

# **Cultivation and Operations Manual**

## **EVERGREEN FAMILY FARM, LLC**

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OPERATIONS MANUAL  
EVERGREEN FAMILY FARM LLC

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- Appendix A: Personnel Acknowledgement Form
  - Appendix B: Site Plan
  - Appendix C: Pesticide Storage, Handling and Application Plan
  - Appendix D: Emergency Procedures and Contact Information
  - Appendix E: Cultivation Activities Schedule
  - Appendix F: Material Safety Data Sheets
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## 1. PROJECT SUMMARY

### 1.1. PROJECT DESCRIPTION

EVERGREEN FAMILY FARM LLC is seeking a Conditional Use Permit (application #11978) for 21,688 square feet of existing cannabis cultivation, consisting of 10,288 square feet of mixed-light and 11,400 square feet of outdoor cannabis cultivation in accordance with the County of Humboldt's Ordinance No. 2559 (CMMLUO). Water for irrigation is sourced from an existing groundwater well permitted for agricultural irrigation. Processing, including drying, trimming, and harvest storage, will occur off-site until an existing structure is upgraded to meet commercial standards. Electricity is provided by a solar arrays and diesel generators.

### 1.2. SITE DESCRIPTION

The 160-acre project site (APN 522-024-002) is located in Humboldt County, outside of the community of Willow Creek, on the North side of State Highway 299. The terrain is relatively steep, with natural benches. Elevation ranges from 3,600 feet to 4,200 feet above mean sea level.

The site is located within the Supply Creek, Willow Creek and Campbell Creek-Trinity River watersheds. The parcel is zoned for Timberland Production (TPZ) and has a Humboldt County General Plan Land Use Designation of T.

The project site has historically been used for timber harvest and homesteading. Existing infrastructure on-site includes three cabins, an ag exempt shed, two shipping containers, two ponds, a groundwater well, a point of diversion, and multiple water storage tanks.

### 1.3. STATE AND LOCAL COMPLIANCE

#### 1.3.1. STATE OF CALIFORNIA COMMERCIAL CANNABIS ACTIVITY LICENSE

Upon project approval, Evergreen Family Farm, LLC shall obtain licensure under CDFA. Copies of State licenses shall be posted on the subject parcel, and copies will be made available upon request.

#### 1.3.2. STATE WATER RESOURCES CONTROL BOARD

The applicant is enrolled as a Tier 2 Low Risk discharger (WDID 1\_12CC4292374) under State Water Resources Control Board (SWRCB) Order WQ 2017-0023-DWQ. The SWRCB Order provides a framework for managing water quality, instream flow impacts, and wastewater discharge associated with commercial cannabis cultivation. Dischargers must implement Best Practicable Treatment or Control (BPTC) measures and submit technical and monitoring reports to ensure compliance with the order. The applicant has retained a consultant to prepare a Site Management Plan (SMP) summarizing existing and proposed BPTC measures for compliance with the SWRCB's General Order. Upon completion, the SMP will be submitted to the Humboldt County Planning Department (HCPD).

#### 1.3.3. HUMBOLDT COUNTY BUILDING DEPARTMENT

Building permits for the residences, septic, and accessory structures shall be obtained from the County of Humboldt County Building Department (HCBD) upon approval. Ag Exempt permits shall be obtained for the greenhouses and drying shed. Cabin #3 shall be upgraded to ADA/commercial standards.

### 1.3.4. CAL FIRE

The subject property is located within the State Responsibility Area (SRA) for fire protection. The emergency vehicle turn-around area is located on the driveway leading to Cabin #1. The driveway is approximately 100 feet long, less than 7% grade, and is regularly rocked and maintained to prevent ruts or rills to the road surface. The hammerhead turn-around area is approximately 50 feet wide with well over 15 feet of vertical clearance.

Evergreen Family Farm shall maintain the recommended 100 feet of defensible space around all structures on the property. Existing buildings and proposed greenhouses meet the 30-foot SRA property line setback requirement.

### 1.3.5. CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

A Lake and Stream Bed Alteration (LSA) notification was submitted to CDFW on November 30, 2020. A copy of the notification is on file with HCPD.

The LSA notification includes a domestic point of diversion (POD #1) on the adjacent parcel (APN 522-025-003), the maintenance and repair of four stream crossings (SC #1 and SC #2 on subject parcel and SC #3 and SC #4 on adjacent parcel), and the decommissioning of an on-stream pond (Pond #1) on the subject parcel. Due to signs of instability near the outfall pipe, Timberland Resource Consultants and Tom Leroy, Certified Engineering Geologist, recommend decommissioning the on-stream pond.

Upon Fish and Wildlife approval, a copy of the final Lake and Streambed Alteration Agreement (LSAA) will be filed with HCPD.

### 1.3.6. CULTURAL RESOURCES

No ground disturbing activities are proposed. If buried archaeological or historical resources are encountered during regular cultivation activities, Evergreen Family Farm shall call all work in the immediate area to a temporary halt, and a qualified archaeologist will be contacted to evaluate material(s).

## 2. OPERATIONS MANAGEMENT

### 2.1. WATER SUPPLY AND WATER USE

Water for cannabis cultivation is sourced from a high-yielding groundwater well permitted for agricultural irrigation. The well is located over 200 feet from the nearest watercourse. A Well Completion Report is on file with HCPD.

Irrigation water is stored in HDPE storage tanks. Float valves and water meters shall be installed on all water tanks.

Water for domestic purposes is sourced from an existing groundwater well and a point of diversion (POD-1) located on an unnamed tributary to Supply Creek. Domestic water is stored in a HDPE storage tank.

TABLE 1: INVENTORY OF WATER STORAGE			
STORAGE TYPE	QUANTITY	CAPACITY (GAL)	PROPOSED USE

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HDPE tank	3	2,500	Fire suppression
HDPE tank	4	5,000	Irrigation
HDPE tank	4	2,500	Irrigation
HDPE tank	2	1,500	Irrigation
HDPE tank	1	2,500	Domestic
<b>TOTAL</b>	<b>12</b>	<b>43,000</b>	<b>--</b>

Evergreen Family Farm currently utilizes approximately 250,000 gallons of water per year for cannabis irrigation on APN 522-024-002. The following table outlines the estimated water usage for the proposed cultivation during a typical year. This estimate does not take into account variables such as weather conditions or specific cannabis strains which may have slight effects on overall water usage.

TABLE 2: PROPOSED AGRICULTURAL WATER USE (GAL)											
Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
0	0	0	0	5,000	35,000	60,000	65,000	65,000	20,000	0	0

## 2.2. SITE DRAINAGE, RUNOFF AND EROSION CONTROL

Evergreen Family Farm has developed a plan using the guidelines for best practicable treatments and controls (BPTCs) in accordance with the recommendation of SWRCB General Order. The SMP summarizes erosion and sediment control measures that have been implemented to minimize discharge to surface waters.

Evergreen Family Farm will utilize the following BPTCs to manage stormwater runoff:

1. Maintenance of roads, including rocking and armoring as needed.
2. Cultivation facilities and spoil stockpiles will meet all required setbacks from riparian areas.
3. Regulated products will be safely stored with secondary containments.
4. Proper management of solid, liquid, and cultivation waste.
5. Irrigation and fertilizer application will be applied at agronomic rates.

## 2.3 WATERSHED AND HABITAT PROTECTION

Watercourses and wetlands have been mapped and surveyed by Pacific Watershed Associates technicians and James Reagan, biologist. Copies of those reports are on file with HCPD. No cultivation areas fall within the riparian setbacks of the mapped watercourse and wetland features. There are no known occurrences of threatened, rare, or endangered species near the project site.

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The slope buffers are well-vegetated and adequate as a filter for any errant waste or entrained sediment from managed areas. No spoils from road grading or site grading are stored on the project site.

All filling or earthwork activities will be conducted in accordance with approved the SMP and SWRCB BPTCs. Maintenance and repair strategies for site development and road improvements will utilize best practicable treatment and controls (BPTCs), such as out sloping of roads, installation of water bars, or other appropriate measures, to maintain slope and access road integrity. Proposed cultivation operations will be developed in accordance with SWRCB's BPTCs and the CDFW LSAA to ensure erosion control measures are effective and operations will not allow discharges to riparian areas.

### 2.3.1 INVASIVE SPECIES CONTROL PLAN

The cannabis cultivator shall not plant or seed noxious weeds. Prohibited plant species include those identified in the California Invasive Pest Plant Council's database, available at: [www.cal-ipc.org/paf/](http://www.cal-ipc.org/paf/). Locally native, non-invasive, and nonpersistent grass species may be used for temporary erosion control benefits to stabilize disturbed land and prevent exposure of disturbed land to rainfall. Straw mulch used for erosion control must be weed-free and secured to the ground, if warranted by site conditions.

To prevent transfer of invasive species, all equipment used at the cannabis cultivation site, including excavators, graders, etc., shall be cleaned before arriving and before leaving the site.

### 2.4 ENERGY PLAN

Electricity for cultivation operations is supplied by solar arrays and diesel generators. Solar panels provide power for greenhouse exhaust fans. A diesel generator (Honda 7,000) is used to supply power to mixed-light greenhouses and nursery located at Cultivation Area #1 (CA #1). Domestic power is supplied by diesel generators. An inventory of generators is included in Table 3 below.

MAP-ID	GENERATOR MODEL	MANUFACTURER NOISE RATING	HOURS OF OPERATION	USE PURPOSE
CA #1	Honda EU7000iS	52-58 dBA	20 hours per week/ 80 hours per month	Cultivation
Cabin #1	Honda EU3000iS	50-57 dBA	40 hours per week/ 160 hours per month	Domestic
Cabin #2	Honda EU3000iS	50-57 dBA	40 hours per week/ 160 hours per month	Domestic
Cabin #3	Honda EU7000iS	52-58 dBA	40 hours per week/ 160 hours per month	Domestic

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Generators shall have secondary containment and be shielded to prevent excessive noise levels. Noise levels from all sources including generators and exhaust fans shall not exceed 50 decibels (dBA) at tree lines or habitat areas and 60 dBA at property lines.

#### 2.4.1 LIGHT POLLUTION CONTROL PLAN

When artificial lighting is in use, Evergreen Family Farm shall shield mixed-light and nursery greenhouses so that no light is visible from neighboring properties between sunset and sunrise. The light source should comply with the International Dark Sky Association standards for Lighting Zone 0 and Lighting Zone 1 and be designed to regulate light spillage onto neighboring properties resulting from backlight, uplight, or glare (BUG). Should the Humboldt County Planning Division receive complaints that the lighting is out of alignment or not complying with these standards, the applicant shall submit written verification within ten (10) working days of receiving written notification that the lights' shielding and alignment has been repaired, inspected and corrected as necessary.

#### 2.5 NOISE SOURCE ASSESSMENT AND MITIGATION PLAN

The combined decibel (dBA) level for all noise sources, including generators and exhaust fans, shall not exceed 50 dBAs at any potential habitat area, or tree line, and shall not exceed 60 dBs at the parcel boundary. Based on the manufacturer's noise ratings for the proposed generators, noise levels are not expected to exceed the thresholds listed above. Upon approval, a qualified professional shall measure the noise levels and submit a report to the HCPD to prove compliance with noise standards.

#### 2.6 USE AND STORAGE OF REGULATED PRODUCTS

Evergreen Family Farm shall employ BPTCs when storing, handling, mixing, applying, and disposing of all fertilizers. Evergreen Family Farm practices organic farming methods for all cultivation. Table 4 contains an inventory of agricultural chemicals.

