



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: July 1, 2025
Public Review Period: July 1, 2025-July 30, 2025
State Clearinghouse Number:
Permit Sonoma File Number: **UPE21-0042**
Prepared by: Jen Chard
Phone: (707) 565-2336

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

Project Name: Medlock Ames Winery and Tasting Room

Project Applicant/Operator: MA Properties LLC

Project Location/Address: 13414 Chalk Hill Road, Healdsburg

APN: 132-120-017 and 132-120-018

General Plan Land Use Designation: Land Intensive Agriculture, 40 acre density

Zoning Designation: Land Intensive Agriculture (LIA), 40 acre density (B6 40), Accessory Dwelling Unit Exclusion (Z) with combining districts for Oak Woodland (OAK), Riparian Corridor 100 ft setback (RC 100/50) and Valley Oak Habitat (VOH)

Decision Making Body: Board of Zoning Adjustments (BZA). Action by BZA is appealable within 10 calendar days.

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	
Energy	ENERGY		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	TRANS		X
Tribal Cultural Resources	TCR	X	
Utilities and Service Systems	UTL		X
Wildfire	FIRE		X
Mandatory Findings of Significance	MFS		X

RESPONSIBLE AND TRUSTEE AGENCIES

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

Agency	Activity	Authorization
Northern Sonoma County Air Pollution Control District (NSCAPCD)	Stationary air emissions	Emissions thresholds from BAAQMD Rules and Regulations (Regulation 2, Rule 1 – General Requirements; Regulation 2, Rule 2 – New Source Review; Regulation 9 – Rule 8 – NOx and CO from Stationary Internal Combustion Engines; and other BAAQMD administered Statewide Air Toxics Control Measures (ATCM) for stationary diesel engines
U. S. Army Corps of Engineers	Permits for activities that involve any discharge of dredged or fill material into	Clean Water Act, Section 401

	“waters of the United States,” including wetlands	
North Coast Regional Water Quality Control Board (NCRWQCB)	Discharge or potential discharge to waters of the state Wetland dredge or fill	California Clean Water Act (Porter Cologne) – Waste Discharge requirements, general permit or waiver Clean Water Act, Section 404
State Water Resources Control Board	Generating stormwater (construction, industrial, or municipal)	National Pollutant Discharge Elimination System (NPDES) requires submittal of NOI
California Department of Fish and Wildlife	Incidental take permit for listed plant and animal species; Lake or streambed alteration	California Endangered Species Act (CESA), Section 2081 of the Fish and Game Code; Section 1600 of the Fish and Game Code
U. S. Fish and Wildlife Service (FWS) and or National Marine Fisheries Service (NMFS)	Incidental take permit for listed plant and animal species	Endangered Species Act
Sonoma County Public Infrastructure	Traffic and road improvements	Sonoma County Municipal Code, Chapter 15
Sonoma County Environmental Health	Retail Food Facility Permit	Sonoma County Municipal Code, Chapter 14

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 measure into the project plans.

Jen Chard

Prepared by: Jen Chard

July 1, 2025



Expanded Initial Study

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I. INTRODUCTION:

Medlock Ames Vintners and MA Properties, LLC propose a modification to a Use Permit for Medlock Ames Winery (UPE01-0182) to increase production to 30,000 cases annually, and to incorporate tasting and vineyard tours by appointment, retail sales, and 12 annual agricultural promotional events with a maximum of 50 guests per event on a 48.37 acre parcel and 139.90 acre parcel. Existing facilities will be utilized for the proposed winery activities, which will involve conversion of 1,600 sf of space within the 20,000 sf existing winery building, and conversion of a 1,350 sf barn into a tasting room with a commercial kitchen, office space, and support space. Tasting would occur within the winery building, tasting room barn, and outdoor courtyard by appointment only with a maximum of 60 persons per day between 11:00 am and 5:00 pm, Monday through Sunday. Agricultural promotional events would be scheduled any day of the week, between 11:00 am and 9:30 pm. 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 the Initial Study required by the California Environmental Quality Act (CEQA). The report was prepared by Jen Chard, Project Review Planner with the Sonoma County Permit and Resource Management Department, Project Review Division. Information on the project was provided by Medlock Ames Vintners. Technical studies were provided by qualified consultants to support the conclusions in this Expanded Initial Study. Technical studies, other reports, documents, and maps referred to in this document are available for review through the Project Planner, or Permit Sonoma Records Section.

Please contact Jen Chard, Planner, at (707) 565-2336, for more information.

II. EXISTING FACILITY

The subject site is located 3 miles northeast of the Town of Windsor and 4.75 miles southeast of the City of Healdsburg in unincorporated Sonoma County (Figure 1).

The proposed project will utilize an existing winery located on Toby Lane approximately 1 mile east of the Chalk Hill Road. The site includes six existing structures, including a 20,000+/- sq ft winery production building, a 1,350+/- sq ft barn, three agricultural storage buildings and a single family dwelling. These structures are currently used to conduct the approved winery operations and support and store vineyard maintenance and harvesting equipment. Additionally, the site contains three existing wells and an existing septic system for domestic and the existing winery wastewater disposal. The property is currently planted with 61.59 acres of vineyards and approx. 3 acres of olive trees. There is a riparian corridor that runs along the western property line and several mature trees including Valley Oak trees and Oak Woodland. Access to the site is currently provided by a driveway off of Toby Lane.

Figure 1: Vicinity Map

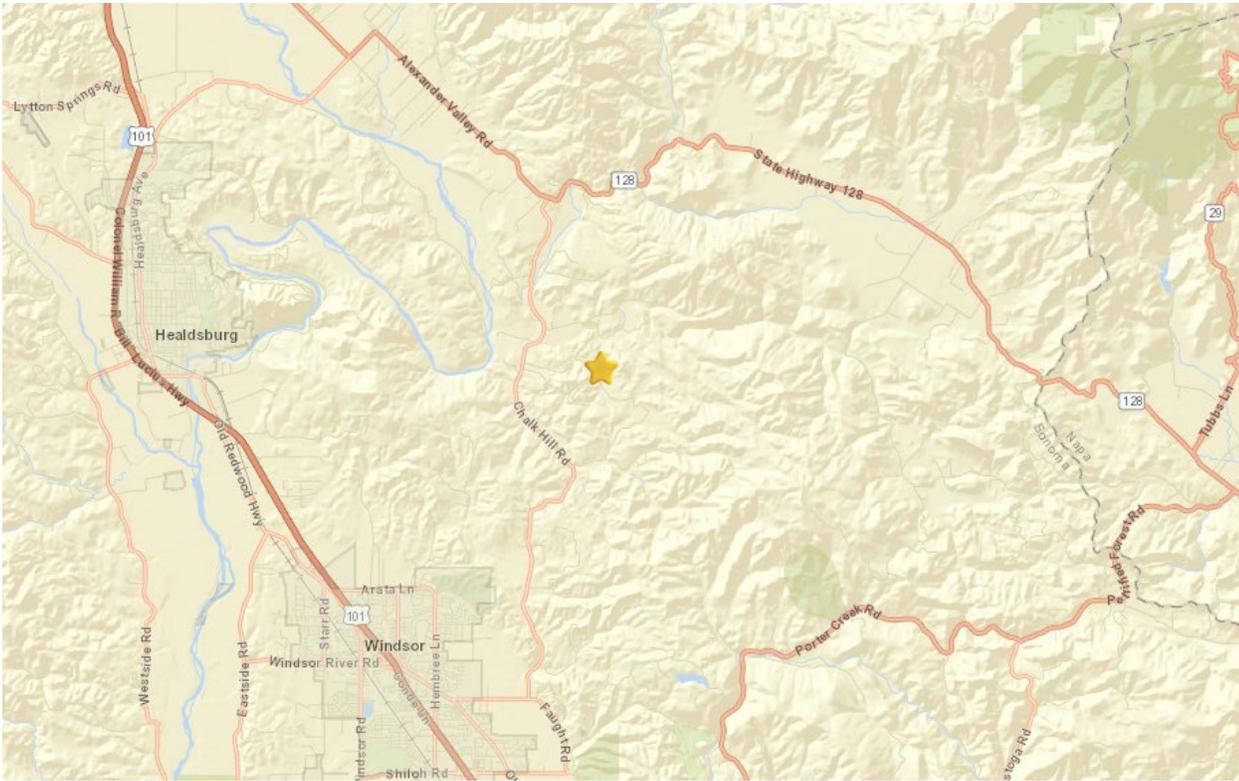
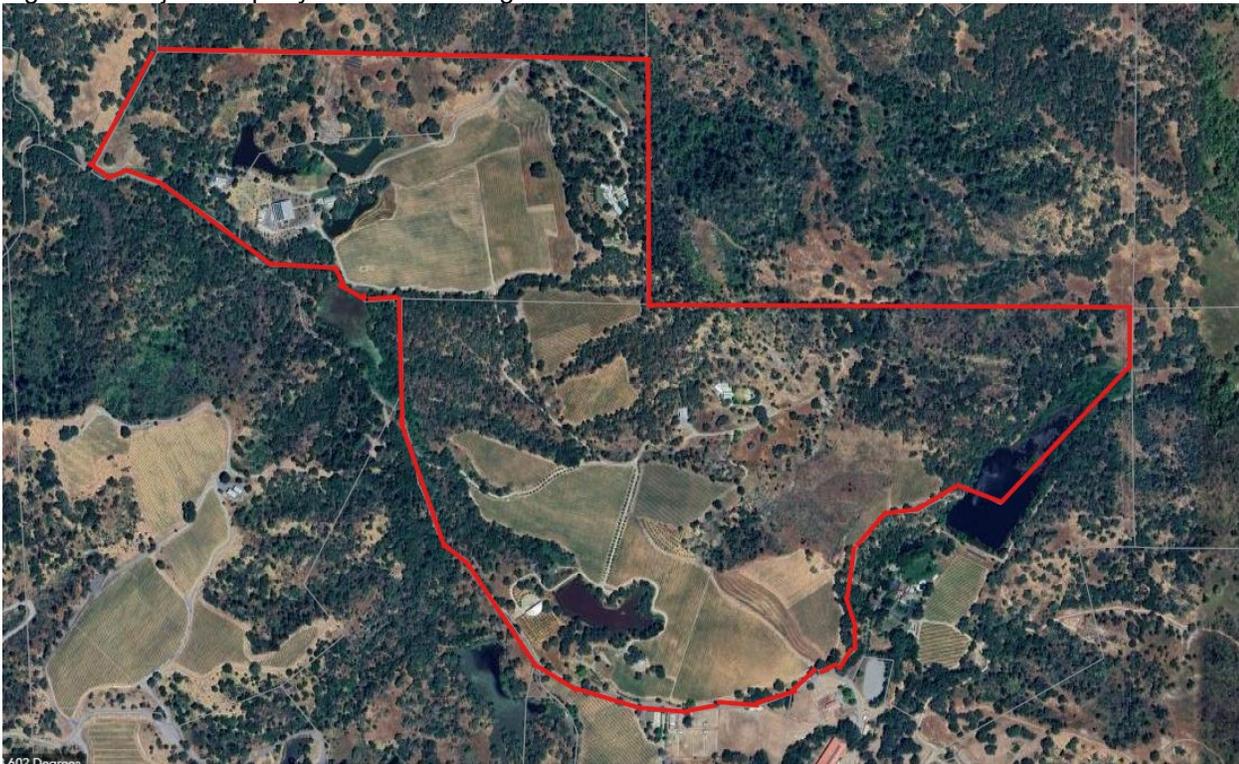


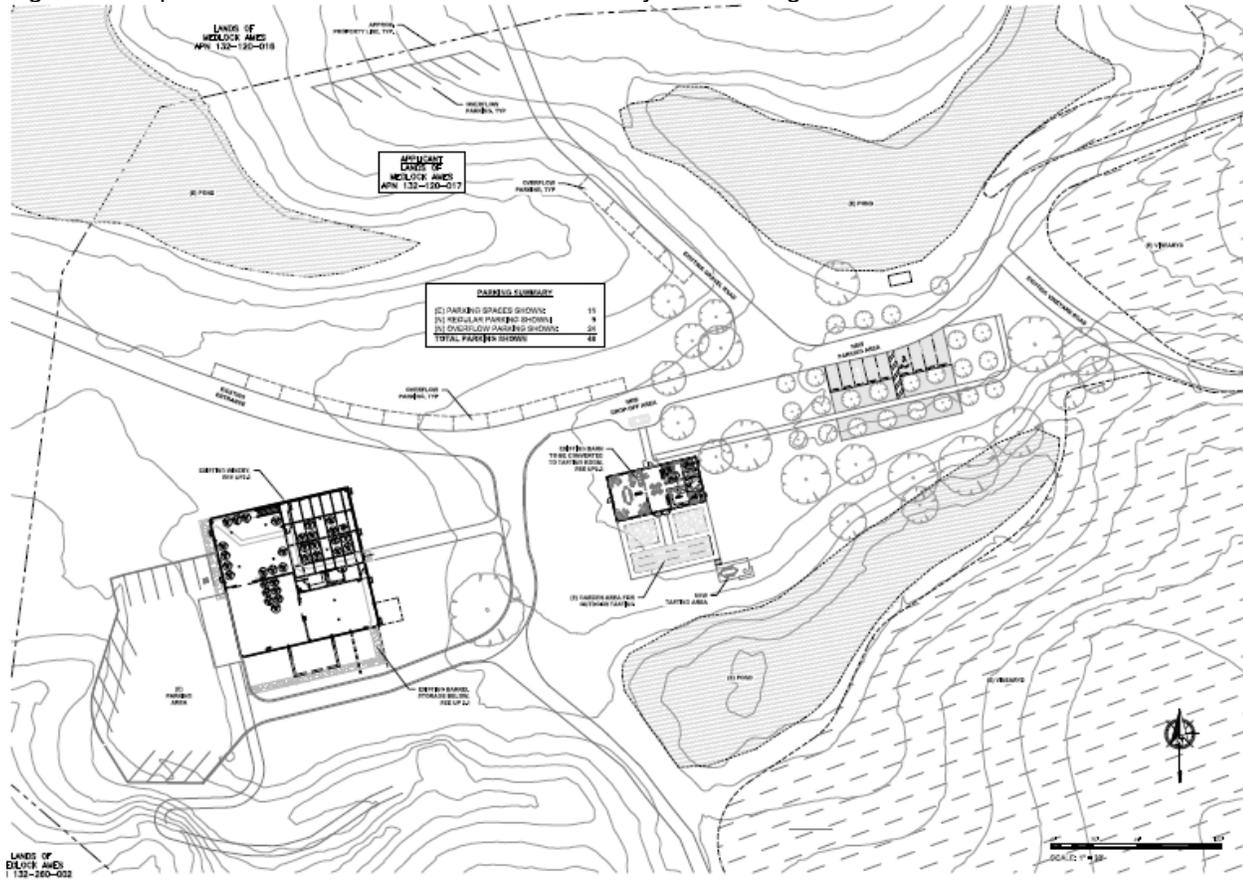
Figure 2: Subject Property and Surrounding Areas



III. PROJECT DESCRIPTION

The project is a request for: a Use Permit Modification to an existing approved winery (Medlock Ames Winery UPE01-0182) including an increase in production from 20,000 annual cases to 30,000 annual cases and to incorporate tasting and vineyard tours by appointment, retail sales, and 12 annual agricultural promotional events with a maximum of 50 guests per event on a 48.37 acre parcel and 139.90 acre parcel.

Figure 3: Proposed Site Plan for Medlock Ames Winery and Tasting



Use Permit Modification for Medlock Ames Winery and Tasting:

The Medlock Ames Winery and Tasting proposes existing facilities be utilized for the proposed winery activities, which will involve conversion of 1,600 sf of space within the 20,000 sf existing winery building, and conversion of a 1,350 sq ft barn into a tasting room. The conversion of the existing three story winery building will be 1,600 sq ft of the 3,200 sq ft mezzanine level to production and administration offices (Figure 4). The conversion of the 1,350 sq ft barn to a tasting room will include 750 sq ft tasting room, 242 sq ft commercial kitchen, 156 sq ft office space and restrooms, mechanical and storage (Figure 5). Tasting would occur within the winery building, tasting room barn, and outdoor courtyard by appointment only with a maximum of 60 persons per day.

Figure 4: Proposed Floor Plan for the Mezzanine Level Conversion

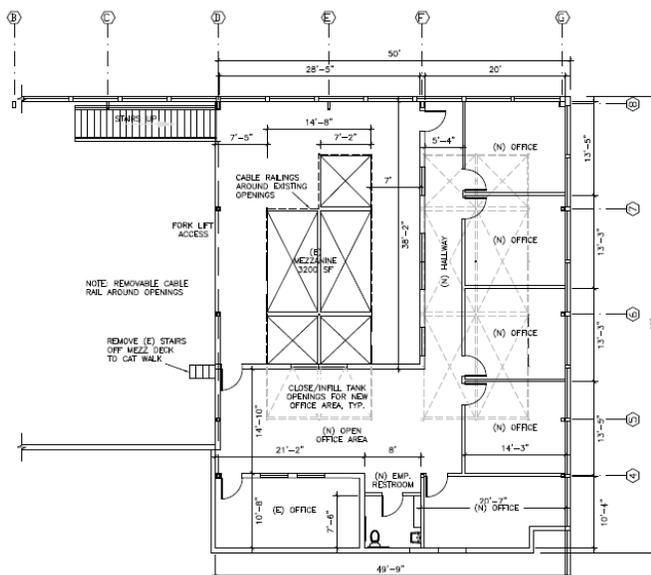
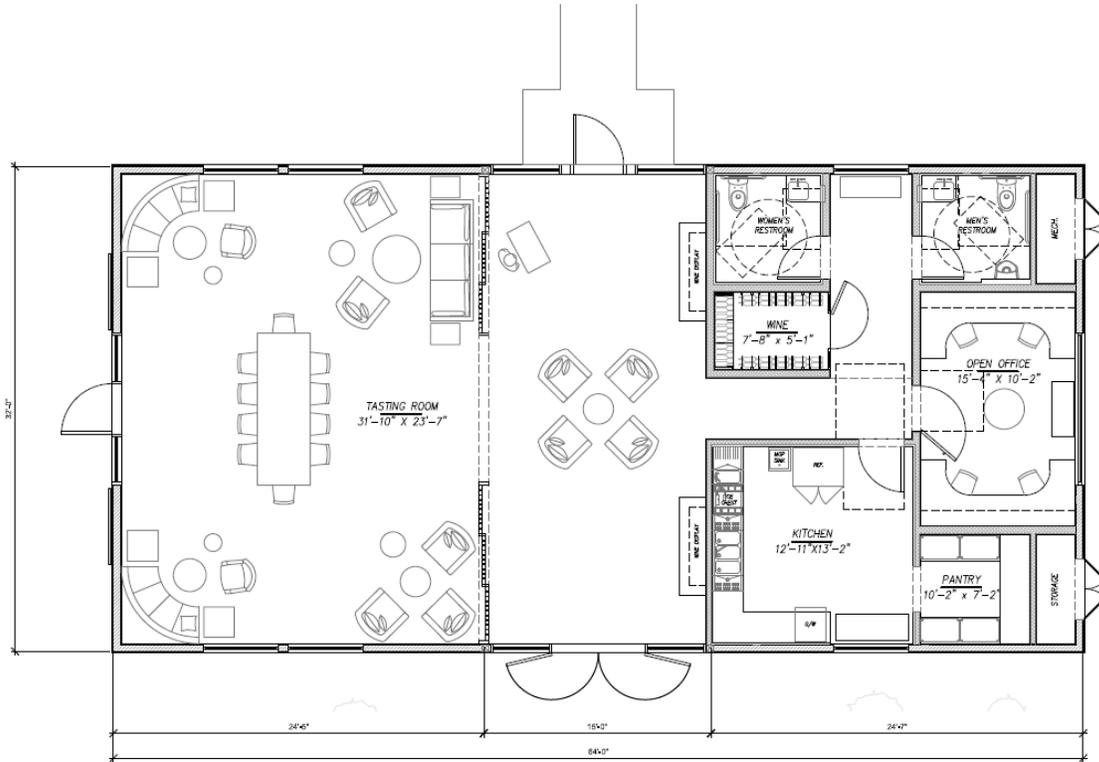


Figure 5: Proposed Tasting Room Floor Plan for the Barn Conversion



Proposed Hours of Operation:

- Winery operation hours - 7:00 am to 6:00 pm, 7 days a week
- Winery Harvest Season hours - 7:00 am to 10:00 pm, 7 days a week
- Tasting Room Appointments- 11:00 am to 5:00 pm, 7 days a week
- Event hours - 11:00 am to 9:30 pm; cleanup by 10:00 pm
- Tours of the vineyards held during normal tasting room appointments only.

Proposed Winery Events:

Number of Events	Maximum Attendees	Time of Week	Time of Day	Amplified Music
12	50	Weekday or Weekend	Daytime or Evening	Yes

Proposed Food Service:

- Food and Wine Pairings (no meals) may be provided during permitted tasting hours as part of normal business activities. Food and wine pairing will be pre-prepared samples or tastes produced from food products from the local area. Food will be from a pre-fixed pairing menu and only during tasting room hours. There is no restaurant or deli service provided.

Proposed Employees:

- Tasting room, Winery, and Events: 10 full-time employees during normal operations
- Tasting room and Winery during harvest: 15 full-time employees

Access and Parking:

Vehicular and emergency access to the winery site is established with an existing driveway off of Toby Lane. Existing parking for the winery includes 15 parking spaces and an additional 9 parking spaces are proposed for the daily tasting room operations. An additional 24 parking spaces to accommodate special events would be accommodated by overflow parking between vineyard rows and along driveways. Shuttling is not anticipated to be used to support events. Parking attendants would be used to direct onsite traffic on event days. Enforcement of on-street parking restrictions are a condition of approval for the project.

Water, Wastewater, and Waste Disposal:

The water supply for the winery production and irrigation for the vineyards will be met via existing on-site groundwater wells on the property. An existing on site groundwater well will provide the potable water demands for the tasting room.

Wastewater disposal will be obtained through county approved septic systems. Existing septic systems and leach fields will be modified to serve the proposed expansions of use. The proposed septic system for the tasting room will be required to meet the needs of the largest event peak sanitary waste of 380 gallons per day. The proposed septic system for the winery production facility will be required to meet the need of peak harvest sanitary waste of 1,800 gallons per day.

All solid waste disposal will meet county requirements and conditions of approval for the project will enforce requirements.

Energy:

The project will meet the most current requirements for renewable energy use under the California Energy Code (Title 24, Part 6). The project proposes use of solar and no natural gas or propane.

Construction:

Construction will occur within two years after project approval. Before commencement of construction activities, the project applicant would be required to obtain construction permit approvals, including grading and building permits. Next, site work including rough grading and infrastructure (utilities and roadways) would be completed. Finally, construction of buildings would be completed and landscaping. Grading activities are anticipated to generally be balanced on the site.

IV. SETTING

The subject site is located 3 miles northeast of the Town of Windsor and 4.75 miles southeast of the City of Healdsburg in unincorporated Sonoma County. Most the surrounding parcels have similar development build outs, single family dwelling units, accessory structures, agricultural structures vineyards and wineries.). All adjacent parcels share the same Land Intensive Agriculture (LIA) Land Use designation and LIA base zoning district.

V. ISSUES RAISED BY THE PUBLIC OR AGENCIES

On June 25, 2021, Permit Sonoma circulated a referral packet to inform and solicit comments from selected relevant local, state and federal agencies, local Tribes, neighbors within 300 feet of the project site; and to special interest groups that were anticipated to take interest in the revised project. Comments were received from:

- Permit Sonoma Building Division
- Permit Sonoma Fire Prevention
- Permit Sonoma Natural Resources Division
- Permit Sonoma Grading and Stormwater Division
- Sonoma Public Infrastructure formerly Department of Transportation of Public

- Works
- Sonoma County Health
 - State Water Resources Control Board Division of Drinking Water – Sonoma District

Referral agency comments included recommended mitigated measures and standard conditions of approval for the project.

Assembly Bill 52 Project Notifications were sent to the Cloverdale Rancheria of Pomo Indians, Dry Creek Rancheria Band of Pomo Indians, Torres Martinez Desert Cahuilla Indians, Mishewal Wappo Tribe of Alexander Valley, Middletown Rancheria Band of Pomo Indians, Lytton Rancheria of California, Kashia Pomo Stewarts Point Rancheria and Federated Indians of Graton Rancheria. No Tribe requested formal consultation on the proposed project.

Public comment has been received on this project regarding the shared road (Toby Lane) with neighbors. Neighbors are concerned about increased traffic and fair share maintenance of the road.

VI. 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.

Less Than Significant with Mitigation Incorporated: 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 Medlock Ames has 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.

1. AESTHETICS:

Except as provided in Public Resources Code Section 21099, would the project:

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

Comment:

The project is not in an area designated as visually sensitive by the Sonoma County General Plan. It is not located on a scenic hillside, nor would it involve tree removal, construction or grading that would affect a scenic vista. The buildings for the proposed uses are existing and are screened from view from public roads and parks by existing vegetation. The viewshed of the project area as seen from public roads and parks will not substantially change as a result of the project.

Significance Level:

Less than Significant Impact

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

Comment:

The parcel is not located on a site visible from a state scenic highway.

Significance Level:

No Impact

c) In non-urbanized areas substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Comment:

The character of the 48.37 acre parcel and 139.90 acre site and surrounding lands is agricultural and rural development. Using the County's Visual Assessment Guidelines, staff characterized the project site as having moderate visual sensitivity because it is not located in the Scenic Resources Combining District. The project's visual dominance can be categorized as Subordinate because the existing structures are minimally visible from public view. Utilizing the Visual Assessment Guidelines' matrix (Attachment 3), the project's visual impact will be less than significant.

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

Significance Level:

Less than Significant Impact

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

Comment:

The project will change the use of an existing structure on the site and thus introduce new sources of light and glare. The County's standard development regulations under Article 82 of the Zoning Code (Design Review), minimizes the impact of new development by ensuring that exterior lighting is designed to prevent glare, and preclude the trespass of light on to adjoining properties and into the night sky.

The project will require exterior lighting as necessary to comply with the California Building Code. A standard condition of approval requires "All new exterior lighting to be dark sky compliant, low mounted, downward casting and fully shielded to prevent glare. Lighting shall not wash out structures or any portions of the site. Light fixtures shall not be located at the periphery of the property and shall not spill over onto adjacent properties or into the night sky. Flood lights are not permitted. Lighting shall shut off automatically after closing and security lighting shall be motion sensor activated. Prior to final occupancy of the remodeled structures, the applicant is required to demonstrate compliance with exterior lighting requirements by providing Permit Sonoma photograph documentation of all exterior light fixtures installed". By incorporating standard conditions of approval, the project will not result in a new source of substantial light or glare with would adversely affect day or nighttime view in the 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. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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 site currently contains approximately 61.59 acres of vineyards and approx. 3 acres of olive trees. According to the Sonoma County Important Farmlands Map, the project site is designated as Farmland of Statewide Importance, Unique Farmland and Grazing Land. There are currently approximately 67 acres of important farmland on the site. The project proposes an expansion to the existing winery but does not propose any new structures and therefore no conversion of the Prime or Statewide importance land will take place. The project involves a winery and tasting room and is consistent with the permitted uses of the General Plan and Zoning Code, provided that a Use Permit is obtained. The primary use of the site would remain in agricultural production with related agricultural processing and agricultural promotional visitor serving uses. All existing vineyards will remain intact, and no designated farmland will be converted to non-agricultural use. Therefore, the project would not convert a significant amount of important farmland to non-agricultural use and therefore potential impacts are less than significant.

Significance Level:

Less than Significant Impact

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

Comment:

The project site is zoned LIA (Land Intensive Agriculture) which allows Agricultural Processing, Tasting Rooms and Winery Events with a Conditional Use Permit and is subject to a Williamson Act contract.

Applicable Zoning Requirements:

Section 26-18-030 Ag Processing:

LIA, LEA, DA, AR zones: the use must be sized to accommodate, but not exceed, the needs of the on-site growing or processing operation. (general plan policy AR-5c). The proposed Winery does not propose any storage areas that would exceed the needs of the proposed 30,000 case production.

To approve an Agricultural Processing facility in the LIA, LEA, DA, or AR zone that processes products grown off-site, the review authority must find that the facility will be consistent with general plan policy AR-5g. The proposed Winery will be consistent with this policy with the proposed mitigation measure incorporated and as assessed in the visual assessment of the project.

Section 26-18-210 Tasting Rooms:

Shall not require the extension of sewer and water.

Must be consistent with general plan policy AR 6-d and AR 6-f. (see discussion in Planning and Land Use section)

The project has been determined to be consistent with the Zoning Ordinance as the project proposes a 30,000 case winery that processes grapes grown onsite and from Sonoma County. The proposed wine tasting room and events promote products processed on site and from the local area, is secondary and incidental to the agricultural production activities on site, and are compatible with existing uses in the area. The winery and tasting uses will not be detrimental to the rural character of the area.

Land Conservation Contract:

Williamson Act contract compliance requires the property is at least 10 acres in size for a prime agricultural operation, have 50% of the total parcel dedicated to a qualifying agricultural use, and meet the minimum income requirements. Any use of the land, other than permitted agricultural uses, must be a compatible use allowed under Rule 8.0 of the Uniform Rules.

Contract Compliance Analysis:

Staff find the property will maintain compliance with its Williamson Act contract and the Uniform Rules, as summarized below.

The project parcel subject to the contract is 48.37 acres in size and is subject to a Prime Land Conservation (Williamson) Act contract, recorded under Document No. 1998-013256. Prime agricultural land includes land used for fruit- or nut-bearing trees, vines, bushes, or crops which have a nonbearing period of less than five years and meet the minimum income requirements in Table 4-2 of these uniform rules. The property with adjusted property lines resultant of an approved lot line adjustment will have 24.32 acres of vineyards and 0.89 acres of olive trees and therefore meeting the 50% requirement. As a condition of approval the applicants will be required to record the approved lot line adjustment to ensure the property remains compliant.

Pursuant to Uniform Rule Table 4-2 (Annual Income Requirements), prime contracted land is required to meet \$1,000 gross total income per acre of production. Medlock Ames agricultural operation is projected to provide sufficient income for prime agricultural land, per industry standard the value of wine grapes in Sonoma County is approx. \$9,700 per acre.

The Sonoma County Uniform Rules Rule 8.3 (Compatible Uses – Agricultural Contracted Land). allows for one single family dwelling, agricultural housing, agricultural processing, sale, marketing, and special events (see list below), provided

that all compatible uses on the property collectively occupy no more than 15% of the contracted land as a whole, or 5 acres, whichever is less, excluding public roads, private access roads, and driveways. Note, accessory agricultural uses and structures (including structures used for storage, cleaning, and packaging agricultural commodities, storing equipment; irrigation infrastructure; and fencing, paddocks, etc.) are identified under Rule 7.2B. and are not counted toward the maximum compatible use threshold.

For this property, the 5-acre threshold applies. The existing residential and winery uses combined with the proposed tasting room, parking area, and outdoor landscaped areas, collectively occupy approximately 2.4 acres, which is less than the maximum 5-acre allowed under contract.

Uniform Rule 8.3B "Compatible Uses" (not an exhaustive list):

- A single-family dwelling occupied by the landowner or farm operator.
- Residential accessory uses and structures including private garage, workshop, patios, decks, gazebos, and similar structures.
- Processing of agricultural commodities beyond the natural state, including processing by pressing, pasteurizing, slaughtering, cooking, freezing, dehydrating, and fermenting. This use includes facilities for processing and storage of agricultural commodities beyond the natural state such as wineries, dairies, slaughterhouses, and mills.
- Sale and marketing of agricultural commodities in their natural state or beyond, including winery tasting rooms, promotional activities, marketing accommodations, farmer's markets, stands for the sampling and sale of agricultural products, livestock auction or sale yards, and related signage.
- Wells, septic systems, and wastewater treatment ponds necessary for agricultural support uses.
- Special events, when directly related to agricultural education or the promotion or sale of agricultural commodities and products produced on the contracted land, provided that: the events last no longer than two consecutive days and do not provide overnight accommodations; and no permanent structure dedicated to the events is constructed or maintained on the contracted land.

The proposed project does not conflict with the previously established Land Conservation (Williamson) Act contract because the existing winery and proposed tasting and agricultural promotional event uses are listed as compatible uses, under the Sonoma County Uniform Rules for the Land Conservation Act Program, and the property will continue to be maintained in qualifying prime agricultural uses.

Significance Level:

Less than Significant 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 under the TP (Timberland Production) zoning district, therefore the project will not conflict with, or cause the rezoning of, 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 does not result in a loss of forest land or conversion of forest land to non-forest use as the project site does not contain forest land nor any timber resources.

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 does not involve other changes in the environment that could result in conversion of farmland to non-agricultural use or forest land to non-forest use. The project site will remain zoned Land Intensive Agriculture and the existing commercial vineyard will remain on the site.

Significance Level:

No Impact

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 jurisdiction of the Northern Sonoma County Air Pollution Control District (NSCAPCD). The NSCAPCD does not have an adopted air quality plan because it is in attainment for all federal and state criteria pollutants, although the District occasionally exceeds state standards for PM₁₀.

Significance Level:

Less than Significant Impact

b) 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?

Comment:

The project is located in the NSCAPCD jurisdiction, a region that is in attainment for criteria pollutants under applicable state and federal ambient air quality standards, however, PM₁₀ is a criteria pollutant that is closely monitored in the NSCAPCD. Readings in the district have exceeded state standards on several occasions in the last few years. The high PM₁₀ readings occurred in the winter and are attributed to the seasonal use of wood burning stoves. Since the geographic area under the NSCAPCD jurisdiction is in attainment for all criteria air pollutants, meaning there have been no violations of State or Federal air quality standards, no CEQA thresholds of significance have been set for the NSCAPCD. NSCAPCD does, however, suggest the use of the Bay Area Air Quality Management District (BAAQMD) CEQA thresholds and mitigation measures.

The project will have no long-term effect on PM₁₀, because all surfaces will be paved, gravel, landscaped or otherwise treated to stabilize bare soils, and operational dust generation will be insignificant. However, there could be a significant short-term emission of dust (which would include PM_{2.5} and PM₁₀) during construction. These emissions could be significant at the project level, and could also contribute to a cumulative impact. This impact would be reduced to less than significant by including dust control measures as described in mitigation measure below.

Although the project will generate some ozone precursors from project trip generation, an average of 62 daily vehicle trips and an average of 1 daily winery truck trips, the project will not have a significant cumulative effect on ozone because it will not generate substantial traffic resulting in significant new emissions of ozone precursors (ROG and NO_x, See table below). An Air Quality Assessment prepared by James A Reyff of Illingworth & Rodkin, Inc is provided in Attachment 2.

Scenario	ROG	NO _x	PM ₁₀	PM _{2.5}
Typical Project Operational emissions	0.04	0.04	0.03	0.01
Fermentation	0.07	-	-	-
Emissions from Events (12/year) 50 Persons	<0.01	<0.01	<0.01	<0.01
Total	0.11	0.05	<0.01	<0.01
<i>NSCAPCD Thresholds (tons per year)</i>	<i>40 tons</i>	<i>40 tons</i>	<i>15 tons</i>	<i>10 tons</i>
Exceed Threshold?	No	No	No	No

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation Measure AIR-1:

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

- a. 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.
- b. Trucks hauling soil, sand and other loose materials over public roads will cover the loads, or will keep the loads at least two feet below the level of the sides of the container, or will wet the load sufficiently to prevent dust emissions.
- c. Paved roads will be swept as needed to remove soil that has been carried onto them from the project site.

Mitigation Monitoring AIR-1:

Building/grading permits shall not be approved for issuance by Permit Sonoma staff until the above notes are printed on all construction plans including plans for building and grading.

c) Expose sensitive receptors to substantial pollutant concentrations?

Comment:

Sensitive receptors include hospitals, schools, convalescent facilities, and residential areas. The nearest sensitive receptor is a residential area located approximately 1,400 feet away from winery production site.

Although there will be no long term increase in emissions, during construction there could be significant short term dust emissions that would affect nearby residents. Dust emissions can be reduced to less than significant by the mitigation measure described in item 3b above.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation: See Mitigation Measure AIR-1

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)

Comment:

The BAAQMD's CEQA Air Quality Guidelines (2022) identifies land uses associated with odor complaints to include, but are not limited to, wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants.

Construction equipment may generate odors during project construction. The impact would be less than significant as it would be a short-term impact that ceases upon completion of the project.

The existing Winery may generate objectional odors due to the pomace from grape crushing which can create objectionable odors if not handled properly. This is an existing use and the expansion of production should not introduce any new odors to the site. Standard health conditions address the disposal of waste on site.

Significance Level:

Less than Significant Impact

4. BIOLOGICAL RESOURCES:

Regulatory Framework

The following discussion identifies federal, state and local environmental regulations that serve to protect sensitive biological resources relevant to the California Environmental Quality Act (CEQA) review process.

Federal

Federal Endangered Species Act (FESA)

FESA establishes a broad public and federal interest in identifying, protecting, and providing for the recovery of threatened or endangered species. The Secretary of Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their critical habitat, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on listed species. The USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) are charged with implementing and enforcing the FESA. USFWS has authority over terrestrial and continental aquatic species, and NOAA Fisheries has authority over species that spend all or part of their life cycle at sea, such as salmonids.

Section 9 of FESA prohibits the unlawful "take" of any listed fish or wildlife species. Take, as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such action." USFWS's regulations define harm to mean "an act which actually kills or injures wildlife." Such an act "may include "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR § 17.3). Take can be permitted under FESA pursuant to sections 7 and 10. Section 7 provides a process for take permits for federal projects or projects subject to a federal permit, and Section 10 provides a process for incidental take permits for projects without a federal nexus. FESA does not extend the take prohibition to federally listed plants on private land, other than prohibiting the removal, damage, or destruction of such species in violation of state law.

The Migratory Bird Treaty Act of 1918 (MBTA)

The U.S. MBTA (16 USC §§ 703 et seq., Title 50 Code of Federal Regulations [CFR] Part 10) states it is “unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill; attempt to take, capture or kill; possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or in part, of any such bird or any part, nest or egg thereof...” In short, under MBTA it is illegal to disturb a nest that is in active use, since this could result in killing a bird, destroying a nest, or destroying an egg. The USFWS enforces MBTA. The MBTA does not protect some birds that are non-native or human-introduced or that belong to families that are not covered by any of the conventions implemented by MBTA. In 2017, the USFWS issued a memorandum stating that the MBTA does not prohibit incidental take; therefore, the MBTA is currently limited to purposeful actions, such as directly and knowingly removing a nest to construct a project, hunting, and poaching.

The Clean Water Act (CWA)

The CWA is the primary federal law regulating water quality. The implementation of the CWA is the responsibility of the U.S. Environmental Protection Agency (EPA). However, the EPA depends on other agencies, such as the individual states and the U.S. Army Corps of Engineers (USACE), to assist in implementing the CWA. The objective of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Section 404 and 401 of the CWA apply to activities that would impact waters of the U.S. The USACE enforces Section 404 of the CWA and the California State Water Resources Control Board enforces Section 401.

Section 404.

As part of its mandate under Section 404 of the CWA, the EPA regulates the discharge of dredged or fill material into “waters of the U.S.”. “Waters of the U.S.: include territorial seas, tidal waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high-water marks. Wetlands are defined as those areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3(b)). The discharge of dredged or fill material into waters of the U.S. is prohibited under the CWA except when it is in compliance with Section 404 of the CWA. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch. The EPA has veto authority over the USACE’s administration of the Section 404 program and may override a USACE decision with respect to permitting. Substantial impacts to waters of the U.S. may require an Individual Permit’s Projects that only minimally affect waters of the U.S. may meet the conditions of one of the existing Nationwide Permits, provided that such permit’s other respective conditions are satisfied. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions (see below).

Section 401.

Any applicant for a federal permit to impact waters of the U.S. under Section 404 of the CWA, including Nationwide Permits where pre-construction notification is required, must also provide to the USACE a certification or waiver from the State of California. The “401 Certification” is provided by the State Water Resources Control Board through the local Regional Water Quality Control Board (RWQCB). The RWQCB issues and enforces permits for discharge of treated water, landfills, storm-water runoff, filling of any surface waters or wetlands, dredging, agricultural activities and wastewater recycling. The RWQCB recommends the “401 Certification” application be made at the same time that any applications are provided to other agencies, such as the USACE, USFWS, or NOAA Fisheries. The application is not final until completion of environmental review under the CEQA. The application to the RWQCB is similar to the pre-construction notification that is required by the USACE. It must include a description of the habitat that is being impacted, a description of how the impact is proposed to be minimized and proposed mitigation measures with goals, schedules, and performance standards. Mitigation must include a

replacement of functions and values, and replacement of wetland at a minimum ratio of 2:1, or twice as many acres of wetlands provided as are removed. The RWQCB looks for mitigation that is on site and in-kind, with functions and values as good as or better than the water-based habitat that is being removed.

State

California Endangered Species Act (CESA)

Provisions of CESA protect state-listed threatened and endangered species. The CDFW is charged with establishing a list of endangered and threatened species. CDFW regulates activities that may result in “take” of individuals (i.e., “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). Habitat degradation or modification is not expressly included in the definition of “take” under the California Fish and Game Code (CFGC), but CDFW has interpreted “take” to include the killing of a member of a species which is the proximate result of habitat modification.

Fish and Game Code 1600-1602

Sections 1600-1607 of the CFGC require that a Notification of Lake or Streambed Alteration Agreement (LSAA) application be submitted to CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW reviews the proposed actions in the application and, if necessary, prepares a LSAA that includes measures to protect affected fish and wildlife resources, including mitigation for impacts to bats and bat habitat.

Nesting Birds

Nesting birds, including raptors, are protected under CFGC Section 3503, which reads, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” In addition, under CFGC Section 3503.5, “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Passerines and non-passerine land birds are further protected under CFGC 3513. As such, CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by CDFW.

Non-Game Mammals

Sections 4150-4155 of the CFGC protects non-game mammals, including bats. Section 4150 states “A mammal occurring naturally in California that is not a game mammal, fully protected mammal, or fur-bearing mammal is a nongame mammal. A non-game mammal may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission”. The non-game mammals that may be taken or possessed are primarily those that cause crop or property damage. Bats are classified as a non-game mammal and are protected under the CFGC.

California Fully Protected Species and Species of Special Concern

The classification of “fully protected” was the CDFW’s initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibians and reptiles at §5050, birds at §3503 and §3511, and mammals at §4150 and §4700) dealing with “fully protected” species state that these species “...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species,” although take may be authorized for necessary scientific research.

This language makes the “fully protected” designation the strongest and most restrictive regarding the “take” of these species. In 2003, the code sections dealing with “fully protected” species were amended to allow the CDFW to authorize take resulting from recovery activities for state-listed species.

California Species of Special Concern (CSC) are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or because they historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under the CEQA during project review.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Water Quality Control Act (Porter-Cologne) is to protect water quality and the beneficial uses of water, and it applies to both surface and ground water. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under Porter-Cologne, referred to as “waters of the State,” include isolated waters that are not regulated by the USACE. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, any person discharging, or proposing to discharge, waste (e.g., dirt) to waters of the State must file a Report of Waste Discharge and receive either waste discharge requirements (WDRs) or a waiver to WDRs before beginning the discharge.

Local

Sonoma County General Plan

The *Sonoma County General Plan 2020* Land Use Element and Open Space & Resource Conservation Element both contain policies to protect natural resource lands including, but not limited to, watershed, fish and wildlife habitat, biotic areas, and habitat connectivity corridors.

Riparian Corridor Ordinance

The RC combining zone is established to protect biotic resource communities, including critical habitat areas within and along riparian corridors, for their habitat and environmental value, and to implement the provisions of the General Plan Open Space and Resource Conservation and Water Resources Elements. These provisions are intended to protect and enhance riparian corridors and functions along designated streams, balancing the need for agricultural production, urban development, timber and mining operations and other land uses with the preservation of riparian vegetation, protection of water resources, floodplain management, wildlife habitat and movement, stream shade, fisheries, water quality, channel stability, groundwater recharge, opportunities for recreation, education and aesthetic appreciation and other riparian functions and values.

Valley Oak Habitat (VOH) Combining District

The VOH combining district is established to protect and enhance valley oaks and valley oak woodlands and to implement the provisions of *Sonoma County General Plan 2020* Resource Conservation Element Section 5.1. Design review approval may be required of projects in the VOH, which would include measures to protect and enhance valley oaks on the project site, such as requiring that valley oaks shall comprise a minimum of fifty percent (50%) of the required landscape trees for the development project.

Sonoma County Tree Protection Ordinance

The Sonoma County Tree Protection Ordinance (Sonoma County Code of Ordinances, Chapter 26, Article 88, Sec. 26-88-010 [m]) establishes policies for protected tree species in Sonoma County. Protected trees are defined (Chapter 26, Article 02, Sec. 26- 02-140) as the following species: big leaf maple (*Acer macrophyllum*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), coast live oak (*Quercus agrifolia*), interior live oak (*Quercus wislizenii*), madrone (*Arbutus menziesii*), oracle oak (*Quercus morehus*), Oregon oak (*Quercus garryana*), redwood (*Sequoia sempervirens*), valley oak (*Quercus lobata*), California bay (*Umbellularia californica*), and their hybrids.

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?**

Comment:

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 (The Service) 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 The Service 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 The Service 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 the 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. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

Essential Fish Habitat

Essential Fish Habitat (EFH) is regulated through the 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 Essential Fish Habitat as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" [16 USC 1802(10)]. NMFS further defines essential fish habitat as areas that "contain habitat essential to the long-term survival and health of our nation's fisheries" Essential Fish Habitat 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).

Staff Analysis:

The portions of the project constructed as of the date of application submittal are considered to be part of the California Environmental Quality Act (CEQA) "baseline" for the project and includes grading and improvements to the existing winery building, barn, adjacent outdoor landscaped areas and parking area.

Given that under current CEQA case law it is clear that the existing portions of the project are included in the CEQA baseline, the County's review of these issues is legally truncated. However, all of these species and habitat issues may require multiple state and federal permit reviews and consultations.

For this reason, the following Condition of Approval is to be included in the Use Permit:

Prior to issuance of any required occupancy approvals, building permits, grading permits, septic system permits, commencement of use permit activities and vesting the use permit, the applicant shall provide the County copies of all required state and federal regulatory permits, or if such permits are not required, written documentation from the respective state or federal agency that no such permit is required, for all of the following: Section 401 certification from the Region 2 San Francisco Water Quality Control Board (SFWQCB) for impacts to wetlands or streams, Section

404 permit from the Army Corps of Engineers (ACOE) for any impacts to wetlands or streams, Lake and Stream Bed Alteration Agreement for any impacts to wetlands, streams, lakes, ponds, or riparian habitats from the California Department of Fish and Wildlife (CDFW), Incidental Take Permit for any impacts to California Endangered Species Act (CESA) species from CDFW, and/or an Endangered Species Act (ESA) consultation, permit and/or habitat conservation plan from the U.S. Fish and Wildlife Service (USFWS) for impacts to any federally listed species.

Significance Level:

Less than Significant Impact

- 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:

All oak woodland vegetation communities are protected under the Sonoma County Oak Woodland Ordinance. Conservation Areas have been established in the Oak Woodland overlay zone to protect oak woodland habitat. Removal of vegetation and trees must comply with Oak Woodland Ordinance policies that govern the identified areas.

The proposed landscape and parking area does not proposed the removal of any trees or vegetation in the identified Oak Woodland areas.

All blueline streams shown on the USGS maps are designated for protection in the Sonoma County General Plan. Streamside Conservation Areas have been established in the riparian corridor overlay zone to protect riparian habitat. Removal of vegetation must comply with General Plan and Riparian Corridor Ordinance policies that govern riparian corridors for a distance of 100 ft. from the top of the highest bank.

The RC Combining Zone includes the applicable stream setback distance for development and as shown in the Table 1, below.

Riparian Corridor Category	RC Development Zoning Setbacks (in feet)
Russian River and some Area Plan streams	RC-200
Designated Flatland	RC-100
Other Flatland	RC-50
Upland	RC-50
Urban Areas	RC-50

The mitigation measures below are designed to ensure project consistency with Sonoma County General Plan policies for designated riparian corridors, including:

Policy OS-5h: Roadway construction should seek to minimize damage to riparian areas.

Policy CT-1k: Where practical, locate and design circulation improvements to minimize disturbance of biological resource areas and destruction of trees.

The proposed new construction for the project is outside the 100 ft Riparian Corridor setback but incidental grading related to site improvements may occur within the setback. Mitigation Measure BIO-1 and Conditions of Approval requiring Best Management Practice during the grading associated

with improvements will reduce the impact to less than significant.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation Measure BIO-1:

No vegetation will be pruned or removed within 100 ft. from the top of the highest bank along the unnamed seasonal swale. Where possible, vegetation will be tied back in lieu of cutting. Native vegetation that must be removed will be cut at or above grade to facilitate re-growth. Any pruning that is done, including for utility line clearance, will conform to the American National Standard for Tree Care Operation Tree, Shrub, and Other Woody Plant Maintenance Standard Practices, Pruning (ANSI A300 Part 1)-2008 Pruning), and the companion publication Best Management Practices: Tree pruning (ISA 2008). Roots will only be unearthed when necessary. Once construction is completed, the disturbed area from the construction shall be replanted to restore herbaceous, shrub and tree riparian vegetation.

Mitigation Monitoring BIO-1:

Building/grading permits shall not be approved for issuance by Permit Sonoma staff until the 100-foot riparian setback is identified on the building, grading, and improvement plans and plans for the restoration of the areas disturbed by the construction of the bridge are submitted to Permit Sonoma for review.

- c) **Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Comment:

Regulatory Framework

The Army Corps of Engineers (Corps) 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 Corps 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.

The proposed remodel of existing structures, landscape and parking area are outside state or

federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.). Conditions of Approval requiring Best Management Practice during the ground disturbance associated with the proposed project improvements will reduce the impact to less than significant.

Significance Level:

Less than Significant 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 property is located within a much larger tract of agricultural/viticultural and lightly developed land southeast of urban development in the City of Healdsburg. The property includes a portion of an unnamed perennial stream and its surrounding Riparian Corridor. The corridor presumably serves as a movement and habitat corridor for an array of wildlife, and provides a linkage between the baylands of Sonoma and Napa Counties and other rural areas to the south.

While a (very small) component of this greater landscape setting, the property itself does not provide corridor functions beyond connecting similar agricultural/viticultural land parcels to the south, east, west and north. Within this context, agricultural expansion and/or limited development on the property is in and of itself unlikely to result in any significant impacts to local wildlife movement or impede the use of native wildlife nursery sites.

Ephemeral streams (even when dry) and associated vegetation within the property presumably provide very localized movement and shelter habitat for common wildlife species. The proposed project does not include tree removal in these designated areas and is designed to avoid stream on the property and therefore is not anticipated to interfere with the movement of wildlife.

The previous Mitigation Measure BIO-1 will reduce impacts to a level that would be less than significant.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

See Mitigation Measure BIO-1

Mitigation Monitoring

See Mitigation Monitoring BIO-1

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

Comment:

Oak Woodland Combining District and VOH Valley Oak Habitat Combining District

Chapter 26, Article 67 of the Sonoma County Code contains a Oak Woodland Combining District and VOH Valley Oak Habitat Combining District ordinance (Sonoma County 2024). The ordinance designates 'protected' habitats and trees as well as provides mitigation standards for impacts to protected habitats and trees.

Tree Protection Ordinance

Chapter 26, Article 88. Sec. 26-88-010 (m) of the Sonoma County Code contains a tree protection ordinance (Sonoma County 2013). The ordinance designates 'protected' trees as well as provides mitigation standards for impacts to protected trees.

Sonoma County General Plan

The *Sonoma County General Plan 2020* (Sonoma County 2008) Land Use Element and Open Space & Resource Conservation Element both contain policies to protect natural resource lands including, but not limited to watershed, fish and wildlife habitat, biotic areas, and habitat connectivity corridors. Policy OSRC-8b establishes streamside conservation areas along designated riparian corridors.

Riparian Corridor Ordinance

The RC combining zone is established to protect biotic resource communities, including critical habitat areas within and along riparian corridors, for their habitat and environmental value, and to implement the provisions of the General Plan Open Space and Resource Conservation and Water Resources Elements. These provisions are intended to protect and enhance riparian corridors and functions along designated streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, floodplain management, wildlife habitat and movement, stream shade, fisheries, water quality, channel stability, groundwater recharge, opportunities for recreation, education and aesthetic appreciation and other riparian functions and values. Monitoring of the Riparian Corridor were discussed in 4 (b).

Significance Level:

Less than Significant 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:

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

5. CULTURAL RESOURCES:

Would the project:

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

Comments:

There are no historical resources on the property, therefore there will be no impact.

