other approved location for a minimum of 30 days. Data transfer will be by coax cable or by Wi-Fi router. Power supplies shall be self-contained, such as solar arrays and batteries.

## **11.5. Fencing**

The cultivation site will be enclosed with a sturdy fence. The posts should be set in the ground and should be made of steel tubing or lumber. Terminal posts should be set in concrete or otherwise anchored to prevent leaning under the tension of stretched fence panels. Post interval should not exceed 10 feet. A top horizontal rail should be installed between each post interval. Fence panels should consist of metal mesh "cyclone" fabric or welded wire mesh. Barbed wire or razor wire is prohibited from use on the top rails. The cultivation site is not viewable to the

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public because the Property is densely vegetated, and the cultivation areas are isolated. Any gate will be large enough for a service vehicle to ingress/egress. The gate will be secured with a metal padlock. Keys or lock combinations should be controlled by the Security Officer.

### **11.6. Maps**

The required maps are provided in the Site Management Plan.

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## 12.0 STORM WATER MANAGEMENT

### 12.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Storm Water Management:

*(a) Intent: To protect the water quality of the surface water and the stormwater management systems managed by Lake County and to evaluate the impact on downstream property owners.*

*(b) All permittees shall manage storm water runoff to protect downstream receiving water bodies from water quality degradation.*

*(c) All cultivation activities shall comply with the California State Water Board, the Central Valley Regional Water Quality Control Board, and the North Coast Region Water Quality Control Board orders, regulations, and procedures as appropriate.*

*(d) Outdoor cultivation, including any topsoil, pest management, or fertilizer used for the cultivation cannabis shall not be located within 100 feet of any spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool. For purposes of determining the edge of Clear Lake, the setback shall be measured from the full lake level of 7.79 feet on the Rumsey Gauge.*

*(e) The illicit discharge of irrigation or storm water from the premises, as defined in Title 40 of the Code of Federal Regulations, Section 122.26, which could result in degradation of water quality of any water body is prohibited.*

*(f) All permittees shall prepare a Storm Water Management Plan based on the requirements of the California Regional Water Quality Control Board Central Valley Region or the California Regional Water Quality Control Board North Coast Region to be approved by the Lake County Water Resources Department. In addition to those requirements, the plan shall include:*

*a. Identification of any Lake County maintained drainage or conveyance system that the stormwater is discharged into and documentation that the stormwater discharge is in compliance with the design parameters of those structures.*

*b. Identification of any public roads and bridges that are downstream of the discharge point and documentation that the stormwater discharge is in compliance with the design parameters of any such bridges.*

*c. Documentation that the discharge of stormwater from the site will not increase the volume of water that historically has flow onto adjacent properties.*

*d. Documentation that the discharge of stormwater will not increase flood elevations downstream of the discharge point.*

*e. Documentation that the discharge of stormwater will not degrade water quality of any water body.*

*f. Documentation of compliance with the requirements of Chapter 29, Storm Water Management Ordinance of the Lake County Ordinance Code.*

*g. Describe the proposed grading of the property.*

*h. Describe the storm water management system.*

*i. Describe the best management practices (BMPs) that will be used during construction and those that will be used post-construction. Post-construction BMPs shall be maintained through the life of the permit.*

*j. Describe what parameters will be monitored and the methodology of the monitoring program.*

### 12.2. List of Responsible Parties and Contact Information

The Stormwater Manager(s) currently assigned to the cultivation operations are:

- Jennifer Berg
- the Stormwater Management Consultant is: Hurvitz Environmental (707) 824-1690

The stormwater manager shall have primary responsibility and significant authority for the implementation, maintenance, inspection, and amendments to the Stormwater Management Plan. Duties of the stormwater manager include but are not limited to:

- 
- Ensuring full compliance with the Plan and the Chapter 29, Storm Water Management Ordinance of the Lake County Ordinance Code;
  - Implementing all elements of the Plan, including but not limited to implementation of prompt and effective erosion and sediment control measures, and implementing all non-storm water management, and materials and waste management activities (such as monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.);
  - Inspections (pre-storm, during storm, and post-storm) or designating qualified personnel to do so;
  - Routine inspections as specified in the cultivation operation's specifications or described in the Plan;
  - Preparing any annual compliance certification;
  - Ensuring elimination of all unauthorized discharges;
  - The storm water manager shall be assigned authority to mobilize crews to make immediate repairs to the control measures;
  - Coordinate with the landowner or cultivator to assure all the necessary corrections/repairs are made immediately, and that the project complies with the Plan and relevant permits.

## **12.3. Compliance**

### **12.3.1. Setbacks and Buffers**

The Ordinance requires that all cultivation operations be located at least 100 feet away from all waterbodies (i.e. spring, top of bank of any creek or seasonal stream, edge of lake, wetland or vernal pool). The Water Board requires a 100-foot setback from Class II watercourses. This project is in compliance with the Cannabis General Order setback requirements

### **12.3.2. Water Board Permitting**

This cultivation operation is enrolled as a Tier II / Low Risk cultivation operation in the State Water Resources Control Board's *Order WQ 2019-0001-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities* (General Order). Waste Discharge ID# 5S17CC429060. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices, buffer zones, sediment and erosion controls, inspections and reporting, and regulatory oversight. Note also that a sediment and erosion control plan is being implemented as part of the larger Site Management Plan included with this submittal:

Hurvitz Environmental Services Inc / Site Management Plan for the Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California.

The cultivation operation will not alter the hydrology of the Property significantly. Establishment of the cultivation operation requires no grading because gardens will be located on land that is

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relatively flat or has naturally gentle slopes. In general, stormwater on the Property infiltrates the soil. Should a new facility be planned and constructed that would significantly impact hydrological function, the Ordinance requires documentation that downstream hydrology and public roads and bridges will not be negatively impacted.

## **12.4. Storm Water Management**

### **12.4.1. Water Pollution Control Schedule**

BMPs should be deployed in a sequence to follow the progress of site preparation / tilling / cultivation. As the locations of soil disturbance change, erosion and sedimentation controls should be adjusted accordingly to control storm water runoff at the downgrade perimeter and drain inlets. BMPs should be mobilized as follows:

- Year-round:
  - The site manager or stormwater manager should monitor weather using National Weather Service reports (<https://www.weather.gov/>) to track conditions and alert crews to the onset of rainfall events.
  - Disturbed soil areas should be stabilized with temporary erosion control or with permanent erosion control as soon as possible after grading or construction is complete.
- During the rainy season:
  - Disturbed areas should be stabilized with temporary or permanent erosion control before rain events.
  - Disturbed areas that are substantially complete should be stabilized with permanent erosion control (soil stabilization) and vegetation (if within seeding window for seed establishment).
  - Prior to forecast storm events, temporary erosion control BMPs should be deployed and inspected.
- During the non-rainy season:
  - The project schedule should sequence earth-moving activities with the installation of both erosion control and sediment control measures. The schedule should be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to grading.

Sufficient quantities of temporary sediment control materials should be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies. This includes implementation requirements for active areas and non-active areas before the onset of rain. The following table summarizes the general schedule of implementation of site BMPs.

**Water Pollution Control Schedule**

<b>Phase, Activity, or Milestone</b>	<b>Date</b>
File any needed permit registration documents	immediately
Implementation of rainy season BMPs	October 1 <sup>st</sup> of every year
Rainy season begins	October 15
Implementation of dry season BMPs	April 1 <sup>st</sup> of every year

Phase, Activity, or Milestone	Date
Dry season begins	April 15
Repair / replacement of erosion control devices	see BMP section of the Site Mgmt Plan
Site inspections	see Inspection section of the Site Mgmt Plan
Submit Annual Report	annually, as required
Expansion / modification of cultivation operational area	modify this Plan within 30 days

## 12.4.2. Pollutant Source Identification

### *Inventory of Materials and Activities that May Pollute Storm Water*

Construction or cultivation activities that have the potential to contribute sediment to storm water discharges include:

- Tilling, grading and excavation operations;
- Soil import/export operations;
- Structure installation process; and
- Paving operations.

The following table provides a list of materials that may be used and activities that may be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff.