PRODUCT NAME	QUANTITY	PRODUCT TYPE
Bone Meal	150 lbs	Fertilizer
Humic Acid	150 lbs	Soil amendment
Seaweed	250 lbs	Fertilizer
Moca Guano	275 lbs	Fertilizer
Molasses	24 gal	Fertilizer
Azomite	165 lbs	Soil amendment
Nitro Guano	220 lbs	Fertilizer
Black Gold Organic Soil	40,000 lbs	Soil
Rainbow Mix Organic Grow & Bloom	200 lbs	Soil
Dr. Zymes	2 gal	Integrated pest management
Grandevo	4 lbs	Integrated pest management

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The Agent in Charge shall be responsible for proper applications of regulated products and will be trained in accordance with the Department of Agriculture and issued through the Humboldt County Agricultural Department. All nutrients are stored and handled as per manufacturer's recommendation. The designated Ag Chem storage area is in an enclosed shipping container as noted on the attached site plan. Agricultural chemicals shall be stored in secondary containment.

The applicant will enroll with the Humboldt County Environmental Health Department (HCEHD) as the Certified Unified Program Agency (CUPA) and will comply with inventory reporting and response plan requirements.

A copy of the Operations Plan will be kept on site by the Agent in Charge and will contain all material safety data sheets (MSDS) for all regulated products used on site.

## **2.7 FUELS AND OILS**

Gasoline and oil for generators, vehicles, and equipment shall be stored in containers rated for petroleum products and stored in secondary containment in the designated Petroleum Storage Area near Cabin #2. Equipment maintenance and servicing takes place off-site.

## **2.8 WASTE MANAGEMENT PLAN**

### **2.8.1 SOLID WASTE MANAGEMENT**

Garbage and recycling are stored in a secure waste storage area located west of Cabin #2. The waste storage area complies with BPTCs to prevent wildlife tampering and transport of waste to waters of the State. Waste is removed from the property every two weeks and transported to an approved waste disposal facility.

### **2.8.2 CULTIVATION WASTE AND SOIL MANAGEMENT**

Cultivation waste such as root balls, branches, and leaves shall be composted in a designated area away from surface waters as noted on the attached site plan. Spent soil will remain in raised beds, where it will be planted with cover crops or covered with weighted tarps and amended for the following season. Pots containing clones will be washed, rinsed, and reused the following season. Pesticide and fertilizer bags and containers will be stored in the waste storage shed until they can be transported to an off-site recycling or waste disposal facility.

### **2.8.3 WASTEWATER MANAGEMENT**

Domestic wastewater treatment is managed via three septic systems for the existing cabins. The septic leachfield locations are noted on the attached site plan. The applicant shall pursue permitting for the existing septic systems upon project approval.

## **2.9 EMPLOYEE PLAN**

Evergreen Family Farm, LLC is an "agricultural employer" as defined in the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 (commencing with Section 1140) of Division 2 of the Labor Code), and complies with all applicable federal, state and local laws and regulations governing California Agricultural Employers.

### **2.9.1 JOB DESCRIPTIONS AND EMPLOYEE SUMMARY**

- *Agent in Charge*: Oversight and management of the entire facility. Responsibilities will include but not be limited to: personnel, records keeping, budget, and liaison with State and County inspectors as needed.
- *Lead Cultivator*: Oversight and management of the day to day cultivation of commercial cannabis cultivation. This will include but not be limited to: irrigation, fertilization, pesticide management and harvest.

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Evergreen Family Farm, LLC currently performs the role of Agent in Charge and Lead Cultivator, the applicant seasonally employs family members living on site to perform tasks related to cannabis cultivation.

### **2.9.5 EMPLOYEE TRAINING AND SAFETY PRACTICES**

All cultivation and harvesting activities are performed by trained employees on procedures for cultivation, harvesting, use of pruning tools, proper application and storage of pesticides and fertilizers. All staff area provided with proper hand, eye, body Personal Protective Equipment (PPE). Access to onsite cultivation, drying and processing facilities are limited to authorized staff of Evergreen Family Farm, LLC. A copy of the Operations Plan will be kept on site by the Agent in Charge and will contain all material safety data sheets (MSDS), see Appendix F.

### **3.1 ON SITE HOUSING AND PARKING PLAN**

The project site includes three existing cabins. Cabin #1 is occupied by the owner and their family. Cabin #2 and Cabin #3 are currently unoccupied. The applicant proposes to convert Cabin #3 into a commercial/ADA compliant processing building. Bottled drinking water and restrooms are available in all cabins. Domestic wastewater is processed by the existing septic systems as shown on the attached site plan.

Cabin #1 and Cabin #2 each have two 9'x18' parking spaces each. Cabin #3 has four parking spaces.

### **3.2 SECURITY PLAN**

Evergreen Family Farm has implemented security measures to safeguard the product and prevent nuisance from occurring on the property. Security gates are installed along all main roads and access gates. Gates have keyed locks and are kept locked when not in use. The applicant proposes to install an alarm system, game cameras, and motion sensor lights near cultivation areas and appurtenant facilities.

## **4 CULTIVATION PLAN**

### **4.1.1 RECONFIGURATION AND ENVIRONMENTAL SUPERIORITY**

The applicant is proposing to reconfigure cultivation areas within existing footprints to decrease environmental impacts. The proposed reconfiguration will not result in expansion, grading, or tree removal.

Evergreen Family Farm proposes to consolidate all mixed-light greenhouses and nurseries to Cultivation Area #1 (CA #1) located near Cabin #1. The proposed configuration allows the cultivator to use one generator rather than four generators spread out across the entire parcel. Decreasing the number of generators will reduce potential noise impacts to wildlife.

Rather than create a new cultivation area near Cabin #2 (CA #2 West on PWA's April 2019 CMMLUO Site Plan for APN 522-024-002) the applicant is proposing to keep all cultivation within the existing footprints and enclose outdoor cultivation in hoopouses. The proposed dimensions are included in the attached site plan and Table 6 below. Enclosing outdoor cultivation in hoopouses and planting in raised beds will reduce irrigation demands. Consolidating cultivation into three existing areas will reduce the construction impacts, noise, dust, and potential runoff that would

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occur while building a new cultivation area near Cabin #2. Proposed hoophouses will fit within existing cultivation areas. No tree removal or grading is proposed.

The applicant proposes to include an immature plant area (Nursery #2) for the adjacent parcel (APN 522-025-003) on the subject parcel to reduce environmental impacts associated with generator use. Both parcels share ownership, water resources, and drying/storage space. The applicant has applied for 10,000 square feet of full-sun outdoor on the adjacent parcel (#11980). Siting Nursery #2 on the subject parcel is environmentally superior because the adjacent parcel does not currently utilize generators or artificial lighting. Allowing Nursery #2 to share the generator already being used for mixed-light cultivation on the subject parcel reduces potential noise and light impacts on APN 522-025-003.

#### 4.1.2 PROPAGATION

Juvenile plants are obtained from 'mother plants' that demonstrate the desired genetics for the specific cannabis strain. The 'mother plants' shall be kept in designated nursery areas, as noted on the attached Site Plan. Cuttings are sampled from the mother plants and are rooted into a growing medium, to produce 'clones.' Once fully rooted, clones are transplanted into 4" pots inside the Nursery. The juvenile plants are irrigated using hand watering methods. After approximately 10 days, the clones are then transplanted into beds with a soil medium, where they continue their 'vegetative' cycle.

Nursery #1 serves the subject parcel (APN 002) and Nursery #2 serves the adjacent parcel (003). The applicant is proposing to site Nursery #2 on the subject parcel to reduce generator use and reduce environmental impacts.

TABLE 5: IMMATURE PLANT AREAS			
ID	TYPE	SIZE (FT)	TOTAL SQUARE FEET (FT <sup>2</sup> )
Nursery #1	Proposed Nursery	20' x 100'	2,000
Nursery #2	Proposed Nursery (APN 003)	20' x 50'	1,000
TOTAL			3,000

#### 4.1.3 CULTIVATION PLAN AND SCHEDULE

##### EXISTING MIXED-LIGHT CULTIVATION

The applicant is proposing to consolidate all mixed-light cultivation at Cultivation Area #1 near Cabin #1. The proposed cultivation area is composed of five 20' x 100' hoophouses and one 12' x 24' hoophouse for a total of 10,688 square feet of mixed-light cultivation. Mixed-light hoophouses will utilize supplemental string lighting and light deprivation tarps. The applicant is proposing two cycles per year. Solar panels provide power for 36" Snap Fans (two per hoophouse). Lighting is powered by a generator. Water is sourced from a permitted groundwater well.

##### EXISTING OUTDOOR CULTIVATION

Cultivation Area #2 is composed of one 20' x 100' hoophouse and one 34' x 100' hoophouse for a total of 5,400 square feet of outdoor cultivation. Solar panels provide power for 36" Snap Fans (two per hoophouse). Lighting is powered by a generator.

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Cultivation Area #3 is composed of three 20' x 100' hoophouses for a total of 6,000 square feet of outdoor cultivation. Solar panels provide power for 36" Snap Fans (two per hoophouse). Lighting is powered by a generator. Water is source from a permitted groundwater well.

All outdoor cultivation on the subject parcel will be enclosed in poly-vinyl and PVC hoophouses with light-deprivation tarps. No artificial lighting will be used. The applicant is proposing two cycles per year.

The following table includes an inventory of all cultivation areas moving west to east across the subject parcel.

TABLE 4: CULTIVATION AREAS			
ID	CULTIVATION TYPE	DIMENSIONS (FT)	TOTAL SQUARE FEET (FT <sup>2</sup> )
GH #1	Existing Mixed-Light	20 x 100	2,000
GH #2	Existing Mixed-Light	20 x 100	2,000
GH #3	Existing Mixed-Light	20 x 100	2,000
GH #4	Existing Mixed-Light	20 x 100	2,000
GH #5	Existing Mixed-Light	20 x 100	2,000
GH #6	Existing Mixed-Light	12 x 24	288
GH #7	Existing Outdoor Light Deprivation	34 x 100	3,400
GH #8	Existing Outdoor Light Deprivation	20 x 100	2,000
GH #9	Existing Outdoor Light Deprivation	20 x 100	2,000
GH #10	Existing Outdoor Light Deprivation	20 x 100	2,000
GH #11	Existing Outdoor Light Deprivation	20 x 100	2,000
TOTAL			21,688

#### 4.1.4 IRRIGATION PLAN AND SCHEDULE

Irrigation will occur via hand watering methods. Evergreen Family Farm maintains that the amount of irrigation needed is better controlled via hand watering and allows for a more tailored irrigation plan and better plant inspection and nutrient application.

#### 4.1.5 HARVESTING, DRYING AND TRIMMING

Once the *Lead Cultivator* has determined the plants are at their peak, harvest procedures will be initiated. This entails removing the flowering branches from the plant and suspending them in the drying shed with ventilation supplied by oscillating fans. The drying process takes approximately one week. Dried flowers are then 'bucked' off the stalks and into manageable sizes for processing.

The finished product is stored in the drying, curing, harvest storage building before being processed transported to a licensed facility or processing on-site. The waste product or 'trim',

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is collected and placed into bins to be weighed and labeled. The trim will be transported off-site to a licensed manufacturing facility.

#### **4.1.6 PROCESSING**

Processing will be completed off-site at a licensed facility until the applicant can upgrade Cabin #3 to commercial/ADA standards. After permitting and completing the required upgrades, cannabis will be processed in a trim machine operated by Evergreen Family Farm's *Lead Cultivator*. The trimmed material will be placed into sterilized locking lid bins. These bins will be weighed, labeled, logged and sealed. Great care will be taken to ensure that the original numbered corresponding plant tag remains affixed to each bin. The *Agent in Charge* will then deliver the sealed and logged bins to the designated secured area within the processing area.

The waste product from the machines or "trim" will be collected and placed into sterilized locking lid bins. These bins will then be weighed, labeled and sealed for transport and delivery to an offsite, contracted, licensed Facility. All weights will be recorded in the master log. Once securely in the Processed Material Holding Facility, the *Agent in Charge/Lead Cultivator* will begin to weigh, vacuum seal and label individual one-pound packages for distribution. After weighing, labeling and packaging each unit will be placed inside of a lock box or safe inside the designated secured area in the processing facility.

