



**NORTHPOINT**  
CONSULTING GROUP, INC.

**Jesse Bareilles**

**Noise Source Assessment and Mitigation Plan**

**APN: 201-322-006**

**Humboldt County, CA**

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**March 2021**

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A: Site Map



## Objective

The purpose of this Noise Source Assessment and Mitigation Plan is to evaluate the potential impacts from the proposed project and describe how the project will conform with the Performance Standard set forth in Section 55.4.12.6 – Performance Standard for Noise at Cultivation Sites in the Humboldt County Ordinance No. 2599, Commercial Cannabis Land Use Ordinance (CCLUO). Evaluation of potential noise impacts included the establishment of onsite ambient and maximum noise levels, identification of proposed project noise sources, and modeling of proposed project noise sources in relation to current onsite noise.

## Proposed Project Overview

Jesse Bareilles is proposing to permit commercial cannabis cultivation activities in accordance with the County of Humboldt's (County) *Commercial Cannabis Land Use Ordinance* (CCLUO), aka "Ordinance 2.0".

The project requires a Conditional Use Permit for 43,560-sf (square feet) of mixed-light cannabis cultivation in gutter-connected greenhouses with odor mitigation on an existing disturbed flat, including a 4,360-sf proposed ancillary nursery. The project would include onsite drying in an existing 46' x 90' structure, and onsite processing and distribution in a proposed 40' x 60' commercial building. Power would be provided from an existing PG&E service. Water would be sourced from rainwater collected off of existing and proposed surfaces and may be supplemented by a proposed future groundwater well. Up to fourteen (14) employees would be utilized. The proposed commercial building would include a restroom for employees compliant with ADA requirements.

## Site Description and Sensitive Receptors

The project site is located on 1178 CA-36 (APN 201-322-006) near the community of Alton (lat/long 40.5470, -124.1268). The 5-acre property is located at an elevation of approximately 80 feet above sea level.

Existing onsite infrastructure includes a 10' x 18' storage building and 46' x 90' building for drying. Proposed onsite infrastructure includes twelve (12) 20' x 200' gutter-connected greenhouses, and a 40' x 60' commercial building for processing and distribution building with ADA Bathroom. All electricity demand will be met by existing PG&E Service. A backup generator is kept on site for use during an emergency. See the attached site map for locations of existing and proposed infrastructure, adjacent residences, watercourses and associated setbacks.

The property has flat terrain. The site has General Plan Land Use Designation of Industrial, General and Airport Land Use Compatibility Zone Overlay (IG; AP) and is zoned Heavy Industrial (MH-Q). Land uses surrounding the parcel are comprised of industrial and agriculture.

There are several neighboring residences surrounding the project site. The closest neighboring residence is located approximately 305 feet from the nearest proposed cultivation activity. The surrounding neighboring residences are shown on the attached site map Appendix A.



## Analysis of Existing Ambient Noise Levels

This section summarizes the data collection procedures that were taken in order to analyze the existing ambient noise levels within the project site. The *existing ambient noise level* is defined as the baseline of sound pressure experienced in an area prior to the proposed cannabis cultivation activities. Existing ambient noise levels included natural and human-induced noise.

Three (3) Monitoring Locations were established throughout the parcel to establish noise levels at property lines (closest to sensitive receptors such as neighboring houses) and habitat areas (closest to sensitive receptors such as wildlife). Table 1 below describes the Monitoring Locations in more detail and the locations can be seen on the site map attached in Appendix A.

Table 1: Monitoring Location Details

Monitoring Location	Lat., Long.	Description & Notes	Impact Potential
#1 <i>N</i>	40.54762°, -124.12685°	Adjacent to north property boundary and Highway 36	Adjacent parcel and Habitat
#2 <i>E</i>	40.54722°, -124.12751°	Adjacent to west property boundary and neighboring residence	Adjacent parcel, and Neighboring residence
#3 <i>W</i>	40.54690°, -124.12623°	Adjacent to east property boundary and neighboring industrial property	Neighboring Industrial property

The sound pressure level was measured in decibels using a type 2 digital sound meter which utilizes an A-weighted filter network (dB(A)). The digital sound meter was mounted to a tripod, allowing it to be positioned approximately 2 feet above the ground to minimize ground noise and maximize unobstructed sound readings. Measurements were taken on November 25<sup>th</sup>, 2020, which was a cold, cloudy day with a mild intermittent breeze.

