Conditional Use Permit for Cannabis Cultivation Proposal Statement (Demeter)

Prepared August 31, 2017
Revised May 4, 2018

Site:
12201 HWY 12
Glen Ellen, CA 95442
APN: 053-130-009, 053-100-015
UPC 17-0048
HLS Project: #2584

Operators:
Joseph"Joey"Ereneta (dba: Terra Luna Farms LLC)

Property Owners:
Gordenker Turkey Farms Inc.
12201 Highway 12
Glen Ellen, CA 95442

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ATTACHMENTS:

HOGAN LAND SERVICES
A CALIFORNIA CORPORATION

PREPARED: August 25, 2017
REVISED: May 4, 2018

SUBJECT: Conditional Use Permit Outdoor Cannabis Cultivation

OPERATORS: Joey Ereneta (dba: Terra Luna Farms LLC)

OWNERS: Lands of Gordenker Turkey Farms-Demeter

ADDRESS: 12201 Hwy 12 Glen Ellen, CA 95442

APN: 053-130-009, 053-100-015

REFERENCES:

- Sonoma County Medical Cannabis Land Use Ordinance, Section 26-88-250, 252, & 254
- Sonoma County Code, 26-04-010(d)

A. EXISTING USE AND PROPERTY:

The subject parcel is located at 12201 Hwy 12 in Glen Ellen, CA 95442. The property has two existing easements; one drainage easement and one 40 foot wide access road. The property currently accommodates several agricultural uses: an organic free range chicken farm which produces organic eggs for human consumption; several head of organic free range cattle, which are also raised for human consumption; and over seven acres of organic cabernet grapes.

By and large, the land is underdeveloped and underutilized in an agricultural sense. As a result, the property has developed a naturally biodiverse environment, one that we aim to preserve by pursuing Demeter-USA Biodynamic certification for this farm. We believe our proposal is the highest, best, and most efficient use of the land per square foot, without contributing to the oversaturation of vineyards and wineries in the Sonoma Valley. If not our project, economic consideration will force the property owners to consider uses with more harmful impacts on the land and surrounding areas.

On October 11, 2017, the property sustained significant damage as a result of the the Nuns Canyon Fire. The US Army Corps of Engineers (USACOE) completed cleanup and debris removal on April 18, 2018. This revised proposal reflects changes that were necessary as a result of fire damage.

B. PROPOSED CANNABIS USE AND OPERATION PLAN:

i. PROJECT STATEMENT:

We are extremely proud to introduce our 1-acre, biodynamic cannabis cultivation site. Our experienced team has joined with Demeter USA, the American wing of the internationally renowned biodynamic certification organization, to help us design and certify our farm. Their

comprehensive verification process ensures strict compliance with the International Demeter Production and Processing Standards, as well as all state and national organic regulations. In common with other forms of organic agriculture, biodynamic agriculture uses management practices that are intended to restore, maintain and enhance ecological harmony. This principle emphasizes that humans have a responsibility for the development of their ecological and social environment which goes beyond economic aims and the principles of descriptive ecology. Crops, livestock and farmer form a unique interaction, which biodynamic farming tries to actively shape through a variety of management practices. The prime objective is always to encourage healthy conditions for life: soil fertility, plant and animal health, and product quality.

As such, we at Terra Luna Farms seek to enhance and support the forces of nature that lead to healthy crops, and reject farm management practices that damage the environment, soil, plant, animal or human health. Our farm shall be conceived of as an organism, a self-contained entity with its own individuality, holistically conceived and self-sustaining. Disease and insect control shall be addressed through botanical species diversity, predator habitat, balanced crop nutrition, and attention to light penetration and airflow. Weed control shall emphasize prevention, including timing of planting, mulching, and identifying and avoiding the spread of invasive weed species. Important features shall include the use of local livestock manures to sustain plant growth (recycling of nutrients), maintenance and improvement of soil quality, and the health and well being of both our crops and our animals. Cover crops, green manures and intercropping shall be used extensively in order to foster the diversity of plant and animal life, and to enhance the biological cycles and biological activity of the soil.