## **5 PRODUCT MANAGEMENT**

### **5.1 PRODUCT TESTING**

Samples will be selected from harvested cannabis strains to be tested by a licensed third-party lab in accordance with State and Local regulations. The finished product shall be labeled with the Evergreen Family Farm, LLC logo and will include tracking identification provided by CDFA's Track and Trace (METRC) program.

### **5.2 PRODUCT INVENTORY AND TRACKING**

Inventory of all plants shall be performed by the *Agent in Charge/Lead Cultivator*. All commercial cannabis will be tracked from clone to packaged product and accounted for and inventoried. Records will be kept at each phase of the harvest and processing operation for reporting and compliance with State and Local regulations. The information recorded for each harvest includes

- ✓ Weight of flowers, byproduct, and trim waste
- ✓ Weight of trimmed buds
- ✓ Staff identification
- ✓ Product ID numbers and product weight
- ✓ Physical location of plant material at all times

#### **5.2.1 REPORTING**

The Master Log will contain reports on the harvest process, providing total weight harvested and trimmed at each weigh point, and compares that to final weight post-trim, including waste. Discrepancies are traced to the source, documented, and reported to the *Agent in Charge*. After investigation, any appropriate corrective measures are taken. All cultivation and harvest records are retained for a minimum of five (5) years.

### **5.3 TRANSPORTATION AND DISTRIBUTION PLAN**

Transportation will be handled via a third party, contracted, licensed transporter/distributor in accordance with MMRSA. All merchantable product will only be distributed through licensed

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medical cannabis dispensaries. Prior to moving packages from the onsite holding facility to another physical location, a transport manifest will be created by the distributor/transporter. This distribution document is required for each movement of packages and will be recorded in the Master Log.

The *Agent in Charge* is responsible for performing a physical inventory of all packages being transported, ensuring that the physical inventory reconciles with the transport manifest, as well as the packaging material is intact and the labeling is secure. The distribution document records the current location and status of the packages, such as "in-transit" or "received." The licensed distributor must also create detailed transport manifests for the package distribution. The manifest contains details such as:

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

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RESOURCES

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<<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=11001-12000&file=11357-11362.9>> Date accessed: July 16, 2014.

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

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<[http://www.ag.ca.gov/cms\\_attachments/press/pdfs/n1601\\_medicalmarijuanaguidelines.pdf](http://www.ag.ca.gov/cms_attachments/press/pdfs/n1601_medicalmarijuanaguidelines.pdf)>

### **Personnel Acknowledgement Form**

It is the intention of EVERGREEN FAMILY FARM, LLC to create an enjoyable, safe, and sane workplace. We feel that understanding and compliance with our Operations Manual will create just that. It is the responsibility of each employee to read and understand the procedures outlined herein. If after reading and reviewing this entire document, you have any questions please see the Agent in Charge immediately for clarification. By signing this document below, it confirms your reading, understanding and adherence to the entire **EVERGREEN FAMILY FARM, LLC OPERATIONS MANUAL FOR MEDICAL CANNABIS CULTIVATION.**

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***Employee sign and date***

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***Agent in Charge sign and date***

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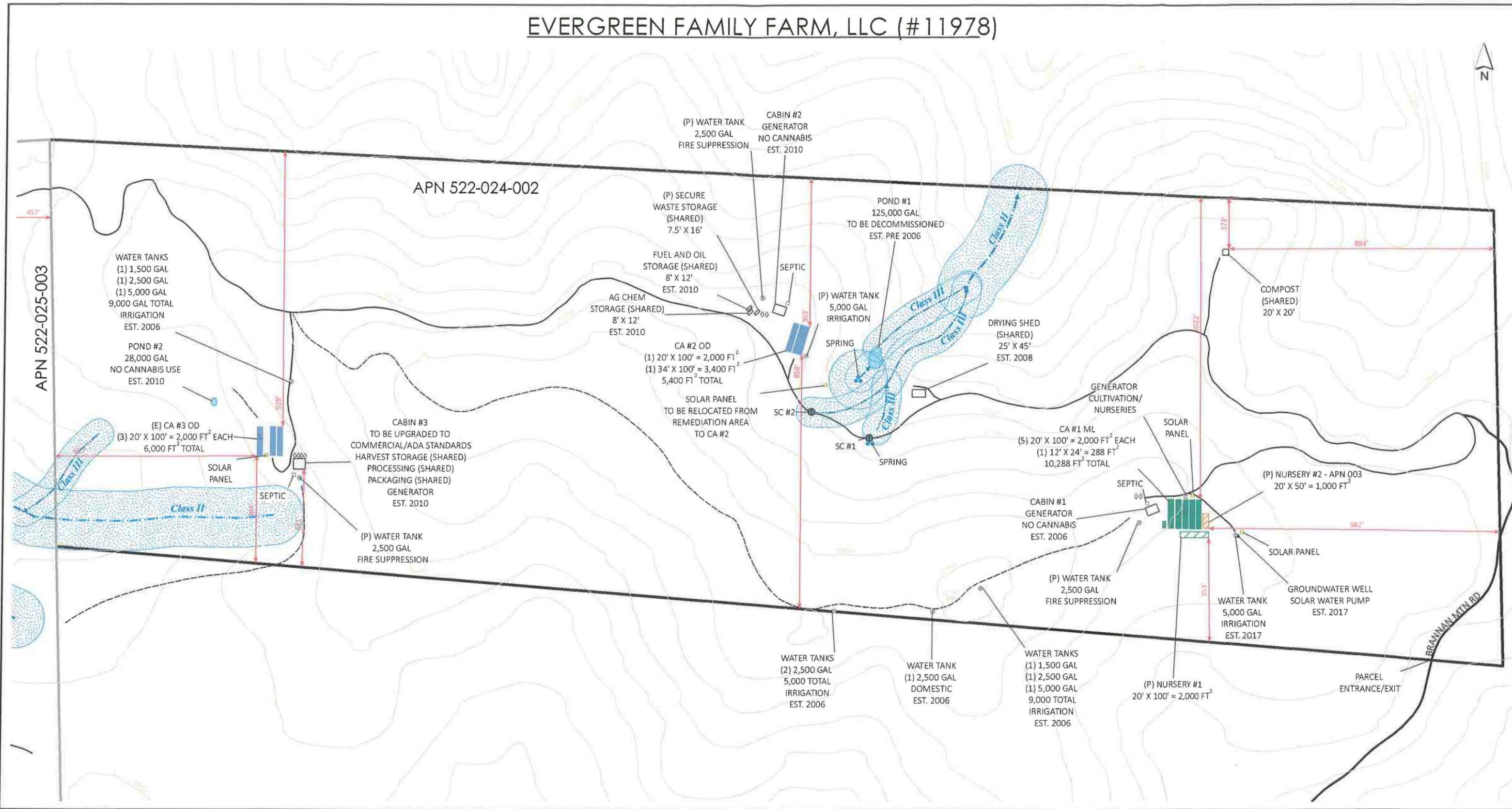
**Appendix B: Site Plan**

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**Appendix C: Pesticide Storage,  
Handling and Application Plan**

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# EVERGREEN FAMILY FARM, LLC (#11978)



⊙	WATER TANK	-----	ATV/FOOT TRAIL	■	MIXED LIGHT CULTIVATION	▨	NURSERY - APN 003
▲	GROUNDWATER WELL	————	PERMANENT ROAD	■	OUTDOOR CULTIVATION	▨	STREAMSIDE MGMT AREA
⊕	STREAM CROSSING	~~~~~	WATERCOURSE	■	NURSERY	■	POND
⊕	SPRING	↔	SETBACKS				
■	SOLAR PANEL						
⊞	GENERATOR						
◇	PARKING (9' X 18')						

**SITE PLAN**  
 EVERGREEN FAMILY FARM, LLC  
 APN 522-024-002  
 BRANNAN MOUNTAIN ROAD,  
 WILLOW CREEK, CA 95525

MIXED-LIGHT CULTIVATION = 10,288 FT<sup>2</sup>  
 OUTDOOR CULTIVATION = 11,400 FT<sup>2</sup>  
 TOTAL CULTIVATION AREA = 21,688 FT<sup>2</sup>

CA = CULTIVATION AREA  
 OD = OUTDOOR  
 ML = MIXED-LIGHT  
 SC = STREAM CROSSING

PREPARED BY CHRISTINA SUNDMAN FOR  
 PR PROFESSIONAL SERVICES  
 DECEMBER 14, 2020 V1

SCALE 1:4,800 1 INCH = 400 FEET  
 PARCEL: HUMBOLDT COUNTY GIS 2019

0 160 320 640 Feet

**CO**

**EVERGREEN FAMILY FARM LLC**  
**Pesticide Storage, Handling and Application Plan**

All pesticides, disinfectants, fungicides and agricultural chemical products used by the EVERGREEN FAMILY FARM, LLC will maintain strict compliance with standards imposed by the Humboldt County Agricultural department and State of California Department of Agriculture Department and US Environmental Protection Agency. The Agent will maintain a current Private Applicators License with the Humboldt County Agricultural Department. This license will be posted and a copy will be entered into the Manager's Handbook and available for view by any regulatory agency deemed appropriate by Humboldt County or State of California.

**Storage**

All pesticides, disinfectants, fungicides and agricultural chemicals will be secured in an appropriate locked and labeled housing and accessed only by those employees that have been trained under the guidelines of *State of California Agricultural Department Personal Pesticide Application License* guidelines in handling, application and disposal of each product. Entry into the locked facility will be logged by the Lead Cultivator. This log will include: The name of employee removing the material, the date and time of day and the amount and type of pesticide removed.

Any over-the-counter pesticide products may be applied by either the *Agent* or trained personnel in accordance with State of California Agricultural Department's Private Applicators License criteria. Training of employees will be in accordance with *State of California Private Applicators License* criteria. These products will be limited to safe chemicals recognized by the Humboldt County Department of Agriculture, the California Department of Agriculture and the Federal EPA. Copies of all MSDSs and labels will be clearly identified and maintained onsite at all times in the Lead Cultivators Handbook. EVERGREEN FAMILY FARM will make available to its employees saline eye wash stations where ever pesticides are stored.

**Handling**

The handling of pesticides/fungicide will be done in accordance with *State of California Agricultural Department Personal Pesticide Application License* guidelines. Handling will include, transportation from retail outlet to cultivation site, logging and entering into secured, labeled storage, mixing, preparation, transport to application locations on site, application and disposal. These activities will be logged into the Master Log immediately by the *Lead Cultivator*. By having a strictly monitored Pesticide Management plan in place, EVERGREEN FAMILY FARM will strive for a "ZERO SPILL POLICY". In the event of a spill, EVERGREEN FAMILY FARM will maintain on site an Emergency Containment and Clean Up policy in accordance with *State of California Agricultural Department Personal Pesticide Application License* guidelines.

EVERGREEN FAMILY FARM will also maintain on site in a clearly marked and accessible secure location any materials deemed necessary for clean up or spill containment and abatement. EVERGREEN FAMILY FARM will maintain a well-marked and easily accessible plan for accidental personnel exposure as well as proper applicators training as set forth by *State of California Agricultural Department Personal Pesticide Application License* guidelines in the event of such accidental exposure. Any spills or accidental personnel exposure will be

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OPERATIONS MANUAL  
EVERGREEN FAMILY FARM, LLC

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reported to the appropriate agencies as deemed necessary by *State of California Agricultural Department Personal Pesticide Application License* guidelines. These incidents will also be documented into the Master Log by the Lead Cultivator.

**Application**

All application will be done in accordance with *State of California Agricultural Department Personal Pesticide Application License* guidelines. A copy of all applications will be manually entered into the Master Log. Proper eye, face and body protective wear as well as approved respirators shall be provided by EVERGREEN FAMILY FARM and worn and available at all times during application of all pesticides/fungicides. A preventive application program per manufactures directions and label requirements will be established from the onset of the plants initial transplant. Application frequency will vary with each phase of growth or infestation pressure. This will help to ensure the least amount of pesticide/fungicide will be needed. Application will end no less than thirty days before harvest or by manufactures able requirements, whichever is longer.