#### Summary of Potential Project Pollutant Other Than Sediment

Activity/Material Type	Potential Pollutant
Vehicle lubricants and fuels, including oil, grease, diesel and gasoline, and coolants	Petroleum hydrocarbons, volatile organic compounds (VOCs)
Portland cement, masonry, and concrete products, muriatic acid, etc.	Materials with a low or high pH, materials with high alkalinity, metals
Road base and subbase material	Materials with high alkalinity or high pH, metals
Gardening materials and wastes	Pesticides, nutrient pollution (nitrates, phosphates, biological oxygen demand, etc.), metals
Treated lumber (materials and waste)	Arsenic, copper, other metals, creosote
Material packaging and site personnel	General litter (municipal solid waste, universal waste)
Portable toilets	Septic waste (fecal coliform, biological oxygen demand)

### Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures within the project site:

- sufficient buffer distances between cultivation areas and drainages
- gravel armoring on driveways and roads
- preservation of existing vegetation
- application of mulch (wood chips) to exposed soil

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### 12.4.3. Best Management Practices

Resources consulted for BMP selection included:

- Central Valley Region's Best Management Practices Manual for Cannabis Cultivation. Appendix A in: Waste Discharge Requirements for Cannabis Cultivation Order R5-2015-0113.
- California Stormwater Quality Association. 2011. California Stormwater Best Management Practice Handbook – Construction. California Stormwater Quality Association, Menlo Park, California 886 pp.
- California Stormwater Quality Association. 2014. Stormwater Best Management Practice Handbook Portal: Industrial and Commercial. California Stormwater Quality Association, Menlo Park, California. 474 pp.
- The California Department of Transportation's Construction Site BMPs Handbook, available electronically at <http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>
- The California Department of Transportation's Construction Site BMP Fact Sheets, available electronically at <http://www.dot.ca.gov/hq/construc/stormwater/factsheets.htm>
- USEPA NPDES Storm Water Program's National Menu of BMPs website at <http://www.epa.gov/npdes/stormwater/menuofbmps>

Sections discussing BTPC (Best Practical Treatment or Control) are discussed within the Site Management Plan.

#### ***Erosion Control***

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will implement the following practices for effective temporary and final erosion control:

- Preserve existing vegetation where required and when feasible;
- Apply temporary erosion control to exposed areas. Reapply as necessary to maintain effectiveness;
- Implement temporary erosion control measures at regular intervals throughout the defined rainy season to achieve and maintain stability. Implement erosion control prior to the defined rainy season;
- Control erosion in concentrated flow paths by applying erosion control devices.
- Divert run-on and stormwater generated from within the facility away from all erodible materials; and
- If sediment traps or basins are installed, ensure that they are working properly and emptied of accumulated sediment and litter.

Specific erosion control BMPs that can be implemented are listed here and the Construction and Industrial BMP fact sheets are included in the Appendix of the Site Management Plan.

- EC-2: Preservation of Existing Vegetation
- EC-3: Hydraulic Mulch
- EC-4: Hydroseeding
- EC-5: Soil Binders
- EC-6: Straw Mulch

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- EC-7: Geotextiles & Mats
  - EC-8: Wood Mulching
  - EC-9: Earth Dikes & Drainage Swales
  - SC-33: Outdoor Storage of Raw Materials
  - SC-40: Contaminated or Erodible Surfaces
  - TC-30: Vegetated Swale
  - TC-31: Vegetated Buffer Strip

Erosion and sediment control diagrams are provided in the Site Management Plan that indicate the recommended type and placement of erosion control devices.

### ***Sediment Control***

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate sediment control measures as needed.

Specific sediment control BMPs that can be implemented are listed here:

- SE-1: Silt Fence
- SE-3: Sediment Trap
- SE-5: Fiber Rolls
- SE-6: Gravel Bag Berm
- SE-8: Sand Bag Barrier
- SE-9: Straw Bale Barrier
- TC-32: Bioretention

Erosion and sediment control measures are discussed within the Site Management Plan.

### ***Road Maintenance***

The property is accessed via Voigt Road off of Highland Springs Road (a paved road). This road system consists of private unpaved roads that are well designed and constructed.

The driveways and access roads are typically armored with gravel and follow ridgelines and gentle contours. Most sections are well graveled. There are no rolling dips or water bars. Driveways and roads will be maintained so that significant erosion does not occur. This may include wetting dusty roads, armoring with gravel or asphalt, patching holes, and maintaining drainage features such as side ditches.

The following guidebook should be referenced for road maintenance:

- Handbook for Forest, Ranch, & Rural Roads: A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads.  
[available at:  
<http://www.pacificwatershed.com/sites/default/files/RoadsEnglishBOOKapril2015b.pdf>]



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### ***Monitoring / BMP Inspection and Maintenance***

Sufficient quantities of temporary sediment control materials should be maintained on-site throughout the rainy season, to allow implementation of temporary erosion and sediment controls in the event of predicted rain, and for rapid response to failures or emergencies.

A visual monitoring (inspection) program should be implemented, and an inspection would ideally be performed prior to each qualifying rain event and contain the following focal areas:

- All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources
- All BMPs to identify whether they have been properly implemented
- Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard

Note that stormwater sampling procedures are discussed in the Water Use subsection.

### ***Training***

A copy of the Plan should be made available to the site personnel or contractor representatives engaged in the maintenance or installation of BMPs. Site inspectors observing pollution caused by ineffective construction or cultivation practices should inform site personnel of appropriate and proper erosion and sedimentation control practices, along with special follow-up inspection for further training. The Stormwater Manager or general contractor should organize orientation sessions with all installation, inspection, and maintenance personnel upon initiation of a specific project activity or change in key personnel. These sessions should be setup to ensure that all contractor and sub-contractor operations are implemented in accordance with this Plan. Training sessions should be included as part of regular safety meetings to familiarize works with the requirements of the Plan.

## **12.5. Maps**

The required maps are provided in the Site Management Plan.

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## 13.0 WASTE MANAGEMENT

### 13.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Waste Management:

*(a) Intent: To minimize the generation of waste and dispose of such waste properly, to prevent the release of hazardous waste into the environment, minimize the generation of cannabis vegetative waste and dispose of cannabis vegetative waste properly, and manage growing medium and dispose of growing medium properly.*

*(b) This section shall include the following components:*

*a. Solid Waste Management*

*The solid waste section shall include:*

- 1. Provide an estimate of the amount of solid waste that will be generated on an annual basis and daily during peak operational seasons, broken down into the following categories: paper; glass; metal; electronics; plastic; organics; inerts; household hazardous waste; special waste, and mixed residue*
- 2. Describe how the permittee will minimize solid waste generation, including working with vendors to minimize packaging.*
- 3. Describe the waste collection frequency and method.*
- 4. Describe how solid waste will be temporarily stored prior to transport to a compost, recycling, or final disposal location.*
- 5. Describe the composting, recycling, or final disposal location for each of the above categories of solid waste.*

*b. Hazardous Waste Management*

*The hazardous waste section shall include:*

*1. Hazard Analysis.*

*The applicant shall conduct a hazard analysis to identify or evaluate known or reasonably foreseeable hazards for each type of cannabis product produced at their facility in order to determine whether there exist any hazards requiring a preventive control. The hazard analysis shall include:*

*The identification of potential hazards, including:*

- i. Biological hazards, including microbiological hazards;*
- ii. Chemical hazards, including radiological hazards, pesticide(s) contamination, solvent or other residue, natural toxins, decomposition, unapproved additives, or food allergens; and/or*
- iii. Physical hazards, such as stone, glass, metal fragments, hair or insects.*

*The evaluation of the hazards identified in order to assess the severity of any illness or injury that may occur as a result of a given hazard, and the probability that the hazard will occur in the absence of preventive controls.*

*The hazard evaluation shall consider the effect of the following on the safety of the finished cannabis product for the intended consumer:*

- i) The sanitation conditions of the manufacturing premises;*
- ii) The product formulation process;*
- iii) The design, function and condition of the manufacturing facility and its equipment;*
- iv) The ingredients and components used in a given cannabis product;*
- v) The operation's transportation and transfer practices;*
- vi) The facility's manufacturing and processing procedures;*
- vii) The facility's packaging and labeling activities;*
- viii) The storage of components and/or the finished cannabis product;*
- ix) The intended or reasonably foreseeable use of the finished cannabis product.*
- x) Any other relevant factors.*

*(2) Management Plan*

*The Management Plan shall:*

- 
- i. Identify all Resource Conservation and Recovery Act (RCRA), Non-RCRA hazardous waste and Universal wastes and the volume of each.
  - ii. Identify all containers and container management.
  - iii. Describe storage locations and chemical segregation procedures.
  - iv. Describe hazardous waste manifest and recordkeeping protocol.
  - v. Outline inspection procedures.
  - vi. Identify emergency spill response procedures.
  - vii. Describe staff responsibilities.
  - viii. Describe the staff training program.
  - ix. Describe the methodology on how the amount of hazardous materials and waste that is generated on the site, the amount that is recycled, and the amount and where hazardous materials and waste is disposed of, is measured, and
  - x. Include a map of any private drinking water well, spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool on the lot of record or within 100 feet of the lot of record and a 100 foot setback from any identified private drinking water well, spring, top of bank of any creek or seasonal stream, edge of lake, delineated wetland or vernal pool. The map shall also include any public water supply well on the lot of record or within 200 feet of the lot of record and a 200 foot setback from any public water supply well.