To execute this vision, we have partnered with Sonoma County's expert biodynamic winemaker, Mike Benziger. As a cancer survivor and firm supporter of cannabis as medicine, Mike shall bring his many years of biodynamic farming experience to our team and offer his ongoing support to our project. Our farm's founder and primary operator is expert, industry consultant, Joey Ereñeta, who has been cultivating, teaching, consulting and shaping regulatory policy in the cannabis industry for 23 years. Mr. Ereñeta is the Lead Horticulture Instructor at Oaksterdam University, the nation's first and premiere cannabis college. Having designed and operated countless cultivation and processing facilities across the country, and after teaching over 30,000 students from around the world about the cannabis plant and industry. Also in the past 10 years, Joey has operated a successful medical marijuana consulting business, Let It Grow Consulting, and has worked with dozens of indoor and outdoor patient collectives and individuals, with sites ranging in size from 600 to 60,000 square feet and in locations from California to Connecticut. When it comes to developing world-class compliant cannabis farms, Joey has run the gambit.

Together, our team will bring California the latest in cutting edge and sustainable technologies and stringent quality control protocols in order to produce the safest and highest quality pharmaceutical grade cannabis. These synergies present an extremely unique and powerful potential for excellence and success at our highly sustainable cultivation operation. By pioneering this method of cannabis production, our farm will serve as an example to cannabis cultivators throughout California as a responsible, environmentally friendly and regenerative farm.

Terra Luna Farms has developed and maintains positive relationships with our neighbors on the adjacent parcels and surrounding neighborhood. We take our community relations very seriously and track all correspondence in order to ensure we're collecting all feedback from our neighbors. In fact, we conducted a guided tour of the property to discuss the proposed project for our neighbors. This very successful meeting and tour took place on July 22, 2017, during which over 35 of our immediate neighbors attended. We have received much interest in and support for the project and will continue to engage and respect our local community members.

ii. CANNABIS USES AND OPERATION PLAN:

We look forward to showing you the very best the cannabis industry has to offer in the cultivation of connoisseur-level cannabis plant pharmaceuticals for the patients of Sonoma County and California. The key to producing consistent and high quality, medicinal cannabis products lies in the ability to cultivate a wide range of cannabis varieties, and doing so to their maximum genetic potential. This requires a keen understanding of plant anatomy, morphology, and physiology, matched with comprehensive climate data and the skills to teach and train our farm staff. With our highly experienced cultivation team, our renowned biodynamic consultant, and our owner/operator, who is one of the leading authorities in cannabis horticulture, we shall implement the necessary planning, procedures and oversight, to ensure a consistent and pharmaceutical-grade cannabis product year in and year out. We shall run a very tight ship with regards to operational flow and crop cycling, capitalizing on the benefits of an extremely efficient farm and a well-trained and managed team.

Terra Luna Farms proposes one acre of outdoor cannabis cultivation canopy for this site. Cannabis will be cultivated directly in the ground, with plants arranged into rows and access aisles between rows. Due to strict biodynamic requirements, these access aisles shall be swapped/rotated with the planting rows at least every two years, thus minimizing the depletion of soil fertility in the planted areas. This shall be reflected in our extensive and comprehensive Cultivation SOPs. These operating procedures will be continuously evaluated and improved to maximize efficiency, safety and the quality assurance of our cannabis flowers and products. Through our proposed cannabis uses and operation plan we will ensure strict adherence to Sonoma County's Cannabis Cultivation Best Management Practices and to Demeter International's stringent requirements for biodynamic certification. Please see Attachment: C Outdoor Cannabis Uses and Operation Plan for more information.

iii. PROCESSING PLAN: All cannabis product is to be processed off site at a licensed facility.

C. MEDICAL CANNABIS LAND USE ORDINANCE DEVELOPMENT CRITERIA:

i. NUMBER AND TYPES OF FACILITIES:

Proposed farm is one acre of outdoor, in-ground planted cannabis.

ii. SQUARE FOOTAGE OF EACH CULTIVATION AREA:

We will cultivate one acre of mature cannabis canopy in clearly demarcated planting rows. We have contracted with Hogan Land Services for the purpose of accurately measuring this square

footage. Please see Site Plan for further details.

iii. SETBACKS OF ALL CULTIVATION AND OUTDOOR ACTIVITY AREAS:
Harvesting and all other outdoor activities shall occur in compliance with all required riparian, biotic and sensitive use setbacks. The separation of the cultivation site from sensitive uses is beyond the minimum requirement of 1000 feet. We have contracted the services of Hogan Land Services for the purpose of measuring and complying with all required setbacks. Please see Site Plan for exact measurements of all setbacks for all cultivation and outdoor activity areas.