Significance Level:

No Impact

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

Comment:

On June 25, 2021, Permit Sonoma staff referred the project application to Native American Tribes within Sonoma County to request consultation under AB-52 (the request for consultation period ended July 26, 2021). No requests for consultation were received.

There are no known archaeological resources on the site, but the project could uncover such materials during construction. Consistent with the CEQA Guidelines the following mitigation measure has been incorporated into the project to ensure accidental discoveries are mitigated to a less than significant impact.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

See Mitigation Measure TCR-1

Mitigation Monitoring:

See Mitigation Monitoring TCR-1

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Comment:

The project site is not located within vicinity of any known unique paleontological resource or site or unique geologic. As described in Section 5.b) above, mitigation measures are in place to protect any paleontological resources or prehistoric, historic or tribal cultural resources that may be encountered during ground-disturbing work.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation:

See Mitigation Measure TCR-1

Mitigation Monitoring:

See Mitigation Monitoring TCR-1

6. ENERGY

Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Comment:

The project will not result in significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Construction related to the remodel of the existing winery building and barn is minimal and standard construction practices will be used.

The project would increase electricity consumption in the region relative to existing conditions. However, the project would comply with the latest Title 24 Building Energy

Efficiency Standards. Increased energy use would occur as a result of increased electricity for building and facility operations and vehicle-based visitation to the project sites. Operation of the project would be typical of tasting room and farm retail requiring electricity for lighting, climate control, and miscellaneous appliances. Transportation energy demand from the implementation of the projects would be reduced by federal and State regulations including the Low Carbon Fuel Standard, Clean Car Standards, and Low Emission Vehicle Program. The site would also include onsite renewable energy generation from photovoltaic solar panels and EV charging facilities. Any additional energy use would be supplied by Sonoma Clean Power, which provides increased levels of renewable energy sourced energy from typical energy supplied by an investor-owned utility. Furthermore, the projects would not use natural gas or propane as an energy source. Thus, the projects' energy consumption from construction, building operation, and transportation would not be considered wasteful, inefficient, or unnecessary.

Significance Level:

Less than Significant Impact

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Comment:

As noted above, the project facilities and buildings would comply with the latest Title 24 Building Energy Efficiency Standards, which are intended to increase the energy efficiency of new development projects in the state and move the State closer to its zero-net energy goals. The project would be automatically enrolled as a member of the Sonoma Clean Power (SCP), which serves as the Community Choice Aggregate (CCA) for the County. SCP works in partnership with PG&E to deliver GHG-efficient electricity to customers within its member jurisdictions. The project would also be all electric and provide EV charging facilities consistent with state efforts (e.g., 2022 Scoping Plan Update) for energy efficiency and fossil fuel use reduction. Implementation of the project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Significance Level:

Less than Significant Impact

7. GEOLOGY AND SOILS:

Would the project:

a) Directly or indirectly cause 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.**

Existing geologic conditions that could affect new development are considered in this analysis. Impacts of the environment on the project are analyzed as a matter of County policy and not because such analysis is required by CEQA.

Comment:

The site is not located in an Alquist-Priolo fault zone or on a known fault based on the Safety Maps in the Sonoma County General Plan. The Uniform Building Code has been developed to address

seismic events in California and development which complies with the Code will result in buildings which should withstand the most severe reasonably anticipated seismic event.

Significance Level:

Less than Significant 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. 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 structures will be subject to engineering standards of the California Building Code (CBC), which take into account soil properties, seismic shaking and foundation type. Project conditions of approval require that building permits be obtained for all change of use of buildings and construction and that the project meets all standard seismic and soil test/compaction requirements. The project would therefore not expose people to substantial risk of injury from seismic shaking. The following mitigation measures will ensure that potential impacts are reduced to less than significant levels.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation GEO-1

All earthwork, grading, trenching, backfilling and compaction operations shall be conducted in accordance with the Drainage and Storm Water Management Ordinance (Chapter 11, Sonoma County Code). All construction activities shall meet the California Building Code regulations for seismic safety. Construction plans shall be subject to review and approval of Permit Sonoma prior to the issuance of a building permit. All work shall be subject to inspection by Permit Sonoma and must conform to all applicable code requirements and approved improvement plans prior to the issuance of a certificate of occupancy.

Mitigation Monitoring GEO-1

Building/grading permits for ground disturbing activities shall not be approved for issuance by Project Review staff until the above notes are printed on applicable building, grading and improvement plans. The applicant shall be responsible for notifying construction contractors about code requirement.

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. The subject site is not identified on the map in Safety Element (PS-1c) as Very High, High or Medium Liquefaction Hazard Areas.

Significance Level:

Less than Significant 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. According to the Public Safety Element map PS-1d, the project includes structures located within a landslide hazard area. Building or grading could

destabilize slopes resulting in slope failure. All structures will be required to meet building permit requirements, including seismic safety standards and soil test/compaction requirements. Implementation of Mitigation Measures GEO-1, above would reduce any impacts to less than significant.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

See Mitigation Measure GEO-1

Mitigation Monitoring

See Mitigation Monitoring GEO-1

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

Comment:

The project includes minor ground disturbance for the addition of the parking area and new landscape. Ground disturbance and related grading activities are subject to erosion and sediment control provisions of the Drainage and Storm Water Management Ordinance (Chapter 11, Sonoma County Code) and Building Ordinance (Chapter 7, Sonoma County Code), which requires implementation of flow control best management practices to reduce runoff. The Ordinance requires treatment of runoff from the two year storm event. Required inspection by Permit Sonoma staff ensures 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.

In regard to water quality impacts, County grading ordinance design requirements, adopted County grading standards and best management practices (such as silt fencing, straw wattles, construction entrances to control soil discharges, primary and secondary containment areas for petroleum products, paints, lime and other materials of concern, etc.), mandated limitations on work in wet weather, and standard grading inspection requirements, are specifically designed to maintain potential water quality impacts at a less than significant level during project construction.

For post construction water quality impacts, adopted grading permit standards and best management practices require that storm water to be detained, infiltrated, or retained for later use. Other adopted water quality best management practices include storm water treatment devices based on filtering, settling or removing pollutants. These construction standards are specifically designed to maintain potential water quality grading impacts at a less than significant level post construction.

The County adopted grading ordinances and standards and related conditions of approval which enforce them are specific, and also require compliance with all standards and regulations adopted by the State and Regional Water Quality Control Board, such as the Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, Low Impact Development and any other adopted best management practices. Therefore, no significant adverse soil erosion or related soil erosion water quality impacts are expected given the mandated conditions and standards that need to be met.

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 subject to seismic shaking and other geologic hazards as described in item 6.a.ii, iii, and iv, above. Implementation of Mitigation Measures GEO-1, above would reduce any impacts to less than significant.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation

See Mitigation Measure GEO-1

Mitigation Monitoring

See Mitigation Monitoring GEO-1

- 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:

Potential impacts will be addressed through appropriate structural design and construction standards. For the proposed project, soils at the site have not been tested for their expansive characteristics. 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. The project will also be conditioned to require building permits to be approved in compliance with Building Code standards.

Significance Level:

Less than Significant 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 not in an area served by public sewer. Preliminary documentation provided by the applicant and reviewed by the Permit Sonoma Health Specialist indicates that the soils on site could support a replacement septic system and the required expansion area.

Significance Level:

No Impact

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Comment:

No cultural resource study was required for this project. The project site is already significantly disturbed by an active farming operation and related infrastructure. Required ground disturbance is related to new parking and landscaping. There have been no unique geologic features identified on site. Standard Tribal Cultural Resource mitigation requiring notes on maps for the required building permits will reduce the impacts to less than significant.

Significance Level:

Less than Significant Impact

8. GREENHOUSE GAS EMISSIONS:

Would the project:

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

Section 15064.4 of the State CEQA Guidelines assists lead agencies in determining the significance of the impacts of GHG emissions. Section 15064.4 gives lead agencies the discretion to assess emissions quantitatively or qualitatively. The CEQA Guidelines do not establish a threshold of significance. Lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies or other experts, so long as any threshold chosen is supported by substantial evidence.

The Bay Area Air Quality Management District's (BAAQMD) 2022 Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects acknowledges that evaluating climate impacts under CEQA can be challenging because global climate change is inherently a cumulative problem, rather than the result of a single source of greenhouse gas (GHG) emissions. With that in mind, the BAAQMD has recommended thresholds of significance as to whether a proposed project would have a "cumulatively considerable" contribution to the significant cumulative impact on climate change.

For land use development projects, the BAAQMD recommends using an approach which evaluates a project based on its effect on California's efforts to meet the State's long-term climate goals. Using this approach, a project that is consistent with and would contribute its "fair share" towards achieving those long-term climate goals can be found to have a less-than-significant impact on climate change under CEQA because the project would, in effect, help to solve the problem of global climate change. Applying this approach, the Air District has analyzed what will be required of new land use development projects to achieve California's long-term climate goal of carbon neutrality by 2045.

Because GHG emissions from the land use sector come primarily from building energy use and from transportation, these are the areas that the BAAQMD evaluated to ensure that a project can and will do its fair share to achieve carbon neutrality. With respect to building energy use, the BAAQMD recommends replacing natural gas with electric power and eliminating inefficient or wasteful energy usage. This will support California's transition away from fossil fuel-based energy sources and will bring a project's GHG emissions associated with building energy use down to zero as the state's electric supply becomes 100 percent carbon free. With respect to transportation, the BAAQMD recommends that projects be designed to reduce project-generated Vehicle Miles Travelled (VMT) and to provide sufficient electric vehicle (EV) charging infrastructure to support a shift to EVs over time.

The BAAQMD has found, based on this analysis, that a new land use development project being built today either must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b), or must incorporate the following design elements to achieve its "fair share" of implementing the goal of carbon neutrality by 2045:

A. Projects must include, at a minimum, the following project design elements:

1. Buildings

- a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2. Transportation

- a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's (OPR) 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee

- iii. Retail projects: no net increase in existing VMT
- b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

There is currently no applicable local GHG reduction strategy, such as an adopted Climate Action Plan, for Sonoma County. Therefore, the applicants provided an Air Quality and GHG Analysis prepared by James A. Reyff of Illingworth & Rodkin, Inc. on September 7, 2021 and revised on January 29, 2024 (Attachment 2) and the project was analyzed under criterion A above and discussed below.

Buildings: As discussed in the Energy Section 6a, the project does not include any new construction except the remodel of an existing winery building and barn that will bring it up to commercial building code standards for a tasting room and event space. Plans for the building do not include the use of natural gas appliances or natural gas plumbing. The winery building and barn remodels and updates will require compliance with the latest Title 24 Building Energy Efficiency Standards. Therefore, impacts due to energy consumption would be less than significant.

Transportation: The tasting room and winery project does not include new residences, office buildings, or commercial retail, and therefore, does not contribute any VMT to these three land use categories of concern. (Note that "commercial retail" refers to commercial retail spaces, not to a small ancillary retail space associated with another land use). The project would include commercial use of an existing barn and would conservatively generate a maximum of 62 average daily trips.

As discussed in the Transportation Section 17b, VMT refers to the amount and distance of automobile travel attributable to a project. The County of Sonoma has not yet adopted specific VMT policies or thresholds of significance. However, the OPR Technical Advisory includes a screening threshold for small projects that generate or attract fewer than 110 trips per day, stating this level of vehicle activity may generally be assumed to result in a less than significant transportation impact. The project proposes a maximum of 62 average daily trips. The project also proposes to implement a local hiring plan (at least 50% of employees from local area), so although distance travelled for employee trips has not been estimated, it is reasonable to assume that employees would primarily be hired from the local area and would generate relatively few travel miles associated with in-county commuter trips.

The maximum average daily trip number of 62 is far below the OPR threshold of 110, and distance-related vehicle miles are also anticipated to be low due to the proposed plan to hire from the local workforce. Therefore, the project is expected to have a less than significant VMT impact.

The latest California Green Building Standards Code (CALGreen) was published in 2022 and went into effect on January 1, 2023. The 2022 CALGreen Tier 2 requirements for EV charging stations apply to new non-residential buildings and require that off-street EV capable spaces be provided for a new non-residential development project with 10 or more parking spaces (note there are separate EV requirements for residential projects). The project proposed is exempt from the 2022 requirements because it is a remodel of an existing non-residential structure. Per the provided GHG analysis the applicant is committed to voluntarily complying with measures for providing electrical vehicle charging stations.

The BAAQMD 2022 guidance does not propose construction-related climate impact thresholds, stating that GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions, and that land use project thresholds are better focused on addressing operational GHG emissions, which represent the vast majority of project GHG emissions. Therefore, construction related GHG would not exceed established thresholds. Additionally, project construction activities would be minimal, consisting of internal tenant improvements to reconfigure the existing barn and to bring it up to current code standards. Proposed improvements include an additional parking area and new landscape.

Because the project does not propose the use of natural gas, would use minimal energy, does not include new residential, office, or retail uses, would generate low VMT, and meets 2022 CALGreen requirements for EV charging stations, the project would contribute its "fair share" towards achieving the State's long-term climate goals, and therefore, would have a less-than-significant impact on climate change.

Significance Level:

Less than Significant Impact

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. The project has proposed to incorporate many GHG reduction strategies, including:

1. Increase building energy efficiency.
 - a. The project is compliant as it would meet any appropriate State and local building code requirement for energy efficiency.
 - b. LED lighting systems would be installed.
 - c. Lighting timers and dimmers will be utilized.
 - d. Night air cooling would be utilized as there would no new air conditioning use. An HVAC system is only anticipated in the hospitality and administration areas of the Hospitality/Administration/Barrel Building.
2. Increase renewable energy use.
 - a. The project would have a negligible increase in electricity usage.
 - b. Project plans would include generation of onsite solar power.
 - c. Sonoma Clean Power will be the electrical utility provider for the site, which has a greater reliance on renewable power sources.
3. Electrical energy usage.
 - a. EV charging stations will be installed at the parking lots, in accordance with County guidelines.
4. Reduce travel demand through focused growth.
 - a. The project is a local winery that will use locally grown agriculture products.
 - b. The project is anticipated to generate traffic below 110 trips daily and would be below screening thresholds for vehicle miles travelled impacts.
5. Increase solid waste diversion.
 - a. The project is compliant as it would meet the County and local recycling goals. 100% of the solid waste (pomace) will be recycled on site as a soil amendment for the vineyards.
6. Reduce water consumption.
 - a. The project would include low flow water fixtures and water efficient irrigation systems. 100% of the winery process wastewater will be reclaimed for irrigation of the onsite vineyards.
 - b. Any new landscape would be drought tolerant.
7. Increase carbon sequestration.
 - a. The project would have limited effects on vegetation. Any project landscaping will increase productive vegetation that sequesters carbon.

By incorporating these 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:

No Impact

9. 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:

Small amounts of potentially hazardous materials will be used on this project such as fuel, lubricants, and cleaning materials. Proper use of materials in accordance with local, state, and federal requirements, and as required in the construction documents, will minimize the potential for accidental releases or emissions from hazardous materials. This will assure that the risks of the project uses impacting the human or biological environment will be reduced to a less than significant level.

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:

The project proposes minor construction for remodeling the existing winery building and barn and the addition of a small parking area and landscaping. The project would not generate or produce substantial quantities of hazardous material or unsafe conditions. During construction activities there could be spills of hazardous materials. To address this possibility, the project is required to comply with all applicable hazardous materials handling and storage requirements and would use qualified contractors for construction. See Item 9.a. above.

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 does not involve hazardous emissions or handle hazardous materials. There is not an existing or proposed school within 0.25 miles of the site.

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:

The project site was not identified on, or in the vicinity of, any parcels on lists compiled by the California Environmental Protection Agency, Regional Water Quality Control Board, California Department of Toxic Substances Control, and the CalRecycle Waste Management Board Solid Development Waste Information System (SWIS). The project area is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

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 or excessive noise for people residing or working in the project area?**

Comment:

The site is not within the Airport Referral Area as designated by the Sonoma County Comprehensive Airport Land Use Plan (ALUC).

Significance Level:

No Impact

- f) 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. In any case, the project would not change existing circulation patterns significantly, and would have no effect on emergency response routes.

Significance Level:

No Impact

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?**

Comment:

Prior to operation, the applicant and/or operator must comply with all fire safety laws, including the California Department of Forestry and Fire Protection, 14 California Code of Regulations §1270 et seq., the California Fire Code as adopted with local amendments in the Sonoma County Code Chapter 13, and defensible space requirements as set forth in Sonoma County Code Chapter 13A. All construction projects must comply with these fire safety laws, including but not limited to, installing fire sprinklers in buildings, providing emergency vehicle access, and maintaining a dedicated fire-fighting water supply on-site. As part of the County's planning referral process, the Sonoma County Fire Prevention required the applicants to apply for a Same Practical Effect Exemption to standards pursuant to 14 California Code Regulations §1270.

California Department of Forestry and Fire Protection, 14 California Code of Regulations § 1273.00, require developments in the State Responsibility Area to provide for safe access for emergency wildfire equipment and civilian evacuation concurrently. The applicant requested an Exceptions to Standards to provide the same practical effect pursuant to 14 California Code of Regulations §1270.01 and §1270.06 due to environmental conditions and physical site limitations based on the following:

1. Mitigations to achieve "same practical effect" are directed at limiting the use of the road by visitors and hospitality employees in high fire hazard conditions and during active fires. Specifically, the hazard posed to occupants egressing on narrow roads during wildland fire conditions is mitigated by significantly reducing the likelihood that visitors will be on the roads during these conditions.
2. In the event of a red flag warning, visitor serving activities, including tasting appointments, will be relocated to the alternate Medlock Ames Tasting Room site located on Hwy 128 in Geyserville, CA or cancelled and rescheduled if necessary. Additionally, multiple exits off of the property exist, including a secondary evacuation exit via Flora Ranch Road as described above is available if Toby Lane is impacted. Fire safety and emergency action plans are provided to employees and qualified staff is present to administer them.
3. Furthermore, there are four wells and six on site ponds. All of the ponds would be available for fire suppression, if needed, however pond Ponds P2 (13 acre feet) and P3 (9.61 acre feet) are solely available for fire suppression as neither pond are utilized for any other use. Both ponds P2

and P3 are naturally filled with rainwater. Pond P3 is specifically designated for fire suppression, and therefore is topped with well water as needed to maintain a full pond at all times. Pond P2 is merely a landscape feature, and may have water added as needed in the event of severe evaporation. As a result, there exists 22.61 acre feet of water located adjacent to the winery site that are available solely for fire suppression. See sheet UP1 with the location of all wells and ponds noted.

Irrigation Ponds & Reservoirs		
Map ID	Capacity (acre-feet)	Primary Use
P1	9.94	landscape & agricultural irrigation
P2	13	not used - landscaping feature only
P3	9.61	fire suppression only
P4	26	shared with neighbor
P5	5	frost protection
P6	45	shared with neighbor; recreational use only

Sonoma County Fire Prevention included several conditions of approval that the applicant would need to comply with, addressing the following areas:

- Compliance with pertinent codes, regulations, and ordinances related to building design and fire prevention.
- Fire protection planning.
- Fire access roads, including gates with Knox Box to ensure access.
- Water supplies and hydrants
- Location of hazardous materials
- Employee training for proper use of regulated materials as required in the California Fire Code adopted with local amendments in Sonoma County Code Chapter 13.

As a standard condition of approval, construction on the project site would be required to comply with the California Fire Code with local amendments as adopted in Sonoma County Code Chapter 13, including but not limited to fire sprinklers, emergency vehicle access, and water supply making the impact from risk of wildfire less than significant. County Code Section 26-88-254(f)(16) also requires that the applicant prepare and implement a fire prevention plan for construction and ongoing operations, including provision for emergency vehicle access and turnouts, vegetation management, and fire break maintenance around all structures.

Project compliance with standard County and State requirements as well as the secondary emergency access route to assist the emergency response in the event of a wildfire emergency and significant additional water storage would ensure that risks from wildland fires on people and structures would be less than significant.

Employee training for proper use of regulated materials as required in the California Fire Code adopted with local amendments in Sonoma County Code Chapter 13. As a standard condition of approval, construction on the project site would be required to comply with the California Fire Code with local amendments as adopted in Sonoma County Code Chapter 13, including but not limited to fire sprinklers, emergency vehicle access, and water supply making the impact from risk of wildfire less than significant. County Code Section 26-88-254(f)(16) also requires that the applicant prepare and implement a fire prevention plan for construction and ongoing operations, including provision for emergency vehicle access and turnouts, vegetation management, and fire break maintenance around all structures. See section 20 for further discussion of wildfire impacts.

Significance Level:

Less than Significant Impact

10. HYDROLOGY AND WATER QUALITY:

Would the project:

- a) **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

Comments:

With regard to wastewater discharge requirements, the project site is not located in an area served by public sewer. Existing septic systems and leachfields will be modified to treat domestic wastewater for the winery and tasting room. The systems would comply with the Building Regulations listed in Chapter 7 of the Sonoma County Code of Ordinances which would require that approval be obtained from the well and septic section of Permit Sonoma for any onsite disposal system. The septic systems and leachfields would be subject to the provisions of the County of Sonoma OWTS Manual which provides the regulations, procedural and technical details governing septic tanks, including soil capability. The site would be evaluated for soil depth, depth to groundwater, soil percolation rates, and other soil properties related to septic systems. In addition, the septic systems would also be subject to the County's Sewers and Sewage Disposal Ordinance, Chapter 24 of the Sonoma County Code of Ordinances. The ordinance requires that the septic tank meet the International Association of Plumbing and Mechanical Officials PS-1 design standard and would require a permit for maintenance and cleaning of the system. These requirements have been developed to ensure protection of groundwater resources, human health, and the environment.

Project conditions require that an application for additional wastewater discharge requirements be filed by the applicant with the North Coast Regional Water Quality Control Board. Documentation of acceptance of a complete application with no initial objections or concerns by the Regional Water Quality Control Board must be submitted to the Project Review Health Specialist prior to building permit issuance. In addition, prior to building permit issuance and occupancy, the applicant shall have a capacity/wastewater flow analysis by a Registered Civil Engineer or Registered Environmental Health Specialist regarding the existing septic system's ability to accommodate the peak flows from all sources granted.

With regard to water quality, standard permitting procedures require a Grading Permit and associated Erosion Prevention and Sediment Control Plan for the proposed improvements and other movement of soils, to which all applicable standards and provisions of the Sonoma County Grading and Drainage Ordinance would apply.

Significance Level:

Less than Significant Impact

- b) **Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

Comment:

The project is located in the Santa Rosa Plain groundwater basin that is managed by the Santa Rosa

Plain Groundwater Sustainability Agency in accordance with the Sustainable Groundwater Management Act. The Groundwater Sustainability Agencies are currently developing Groundwater Sustainability Plans which must be completed by 2022 and will provide a regulatory framework for managing groundwater use.

The proposed project is located within a Class 3-Marginal Groundwater Area, subject to requirement of General Plan Policy WR-2e which calls for a groundwater studies that demonstrate adequate groundwater supply for projects in Class 3 and 4 water areas.

The County requires preparation of a groundwater study to assess impact of projects that include new groundwater use.

A Groundwater Resource Impact Assessment (Attachment 3) was performed by O'Connor Environmental Inc. on January 5, 2022 and accepted by Permit Sonoma's staff Geologist on June 3, 2022. The report found that a cumulative impact area of 272 acres for the water budget analysis. The report estimated groundwater storage (1,302 acre feet) and average year recharge (208.5 acre feet/year) to be greater than proposed water demands (46.2 acre feet) of the cumulative impact area at full build-out under current zoning. The project itself is expected to increase groundwater use by roughly 0.5 acre feet/year, and the winery and tasting room will have a total water use of 1.35 acre feet/year. No Impacts to groundwater resources are expected as a result of the project.

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?

- i. would result in substantial erosion or siltation on- or off-site?**
- ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;**
- iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**
- iv. Impede or redirect flood flows?**

Comment:

Construction activities associated with the proposed project are not anticipated to alter the existing drainage pattern of the site or area in a way that would result in downstream erosion and/or sedimentation. The project site is not within any classified flood hazard zone. All ground disturbance and construction activities require a grading and building permit prior to commencement of these activities. Standard conditions of approval for the project require prior to grading permit issuance, the applicant submit a drainage report prepared by a civil engineer and demonstrate drainage improvements are designed in accordance with the Sonoma County Water Agency Flood Management Design Manual. Drainage improvements are required to maintain off-site natural drainage patterns, limit post-development storm water quantities and pollutant discharges in compliance with Permit Sonoma's best management practices guide and all other applicable regulations. Existing drainage patterns must be maintained, to the maximum extent practicable, to not adversely impact adjacent properties or drainage systems. Proposed drainage improvements shall not adversely impact adjacent properties or drainage systems.

Significance Level:

Less than Significant Impact

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Comment:

No. The proposed project is located in an existing building complex, outside of any designated flood hazard area, tsunami, or seiche zone. Therefore, no risk of pollutants due to project inundation would occur.

Significance Level:

Less than Significant Impact

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Comment:

No. As discussed in (a) and (b) above this project is expected to result in a zero net water use for the site consistent with the requirements of the Sustainable Groundwater Management Plan and Groundwater Sustainability Plan.

Significance Level:

Less than Significant Impact

11. LAND USE AND PLANNING:

Would the project:

a) Physically divide an established community?

Comment:

The project would not physically divide a community. It does 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.

Significance Level:

No Impact

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Comment:

The General Plan Land Use Designation on the project parcel is Land Intensive Agriculture. This land use designation is intended to enhance and protect lands best suited for permanent agricultural use and capable of relatively high 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. Within the Land Intensive Agriculture Zoning designation agricultural crop production and cultivation is principally permitted use, which is proposed to be the primary use of the parcel. The proposed uses of the agricultural processing (winery), tasting room and proposed events are considered accessory to the primary use. The secondary use of agricultural processing has been found consistent with the applicable Zoning Code sections and applicable General Plan Policies. See above section 2: Agriculture and Forest Resources. The secondary use of tasting room has been found consistent with the applicable Zoning Code sections and applicable General Plan Policies. See above section 2: Agriculture and Forest Resources.

The proposed project will allow agricultural processing of grapes to wine, tasting room and events on site and therefore would not impede on existing or future agriculture operations on site because the secondary uses are in direct conjunction of the onsite agricultural processing. The proposed project will align the existing use with Policy AR-4a by creating visitor serving uses in conjunction with the primary agricultural production use. 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

12. 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). Sonoma County has adopted the Aggregate Resources Management Plan that identifies aggregate resources of statewide or regional significance (areas classified as MRZ-2 by the State Geologist). Consult California Geologic Survey Special Report 205, Update of Mineral Land Classification: Aggregate Materials in the North San Francisco Bay Production-consumption region, Sonoma, Napa, Marin, and Southwestern Solano Counties, California (California Geological Survey, 2013).

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 an area of 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

13. NOISE:

Would the project:

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the**

vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?Comment:

Staff determined that a noise study is not required for this project. The existing processing facility is considered a noise generating land use and is considered baseline for CEQA analysis. The closest residence or noise sensitive land use is 1500 feet away and the proposed events will only have amplified music indoors. Light acoustic sound is proposed outdoors but given the proximity of the closest residence a noise study is not warranted.

Temporary noise related to construction can be mitigated to less than significant with the incorporation of Mitigation Measure NOISE-1.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation Measure NOISE-1:

Construction activities for this project shall be restricted as follows:

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

- a) All internal combustion engines used during construction of this project will 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.
- b) Except for actions taken to prevent an emergency, or to deal with an existing emergency, all construction activities 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. (same note as above) on weekends and holidays. If work outside the times specified above becomes necessary, the applicant shall notify the Permit Sonoma Project Review Division as soon as practical.
- c) There will be no start up of machines nor equipment prior to 7:00 a.m, Monday through Friday or 9:00 am on weekends and holidays; no delivery of materials or equipment prior to 7:00 a.m nor past 7:00 p.m, Monday through Friday or prior to 9:00 a.m. nor past 7:00 p.m. on weekends and holidays and no servicing of equipment past 7:00 p.m., Monday through Friday, or weekends and holidays. A sign(s) shall be posted on the site regarding the allowable hours of construction, and including the developer- and contractors mobile phone number for public contact 24 hours a day or during the hours outside of the restricted hours.
- d) Pile driving activities shall be limited to 7:30 a.m. to 7:00 p.m. weekdays only
- e) 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.
- f) The developer shall designate a Project Manager with authority to implement the mitigation prior to issuance of a building/grading permit. The Project Managers 24-hour mobile phone number shall be conspicuously posted at the construction site. The Project Manager shall determine the cause of noise complaints (e.g. starting too early, faulty muffler, etc.) and shall take prompt action to correct the problem.

Mitigation Monitoring NOISE-1:

Permit Sonoma Project Review Division staff shall ensure that the measures are listed on all site alteration, grading, building or improvement plans, prior to issuance of grading or building permits. Permit Sonoma staff shall inspect the site prior to construction to assure that the signs are in place and the applicable phone numbers are correct. Any noise complaints will be investigated by Permit Sonoma staff. If violations are found, Permit Sonoma shall seek voluntary compliance from the permit holder, or may require a noise consultant to evaluate the problem and recommend corrective actions, and thereafter may initiate an enforcement action and/or revocation or modification proceedings, as appropriate. (Ongoing)

b) Generation of excessive groundborne vibration or groundborne noise levels?

Comment:

The project includes construction activities that may generate minor ground borne vibration and noise. These levels would not be significant because they would be short-term and temporary, and would be 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. (For quarries need to consider potential for blasting impacts).

Significance Level:

Less than Significant Impact

c) For a project located within the vicinity of a private airstrip or 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 land use plan as designated by Sonoma County.

Significance Level:

No Impact

14. POPULATION AND HOUSING:

Would the project:

a) Induce substantial unplanned 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 project would not include construction of any homes, substantial number of businesses or infrastructure and therefore would not induce substantial population growth.

Significance Level:

No Impact

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

Comment:

No housing will be displaced by the project and no replacement housing is proposed to be

constructed.

Significance Level:
No Impact

15. 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 rations, 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 and the impact would be less than significant.

Significance Level:
Less than Significant Impact

i. Fire protection?

Comment:
Sonoma County Code requires that all new development meet Fire Safe Standards (Chapter 13). The County Fire Marshal reviewed the project description and requires that the expansion 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. This is a standard condition of approval and required by county code and impacts would be less than significant. Fire protection services will continue to be provided by the Fire Department.

Significance Level:
Less than Significant Impact

ii. Police?

Comment:
The Sonoma County Sheriff will continue to serve this area. There will be no increased need for police protection resulting from this project.

Significance Level:
Less than Significant Impact

iii. Schools?

Comment:
The project itself would not contribute to an increase in the need for expanded or additional schools.

Significance Level:
Less than Significant Impact

iv. Parks?

Comment:

The project itself would not contribute to an increase in the need for expanded or additional parks.

Significance Level:

Less than Significant Impact

v. Other public facilities?

Comment:

The project itself would not contribute to an increase in the need for expanded or additional public facilities.

Significance Level:

Less than Significant Impact

16. 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 would not involve activities that would cause or accelerate substantial physical deterioration of parks or recreational facilities. The project will 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 project does not include a recreational facility and is of a project-type that does not require the construction or expansion of a recreational facility.

Significance Level:

No Impact

17. TRANSPORTATION:

Would the project:

- a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?**

Three transportation-related plans have been adopted in Sonoma County: the Sonoma County General Plan 2020 Circulation Element, the Sonoma County Transportation Authority Comprehensive Transportation Plan (2009), and the Sonoma County Bikeways Plan. The project will not conflict with any of these plans.

Using the screening criteria established by the County of Sonoma Guidelines for traffic studies, which states that Permit Sonoma and Sonoma County Public Infrastructure are both responsible for the review and condition of private development projects. Traffic related conditions must be based on an analysis of the potential traffic impacts that establish a reasonable nexus between the impacts of the project and the required improvements or conditions. The applicant submitted a traffic study (Attachment 5) that met these guidelines and determined that the project would not cause a significant traffic impact to the study intersections.

The applicant submitted an initial Draft Traffic Study dated November 10, 2022, after peer review by Sonoma County Public Infrastructure and Final Traffic Study was submitted and accepted July 7, 2023. The traffic study findings are as follows:

- The proposed project would be expected to generate 62 daily trips on average, including three trips during the a.m. peak hour and ten p.m. peak hour trips. The twelve proposed 50-person events would each be expected to generate an average of 46 trip ends at the driveway.
- The project is anticipated to result in a less-than-significant transportation impact on VMT based on the OPR Guidelines.
- Under Existing conditions, Chalk Hill Road is operating acceptably at LOS A and would be expected to continue doing so upon adding trips associated with the proposed events.
- Adequate sight distances are available on Chalk Hill Road at Toby Lane, which leads to the project site.
- A left-turn lane is not warranted on Chalk Hill Road at Toby Lane based on Existing plus Event volumes.

Sonoma County Public Infrastructure provided Conditions of Approval for this project that require the applicant adhere to these recommendations.

Significance Level:

Less than Significant Impact

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (evaluation of transportation impacts of land use projects using vehicle miles traveled)?

Comment:

Sonoma County does not have a congestion management program but LOS standards are established by the Sonoma County General Plan Circulation and Transit Element. See Item 17(a) above for a discussion of traffic resulting from project operation.

Senate Bill (SB) 743 established the change in vehicle miles traveled (VMT) as the metric to be applied to determining transportation impacts associated with development projects. As of the date of this analysis, Sonoma County has not yet adopted thresholds of significance related to VMT. As a result, project-related VMT impacts were assessed based on guidance published by the California Governor's Office of Planning and Research (OPR) in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory, 2018. The OPR guidelines identify several criteria that may be used by jurisdictions to identify certain types of projects that are unlikely to have a significant VMT impact and can be "screened" from further analysis. One of these screening criteria pertains to "small projects," which OPR identifies as generating fewer than 110 new vehicle trips per typical weekday. The trip generation for the project, including the farmstand, tasting room, as well as proposed events, were translated to annual average daily trips. Altogether, the project is expected to generate an average of about 62 daily trips, which falls well below the OPR threshold of 110 daily trips. As a result, it is reasonable to conclude that the project would have a less-than-significant impact on VMT.

Accordingly, the project is expected to have a less-than- significant impact on VMT for both

employment and patron-related travel.

Significance Level:

Less than Significant Impact

c) Substantially increase hazards due to geometric 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 and would not create hazards from incompatible uses.

Significance Level:

No Impact

d) 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.

Applicant/contractor shall provide a Traffic Control Plan for review and approval by Sonoma County Fire and Emergency Services and Department of Transportation and Public Works prior to issuance of a building permit or award of bids. The Traffic Control Plan must address emergency vehicle access during construction and provide for passage of emergency vehicles through the project site at all times. Applicant/contractor shall notify local emergency services prior to construction to inform them that traffic delays may occur, and also of the proposed construction schedule.

Significantly, the applicant has also offered access on a private driveway on the adjoining property to the south for emergency responders to access a secondary emergency vehicle access route from Flora Ranch Road to Toby Lane to ensure safe access for emergency wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with §§1273.00 through 1273.09.

Significance Level:

Less than Significant Impact

e) Result in inadequate parking capacity?

Comment:

The Sonoma County Code Section 26-86 does not have an equivalent use for a tasting room or events, the best equivalent use is found in code section 26-18-260 that identifies standards for winery tasting rooms and events. Parking requirements for these tasting rooms and events are one space per 2.5 guests and one parking space per employee. The tasting room and winery's daily operations are limited to 12 visitors at one time and 15 employees per day during harvest requiring one space per 2.5 people and one space per employee equal to 20 parking spaces. The largest events for 50 people will also require one space per 2.5 people equal to 20 spaces total plus one space per employee for the event equal to 15 spaces for a total of 35 spaces for the largest events. In total there are 48 parking spaces to accommodate all uses on the project site.

Significance Level:

Less than Significant Impact

18. TRIBAL CULTURAL RESOURCES:

State Regulations

CEQA requires that a lead agency determine whether a project could have a significant effect on historical resources and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is one listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR, PRC Section 21084.1), a resource included in a local register of historical resources (PRC Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (PRC Section 15064.5[a][3]).

If a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b], and [c]).

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (*CEQA Guidelines* Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion or eligibility for inclusion in the CRHR (*CEQA Guidelines* Section 15064.5[b][2][A]).

California Public Resources Code

Section 5097.5 of the California PRC states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

As used in this PRC section, "public lands" means lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, local agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

Codes Governing Human Remains

The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC sections 5097.94 and 5097.98 and falls within the jurisdiction of the Native American Heritage Commission (NAHC). If human remains are discovered, the county coroner must be notified within 48 hours, and there should be no further disturbance to the site where the remains were found. If the coroner determines the remains are Native American, the coroner is responsible to contact the NAHC within 24 hours. Pursuant to PRC Section 5097.98, the NAHC will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

Would the project:

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object

with cultural value to a California native American tribe, and that is: i) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5030.1(k); or ii) a resource determined by the lead agency. In its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

On June 25, 2021, Assembly Bill 52 Project Notifications were sent to the Cloverdale Rancheria of Pomo Indians, Dry Creek Rancheria Band of Pomo Indians, Torres Martinez Desert Cahuilla Indians, Mishewal Wappo Tribe of Alexander Valley, Middletown Rancheria Band of Pomo Indians, Lytton Rancheria of California, Kashia Pomos Stewarts Point Rancheria and Federated Indians of Graton Rancheria. These Native American tribes were invited to consult on the project pursuant to Public Resources Code sections 21080.3.1 and 21080.3.2. No requests for consultation were received.

There are no known archaeological resources on the site, but the project could uncover such materials during construction. Consistent with the CEQA Guidelines the following mitigation measure has been incorporated into the project to ensure that no cultural or archaeological resources are unearthed during ground disturbing activities.

Significance Level:

Less than Significant with Mitigation Incorporated

Mitigation Measure TCR-1:

All building and/or grading permits shall have the following note printed on grading or earthwork plan sheets:

NOTE ON PLANS: "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."

Mitigation Monitoring TCR-1:

Building/grading permits shall not be approved for issuance by Permit Sonoma - Project Review Staff until the above notes are printed on the building, grading and improvement plans.

19. UTILITIES AND SERVICE SYSTEMS:

Would the project:

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Comment:

The project would not contribute to the need for construction of new water or wastewater treatment facilities, other than construction of a replacement private onsite septic system.

Significance Level:

No Impact

- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

Comment:

The property is served by an existing well. Permit Sonoma staff Geologist has determined the site contains sufficient onsite water supplies available for the project. See section 10 above for a more detailed analysis.

Significance Level:

Less than Significant Impact

- c) **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 domestic wastewater systems for the site will be sized in accordance with the County of Sonoma OWTS Manual. The onsite septic would have sufficient capacity to treat the maximum domestic daily demand generated by the winery, tasting room and events.

Significance Level:

Less than Significant Impact

- d) **Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?**

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 waste that would result from the proposed project. Active permitted regional landfills include the Redwood Sanitary Landfill (26 million cubic yards remaining capacity), Potrero Hills Landfill (13.9 million cubic yards remaining capacity), Vasco Road Landfill (7.4 million cubic yards remaining capacity), and Keller Canyon Landfill (63.4 million cubic yards remaining capacity) (CalRecycle 2016). Solid waste generated during construction and operation of the project would represent a small fraction of the daily permitted tonnage of these facilities.

Significance Level:

Less than Significant Impact.

e) Comply with federal, state, and local management and reduction 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 accordance with local and state regulations. The project would not conflict with or impede implementation of such programs.

Significance Level:

Less than Significant Impact.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Comment:

Prior to operation, the applicant and/or operator must comply with all fire safety laws, including the California Department of Forestry and Fire Protection, 14 California Code of Regulations §1270 et seq., the California Fire Code as adopted with local amendments in the Sonoma County Code Chapter 13, and defensible space requirements as set forth in Sonoma County Code Chapter 13A. All construction projects must comply with these fire safety laws, including but not limited to, installing fire sprinklers in buildings, providing emergency vehicle access, and maintaining a dedicated fire-fighting water supply on-site. As part of the County's planning referral process, the Sonoma County Fire Prevention required the applicants to apply for a Same Practical Effect Exemption to standards pursuant to 14 California Code Regulations §1270.

California Department of Forestry and Fire Protection, 14 California Code of Regulations § 1273.00, require developments in the State Responsibility Area to provide for safe access for emergency wildfire equipment and civilian evacuation concurrently. The applicant requested an Exceptions to Standards to provide the same practical effect pursuant to 14 California Code of Regulations §1270.01 and §1270.06 due to environmental conditions and physical site limitations based on the following:

4. Mitigations to achieve "same practical effect" are directed at limiting the use of the road by visitors and hospitality employees in high fire hazard conditions and during active fires. Specifically, the hazard posed to occupants egressing on narrow roads during wildland fire conditions is mitigated by significantly reducing the likelihood that visitors will be on the roads during these conditions.
5. In the event of a red flag warning, visitor serving activities, including tasting appointments, will be relocated to the alternate Medlock Ames Tasting Room site located on Hwy 128 in Geyserville, CA or cancelled and rescheduled if necessary. Additionally, multiple exits off of the property exist, including a secondary evacuation exit via Flora Ranch Road as described above is available if

Toby Lane is impacted. Fire safety and emergency action plans are provided to employees and qualified staff is present to administer them.

6. Furthermore, there are four wells and six on site ponds. All of the ponds would be available for fire suppression, if needed, however pond Ponds P2 (13 acre feet) and P3 (9.61 acre feet) are solely available for fire suppression as neither pond are utilized for any other use. Both ponds P2 and P3 are naturally filled with rainwater. Pond P3 is specifically designated for fire suppression, and therefore is topped with well water as needed to maintain a full pond at all times. Pond P2 is merely a landscape feature, and may have water added as needed in the event of severe evaporation. As a result, there exists 22.61 acre feet of water located adjacent to the winery site that are available solely for fire suppression. See sheet UP1 with the location of all wells and ponds noted.

Irrigation Ponds & Reservoirs		
Map ID	Capacity (acre-feet)	Primary Use
P1	9.94	landscape & agricultural irrigation
P2	13	not used - landscaping feature only
P3	9.61	fire suppression only
P4	26	shared with neighbor
P5	5	frost protection
P6	45	shared with neighbor; recreational use only

Sonoma County Fire Prevention included several conditions of approval that the applicant would need to comply with, addressing the following areas:

- Compliance with pertinent codes, regulations, and ordinances related to building design and fire prevention.
- Fire protection planning.
- Fire access roads, including gates with Knox Box to ensure access.
- Water supplies and hydrants
- Location of hazardous materials
- Employee training for proper use of regulated materials as required in the California Fire Code adopted with local amendments in Sonoma County Code Chapter 13.

As a standard condition of approval, construction on the project site would be required to comply with the California Fire Code with local amendments as adopted in Sonoma County Code Chapter 13, including but not limited to fire sprinklers, emergency vehicle access, and water supply making the impact from risk of wildfire less than significant. County Code Section 26-88-254(f)(16) also requires that the applicant prepare and implement a fire prevention plan for construction and ongoing operations, including provision for emergency vehicle access and turnouts, vegetation management, and fire break maintenance around all structures.

Project compliance with standard County and State requirements as well as the secondary emergency access route to assist the community and emergency response in the event of a wildfire emergency and significant additional water storage would ensure that risks from wildland fires on people and structures would be less than significant.

Significance Level: Less than Significant Impact

- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**

Comment:

The Project site sits on a hillside surrounded by other hillsides covered in dense forest. For the Healdsburg and surrounding area, prevailing winds tend to come from the west or north. No aspect of the project will exacerbate the existing level of fire hazard posed to the project site as it is or surrounding areas. As a project condition of approval, new construction, including grading on the project site must conform to the California Department of Forestry and Fire Protection regulations, 14 CCR §§1270 et seq. , Sonoma County Code Chapter 13A defensible space requirements as well as the California Fire Code adopted with local amendments in Sonoma County Chapter 13, including but not limited to, emergency vehicle access, and water supply making the impact from risk of wildland fire less than significant. In addition, the project is proposing an emergency access route available to emergency responders through its site and on a private road on the adjoining property to the south. See discussion under section 9.f-g.

Significance Level:

Less than Significant Impact

- c) **Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk of that may result in temporary or ongoing impacts to the environment?**

Comment:

Access to the winery and tasting room area will be from Toby Lane via an existing driveway. The project operator will maintain the site to reduce fire hazards and fire risk. The project will comply with California Department of Forestry and Fire Protection regulations, 14 CCR §§1270 et seq., as well as the California Fire Code adopted with local amendments in Sonoma County Chapter 13 for emergency water supply and storage for fire protection. Applicant will also provide access to water in the irrigation ponds for extended fire suppression.

The applicant is proposing an emergency access through its site and on a private road on the adjoining property to the south. The road is currently improved. The project proposes to grant an Emergency Vehicle Access easement to the County of Sonoma for emergency responders in the event of an emergency CAL FIRE will also have access to the onsite ponds for fire suppression.

Significance Level:

Less than Significant Impact

- d) **Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

Comment:

The project development areas including winery and tasting areas are generally level or gently sloping and contain native vegetation. The potential for flooding, slope stability, drainage changes and landslides are less than significant. Any grading required for construction of project improvements, will be constructed with a County issued grading permit that requires design and approval of stormwater improvements that will be required as part of the grading permit.

Significance Level:

Less than Significant Impact

21. 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 on special status plant and fish/wildlife species and habitat are addressed in Section 4. Implementation of the required mitigation measures (Mitigation Measure BIO-1) would reduce these potential impacts to a less-than-significant level. Potential adverse project impacts to cultural resources are addressed in Section 5. A standard condition of approval to ensure that cultural or archaeological resources are protected if unearthed during ground disturbing activities is provided in Section 18a. Implementation of this standard condition of approval would reduce any potential impacts to a less- than-significant level.

Significance Level:

Less than Significant Impact

- 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:

No project impacts have been identified in this Initial Study that are individually limited but cumulatively considerable. The project would contribute to impacts related to air quality, biological resources, cultural resources, geology and soils, noise and tribal resources, which may be cumulative off-site, but mitigations would reduce project impacts to less-than-significant levels.

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:

Proposed project operations have the potential to cause substantial adverse impacts on human beings, both directly and indirectly. However, all potential impact and adverse effects on human beings (resulting from air quality, biological resources, cultural resources, geology and soils, noise and tribal resources) were analyzed, and would be less than significant with the mitigations identified in the Initial Study incorporated into the project.

Significance Level:

Less than Significant Impact

Attachments

1. Application Packet
2. Air Quality Study
3. Groundwater Study
4. Traffic Study
5. Wastewater Analysis
6. Wildfire Road Exception File

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[pdf](#)

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29. Sonoma County Permit and Resource Management Department, Visual Assessment Guidelines, (no date)
30. Sonoma County Permit and Resource Management Department Noise Guidelines, 2017
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**MEDLOCK AMES WINERY
USE PERMIT MODIFICATION
PROJECT DESCRIPTION**

The existing Medlock Ames Winery is located at 13414 Chalk Hill Road in Healdsburg, CA. The current Use Permit (UPE01-0182) allows for a maximum annual wine production of 20,000 cases with no public tasting or retail sales on Assessor's Parcel Number (APN) 132-120-017. This Use Permit Modification requests an increase to 30,000 cases of wine annually, the addition of tasting and vineyard tours by appointment only, retail sales, and 12 agricultural events annually. This Use Permit Modification is also requesting the inclusion of the adjacent parcel APN 132-120-018, under same ownership, to conduct vineyard tours. The winery parcel (APN 132-120-017) currently has 20.7 acres of vines and the adjacent parcel (APN 132-120-018) currently has 33.3 acres of vines, for a total of 54 acres of vineyard.

1. Wine will continue to be produced within the existing 20,000 SF, three level winery building (including basement and mezzanine levels).
 - a. 1600 SF of the existing 3200 SF mezzanine within the winery is proposed to be converted to production and administration offices.
2. The existing 1350 SF barn is proposed to be converted as follows:
 - a. 750 SF tasting room
 - b. 242 SF commercial kitchen and pantry
 - c. 156 SF office space
 - d. Remainder: restrooms, tax paid, mechanical, and storage.
3. Tasting, vineyard tours, and retail sales strictly by appointment only. Tasting proposed to occur within the existing winery, remodeled existing barn, and the landscaped outdoor courtyard adjacent to the barn.
4. 12 agricultural visitor serving activities per year with 50 persons maximum. Activities will not be held during a red flag warning.

<u>Activity</u>	<u>Quantity</u>	<u>Date & Time Period</u>	<u>Attendees (maximum)</u>
Wine Maker Luncheons & Dinners	4	January - December	50
Ag Promotional Events	6	January - December	50
Weddings	2	January - December	50

Notes:

- a) *In the event of a red flag warning, visitor serving activities will be cancelled and rescheduled.*
- b) *Agricultural Promotional Events will include Pick-up Weekend, Harvest Celebration, or other marketing visitor serving activities to support and build the Wine Club Member list.*
- c) *All noise, including any amplified or acoustic music, will meet the Sonoma County Noise Ordinance levels (Table NE-2, as measured from the property line).*
 - i. *Amplified music is only proposed on event days and only within the building.*

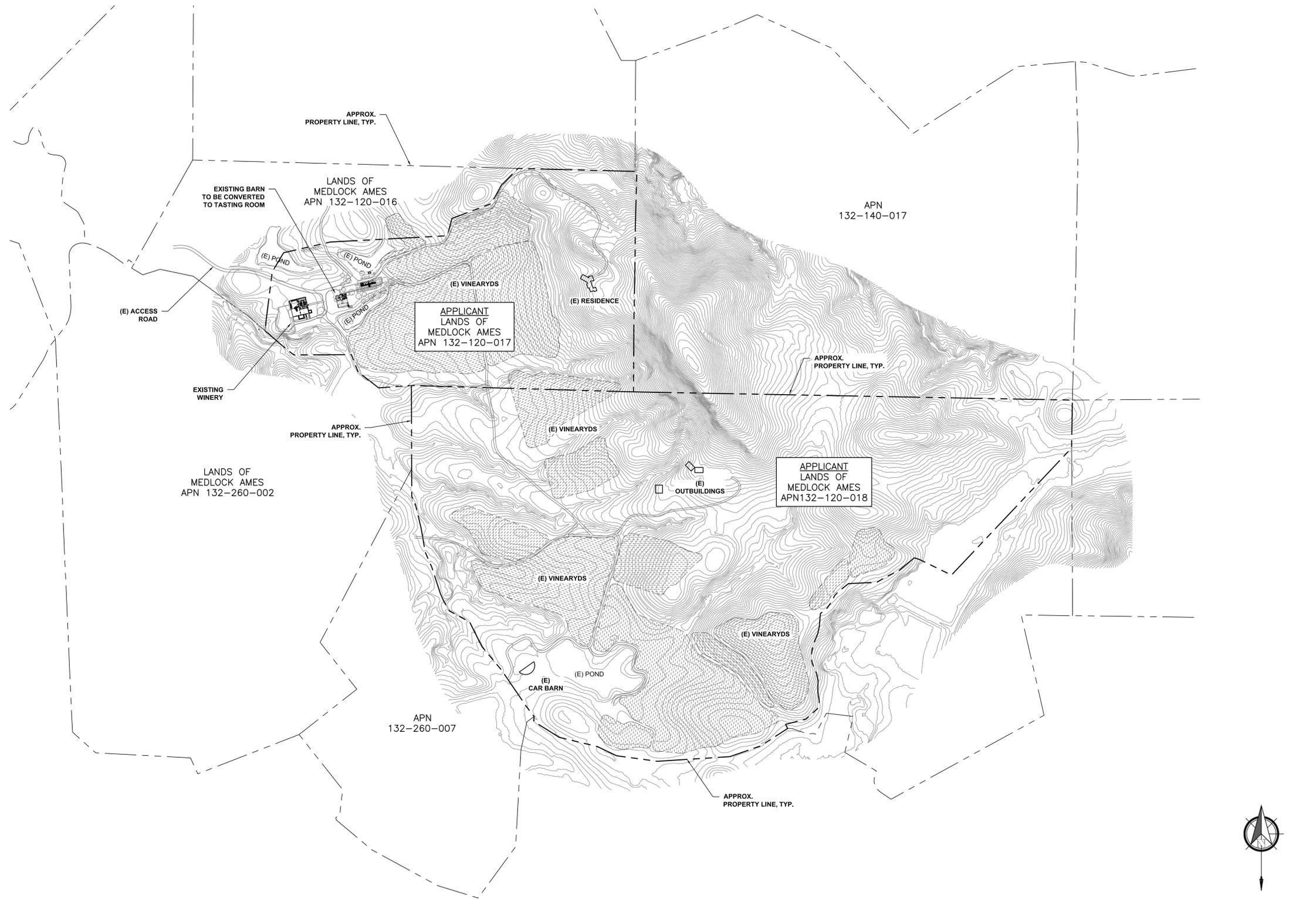
ii. Acoustic music is proposed during operating hours Monday through Sunday and may be accompanied by lightly amplified vocals

d) Participation in Industry Wide Events is not planned nor requested.