Pursuant to the California Health and Safety Code, the use of hazardous materials shall be prohibited except for limited quantities of hazardous materials that are below State threshold levels of 55 gallons of liquid, 500 pounds of solid, or 200 cubic feet of compressed gas. The production of any Hazardous Waste as part of the cultivation process is prohibited.

**(c) Cannabis Vegetative Material Waste Management**

The cannabis vegetative material waste management section shall include:

- (1) Provide an estimate of the type and amount of cannabis vegetative waste that will be generated on an annual basis.
- (2) Describe how the permittee will minimize cannabis vegetative waste generation.
- (3) Describe how solid waste will be disposed.
- (4) Describe the methodology on how the amount of cannabis vegetative waste that is generated on the site, the amount that is recycled, and the amount and where cannabis vegetative waste is disposed of is measured.

**(d) Growing Medium Management**

The growing medium management section shall include:

- (1) Provide an estimate of the type and amount of new growing medium that will be used and amount of growing medium will be disposed of on an annual basis.
- (2) Describe how the permittee will minimize growing medium waste generation.
- (3) Describe any non-organic content in the growing medium used (such as vermiculite, silica gel, or other non-organic additives).
- (4) Describe how growing medium waste will be disposed.
- (5) Describe the methodology on how the amount of growing medium waste that is generated on the site, the amount that is recycled, and the amount and where growing medium waste is disposed of, is measured.

## **13.2. Solid Waste Management**

### **13.2.1. Solid Waste Sources and Volumes**

The volume of solid waste generated at the cultivation site is estimated below on a peak daily basis and an annual basis, in pounds.

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### Estimated Solid Waste Generation Per Cultivation Site

	Annual Basis (pounds per year)	Peak daily (pounds per day)
Paper	10	<1
Glass	10	<1
Metal	10	<1
Electronics	1	n/a
Plastic	100	10
Organics	1,000	100
Inerts*	10	<1
Household hazardous waste	1	n/a
Special waste	1	n/a
Mixed residue	10	<1
* Inert waste is waste which is neither chemically nor biologically reactive and will not decompose. Examples are sand and concrete.		

#### 13.2.2. Waste Collection, Storage, and Disposal

At least one waste bin will be located within the cultivation compound. Waste bins will consist of trash cans (20 or 35 gallon) with lids or roll-off dumpsters with lids. The locations of waste bins / containers are shown on the site maps within the Site Management Plan.

Recyclables will be segregated from solid waste and stored in bins. At weekly intervals, staff should transfer them by truck in trash cans, with tight lids or plastic garbage bags and tarped loads and deposit them in an appropriate recycling facility. Recyclables such as scrap metal, glass, metal and plastic containers, can be conveniently unloaded at a recycling drop-off center (a Lake County Integrated Waste Management facility or private facility). Cardboard and newspaper may be recycled or mixed in with other composting materials.

Yard waste, green waste, and other compostable materials will be segregated from the solid waste and shredded and composted onsite for reuse as mulch, or as a soil amendment, or deposited at an appropriate transfer facility. Compost and recyclable wood can be dropped off at any compost facility where it is processed as new compost. Household toxic materials will be segregated from the solid waste and disposed of at a Lake County Integrated Waste Management facility.

Waste will be hauled to an appropriate licensed facility by a private waste-hauling contractor, such as Waste Management, Inc., or C & S Waste Solutions, or by cultivation operation staff. The Lake County Integrated Waste Management facilities are:

- Eastlake Landfill, 16015 Davis Ave, Clearlake
- Lake County Waste Solutions Transfer Station and Recycling Center, 230 Soda Bay Road, Lakeport
- South Lake Refuse and Recycling Center, 16015 Davis Street, Clearlake

- 
- Quackenbush Mountain Resource Recovery and Compost Facility, 16520 Davis Street, Clearlake

The following material handling and waste management measures will be implemented:

- Prevent or minimize handling of wastes that can be readily mobilized by contact with stormwater during a storm event;
- Contain all stored wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with stormwater during handling;
- Cover waste disposal containers and material storage containers when not in use;
- Divert run-on and stormwater generated from within the facility away from all stockpiled materials;
- Clean all spills of wastes that occur during handling in accordance with the spill response procedures); and
- Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with chemical/industrial materials or wastes.

A sandbag barrier (Construction BMP Factsheet SE-8) can be placed around waste storage areas to prevent stormwater run-on from adjacent upstream areas. Materials can be elevated with pallets or cement blocks to minimize contact with stormwater. Spill clean-up materials, material safety data sheets, a material inventory, and emergency contact numbers should be maintained and stored in the residence or shipping container.

To reduce or eliminate pollution of storm water from stockpiles of soil and cultivation materials, stockpiles should be surrounded with sediment controls (Construction Factsheets BMP SE-5: Fiber Rolls, SE-8: Sandbag Barrier, and WM-3 Stockpile Management) as needed. Plastic covers can be used, as needed, before rain events or before strong winds begin.

BTMPs will be implemented to minimize storm water contact with waste materials and prevent waste discharges. Solid waste should be removed and disposed off-site at least weekly at a proper receiving facility. Any chemicals will be stored in the shipping containers or sheds. Chemical wastes will be appropriately and clearly marked in containers and segregated from other non-waste materials.

Storage of soil amendments and chemicals should employ the following CASQA Industrial BMP fact sheets:

- SC-31: Outdoor Liquid Container Storage
- SC-32: Outdoor Equipment Operations
- SC-33: Outdoor Storage of Raw Materials
- SC-34: Waste Handling and Disposal
- SC-40: Contaminated or Erodible Surfaces
- TC-30: Vegetated Swale
- TC-31: Vegetated Buffer Strip.

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### 13.2.3. Solid Waste Reduction

The CDFA CalCannabis Program states, “*Cultivators must comply with the California Integrated Waste Management Act of 1989, which requires that all California cities and counties reduce, recycle, and compost at least 50 percent of wastes by 2000.*” (CDFA 2017)

Solid waste should be reduced using some combination of the following strategies and activities:

- Provide filtered water and dedicated cups instead of bottled water for staff.
- Use biodegradable containers.
- Use durable materials to reduce the use of disposable materials.
- Preferably select vendors that use reusable packaging and shipping containers; encourage vendors to do so.
- Minimize the volume of packaging material required by selecting products packaged efficiently or by buying in bulk.
- Grow cannabis plants in the ground instead of in bags, where possible.
- Employ soil fertility practices, such as nitrogen fixation cover crops and mulching, to reduce the importation of fertilizers and soil amendments.
- Use electricity-powered vehicles and equipment and install a solar array and battery storage.

## 13.3. Hazards and Hazardous Waste

### 13.3.1. Hazard Analysis

The CalCannabis Licensing Program regulations (Section 8102[b][19]) would require that applicants have conducted a hazardous materials record search of the EnviroStor database for the proposed premises. If hazardous sites were encountered, the regulations require that applicants provide documentation of protocols implemented to protect employee health and safety.

The following hazardous materials databases were queried on April 10, 2021.

- EnviroStor is an online search and Geographic Information System tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.
- GeoTracker is a geographic information system maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at the Internet address (URL) = <http://geotracker.waterboards.ca.gov/>.

The GeoTracker database and EnviroStor database did not report contamination cases or hazardous material usage on the Property or adjacent properties. The nearest contamination case is 1800 feet away however is under evaluation (4745 Highland Springs Road). There was no indication that the Property has previously been used for an industrial purpose.

This Hazard Analysis analyzes only the cultivation, harvest, trimming, and curing of Cannabis. Cannabis will not be processed or manufactured at this operation. If Cannabis is processed or manufactured at this facility, this Hazard Analysis will be expanded and revised.

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### ***Potential Biological Hazards***

For unprocessed Cannabis, the primary biological hazard is microbiological, and specifically, fungal growth. In rare instances, some Cannabis crops can be contaminated with fecal coliforms that derive from soils or improper hygiene. Insects and arachnids, such as mites, could also be present on Cannabis product. For cultivation staff, the biological hazards are snake bites, insect stings, ticks, and weather exposure.