During application factors such as wind, temperature and humidity will be taken into account. This will ensure that the pesticide/fungicide is used in the most efficient manner and will mitigate drift. Pesticides will be applied using a variety of methods including atomizer, back pack sprayer and air less sprayer. Nozzle types and pressure settings will be determined by manufacture directions. Anywhere pesticide is applied EVERGREEN FAMILY FARM will provide a saline eye wash station in case of accidental exposure.

**Disposal**

Any mixed solutions will be used to their entirety. In the event there is a surplus of used mixed solution, it will be disposed of according to guidelines set forth by *State of California Agricultural Department Personal Pesticide Application License* procedures. After the applicator has finished application, the protective wear shall be discarded and disposed according to *State of California Agricultural Department Private Applicators License* guidelines. All bottles, containers or receptacles that have come into contact with, or contained, any product that falls under the state's guidelines for pesticides, disinfectants, fungicides and agricultural chemicals shall be washed, rinsed and or disposed of according to strict EPA and *State of California Agricultural Department Private Applicators License* guidelines. Proper training of employees in rinsing, washing and disposal shall be overseen by the Licensed Lead Cultivator on premise. All washing, rinsing or disposal of any product packaging, applicator or protective clothing will be logged into the Master Log.

**Appendix D: Emergency  
Procedures and Contact  
Information**

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## **Emergency Procedures Instructions EVERGREEN FAMILY FARM, LLC**

*The first priority in the event of an emergency is for the safety of all people present. Move quickly out of area danger. Meet at assigned meeting place to get a headcount. Enact Emergency Procedures.*

### **Emergency Phone Numbers**

**Dial 911 for Fire/Police/Ambulance:**

- 1. Tell the operator which emergency service you want**
- 2. Wait until the service answers**
- 3. Give the following address:**

**APN 522-024-003  
BRANNON MOUNTAIN ROAD,  
WILLOW CREEK, CA 95525**

- 4. Do not hang up until told to do so by the 911 Operator**

### **Other Emergency Contacts**

**Humboldt County Sheriff: 707-445-7251**

**Willow Creek Volunteer Fire Dept: (530) 629-2229**

**Humboldt County HazMat: 707-445-6215**

**Humboldt County Ag Dept.: 707-441-5260**

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## **Fire and Emergency Procedures Checklist**

*You must know and understand what to do if a fire occurs. Your first concern is the immediate safety of visitors and staff; secondly, the need to call emergency services and then to contain the fire but only if it is safe to do so. If help is available, allocate responsibilities to others to create a competent fire fighting team.*

- Evacuate people from the area
  - If it is safe to do so, switch off power to all equipment
  - Call the fire department (dial 911)
  - If a small fire, use your fire extinguisher if it is safe to do so – try to contain and extinguish the fire
  - If the fire is near a fuel tank, do not attempt to extinguish the fire – retreat to a safe distance
  - Be prepared to direct the fire service to the scene
-

## **Spill Procedures Checklist**

*You must know and understand what to do if a spill occurs. Your first consideration is the immediate safety of visitors and staff; secondly, the need to call emergency services and then contain the spill if it is safe to do so. If help is available allocate responsibilities to others to create a competent team to deal with the spill.*

- If the spill is from the hose or tap, shut the isolation valve
  - Warn people in area of the spill – evacuate if necessary
  - Remove sources of ignition if flammable substance present
  - Evaluate the spill – only respond if you believe it is safe to do so
  - Refer to the safety data sheet or call on an approved handler or other specialists for advice
  - If necessary, call emergency services and advise local authority
  - Put on safety equipment (e.g. overalls, boots, gloves, eye protection, etc.)
  - Contain the spill if it is safe to do so – utilize a drip tray or oversize container or spill kit to soak up the substance
  - Dispose of waste safely as set out in the material safety data sheet
-

## **Incident Reporting**

*Every accident resulting in injury or damage to farm property must be reported to your manager immediately.*

**Respond to the accident promptly and positively**

**Collect relevant information about the accident**

**Develop and take remedial actions**

**Complete insurance claims and reports required**

### ***First Aid***

- A first aid kit must be kept on the premises and maintained
- All staff must know basic first aid procedures

### ***Minor Injury Accidents***

- Minor cuts and abrasions must be attended to immediately
- If in doubt contact a physician or call 911

### ***Serious Injury Accidents***

- Call an ambulance immediately (dial 911)
- Seek the assistance of any first responder
- Stabilize Victim
- Advise your manager

### ***Property Damage***

- All damage to farm property must be reported to your manager
-

## **Emergency First Aid-Procedures**

### **Control of Bleeding**

- 1. Direct pressure – use your hand(s).**
- 2. Elevate (raise) the limb**
- 3. Apply a pad and firm bandage.**
- 4. If necessary use clean rags or clothing.**

#### ***Remember!!***

- Always check circulation below the bandage!***
- If there is tingling, numbness or blueness  
loosen the bandage.***

### **Management of Burns**

- 1. Cool the burnt area with cool water for 10-15 minutes**
- 2. If necessary, cover the burn with a clean dressing or plastic wrap before removing person to medical aid.**

#### ***Remember!!***

- Do not burst blisters.***
  - Do not remove clothing that is stuck.***
  - Do not apply creams***
-

## **Management of Eye Injuries**

### **Foreign bodies in the eye(s)**

- 1. Wash the eye(s) with eyewash or clean water.**
- 2. If the foreign body is stuck to the eye DO NOT attempt remove.**
- 3. Place covering over the eye and obtain medical attention.**

### **Management of Chemicals in Eye(s)**

- 1. Wash the eye(s) with clean cool water for at least 15 minutes.**
- 2. Wash from near the nose outward.**
- 3. Always wash under the upper eyelid.**
- 4. Obtain medical attention**

### **Breathing**

**If a person is breathing but unconscious turn them on their side to prevent tongue swelling or vomit from obstructing airway.**

**If person *is not breathing***

- *Check airway for blockage and clear***
  - *Call 911***
  - *Administer CPR***
-

### **Location of Firefighting Equipment, Spill and First Aid Kits**

A **fire extinguisher** is located in the following places:

- *All Cold Frames*
- *Nutrient and Fertilizer Storage*
- *Drying and Processing Facility*

A **first aid kit** is located in the following places:

- *Cultivation Site*
- *Drying and Processing Facility*

A **spill kit** is located in the following places:

- *Cultivation Site*
  - *Processing Facility*
-

**Appendix E: Cultivation  
Activities Schedule**

# PR Professional Services

Project Management Consulting

## SCHEDULE OF ACTIVITIES – HOURS OF OPERATION

Evergreen Family Farm, LLC  
APN: 522-024-002 & 522-025-003

### Schedule of Activities

**April:** Site prep includes amending beds, and erecting hoops.

**May:** Hoophouses planted early May. Plants are regularly checked, watered, and fed.

**June:** Full sun outdoor planted. Plants are regularly checked, watered, and fed. Trellis placed around plants for support.

**July:** Harvest hoophouses mid-July; replant end of July. Cages placed around full sun outdoor plants. Plants are checked, watered and fed.

**August:** Plants are checked, watered, and fed. Cages and trellis are placed around plants for support.

**September:** Harvest hoophouses at end of September or beginning of October.

**October:** Harvest full sun outdoor late October. Cover soil with tarps or cover crop. Begin winterization measures.

**November:** Break down site in preparation for winter. Complete all winterization and erosion control measures.

### Hours of Operation – 8am to 8pm

Activities associated with cultivation (watering, transplanting, and harvesting) generally occur during daylight hours (dawn to dusk).

The operation is staffed by up to up to 3 full-time employees and 4 part-time seasonal employees. Employees are shared between APN 522-024-002 (#11978) and APN 522-025-003 (#11980).

### Staffing Table - Person Hours by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
<b>Total person hours</b>	0	0	160	320	560	504	640	504	504	640	320	0
<b>Full time</b>	1	0	1	2	3	3	3	3	3	3	2	0
<b>Part time</b>	0	0	0	0	0	2	4	2	2	4	0	0

<b>TOTAL Person Hours Per Year:</b>	<b>4,152</b>
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NOTE: Person Hours may vary based on weather and/or unforeseen issues that may arise. Hours are based on median estimates.

**Appendix F: Material Data  
Safety Sheets**

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**MATERIAL SAFETY DATA SHEET****SECTION I – IDENTIFICATION OF PRODUCT**

<b>Manufacturers Name</b>	<b>Emergency Phone Number</b>
Dr. Earth Company	(707) 448-4676
P.O. Box 460	<b>Fax:</b> (707) 448-4760
Winters, Ca 95694	

**Trade Name & Synonyms**  
Dr. Earth® Bone Meal 3-15-0

<b>Chemical Name &amp; Synonyms</b>	<b>Chemical Family</b>
Fertilizing Compounds	Organic Solid

**SECTION II – HAZARDOUS INGREDIENTS OF MIXTURES**

<b>Component</b>	<b>%</b>
Total Nitrogen (N)	3.0
3.0 % Water insoluble organic nitrogen	
Available Phosphoric acid (P205)	15.0
Soluble Potash (K20)	0.0
Calcium (Ca)	—
Magnesium (Mg)	—
Sulfur (S)	—
Inert Ingredients	82.0

**SECTION III – PHYSICAL DATA**

<b>Appearance &amp; Odor:</b> Dry powdery, white to light yellow in color.		
<b>Boiling Point (Degrees Fahrenheit)</b>	<b>Specific (Water = 1)</b>	<b>Bulk Density</b>
N/A	N/A	N/A
<b>Vapor Pressure (MM of Mercury)</b>	<b>Percent Volatile (By Volume)</b>	
N/A	N/A	
<b>Vapor Density (Air = 1)</b>	<b>Evaporation Rate (Butyl acetate = 1)</b>	
N/A	N/A	
<b>Solubility in Water</b> Fairly soluble, but most remains solid.		

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

<b>Flash Point (Specify Method/Degrees F)</b>	<b>Flammable Limits</b>	<b>Lower</b>	<b>Upper</b>
N/A	<b>% by Volume</b>	N/A	N/A
<b>Fire Extinguishing Media:</b> Use that which is appropriate for the surrounding fire.			
<b>Special Fire Fighting Procedures:</b> Wear bunker gear & a self-contained breathing apparatus.			

SECTION V – HEALTH HAZARD DATA

Effects of Overexposure: <b>May irritate sensitive individuals if on skin for prolonged period of time.</b>
<b>Emergency and First Aid Procedures:</b> <i>If Swallowed:</i> Induce vomiting, get medical attention. <i>If on Skin:</i> Flush with soap and water, remove and launder contaminated clothing. <i>If in Eyes:</i> Flush with plenty of water for at least 15 minutes. <i>If Inhaled:</i> Remove to fresh air.

SECTION VI – REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>	<b>Conditions to Avoid</b> N/A
	<b>Stable</b> X	
<b>Incompatibility (Materials to Avoid):</b> None Known		
<b>Hazardous Decomposition Products:</b> None Known		
<b>Hazardous Polymerization</b>	<b>May Occur</b>	<b>Conditions to Avoid</b> N/A
	<b>Will not Occur</b> X	

SECTION VII – SPILL OR LEAK PROCEDURES

<b>Steps to be taken in case material is released or spilled:</b> Sweep or scoop residue and remove. Mix with surrounding soil if possible; Recycle if possible.
<b>Waste Disposal Method:</b> Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

SECTION VIII – SPECIAL PROTECTION INFORMATION

<b>Respiratory Protection (Specify type):</b> N/A	<b>Mechanical (General):</b> N/A
<b>Ventilation:</b> Use with adequate ventilation.	<b>Local Exhaust:</b> N/A
<b>Protection Gloves:</b> N/A	<b>Eye Protection:</b> N/A
<b>Other Protective Equipment:</b> Change cloths daily; bathe daily, wash cloths separately before reuse.	