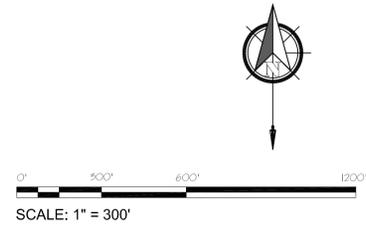
5. Infrastructure includes new delineated parking area, expansion of existing sanitary wastewater leach field system, storm water management improvements, fire protection water storage, utilities and associated grading and site improvements.
6. 10 full-time employees during non-harvest with 5 additional part-time employees during the harvest season and bottling.
7. Tasting room visitors will be strictly by appointment and are anticipated to be on the order of 30 for an average day and 60 for a peak day. Visitors proposed to be scheduled for appointments spread out throughout the day. Visitor appointments are projected to have a maximum of 20 persons per appointment (resulting in 20 visitors on site at a time). In the event of a red flag warning, tasting room appointments will be cancelled and rescheduled.
8. Vineyard tours may be offered to tasting room appointment visitors. Most of the vineyard tours will be walking tours, however, on occasion, tours may be conducted via electric vehicle with 6-8 persons per vehicle.). In the event of a red flag warning, vineyard tour appointments will be cancelled and rescheduled.
9. Operating hours shall be 7 AM to 6 PM Monday through Friday off harvest and 6 AM to 10 PM Monday through Sunday during harvest season.
 - a. Tasting Room Appointments: 11 AM to 5 PM Monday through Sunday
 - b. Ag Promotional Activities: 11 AM to 9:30 PM Monday through Sunday

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1 OVERALL SITE PLAN
 Scale: 1" = 300'



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 CONSTRUCTION

USE PERMIT
 OVERALL SITE

MEDLOCK AMES
 13414 CHALK HILL RD
 HEALDSBURG, CA 95448
 APN 132-120-017 & 018

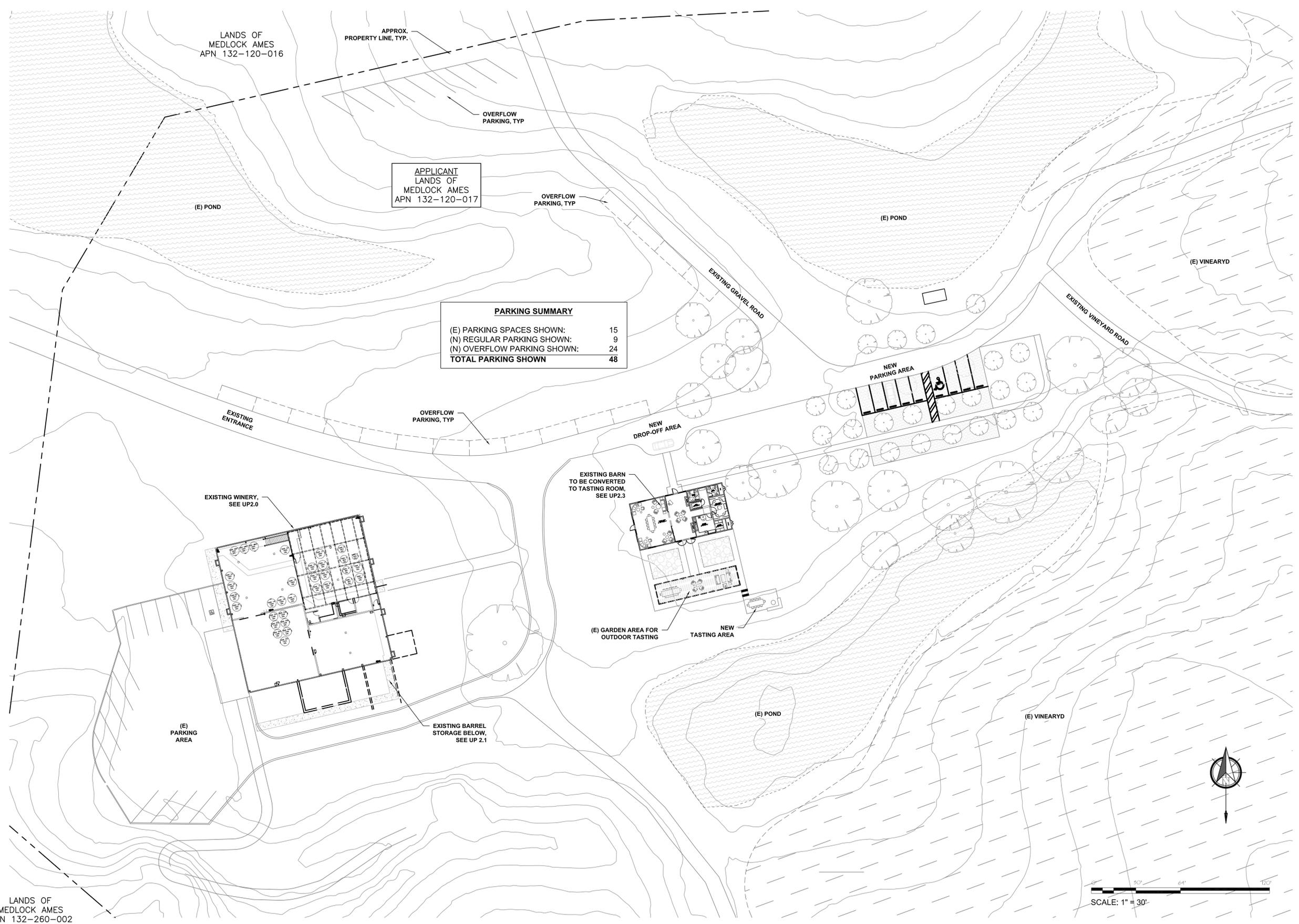
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 PARTIAL SITE PLAN

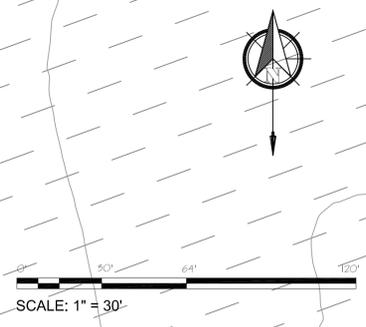
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 APN 132-120-017 & 018

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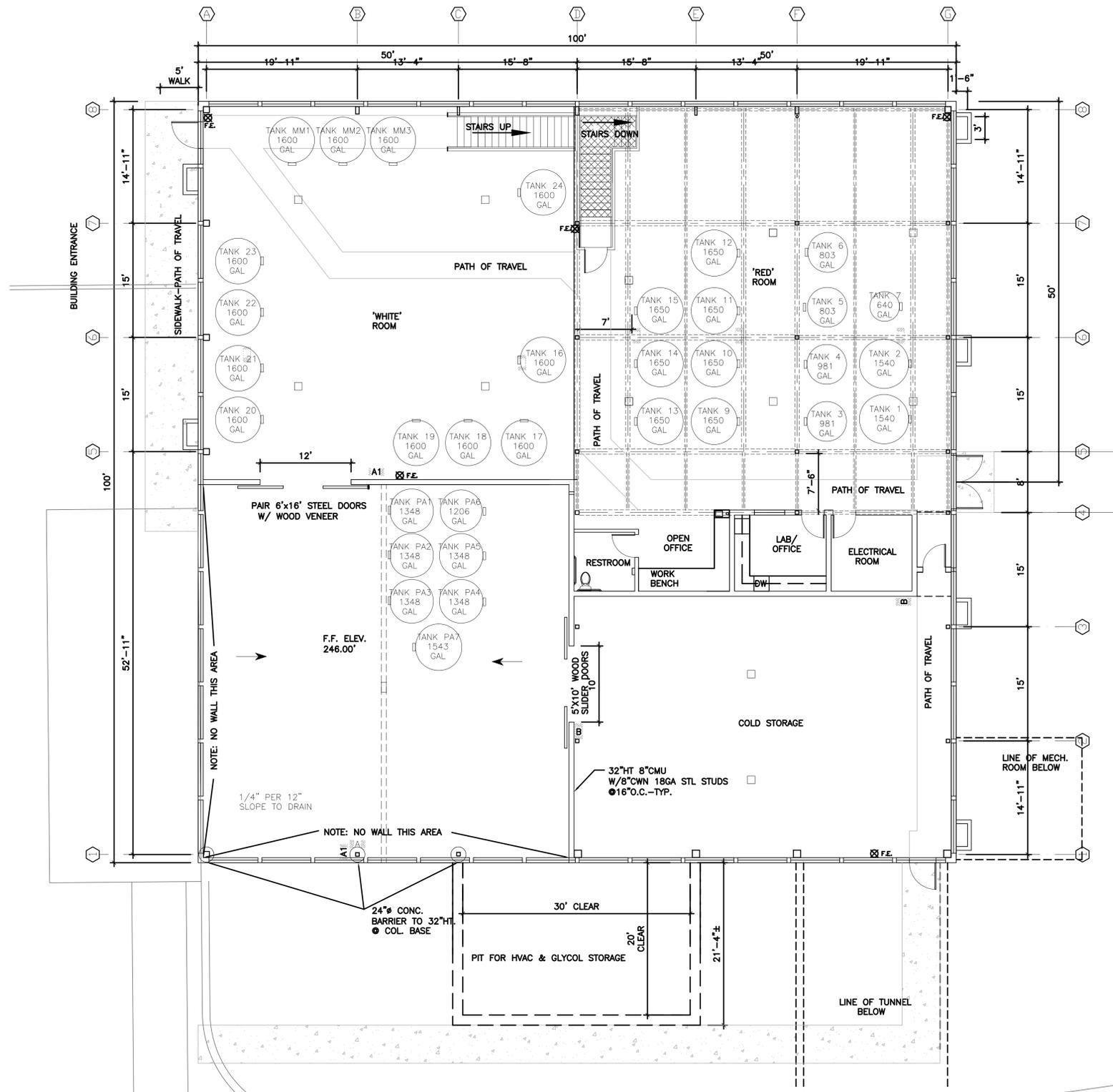
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1 PROPOSED PARTIAL SITE PLAN
 Scale: 1" = 30'

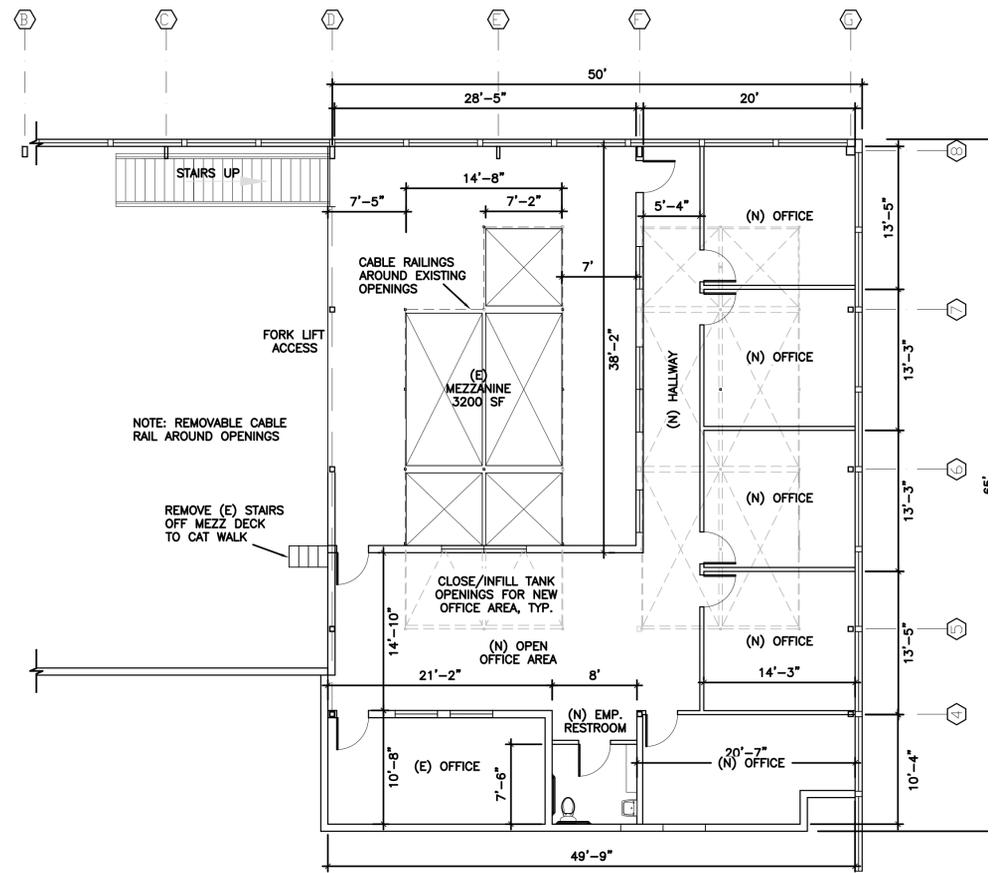


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1 EXISTING WINERY - FIRST FLOOR
 Scale: 1/8" = 1'-0"



2 PROPOSED REMODELED WINERY MEZZANINE
 Scale: 1/8" = 1'-0"

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USE PERMIT
 WINERY FLOORPLANS
 FIRST FLOOR & MEZZANINE

MEDLOCK AMES
 13414 CHALK HILL RD
 HEALDSBURG, CA 95448
 APN 132-120-017 & 018

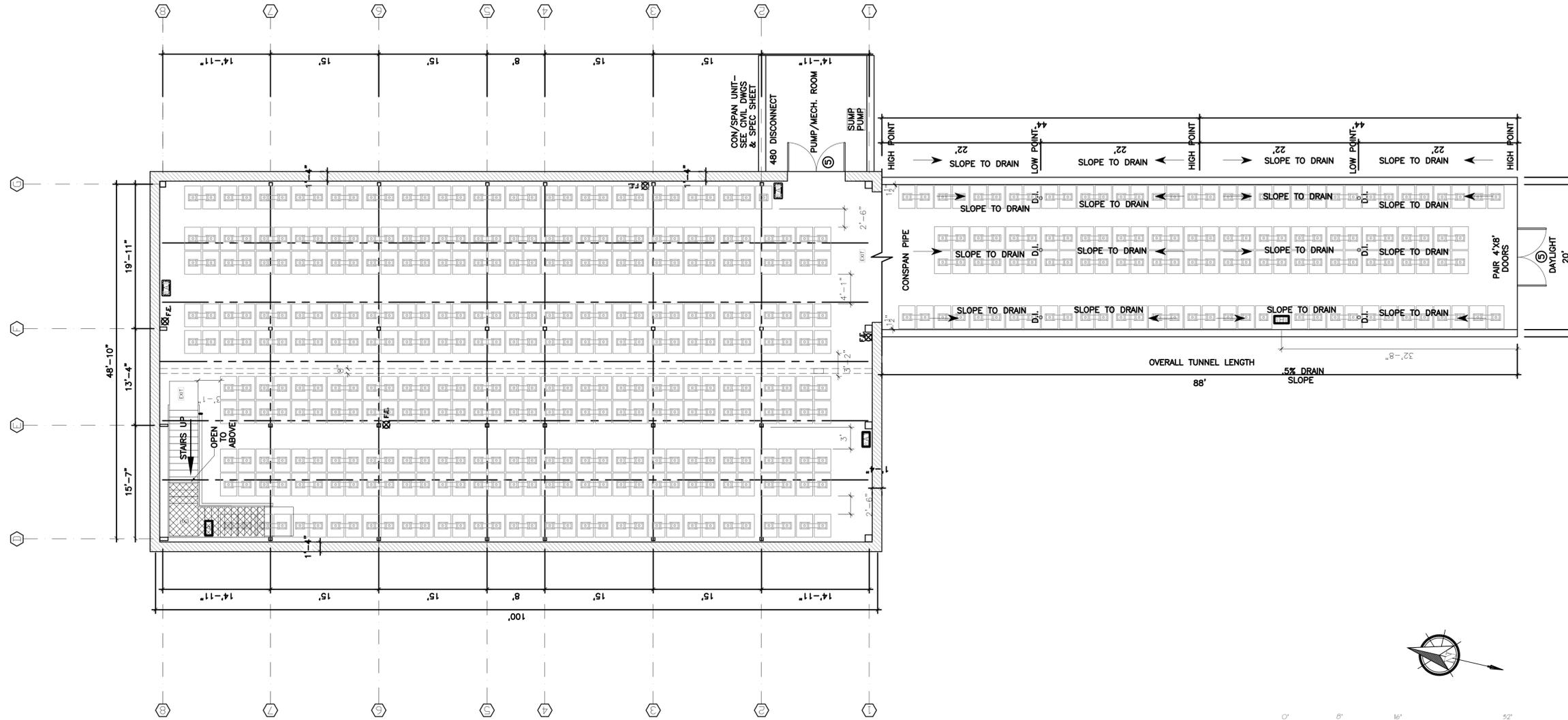
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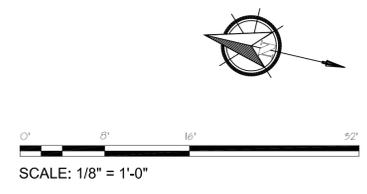
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1 EXISTING WINERY - LOWER LEVEL
 Scale: 1/8" = 1'-0"



NOTE:
 THIS PLAN ROTATED 90° FROM UPPER FLOOR PLAN ON SHEET UP2.0

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USE PERMIT
 WINERY FLOORPLAN
 LOWER LEVEL
 BARREL STORAGE

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 APN 132-120-017 & 018

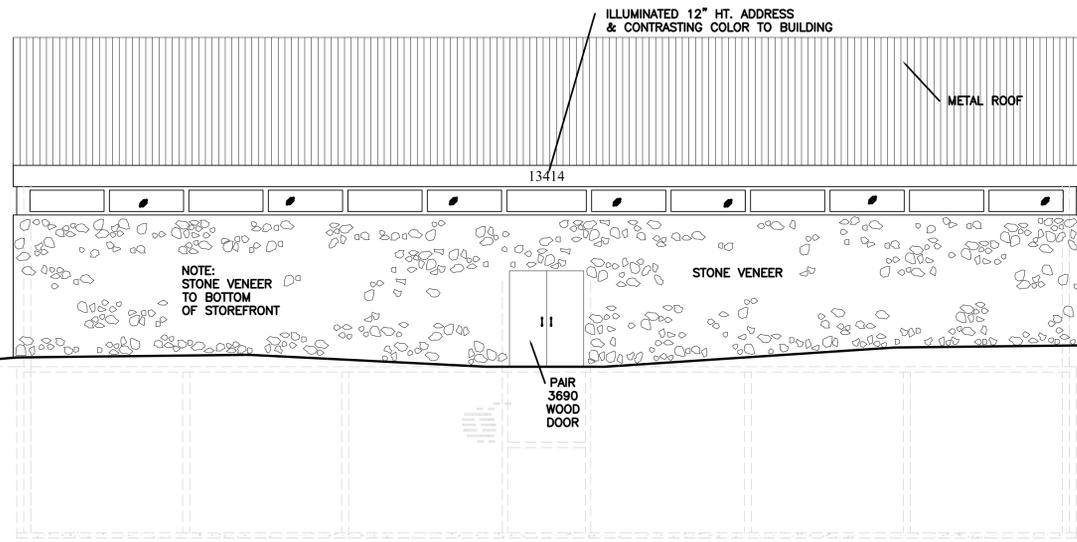
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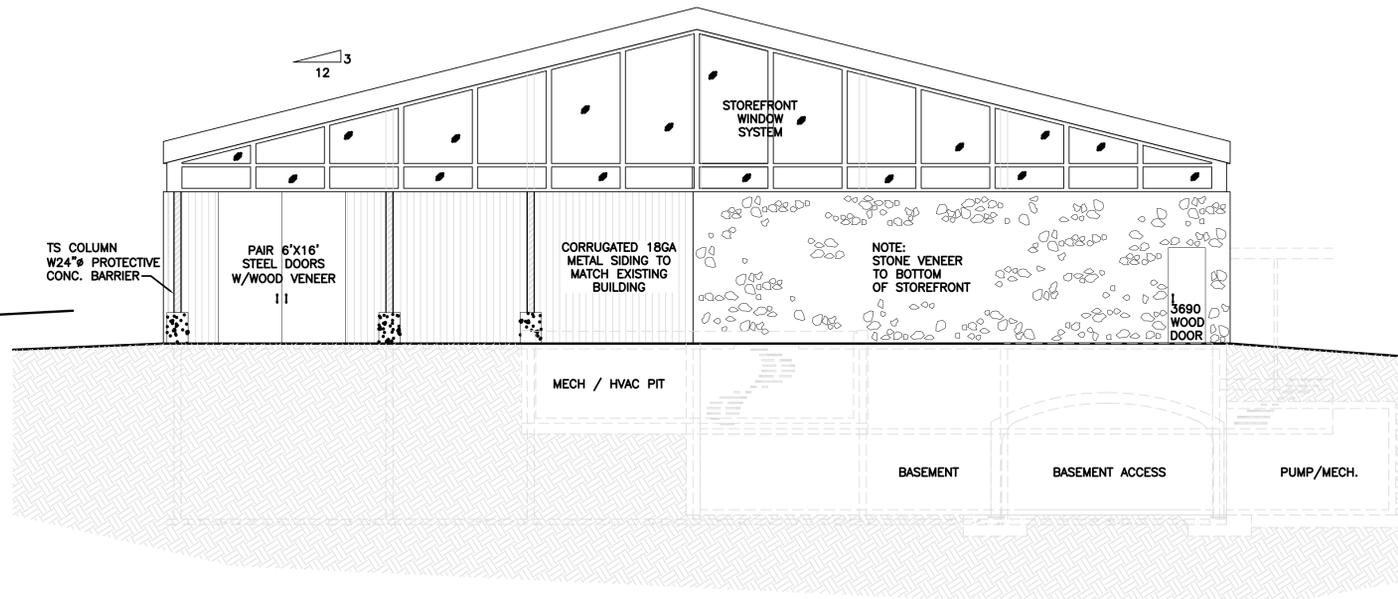
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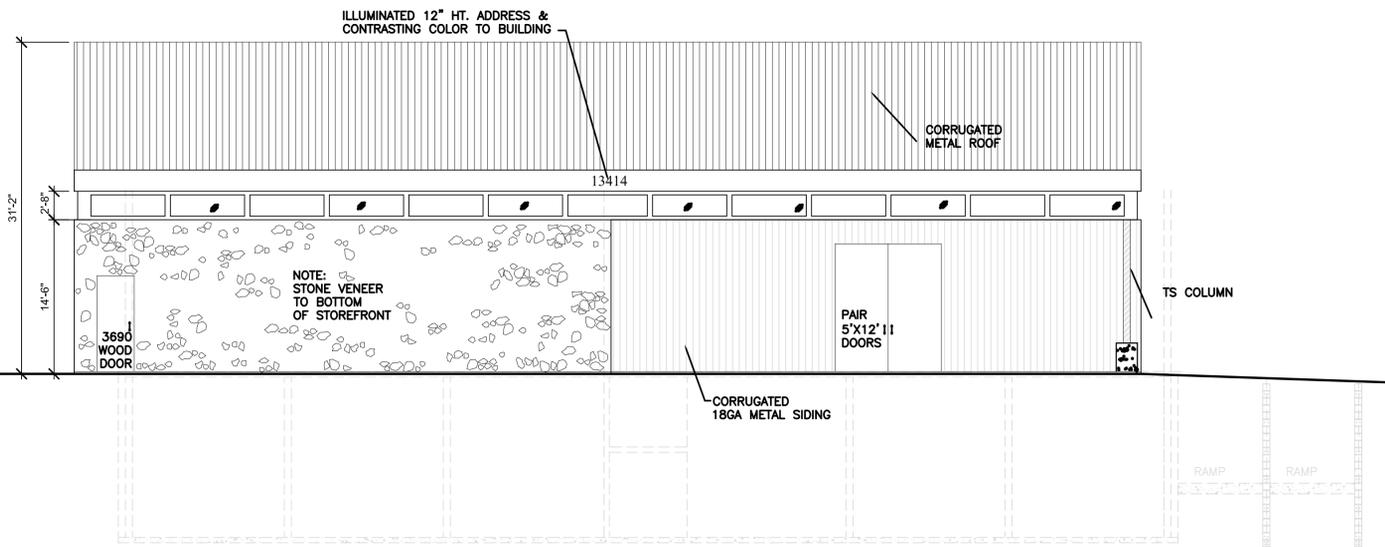
3 EXISTING WINERY - EAST ELEVATION

Scale: 1/8" = 1'-0"



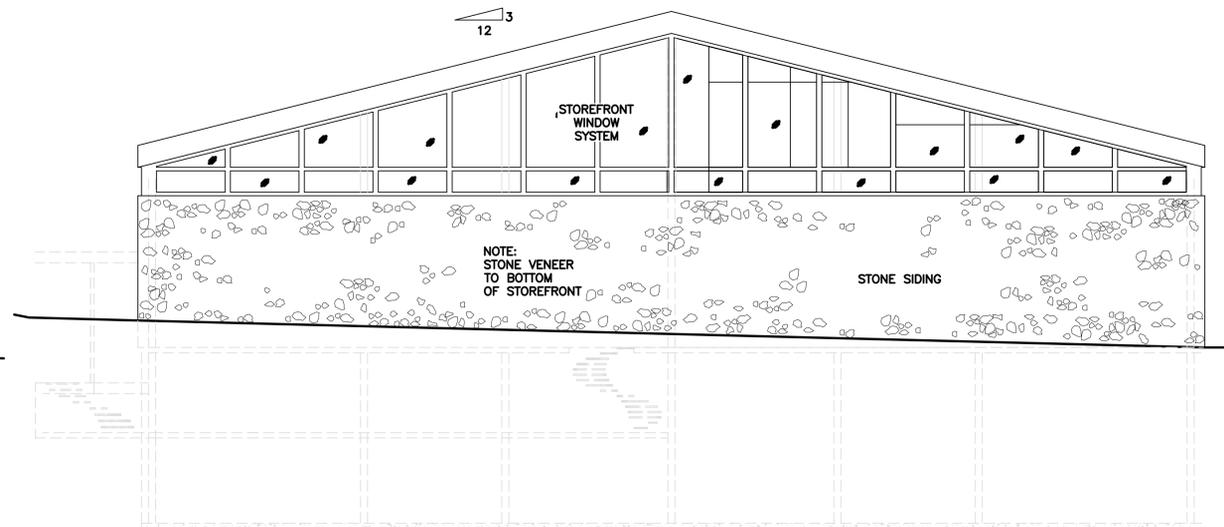
4 EXISTING WINERY - NORTH ELEVATION

Scale: 1/8" = 1'-0"



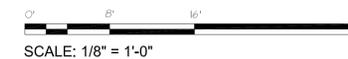
1 EXISTING WINERY - WEST ELEVATION

Scale: 1/8" = 1'-0"



2 EXISTING WINERY - SOUTH ELEVATION

Scale: 1/8" = 1'-0"



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 ELEVATIONS

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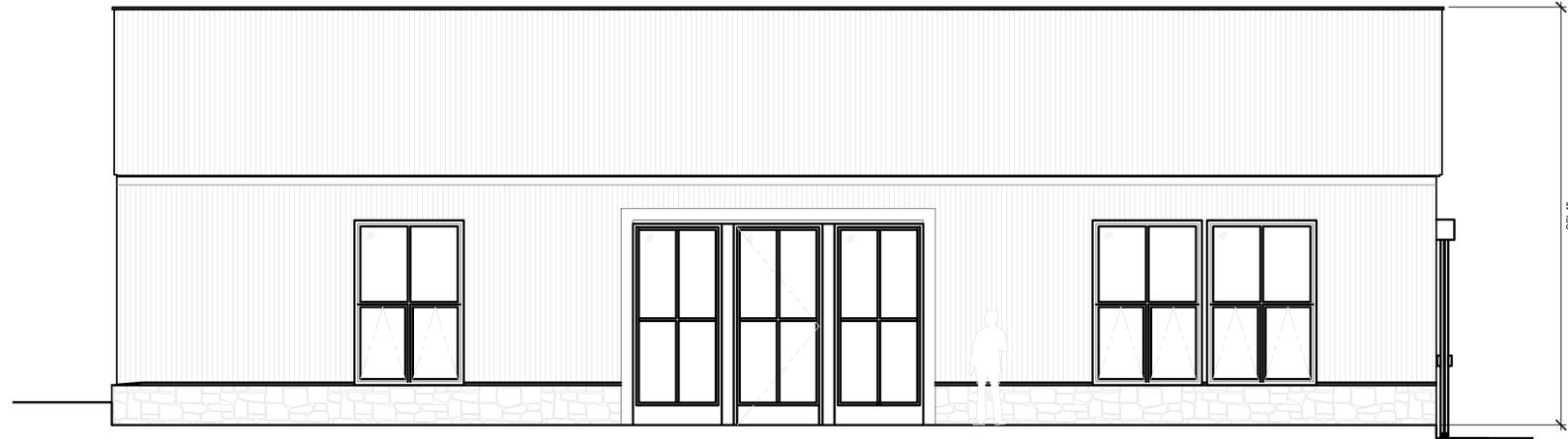
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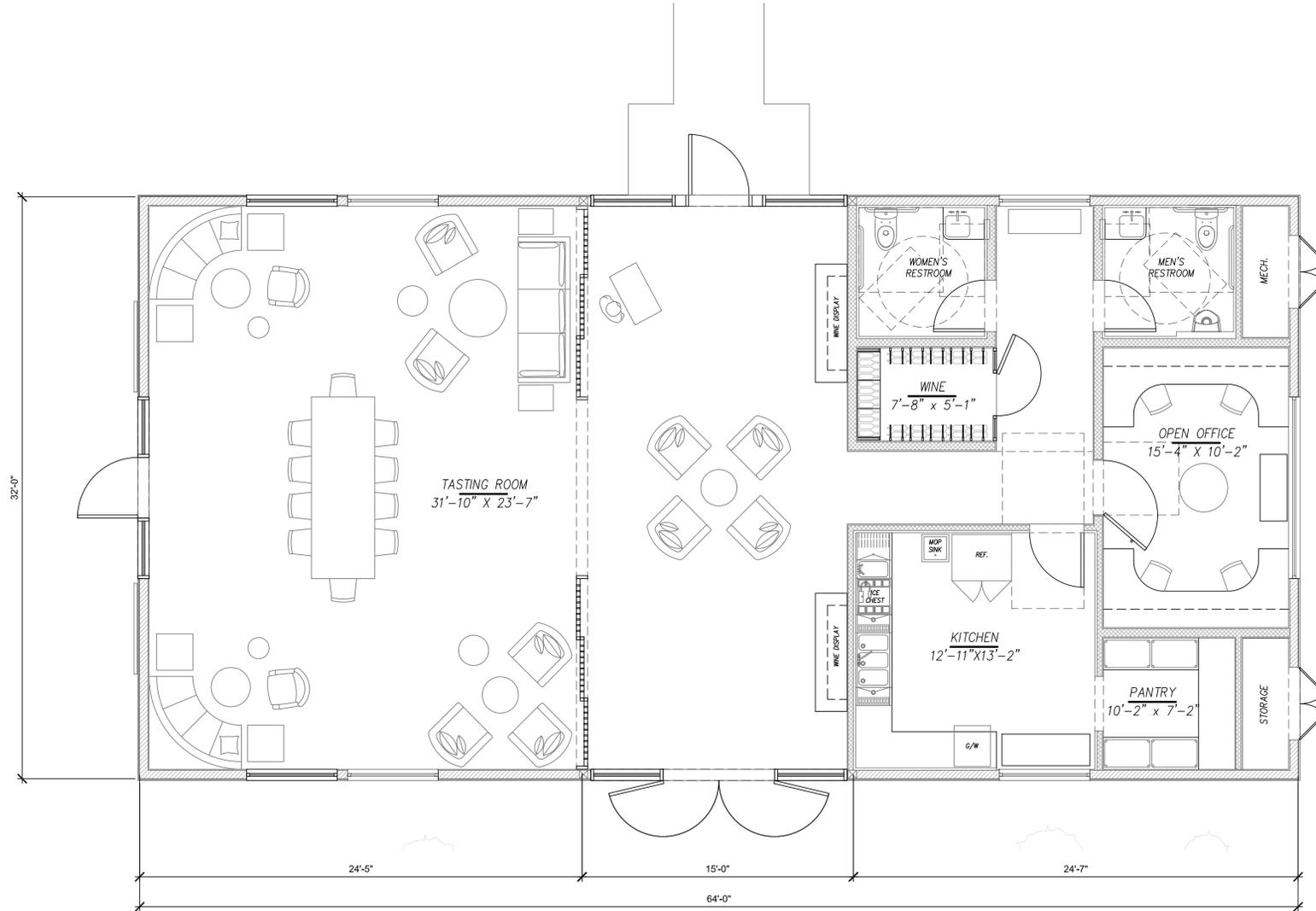
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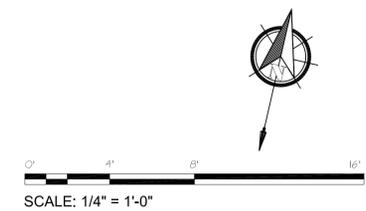
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2 EXISTING BARN / PROPOSED TASTING ROOM REMODEL
 NORTH ELEVATION
 Scale: 1/4" = 1'-0"



1 EXISTING BARN / PROPOSED TASTING ROOM REMODEL
 FLOORPLAN
 Scale: 1/4" = 1'-0"



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PROPOSED TASTING ROOM
 FLOORPLAN & ELEVATION

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 13414 CHALK HILL RD
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 APN 132-120-017 & 018

REVISIONS

DATE	DESCRIPTION

JOB NO. SMA2020-006

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September 7, 2021

Medlock Ames Vintners, LLC
c/o Steve Martin Associates, Inc.
Tammy Martin, REHS
130 S. Main Street, Suite 201
Sebastopol, CA 95472

VIA E-Mail: tammy@smassociates.net

SUBJECT: **Medlock Ames Use Permit Modification, Sonoma County, CA**
Greenhouse Gas Emissions Analysis – I&R #21-134

Dear Tammy:

This letter presents the evaluation of greenhouse gas (GHG) emissions associated with the proposed Medlock Ames Winery Use Permit Modification project. The winery where this project would occur is located at 13414 Chalk Hill Road in Healdsburg, California (Sonoma County).

Project Description

The current Medlock Ames Winery Use Permit (UPE01-0182) allows for a maximum annual wine production of 20,000 cases with no public tasting or retail sales on Assessor's Parcel Number (APN) 132-120-017. This Use Permit Modification requests an increase to 30,000 cases of wine annually, the addition of tasting and vineyard tours by appointment only, retail sales, and 12 agricultural events annually. This Use Permit Modification is also requesting the inclusion of the adjacent parcel APN 132-120-018, under same ownership, to conduct vineyard tours. The winery parcel (APN 132-120-017) currently has 20.7 acres of vines and the adjacent parcel (APN 132-120-018) currently has 33.3 acres of vines, for a total of 54 acres of vineyard. Under the requested permit modification, the following would occur:

1. Wine will continue to be produced within the existing 20,000 square foot (sf), three level winery building (including basement and mezzanine levels).
 - a. 1,600-sf of the existing 3,200-sf mezzanine within the winery is proposed to be converted to production and administration offices.
2. The existing 1,350-sf barn is proposed to be converted as follows:
 - a. 750-sf tasting room,
 - b. 242-sf commercial kitchen and pantry,
 - c. 156-sf office space, and
 - d. Remainder: restrooms, tax paid, mechanical, and storage.

3. Tasting, vineyard tours, and retail sales strictly by appointment only. Tasting proposed to occur within the existing winery, remodeled existing barn, and the landscaped outdoor courtyard adjacent to the barn.
4. 12 agricultural visitor serving activities per year with 50 persons maximum.

Setting and Regulatory Background

The project is located in the North Coast Air Basin. The Northern Sonoma County Air Pollution Control District (NSCAPCD) regulates air emissions in this part of the basin. However, this Air District relies on the Bay Area Air Quality Management District's (BAAQMD) California Environmental Quality Act (CEQA) Air Quality Guidelines to assess air quality and GHG emissions from land use projects. This analysis was conducted following guidance provided by BAAQMD.¹ In addition, to compute the reactive organic compounds (ROC [i.e. ROG]) and carbon dioxide (CO₂) fermentation emissions, a winery tool developed by the Santa Barbara County Air Pollution Control District (SBCAPCD) was used.²

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form high ozone levels. High ozone (O₃) levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Greenhouse Gases

Global temperatures are affected by naturally occurring and anthropogenic-generated (generated by humankind) atmospheric gases, such as water vapor, carbon dioxide, methane, and nitrous oxide. Gases that trap heat in the atmosphere are called GHGs. Solar radiation enters the earth's atmosphere from space, and a portion of the radiation is absorbed at the surface. The earth emits this radiation back toward space as infrared radiation. GHGs, which are mostly transparent to incoming solar radiation, are effective in absorbing infrared radiation and redirecting some of this back to the earth's surface. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This is known as the greenhouse effect.

¹ BAAQMD, 2017. *BAAQMD CEQA Air Quality Guidelines*. May.

² Santa Barbara County Air Pollution Control District, Winery Resources. Web: <https://www.ourair.org/land-use/>

The greenhouse effect helps maintain a habitable climate. Emissions of GHGs from human activities, such as electricity production, motor vehicle use and agriculture, are elevating the concentration of GHGs in the atmosphere, and are reported to have led to a trend of unnatural warming of the earth's natural climate, known as global warming or global climate change. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred because it implies that there are other consequences to the global climate in addition to rising temperatures. Other than water vapor, the primary GHGs contributing to global climate change include the following gases:

- CO₂, primarily a byproduct of fuel combustion;
- Nitrous oxide (N₂O), a byproduct of fuel combustion; also associated with agricultural operations such as the fertilization of crops;
- Methane (CH₄), commonly created by off-gassing from agricultural practices (e.g. livestock), wastewater treatment and landfill operations;
- Chlorofluorocarbons (CFCs) were used as refrigerants, propellants and cleaning solvents, but their production has been mostly prohibited by international treaty;
- Hydrofluorocarbons (HFCs) are now widely used as a substitute for chlorofluorocarbons in refrigeration and cooling; and
- Perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆) emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

These gases vary considerably in terms of Global Warming Potential (GWP), a term developed to compare the propensity of each GHG to trap heat in the atmosphere relative to another GHG. GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time of gas remains in the atmosphere. The GWP of each GHG is measured relative to CO₂. Accordingly, GHG emissions are typically measured and reported in terms of equivalent CO₂ (CO₂e). For instance, SF₆ is 22,800 times more intense in terms of global climate change contribution than CO₂.

The State of California is addressing the issue of GHG through legislation, policy guidance, and outreach programs. CO₂ is the primary GHG emitted from land use and industrial projects. In 2006 California enacted AB 32 – the Global Warming Solutions Act, which requires that statewide GHG emissions be reduced to 1990 levels by 2020. In 2008, the California Air Resources Board (CARB) adopted the Climate Change Scoping Plan in response to AB 32. This plan describes the strategies that the State will implement to reduce future emissions by 28% to meet the 1990 target goal in 2020. BAAQMD's analysis of future land use development in the Bay Area and applicable AB 32 GHG reduction strategies lead to the development of emission-based significance thresholds for the projects in the Bay Area, which are also used in northern Sonoma County.

Climate Action 2020 and Beyond – Sonoma County Regional Climate Action Plan

Climate Action 2020 and Beyond is a regional climate action plan (CAP) established by Sonoma County to reduce GHG emissions.³ The CAP was published in July 2016. According to the County CAP, the county emitted approximately 3,944,000 MT CO_{2e} in the year 2010. This countywide inventory identified that 53 percent of the emissions were due to on-road transportation, 34 percent came from building energy, 7 percent came from fertilizer and livestock, 4 percent came from solid waste, 2 percent came from off-road transportation and equipment, and less than one percent was due to wastewater treatment and water conveyance. Transportation and building energy are the biggest GHG emissions sources in Sonoma County.

The CAP includes measures to reduce GHG emissions by 25 percent below 1990 levels by 2020, which is the primary goal. The CAP's long-term goals include to reduce GHG emissions by 40 percent in 2030 and by 80 percent in 2050. The CAP includes goals and GHG reduction measures for six different GHG sources. Additionally, the CAP includes per capita targets to assess whether the long-term goals are being met. The 2020 County Target is 5.8 MT CO_{2e} per capita, while the 2040 and 2050 targets are 2.6 and 1.3 MT CO_{2e} per capita, respectively. The CAP also includes a consistency checklist listed as *Appendix A Climate Action 2020 Community Climate Action Plan Consistency Checklist Template* as a tool for local agencies to evaluate consistency with the CAP.⁴ However, this CAP is not a valid CAP, and therefore not used for CEQA purposes.⁵

NSCAPCD CEQA Thresholds

Being an attainment area outside the Bay Area, NSCAPCD has established air pollutant emissions-based thresholds that can be applied to land use projects for the purpose of evaluating the significance under CEQA. These thresholds are shown in Table 1.

BAAQMD CEQA Thresholds

Per Appendix G of the CEQA Guidelines and BAAQMD recommendations, greenhouse gas emissions are considered significant if implementation of the proposed projects would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The NSCAPCD regulates air emissions in this part of the basin; however, the Air District relies on the Bay Area Air Quality Management District's methods for analyzing impacts and providing emission-based thresholds for GHG. In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA.

³ Sonoma County Regional Climate Protection Authority, 2016. *Climate Action 2020 and Beyond*. July. Web: https://rcpa.ca.gov/wp-content/uploads/2016/07/CA2020_Plan_7-7-16_web.pdf

⁴ Sonoma County Regional Climate Protection Authority, 2016. *Climate Action 2020 and Beyond Appendices*. July. Web: https://rcpa.ca.gov/wp-content/uploads/2016/07/CA2020_Appendices_7-7-16_web.pdf

⁵ Sonoma County, 2018. *Resolution Number 18-0166*. May.

These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and are included in the Air District's updated CEQA Guidelines. The BAAQMD thresholds were developed specifically for the Bay Area after considering the latest Bay Area GHG inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. BAAQMD intends to achieve GHG reductions from new land use developments to close the gap between projected regional emissions with AB 32 scoping plan measures and the AB 32 targets.

The BAAQMD GHG recommendations include a bright-line emissions threshold of 1,100 metric tons (MT) of CO_{2e} or an emission efficiency metric of 4.6 MT of CO_{2e} per year per service population (future residences and full-time workers) if the bright-line threshold is exceeded. Projects that have emissions below 1,100 MT of CO_{2e} per year, or 4.6 MT of CO_{2e} per year per capita, are considered to have less-than-significant GHG emissions. For this analysis, only the metric ton threshold of 1,100 MT of CO_{2e} per year was used. To adjust for year 2030 GHG reduction targets, the threshold was reduced by 40 percent.⁶

CalEEMod Modeling

The California Emissions Estimator Model, Version 2020.4.0 (CalEEMod) was used to estimate construction and operational emissions. CalEEMod is a computer model developed by the South Coast Air Quality Management District with cooperation of other California Air Districts to estimate air pollutant and GHG emissions from land use development projects. The model is recommended by California air districts for use in estimating emissions from land use development projects. CalEEMod uses CARB's EMISSION FACTORS 2017 model to compute emissions from traffic generated by construction (i.e. off-site construction activities), which included worker trips, vendor deliveries and material hauling trips and operational traffic.⁷ The project proposed land uses were entered as follows:

- 1,350-sf entered as "Quality Restaurant" to represent the barn conversion to wine tasting with some kitchen functions. Note that CalEEMod does not have a separate land use for wineries.

Summary of Construction Criteria Pollutants

Construction period emissions, assumed to occur all in one year (i.e., 2022), are reported in Table 1. These emissions are based on construction activity assumed under default conditions as predicted by the CalEEMod model. Emissions do not exceed NSCAPCD thresholds. Therefore, the project would not have a *less-than-significant impact* in regards to construction emissions.

⁶ The year 2020 threshold of 1,100 metric ton threshold is adjusted in line with the Sonoma County CAP 2030 target that is 40 percent below 2020 conditions.

⁷ See CARB's EMFAC2017 Web Database at <https://www.arb.ca.gov/emfac/2017/>

Table 1. Project Construction Emissions (Tons/Year)

Scenario	ROG	NOx	PM ₁₀	PM _{2.5}	GHG
Project Construction	0.06 tons	0.42 tons	0.03 tons	0.02 tons	62 Metric Tons
<i>NSCAPCD Thresholds (tons per year)</i>	<i>40 tons</i>	<i>40 tons</i>	<i>15 tons</i>	<i>10 tons</i>	<i>N/A</i>
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	

Project Operational Criteria Pollutants & Greenhouse Gas Emissions

The primary source of operational GHG emissions associated with the project would be from the traffic. Other sources would include minor direct emissions from natural gas usage and indirect emissions from electricity usage. Traffic information used in this analysis is based on the project’s traffic study that analyzed a 1,350-sf tasting room.⁸ The traffic trips are assumed to include attendees for vineyard tours. The traffic study predicts 62 new trips per day with the proposed expansion.

There would be up to 12 events per year that would attract 50 visitors in addition to daily operations. According to the traffic study, attendees and extra employees would result in 46 trips per event.

CalEEMod Modeling

CalEEMod was used to estimate full build-out operational criteria pollutants and GHG emissions. Unless otherwise noted below, the model defaults for the Sonoma County – North Coast were used. The year 2023 was used for modeling, as this was assumed to be the earliest the project could be operational. Annual emissions occurring after 2023 would be lower as vehicle and electricity production emission rates are anticipated to continually decrease.

CalEEMod estimated emissions for mobile, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport based on the land uses described above. Inputs to the operational and GHG modeling are described below. Operational criteria pollutant emission and GHG emissions are listed in Tables 2.

Operational Trip Emissions

The CalEEMod model uses mobile emission factors from the California Air Resources Board’s Emission FACTors (EMFAC) 2017 model. Forecasted project trip generation rates provided by the traffic consultant were applied to the wine tasting room land use.⁹ The daily rate of 62 trips per 1,350-sf was used for weekday and weekend trips (i.e. 62 trips divided by 1.35 thousand square feet). For the 12 special events, daily mobile emissions from regular operation (62 trips per day) were ratioed with event trips (46 trips per day) to compute the additional daily emissions. Default trip lengths for a rural setting were used.

⁸ W-Trans, 2021. *Memorandum of Assumptions for Medlock Ames Project Traffic Analysis*. From Dalene J. Whitlock, PE and Jade Kim. June 30.

⁹ W-Trans, 2021. *Memorandum of Assumptions for Medlock Ames Project Traffic Analysis*. From Dalene J. Whitlock, PE and Jade Kim. June 30.

Energy, Natural Gas, Water Usage and Solid Waste Production

CaleEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. Indirect emissions from electricity were computed in CaleEMod using the existing model default intensity rate of 119.98 pounds of CO₂ per megawatt of electricity produced.

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions.

Wine Fermentation

The CaleEMod model, described above, does not account for the ROC and CO₂ emissions from wine fermentation. ROCs and CO₂ are released during this process. Although this is considered a biogenic emission, they were included in this analysis for informational purposes. The amount of ROCs and CO₂ emitted are dependent on many variables including the type of wine produced and the winemaking process.

The SBCAPD has developed winery resources tools to predict winery emissions for CEQA purposes. The Winery Excel for CEQA workbook was created to estimate emissions from the winery fermentation process and equipment, such as a boiler and emergency generator. For this analysis, the workbook was only used to compute CO₂ emissions from fermentation. The total maximum cases produced per year (i.e. 5,000 cases) and percentage of red (i.e. 70 percent) and white wine (i.e. 30 percent) was used to predict the fermentation emissions.

Summary of Operational Criteria Pollutants and GHG Emissions

As shown in Table 2, the proposed project would have operational criteria pollutants below the NSCAPCD threshold. In Table 3, the direct and indirect emissions are below the GHG operational threshold (660 MT of CO₂e per year). Therefore, the project’s operational and GHG emissions would have a *less-than-significant impact*.

Table 2. Annual Operational Air Pollutant Emissions (Tons/Year)

Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
Typical Project Operational emissions	0.04	0.04	0.03	0.01
Fermentation	0.07	-	-	-
Emissions from Events (12/year) 50 Persons	<0.01	<0.01	<0.01	<0.01
Total	0.11	0.05	<0.01	<0.01
<i>NSCAPCD Thresholds (tons per year)</i>	<i>40 tons</i>	<i>40 tons</i>	<i>15 tons</i>	<i>10 tons</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Table 3. Annual Operational GHG Emissions (MT CO₂e/Year)

Source	Project Emissions	Methodology
Area	<1	Based on CalEEMod default
Energy Consumption	17	Based on CalEEMod default, adjusted to PG&E verified rate for electricity
Mobile	27	Based on EMFAC2017 in CalEEMod that includes daily traffic generation
Mobile (12 events/year)	3	(12) Agriculture Events per Year (50 guests)
Solid Waste	1	Based on CalEEMod default
Water	1	Based on CalEEMod default
Fermentation	10*	Based on SBCAPCD Winery Excel for CEQA
Project Total	49	
BAAQMD Threshold	660 MT CO₂e/Year	
Exceed Threshold?	No	

*Biogenic emissions not included in GHG emissions total.

* * *

This concludes the assessment of the GHG impacts from the Medlock Ames Winery Use Permit Modification project. If you have any questions or comments, please feel free to contact me at (707) 794-0400. We appreciate the opportunity to assist you.

Sincerely,

James A. Reyff
 Principal Consultant
Illingworth & Rodkin, Inc.

