

ATTACHMENT 8:

Mitigated Negative Declaration, March 11, 2019, Amended April 11, 2019

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Proposed Mitigated Negative Declaration

Sonoma County Permit and Resource Management Department

2550 Ventura Avenue, Santa Rosa, CA 95403
(707) 565-1900 FAX (707) 565-1103

Publication Date:	3/11/ 2019
Public Review Period:	3/11/19 - 4/11/19
State Clearinghouse Number:	2019039068
Permit Sonoma File Number:	UPC17-0020
Prepared by:	Crystal Acker at
Phone:	(707) 565-8357

Pursuant to Section 15071 of the State CEQA Guidelines, this proposed Mitigated Negative Declaration and the attached Expanded Initial Study including the identified mitigation measures and monitoring program, constitute the environmental review conducted by the County of Sonoma as lead agency for the proposed project described below:

Project Name: UPC17-0020; Petaluma Hills Farm (Cannabis Cultivation Operation)

Project Applicant/Operator: Sam Magruder, Managing Member for Petaluma Hills Farm, LLC.

Project Location/Address: 334 Purvine Road, Petaluma, CA 94952

APN: 022-230-020

General Plan Land Use Designation: Land Extensive Agriculture 100-acre density (LEA 100)

Zoning Designation: Land Extensive Agriculture 100-acre density, Accessory Dwelling Unit Exclusion (LEA B6 100, Z)

Decision Making Body: Sonoma County Board of Zoning Adjustments.

Appeal Body: Sonoma County Board of Supervisors

Project Description: **See Item III, below**

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation" as indicated in the attached Initial Study and in the summary table below.

Table 1. Summary of Topic Areas

Topic Area	Abbreviation*	Yes	No
Aesthetics	VIS		x
Agriculture & Forestry Resources	AG		x
Air Quality	AIR	x	
Biological Resources	BIO	x	
Cultural Resources	CUL	x	
Geology and Soils	GEO		x
Greenhouse Gas Emission	GHG		x
Hazards and Hazardous Materials	HAZ		x
Hydrology and Water Quality	HYDRO		x
Land Use and Planning	LU		x
Mineral Resources	MIN		x
Noise	NOISE	x	
Population and Housing	POP		x
Public Services	PS		x
Recreation	REC		x
Transportation & Traffic	TRANS		x
Utility and Service Systems	UTL		x
Mandatory Findings of Significance			

RESPONSIBLE AND TRUSTEE AGENCIES

Table 2 lists other public agencies whose approval is required for the project, or who have jurisdiction over resources potentially affected by the project.

Table 2. Agencies and Permits Required

Agency	Project Activity	Permit Required
Regional Water Quality Control Board (San Francisco Bay)	Cannabis cultivation	Cannabis Cultivation Waste Discharge Program
State Water Resources Control Board	Generating stormwater (construction, industrial, or municipal) SWPPP	National Pollutant Discharge Elimination System (NPDES) requires submittal of NOI
Bay Area Air Quality Management District (BAAQMD)	Stationary air emissions	Authority to Construct/ Permit to Operate
California Department of Food and Agriculture (CalCannabis)	Cannabis cultivation	Cultivation Licensing
California Department of Fish and Wildlife	Cannabis cultivation	Lake or Streambed Alteration Agreement or waiver

ENVIRONMENTAL FINDING:

Based on the evaluation in the attached Expanded Initial Study, I find that the project described above will not have a significant adverse impact on the environment, provided that the mitigation measures identified in the Initial Study are included as conditions of approval for the project and a Mitigated Negative Declaration is proposed. The applicant has agreed in writing to incorporate identified mitigation measures into the project plans

Prepared by: Crystal Acker

3/11/2019; Amended 4/11/2019



Expanded Initial Study

Sonoma County Permit and Resource Management Department

2550 Ventura Avenue, Santa Rosa, CA 95403

(707) 565-1900 FAX (707) 565-1103

I. INTRODUCTION:

Petaluma Hills Farm, LLC proposes a commercial cannabis operation including outdoor, mixed light greenhouse, and indoor cultivation, and on-site processing on a developed agricultural parcel. Some existing buildings will be repurposed and some new structures will be constructed. A referral letter was sent to the appropriate local, state and federal agencies, and interest groups who may wish to comment on the project.

This report is an Initial Study required by the California Environmental Quality Act (CEQA). The report was prepared by Crystal Acker, Project Review Planner with the Sonoma County Permit and Resource Management Department, Project Review Division. Information on the project was provided by Petaluma Hills Farm, LLC, and their consultants. Technical studies provided by qualified consultants are attached to this Expanded Initial Study to support the conclusions. Other reports, documents, maps and studies referred to in this document are available for review at the Permit and Resource Management Department (Permit Sonoma) or on the County's website at:

<https://links.sonoma-county.org/Y6hxF9iFNHM/>

Please contact Crystal Acker, Planner III, at (707) 565-8357 for more information.

II. EXISTING FACILITY

The project would be located at 334 Purvine Road on a 37.02-acre parcel, the site of a former poultry ranch that has been developed with thirteen buildings including a primary residence, granny unit, detached garage, and multiple storage and agricultural structures. There is an existing domestic water well and two existing septic systems, serving the main house and guest house. The entrance to the property is a dirt/gravel driveway.

Existing uses on the parcel include a residence (currently rented), cattle grazing on 25 acres (leased to a nearby rancher), and a 1-acre chef's garden (leased to SHF Jugo, Inc.), which supplies organic produce for restaurant use.

Table 1 lists the existing buildings and the proposed or continued use of each structure or area.

Proposed uses are described in more detail in the next section under Project Description. The proposed Site Plan is Figure 1. Figure 2 illustrates where each operation is located on the parcel.

Table 1. Existing Buildings Shown on Site Plan

ID	Existing/Previous Use	Existing Size (sq ft)	Proposed Use	Proposed Size (sq ft)
B1	Small Storage Shed - REMOVED	289		
B2*	Equipment Storage Barn 1	1,720	* Leased to Chef Garden	1,720
B3	Concrete Block Storage Building	1,440	Processing/Secure Storage (trimming, packaging, storage)	1,440
B4	Poultry Barn 1- REMOVED	4,800	Outdoor Cultivation	28,560
B4.5	Former Poultry Barn Area	8,320	Outdoor Cultivation	
B5	Poultry Barn 2- REMOVED	4,800	Outdoor Cultivation	
B6	Dairy Barn- REMOVED	6,000	Greenhouse/Indoor Cultivation Building	15,343
B7*	Equipment Storage Barn 2	704	* Leased to Chef Garden	
B8	Hay Barn- REMOVED	2,236	Drying Barn (drying/non-cannabis storage)	3,611
B9	Detached Garage	792	Security Office	792
B10	Primary Residence		On-site Manager Residence (no construction)	
B11	Granny Unit	901	Office/Restroom/Break Room	901
B12	Well/Pump House		No change	
B13	Storage Shed- Residence		No change	

*Not part of proposed operation

III. PROJECT DESCRIPTION

Petaluma Hills Farm, LLC proposes a commercial cannabis operation including cultivation to flower and propagation within a 15,353 square foot cultivation facility including 8,096 square feet of mixed light flowering canopy (Type 2B state license), 2,880 square feet of indoor flowering canopy (Type 1A state license), and 4,080 square feet of indoor non-flowering propagation. The operation would also include 28,560 square feet of outdoor cultivation (Type 3 state license). Total flowering cultivation area would not exceed 43,560 square feet (1 acre). On-site processing is also proposed consisting of trimming, drying, curing, weighing, and packaging. The applicant is not participating in the penalty relief program; no commercial cannabis is currently grown on the site. Proposed hours of operation for cultivation, indoor processing, and outdoor harvesting are 24 hours per day, seven days per week, as needed. Although, outdoor cultivation will only take place for 5-6 months a year during the growing season. Outdoor processing, deliveries, and shipping would be limited to 8:00 am to 5:00 pm Monday through Friday. The cannabis operation would employ up to 10 full-time positions, including 2 full-time security guards, an on-site manager, and up to 7 cultivation, processing, and harvest staff.

Existing grazing and chef's garden operations would continue, independently from the cannabis operation. Figure 2 illustrates where each operation is located on the parcel.

Table 2 lists all the proposed structures and improvements. More details are provided below the table. The proposed Site Plan is Figure 1.

Table 2. Proposed Buildings and Improvements Shown on Site Plan

ID	Proposed Use	Proposed Size (sq ft)	Repurposed or new construction - Location
P1/ P7	Greenhouse/Indoor Cultivation	15,343	New - in general area of dairy barn
P2	Compost area	7,800	New - inside greenhouse perimeter fence
P3	Rainwater holding tanks (4) 10,000 gallons each		New - inside greenhouse perimeter fence
	Fire suppression well water tanks (2) 5,000 gallon		New - 1 inside greenhouse perimeter fence; 1 south of processing buildings
	Well water irrigation tanks 10,000 gallon (2) & 5,000 gallon (1)		New - various locations
	Graywater irrigation tank (1) 1,500 gallon		New - inside greenhouse perimeter fence
P4	ADA sidewalk	650	New - various locations between facilities
P5	Non-cannabis solid waste covered enclosure	575	New - south of B3/P10 stone processing building
P6	Fire turnaround		New - west of greenhouse perimeter fence
P8	Drying Barn (drying/non-cannabis storage)	3,611	New - in same footprint as B8 old hay barn; additional sq ft due to 2 nd floor
P9	Outdoor Cultivation	28,560	New - in general location as old poultry barns
P10	Processing/Storage (drying/trimming/packaging)	1,440	Repurposed - B3 concrete block building; interior improvements; no footprint change
P11	Office/Restroom/Break Room	901	Repurposed - B11 granny unit; interior improvements; no footprint change

Cultivation and Processing Facilities

The following three structures are the only buildings where cannabis would be present at any time during the proposed operation. Each of these buildings would have a security system installed, including security lighting and cameras, and controlled access by key card or digital code, protected by an alarm system.

The new 15,343-square-foot greenhouse (P1) and indoor cultivation (P7) building would consist of a corrugated metal building with metal framing and solid walls on a concrete slab foundation.

The mixed light greenhouse portion of the building would have a frosted refracted glass paned gabled roof with retractable curtains and would contain four greenhouse bays. The roof curtains would be designed to fully contain the light and ensure that no light escapes between sunset and sunrise or would be visible from neighboring properties. Flowering cannabis plants in the greenhouse would be grown in soil medium in containers in a single level. The entire greenhouse would be used for flowering cultivation, approximately 8,096 square feet of flowering canopy.

The indoor portion would have a solid gabled roof instead of glass, and would be the same width as two greenhouse bays. One bay would contain flowering cannabis plants in a 3-tiered mobile racking system totaling about 2,880 square feet of flowering canopy. The other bay would contain approximately 4,080 square feet of non-flowering canopy in two propagation rooms for mothers and vegetative plants, also

using 3-tiered mobile racking systems. Mobile racks maximize cultivation space so that less walkway space is needed for cultivators to reach all plants. One full-width aisle is provided along one side and at the end of each cultivation room when all the racks are pushed together. When the end rack is pushed against the end wall, it creates a new aisle between the adjacent racks. Each additional rack can move along a track to provide a new aisle until reaching the opposite wall. Plants would be grown in soil medium in trays or containers. The indoor facility would also include non-cultivation areas, including a harvest room and changing room.

Soil would be delivered to the site, as needed. Used soil would be composted along with cannabis green waste and re-used in the operation. Irrigation and application of fertilizer and growth amendments would occur using timer/sensor-driven drip irrigation. A perimeter fence (see below under Fencing for more details) would be constructed around the greenhouse/indoor structure and additional outdoor area designated for cannabis green waste composting and soil reclamation processes to provide security and screen the operations from view.

The new 3,611-square-foot drying barn (P8) would be constructed of wood framing and wood siding on a concrete foundation in the same footprint as the old hay barn (B8). The new barn would be approximately the same height as the former, consisting of a ground floor and partial second floor/central loft area. Walls would be clad with salvaged barn wood from the original barn to maintain the agrarian character, and the barn roof would be gabled to match the look of the original barn. Drying of site-grown cannabis is the only processing activity that would occur in the barn. The structure would include a separate room to house hazardous materials, such as fertilizers, and additional non-cannabis storage would occur on the second floor. No growing would occur in the structure. The building would be equipped with a security system.

The repurposed 1,440-square-foot concrete block packaging and inventory storage building (B3/P10) would require framing/structural improvements to meet current building code. Interior improvements and installation of a security system and secure temperature-controlled storage are also proposed. Processing activities, including trimming, curing, and weighing of cannabis, would occur in this structure and be limited to cannabis grown on-site; no importation of off-site cannabis would be allowed. Packaging and short-term storage of products prior to transfer to a licensed and permitted distributor would also occur in this structure. The structure would be equipped with a roll-up door for secure loading of salable cannabis products. Transport vehicles would pull inside the secure loading fence immediately outside the rollup door, and loading would occur inside the fence with the fence gates closed. No cultivation would occur in the structure.

Odor and Climate Control

The indoor cultivation and mixed light greenhouse building would be equipped with a self-contained, closed-loop climate control and air filtration system. All cultivation rooms would contain carbon filters and multiple fans to diminish cannabis odor. Carbon filters pull odor out of the air and neutralize odors that pass through the room. Additionally, carbon filters can filter out mold and mildew spores. Odor inspections are proposed to be conducted daily by the on-site manager. Inspections would include verifying that all filtration equipment is functioning properly, checking that filters have been replaced on schedule, and would include a walking tour through the interior and around the exterior of each cannabis-containing facility to document any noticeable odor (indoor cultivation/greenhouse, and both processing buildings).

The odor filtration system would function in tandem with the climate control system. Air would be continually conditioned and re-circulated around the building interior by blowers to maintain the exact desired temperature and humidity at all times, year-round. The only exterior component of the system is the chiller unit, which would be ground mounted on a concrete pad outside the cultivation building on the east (property interior) side. Processing buildings would have similar closed loop climate control and carbon filter systems, but with standard residential HVAC units, instead of a commercial chiller.

Indoor and greenhouse lighting would consist of liquid-cooled LED horticultural lights, which are extremely efficient and can reduce facility energy costs by up to 70% over traditional high pressure sodium (HPS) grow lights. The liquid cooling is a closed loop system which pulls heat away during the hot summer months and recirculates it through the facility during winter to reduce both heating and cooling needs and increase both water and energy efficiency.

Outdoor Cultivation

Outdoor cannabis (P9) would be cultivated in a 28,560-square-foot area in the former location of the poultry barns. Outdoor cultivation would occur during the May to October outdoor growing season with one harvest conducted, typically in late October. Plants would be cultivated in-ground with dry-farming techniques and be irrigated on a limited basis by timer/sensor-driven drip irrigation to limit water use and prevent surface runoff. A perimeter fence (see below under Fencing for more details) would be constructed around the entire outdoor cultivation site to provide security and screen it from view.

No engineered odor control system is proposed or required for outdoor cultivation. However, the cultivation site is proposed in a location greater than 200 feet away from the nearest property boundary and greater than 600 feet away from the nearest off-site residence to limit potential for off-site odors.

Support Facilities

Support facilities would be used by staff in the proposed operation, but would not contain cannabis at any stage of the commercial process.

The existing residence (B10) (currently under rental) would be used to house the on-site manager and his or her family. No changes to the house are proposed.

The existing 792-square-foot detached garage (B9) contains a small office space which would be enlarged and improved to accommodate a security office and an additional office. The remaining portion of the garage would continue to serve as parking and storage for the primary residence.

The existing 901-square-foot granny unit (B11) would be converted to an office/employee break room with an Americans with Disabilities Act (ADA) accessible restroom, and additional non-cannabis storage.

Fencing and Landscaping

Security fencing would be installed around the outdoor cultivation area and around the greenhouse/indoor cultivation complex, including a designated cannabis green waste composting/soil reclamation area. Fencing would include security lighting and cameras, and controlled access by key card or digital code, protected by an alarm system. Proposed fencing would consist of 7-foot-tall chain link and green plastic slat with 3 rows of barbed wire on the top (8 feet total height).

Proposed landscaping in front of the fence would consist of rose bushes planted along the fence on exterior sides (facing Purvine Road & neighbors to the southwest). Drought-tolerant, fire-resistant, trees and shrubs would then be planted in front of the roses.

A new 8-foot wood fence was also recently constructed between the project property and their neighbors to the southwest, at the neighbor's request.

Driveway, Access, and Parking Improvements

The existing driveway entrance would be widened to 24 feet and an electronic security gate would be installed a minimum of 30 feet back from Purvine Road. The remaining driveway would be widened to 20 feet in the property interior and would be paved to the security office. Remaining access roads would be improved gravel or dirt. A fire truck turnaround would be constructed to the west of the greenhouse/indoor perimeter fence. The improvements would widen and improve the angle for access to the driveway and would be done at the same time as the grading for the new buildings.

A gate camera/intercom system would be installed to communicate with the security office (B9) and control site access. All staff, all vendors, and all visitors would be required to check in with security staff prior to entering the gate.

Ten parking spaces would be provided, including four accessible parking spaces compliant with ADA Standards for Accessible Design. One accessible space would be located at each building (greenhouse/indoor cultivation complex, security office, one at each processing building).

Water Supply

An existing domestic water well is located in a pump house (B12) on the northwest portion of the site. In addition, two shallow "hand dug" water wells are present, one located approximately 220 feet south of the domestic well and the other located approximately 370 hundred feet south of the domestic well. These shallow wells were likely dug associated with previous ranching operations to supplement watering for livestock; however, they are not proposed for use in the cannabis operation or included in water supply calculations for any of the proposed or existing uses.

A rainwater harvesting system would also be installed to capture up to 40,000 gallons from the greenhouse/indoor cultivation building roof. The rainwater would be filtered and used to supplement cultivation irrigation. In addition, greywater would be captured from the handwashing sink in the indoor building and from bioswales constructed downslope of the greenhouse/indoor cultivation complex and used only to supplement irrigation of perimeter fence landscaping.

Water Storage Tanks: Four 10,000-gallon rainwater collection tanks (P3) would be installed for irrigation (40,000 gallons total). Three additional irrigation tanks (two 10,000-gallon; one 5,000-gallon) would be connected to the existing well pump house and filled with well water (25,000 gallons total).

Two 5,000-gallon tanks would be installed for fire suppression (10,000 gallons total), also filled with well water. A 1,500-gallon graywater tank would be installed and used only to supplement irrigation of the fence landscaping around the greenhouse/indoor cultivation complex. Two existing 2,500-gallon well water storage tanks are present near the existing well house.