SECTION IX – SPECIAL PRECAUTIONS

<b>Precautions to be taken in handling and storing:</b> Store in the original container, preferably in a locked storage area. <b>KEEP OUT OF REACH OF CHILDREN!</b>
<b>Other precautions:</b> Wash thoroughly after handling. Do not get in eyes; on skin or clothing do not breathe dust. Cover up open wounds contain live bacteria.

SECTION X – DOT INFORMATION AND DATE

**DOT Classification and Label:** Not required by DOT



# SAFETY DATA SHEET Humic Acid 70

## 1. Identification

**Product name** Humic Acid 70  
**Product code** FMHUM  
**Chemical Description** Granular Humic and fulvic acid derived from Leonardite

**Recommended use** Agriculture  
**Manufacturer & Distributor information**  
**Corporate Office** Plant Food Company, Inc.  
38 Hightstown-Cranbury Station Road  
Cranbury, NJ 08512 United States  
Information: 1-609-448-0935

**Telephone**  
**Website** [www.plantfoodco.com](http://www.plantfoodco.com)  
**E-mail** [pfc@plantfoodco.com](mailto:pfc@plantfoodco.com)  
**Contact person** SDS-Regulatory Department

**Emergency phone number** 1-800-424-9300 CCN725928

**Call CHEMTREC Day or Night Within USA and Canada** or +1 703-527-3887 (collect calls accepted)  
**Other Countries** 1-609-448-0935

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Acute toxicity, oral Category 4  
Serious eye damage/eye irritation Category 2A  
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 2  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Warning  
**Hazard statement** Harmful if swallowed. Causes serious eye irritation. May cause respiratory irritation.

**Precautionary statement**  
**Prevention** Use only outdoors or in a well-ventilated area. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear eye/face protection.

**Response** If swallowed: Call a poison center/doctor if you feel unwell. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. If eye irritation persists: Get medical advice/attention.  
**Hazard(s) not otherwise classified (HNOC)** None known.

## 3. Composition/Information on Ingredients

Mixture	Synonym Common Name	CAS Number	EINECS No.
Chemical Name	Humic Acid	1415-93-6	215-809-6
Leonardite			



## SAFETY DATA SHEET Humic Acid 70

### 4. First-aid measures

Inhalation	Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start CPR. Obtain medical attention.
Skin contact	Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Continue rinsing. Obtain medical attention if irritation occurs.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Continue rinsing. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention.
Ingestion	Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. If victim is conscious, give two to four glasses of water and induce vomiting by touching finger to back of throat. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Irritation of eyes and mucous membranes.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### 5. Fire-fighting measures

Flammable Properties:	NFPA: Health - 0 Flammability - 0 Reactivity - 0
Suitable extinguishing media	Not flammable, use media suitable for combustibles involved in fire.
Unsuitable extinguishing media	Not applicable.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Heating (flames) of closed or sealed containers may cause violent rupture of container due to thermal expansion of compressed gases. Heating causes release of ammonia vapors. Vapors are irritating to eyes, skin and respiratory tract. Heating to dryness may cause the release of ammonia, ammonium sulfate, sulfur and oxides of sulfur (respiratory hazard).
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Move containers from fire area if you can do so without risk. Keep containers/storage vessels in fire area cooled with water spray.
Fire-fighting equipment/instructions	
Specific methods	Move container from fire area if it can be done without risk.
General fire hazards	

### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep people away from any upwind of spill/leak. Keep out of low areas. Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

### 7. Handling and storage

Precautions for safe handling	Do not taste or swallow. Avoid breathing mist or vapor. Avoid contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).

### 8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for ingredient(s).
Appropriate engineering controls	Provide eyewash station.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear eye/face protection. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Other	Wear suitable protective clothing. Wash contaminated clothing prior to reuse.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.



**SAFETY DATA SHEET Humic Acid 70**

**9. Physical and chemical properties**

Appearance (physical state, color, etc)	Black granular
Odor	slightly musty
Odor threshold	Not available.
pH	
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	Not available.
Evaporation rate	Not determined
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	
Solubility	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Data not available
Viscosity	
Other information	
Shelf life	> 2 years

**10. Stability and reactivity**

Reactivity	Avoid interaction with heat (flames), oxidizers, acids or alkalis (see details below in this section).
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	None known
Conditions to avoid	Temperatures above 120°F (49°C) and below 32°F (0°C).
Hazardous decomposition products	

**11. Toxicological Information**

Information on likely routes of exposure	
Oral	Not determined
Inhalation	Not determined
Skin contact	Not determined
Eye contact	Not determined
Chronic/Carcinogenicity:	Not listed in NTP, IARC or by OSHA.
Teratology:	Data not available.
Reproduction:	Data not available.
Mutagenicity:	Data not available.



## SAFETY DATA SHEET Humic Acid 70

### 12. Ecological Information

Ecotoxicity	Data not available.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	This product is not bioaccumulative.
Mobility in soil	Not determined
Other adverse effects	Not determined

### 13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal Instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

### 15. Regulatory Information

US federal regulations	This product meets the criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification CFR 707, Subpt. D)	(40) Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.
SARA 304 Emergency release notification	Not regulated.
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Not listed.
SARA 302 Extremely hazardous substance	
Other federal regulations	
OSHA Specifically Regulated Substances CFR 1910.1001-1050)	(29) Not listed.
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.
Safe Drinking Water Act (SDWA)	Not regulated.

### 16. Other information, including date of preparation or last revision

Issue date	6/1/2015
Revision date	
Version #	1
Disclaimer	

While the information contained herein is presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or information set forth, or that the products, or information may be used without infringing the intellectual property rights of others. In no case shall the information provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the information furnished by our company hereunder is given gratis and we assume no obligation or liability for the information given or results obtained, all such being given and accepted at your risk.

Revision Information	Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties
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## MATERIAL SAFETY DATA SHEET

### ASL™ Technical Ingredients *Ascophyllum nodosum* Soluble Seaweed Extract Powder

#### 1. PRODUCT AND COMPANY

**TRADE NAME:** ASL™ Technical Ingredients  
*Ascophyllum nodosum* Soluble Seaweed Extract Powder

**APPLICATION:** Extract from algae (*Ascophyllum nodosum*)

**Producer/Importer:** Acadian Seaplants Limited

**Address:** 30 Brown Avenue

**Postal Code & City:** Dartmouth, Nova Scotia, Canada, B3B 1X8

**Telephone:** (902) 468-2840

**Fax:** (902) 468-3474

**Contact Person:** David Hiltz

**Issued By:** Technical Department (Acadian Seaplants Limited)

#### 2. COMPOSITION OF PRODUCT

No.	Ingredients Name	CAS-NO	Cons. (weight%)	Classification
1	Extract from algae	n/a	100%	IK

Legend: T<sup>+</sup> = Very Toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritant,  
IK = No Classification Required, E = Explosive, O = Oxidizing, F<sup>+</sup> = Extremely  
Flammable, F = Very Flammable, Fo = Flammable, N = Dangerous to Environment,  
Mu = Genetoxic, Sens = Sensitizing, Care = Carcinogen,  
Repr = Causes Birth Defects

#### 3. HAZARD IDENTIFICATION

This product does not require labeling.

**4. FIRST AID****GENERAL**

Non-hazardous material. If irritation or discomfort occurs, seek medical advice from a physician.

**EYE CONTACT**

Non-irritating to ocular tissue. Immediately flush eyes with plenty of water. Keep eyes wide open while flushing. Seek medical attention if irritation occurs.

**SKIN CONTACT**

Non-irritating to skin. Wash with mild soap and water. Seek medical attention if discomfort occurs.

**INHALATION**

Non-toxic. Do not intentionally breathe vapors.

**INGESTION**

Non-toxic if ingested. Drink plenty of water or milk. Seek medical attention if discomfort occurs.

**OVER EXPOSURE**

Not applicable.

**5. FIRE FIGHTING MEASURES****FLASH POINT**

Not applicable.

**FLAMMABLE LIMITS**

Not applicable.

**PROPER FIREFIGHTING EQUIPMENT**

Use extinguishing media appropriate for surrounding fire. Caution: Slippery in liquid form or when mixed with water.

**FIRE AND EXPLOSION HAZARDS**

Non-flammable. Non-explosive.

**6. UNINTENTIONAL LIBERATION OR RELEASE MEASURES****SAFETY MEASUREMENTS TO PROTECT PERSONS**

Gloves and eye protection should be worn when handling due to temporary staining.

**PROPER METHODS FOR DAMAGE LIMITATION AND CLEANUP**

Spills may be easily cleaned by removing as much solid as possible and washing remaining spill with copious amounts of water. Avoid loose product on floor in damp areas as product may become slippery with the addition of clean-up water. Gloves and eye protection should be worn due to temporary staining.

**7. HANDLING AND STORAGE****HANDLING ADVICE**

Avoid handling which may cause staining. Use personal protective equipment as specified in section 8.

**STORAGE**

Store in cool place and out of direct sunlight. Do not contaminate water, food or feed by storage or disposal.

**8. EXPOSURE CONTROL AND PERSONAL PROTECTION****EXPOSURE CONTROL**

No specific ventilation requirements. Eyewash facilities should be available.

**RESPIRATION PROTECTION**

No respirator is required.

**EYE PROTECTION**

Eye protection should be worn when handling due to temporary staining.

**HAND PROTECTION**

Gloves should be worn when handling due to temporary staining.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Form</b>	Powder	<b>Air Reactive</b>	n/a
<b>Color</b>	Black	<b>Percent Volatile (by Volume)</b>	n/a
<b>Odor</b>	Marine-like	<b>Bulk Density</b>	0.65 g/cm <sup>3</sup>
<b>Solubility</b>	100% Water Soluble	<b>Solubility in Water</b>	100% at 20°C
<b>Melting Point/Range</b>	Not Determined	<b>Saturation Conc.</b>	Not Determined
<b>Expl. Limit LEL-UEL. %-%</b>	n/a	<b>Rel. Density Sat. Air (Air=1)</b>	Not Determined
<b>Vapor Pressure</b>	Not Determined	<b>Boiling Point/Range</b>	Not Determined
<b>Decomposition Temp.</b>	Not Determined	<b>pH Concentrate</b>	10
<b>pH Value</b>	10 - 10.5	<b>Viscosity</b>	n/a
<b>Flash Point</b>	n/a	<b>Smelling Limits lo-hi</b>	Not Determined
<b>Molecular Weight</b>	Not Determined	<b>Rel. Evap. Velocity</b>	Not Determined
<b>Ignition Temp.</b>	550°C	<b>Water Reactive</b>	n/a
<b>Rel. Vapor Density (air=1)</b>	Not Determined		

**10. STABILITY AND REACTIVITY****STABILITY**

Product is stable.

**CONDITIONS TO AVOID**

Excessive heat or freezing.

**MATERIALS TO AVOID**

Oxidants and acids may cause degradation.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Not applicable.

**HAZARDOUS POLYMERIZATION**

Will not occur.

**11. TOXICOLOGICAL INFORMATION****ACUTE ORAL TOXICITY**

Non-toxic orally. Ingestion of significant amounts may cause nausea and discomfort.

**ACUTE OCULAR TOXICITY**

Non-irritating to the ocular tissue of non-irrigated eyes.

**ACUTE DERMAL TOXICITY**

Not toxic dermally. No treatment-related effects were observed.

**ACUTE DERMAL IRRITATION**

No irritation or corrosive effects were observed.

**INHALATION TOXICITY**

Not hazardous by inhalation.

**SKIN SENSITIZATION**

Very slight erythema observed with no other signs of irritation.

**12. ECOLOGICAL INFORMATION****BREAKDOWN**

Biodegradable. Product presents minimal environmental impact.

**ECOTOXICITY**

Plant nutritional supplement and growth stimulant, high concentrations may cause burn of plants. Non toxic to marine algae, vertebrates or invertebrates.

**13. DISPOSAL CONSIDERATIONS**

Not classified as hazardous waste. Product must be disposed of according to Federal, State or local procedures.

**14. TRANSPORT INFORMATION****GENERAL**

Non-hazardous material according to transport regulations. No special precautions are necessary.