### ***Potential Chemical Hazards***

For unprocessed Cannabis, the primary chemical hazards are chemical residues: fertilizers; insecticides; and fungicides. Petroleum product usage could also lead to contamination of Cannabis product or soil. For cultivation staff, the chemical hazards are exposure to hazardous chemicals.

### ***Potential Physical Hazards***

For unprocessed Cannabis product, physical hazards include the introduction of material fragments such as stone, glass, metal fragments, or hair. Such contamination could occur from a variety of sources, such as fugitive dust, dirty containers during transport, etc. For cultivation staff, the physical hazards are cuts by sharp objects, crushing by falling objects, and weather exposure.

## **13.3.2. Hazard Evaluation**

### ***Evaluation of Biological Hazards***

Arthropod infestations and fungal growths are common hazards. Arthropod infestations and fungal vectors and fungal growth will be controlled in various ways. Regular testing for fungal spores on raw product should be conducted. If a biological contaminant is found, the incident should be investigated to determine the source. Areas inside cultivation compounds can be graveled or paved to suppress dust and mud. Live traps may be deployed to remove rodents from operational areas. Disposable coveralls (e.g. Tyvek) can be used to increase sanitation levels and reduce vectoring of mites and other pests. A clothing changing station / mudroom can be provided for employees so that street clothing is separated from cultivation clothing. The number of workers and visitors should be minimized, as mites can travel on clothes. Increasing ventilation, such as the addition of fans, can lower humidity levels and discourage fungal growth.

To reduce the risk of snake bites, insect stings, ticks, and weather exposure, staff should be required to wear personal protective equipment and stay hydrated. These hazards are easily mitigated by taking precautions in the field.

### ***Evaluation of Potential Chemical Hazards***

Chemical contamination of raw product is possible, but unlikely. Regular testing for chemical residues on raw product should be performed. Chemical contamination can be reduced by implementation of Best Management Practices, which are identified in other subsections of this Plan. The use of organic-certified chemicals will also reduce this hazard significantly.

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For cultivation staff, the risk of chemical exposure can be reduced using personal protective equipment and the implementation of Best Management Practices, which are identified in other subsections of this Plan.

### ***Evaluation of Potential Physical Hazards***

For unprocessed Cannabis product, contamination of raw product by physical residues is relatively common, but easy to avoid. Facilities should be kept as clean as possible. Disposable coveralls (e.g. Tyvek) can be used to increase sanitation levels. Plastic sheeting can be used when raw product must be handled or stored. Equipment, such as scissors and saws, will be sanitized with ethanol.

For cultivation staff, the risk of physical hazards may be reduced by means of personal protective equipment.

## **13.4. Hazardous Waste Management Plan**

Cannabis cultivation operations may involve the use of hazardous materials, such as fuel for power equipment and generators, and pesticides. Transport, storage, and use of these materials could endanger human health and the environment in the event that upset, or accident conditions cause a release of the materials. Numerous existing laws and regulations are designed to prevent spills of hazardous materials and limit damage in the event that such materials are released. The CalCannabis Licensing Program would only authorize lawful cultivation activities that comply with existing laws regarding storage and use of hazardous materials. California Health and Safety Code provisions and the CalARP program would require any cannabis cultivation facility storing more than a threshold quantity of regulated substances to prepare a Hazardous Materials Business Plan. These plans would include emergency response procedures to coordinate response in the event of a release and chemical accident prevention measures. With adherence to existing hazardous materials laws, the risk of accidental releases of hazardous materials from cultivation activities that could cause substantial hazards is considered low.

In addition, the CalCannabis Licensing Program's environmental protection measures (Sections 8301[a][4], 8302[a][5], and 8313 of the proposed regulations, as provided in Appendix A) would minimize potential accidental releases of hazardous materials by requiring licensees to store chemicals in a secure building or shed, and to contain any chemical leaks and immediately clean up any spills. Therefore, the risk of accidental releases of hazardous materials from lawful cannabis cultivation operations would be lower than many other ongoing activities in the State, including existing unpermitted cannabis cultivation activities.

The Lake County Division of Environmental Health is the Certified Unified Program Agency (CUPA) for all of Lake County, dealing with hazardous waste and hazardous materials. The CUPA typically requires a Hazardous Materials Business Plan for the following volumes of hazardous materials: greater than 55 gallons of liquid; 200 standard cubic feet of compressed gas; or 500 pounds of a solid. All permittees shall manage all waste that is hazardous waste, as defined in Section 40141 of Public Resources Code, in compliance with all applicable hazardous-waste statutes and regulations.



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However, the Cannabis Ordinance 3084 limits use of hazardous materials to volumes less than the State threshold: 55 gallons of a liquid; 500 pounds of a solid; or 200 cubic feet of a gas. Ordinance 3084 also prohibits the generation of hazardous waste as part of the Cannabis cultivation process.

Chemicals will be stored in a stormproof shed or Conex container so that stormwater is not contaminated. Chemicals will be properly labeled, properly segregated, and open containers sealed when not in use. Staff, when handling chemicals, will use personal protective equipment such as safety glasses, gloves, dust mask, boots, and pants and long-sleeved shirt. Chemicals will be properly labeled, and open containers sealed when stored. Personal protective equipment such as safety glasses, gloves, dust mask, boots, and pants and long-sleeved shirt, will be used by staff when handling chemicals.

The following mechanized equipment will be used that requires fuels and lubricants: 310J backhoe, and pickup trucks. Rototillers: a quad ATV, chain saw, line trimmer and other hand operate power tools may also be used. Gasoline in 5-gallon jugs will be used to fuel small engines. No significant quantities of petroleum products are currently used on the Project Area. All large equipment maintenance operations should typically occur at service stations outside of the Property. Should vehicle and equipment fueling, or maintenance be performed on the Property, the following CASQA Industrial BMP fact sheets will be followed:

- SC-20: Vehicle and Equipment Fueling
- SC-21: Vehicle and Equipment Cleaning
- SC-22: Vehicle and Equipment Maintenance and Repair

Material Safety Data Sheets (MSDS) will be kept on file for each chemical used at this facility. MSDS sheets will be made available to all staff for viewing. When a new chemical is brought on to this facility, there should be a brief “tailgate” meeting to discuss proper storage, handling, and disposal of the chemical. MSDS for the facility are provided in the Appendix.

The CDFA CalCannabis Program concluded:

*“With adherence to existing hazardous materials laws, the risk of accidental releases of hazardous materials from cultivation activities that could cause substantial hazards is considered low. In general, cannabis cultivation would not make intensive use of hazardous materials. In addition, the Proposed Program’s environmental protection measures (Sections 8301[a][4], 8302[a][5], and 8313 of the proposed regulations, as provided in Appendix A) would minimize potential accidental releases of hazardous materials by requiring licensees to store chemicals in a secure building or shed, and to contain any chemical leaks and immediately clean up any spills. Therefore, the risk of accidental releases of hazardous materials from lawful cannabis cultivation operations would be lower than many other ongoing activities in the state, including existing unpermitted cannabis cultivation activities.” (CDFA 2017)*

*“Cannabis cultivation sites may be located in areas of high risk for wildfire.” (CDFA 2017)*

A sandbag barrier (Construction BMP Factsheet SE-8) can be placed around waste storage areas to prevent stormwater run-on from adjacent upstream areas. Sheds or shipping containers should be used to store hand tools, small parts, and most cultivation materials that can be carried

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by hand. Large items can be stored in the open in the general storage areas. Such materials should be elevated with pallets or cement blocks to minimize contact with stormwater. Spill clean-up materials, material safety data sheets, a material inventory, and emergency contact numbers should be maintained and stored in the residence or shipping container.

To reduce or eliminate pollution of storm water from stockpiles of soil and cultivation materials, stockpiles will be surrounded with sediment controls (Construction BMP Factsheets SE-5: Fiber Rolls, SE-8: Sandbag Barrier, and WM-3 Stockpile Management) as needed. Plastic covers can be used, as needed, before rain events or before strong winds begin.

BMPs will be implemented to minimize storm water contact with waste materials and prevent waste discharges (Construction BMP Factsheet WM-5 Solid Waste Management). Solid waste should be removed and disposed off-site at least weekly at a proper receiving facility. Any chemicals will be stored in the shipping containers or sheds. Chemical wastes will be appropriately and clearly marked in containers and segregated from other non-waste materials.

Storage of soil amendments and chemicals should employ the following CASQA Industrial BMP Fact Sheets:

- SC-31: Outdoor Liquid Container Storage
- SC-32: Outdoor Equipment Operations
- SC-33: Outdoor Storage of Raw Materials
- SC-34: Waste Handling and Disposal
- SC-40: Contaminated or Erodible Surfaces
- TC-30: Vegetated Swale
- TC-31: Vegetated Buffer Strip.