Solid Waste and Wastewater Disposal

All cannabis plant waste and all used soil or other cultivation planting mediums would be collected in a dedicated secured waste area (P2), and composted for reuse in the cultivation operation. Cannabis green waste would be ground up in a small wood chipper and mixed with soil and/or mulch prior to composting.

A covered solid waste enclosure for non-cannabis waste only (P5) would be constructed south of the concrete block processing building (B3, P10).

Domestic wastewater disposal would be via the two existing septic systems, one 1,200-gallon system for the primary residence (B10) and one estimated 650 gallon tank for the granny unit conversion to an ADA compliant restroom and employee office/break room (B11/P11).

Construction

Project construction is anticipated to occur over 6-8 months, with work hours from 7:00 am to 7:00 pm Monday – Saturday as weather permits, and no construction grading or heavy construction during holidays. Construction would begin with site preparation, including clearing and grubbing to provide a relatively flat surface and remove old foundations and building debris within the project area. Rough grading activities would include building pad preparation and grading of roads and walkways to elevations shown on final improvement plans, and installation of sediment and erosion control features. Concrete slab foundations for the new greenhouse/indoor cultivation facility and new drying barn would be constructed next, followed by vertical construction of new buildings, and remodeling/interior improvements to existing buildings. The final phase would include finished hardscapes, installation of fencing, landscaping, and water storage/irrigation systems. A variety of construction equipment would likely be used, including an excavator, bulldozer, backhoe, grader, cement mixers, pavers, and other general construction equipment.

The proposed earthwork would balance on site and would not require import or export of soil. Additional crushed rock for road base and a base for the building slabs would be brought on site with dump trucks. Appropriate Best Management Practices, including dust control, would be implemented throughout construction, as needed.

IV. SETTING

The parcel is located in an unincorporated, rural agricultural area in the Petaluma Dairy Belt, approximately 4.5 miles west of the City of Petaluma and about 3 miles southeast of Two Rock. Access to the site is from Purvine Road via either Spring Hill Road or Middle Two Rock Road. Surrounding land uses are predominantly pasture land, dairy and poultry farms, horse and canine facilities, and rural residential development. Nearby commercial operations include McClelland's Dairy, Reichardt Duck Farm, Spring Hill Cheese, Two Rock Dog Ranch, and the Great Peter Pumpkin Patch. Figure 3 shows the project site vicinity, while Figure 4 provides an aerial view of the project and surrounding area.

There are existing trees on the property, primarily a row of eucalyptus along the Purvine Road frontage and a few other species (e.g., coast live oak, Monterey pine, coast redwood, fan palm) planted around the residential structures. A few remnant orchard trees are present southwest of the farm buildings

(cherry, apple, and grapefruit). However, most of the site consists of gently sloping, open pastureland vegetated by non-native annual grassland, which is common to heavily grazed areas.

Site drainage occurs by overland flow to the southwest. Site elevation ranges from 320 feet MSL at the eastern end to 240 feet MSL at the southwestern corner. There are no waterways or wetland features on the parcel. The site is located in a Groundwater Availability Class 2 – Major Natural Recharge Area, and is not within a Medium or High Priority basin defined under the Sustainable Groundwater Management Act (SGMA). The nearest SGMA basin is Petaluma Valley, about 3 miles to the northeast.

The General Plan Land Use Designation on the parcel is Land Extensive Agriculture 100-acre density. The site is also designated Land Extensive Agriculture by the Petaluma Dairy Belt Area Plan. The project is not located on a bikeway or closer than two miles to an existing or proposed bikeway. The closest proposed Class II bikeway is Bodega Ave to the north.

GENERAL NOTES:

- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS INCLUDING THOSE CONTAINED IN LAKE COUNTY CODE CHAPTERS 8.10, 12.02, 13.01, AND 15.05.
- A COPY OF THE APPROVED PLAN MUST BE AVAILABLE ON-SITE AT ALL TIMES.
- CONTRACTOR SHALL CONTACT THE DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING.
- CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT 800-227-2600 FOR UTILITY LOCATION BEFORE EXCAVATION WORK.
- TO ALLOW FOR INSPECTION, ALL WORK IS TO BE PERFORMED DURING DAYLIGHT HOURS ONLY, MONDAY THROUGH FRIDAY, EXCLUDING COUNTY HOLIDAYS.
- CUT SLOPES SHALL BE NO STEEPER THAN 2:1 (HORIZONTAL TO VERTICAL); FILL SLOPES SHALL BE NO STEEPER THAN 2:1 (HORIZONTAL TO VERTICAL). A GEOTECHNICAL REPORT MUST BE SUBMITTED FOR CUT AND FILL SLOPES IN EXCESS OF 2:1.
- ESTIMATED QUANTITY OF CUT MATERIAL IS 180 CUBIC YARDS.
- ESTIMATED QUANTITY OF FILL MATERIAL IS 180 CUBIC YARDS.
- FILL MATERIALS SHALL BE COMPACTED TO A RELATIVE COMPACTION OF NOT LESS THAN 95% UNDER PAVED AREAS, AND 90% UNDER ALL OTHER FILL AREAS. TEST RESULTS AND A DESCRIPTION OF THE TEST METHOD USED SUBMITTED BY A LICENSED CIVIL ENGINEER ARE REQUIRED AS EVIDENCE OF COMPLIANCE.
- CONTRACTOR IS TO IMPLEMENT BEST MANAGEMENT PRACTICES (BMPs) TO CONTROL EROSION AND REDUCE THE OFF-SITE DISCHARGE OF SEDIMENT TO THE MAXIMUM EXTENT PRACTICABLE.
- EROSION CONTROL BMPs SHALL BE IN PLACE AND MAINTAINED ALL YEAR ROUND.
- CONTRACTOR SHALL KEEP ADJOINING PUBLIC STREETS FREE OF DIRT, MUD, AND OTHER PROJECT RELATED DEBRIS THROUGHOUT CONSTRUCTION. ANY DAMAGE TO PUBLIC STREETS OR ROADWAYS SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE COUNTY.
- DUST GENERATION MUST BE MINIMIZED AND A WATER TRUCK MUST BE AVAILABLE ON-SITE FOR ADEQUATE DUST CONTROL.
- AN ENCROACHMENT PERMIT IS REQUIRED BEFORE DOING ANY WORK IN THE COUNTY RIGHT-OF-WAY.
- CONTRACTOR SHALL PROVIDE APPROPRIATE MEASURES FOR TRAFFIC CONTROL AND PUBLIC PROTECTION IN ACCORDANCE WITH THE COUNTY CODE AND THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- SURVEY MONUMENTS SHALL BE RE-ESTABLISHED BY A LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE IF DISTURBED DURING CONSTRUCTION.
- CONSTRUCTION STAKING IS TO BE IN PLACE PRIOR TO BEGINNING OF CONSTRUCTION AND IS TO BE MAINTAINED OR REPLACED AS NEEDED FOR CONSTRUCTION PURPOSES. MINIMUM STAKING FOR ROADWAYS INCLUDES THE BC, EC, EVC, PVI, AND EVC OF ALL CURVES AND AT 50-FOOT INTERVALS. FIELD LOCATE AND DELINEATE EASEMENTS, RIGHTS-OF-WAYS, AND PROPERTY LINES.
- ALL REQUIRED LOCAL, STATE, FEDERAL PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION AND COPIES OF ALL SUCH PERMITS SHALL BE AVAILABLE ON-SITE.
- IF MORE THAN ONE ACRE OF GROUND IS DISTURBED, THE CONTRACTOR MUST APPLY TO THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD FOR COVERAGE UNDER THE STATE'S "STORM WATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES" AND COMPLY WITH ALL ASSOCIATED PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS, INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. HE WILL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES.
- ALL MATERIALS USED FOR SITE CONSTRUCTION MUST BE INSTALLED PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES ON THIS SHEET.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS AS REQUIRED.
- THE CONTRACTOR SHALL LEAVE THE SITE FREE FROM ALL CONSTRUCTION DEBRIS.
- NOTE REGARDING EARTHWORK: EVERY EFFORT HAS BEEN MADE TO PROVIDE A DESIGN TO ACHIEVE A BALANCED SITE, HOWEVER, REALM DOES NOT WARRANT OR GUARANTEE A BALANCED SITE. FACTORS AFFECTING A BALANCED SITE INCLUDE THE FOLLOWING: SOILS FACTORS (VOLUME CHANGE), TYPE AND EXTENT OF UTILITY TRENCHES, SUBGRADE DEPTHS, PAD GRADING AND LANDSCAPE TREATMENTS. THE CONTRACTOR SHOULD MAKE HIS OWN ESTIMATES OF EARTHWORK QUANTITIES AND RELY ON THEM. THE CONTRACTOR SHOULD ALSO MAKE PROVISIONS FOR AN IMBALANCE BY IDENTIFYING ON-SITE OR OFF-SITE DISPOSAL OR EXTRACTION SITES, AND BY PROVIDING REASONABLE CONTINGENCIES FOR PAYING FOR SUCH WORK.
- CONTOUR INTERVAL IS 5'

SITE CLEARING:

- REMOVE SURFACE DEBRIS.
- DEMOLISH AND REMOVE CONCRETE, PAVING AND ETC. IN CONSTRUCTION AREA.
- CLEAR NEW CONSTRUCTION AREA OF TREES, PLANT LIFE AND GRASS.
- CONFORM TO APPLICABLE CODE FOR DISPOSAL OF DEBRIS.
- COORDINATE CLEARING WORK WITH UTILITY COMPANIES.

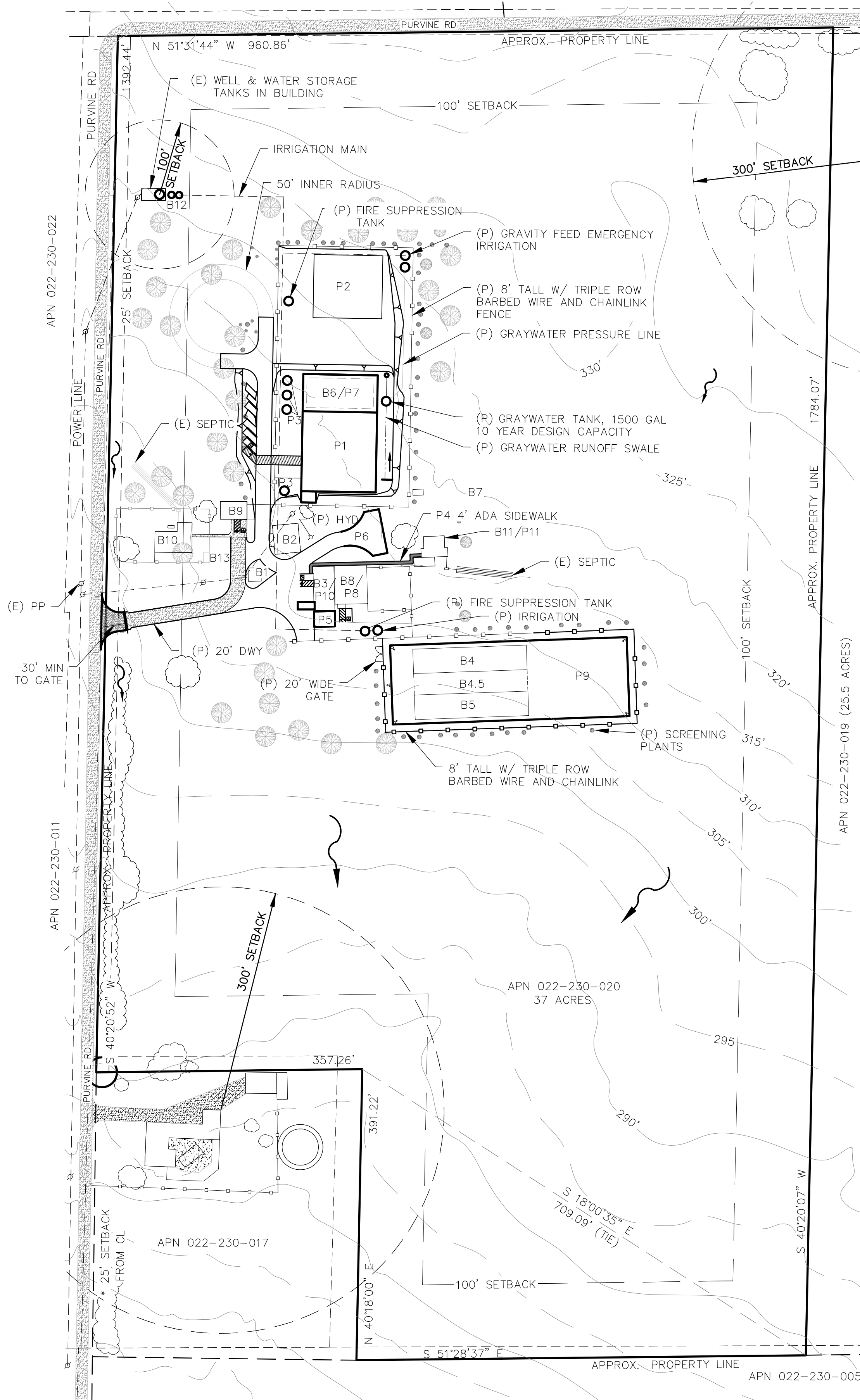
PROTECTION:

- PROTECT BENCH MARKS, EXISTING STRUCTURES, UTILITIES, FENCES, ROADS, SIDEWALKS, PAVING AND CURBS.

UTILITIES:

- UPON DISCOVERY OF UNKNOWN UTILITIES OR CONCEALED CONDITIONS, DISCONTINUE AFFECTED WORK; NOTIFY GENERAL CONTRACTOR.
- "POT HOLE" EXISTING UTILITIES TO VERIFY DEPTH. RELOCATE UTILITIES AS NECESSARY TO MAINTAIN A MINIMUM COVER UNDER PROPOSED ROADWAY. CHECK WITH PROPER UTILITY COMPANIES FOR RELOCATION PROCEDURES.
- ALL UTILITY SERVICE AND JUNCTION BOXES SHALL BE ADJUSTED TO GRADE.
- COMPLETE ALL UTILITY RELOCATION PRIOR TO START OF ROAD WORK.
- UTILITIES SHOWN ON THESE PLANS ARE FROM SURFACE EVIDENCE OR RECORD INFORMATION ONLY. POT HOLE AND FIELD VERIFY THEIR LOCATION PRIOR TO THE START OF CONSTRUCTION. REALM WILL NOT ASSUME RESPONSIBILITY FOR UNDERGROUND LINES.

DEMOLITION SCHEDULE FOR GRADING AND DRAINAGE & EROSION CONTROL PLANS



EXISTING BUILDING	SQ.FT.	DEMO	PROPOSED USE OR AREA
B1	289 SF	X	EQUIPMENT STORAGE AREA
B2	1,720 SF		EQUIPMENT STORAGE AREA
B3	1,440 2,100 SF		F1 OCCUPANCY-PROCESSING AND FINISHED PRODUCT STORAGE
B4	4,800 SF	X	POULTRY BARN
B4.5	8,320 SF		FORMER POULTRY BARN AREA
B5	4,800 SF	X	POULTRY BARN
B6	6,000 SF	X	LIVE STOCK BARN
B7	704 SF		
B8	2,236 SF	X	(REPLACE WITH METAL BUILDING 43'X52')
B9	792 SF		GARAGE TO BE CONVERTED TO SECURITY OFFICE
B10			PRIMARY RESIDENCE
B11	901 SF		GUEST RESIDENCE
B12			WELL WITH PUMP AND WATER STORAGE BUILDING
B13			STORAGE SHED IN RESIDENCE YARD
PROPOSED BUILDING	SQ.FT.		PROPOSED USE OR AREA
P1	10,343 40,612 SF		MIXED LIGHT GREENHOUSE
P2	7,800 SF		WASTE HOLDING AREA, COMPOSTING AND SOIL RECLAMATION
P3	4 QTY		10,000 GALLON IRRIGATION-RAINWATER TANKS
P4	650 SF		ADA SIDEWALK FOR WORKERS
P5	575 SF		NON CANNABIS WASTE HOLDING
P6			PER SONOMA COUNTY FIRE SAFE STANDARDS, ORDINANCE NO.5905, SEC 13-36(C) FIRE TURN AROUND.
P7	5,000 SF		INDOOR CULTIVATION
P8	3,611 2,236 SF		F1 DRYING & HAZMAT STORAGE
P9	28,560 SF		OUTDOOR CULTIVATION
P10	1,440 2,100 SF		F1 OCCUPANCY-PROCESSING AND FINISHED PRODUCT STORAGE
P11	901 SF		ADA BATHROOM, OFFICE AND EMPLOYEE BREAK AREA

LEGEND:

- P** UNDERGROUND POWER LINE
- G** UNDERGROUND GAS LINE
- 1530** CONTOUR ELEVATIONS
- FENCE**
- CMS** CONSTRUCTION MATERIAL STORAGE AREA
- EARTH**
- GRAVEL**
- ASPHALT**
- APN:** ASSESSOR'S PARCEL NUMBER
- APPROX** APPROXIMATELY
- DWY** DRIVEWAY
- HYD** NEW FIRE HYDRANT
- (E)** EXISTING
- (A)** ABANDONED
- (P)** PROPOSED
- RD** ROAD
- SF** SQUARE FEET
- PO** POWER POLE
- WV** WATER VALVE
- DR** DRAINAGE DIRECTION
- ADA** ADA PARKING
- FH** FIRE HYDRANT (400' FROM ALL STRUCTURES)
- NOTES:**
 - CONTOUR INTERVAL IS 5'
 - * = 25' SETBACK FROM CL OF RIGHT OF WAY FOR COUNTY ROAD MAINTENANCE

THIS PLAN WILL NOT IMPOSE A DRAINAGE, GRADING OR FLOODING HAZARD TO ITSELF AND SURROUNDING PROPERTIES.

JASON B. VINE, P.E. DATE
LICENSE NO: C67800 EXPIRATION DATE: 06-30-19

THE NORTH AMERICAN DATUM OF 1983 (NAD 83) IS THE HORIZONTAL CONTROL DATUM FOR THE UNITED STATES, BASED ON A GEOCENTRIC ORIGIN AND THE GEODETIC REFERENCE SYSTEM 1980 WAS USED FOR THIS SURVEY. VERTICAL ELEVATION IS NAD 88 AND WAS ESTABLISHED WITH SURVEY GRADE GPS.