**15. REGULATORY INFORMATION****COMPOSITION**

Extract from algae (*Ascophyllum nodosum*)

**R-PHRASES**

The product does not require labeling. Marking according to hazardous product regulations is not required.

**REFERENCES**

The MSDS is prepared on basis of information given by the manufacturer.

**16. OTHER INFORMATION**

**ISSUED: February 2009**

**VENDOR NOTES**

Every endeavor has been made to ensure that the information contained in this MSDS leaflet is reliable, but we cannot accept liability for any loss, injury or damage, which may result from its use or misuse. Data given in this MSDS is solely for the guidance in safe handling and use of the product by customers; they do not form part of any specification. If any difficulties arise, we shall be glad to discuss them. Customers are encouraged to conduct their own tests following discussion with our technical department. The above information is based on experience, but it is always advisable for customers to satisfy themselves, by consultation with our technical department and small-scale testing is necessary, that product, which they have selected, is suitable for their purpose under their conditions of use.

**MATERIAL SAFETY DATA SHEET**

**SECTION I – IDENTIFICATION OF PRODUCT**

<b>Manufacturers Name</b>	<b>Emergency Phone Number</b>
Dr. Earth Company	(707) 448-4676
P.O. Box 460	<b>Fax:</b> (707) 448-4760
Winters, CA 95694	

**Trade Name & Synonyms**  
Dr. Earth® Bat Guano 10-3-1

<b>Chemical Name &amp; Synonyms</b>	<b>Chemical Family</b>
Fertilizing Compounds	Organic Solid

**SECTION II – HAZARDOUS INGREDIENTS OF MIXTURES**

<b>Component</b>	<b>%</b>
Total Nitrogen (N)	10.0
10.0 % Water insoluble organic nitrogen	
Available Phosphoric acid (P205)	3.0
Soluble Potash (K20)	1.0
Calcium (Ca)	—
Magnesium (Mg)	—
Sulfur (S)	—
Inert Ingredients	86.0

**SECTION III – PHYSICAL DATA**

<b>Appearance &amp; Odor:</b> Dry granular, powdery, dark brown to light brown in color.		
<b>Boiling Point (Degrees Fahrenheit)</b>	<b>Specific (Water = 1)</b>	<b>Bulk Density</b>
N/A	N/A	N/A
<b>Vapor Pressure (MM of Mercury)</b>	<b>Percent Volatile (By Volume)</b>	
N/A	N/A	
<b>Vapor Density (Air = 1)</b>	<b>Evaporation Rate (Butyl acetate = 1)</b>	
N/A	N/A	
<b>Solubility in Water</b> Approx. 50% by Weight		

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

<b>Flash Point (Specify Method/Degrees F)</b>	<b>Flammable Limits</b>	<b>Lower</b>	<b>Upper</b>
N/A	<b>% by Volume</b>	N/A	N/A
<b>Fire Extinguishing Media:</b> Use that which is appropriate for the surrounding fire.			
<b>Special Fire Fighting Procedures:</b> Wear bunker gear & a self-contained breathing apparatus.			

SECTION V – HEALTH HAZARD DATA

Effects of Overexposure: <b>May irritate sensitive individuals if on skin for prolonged period of time.</b>
<b>Emergency and First Aid Procedures:</b> <i>If Swallowed:</i> Induce vomiting, get medical attention. <i>If on Skin:</i> Flush with soap and water, remove and launder contaminated clothing. <i>If in Eyes:</i> Flush with plenty of water for at least 15 minutes. <i>If Inhaled:</i> Remove to fresh air.

SECTION VI – REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>	<b>Conditions to Avoid</b> N/A
	<b>Stable</b> X	
<b>Incompatibility (Materials to Avoid):</b> None Known		
<b>Hazardous Decomposition Products:</b> None Known		
<b>Hazardous Polymerization</b>	<b>May Occur</b>	<b>Conditions to Avoid</b> N/A
	<b>Will not Occur</b> X	

SECTION VII – SPILL OR LEAK PROCEDURES

<b>Steps to be taken in case material is released or spilled:</b> Sweep or scoop residue and remove. Mix with surrounding soil if possible; Recycle if possible.
<b>Waste Disposal Method:</b> Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

SECTION VIII – SPECIAL PROTECTION INFORMATION

<b>Respiratory Protection (Specify type):</b> N/A	<b>Mechanical (General):</b> N/A
<b>Ventilation:</b> Use with adequate ventilation.	<b>Local Exhaust:</b> N/A
<b>Protection Gloves:</b> N/A	<b>Eye Protection:</b> N/A
<b>Other Protective Equipment:</b> Change cloths daily; bathe daily, wash cloths separately before reuse.	

SECTION IX – SPECIAL PRECAUTIONS

<b>Precautions to be taken in handling and storing:</b> Store in the original container, preferably in a locked storage area. <b>KEEP OUT OF REACH OF CHILDREN!</b>
<b>Other precautions:</b> Wash thoroughly after handling. Do not get in eyes; on skin or clothing do not breathe dust. Cover up open wounds contain live bacteria.

SECTION X – DOT INFORMATION AND DATE

**DOT Classification and Label:** Not required by DOT

# MATERIAL SAFETY DATA SHEET

# Blackstrap Molasses

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Name: **Blackstrap Molasses**  
 Common Name: Molasses  
 Chemical Description: Inverted syrup from the juice of sugar cane

1.2 Manufactured For: Plant Food Company, Inc.      Emergency Telephone Number      609-448-0935  
 38 Hightstown-Cranbury Station Road      Telephone Number for Information      609-448-0935  
 Cranbury, NJ 08512      Date Prepared      11/1/2011

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous Components (Specific Chemical)

Identity: Common Name	(CAS #)	OSHA PEL	ACGIH TLV	Other Limits Recommended
This product is a mixture--no specific CAS number	#REF!	N/A	N/A	N/A

## SECTION 3: HAZARDS IDENTIFICATION

Black/brown liquid with typical odor.

NEPA: Health:0 Reactivity:0 Flammability:1 Environment:0 (0=Insignificant=1 Slight 2=Moderate 3=High 4=Extreme)

### EMERGENCY OVERVIEW

This material is not a 'health hazard' or a 'physical hazard' as determined when reviewed according to the requirements of the Occupational Safety and Health Administration Hazard Communication Standard, 20 CFR 1910.1200

## SECTION 4: FIRST AID MEASURES

4.1 EYES: Flush immediately with plenty of water for at least 15 minutes while holding eyelids apart to ensure complete irrigation of all eye and lid tissue. If irritation occurs, seek medical attention.

4.2 SKIN: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention if irritation persists.

4.3 INGESTION: If conscious and alert, administer water or milk to dilute, then induce vomiting. Call Poison Control Center or physician immediately. Do not give anything by mouth to an unconscious person.

4.4 INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth and get medical attention.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

FLASHPOINT: Not flammable      METHOD USED: Closed Cup/NONCOMBUSTIBLE

5.2 FLAMMABLE LIMITS: LFL: NA UFL: NA

5.3 EXTINGUISHING MEDIA: Foam, carbon dioxide, dry chemical, or water fog.

5.4 FIRE & EXPLOSIVE HAZARDS: Not Combustible

5.5 FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Avoid smoke inhalation. Contain any liquid runoff.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 SMALL RELEASES: Confine and absorb small releases on sand earth or other inert absorbent. Use water spray to dilute.

6.2 LARGE RELEASES: Shut off release if safe to do so. Dike spill area to prevent runoff into sewers, rains or surface waterways. Recover as much of the solution as possible. Treat remaining material as a small release (above).

## SECTION 7: HANDLING AND STORAGE

7.1 HANDLING: Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of vapors. Avoid prolonged or repeated contact with the skin.

7.2 STORAGE: Store in original container only in a cool, well-ventilated, dry place at temperatures between 40° and 95°F. Do not store near food or feeds.

7.3 TRANSFER EQUIPMENT: Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.

## SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

8.1 RESPIRATORY PROTECTION: Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/moist respirator (such as 3M#8710). Ventilation: Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminate.

8.2 SKIN PROTECTION: Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.

8.3 EYE PROTECTION: Chemical goggles and a full face shield. DO NOT WEAR CONTACT LENSES.

8.4 EXPOSURE GUIDELINES:

	TWA	STEL
OSHA	N/A	N/A
ACGIH	N/A	N/A

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 APPEARANCE:	Black/brown, clear viscous liquid
9.2 ODOR:	Fruity sweet
9.3 VAPOR PRESSURE:	None
9.4 VAPOR DENSITY:	Not available
9.5 SOLUBILITY IN WATER:	Highly soluble
9.6 SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	1.4
9.7 MELTING POINT:	N/A
9.8 pH:	5.1
9.9 VOLATILE:	Not available
9.10 COLOR:	Black/brown, clear viscous liquid
9.11 WEIGHT PER GALLON:	11.7 lbs (5.3 kg)
9.12 STORAGE LIFE AT 70° F:	> 1 Year
9.13 PH-21C:	N/A
9.15 VISCOSITY:	Not available
9.16 FREEZING POINT:	< 32° F
9.17 EVAPORATION RATE:	Not determined
9.18 BOILING POINT:	224°F

**SECTION 10: STABILITY AND REACTIVITY**

- 10.1 STABILITY: Stable
- 10.2 HAZARDOUS POLYMERIZATION: Will not occur.
- 10.3 HAZARDOUS DECOMPOSITION PRODUCTS: None Known
- 10.4 INCOMPATIBILITY: None. Avoid heat over 140°F. Keep container vented to allow release of CO<sub>2</sub> produced by natural yeast in product

**SECTION 11: TOXICOLOGICAL INFORMATION**

- 11.1 ORAL: May cause stomach cramps and/or nausea.
- 11.2 DERMAL: May cause slight irritation, especially from prolonged exposure. May cause redness.
- 11.3 INHALATION: None expected but inhalation may cause mild irritation of nasal mucous membranes.
- 11.4 CHRONIC/CARCINOGENICITY: Data not available
- 11.5 TERATOLOGY: Data not available
- 11.6 REPRODUCTION: Data not available
- 11.7 MUTAGENICITY: Data not available
- 11.8 EYES: May cause temporary eye irritation.

**SECTION 12: ECOLOGICAL INFORMATION**

- 12.1 Alga/Lemna Growth Inhibition: Not known.
- 12.2 Toxicity to Fish and Invertebrates: Not known
- 12.3 Toxicity to Plants: Not known
- 12.4 Toxicity in Birds: Not known

**SECTION 13: DISPOSAL CONSIDERATIONS**

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local waste disposal regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal.

**SECTION 14: TRANSPORTATION INFORMATION**

D.O.T. Not D.O.T. Regulated  
 Other Shipping Description: Fertilizing Compounds (Manufactured), Liquid, NMFC Item 6810 Sub 6, LTL Class 70

**SECTION 15: REGULATORY INFORMATION**

- 15.1 CERCLA: None
- 15.2 SARA TITLE III, Section 313 Toxic Chemicals: None

**SECTION 16: OTHER INFORMATION**

This information was developed from information on the constituent materials. No warranty is expressed or implied regarding the completeness or continuing accuracy of the information contained herein, and Plant Food Company, Inc. disclaims all liability for reliance thereon. The user should satisfy himself that he has all current data relevant to his particular use.



## **AZOMITE® Material Safety Data Sheet**

### **Section I – Manufacturer**

AZOMITE Mineral Products, Inc.  
27 South Main  
Nephi, Utah 84648  
Phone: 435-623-8007  
Fax: 435-623-8009  
Toll Free: 877-296-6483  
USA E-Mail: [info@azomite.com](mailto:info@azomite.com)

### **Section II – Composition/Information on Ingredients**

Chemical name: Hydrated Sodium Calcium Aluminosilicate CAS No. 1344-01-0  
Hazardous Ingredients: None known  
Formula:  $\text{NaK}_2\text{Ca}_5\text{Al}_3\text{Si}_2\text{10}_7\text{O}_6\text{H}_2\text{O}$   
Other elements are present as minor minerals in this natural product

### **Section III – Hazards Identification**

Potential Health Effects: Avoid inhalation of dust. May cause eye or skin irritation.