Measurement readings of 15 minutes were taken at all Monitoring Locations. During the readings, data was collected on the noise levels and detailed notes were taken whenever the noise level increased from outside activity. Examples of outside activity included a car driving by, animals making noises, and any noise not associated with the proposed project. During the measurements, extreme care was taken to minimize noise disturbance from the operator. Recordings of noise levels began once all rustling from the operator was not interfering the meter.

After the measurements were taken, a log was created detailing what outside activity was associated with the increased noise level. The data was then analyzed to determine the existing ambient noise levels. The results from this analysis are presented in Table 2. Table 2 displays the Monitoring Location, the average decibel reading throughout the measurement, the maximum decibel reading, and the outside noise associated with the maximum decibel reading.



Table 2: Onsite Noise Analysis Results

Location	Average Decibel Reading (dBA)	Max Noise Level Measured (dBA)	Max Noise Level Association Description
#1 <i>N</i>	40.1	81.0	Truck driving by on Highway 36
#2 <i>E</i>	53.3	80.1	Car driving by on Demello Road
#3 <i>W</i>	57.1	75.8	Truck driving by on Highway 36

In general, the existing average noise levels range from approximately 40 dBA to 57 dBA. Vehicles driving on Highway 36 and DeMello Road were determined to be the loudest outside noise source.

### Noise Sources Associated with Proposed Project

The acre of mixed-light cultivation will occur in the proposed 200' x 200' greenhouse, along with 4,300 square feet of ancillary nursery and storage space. The greenhouse is proposed to be fully automated, with automated black-out tarps, humidity-sensing drip irrigation systems, and automated nutrient feeding infrastructure. Mixed-light cultivation will use a combination of natural and supplemental lighting up to 27.3 watts/sq. ft. to produce up to four (4) cycles year-round. Fans will be used in each of the greenhouses.

Each of the proposed fully automated greenhouses will utilize several exhaust fans that is yet to be determined. See sheet NS1 in Appendix A for a typical greenhouse layout depicting circulation. Each fan will be equipped with a variable speed controller to allow for adjustment of fan speed. The fan speed is directly related to the noise of the fan. The applicant will use the variable speed controllers to ensure noise levels do not increase three decibels above ambient.

Drying will occur in the 46' by 90' existing building, and processing, and curing of harvested cannabis will occur in a proposed 40' x 60' commercial building. Small indoor fans and dehumidifiers will be utilized in the drying building. It is anticipated that noise from the fans and dehumidifiers will not be audibly heard from outside the either building.

Energy requirements for all proposed cultivation activities is proposed to be met energy provided by the existing P.G.&E. service and solar power. The location of the existing and proposed buildings and facilities can be seen on the site map in Appendix A.

### Anticipated Noise Levels

Noise from the proposed cultivation activities are not anticipated to result in an increase of more than three (3) decibels of continuous noise above existing ambient noise levels. Furthermore, the project related noise levels at all Monitoring Locations are anticipated to be less than 50 dBA.

### Proposed Noise Attenuation Measures

All greenhouses will be fully automated and constructed from aluminum. Each greenhouse will be equipped with approximately two to eight exhaust fans. The fans will be located on either end of the greenhouse to allow fresh air to enter and escape.





Each exhaust fans will be equipped with a variable speed controller, allowing for precise adjustment of the fan speed. Measuring of noise levels will continues on a regular basis following the proposed activities. If the noise levels are measured to be higher than the anticipated levels, the fans will be adjusted, reducing the noise output from the fans, and reducing the noise impact at the subject monitoring location.

The components of the proposed buildings/facilities that will be used for cultivation and related activities, including walls, doors, foundation, roof and ventilation components will be constructed of materials that have appropriate Sound Transmission Class (STC) Ratings to allow the reduction of generated noise to 50 decibels (dBA) maximum at the tree line.

### Monitoring

Measuring of noise levels will continue on a regular basis following the proposed activities. If the noise levels are measured to be higher than the anticipated levels, further measures will be implemented to reduce the noise output from the project's activity.

Off-site noise includes, but is not limited to, neighboring or adjacent resident activity, nearby vehicle traffic and all other activities not related to the proposed project or parcel. If the increase from off-site noise sources occurs, it would not be anticipated to be significant.