Attachment 1: CalEEMod Outputs and Wine Fermentation Worksheets

Attachment 1: CalEEMod Outputs and Wine Fermentation Worksheets

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**Medlock Ames
Sonoma-North Coast County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Quality Restaurant	1.35	1000sqft	1.00	1,350.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	75
Climate Zone	4			Operational Year	2023
Utility Company	Sonoma Clean Power				
CO2 Intensity (lb/MWhr)	119.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Convert Barn into tasting room/small kitchen/office uses

Vehicle Trips - 62 trips/1.350 ksf = 45.93 trips

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.03	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	90.04	46.00
tblVehicleTrips	SU_TR	71.97	46.00
tblVehicleTrips	WD_TR	83.84	46.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.2498	0.2498
2	4-3-2022	7-2-2022	0.2212	0.2212
		Highest	0.2498	0.2498

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.8400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	17.2955	17.2955	9.4000e-004	3.5000e-004	17.4240
Mobile	0.0270	0.0279	0.1891	2.9000e-004	0.0271	3.0000e-004	0.0274	7.2700e-003	2.8000e-004	7.5500e-003	0.0000	26.8466	26.8466	2.7500e-003	1.7800e-003	27.4456
Waste						0.0000	0.0000		0.0000	0.0000	0.2497	0.0000	0.2497	0.0148	0.0000	0.6186
Water						0.0000	0.0000		0.0000	0.0000	0.1300	0.1257	0.2557	0.0134	3.2000e-004	0.6855
Total	0.0354	0.0416	0.2007	3.7000e-004	0.0271	1.3400e-003	0.0285	7.2700e-003	1.3200e-003	8.5900e-003	0.3797	44.2677	44.6474	0.0318	2.4500e-003	46.1737

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	6.8400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	17.2955	17.2955	9.4000e-004	3.5000e-004	17.4240
Mobile	0.0270	0.0279	0.1891	2.9000e-004	0.0271	3.0000e-004	0.0274	7.2700e-003	2.8000e-004	7.5500e-003	0.0000	26.8466	26.8466	2.7500e-003	1.7800e-003	27.4456
Waste						0.0000	0.0000		0.0000	0.0000	0.2497	0.0000	0.2497	0.0148	0.0000	0.6186
Water						0.0000	0.0000		0.0000	0.0000	0.1300	0.1257	0.2557	0.0134	3.2000e-004	0.6855
Total	0.0354	0.0416	0.2007	3.7000e-004	0.0271	1.3400e-003	0.0285	7.2700e-003	1.3200e-003	8.5900e-003	0.3797	44.2677	44.6474	0.0318	2.4500e-003	46.1737

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/16/2022	6/22/2022	5	5	
2	Building Construction	Building Construction	1/20/2022	6/8/2022	5	100	
3	Demolition	Demolition	1/3/2022	1/14/2022	5	10	

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4	Grading	Grading	1/18/2022	1/19/2022	5	2
5	Paving	Paving	6/9/2022	6/15/2022	5	5
6	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,025; Non-Residential Outdoor: 675; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	0.0162	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394

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3.2 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	0.0162	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394

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3.2 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

3.3 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0739	50.0739	0.0162	0.0000	50.4787
Total	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0739	50.0739	0.0162	0.0000	50.4787

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3.3 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133
Total	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0738	50.0738	0.0162	0.0000	50.4787
Total	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0738	50.0738	0.0162	0.0000	50.4787

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3.3 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133
Total	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133

3.4 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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3.4 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133
Total	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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3.4 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133
Total	2.5000e-004	2.0000e-004	2.1700e-003	1.0000e-005	6.1000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5082	0.5082	2.0000e-005	2.0000e-005	0.5133

3.5 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3100e-003	0.0000	5.3100e-003	2.5700e-003	0.0000	2.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0800e-003	0.0120	5.9400e-003	1.0000e-005		5.2000e-004	5.2000e-004		4.8000e-004	4.8000e-004	0.0000	1.2381	1.2381	4.0000e-004	0.0000	1.2482
Total	1.0800e-003	0.0120	5.9400e-003	1.0000e-005	5.3100e-003	5.2000e-004	5.8300e-003	2.5700e-003	4.8000e-004	3.0500e-003	0.0000	1.2381	1.2381	4.0000e-004	0.0000	1.2482

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3.5 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0821
Total	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0821

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3100e-003	0.0000	5.3100e-003	2.5700e-003	0.0000	2.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0800e-003	0.0120	5.9400e-003	1.0000e-005		5.2000e-004	5.2000e-004		4.8000e-004	4.8000e-004	0.0000	1.2381	1.2381	4.0000e-004	0.0000	1.2482
Total	1.0800e-003	0.0120	5.9400e-003	1.0000e-005	5.3100e-003	5.2000e-004	5.8300e-003	2.5700e-003	4.8000e-004	3.0500e-003	0.0000	1.2381	1.2381	4.0000e-004	0.0000	1.2482

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3.5 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0821
Total	4.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0821

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663

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3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.8000e-004	1.9600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4574	0.4574	1.0000e-005	1.0000e-005	0.4619
Total	2.3000e-004	1.8000e-004	1.9600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4574	0.4574	1.0000e-005	1.0000e-005	0.4619

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663

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3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.8000e-004	1.9600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4574	0.4574	1.0000e-005	1.0000e-005	0.4619
Total	2.3000e-004	1.8000e-004	1.9600e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4574	0.4574	1.0000e-005	1.0000e-005	0.4619

3.7 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	2.7000e-004	1.3000e-004	4.0000e-004	3.0000e-005	1.2000e-004	1.5000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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3.7 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0254	0.0254	0.0000	0.0000	0.0257
Total	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0254	0.0254	0.0000	0.0000	0.0257

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	2.7000e-004	1.3000e-004	4.0000e-004	3.0000e-005	1.2000e-004	1.5000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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3.7 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0254	0.0254	0.0000	0.0000	0.0257
Total	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0254	0.0254	0.0000	0.0000	0.0257

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0270	0.0279	0.1891	2.9000e-004	0.0271	3.0000e-004	0.0274	7.2700e-003	2.8000e-004	7.5500e-003	0.0000	26.8466	26.8466	2.7500e-003	1.7800e-003	27.4456
Unmitigated	0.0270	0.0279	0.1891	2.9000e-004	0.0271	3.0000e-004	0.0274	7.2700e-003	2.8000e-004	7.5500e-003	0.0000	26.8466	26.8466	2.7500e-003	1.7800e-003	27.4456

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Quality Restaurant	62.10	62.10	62.10	73,738	73,738
Total	62.10	62.10	62.10	73,738	73,738

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Quality Restaurant	14.70	6.60	6.60	12.00	69.00	19.00	38	18	44

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Quality Restaurant	0.527833	0.059888	0.175497	0.130685	0.038148	0.009127	0.014102	0.006456	0.001101	0.000300	0.030749	0.001549	0.004565

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.3635	2.3635	6.5000e-004	8.0000e-005	2.4033
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.3635	2.3635	6.5000e-004	8.0000e-005	2.4033
NaturalGas Mitigated	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9320	14.9320	2.9000e-004	2.7000e-004	15.0207
NaturalGas Unmitigated	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9320	14.9320	2.9000e-004	2.7000e-004	15.0207

Medlock Ames - Sonoma-North Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Quality Restaurant	279815	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9320	14.9320	2.9000e-004	2.7000e-004	15.0207
Total		1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9320	14.9320	2.9000e-004	2.7000e-004	15.0207

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Quality Restaurant	279815	1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9320	14.9320	2.9000e-004	2.7000e-004	15.0207
Total		1.5100e-003	0.0137	0.0115	8.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	14.9320	14.9320	2.9000e-004	2.7000e-004	15.0207

Medlock Ames - Sonoma-North Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Quality Restaurant	43429.5	2.3635	6.5000e-004	8.0000e-005	2.4033
Total		2.3635	6.5000e-004	8.0000e-005	2.4033

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Quality Restaurant	43429.5	2.3635	6.5000e-004	8.0000e-005	2.4033
Total		2.3635	6.5000e-004	8.0000e-005	2.4033

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.8400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	6.8400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	6.8300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

Medlock Ames - Sonoma-North Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	6.8300e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2557	0.0134	3.2000e-004	0.6855
Unmitigated	0.2557	0.0134	3.2000e-004	0.6855

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Quality Restaurant	0.409771 / 0.0261556	0.2557	0.0134	3.2000e-004	0.6855
Total		0.2557	0.0134	3.2000e-004	0.6855

Medlock Ames - Sonoma-North Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Quality Restaurant	0.409771 / 0.0261556	0.2557	0.0134	3.2000e-004	0.6855
Total		0.2557	0.0134	3.2000e-004	0.6855

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2497	0.0148	0.0000	0.6186
Unmitigated	0.2497	0.0148	0.0000	0.6186

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Quality Restaurant	1.23	0.2497	0.0148	0.0000	0.6186
Total		0.2497	0.0148	0.0000	0.6186

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Quality Restaurant	1.23	0.2497	0.0148	0.0000	0.6186
Total		0.2497	0.0148	0.0000	0.6186

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

Medlock Ames - Sonoma-North Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Winery Emissions Summary for CEQA				
Project Name:		Medlock Ames		
Date:		9/3/2021		
<i>These tables can be copied and used the CEQA document.</i>				
Long Term Operational Impacts				
Source		ROG/ROC (lbs/day)	NOx (lbs/day)	PM (lbs/day)
CalEEMod	Mobile			N/A
	Total			
Fermentation		7.04	0	0
Equipment	Boiler	#N/A	#N/A	#N/A
	Diesel Engine	#N/A	#N/A	#N/A
<i>Daily Criteria Pollutant Emissions</i>		#N/A	#N/A	#N/A
Annual Greenhouse Gas Emissions				
Source		MT CO2e/yr		
CalEEMod				
Fermentation		9.52		
Equipment	Boiler	0		
	Diesel Engine	0.00		
<i>Annual GHG Emissions</i>		10		

Criteria Pollutant Wine Emissions									
Maximum Daily Wine ROC Emissions (ethanol)									
Process	Red usage	White usage	units	Red EF	White EF	units	Red lb/day	White lb/day	
Fermentation	7,133	0	gal/cycle	6.20	2.50	lb/1000 gal	6.32	0.00	
Aging/Storage	9,510	0	gal/day	0.0762	0.0708	lb/1000 gal-day	0.73	0.00	
							7.04	0.00	
Total ROC (ethanol) Emissions=							7.04	lb/day	
Annual Wine ROC Emissions (ethanol)									
Process	Red usage	White usage	units	Red EF	White EF	units	Red lb/year	White lb/year	
Fermentation	23,775	0	gal/yr	6.20	2.50	lb/1000 gal	147	0	
Aging/Storage	0	0	gal/yr	27.83	25.83	lb/1000 gal	0	0	
							147	0	
Total =							147	lb/year	
							0.07	tpy	

Annual CO2 Emissions from Fermentation		
Emission Factors (EF)	Data	Units
EF red wine	882	lbs CO2/1000 gal red wine
EF white wine	819	lbs CO2/1000 gal white wine
Red Wine Production	23,775	gallons/year
Red Wine Emissions	20,980	lbs CO2/year
	9.52	MT CO2/year
White Wine Production	0	gallons/year
White Wine Emissions	0	lbs CO2/year
	0.00	MT CO2/year
Total GHG Emissions	9.52	MT CO2/year

Groundwater Report
13414 Chalk Hill Road,
APN 132-120-017

Prepared per Sonoma County Policy & Procedure 8-1-14

Prepared for:

Ames Morrison
13414 Chalk Hill Road,
Healdsburg California, 95448

Prepared by:



O'Connor Environmental, Inc.
P.O. Box 794, 447 Hudson Street
Healdsburg, CA 95448
www.oe-i.com

A handwritten signature in blue ink, appearing to read "Michael Sherwood".



Michael Sherwood BS PG #8839 (EXP 6/30/23)
Geologist/Hydrologist

Katherine Woodworth, BS
Environmental Scientist

January 5, 2022

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Appendix A: Well Completion Reports

Appendix B: Sonoma County Groundwater Recharge Analysis

Introduction

This project is a Use Permit Modification for the Medlock Ames Winery located at 13414 Chalk Hill Road (Sonoma County APN 132-120-017), located outside of the City of Healdsburg (Figure 1). The project applicant also owns three parcels adjacent to the winery parcel (APN's 132-120-016, 132-120-018 and 132-140-017) Figure 2. The existing Use Permit (UPE01-0182) allows for the production of 20,000 cases of wine with no public tasting or retail on the winery parcel. The winery parcel currently contains one secondary residence, one winery, and 20.7 acres of vineyard. The Use Permit Modification requests a production increase from 20,000 to 30,000 cases of wine annually as well as beginning vineyard tours across the winery parcel and neighboring parcel APN 132-120-018, and wine tasting by appointment.

The project parcel is located within the Class 3 groundwater area defined by the County of Sonoma as having marginal groundwater availability. This hydrogeologic report was prepared as required by the Sonoma County Permit and Resource Management Division (PRMD) pursuant to General Plan Policy WR-2e and Procedure and Policy 8-1-14. This report only evaluates potential impacts of the proposed project to groundwater. All other plans and documents related to permitting the project are being prepared by other professionals.

This hydrogeologic report includes the following elements: estimates of existing and proposed water use within the project impact area, compilation of well completion reports (drillers' logs) from the area and characterization of local hydrogeologic conditions, estimates of annual groundwater recharge and existing and proposed groundwater use, and the potential for well interference between the project well and neighboring wells.

Limitations

Groundwater systems in Sonoma County and the Coast Range are typically complex, and available data rarely allows for more than a general assessment of groundwater conditions and aquifer extents. Hydrogeologic interpretations are based on drillers' reports made available through the California Department of Water Resources (DWR), available geologic maps and hydrogeologic studies, and professional judgment. Existing and proposed water uses on and near the project parcel are estimated based on the applicant's experience and expectations, and on regionally appropriate water duties for the observed and expected uses. The recharge estimates presented below are based on established soil water balance modeling techniques for calculating infiltration recharge and they do not explicitly account for the role of surface water/groundwater interaction or bedrock geology in controlling recharge and groundwater availability.

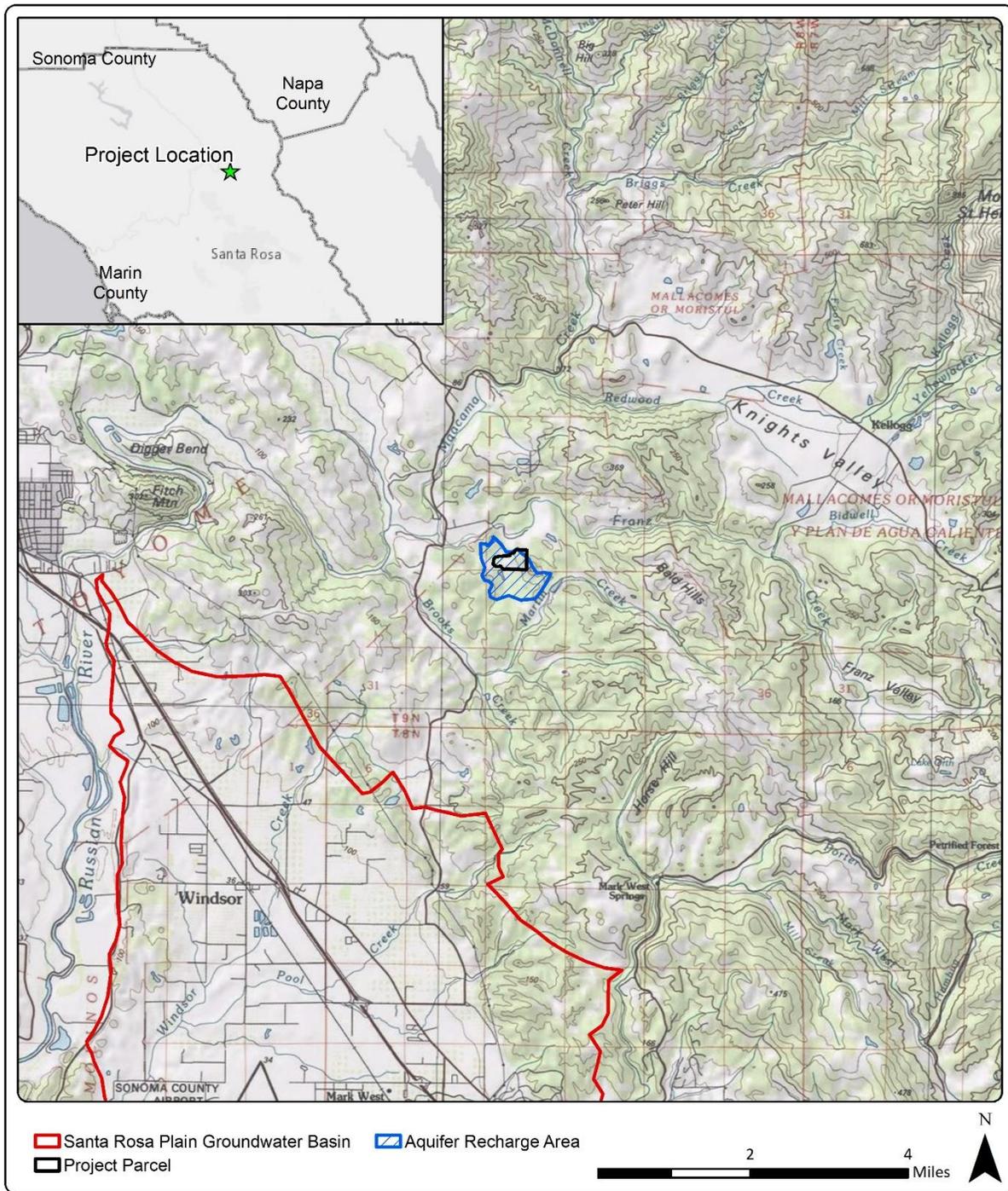


Figure 1: Project location map.

Hydrogeologic Conditions

Overview

The project parcel is located approximately 5 miles east of the City of Healdsburg and covers the western portion of Bell Mountain south of Franz Creek (Figure 1). The primary geologic unit underlying the project site is the Glen Ellen formation, (Map unit QTget, Figure 2) which consists of interbedded siltstone, fine- to coarse- grained sandstone, pebbly and cobbly sandstone, and tuff (Blake et al., 2002). Southeastern portions of the aquifer recharge area were mapped in 2007 by Graymer et. al. as being underlain by the Clear Lake Volcanics, Huichia, and Glen Ellen formations, (Map Unit QThg, Figure 2) which are comparable to the Glen Ellen formation in the rest of the project area. To the North and east of the aquifer recharge zone, there are contacts with surficial alluvium and fluvial deposits (map Unit Qa and Qal respectively, Figure 2)

Yields from wells completed in the Glen Ellen Formation typically range from 15 to 30 gpm (Ford, 1975), specific yield estimates range from 3 to 7% (Herbst et al., 1982), and hydraulic conductivity estimates range from 5 to 23 ft/day (Cardwell, 1958; Kadir & McGuire, 1987; Nishikawa, 2013). In some areas, large amounts of clay result in the development of confined aquifer conditions (Nishikawa, 2013).

The Maacama fault runs from northwest to southeast approximately 0.6 miles northeast of the project parcel (Figure 2), and other unnamed faults exist 1.2 miles southwest of the parcel. Although these faults likely impact regional groundwater flows they are located at such a distance that they are not believed to impact groundwater resources at the scale of the local project aquifer.

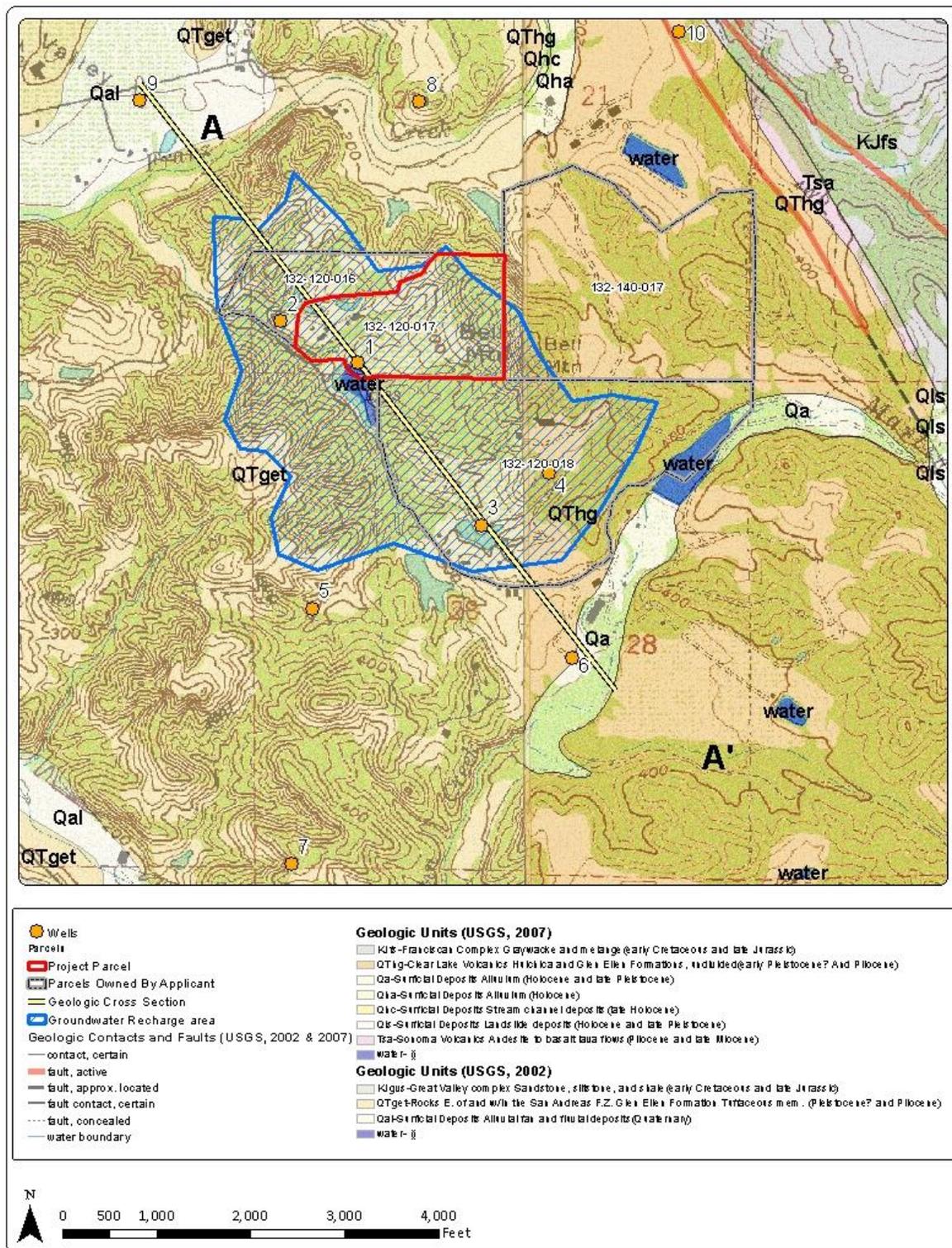


Figure 2: Surficial geology and locations of wells in the vicinity of the project parcel. Surficial geology based on data from the Geologic Map and Map Database of Western Sonoma, Northernmost Marin, and Southernmost Mendocino Counties, California, (Blake et al 2002) and Geologic Map and Map Database of Eastern Sonoma and Western Napa Counties, California. (Graymer et. Al, 2007)

Well Data

Well Completion Reports for wells within the vicinity of the project parcel were obtained through the California Department of Water Resources (DWR) Well Completion Report Map Application as well as through the Sonoma County permit history database. A subset of these logs which could be accurately georeferenced based on parcel numbers and location sketches has been compiled and is discussed below. The approximate location of these wells is shown in Figure 2. Well Completion Reports for these wells have been compiled in Appendix A. Additional well information was provided for wells located on the project parcel as well as neighboring parcels owned by the project applicant.

The project well, Well 1, is also known as the CS2 well, and is located near the southwestern corner of the project parcel (Figure 2). Although a well completion report was not available for this well some details are known. Well 1 is reported by the applicant to be 470 ft deep with perforated casing installed from 310 to 370 ft, 390 to 410 ft and 430 to 470 ft. A static water level of 70.5 ft was measured in Well 1 in July of 2021.

Three other wells (Wells 2, 3 and 4) are located on two adjacent parcels owned by the applicant (APNs 132-120-016 to the west and 132-120-018 to the south) (Table 1). Of these, the project applicant had Well Completion reports available for the two wells (Wells 3 and 4) which are located on parcel 132-120-018 south of the project parcel (Figure 2). Well 2 is also known as the Biz Barn Well and is located near the western edge of parcel 132-120-016. A well completion report for Well 2 was not available, however details regarding its depth and recent water surface elevation are known. Well 2 is reported to be 463 ft deep and a static water level of 67 ft was measured in July of 2021. The screened interval of Well 2 is unknown at the time of this report and are assumed to be similar to those of other nearby wells.

Well 3 is known as the Alligator Pond well and is located on the margin of the pond located in the southwest corner of parcel 132-120-018. This well was constructed in 2016 and completed to a depth of 660 ft. The driller reported encountering “brown clay and volcanic rock” in the upper 45 ft of the boring followed by alternating layers of blue ash and blue volcanic rock through to the bottom of the well boring. These materials are consistent with the volcanic members of the Glenn Ellen formation. Well 3 was perforated beginning at 280 ft all the way to the bottom of the well at 660 ft. A static water level of 100 ft below ground surface (bgs) was reported after development. Following a two-hour airlift pumping test the well had an estimated yield of 300 gallons per minute (drawdown was not reported for this test).

Well 4 is also located on parcel 132-120-018 closer to the center of the parcel and is known as the Cabana well. Well 4 was completed to a depth of 510 ft in 2006. Materials encountered include a variety of sediments including gravels and sands mixed with blue and green clays alternating at relatively short intervals. This mixture of sedimentary rocks although different from what was encountered in the relatively close Well 3 match the descriptions of the sedimentary rocks associated with the Glenn Ellen Formation demonstrating the great variety of rock types found within the same formation. After development a static water level of 160 ft bgs

was recorded. A yield of 20 + gpm was reported after a four-hour airlift test which resulted in 480 ft of drawdown.

Drillers' Reports for wells within a half mile of the project parcel indicate that the top of the local water table is between 10 and 200 ft below the ground surface (Figure 2, Table 1). Yields range from 20 to 300 gpm. Water levels after sustained pumping range from 40 and 375 ft. The variability of the above characteristics reflects the complexity of hydrogeology of the local aquifers (Table 1). Yields may differ between different units of the Glen Ellen Formation and the surficial alluvial and fluvial deposits, but an insufficient number of wells could be accurately located to make this determination. In general, well yields in the Glenn Ellen are known to vary significantly over short distances. The wells evaluated in this area (Table 1) are characteristic of this variability. Drillers reports for wells in the Glen Ellen formation report blue and green clays, sandy clays, clayey sands and gravels, interbedded with layers blue volcanic rock and ash which may be part of the Sonoma Volcanics.

Table 1: Well completion details for wells completed on and near the project parcel.

Well No.	1	2	3	4		
Well Name	CS2 Well	Biz Barn Well	Alligator Pond Well	Cabana Well		
Year Completed	-	-	2016	2008		
Well Depth (ft)	470	463	700	510		
Static Water Level (ft)	70.5	67	196.5	186.5		
Estimated Yield (gpm)	-	-	300	20		
Top of Screen (ft)	310	-	280	110		
Bottom of Screen (ft)	470	-	660	510		
Geologic Map Unit	QTget	QTget	QTget	QThg		
WCR Reference No.	-	-	e0296996	e0084047		
Well No.	5	6	7	8	9	10
Well Name	-	-	-	-	-	-
Year Completed	2014	2005	2019	1980	1997	1996
Well Depth (ft)	500	790	380	168	380	337
Static Water Level (ft)	50	86	140	20	10	50
Estimated Yield (gpm)	70	50	9	60	60	35
Top of Screen (ft)	40	340	200	48	40	77
Bottom of Screen (ft)	340	780	375	168	380	337
Geologic Map Unit	QTget	QThg	QTget	QTget	Qal	QThg
WCR Reference No.	994819	e033059	016743	050327	562561	526567

Geologic Cross-Section

A geologic cross-section, oriented northwest to southeast through the project recharge area is shown in Figure 3 (see Figure 2 for location). This cross section is oriented approximately parallel to regional faulting. This cross section extends from just north of Franz Creek, near Bell Mountain,

to Martin Creek. Drillers’ logs indicate that wells 8 and 3, had volcanic materials throughout the profile while wells 6 and 7 had volcanic ash conglomerates interbedded with gravels and clays through the upper 400 feet of the profile. Well logs from wells 4, 5, and 10 indicate primarily blue-colored sands, clay and gravel. This interbedding of volcanics into sandstone and conglomerates is characteristic of the eastern portions of the Glen Ellen Formation (Map unit QTget). The clay and gravel observed in well 9 are characteristic of alluvial and fluvial deposits (Map unit Qa and Qal). Water surface elevations are shown for wells intersected by the cross section, Wells 1, 2, and 3 show levels measured in July of 2021. As shown, in all wells with known screened intervals water surface elevations are above the upper end of the screen indicating groundwater in under pressure and the aquifer is semi-confined to confined.

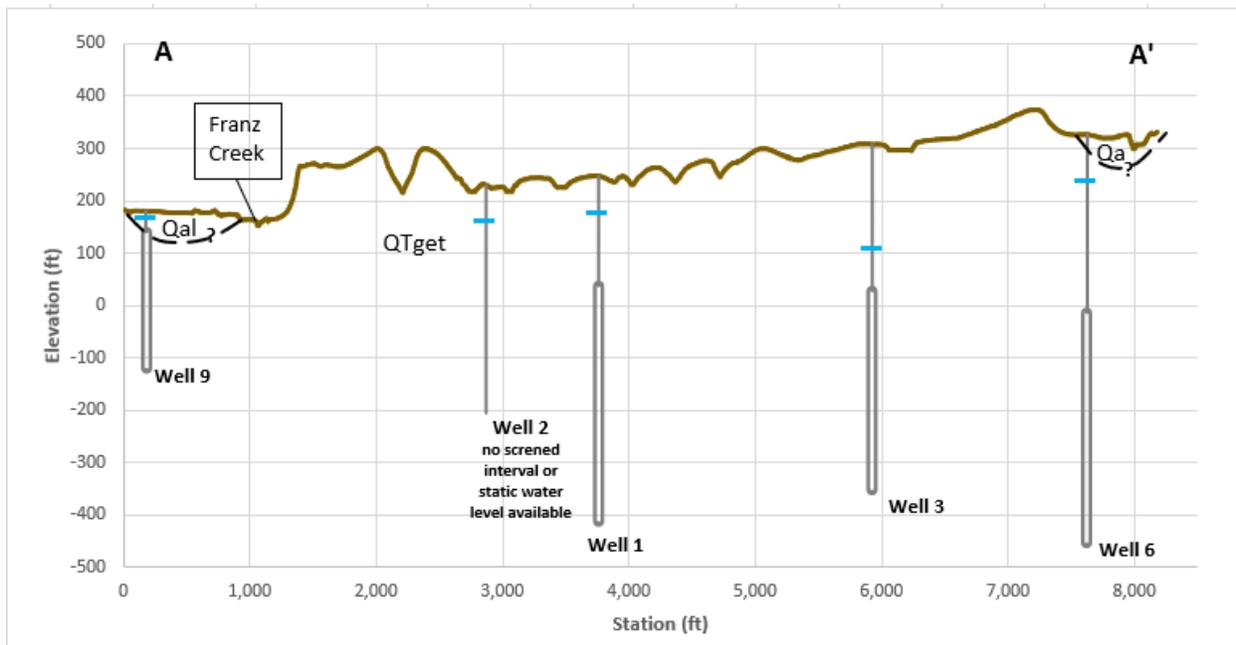


Figure 3: Hydrogeologic cross section A - A’ through the vicinity of the project parcel wells 1, 2, and 3 show water surface elevations measured July 2021 (see Figure 2 for location).

Project Aquifer

The project recharge area, which also represents the project aquifer and the project impact area, is conceptualized as adjacent portions of the Glen Ellen Formation (Figure 2). The extent of the

project recharge area is defined primarily by ridgelines of the surrounding hills and mountains. These ridgelines may function as subtle divides in groundwater flow and at a minimum delineate the extent of anticipated impacts from the project well. The project aquifer is believed to be within rocks of the Glen Ellen formation.

As defined the total project recharge/impact area is approximately 272 acres. Because of the relatively large depths at which wells are screened and the quantity of clay layers and other fine-grained material present within the Glen Ellen formation, the project aquifer is likely confined or semi-confined.

Groundwater Storage Volume

An estimate of the total available groundwater storage within the aquifer recharge area can be obtained as the product of the aquifer area in units of acres, the saturated aquifer thickness in units of feet, and the specific yield of the aquifer. This method is generally applicable to unconfined aquifers with primary porosity and are not generally appropriate for confined aquifers. Nevertheless, we provide this estimate for general interpretive and comparative purposes.

The saturated thickness of the aquifer was estimated as the screened interval in the project well (Well 1). The screened interval of the project well starts at 310 feet and extends to the bottom of the well at 470 feet. This calculation estimates saturated thicknesses to be 160 feet. This is a conservative estimate of aquifer thickness as water-bearing units of the Glen Ellen Formation likely extend to significantly greater depths within the project recharge area. As reported above specific yield estimates for the Glen Ellen Formation range from 3% to 7% (Herbst et al., 1982). To be conservative, we have used a low-end estimate of specific yield of 3% for the project aquifer. This results in an estimated groundwater storage of 1,306 acre-ft (272 acres x 160 feet x 0.03).

Water Demand

Within the project impact area, water demand was estimated for three conditions: existing, proposed, and full build-out. The full-build out condition reflects full development of neighboring parcels consistent with current zoning. Water uses on the project parcel were determined using site details provided by the project applicant and verified using available satellite imagery. Water uses on other parcels within the project impact area were determined using satellite imagery. Annual rates for the various uses were estimated primarily based on Sonoma County Policy 8-2-1 Water Supply, Use and Conservation Guidelines (Sonoma County, 2020) as well as the County of Napa's Water Availability Analysis Guidance Document, dated May 2015 (Napa County, 2015). Tables 3, 4 and 5 show all rates applied to the various uses identified within the impact area.

Existing Condition

In the existing condition, uses on the project parcel include a single secondary residence, a winery, orchards, and vineyards which are all supplied with water from Well 1. The residence has 0.19 acres of lawn along with 0.4 acres of other landscaping. Under the existing use permit

UPE01-0182 the winery produces 20,000 cases of wine per year and has seven full time and seven part-time employees. Employee water use is approximated as 15 gal/shift at 250 shifts per year for full-time employees and 125 shifts per year for part-time employees. One case of wine is equivalent to approximately 2.4 gallons, and the existing use permit estimates 5 gallons of water use per gallon wine produced and so the existing 20,000 cases requires a total of 48,000 gallons or 0.74 ac-ft annually (Table 3). There are also 0.9 acres of irrigated olive orchards, and 20.7 acres of vineyards on the project parcel. There are no other existing water uses on the project parcel.

Land use on neighboring parcels within the project recharge area is primarily vineyard with residences and orchards. Based on available aerial imagery, these parcels contain two primary residences and 0.19 acres of lawn. Neighboring parcels also contain approximately 33.3 acres of vineyard and 1.3 acres of irrigated orchards (Figure 4).

Based on rates used by the Santa Rosa Plain Groundwater Sustainability Agency for rural parcels, primary residences were estimated to use 0.5 acre-ft/yr. This is at the lower end of the range of uses estimated for primary residences in the County of Sonoma Guidance. However, this estimated rate is considerably higher than actual water use rates reported by the California State Water Resources Control Board. Using data from 2015 – 2019, average annual residential water use rates varied from 64 to 102 gallons per capita per day (gpcd) or 0.07-0.11 acre-ft/person/yr for four nearby providers: the City of Sonoma, the Valley of the Moon Water District, the City of Santa Rosa, and the Town of Windsor (Figure 5). Residence sizes, landscaped areas, and climatic conditions in these service areas are similar to the project recharge area. This is particularly true for the City of Sonoma. Using an average residential occupancy rate of 2.1 persons per residence obtained from nearby blocks of the 2010 Census, these rates are equivalent to 0.15 to 0.24 acre-ft/residence/yr. Therefore the 0.50 acre-ft/yr rate obtained from the Santa Rosa Plain Groundwater Sustainability Agency provides a reasonable, but conservative estimate of residential water use. Based on rates from the County of Napa Water Availability Guidance Document, secondary residences were considered to use 0.25 acre-ft/yr and pools were considered to use 0.10 acre-ft/yr.

Existing water demand within the project impact area is estimated to be 40.59 acre-ft/yr (Table 2). Of this, 16.59 acre-ft/yr comes from the project parcel (Table 3). The remaining 24.0 acre-ft/yr comes from neighboring parcels. Of the use on neighboring parcels, approximately 93% comes from vineyard agriculture, uses (Table 4). Vineyards in APN 132-260-002 were ignored as the developed portion of the parcel lies outside of the recharge area and we can assume that groundwater use is occurring outside of the recharge area.

Table 2: Estimated groundwater use within the project recharge area in the existing and proposed conditions.

	Existing Condition (acre-ft/yr)	Proposed Condition (acre-ft/yr)	Full Build-Out Condition (acre-ft/yr)
Project Parcel	16.59	17.08	19.52
Residential Use	1.65	1.65	2.15
Irrigation Use	14.08	14.08	16.02
Winery Use	0.74	1.10	1.10
Employee/Guest Use	0.12	0.25	0.25
Neighboring Parcels	24.00	24.00	26.70
Residential Use	1.68	1.68	3.18
Irrigation Use	22.32	22.32	23.52
Total	40.59	41.08	46.22

Table 3: Estimated groundwater uses on the project parcel in the existing condition.

	# of Units	Use per Unit	Annual Water Use (AF/yr)
Residential Use			1.65
Residences, Secondary	1 Residence	0.25 AF/Residence	0.25
Lawn, Additional	0.19 Acres	3.60 AF/acre/yr	0.68
Other Landscaping, Addtl.	0.4 Acres	1.80 AF/acre/yr	0.72
Agricultural Use			14.08
Vineyard	20.7 Acres	0.60 AF/acre/yr	12.42
Orchard, Irrigated	0.923 Acres	1.80 AF/acre/yr	1.66
Winery Use			0.74
Process Water	48000 Gallons	5.00 gal water/gal wine.	0.74
Guest & Employee Use			0.12
Full-Time Employees	7 Employees	15 gal./shift @ 250 shifts/yr	0.08
Part-Time Employees	7 Employees	15 gal./shift @ 125 shifts/yr	0.04
Total			16.59

Table 4: Estimated groundwater uses on neighboring parcels within the project recharge area in the existing and proposed conditions. Proposal has no change in water use for adjacent parcels

	# of Units	Use per Unit	Annual Water Use (AF/yr)
Residential Use			1.68
Residences, Primary	2 Residences	0.50 AF/Residence	1.00
Lawn, Additional	0.19 Acres	3.60 AF/acre/yr	0.68
Agricultural Use			22.32
Vineyard	33.3 Acres	0.60 AF/acre/yr	19.98
Orchard, Irrigated	1.3 Acres	1.80 AF/acre/yr	2.34
Total			24.00

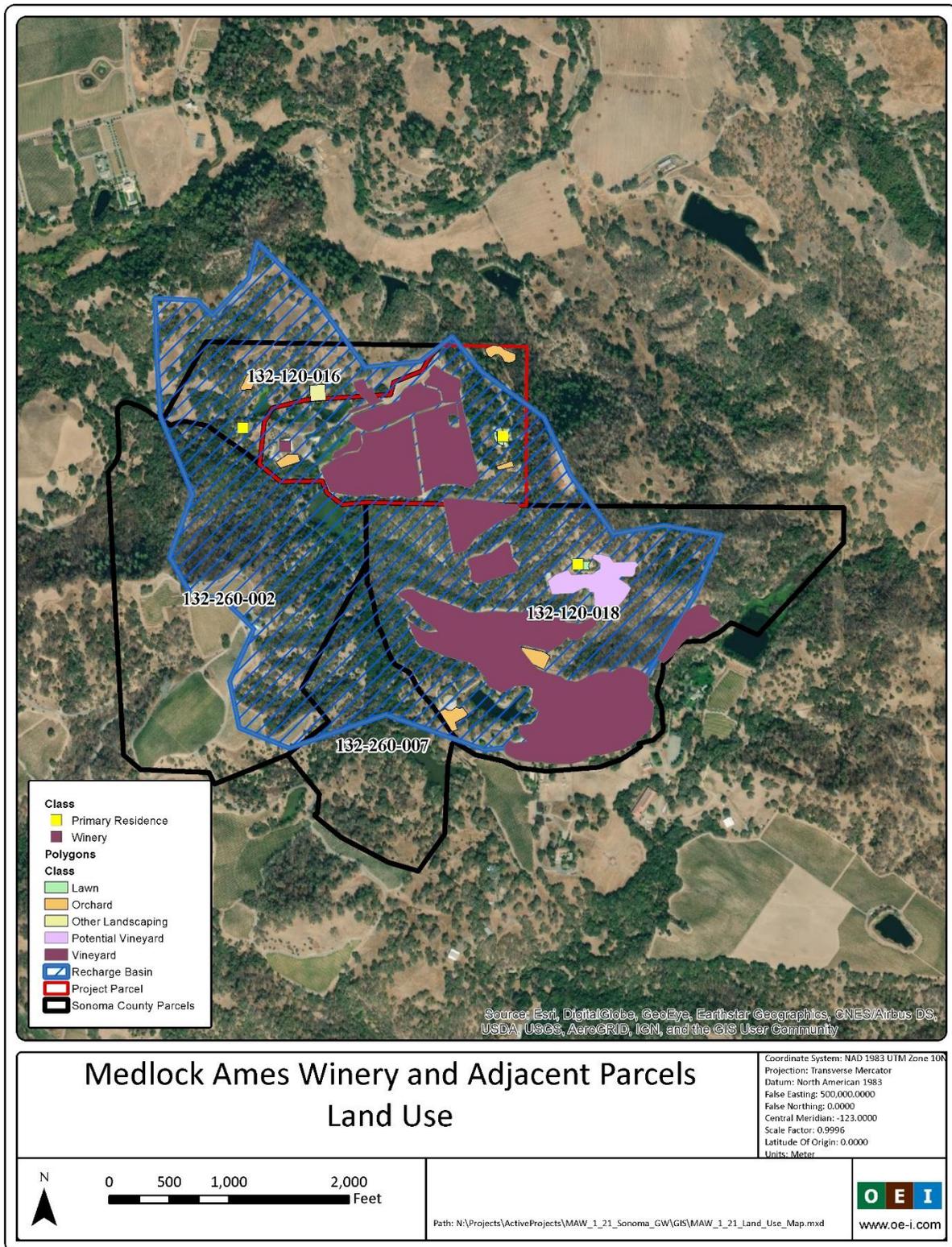


Figure 4: Water uses within the project recharge area.

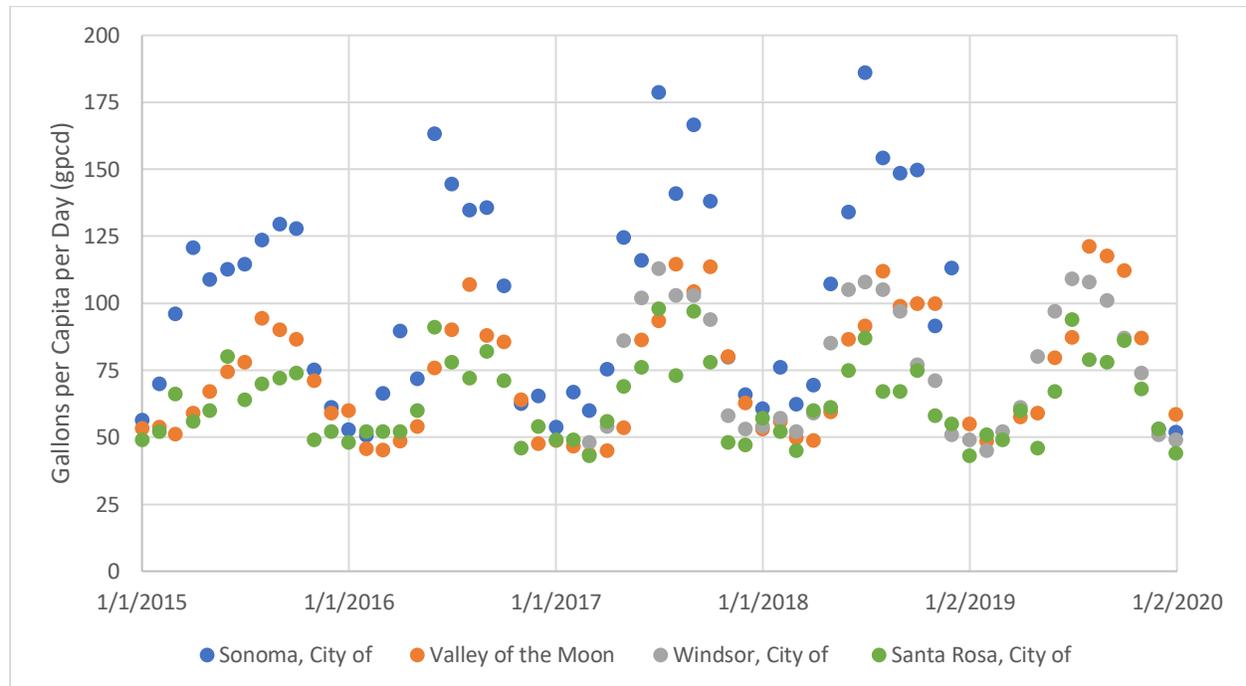


Figure 5: Reported residential water use rates from the California State Water Resources Control Board for nearby public water providers.

Proposed Condition

In the proposed condition, Medlock Ames Winery will increase its wine production by 50%, from 20,000 cases per year to 30,000 cases. They will also begin tasting room visitations by appointment, with an estimated 10,000 guests for tastings annually and host up to twelve events catered with food prepared offsite with an estimated 600 total guests. Finally, they will increase their staff to ten full-time with up to five part time employees throughout the year in the winery and vineyard. Table 5 presents a summary of proposed water use on the project parcel and includes assumed use rates. Increased water use from increased wine production is approximated based on the use rate presented in the Wastewater Feasibility Study completed by SMA. Water use on neighboring parcels is not anticipated to change as part of this project.

Based on these additional uses, it is estimated that water demand within the project recharge area will increase by up to 0.49 acre-ft/yr to 41.08 acre-ft/yr (Table 2). The change in demand is due to the increase in wine production, the addition of tastings and events and an increase in employees (Table 5).

Table 5: Estimated groundwater uses on the project parcel in the proposed condition.

	# of Units	Use per Unit	Annual Water Use (AF/yr)
Residential Use			1.65
Residences, Secondary	1 Residence	0.25 AF/Residence	0.25
Lawn, Additional	0.19 Acres	3.60 AF/acre/yr	0.68
Other Landscaping, Addtl.	0.4 Acres	1.80 AF/acre/yr	0.72
Agricultural Use			14.08
Vineyard	20.7 Acres	0.60 AF/acre/yr	12.42
Orchard, Irrigated	0.923 Acres	1.80 AF/acre/yr	1.66
Winery Use			1.10
Process Water	72000 Gallons	5.00 gal water/gal wine.	1.10
Guest & Employee Use			0.25
Tasting Room Visitations	10000 Guests	3 gal./Guest	0.09
Events	600 Guests	5 gal./Guest	0.01
Full-Time Employees	10 Employees	15 gal./shift @ 250 shifts/yr	0.12
Part-Time Employees	5 Employees	15 gal./shift @ 125 shifts/yr	0.03
Total			17.08

Full Build-Out Condition

The full build-out condition reflects the full development of parcels consistent with their current zoning. Uses in the full build-out condition were estimated using the following assumptions:

- All parcels will have primary dwellings and half will have secondary dwellings.
- For parcels with existing vineyards, orchards, or other established agricultural uses, 50% of “open” land was assumed to be developed. “Open” land was defined as either “non-riparian shrubs” or “herbaceous” by the Vegetation and Habitat Map Key accompanying the Sonoma County Fine Scale Vegetation Map (Sonoma Veg Map 2015). Timber conversions were assumed not to occur. Limitations on maximum slope, riparian setbacks, and feasibility were not assessed.
- Parcels without vineyard, orchard, or other established agricultural uses were not considered to have new agricultural uses in the full build-out condition.
- Subdivisions and other discretionary projects were not considered.

Of the four non-project parcels located within the project recharge area, only two have primary residences while none have secondary residences. In the full build-out condition it was assumed that all parcels would have a primary residence and two would have a secondary residence, for a total of four primary residences and two secondary residences. It was also assumed that the

project parcel would construct a primary residence in addition to the secondary residence presently on the property.

The project parcel and one adjacent parcel on the property currently have vineyards and orchards. Approximately four acres of open land was identified on parcel (APN 132-120-018) just south of the project parcel which could potentially be developed into vineyards; two acres of this was assumed to be developed into vineyard under the full build-out condition.

Based on the additional uses described above, water use in the full build-out condition is estimated to increase by an additional 5.14 acre-ft/yr to 46.22 acre-ft/yr (Table 2). This increase comes from additional residential demand on neighboring parcels and from increased agricultural use. Additional residential and agricultural demand will cause water use on neighboring parcels to increase to 26.70 acre-ft/yr (Table 6). Additional construction of vineyards and orchards as well as construction of a secondary residence in the full build-out will increase demand by 2.44 acre-ft/yr to 19.52 acre-ft/yr on the project parcel (Table 7).

Table 6: Estimated water demand in the full build-out condition for neighboring parcels within the project impact area.

	# of Units	Use per Unit	Annual Water Use (AF/yr)
Residential Use			3.18
Residences, Primary	4 Residences	0.50 AF/Residence	2.00
Residences, Secondary	2 Residences	0.25 AF/Residence	0.50
Lawn, Additional	0.19 Acres	3.60 AF/acre/yr	0.68
Agricultural Use			23.52
Vineyard	35.3 Acres	0.60 AF/acre/yr	21.18
Orchard, Irrigated	1.3 Acres	1.80 AF/acre/yr	2.34
Total			26.70

Table 7: Estimated water demand on the project parcel in the full build-out condition.

	# of Units	Use per Unit	Annual Water Use (AF/yr)
Residential Use			2.15
Residences, Primary	1 Residence	0.50 AF/Residence	0.50
Residences, Secondary	1 Residence	0.25 AF/Residence	0.25
Lawn, Additional	0.19 Acres	3.60 AF/acre/yr	0.68
Other Landscaping, Addtl.	0.4 Acres	1.80 AF/acre/yr	0.72
Agricultural Use			16.02
Vineyard	20.7 Acres	0.60 AF/acre/yr	12.42
Orchard, Irrigated	2 Acres	1.80 AF/acre/yr	3.60
Winery Use			1.10
Process Water	72000 Gallons	5.00 gal water/gal wine.	1.10
Guest & Employee Use			0.25
Tasting Room Visitations	10000 Guests	3 gal./Guest	0.09
Events	600 Guests	5 gal./Guest	0.01
Full-Time Employees	10 Employees	15 gal./shift @ 250 shifts/yr	0.12
Part-Time Employees	5 Employees	15 gal./shift @ 125 shifts/yr	0.03
Total			19.52

Groundwater Recharge Analysis

Groundwater recharge within the project impact area was estimated using a Soil Water Balance (SWB) model developed for Sonoma County and portions of Marin County by OEI. The code for the SWB model was developed by the U.S. Geological Survey (Westenbroek et al., 2010) and it produces a spatially distributed estimate of annual recharge. This model operates on a daily timestep and calculates runoff based on the Natural Resources Conservation Service (NRCS) curve number approach and Actual Evapotranspiration (AET) based on a modified Thornthwaite-Mather soil-water-balance approach (Westenbroek et al., 2010). Details of this model are included in Appendix B.

Groundwater recharge was simulated for Water Year 2010 which was selected because annual precipitation was close to the 30-year average for much of Sonoma County. During the simulated water year, precipitation averaged 44.1 inches across the project impact area and actual evapotranspiration (AET) averaged 23.5 inches. Groundwater recharge varied across the project impact area with a spatially averaged recharge of 9.2 inches (Table 8). Groundwater recharge estimates can also be expressed as a total volume by multiplying the calculated recharge by the area of project impact area (272 acres). This calculation yields an estimated mean annual recharge of 208.5 acre-ft/yr.

Table 8: Summary of water balance results from the SWB model for Water Year 2010

	2010 Normal Year	
	inches	% of precipitation
Precipitation	44.1	-
AET	23.5	53%
Runoff	11.4	26%
Δ Soil Moisture	0.0	0%
Recharge	9.2	21%

Water budget estimates are available for several larger watershed areas nearby including the Sonoma Valley, Santa Rosa Plain, and Napa Valley. Comparisons to these water budgets are useful for determining the overall reasonableness of the results, although one would not expect precise agreement owing to significant variations in climate, land cover, soil types, and underlying hydrogeologic conditions. These regional analyses estimated that mean annual recharge was equivalent to between 7% and 28% of mean annual precipitation (Farrar et. al., 2006; Flint and Flint 2014; LSCE, 2013; Wolfenden and Hevesi, 2014). Simulated groundwater recharge for Water Year 2010 represents approximately 21% of annual precipitation, within the range of these regional estimates (Table 7).

Comparison of Water Demand and Groundwater Recharge

The total proposed groundwater use for the project impact area is estimated to be 41 acre-ft/yr, 17 acre-ft/yr of which is from the project parcel (Table 2). The proposed use increase of 0.46 acre-ft as a result of the project represents less than 2% of total estimated use within the impact area. In the proposed condition, groundwater use in the project impact area is estimated to be equivalent to 20% of the mean annual groundwater recharge of 208.5 acre-ft/yr. In the full build-out condition, groundwater use is estimated be equivalent to 22% of the estimated mean annual groundwater recharge (Table 9). The magnitude of surplus recharge strongly suggests the project is unlikely to result in significant reductions in groundwater levels or depletion of groundwater resources over time.

Table 9: Comparison of estimated water use and mean annual recharge within the project impact area.

Condition	Total Proposed Demand (ac-ft/yr)	Average Water Year (2010)		
		Recharge (ac-ft/yr)	Recharge Surplus (ac-ft/yr)	Demand as % of Recharge
Proposed	41	208.5	167.5	20%
Full Build-Out	46.2	208.5	162.3	22%

Potential Impacts to Streams

The nearest surface waterbody to Well 1 is an onstream pond located 145 feet southwest of the well. This pond captures water from an unnamed tributary to Franz Creek (Figure 1). Based on Sonoma County LiDAR data collected in fall of 2013 (when the pond would presumably be close to its annual low) the water surface is approximately 23 feet below the wellhead. The project well is screened beginning at a depth of 310 ft below ground. If we assume the pond depth extends another 10 feet below the 2013 water surface elevation the screened interval in Well 1 would still be 277 feet below. Due to the significant vertical separation between the screened interval of Well 1 and presence of low permeability materials including clays It is unlikely that pumping the project well impacts water levels in the pond or flows in the unnamed tributary.

Summary

The project parcel currently contains a secondary residence, a winery, and 20.7 acres of vineyard, supplied by an a well screened within the Glen Ellen complex. The applicant intends to increase winery production by 50% and begin vineyard tours and tasting room visitations. Application of the Soil Water Balance Model (SWB) to the project recharge area indicated mean annual groundwater recharge was approximately 9.2 inches/yr or 208.5 acre-ft/yr. The total proposed groundwater use within the project recharge area is estimated to be 41 acre-ft/yr, of which up to 17 acre-ft/yr will come from the project parcel. This represents 20% of the mean annual recharge. Comparison of proposed and full build-out use to groundwater recharge estimates suggest that groundwater resources are sufficient in the project area. A surplus in recharge suggests that the project is unlikely to result in significant reductions in groundwater levels or depletion of groundwater resources over time.