### **Section IV – First Aid Measures**

Skin Contact: Cover bare skin – dusty product.  
Eye Contact: Wear eye protection – dusty product.  
Inhalation: Wear respiratory protection – dusty product.  
Ingestion: Tested as feed additive up to 3% with no harmful results. Information beyond that is not available and human ingestion is not advised.

### **Section V – Fire Fighting Measures**

Flammable: No Means of Extinction: Not applicable Flash Points: Not applicable  
Flammable Limits: Not applicable Auto-ignition Temperature: Not applicable  
Explosion Data: Not available

### **Section VI – Accidental Release Measures**

In case of spill, sweep or scoop up material. Dispose in a container for non-hazardous materials.

### **Section VII – Handling and Storage**

Handling Procedures and Equipment: Dusty product; cover bare skin and wear eye and respiratory protection.  
Storage Requirements: Store in a clean, dry place.

### **Section VIII – Exposure Control/Personal Protection**

Exposure Limits: Not available Specific Engineering Controls: None  
Personal Protection: Eye protection, gloves, dust mask.

Section IX – Physical and Chemical Properties

Physical State: Solid Odor and Appearance: Odorless, tan to pink Odor Threshold: Not available Specific Gravity: 0.75 (Water=1) Vapor Density: Not available Vapor Pressure (mm Hg): 0 Evaporation Rate: Not applicable Boiling Point: Not available Freezing Point: Not applicable  
pH: 8.0 Coefficient of Water/Oil Dist: Not available Solubility in water: <1%

Section X – Stability and Reactivity

Stability: Unstable in acid Incompatibility with other substances: Avoid exposure to acid  
Remarks on Reactivity: Not available Hazardous Polymerization: Will not occur

Section XI – Toxicological Information

Effects of chronic exposure: Repeated inhalation of excessive concentration of any dust, including this material, may lead to lung injury.  
Threshold Limit Value: Mineral particles are classified as nuisance dusts by the American Conference of Governmental Industrial Hygienists (ACGIH) in their 1983-1984 TLV List. This material contains some free Silica (Fine silt and sand). Use ACGIH Publication to determine appropriate TLV.

Section XII – Ecological Information

Not applicable.

Section XIII – Disposal Considerations

Dispose in container for non-hazardous materials.

Section XIV – Transport Information

DOT Classification: Not a DOT controlled material (United States).  
Non-hazardous for air, sea and road freight.

Section XV – Regulatory Information

None available.

Section XVI – Other Information

Manufacturer Disclaimer: The information contained herein is, to the best of the Manufacturer's knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and the Manufacturer shall not be liable for any loss or damage arising out of the use thereof. The Manufacturer shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

# Material Safety Data Sheet



Date Reviewed and Issued: August 18, 2011

MSDS# #3100

## Section 1. Identification: Retail Organic Mixes

### Product Names:

- Black Gold All Organic
- Black Gold Natural & Organic Plus Fertilizer
- Black Gold Coco Blend
- Black Gold Waterhold Cocoblend
- Nature's All Organic Mix
- Nature's Natural & Organic Mix
- Lakeland All Organic Potting Soil
- Lakeland Natural and Organic Potting soil
- Sunshine Organic Gardening Mix
- Sunshine Natural & Organic Gardening Mix
- Sunshine Organic Planting Mix
- Sunshine Natural & Organic Planting Mix

### Manufacturer/Supplier:

Sun Gro Horticulture Canada Ltd.  
P.O. Box 189  
Seba Beach, AB T0E 2B0

### For more information call:

Western Region 1-888-797-7328  
Central Region 1-888-982-4500  
Eastern Region 1-888-896-1222  
Southeast Region 1-800-683-7700

For more information: [www.sungro.com](http://www.sungro.com)

### Distributed in the USA by:

Sun Gro Horticulture Distribution, Inc.  
15831 NE 8<sup>th</sup> St., Suite 100  
Bellevue, WA 98008

Product Uses: Horticulture

## Section 2. Hazardous Ingredient & Composition

Component	CAS#	OSHA PEL		ACGIH TLV	
		Total	Respirable	Total	Respirable
Nuisance dust	Not Applicable	15 mg/m3	5 mg/m3	10 mg/m3	3 mg/m3

**Comments:** This product is not considered to be hazardous in accordance with the OSHA Hazard Communication Standard 29 CFR 1910.1200, Health Hazard. The product is classified by ACGIH as a "Nuisance Dust" or "Particulates Not Otherwise Classified" (PNOC). See product label for ingredients and product specific information.

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### Section 3. Physical/Chemical Characteristics

<b>Physical State:</b> Solid	<b>Boiling Point:</b> Not applicable
<b>Appearance:</b> Granular, soil-like	<b>Vapor Pressure:</b> Not applicable
<b>Color:</b> Brown, earthy color	<b>Solubility in Water:</b> Not applicable
<b>Odor:</b> Earthy	<b>Melting point:</b> Not applicable
<b>pH:</b> 3.5 to 7.5	<b>Evaporation rate:</b> Not applicable
<b>Density:</b> 400-800 g/l or 25-50 lb/cubic foot	<b>Specific gravity:</b> Not applicable

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### Section 4. Fire and Explosion Hazard Data

<b>Flash Point:</b>	Not Applicable
<b>Flammable Limits:</b>	Not Applicable
<b>Extinguishing Media:</b>	Water, fog or spray
<b>Special Fire Fighting Procedures:</b>	None. Caution, burning may continue inside bags or piles after surface fire is out. Break bags or separate pile to assure that the fire is extinguished. The thermal decomposition products are those commonly observed with natural products such as wood or other vegetative matter.
<b>Unusual Fire and Explosion Hazards:</b>	None

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### Section 5. Stability and Reactivity

<b>Stability:</b>	Stable
<b>Conditions to Avoid:</b>	See label. Keep away from heat, sparks and open flames.
<b>Incompatibility:</b>	None known
<b>Hazardous Decomposition or Byproducts:</b>	High temperatures or fire may produce irritating gases and vapors.
<b>Polymerization:</b>	Will not occur
<b>Incompatible Materials:</b>	None known

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**Section 6. Health Hazard Data**

- Routes of Entry:** Inhalation, open wounds and eyes
- Health Hazards:** Nuisance dust. See product label for ingredients
- Carcinogenicity:** None known
- Effects of Exposure:** Inhalation over long periods of high amounts of any nuisance dust may overload lung clearance mechanism, irritate mucous membranes and make lungs more vulnerable to respiratory disease.
- Emergency and First Aid Procedures:** If inhaled, provide fresh air. If eye irritation occurs, flush with water. Keep open wounds covered and clean as suggested by any good program of hygiene.
- Other Concerns:** Keep out of reach of children and pets.

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**Section 7. Toxicological Information**

**General Comments:** Inhalation of dust may irritate nose, throat and lungs. Eye contact with solids may produce irritation, tearing or blinking as a foreign body in the eye.

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**Section 8. Precautions for Safe Handling and Use**

- Steps to be taken in case material is spilled:** Use methods to clean spill which avoid creating airborne dust.
- Waste Disposal Method:** According to EPA 40 CFR 261.3, waste of this product is not defined as hazardous. Dispose of all waste in accordance with federal, state and local regulations.
- Precautions to be taken in handling and storage:** If excessive dust is created avoid breathing dust by using adequate ventilation and/or using NIOSH or MSHA approved respirator for nuisance dust of this type. Breathing dust may be harmful to your health.
- Other Precautions:** Protective eyewear should be worn where dust levels are high enough to cause irritation.
- Ecological Information:** Keep out of lakes, streams or ponds.
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## Section 9. Control Measures

**Respiratory Protection:** If dust is created use NIOSH or MSHA approved respirator for nuisance dust of this type.

**Ventilation:** Local exhaust advisable if excessive dust is created.

**Protective Gloves:** Not normally necessary but suggested in cases of open wounds that are not appropriately protected.

**Eye Protection:** Protective eyewear should be worn where dust levels are high enough to cause irritation.

**Other Protective Clothing or Equipment:** Normal work clothing

**Work/Hygienic Practices:** NIOSH or MSHA approved respirator, eye protection and ventilation under conditions where excessive dust is created. Open wounds should be kept clean and suitably protected.

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## Section 10. Supplemental Information

These materials are made from natural products and may contain naturally occurring microorganisms. Proper precautions are advised to prevent infection of open wounds, inhalation of excessive amounts of dust and eye irritation. The proper hygiene practices necessary to prevent health hazards from any naturally occurring substance such as soil, bark, etc., should be observed.

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Earth Juice®  
Rainbow Mix Bloom™ Original Blend

SECTION I: GENERAL INFORMATION

PRODUCT NUMBER: J50001-J50101  
PRODUCT NAME: RAINBOW MIX BLOOM™ (WITH MYCORRHIZAE/HUMIC ACID) ORIGINAL BLEND, Earth Juice®  
PRODUCT CLASS: PLANT NUTRIENT  
CHEMICAL NAME AND SYNONYMS: ORGANIC GRANULAR/POWDER NPK FERTILIZER  
PRECAUTIONS: Avoid contact with eyes and clothing. Avoid inhaling dust.

SECTION II: HAZARDOUS INGREDIENTS

Not Applicable

SECTION III: PHYSICAL/CHEMICAL DATA

BOILING POINT: N/A  
% VOLATILE BY WEIGHT: N/A  
VAPOR DENSITY: Not Determined  
VAPOR PRESSURE (MM HG): Not Determined  
SOLUBILITY IN WATER: Insoluble  
SPECIFIC GRAVITY (H2O-1): Not Determined  
pH: 5 - 7  
APPEARANCE AND ODOR: Light brown powder, slightly organic smell

SECTION IV: FIRE AND EXPLASION DATA

FLASH POINT: N/A  
EXPLOSIVE LIMITS: Not determined  
EXTINGUISHING MEDIA: Dry Chemical, Carbon Dioxide, Foam, Water Class BC, ABC Fire Extinguisher  
UNUSUAL FIRE EXPLOSION HAZARDS: None

SECTION V: REACTIVITY DATA

STABILITY: Stable  
HAZARDOUS POLYMERIZATION: Will not occur  
HAZARDOUS DECOMPOSITION PRODUCTS: None  
INCOMPATIBILITY: unknown

SECTION VI: HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE/ EMERGENCY AND FIRST AID PROCEDURES:  
EYES: Avoid contact with eyes. Flush eyes with water.  
SKIN: Wash off skin with water  
INHALATION: If dust causes irritation or distress, move to fresh air.  
INGESTION: If swallowed, consult a physician immediately.  
RESPIRATORY PROTECTION: For those that are sensitive to dust, wear a mask or respirator.

SECTION VII: SPILL, LEAK, AND DISPOSAL PROCEDURES

Contain spills. Product is non toxic

SECTION VIII: SPECIAL PRECAUTIONS

Store in a dry location.  
Wash thoroughly after handling. If ingested, call a physician.  
Dusty.  
DO NOT USE AS FEED FOR RUMINANTS.

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<b>SAFETY DATA SHEET</b> <b>The Amazing Doctor Zymes Eliminator</b>
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**Section 1-Chemical Product & Company Identification**

**Trade Name:** The Amazing Doctor Zymes Eliminator

**Product Description:** A fermentation product made from a proprietary blend, Citric Acid. Contains no hazardous chemicals.

**Manufacturer's Name:** The Amazing Doctor Zymes

**Address:** 44911 North Highway 101, PMB #148, Laytonville, CA 95454

**Phone:** 707-984-6094

**Section 2-Composition/Information of Ingredients**

The Amazing Doctor Zymes Eliminator is a proprietary composition NOT CONSIDERED HAZARDOUS under the

OSHA Hazard Communication Standard CFR Title 29 1910.1200.

