HUMBOLDT OPTIMAL GROWTH FARMS, INC.
CULTIVATION AND OPERATIONS MANUAL
HUMBOLDT COUNTY, CA

Exhibit H
Operations Plan

PREPARED FOR:

September 2017
Revised March 2019

Cultivation and Operations Manual
For
Humboldt Optimal Growth Farms, INC.

Proposed Medical Cannabis Cultivation Facilities

Lead Agency:

Humboldt County Planning Department
3015 H Street
Eureka, CA 95501

Revised By:
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September 2017
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1. PROJECT SUMMARY

1.1. PROJECT OBJECTIVE

Humboldt Optimal Growth Farms, INC. is proposing to permit existing cannabis cultivation activities in accordance with the count of Humboldt (County) Commercial Cannabis Land Use Ordinance (CCLUO), Ordinance # 2554. The existing operation includes approximately 9,880 square feet of cannabis cultivation area which includes 2,160 sf of outdoor cultivation and 7,720 square feet of mixed light cultivation. The project proposal includes the development of facilities appurtenant to the cultivation, including greenhouse, a facility for drying, curing, grading, and trimming of cannabis, water diversion works and appropriate water storage. The applicant aims to become fully compliant with State and Local cultivation regulations.

1.1.1. RELOCATION, REORGANIZATION, AND REMEDIATION

As part of the sites Water Resources Protection Plan it has be recommended that the 2,500 square feet of mixed light and the 600 square feet of outdoor cultivation be relocated to a more stable landing. The current conditions of this area has steep terrain and ditch relief culvert that is draining the home site has a shotgun outlet and is creating a gully on the hillslope. The culvert will have a downspout installed and the outfall rocked for energy dissipation. The bare soil around greenhouse area will have seed and straw applied. Cultivation waste will be removed and composted at the specified location. Fibers rolls will be installed around the eastern border of the greenhouses to prevent cultivation soil from leaving the site and to help in the stabilization of the steep slope. Monitoring of the site will be done as part of the requirements of the North Coast Regional Water Board Waiver of Waste discharge. See section 3.5

1.2. SITE DESCRIPTION

The Project is located at parcel number 221-101-012 approximately 22 miles from the community of Redway, Ca at latitude of 40.2002 and longitude of -123.9713. The subject parcel is 40 acres in size per the County of Humboldt's WebGIS. The site is at an elevation of approximately 1,800 ft with two class III watercourses flowing through the property. Existing development of the site includes a 3-bedroom single-family residence, an accessory building, a drying building, three storage sheds, a generator and diesel storage shed, and a metal building for drying a curing.

1.3. LAND USE

The subject property has a General Plan Designation Agricultural Land as identified by the Humboldt County General Plan and is zoned Unclassified. The surrounding parcels are zoned unclassified.

1.4. STATE AND LOCAL COMPLIANCE

1.4.1. STATE OF CALIFORNIA COMMERCIAL CANNABIS ACTIVITY LICENSE

Humboldt Optimal Growth Farms, INC. has obtained a Temporary Commercial Cannabis Activity license from the State of California (TAL18-0011177, small mixed light).

1.4.2. STATE WATER RESOURCES CONTROL BOARD

The primary water source is a point of diversion (POD) located at 40.2005°, -123.9729° on an unnamed class III tributary to Mattole Canyon Creek. The POD has been registered with the SWRCB under a riparian right (S026021). The applicant is in the process of obtaining a Small Irrigation Use under the Division of Water Rights.

1.4.3. North Coast Regional Water Quality Control Board

Effective May 2nd, 2016 Humboldt Optimal Growth Farms, INC. enrolled with the North Coast Regional Water Quality Control Board (NCRWQCB) for coverage under Tier 2 of Order No. 2015-0023 *Waiver of Waste Discharge Requirements and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects in the North Coast Region* (WDID Number 1B16388CHUM). A Water Resources Protection Plan was developed for the project by Manhard Consulting and has been implemented for activities associated with onsite cultivation since March 2017.

1.4.4. Humboldt County Building Department

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

1.4.5. Cal Fire

The subject property is located within a State Responsibility Area (SRA) for fire protection. Several improvements are proposed to meet SRA requirements, including designating a fire turn-around and pull-out area for emergency vehicles, and management of trees and vegetation around existing structures to maintain the required 100-foot defensible space. All structures on the property meet the 30-foot SRA setback requirement from property lines. The site will need to have a hydrant installed near the place of residence to SRA specifications that is connected to at least a 2,500-gallon water tank.

1.4.6. California Department of Fish and Wildlife

A Lake and Streambed Alteration Agreement (LSAA) with the California Department of Fish and Wildlife was executed in November of 2017. The LSAA included the one (1) point of diversion for Humboldt Optimal Growth Farms, INC. water source for domestic and irrigation needs and includes use and maintenance of the water diversion infrastructure and two stream crossings. The point of diversion is a spring located at 40.2005°, -123.9729° on the bank of a Class III drainage, tributary to Mattole Canyon Creek. The spring gravity feeds a holding tank further down the channel from which water is pumped to higher elevation storage tanks distributed around the property (58,500 gallons in total). The holding tank will be moved further away from the stream channel to reduce impacts on the stream morphology and habitat. Pursuant with a pending Small Domestic Use Registration and Small Irrigation Use Registration with the State Water Board, the applicant wishes to increase storage to 113,500 gallons in order to comply with a 150-day forbearance period. There are two stream crossings on the property; both 18" corrugated plastic pipes. The stream crossing located at 40.201°, -123.972° requires replacement with a 36" pipe and restoration of the channel. The channel was filled during construction of the road and needs to be regraded, rocked and vegetated to prevent erosion. Slash will be removed from the channel upstream of the crossing. The other stream crossing (40.199°, -123.968°) is appropriately sized but requires inlet and outlet stabilization as well as slash removal.

1.4.7. Cultural Resources

If buried archaeological or historical resources are encountered during construction or cultivation activities, the applicant or contractor shall call all work in the immediate area to halt temporarily, and a qualified archaeologist is to be contacted to evaluate the materials. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, dietary bone, and human burials. If human burial is found during construction, state law requires that the County Coroner be contacted immediately. If the remains are found to be those of a Native American,

the California Native American Heritage Commission will then be contacted by the Coroner to determine appropriate treatment of the remains. The applicant is ultimately responsible for ensuring compliance with this condition.

2. CULTIVATION AND PROCESSING

2.1. PROPAGATION AND INITIAL TRANSPLANT

Juvenile plants are propagated on site from 'mother plants' that demonstrate the desired genetics for the specific cannabis strain. Mother plants remain in the vegetative stage solely for propagation. Cuttings are sampled from the mother plants and are rooted into a growing medium, typically oasis cubes, to produce 'clones.' The clones are placed the proposed 16'x50' nursery greenhouse, and once fully rooted they are transplanted directly into one (1) gallon to five (5) gallon plastic containers after 3 weeks (see Appendix A for nursery location). The juvenile plants are irrigated using hand watering methods. After 2-4 weeks the clones are then transplanted into the soil beds and moved into either a mixed light greenhouse or outdoor greenhouse where they continue their 'vegetative' cycle.