iv. SEPARATION DISTANCE OF PROPERTY BOUNDARY TO PROPERTY LINE:
The setback of the cultivation site from the parcel/property line shall meet or exceed the minimum required 100 feet. We have contracted the services of Hogan Land Services for the purpose of measuring and complying with all required setbacks. Please see attached Site Plan for exact measurements of all setbacks for all cultivation and outdoor activity areas.

v. LIST OF ALL EXISTING STRUCTURES AND PROPOSED USES:
The proposed project includes no new structures, and will not use any of the property's existing structures. However, the parcel currently contains existing barns and agriculture supporting structures from the previous use. These structures and uses are mapped out and clearly listed in the attached Site Plan.

vi. BIOTIC RESOURCES:
We have contracted with Wiemeyer Ecological Sciences. All on-site assessments have been completed, including wet weather visits. Please see Attachment A: Biotic Assessment.

vii. CULTURAL RESOURCES:
Proposed site is not located within a historic district.

viii. FIRE PREVENTION PLAN:
We have contracted the services of Brian Elliott, Fire and Emergency Services Consulting (FESC). On-site assessments have been completed and it has been determined that the proposed project does not increase fire risk. For complete details, please refer to Attachment E: Fire Prevention Plan.

ix. GRADING AND ACCESS:
Access will be provided by the existing gravel driveway off of Trinity road approximately 700' east of Highway 12. This gravel driveway will be over parcel (APN: 053-110-001) of which will provide an access easement. The existing gravel driveway averages a slope of 2 percent. It is proposed to install a turnout half way down the 1,700' gravel driveway. This gravel road t's in to Weiss road being a paved road. Approximately 400' of this paved road will be used and the remainder of the access will be over an existing dirt road. This dirt road averages a slope of no more than 2 percent and is approximately 200' in length. A fire safe turnaround will be provided at the end of the dirt road.

x. HAZARDOUS MATERIALS:

We have contracted the services of Brian Elliott, Fire and Emergency Services Consulting (FESC). to co-develop our Hazardous Materials Plan. This plan includes the monitoring and safeguarding of all hazardous materials and the handling, tracking, transporting, storing, disposing and recalling of products containing medical cannabis and medical cannabis waste in accordance with all applicable local, state and federal laws, rules and regulations. Please see Attachment F: "Hazardous Materials Inventory List and Plan" for further details.

xi. LIGHTING PLAN:

No lighting will be used for cultivation purposes at this site. The only lights onsite will be for security and safety purposes, which meet all applicable requirements and regulations. This lighting shall be provided via solar powered motion sensors. Proposed light type will be a Sunforce White Outdoor Solar 80-LED Motion Light or something equivalent. The solar powered lights shall be limited to gates, corners of cultivation areas, throughout cultivation area as needed, and auxiliary structures. All exterior lighting shall be fully shielded, downward casting, and will not spill over onto structures, other properties, or the night sky. These lights and their specifics have been mapped and listed on our Site Plan.

xii. STORMWATER MANAGEMENT PLAN:

Runoff containing sediment, by-products, or other waste shall not be allowed to drain to the storm drain system, waterways, or adjacent lands. Despite the common problem of over-watering at many outdoor cannabis cultivation operations; our plants will be watered very efficiently to avoid runoff and erosion around the cultivation area. By using a vegetative mulch and a drip system, we will ensure no water is wasted. Additionally, appropriate erosion and sediment control BMPs will be used to prevent runoff of nutrients, sediment and contaminants. Any ground disturbed as a result of the development will be reseeded and re-vegetated. For more information see Grading and Erosion Control notes on attached Site Plan.

xiii. SECURITY AND FENCING PLAN:

[redacted]

[redacted]

D. MEDICAL CANNABIS LAND USE ORDINANCE OPERATING STANDARDS:

i. ODOR CONTROL PLAN:

We at Terra Luna Farms take very seriously our responsibility to establish comprehensive and effective odor mitigation strategies for the continued and responsible operation of our outdoor cannabis farm. Pursuant to industry best practices, our cultivation area shall be located with sufficient setbacks to public roadways and adjoining properties in order to mitigate odor. Please see Attachment D: Odor Mitigation Plan for further details.

ii. ENERGY SOURCE USE:

All energy will be sourced through the Sonoma Clean Power EverGreen program, in accordance with Sonoma County Ordinance 6189.

iii. HOURS OF OPERATION:

Outdoor cultivation and harvesting activities may be conducted seven days a week, 24-hours a day

as needed. Deliveries and shipping activities will be limited to daily hours between 8:00 a.m to 5:00 p.m. unless a permit is obtained.