**Section 3-Physical and Chemical Properties**

**Vapor Pressure:** <1

**Vapor Density (air = 1)** Unknown

**Specific Gravity:** 1.000-1.010 @ 77 degrees F. (25 degrees C.)

**Solubility in water:** Infinitely Soluble

**Volatile Organic:** Negligible

**Content:**

**Appearance:** Orange/brown translucent liquid

**PH:** 3.25-4.20@ 77 degrees F. (25 degrees C.)

**Evaporation Rate:** <1 (water = 1)

**Weight:** Approximately 8.5 lb. gallon (3.8 kg/liter)

**Odor:** Mild, slightly sweet

**Section 4-Fire Fighting Measures**

Flammable Properties: Non-Flammable

Flammable Limits: N/A

Hazardous Combustion: None known

Products:

Extinguishing Method: Water fog, foam, carbon dioxide, dry chemical foam

Fire Fighting Instructions: Wear self-contained breathing apparatus and protective clothing.

**Section 5-Hazards Identification & First Aid Measures****HMIS Hazard Ratings**

Health-0,1,2 Fire-0 Reactivity-0 Personal Protection-See Section 8

Routes of Entry: Product may enter the body via eye contact, skin contact and ingestion.

Potential Health Effects:

Eye: Eye Contact with product may cause irritation. Avoid eye contact.

Skin: Adverse effect not known to occur. Avoid prolonged skin contact with the product.

Ingestion: Swallowing may cause irritation of mouth and throat. Mild diarrhea may occur if ingested.

**First Aid Measures**

Eye Contact: Direct contact with eyes may be painful and irritating. Flush eyes immediately with plenty of water. Seek medical attention if irritation occurs.

Skin Contact: Adverse effects are not known to occur. Rinse exposed areas with water.

Ingestion: If swallowed, give 2 glasses of water. Do not induce vomiting. If spontaneous vomiting is inevitable, PREVENT ASPIRATION by keeping victim's head below the knees. Seek immediate medical attention.

Inhalation: Adverse effects not known to occur. Remove to fresh air, if breathing is difficult.

**Section 6-Stability and Reactivity**

Hazardous Polymerization: Will not occur.

Materials to Avoid: Avoid contact with strong oxidizing and reducing agents.

Hazardous Decomposition Products: N/A

**Section 7-Accidental Release Measures**

Large Spill: Product is biodegradable and ecologically harmless. Rinse spill with water if desired.

Small Spill: Contain spill. Follow same procedure as above for large spill.

Waste Disposal Method: Flush with water; safe for sewer disposal; harmless to aquatic, plant and animal life.

**Section 8-Exposure Controls, Personal Protection**

Personal Protection:

Gloves: Always wear gloves when handling this product in bulk.

Safety Glasses: Always wear eye protection. Goggles or safety glasses with side shields are recommended when spraying.

**Section 9-Handling and Storage**

Storage Temperature: Store this product below 120 Degrees F (49 Degrees C), preferably below 75 degrees F (24 Degrees C), in a cool, dry, well ventilated area away from heat, sparks, flame, oxidizers and out of direct sunlight.

General Precautions: Keep container closed when handling and storing.

**Section 10-Other Information**

Disclaimer: The information contained herein is based upon data available to us and reflects our best professional judgment. However, no warranty is expressed or implied regarding the accuracy of such information or the results obtained from the use thereof. We assume no legal responsibility whatsoever for any damage resulting for reliance upon this information since it is being furnished upon the condition that the person receiving it shall make his or her own determination of the suitability of the material described herein for a particular application of storage situation.

The Amazing Doctor Zymes urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals that are experts in ventilation, toxicology and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product, and (3) request its customers to notify their employees, customers and other users of this product information.

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Revision Date 07/10/2017

**SAFETY DATA SHEET****SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** **GRANDEVO<sup>®</sup>**

**REGISTRATION NO:** 84059-17

**MANUFACTURER:** Marrone Bio Innovations

**ADDRESS:** 1540 Drew Avenue, Davis CA, 95618

**EMERGENCY PHONE:** **INFOTRAC Chemical Response System**  
**US and Canada 1-800-535-5053 (24 hours)**  
**International 1-352-323-3500 (24 hours)**

**OTHER CALLS:** Marrone Bio Innovations 530-750-2800 (9am to 5 pm PST)  
**FAX PHONE:** Marrone Bio Innovations 530-750-2808

**PRODUCT USE:** Bio-based Insecticide/ bio-protectant

**SECTION 2: HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:**

Causes eye irritation

**HAZARD SYMBOLS:**

Pictogram (NONE)

Signal Word Warning

**HAZARD STATEMENT:**

H320 Causes eye irritation

**PRECAUTIONARY STATEMENTS**

P264 Wash exposed areas thoroughly after handling.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical attention.

**POTENTIAL ROUTES OF ENTRY:** Oral, eye, and inhalation.**CARCINOGENICITY:**

OSHA: Not listed      ACGIH: Not listed      NTP: Not listed. IARC: Not listed

**SAFETY DATA SHEET****SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

synonyms: MBI-203 DF, GRANDEVO® ST, GRANDEVO® DF

**ACTIVE INGREDIENT:***Chromobacterium subtsugae* strain PRAA4-1 an spent fermentation mediaCAS NO. None% WT 30EXPOSURE LIMITS None Established**OTHER INGREDIENTS:**

70.0 % inert, non-reactive.

**SECTION 4: FIRST AID MEASURES**

**INHALATION:** Remove person to fresh air. If the person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment.

**EYES:** Hold eye open and rinse slowly and gently with water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Do not use an eye ointment. Call poison control center or doctor for treatment advice.

**SKIN:** Remove contaminated clothing. Rinse skin immediately with plenty of water for at least 15-20 minutes. Call a poison control center or doctor for treatment advice.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or physician. Do not give anything by mouth to an unconscious person.

**SECTION 5: FIRE-FIGHTING MEASURES****FLAMMABLE LIMITS IN AIR, (% BY VOLUME)**

UPPER: Not applicable.

LOWER: Not applicable.

**FLASH POINT:** Not applicable.**AUTOIGNITION TEMPERATURE:** Not applicable.**NFPA HAZARD CLASSIFICATION**

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION**

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

**EXTINGUISHING MEDIA:** Use extinguishing media appropriate for the surrounding fire.

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**SPECIAL FIRE FIGHTING PROCEDURES:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None

**HAZARDOUS DECOMPOSITION PRODUCTS:** None

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Use personal protective equipment. Avoid dust formation, Avoid breathing dust, vapor, or mist. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see Section 8.

#### ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### SECTION 7: HANDLING AND STORAGE

#### PRECAUTIONS FOR SAFE HANDLING

Further processing of solid materials may result in the formation of combustible dusts. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

#### CONDITIONS FOR SAFE STORAGE

Keep container tightly closed in a dry and well-ventilated place. Store in original container and out of direct sunlight.

**OTHER PRECAUTIONS:** No special precautions.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Spill controls and dust control apparatus should be provided for working with large quantities.

**VENTILATION:** No TLV assigned. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and aerosols below the exposure levels. Ensure that eyewash stations and safety showers are proximal to the work-station location.

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**RESPIRATORY PROTECTION:** Use a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95.

**EYE PROTECTION:** Safety goggles or glasses with side shields advisable when handling dry powder.

**SKIN PROTECTION:** Wear gloves made of Latex or other impervious material.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Clothing to prevent prolonged skin contact as needed such as long-sleeved shirt, long pants and shoes with socks.

**WORK HYGIENIC PRACTICES:** Wash any contamination from skin or eyes immediately. Wash hands and exposed skin before eating, drinking, smoking, after work or using the toilet.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE:	Powder
COLOR:	Dark brown powder
ODOR:	Fruity
pH:	7 to 9
DENSITY:	Not determined
BOILING POINT:	Not applicable
MELTING POINT:	Not applicable
SOLUBILITY IN WATER:	Dispersible in water
FLASH POINT:	Not determined
EVAPORATION RATE:	Not determined
FLAMMABILITY (SOLID. GAS):	Not determined
UPPER FLAMMABILITY LIMITS:	Not determined
LOWER FLAMMABILITY LIMITS:	Not determined
VAPOR PRESSURE:	Not determined
VAPOR DENSITY:	Not determined
RELATIVE DENSITY:	Not determined
SOLUBILITY IN OTHER SOLVENTS:	Not determined
PARTITION COEFFICIENT:	Not determined
AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined
KINEMATIC VISCOSITY:	Not determined
DYNAMIC VISCOSITY:	Not determined
EXPLOSIVE PROPERTIES:	Not determined
OXIDIZING PROPERTIES:	Not determined

**SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** Stable.

**INCOMPATIBILITY (MATERIAL TO AVOID):** None known

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** None known

**HAZARDOUS POLYMERIZATION:** Not known to occur

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CONDITIONS TO AVOID (POLYMERIZATION): None

**SECTION 11: TOXICOLOGICAL INFORMATION**

ACUTE ORAL TOXICITY LD <sub>50</sub> :	LD <sub>50</sub> >5000 mg/kg (rat). Not categorized
ACUTE DERMAL TOXICITY LD <sub>50</sub> :	LD <sub>50</sub> >5050 mg/kg (rat). Not categorized
ACUTE INHALATION LC <sub>50</sub> :	LC <sub>50</sub> >5.11 mg/L (rat). Not categorized
EYE IRRITATION:	Mild irritation; clears within 72 hours (rabbit) Category 2B
SKIN IRRITATION:	Does not produce irritation (rabbit) Not categorized.
SKIN SENSITIZATION:	Non-sensitizing (guinea pigs) Not categorized

**SECTION 12: ECOLOGICAL INFORMATION**

Toxicity to freshwater aquatic life (OECD 203): Rainbow trout (96-hour acute toxicity)  
LC<sub>50</sub> > 100 mg/L; NOEC > 100 mg/L

Acute Oral Toxicity to Honey Bee (*Apis mellifera*) (OECD 213): 48-hour LD<sub>50</sub> > 100 µg a.i./bee

Acute Contact Toxicity Honey Bee (*Apis mellifera*) (OECD 214): 48-hour LD<sub>50</sub> > 100 µg a.i./bee

Testing all beneficial insects, in all situations, mixtures and combinations, is not feasible. Prior to treating entire crop where the release of beneficial insects serve as part of an Integrated Pest Management (IPM) program, consult with an extension specialist, a pest control advisor (PCA) or with the product manufacturer.

**For terrestrial uses only:** Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

**Sensitive areas:** The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals. Do not allow product to drift to blooming crops or weeds if bees are foraging. Minimize spray drift away from the target area to reduce effects to other non-target insects

Bioconcentration potential: This material is not expected to bioconcentrate in organisms.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Do not reuse containers. Dispose of in accordance with all applicable federal, state, and local environmental regulations.

**SECTION 14: TRANSPORTATION INFORMATION**

U.S. DOT: Not regulated

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IATA DGR: Not regulated

IMDG: Not regulated

Freight Classification: Insecticide. See NMFTA code.

**SECTION 15: REGULATORY INFORMATION**

Allowable Tolerances:

Residues of GRANDEVO<sup>®</sup> are exempted from the requirement of a tolerance when used in accordance with good agricultural practices and label application instructions to agricultural commodities directed on the product label.

**U.S. FEDERAL REGULATIONS**

TSCA: Exempt

CERCLA: Not applicable.

**SARA TITLE III HAZARD CLASSIFICATION SECTIONS 311 AND 312:**

Immediate (acute) Health: None

Delayed (chronic) Health: None

Fire: None

Sudden Release of Pressure: None

Reactivity: None

**US STATE RIGHT TO KNOW REGULATIONS:**

New Jersey Right To Know Components  
Kaolin CAS No.  
1332-58-7

Pennsylvania Right To Know Components  
Kaolin CAS No.  
1332-58-7

California Proposition 65  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**SECTION 16: OTHER INFORMATION**

**NFPA HAZARD CLASSIFICATION**

HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION**

HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0

SPECIAL HAZARDS: Not Determined

**SAFETY DATA SHEET**

Date Issued: 10 April 2019  
Revision: 5  
Revision Note: Update synonyms

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