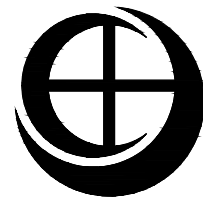
PLANS REVIEWED OR APPROVED BY:

SONOMA COUNTY ENGINEER DATE

ARCHILOGIX

DESIGN - DEVELOPMENT STRATEGIES

50 Santa Rosa Avenue, Suite 400
T707 686 0646 1707 686 0644
www.archilogix.com



REALM

CIVIL ENGINEERING
1767 MARKET STREET STE C
REDDING, CA 96001
530-526-7493

PLANS PREPARED UNDER
THE SUPERVISION OF:



01-11-19

PETALUMA HILLS FARM
CULTIVATION FACILITY

334 PURVINE ROAD
PETALUMA, CA 94952

Figure 1. Site Plan

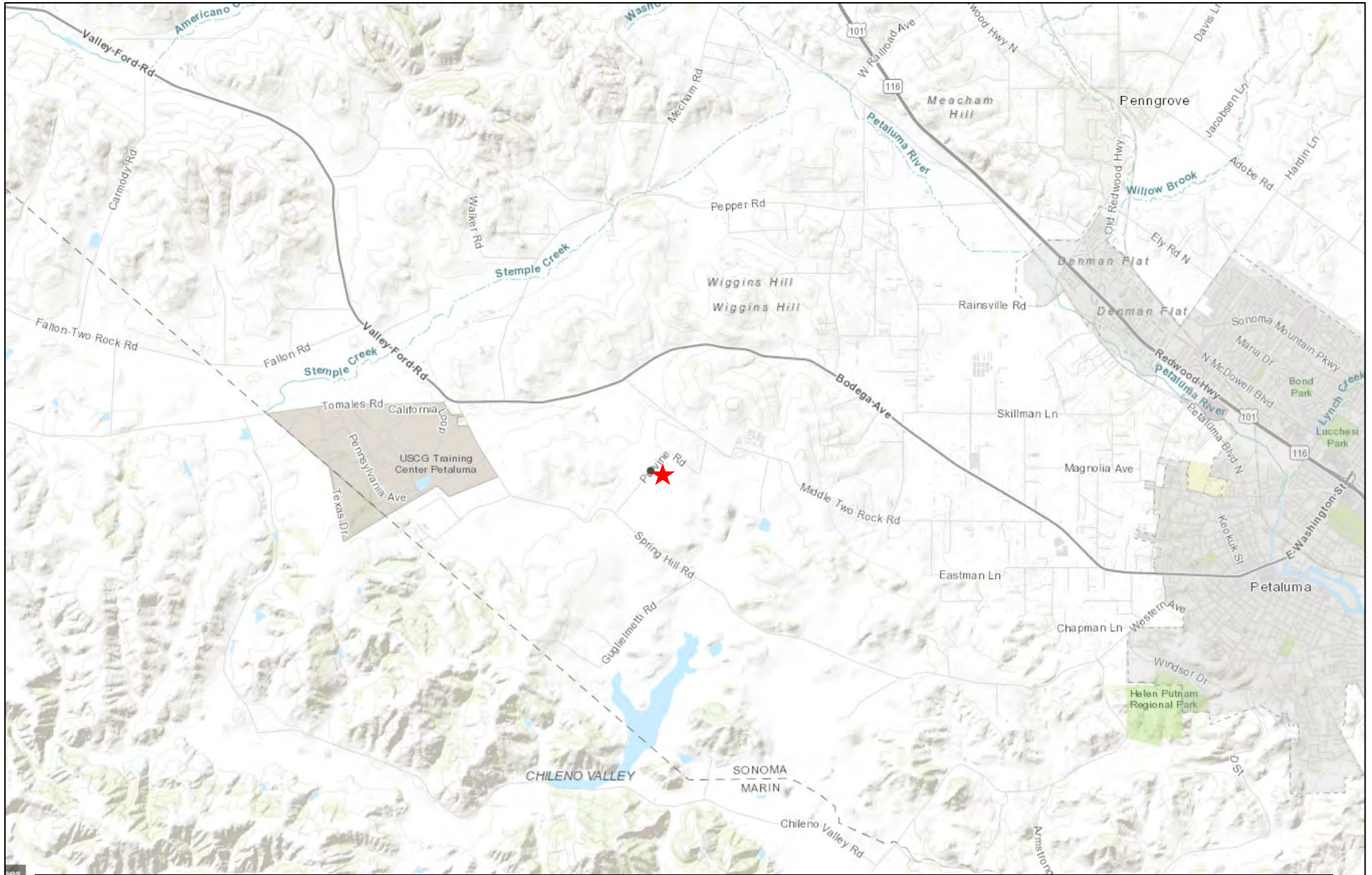
No.	Revision	Date
Project Manager		
PETER STANLEY		
Drawn by		Checked by
		MITCH CONNER
Date		
10.11.2018		
Filename		
PURVINE-12-10-18.dwg		
Job Number		
202-1701		
Sheet		



334 Purvine Rd.
Proposed Configuration

Figure 2. Premise Map

KEY			
ID	Entity	Also Known As	Description
	Sonoma Hills Farm LLC	SHF	Landholder & landlord
	Petaluma Hills Farm LLC	PHF	PHF Lease Area - 1 acre
	SHF Jugo, Inc	Chef's Garden	Organic Vegetable Garden
	Residential Tenant		PHF Onsite Manager Residence
	Local Rancher		Cattle Grazing Lease Area - 25 acres



334 Purvine Road, Petaluma
UPC17-0020 Petaluma Hills Farm – Greenhouse, Indoor, and Outdoor Cannabis Cultivation

Figure 3.
Vicinity Map



334 Purvine Road, Petaluma
UPC17-0020 Petaluma Hills Farm – Greenhouse, Indoor, and Outdoor Cannabis Cultivation

Figure 4.
Aerial Map

V. ISSUES RAISED BY AGENCIES OR THE PUBLIC

Agency Referral

A referral packet was circulated to inform and solicit comments from selected relevant local and state agencies and to special districts and special interest groups that were anticipated to take interest in the project. As of March 3, 2018, the project planner has received eight (8) responses to the project referral from: Sonoma County Environmental Health, Sonoma County Department of Transportation & Public Works, Sonoma County Agricultural Commissioner's Office, the Northwest Information Center at Sonoma State University, PRMD Grading & Storm Water Section, PRMD Project Review Health Specialist, PRMD Natural Resources Geologist, and PRMD Fire and Emergency Services Department. The referral responses included several requests for further information and included recommended draft use permit conditions of approval. No referral responses from any state or federal agencies were received.

Tribal Consultation Under AB52

Referrals were sent the following Tribes on December 11, 2017:

Cloverdale Rancheria of Pomo Indians
Dry Creek Rancheria Band of Pomo Indians
Lytton Rancheria of California
Kashia Pomos Stewarts Point Rancheria
Federated Indians of Graton Rancheria
Middletown Rancheria Band of Pomo Indians
Mishewal Wappo Tribe of Alexander Valley
Torres Martinez Desert Cahuilla Indians

The Federated Indians of Graton Rancheria (FIGR) requested a copy of the cultural resources study conducted for the project. No other tribes requested further information and no tribe requested formal consultation. A copy of the cultural resources study was sent to FIGR on December 13, 2017; FIGR replied on February 7, 2018, stating the Tribe had reviewed the study, and asking to be contacted if tribal cultural resources are discovered during construction. Permit Sonoma staff will contact FIGR if any archaeological resources are discovered during construction, as required by County standard conditions of approval (see Cultural Resources section below for additional details).

Public Comments

A neighborhood notification was distributed to residents within 300 feet of the subject property line on August 24, 2017. Public comments on the proposed project have been received, which were subsequently registered to the project file. Issues raised as areas of potential environmental concern include: groundwater use and quality, odor, safety, traffic, and preservation of rural agricultural character and structures. These comments were not in response to a formal public review period or County action.

VI. OTHER RELATED PROJECTS

Five other applicants have applied for cannabis cultivation projects in the unincorporated western Petaluma area (about a 5-mile radius from the project site), ranging in size from 500 square feet to 1 acre. Two of these are working through the County cannabis permit program; the other three have incomplete applications which are not currently being processed. No other proposed discretionary projects were identified within the vicinity.

VII. EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts of this project based on the criteria set forth in the State CEQA Guidelines and the County's implementing ordinances and guidelines. For each item, one of four responses is given:

No Impact: The project would not have the impact described. The project may have a beneficial effect, but there is no potential for the project to create or add increment to the impact described.

Less Than Significant Impact: The project would have the impact described, but the impact would not be significant. Mitigation is not required, although the project applicant may choose to modify the project to avoid the impacts.

Potentially Significant Unless Mitigated: The project would have the impact described, and the impact could be significant. One or more mitigation measures have been identified that will reduce the impact to a less than significant level.

Potentially Significant Impact: The project would have the impact described, and the impact could be significant. The impact cannot be reduced to less than significant by incorporating mitigation measures. An environmental impact report must be prepared for this project.

Each question was answered by evaluating the project as proposed, that is, without considering the effect of any added mitigation measures. The Initial Study includes a discussion of the potential impacts and identifies mitigation measures to substantially reduce those impacts to a level of insignificance where feasible. All references and sources used in this Initial Study are listed in the Reference section at the end of this report and are incorporated herein by reference.

The applicant and operators for Petaluma Hills Farm, LLC. have agreed to accept all mitigation measures listed in this Initial Study as conditions of approval for the proposed project, and to obtain all necessary permits, notify all contractors, agents and employees involved in project implementation and any new owners should the property be transferred to ensure compliance with the mitigation measures. However, cannabis permits require renewal and are not transferrable with the sale of the land like other Conditional Use Permits.

1. AESTHETICS:

Would the project:

a) Have a substantial adverse effect on a scenic vista?

Comment:

The project site is not located in an area designated as visually sensitive by the Sonoma County General Plan or the Petaluma Dairy Belt Area Plan. It is not located on a scenic hillside, nor would it involve tree removal, grading or construction that would affect a scenic vista. The project would have no impact on scenic vistas in Sonoma County.

Significance Level: No Impact

b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Comment:

The project is not located on or visible from a state scenic highway (officially designated state scenic highways in Sonoma County are Highway 12 and Highway 116).

Significance Level: No Impact

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Comment:

The existing visual character of the site and surrounding area is rural agricultural, with some larger-scale commercial agricultural operations and rural residential uses. The project would be visible from Purvine Road and Spring Hill Road, but has been designed to blend with the agrarian character of the site.

All structures would be located in approximately the same footprints as existing or previous structures within the developed interior portion of the parcel. The majority of the land (over 25 acres) would remain as open pastureland. The outdoor cultivation area would be located where the previous poultry barns were. The indoor/greenhouse cultivation building would be located where the former dairy barn was located. The drying barn would be located in place of the former hay barn, and all other operations would take place in repurposed existing buildings. Therefore, the overall level of structural development would be similar to the existing condition.

In addition, new and repurposed buildings have been designed to stay in character with the agricultural setting. The new drying barn would have walls clad with salvaged barn wood from the original barn to maintain the agrarian character, and the barn roof would be gabled to match the look of the original barn. The new indoor cultivation/greenhouse structure would be approximately 23 feet tall, slightly taller than the former dairy barn (about 20 feet tall), but of similar scale. It also would have a gabled roof and be constructed of corrugated metal siding common to newer agricultural buildings in the county.

The most visible change would be the two proposed security fences, required by County code. Proposed security fencing would be installed around the outdoor cultivation area and around the greenhouse/ indoor cultivation building, and would consist of 7-foot-tall chain link and green plastic slat with 3 rows of barbed wire on the top (8 feet total height). Landscaping in front of the fences would consist of rose bushes planted along the fence on exterior sides (facing Purvine Road & neighbors to the southwest), with drought-tolerant, fire-resistant, trees and shrubs planted in front of the roses. Although the fencing would be visible, the proposed landscaping would substantially soften the visual appearance. Design review of all commercial structures, including fencing, and landscaping will be required as a standard use permit condition of approval to ensure the approved fencing and landscaping is compatible with County requirements and with the surrounding area.

According to the County's Visual Assessment Guidelines, the site sensitivity of the project site would be Moderate- a category applied to rural land use designations without an additional scenic resources protection designation. The visual dominance would be Co-Dominant, applied when proposed project elements would be moderate or prominent within the setting, but still compatible with their surroundings.

Table 3. Thresholds of Significance for Visual Impact Analysis
PRMD Visual Assessment Guidelines

Sensitivity	Visual Dominance			
	<i>Dominant</i>	<i>Co-Dominant</i>	<i>Subordinate</i>	<i>Inevident</i>
<i>Maximum</i>	Significant	Significant	Significant	Less than significant
<i>High</i>	Significant	Significant	Less than significant	Less than significant
<i>Moderate</i>	Significant	Less than significant	Less than significant	Less than significant
<i>Low</i>	Less than significant	Less than significant	Less than significant	Less than significant

Based on the project site's Moderate visual sensitivity and the proposed project's Co-Dominant visual dominance, the project would be considered to have a Less than significant effect on the existing visual character or quality of the site and its surroundings.

Significance Level: Less than Significant Impact

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Comment:

The proposed greenhouse building would use frosted glass as roofing and upper level walls, which would limit potential for daytime glare associated with sunlight striking the roof. Large, opaque, electronically-controlled curtains would block the glass and prevent any light from escaping between sunset and sunrise. The indoor cultivation facility would be constructed with solid walls and no windows. Proposed security lighting at all locations would be fully shielded, downward

casting, and motion sensor-controlled. Nighttime lighting spillage from security lighting would be minimal. However, as a condition of approval, the project would be required to comply with the following Zoning Code lighting requirement:

All lighting shall be fully shielded, downward casting and not spill over onto structures, other properties or the night sky. All indoor and mixed light operations shall be fully contained so that little to no light escapes. Light shall not escape at a level that is visible from neighboring properties between sunset and sunrise (Sec 26-88-254(f)(19)).

Design review, required as a standard use permit condition of approval, includes review of all proposed exterior lighting, to ensure it is compatible with County requirements and with the surrounding area.

Significance Level: Less than Significant Impact

2. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

Comment:

The project site is mapped as Farmland of Local Importance. Therefore, no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would be converted to a non-agricultural use.

Significance Level: No Impact

- b) Conflict with existing zoning for agricultural use, or Williamson Act Contract?**

Comment:

The project site is in the Land Extensive Agriculture zoning district, which allows up to one acre of commercial cannabis cultivation, plus ancillary on-site processing, with a Use Permit. The parcel is not subject to a Williamson Act Land Conservation Act Contract. Therefore, the project would not conflict with the existing zoning for agricultural use, or with a Williamson Act Contract.

Significance Level: No Impact

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?**

Comment:

The project site is not in a Timberland Production zoning district, and no commercial timberland is present. Therefore, the proposed project would not conflict with or cause a rezoning of any forest land or timberland zoned Timberland Production.

Significance Level: No Impact

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Comment:

The project would not be located on land utilized or zoned for forest land, timberland, or timber production. Therefore the project would not result in the loss or conversion of forest land.

Significance Level: No Impact

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use?

Comment:

The project would not involve conversion of land currently used for agricultural purposes. Presently, 25 acres of land are leased to a local rancher for cattle grazing and 1 acre is leased to a commercial produce company to grow fresh produce and herbs for local chefs. Both of these uses would continue independently from the proposed cultivation project. The project would not remove any land currently or recently being used for agriculture from that use.

The proposed cultivation operation would be located within the developed portion of the farm, either in repurposed existing buildings or in new buildings constructed within the approximate footprints of former buildings. Therefore, the project would not convert a significant amount of potential farmland to non-agricultural use.

Significance Level: Less than Significant

3. AIR QUALITY:

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Comment:

The project is within the San Francisco Bay Area Air Basin under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The Basin is currently designated as a nonattainment area for state and federal ozone standards, the state PM₁₀ standard, and the state and federal PM_{2.5} standard. BAAQMD has adopted a Clean Air Plan (April 2017), and an Ozone Attainment Plan (October 2001, incorporated into the Statewide Implementation Plan (SIP)) in compliance with

Federal and/or State Clean Air Acts. These plans include measures to achieve compliance with the standards. The plans deal primarily with emissions of ozone precursors (nitrogen oxides (NO_x) and volatile organic compounds, also referred to as Reactive Organic Gases (ROG)) and particulate matter and its precursors. The pollutants NO_x and ROG form ozone in the atmosphere in the presence of sunlight. The principal source of ozone precursors is vehicle engine emissions, although stationary internal combustion engines are also considered a source. ROG are emitted from numerous sources, as described in BAAQMD's report *Bay Area Emissions Inventory Summary Report: Criteria Air Pollutants* (May 2014). The BAAQMD provides screening criteria in its report, *California Environmental Quality Act Air Quality Guidelines* (May 2017). Cannabis cultivation is not listed as a land use type in the BAAQMD screening criteria; however, a general comparison can be made to a similar land use. The "general light industry" category has a screening size of 541,000 square feet (or 1,249 employees) for operational criteria pollutants and a screening size of 259,000 square feet (or 540 employees) for construction-generated pollutants. Based on these screening criteria, the proposed project would be much smaller in scale and would be well below the emission thresholds for PM₁₀, PM_{2.5}, and ozone precursors, and therefore, would not conflict with or obstruct the implementation of applicable air quality plans.

Significance Level: Less than Significant Impact

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Comment:

A Trip Generation Analysis prepared by W-Trans (January 22 2019) found that the project is expected to generate an average of 31 vehicle trips per day. This small increase in vehicle trips would be far below the thresholds established by BAAQMD, and would not result in substantial traffic which could result in substantial emissions of ozone precursors (ROG and NO_x). Therefore, the project would not violate any air quality standards or substantially contribute to an existing or projected air quality violation.

Significance Level: Less than Significant Impact

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Comment:

State and Federal standards have been established for the "criteria pollutants": ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulates (PM₁₀ and PM_{2.5}), and lead. The project would generate some criteria pollutants, primarily from new vehicle trips. A Trip Generation Analysis prepared by W-Trans (January 22, 2019) found that the project is expected to generate an average of 31 vehicle trips per day. This small increase in vehicle trips would be far below the BAAQMD screening criteria for ROG and NO_x, and would not result in substantial traffic which could result in substantial emissions of ozone precursors (ROG and NO_x). With regard to CO emissions, the BAAQMD Guidelines identify that projects that do not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour do not need to conduct any further evaluation. Traffic at nearby intersections is nowhere near this level, and the 31 new trips the project is expected to generate would not be enough to approach the 44,000 vehicle threshold. Exhaust PM

emissions are lower than NOx emissions and are subject to higher significance thresholds; therefore, the significance thresholds for exhaust PM₁₀ and PM_{2.5} would also be complied with.