iv. OUTDOOR ACTIVITY AREAS & DISTANCE TO PROPERTY LINES

Harvesting and all other outdoor activities shall occur in compliance with all required property line setbacks. We have contracted the services of Hogan Land Services for the purpose of measuring the outdoor activity areas and distance to adjacent property lines. Please see Site Plan for further details on outdoor activity areas and distance measurements to property lines.

v. WASTE MANAGEMENT PLAN:

In accordance with Sonoma County Ordinance 6189, all garbage and refuse on this site shall be accumulated or stored in non-absorbent, water-tight, vector resistant, durable, easily cleanable, galvanized metal or heavy plastic containers with tight fitting lids. No refuse container shall be filled beyond the capacity to completely close the lid. All garbage and refuse on this site shall not be accumulated or stored for more than seven calendar days, and shall be properly disposed of before the end of the seventh day in a manner prescribed by the Solid Waste Local Enforcement Agency. All waste, including but not limited to refuse, garbage, green waste and recyclables, shall be disposed of in accordance with local and state codes, laws and regulations. All waste generated from cannabis operations shall be properly stored and secured to prevent access from the public. Staff shall follow strict waste management protocols to prevent the diversion of cannabis, the spread of disease and contamination, and the safekeeping of all of our medical cannabis inventory. Please see Attachment G: Medical Cannabis Waste Plan for further details.

vi. WATER SUPPLY AND MANAGEMENT PLAN

Water shall be supplied by the Northwest well drilled under permit WEL17-0247. This water will flow into a central storage facility on another adjoining parcel (APN 053-130-009 / 053-110-001), where storage capacity will be approximately 150,000 gallons. We shall also have an emergency 10,000 gallon tank storage located on this parcel equipped with fire department connection. The water line for this parcel will be metered separately from other parcels. In our watering process we will practice Zero-waste, drain to waste, top drip irrigation, using moisture meter controlled irrigation valves.

Projected water need is 40,000/month, 280,000/year. This shall be significantly offset by rainwater harvesting which will be captured off of new ag barn and proposed greenhouses on adjacent plot.

Emergency water will be stored on site, as mentioned in Attachment E: Fire Prevention Plan.

We have contracted with PJC & Associates to conduct a hydrogeologic report certifying that the onsite groundwater supply is adequate to meet the proposed uses and that the operation will not result in or exacerbate an overdraft condition in the basin, result in reduction of critical flow in nearby streams, or result in well interference at off-site wells. All on-site assessments have been completed and the final report is attached. Please see Attachment B: Hydro-Geologic Report.

vii. GROUNDWATER MONITORING EASEMENT:

A groundwater monitoring easement will be provided to the onsite tank farm on parcel APN 053-130-009 / 053-110-001, together with an access easement from Trinity road over Parcel 053-110-001. The tank farm will contain meters for each individual site being served by the tank farm. The sites that will draw from the tank farm will be; 053-110-076, 053-110-001, 053-130-009, and 053-100-015. The tank farm shall be equipped with a meter and sounding tube or other water level sounding device and marked with a measuring reference point. Static water level and total quantity of water pumped will be recorded quarterly and reported annually. Groundwater monitoring reports, showing a cumulative hydrograph of static water levels and the total quarterly quantities of water pumped from wells used in processing, will be submitted annually to the Permit and Resource Management Department, Project Review Division by January 31 of each year.

viii. WASTEWATER MANAGEMENT PLAN:

Per phone conversation with Tim Ricard, Cannabis Program Manager, on Feb 1, 2018, applicant shall provide seasonal, onsite, ADA accessible restrooms sufficient for all staff.

Terra Luna Farms, LLC

Amy Lyle, Supervising Planner
Permit Sonoma, County of Sonoma
2550 Ventura Avenue
Santa Rosa, CA 94503

November 12, 2018

RE: Project Status and Application Revisions
File No. UPC17-0048 || APN 053-130-009

Dear Ms. Lyle,

Terra Luna Farms, LLC submitted a Cannabis Cultivation Conditional Use Permit to Permit Sonoma on August 31, 2017 for a 43,560 square foot outdoor cannabis cultivation project on a 26.15-acre parcel. The application included a Penalty Relief Form to acknowledge the existing nature of the operations.