### Conclusion

Jess Bareilles aims to meet the noise levels and mitigations set forth in this report. Following the recommendations set forth in this report, the proposed noise sources from the project are not expected to increase onsite ambient noise levels and compliance with Performance Standard 55.4.12.6 will be met. Noise from the proposed cultivation activities are not anticipated to result in an increase of more than three (3) decibels of continuous noise above existing ambient noise levels. Furthermore, the project related noise levels at all Monitoring Locations are anticipated to be less than 50 dBA.

In order to ensure that cultivation activities comply with the Performance Standards, future noise measurements will be taken at the same monitoring locations to ensure no disturbance is occurring to habitat or to neighboring residences.





# BAREILLES

## NOISE SOURCE ASSESSMENT AND MITIGATION PLAN

APN: 201-322-006



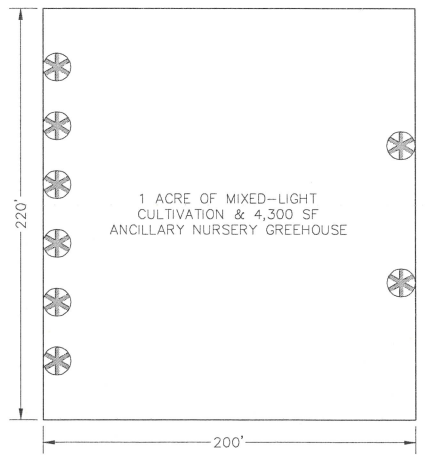
**VICINITY MAP**  
NOT TO SCALE

**DIRECTIONS TO SITE:**  
**FROM EUREKA, CA**  
 - TAKE US-101 SOUTH (19.9 MILES)  
 - TAKE EXIT 685  
 - TURN LEFT ONTO CA-36 EAST (1.1 MILES)  
 - SITE LOCATION ON THE RIGHT

**GENERAL NOTES:**

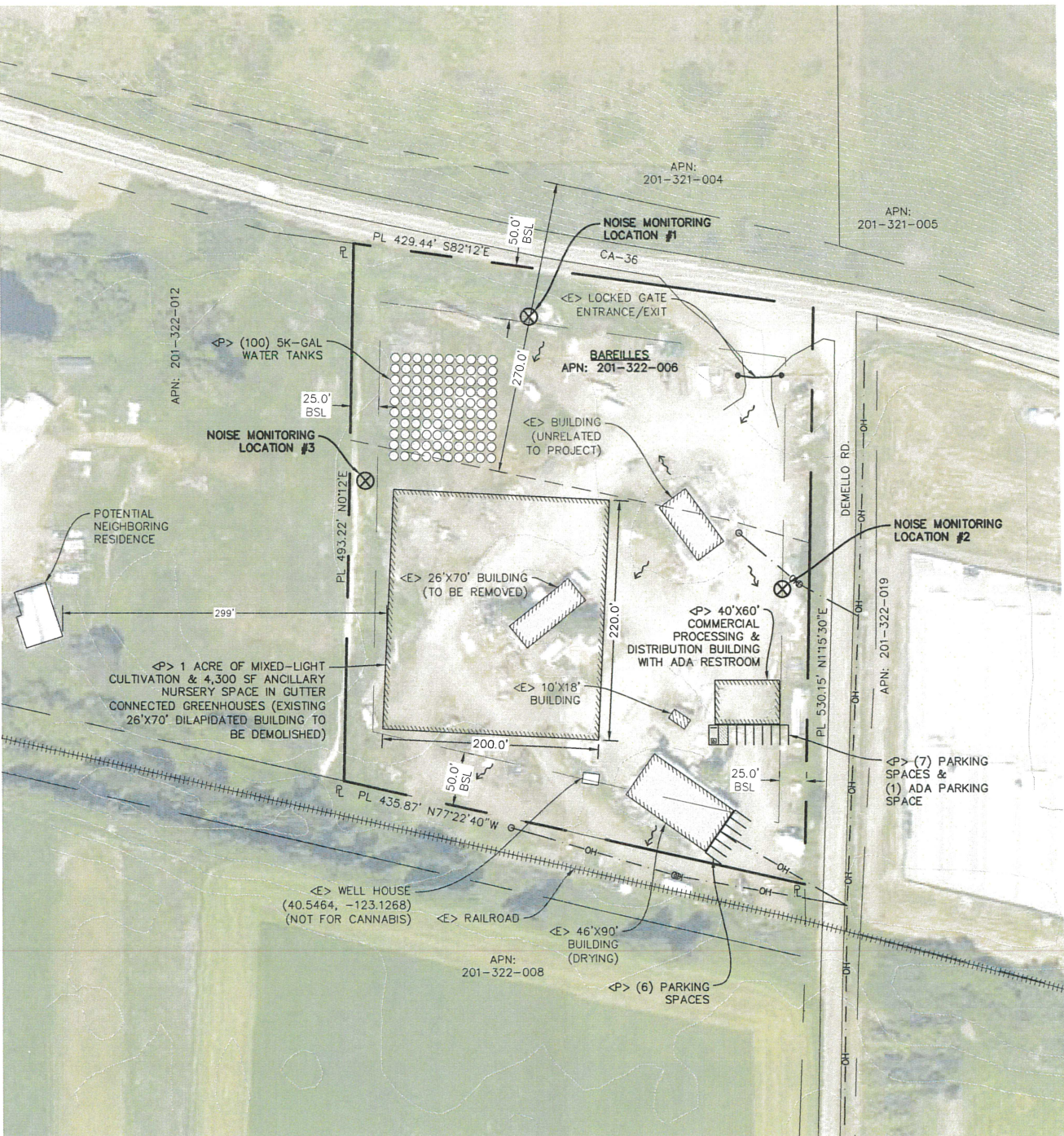
- DRAWING SCALE AS NOTED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
- THIS IS NOT A BOUNDARY SURVEY. BOUNDARY INFORMATION DEPICTED HAS BEEN OBTAINED FROM HUMBOLDT COUNTY 2015 GIS DATA. NORTHPOINT CONSULTING GROUP, INC. HAS NOT VERIFIED THIS PROPERTY BOUNDARY.
- THERE ARE NO NEARBY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