New sources of non-exhaust PM₁₀ and PM_{2.5} would be minimized during project operation because all surfaces would be paved, compacted gravel, landscaped, or otherwise treated to stabilize bare soils. However, there could be a significant short-term increase in construction vehicle emissions or emissions of dust (which would include PM_{2.5} and PM₁₀) during construction. These emissions would be reduced to a less than significant level with implementation of Mitigation Measure AIR-1.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure AIR-1 Construction Dust and Air Quality Control:

The following dust and air quality control measures shall be included in the project:

- a. A Construction Coordinator shall be designated by the project applicant, and a sign shall be posted on the site including the Coordinator's 24-hour phone number for public contact regarding dust, trackout, and air quality complaints. The Coordinator shall respond and take corrective action within 48 hours. The Coordinator shall report all complaints and their resolutions to Permit Sonoma staff.
- b. Water or alternative dust control method shall be sprayed to control dust on construction areas, soil stockpiles, and staging areas during construction as directed by the County.
- c. Trucks hauling soil, sand, and other loose materials over public roads shall cover the loads, or shall keep the loads at least two feet below the level of the sides of the container, or shall wet the load sufficiently to prevent dust emissions.
- d. Vehicle speeds on unpaved areas shall be limited to 15 miles per hour.
- e. Final surfacing (i.e., pavement or concrete, gravel, landscaping) shall be completed as soon as possible after earthwork is finished, unless seeding or soil binders are used.
- f. Idling time of diesel-powered construction equipment shall be limited to five minutes. Signs shall be posted reminding workers of this idling restriction at all access points and equipment staging areas during construction of the proposed project.
- g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications and shall have a CARB-certified visible emissions evaluator check equipment prior to use at the site.
- h. Trackout shall not be allowed at any active exit from the project site onto an adjacent paved public roadway or shoulder of a paved public roadway that exceeds cumulative 25 linear feet and creates fugitive dust visible emissions without cleaning up such trackout within 4 hours of when the Construction Coordinator identifies such excessive trackout, and shall not allow more than 1 quart of trackout to remain on the adjacent paved public roadway or the paved shoulder of the paved public roadway at the end of any workday.
- i. Visible emissions of fugitive dust shall not be allowed during cleanup of any trackout that exceeds 20 percent opacity as determined by the Environmental Protection Agency in *Method 203B - Opacity Determination for Time-Exception Regulations* (August 2017).

Trackout is defined by BAAQMD in *Regulation 6, Rule 6: Prohibition of Trackout* (August 2018) as any sand, soil, dirt, bulk materials or other solid particles from a site that adhere to or agglomerate on the exterior surfaces of vehicles (including tires), and subsequently fall or are dislodged onto a paved public roadway or the paved shoulder of a paved public roadway on the path that vehicles follow at any exit and extending 50 feet out onto the paved public roadway beyond the boundary of the site. Material that has collected on the roadway from erosion is not trackout.

Mitigation Monitoring:

Mitigation Monitoring AIR-1 Construction Dust and Air Quality Control: Permit Sonoma staff shall verify that the AIR-1 measures are included on all site alteration, grading, building or improvement plans prior to issuance of grading or building permits. The applicant shall submit documentation to Permit Sonoma staff that a Construction Coordinator has been designated and that appropriate signage has been posted including the Coordinator's phone number. Documentation may include photographic evidence or a site inspection, at the discretion of Permit Sonoma staff.

d) Expose sensitive receptors to substantial pollutant concentrations?

Comment:

Sensitive receptors include hospitals, schools, convalescent facilities, and residential areas. The project site is located in a predominantly rural area, away from institutional receptors (the nearest is Two Rock Elementary on Spring Hill Road about 1.6 miles to the east). The nearest off-site residence is greater than 600 feet from the proposed outdoor cultivation area, greater than 700 feet from processing activities, and greater than 800 feet from indoor/greenhouse cultivation. Based on the analysis in sections 3.a and 3.b above, the project would not result in substantial pollutant exposure due to operations.

However, as described in section 3.c, there could be a significant short-term increase in construction vehicle emissions or emissions of dust (which would include PM_{2.5} and PM₁₀) during construction. These construction period effects on air quality (i.e., dust, diesel exhaust), would be reduced to a less than significant level with implementation of Mitigation Measure AIR-1.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Implement Mitigation Measure AIR-1 Construction Dust and Air Quality Control.

Mitigation Monitoring:

See Mitigation Monitoring AIR-1 Construction Dust and Air Quality Control.

e) Create objectionable odors affecting a substantial number of people?

Comment:

Construction Odors

Construction equipment may generate odors during project construction; however, construction activities would be short-term, intermittent, and would cease upon completion of project construction. In addition, implementation of Mitigation Measure AIR-1 would reduce construction vehicle emissions which could contribute to odor and would not affect a substantial number of

people. Therefore, the construction-related odor impact would be less than significant.

Greenhouse, Indoor Cultivation, and Indoor Processing Odors

Cannabis cultivation and processing facilities are not listed as an odor-generating use in the BAAQMD *California Environmental Quality Act Air Quality Guidelines* (May 2017). However, the County's cannabis ordinance requires compliance with the following Zoning Code Operating Standard:

All indoor and mixed light cultivation operations and any drying, aging, trimming and packing facilities shall be equipped with odor control filtration and ventilation system(s) to control odors, humidity, and mold (Sec. 26-88-254(g)(2).

The project includes self-contained, closed-loop climate control systems, including carbon filtration to clean the air and control odor, for all cultivation and processing structures. The project also includes daily inspections to verify that all filtration equipment is functioning properly, and check that filters have been replaced on schedule. Implementation of Mitigation Measure AIR-2 would ensure that odor release from structures would be reduced to a less than significant level.

Outdoor Cultivation Odors

The project would generate cannabis odors from the outdoor cultivation operation during the last 4-8 weeks of the growing season prior to harvest (September-October). The cannabis ordinance specifies mandatory setback distances for outdoor cultivation sites (300 feet from residences and businesses and 1,000 feet from schools, parks and other sensitive uses) to facilitate odor dissipation by distance. Generally, odors dissipate with distance from the source and opposite the primary direction of the odor flow.

Surrounding an odor-generating land use with a natural buffer or windbreak has been a successful strategy to reduce odor impacts for poultry and swine operations. The buffer/windbreak strategy is most effective when parcels are large (at least 10 acres) and land uses are far apart, maximizing odor dissipation with distance between uses. Odor plumes generally travel along the ground in the direction of the prevailing winds. However, tree and shrub buffers have been found to deflect the odor plume above the vegetation layer where it is diffused into the atmosphere (USDA NRCS 2007). Additional benefits of natural buffer/windbreaks include visual screening, noise reduction, and providing food, shelter and overwintering habitat for birds and beneficial invertebrates, such as insect predators and native pollinators (USDA NRCS 2007 and 2014).

Fencing and landscaping is proposed around the outdoor cultivation site, consisting of a 7-foot-tall chain link and green plastic slat fence, with a row of rose bushes planted in front of the fence and taller trees and shrubs planted in clusters in front of the rose bushes. The combined fencing and landscaping is expected to deflect odor plumes upward to diffuse into the atmosphere and be further dispersed along the predominant wind direction. The prevailing wind direction during September-October is from the coast- west to east.

Most of the parcels to the east are large agricultural parcels without residences; however, there are four parcels with residences within one half mile of the cultivation site in a general easterly direction. The approximate distance between the outdoor grow site and the nearest residence to the east or northeast is about 850 feet away. The next three residences are approximately 1,250, 1,500, and 2,300 feet from the outdoor cultivation site. Six additional residences occur within one

half mile in other directions (a total of 10 residences identified within 0.5 mile from aerial imagery). The nearest residence overall is about 620 feet to the southwest of the cultivation site. This residence is opposite the prevailing wind direction and separated from the cultivation area by the cultivation site fencing and landscaping and by an additional 8-foot wood fence along the property boundary, all of which are expected to deflect and diffuse cannabis cultivation odors.

In addition, the project site is located in the Petaluma Dairy Belt, just east across Purvine Road from land owned by McClelland's Dairy, where manure is often spread to dry in the sun at the same time of year, typically from late summer to early fall. Because the dairy is located west of the cultivation site, manure odors would be carried along with the prevailing wind and additively mixed with any cannabis odors from the project site before dispersing further to the west.

Due to a combination of multiple contributing factors: limited time of year that outdoor cannabis plants would be producing odors; proposed fencing and landscaping around the cannabis cultivation area to deflect odors upwards to the atmosphere; prevailing wind direction carrying atmospheric odors further west away from most receptors; the prevalence of manure odors in the general area and specifically being carried onto the project site from the dairy to the west; and the large parcel size and distance to residential receptors, the outdoor cannabis odor impact is not expected to create objectionable odors affecting a substantial number of people.

However, in the case that odors are not adequately diffused and verified odor complaints are received, Mitigation Measure AIR-3 would reduce the impact to a less than significant level.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Implement Mitigation Measure AIR-1 Construction Dust and Air Quality Control.

Mitigation Measure AIR-2 Operational Odor Control for Structures: The cannabis cultivation building shall install and maintain an odor control air filtration and ventilation system that controls humidity and mold and ensures there will be no off-site odor from structures. Daily inspections shall be performed by the on-site manager. Inspections shall include verifying that all filtration equipment is functioning properly, checking that filters have been replaced on schedule, and shall include a walking tour through the interior and around the exterior of each cannabis-containing facility to document any noticeable odor (indoor cultivation/greenhouse, and both processing buildings).

Mitigation Measure AIR-3 Operational Odor Control for Outdoor Cultivation: In the event that multiple verified odor complaints are received, Permit Sonoma staff may bring this matter back to the Board of Zoning Adjustments for review of additional measures to reduce outdoor odor generation, including use of engineered solutions such as Vapor-Phase Systems (Fog Systems).

Mitigation Monitoring:

See Mitigation Monitoring AIR-1 Construction Dust and Air Quality Control.

Mitigation Monitoring AIR-2 Operational Odor Control for Structures: Permit Sonoma staff shall ensure that the odor control filtration and ventilation system(s) are included on all building and/or improvement plans, prior to issuance of building permits.

Odor monitoring reports shall be submitted annually to the County by January 31 of each year. Daily logs shall be made available to Permit Sonoma staff upon request throughout the year in response to any odor concerns that may arise.

Mitigation Monitoring AIR-3 Operational Odor Control for Outdoor Cultivation: Permit Sonoma staff shall perform a site inspection to verify any odor complaint received and shall evaluate odor complaint history, whether the outdoor cultivation operation is creating objectionable odors affecting a substantial number of people, and may require that the project go back to the Board of Zoning Adjustments for review of additional measures to reduce outdoor odor generation, including use of engineered solutions such as Vapor-Phase Systems (Fog Systems).

4. BIOLOGICAL RESOURCES:

Would the project:

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Regulatory Framework

Special-Status Species

Special-status species include those plant and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed and proposed species. In addition, California Department of Fish and Wildlife (CDFW) Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special-status invertebrates, are all considered special-status species. Although CDFW Species of Special Concern generally have no special legal status, they are given special consideration under the California Environmental Quality Act (CEQA). In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Plant species on California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species and must be considered under CEQA. Bat species designated as "High Priority" by the Western Bat Working Group (WBWG) qualify for legal protection under Section 15380(d) of the CEQA Guidelines. Species designated "High Priority" are defined as "imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats."

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq.) was enacted to provide a means to identify and protect endangered and threatened species. Under the Section 9 of the ESA, it is unlawful to take any listed species. "Take" is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting a listed species. "Harass" is

defined as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. "Harm" is defined as an act which actually kills or injures fish or wildlife and may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. Actions that may result in "take" of a federal-listed species are subject to USFWS or National Marine Fisheries Service (NOAA Fisheries) permit issuance and monitoring. Section 7 of ESA requires federal agencies to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat for such species. Any action authorized, funded, or carried out by a federal agency or designated proxy (e.g., Army Corps of Engineers) which has potential to affect listed species requires consultation with USFWS or NOAA Fisheries under Section 7 of the ESA.

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery, whether or not those lands are occupied by the subject species. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard (which is applied to ensure that a federal action would not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat).

Essential Fish Habitat

Essential Fish Habitat (EFH) is regulated through the National Marine Fisheries Service (NMFS), a division of the National Oceanic and Atmospheric Administration (NOAA). Protection of Essential Fish Habitat is mandated through changes implemented in 1996 to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to protect the loss of habitat necessary to maintain sustainable fisheries in the United States. The Magnuson-Stevens Act defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" [16 USC 1802(10)]. NMFS further defines EFH as areas that "contain habitat essential to the long-term survival and health of our nation's fisheries" EFH can include the water column, certain bottom types such as sandy or rocky bottoms, vegetation such as eelgrass or kelp, or structurally complex coral or oyster reefs. Under regulatory guidelines issued by NMFS, any federal agency that authorizes, funds, or undertakes action that may affect EFH is required to consult with NMFS (50 CFR 600.920).

Comment:

A Biotic Assessment was prepared for the project site to identify special-status plant and wildlife species and sensitive habitats (including wetlands) that have the potential to occur on or in the vicinity of the project site (Pinecrest Environmental Consulting, June 7, 2017). The assessment

included literature and database searches in addition to a field survey to determine what biological resources might have potential to be present on the project site. The information and data collected for the assessment have been used as the basis of this biological resources analysis.

Special Status Plant Species

A total of 16 special status plant species were identified within the region and were evaluated in the study. Many of these plants are not expected to occur within the project area because their primary habitat requirements are lacking (such as vernal pools, freshwater marsh, swamp, chaparral, sandy or rocky soils, etc.) or the habitat, if present, is only marginally suitable (e.g., grassland subject to long-term grazing that currently supports primarily non-native and invasive species). All of the plant species were determined to have no or low potential for occurrence on the project site due to the lack of suitable habitat. No special status plant species were observed during surveys, and no additional surveys were recommended, as all plant species were identifiable during the May survey, which was timed to coincide with the flowering period of the majority of plant species in the region. No special status plant species are known or likely to be present on the site, and no habitat suitable to support special status plants was observed; therefore, impacts to special status plant species and their habitat would be less than significant.

Special Status Aquatic Wildlife Species

No streams or wetlands exist on or adjacent to the project site; therefore, no aquatic wildlife species, like fish or turtles would be present on the site. Therefore, no impact to aquatic species or their habitat would occur.

Special Status Amphibian Species

No streams or wetlands exist on or adjacent to the project site; therefore, no impacts to breeding amphibians or amphibian breeding habitat would occur. However, uplands can be used as summer estivation habitat for some salamanders and frogs, which over-summer underground in damp burrows dug by other animals. Few ground squirrel burrows were observed during the May field survey and the site is not near any drainage channels, seasonal wetlands, or other sources of surface water; however, estivation habitat was determined to be marginally suitable. The site is not located within critical habitat or the regulatory Santa Rosa Plain for California tiger salamander. The nearest known occurrence is 1.8 miles to the west on the east side of the US Coast Guard Two Rock Training Center. California tiger salamanders are thought to travel a maximum of 1.3 miles from breeding locations. The site is not in critical habitat for California red-legged frog, and the nearest known occurrence is about 2.7 miles to the northwest near Central Landfill. No special status amphibians were observed during the May field survey, estivation habitat was found to be only marginally suitable, and known locations of the species are further away than the species are thought to migrate. Therefore, it is highly unlikely for either species to be present in uplands on the site. Mitigation Measure BIO-1 would reduce any potential impact to special status amphibians to a less than significant level.

Special Status Bat Species

Bats may roost in tree cavities or old structures, such as barns. Pregnant bats typically roost in groups in maternity colonies, from April through November. Maternity roosting sites are important habitat for the species. Daytime roosts used by bats change frequently depending on where the bat

is foraging the night before. No bats or sign of bats were observed in trees or structures during the May survey. However, bats, such as Townsend's big-eared bat and pallid bat, are known to occur in the region and may move into the area prior to construction. No suitable roost trees (bats would not roost in the small fruit trees) or additional structures would be removed by the project; however, construction noise would have the potential to impact these species. Mitigation Measure BIO-2 would reduce any potential impact to special status bats to a less than significant level.

Special Status Avian Species

Birds and raptors are protected under the federal Migratory Bird Treaty Act (50 CFR 10.13), and their nest, eggs, and young are also protected under the California Fish and Wildlife Code (§3503, §3503.5, and §3800). In addition, raptors such as the white-tailed kite are "fully protected" under the Fish and Wildlife Code (§3511). Fully protected raptors cannot be taken or possessed at any time. No special status birds were observed, and no burrows appropriate for burrowing owl were observed during the field survey. Eucalyptus trees along Purvine Road provide suitable nesting habitat for birds; other trees on the property provide only marginally suitable nesting habitat. No trees are proposed for removal except the fruit trees in the remnant orchard. However, if nesting birds were present in trees at the project site, construction noise would have the potential to impact these species. Mitigation Measure BIO-3 would reduce the impact to nesting birds to a less than significant level.

American Badger

Open pastureland can provide potential habitat for the American badger, although no badger burrows or other sign of badgers were observed during the May field survey. Project grading and/or construction noise could impact individual badgers or potential burrows if present during construction activities. Mitigation Measure BIO-4 would reduce the impact to badgers and their potential habitat to a less than significant level.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure BIO-1 Amphibian Pre-Construction Survey(s): Pre-construction surveys shall be performed within 24 hours of initiation of project activities (including initial ground disturbing activities). Any small mammal burrows found shall be protected with a 30-foot buffer and exclusion fencing placed around the construction site. No construction activities shall occur during rain events, defined as ¼ inches of rain falling within a 24-hour period; however, construction activities may resume 24 hours after the end of the rain event. Prior to construction, all workers on the crew shall be trained by a qualified biologist as to the sensitivity of special-status species potentially occurring in the project area. If any special status amphibians are encountered during the surveys, all work in the area shall be placed on hold while findings are reported to state and federal regulatory agencies, and it is determined what, if any, further actions must be followed to prevent possible take of the species.