### **13.5. Pollution Prevention and Spill Response**

A pollution prevention and spill response subplan was prepared in the following document:

- Hurvitz Environmental Services Inc, Site Management Plan for the Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California.

This pollution prevention plan prescribes the following practices: good housekeeping; preventative maintenance; other BMPs; spill and leak prevention and response measures, and a monitoring program.

The spill prevention and control plan includes the following components:

- Maintenance of spill kit for petroleum hydrocarbons on site and in fuel supply trucks to include:
  - Containment drum;
  - Oleophilic absorbent pads; and
  - Granular spill absorbent suitable for petroleum, brake fluid, and antifreeze;
- Daily inspection of equipment for oil and fuel leaks;
- Fueling only in the designated area; and
- Training of personnel on handling of leaks (training at tailgate safety meetings).

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## 13.6. Cannabis Vegetative Material Waste Management

### 13.6.1. Types and Volumes of Green Waste

The CDFA CalCannabis Program describes green waste as follows:

*“Green waste is generated throughout the cannabis cultivation process. Some plants fail to reach maturity, pruning generates waste, nuisance weeds must be removed, and other plant material remains unused following harvesting, processing, and preparation for a new crop to be planted. Processing, including trimming, is described in Section 3.8 below.*

*Some cultivators may use sugar leaves, branch stalks, or stems for various cannabis or hemp products; typically, however, after the flowers are harvested, the remainder of the cannabis plant becomes green waste. Removal of some large plants, particularly in outdoor cultivation operations, may require a chainsaw due to the strength and thickness of the plant’s stem. Green waste is generally not piled and stored near active cannabis crops to avoid botrytis or other fungal pest issues that may occur on the waste and spread to the living cannabis plants. Disposal of green waste would follow procedures established by the Proposed Program. On-site composting is an option. If off-site disposal is used, the cultivator would make all cannabis waste unusable and unrecognizable before it leaves the licensed premises by grinding and mixing the green waste with non-consumable solid wastes such that the resulting mixture is at least 50 percent non-cannabis waste. Under Section 8305, Cannabis Waste Management, of the Proposed Program regulations, acceptable types of non-cannabis waste are any nonhazardous compostable materials, as defined in Title 14 of the California Code of Regulations at Section 17852(a)(11). After the waste is ground and mixed, licensees may dispose of it at a manned and permitted solid waste landfill, compostable materials handling facility, or in-vessel digestion facility as described in the regulations.” (CDFA 2017)*

Sources of green waste on this cultivation operation consist of the following:

- mulch, humus, etc.
- landscape maintenance: lawn and weed trimmings, treated lumber, wood fencing, etc.
- Cannabis processing waste: leaves, stems, and root balls that remain after flower harvest, trimming, and grooming; whole dead plants; etc.

Volume of green waste generated by this cultivation operation is estimated at:

- 6cubic yards per month per acre, or 48 cubic yards per year per acre.

Cannabis green waste should be weighed daily, weekly, or as needed, and data should be recorded for reporting requirements.

### 13.6.2. Handling and Disposal of Green Waste

There will be a dedicated area in the cultivation compound where Cannabis waste is handled. This area will be surveilled by video camera, and Cannabis waste will be weighed at regular intervals as part of the Track and Trace Program. Cannabis waste will be handled with appropriate personal protective equipment, including long-sleeved shirts, pants, boots, dust mask, eye protection, and gloves. Cannabis waste will either be composted onsite or disposed at a licensed landfill offsite after rendering it unconsumable.

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Non-cannabis green waste can be shredded in a wood-chipper, as necessary. Green waste can be mixed with soil and inoculated with humus. Compost heaps should be at least one cubic yard in size to generate and sustain necessary heat for composting (to sustain aerobic digestion). Compost heaps should be segregated into batches as they age, with humus being the resulting product after several weeks of composting. Compost heaps should be turned often to encourage aeration and aerobic digestion and supplemental water added to keep the heaps moist, but not wet (to discourage anaerobic digestion). Cannabis waste should be shredded and mixed with at least an equal amount of compostable materials such as food waste, yard waste, or growing medium (to render the cannabis unconsumable). Cannabis waste must be kept inside the locked fence, or other locked compound at all times.

If cannabis waste is to be disposed offsite, it should first be shredded and blended with an equal part of non-consumable material, such as cardboard. Cannabis waste must be kept inside the locked garden area or other locked compound until ready for transport. It would then be transported as solid waste to the proper disposal facility (see Solid Waste Management Plan).

California Department of Food and Agriculture's CalCannabis Cultivation Licensing Program dictates specific Cannabis waste management practices, that will be adopted, as applicable, by this cultivation operation. The following draft regulations from the CalCannabis Cultivation Licensing Program are quoted as follows, and incorporated by reference:

*§ 8305. Cannabis Waste Management*

*(a) For the purposes of this Chapter, "cannabis waste" is waste that is not hazardous waste as defined in Section 40141 of Public Resources Code, and is solid waste, as defined in Section 40191 of Public Resources Code, that contains cannabis and that has been made unusable and unrecognizable in the manner prescribed in subsection (e). A licensee may not sell cannabis waste.*

*(b) A licensee shall manage all waste that is hazardous waste, as defined in Section 40141 of Public Resources Code, in compliance with all applicable hazardous-waste statutes and regulations.*

*(c) A licensee shall dispose of cannabis waste as identified in the licensee's Cultivation Plan approved by the Department. A licensee shall not dispose of cannabis waste in an unsecured waste receptacle, whether in the control of the licensee or not.*

*(d) Cannabis that a licensee intends to render into cannabis waste shall be held in the designated holding area for a minimum of 72 hours. A licensee shall affix to each batch one or more documents with batch information and weight. At no time during the 72-hour hold period may the cannabis be handled, moved, or rendered into cannabis waste. The cannabis the licensee intends to render into cannabis waste is subject to inspection by the Department.*

*(e) A licensee shall make cannabis into cannabis waste by rendering the cannabis unusable and unrecognizable. The licensee shall render the cannabis into cannabis waste before removing the cannabis waste from the licensed premises. A licensee shall render the cannabis into cannabis waste by grinding and incorporating the cannabis with other ground material so that the resulting mixture is at least 50 percent noncannabis material by volume. A licensee shall render cannabis into cannabis waste and track that waste by batch.*

*(f) Cannabis that a licensee wishes to deposit at a compostable materials handling facility or at an in-vessel digestion facility may be rendered cannabis waste by incorporating any nonhazardous compostable material, as defined in Title 14 of the California Code of Regulations*

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at Section 17852 (a)(11), that a compostable materials handling facility or in-vessel digestion facility may lawfully accept.

(g) Unless a licensee will compost onsite, after a licensee renders the cannabis into cannabis waste, a licensee shall do one of the following with the cannabis waste:

- (1) Dispose of the cannabis waste at a manned and fully permitted solid waste landfill;
- (2) Deposit the cannabis waste at a manned solid waste operation or a manned fully permitted compostable materials handling facility; or
- (3) Deposit the cannabis waste at a manned solid waste operation or a manned fully permitted in-vessel digestion facility.

(h) In addition to all other tracking requirements set forth in Sections 8404 and 8405 of this Chapter, a licensee shall use the track-and-trace system and onsite documents to ensure the cannabis waste materials are identified, weighed, and tracked while on the licensed premises and when disposed of or deposited in accordance with subsection (g).

(i) A licensee shall enter the date and time that the cannabis was rendered cannabis waste and the weight of the resulting cannabis waste into the track-and-trace database.

(j) A licensee shall maintain accurate and comprehensive records regarding cannabis waste material that account for, reconcile, and evidence all activity related to the generation and disposal or disposition of cannabis waste. A licensee shall obtain a record from the solid waste facility evidencing the acceptance of the cannabis waste material at the facility. The record shall contain the name and address of the facility, the date, and the volume or weight of the cannabis waste accepted. These documents are records subject to inspection by the Department and shall be kept in compliance with Section 8400 of this Chapter.

(k) A licensee shall enter the date and time of the disposal or deposit of the cannabis waste at a solid waste facility, compostable materials handling facility, or an in-vessel digestion facility into the track-and-trace system.