-NOTE: FAN LOCATIONS ARE APPROXIMATE.



**GREENHOUSE DETAIL**

22x34 SHEET: 1"=50'  
 11x17 SHEET: 1"=100'



**PLOT PLAN**

22x34 SHEET: 1"=70'  
 11x17 SHEET: 1"=140'

**GREENHOUSE LEGEND**



**PROJECT INFORMATION:**

**APPLICANT:**  
 JESS BAREILLES  
 1925 ALLIANCE ROAD  
 ARCATA, CA 95521

**PROPERTY OWNER:**  
 KENNETH BAREILLES  
 533 E STREET  
 EUREKA, CA 95501

**APPLICANTS AGENT:**  
 NORTHPOINT CONSULTING GROUP, INC  
 1117 SAMOA BLVD.  
 ARCATA, CA 95521  
 (707) 798-6438

**SITE ADDRESS:**  
 APN: 201-322-006  
 1178 CA-36  
 FORTUNA, CA 95540

- TREES TO BE REMOVED = NONE
- PRIME AGRICULTURAL AREA = 0 SQ.FT.
- 20% OF PRIME AGRICULTURAL AREA = 0 SQ.FT.
- EARTHWORK QUANTITIES = NONE
- WATER = PRIVATE
- SEWER = PRIVATE
- PROPERTY SIZE = ±5.00 ACRES
- ZONING = MH-0
- GENERAL PLAN DESIGNATION = IG,AP
- COMMUNITY PLAN = FACP

**BUILDING SETBACKS:**

	MH
FRONT	50'
SIDE	25'
REAR	50'

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

**LEGEND:**

- PG&E POWER POLE
- OH — OVERHEAD POWER LINES
- ↗ DRAINAGE DIRECTION
- ⊗ NOISE MONITORING LOCATIONS

**SHEET INDEX:**

CO - NOISE SOURCE ASSESSMENT AND MITIGATION PLAN

<p><b>BAREILLES CONDITIONAL USE PERMIT</b></p> <p>1178 CA-36 FORTUNA, CA 95540 APN:201-322-006</p> <p><b>NOISE SOURCE ASSESSMENT AND MITIGATION PLAN</b></p>	<p><b>NORTHPOINT CONSULTING GROUP, INC.</b>                  1117 Samoa Blvd., Arcata, CA 95521</p>
PROJ. MGR.: PS DRAWN BY: CC DATE: 03/10/21 SCALE: AS SHOWN	SHEET <span style="font-size: 2em; font-weight: bold;">CO</span> 20-040

March 10, 2021 11:43 Day Name: P:\Bareilles\_1178 CA-36 FORTUNA, CA 95540 APN:201-322-006 Noise Assessment.dwg Unplotted By: Chant Chen