References

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APPENDIX A
WELL COMPLETION REPORTS

Well 3 (Alligator Pond Well)

STATE OF CALIFORNIA
WELL COMPLETION REPORT
 No. **e0296996**

DWR USE ONLY --- DO NOT FILL IN
09W08W920
 STATE WELL NO. STATION NO.
383640 1 204624
 LATITUDE LONGITUDE

 APN / TRS / OTHER

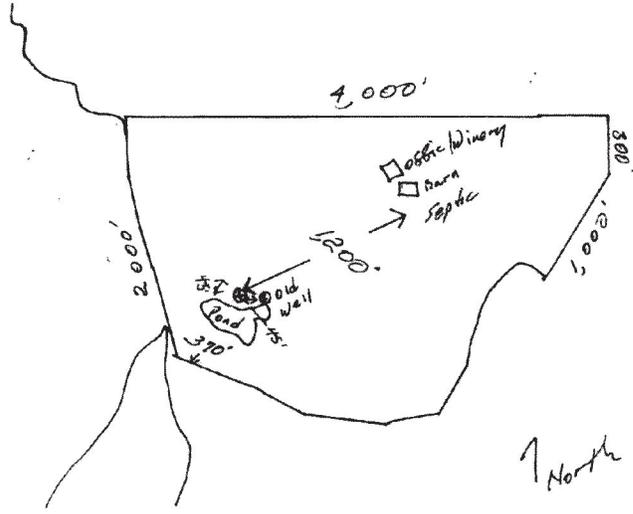
OWNER'S WELL No. 9469
 Date Work Began 8/5/16 Ended 8/17/16
 Local Permit Agency SONOMA

Permit No. WEL16-0190 Permit Date 7-29-2016

GEOLOGIC LOG			WELL OWNER	
ORIENTATION	Vertical	Degree of Angle	_____	
DEPTH FROM SURFACE	DEPTH TO FIRST WATER	(ft.) BELOW SURFACE	_____	
Ft.	Ft.	DESCRIPTION	_____	
0	45	brown clay and brown volcanic rock	_____	
45	80	blue ash	_____	
80	150	blue volcanic rock and ash	_____	
150	220	blue volcanic rock	_____	
220	400	blue volcanic ash	_____	
400	700	blue volcanic rock and ash	_____	

WELL LOCATION
 Address 13422 CHALK HILL ROAD
 City HEALDSBURG County SONOMA
 Apn Book 132 Page 120 Parcel 018
 Township _____ Range _____ Section _____ 1/4 _____ 1/4
 Latitude 38 36 02 NORTH Longitude 122 45 94 WEST
 Deg. Min. Sec. Deg. Min. Sec.
 LOCATION SKETCH

CA DEPT OF WATER RESOURCES
 NORTH CENTRAL REGIONAL OFFICE
 2016 SEP -6 AM 10:19



recommended pump setting of 400'

ACTIVITY NEW WELL PLANNED USE(S) DOMESTIC WATER
 DRILLING METHOD ROTARY MUD FLUID
 DEPTH OF STATIC 100 (Ft.) & DATE MEASURED Aug 17, 2016
 WATER LEVEL _____
 ESTIMATED YIELD * 300 (G.P.M.) & TEST TYPE Airlift
 TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN _____ (FT.)
 *May not be representative of a well's long-term yield.

CASING							ANNULAR MATERIAL			
DEPTH FROM SURFACE		BORE-HOLE DIA.	TYPE	Material / Grade	Dia.	Gauge	Slot size	Seal Material		Filter Pack (Type / Size)
Ft.	To Ft.							Ft.	To Ft.	
0	60	15	BLANK	F480 PVC	8	200		0	50	BENTONITE
60	280	12.25	BLANK	F480 PVC	8	200		50	660	#6
280	660	12.25	PERF	F480 PVC	8	200	032			SAND

- Attachments
- no Geologic Log
 - no Well Construction Diagram
 - no Geophysical Logs
 - no Soil Water Chemical Analyses
 - no Other

CERTIFICATION STATEMENT
 I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
 NAME FISCH BROS DRILLING INC
 (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
5001 Gravenstein Hwy No Sebastopol CA 95472
 Signed Steve Unterseher 0818-16 399226
 WELL DRILLER / AUTHORIZED REPRESENTATIVE DATE SIGNED C- 57 LICENSE NUMBER

Owner's Well No. WELL #1

No. **e0084047**

Date Work Began 12/3/2008, Ended 12/16/2008

Local Permit Agency Sonoma County PRMD

Permit No. WEL08-0534 Permit Date 11/26/2008

DWR USE ONLY DO NOT FILL IN

09 N 09 W 28

STATE WELL NO./STATION NO.

LATITUDE _____ LONGITUDE _____

APN/TRS/OTHER _____

GEOLOGIC LOG

WELL OWNER

ORIENTATION (✓) VERTICAL HORIZONTAL ANGLE _____ (SPECIFY)
DRILLING METHOD MUD ROTARY FLUID BENTONITE

DEPTH FROM SURFACE		DESCRIPTION <i>Describe material, grain, size, color, etc.</i>
Ft.	to Ft.	
0	17	Semi cemented gravels
17	28	Brown sandy clay and gravels
28	45	Cemented gravels
45	58	Semi cemented gravels
58	85	Brown clay and gravels
85	105	Brown clay trace of gravels
105	115	Cemented gravels
115	130	Blue sandy clay and gravels
130	160	Green clay and gravels
160	210	Green clay
210	225	Blue crunchy sand and gravels
225	245	Semi cemented gravels
245	282	Green clay and gravel
282	286	Sands and gravels
286	302	Green sand clay and gravels
302	330	Green clay
330	342	Green sandy clay and gravel
342	360	Blue clay
360	368	Sands and gravels
368	388	Blue clay
388	391	Sands and gravels
391	470	Blue sandy clay and gravels
470	495	Green clay
495	500	Sands and gravels
500	510	Blue clay

WELL LOCATION
Address 13422 Chalk Hill Road
City Healdsburg CA
County Sonoma
APN Book 132 Page 120 Parcel 018
Township _____ Range _____ Section _____
Latitude _____

LOCATION SKETCH
NORTH _____ SOUTH _____
WEST _____ EAST _____

ACTIVITY (✓)
 NEW WELL
MODIFICATION/REPAIR
— Deepen
— Other (Specify) _____

— DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)
WATER SUPPLY
 Domestic Public
 Irrigation Industrial

MONITORING _____
TEST WELL _____
CATHODIC PROTECTION _____
HEAT EXCHANGE _____
DIRECT PUSH _____
INJECTION _____
VAPOR EXTRACTION _____
SPARGING _____
REMIEDIATION _____
OTHER (SPECIFY) _____

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER N/A (Ft.) BELOW SURFACE **1**
DEPTH OF STATIC WATER LEVEL 160 (Ft.) & DATE MEASURED 12/16/2008
ESTIMATED YIELD • 20+ (GPM) & TEST TYPE Air developed
TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN 480 (Ft.)
May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 510 (Feet)
TOTAL DEPTH OF COMPLETED WELL 510 (Feet)

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	CASING (S)							
		TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
BLANK	SCREEN	CON-DUCTOR	FILL PIPE						
310	330		✓						.032
350	390		✓						.032
430	450		✓						.032
490	510		✓						.032

DEPTH FROM SURFACE Ft. to Ft.	ANNULAR MATERIAL			
	TYPE			
	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	2	✓		CONCRETE
2	50		✓	
50	510			✓ 12x20 SAND

- ATTACHMENTS (✓)**
- Geologic Log
 - Well Construction Diagram
 - Geophysical Log(s)
 - Soil/Water Chemical Analysis
 - Other _____
- ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Weeks Drilling & Pump
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

P.O. Box 176 Sebastopol CA 95473
ADDRESS CITY STATE ZIP

Signed Melissa G Lopez 12/19/08 177681
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED C-57 LICENSE NUMBER

Lat/Long: 38° 35' 55" N 122° 45' 33" W

Well 5 **WELL COMPLETION REPORT - STATE OF CALIFORNIA**
 Page 1 of 1 No# 0994819
 Owner's Well No. 1 State Well No./Station No. 09N08W28
 Permit Date: 03/17/014 Permit # WEL14-0114
 D Work Began 4/23/2014 Ended 5/7/2014
 Per. Agency Dept of Permits & Resource Management APN/TRS/Other 132-260-009

GEOLOGIC LOG
 ORIENTATION: Vertical
 DRILLING METHOD: Rotary
 FLUID: Mud

WELL OWNER
 Name: _____
 Mailing Address: _____

Ft	to	Ft	DESCRIPTION
0	:	4	Top soil
4	:	35	Clay
35	:	53	Fractured up rock
53	:	55	Clay
55	:	90	Fractured rock
90	:	100	Clay
100	:	140	Clay and gravel layers
140	:	150	Blue gravel
150	:	200	Clay and gravel layers
200	:	210	Gravel big
210	:	220	Clay
220	:	225	Clay
225	:	227	Gravel
227	:	260	Sandy clay
260	:	274	Clay
274	:	280	Gravel
280	:	294	Clay
294	:	298	Gravel
298	:	316	Clay sandy
316	:	333	Gravel
333	:	440	Clay stiff
440	:	462	Blue clay
462	:	475	Clay and gravel
475	:	489	Clay
489	:	493	Clay and gravel
493	:	500	Clay

WELL LOCATION
 Address: 13421 Flora Ranch Road
 City: Healdsburg
 County: Sonoma
 APN Book 132 - 260 - 009
 Latitude _____ Longitude _____

Ft	to	Ft	DESCRIPTION
100	:	140	Clay and gravel layers
140	:	150	Blue gravel
150	:	200	Clay and gravel layers
200	:	210	Gravel big
210	:	220	Clay
220	:	225	Clay
225	:	227	Gravel
227	:	260	Sandy clay
260	:	274	Clay
274	:	280	Gravel
280	:	294	Clay
294	:	298	Gravel
298	:	316	Clay sandy
316	:	333	Gravel
333	:	440	Clay stiff
440	:	462	Blue clay
462	:	475	Clay and gravel
475	:	489	Clay
489	:	493	Clay and gravel
493	:	500	Clay

LOCATION SKETCH
 38.598510°
 -122.759063°

ACTIVITY
 New Well
 Modification/Repair
 Deepen
 Other (Specify) _____

DESTROY (Describe) Procedures and Materials Under "Geologic Log")

PLANNED USES
 Water Supply
 Domestic Public
 Irrigation Industrial

PLANNED USES:
 Monitoring
 Test well
 Cathodic Protection
 Heat Exchange
 Direct Push
 Injection
 Vapor Extraction
 Sparging
 Remediation
 Other (specify) _____

WATER LEVEL & YIELD OF COMPLETED WELL
 Depth to First Water _____ (ft.) BELOW SURFACE
 Date Measured: 5/7/2014
 Water Level (Ft) 50 Test Length/Test type: 11 hour Air lift
 Estimate Yield (GPM)* 10, 70, 100+ Total draw 100, 200, 335'
 TOTAL DEPTH OF BORING (FT): 502
 TOTAL DEPTH OF COMPLETED WELL (FT): 340
 *May not be representative of a well's long-term yield

Depth from surface	Bore-hole diameter	Type		Material Grade	Diameter	Gauge	Slot Size	Depth		Annular Material Seal Material
		Blank	Screen					From Surface	Annular Material Seal Material	
Ft	to Ft	Inches						Ft	to Ft	
0	40	15	XX	PVC	8	200		0	20	Bentonite
40	340	15		PVC	8	200	0.032	20	340	8 x 16 x 12x20 mix

ATTACHMENTS
 No Geologic Log
 No Well Construct Diagram
 No Geophysical Log(s)
 No Soil/Water Chemical Analyses
 No Other

CERTIFICATION STATEMENT
 I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief
 NAME: LES PETERSEN DRILLING AND PUMP, INC
 ADDRESS: 5434 OLD REDWOOD HWY, SANTA ROSA, CA 95403
 SIGNED: Matt Petersen 5/7/2014 261084
 Well Driller/Authorized Representative (Benny) LP Date C-57 License #

Driller Owner Local

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **e033059**

DWR USE ONLY -- DO NOT FILL IN

09N08W28

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Owner's Well No. Well #1

Date Work Began 10/27/2005, Ended 11/16/2005

Local Permit Agency Sonoma County PRMD

Permit No. WEL05-0602

Permit Date 10/6/2005

GEOLOGIC LOG

ORIENTATION (✓) VERTICAL HORIZONTAL ANGLE _____ (SPECIFY)

DRILLING METHOD MUD ROTARY FLUID Bentonite

DEPTH FROM SURFACE
Ft. to Ft. DESCRIPTION
Describe material, grain, size, color, etc.

0	2	Top soil
2	6	Brown sandy clay
6	9	Brown sandstone
9	18	Cemented sand and gravel
18	29	Sandy brown clay
29	33	Blue clay
33	36	Brown clayee gravels
36	48	Brown sandy clay
48	53	Blue clay
53	58	Blue green sandstone
58	67	Clayee blue sand and gravel
67	69	Blue green clay
69	81	Clay multi-colored conglomerate
81	102	Volcanic conglomerate
102	113	Clayee conglomerate, streaks of clayee ash
113	121	Clayee ash
121	129	Conglomerate
129	141	Clayee ash
141	162	Blue clay
162	175	Sandy blue clay
175	182	Blue clay
182	190	Blue green sandy clay
190	236	Blue clay
236	240	Conglomerate
240	302	Clayee blue green ash
302	321	Stiff blue clay
321	324	Sandy clay
324	335	Stiff blue clay
335	355	Volcanic conglomerate
355	410	Blue clay

TOTAL DEPTH OF BORING 800 (Feet)

TOTAL DEPTH OF COMPLETED WELL 790 (Feet)

WELL LOCATION

Address 13426 Chalk Hill Road

City Healdsburg CA

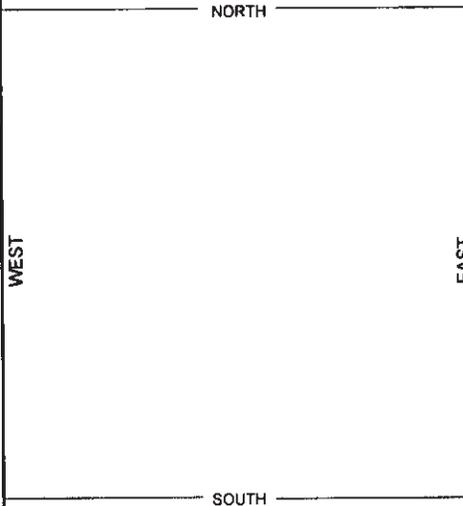
County Sonoma

APN Book 132 Page 120 Parcel 025

Township _____ Range _____ Section _____

Latitude _____

LOCATION SKETCH



Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

NEW WELL

MODIFICATION/REPAIR

Deepen

Other (Specify) _____

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY

Domestic Public

Irrigation Industrial

MONITORING _____

TEST WELL _____

CATHODIC PROTECTION _____

HEAT EXCHANGE _____

DIRECT PUSH _____

INJECTION _____

VAPOR EXTRACTION _____

SPARGING _____

REMEDICATION _____

OTHER (SPECIFY) _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 86 (Ft.) & DATE MEASURED 11/16/2005

ESTIMATED YIELD * 50 (GPM) & TEST TYPE AIR LIFTED

TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN 400 (Ft.)

May not be representative of a well's long-term yield.

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	CASING (S)							
		TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
BLANK	SCREEN	CON-DUCTOR	FILL PIPE						
0	800	11							
+1.5	790		✓			PVC	6	CL200	
340	360			✓					.032
500	520			✓					.032
560	660			✓					.032
680	780			✓					.032

DEPTH FROM SURFACE Ft. to Ft.	ANNULAR MATERIAL TYPE				
	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)	
0	2	✓			
2	51		✓		
51	790			✓	1/8 x 1/4 gravel

ATTACHMENTS (✓)

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analysis
- Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Weeks Drilling & Pump
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

P.O. Box 176
ADDRESS

Sebastopol
CITY

CA 95473
STATE ZIP

Signed _____
WELL DRILLER/AUTHORIZED REPRESENTATIVE

03/17/06
DATE SIGNED

177681
C-57 LICENSE NUMBER

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. **e033059**

DWR USE ONLY -- DO NOT FILL IN

09N08W28

STATE WELL NO / STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Owner's Well No. Well #1

Date Work Began 10/27/2005, Ended 11/16/2005

Local Permit Agency Sonoma County PRMD

Permit No. WEL05-0602 Permit Date 10/6/2005

GEOLOGIC LOG

ORIENTATION (✓) VERTICAL HORIZONTAL ANGLE (SPECIFY)

DRILLING METHOD MUD ROTARY FLUID Bentonite

DEPTH FROM SURFACE DESCRIPTION

Fl.	to	Fl.	Describe material, grain, size, color, etc.
410	417		Clay sand and coarse sand
417	450		Blue clayee sand and sandy clay
450	458		Blue green clayee sand with sandstone steaks
458	509		Sandy blue green clay
509	518		Cemented conglomerate
518	550		Blue clay small sandy streaks
550	564		Sandy blue green clay
564	610		Cemented conglomerate
610	622		Blue clayee sand
622	642		Clayee blue sand and small gravels
642	663		Sandy blue clay
663	670		Blue clayee sand and small gravels
670	679		Sandy blue clay
679	687		Clayee blue sand
687	702		Clayee sand, cemented gravels
702	710		Clayee blue sand
710	735		Clayee sand and small gravels
735	739		Clayee volcanics
739	757		Gray clayee sand
757	766		Cemented gravels
766	774		Clayee gravels
774	789		Blue green sand and clay
789	800		Blue sandy clay

TOTAL DEPTH OF BORING 800 (Feet)

TOTAL DEPTH OF COMPLETED WELL 790 (Feet)

WELL OWNER

WELL LOCATION

Address 13426 Chalk Hill Road
City Healdsburg CA
County Sonoma
APN Book 132 Page 120 Parcel 025
Township Range Section
Latitude

DEG. MIN. SEC. LOCATION SKETCH NORTH SOUTH
ACTIVITY (✓)
 NEW WELL

MODIFICATION/REPAIR
 Deepen
 Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)
WATER SUPPLY
 Domestic Public
 Irrigation Industrial

MONITORING
TEST WELL
CATHODIC PROTECTION
HEAT EXCHANGE
DIRECT PUSH
INJECTION
VAPOR EXTRACTION
SPARGING
REMEDICATION
OTHER (SPECIFY)

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 86 (Ft.) & DATE MEASURED 11/16/2005
ESTIMATED YIELD 50 (GPM) & TEST TYPE AIR LIFTED
TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN 400 (Ft.)
May not be representative of a well's long-term yield.

DEPTH FROM SURFACE		BORE-HOLE DIA. (Inches)	CASING (S)				ANNULAR MATERIAL								
Fl.	to		Fl.	TYPE (✓)	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	DEPTH FROM SURFACE	TYPE					
Fl.	to	Fl.	BLANK	SCREEN	CON-DUCTOR	FILL PIPE			Fl.	to	Fl.	CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	800	11							0	2		✓			
+1.5	790		✓				PVC	6	CL200						
340	360			✓											
500	520			✓											
560	660			✓											
680	780			✓											
										51	790			✓	1/8 x 1/4 gravel

ATTACHMENTS (✓)

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analysis
- Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Weeks Drilling & Pump
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

P.O. Box 176 Sebastopol CA 95473
ADDRESS CITY STATE ZIP

Signed WELL DRILLER/AUTHORIZED REPRESENTATIVE 03/17/06 DATE SIGNED 177681 C-57 LICENSE NUMBER

Well 7

State of California
Well Completion Report
Form DWR 188 Auto-Completed 1/27/2020
WCR2019-016743

Owner's Well Number 10591 Date Work Began 11/21/2019 Date Work Ended 11/21/2019
Local Permit Agency Sonoma County Permit & Resource Management Department
Secondary Permit Agency Permit Number WEL19-0504 Permit Date 11/04/2019

Well Owner (must remain confidential pursuant to Water Code 13752)
Name
Mailing Address
City State XX Zip XXXXX

Planned Use and Activity
Activity New Well
Planned Use Water Supply Irrigation - Agriculture

Well Location
Address 11500 CHALK HILL RD APN 132-120-054
City HEALDSBURG Zip 95448 County Sonoma Township 09 N
Latitude 38 35 27.75 N Longitude -122 45 35.56 W Range 08 W
Section 28
Baseline Meridian Mount Diablo
Dec. Lat. 38.5910417 Dec. Long. -122.7598778
Ground Surface Elevation
Vertical Datum Horizontal Datum WGS84 Elevation Accuracy
Location Accuracy Location Determination Method Elevation Determination Method

Borehole Information
Orientation Vertical Specify
Drilling Method Direct Rotary Drilling Fluid Air
Total Depth of Boring 400 Feet
Total Depth of Completed Well 380 Feet

Water Level and Yield of Completed Well
Depth to first water (Feet below surface)
Depth to Static
Water Level 140 (Feet) Date Measured 11/21/2019
Estimated Yield* 9 (GPM) Test Type Air Lift
Test Length 2 (Hours) Total Drawdown (feet)
*May not be representative of a well's long term yield.

Geologic Log - Free Form
Table with 2 columns: Depth from Surface (Feet to Feet), Description
0 20 BROWN CLAY WITH BOULDERS
20 45 LIGHT BROWN ASH
45 60 GRAVELS AND BROWN CLAY
60 110 LIGHT AND DARK BROWN CLAY
110 140 LIGHT BROWN ASH
140 185 MULTI SHADES OF ASH
185 360 BLACK ASH
360 400 STICKY BLUE GREEN CLAY

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 050327

Permit No. or Date 249-80

State Well No. _____
Other Well No. 09N08W22D

(1) Address _____
City _____
(2) LOCATION OF WELL (See instructions):
County Sonoma Owner's Well Number 132-140-05
Well address if different from above 5100 Thomas Rd.
Township Healdsburg Range _____ Section _____
Distance from cities, roads, railroads, fences, etc. _____

(12) WELL LOG: Total depth 168 ft. Depth of completed well 168 ft.
from ft. to ft. Formation (Describe by color, character, size or material)

0 - 2	Topsoil
2 - 8	Sandy brown clay
8 - 15	Cemented sand and small gravel
15 - 21	Gray volcanic ash
21 - 36	Multi-colored volcanics
36 - 98	Cemented black volcanic sand
98 - 110	Multi-colored volcanics
110 - 138	Highly fractured volcanic rock (g)
138 - 154	Multi-colored volcanics
154 - 168	Gray clayey volcanic ash

(3) TYPE OF WORK:
New Well Deepening
Reconstruction
Reconditioning
Horizontal Well
Destruction (Describe destruction materials and procedures in Item 12)
(4) PROPOSED USE:
Domestic
Irrigation
Industrial
Test Well
Stock
Municipal
Other

WELL LOCATION SKETCH

(5) EQUIPMENT:
Rotary Reverse
Cable Air
Other Bucket
(6) GRAVEL PACK:
Yes No Size Fine Red
Diameter of bore 10 5/8, 8 3/4
Packed from 30 to 168 ft.

(7) CASING INSTALLED: Steel Plastic Concrete
(8) PERFORATIONS:
Type of perforation or size of screen Teich

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
0	168	6 5/8	.156	48	88	1/8 x 6
				108	128	" "
				148	168	" "

(9) WELL SEAL:
Was surface sanitary seal provided? Yes No If yes, to depth 30 ft.
Were strata sealed against pollution? Yes No Interval _____ ft.
Method of sealing Cement on pack

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion 20 ft.

(11) WELL TESTS:
Was well test made? Yes No If yes, by whom? Weeks
Type of test Pump Bailer Air lift
Depth to water at start of test 20 ft. At end of test 40 ft.
Discharge 60 gal/min after 1 hours Water temperature cool
Chemical analysis made? Yes No If yes, by whom? _____
Was electric log made? Yes No If yes, attach copy to this report

Work started 7/7 1980 Completed 7/8 1980
WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
SIGNED Gerald G. Thompson, By: Mary E. Thompson
(Well Driller)
NAME WEEKS DRILLING AND PUMP COMPANY
(Person, firm, or corporation) (Typed or printed)
Address 6100 Sebastopol Rd.
City Sebastopol, CA Zip 95472
License No. 057-177681 Date of this report July 15, 1980

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

DWR USE ONLY - DO NOT FILL IN
09W08WD
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. 2/19/97 No. **562561**
Date Work Began 2/19/97, Ended 3/3/97

Local Permit Agency **DEPARTMENT OF PERMITS & RESOURCE MANAGEMENT**
Permit No. 97-0019 Permit Date 2/18/97

GEOLOGIC LOG

WELL OWNER

ORIENTATION (∠) VERTICAL HORIZONTAL ANGLE (SPECIFY)

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE
DEPTH FROM SURFACE _____
DESCRIPTION
Ft. to Ft. Describe material, grain size, color, etc.

0	3	TOP SOIL
3	10	BOULDERS
10	20	BROWN CLAY AND ROCK
20	26	BLUE CLAY
26	50	BLUE CLAY AND GRAVEL
50	56	GRAVEL
56	58	BLUE CLAY
58	65	GRAVEL
65	76	GRAVEL/SOME CLAY
76	86	BLUE CLAY
86	96	GRAVEL
96	110	BLUE CLAY
110	116	GRAVEL
116	173	STICKY BLUE CLAY
173	178	GRAVEL
178	196	BLUE CLAY/GRAVEL
196	216	BLE CLAY/ROCK
216	256	BLUE CLAY
256	272	BLUE CLAY/GRAVEL
272	296	ROCK AND GRAVEL
296	326	STICKY BLUE CLAY
326	350	BLUE CLAY
350	356	BLUE CLAY/GRAVEL
356	376	GRAVEL
376	386	BLUE CLAY
PERFS CON'D FROM BELOW		
300	340	BLANK
340	380	PERFORATED CASING
TOTAL DEPTH OF BORING <u>390</u> (Feet)		
TOTAL DEPTH OF COMPLETED WELL <u>380</u> (Feet)		

WELL LOCATION
Address 4770 THOMAS ROAD
City HEALDSBURG, CA. 95448
County SONOMA
APN Book 132 Page 110 Parcel 44
Township _____ Range _____ Section _____
Latitude _____ North Longitude _____ West

LOCATION SKETCH NORTH _____ SOUTH _____
WEST _____ EAST _____
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (∠)
 NEW WELL
 MODIFICATION/REPAIR
 Deepen
 Other (Specify) _____
 DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")
PLANNED USE(S) (∠)
 MONITORING
WATER SUPPLY
 Domestic
 Public
 Irrigation
 Industrial
 "TEST WELL"
 CATHODIC PROTECTION
 OTHER (Specify) _____

DRILLING METHOD ROTARY MUD FLUID _____
WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH OF STATIC WATER LEVEL 10' (Ft.) & DATE MEASURED 3/3/97
ESTIMATED YIELD 60 (GPM) & TEST TYPE ATR LTFT
TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN 375 (Ft.)
** May not be representative of a well's long-term yield.*

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	CASING(S)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
		TYPE (∠)	BLANK	SCREEN	CONDUIT				
0	40	9 7/8	X			F480	8"	200#	
40	126	"		X		"	"	"	.032
120	160	"	X			"	"	"	
160	220	"		X		"	"	"	.032
220	240	"	X			"	"	"	
240	300	"		X		"	"	"	.032

DEPTH FROM SURFACE Ft. to Ft.	ANNULAR MATERIAL			
	CE- MENT (∠)	BEN- TONITE (∠)	FILL (∠)	FILTER PACK (TYPE / SIZE)
0	30	XX		
30	380			8/16 MONT

(NOTE: PERFS CONTINUED B/LOW LOG)

ATTACHMENTS (∠)

Geologic Log
 Well Construction Diagram
 Geophysical Log(s)
 Soil/Water Chemical Analyses
 Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME LES PETERSEN DRILLING & PUMP, INC.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
5434 OLD REDWOOD HIGHWAY SANTA ROSA, CA. 95403
ADDRESS CITY STATE ZIP
Signed LUPE VASQUEZ 3/3/97 261084
WELL DRILLER/AUTHORIZED REPRESENTATIVE DATE SIGNED G-57 LICENSE NUMBER

ORIGINAL
File with DWR

Well 10

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

Page 1 of 1

Owner's Well No. 1

No. **562567**

Date Work Began **11-11-96**, Ended **11-14-96**

Local Permit Agency **DEPARTMENT OF PERMIT & RESOURCE MANAGEMENT**

Permit No. **96-0425**

Permit Date **10/10/96**

DWR USE ONLY - DO NOT FILL IN

0 9 N 0 8 W 2 1

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

WELL OWNER

ORIENTATION (✓) **XX** VERTICAL _____ HORIZONTAL _____ ANGLE _____ (SPECIFY)

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE	
Ft.	to Ft.
0	3
3	20
20	37
37	47
47	67
67	77
77	80
80	87
87	90
90	117
117	122
122	147
147	157
157	187
187	197
197	247
247	267
267	277
277	287
287	307
307	317
317	327
327	337

DESCRIPTION

Describe material, grain size, color, etc.

0	3	TOP SOIL
3	20	SOFT BROWN ROCK/CLAY
20	37	SOFT BROWN ROCK
37	47	HARD BROWN ROCK
47	67	SANDY BROWN CLAY/ROCK
67	77	SOFT GRAY SAND/ROCK
77	80	SOFT BROWN ROCK
80	87	SOFT GRAY SAND/ROCK
87	90	SOFT GRAY SAND/ROCK
90	117	GRAY & GREEN SOFT SAND/ROCK
117	122	MIXED GRAVEL
122	147	BLUE CLAY/ROCK
147	157	BLUE CLAY & GRAVEL
157	187	BLUE CLAY/GRAVEL
187	197	BLUE CLAY/ROCK
197	247	BLUE CLAY/GRAVEL
247	267	GRAVEL/BLUE CLAY
267	277	BROWN CLAY/GRAVEL
277	287	SOFT SAND/ROCK
287	307	GRAVEL W/BLUE CLAY/REDWOOD
307	317	GRAVEL W/BLUE CLAY
317	327	ROCK & GRAVEL/REDWOOD
327	337	GRAVEL/SOME BLUE CLAY

WELL LOCATION

Address **5454 THOMAS ROAD**

City **HEALDSBURG, CA. 95448**

County **SONOMA**

APN Book **132** Page **140** Parcel **011**

Township _____ Range _____ Section _____

Latitude _____ or Longitude _____ NORTH WEST

LOCATION SKETCH

ACTIVITY (✓)

XX NEW WELL

MODIFICATION/REPAIR

_____ Deepen

_____ Other (Specify)

_____ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S)

(✓) _____ MONITORING

WATER SUPPLY

XX Domestic

_____ Public

_____ Irrigation

_____ Industrial

_____ "TEST WELL"

_____ CATHODIC PROTECTION

_____ OTHER (Specify)

SOUTH
Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

DRILLING METHOD **ROTARY MUD** FLUID _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC **50**

WATER LEVEL _____ (Ft.) & DATE MEASURED **11/14/96**

ESTIMATED YIELD* **35** (GPM) & TEST TYPE **AIR LIFT**

TEST LENGTH **4** (Hrs.) TOTAL DRAWDOWN **325** (Ft.)

* May not be representative of a well's long-term yield. **15 @ 210**

TOTAL DEPTH OF BORING **337** (Feet)

TOTAL DEPTH OF COMPLETED WELL **337** (Feet)

DEPTH FROM SURFACE	BORE-HOLE DIA. (Inches)	CASING(S)						DEPTH FROM SURFACE	ANNULAR MATERIAL				
		TYPE (✓)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)		GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE		
Ft.	to Ft.	BLANK	SCREEN	CONDUIT	FILL PIPE								
0	77	9 7/8	X				F480	5"	200#				
77	157	"	XX				"	"	"	.032			
157	217	"	X				"	"	"				
217	337	"		X			"	"	"	.032			8 X 16

ATTACHMENTS (✓)

- _____ Geologic Log
- _____ Well Construction Diagram
- _____ Geophysical Log(s)
- _____ Soil/Water Chemical Analyses
- _____ Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME **LES PETERSEN DRILLING & PUMP, INC.** **266**

(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS **5434 OLD REDWOOD HIGHWAY SANTA ROSA, CA. 95403**

Signed **LUPE VASQUEZ** **11/15/96**

WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE SIGNED

261084

C-57 LICENSE NUMBER

APPENDIX B

SONOMA COUNTY GROUNDWATER RECHARGE ANALYSIS

Sonoma County Groundwater Recharge Analysis

Introduction

Developing accurate estimates of the spatial and temporal distribution of groundwater recharge is a key component of sustainable groundwater management. Efforts to quantify recharge are inherently difficult owing to the wide variability of controlling hydrologic processes, the wide range of available tools/methods for estimating recharge, and the difficulty in assessing the accuracy of estimates because direct measurement of recharge rates is, for the most part, infeasible.

Numerical modeling is a common approach for developing recharge estimates. Soil-water-balance modeling is one category of numerical models particularly well-suited for estimating recharge across large areas with modest data requirements. This study describes an application of the U.S. Geological Survey's (USGS) Soil Water Balance Model (SWB) (Westenbroek et al., 2010) to develop spatial and temporal distributions of groundwater recharge across Sonoma County. Hydrologically connected portions of Marin County, including the San Antonio Creek and Walker Creek watersheds, were also included in the model domain. This model operates on a daily timestep and calculates surface runoff based on the Natural Resources Conservation Service (NRCS) curve number method, actual evapotranspiration (AET), and recharge based on a modified Thornthwaite-Mather soil-water-balance approach (Westenbroek et al., 2010).

It is important to note that the SWB model focuses on surface and soil-zone processes and does not simulate the groundwater system or track groundwater storage over time. The model also does not simulate surface water/groundwater interaction or baseflow; thus, the runoff estimates represent only the surface runoff component of streamflow resulting from rainstorms and the recharge estimates represent only the infiltration recharge component (also referred to as diffuse recharge) of total recharge (stream-channel recharge is not simulated).

Model Development

The model was developed using a 1 arc-second (90.8-ft) resolution rectangular grid. Water budget calculations were made on a daily time step. Key spatial inputs included a flow direction map developed from the USGS 1 arc-second resolution Digital Elevation Model (DEM), a land cover dataset derived from the Sonoma County Veg Map Lifeform dataset supplemented by the U.S. Forest Service (USFS) CALVEG dataset for portions of Marin County (Figure 1), a distribution of Hydrologic Soil Groups (A through D classification from lowest to highest runoff potential; Figure 2), and a distribution of Available Water Capacity (AWC) developed from the NRCS Soil Survey Geographic Database (SSURGO) (Figure 3).

A series of model parameters were assigned for each land cover type/soil group combination including a curve number, dormant and growing season interception storage values, and a rooting depth (Table 1). Curve numbers were assigned based on standard NRCS methods. Interception storage values and rooting depths were assigned based on literature values and



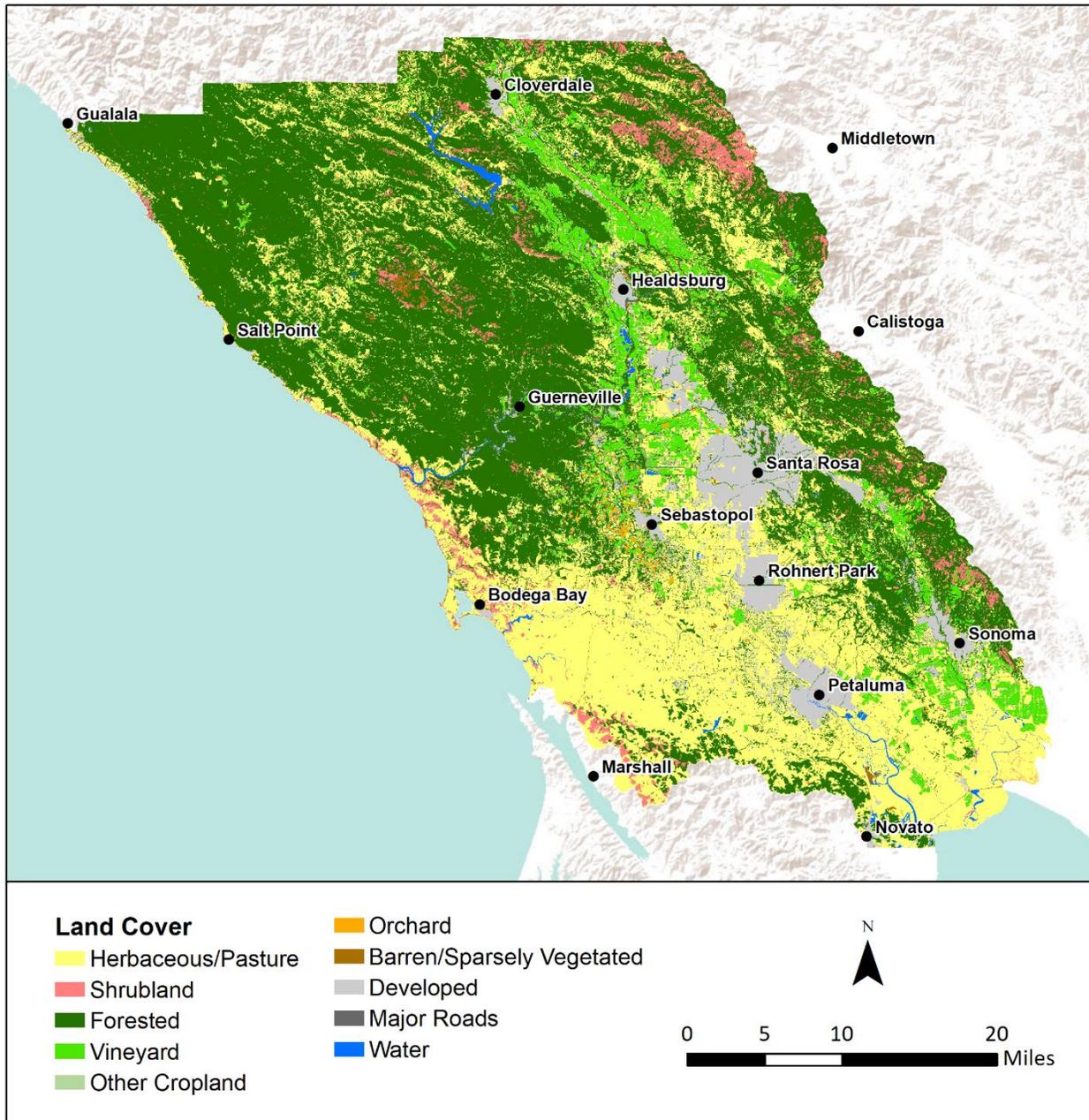


Figure 1: Land cover map used in the Sonoma County SWB model.

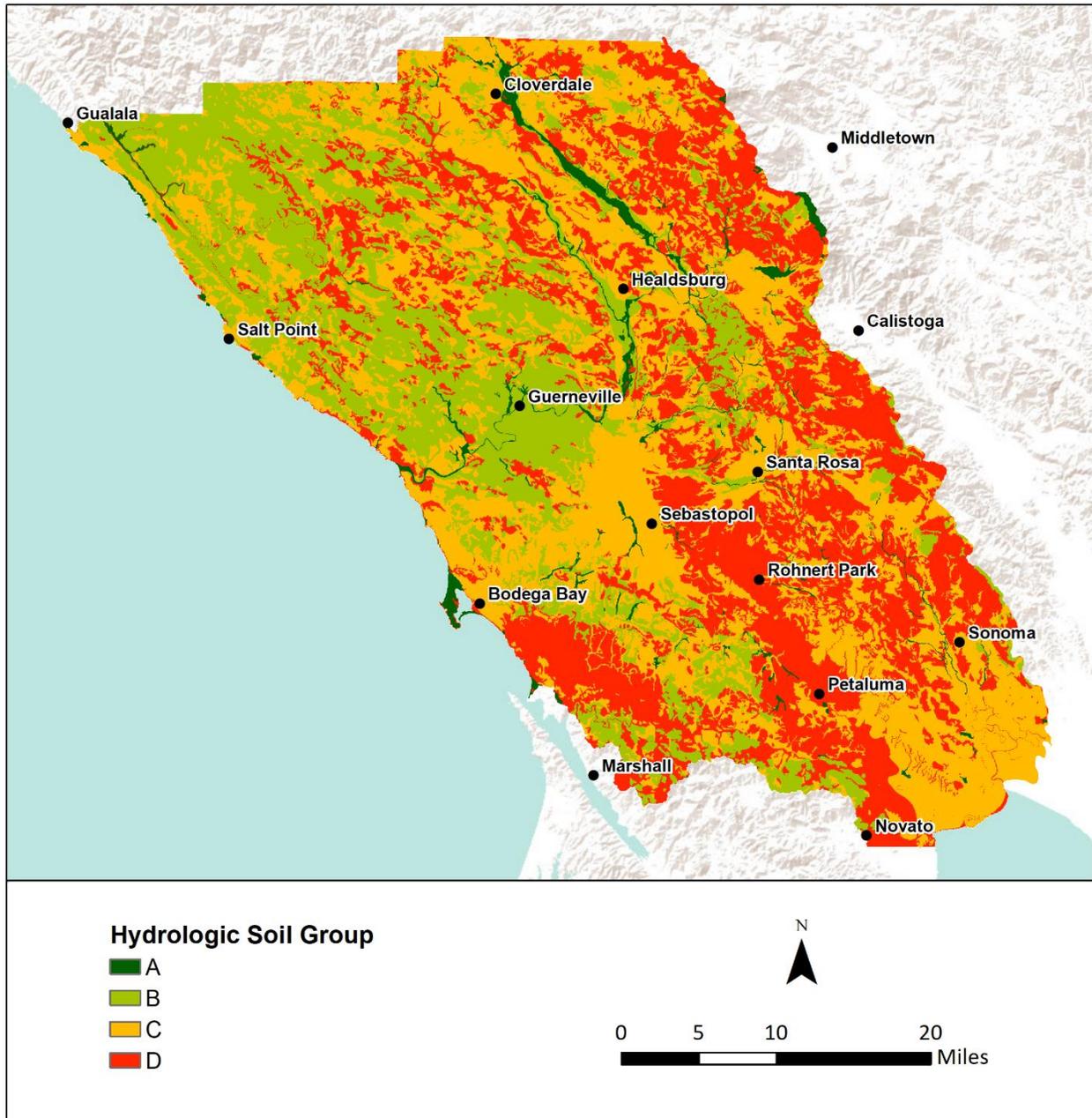


Figure 2: Hydrologic soil group map used in the Sonoma County SWB model.

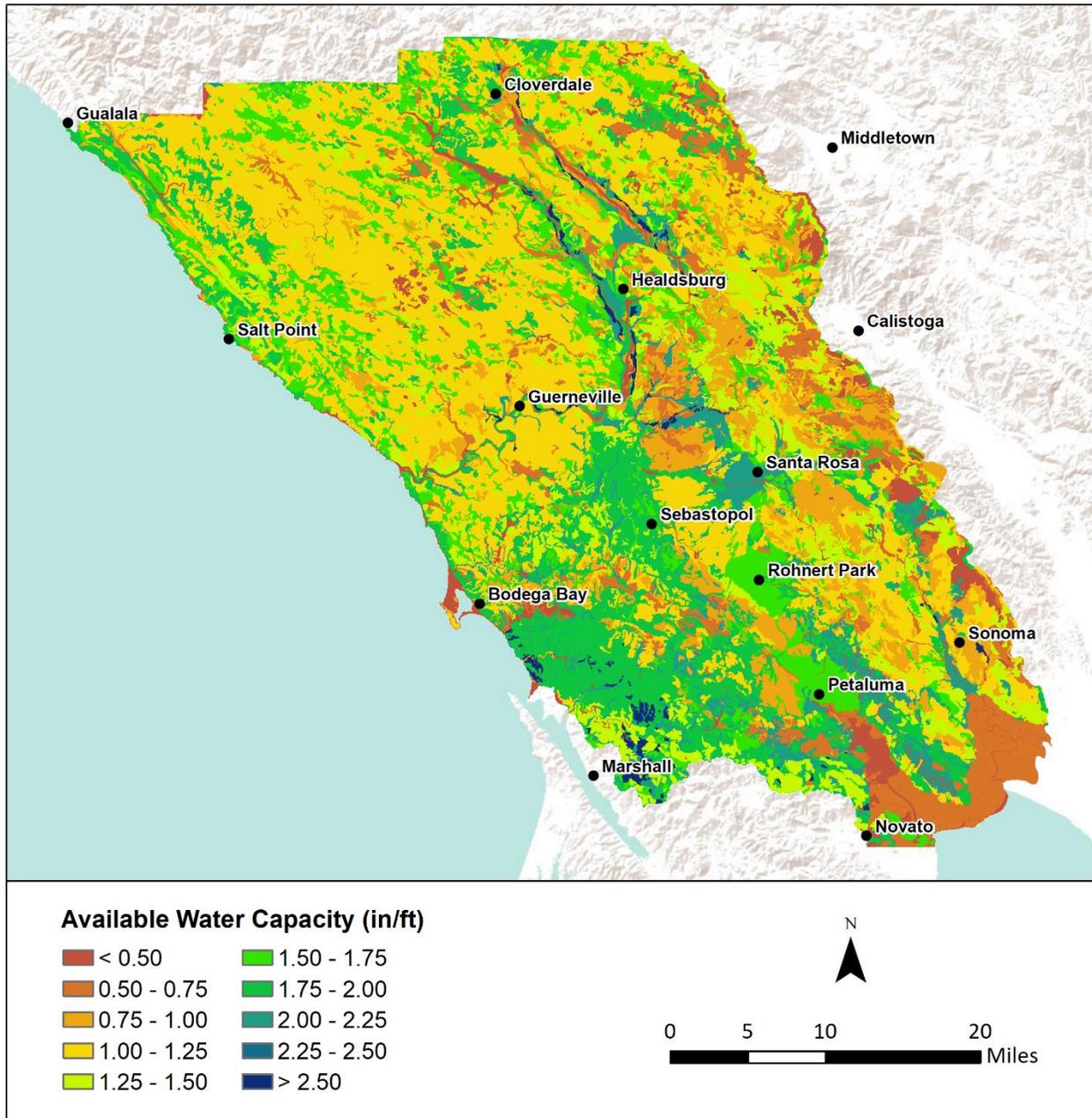


Figure 3: Available water capacity map used in the Sonoma County SWB model.

Table 1: Soil and land cover properties used in the Sonoma County SWB model.

Land Cover	Curve Number				Interception Storage Values		Rooting Depth (ft)			
	A Soils	B Soils	C Soils	D Soils	Growing Season	Dormant Season	A Soils	B Soils	C Soils	D Soils
	Herbaceous	30	58	71	78	0.005	0.004	1.3	1.1	1.0
Shrubland	30	48	65	73	0.080	0.015	3.2	2.8	2.7	2.6
Forested	30	55	70	77	0.050	0.020	5.9	5.1	4.9	4.7
Vineyard	38	61	75	81	0.080	0.015	2.2	2.1	2.0	1.9
Other Cropland	38	61	75	81	0.080	0.040	2.0	1.9	1.8	1.7
Orchard	38	61	75	81	0.050	0.015	3.2	2.8	2.7	2.6
Barren	77	86	91	94	0.000	0.000	0.7	0.6	0.5	0.4
Developed	61	75	83	87	0.005	0.002	2.3	2.1	2.0	1.8
Major Roads	77	85	90	92	0.005	0.002	0.7	0.6	0.5	0.4
Water	100	100	100	100	0.000	0.000	0.0	0.0	0.0	0.0

Table 2: Infiltration rates for NRCS hydrologic soil groups (Cronshey et al., 1986).

Soil Group	Infiltration Rate (in/hr)
A	> 0.3
B	0.15 - 0.3
C	0.05 - 0.15
D	<0.05

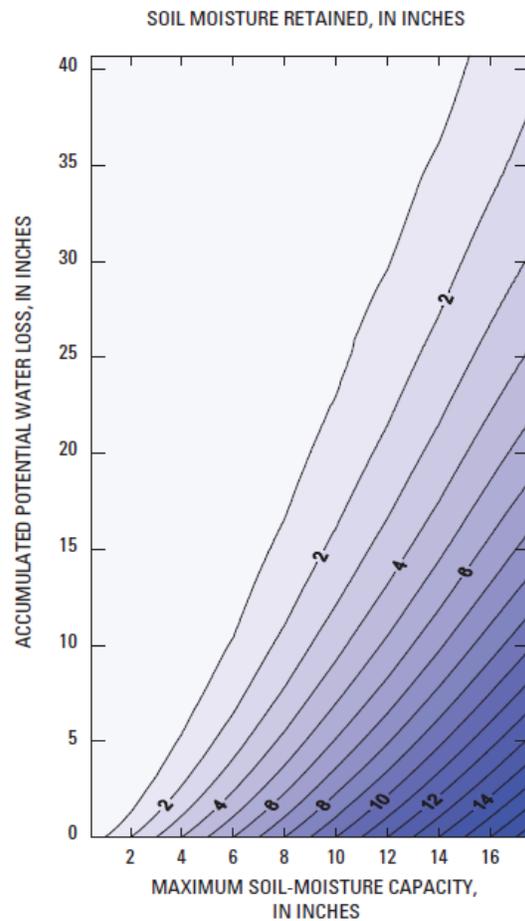


Figure 4: Soil-moisture-retention table (Thornthwaite and Mather, 1957).

previous modeling experience. Infiltration rates for hydrologic soil groups A through D were applied based on Cronshey et al. (1986) (Table 2) along with default soil-moisture-retention relationships based on Thornthwaite and Mather (1957) (Figure 4).

The SWB model utilizes daily precipitation and mean daily temperature data derived from climate stations. To account for the spatial variability of these parameters, daily precipitation and mean daily temperature were input as gridded time-series. The gridded precipitation time-series was created using data from 22 weather stations in Sonoma County, and the gridded mean temperature time-series was created using data from 10 stations (Table 3, Figures 5 & 6). These stations were selected based on completeness of the records and to provide station data across the range of climates experienced in the county. Temperature and precipitation data were obtained from the California Data Exchange Center (CDEC), the Western Regional Climate Center (WRCC), the National Climatic Data Center (NCDC), and data collected by O'Connor Environmental, Inc. from work on prior projects.

To create the gridded time-series, the model domain was divided into discrete areas represented by individual weather stations (Figures 7 and 8). This delineation was based on the USGS HUC-10 watersheds, local knowledge of climate variations across the county, and climate variations described by existing gridded mean annual (1981-2010) precipitation and temperature data (PRISM, 2010).

For the precipitation time-series, each area representing a weather station was subdivided into three to fifteen zones based on PRISM-derived 2-inch interval mean annual precipitation zones. The ratio of mean annual precipitation within a given zone and at a given gauge location was used to define scaling factors for each zone. The raw station data (daily precipitation) was then multiplied by the scaling factor to develop the final timeseries for each zone. The resulting gridded time-series is comprised of 215 individual time-series based on the scaled station data from the twenty-two stations.

The assignment of temperature stations was based on the understanding that the 10 available stations represent distinct climate zones in Sonoma County. Coastal climate conditions are best represented by the Fort Ross and Bodega Bay weather stations. The Occidental station is most representative of climate conditions in the coastal mountains of western Sonoma County, and the St. Helena station is most representative of conditions in the mountains of eastern Sonoma County. The remaining 6 stations all represent climate conditions in the inland valley bottom areas of the county. The temperature areas were not divided into additional zones for scaling because variations in temperatures within each representative area are expected to be relatively minor compared with the variations in precipitation; also the model sensitivity to temperature is expected to be small compared to the sensitivity to precipitation.

Missing and suspect data was encountered in the raw precipitation and temperature data from the weather stations used by the model. Values that were significantly outside the typical range and where similar outlying observations were not observed at nearby stations were removed from the datasets. These and missing values were filled using scaled data from other nearby

stations. Precipitation data was scaled using the ratio of the 1981 to 2010 mean annual precipitation (PRISM 2010) between the two stations. Temperature data was scaled using the ratio of the 1981 to 2010 mean monthly minimum and maximum temperatures (PRISM, 2010) between the two stations.

The current analysis focuses on a Water Year 2010 (October 1, 2009 – September 30, 2010). This year was selected because it represents a recent year with data available from most weather stations in the county, and the total annual rainfall was near long-term average conditions at most of the weather stations. Water year 2010 rainfall ranged from 83% of long-term average conditions at the Sonoma and Petaluma 10.1 W station to 137% at the Fort Ross station based on a comparison between the station data and the 1981-2010 average precipitation from PRISM (2010) (Table 3).