## **13.7. Growing Medium Management**

The CDFA CalCannabis Program describes soils handling as follows:

*“Soils used in cannabis cultivation may be treated, reused, stockpiled, and/or discarded. For reuse, soils are piled and covered with tarps for an extended period (months to a year) to allow heat from sunlight to destroy any potential soil pathogens or pests. Another practice for soil reuse is to run a compost tea through the soils between harvests to restore soil nutrients. Although it is not a direct component of the Proposed Program, another aspect of soil reuse can include laboratory testing of soil samples to identify nutrient deficiencies or other issues. Identifying such deficiencies allows the soil to be properly treated or amended with fertilizers or other soil amendments, thereby correcting these deficiencies, prior to being reused with a new cannabis crop.” (CDFA 2017)*

*“Outdoor cultivation typically involves planting rooted cannabis cuttings or seeds in the early spring and harvesting the plants in the fall (mid-September through November), after the plants flower. Soils used in the pots or grow bags are typically amended to ensure that nutrients are available to the plants throughout the growing season. Compost teas, which are created by steeping compost material in water, may also be used to fulfill nutrient needs (Ingham 2014). Water and nutrient supplement needs for outdoor cultivation may vary depending on the type of growing container selected. For example, raised beds typically require more watering and additional liquid nutrient application compared to other growing container options.” (CDFA 2017)*

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For the purposes of this Plan, growing medium consists of soil and non-organic amendments (vermiculite, perlite, silica gel, etc.). It does not include fertilizers or organic amendments such as mulch, humus, worm castings. etc.

#### **13.7.1. Types and Volumes of Growing Medium**

The method of growing cannabis is through mixed light greenhouses which will require imported soil medium for planting.

#### **13.7.2. Growing Medium Handling, Disposal, and Waste Reduction**

Growing media waste can be reduced or eliminated by composting and blending old soils with new soils and amendments. No significant amounts of growing media are expected to be disposed. Soil staging areas and compost piles will be located inside the fenced compounds. BTMPs will be employed to ensure that these piles do not contaminate stormwater or cause nuisance dust or odor issues.

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## 14.0 WATER RESOURCES

### 14.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must discuss Water Resources.

### 14.2. Description of Water Resources

The Lake County Groundwater Management Plan, together with the Lake County Water Inventory and Analysis (CDM 2006) and the Lake County Water Demand Forecast (CDM 2006), serve to manage the water resources in Lake County and provide a framework for the County and other water users to implement effective water resource management programs.

Field activities performed by Lee Hurvitz Environmental Services included performing an inventory of all jurisdictional water features within the operational areas and surrounding property. The Site Management Plan was developed using a combination of site visits performed by HES at various time points in 2021, as well as aerial imagery and online database analysis by HES staff.

The Cannabis cultivation operations will use water from an existing well for the cannabis grow project.

The Study Area is located within the Inner North Coast Range geographic subregion, which is contained within the Northwestern California geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately-cold winters. The Study Area and vicinity is in Climate Zone 7 - California's Gray Pine Belt, defined by hot summers and mild but pronounced winters without severe winter cold or high humidity (Sunset, 2021). The topography of the Study Area is mostly flat with gentle slopes and swales found in the southern portion. The elevation ranges from approximately 1,400 feet to 1,470 feet above mean sea level. Drainage runs west, and eventually flows into Thompson Creek, thence Clear Lake.

### 14.3. Water Resource Protection

This cultivation operation is enrolled as a Tier II / Low Risk cultivation operation in the State Water Resources Control Board's *Order WQ-2019-0001-DWQ General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities* (General Order). WDID: 5S17CC429060. Compliance with this Order will ensure that cultivation operations will not significantly impact water resources by using a combination of Best Management Practices, buffer zones, sediment and erosion controls, inspections and reporting, and regulatory oversight. Note also that a sediment and erosion control plan is being implemented as part of the larger Site Management Plan:

- Hurvitz Environmental Services, Inc./Site Management Plan for the Cultivation Operations at 425 & 500 Voigt Road, Lakeport, California.

Potential adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, the filling of wetlands, or by increased erosion

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and sedimentation in receiving water bodies due to soil disturbance. Project implementation will not directly impact any channels or wetlands. Soil disturbance from project implementation could increase erosion and sedimentation. Regulations at both the County and State levels require creation and implementation of an erosion control plan/stormwater management plan. Furthermore, if the total area of ground disturbance from project implementation is greater than 1 acre, the project proponent will need to enroll for coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ).

### **14.3.1. Avoidance and Minimization Measures**

#### ***Zoning Setbacks and Site Selection***

The County's Cannabis Ordinance requires that all cultivation operations be located at least 100 feet away from all waterbodies (i.e. spring, top of bank of any creek or seasonal stream, edge of lake, wetland or vernal pool). The State Water Resources Control Board's Cannabis General Order requires various setbacks depending upon the type of waterbody (see following table).



### Minimum Riparian Setbacks<sup>1</sup>

Common Name	Watercourse Class	Distance (Low Risk <sup>2</sup> )	Distance (Mod Risk <sup>2</sup> )	Variance <sup>3</sup>
Perennial watercourses, springs, or seeps	I	150 ft.	200 ft.	Compliance Schedule
Intermittent watercourses	II	100 ft.	150 ft.	Compliance Schedule
Ephemeral watercourses	III	50 ft.	100 ft.	Compliance Schedule
Other waterbodies (lakes, etc.) and wetlands		150 ft.	200 ft.	Compliance Schedule

- 1 Riparian setbacks do not apply to man-made irrigation canals, water supply reservoirs, and hydroelectric canals (Watercourse Class IV) that do not support native aquatic species, however cannabis cultivators shall ensure land disturbance, cannabis cultivation activities, and facilities are not located in or disturb the existing riparian and wetland riparian vegetation associated with these Watercourse Class IV waterbodies.
- 2 Risk is defined in Table 1 of this Policy and is based on the natural (prior to land disturbance activities) surface topography.
- 3 Variance to riparian setbacks is only allowed if consistent with this Policy and a work plan and compliance schedule are approved by the applicable Regional Water Board Executive Officer.

### **Vegetative Buffers**

Generous vegetative buffers exist between this cultivation operation and the nearest water resource. These vegetated areas will be preserved as much as possible. The exception are any fire breaks needed for wildfire protection. Areas that are covered in grasses will be regularly mowed or trimmed. Areas that are covered in natural habitats should not be trimmed.

Three freshwater wetlands are mapped in the Study Area. One wetland is a well-developed riverine marsh mapped along the watercourse in the northern portion of the Study Area. The composition of the riverine vegetation includes broadleaf cattail (*Typha latifolia*), curly dock (*Rumex crispus*), rush (*Juncus* sp.) and Himalayan blackberry. This vegetation can be classified as the Holland Type "Coastal and Valley Freshwater Marsh" or as "52.050.00 Cattail Marsh" (CDFW 2020).

Two seasonal wetlands are found in the southeastern portion of the Study Area. Typical plants in these wetlands include Torrey's willowherb (*Epilobium torreyana*), pennyroyal (*Mentha pulegium*), Italian ryegrass (*Festuca perennis*) and a variety of annual herbs. This vegetation

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can be classified as the Holland Type “Coastal and Valley Freshwater Marsh” or as “45.560.00 Rush Marshes” (CDFW 2020)”

A class II watercourse runs adjacent to the property, however it is not located near the proposed cultivation sites.

#### **14.3.2. Best Management Practices**

Water resource protection BMP’s were identified and discussed in the Stormwater Management subsection.

### **14.4. Water Quality Monitoring Program**

#### **14.4.1. Objectives**

The Project Site Monitoring Program should be developed and implemented to address the following objectives:

- To demonstrate that the site is in compliance with all permits and ordinances;
- To determine whether non-visible pollutants are present at the project site and are causing or contributing to exceedances of water quality objectives;
- To determine whether immediate corrective actions, additional BMP implementation, or Plan revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and
- To determine whether BMPs indicated in the Plan are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

Note that water quality monitoring and sampling is also required under the State Water Board’s Cannabis General Order.

#### **14.4.2. Types of Inspections and Frequency**

Based on the project site’s location, construction / cultivation periods, and rainfall erosivity factor, this project should perform inspections at the following times: beginning of the rain season; before and after any storm that produces over 1 inch of rain; and during any storm that produces a significant stormwater discharge. Each inspection event should be logged in the Inspection Log in this Plan or in a separate binder.

The inspectors should be prepared to collect samples and conduct visual inspections. Inspectors are not required to physically collect samples or conduct visual inspections under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms; and
- Outside of scheduled site business hours.

