

Environmental Noise Assessment

Placer County Winery & Farm Brewery Zoning Text Amendment

Placer County, California

BAC Job # 2017-092

Prepared For:

Raney Planning & Management, Inc.

Attn: Mr. Nick Pappani
1501 Sports Drive, Suite A
Sacramento, CA 95834

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

April 16, 2019



Introduction and Project Description

This report provides an evaluation of the potential noise effects of implementing the proposed Winery and Farm Brewery Zoning Text Amendment Project (Project).

The proposed project consists of a revision to the existing Winery Ordinance that regulates wineries located in unincorporated Placer County. The existing Winery Ordinance consists of Section 17.56.330 (Wineries) and Section 17.04.030 (Definitions) of the Placer County Code. Generally, the proposed amendments include the following substantive changes: redefine the term Events; define the term Farm Brewery; modify the minimum parcel size; create a table outlining special event allowances and maximum capacity at certain types of events; clarify the hours of operation; update the standards for potable water and waste disposal; and update the standards for access.

In general, the proposed amendment to the Placer County Winery Ordinance is intended to provide additional flexibility with respect to holding events at existing and future wineries and farm breweries. From a standpoint of noise, the amendments do not change the day-to-day operation of wineries and farm breweries (e.g., production, normal tasting room activities, etc.) nor does the amendment change the process undertaken by the County to process new winery and farm brewery applications. Thus, this analysis is not intended to address the regular day-to-day noise levels of existing and new wineries or farm breweries. Whereas the current Winery ordinance allows up to six promotional events per year with an Administrative Review Permit, the proposed ordinance would modify the promotional event definition to create a separate definition for Agricultural Promotional Events and Special Events, as follows:

An "Agricultural Promotional Event" is directly related to the education and marketing of wine and craft beer to consumers including but not limited to winemaker/brewmaster dinners, pick-up parties, release parties, and membership club parties. An Agricultural Promotional Event accommodates 50 people or less at one time (excluding staff). If greater than 50 people are in attendance at one time, those events shall be regulated in the same manner as a Special Event. See Table 1.

A "Special Event" is an event of greater than 50 people where the agricultural-related component is subordinate to the primary purpose of the event. Included in this definition are events such as private parties, fundraisers, social or educational gatherings where outside alcohol may be allowed, and events where the property owner is compensated in exchange for the use of the site and facility (referred to as a facility rental). Special Events do not include industry-wide events, the normal patronage of a tasting room, and private gatherings of the owner where the general public does not attend.

As discussed in the Project Description chapter of the EIR, while Agricultural Promotional Events (attendance <50) are not limited in number, it is unrealistic for the analysis to assume that wineries and farm breweries will host back-to-back events all day, every day. There are several factors that limit a particular facility's ability to host events, including number of staff, budget, parking capacity, overlap with regular tasting room hours, etc. In an effort to conduct a reasonable,

conservative analysis in this EIR, based upon reasonable forecasts, the County solicited input from a variety of facilities currently operating in the County. Considering several factors discussed in the Project Description, the EIR conservatively assumes that each facility would host up to two additional agricultural promotional events per day as a result of the proposed Zoning Text Amendment. Further differentiation has been made in the project traffic study with respect to the two different types of Agricultural Promotional Events evaluated in this EIR. Please refer to Table 10 of the traffic study for additional detail.

With respect to Special Events, the EIR will evaluate the potential environmental effects that could result from a maximum of 12 Special Events or Agricultural Promotional Events with attendance >50, at facilities on large parcels (>20 acres). While the ordinance currently allows six Special Events, and thus the net increase for facilities on large parcels is only six events, this ordinance amendment would enable facilities to host new types of uses under the Special Event category, namely weddings and similar events having amplified music. Thus, it was determined that the traffic analysis should evaluate traffic from all 12 potential Special Events on large parcels. The maximum attendance for a Special Event on large parcels is 200 people. While wineries and farm breweries on medium parcels would not be afforded additional Special Events, as compared to their current allowance, they would be able to host new types of uses under the Special Event category, namely weddings and similar events having amplified music. Per Table 3-2, on medium parcels, Special Events have a maximum attendance of 100 people. In order to evaluate the potential impacts of weddings and like events for medium parcels, it was determined that the traffic analysis should also evaluate traffic from up to six Special Events on medium parcels. It should be noted that some existing wineries are situated on small parcels (4.6-9.9 acres), as defined in the proposed ordinance. Under the current ordinance, existing wineries on parcels 4.6-9.9 acres are allowed to conduct up to six promotional events per year with an Administrative Review Permit. If no Administrative Review Permit or other permit exists that allows the event activity, any proposal for events after the adoption date of the proposed ordinance would constitute an expansion of operation and require compliance with the new regulation (i.e., the facility would need to obtain a minor use permit). Given that wine production facilities with tasting rooms on 4.6-9.9 acres are already allowed six events under the currently adopted ordinance (with an Administrative Review Permit), there is no net change to the operations of these facilities on 4.6-9.9 acre parcels associated with the proposed Winery and Farm Brewery Zoning Text Amendment. Thus, wine production facilities, with tasting rooms on 4.6-9.9 acre parcels, are not being evaluated in this traffic study because further environmental review would be conducted with any future use permit application. Rather, this study focuses on the effects of by-right winery event allowances at facilities on medium and large parcels.