Table 3: Weather stations used in the Sonoma County SWB model.

Climate Zone	Station	Data Source	Data Used	1981 - 2010 Mean Annual Precip (in)	WY 2010 Precip (in)	WY 2010 Precip (% Avg.)
Coastal	Bodega Bay 6 WSW	NOAA accessed via NCDC	Precip. & Temp.	34.06	37.11	109%
	Fort Ross	NOAA accessed via WRCC	Precip. & Temp.	35.10	48.01	137%
Western Mountains	Francini Creek	OEI Project Data	Precip. Only	46.99	59.71	127%
	Geyserville 10.6 WNW	NOAA accessed via NCDC	Precip. Only	52.34	52.97	101%
	Monte Rio	NOAA accessed via NCDC	Precip. Only	48.44	51.01	105%
	Occidental	NOAA accessed via WRCC	Precip. & Temp.	55.37	57.02	103%
	Petaluma 10.1 W	NOAA accessed via NCDC	Precip. Only	37.90	31.57	83%
	SF Fuller Creek	OEI Project Data	Precip. Only	56.49	60.89	108%
	Venado	CA DWR accessed via CDEC	Precip. Only	60.14	66.01	110%
Valleys	Cloverdale	NOAA accessed via WRCC	Precip. & Temp.	42.63	52.65	123%
	Glen Ellen 1.5 N	NOAA accessed via NCDC	Precip. Only	36.14	46.74	129%
	Graton	NOAA from WRCC	Precip. & Temp.	41.07	45.00	110%
	Healdsburg	NOAA accessed via WRCC	Precip. Only	40.95	47.65	116%
	Petaluma River Airport	NOAA accessed via WRCC	Precip. & Temp.	26.60	26.92	101%
	Rohnert Park 0.9 SW	NOAA accessed via NCDC	Precip. Only	33.36	34.73	104%
	Santa Rosa	CAL Fire accessed via CDEC	Precip. & Temp.	31.90	39.55	124%
	Sonoma	NOAA accessed via WRCC	Precip. & Temp.	31.77	26.35	83%
	Calistoga	NOAA accessed via WRCC	Temp. Only	na	na	na
	Warm Springs Dam	USACE accessed via CDEC	Precip. Only	43.44	53.29	123%
Eastern Mountains	Calistoga 4.6 WSW	NOAA accessed via NCDC	Precip. Only	39.64	44.85	113%
	Glen Ellen 1.9 WNW	NOAA accessed via NCDC	Precip. Only	49.16	46.32	94%
	Hawkeye	NOAA accessed via WRCC	Precip. Only	45.57	51.06	112%
	St. Helena 4 WSW	CA DWR accessed via CDEC	Precip. & Temp.	49.12	47.88	97%

Notes: NOAA – National Oceanic and Atmospheric Administration; CA DWR – California Department of Water Resources; NCDC – National Climate Data Center; USACE – United States Army Corps of Engineers; WRCC – Western Regional Climate Center; CDEC – California Data Exchange Center

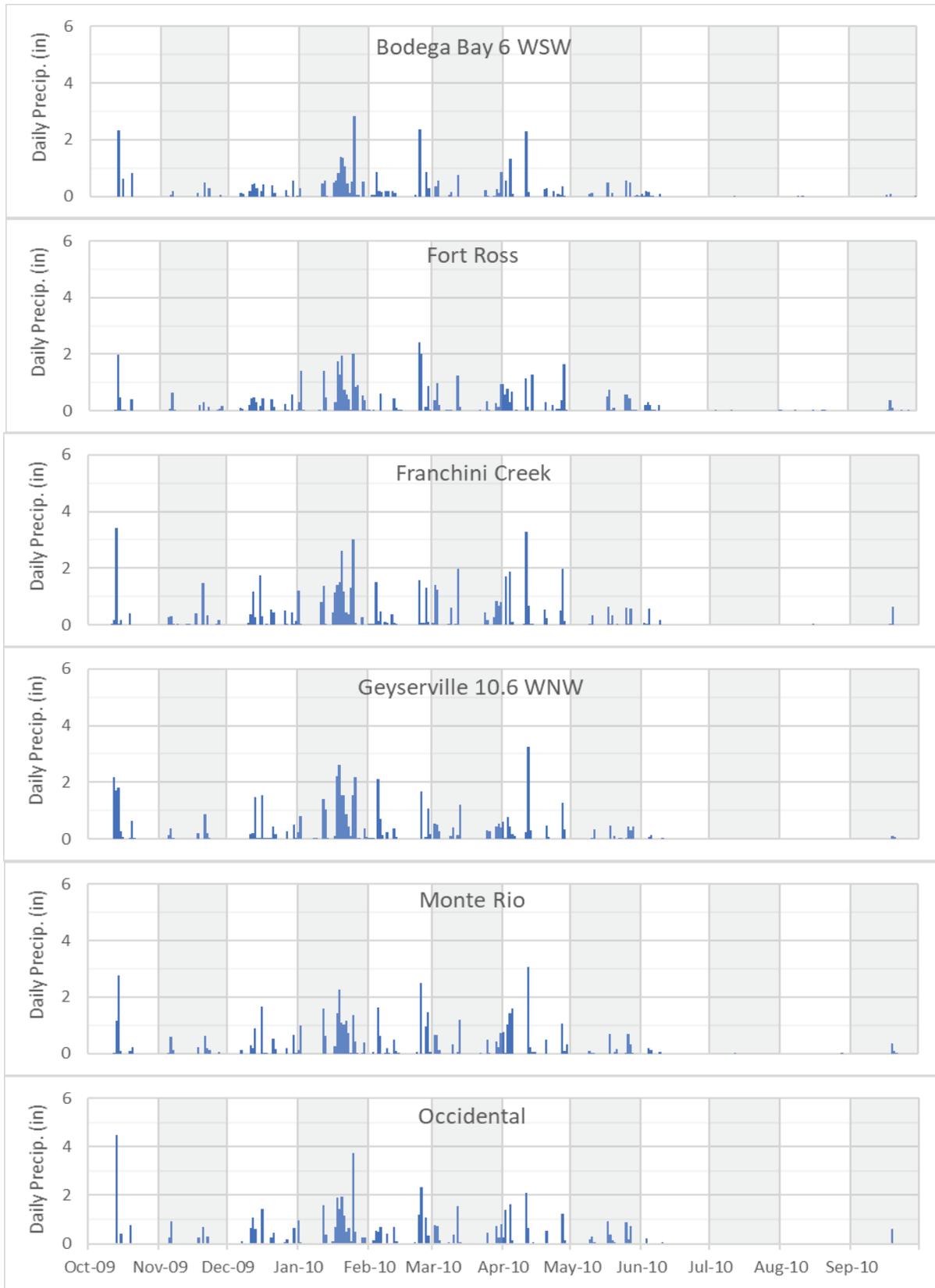


Figure 5: Daily precipitation data used in the Sonoma County SWB model.

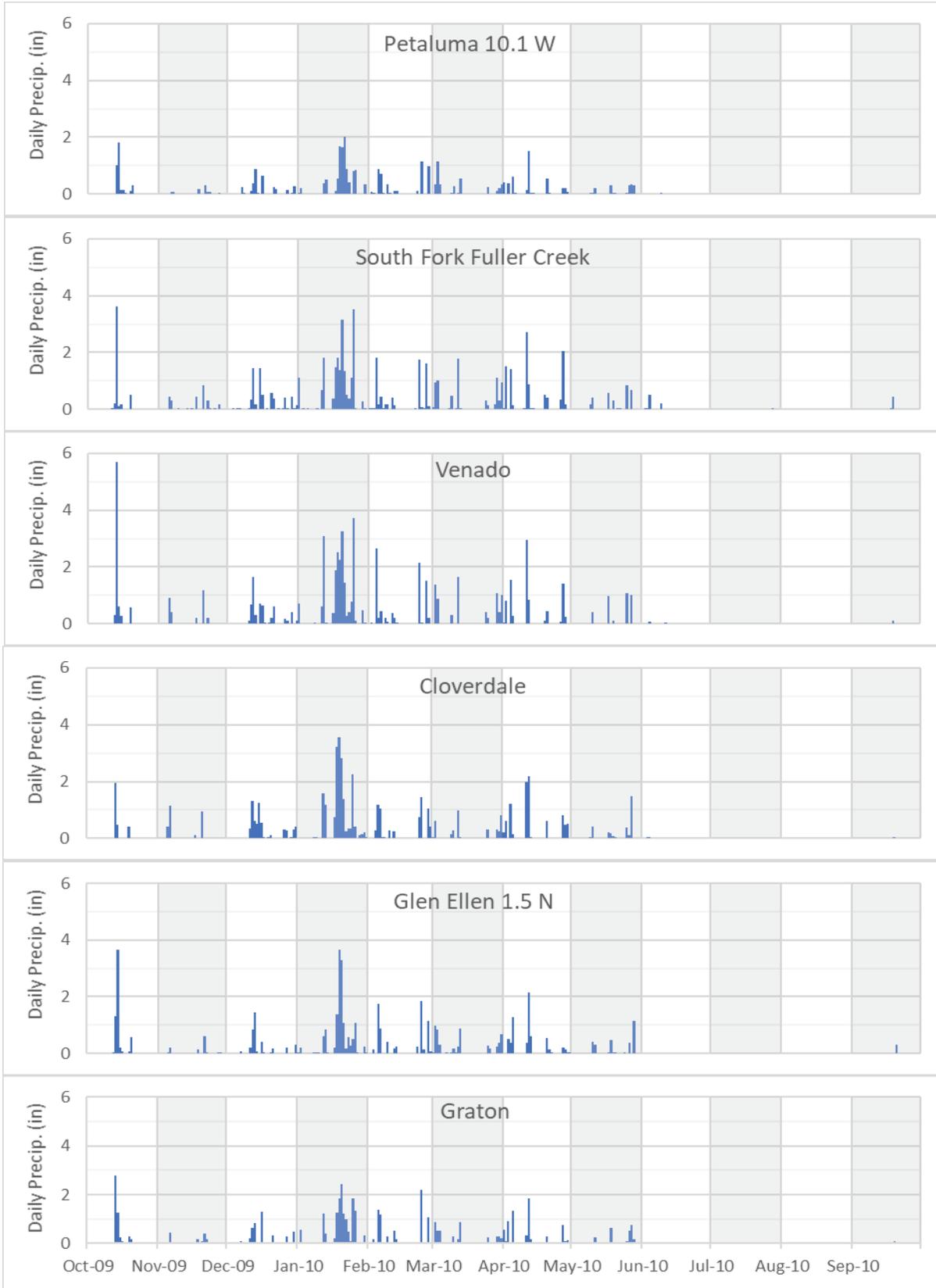


Figure 5 (continued)



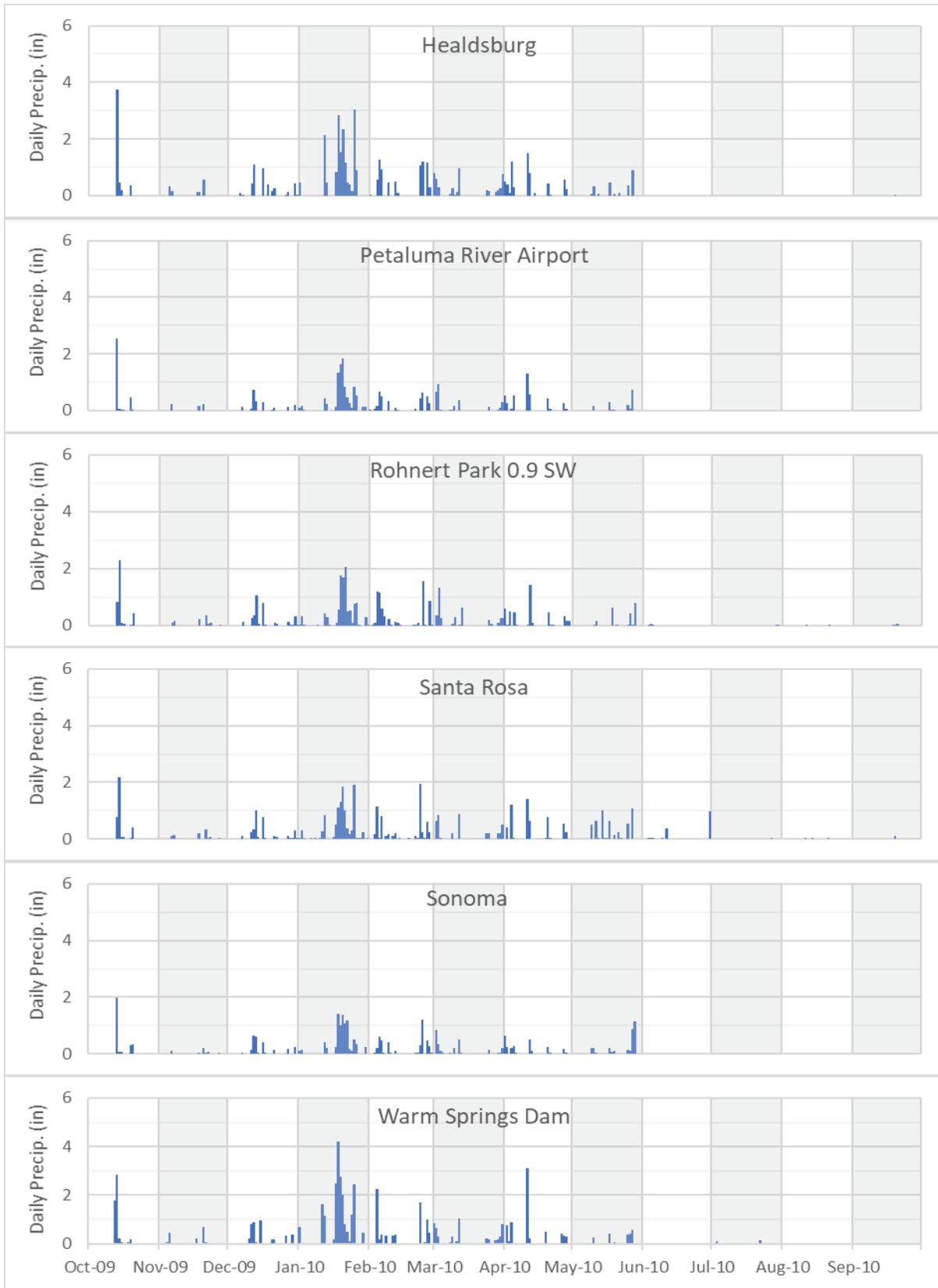


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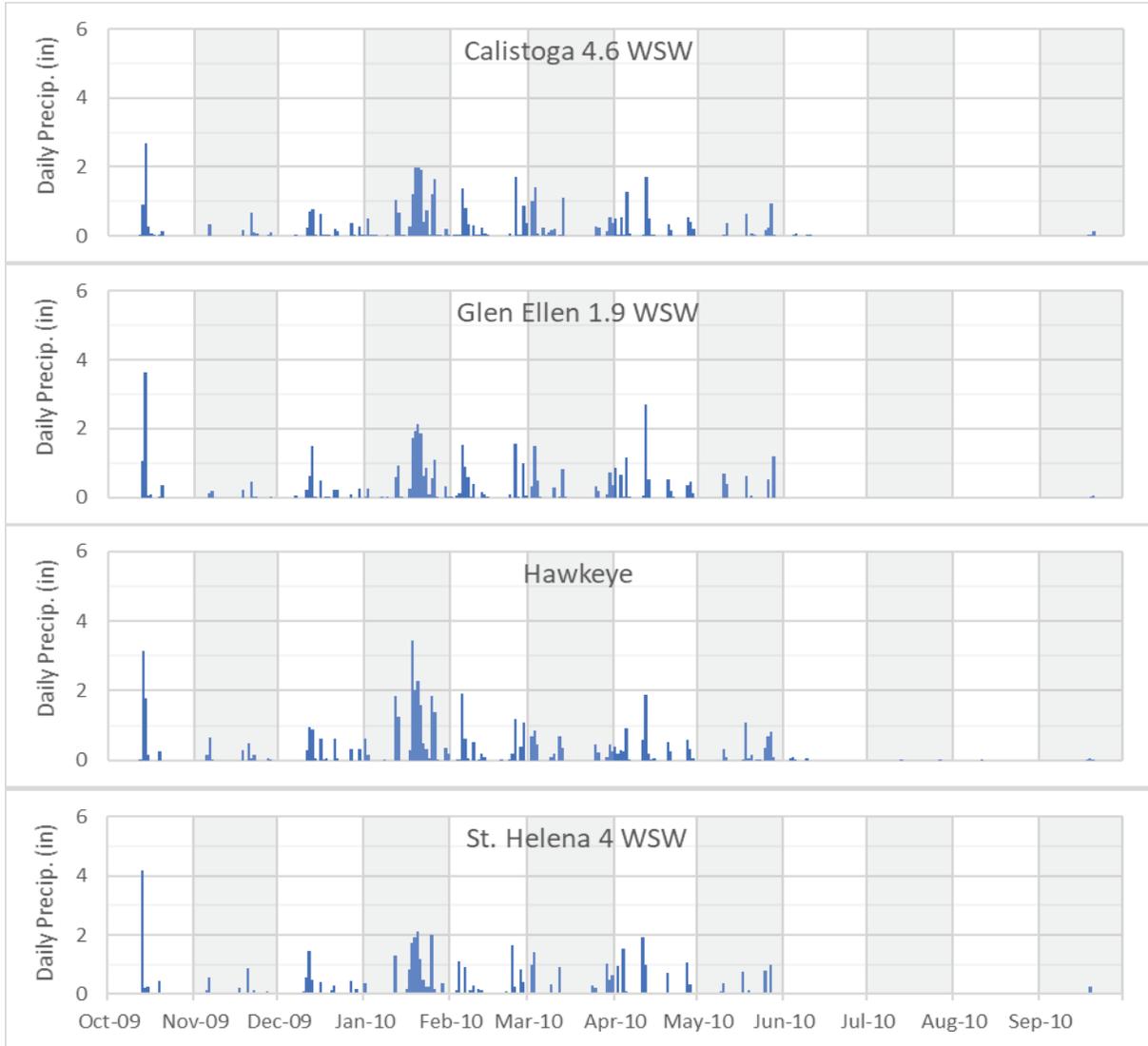


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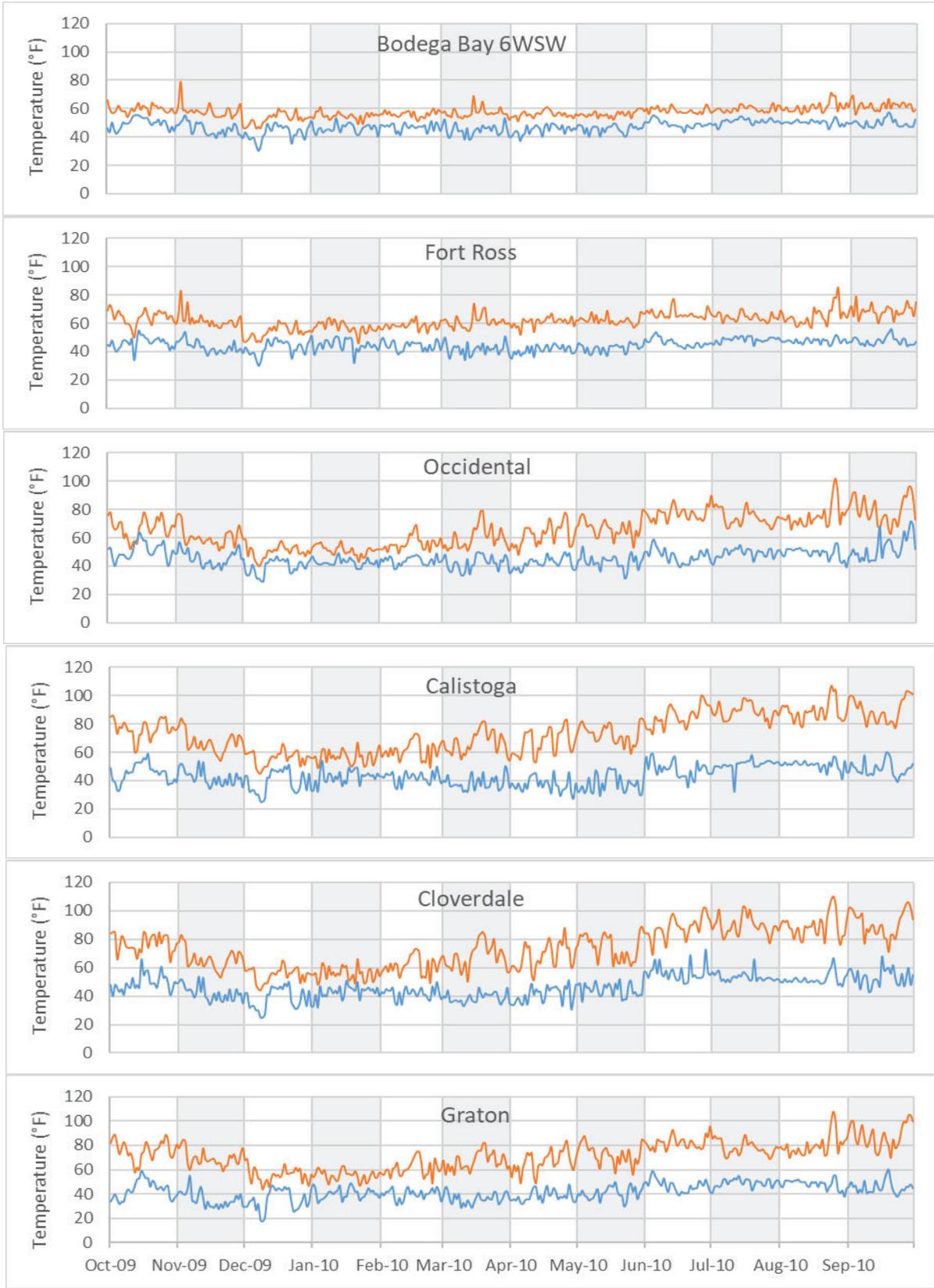


Figure 6: Daily minimum and maximum temperature data used in the Sonoma County SWB model.

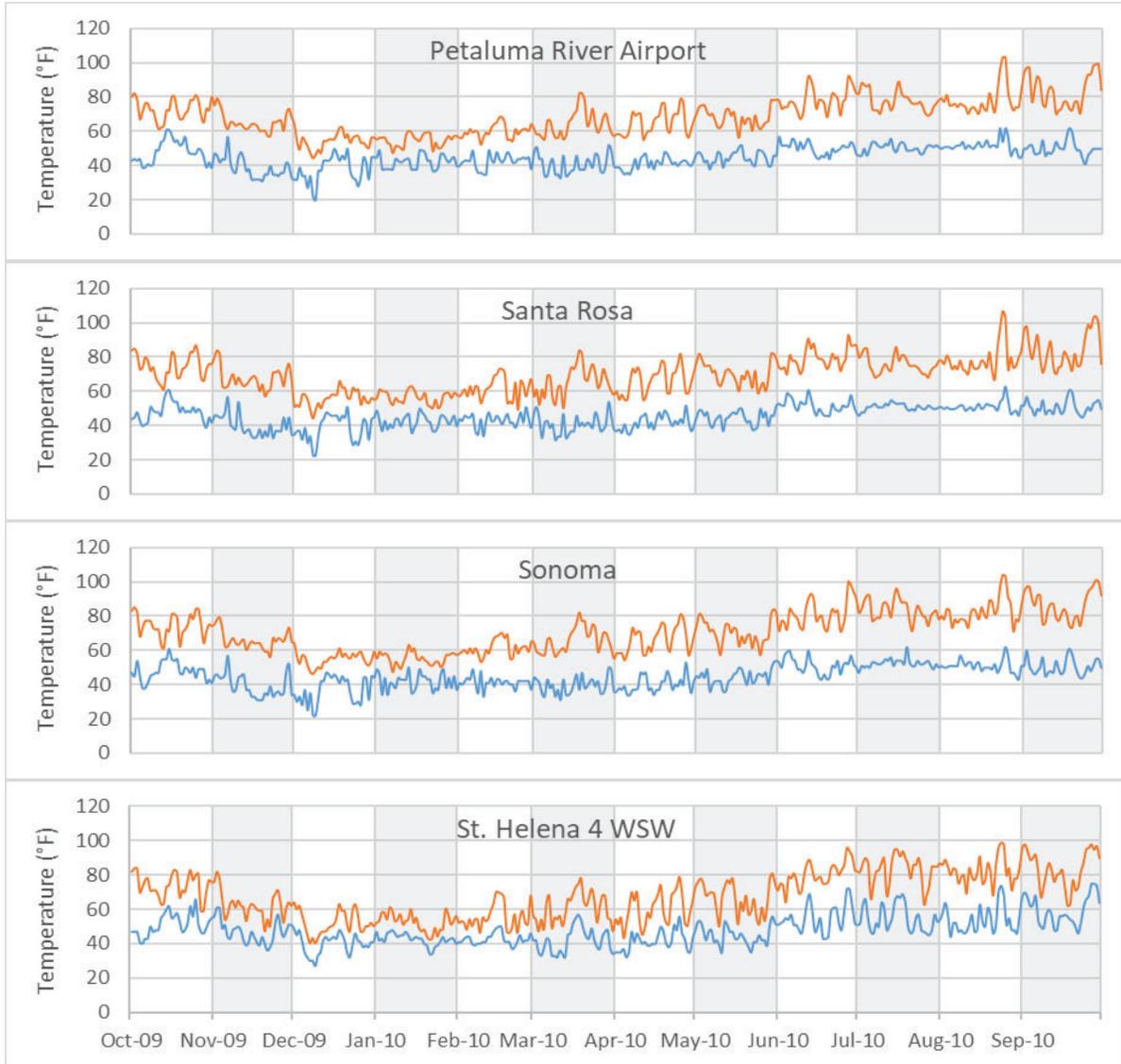


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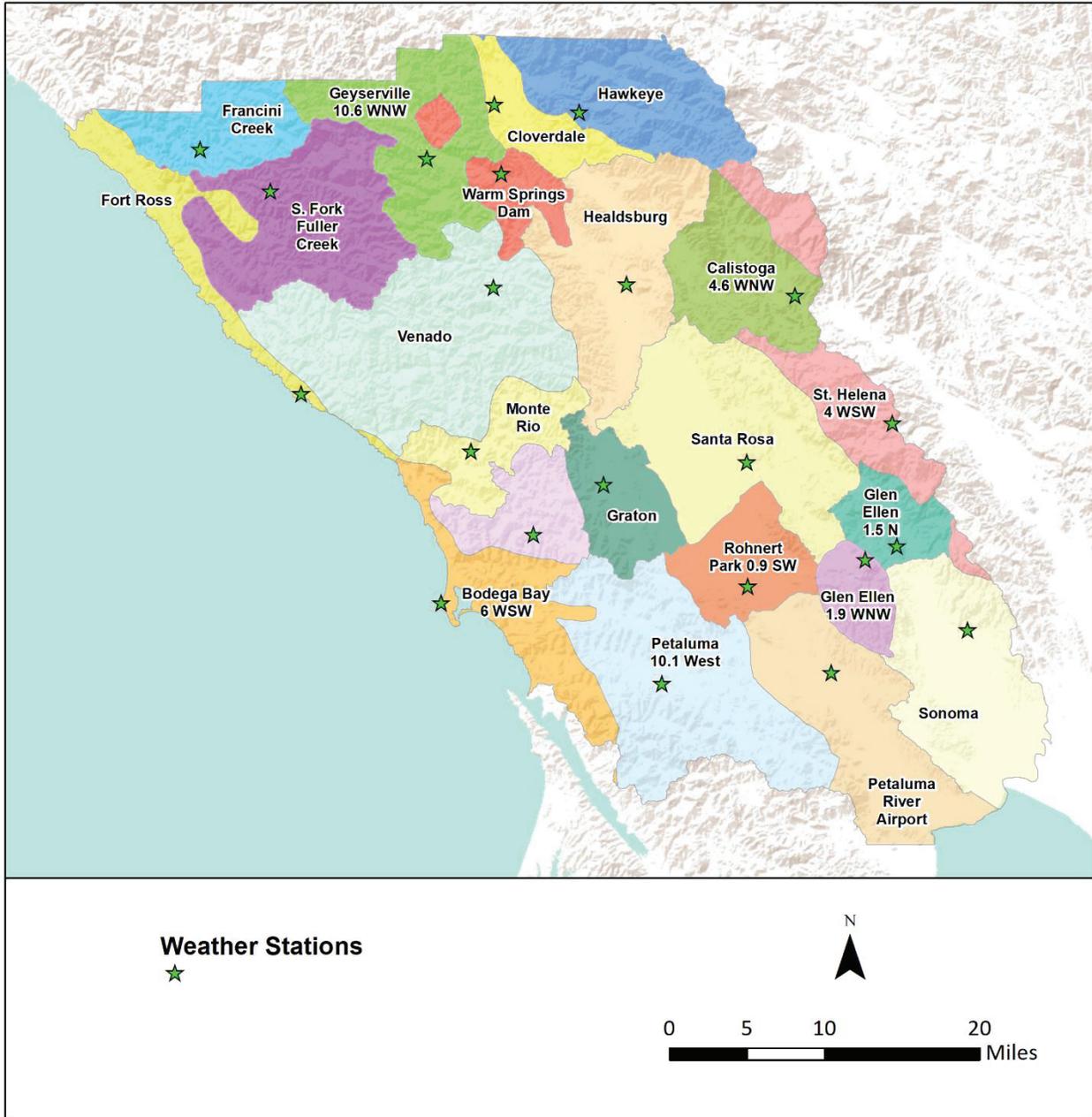


Figure 7: Precipitation zones used in the Sonoma County SWB model.

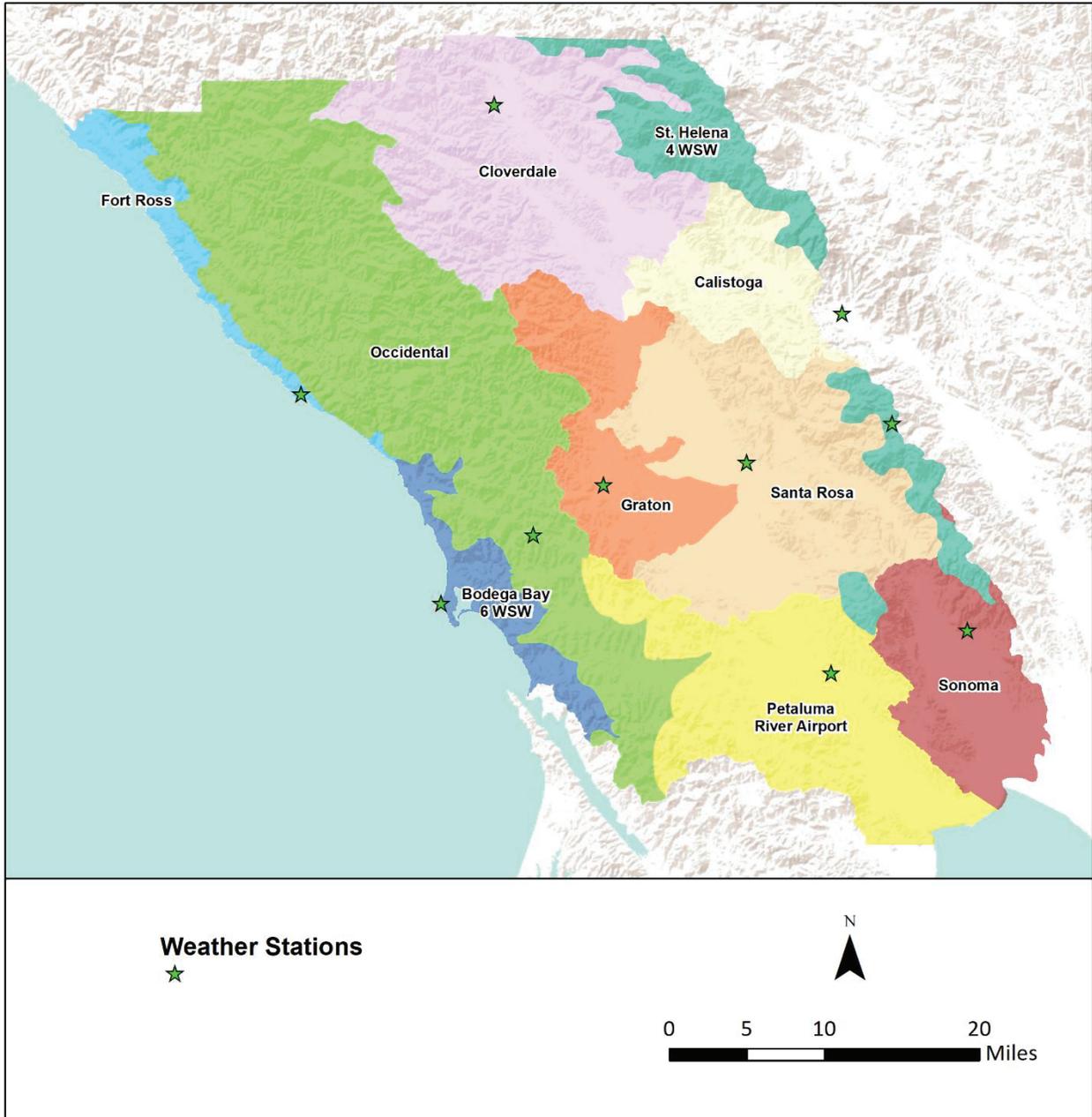


Figure 8: Temperature zones used in the Sonoma County SWB model.

Model Calibration

To provide a means of calibrating the Sonoma County SWB model, streamflow data was compiled from five gauges with available data for water year 2010 (Figure 9, Table 4). These gauges were selected because they represent relatively small watersheds without significant urbanization, diversions, groundwater abstraction, reservoir impoundments, or large alluvial bodies where significant exchanges between surface water and groundwater may be expected. These attributes are desirable because the hydrographs can more readily be separated into surface runoff and baseflow components and the surface runoff pattern is more directly comparable to the SWB simulated surface runoff which does not account for water use, reservoir operations, or surface water/groundwater exchange. An overview of hydrograph separation methods may be found in Healy (2010, pp. 85-90).

We utilized the web-based Hydrograph Analysis Tool (Lim et al., 2005) to perform baseflow separations on the gauge records using the recursive digital filter method (Eckhardt, 2005) and default filter parameters for perennial streams with hard rock aquifers. Total monthly surface runoff volumes were compiled for each gauge and compared to the mean monthly surface runoff volumes predicted by SWB within each corresponding watershed area. SWB utilizes a simplified routing scheme whereby surface runoff is routed to downslope cells or out of the model domain on the same day in which it originates as rainfall, thus it is not capable of accurately estimating streamflow over short-time frames. The use of the total monthly surface runoff volumes provides a means of calibrating the model to measured surface runoff data within the limitations of the model's routing scheme.

The model successfully reproduced the seasonal variations in surface runoff at all five gauge locations (Figure 10). Monthly Mean Errors (ME) ranged from -0.2 to 0.4 inches with a mean value of 0.1 inches (Table 5). Monthly Root Mean Square Errors (RMSE) ranged from 0.5 to 1.5 inches with a mean value of 1.0 inches. Annual surface runoff totals ranged from an under-prediction of approximately 10% at Franchini Creek to an over-prediction of approximately 19% at Buckeye Creek, with a mean over-prediction of approximately 6% across the five stations (Table 5). These results indicate that the SWB model was able to reproduce monthly surface runoff volumes with a reasonable degree of accuracy and that the model tends to over-predict surface runoff somewhat, suggesting that the model may generate a low-range estimate of recharge.

Table 4: Overview of the streamflow gauges used for calibrating the Sonoma County SWB model.

	Operated By	Drainage Area (mi ²)	Period of Record
Sonoma Creek at Kenwood, CA (#11458433)	USGS	14.3	Oct 2008 - present
Buckeye Creek	OEI	3.1	Dec 2005 - Sept. 2012
Franchini Creek	OEI	1.8	Dec 2005 - Sept. 2012
South Fork Fuller Creek	OEI	1.2	Mar 2006 - Sept. 2012
Soda Springs Creek	OEI	1.5	Dec 2005 - Sept. 2012

Notes: USGS - U.S. Geological Survey, OEI - O'Connor Environmental, Inc.

Table 5: Calibration statistics for the Sonoma County SWB model calibration.

	Annual Simulated Surface Runoff (in)	Annual Observed Surface Runoff (in)	Annual PE	Monthly ME (in)	Monthly RMSE (in)
Sonoma Creek	12.7	11.7	8.1%	0.1	0.6
Buckeye Creek	31.6	26.5	19.2%	0.4	1.2
Franchini Creek	22.1	24.5	-9.6%	-0.2	1.0
South Fork Fuller Creek	24.1	21.9	10.2%	0.2	1.5
Soda Springs Creek	24.2	24.1	0.6%	0.0	0.5
MEAN	23.0	21.7	5.7%	0.1	1.0

Notes: PE - Percent Error, ME - Mean Error, RMSE – Root Mean Square Error

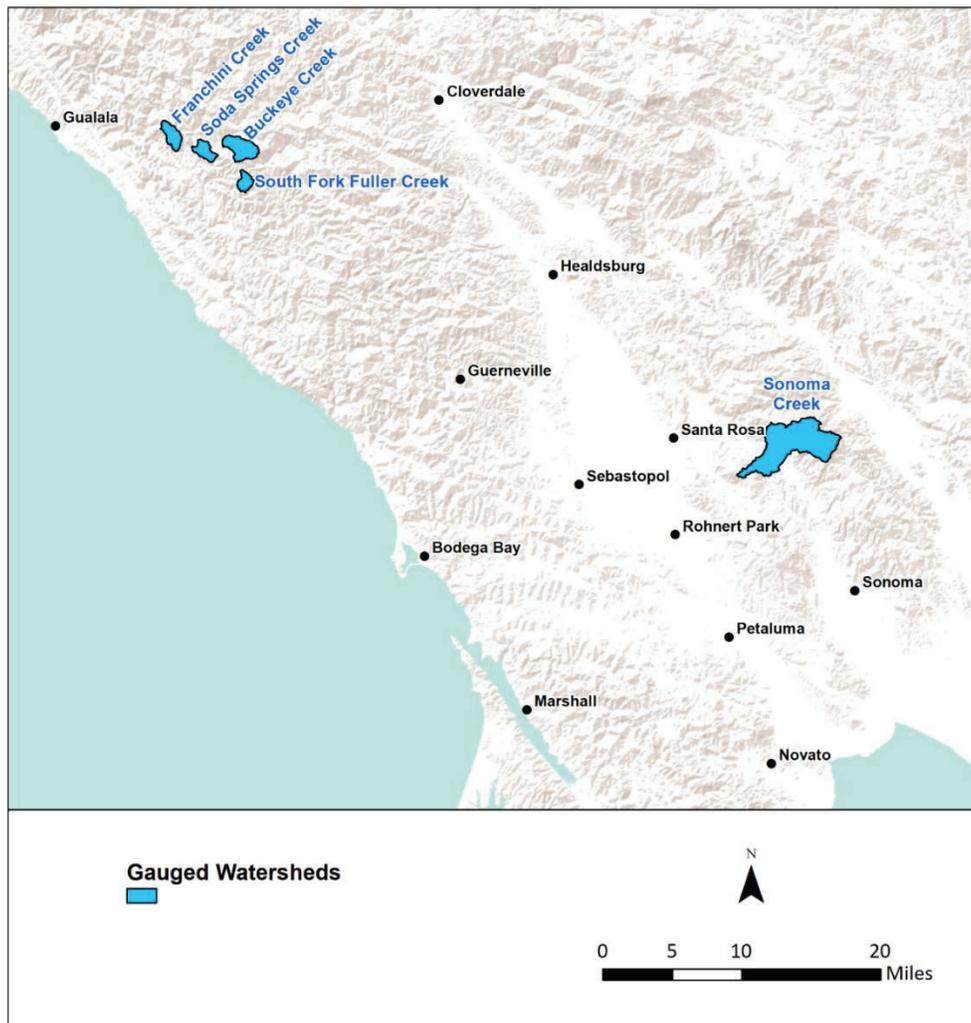


Figure 9: Gauged watersheds used to calibrate the Sonoma County SWB model.

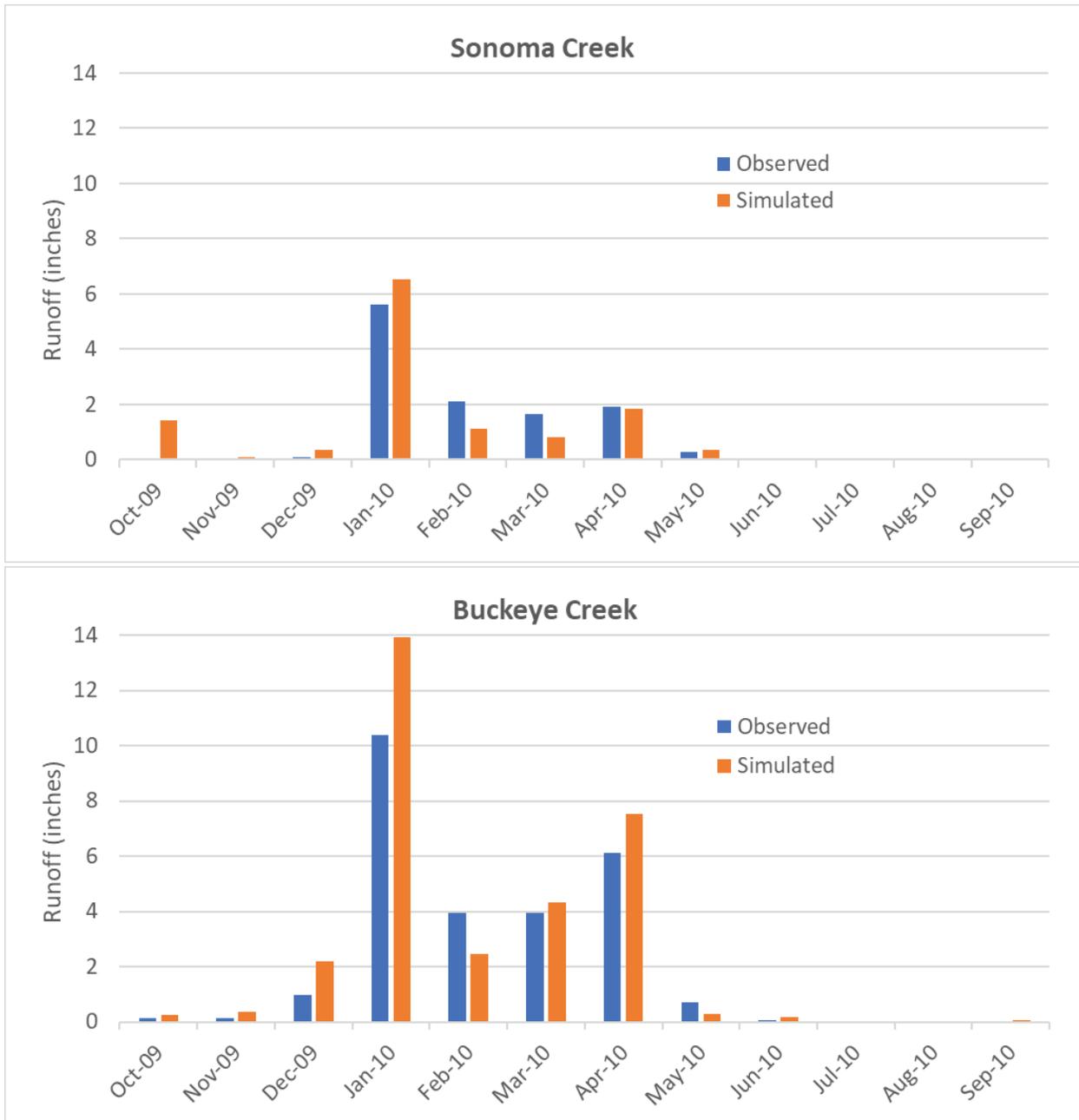


Figure 10: Comparison between monthly surface runoff computed from hydrograph separation at streamflow gauges and monthly surface runoff simulated with the Sonoma County SWB model.

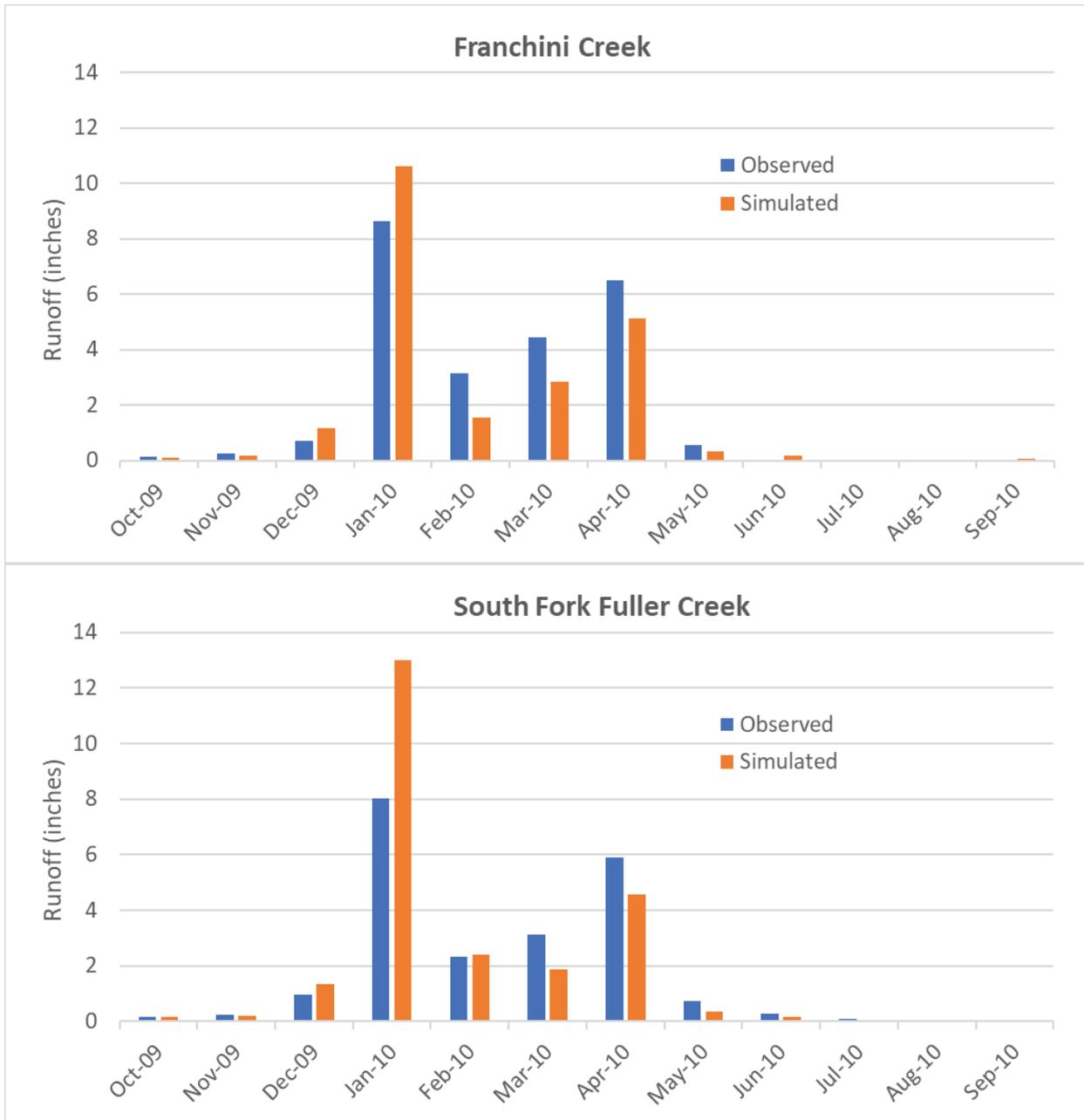


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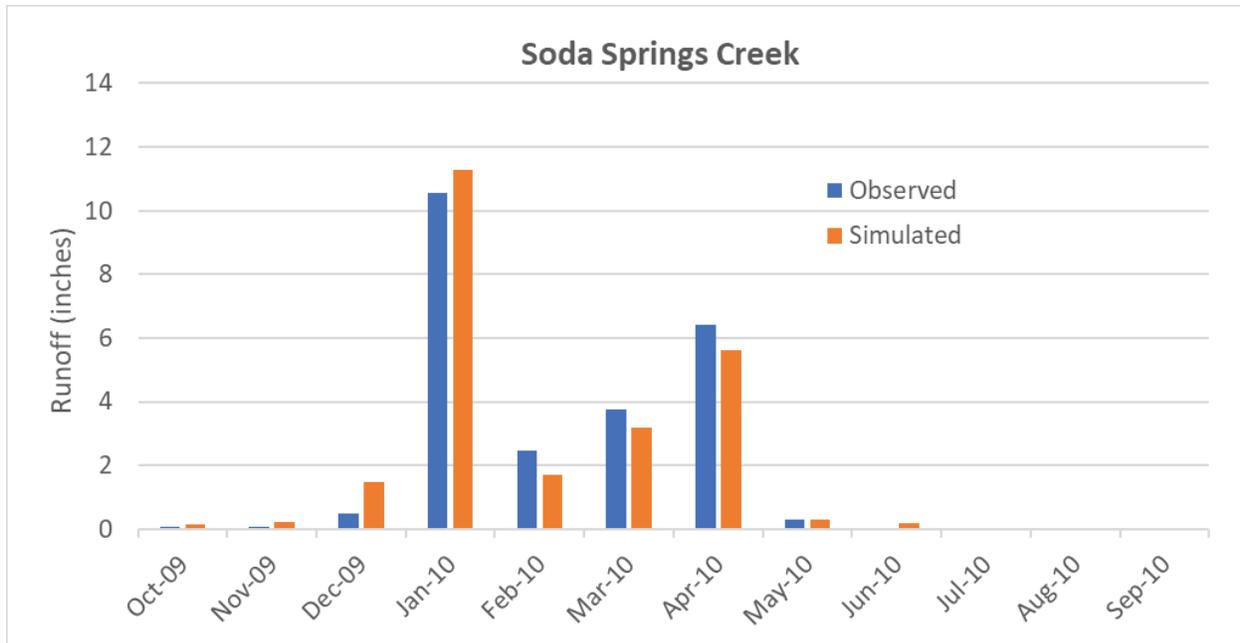


Figure 10 (continued)

Model Results

The principal elements of the annual water budget simulated with the Sonoma County SWB model for water year 2010 are shown in map form in Figures 12 through 16 and in tabular form (sorted by total annual precipitation) for 23 major watershed areas in the county in Table 6. The watershed areas are a modified version of the USGS HUC-10 watersheds and are named for the stream which comprises the largest proportion of the area; although in many cases the areas consist of multiple tributary streams (Figure 11).

Water year 2010 precipitation varied from 26.1 inches in the Lower Sonoma Creek watershed to 70.7 inches in the Austin Creek watershed (Table 6, Figure 12). Actual evapotranspiration (AET) ranged from 17.9 inches in the San Antonio Creek watershed to 29.5 inches in the Pena Creek watershed (Table 6, Figure 13). Surface runoff ranged from 4.0 inches in the Lower Sonoma Creek watershed to 28.1 inches in the Austin Creek watershed (Table 6, Figure 14). Recharge ranged from 5.0 inches in the Lower Sonoma Creek watershed to 16.4 inches in the Austin Creek watershed (Table 6, Figure 15). Small decreases in soil moisture storage (up to 0.8 inches) occurred in 16 of the 23 watersheds and small increases (up to 0.8 inches) occurred in the remaining watersheds (Table 6, Figure 16).

When expressed as a percentage of the annual precipitation, AET ranged from 37% in the Austin Creek watershed to 69% in the Lower Sonoma Creek watershed (Table 7). Surface runoff ranged from 15% of precipitation in the Lower Sonoma Creek watershed to 40% in the Austin Creek watershed. The variations in recharge as a percentage of precipitation is relatively narrow ranging from 19% in the Lower Sonoma Creek watershed to 27% in the Salmon Creek watershed (Table 7).