Mitigation Measure BIO-2 Roosting Bat Pre-Construction Survey(s): If initial ground disturbance or building demolition occurs during the bat maternity roosting season (May 1 through August 31), a qualified biologist shall conduct a bat roost assessment of trees and structures within 100 feet of the construction site. Surveys shall be conducted immediately prior to construction (within 1 to 2 days). If the biologist determines there is potential for maternity roosting bats to be present within 100 feet of the project site, nighttime emergence surveys

shall be performed to determine if maternity roosting bats are present. If bat maternity roosts are present, the biologist shall establish an appropriate exclusion zone around the maternity roost. Once all young have become independent of the roost, construction may take place in the former exclusion zone.

Mitigation Measure BIO-3 Nesting Bird Pre-Construction Survey(s): If initial ground disturbance or vegetation removal occurs during the breeding season (February 1 through August 31), a qualified biologist shall conduct a breeding bird survey no more than 14 days prior to ground disturbance to determine if any birds are nesting in underground burrows or dens, or in trees on or adjacent to the project site. If active nests are found close enough to the project site to affect breeding success, the biologist shall establish an appropriate exclusion zone around the nest. This exclusion zone may be modified depending on the species, nest location, and existing visual buffers, but typically would entail a minimum of 500 feet for raptor species and 300 feet for other migratory species. Once all young have become independent of the nest, vegetation removal and grading may take place in the former exclusion zone. If initial ground disturbance is delayed or there is a break in project activities of more than 14 days within the bird-nesting season, then a follow-up nesting bird survey shall be performed to ensure no nests have been established in the interim. If a burrowing owl or occupied burrow is found, CDFW will be contacted to determine the appropriate mitigation measure to avoid impacts on the species, which may include relocating the owl or burrow to a safe location.

Mitigation Measure BIO-4 American Badger Pre-Construction Survey: If initial ground disturbance or vegetation removal occurs during the badger breeding season (February through May), a qualified biologist shall conduct a badger survey prior to construction activities. This survey could be conducted concurrently with preconstruction nesting bird surveys conducted within the same time period. If a badger or its den is found, CDFW will be contacted to determine the appropriate mitigation measure to avoid impacts on the species, which may include relocating the badger or den to a safe location.

Mitigation Measure BIO-5 Pre-Construction Rare Plant Survey: If initial ground disturbance occurs during the blooming period of congested-headed hayfield tarplant (May-November), a qualified biologist shall conduct a pre-construction survey of the disturbance area prior to construction activities. If the plant is found, CDFW will be contacted to determine the appropriate mitigation measure to avoid impacts on the species, which may include collection and redistribution of the seedbank.

Mitigation Monitoring:

Mitigation Monitoring (BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5): Prior to issuance of any grading permit(s) and through completion of initial site disturbance, the County shall review the results of all pre-construction surveys and any measures recommended by the biologist to avoid sensitive habitat or species. All measures shall be noted on the final project plans.

Permits for demolition of the old barns were issued September 8, 2017. The removal and salvage operation was completed on or around October 8, 2017. Therefore, work occurred outside of the bat maternity roosting season and Mitigation Measure BIO-2 has been complied with.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Comment:

No stream channels, riparian habitat, or other sensitive natural community (e.g., native bunchgrass, serpentine chaparral) occur on or adjacent to the project site. The undeveloped portion of the parcel consist of non-native grassland. The project would have no impact on riparian habitat or other sensitive natural community.

Significance Level: No Impact

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Regulatory Framework

The Army Corps of Engineers (ACOE) regulates “Waters of the United States”, including adjacent wetlands, under Section 404 of the federal Clean Water Act. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. Potential wetland areas are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act. Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as “other waters” and are often characterized by an ordinary high water mark (OHWM). The discharge of dredged or fill material into a Waters of the U.S. (including wetlands) generally requires a permit from the ACOE under Section 404 of the Clean Water Act.

“Waters of the State” are regulated by the Regional Water Quality Control Board (Water Board) under the State Porter-Cologne Water Quality Control Act. Waters of the State are defined by the Porter-Cologne Act as any surface water or groundwater, including saline waters, within the boundaries of the State. RWQCB jurisdiction includes “isolated” wetlands and waters that may not be regulated by the ACOE under Section 404 (such as roadside ditches). Section 401 of the Clean Water Act specifies that any activity subject to a permit issued by a federal agency must also obtain State Water Quality Certification (401 Certification) that the proposed activity will comply with state water quality standards. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the Water Board has the option to regulate the dredge and fill activities under its state authority through its Waste Discharge Requirements (WDR) program.

Comment:

A Biotic Assessment was prepared for the project site to identify special-status plant and wildlife species and sensitive habitats (including wetlands) that have the potential to occur on or in the vicinity of the project site (Pinecrest Environmental Consulting, June 7, 2017). A field survey conducted in May did not identify any potential for wetlands on the project parcel. The project would have no impact on wetlands.

Significance Level: No Impact

- d) **Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Comment:

The project site only contains upland habitat for amphibians, so no breeding or nursery sites would be impacted. Further, amphibians would not be likely to use the project site as a movement corridor given its distance from known breeding sites and lack of a protected migration corridor, like a drainageway. Trees, grassland, and structures on the site could provide roosting, nesting, or burrowing habitat for bats, birds, and badgers. Implementation of pre-construction surveys prior to initiation of construction activities would reduce the potential impact to a less than significant level.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Implement Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4

Mitigation Monitoring:

See Mitigation Monitoring BIO-1, BIO-2, BIO-3, and BIO-4

- e) **Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?**

Comment: The project would not remove any trees protected by the Tree Protection Ordinance (Zoning Code Sec. 26-08-010 (m)), as only a few planted fruit trees are proposed for removal. The site is not located in an area with a special resource protection designation (e.g., VOH- Valley Oak Habitat, RC- Riparian Corridor). Therefore, the project would not conflict with any local resource protection policies or ordinances. No impact would occur.

Significance Level: No Impact

- f) **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?**

Comment:

There are no adopted habitat conservation plans or natural community conservation plans covering the project area, nor is the project site located in the Santa Rosa Plain. Therefore, the proposed project would not be subject to any habitat conservation plan or natural community conservation plan and would not conflict with any such plans. No impact would occur.

Significance Level: No Impact

5. CULTURAL RESOURCES:

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

Comment:

A Historic Resource Evaluation was conducted for the project site (Evans & De Shazo, September 29, 2017). A record search was conducted at the Northwest Information Center (NWIC) of the California Historical Information System (CHRIS), Sonoma County Assessor/Recorder office, Sonoma County Library, the Sonoma County History and Genealogy Library, as well as various online sources to obtain details regarding property ownership and to develop a historic context in which to evaluate the historic significance of the property. The record search indicated that the property had not been previously evaluated for cultural resources and no cultural resources are currently recorded within or adjacent to the property.

An intensive level field survey was also conducted to document the existing buildings and associated landscape to formulate assessments within the context of farming within the vicinity of the City of Petaluma in Sonoma County. All structures on the property were evaluated, including the primary residence (ca. 1933), granny unit (ca. 1940), detached garage (ca. 1933), two chicken barns (ca. 1910), four other barns (ca. 1910 – ca. 1950), two storage sheds (ca. 1910 – ca. 1933), and the concrete block storage building (ca. 1940), as well as various landscape features such as fences and foundations.

The property is associated with chicken farming for over six decades, from 1903 through the 1970s, owned by Walter Collings and the Collings family. The Collings were one of hundreds of chicken farming families in Petaluma and the surrounding county and are not considered persons important to local history or the history of California. The farm buildings are a modest example of a chicken farm in the Petaluma vicinity and Sonoma County, but are not considered an excellent or representative example of chicken farming buildings. The study concluded that the property's association with early chicken farming in Sonoma County appears to be a significant contribution to the broad patterns of California's history and cultural heritage, and that the property is considered a historical resource for the purposes of CEQA. The study proposed the below mitigation measures to address potential impacts to historical resources resulting from the proposed project.

No historic-era archaeological deposits associated with the chicken ranch were identified; however, there is the potential for associated archaeological deposits to be present. Please see Section 5.b. below for a discussion of archeological resources.

Permits to demolish the barns (B4, B5, B and B8) were applied for and issued on September 8, 2017, but were put on hold on September 28, 2017, by the Planning Division pending approval of the subject conditional use permit. The barns were subsequently demolished on or around October 8, 2017, after the historic evaluation was completed. All usable wood was salvaged for reuse on the site, as required by Mitigation Measure CUL-1 below. The barn wood is proposed to be used as siding on the new drying barn (P8).

Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce the impact to historical resources to a less than significant level.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure CUL-1 Archive or Salvage Building Materials: Prior to demolition of any structures, the applicant shall inventory the architectural elements to re-use on site or donate to the Sonoma County Historical Society or other appropriate archival facility. Any associated artifacts or other architectural elements that are feasible to archive or store shall be salvaged. The associated artifact or architectural element shall be carefully removed and properly stored for reuse or delivered to the archive facility in good condition to be used in future conservation work.

Mitigation Measure CUL-2 Interpretive Display: The applicant shall work with the Sonoma County Historical Society or the Petaluma Historical Library and Museum in developing an interpretive display about the Collings family history and chicken farming on the property that can be displayed on site. This could include a film documentation, historical photographs, and/or an oral history with interviews conducted by a professional oral historian with Walter Collings.

Mitigation Monitoring:

Mitigation Monitoring CUL-1 Archive or Salvage Building Materials: Prior to issuance of any demolition or grading permit(s), the County shall verify that salvage and storage of appropriate architectural elements has been conducted.

Heritage Salvage, a professional salvage company, removed the barns (B4, B5, B6 and B8) on the property after the historic evaluation was completed and salvaged all usable wood for reuse on the site, as required by Mitigation Measure CUL-1. The barn wood is proposed to be used as siding on the new drying barn (P8). This mitigation measure has been implemented and verified by County staff.

Mitigation Monitoring CUL-2 Interpretive Display: Prior to building permit final or granting of occupancy for the use, the applicant shall submit documentation that the interpretive display has been completed. Verification shall be required, either by photographic documentation or site inspection, at the discretion of Permit Sonoma staff.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Comment:

On December 11, 2017, Permit Sonoma staff referred the project application to Native American Tribes (see Section V above) within Sonoma County to request consultation under AB-52 (the request for consultation period ended January 10, 2018). No tribe responded with a request for formal consultation; however, FIGR requested a copy of the cultural resources study and identified the project area as their aboriginal territory.

A Cultural Resources Study was conducted for the project site (Evans & De Shazo, September 29, 2017). A record search and literature review was conducted at the Northwest Information Center (NWIC) of the California Historical Information System (CHRIS), as well as various online sources. A Sacred Sites inventory request was also made to the Native American Heritage Commission (NAHC) to determine if there are any Sacred Sites located within or near to the project area. An intensive level field survey was also conducted to inspect the project area for evidence of prehistoric artifacts, such as chipped stone (obsidian, chert and basalt) flakes and tools (e.g. projectile points, knives, scrapers), shellfish remains, ground stone, fire-affected rock, as well as historic-era artifacts and evidence of historic archaeological deposits associated with historic-era activities.

The record search indicated that the property had not been previously evaluated for cultural resources and no cultural resources are currently recorded within or adjacent to the property. The Sacred Sites inventory conducted by the NAHC did not identify the presence of a Native American Sacred Site within the project area.

The field survey resulted in the identification of artifacts and historic-era features associated with the historic use of the project as a chicken farm. The survey also resulted in the identification of the former location of the Iowa School building. The area where the school previously existed is greater than 500 feet from where any construction or grading would occur for the proposed project. Therefore, no impacts would occur to the former school site.

The study concluded that there is high potential for buried historic-era archaeological resources and moderate potential for prehistoric archaeological resources to be present within the project area.

Implementation of Mitigation Measure CUL-3 would reduce the impact to buried archaeological resources to a less than significant level.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Mitigation Measure CUL-3 Archaeological Monitoring: A qualified Archaeological Monitor shall be present onsite during all initial grading and ground disturbance activities, including any vegetation removal or grubbing. Monitoring shall continue until, in the Archaeological Monitor's judgment, cultural resources are not likely to be encountered.

If archaeological materials are encountered during ground-disturbing activities, all work within 25 feet of the discovery shall be halted until the archaeologist assesses the finds, consults with the appropriate individuals and agencies, and makes recommendations for the treatment of the discovery. Upon completion of the assessment, the archaeologist shall prepare a report to document the methods and results of the assessment. The report shall be submitted to Permit Sonoma and the NWIC upon completion of the project.

Mitigation Monitoring:

Mitigation Monitoring CUL-3 Archaeological Monitoring: Prior to issuance of any grading or building permit(s), the applicant shall provide the County with documentation that a qualified archaeological monitor has been retained.

Prior to building permit final or granting of occupancy for the use, any assessment reports shall be submitted to the County.

The County also has a standard “accidental discovery” condition of approval that work be halted if unanticipated buried cultural resources are encountered during construction. The condition is applied to all use permits that involve ground disturbance, and requires that the following notes be printed on all grading and building permit plans involving ground disturbing activities:

“If paleontological resources or prehistoric, historic or tribal cultural resources are encountered during ground-disturbing work, all work in the immediate vicinity shall be halted and the operator must immediately notify the Permit and Resource Management Department (PRMD) – Project Review staff of the find. The operator shall be responsible for the cost to have a qualified paleontologist, archaeologist or tribal cultural resource specialist under contract to evaluate the find and make recommendations to protect the resource in a report to PRMD. Paleontological resources include fossils of animals, plants or other organisms. Prehistoric resources include humanly modified stone, shell, or bones, hearths, firepits, obsidian and chert flaked-stone tools (e.g., projectile points, knives, choppers), midden (culturally darkened soil containing heat-affected rock, artifacts, animal bone, or shellfish remains), stone milling equipment, such as mortars and pestles, and certain sites features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe. Historic resources include all by-products of human use greater than fifty (50) years of age including, backfilled privies, wells, and refuse pits; concrete, stone, or wood structural elements or foundations; and concentrations of metal, glass, and ceramic refuse.

If human remains are encountered, work in the immediate vicinity shall be halted and the operator shall notify PRMD and the Sonoma County Coroner immediately. At the same time, the operator shall be responsible for the cost to have a qualified archaeologist under contract to evaluate the discovery. If the human remains are determined to be of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification so that a Most Likely Descendant can be designated and the appropriate measures implemented in compliance with the California Government Code and Public Resources Code.”

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Comment:

Paleontological resources include fossil remains, as well as fossil localities and rock or soil formations that have produced fossil material. No surveys for paleontological resources have been conducted for the site. Mitigation Measure CUL-3 and the standard condition of approval for accidental discovery would reduce the impact of construction activities on unknown paleontological resources to a less than significant level by addressing discovery of unanticipated buried resources.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Implement Mitigation Measure CUL-3 Archaeological Monitoring.

Mitigation Monitoring:

See Mitigation Monitoring CUL-3 Archaeological Monitoring.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Comment:

No burial sites are known in the vicinity of the project, and most of the project site where the proposed operation would occur has already been disturbed by past construction.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Implement Mitigation Measure CUL-3 Archaeological Monitoring.

Mitigation Monitoring:

See Mitigation Monitoring CUL-3 Archaeological Monitoring.

6. GEOLOGY AND SOILS:

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Comment:

The project site is not within a fault hazard zone as defined by the Alquist-Priolo fault maps.

Significance Level: No Impact

ii. Strong seismic ground shaking?

Comment:

All of Sonoma County is subject to seismic shaking that would result from earthquakes along the San Andreas, Healdsburg-Rodgers Creek, and other faults. Predicting seismic events is not possible, nor is providing mitigation that can entirely reduce the potential for injury and damage that could occur during a seismic event. However, by applying geotechnical evaluation techniques and appropriate engineering practices, potential injury and damage from seismic activity can be diminished, thereby exposing fewer people and less property to the effects of a major damaging earthquake. The design and construction of new structures are subject to engineering standards of the California Building Code (CBC), which take into account soil properties, seismic shaking and foundation type. Standard conditions of approval require that building permits be obtained for all construction and that the project meet all standard seismic and soil test/compaction requirements. Therefore, the potential impact from strong seismic ground shaking would be less than significant.

Significance Level: Less than Significant Impact

iii. Seismic-related ground failure, including liquefaction?

Comment:

Strong ground shaking can result in liquefaction, the sudden loss of shear strength in saturated sandy material, resulting ground failure. Areas of Sonoma County most at risk of liquefaction are along San Pablo Bay and in alluvial valleys. According to the Hazard Mitigation Plan Major Earthquake Fault Zones and Areas of Liquefaction Map (Sonoma County General Plan Figure 8.1), the project site is not located in a designated Liquefaction Hazard Area.

Significance Level: No Impact

iv. Landslides?

Comment:

Steep slopes characterize much of Sonoma County, particularly the northern and eastern portion of the County. Where these areas are underlain by weak or unconsolidated earth materials, landslides are a hazard. The project is located in a minimal slope area, with site elevations ranging from 320 feet MSL at the eastern end to 240 feet MSL at the southwestern corner. According to the Hazard Mitigation Plan Landslide Hazard Areas Map (Sonoma County General Plan Figure 8.11), the project site is not located in a designated Landslide Hazard Area.

Significance Level: No Impact

b) Result in substantial soil erosion or the loss of topsoil?

Comment:

The project includes grading, cuts and fills which require the issuance of a grading permit. Improper grading, both during and post construction, has the potential to increase the volume of runoff from a site which could have adverse downstream flooding and further erosional impacts, and increase soil erosion on and off site which could adversely impact downstream water quality.

As discussed in Section 9, erosion and sediment control provisions of the County Construction Grading and Drainage Ordinance (Zoning Code Chapter 11) and Storm Water Quality Ordinance (Zoning Code Chapter 11A) require submission of an Erosion and Sediment Control Plan and implementation of flow control best management practices to reduce runoff and require treatment of runoff from the two-year storm event. Required inspections by Permit Sonoma staff insure that all grading and erosion control measures are constructed according to the approved plans. These ordinance requirements and adopted best management practices are specifically designed to maintain potential water quantity impacts at a less than significant level during and post construction. Therefore, the potential soil erosion impact would be less than significant.

Significance Level: Less than Significant Impact

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Comment:

The project site is not located within a designated Liquefaction Hazard Area or designated Landslide Hazard Area. The project site is generally flat. Therefore, the potential impact from landslides or liquefaction would be less than significant.