2.2. MIXED LIGHT AND OUTDOOR CULTIVATION PLAN AND SCHEDULE

The mixed light cultivation will occur in two (2) existing 24'x90' greenhouses, one (1) existing 24'x95', and one (1) 14'x80' greenhouses for a combined total mixed light cultivation area of approximately 7,720 square feet. The outdoor cultivation will occur in a 24'x90' greenhouse. The greenhouses consist of heavy gauge steel tubing, covered with a woven poly translucent opaque tarp. Each greenhouse is ventilated by 24" solar snap fans. The greenhouses utilize a combination of natural light, artificial light (mixed light only) and light deprivation to produce up to three (3) flowering cycles per year. Black out tarps will be used to achieve both light deprivation and Dark Sky standards. Any greenhouse or propagation area with supplemental lighting will be properly maintained by shielding so little to no light escapes. Light shall not escape at a level this is visible from neighboring properties between sunset and sunrise. The monthly Cultivation Schedule in Appendix C details the cultivation activities associated with the mixed light cultivation operation for a typical three cycle year and outdoor cultivation operation with a typical two cycle year.

2.3. IRRIGATION PLAN AND SCHEDULE

Irrigation of plants occurs using top-feed hand watering methods while juveniles, and drip emitters after the plants are transplanted into the greenhouse's raised beds. Plants are watered at different rates depending on size of plant and time of year. Nutrients via compost teas are currently applied to the plants every third watering by hand. Composting teas are made using a mixture of worm castings, compost and fish emulsion. The monthly Cultivation Schedule in Appendix C details the irrigation activities associated with all cultivation. Humboldt Optimal Growth Farms, INC. maintains that irrigation is efficiently managed and daily inspections of each bed occurs by the lead cultivator.

2.4 HARVESTING, DRYING, AND TRIMMING

Plants that are ready for harvest have their flowering branches removed and suspended in the <E> 24'x 40' facility until the proposed 25'x50' drying and curing building is constructed and is equipped with ventilation fans. The drying process takes approximately one to two weeks, at which time the flowers are bucked into manageable buds and placed in storage bins. The storage bins allow safe transportation to an offsite processing facility. Hand Trimming will be done off site at a licensed processing facility with machine trimming taking place by the owner/operator on site. The waste product, or 'trim', is collected and placed into bins to be weighed, labeled, and sealed. Trim will be transferred to an offsite, licensed manufacturing facility.

2.5 Employee Plan

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

2.5.1 Job Descriptions And Employee Summary

- *Agent in Charge*: Owner/operator will be responsible for business oversight and management of the Humboldt Optimal Growth Farms, INC. Responsibilities include, but are not limited to: inventory and tracking, personnel management, record keeping, budget, and liaison with State and County inspectors as needed. This is a part-time to full-time, seasonal position.
- *Lead Cultivator*: Oversight and management of the day to day cultivation of medical cannabis. Responsibilities include but are not limited to: plant propagation and transplant, soil management, irrigation, fertilization, pesticide management, and harvest activities. This is a full-time, year-round position.
- *Assistant Cultivator / Processing Manager*: Provides support to the *Lead Cultivator* in their day to day duties and takes the lead role during times when the *Lead Cultivator* may be off site. Once processing activities commence, the *Assistant Cultivator* duties switch to oversight and management of processing the dried medical cannabis. This is a full-time, seasonal position.
- Seasonal Laborer: Provides cultivation, harvesting, and processing support. This is a part-time to full-time, seasonal position.

2.5.2 Staffing Requirements

In addition to the *Agent, two (2) Laborer positions* are employed. The number of seasonal laborers varies based on the needs of the farm during the cultivation, harvest and processing seasons. Even at the peak harvest and processing season, there are an estimated total of two (2) employees on site. The *Agent in Charge*, owner/operator, works approximately 40 hrs/wk and each of the two *Laborers* work 20 hrs/wk.

2.5.3 Employee Training and Safety

On site cultivation, harvesting, and drying is performed by employees trained on each aspect of the procedure including: cultivation and harvesting techniques and use of pruning tools; proper application and storage of pesticides and fertilizers. All cultivation and processing staff are provided with proper hand, eye, body and respiratory Personal Protective Equipment (PPE). Access to the onsite cultivation, drying and processing facilities are limited to authorized and trained staff.

All employees are trained on proper safety procedure including fire safety; use of rubber gloves and respirators; proper hand washing guidelines; and protocol in the event of an emergency. Contact information for the local fire department, CAL FIRE, Humboldt County Sheriff and Poison Control as well as the Agent in Charge will be posted at the employee restroom. Each employee is provided with a written copy of emergency procedures and contact information. The material safety data sheets (MSDS) are kept on site and accessible to employees.

2.5.4 Toilet and Handwashing Facilities

At the drying building, an existing finished bathroom with a septic is proposed to be permitted by the Humboldt County Department of Environmental Health. At each of the two cultivation sites a portable toilet will be available and serviced by the provider during the working season.

2.5.5 On Site Housing

The existing 3-bedroom single family residence located on site is occupied by the property owner/*Agent in Charge*. The residence is separated from cultivation operations. All other full-time and seasonal employees live off site and commute daily to the cultivation site. No new residential structures are proposed as a part of this project.

2.5.6 Septic System

A septic system exists at the drying building and will be permitted by the Humboldt County Department of Environmental Health. The septic system is scheduled to be pumped in June 2017.

2.5.7 Parking

There are two (2) 8'x18' proposed parking spaces around the cultivation areas.

2.6 Security Plan and Hours of Operation

2.6.1 Facility Security

The site is secured by a locked gate on the access road. Access to the facilities are limited exclusively to employees, and restricted access signs are posted conspicuously at the entry gates. Automatic lighting and video cameras will be installed for additional security measures. During the working season the agent in charge will be living in the residence on the property.

2.6.2 Hours of Operation

Activities associated with cultivation in the greenhouses (watering, transplanting, and harvesting) generally occur during daylight hours. All other activities such as processing typically occur no earlier than 8am and extend no later than 9pm 5 days per week between the months of March and October.

3 ENVIRONMENT

3.1 Water Source and Projected Water Use

The primary water source is a point of diversion (POD) located at 40.2005°, -123.9729° on an unnamed class III tributary to Mattole Canyon Creek. The POD has been registered with the SWRCB under a riparian right (S026021). The applicant is in the process of applying for a Small Irrigation Use under the Division of Water Rights.