Following the devastating Nuns Canyon Fire in October 2017, Terra Luna Farms met with Sonoma County planning staff and consultants to discuss a proposed relocation of the cultivation area to a nearby plot on the same parcel. As directed, Terra Luna Farms submitted the required materials regarding the relocation and to complete the application prior to the June 1, 2018 deadline and Permit Sonoma deemed our application complete for processing.

Pursuant to Board of Supervisors amendments to Sonoma County Code Sec. 26-88-254(f)(4)(b) adopted on October 16, 2018, Terra Luna Farms wishes to update our proposed project to include up to 10,000 square feet of propagation and vegetative space to be kept separate from the proposed cultivation canopy of 43,560 square feet. Temporary structures within the secure garden perimeter shall be used for vegetative and propagation space and shall not be erected for more than 180 days.

We are additionally submitting an updated Biotic report prepared by Darren Wiemeyer in October 2018.

Terra Luna Farms, LLC

With the submission of this material, our application is complete and ready for processing. We look forward to beginning the review process and advancing this project. Please direct any questions regarding this project to Andrew Dobbs-Kramer in my office at 707-584-6923 or TerraLunaFarm@Gmail.com. Thank you for your review of our revised application materials.

Sincerely,

Joseph Ereñeta,
6010 Commerce Blvd STE 141, Rohnert Park, CA 94928
707.584.6923
TerraLunaFarm@gmail.com

CC Richard Larrouy, Land Logistics, Contract Project Planner (richard@landlogistics.com)
Brian Millar, Land Logistics, Contract Project Planner (brian@landlogistics.com)
Dean Parsons, Project Review Division Manger (dean.parsons@sonoma-county.org)
Tim Ricard, Cannabis Program Manager (Tim.Ricard@sonoma-county.org)

Attachment C: Outdoor Cannabis Uses and Operation Plan

Cultivation SOPs

Terra Luna Farms is extremely proud to introduce our 1 acre, biodynamic cannabis cultivation site. Our experienced team has joined with Demeter USA, the American wing of the internationally renowned biodynamic certification organization, to help us design and certify our farm. Their comprehensive verification process ensures strict compliance with the International Demeter Production and Processing Standards, as well as state and national organic regulations. The holistic Demeter requirements generally exceed government mandated regulations. Not only do they exclude the use of synthetic fertilizers and chemical plant protection agents in agricultural crop production, or artificial additives during processing, but also require very specific measures to strengthen the life processes in soil and plant crops.

In common with other forms of organic agriculture, biodynamic agriculture uses management practices that are intended to restore, maintain and enhance ecological harmony. Central features include crop diversification and the avoidance of chemical soil treatments and off-farm inputs generally. Demeter recommends that a minimum of ten percent of the total farm acreage be set aside as a biodiversity preserve. That may include but is not limited to forests, wetlands, riparian corridors, and intentionally planted insectaries. Diversity in crop rotation and perennial planting is required. Bare tillage year round is prohibited so land needs to maintain adequate green cover.

The Demeter Association also recommends that the individual design of the land by the farmer, as determined by site conditions, is one of the basic tenets of biodynamic agriculture. This principle emphasizes that humans have a responsibility for the development of their ecological and social environment which goes beyond economic aims and the principles of descriptive ecology. Crops, livestock and farmer form a unique interaction, which biodynamic farming tries to actively shape through a variety of management practices. The prime objective is always to encourage healthy conditions for life: soil fertility, plant and animal health, and product quality.

Attachment C: Outdoor Cannabis Uses and Operation Plan

Terra Luna Farms seeks to enhance and support the forces of nature that lead to healthy crops, and reject farm management practices that damage the environment, soil plant, animal or human health. Our farm shall be conceived of as an organism, a self-contained entity with its own individuality, holistically conceived and self-sustaining. Disease and insect control shall be addressed through botanical species diversity, predator habitat, balanced crop nutrition, and attention to light penetration and airflow. Weed control shall emphasize prevention, including timing of planting, mulching, and identifying and avoiding the spread of invasive weed species. Important features shall include the use of local livestock manures to sustain plant growth (recycling of nutrients), maintenance and improvement of soil quality, and the health and well being of both our crops and our animals. Cover crops, green manures and intercropping shall be used extensively in order to foster the diversity of plant and animal life, and to enhance the biological cycles and the biological activity of the soil.