Significance Level: Less than Significant Impact

- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

Comment: Table 18-1-B of the Uniform Building Code is an index of the relative expansive characteristics of soil as determined through laboratory testing. For the proposed project, soils at the site have not been tested for their expansive characteristics. According to the National Resources Conservation Service, soils on the project site consist of Steinbeck loam, which has a low shrink-swell potential and is not considered an expansive soil. No substantial risks to life or property would be created from soil expansion at the proposed project, even if it were to be affected by expansive soils.

Significance Level: No Impact

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

Comment: The project site is served by two existing septic systems, one for the primary residence and one for the granny unit to be converted to an employee break room and restroom. An inspection report (BC Engineering Group, May 16, 2017) found them both to be in good working condition. No problems with the leach fields were encountered during inspection. It was also noted that there appears to be sufficient room for a replacement septic system should failure occur in the future, or should additional capacity be required for the new buildings and/or change in occupancy for existing repurposed buildings.

Significance Level: Less than Significant Impact

7. GREENHOUSE GAS EMISSIONS:

Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Comment:

The Bay Area Air Quality Management District (BAAQMD) has adopted a significance threshold of 1,100 metric tons of CO₂e per year or compliance with a qualified GHG Reduction Strategy for operational impacts for land use projects (*California Environmental Quality Act Air Quality Guidelines May 2017*). Emissions are caused by natural gas combustion, electricity use, on-road vehicles, water use, wine fermentation, carbon sequestration, and existing emissions. The BAAQMD does not include a threshold of significance for construction-related GHG emissions.

Indoor cultivation and mixed light cultivation operations include the use of energy-intense lighting and ventilation systems, which could operate 24 hours per day, and require year-round irrigation. To minimize energy and water use and emissions of GHG, the project has incorporated the following strategies: to reduce energy use and improve efficiency in energy use through installation of liquid-cooled, high efficiency LED grow lighting; reduce water use and improve efficiency in water use through timer/sensor-driven drip irrigation and dry farming techniques (for outdoor cultivation), rainwater capture, and recycling/reuse of greywater; invest in local renewable energy sources through Sonoma Clean Power; and protect farmlands and working lands by maintaining on-site grazing on 25 acres and planting a 1-acre chefs garden.

As discussed in Air Quality Sections 3.a and 3.b, the proposed project would be much smaller in scale than other screened land uses and would be well below the emission threshold for ozone precursors. Additionally, the project would not be open to the public and would only employ a maximum of 10 people; therefore, GHG emissions from traffic are expected to be low. Given this, the project is anticipated to be well below the GHG significance threshold of 1,100 metric tons of CO₂e per year. In addition, the project incorporates multiple GHG reduction strategies.

As a condition of approval, the project would be required to comply with the following Zoning Code renewable energy use requirement:

Electrical power for indoor cultivation, mixed light operations, and processing including but not limited to illumination, heating, cooling, and ventilation, shall be provided by any combination of the following: (i) on-grid power with one hundred percent (100%) renewable source; (ii) on-site zero net energy renewable source; or (iii) purchase of carbon offsets of any portion of power not from renewable sources. The use of generators for indoor and mixed light cultivation is prohibited, except for portable temporary use in emergencies only (Sec 26-88-254(g)(3)).

Therefore, the impact of energy-related GHG emissions would be less than significant level.

For construction activities, the greatest source of greenhouse gas emissions would be diesel emissions from heavy equipment associated with grading and hardscape construction. The BAAQMD does not include a threshold of significance for construction-related GHG emissions. However, emissions would be reduced to a less than significant level with implementation of Mitigation Measure AIR-1, which requires that idling time of diesel-powered construction equipment be limited to five minutes.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:

Implement Mitigation Measure AIR-1 Construction Dust and Air Quality Control.

Mitigation Monitoring:

See Mitigation Monitoring AIR-1 Construction Dust and Air Quality Control.

- b) **Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

Comment:

The County does not have an adopted Climate Action Plan but has adopted a Climate Change Action Resolution (May 8, 2018) which resolved to reduce GHG emissions by 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050" and noted twenty strategies for reducing GHG emissions, including increasing carbon sequestration, increasing renewable energy use, and reducing emissions from the consumption of good and services.

By incorporating multiple GHG reduction strategies, the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Significance Level: Less than Significant Impact

8. HAZARDS AND HAZARDOUS MATERIALS:

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Comment:

Construction of the project may involve the intermittent transport, storage, use and disposal of potentially hazardous materials, including fuels and lubricants, paints, solvents, and other materials commonly used in construction. During construction activities, any on-site hazardous materials that may be used, stored, or transported would be required to follow standard protocols (as determined by the U.S. EPA, California Department of Health and Safety, and Sonoma County) for maintaining health and safety. Improper transit, storage, or handling of these materials could result in spills. This potential impact would be reduced to a less than significant level with implementation of standard approved construction methods for handling hazardous materials.

In addition, plant nutrients, fertilizers, fungicides, and approved algaecides may be used during the cultivation operation. Quantities of bulk nutrients are normally transported and stored in 6-gallon plastic containers and then diluted with water to a 10% solution for use on plants. Plant nutrients and fertilizers would be stored in a secure storage room in the new drying barn (P8) without exposure to weather, sunlight or wind. These materials would be stored on pallets and/or shelving to minimize the possibility of spills and leaks going undetected. Liquid products would be stored in secondary containment, where needed. Generally, there is no disposal of agricultural chemicals since they are applied to and taken up by the plants. Any disposal of unused plant chemicals would be minor and the material would be taken to an appropriate solid waste disposal location as identified in product disposal instructions (most are safe for landfill disposal). No impacts are anticipated related to the routine transport, use, or disposal of small amounts of agricultural chemicals. As a condition of approval, the project would be required to comply with the following Operating Standard:

All cultivation operations that utilize hazardous materials shall comply with applicable hazardous waste generator, underground storage tank, above ground storage tanks, and any AB 185 (hazardous materials handling) requirements and maintain any applicable permits for these programs from the Fire Prevention Division, Certified Unified Program Agency (CUPA) of Sonoma

County Fire and Emergency Services Department, or the Agricultural Commissioner (Sec 26-88-254(g)(4)).

Therefore, the potential environmental impact associated with the routine transport, use, or disposal of hazardous materials would be less than significant.

Significance Level: Less than Significant Impact

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Comment:

During construction there could be spills of hazardous materials. See Item 8.a above.

Also discussed in 8.a above, plant nutrients, fertilizers, fungicides, and approved algacides may be used during the cultivation operation. These materials would be stored in a secure storage room in the new drying barn (P8), where spills would be easily detected and contained. Chemicals would be diluted with water to a 10% solution prior to delivering to plants through a controlled drip irrigation system. The system would be monitored for leaks and breakage and immediately repaired if needed. Any spill from the delivery system would be inconsequential due to its small size and the highly diluted nature of the liquid.

Potential impacts related to construction and operational use of hazardous materials would be minimized through review and oversight of multiple jurisdictional entities requiring permits for use of hazardous materials, as described in 8.a. above. Therefore, the potential impact from accidents involving the use of hazardous materials would be less than significant.

Significance Level: Less than Significant Impact

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Comment:

The project is not located within 0.25 mile from an existing or proposed school. The nearest school, Two Rock Elementary, is about 1.6 miles to east on Spring Hill Road.

Significance Level: No Impact

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Comment:

There are no known hazardous materials sites within or adjacent to the project limits, based on a review of the following databases (commonly known as the Cortese List) on January 25, 2018.

1. The State Water Resources Control Board Geotracker database,

2. The California Department of Toxic Substances Control EnviroStor database (formerly known as Calsites), and
3. The CalRecycle Solid Waste Information System (SWIS).

The closest hazardous materials site on record is a diesel LUST (Leaking Underground Storage Tank) site located 6,000 feet to the northeast on Bodega Avenue. The LUST site status is closed after cleanup was completed in 1996.

Significance Level: No Impact

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

Comment:

The site is not within an Airport Referral Area as designated by the Sonoma County Comprehensive Airport Land Use Plan. The closest public use airport-Petaluma Municipal Airport- is greater than 7 miles to the east.

Significance Level: No Impact

- f) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

Comment:

There are no known private airstrips within the vicinity of the proposed project.

Significance Level: No Impact

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Comment:

The project would not impair implementation of, or physically interfere with the County's adopted emergency operations plan. There is no separate emergency evacuation plan for the County. The project would not change existing circulation patterns, would not generate substantial new traffic, and therefore, would have no effect on emergency response routes. Refer to Section 16. Transportation and Traffic for a discussion of project traffic.

Significance Level: No Impact

- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas of where residences are intermixed with wildlands?**

Comment:

According to the Wildland Fire Hazard Area map (Figure PS-1g) in the Sonoma County General Plan,

the project site is located in the State Responsibility Area and is designated as a Moderate Fire Hazard Severity Zone. Moderate Zones are generally located in grasslands and valleys, away from significant forested or chaparral wildland vegetation, as is the case with the project site. Projects located in High and Very High Fire Severity Zones are required by state and county code to have a detailed vegetation management plan developed and reviewed by the Sonoma County Fire Prevention Division before a building permit can be issued. This requirement does not apply to projects located in a Moderate Zone. However, all construction projects must comply with County Code Fire Safe Standards (Chapter 13), including but not limited to, installing fire sprinklers in buildings, providing emergency vehicle access, and maintaining a dedicated fire-fighting water supply on-site. The proposed project is not located in a High or Very High Wildland Fire Hazard Area and would comply with all Fire Safe Standards. Therefore, the project would not be likely to expose people or structures to a significant risk of loss, injury or death involving wildland fires.

Significance Level: Less than Significant Impact

9. HYDROLOGY AND WATER QUALITY:

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Comment:

The project would result in grading for an improved driveway and access roads, parking, greenhouse/indoor cultivation building, replacement drying barn, and associated hardscape and landscaping estimated at 1.3 acres (55,883 square feet) of soil disturbance and 27,423 square feet of new impervious surfaces. Construction activities, completed improvements, and project operations could all affect the quantity and/or quality of stormwater runoff.

There are no streams, drainage channels, or wetland features on or adjacent to the project site. The nearest drainage identified is an unnamed channel about 1,000 feet to the west of the property. Therefore, no nearby surface waters exist to act as receiving waters for project discharge. However, a number of regulations could apply to the project, summarized below.

A construction project disturbing one or more acres of soil is required to obtain coverage under the State Water Resources Control Board (SWRCB) Construction General Permit Order 2009-0009-DWQ for Discharges of Storm Water Runoff Associated with Construction Activity. Construction activities subject to this permit include clearing, grading, stockpiling, excavation, and reconstruction of existing facilities involving removal and replacement. The General Permit requires submittal of a Notice of Intent (NOI) package, and development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) which, in addition to other requirements, must include Best Management Practices (BMPs) to protect the quality of stormwater runoff.

On October 17, 2017, the State Water Resources Control Board adopted the Cannabis Cultivation Policy (Cannabis Policy) and the Statewide Cannabis General Order WQ 2017-0023-DWQ (Cannabis General Order) for General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities. The Cannabis Policy and Cannabis General Order include requirements to reduce impacts of waste discharges and

surface water diversions associated with cannabis cultivation. The Order requires submittal of a Site Management Plan describing BMPs to protect water quality, and may also require a Site Erosion and Sediment Control Plan, Disturbed Area Stabilization Plan, and/or Nitrogen Management Plan, depending on size and site characteristics of the operation. All outdoor commercial cultivation operations that disturb an area equal to or greater than 2,000 square feet of soil are required to enroll. Most commercial indoor cannabis cultivation operations are conditionally exempt, but must enroll in the program to obtain documentation of their conditionally exempt status. Compliance with the Cannabis General Order is a standard condition of approval for all cannabis permits.

The Sonoma County Department of Agriculture/ Weights & Measures has prescribed cannabis cultivation Best Management Practices related to pesticide and fertilizer storage, pesticide use, fertilizer use, riparian protection, water use and storage, waste management, erosion control/grading and drainage, and items related to indoor cultivation.

Sonoma County also requires the project applicant to prepare a grading and drainage plan (Erosion Prevention and Sediment Control Plan) in conformance with Chapter 11 (Construction Grading and Drainage Ordinance) and Chapter 11A (Storm Water Quality Ordinance) of the Sonoma County Code and the Sonoma County Storm Water Low Impact Development Guide, all of which include performance standards and Best Management Practices for pre-construction, construction, and post-construction to prevent and/or minimize the discharge of pollutants, including sediment, from the project site. Required inspections by Permit Sonoma staff insure that all grading and erosion control measures are constructed according to the approved plans.

All of the above ordinance requirements and adopted best management practices are specifically designed to maintain potential water quality impacts at a less than significant level during and post construction.

Significance Level: Less than Significant

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

Comment:

The site is located in a Groundwater Availability Class 2 – Major Natural Recharge Area, and is not within a Medium or High Priority basin defined under the Sustainable Groundwater Management Act (SGMA). The nearest SGMA basin is Petaluma Valley, about 3 miles to the northeast. Although the project would not be located in a SGMA basin or in a water scarce area (Zone 3 or 4) where a groundwater report is required by General Plan Policy WR-2e and County Zoning Code (Sec 26-88-254(g)(10)), a Hydrogeologic Assessment Report was prepared to address potential groundwater impacts under CEQA (Hurvitz Environmental Services, May 1, 2018).

The hydrogeologic report identified the cumulative amount of development and uses allowed in the area and assessed the impact of the proposed project's groundwater use on overdraft conditions, land subsidence, saltwater intrusion, surface water resources, and neighboring wells.

Greenhouse/Indoor Cultivation Water Use

The point drip emitter system for the greenhouse/indoor operation would use 0.33 gallons of water per plant per day, and would house approximately 4,500 plants, so daily water use would be about 1,485 gallons per day. This water use estimate is based on the applicant's 20 years of cultivation experience and directly from the applicant's current water consumption metered by the City of San Francisco at a 100 light, 3,500 square foot indoor cultivation facility using a similar drip emitter system. The annual greenhouse/ indoor operation water use is calculated as 1,485 gallons per day x 365 days per year = 542,025 gallons per year (325,851 gallons/acre-feet) = 1.66 acre-feet per year.

Outdoor Cultivation Water Use

The project proposes dry farming methods for outdoor plants, including deep tilling of the soil to trap moisture in early spring allowing for maximum penetration of rain and moisture before planting. Rooted cannabis plants would then be planted directly into the ground after the last frost with little to no additional watering. The micro climate of the west Petaluma area typically has heavy morning fog and remains cool and mild throughout the summer months allowing for significantly less watering than most other areas in Sonoma County. The applicant proposes a point drip emitter system to deliver 3.5 gallons per plant over a 5-hour period only once per month for the five-month outdoor growing season. The outdoor cultivation area would contain about 1,000 plants, so the calculated monthly outdoor cultivation water use would be 3,500 gallons per month. The annual outdoor operation is then calculated at 3,500 gallons per month x 5 months per year = 17,500 gallons per year (325,851 gallons/acre-feet) = 0.05 acre-feet per year.

Because this water use budget is very low, an additional, more conservative water budget was prepared based on average water use from published sources, rather than the applicant's water use proposal. The average daily water use per plant for a typical Northern California outdoor cultivation site is about 2.30 gallons per day. The typical outdoor growing season is approximately 150 to 180 days. Using these more conservative average numbers, outdoor cultivation water use at the project site is calculated as 2.3 gallons per day x 180 days per year x 1,000 plants = 414,000 gallons (325,851 gallons/acre-feet) = 1.27 acre-feet per year.

Total Cultivation Water Use

This environmental analysis uses the more conservative outdoor water use calculation. Therefore, total water use for proposed cultivation operations is calculated at 2.93 acre-feet per year (1.66 acre-feet for greenhouse/indoor cultivation + 1.27 acre-feet for outdoor cultivation).

To off-set some of the projected groundwater use, a rainwater harvesting system is proposed to capture and store 40,000 gallons from the greenhouse/indoor cultivation building roof. The rainwater would be filtered and used to supplement cultivation irrigation. The rainwater capture offset was calculated at 0.85 acre-feet per year.

In addition, up to 1,500 gallons of greywater would be captured from the handwashing sink in the indoor building and from bioswales constructed downslope of the greenhouse/indoor cultivation complex and used only to supplement irrigation of the fence landscaping around the greenhouse/indoor cultivation complex. However, the greywater capture was not included in the 0.85-acre off-set.

Taking into account the 0.85 acre-foot offset anticipated from rainwater capture, total project water use is expected to be 2.08 acre-feet per year.

Total Onsite Water Use

The total onsite water use, including proposed cultivation plus existing grazing operations and domestic uses (including both existing residential uses plus proposed employees) is calculated at 5.94 acre-feet per year (2.93 acre-feet for cultivation + 1.68 acre-feet for cattle grazing + 1.33 acre-feet for domestic uses). Taking into account the 0.85 acre-foot offset anticipated from rainwater capture, total onsite water use is expected to be 5.09 acre-feet per year.

Water Use Impact Analysis

The cumulative impact area for the study was centered on the project well and includes an approximately 500-acre circular area within a 0.5-mile radius. It includes 22 properties ranging in size from 1 acre to 313 acres with an average size of 52 acres. Seventeen of the surrounding properties are also in a major groundwater recharge area (Zone 2); the other five properties are partly in areas of low or highly variable water yield (Zone 4). The total groundwater storage capacity in the area is calculated at 2,175 acre-feet with an annual recharge rate of 125 acre-feet. The current annual water demand within the cumulative impact area is estimated to be 42.9 acre-feet; the future potential annual water demand is estimated at 63.59 acre-feet.

The proposed project's annual water demand of 2.93 acre-feet increases the current total water demand within the cumulative impact area by 8.6% and the future total water demand within the cumulative impact area by 4.8%. Note that the 2.93-acre-foot water budget does not take into account the 0.85 acre-foot offset anticipated from rainwater capture, so these water demands are more conservative than likely to occur.

The zone of pumping influence from the onsite well was determined by pump test to extend about 160 feet from the well, based on a pumping rate of 6.7 gallons per minute with the pump running for an 8-hour time period. The closest neighboring well was identified approximately 1,583 feet from the onsite well, far outside of the potential area of pumping influence. The nearest surface water identified was an unnamed creek located approximately 1,700 feet southwest of the project well, which is also outside the well's potential area of pumping influence.