The water usage for the parcel operations during a typical year was estimated and based on the single resident year around, the number of seasonal workers (2), the existing cultivation area and previous years uses and reporting. (Table 3. and 3.2). The applicant is efficient with their water uses and plants in raised beds with drip emitters. Variables such as weather conditions and specific cannabis strains will also have a slight effect on water use.

Table 3.1: Estimated Annual Domestic Water Usage (Gallons)

Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	**Total**
1500	1500	2000	2000	2000	2000	3500	3500	3500	3500	2500	1500	29,000

Table 3.2: Estimated Annual Irrigation Water Usage (Gallons)												
Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	**Total**
0	0	0	3,000	8,000	15,000	15,000	24,000	24,000	12,000	0	0	101,000

3.2 Water Storage

The table below outlines the existing and proposed water storage on the parcel. Humboldt Optimal Growth Farms, INC. has an existing water storage capacity of 78,500 gallons. As part of the Water Resource Protection Plan a proposed 50,000-gallon tank will be installed. The tank will require a building permit through the Humboldt County Building Department. With the proposed storage Humboldt Optimal Growth Farms, INC. is estimated to meet the forbearance period set by the DFW (**Error! Reference source not found.**).

List of Existing and Proposed Water Storage Vessels on Site				
Existing/Proposed	Type	Quantity (Gallons)	Number	Total Storage (Gallons)
	Plastic Tank	5,000	14	70,000
	Plastic Tank	3,000	2	6,000
	Plastic Tank	2,500	1	2,500
Total Existing Storage	---		**17**	**78,500**
Proposed storage tank	Steel Tank	50,000	1	50,000
Total Proposed Storage				**128,500**

3.3 Site Drainage, Runoff, and Erosion Control

Humboldt Optimal Growth Farms, INC. is enrolled with the North Coast Regional Water Quality Control Board (NCRWQCB) for Tier 2 coverage, and a Water Resources Protection Plan (WRPP) has been developed utilizing best management practices (BMP's) in accordance with the NCRWQCB's recommendations. Manhard Consulting, enrolled Humboldt Optimal Growth Farms, INC. and developed the WRPP. The drainage and erosion control measures described below are referenced from the WRPP.

3.3.1 Site Drainage and Runoff

Site investigation for the development of the Water Resources Protection Plan (WRPP) by Manhard Consulting showed there is one main road on the property to the residence and one to the lower cultivation sites. The main road to the residence is native surface with no drainage pattern. This road is heavily used and needs to be out sloped, rocked, and rolling dips installed. The road to the lower cultivation sites is steep with moderately use and needs to be in-sloped, rocked, and rolling dips installed. The abandoned logging road are not in use and will need to include a sediment source inventory of abandoned logging roads on the property to assess the risk to water quality (RI). The ditch relief culverts on the access road to the lower greenhouse site will have the inlets and outlets cleared and rock installed at the outfalls.

The lower greenhouse site will have fiber rolls installed around the southern perimeter of the greenhouses to prevent any graded flat sediment or cultivation soil from leaving the site. The cut slope of the graded flat will have straw and seed applied for slope stabilization. A drainage ditch will be installed direct surface runoff into a sediment basin. A gully forming on the fill slope will be filled with 4" rock for stabilization. Straw and seed will be applied to the bare soil around the greenhouses.

The water tank in the stream channel will be relocated away from riparian zone. A storage shed and fuel tank will be relocated out of the riparian 50' buffer. There are tires piled behind the storage shed that will be disposed of properly off site at the appropriate waste facility. The road leading down to the lower cultivation site will be in-sloped with the existing in-board ditch maintained.

The outdoor cultivation site will have the graded flat covered with ¾" rock. The cut slope will have seed and straw applied to stabilize bank.

The bare soil around greenhouse will have seed and straw applied to the bare soil. Cultivation waste will be stored/ composted at the specified location. Fibers rolls will be installed around the eastern border of the greenhouses to prevent cultivation soil from leaving the site. The ditch relief culvert that is draining the residence graded flat has a shotgun outlet and is creating a gully on the hillslope. The culvert will have a downspout installed and the outfall rocked for energy dissipation. Garbage on this site will be stored in a manner that will prevent it from discharging into receiving water. The garbage will be disposed at the appropriate waste disposal location. This cultivation site is potentially going to be relocated to a more stable landing, due to the steep terrain in this region of the property.

3.3.2 Erosion Control

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

3.4 Watershed and Habitat Protection

Adherence to the Water Resource Protection Plan (WRPP) ensures that the watershed and surrounding habitat are protected. The cultivation activities and associated structures will be outside of all riparian zones, providing a suitable buffer between the cultivation operation and habitat. Additionally, site development and maintenance activities utilize BMP's in accordance with the NCRWQCB's recommendations. Any grading and earthwork activities will be conducted by a licensed contractor in accordance with approved grading permits and the WRPP. Refer to the WRPP for detailed descriptions of watershed and habitat protection measures.

3.5 Monitoring and Reporting

Monitoring will be conducted to confirm the effectiveness of corrected measures listed in the Water Resource Protection Plan (WRPP) and determine if the site meets all Standard Conditions. Inspections will include photographic documentation of any controllable sediment discharge sites as identified on the site map. Visual inspection will occur at those locations on the site where pollutants or wastes, if uncontained, could be transported into receiving waters, and those locations where runoff from roads or developed areas drains into or towards surface water. The inspection will also document the progress of any plan element subject to a time schedule, or in the process of being implemented. A monitoring plan is included in the WRPP with photo points identified on WRPP map.

Onsite monitoring shall occur:

- Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site. Inspection should include photographic documentation, with photo records to be kept on site.
- Prior to October 15 and December 15 to evaluate site preparedness for storm events and stormwater runoff.

- Following any rainfall event with an intensity of 3 inches precipitation in 24 hours. Precipitation data can be obtained from the National Weather Service by entering the site zip code at http://www.srh.noaa.gov/forecast.

A Monitoring and Reporting Form (Order No. 2015-0023 Appendix C) will be submitted upon initial enrollment in the Order (NOI) and then annually by March 31 to the Regional Water Board. The annual report will include data from the monitoring reports.

3.6 Energy and Generator Use

Due to the remote location and off the grid nature of the site, it will be necessary for Humboldt Optimal Growth Farms, INC. to employ the use of both solar and generator for electricity. There is an existing 4-kilowatt solar panel array located on top of the garage/shop as well as a 30-kilowatt SQ-33 Kubota generator for domestic electricity. Humboldt Optimal Growth Farms, INC. will limit the use of the generator to an as needed basis following all guidelines set up by Humboldt County and the State of California. In addition, Humboldt Optimal Growth Farms, INC. will employ the use of portable generators (Honda Eu2000 and Honda3000) to produce supplemental electricity for cultivation for lights and fans. Generators are located by each greenhouse site. When not in use, generators are stored inside the sheds and barn with the five (5) 5-gallon containers used to store the fuel will have secondary containment for spill prevention. See Appendix F- Generator Data Sheets and noise levels.