To execute this vision, Terra Luna Farms has partnered with Sonoma County's expert biodynamic winemaker, Mike Benziger. As a cancer survivor and firm supporter of cannabis as medicine, Mike shall bring his many years of biodynamic farming experience to our team and offer his ongoing support to our project. Our team leader and project applicant, Joey Ereñeta, has been cultivating, teaching, consulting and shaping regulatory policy in the cannabis industry for 23 years. Mr. Ereñeta is the Lead Horticulture Instructor at Oaksterdam University, the nation's first and premiere cannabis college. Having designed and operated countless cultivation and processing facilities across the country, and after teaching over 30,000 students from around the world about the cannabis plant and industry, Joey brings an incredible wealth of knowledge and level of expertise found very rarely in the cannabis field. Together, we will bring California the latest in cutting edge and sustainable technologies and stringent quality control protocols. These synergies present an extremely unique and powerful potential for excellence and success at our highly sustainable cultivation operation.

As part of our Quality Control Plan, Terra Luna Farms shall perform a visual inspection of all in-process growing, flowering and harvested plant material, to ensure there are no

pests, mold, mildew, or other pathogens. Pursuant to our waste management protocols, we shall have a separate and secure area for temporary storage of any cannabis or medical cannabis designated for destruction. The cannabis plants shall be processed in a safe and sanitary manner.

Plant Inventory

Terra Luna Farms's intention is to cultivate a wide variety of cannabis strains in order to offer an extremely diverse line of formulated medical products for California patients. The profile of therapeutic compounds obtained from the cannabis plant is dictated by the genotype, or genetic makeup, of each distinct variety. This genetic blueprint is what regulates the phenotypes, or physical characteristics, that express themselves during the maturation of each plant. It is therefore essential for us to equip our genetic library with a rich diversity of genetic varieties, so that we may cultivate, extract, process and formulate the widest variety of synergistic compounds found within this medicinal plant. Once we have established our startup inventory, we shall propagate new cannabis plants and seed hybrids using a combination of stem cutting and tissue culture cloning, as well as pollination and breeding of newly hybridized and stabilized seed varieties, for further expanding our diverse library of cannabis plants and product offerings.

Nutrient Management

The cultivation of healthy and productive cannabis plants requires precise nutrient monitoring and application. Terra Luna Farms's cultivators have decades of experience formulating, applying and analyzing nutrient regimen for a wide variety of cannabis strains and growing conditions. Terra Luna Farms will implement fully automated plant nutrition systems that incorporate a balance of the planting medium mix, the nutrient/pH/water quality conditions, and the irrigation system itself.

Regarding industry best practices and procedures for growing and processing medical cannabis, Terra Luna Farms shall:

1. Use a fertilizer or hydroponic solution of a type, formulation and at a rate to support healthy growth of plants.
2. Maintain records of the type and amounts of fertilizer and any growth additives used.
3. Not add any additional active ingredients or materials that alter the color, appearance, smell, taste, effect or weight of the medical cannabis unless we have first obtained the prior written approval of the Department. Excipients must be pharmaceutical grade, unless otherwise approved by the Department.

Medical cannabis waste deemed to be free of pests and pathogens shall be composted and beneficially used as a soil substitute, soil conditioner, soil amendment, fertilizer or mulch.

Nutrient Monitoring and Control

Consistency throughout the cultivation process continues with our automated, organic nutrition system. All plants in a batch are nourished from irrigation lines fed by the same precise fertigation units, meaning that every plant in a batch gets the exact same concentration of nutrients, further producing consistent results cycle to cycle. Commercial agriculture has long implemented automated irrigation monitoring and control systems, but this has only more recently been implemented in the cannabis industry. Standard industry practices of using central reservoirs for mixing nutrient recipes brings with it a slew of problems involving inconsistency, contamination and disease, and significant waste of nutrients which further adversely affects downstream environments, waterways and plant and animal species. Terra Luna Farms shall adopt a nutrient management plan prepared by a certified nutrient management consultant. We shall use organically-certified fertilizer solutions of a type, formulation, and at a minimal

rate to support the healthy growth of our plants. Terra Luna Farms shall also maintain records of the type and amounts of fertilizer and any growth additives used.