The maximum daily water demand for the proposed cultivation project (greenhouse, indoor, and outdoor) during peak summer irrigation would be 4,199 gallons, which would require about 10.5 hours of pumping with a well yield of 6.7 gallons per minute. A 10.5-hour pump day would extend the pumping influence slightly farther than the 8-hour pump test analyzed. However, the zone of pumping influence would not be anticipated to extend an additional 1,400+ feet (i.e., 160 to 1,583 feet) to have any impact on a neighboring well. Note also, the peak usage rate would occur only two months per year (during peak outdoor cannabis watering); typical daily demand would be met with approximately 6 hours of pumping with a well yield of 6.7 gallons per minute.

Based on these calculations, the hydrogeologic report determined that the proposed project would not result in a net deficit in aquifer volume or a lowering of the local groundwater table.

Additionally, the County has several standard conditions of approval related to water use which would apply to this project, including required submission of a Water Conservation Plan for all new and repurposed buildings; review of the landscaping plan to ensure compliance with Water Efficient Landscape Regulations (County Code Chapter 7D3); installation of a groundwater level monitoring device pursuant to General Plan Policy WR-2d, including installation of a water meter(s) on the

water system and quarterly groundwater extraction reports, with the further provision that in the event actual project groundwater use exceeds projected use (2.08 acre-feet per year), project groundwater use would be subject to additional County review.

The results of the groundwater study combined with the additional County review and oversight required through multiple standard conditions of approval would ensure that the project does not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Significance Level: Less than Significant Impact

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

Comment:

There are no streams, drainage channels, or wetland features on the project site. Site drainage occurs by overland flow to the southwest, which is gently sloped in that direction. Elevation ranges from 320 feet MSL at the eastern end to 240 feet MSL at the southwestern corner. Existing site elevations and topography would remain largely unchanged after project construction, and overall drainage patterns would remain essentially the same. Grading would occur only in the central portion of the parcel where existing farm development is already located. The project would be subject to a grading permit, which requires that all new runoff from new impervious surfaces be contained and treated onsite. Because overall drainage patterns would not change, the project would not result in substantial erosion or siltation on- or off-site and the post-construction operational soil erosion impact would be less than significant.

Though limited to a small portion of the site, construction of the proposed project would involve cuts, fills, and other grading. Unregulated grading during construction has the potential to increase soil erosion from a site. Construction grading activities would be subject to a grading permit, which requires installation of adequate stormwater treatment measures to prevent soil erosion during construction, such as silt fencing, straw wattles, and soils discharge controls at construction site entrance(s). Compliance with the County grading regulations is aimed at capturing and treating all project runoff onsite, thereby reducing the potential for soil erosion and sediment delivery from the site, as described in 9.a above.

Significance Level: Less than Significant Impact

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

Comment:

There are no streams, drainage channels, or wetland features on the project site and the parcel is not in the 100-year flood plain or in an area prone to flooding. Site drainage occurs by overland flow to the southwest, which is gently sloped in that direction. Elevation ranges from 320 feet MSL at the eastern end to 240 feet MSL at the southwestern corner. Existing site elevations and topography

would remain largely unchanged after project construction, and overall drainage patterns would remain essentially the same. New development would occur only in the central portion of the parcel where existing farm development is already located. The project would collect and store rainwater from the roof of the new greenhouse/indoor cultivation building, and would construct a bioswale to capture overland runoff within the fenced area around the building. The new drying barn would be constructed in the same footprint as the original hay barn; improvements to the concrete block processing building and employee restroom/break room would not expand existing footprints. New hardscape would be installed for the paved driveway; other access roads would be improved gravel or dirt. The project would be subject to a grading permit, which requires that all new runoff from new impervious surfaces be contained and treated onsite. Because overall drainage patterns would not change, the project would not result in substantial new surface runoff or flooding on- or off-site, either during construction or post-construction and the flooding impact would be less than significant.

Significance Level: Less than Significant Impact

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Comment:

On-site construction would result in new impervious surface and generation of stormwater. A rainwater harvesting system would be installed to capture up to 40,000 gallons in tanks from the greenhouse/indoor cultivation building roof. Bioswales would also be constructed to manage stormwater drainage and retain all stormwater on the site. Grading and Stormwater Section staff reviewed the project referral and provided conditions of approval to comply with the County Construction Grading and Drainage Ordinance (Zoning Code Chapter 11) and the Storm Water Quality Ordinance (Zoning Code Chapter 11A). The project would require a grading permit, which would not be issued until all recommended feasible stormwater treatment options have been incorporated in compliance with all applicable standards of the County Code.

Significance Level: Less than Significant Impact

f) Otherwise substantially degrade water quality?

Comment:

Though limited to a small portion of the site, construction of the proposed project would involve cuts, fills, and other grading. Unregulated grading during construction has the potential to increase soil erosion which can lead to degraded water quality. Grading and Stormwater Section staff reviewed the project referral and provided conditions of approval to comply with the County Construction Grading and Drainage Ordinance (Zoning Code Chapter 11) and the Storm Water Quality Ordinance (Zoning Code Chapter 11A). The project would require a grading permit, which would not be issued until all recommended feasible stormwater treatment options have been incorporated in compliance with all applicable standards of the County Code. Treatment measures could include silt fencing, straw wattles, and soils discharge controls at construction site entrance(s), and could also include primary and secondary containment for petroleum products, paints, lime, and other hazardous materials of concern. Compliance with the County grading regulations is aimed at capturing and treating all project runoff onsite, thereby reducing the potential for water quality degradation. In addition, potential water quality impacts related to both project construction and

project operation would be minimized through review and oversight of multiple jurisdictional entities requiring permits, including the Fire Prevention Division, Certified Unified Program Agency (CUPA) of Sonoma County Fire and Emergency Services Department, the Sonoma County Department of Agriculture/ Weights & Measures, State Water Resources Control Board Construction General Permit Order and Cannabis General Order, as described in 8.a and 9.a above. Standard use permit conditions of approval require demonstration of compliance with all of these. Therefore, potential water quality impacts would be less than significant.

Significance Level: Less than Significant Impact

g) Place housing within a 100-year hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Comment:

The proposed project does not include any new residential development and the project site is not located in a 100-year floodplain or other Special Flood Hazard Area mapped by the Federal Emergency Management Agency.

Significance Level: No Impact

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Comment:

The project site is not located in a 100-year floodplain or other Special Flood Hazard Area mapped by the Federal Emergency Management Agency.

Significance Level: No Impact

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Comment:

According to Figure PS-1f of the Sonoma County General Plan, the project site is not located in an area that would be subject to flooding as a result of levee or dam failure.

Significance Level: No Impact

j) Inundation by seiche, tsunami, or mudflow?

Comment:

The project site is not located in an area subject to seiche or tsunami. A seiche is a wave in a large enclosed or partly enclosed body of water triggered by an earthquake. The project site is not located near enough to a large body of water or the coastline to be subject to earthquake-triggered waves. Mudflows can be triggered by heavy rainfall, earthquakes or volcanic eruption; however, the project site is not located below any steep slopes subject to mudflow.

Significance Level: No Impact

10. LAND USE AND PLANNING:

Would the project:

a) Physically divide an established community?

Comment:

The project would not physically divide a community. The project would not involve construction of a physical structure (such as a major transportation facility) or removal of a primary access route (such as a road or bridge) that would impair mobility within an established community or between a community and outlying areas. No impact would occur.

Significance Level: No Impact

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Comment:

The General Plan Land Use Designation on the parcel is Land Extensive Agriculture. The site is also designated Land Extensive Agriculture by the Petaluma Dairy Belt Area Plan. This land use designation is intended to enhance and protect lands capable of and generally used for animal husbandry and the production of food, fiber, and plant materials in areas where soil and climate conditions typically result in relatively low production per acre of land. The primary use of any parcel within one of the three agricultural land use categories must involve agricultural production and related processing, support services, and visitor serving uses. Allowed non-agricultural land uses must be conducive to continued agricultural production. Within the Land Extensive Agriculture zoning designation, commercial cannabis cultivation (up to 1 acre of cultivation area) including ancillary processing operations is an allowed land use with a use permit (Sec. 26-06-020(t)). Approval of use permits requires compliance with multiple Development Criteria and Operating Standards from the Zoning Code intended to avoid and minimize potential environmental impacts (Sec. 26-88-250 and 254).

The proposed project would continue the existing 25-acre grazing operation and 1-acre chefs garden unchanged, and therefore, would not impede existing or future agricultural operations on the site. No conflicts with other general plan policies related to scenic, cultural, or biotic resource protection, noise, or transportation have been identified. No conflicts with Development Criteria or Operating Standards have been identified and no exceptions or reductions to standards would be necessary to approve the project. Therefore, the project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Significance Level: Less than Significant Impact

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Comment:

See 4.f. above. Habitat conservation plans and natural community conservation plans are site-specific plans to address effects on sensitive species of plants and animals. The project site is not

located in an area subject to a habitat conservation plan or natural community conservation plan.

Significance Level: No Impact

11. MINERAL RESOURCES:

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

Comment:

The project site is not located within a known mineral resource deposit area (Sonoma County Aggregate Resources Management Plan, as amended 2010).

Significance Level: No Impact

- b) **Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

Comment:

The project site is not located within a locally-important mineral resource recovery site and the site is not zoned MR (Mineral Resources) (Sonoma County Aggregate Resources Management Plan, as amended 2010 and Sonoma County Zoning Code). No locally-important mineral resources are known to occur at the site.

Significance Level: No Impact

12. NOISE:

Would the project:

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Comment:

County noise standards for non-transportation operational noise are provided in Table NE-2 of the General Plan (Table 4 below). These thresholds may be adjusted based on site-specific conditions, such as a very high or very low ambient noise level, specific types of noise (e.g., dog barking, simple tone noises), or short-term noise sources permitted to occur no more than six days per year (e.g., concerts, special events).

Table 4. Maximum Allowable Exterior Noise Exposures for Non-transportation Noise Sources

Hourly Noise Metric ¹ , dBA	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
L50 (30 minutes in any hour)	50	45
L25 (15 minutes in any hour)	55	50

L08 (4 minutes 48 seconds in any hour)	60	55
L02 (72 seconds in any hour)	65	60
¹ The sound level exceeded n% of the time in any hour. For example, the L50 is the value exceeded 50% of the time or 30 minutes in any hour; this is the median noise level.		

Outdoor cultivation would make use of typical small-scale farming equipment, such as a small tractor or rototiller. Such equipment would be run only a few times per season during the daytime. The climate control system proposed for the greenhouse and indoor cultivation facility could run 24 hours per day, as needed. Most of the system would be located inside the structure; however, a commercial HVAC unit would be located outside the cultivation building on the east (property interior) side.

According to the HVAC manufacturer's specifications, this unit is rated at 75 dBA at a 30 foot distance from the unit. However, the specifications also include details on a barrier wall design (a three sided, plywood-stud wall consisting of a minimum of ½ inch thick plywood built to a height of at least 2 feet above the height of the HVAC) that give a 10 dBA reduction in sound. Using the Inverse Square Law, in an unrestricted space, there is a 6 dBA reduction with the doubling of distance from a noise source. Table 5 demonstrates the estimated reduction in dBA from the HVAC unit when a sound wall is constructed given the specifications.

Table 5. Calculated Exterior Noise Exposures for Project Operational Noise Sources

Distance (feet)	dBA (without sound wall)	dBA (with sound wall)
30	75	65
60	69	59
120	63	53
240	57	47
480	51	41
960	45	35
1,920	39	29

Using GIS analysis, the nearest property line from the HVAC unit is along Purvine Road, a distance of approximately 250 feet when measured from the southwest corner of the greenhouse where the HVAC unit is proposed. Additionally, the detached garage and several proposed trees will partially screen the unit from Purvine Road. For these reasons, noise associated with the HVAC at this property line is expected to be less than 47 dBA with the sound barrier incorporated.

The two nearest property lines with residential receptors from the HVAC unit are located about 670 feet to the southeast (residential house is about 920 feet away) and about 740 feet to the southwest (residential house is about 820 feet away). Additionally, the HVAC unit would be located behind the drying/processing building, the detached garage, and several proposed landscape tree plantings and fencelines. For these reasons, noise associated with the HVAC unit at the residential property line to the southeast and southwest is expected to be less than 41 dBA when the sound wall is incorporated. With implementation of Mitigation Measure NOISE-1, the operational noise impact would be reduced to a less than significant level.

Neither the General Plan, nor the County Code establishes any noise thresholds or standards for temporary construction activities; therefore, construction-related noise would not exceed standards. However, see 12.d. below for a discussion of temporary construction noise which is not

governed by County standards.

Significance Level: Less than Significant Impact with Mitigation Incorporated

Mitigation:

Mitigation Measure NOISE-1 HVAC Unit Sound Wall: A wall for sound attenuation shall be constructed on three sides of the cultivation HVAC unit. The wall shall be constructed of ½ inch thick (at a minimum) plywood and studs; the top of the wall shall extend to a minimum of two feet above the top of the HVAC unit. Solid walls of brick, masonry, or other robust materials are also allowable instead of lumber as long as they attenuate sound to an equal or greater degree.

Mitigation Monitoring:

Mitigation Monitoring NOISE-1 HVAC Unit Sound Wall: Permit Sonoma staff shall verify that the sound wall is in place prior to Certificate of Occupancy or operation of the use. Verification shall include photographic documentation and/or a site visit, at the discretion of Permit Sonoma staff.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Comment:

The project would include construction activities that may generate minor ground borne vibration and noise from conventional construction equipment, but no intensive vibratory noise would occur, such as pile-driving or jackhammering. All construction noise would be short-term, temporary, and limited to daytime hours. There are no other activities or uses associated with the project that would expose persons to or generate excessive ground borne vibration or ground borne noise levels.

Significance Level: Less than Significant Impact

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Comment:

As discussed in 12.a. above, the only permanent operational noise source would be the commercial HVAC unit associated with the greenhouse/indoor climate control system. The calculated noise level of the unit with sound wall at the nearest property line would be less than 47 decibels, while the calculated noise level at the property line of the nearest residential receptor would be less than 41 decibels. Normal conversation is typically measured between 50 - 60 decibels. The low level of operational noise generated by the project would not be expected to result in a substantial permanent increase in the ambient noise level, and therefore, would be a less than significant impact.

Significance Level: Less than Significant Impact

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Comment:

The project would result in a temporary noise increase during construction, mostly related to engine noise and back-up beepers associated with operation of construction equipment and transport of construction materials. This impact would cease when construction of the project is completed.

Mitigation Measure NOISE-1 would reduce the noise impact from construction activities and hauling to less than significant.

Significance Level: Less than Significant with Mitigation Incorporated

Mitigation:**Mitigation Measure NOISE-2 Construction Operation:**

All plans and specifications or construction plans shall include the following notes:

- a) A Construction Coordinator shall be designated by the project applicant, and a sign shall be posted on the site stating the allowable hours of construction, and including the Coordinator's 24-hour phone number for public contact regarding noise issues. The Coordinator shall investigate all complaints to determine the cause (such as starting too early, faulty muffler, etc.), and shall take prompt action to correct any problem. The Coordinator shall report all complaints and their resolutions to Permit Sonoma staff.
- b) All internal combustion engines used during construction shall be operated with mufflers that meet the requirements of the State Resources Code, and, where applicable, the Vehicle Code. Equipment shall be properly maintained and turned off when not in use.
- c) Except for actions taken to prevent an emergency or to deal with an existing emergency, all construction activities (including equipment start-up, operation, servicing, and deliveries) shall be restricted to the hours of 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 7:00 p.m. on Saturdays. No construction shall occur on Sundays or holidays. If work outside the times specified above becomes necessary, the applicant shall notify the Permit Sonoma staff as soon as practical.
- d) Construction maintenance, storage and staging areas for construction equipment shall avoid proximity to residential areas to the maximum extent practicable. Stationary construction equipment, such as compressors, mixers, etc., shall be placed away from residential areas and/or provided with acoustical shielding. Quiet construction equipment shall be used when possible.

Mitigation Monitoring:

Mitigation Monitoring NOISE-2 Construction Operation: Permit Sonoma staff shall verify that the NOISE-2 measures are included on all site alteration, grading, building or improvement plans prior to issuance of grading or building permits. The applicant shall submit documentation to Permit Sonoma staff that a Construction Coordinator has been designated and that appropriate signage has been posted including the Coordinator's phone number. Documentation may include photographic evidence or a site inspection, at the discretion of Permit Sonoma staff.

Any noise complaints not immediately resolved by the Coordinator shall be investigated by Permit Sonoma staff. If violations are found, a noise consultant may be required at the applicant's expense to evaluate the problem and recommend corrective actions. Continuing or unresolved noise violations may result in an enforcement action and/or revocation or modification proceedings, as appropriate.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Comment:

The site is not within an Airport Referral Area as designated by the Sonoma County Comprehensive Airport Land Use Plan. The closest public use airport-Petaluma Municipal Airport- is greater than 7 miles to the east.

Significance Level: No Impact

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Comment:

There are no known private airstrips within the vicinity of the proposed project.

Significance Level: No Impact

13. POPULATION AND HOUSING:

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Comment:

The proposed project does not propose new housing, nor would it generate significant new demand for housing in the area (a maximum of 10 full time employees is proposed). This small increase in employment opportunities is not anticipated to result in an indirect increase in population as it is anticipated that employees would be existing residents of the Bay Area. No new infrastructure is proposed. Therefore, the project would not induce substantial population growth.

Significance Level: Less than Significant Impact

b) Displace substantial numbers of existing housing necessitating the construction of replacement housing elsewhere?

Comment:

No housing would be displaced by the project and no replacement housing would be required. The existing primary residence would remain to house the on-site manager. The granny unit would be converted to an employee break room/restroom; however, its conversion would not be considered a substantial loss of housing.

Significance Level: Less than Significant Impact

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Comment:

The tenant currently renting the primary residence on the project site would be required to relocate. The granny unit is not currently being used as a residence. It is not anticipated that displacement of the current tenant would necessitate construction of replacement housing.

Significance Level: Less than Significant Impact

14. PUBLIC SERVICES:

Would the project:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Comment:

Construction of the project would not involve substantial adverse physical impacts associated with provision of public facilities or services. The proposed project does not propose new housing, nor would it generate significant new demand for housing in the area (a maximum of 10 full time employees is proposed). This small increase in employment opportunities is not anticipated to result in an indirect increase in population requiring construction of new or altered government facilities. Therefore, the project would not necessitate or facilitate construction of new public facilities.

Significance Level: No Impact

i. Fire protection?