3.7 Use and Storage of Regulated Products

3.7.2 Fuel Storage

Propane is used for heating and is stored in a 500-gallon tank serviced by Blue Star. Diesel storage is has secondary containment in the storage shed. A spill kit and safety kit will be kept onsite for emergencies such as cleanup for small spills.

3.7.3 Best Management Practices

Best Management Practices (BMP's) are employed when storing, handling, mixing, application and disposal of all fertilizers, pesticides and fungicides. All nutrients, pesticides and fungicides are in a locked storage room, and contained within water tight, locked and labeled containers in accordance with manufactures instruction. Application rates will be tracked and reported with the end of the year monitoring report required in the Water Resources Protection Plan (WRPP). Employees responsible for application are trained to handle, mix, apply or dispose of pesticides/fungicides with proper hand, eye body and respiratory protection in accordance with the manufacturer's recommendations. Humboldt Optimal Growth Farms, INC. uses Oxidate (hydrogen peroxide) at an amount and frequency of approximately 2.5 gallons per year and rubbing alcohol at an amount and frequency of approximately 1 gallon per year for sanitizing and cleaning.

3.7.4 Fertilizers

Compost teas is applied every third watering by hand. Storage of fertilizers and pesticides is in the 10'x12' storage building at the upper site. Ingredients include:

- Advanced Nutrients Carbo Load
- Age Old Bloom
- Age Old Grow
- Anasazi Gold
- Archipelago Bat Guano LLC
- Beneficial Living SassaFrass
- CalMag
- Dr. Earth Flower Girl

- Fox Farm – Ocean Forrest
- Stutzman Sup'r Green

See Appendix B - Regulated Products Resource List for product details and Material Safety Data Sheets (MSDS).

3.7.5 Pesticides and Fungicides

Pesticides are currently stored in the 10'x12' storage building. Pesticides and fungicides used for cultivation include:

- Monterey 70% Neem Oil
- SaferGro Mildew Cure

See Appendix B - *Regulated Products Resource List* for product details and Material Safety Data Sheets (MSDS).

3.8 Waste Management Plan

3.8.2 Solid Waste Management

Trash and recycling will be kept and stored in 32-gallon containers at the storage area behind the residence. The containers will be placed to prevent storm water contamination and leachate from entering or percolating to receiving waters. Applicant will haul off-site solid waste and recycling using a dump trailer at least once per week to the Eel River Disposal.

Vegetation matter such as branches and leaves will be either burned or hauled off to the Eel River green waste. The root balls will be burned in the winter during the appropriate burn days recommended by the local fire department. Soil will be left in the raised beds and cover crop planted in rainy months.

3.8.3 Irrigation Runoff Management

The water management plan aims to irrigate at agronomic rates, using drip emitters. Refer to section 2.3 for a summary of irrigation practices. No evidence of water movement and erosion in the cultivation area was observed during the site assessment. Humboldt Optimal Growth Farms, INC. will apply amendments and fertilizers per label specifications.

3.8.4 Cultivation Waste and Soil Management

Cultivation vegetative matter such as root balls, branches, and leaves are composted at a designated area. Spent potting soil is stored in the greenhouses the first year and then in a designated contained covered area in subsequent years. The soil containment area is lined to prevent any soil erosion or nutrient seepage. The soils are analyzed by Dirty Business Consulting, a local consulting firm providing soil testing, analysis, and management services. After consultation, the soils are amended and reused. Used pots will be collected and stored for the winter. All packaging from soil amendments and fertilizers will be collected and disposed at an appropriate facility.

3.8.5 Septic System

A septic system exists at the residence and will be permitted by the Humboldt County Department of Environmental Health. The septic system was serviced in June 2017.

4 PRODUCT MANAGEMENT

4.3 PRODUCT TESTING AND LABELING

Samples are selected from individual harvested cannabis strains and are tested by a licensed third-party lab in accordance with State and local standards. The finished product is labeled with the Humboldt Optimal Growth Farms, INC. name, and will include tracking ID's provided by the County of Humboldt and/or Statewide tracking systems once they become available.

4.4 PRODUCT INVENTORY AND TRACKING

An internally-developed system of inventory and tracking system will be implemented until either a County or Statewide cannabis product and inventory tracking system becomes available. The Agent in Charge and Lead Cultivator ensure all medical cannabis from clone to packaged product is tracked, accounted for and inventoried. Records are 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:

- Cultivation canopy area
- Weight of flowers, by-product, and trim waste after drying and separation
- Weight of buds after trimming
- Product ID numbers and product weight
- Staff identification (at each step)
- Physical location of the plant material

4.5 TRANSPORTATION AND DISTRIBUTION

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

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

The *Agent in Charge* is responsible for performing a physical inventory of all packages being transported, and ensuring that the physical inventory coincides with the transport manifest.

APPENDIX A: SITE PLAN

HUMBOLDT OPTIMAL GROWTH FARMS, INC.

SPECIAL PERMIT

APN: 221-101-012

VICINITY MAP

NOT TO SCALE

DIRECTIONS TO SITE:

FROM EUREKA, CA
-SOUTHBOUND ON US-101 (APPROX. 63 MILES)
-TAKE EXIT 642 FOR REDWOOD DR, CONTINUE ONTO REDWOOD DR (APPROX. 1.8 MILES)
-TURN RIGHT ONTO BRICELAND THORN RD (APPROX. 10 MILES)
-STAY STRAIGHT ONTO ETTERSBURG RD (APPROX. 5.5 MILES)
-TURN RIGHT ONTO DUTYVILLE RD (APPROX. 5 MILES)
-TURN LEFT ONTO DOODY RIDGE RD (APPROX. 1.4 MILES)
-SITE DRIVEWAY ON RIGHT

PROJECT DESCRIPTION:

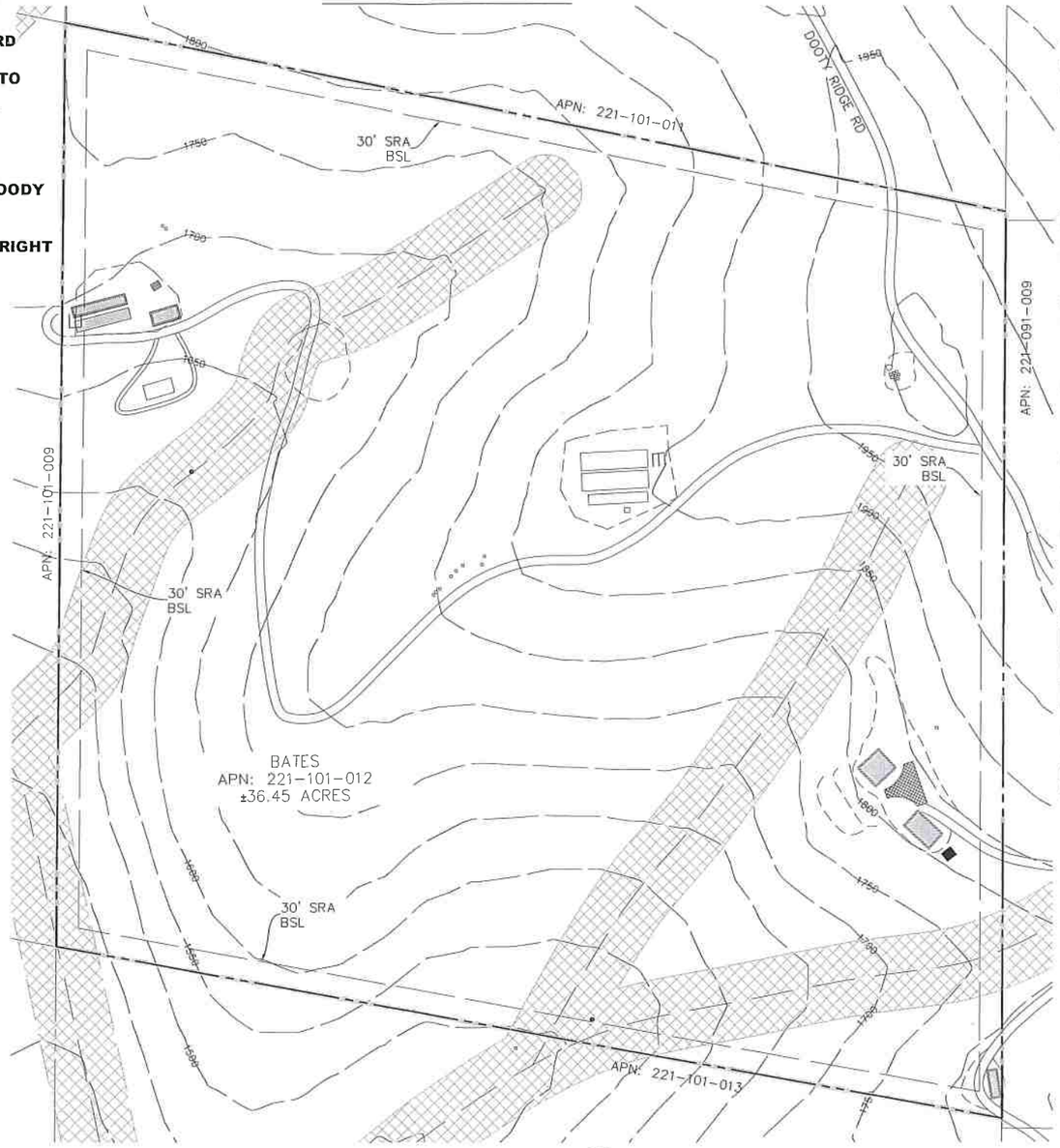
HUMBOLDT OPTIMUM GROWTH FARMS, INC. IS PROPOSING TO PERMIT EXISTING CANNABIS CULTIVATION ACTIVITIES IN ACCORDANCE WITH THE COUNTY OF HUMBOLDT (COUNTY) COMMERCIAL MARIJUANA LAND USE ORDINANCE (CMMLUO), ORDINANCE NO. 2554. THE EXISTING OPERATION INCLUDES APPROXIMATELY 9,880 SQUARE FEET (SF) OF CANNABIS CULTIVATION AREA WHICH INCLUDES 2,160 SF OF OUTDOOR CULTIVATION AND 7,720 SF OF MIXED LIGHT CULTIVATION. THE PROJECT PROPOSAL INCLUDES THE DEVELOPMENT OF FACILITIES APPURTENANT TO THE CULTIVATION, INCLUDING GREENHOUSES, 1 FACILITY FOR DRYING, CURING, GRADING AND TRIMMING OF CANNABIS, WATER DIVERSION WORKS AND APPROPRIATE WATER STORAGE.

GENERAL NOTES:

1. DRAWING SCALE AS NOTED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
2. THIS IS NOT A BOUNDARY SURVEY. BOUNDARY INFORMATION DEPICTED HAS BEEN OBTAINED FROM HUMBOLDT COUNTY 2015 GIS DATA. NORTHPOINT CONSULTING GROUP. HAS NOT VERIFIED THIS PROPERTY BOUNDARY.
3. THERE ARE NO NEARBY SCHOOLS, SCHOOL BUS STOPS, PLACES OF WORSHIP, PUBLIC PARKS OR TRIBAL RESOURCES WITHIN 600 FEET OF THE CULTIVATION AREA.
4. THERE ARE NO RESIDENCES ON ADJOINING PARCELS WITHIN 300 FEET OF THE PROPOSED CULTIVATION AREAS.
5. ANY EXISTING DEVELOPMENT CONSTRUCTED WITHOUT THE BENEFIT OF COUNTY REVIEW WILL BE SUBJECT TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT UPON APPROVAL OF THE SPECIAL PERMIT.

NCRWQCB ORDER NUMBER R1-2015-0023

THE SUBJECT PARCEL HAS BEEN ENROLLED IN THE NCRWQCB CANNABIS CULTIVATION WASTE DISCHARGE REGULATORY PROGRAM. WDID NUMBER 1B16388CHUM.



PLOT PLAN

22x34 SHEET: 1"=100'
11x17 SHEET: 1"=200'

0 50 100 200

N

PROJECT INFORMATION:

APPLICANT:
HUMBOLDT OPTIMUM GROWTH FARMS, INC.
P.O. BOX 2543
REDWAY, CA 95560

PROPERTY OWNER:
ALAN BATES & MATTHEW HUMECKE
115 TRANQUILITY LN
WHITETHORN, CA 95589

OWNERS AGENT:
NORTHPOINT CONSULTING GROUP, INC
317 3RD STREET, SUITE 15
EUREKA, CA 95501
(707) 798-6438

SITE ADDRESS:
APN: 221-101-012
ETTERSBURG, CA 95542

TREES TO BE REMOVED = NONE

EXISTING OUTDOOR CULTIVATION AREA = 2,400 SQ. FT.
EXISTING MIXED LIGHT CULTIVATION AREA = 7,500 SQ. FT.