#### **14.4.3. Inspection and Sampling Personnel**

All inspection and sampling activities should be performed by the stormwater manager until site personnel are professionally trained to take over these tasks. The name(s) and contact number(s) of the assigned inspection and sampling personnel are:

- 
- Jennifer Berg
  - the Stormwater Management Consultant is: Hurvitz Environmental (707) 824-1690

#### **14.4.4. Record Keeping and Reports**

The site manager or storm water manager should retain records of all storm water monitoring information and copies of all reports for a period of at least three years. Each inspection event can be logged in the Inspection Log in a binder. These records include:

- The date, place, time of facility inspections, sampling, visual inspections, and/or measurements, including precipitation;
- The individual(s) who performed the facility inspections, sampling, visual inspections, and or measurements;
- The date and approximate time of analyses;
- The individual(s) who performed the analyses;
- Rain gauge readings from site inspections;
- Non-storm water discharge inspections and visual inspections and storm water discharge visual observation records;
- Visual observation and sample collection exception records; and
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual inspections, or inspections.

#### **14.4.5. Visual Inspection Plan**

The inspector is only required to conduct visual observations (inspections) during business hours only. Within 2 business days (48 hours) prior to significant rain events, the inspector should visually observe (inspect):

- All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources (if needed, the site manager should implement appropriate corrective actions);
- All BMPs to identify whether they have been properly implemented in accordance with the Plan (if needed, the site manager shall implement appropriate corrective actions); and
- Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

The inspector should conduct during-rain event visual observations (inspections) at regular intervals during extended storm events. The inspector should visually observe (inspect) storm water discharges at all discharge locations. Within two business days (48 hours) after major rain events, the inspector should conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the Plan accordingly.

For the visual inspections described above, the inspector should observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants. The inspector should maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

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#### **14.4.6. Sampling Plan for Pollutants**

Water sampling is only required if a significant water pollution event occurs. The inspector should analyze one or more effluent samples for any parameters indicating the presence of pollutants during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water. Samples of discharge should be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

The inspector should analyze samples for all applicable pollutant parameters. The inspector should collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample. The inspector should compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. The inspector should keep all field /or analytical data. Samples should be analyzed for the applicable constituents using the USEPA analytical methods.

#### **14.4.7. General Sampling Methodology**

The storm water manager should designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's 2008 Quality Assurance Program Plan. The storm water manager should ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and should use only the sample containers provided by the laboratory to collect and store samples.

The storm water manager should ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. The storm water manager should ensure that all laboratory analyses are conducted according to test procedures under 40 Code of Federal Regulations Part 136 unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the inspectors for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants should be available on the project site prior to a sampling event. Monitoring supplies and equipment should be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel should be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site should include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels,

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personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The storm water manager should obtain and maintain the field-testing instruments for analyzing samples in the field by trained sampling personnel.

Grab samples should be collected and preserved in accordance with the applicable test method. Only personnel trained in proper water quality sampling should collect samples. Samples should be collected by placing a separate lab-provided sample container directly into a stream of water down gradient and within close proximity to the potential non-visible pollutant discharge location. This separate lab-provided sample container should be used to collect water, which should be transferred to sample bottles for laboratory analysis. The up gradient and uncontaminated background samples should be collected first prior to collecting the down gradient to minimize cross-contamination. The sampling personnel should collect the water upgradient of where they are standing. Once the separate lab-provided sample container is filled, the water sample should be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored. To maintain sample integrity and prevent cross-contamination, sampling collection personnel should:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location;
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample;
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection;
- Not leave the cooler lid open for an extended period of time once samples are placed inside;
- Not sample near a running vehicle where exhaust fumes may impact the sample;
- Not touch the exposed end of a sampling tube, if applicable;
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles;
- Not eat, smoke, or drink during sample collection;
- Not sneeze or cough in the direction of an open sample bottle;
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place;
- Decontaminate sampling equipment prior to sample collection using a laboratory-grade soapy water wash, distilled water rinse, and final rinse with distilled water; and
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log. Immediately following collection, sample bottles for laboratory analytical testing should be capped, labeled, documented on a COC form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to a California state-certified laboratory.

## Sample Collection, Preservation, and Analysis for Monitoring Non-visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
VOCs-solvents	EPA 8260B	3 × 40 mL	VOA-glass	Store at 4° C, HCl to pH<2	1 µg/L	14 days
SVOCs	EPA 8270C	1 × 1 L	Glass-amber	Store at 4° C	10 µg/L	7 days
Pesticides	EPA 8081A	1 × 1 L	Glass-amber	Store at 4° C	0.1 µg/L	7 days
Herbicides	EPA 8151A	1 × 1 L	Glass-amber	Store at 4° C	Check lab	7 days
COD	EPA 410.4	1 × 250 mL	Glass-amber	Store at 4° C, H <sub>2</sub> SO <sub>4</sub> to pH<2	5 mg/L	28 days
TDS	EPA 160.1 (TDS)	1 × 100 mL	Polypropylene	None	ppm	Immediate
pH	EPA 150.1	1 × 100 mL	Polypropylene	None	Unitless	Immediate
Alkalinity	SM 2320B	1 × 250 mL	Polypropylene	Store at 4° C	1 mg/L	14 days
Nitrate	EPA 353.2	1 × 125 mL	Polypropylene	Store at 4° C, H <sub>2</sub> SO <sub>4</sub> to pH<2	Check lab	28 days
Phosphate	EPA 365.3	1 × 125 mL	Polypropylene	Store at 4° C	Check lab	28 days
Organic nitrogen	TKN – NH <sub>3</sub>	1 × 1 L	Glass-amber	Store at 4° C, H <sub>2</sub> SO <sub>4</sub> to pH<2	Check lab	28 days
TOC	EPA 415.1	1 × 250 mL	Glass	Store at 4° C, H <sub>2</sub> SO <sub>4</sub> to pH<2	Check lab	28 days
Potassium	EPA 200.7	1 × 250 mL	Polypropylene	Store at 4° C, HNO <sub>3</sub> to pH<2	0.1 mg/L	6 months
Phenols	EPA 8270C	1 × 1 L	Glass-amber	Store at 4° C	Check lab	7 days
Metals (Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Se, Na, Th, Va, Zn)	EPA 6010B/7470A	1 × 250 mL	Polypropylene	Store at 4° C, HNO <sub>3</sub> to pH<2	0.1 mg/L	6 months
Metals (chromium VI)	EPA 7199	1 × 500 mL	Polypropylene	Store at 4° C	1 µg/L	24 hours

**Notes:**

°C = degree(s) Celsius

µg/L = microgram(s) per Liter

COD = chemical oxygen demand

DO = dissolved oxygen

EPA = U.S. Environmental Protection Agency

HCl = hydrogen chloride

H<sub>2</sub>SO<sub>4</sub> = hydrogen sulfate

HNO<sub>3</sub> = nitric acid

L = liter

mg/L = milligrams per liter

mL = milliliter(s)

ppm = parts per million

PCB = polychlorinated biphenyl

SVOC = semi-volatile organic compound

TDS = total dissolved solids

VOA = volatile organic analysis

VOC = volatile organic compound

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## 15.0 WATER USE

### 15.1. Requirements / Goals

According to the Ordinance, the Property Management Plan must have a section on Water Use:

- (a) Intent: To conserve the County's water resources by minimizing the use of water.*
- (b) All permitted activities shall have a legal water source on the premises, and have all local, state, and federal permits required to utilize the water source. If the permitted activity utilizes a shared source of water from another site, such source shall be a legal source, have all local, state, and federal permit required to utilize the water source, and have a written agreement between the owner of the site where the source is located and the permitted activity agreeing to the use of the water source and all terms and conditions of that use.*
- (c) Permittee shall not engage in unlawful or unpermitted drawing of surface water.*
- (d) The use of water provided by a public water supply, unlawful water diversions, transported by a water hauler, bottled water, a water-vending machine, or a retail water facility is prohibited.*
- (e) Where a well is used, the well must be located on the premises or an adjacent parcel. The production well shall have a meter to measure the amount of water pumped. The production wells shall have continuous water level monitors. The methodology of the monitoring program shall be described. A monitoring well of equal depth within the cone of influence of the production well may be substituted for the water level monitoring of the production well. The monitoring wells shall be constructed, and monitoring begun at least three months prior to the use of the supply well. An applicant shall maintain a record of all data collected and shall provide a report of the data collected to the County annually.*
- (f) Water may be supplied by a licensed retail water supplier, as defined in Section 13575 of the Water Code, on an emergency basis. The application shall notify the Department within 7 days of the emergency and provide the following information:*
  - a. A description of the emergency.*
  - b. Identification of the retail water supplier including license number.*
  - c. The volume of water supplied.*
  - d. Actions taken to prevent the emergency in the future.*
- (g) All permittees shall prepare a Water Use Management Plan to be approved by the Lake County Water Resources Department. Said plan shall:*
  - a. Identify the source of water, including location, capacity, and documentation that it is a legal source.*
  - b. Described the proposed irrigation system and methodology.*
  - c. Describe the amount of water projected to be used on a monthly basis for irrigation and separately for all other uses of water and the amount of water to be withdrawn from each source of water on a monthly basis.*

### 15.2. Water Use Management Plan

#### 15.2.1. Water Sources and Metering

The Property does not have municipal water service. The cannabis cultivation operations will use water from an existing well.