**Table 6: Water budgets simulated with the Sonoma County SWB model for water year 2010
(see Figure 11 for locations).**

Watershed	Drainage		AET (in)	Surface Runoff (in)	Recharge (in)	Soil Moisture Change (in)
	Area (sq. mi.)	Precipitation (in)				
Lower Sonoma Creek	120	26.1	18.0	4.0	5.0	-0.8
San Antonio Creek	79	29.6	17.9	6.0	6.4	-0.7
Petaluma River	76	31.4	19.3	5.9	6.9	-0.7
Chileno Creek	145	33.3	19.1	7.0	7.9	-0.6
Upper Laguna De Santa Rosa	62	36.2	21.6	8.0	7.5	-0.8
Mark West Creek	161	43.3	26.6	8.7	8.5	-0.5
Lower Laguna De Santa Rosa	31	43.6	25.8	9.6	9.0	-0.8
Upper Sonoma Creek	45	46.4	24.1	13.4	9.4	-0.4
Sausal Creek	46	47.8	24.3	13.4	10.8	-0.8
Maacama Creek	97	47.9	25.4	12.6	10.6	-0.7
Salmon Creek	53	48.7	22.3	13.2	13.1	0.2
Atascadero Creek	38	50.2	28.1	12.7	10.0	-0.6
Big Sulphur Creek	130	52.6	26.2	16.5	10.5	-0.5
Lower Dry Creek	42	53.5	26.4	17.2	10.7	-0.7
Willow Creek	24	53.9	22.8	18.2	12.7	0.2
Mill Creek	53	55.4	27.7	17.1	11.3	-0.6
Upper Dry Creek	89	57.4	27.0	20.0	10.9	-0.5
Dutch Bill Creek	55	57.7	25.2	18.6	13.7	0.1
Wheatfield Fork Gualala River	145	61.4	26.0	20.9	14.0	0.5
Pena Creek	23	63.0	29.5	21.6	12.5	-0.5
Buckeye Creek	60	65.7	26.4	24.0	14.4	0.8
South Fork Gualala River	65	68.2	25.7	26.2	16.1	0.1
Austin Creek	70	70.7	26.1	28.1	16.4	0.0

Table 7: Water budgets simulated with the Sonoma County SWB model for water year 2010 expressed as a percentage of annual precipitation (see Figure 11 for locations).

Watershed	Drainage		AET (%)	Surface	
	Area (sq. mi.)	Precipitation (in)		Runoff (%)	Recharge (%)
Lower Sonoma Creek	120	26.1	69%	15%	19%
San Antonio Creek	79	29.6	60%	20%	22%
Petaluma River	76	31.4	62%	19%	22%
Chileno Creek	145	33.3	57%	21%	24%
Upper Laguna De Santa Rosa	62	36.2	59%	22%	21%
Mark West Creek	161	43.3	61%	20%	20%
Lower Laguna De Santa Rosa	31	43.6	59%	22%	21%
Upper Sonoma Creek	45	46.4	52%	29%	20%
Sausal Creek	46	47.8	51%	28%	23%
Maacama Creek	97	47.9	53%	26%	22%
Salmon Creek	53	48.7	46%	27%	27%
Atascadero Creek	38	50.2	56%	25%	20%
Big Sulphur Creek	130	52.6	50%	31%	20%
Lower Dry Creek	42	53.5	49%	32%	20%
Willow Creek	24	53.9	42%	34%	24%
Mill Creek	53	55.4	50%	31%	20%
Upper Dry Creek	89	57.4	47%	35%	19%
Dutch Bill Creek	55	57.7	44%	32%	24%
Wheatfield Fork Gualala River	145	61.4	42%	34%	23%
Pena Creek	23	63.0	47%	34%	20%
Buckeye Creek	60	65.7	40%	37%	22%
South Fork Gualala River	65	68.2	38%	38%	24%
Austin Creek	70	70.7	37%	40%	23%

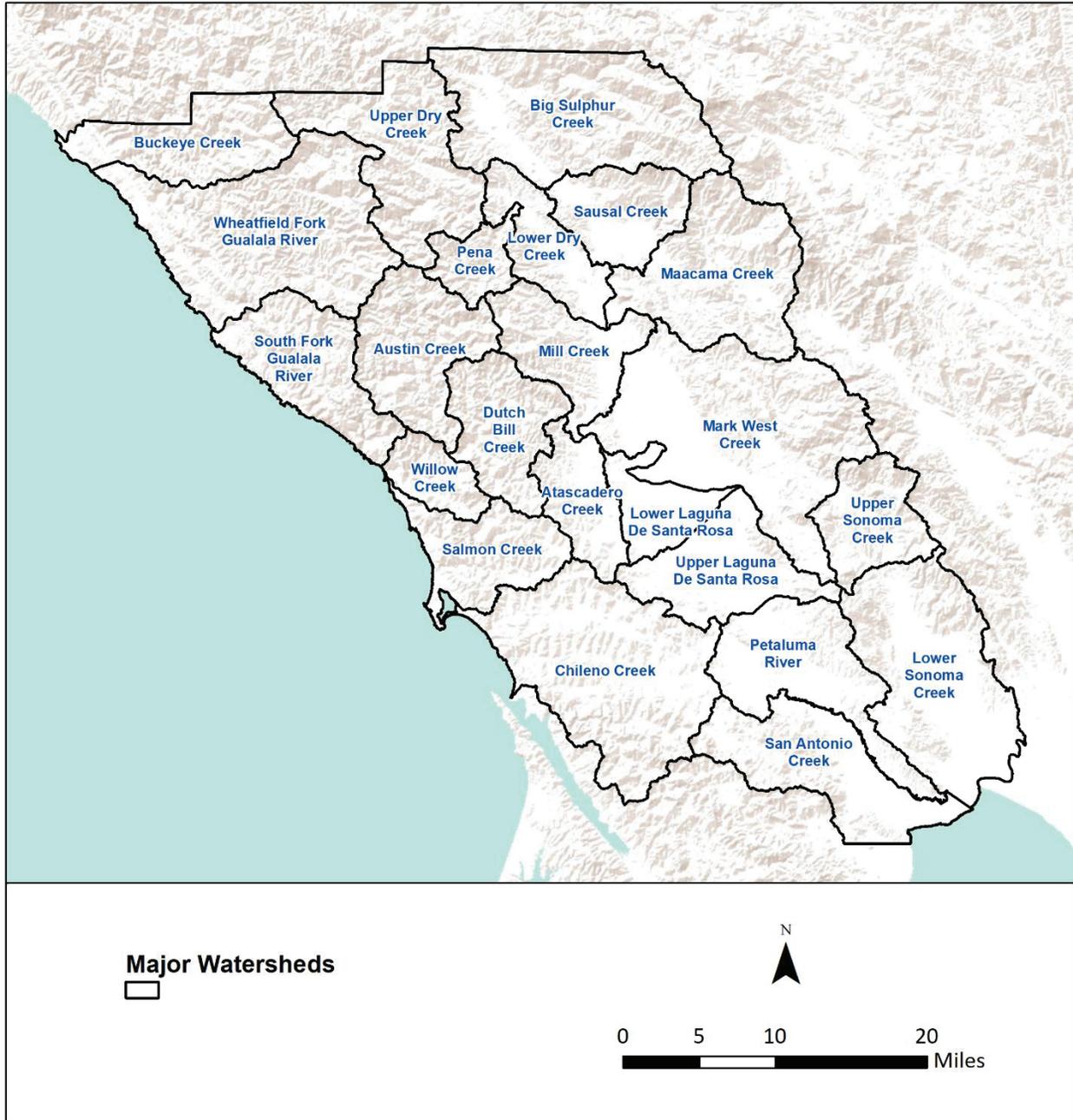


Figure 11: Major watersheds areas used to summarize water budget information in Tables 6 & 7).

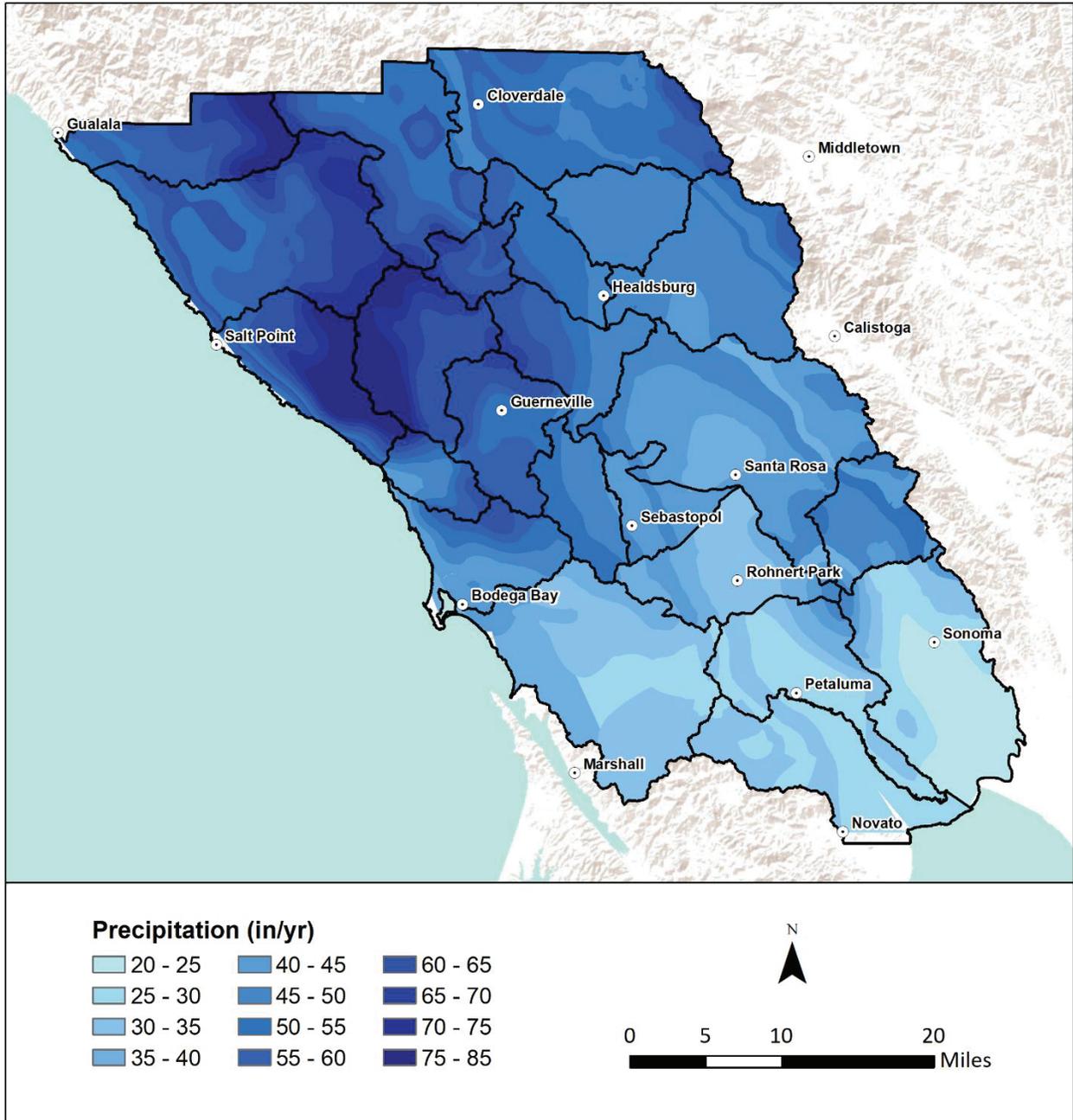


Figure 12: Water year 2010 Precipitation simulated with the Sonoma County SWB model.

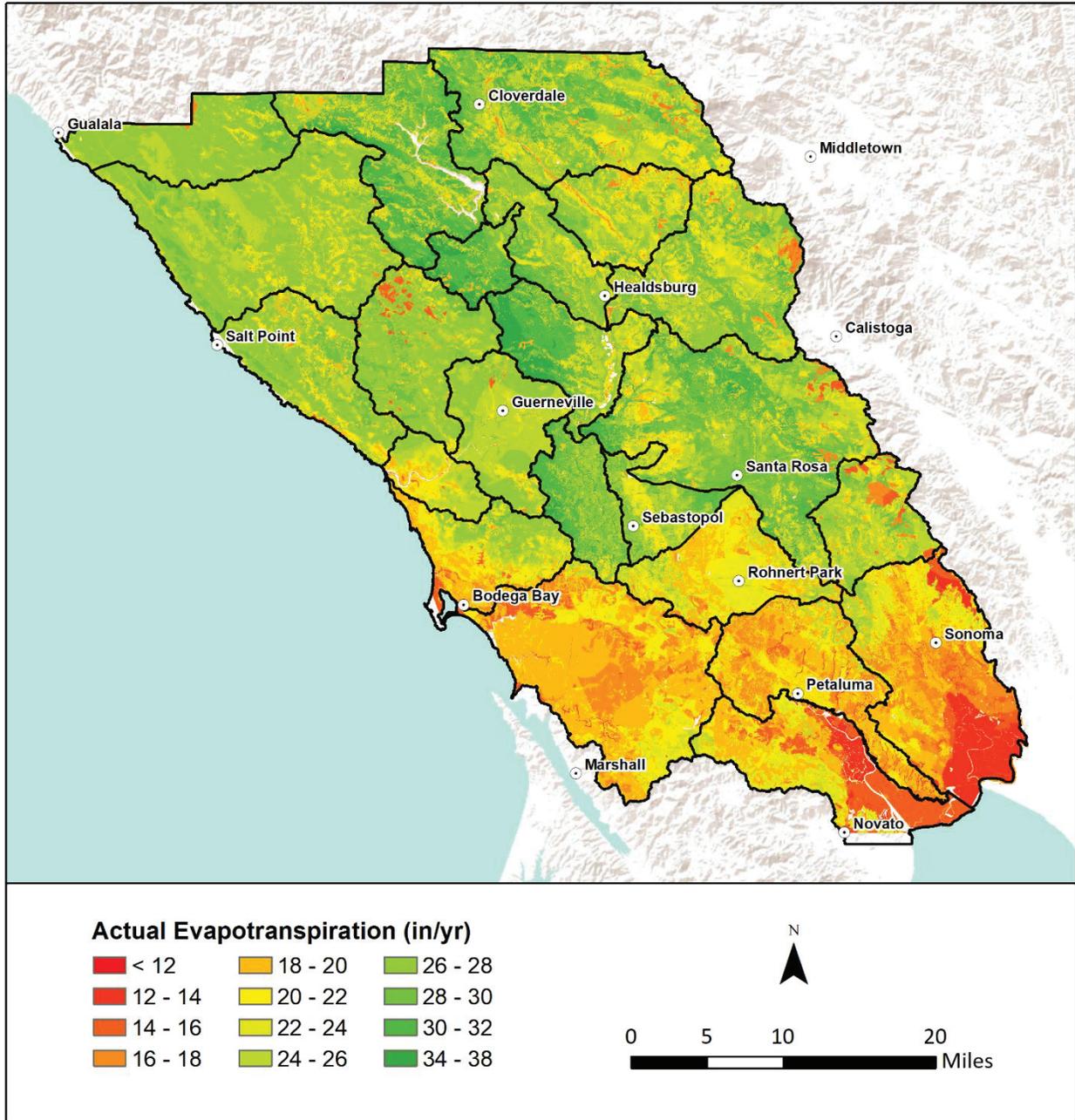


Figure 13: Water year 2010 Actual Evapotranspiration (AET) simulated with the Sonoma County SWB model.

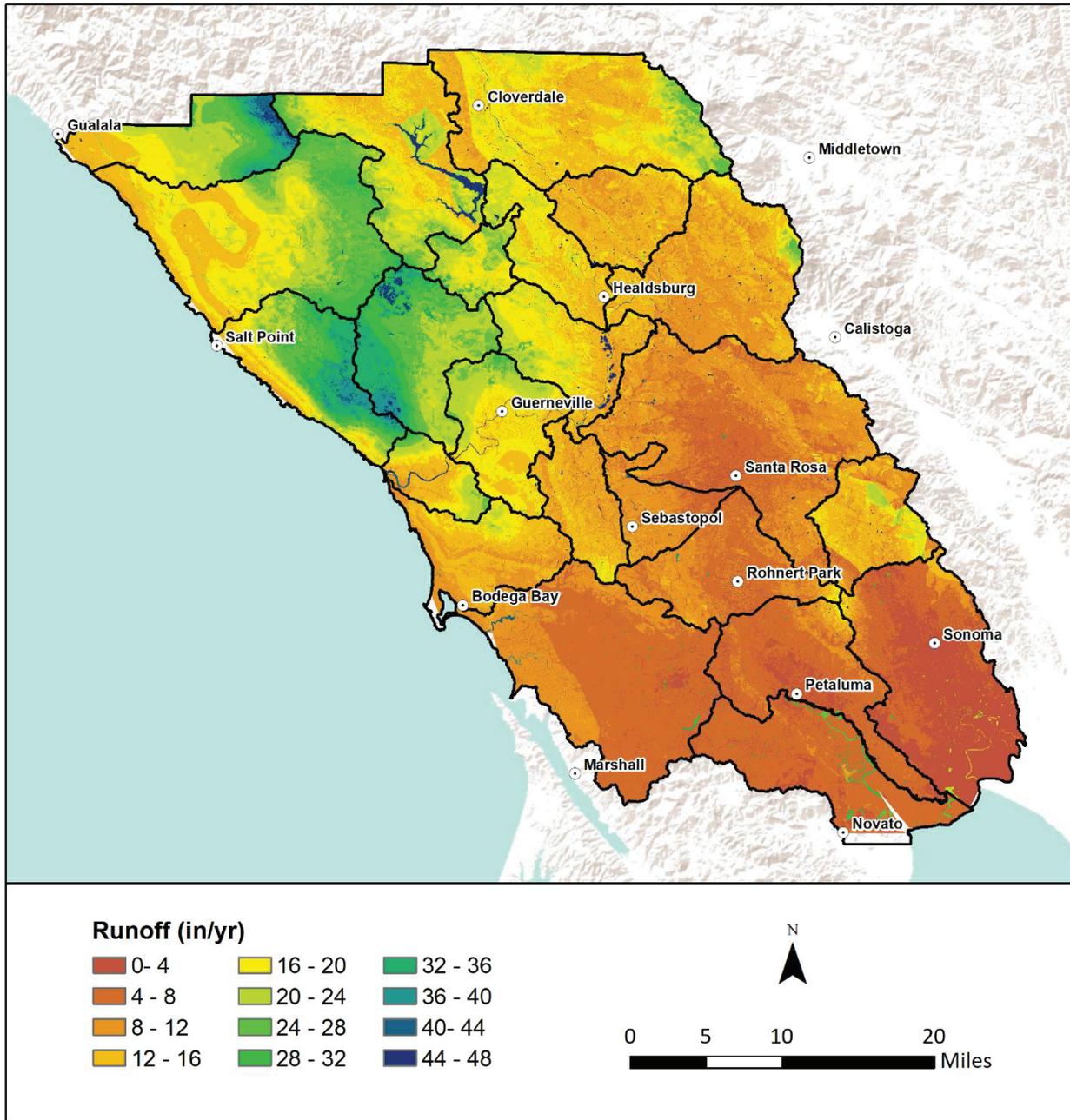


Figure 14: Water year 2010 Surface runoff simulated with the Sonoma County SWB model.

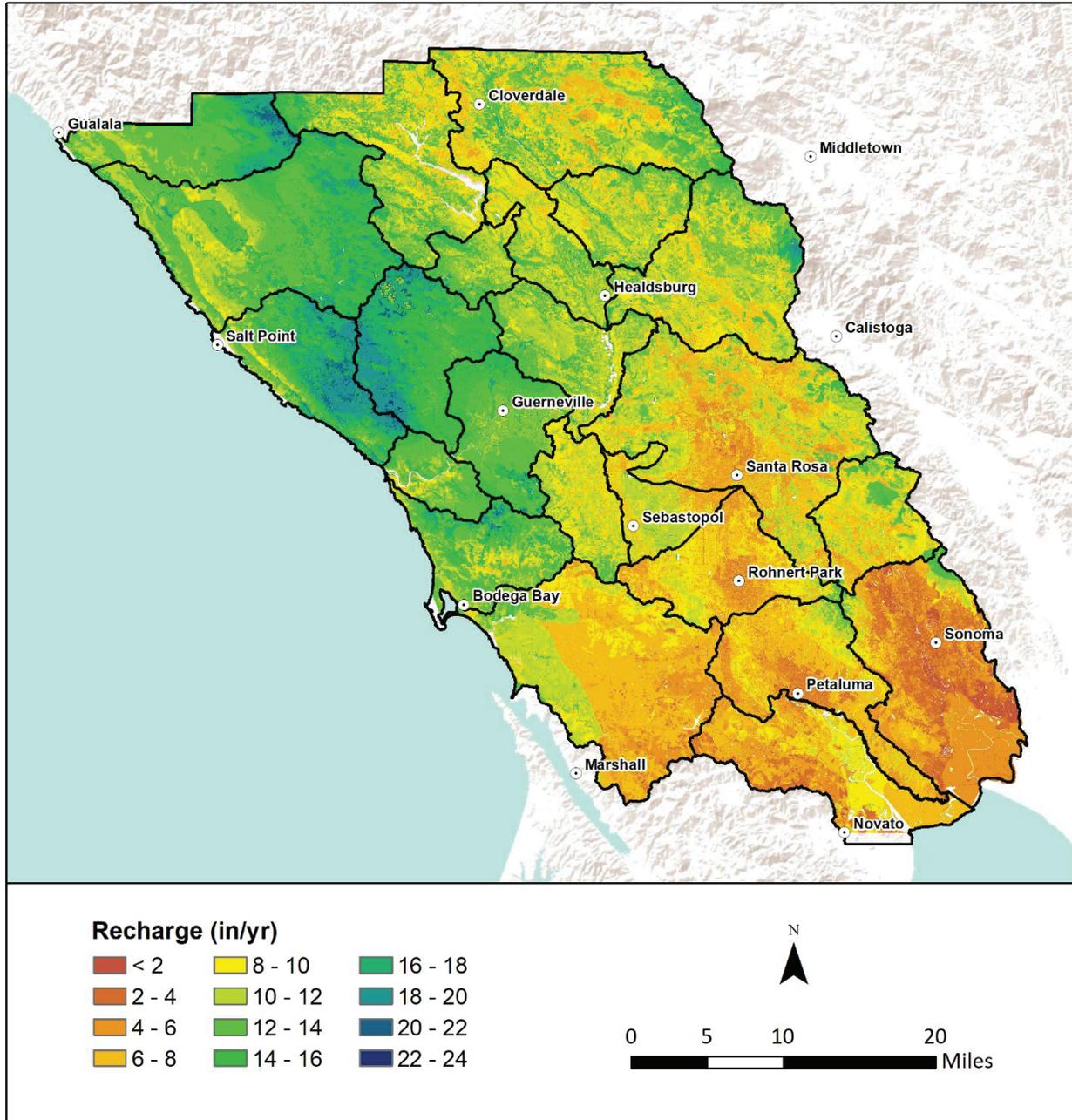


Figure 15: Water year 2010 Recharge simulated with the Sonoma County SWB model.

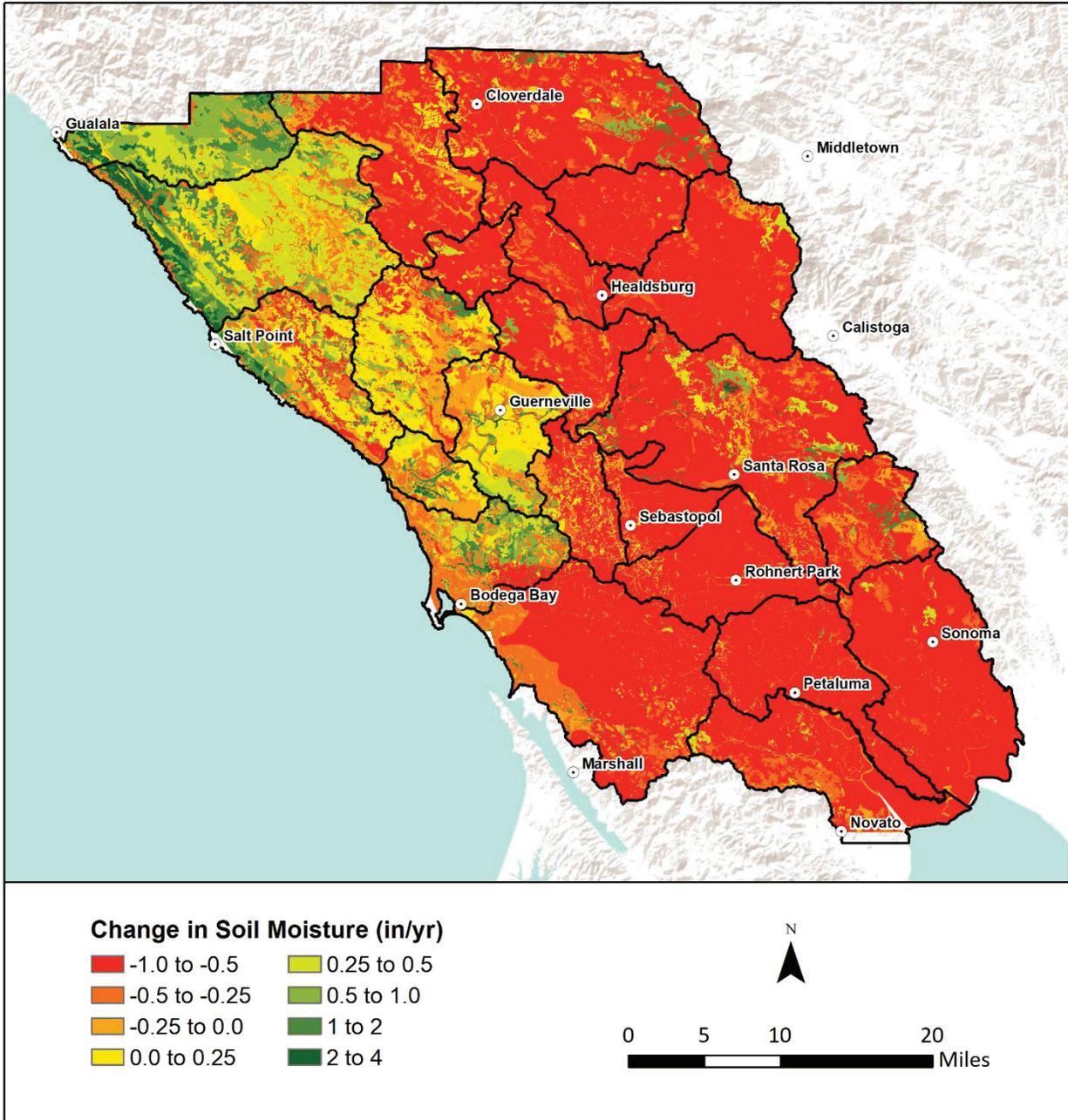


Figure 16: Water year 2010 Soil Moisture Change simulated with the Sonoma County SWB model.

Discussion and Conclusion

Previous modeling studies have estimated water budget components in several larger watershed areas in the county including the Santa Rosa Plain, the Green Valley and Dutch Bill Creek watersheds, and the Sonoma Valley (Farrar et. al., 2006; Kobor and O'Connor, 2016; Woolfenden and Hevesi, 2014). Comparisons to these water budgets are useful for evaluating the SWB results. One would not expect precise agreement owing to significant variations in climate, land cover, soil types, underlying hydrogeologic conditions, and different spatial scales of modeling studies. These regional analyses estimated that AET was equivalent to between 44% and 49% of mean annual precipitation which is consistent with this analysis where the county-wide AET was equivalent to 48% of the annual precipitation. The regional analyses estimated that surface runoff ranged from 37 to 55% of the annual precipitation which is somewhat higher than this analysis where the equivalent county-wide value was 29%. In the regional analyses, recharge varied from 7% to 19% of the annual precipitation. The equivalent county-wide value from this study is somewhat higher at 22%.

At the local scale, the simulation results indicate sensitivity of the water budget components to variations in topographic position, land cover, and soil texture, however at the watershed scale much of the variation in the principal water budget components (AET, surface runoff, and recharge) are correlated with variations in precipitation across the county (Figure 17). AET increases as a function of precipitation in watersheds with annual precipitation up to about 45 in/yr. Above 45 in/yr AET remains relatively constant (average of about 27 in/yr). This suggests that in portions of the county experiencing low precipitation, AET is limited by available soil moisture in contrast to areas of the county with higher precipitation where AET is limited by the potential ET. Although surface runoff varies more or less linearly as function of precipitation (Figure 17), the slope of the relationship with precipitation increases above precipitation of about 45 in/yr. This suggests that surface runoff increases with precipitation more sharply where precipitation is great enough to fully satisfy potential ET. Recharge also varies linearly as a function of precipitation (Figure 17).

The recharge estimates presented here arguably represent the best available county-wide estimates produced at a fine spatial resolution using a consistent and objective data-driven approach. The current analysis focused on a single water year, 2010, and was calibrated to streamflow gauge-derived monthly surface runoff rates at five locations. Future work to expand the analysis to additional water years and calibrate to additional gauge locations would help to further evaluate, refine, and quantify the uncertainty associated with the model's recharge estimates.

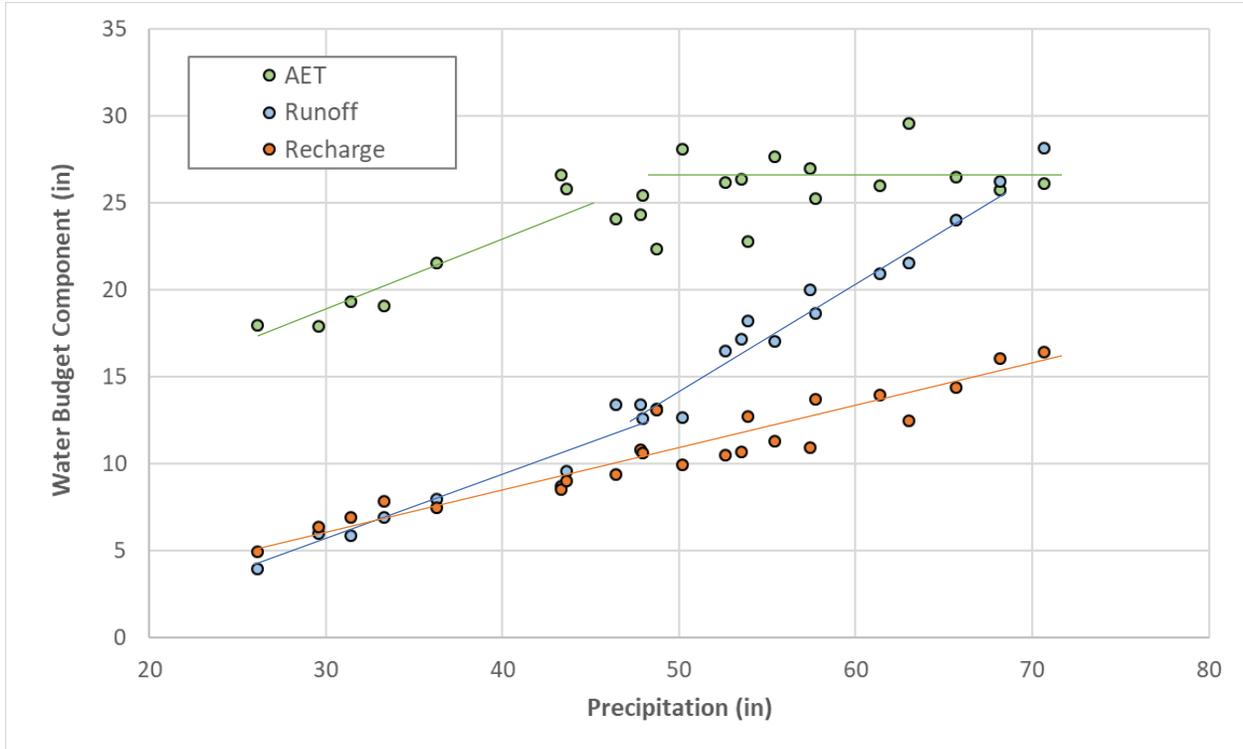


Figure 17: Principal water budget components simulated with the SWB model for major watersheds in Sonoma County as a function of annual precipitation. Trend lines fit by eye.

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October 6, 2021

Ms. Julie Rothberg
Medlock Ames
13414 Chalk Hill Road
Healdsburg, CA 95448

Focused Traffic Study for the Medlock Ames Winery Project

Dear Ms. Rothberg;

As requested, W-Trans has prepared a focused transportation analysis for the proposed changes to the use permit for the Medlock Ames Winery located at 13414 Chalk Hill Road in the unincorporated part of Sonoma County. The purpose of this letter is to present the project's trip generation as well as an analysis of the transportation-related issues required under the California Environmental Quality Act (CEQA). The following analysis is consistent with standard traffic engineering techniques.

Project Description

The proposed project consists of modification in the Conditional Use Permit for the Medlock Ames Winery to include an increase in production from 20,000 to 30,000 cases annually as well as adding vineyard tours and tasting activities by appointment only, retail sales, and twelve annual agricultural events. The project site is currently occupied by a 20,000 square-foot three-story winery building; 1,600 square feet out of 3,200 square feet of mezzanine space of this building would be converted to production and administration offices. Further, the existing 1,350 square foot barn would be repurposed to house a 750 square-foot tasting room, a 242 square-foot commercial kitchen and pantry, a 156 square-foot office, and the remaining 202 square feet would be used for restrooms, mechanical equipment, and tax paid and other storage. The proposed twelve agricultural events would include four winemaker luncheons and dinners, six agricultural promotional events, and two weddings. It is noted that all the proposed events would be held between 11:00 am to 9:30 p.m. and have up to 50 guests each. The anticipated schedule for winery events is enclosed.

- File Number: UPE21-0042
- Address: 13414 Chalk Hill Road, Healdsburg, CA 95448
- APN: 132-120-017, 132-120-018
- Project Name: Medlock Ames Project
- Applicant Name: Julie Rothberg
- Property Owner Name: Medlock Ames Vintners, LLC

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published in the 10th Edition of the *Trip Generation Manual*, 2018 for "Winery" (LU #970). The existing barn is the building that would contain the tasting room, and its area is used as the space to which the trip generation rates are applied. It is noted that the trips associated with the increase in wine production are included despite the independent variable being the size of the tasting room as the "winery" land use encompasses wine production functions as well as tasting room operations. As shown in Table 1, the proposed project would be expected to generate an average of 62 trips per day, including 3 trips during the a.m. peak hour and 10 trips during the p.m. peak hour.

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Winery	1.35 ksf	45.96	62	2.07	3	2	1	7.31	10	5	5

Note: ksf = 1,000 square feet

The anticipated trip generation for a 50-person event was also estimated based on Sonoma County's winery trip generation rate form. Using an occupancy rate of 2.5 persons per vehicle for visitors and solo occupancy for the assumed three staff members in addition to winery employees, a 50-person event would be expected to generate 46 trip ends at the driveway. For events on a weekday, it was assumed all guests would arrive at the project site during the p.m. peak hour. For the events on weekends, half of the total visitors are expected to arrive while the other half are expected to leave the project site during the midday peak hour for some events, though the pattern for weddings would be expected to include a majority of the arrivals and departures during separate single hours. Event employees would travel outside of the arrival and departure hours of the guests as they would be on-site for set-up prior to guest arrival and would remain to clean up. These trips are therefore not included in the peak hour analysis. These assumptions are summarized in Table 2.

Trip Generator	Units	Daily		PM Peak Hour			MD Peak Hour		
		Rate	Trips	Trips	In	Out	Trips	In	Out
Event Employees	3	2	6	0	0	0	0	0	0
Event Guests	50	0.8	40	40	40	0	40	20	20
50-Person Event Total			46	40	40	0	40	20	20

Based on the County's *Guidelines for Traffic Impact Studies*, a focused traffic analysis was prepared as the proposed tasting room would be expected to generate fewer than 25 trips daily during either peak period. Further, Chalk Hill Road can reasonably be assumed to operate at LOS C or better given that the average daily traffic volume is less than 1,500 according to information provided on the County's website. However, in keeping with the County's guidance, an analysis of the potential effect on operation due to the largest event (50 attendees) proposed to occur at the site was prepared.

Trip Distribution

The pattern used to allocate new project trips to the street network was based on knowledge of the area and the surrounding region. It is estimated that 90 percent of trips would be to/from the south on Chalk Hill Road as the Town of Windsor and City of Santa Rosa are located to the south. The remaining 10 percent was assumed to be from the north on Chalk Hill Road to SR 128, which is connected to relatively smaller communities such as Calistoga and Geyserville.

Promotional Event Sensitivity Analysis

Existing Conditions

Study Area and Periods

The study area for the proposed project consists of the one-mile segment of Chalk Hill Road fronting the project site and the project access point. The Promotional Event Sensitivity Analysis (PESA) requires analysis of any intersections with all legs being a collector or higher functional classified road within one-half mile of the project site. As there are no intersections satisfying this criterion no intersection analysis was completed.

Operating conditions during the Friday p.m. peak period was evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. It is noted that based on the traffic count collected on July 30, 2021, the daily traffic volume is nearly 1,170 vehicles with the afternoon peak hour for northbound traffic between 5:00 p.m. and 6:00 p.m. and the southbound peak hour between 1:30 p.m. and 2:30 p.m. Volumes on a Saturday were lower, so the analysis of conditions on a Friday would reflect the worst-case scenario and cover all potential hours when events could start or end. Copies of the counts are enclosed for reference.

Study Roadway

Chalk Hill Road is a two-lane collector road and generally runs north-south in the rural area of Sonoma County. The roadway has a posted speed limit of 45 miles per hour (mph) and is approximately 30 feet wide without any striping delineating the paved shoulders.

Two-Lane Highway Segment Level of Service Methodology

The roadway segment Level of Service methodology found in Chapter 15, "Two-Lane Highways," of the *Highway Capacity Manual* (HCM) is the basis of the automobile LOS analysis. The methodology considers traffic volumes, terrain, roadway cross-section, the proportion of heavy vehicles, and the availability of passing zones. The LOS criteria for two-lane highways differs depending on whether the highway is considered "Class I," "Class II," or "Class III." Class III highways are those that generally carry less traffic, pass through towns and communities, and have a mix of local traffic and through traffic. For the analysis, Chalk Hill Road was defined as a Class III highway.

The measure of effectiveness by which the Level of Service is determined on Class III highways is the percent time spent following (PTSF), or the proportion of time that drivers on the highway are limited in their speed by a driver in front of them. Based on the methodology, a base free-flow speed must be determined from either field data or an estimation based on knowledge of similar facilities or guidance from the HCM. For the purposes of this analysis in accordance with guidance from the HCM, the base free-flow speed of 47.0 mph for northbound and 47.8 mph for southbound movement were estimated for the study segment. Note that these speeds are higher than the posted speed limit of 45 mph.

Traffic Operation Standards

The Level of Service Standard for County roadway operations is to maintain a Level of Service C per Policy CT-4.1. Per County standards, if a roadway is already operating unacceptably at LOS D, a project is determined to have an adverse effect if the addition of project trips results in a reduction of the average travel speed by two mph or more.

Existing and Existing plus Project Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the Friday p.m. peak periods.

Count data were collected between July 30, 2021, and August 1, 2021, on Chalk Hill Road. Based on the Friday data collected on July 30, 2021, peak hour factors (PHFs) were calculated based on the counts obtained and used in the LOS calculations.

Under Existing Conditions, Chalk Hill Road operates acceptably at LOS A for both northbound and southbound directions. With the addition of event-related traffic, Chalk Hill Road would be expected to continue operating at the same service level. A summary of the roadway segment level of service calculations is shown in Table 3, and copies of the Level of Service calculations are enclosed.

Table 3 – Peak Hour Roadway Segment Levels of Service

Study Segment Direction	Existing PM Peak			Existing plus Event PM Peak		
	PTSF	Speed	LOS	PTSF	Speed	LOS
Chalk Hill Rd						
Northbound	18.0	47.0	A	19.0	47.0	A
Southbound	29.1	46.9	A	34.1	46.6	A

Notes: PTSF = Percent Time Spent Following; Speed is measured in miles per hour; LOS = Level of Service

It should be noted that the analysis is based on peak hour volumes even though the events may not generate traffic during the peak hour. To address the potential effects of event trips regardless of the time or day when they might occur, this conservative approach was taken using volumes that represent the worst-case conditions for adding event trips to the study segment. The finding that Chalk Hill Road would continue to operate acceptably during the peak hour with event traffic added indicates that the roadway would operate acceptably regardless of the start/end times for the proposed event.

Vehicle Access

The proposed project site would be accessed via a private road, Toby Lane, which extends east of Chalk Hill Road.

Sight Distance

Sight distance along Chalk Hill Road at Toby Lane was evaluated based on sight distance criteria contained in *A Policy on Geometric Design of Highways and Streets* published by the American Association of State Highway and Transportation Officials (AASHTO). The recommended sight distances for driveway approaches are based on stopping sight distance with approach travel speed used as the basis for determining the recommended sight distance.

Based on the posted speed limit of 45 mph on Chalk Hill Road, the minimum stopping sight distance needed is 360 feet. Based on a review of field conditions, sight lines for outbound drivers from Toby Lane turning onto Chalk Hill Road extend to nearly 530 feet to the south and 400 feet to the north, which is more than adequate for the posted speed limit. Additionally, adequate stopping sight distances are available for a following driver to notice and react to a preceding motorist slowing to turn right or stopped to turn left into Toby Lane to reach the project site. The sight distance exhibit is enclosed.

Left-Turn Warrant

The need for a left-turn lane on Chalk Hill Road at Toby Lane was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation and published in the *Method For Prioritizing Intersection Improvements*, January 1997. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes to determine the need for a left-turn pocket based on safety issues.

Based on Existing plus Event volumes, a left-turn lane is not warranted on Chalk Hill Road at Toby Lane during the critical peak period evaluated. It should be noted that to take a conservative approach, the analysis includes event trips added to the existing volumes as this condition would represent the worst-case scenario. Further, because a left-turn lane is not warranted with event-related trips, it is reasonable to conclude that a left-turn lane would not be warranted for normal operations either. The turn lane warrant analysis output is enclosed.

Vehicle Miles Traveled

Senate Bill (SB) 743 established a change in the metric to be applied to determining transportation impacts associated with development projects. As of the date of this analysis, Sonoma County has not yet adopted thresholds of significance related to VMT. As a result, project-related VMT impacts were assessed based on guidance published by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018. The OPR guidelines identify several criteria that may be used by jurisdictions to identify certain types of projects that are unlikely to have a significant VMT impact and can be "screened" from further analysis. One of these screening criteria pertains to "small projects," which OPR identifies as generating fewer than 110 new vehicle trips per typical weekday.

As shown in Table 1, the proposed project would be expected to generate an average of 62 trips per day on a typical weekday. Further, the proposed twelve event days per year with an average of 46 daily trips translates to an average of 2 daily trips for the 260 weekdays in a year. Altogether, the project would generate an annual average of 64 daily trips which falls well below the OPR threshold. It is noted that trips associated with events were added to provide a conservative analysis although events are planned to be held on any day of the week and weekend traffic is generally not relevant to VMT analyses. As a result, it is reasonable to conclude that the project can be presumed to have a less-than-significant impact on VMT.

Conclusions and Recommendations

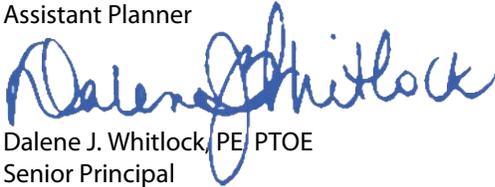
- The proposed project would be expected to generate 62 daily trips on average, including three trips during the a.m. peak hour and ten p.m. peak hour trips. The twelve proposed 50-person events would each be expected to generate an average of 46 trip ends at the driveway.
- The project is anticipated to result in a less-than-significant transportation impact on VMT based on the OPR Guidelines.
- Under Existing conditions, Chalk Hill Road is operating acceptably at LOS A and would be expected to continue doing so upon adding trips associated with the proposed events.
- Adequate sight distances are available on Chalk Hill Road at Toby Lane, which leads to the project site.
- A left-turn lane is not warranted on Chalk Hill Road at Toby Lane based on Existing plus Event volumes.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,



Jade Kim
Assistant Planner



Dalene J. Whitlock, PE PTOE
Senior Principal



DJW/jk/SOX735.L1

Enclosures: Winery Event Schedule, Traffic Counts, Level of Service Calculations, Sight Distance Exhibit, Turn Lane Warrant

Winery Event Matrix

Winery: Medlock Ames Winery
 Location: 13414 Chalk Hill Rd, Healdsburg, CA 95448
 Condition: Existing

Event	Number of Guests	Number of event days this size annually	Estimated Month(s) during which events will occur	Day of Week when Events will occur	Time of Day (start and end)	No. of Employees	No. of Guest Vehicles	No. of Employee Vehicles	Total Vehicles
Wine Maker Luncheons & Dinners	50	4	January - December	Monday - Sunday	11:00 AM - 9:30 PM	3	20	3	23
Ag Promotional Events	50	6	January - December	Monday - Sunday	11:00 AM - 9:30 PM	3	20	3	23
Weddings	50	2	January - December	Monday - Sunday	11:00 AM - 9:30 PM	3	20	3	23

VOLUME

13414 Chalk Hill Rd

Day: Friday
Date: 7/30/2021

City: Healdsburg
Project #: CA21_080160_001

DAILY TOTALS						NB	SB	EB	WB	Total	
						545	620	0	0	1,165	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	11	10			21
00:15	0	1			1	12:15	10	14			24
00:30	1	0			1	12:30	3	9			12
00:45	0	1	0	1	0	12:45	11	35	17	50	28
01:00	0	0			0	13:00	11	8			19
01:15	0	0			0	13:15	9	8			17
01:30	0	0			0	13:30	11	9			20
01:45	1	1	0		1	13:45	4	35	14	39	18
02:00	0	0			0	14:00	6	12			18
02:15	0	1			1	14:15	13	16			29
02:30	1	0			1	14:30	10	25			35
02:45	0	1	0	1	0	14:45	9	38	25	78	34
03:00	0	0			0	15:00	7	13			20
03:15	0	0			0	15:15	12	25			37
03:30	0	1			1	15:30	11	35			46
03:45	0	0	1		0	15:45	3	33	24	97	27
04:00	0	0			0	16:00	16	34			50
04:15	0	0			0	16:15	12	23			35
04:30	0	2			2	16:30	11	19			30
04:45	0	1	3		1	16:45	7	46	13	89	20
05:00	4	1			5	17:00	3	10			13
05:15	12	1			13	17:15	4	11			15
05:30	20	2			22	17:30	3	10			13
05:45	21	57	4	8	25	17:45	10	20	5	36	15
06:00	12	4			16	18:00	5	5			10
06:15	17	2			19	18:15	2	0			2
06:30	11	2			13	18:30	4	3			7
06:45	14	54	5	13	19	18:45	4	15	6	14	10
07:00	13	3			16	19:00	1	5			6
07:15	10	5			15	19:15	5	4			9
07:30	15	4			19	19:30	3	3			6
07:45	7	45	9	21	16	19:45	3	12	2	14	5
08:00	17	7			24	20:00	2	3			5
08:15	5	3			8	20:15	3	2			5
08:30	10	12			22	20:30	2	3			5
08:45	7	39	8	30	15	20:45	5	12	1	9	6
09:00	8	14			22	21:00	2	1			3
09:15	7	3			10	21:15	3	2			5
09:30	11	5			16	21:30	2	0			2
09:45	3	29	1	23	4	21:45	0	7	1	4	1
10:00	10	7			17	22:00	1	1			2
10:15	8	10			18	22:15	1	1			2
10:30	7	4			11	22:30	1	1			2
10:45	14	39	17	38	31	22:45	3	6	1	4	4
11:00	2	15			17	23:00	2	0			2
11:15	4	13			17	23:15	0	1			1
11:30	4	7			11	23:30	0	0			0
11:45	8	18	11	46	19	23:45	0	2	0	1	0
TOTALS	284	185			469	TOTALS	261	435			696
SPLIT %	60.6%	39.4%			40.3%	SPLIT %	37.5%	62.5%			59.7%

DAILY TOTALS						NB	SB	EB	WB	Total	
						545	620	0	0	1,165	
AM Peak Hour	05:30	10:45			05:30	PM Peak Hour	16:00	15:15		15:15	
AM Pk Volume	70	52			82	PM Pk Volume	46	118		160	
Pk Hr Factor	0.833	0.765			0.820	Pk Hr Factor	0.719	0.843		0.800	
7 - 9 Volume	84	51	0	0	135	4 - 6 Volume	66	125	0	0	191
7 - 9 Peak Hour	07:15	07:45			07:15	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	49	31	0	0	74	4 - 6 Pk Volume	46	89	0	0	135
Pk Hr Factor	0.721	0.646	0.000	0.000	0.771	Pk Hr Factor	0.719	0.654	0.000	0.000	0.675

VOLUME

13414 Chalk Hill Rd

Day: Saturday
Date: 7/31/2021

City: Healdsburg
Project #: CA21_080160_001

DAILY TOTALS						NB	SB	EB	WB	Total	
						392	390	0	0	782	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	1			2	12:00	7	12			19
00:15	0	0			0	12:15	5	3			8
00:30	1	0			1	12:30	10	8			18
00:45	0	2	0	1	0	12:45	8	30	8	31	16
01:00	0	0			0	13:00	13	2			15
01:15	0	0			0	13:15	8	9			17
01:30	0	0			0	13:30	6	13			19
01:45	0	0			0	13:45	3	30	14	38	17
02:00	0	1			1	14:00	8	6			14
02:15	0	0			0	14:15	8	15			23
02:30	0	0			0	14:30	5	9			14
02:45	0	0	1		0	14:45	5	26	8	38	13
03:00	0	0			0	15:00	9	4			13
03:15	0	0			0	15:15	7	6			13
03:30	0	0			0	15:30	3	11			14
03:45	0	0			0	15:45	4	23	4	25	8
04:00	0	0			0	16:00	5	9			14
04:15	0	1			1	16:15	3	6			9
04:30	0	0			0	16:30	10	6			16
04:45	2	2	1	2	3	16:45	12	30	8	29	20
05:00	0	0			0	17:00	11	5			16
05:15	5	2			7	17:15	9	5			14
05:30	4	0			4	17:30	10	5			15
05:45	7	16	1	3	8	17:45	16	46	8	23	24
06:00	0	0			0	18:00	3	7			10
06:15	1	2			3	18:15	8	7			15
06:30	3	3			6	18:30	2	2			4
06:45	5	9	0	5	5	18:45	4	17	2	18	6
07:00	6	3			9	19:00	3	4			7
07:15	3	2			5	19:15	4	8			12
07:30	4	4			8	19:30	0	2			2
07:45	4	17	5	14	9	19:45	7	14	4	18	11
08:00	4	2			6	20:00	2	3			5
08:15	2	4			6	20:15	2	5			7
08:30	4	3			7	20:30	4	9			13
08:45	5	15	6	15	11	20:45	6	14	4	21	10
09:00	7	7			14	21:00	1	4			5
09:15	5	4			9	21:15	5	1			6
09:30	3	7			10	21:30	6	1			7
09:45	8	23	4	22	12	21:45	4	16	3	9	7
10:00	6	4			10	22:00	2	1			3
10:15	8	6			14	22:15	1	1			2
10:30	1	6			7	22:30	1	4			5
10:45	4	19	8	24	12	22:45	2	6	2	8	4
11:00	13	5			18	23:00	1	2			3
11:15	5	17			22	23:15	1	0			1
11:30	5	8			13	23:30	3	1			4
11:45	8	31	12	42	20	23:45	1	6	0	3	1
TOTALS	134	129			263	TOTALS	258	261			519
SPLIT %	51.0%	49.0%			33.6%	SPLIT %	49.7%	50.3%			66.4%

DAILY TOTALS						NB	SB	EB	WB	Total
						392	390	0	0	782

AM Peak Hour	11:00	11:15		11:15	PM Peak Hour	17:00	13:30		13:30	
AM Pk Volume	31	49		74	PM Pk Volume	46	48		73	
Pk Hr Factor	0.596	0.721		0.841	Pk Hr Factor	0.719	0.800		0.793	
7 - 9 Volume	32	29	0	0	4 - 6 Volume	76	52	0	0	128
7 - 9 Peak Hour	07:00	07:30		07:00	4 - 6 Peak Hour	17:00	16:00		17:00	
7 - 9 Pk Volume	17	15	0	0	4 - 6 Pk Volume	46	29	0	0	69
Pk Hr Factor	0.708	0.750	0.000	0.000	Pk Hr Factor	0.719	0.806	0.000	0.000	0.719

VOLUME

13414 Chalk Hill Rd

Day: Sunday
Date: 8/1/2021

City: Healdsburg
Project #: CA21_080160_001

DAILY TOTALS						NB	SB	EB	WB	Total	
						248	286	0	0	534	
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	1			1	12:00	4	5			9
00:15	0	0			0	12:15	5	6			11
00:30	0	0			0	12:30	3	3			6
00:45	1	1	2	3	3	12:45	5	17	4	18	9
01:00	0	3			3	13:00	8	8			16
01:15	0	1			1	13:15	8	7			15
01:30	0	1			1	13:30	4	3			7
01:45	0	0	5		0	13:45	9	29	7	25	16
02:00	1	0			1	14:00	5	7			12
02:15	1	0			1	14:15	7	9			16
02:30	0	2			2	14:30	2	6			8
02:45	0	2	1	3	1	14:45	8	22	11	33	19
03:00	0	0			0	15:00	4	4			8
03:15	0	0			0	15:15	2	7			9
03:30	0	0			0	15:30	7	6			13
03:45	0	0			0	15:45	7	20	13	30	20
04:00	0	0			0	16:00	4	8			12
04:15	0	0			0	16:15	3	7			10
04:30	0	0			0	16:30	3	2			5
04:45	0	0			0	16:45	5	15	6	23	11
05:00	0	0			0	17:00	3	4			7
05:15	0	2			2	17:15	9	6			15
05:30	0	1			1	17:30	7	2			9
05:45	0	0	3		0	17:45	3	22	4	16	7
06:00	1	1			2	18:00	1	5			6
06:15	0	1			1	18:15	0	3			3
06:30	3	1			4	18:30	4	3			7
06:45	1	5	5	8	6	18:45	7	12	0	11	7
07:00	3	1			4	19:00	7	3			10
07:15	0	2			2	19:15	2	4			6
07:30	1	2			3	19:30	2	2			4
07:45	1	5	1	6	2	19:45	3	14	6	15	9
08:00	1	2			3	20:00	0	2			2
08:15	4	1			5	20:15	3	4			7
08:30	0	3			3	20:30	1	4			5
08:45	5	10	5	11	10	20:45	3	7	1	11	4
09:00	1	5			6	21:00	3	4			7
09:15	3	3			6	21:15	8	2			10
09:30	3	4			7	21:30	0	1			1
09:45	5	12	5	17	10	21:45	0	11	0	7	0
10:00	3	10			13	22:00	2	1			3
10:15	7	5			12	22:15	2	0			2
10:30	7	1			8	22:30	0	1			1
10:45	4	21	0	16	4	22:45	0	4	0	2	0
11:00	3	3			6	23:00	0	0			0
11:15	5	6			11	23:15	0	0			0
11:30	4	9			13	23:30	0	0			0
11:45	7	19	5	23	12	23:45	0	0			0
TOTALS	75	95			170	TOTALS	173	191			364
SPLIT %	44.1%	55.9%			31.8%	SPLIT %	47.5%	52.5%			68.2%

DAILY TOTALS						NB	SB	EB	WB	Total
						248	286	0	0	534

AM Peak Hour	09:45	11:15		11:15	PM Peak Hour	13:00	15:15		14:00		
AM Pk Volume	22	25		45	PM Pk Volume	29	34		55		
Pk Hr Factor	0.786	0.694		0.865	Pk Hr Factor	0.806	0.654		0.724		
7 - 9 Volume	15	17	0	0	32	4 - 6 Volume	37	39	0	0	76
7 - 9 Peak Hour	08:00	08:00		08:00	4 - 6 Peak Hour	16:45	16:00			16:45	
7 - 9 Pk Volume	10	11	0	0	21	4 - 6 Pk Volume	24	23	0	0	42
Pk Hr Factor	0.500	0.550	0.000	0.000	0.525	Pk Hr Factor	0.667	0.719	0.000	0.000	0.700

HCS7 Two-Lane Highway Report

Project Information

Analyst	Jade Kim	Date	8/10/2021
Agency	W-Trans	Analysis Year	2021
Jurisdiction	Sonoma County	Time Analyzed	Existing PM NB
Project Description	Traffic Study for Medlock Ames Project	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	16	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	68	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.68	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	3.10757	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38135	PF Power Coefficient	0.72292
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	18.0
Segment Travel Time, minutes	1.28	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	Jade Kim	Date	7/27/2021
Agency	W-Trans	Analysis Year	2021
Jurisdiction	Sonoma County	Time Analyzed	Existing PM SB
Project Description	Traffic Study for Medlock Ames Project	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	16	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	148	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.8
Speed Slope Coefficient	3.14822	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37826	PF Power Coefficient	0.72538
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.9

Vehicle Results

Average Speed, mi/h	46.9	Percent Followers, %	29.1
Segment Travel Time, minutes	1.28	Follower Density, followers/mi/ln	0.9
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.9	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	Jade Kim	Date	8/10/2021
Agency	W-Trans	Analysis Year	2021
Jurisdiction	Sonoma County	Time Analyzed	Existing plus Project PM NB
Project Description	Traffic Study for Medlock Ames Project	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	16	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.68	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.0
Speed Slope Coefficient	3.10757	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.38135	PF Power Coefficient	0.72292
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.0

Vehicle Results

Average Speed, mi/h	47.0	Percent Followers, %	19.0
Segment Travel Time, minutes	1.28	Follower Density, followers/mi/ln	0.3
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	0.3	A

HCS7 Two-Lane Highway Report

Project Information

Analyst	Jade Kim	Date	8/10/2021
Agency	W-Trans	Analysis Year	2021
Jurisdiction	Sonoma County	Time Analyzed	Existing plus Project PM SB
Project Description	Traffic Study for Medlock Ames Project	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5280
Lane Width, ft	16	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	7.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	193	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.80	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.8
Speed Slope Coefficient	3.14822	Speed Power Coefficient	0.41674
PF Slope Coefficient	-1.37826	PF Power Coefficient	0.72538
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	46.6

Vehicle Results

Average Speed, mi/h	46.6	Percent Followers, %	34.1
Segment Travel Time, minutes	1.29	Follower Density, followers/mi/ln	1.4
Vehicle LOS	A		

Facility Results

T	Follower Density, followers/mi/ln	LOS
1	1.4	A

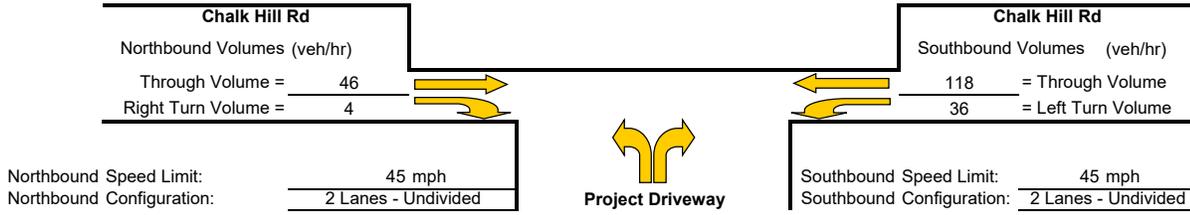


Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Chalk Hill Road/Toby Lane
 Study Scenario: Existing plus Event PM

Direction of Analysis Street: North/South

Cross Street Intersects: From the East



Northbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold AV = -
 Advancing Volume Va = 50
 If $AV < Va$ then warrant is met -

Right Turn Lane Warranted: NO

Northbound Right Turn Taper Warrants

(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold AV = -
 Advancing Volume Va = 50
 If $AV < Va$ then warrant is met -

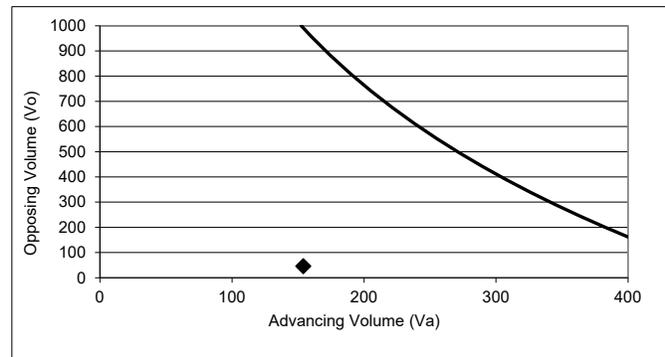
Right Turn Taper Warranted: NO

Southbound Left Turn Lane Warrants

Percentage Left Turns %lt 23.4 %

Advancing Volume Threshold AV 457 veh/hr

If $AV < Va$ then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 45 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: NO

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.