EARTHWORK QUANTITIES = TBD

WATER = PRIVATE
SEWER = PRIVATE

PARCEL SIZE = ±36.45 ACRES

ZONING: = U (UNCLASSIFIED)
GENERAL PLAN DESIGNATION = AL40 (FRWK)

BUILDING SETBACKS:

	SRA
FRONT	30'
SIDE	30'
REAR	30'

MAX. BLDG. HT. = NONE SPECIFIED

SRA AREA: = YES
IN COASTAL ZONE: = NO
IN 100 YR FLOOD ZONE: = NO

SHEET INDEX:

DATE	REVISIONS	DRAWN BY
1/16/2019	SRA UPDATES	PRH

NorthPoint CONSULTING GROUP

HUMBOLDT OPTIMAL GROWTH FARMS, INC.
ETTERSBURG, CA 95501 / APN:221-101-012
PLOT PLAN, VACINITY MAP, AND PROJECT NOTES

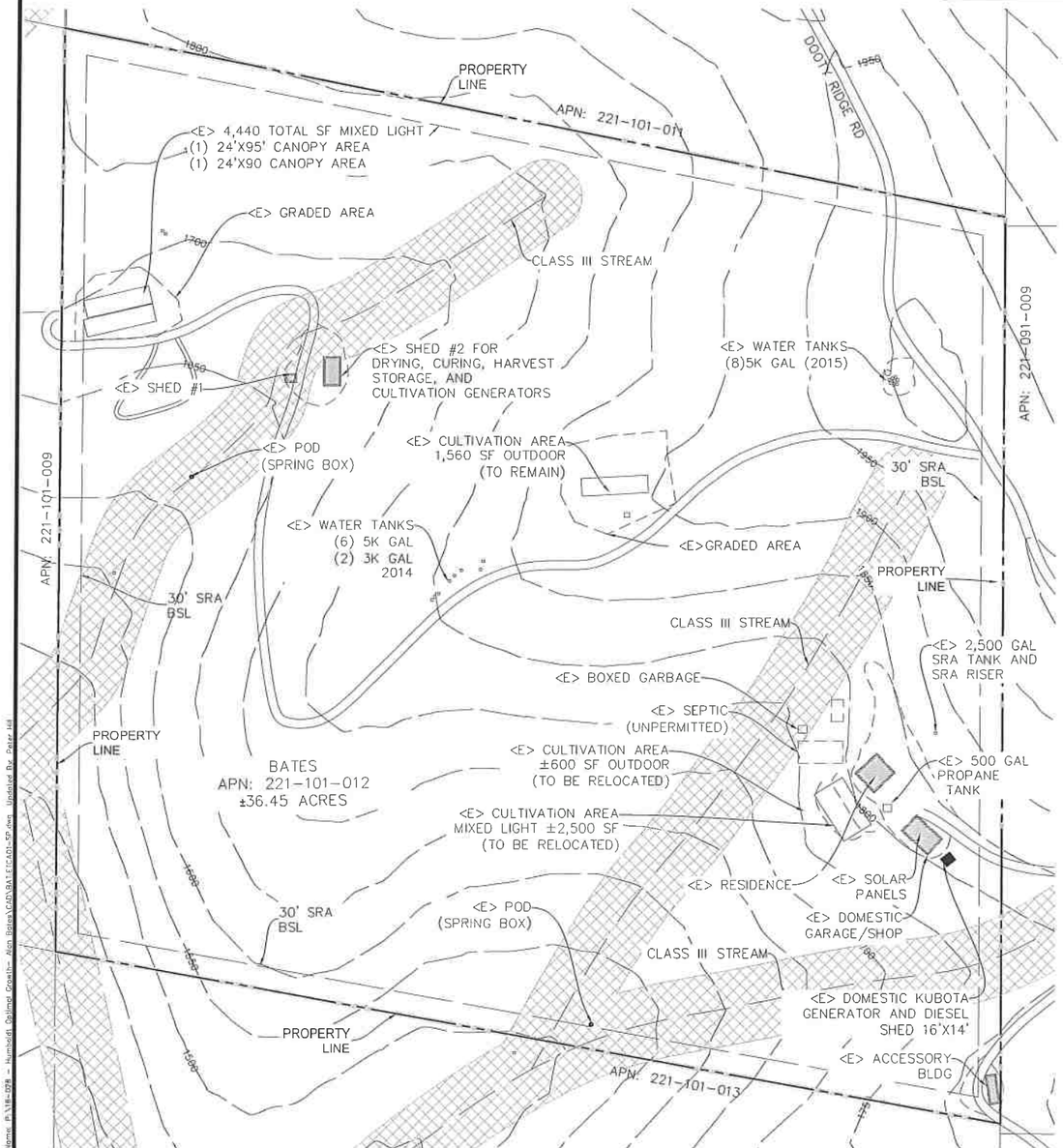
PROJ. MGR.: PBS
DRAWN BY: YR
DATE: 1/15/19
SCALE: AS SHOWN

SHEET
C0
18-28

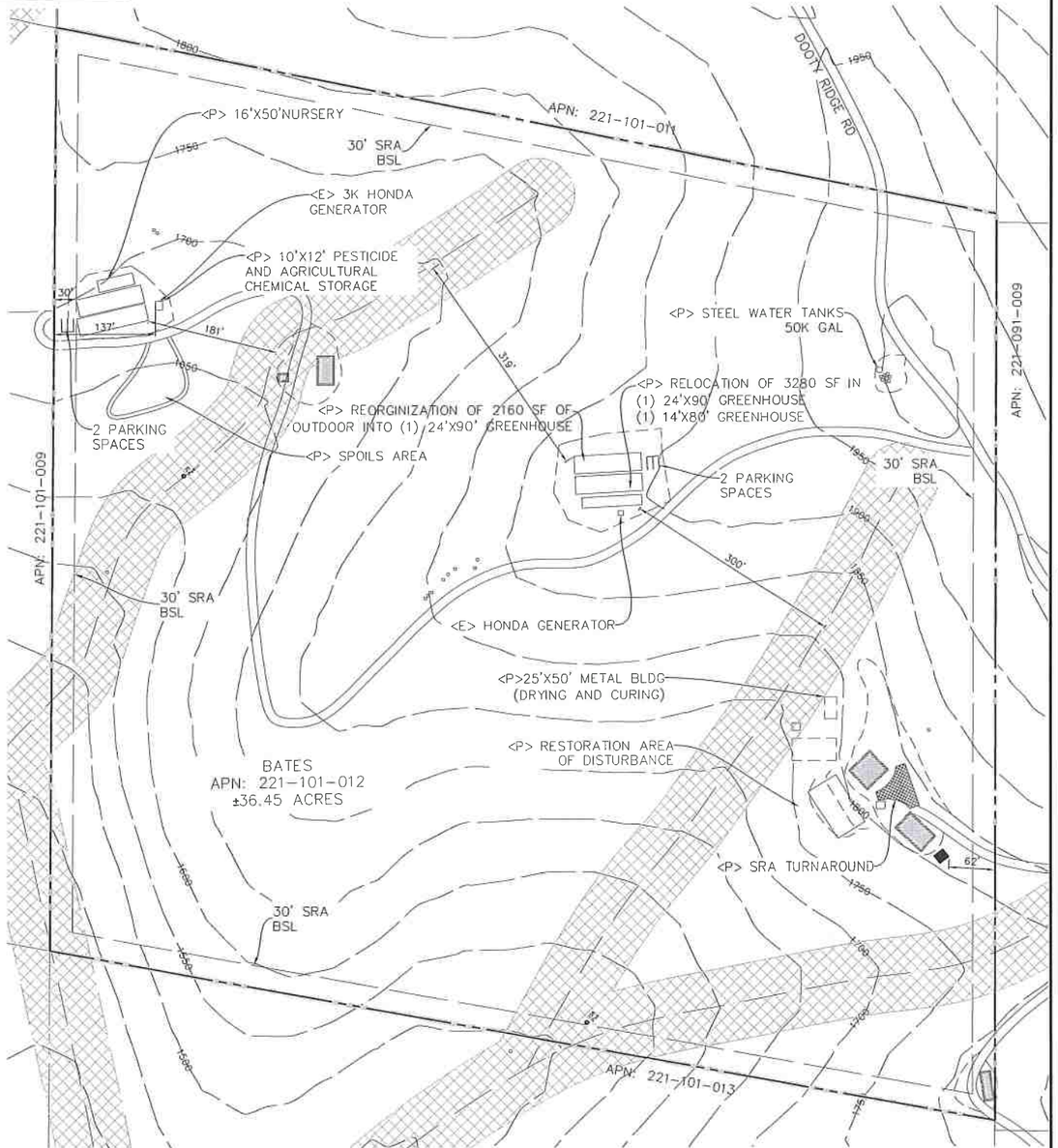
HUMBOLDT OPTIMAL GROWTH FARMS, INC.