Comment:

The proposed project is within the service area of the Two Rock Volunteer Fire Protection District. The Two Rock District would continue to serve this area; existing fire protection facilities are anticipated to be adequate. Sonoma County Code requires that all new development meet Fire Safe Standards (Chapter 13). The County Fire Marshal reviewed the project referral and provided conditions of approval to comply with Fire Safe Standards, including fire protection methods such as sprinklers in buildings, alarm systems, extinguishers, vegetation management, hazardous materials management and management of flammable or combustible liquids and gases. None of the conditions required construction of new or expanded fire protection facilities. Therefore, the project would not necessitate or facilitate construction of new fire protection facilities in order to maintain acceptable service ratios or response times.

Significance Level: Less than Significant Impact

ii. Police?

Comment:

The Sonoma County Sheriff would continue to serve this area; existing sheriff protection facilities are anticipated to be adequate. The proposed project does not propose new housing. The maximum of 10 new job opportunities would not be anticipated to result in a substantial number of new residents moving to the area and requiring police protection. Therefore, the project would not necessitate or facilitate construction of new police protection facilities resulting in environmental impacts in order to maintain acceptable service ratios or response times.

Significance Level: Less than Significant Impact

iii. Schools?

Comment:

Development fees to offset potential impacts to public services, including school fees, are required by Sonoma County Code and state law for new subdivisions and residential developments. The project does not involve residential development, and the maximum of 10 new job opportunities would not be anticipated to result in a substantial number of new residents moving to the area and requiring additional school facilities. Therefore, the project would not necessitate or facilitate construction of new schools resulting in environmental impacts in order to maintain acceptable service ratios or response times.

Significance Level: Less than Significant Impact

iv. Parks?

Comment:

Development fees to offset potential impacts to public services, including parks fees, are required by Sonoma County Code and state law for new subdivisions and residential developments. The project does not involve residential development, and the maximum of 10 new job opportunities would not be anticipated to result in a substantial number of new residents moving to the area and requiring additional park facilities. Therefore, the project would not necessitate or facilitate construction of new parks resulting in environmental impacts in order to maintain acceptable service ratios or response times.

Significance Level: Less than Significant Impact

v. Other public facilities?

Comment:

The project would not be served by public sewer or water facilities. No other public facilities are anticipated to be required as a result of the project.

Significance Level: No Impact

15. RECREATION:

Would the project:

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Comment:

The proposed project does not propose new housing, nor would it generate significant new demand for housing in the area (a maximum of 10 full time employees is proposed). Therefore, the project would not cause or accelerate substantial physical deterioration of parks or recreational facilities, and would have no impact on the use of existing neighborhood and regional parks or other recreational facilities.

Significance Level: No Impact

- b) **Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

Comment:

The proposed project does not include or require construction of recreational facilities. See item 15.a. above.

Significance Level: No Impact

16. TRANSPORTATION / TRAFFIC:

Would the project:

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Comment:

The cannabis operation would employ up to 10 full-time positions, including two 24-hour security staff working opposite shifts, an on-site manager, and up to 7 total cultivation, processing, and harvest staff. A Trip Generation Analysis completed for the project (W-Trans, January 22, 2019) determined the project would be expected to generate an average of 31 trips per day, including 5 each during the morning and evening peak hours. The trip generation rate used in the analysis (3.05 for general light industrial land uses) accounts for all trips made to and from the site including trips associated with deliveries, visitors, and all operational activities that might occur based on a workforce of 10 employees. Due to the small number of employees and low number of peak hour trips, no traffic study is required by the County of Sonoma Guidelines for Traffic Impact Studies screening criteria, and no study was requested by the Transportation and Public Works Traffic

Engineer during the project referral.

Access to the site is from Purvine Road, classed as a Local Road, which does not have designated Level of Service standards. There are no existing or planned mass transit improvements cited along Purvine Road. The project is not located on a bikeway or closer than two miles to an existing or proposed bikeway.

Project traffic is expected to have a less than significant impact on the traffic circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Significance Level: Less than Significant Impact

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Comment:

Sonoma County does not have a congestion management program; therefore, the project would not be in conflict with such a program. See Item 16.a. above for a discussion of traffic resulting from project operation.

Significance Level: No Impact

- c) Result in change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

Comment:

The project would have no effect on air traffic patterns.

Significance Level: No Impact

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

Comment:

The project would not increase hazards, since it maintains the existing alignment of the roadway. Driveway geometry would be improved by widening and improving the angle for access. All cultivation activities would occur in the parcel interior; no farm equipment would use the public roadway. Purvine Road is not a pedestrian or bicycle route; therefore, incompatible interactions between construction equipment and bicyclists or pedestrian are not expected to occur. Temporary construction-related impacts would cease upon completion of project construction and would be considered a less than significant impact.

Significance Level: Less than Significant Impact

- e) Result in inadequate emergency access?**

Comment:

Development on the site must comply with all emergency access requirements of the Sonoma County Fire Safety Code (Sonoma County Code Chapter 13), including emergency vehicle access requirements. Project development plans are required to be reviewed by a Department of Fire and Emergency Services Fire Inspector during the building permit process to ensure compliance with emergency access issues. The project proposes construction of a fire truck turnaround, in compliance with Fire Safety Code. Refer also to discussion in item 16.d. above.

Significance Level: Less than Significant Impact

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Comment:

As discussed in section 16.a, the project would not create conflicts with County bicycle standards or plans for use of alternative transportation.

Significance Level: No Impact

g) Result in inadequate parking capacity?

Comment:

Sonoma County Code Section 26-86 does not include specific parking requirements for cannabis cultivation land uses; however, similar uses such as warehousing recommend one space per 2,000 square feet of building floor area. Total building floor area for cultivation and processing is slightly under 20,000 square feet. The project would not be open to the public, and on-site parking would be designated primarily for employees. Up to 10 full time employees are proposed, including two 24-hour security staff working opposite shifts, and the on-site manager. The project proposes 10 on-site parking spaces, including one garage space for the primary residence/on-site manager and four accessible parking spaces compliant with ADA Standards for Accessible Design. One accessible space would be located at each building (greenhouse/indoor cultivation complex, security office, one at each processing building). Given the total building floor area and maximum number of employees, 10 parking spaces would adequately accommodate parking demand.

Significance Level: No Impact

17. UTILITIES AND SERVICE SYSTEMS:

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Comment:

Domestic wastewater disposal would be by septic systems, and therefore, would have no impact on a wastewater treatment system, or require action by the Regional Water Quality Control Board.

Significance Level: No Impact

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Comment:

Domestic wastewater disposal would be provided by on-site septic systems. Potable water would be provided by an existing private well. A rainwater harvesting system and greywater system would also be constructed to supplement irrigation. The project would not contribute to the need for construction of new water or wastewater treatment facilities or expansion of existing facilities.

Significance Level: No Impact

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Comment:

The proposed project would not require or result in construction of new public roads, sidewalks, or storm water drainage facilities. However, on-site construction would result in new impervious surface and generation of stormwater. A rainwater harvesting system would be installed to capture up to 40,000 gallons in tanks from the greenhouse/indoor cultivation building roof. Bioswales would also be constructed to manage stormwater drainage and retain all stormwater on the site. Grading and Stormwater Section staff reviewed the project referral and provided conditions of approval to comply with the County Construction Grading and Drainage Ordinance (Zoning Code Chapter 11) and the Storm Water Quality Ordinance (Zoning Code Chapter 11A). The project would require a grading permit, which would not be issued until all recommended feasible stormwater treatment options have been incorporated in compliance with all applicable standards of the County Code.

Significance Level: Less than Significant Impact

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Comment:

The project is not located in a water scarce area. Potable water would be provided by an existing private well located within a Groundwater Availability Class 2 – Major Natural Recharge Area. The well would be used to fill and store up to 25,000 gallons of water for cultivation irrigation and up to 10,000 gallons for fire suppression.

A rainwater harvesting system would also be installed to capture up to 40,000 gallons from the greenhouse/indoor cultivation building roof. The rainwater would be filtered and used to supplement cultivation irrigation. In addition, up to 1,500 gallons of greywater would be captured from the handwashing sink in the indoor building and from bioswales constructed downslope of the greenhouse/indoor cultivation complex and used only to supplement irrigation of the fence landscaping around the greenhouse/indoor cultivation complex. No new regional water supply entitlements or facilities would be needed. See Section 9.b. above for a discussion of groundwater use and potential impacts.

Significance Level: Less than Significant Impact

- e) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Comment:

The project would utilize existing septic systems and would not require service from any wastewater treatment provider.

Significance Level: No Impact

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Comment:

Sonoma County has a solid waste management program in place that provides solid waste collection and disposal services for the entire County. The program can accommodate the permitted collection and disposal of the solid waste that would result from the proposed project.

However, to further reduce the solid waste disposal footprint, as a condition of approval, the project would be required to comply with the following Zoning Code waste management requirement:

A Waste Management Plan addressing the storing, handling and disposing of all waste by-products of the cultivation and processing activities in compliance with the Best Management Practices issued by the Agricultural Commissioner shall be submitted for review and approval by the agency having jurisdiction. This plan shall characterize the volumes and types of waste generated, and the operational measures that are proposed to manage and dispose, or reuse the wastes in compliance with Best Management Practices and County standards. 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, must be disposed of in accordance with local and state codes, laws and regulations. All waste generated from cannabis operations must be properly stored and secured to prevent access from the public (Sec 26-88-254(g)(8)).

Significance Level: Less than Significant Impact

- g) **Comply with federal, state, and local statutes and regulations related to solid waste?**

Comment:

No applicable federal solid waste regulations would apply to the project. At the State level, the Integrated Waste Management Act mandates a reduction of waste being disposed and establishes an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. Sonoma County has access to adequate permitted landfill capacity and reduction, reuse, and recycling programs to serve the proposed project. Construction and

operational waste generated as a result of the project would require management and disposal in compliance with local and state regulations. The project would not conflict with implementation of such programs.

Significance Level: Less than Significant Impact

18. MANDATORY FINDINGS OF SIGNIFICANCE

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

Comment:

Potential project impacts to special status plant and wildlife species and habitat are addressed in Section 4. Biological Resources. Implementation of the required mitigation measures would reduce these potential impacts to a less than significant level. Potential project impacts to cultural resources are addressed in Section 5. Cultural Resources. Implementation of the required mitigation measures would reduce these potential impacts to a less-than-significant level.

Significance Level: Less than Significant with Mitigation Incorporated

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

Comment:

Section 15355 of the CEQA Guidelines state: *Cumulative impacts refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.* Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. A search was undertaken to identify reasonably foreseeable projects in the vicinity of the proposed project area that might have overlapping or cumulative impacts. Five other applicants have applied for cannabis cultivation projects in the unincorporated western Petaluma area (about a 5-mile radius from the project site), ranging in size from 500 square feet to 1 acre. Two of these are working through the permit program; the other three have incomplete applications which are not currently being processed. No other proposed discretionary projects were identified within the vicinity.

The large average parcel size in the surrounding area reduces potential for cumulative aesthetic impacts related to additional construction or commercial activity that could occur in the area, because such future uses would likely be separated enough to diminish the visual impact of the overall viewshed from any particular location.

The cumulative impact area for the Hydrogeologic study was centered on the project well and includes an approximately 500-acre circular area within a 0.5-mile radius. It includes 22 properties ranging in size from 1 acre to 313 acres with an average size of 52 acres. Seventeen of the

surrounding properties are also in a major groundwater recharge area (Zone 2); the other five properties are partly in areas of low or highly variable water yield (Zone 4). The proposed project's most conservative annual water demand (without subtracting anticipated offsets from rainwater or greywater capture and reuse) increases the current total water demand within the cumulative impact area by only 8.6% and the future total water demand within the cumulative impact area by only 4.8%.

The combined project contributions are not anticipated to rise to a cumulatively considerable level.

Significance Level: Less than Significant Impact

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Comment:

All potential environmental effects of the project were analyzed. Some environmental impacts could have adverse effects on human beings, including air quality/odor, noise, and traffic. However, implementation of the recommended mitigation measures identified in this Expanded Initial Study would reduce these impacts to a less than significant level.

Significance Level: Less than Significant with Mitigation Incorporated

References

1. Sonoma County General Plan 2020 (as amended), September 23, 2008. <http://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/>
2. General Plan Environmental Impact Report, Sonoma County Permit & Resource Management Department.
3. Assessor's Parcel Maps, County of Sonoma
4. Sonoma County Zoning Regulations. Sonoma County Code Chapter 26.
5. Petaluma Dairy Belt Area Plan (as amended). December 17, 1985. <http://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Area-and-Specific-Plans/Area-and-Specific-Plans/>
6. Caltrans, Scenic Highways. <http://www.dot.ca.gov/design/lap/livability/scenic-highways/>
7. *Visual Assessment Guidelines*. Sonoma County Permit and Resources Management Department, January 2019. <http://sonomacounty.ca.gov/PRMD/Regulations/Environmental-Review-Guidelines/Visual-Assessment-Guidelines/>
8. Sonoma County Important Farmland Map 2014. December 2016. California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/son14.pdf>
9. Climate Change Action Resolution. May 8, 2018. <https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Climate-Change-Action-Resolution/>
10. Bay Area Air Quality Management District (BAAQMD). May 2017. *California Environmental Quality Act Air Quality Guidelines*. http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf
11. BAAQMD. April 19, 2017. *Final 2017 Clean Air Plan*. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>
12. BAAQMD. October 24, 2001. *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard*. <https://www.arb.ca.gov/planning/sip/sip.htm>
13. BAAQMD. May 24, 2014. *Bay Area Emissions Inventory Summary Report: Criteria Air Pollutants*. http://www.baaqmd.gov/~media/files/planning-and-research/emission-inventory/by2011_capsummary.pdf
14. BAAQMD. August 1, 2018. *Regulation 6, Rule 6: Prohibition of Trackout*. <http://www.baaqmd.gov/rules-and-compliance/current-rules/regulation-6-rule-6-2018-archive>
15. W-Trans. January 22, 2019. *Trip Generation Analysis for Petaluma Hills Farm*.

16. U.S. Environmental Protection Agency. August 4, 2017. *Method 203B - Opacity Determination for Time-Exception Regulations*. <https://www.epa.gov/emc/method-203b-opacity-determination-time-exception-regulations>
17. Schauburger G. and Piringer M. 2012. *Assessment of Separation Distances to Avoid Odour Annoyance: Interaction Between Odour Impact Criteria and Peak-to-Mean Factors*. Chemical Engineering Transactions VOL. 30, 13-18.
18. United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). March 2007. *Windbreak Plant Species for Odor Management around Poultry Production Facilities*.
19. USDA NRCS. March 2014. *Conservation Buffers in Organic Systems. California Implementation Guide*.
20. California Natural Diversity Database, California Department of Fish & Game. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>
21. Pinecrest Environmental Consulting. June 7, 2017. *Biotic Assessment, Purvine Road APN 022-230-018, Sonoma County, California*.
22. Valley Oak Protection Ordinance. County Code Chapter 26 Zoning Regulations, Article 67.
23. Sonoma County Heritage or Landmark Tree Ordinance. County Code Chapter 26D.
24. Sonoma County Tree Protection Ordinance. County Code Chapter 26 Zoning Regulations, Sec 26-88-010(m).
25. American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices, Pruning (ANSI A300 (Part 1)-2008 Pruning), American National Standard Institute (ANSI) and National Arborist Association (NAA), 2008; Best Management Practices: Tree Pruning, International Society of Arboriculture (ISA), 2008.
26. Evans & De Shazo. September 29, 2017. *Results of a Cultural Resource Study of the Property at 334 Purvine Road, Petaluma (Vicinity) Sonoma County, California. APN 022-230-020*.
27. Evans & De Shazo. September 29, 2017. *A Historic Resource Evaluation of the Property Located at 334 Purvine Road, Petaluma (Vicinity) Sonoma County, California*.
28. Alquist-Priolo Special Studies Zones/California Earthquake Hazards Zone Online Application; State of California. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>
29. Special Report 120, California Division of Mines and Geology; 1980. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_120/SR_120_Text.pdf
30. Soil Survey of Sonoma County, California, Sonoma County, U.S. Department of Agriculture; 1972.
31. Sonoma County Construction Grading and Drainage Ordinance. County Code Chapter 11.

32. Storm Water Quality Ordinance. County Code Chapter 11A.
33. Cortese List:
California Environmental Protection Agency - <https://calepa.ca.gov/SiteCleanup/CorteseList/>; State Water Resources Control Board - <https://geotracker.waterboards.ca.gov/>; California Department of Toxic Substances Control - https://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm; and CalRecycle Solid Waste Information System (SWIS) - <https://www2.calrecycle.ca.gov/swfacilities/Directory>
34. Construction Stormwater Program. Construction General Permit Order 2009-0009-DWQ. https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html
35. Cannabis Cultivation Waste Discharge Regulatory Program.
https://www.waterboards.ca.gov/northcoast/water_issues/programs/cannabis/
36. Evaluation of Groundwater Resources, California Department of Water Resources Bulletin 118; Update 2003; Interim Update 2016. <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118>
37. Hurvitz Environmental Services. May 1, 2018. *Hydrogeologic Assessment Report. 334 Purvine Road, Petaluma, CA 94952; APN 022-230-020.*
38. Flood Insurance Rate Maps, Federal Emergency Management Agency. <https://msc.fema.gov/portal/search>
39. *Petaluma Valley Groundwater Basin Map*. Petaluma Valley Groundwater Sustainability Agency. <http://petalumavalleygroundwater.org/>
40. Sonoma County Aggregate Resources Management Plan and Program EIR. 1994. http://www.sonoma-county.org/prmd/docs/misc/arm_plan.pdf
41. *Guidelines for the Preparation of Noise Analysis*. Permit Sonoma, County of Sonoma. February 2019. <http://sonomacounty.ca.gov/PRMD/Regulations/Environmental-Review-Guidelines/>
42. Sonoma County Fire Safety Ordinance. County Code Chapter 13.
43. Sonoma County Bicycle and Pedestrian Plan, Sonoma County Permit and Resource Management Department, August 24, 2010. <https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Bicycle-and-Pedestrian-Plan/>
44. *Guidelines for Traffic Impact Studies*. Department of Transportation and Public Works and Permit and Resource Management Department, County of Sonoma. May 2016. <http://sonomacounty.ca.gov/TPW/Roads/Services/Traffic-Engineering/#traffic-study>
45. UPC17-0020 Permit Application Materials on file at the Sonoma County Permit and Resource Management Department (PRMD). Application materials are made available upon request.