The cultivation site should not take water directly from any watercourse. State permits are needed to divert surface water. Note that water may be supplied by a licensed retail water supplier, as defined in Section 13575 of the Water Code, on an emergency basis. The cultivator shall notify the Department within 7 days of the emergency and provide the following information: a description of the emergency; identification of the retail water supplier including license number; the volume of water supplied; and actions taken to prevent the emergency in the future. Note also that the cultivation site should not divert surface water. State permits are needed to use surface water.

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A water meter should be installed for the cultivation site; water consumption should be logged daily. A water budget will be created every year and water use efficiency will be analyzed for the previous year.

### 15.2.2. Estimated Water Use

Water use requirements for outdoor cannabis production are similar to water use requirements for other agricultural crops such as corn (CDFA 2017). CDFA (2017) reports the following regarding the water use for cannabis:

*“According to Hammon et al. (2015), water use requirements for outdoor cannabis production (25-35 inches per year) are generally in line with water use for other agricultural crops, such as corn (20-25 inches per year), alfalfa (30-40 inches per year), tomatoes (15-25 inches per year), peaches (30-40 inches per year), and hops (20-30 inches per year). Lindsey (2012) similarly cites a University of California researcher who suggested that cannabis does well under irrigation management and, as a small-acreage crop, will use far less water than crops such as cotton. Estimates of daily water usage per cannabis plant range from 5 gallons (Live Science 2014) to 6-8 gallons (CDFW 2016).”*

CDFA (2017) concludes the following regarding groundwater impacts from small cultivation operations:

*“Based on the relatively low quantities of water use (from 0.002 to 1.8 acre-feet per year), the likelihood that an individual cultivator or group of cultivators using groundwater from a defined alluvial aquifer would, by themselves, cause substantial groundwater overdraft is considered unlikely, for several reasons. First, groundwater overdraft is typically caused by the combination of various uses in a basin and is not typically attributable to a particular user or set of users; in other words, it is typically a cumulative issue (which is discussed in more detail in Chapter 6, Cumulative Considerations). In addition, the size limitations for cultivation sites under the Proposed Program would limit the maximum extent of water use. For instance, the highest estimate, provided by Hammon et al. (2015), would result in less than 3 acre-feet of annual usage at the largest allowable cultivation site of 1 acre. Finally, no information is available to suggest that there would be high concentrations of cultivators using groundwater from an alluvial basin in a particular location in a manner that could substantially affect neighboring wells.”* (pages 4.8-34 to 4.8-35)

#### Daily Water Consumption

The following estimates were used from the CalCannabis Environmental Impact Report (CDFA 2017):

- 500 Cannabis plants per acre, each requiring 6 gallons per day = 3,000 gallons per day for an acre of Cannabis canopy

This is equivalent to 2.1 gallons per minute for an acre of Cannabis canopy. The County will currently allow up to 1.5 acres of Cannabis canopy for this Property. Thus, the estimated daily requirement is approximately 4 gallons per minute for the project area.

#### Annual Water Consumption



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The Cultivator has estimated water consumption to be 800,000 gallons per year. This is consistent with other cultivation operations. Using the assumptions of 3,800 gallons per day for 2 acres of Cannabis canopy, and a 210-day cultivation season, the estimated annual water demand is estimated at 800,000 gallons for a two acre site per year plus 15,750 gallons for employee water usage (2.46 acre foot per year). The range of values reported in the CalCannabis Environmental Impact Report = from 0.002 to 1.8 acre-feet per year.

### **15.2.3. Water Conservation**

Water conservation practices will be implemented, including some combination of the following strategies and actions:

- selection of plant varieties that are suitable for the climate of the region
- the use of driplines and drip emitters (instead of spray irrigation)
- mulching to reduce evaporation
- water application rates modified from data from soil moisture meters and weather monitoring
- shutoff valves on hoses and water pipes
- daily visual inspections of irrigation systems
- immediate repair of leaking or malfunctioning equipment
- water metering and budgeting

CASQA Construction BMP Fact Sheet NS-1: Water Conservation Practices should be implemented to prevent discharges from water supply equipment. Water application rates should be minimized as necessary to prevent runoff and ponding and water equipment leaks should be repaired immediately. Implement Construction BMP Fact Sheet NS-7: Potable Water / Irrigation to manage the potential pollutants generate during discharges from irrigation lines and unplanned discharges from water sources.

### **15.2.4. Irrigation System**

Water for the cultivation site irrigation would come from an existing well located on the property. A water storage and treatment system would be installed to address water quality issues and make water suitable for cannabis irrigation use. A minimum of five (5) 3,000-gallon storage tanks will be needed for each well water treatment system for each cultivation site for settling and storage of filtered water for irrigation purposes.

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## 16.0 MONITORING AND REPORTING FOR COUNTY LICENSING

### 16.1. Requirements / Goals

According to the Ordinance, the licensee must perform annual compliance monitoring and prepare annual reports as follows:

#### 6. Compliance Monitoring

- i. A compliance monitoring inspection of the cultivation site shall be conducted annually during growing season.*
- ii. The permittee shall pay a compliance monitoring fee established by resolution of the Board of Supervisors prior to the inspection.*
- iii. If there are no violations of the permit or state license during the first five years, the inspection frequency may be reduced by the Director to not less than once every five years.*

#### 7. Annual Reports

##### *i. Performance Review*

*(a) All cannabis permittees shall submit a "Performance Review Report" on an annual basis from their initial date of operation for review and approval by the Planning Commission. The Planning Commission may delegate review of the annual Performance Review Report to the Director at the time of the initial hearing or at any time thereafter. This annual "Performance Review Report" is intended to identify the effectiveness of the approved development permit, use permit, Operations Manual, Operating Standards, and conditions of approval, as well as the identification and implementation of additional procedures as deemed necessary. In the event the Planning Commission identifies problems with specific Performance Review Report that could potentially lead to revocation of the associated development or use permit, the Planning Commission may require the submittal of more frequent "Performance Review Reports."*

*(b) Pursuant to sub-section 6.i. above, the premises shall be inspected by the Department on an annual basis, or less frequently if approved by the Director. A copy of the results from this inspection shall be given to the permittee for inclusion in their "Performance Review Report" to the Department.*

*(c) Compliance monitoring fees pursuant to the County's adopted master fee schedule shall be paid by permittee and accompany the "Performance Review Report" for costs associated with the inspection and the review of the report by County staff.*

*(d) Non-compliance by permittee in allowing the inspection by the Department, or refusal to pay the required fees, or noncompliance in submitting the annual "Performance Review Report" for review by the Planning Commission shall be deemed grounds for a revocation of the development permit or use permit and subject the holder of the permit(s) to the penalties outlined in this Code.*

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## **17.0 LITERATURE CITED AND FURTHER READING**

California Department of Food and Agriculture. 2017. CalCannabis Cultivation Licensing Program Draft Program Environmental Impact Report. State Clearinghouse #2016082077. Prepared by Horizon Water and Environment, LLC, Oakland, California. 484 pp.

California Stormwater Quality Association. 2011. California Stormwater Best Management Practice Handbook – Construction. California Stormwater Quality Association, Menlo Park, California 886 pp.

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Natural Investigations Company/January 27,2021/ Biological Assessment for the Cannabis Cultivation Operation at 425 & 500 Voigt Road, Lakeport, California.

Natural Investigations Company/March 2021/ Cultural Resources Assessment for the Cannabis Cultivation Operation at 425 & 500 Voigt Road, Lakeport, Lake County, California.

HURVITZ Environmental Services, Inc./ Nitrogen Management Plan for the Cannabis Cultivation Operation at 425 & 500 Voigt Road, Lakeport, California. Prepared for Regional Water Quality Control Board.

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HURVITZ Environmental Services, Inc./Water Use/Water Availability Study for the Cannabis Cultivation Operation at 425 & 500 Voigt Road, Lakeport, California.

Newman, J. (editor). 2008. Greenhouse and Nursery Management Practices to Protect Water Quality. Publication Number: 3508. University of California Agriculture and Natural Resources Publications, Oakland, CA. 160 p

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