EXISTING AND PROPOSED PLOT PLAN

APN: 221-101-012



EXISTING PLOT PLAN



PROPOSED PLOT PLAN

22x34 SHEET: 1"=100'
11x17 SHEET: 1"=200'

0 50 100 200

N

DRAWN BY	
REVISIONS	
DATE	

NorthPoint CONSULTING GROUP

HUMBOLDT OPTIMAL GROWTH FARMS, INC.
ETTERSBURG, CA 95501 / APN:221-101-012
EXISTING AND PROPOSED PLOT PLAN

PROJ. MGR:	PBS
DRAWN BY:	YR
DATE:	1/15/19
SCALE:	AS SHOWN

SHEET
C1
18-28

APPENDIX B: REGULATED PRODUCTS RESOURCE LIST AND MATERIAL SAFETY DATA SHEETS

Cleaning Agents:

- Oxidate (hydrogen peroxide)
- Rubbing Alcohol

Pesticides and fungicides:

- Monterey 70% Neem Oil
- SaferGro Mildew Cure

Fertilizers and biological inoculants:

- Advanced Nutrients Carbo Load
- Age Old Bloom
- Age Old Grow
- Anasazi Gold
- Archipelago Bat Guano LLC
- Beneficial Living SassaFrass
- CalMag
- Dr. Earth Flower Girl
- Fox Farm – Ocean Forrest
- Stutzman Sup'r Green

APPENDIX C: CULTIVATION ACTIVITIES SCHEDULE

APPENDIX D: REFERENCES

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

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

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

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

APPENDIX E: GENERATOR SPECIFICATIONS AND NOISE LEVELS

Data Sheets

NorthPoint Consulting Group, Inc.
P.O. Box 44
Eureka, CA 95501
(707) 798-6438

March 8, 2019

TO: Humboldt County Planning Division
3015 H Street
Eureka, CA 95501

SUBJECT: Generator Noise Levels for Apps # 11371

The attachments are to document the estimated noise level for the generator for application number 11371. The first attachment is the manufacture specifications for the Kubota SQ3330, Honda EU3000iS, and Honda 2000i. At full load the Kubota SQ3330 has the highest noise level, specifications show a 65-decibel rating at 23 feet. Noise levels will decrease with distance from the source by 6dB each time the distances from the source is doubled. For example, at 46 feet the Kubota SQ3330 generator noise level would drop to 58 dB.

Using the online calculator at http://hyperphysics.phyastr.gsu.edu/hbase/Acoustic/isprob2.html to determine the estimated decibel rating at 62 feet (distance to property line) for the specified generator would be 56.37 ft See attached calculation.

Estimating Sound Levels With the Inverse Square Law

In the real world, the inverse square law is always an idealization because it assumes exactly equal sound propagation in all directions. If there are reflective surfaces in the sound field, then reflected sounds will add to the directed sound and you will get more sound at a field location than the inverse square law predicts. If there are barriers between the source and the point of measurement, you may get less than the inverse square law predicts. Nevertheless, the inverse square law is the logical first estimate of the sound you would get at a distant point in a reasonably open area.

If you measure a sound level I_1 = 65 dB

at distance

d_1 = 7 m = 22.9658792 ft

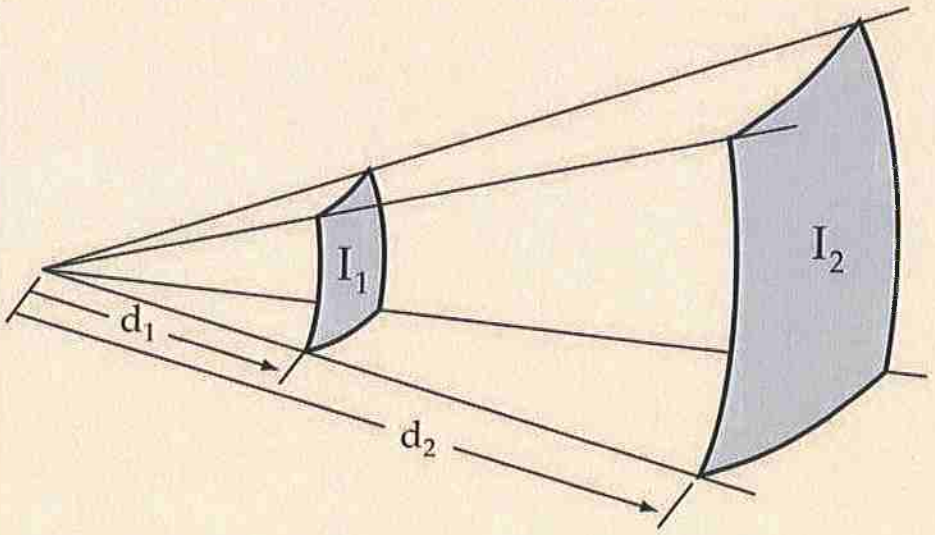
$$\frac{I_2}{I_1} = \left[\frac{d_1}{d_2}\right]^2$$

then at distance

d_2 = 18.8976 m = 62 ft

the inverse square law predicts a sound level

I_2 = 56.3738277 dB



You can explore numerically to confirm that doubling the distance drops the intensity by about 6 dB and that 10 times the distance drops the intensity by 20 dB.