Irrigation Control

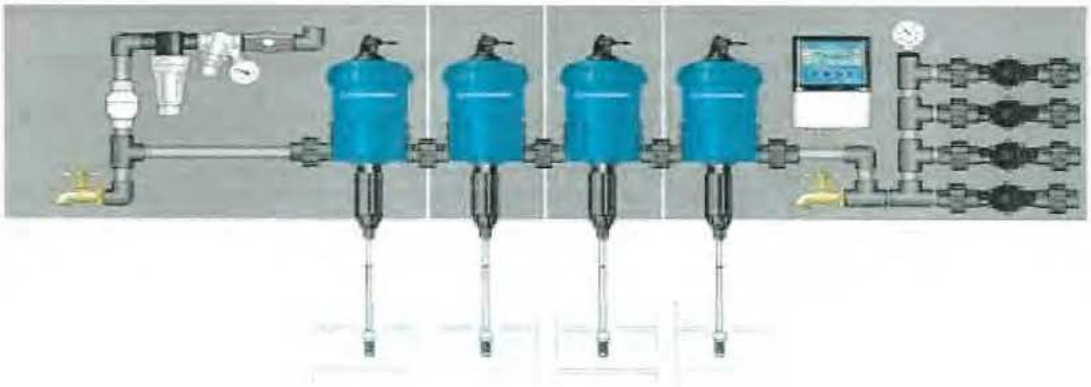
In our Irrigation Control area, Terra Luna Farms will have all the equipment necessary to automate and precisely control the water and nutrient inputs our plants receive on a daily basis. Equipment will include water storage tank(s), a inline filtration systems, a large pump to pressurize the water, soil moisture meters, a series of fertigation valves and systems, bulk organic nutrient storage, pH adjustment solutions, electrical conductivity and pH testing meters, and a manifold/valve/piping system for transporting water and nutrients to the various garden sections.

Essential to the quality assurance of our medical cannabis products is the quality of materials used in the cultivation process. Terra Luna Farms has designed our irrigation system to facilitate the cleanest water and the most efficient control of nutrients inputs. This starts with our source water. Our main source of water will be our well located onsite, using a shared water storage farm located on an adjacent parcel (See Site Plans for more information about Shared Water System.). With average annual rainfall, we will be able to bank ample water reserves to supplement the needs of our facility, and significantly reduce our groundwater consumption. Depending on source water analytics, we will be using a mixture of source water and reverse-osmosis filtered water, in order to remove any contaminants or minimize excessive levels of nutrient salts, before using the water for irrigation purposes.

All stored water will be pressure pump fed through our nutrient injection (fertigation) units. These systems will be tailor-designed to create four distinct nutrient formulas for use in various stages of plant development. Installed directly in the water supply line, the fertigation control system operates by using the flow of water as the power source. The water activates the fertigation control system, which takes up the required percentage of concentrate directly from the nutrient concentrate container and injects it into the water. Inside the fertigation control system, the concentrate is mixed with the

water, and the water pressure forces the solution downstream. The dose of concentrate will be directly proportional to the volume of water entering the system, regardless of variations in flow or pressure, which may occur in the main line. Each recipe will have a different number of input nutrient concentrates, including a pH adjustment solution to control acidity/alkalinity.

At the end of each recipe-specific system, we will install a manifold that allows for timed and/or moisture meter controlled valve operation, which will direct the flow of pre-mixed nutrient solution to the appropriate zones of the cultivation site. Thus, plants will be fed and hydrated simultaneously, and as needed through this automated fertigation system. Adjustments can be easily made for any potential source-water, mineral-content changes throughout the year.



Beneficial Microbiology and Compost Teas

With our commitment to organic cultivation, it is essential that Terra Luna Farms introduces and maintains healthy populations of beneficial microorganisms in the rhizosphere. Organic nutrition relies heavily on the symbiotic relationship between the roots and certain bacterial and fungal populations, called mycorrhizae. The mycorrhizae form protective colonies around the plant's root system that aid in nutrient/water access and defend against pathogenic bacteria and fungi that would otherwise attack and feed

upon the root system. Our cultivation staff shall introduce dry, granular microbes via direct root inoculation during each transplant. We shall also brew aerated compost teas that are rich in beneficial microbes and soluble organic nutrition for regular root drench applications of these microbial populations.

Pesticides

Terra Luna Farms is committed to the cultivation of the safest medicinal cannabis for California patients. As such, we shall use good agricultural practices in conformance with Demeter biodynamic standards and the laws of California.