The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.

The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroorty in 1991.

October 15, 2021

Sonoma County Permit Resource
Management Department - Well and Septic
2550 Ventura Ave.
Santa Rosa, CA 95403

Attention: Ms. Georgia McDaniel,

Re: Medlock Ames Winery
13414 Chalk Hill Road
Healdsburg, CA
UPE21-0042
Wastewater Feasibility Study
SMA Project No. 2020006

Dear Georgia,

Steve Martin Associates, Inc. has prepared this Wastewater Feasibility Study for the purpose of assessing the onsite sanitary wastewater and process wastewater systems treatment and disposal capacity necessary for the Medlock Ames Winery Use Permit Modification UPE21-0042.

The winery currently treats and disposes of both process wastewater (PW) and sanitary wastewater (SW) in a combined dual field 1720 gpd standard system (SEP02-0460). The PW consists of winery wastewater generated from processing 20,000 cases of wine on site and the SW consists of domestic wastewater flows from 6 employees on site. Both waste streams are collected in separate septic tanks, and then flow to a dose tank where the combined effluent is pumped up on the hill to the 2500 LF, dual zone, 200% primary standard system.

This study will show that the existing wastewater management system described above and herein can be modified to accommodate the proposed new wastewater flows generated by an annual production of 30,000 cases, an increase in employees to 15 employees during harvest, public tours and tasting by appointment, and 12 visitor serving activities per year. Updated Permit Sonoma and Regional Water Quality Control Board (RWQCB) requirements will necessitate a separation of the two waste streams into two different wastewater treatment systems. The PW will also require pre-treatment prior to subsurface disposal.

Attachment I: Wastewater System Flow Diagram

Attachment II: Wastewater System Design Criteria, Evaluation, & Calculations

The attached information regarding the proposed improvements should be sufficient for review at the Use Permit level. If you have any questions or require further information, please feel free to contact me at (707) 824-9730.

Sincerely,



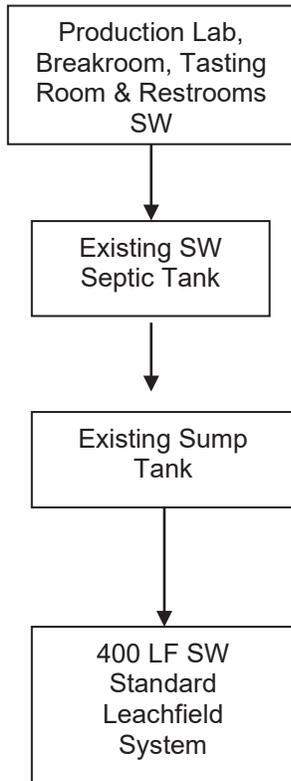
Tamara Martin REHS

ATTACHMENT I

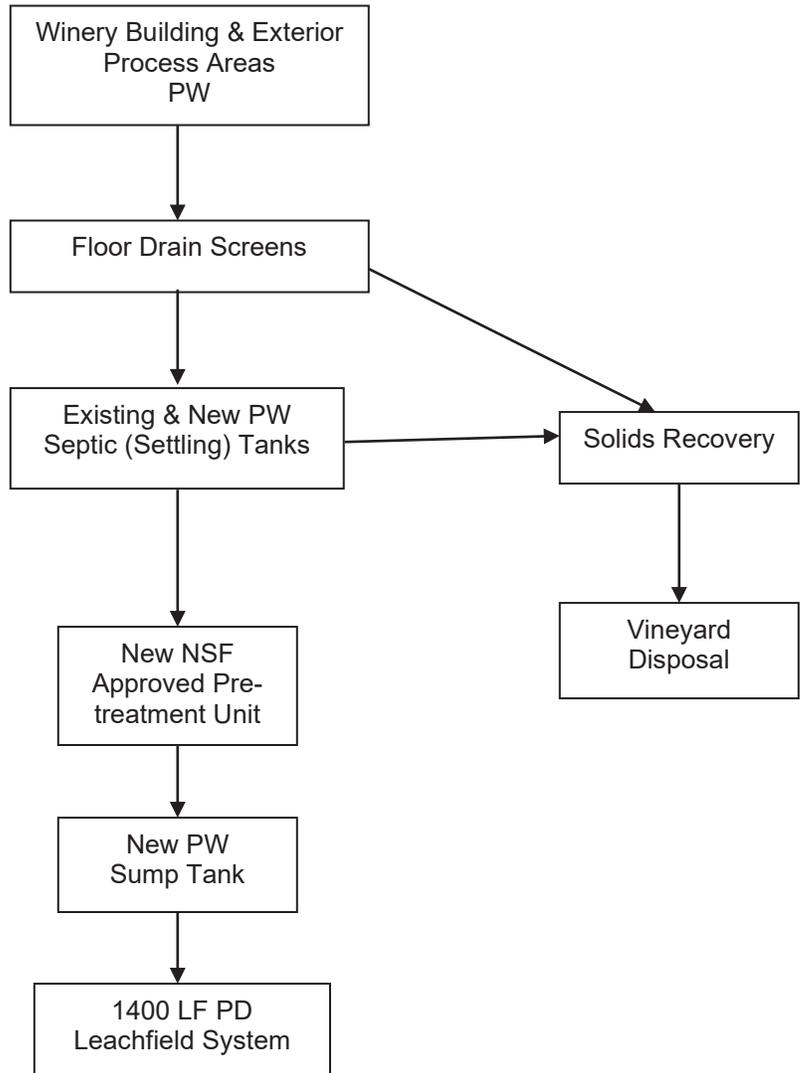
**SANITARY AND PROCESS WASTEWATER
MANAGEMENT SYSTEM
FLOW DIAGRAM**

**WASTEWATER
MANAGEMENT SYSTEMS
FLOW DIAGRAM**

Sanitary Wastewater



Process Wastewater



ATTACHMENT II

**SANITARY AND PROCESS WASTEWATER
MANAGEMENT SYSTEM
DESIGN CRITERIA, EVALUATION,
AND CALCULATIONS**

MEDLOCK AMES WINERY

13414 Chalk Hill Road
Healdsburg, California

WASTEWATER MANAGEMENT SYSTEM DESIGN CRITERIA & EVALUATION

SANITARY WASTEWATER

Sanitary wastewater (SW) at the winery will consist of typical wastewater generated from restrooms, break rooms and laboratory facilities utilized by employees, tasting room visitors and event guests.

This Use Permit Modification proposes 10 full-time employees year round with an additional 5 part-time employees during harvest season and bottling.

Additionally, tasting room visitors will be strictly by appointment and are anticipated to be on the order of 30 for an average day and 60 for a peak day. Visitors are proposed to be scheduled for appointments spread out throughout the day. Visitor appointments are projected to have a maximum of 20 persons per appointment (resulting in 20 visitors on site at a time).

There are 12 visitor serving activities proposed annually with 50 persons maximum at each event. Per the Sonoma County PRMD Policy Number 9-2-31, the onsite wastewater system for facilities hosting 11 to 25 special events per year must accommodate 50% of the fifth largest special event flow, with additional flows being accommodated by portable toilets.

SW FLOWS

AVERAGE DAY:

10 full-time employees x 15 gpd	=	150
0 part-time employees x 10 gpd	=	0
30 visitors x 3 gpd	=	<u>90</u>
Total	=	240 gpd

PEAK DAY (HARVEST):

10 full-time employees x 15 gpd	=	150
5 part-time employees x 10 gpd	=	50
60 visitors x 3 gpd	=	<u>180</u>
Total	=	380 gpd

PEAK EVENT DAY: (no regular tasting or tours conducted during events)

10 full-time employees x 15 gpd	=	150
5 part-time employees x 10 gpd	=	50
50% of 50 event guests x 5.0 gpd	=	<u>125</u>
Total	=	325 gpd

Design SW flow = **380 gpd SW**

SW TREATMENT & DISPOSAL

The existing combined dual zone standard leachfield will be converted into two separate leachfield systems. The sanitary wastewater will continue to be treated in the existing standard trenches, with EQ24 infiltrator chambers. The average perc rate in the vicinity of the existing system was approved at 21 mpi which corresponds to an application rate of 0.643 gal/sf/day.

For a commercial system, the size of the standard leachfield would be determined as follows:

$$\begin{aligned} \text{Total LF} &= \text{Design Flow} \div \text{Application Rate} \div \text{Sidewall} \\ &= 380 \text{ gal/day} \div 0.643 \text{ gal/sf/day} \div 1.5 \text{ sf/lf (EQ24 chambers)} \\ &= 394 \text{ LF} \end{aligned}$$

As a result, 4 of the existing 100 LF standard leachlines of SEP02-0460 will be disconnected from the remaining leachlines and will become a SW only leachfield. The effluent collected in the existing 1,500 gallon SW septic tank will then be pumped up to the 400 LF SW standard system via the existing 1,500 gallon sump tank.

A 200% reserve area will be required for the SW leachfield. There is currently a 1,226 LF filled land system set aside as reserve. This equates to approximately 9600 SF of area, based on a minimum of 8' center of leachline to center of leachline. Based on the depth of suitable soil, this location can be redesigned as a subsurface drip dispersal system. A SW drip system with a flow of 380 gpd and an application rate of 0.643 g/sf/d would equate to a 295 LF or 591 SF drip field. For a 200% drip reserve system, 590 LF or 1,185 SF would be required. This leaves approximately 8,415 SF available for PW reserve area.

PROCESS WASTEWATER

Process wastewater (PW) is generated from typical winery processing activities including crushing, fermentation, barrel storage and bottling with tank, barrel, equipment and floor cleaning. Medlock Ames proposes to increase annual wine production from 20,000 cases to 30,000 cases. Only wine processing occurs at the facility; no distilling operations will occur.

Based on historical flow data from similar sized wineries, the corresponding PW generation rates and calculated projected PW flows are as follows:

PW FLOWS

30,000 cases crushed onsite:

Cases of wine produced onsite = 30,000 cases

Gallons of wine produced onsite = 2.4 gallons/case x 30,000 cases = 72,000 gal

Generation rate = 5.0 gal PW/gal wine

Annual Volume = 72,000 gal wine x 5.0 gal PW/gal wine = 360,000 gal PW

AVERAGE DAY FLOW:

360,000 gal PW ÷ 365 days = 987 gpd PW

AVERAGE DAY HARVEST FLOW:

Generation rate = 1.5 gal PW/gal wine

$\frac{72,000 \text{ gallons wine} \times 1.5 \text{ gal PW/gal wine}}{60 \text{ days}}$ = 1,800 gpd PW

PEAK WEEK HARVEST DAY FLOW

Generation rate = 60 gal PW/ton of grapes crushed

Peak Week = 200 tons

Peak Week Day = 200 tons/7 days = 28.5 tons

28.5 tons grapes crushed/day x 60 gal PW/ton of grapes = 1,710 gpd PW

Design PW flow = 1,800 gpd PW

PW TREATMENT & DISPOSAL

As noted previously, 400 LF of the existing 2500 LF standard system will be separated out as a stand alone SW leachfield. The remaining 2100 LF will be converted to a pressure distribution system by removing the chamber system and filling the trenches with rock and distribution laterals. This will eliminate the need for a dual zone system (or 200% primary installation) and will allow for a greater sidewall credit in determining the total length of required leachline. A pre-treatment unit will need to be added as well as additional septic tankage to provide the required settling time.

The PD system will be sized as follows:

$$\text{Leachline Length} = \frac{\text{Design Flow}}{\text{Application Rate (Sidewall Area/lf)}}$$

$$\text{Leachline Length} = \frac{1800 \text{ gpd}}{0.643 \text{ gal/s.f./day (2 sf/lf)}} = \underline{1400 \text{ l.f.}}$$

As a result, 1400 LF of the remaining 2100 available standard trenches will be converted into pressure distribution (PD) leachlines.

This leaves 700 LF available for a 50% reserve area. The remaining 150% reserve area can be designated as a PW drip system, similar to the SW reserve area noted above.

A PW drip system with a flow of 1800 gpd and an application rate of 0.643 g/sf/d would equate to a 1400 LF or 2800 SF drip field. For a 150% drip reserve system, 2100 LF or 4200 SF would be required. As noted above, there is approximately 8,415 SF available for PW reserve area, and only 4,200 SF is needed.

PW TREATMENT & DISPOSAL

With the modification of the existing 2500 LF standard leachfield into two separate systems (a 400 LF SW standard system and a 1400 LF PW pressure distribution system), there is adequate capacity to treat and dispose of the increased wastewater flows proposed by the Use Permit Modification UPE21-0042.

SMA Steve Martin Associates, Inc.

130 South Main Street, Suite 201
Sebastopol, CA 95472

707-824-9730
707-824-9730 (fax)

December 9, 2023

Sonoma County Fire
2300 County Center Dr.
Santa Rosa, CA 95403

Attention: Steve Mosiurchak, Fire Marshal

Re: Same Practical Effect
14 CCR 1270.06
Medlock Ames Winery
13414 Chalk Hill Rd.
Healdsburg, CA 95448
UPE21-0042

Dear Steve,

Please find attached an application for a Same Practical Effect Exception to standards pursuant to 14 California Code of Regulations §1270.06 for the Medlock Ames Winery located at 13414 Chalk Hill Road in Healdsburg, CA. Medlock Ames is an existing winery that is pursuing a modification of their existing use permit to increase production and add visitor serving activities, including tasting by appointment. The following documents are submitted as part of this application:

- Executed Permit Sonoma Exception – Same Practical Effect 14 CCR 1270.06 Form
- Medlock Ames Winery Use Permit Modification Project Description, updated 11/20/2023
- Medlock Ames Winery Fire Safety, Emergency Action & Evacuation Plan
- Sheet UP1.0 showing the location of all wells and ponds.
- Sheet UP1.2 showing the main access to the winery site on Toby Lane and the alternate exist from the site via Flora Ranch Road.

If you need any additional information or have questions or comments, please call.

Sincerely,



Tamara Martin, REHS

Attachments

APPROVED

By smosiurc at 9:40 am, Feb 01, 2024



APPROVED
By smosiurc at 9:40 am, Feb 01, 2024

Exception – Same Practical Effect 14 CCR §1270.06

California Department of Forestry and Fire Protection Fire Safe Regulations, 14 California Code of Regulations, §1273.00, require developments in the State Responsibility Area to provide for safe access for emergency wildfire equipment and civilian evacuation concurrently. Applicant hereby requests an exception to standards to provide the same practical effect pursuant to 14 California Code of Regulations §1270.06 due to environmental conditions and physical site limitations. A map of the development project area and licensed professional plans documenting the same practical effect alternative is included with this application as Exhibit A.

To have the same practical effect for safe access for emergency wildfire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with 14 CCR 1273.00 through 1273.09

INDEMNIFICATION AGREEMENT

As part of this application, applicant agrees to defend, indemnify, release and hold harmless the County, its agents, officers, attorneys, employees, boards and commissions from any claim, action or proceeding brought against any of the foregoing individuals or entities, the purpose of which is to attack, set aside, void or annul the approval of this application or the adoption of the environmental document which accompanies it. This indemnification shall include, but not be limited to, damages, costs, expenses, attorney fees or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in conjunction with the approval of this application, whether or not there is concurrent passive or active negligence on the part of the County. If, for any reason any portion of this indemnification agreement is held to be void or unenforceable by a court of competent jurisdiction, the remainder of the agreement shall remain in full force and effect.

Applicant Name: Medlock Ames Vintners, LLC

Applicant Signature: 

Owner Name: Medlock Ames Vintners, LLC

Owner Signature: 

File No.: UPE2 -0_4 APN: 132-120-017 & 018 Date: _____

OFFICE USE ONLY###

Submitted to CALFIRE on: 02/01/2024 Number of Pages/Attachments: 26

NOTE: The purpose of the Indemnification Agreement is to allow the County to be held harmless in terms of potential legal costs and liabilities in conjunction with permit processing and approval.

Code Sections Requesting Exception:

<input checked="" type="checkbox"/>	1273.01	Width
<input type="checkbox"/>	1273.02	Road Surface
<input type="checkbox"/>	1273.03	Grades
<input type="checkbox"/>	1273.04	Radius
<input type="checkbox"/>	1273.05	Turnarounds
<input checked="" type="checkbox"/>	1273.06	Turnouts
<input type="checkbox"/>	1273.07	Road and Driveway Structures
<input type="checkbox"/>	1273.08	Dead-End Roads
<input type="checkbox"/>	1273.09	Gate Entrances

Environmental Reasoning:

A Use Permit modification to the existing Medlock Ames Winery located at 13414 Chalk Hill Road has been applied for to increase production from 20,000 cases to 30,000 cases annually and requests vineyard tours and tasting strictly by appointment. Tasting room visitors will be scheduled such that there will be an average of 12 visitors and a maximum of 20 visitors on site at any given time. Additionally, twelve visitor serving activities (approximately one per month) of up to 50 persons has been requested. The main access road to the winery is via Toby Lane, which is 1.15 miles and consists of a 12' wide paved roadway for 0.99 miles and an 18' wide paved driveway for 0.16 miles. The driveway entrance to the winery site is less than 1 mile from the start of Toby Lane. Over the course of the entire 1.15 miles (Toby Lane and winery driveway), there are five 4' wide turnouts, one 6' wide turnout, and one 12' wide paved turnout.

The exception would be based on a demonstration of the adequacy of measures to fully mitigate the potential impact of fire on life safety of visitors to the facility and effectiveness of responding fire service personnel.

There are multiple exits available from the winery site. An alternate evacuation route via Flora Ranch Road has been established as available to employees and guests should the main access via Toby Lane be unavailable. The alternate Flora Ranch Road evacuation route is 2.37 miles and consists of a 10' wide chip seal driveway for 0.70 miles and a 14' wide gravel driveway for 1.67 miles. Over the course of the 2.37 mile alternate evacuation route, there are nine 4' wide turnouts, one 50' x 100' gravel turnout/staging area, and one 50' x 50' gravel turnout/staging area.

Same Practical Effect:

Mitigations to achieve "same practical effect" are directed at limiting the use of the road by visitors and hospitality employees in high fire hazard conditions and during active fires. Specifically, the hazard posed to occupants egressing on narrow roads during wildland fire conditions is mitigated by significantly reducing the likelihood that visitors will be on the roads during these conditions.

In the event of a red flag warning, visitor serving activities, including tasting appointments, will be relocated to the alternate Medlock Ames Tasting Room site located on Hwy 128 in Geyserville, CA or cancelled and rescheduled if necessary. Additionally, multiple exits off of the property exist, including a secondary evacuation exit via Flora Ranch Road as described above is available if Toby Lane is impacted. Fire safety and emergency action plans are provided to employees and qualified staff is present to

administer them.

Furthermore, there are four wells and six on site ponds. All of the ponds would be available for fire suppression, if needed, however pond Ponds P2 (13 acre feet) and P3 (9.61 acre feet) are solely available for fire suppression as neither pond are utilized for any other use. Both ponds P2 and P3 are naturally filled with rainwater. Pond P3 is specifically designated for fire suppression, and therefore is topped with well water as needed to maintain a full pond at all times. Pond P2 is merely a landscape feature, and may have water added as needed in the event of severe evaporation. As a result, there exists 22.61 acre feet of water located adjacent to the winery site that are available solely for fire suppression. See sheet UP1 with the location of all wells and ponds noted.

Irrigation Ponds & Reservoirs		
Map ID	Capacity (acre-feet)	Primary Use
P1	9.94	landscape & agricultural irrigation
P2	13	not used - landscaping feature only
P3	9.61	fire suppression only
P4	26	shared with neighbor
P5	5	frost protection
P6	45	shared with neighbor; recreational use only

**MEDLOCK AMES WINERY
USE PERMIT MODIFICATION
PROJECT DESCRIPTION**

The existing Medlock Ames Winery is located at 13414 Chalk Hill Road in Healdsburg, CA. The current Use Permit (UPE01-0182) allows for a maximum annual wine production of 20,000 cases with no public tasting or retail sales on Assessor's Parcel Number (APN) 132-120-017. This Use Permit Modification requests an increase to 30,000 cases of wine annually, the addition of tasting and vineyard tours by appointment only, retail sales, and 12 agricultural events annually. This Use Permit Modification is also requesting the inclusion of the adjacent parcel APN 132-120-018, under same ownership, to conduct vineyard tours. The winery parcel (APN 132-120-017) currently has 20.7 acres of vines and the adjacent parcel (APN 132-120-018) currently has 33.3 acres of vines, for a total of 54 acres of vineyard.

1. Wine will continue to be produced within the existing 20,000 SF, three level winery building (including basement and mezzanine levels).
 - a. 1600 SF of the existing 3200 SF mezzanine within the winery is proposed to be converted to production and administration offices.
2. The existing 1350 SF barn is proposed to be converted as follows:
 - a. 750 SF tasting room
 - b. 242 SF commercial kitchen and pantry
 - c. 156 SF office space
 - d. Remainder: restrooms, tax paid, mechanical, and storage.
3. Tasting, vineyard tours, and retail sales strictly by appointment only. Tasting proposed to occur within the existing winery, remodeled existing barn, and the landscaped outdoor courtyard adjacent to the barn.
4. 12 agricultural visitor serving activities per year with 50 persons maximum. Activities will not be held during a red flag warning.

<u>Activity</u>	<u>Quantity</u>	<u>Date & Time Period</u>	<u>Attendees (maximum)</u>
Wine Maker Luncheons & Dinners	4	January - December	50
Ag Promotional Events	6	January - December	50
Weddings	2	January - December	50

Notes:

- a) *In the event of a red flag warning, visitor serving activities will be relocated to the alternate Medlock Ames Tasting Room site located on Hwy 128 in Geyserville, CA or cancelled and rescheduled if necessary.*
- b) *Agricultural Promotional Events will include Pick-up Weekend, Harvest Celebration, or other marketing visitor serving activities to support and build the Wine Club Member list.*
- c) *All noise, including any amplified or acoustic music, will meet the Sonoma County Noise Ordinance levels (Table NE-2, as measured from the property line).*
 - i. *Amplified music is only proposed on event days and only within the building.*
 - ii. *Acoustic music is proposed during operating hours Monday through Sunday and may be accompanied by lightly amplified vocals*

d) Participation in Industry Wide Events is not planned nor requested.

5. Infrastructure includes new delineated parking area, expansion of existing sanitary wastewater leach field system, storm water management improvements, fire protection water storage, utilities and associated grading and site improvements.
6. 10 full-time employees during non-harvest with 5 additional part-time employees during the harvest season and bottling.
7. Tasting room visitors will be strictly by appointment and are anticipated to be on the order of 24 for an average day and 60 for a peak day. Visitors are proposed to be scheduled for appointments spread out throughout the day. On an average day, two visitor appointments of 12 persons each will occur at two different times of the day. This will result in an average of 12 visitors on site at a given time. On a peak day, three appointments of 20 persons will occur. This would result in a maximum of 20 visitors on site at a given time. In the event of a red flag warning, visitor serving activities, including tasting appointments, will be relocated to the alternate Medlock Ames Tasting Room site located on Hwy 128 in Geyserville, CA or cancelled and rescheduled if necessary.
8. Vineyard tours may be offered to tasting room appointment visitors. Most of the vineyard tours will be walking tours, however, on occasion, tours may be conducted via electric vehicle with 6-8 persons per vehicle.). In the event of a red flag warning, visitor serving activities, including vineyard tours, will be cancelled and rescheduled if necessary.
9. Operating hours shall be 7 AM to 6 PM Monday through Friday off harvest and 6 AM to 10 PM Monday through Sunday during harvest season.
 - a. Tasting Room Appointments: 11 AM to 5 PM Monday through Sunday
 - b. Ag Promotional Activities: 11 AM to 9:30 PM Monday through Sunday

MEDLOCK AMES WINERY
FIRE SAFETY, EMERGENCY ACTION &
EVACUATION PLAN
13414 Chalk Hill Road
Healdsburg, California

Overview:

The purpose of this document is to identify conditions under which an evacuation would be necessary, designate a clear chain of command, and determine appropriate evacuation procedures. The following plan applies to a number of emergencies, both man-made and natural, which would require the facility to be evacuated, such as fires, explosions, earthquakes, toxic materials releases and any other hazardous situation.

While natural disasters such as earthquakes or fire cannot necessarily be prevented, there are measures that can be taken to reduce the risks and to be prepared.

This Emergency Action Plan, "the Plan" is developed under the requirements set forth in California Fire Code 2019 Chapter 4, Emergency Planning and Preparedness. It provides planning and procedures to Medlock Ames Winery Employees and Occupants for emergencies, evacuation, safety plans, drills, employee training, event permitting, and hazard communication. Sections are organized for use in binders to be made available for use by employees as follows:

- Emergency phone numbers and contact information (Section 1)
- Alarm activation and announcements (Section 2)
- Occupant emergency egress and escape routes (Section 3)
- Emergency vehicle ingress and egress (Section 4)
- Evacuation procedures (Section 7)
- Employee actions and training (Section 6)
- Assembly points and areas of temporary refuge (Section 7)
- Emergency supplies (Section 8)
- Visitation permit requirements and occupancy limits (Section 9)
- Defensible space requirements (Section 10)
- Map
 - Overall Site Plan (Sheet UP1.0)
 - Facility Site Plan (Sheet UP1.1)
 - Evacuation Routes (Sheet UP1.2)

1. Emergency Phone Numbers and Emergency Personnel Contact Information

FOR ALL EMERGENCIES:	911
FIRE DEPARTMENT:	Geyserville Fire District Station 2 6571 California 128 Healdsburg, CA 95448 707-857-3535
SHERIFF:	Sonoma County Sheriff's Main Office 2796 Ventura Ave. Santa Rosa, CA 95403 707-565-2121
AMBULANCE:	Bell's Ambulance Service 434 Powell Ave. Healdsburg, CA 95448 707-433-1114
CAL FIRE:	CAL Fire Healdsburg Station 17475 Fredson Rd. Geyserville, CA 95441 707-576-2285

1.1. Emergency Personnel Names and Phone Numbers

DESIGNATED RESPONSIBLE OFFICIAL (Highest Ranking Manager at site)

Name: _____ Phone: (_____)

EMERGENCY COORDINATOR

Name: _____ Phone: (_____)

AREA/FLOOR MONITORS (If applicable):

Area/Floor: _____ Name: _____ Phone: (_____)

Area/Floor: _____ Name: _____ Phone: (_____)

ASSISTANTS TO PHYSICALLY CHALLENGED (If applicable)

Name: _____ Phone: (_____)

Name: _____ Phone: (_____)

FIRE SAFETY COORDINATOR(S):

Name: _____ Phone: (_____)

Name: _____ Phone: (_____)

2. Alarm Activation and Announcements

Types of emergencies to be reported by site personnel are:

- MEDICAL
- FIRE*
- SEVERE WEATHER
- BOMB THREAT
- CHEMICAL SPILL / TOXIC MATERIALS RELEASE
- EXTENDED POWER LOSS
- OTHER (specify)_____

*Per CFC Sections 401.3.1-401.3.3,

- Fire events. In the event an unwanted fire occurs on a property, the owner or occupant shall immediately report such condition to the fire department.
- Alarm activations. Upon activation of a fire alarm signal, employees or staff shall immediately notify the fire department.
- Delayed notification. A person shall not, by verbal or written directive, require any delay in the reporting of a fire to the fire department.

2.1. MEDICAL EMERGENCY

- Call medical emergency phone number (911):
 - Paramedics
 - Ambulance
 - Fire Department
- Provide the following information:
 - Nature of medical emergency,
 - Location of the emergency (address, building, room number), and
 - Your name and phone number from which you are calling.
- Do not move victim unless absolutely necessary.
- Call the following personnel trained in CPR and First Aid to provide the required assistance prior to the arrival of the professional medical help:

Name: _____ Phone: _____

Name: _____ Phone: _____

- If personnel trained in First Aid are not available, as a minimum, attempt to provide the following assistance:
 - Stop the bleeding with firm pressure on the wounds (note: avoid contact with blood or other bodily fluids).
 - Clear the air passages using the Heimlich Maneuver in case of choking.
- In case of rendering assistance to personnel exposed to hazardous materials, consult the Material Safety Data Sheet (MSDS) and wear the appropriate personal protective equipment. Attempt first aid ONLY if trained and qualified.

2.2. FIRE EMERGENCY

When fire is discovered:

- Activate the nearest fire alarm (if installed)
- Notify the local Fire Department by calling 911
- If the fire alarm is not available, notify the site personnel about the fire emergency by the following means (check applicable):
 - Voice Communication
 - Phone Messaging

Fight the fire ONLY if:

- The Fire Department has been notified.
- The fire is small and is not spreading to other areas.
- Escaping the area is possible by backing up to the nearest exit.
- The fire extinguisher is in working condition and personnel are trained to use it.

Upon being notified about the fire emergency, occupants must:

- Leave the building using the designated escape routes.
- Assemble in the designated area (open space in front of the winery building):
- Remain outside until the competent authority (Designated Official or designee) announces that it is safe to reenter.

Designated Official, Emergency Coordinator or supervisors must (underline one):

- Disconnect utilities and equipment unless doing so jeopardizes safety.
- Coordinate an orderly evacuation of personnel.
- Perform an accurate head count of personnel reported to the designated area.
- Determine a rescue method to locate missing personnel.
- Provide the Fire Department personnel with the necessary information about the facility.
- Perform assessment and coordinate weather forecast office emergency closing procedures

Area/Floor Monitors must:

- Ensure that all employees have evacuated the area/floor.
- Report any problems to the Emergency Coordinator at the assembly area.

Assistants to Physically Challenged should:

- Assist all physically challenged employees in emergency evacuation.

2.3. EXTENDED POWER LOSS

In the event of extended power loss to a facility certain precautionary measures should be taken depending on the geographical location and environment of the facility:

- Unnecessary electrical equipment and appliances should be turned off if power restoration would surge causing damage to electronics and effecting sensitive equipment.
- Facilities with freezing temperatures should turn off and drain the following lines in the event of a long term power loss.
 - Fire sprinkler system
 - Standpipes
 - Potable water lines
 - Toilets

Upon Restoration of heat and power:

- Electronic equipment should be brought up to ambient temperatures before energizing to prevent condensate from forming on circuitry.
- Fire and potable water piping should be checked for leaks from freeze damage after the heat has been restored to the facility and water turned back on.

2.4. CHEMICAL SPILL

The following are the locations of:

Spill Containment and Security Equipment: _____

Personal Protective Equipment (PPE):

MSDS:

When a Large Chemical Spill has occurred:

- Immediately notify the designated official and Emergency Coordinator.
- Contain the spill with available equipment (e.g., pads, booms, absorbent powder, etc.).
- Secure the area and alert other site personnel.
- Do not attempt to clean the spill unless trained to do so.
- Attend to injured personnel and call the medical emergency number, if required.
- Call a local spill cleanup company or the Fire Department (if arrangement has been made) to perform a large chemical (e.g., mercury) spill cleanup.

Name of Spill Cleanup Company: **FARR Consstruction Co.**

Phone Number: **707-484-9987**

- Evacuate building as necessary

When a Small Chemical Spill has occurred:

- Notify the Emergency Coordinator and/or supervisor (select one).
- If toxic fumes are present, secure the area (with caution tapes or cones) to prevent other personnel from entering.
- Deal with the spill in accordance with the instructions described in the MSDS.
- Small spills must be handled in a safe manner, while wearing the proper PPE.
- Review the general spill cleanup procedures.

2.5. SEVERE WEATHER AND NATURAL DISASTERS

2.5.1. Wildland Fire

- Follow evacuation plan procedures.

2.5.2. Earthquake:

- Stay calm and await instructions from the Emergency Coordinator or the designated official.
- Keep away from overhead fixtures, windows, filing cabinets, and electrical power.
- Assist people with disabilities in finding a safe place.
- Evacuate as instructed by the Emergency Coordinator and/or the designated official.

2.5.3. Flood:

If indoors:

- Be ready to evacuate as directed by the Emergency Coordinator and/or the designated official.
- Follow the recommended primary or secondary evacuation routes.

If outdoors:

- Climb to high ground and stay there.
- Avoid walking or driving through flood water.
- If car stalls, abandon it immediately and climb to a higher ground.

3. Occupant Emergency Egress and Escape Routes

- Evacuation route maps have been posted in each work area. The following information is marked on evacuation maps:
 1. Emergency exits
 2. Primary and secondary evacuation routes
 3. Locations of fire extinguishers
 4. Fire alarm pull stations' location
 5. Assembly points

- Site personnel should know at least two evacuation routes.

Directions to nearest hospital.

- Providence Medical Group Urgent Care
6580 Hembree Lane
Windsor, CA
(15 minutes, 8.0 miles)
 - Turn left onto Chalk Hill Road
 - Turn right onto Pleasant Ave
 - Turn right onto Old Redwood Hwy
 - Turn left onto Hembree Ln
 - 6580 Hembree Ln

4. Emergency Vehicle Ingress and Egress

The primary exit and main evacuation route is via Toby Lane to Chalk Hill Road. A secondary evacuation route from the site is via Flora Ranch Rd to Chalk Hill Road. This alternate exit connects the site to Chalk Hill Road 500 feet to the south of Toby Lane. Both of these exits offer two directions for access and egress, one north on Chalk Hill Road to CA Hwy 128 and one to the south on Chalk Hill Road to Faught Road in Windsor. Refer to Sheet UP1.2 Evacuation Routes.

5. Evacuation

Exit routes from the building shall be:

- Clearly marked and well lit
- Wide enough to accommodate the number of evacuating personnel
- Unobstructed and clear of debris or furniture at all times, and
- Unlikely to expose evacuating personnel or visitors to additional hazards

Exit routes from the site:

- If evacuation from the site is required, two exits from the site exist. The Primary Evacuation Route for the Medlock Ames Winery (See Sheet UP1.2 Evacuation Map attached):
 - Primary route to Hwy 128: take Toby Lane to Chalk Hill Rd., turn right (north) onto Chalk Hill Road, proceed to CA HWY 128. (7 minutes, 3.8 miles)
 - Secondary route to Faught Lane, Windsor: take Flora Ranch Rd. to Chalk Hill Rd., turn left (south) onto Chalk Hill Road, proceed to Faught Lane. (15 minutes, 7.9 miles)
- The driveway from the winery to the public road shall have the exit route clearly marked
- The driveway from the winery shall remain clear of debris or obstacles at all times.

Employer shall implement the following:

- Keep fire exits unlocked during business hours
- Test regularly all back-up and safety systems, such as fire extinguishers, emergency lighting and communication systems, and repair as needed
- Post evacuation plan in key locations, and review it periodically to ensure its effectiveness
 - Provide a laminated, easy to read, 1-page document with bullet points on when and how to evacuate or shelter in place
- Post emergency contact numbers in key locations
- Conduct emergency evacuation drills periodically
- Establish designated meeting locations outside the buildings for employees to gather following an evacuation and establish a protocol for taking a head count after the evacuation
- Identify personnel with special needs or disabilities who may need help evacuating and assign one or more people, including back-up personnel, to help them
- Post emergency numbers, including 911, near telephones
- Designate the emergency commander and alternate emergency commanders, both of whom shall be required to:
 - sign up for NIXLE alerts for the Chalk Hill Road Area, and
 - familiarize themselves with a Red Flag event and a
 - Sign up for PG&E alerts of a Public Safety Power Shutoff (PSPS)
 - follow the National Weather Service and Cal Fire on social media for advance warning of a PSPS

Methods to Account for Medlock Ames Winery Employees and Guests

Employees are to be instructed to meet at a designated location so they can be accounted for during an emergency. If it is determined that any persons are missing, the responding emergency agency will be notified. The agency also will be informed about the last approximate whereabouts of missing employees. The meeting location will be chosen based on the type of emergency involved. The project manager will

account for wind direction and potential hazards in determining the meeting place. The meeting location for this project will be: **Open Space in front of the Winery Building.**

6. Employee Actions and Training

Employees shall:

- Be familiar with the work site's emergency evacuation plan
- Know the pathway to at least two alternative exits from the workplace
- Recognize the sound/signaling method of fire/evacuation alarms
- Know who to contact in an emergency and how to contact them
- Know the layout of the workspace so they can escape in the dark if necessary
- Know where the fire/evacuation alarms are located and know how to use them
- Report damaged or malfunction safety systems and back-up systems
- Know the procedures for assisting visitors on site:
 - Check offices, bathrooms and other spaces before being the last person to exit an area
 - Guide visitors out of the building through the emergency exits and to the nearest designated meeting location
 - If evacuation from the site is required, assist employees and visitors with the evacuation of the site

6.1. Securing Property and Equipment

If evacuation of the premises is necessary, some items may need to be secured to prevent further danger to the facility and personnel on hand (such as securing confidential or irreplaceable records or shutting down equipment to prevent release of hazardous materials). Only the following people may remain in the building for the prescribed amount of time to secure the property and equipment to which they have been assigned.

Name	Property or Equipment to Secure	Location of Property or Equipment	Estimated Time to Complete Security Process

All people remaining behind to shut down critical systems or utilities must be capable of recognizing when to abandon the operation or task. Once the property or equipment has been secured, or the situation becomes too dangerous to remain, those who remained behind must exit the building by the nearest escape route as soon as possible and meet the remainder of the employees at the (Designated Assembly Area)

6.2. TRAINING

The following personnel have been trained to ensure a safe and orderly emergency evacuation of other employees (this shall be updated as required if staff changes occur):

Facility:

Name	Title	Responsibility	Date

7. Assembly Points and Areas of Temporary Refuge

7.1. Accounting for Employees/Visitors After Evacuation

Once an evacuation has occurred, the (Responsible Person(s)) will account for each employee or visitor assigned to them at the (Designated Assembly Area). Each employee is responsible for reporting to the appropriate (Responsible Person(s)) so an accurate head count can be made. All employee counts will then be reported to the Emergency Action Plan Manager as soon as possible.

7.2. Sheltering in Place

If environmental conditions do not allow for immediate evacuation, authorities and/or (Responsible Person(s)) might determine that it is safer to remain indoors or in a temporary area of refuge rather than evacuate. The Emergency Action Plan Manager will announce shelter-in-place status by public address system or other means of immediate notification available at worksite.

Conditions under which an evacuation would be necessary may differ from the conditions under which it may be better to shelter in place. A clear chain of command and designation of the person on site authorized to order an evacuation of the building, evacuation of the building and the site, or shelter in place shutdown shall be in place. It is critical that all employees know who this emergency commander is and understand that this person has the authority to make decisions during emergencies. The emergency commander should be responsible for assessing the situation to determine whether the emergency that exists requires activation of the emergency procedures, overseeing emergency procedures, notifying and coordinating with outside emergency services, and directing shutdown of utilities if necessary. An alternate emergency commander shall also be designated in the event of absence or incapacity of the primary emergency commander. When emergency officials, such as the local fire department respond to the emergency, they will assume responsibility for the building occupants and have the authority to make decisions regarding evacuation and whatever actions are necessary to protect life and property.

(Responsible Person(s)) will immediately close the business. If customers, clients, or visitors are in the buildings or on site, they will be advised to stay in the building or move to temporary areas of refuge for their safety.

Unless there is an imminent threat, employees, customers, clients, and visitors will call their emergency contacts to let them know where they are and that they are safe.

(Responsible Person(s)) will turn on call-forwarding or alternative telephone answering systems or services. The recording for voice mail or automated attendant will be changed to indicate that the business is closed, and that staff and visitors will be remaining in the building until authorities advise that it is safe to leave.

(Responsible Person(s)) will quickly lock exterior doors and close windows, air vents, and fireplace dampers. (Responsible Person(s)) familiar with the building's mechanical systems will turn off, seal, or disable all fans, heating and air conditioning systems, and clothes dryers, especially systems that automatically exchange inside air with outside air. If there is a danger of explosion, (Responsible Person(s)) must close window shades, blinds, or curtains.

(Responsible Person(s)) will gather essential disaster supplies (for example, nonperishable food, bottled water, battery-powered radios, first-aid supplies, flashlights, batteries, duct tape, plastic sheeting, and plastic garbage bags), which are stored at (Designated Location), and will take them to the (Shelter-in-Place Location(s)) within the building. [Select interior room(s) above the ground floor, with the fewest windows or vents. The room(s) should have adequate space for everyone to be able to sit. Avoid overcrowding by selecting several rooms if necessary. Large storage closets,

Medlock Ames Winery
Emergency Action Plan

utility rooms, pantries, and copy and conference rooms without exterior windows work well. Avoid selecting rooms with mechanical equipment, such as ventilation blowers or pipes, which may be impossible to seal from outdoors. It is ideal to have a hard-wired telephone in the room(s) you select. Cellular telephone equipment may be overwhelmed or damaged during an emergency. Call emergency contacts and have the telephone available if you need to report a life-threatening condition.]

All employees, customers, and visitors will move immediately to the (Shelter-in-Place Location(s)) within the building. (Responsible Person(s)) will seal all windows, doors, and vents with plastic sheeting and duct tape.

(Responsible Person) will write down the names of everyone in the room and will call the (Designated Emergency Contact outside the building) to report who is in the room, and their affiliations with (Company Name) (employee, visitor, client, customer).

(Responsible Person(s)) will monitor telephone, radio, television and Internet reports for further instructions from authorities to determine when it is safe to leave the building.

8. Emergency Supplies

Store an emergency survival kit in the designated onsite emergency control center location. The emergency survival kit shall include, at a minimum, the following items:

- First Aid Kit
- One gallon per day of drinking water per person, per day, for 3 days
- Freeze dried and canned food (check expiration dates annually and replace as needed)
- Flashlights with extra batteries, candles and box of wooden matches
- Battery operated radio with extra batteries
- N95 mask should be available for every employee, with extras available for visitors
- Non-electric telephone with cord for land line communication during a power outage and a satellite phone in the event of a large-scale event that results in downed communication lines.
- Plastic sheeting, plastic garbage bags, and duct tape for shelter in place situations.
- Emergency blankets or fire shelter blankets shall be provided for every employee, with extras available for visitors

9. Visitation Permits and Occupancy Limits

Tasting room visitors will be strictly by appointment and are anticipated to be on the order of 30 for an average day and 60 for a peak day. Visitors proposed to be scheduled for appointments spread out throughout the day. Visitor appointments are projected to have a maximum of 20 persons per appointment (resulting in 20 visitors on site at a time).

In the event of a red flag warning, tasting room appointments will be cancelled and rescheduled.

Operating hours shall be 7 AM to 6 PM Monday through Friday off harvest and 6 AM to 10 PM Monday through Sunday during harvest season.

- a. Tasting Room and Vineyard Tour Appointments: 11 AM to 5 PM Monday through Sunday except for during Red Flag Events.
- b. Ag Promotional Activities: 11 AM to 9:30 PM Monday through Sunday except for during Red Flag Events.
- c. Tasting, tours, and retail sales strictly by appointment only.

There will be a maximum of 12 agricultural visitor serving activities per year with 50 persons maximum. Activities are proposed only during a non-red flag warning period.

1.

<u>Activity</u>	<u>Quantity</u>	<u>Date & Time Period</u>	<u>Attendees (maximum)</u>
Wine Maker Luncheons & Dinners	4	January - December	50
Ag Promotional Events	6	January - December	50
Weddings	2	January - December	50

Notes:

- a) *In the event of a red flag warning, visitor serving activities will be cancelled and rescheduled.*
- b) *Agricultural Promotional Events will include Pick-up Weekend, Harvest Celebration, or other marketing visitor serving activities to support and build the Wine Club Member list.*
- c) *All noise, including any amplified or acoustic music, will meet the Sonoma County Noise Ordinance levels (Table NE-2, as measured from the property line).*
 - i. *Amplified music is only proposed on event days and only within the building.*
 - ii. *Acoustic music is proposed during operating hours Monday through Sunday and may be accompanied by lightly amplified vocals*
- d) *Participation in Industry Wide Events is not planned nor requested.*

10. Defensible Space Requirements

The area around all buildings shall include defensible space. Flammable vegetation shall be removed around all structures and tree branches shall be trimmed such that they are located at least six feet from the ground and ten feet from any chimney (if applicable). Remove all dead vegetation a minimum of 100 feet from buildings. Flammable vegetation shall be removed at least 10 feet from roadways to allow safe exit during an evacuation. Tree branches shall not be overhanging roofs. Trim trees regularly to keep branches 10 feet away from other trees. Create a separation between trees, scrubs and items that could catch fire, such as patio furniture etc. Weeds and dead grasses shall be cut four inches or shorter. Woodpiles shall be stacked a minimum of 30 feet from any structure, and should be surrounded by bare dirt, (around and under), and or gravel. LPG tanks should also be located on bare dirt or gravel and be located a minimum of 30 feet from the following: any structure, dry or dead material, or anything flammable. Vent openings shall be covered with 1/8" to 1/4" metal mesh to protect from flying embers, and dead leaves shall be cleaned out of gutters regularly. Fire safe landscaping shall be installed and maintained.

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1 OVERALL SITE PLAN
 Scale: 1" = 300'

SMA

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NOT FOR
 CONSTRUCTION

USE PERMIT
 OVERALL SITE

MEDLOCK AMES
 13414 CHALK HILL RD
 HEALDSBURG, CA 95448
 APN 132-120-017 & 018

REVISIONS

DATE	DESCRIPTION

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 DATE MAY 20, 2021
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