SPECIFICATIONS

Model		SQ1130	SQ1210	SQ3330		
GENERATOR						
Design		Revolving field, self-excited brushless AC generator				
Insulation Class		Class H				
Frequency	Hertz	60				
Phase & Wire		1 - 4	1 - 4	3 - 12		
Armature connection		Series	Series	Star with neutral		Zig-Zag
Stand-by Output	kW (kVA)	14.2 (14.2)	21.6 (21.6)	34.8 (27.8)	30.3 (24.2)	20.1 (20.1)
Prime Output	kW (kVA)	13.5 (13.5)	20.6 (20.6)	33.1 (26.5)	28.7 (23.0)	19.1 (19.1)
Voltage - Single Phase	V	120/240	120/240	-	120	120/240
Voltage - Three Phase	V	-	-	480	208	-
Current - Amps	A	56.3	85.8	39.8	79.6	79.6
Circuit Breaker Capacity	A	IT: 60	IT: 90	IT: 40	IT: 80	IT: 80
Number of Poles		4				
Power Factor		1.0	1.0	0.8		1.0
Model		BCI164D	BCI184F	BCI184H		
Voltage Regulation	%	1.5 (No load to full load)				
ENGINE						
Model		D1703-M-E3-BG	V2403-M-E3-BG	V3300-E3-BG		
Type		Vertical, liquid-cooled, 4-cycle diesel engine				
No. of Cylinders		3	4			
Bore & Stroke	mm (in.)	87 x 92.4 (3.43 x 3.64)	87 x 102.4 (3.43 x 4.03)	98 x 110 (3.86 x 4.33)		
Displacement	L (cu. in.)	1.647 (100.5)	2.434 (148.5)	3.318 (202.5)		
Speed	rpm	1800				
Continuous rated output	kW (HP)	17.3 (23.2)	23.7 (31.8)	29.9 (40.1)		
Injection Timing		0.2487 rad (14.25 deg.) BTDC		0.2 rad (9.0 deg.) BTDC		
Injection Pressure		13.73 Mpa (140.0 kgf/cm ², 1991 psi)				
Compression Ratio		22.0 : 1	23.2 : 1	22.6 : 1		
Oil		API service class of CF or higher				
Crankcase Oil	L (USgal.)	7.0 (1.8)	9.5 (2.5)	13.2 (3.4)		
Coolant	L (USgal.)	6.9 (1.8)	7.8 (21)	9.5 (2.5)		
Starting System	12 V	Electric starting with glow plug				
Fuel		Diesel fuel No. 2 (ASTM D975)				
SET						
Fuel Consumption - Full Load	L/h (gal/h)	4.24 (1.12)	6.82 (1.80)	9.0 (2.38)		
Fuel Consumption - 3/4 Load	L/h (gal/h)	3.49 (0.92)	4.94 (1.31)	6.96(1.84)		
Fuel Consumption - 1/2 Load	L/h (gal/h)	2.76 (0.73)	3.60 (0.95)	5.31 (1.40)		
Fuel Consumption - 1/4 Load	L/h (gal/h)	1.79 (0.47)	2.54 (0.67)	3.81 (1.01)		
Fuel Tank Capacity	l (gal)	81.4 (21.5)				
Continuous Hours - Full Load	h	19.2	11.9	9.0		
Continuous Hours - 3/4 Load	h	23.3	16.5	11.7		
Continuous Hours - 1/2 Load	h	29.5	22.6	15.3		
Continuous Hours - 1/4 Load	h	45.5	32.0	21.4		
Battery	(Ah/5Hr)	95D31L (64 Ah)		130E41L (92 Ah)		
Starting System		Electric w/ glow plug				
Dimensions L x W x H	mm (in.) L	1750 (70.0)	1845 (73.8)	2127 (85.1)		
	W	914 (36.0)	914 (36.0)	926 (37.0)		
	H	1044 (41.8)	1044 (41.8)	1044 (41.8)		
Sound Level (Full Load at 7m)	dB(A)	63	64	65		
Approximate Weight	kg (lbs.)	650 (1433)	730 (1609)	915 (2017)		
Emergency Stop System		Low oil pressure, high water temperature, broken fan belt, or when the side cover and door is opened whenrunning.				
AMPS						
Single phase 120V	A	56.3 x 2	85.8 x 2	-	-	79.6 x 2
Single phase 240V	A	56.3	85.8	-	-	79.6
Three phase 208V	A	-	-	-	79.6	-
Three phase 480V	A	-	-	39.8	-	-
RECEPTACLES						
5-20R (GFCI)		2	2	-	3	2
L5-30R		1	1	-	-	1
L14-30R		2	2	-	-	2
Terminal		Available				

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Engine	Honda GX200
Displacement	196cc
AC Output	120V 3000W max.(25A) 2800W rated (23.3A)
Receptacles	20A 125V Duplex, 30A 125V Locking Plug
DC Output	12V, 144W (12A)
Starting System	Recoil, electric
Fuel Tank Capacity	3.4 gal.
Run Time per Tankful	7.1 hrs. @ rated load, 20 hrs. @ 1/4 load
Dimensions (L x W x H)	25.9" x 17.6" x 22.0"
Noise Level	57 dB(A) @ rated load, 50 dB(A) @ 1/4 load How loud is this?
Dry Weight	131 lbs.
Residential Warranty	3 Years
Commercial Warranty	3 Years

Honda >

2,000-Watt Super Quiet Gasoline Powered Portable Inverter Generator with Eco-Throttle and Oil Alert

★★★★★ (245) ~ Write a Review Questions & Answers (150)

- Inverter technology for quiet, fuel-efficient and clean power
- Ultra-portable 2000-watt generator, weighs less than 46 lbs
- Ideal for TV/DVD, satellite, fridge, coffee pot, and more

Product Height (in.)	18.7	Product Width (in.)	20.2
Product Length (in.)	11.4		

Details

Application	Home Standby,Job Site,Recreation	Number of Circuits/Outlets	2
CA (CARB) Compliant	CARB Compliant	Operational Volume (dB)	59
Color Family	Red	Outlet Type	120V 20A
Engine Displacement (cc)	98.8	Power Type	Gasoline
Engine Make	Honda	Product Weight (lb.)	45.6lb
Features	Auto Idle Control,Automatic Voltage Regulation,Built-in Inverter,Low Oil Shutdown,Muffler	Returnable	30-Day
		Run time at 50% load (hours/tank or charge)	6
Fuel Tank Capacity (gallons)	.85		
Full load fuel consumption (gallons/hour)	.9	Running Wattage	1600
Horsepower (hp)	3.5	Start Type	Recoil Start
Included	No Additional Items Included	Starting Wattage	2000
		Suggested Uses	Battery Charger,Lights,Mobile Devices,Power Tools,Small Appliances,Small Electronics