The two existing farm breweries are not situated on small parcels. Any future proposals for farm breweries on small parcels would also require a Minor Use Permit, and thus would need to undergo discretionary review. As a result, the cumulative analysis herein is not required to evaluate future farm breweries on small parcels.

Cumulative (future) Conditions

All future winery/farm brewery applications would be subject to the proposed Winery and Farm Brewery Zoning Text Amendment. Under the proposed project, future facilities on medium- and large-sized parcels would now be afforded the ability to host an unlimited number of Agricultural Promotional Events, and medium and large wineries/breweries would be afforded the ability to host new types of Special Events each year. Therefore, while the Zoning Text Amendment would not directly induce the development of additional medium or large wineries/farm breweries, as they are already permitted by-right in certain zones, and the project is not expanding the number of zones where by-right development can occur, the proposed project would provide greater flexibility with respect to the amount of Agricultural Promotional Events and Special Events that may occur at future wineries/farm breweries. As a result, the EIR will evaluate the potential environmental effects associated with the ability to conduct Agricultural Promotional Events and Special Events at future wineries/farm breweries subject to the proposed project.

The Cumulative traffic noise analysis contained herein is based upon volumes provided by KD Anderson, which, for reasons set forth in the EIR Project Description, assumes 1.5 new facilities per year, for a cumulative horizon of 20 years. This equates to 30 new facilities.

The following environmental assessment includes an evaluation of the ambient noise environments in the general vicinities of representative existing wineries and breweries in Placer County. It also includes an analysis of changes in traffic noise environments resulting from implementation of the project, including cumulative traffic noise environments resulting from concurrent winery and brewery events occurring at all winery and breweries simultaneously. In addition, an evaluation of the potential noise generation of both agricultural promotional events and special events is provided.

Acoustic Fundamentals and Terminology

Sound, Noise and Acoustics

Sound is a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. Without a source to produce sound or a medium to transmit sound-pressure waves, there is no sound. Sound also must be received; a hearing organ, sensor, or object must be present to perceive, register or be affected by sound or noise. In most situations, there are many different sound sources, paths and receivers, not only one of each.

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound.

Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound.

Frequency

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are

low in pitch, like the low notes on a piano or bass drum, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of hertz. The extreme range of frequencies that can be heard by the healthiest human ears spans from 16 to 20 Hz on the low end to about 20,000 Hz (20 kHz) on the high end.

Sound Pressure Level and Decibels

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range.

The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. The amplitude of a sound determines its loudness. Loudness of sound increases and decreases with increasing and decreasing amplitude.

Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. When two sounds of equal SPL are combined, they produce a combined SPL 3 dB greater than the original individual SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sound levels differ by 10 dB or more, the combined SPL is equal to the higher SPL; the lower sound level would not increase the higher sound level.

A-Weighted Decibels

SPL alone is not a reliable indicator of loudness. The frequency of a sound also has a substantial effect on how humans respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, the healthy human ear is most sensitive to sounds from 1,000 to 5,000 Hz and perceives a sound within that range as being more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of SPL adjustments is usually applied to the sound measured by a sound level meter. The adjustments, referred to as a weighting network, are frequency-dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C- and D-scales), but these scales are rarely used in conjunction with normal environmental noise levels experienced in our day to day lives. Noise levels for environmental noise studies are typically reported in terms of A-weighted decibels (dBA). In environmental noise studies, A-weighted SPLs are commonly referred to as noise levels. Table 1 shows typical A-weighted noise levels.