Our primary pest control shall be accomplished by the regular release of beneficial and predatory insects and the use of companion planting both in and among our planting rows as well as in our established insectaries. These methods shall serve to compete with and control any plant pests in our garden without the use of conventional pesticides which can impart deleterious residues on our cannabis medicine. At times, pesticide sprays will be necessary. As part of our Integrated Pest management Plan, Terra Luna Farms shall use only pesticides, fungicides or herbicides that are approved by the California Department of Food and Agriculture (CDFA) and in strict accordance with the Department of Pesticide Regulation (DPR) and our Pesticide Plan. We are committed to only apply pest control products that have been approved by the Organic Materials Review Institute (OMRI) per the guidelines set forth by the National Organic Program of the USDA or by CDFA Organic certification. We shall maintain a log of all actions taken to detect pests or pathogens, and the measures taken for control. We shall use any pesticides, fungicides or herbicides in a manner that is approved by the DPR and CDFA. Pesticides, fungicides, and herbicides shall be applied under the supervision of Joseph Ereneta, CA DPR License# 143207.

Climate Monitoring

Using atmospheric and soil climate monitoring, recording and control technologies, Terra Luna Farms shall monitor the changing conditions that drive the plant's photosynthetic responses. From climate sensors that can monitor light, CO2, temperature, humidity, wind, soil moisture, soil temperature, nutrient concentrations and pH, we shall have ongoing and precise data about the atmospheric and soil conditions throughout the growing season. Our technologies will capture all of this data in real time and store it in the cloud for access at time and for any interval. This data logging shall serve to track and improve upon each and every round, by offering us minute-level details and complex reporting capabilities. It can also alert farm staff within seconds (via text, email and audible alarm) of any climate conditions falling outside of optimal parameters. Using this seasonal data, we shall develop planting locations and methodologies that are tailored specifically to each plant variety and to the stage of growth they are in. We will use these climate monitoring capabilities from seed to harvest and tailor our practices to optimize the incredible results one can expect from our many connoisseur cannabis varieties.

Cannabis Growth, Flowering and Harvest

Cannabis has an extended vegetative growth stage that extends from early Spring to early Fall. In early Spring, we will germinate our seeds and acclimate them to the changing climatic conditions experienced in this season. In mid-Spring, after April 15th, our planting site will be slightly ripped, disced and mounded to produce 6ft-wide planting rows.

After the vegetative growth stage, the cannabis plant enters its flowering or reproductive phase. Being a dioecious plant, this is when males and females differentiate and can be identified. Our cannabis is grown using exclusively female plants, in order to prevent the release of pollen by male plants and the production of seeds on the female plants. Un-pollinated female flower clusters produce the most overall weight and, most importantly, the highest essential oil production and potency. Therefore, the highest

yielding and quality cannabis plants are grown by identifying male plants and culling them before they can mature and pollinate the females. Our seed plants will then be grown directly in the local soils and spaced in these rows at 8ft apart.

Cannabis is an annual plant which means that it will reach a point of maximum maturity, after which it will begin to degrade, break down and die, during a period called "senescence." During the last 2 weeks before harvest, all plants will be given their Final Flush Ripening recipe. This is a daily watering with no amended nutrition. This Final Flush forces each plant to metabolize its stored, unmetabolized nutrients, making for a cleaner, healthier final product, devoid of fertilizer residues. Once our cannabis flowers have reached their peak weight, density and potency, they shall be harvested to capture their optimal characteristics. Working with multiple cannabis varieties that each have their own unique flowering times and physical expressions, or phenotypes, means that we must maintain a seasoned knowledge of the unique preferences and adjustments to be made for each individual strain. Once harvested, our outdoor, biodynamic cannabis will be processed at an offsite location.

Garden Cycling and Consistency

The key to producing consistent and high quality, medicinal cannabis products lies in the ability to cultivate a wide variety of cannabis varieties to their maximum genetic potential. This requires a keen understanding of plant anatomy, morphology, and physiology, matched with comprehensive climate data and the skills to teach and train our farm staff. Our experienced cultivation team along with our expert industry consultant shall implement the necessary planning, procedures and oversight, to ensure a consistent and pharmaceutical-grade cannabis product year in and year out. Terra Luna Farms shall run a very tight ship with regards to operational flow and crop cycling, capitalizing on the benefits of an extremely efficient farm and a well-trained and managed team. This shall be reflected in our extensive and comprehensive Cultivation SOPs. These operating procedures will be continuously evaluated and improved to

maximize efficiency, safety and the quality assurance of our cannabis flowers and products. Terra Luna Farms look forward to showing you the very best the cannabis industry has to offer in the cultivation of connoisseur-level cannabis pharmaceuticals for the patients of Sonoma County and California.