Human Response to Changes in Noise Levels

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure tone”) signals in the midfrequency range. Outside such controlled conditions, the trained ear can detect 2-dB changes in normal environmental noise. However, it is widely accepted that the average healthy ear can barely perceive 3-dB noise level changes for similar sources. A 5-dB change is readily perceptible, and a 10-dB increase is perceived as being twice as loud. As discussed above, doubling sound energy results in a 3-dB increase in sound; therefore, doubling sound energy (e.g., doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in noise analysis:

Equivalent sound level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of the A-weighted sound levels occurring during a 1-hour period.

Percentile-exceeded sound level (L_x): L_x represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10 percent of the time, L_{90} is the sound level exceeded 90 percent of the time).

Maximum sound level (L_{max}): L_{max} is the highest instantaneous sound level measured during a specified period.

Day-night level (L_{dn}): L_{dn} is the energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m.

**Table 1
Typical Noise Levels Associated with Common Noise Sources**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet flyover at 300 meters (1,000 feet)		
	— 100 —	
Gas lawn mower at 1 meter (3 feet)		
	— 90 —	
Diesel truck at 15 meters (50 feet) at 80 kilometers per hour (50 miles per hour)		Food blender at 1 meter (3 feet)
	— 80 —	Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime		
Gas lawn mower, 30 meters (100 feet)	— 70 —	Vacuum cleaner at 3 meters (10 feet)
Commercial area		Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2009.

Existing Noise Environment in the Project Vicinity

Major Noise Sources Affecting the Project Area

The major source of noise affecting ambient conditions within the immediate vicinity of the project-area wineries and breweries is local surface traffic. Distant railroad and aircraft noise is periodically audible at locations within the project area but these sources are not dominant and do not appreciably affect local ambient conditions relative to local traffic noise source. In addition, agricultural operations can temporarily result in increased ambient noise levels in the immediate vicinity of such activities or operations, but such activities tend to be intermittent and highly localized.

Noise Sensitive Land Uses in the Project Vicinity

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the primary intended use of the land. Places where people live, sleep, recreate, worship, and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities.

Because of the rural nature of the portion of Placer County in which the wineries and breweries are located, the noise-sensitive land uses which would potentially be affected by the project consist primarily of rural residential uses.

Existing Traffic Noise Levels along Project Area Roadway Network

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to develop existing noise contours expressed in terms of L_{dn} for major roadways within the project study area. The FHWA model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop L_{dn} values from L_{eq} values.

Traffic data representing average daily traffic volumes for existing conditions were obtained from K.D. Anderson & Associates (KDA - the project traffic engineers). Using these data and the FHWA model, traffic noise levels were calculated. The traffic noise level at 100 feet from the roadway centerline and distances from the centerlines of selected roadways to the 60 dB, 65 dB, and 70 dB L_{dn} contours are summarized in Table 2 for weekday conditions and in Table 3 for weekend conditions.

In many cases, the actual distances to noise level contours may vary from the distances predicted by the FHWA model. Factors such as roadway curvature, roadway grade, shielding from local topography or structures, elevated roadways, or elevated receivers may affect actual sound propagation. The distances reported in Table 2 are considered to be conservative estimates of noise exposure along roadways in the project study area.

It is also recognized that existing sensitive land uses within the project vicinity are located varying distances from the centerlines of the local roadway network. The 100 foot reference distance is utilized in this analysis to provide a reference position at which changes in existing and future traffic noise levels resulting from the project can be evaluated.

Table 2
Existing Weekday Traffic Volumes and Traffic Noise Modeling Results
Placer County Winery and Farm Brewery Roadway Network

Roadway	Segment	Average Daily Traffic	Ldn at 100 feet from Centerline	Distance to Contour (feet)		
				70 dB Ldn	65 dB Ldn	60 dB Ldn
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	8,573	63	33	72	154
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	412	47	3	6	14
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	1,309	52	6	14	30
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	971	51	5	11	24
Bell Rd	Coyote Ridge Ct to Miracle Ln	1,400	57	14	30	64
Bell Rd	Mallard Way to Cramer Rd	614	54	8	17	37
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	355	46	3	6	12
Combie Rd	Placer Hills Rd to Wooley Creek Ln	2,688	55	10	22	48
Cramer Rd	Bell Rd to SR 49	558	48	4	8	17
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	525	48	3	7	16
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	1,126	51	6	12	27
Fowler Rd	Virginiatown Rd to SR 193	3,412	56	12	26	56
Fleming Rd	Gladding Rd to McCourtney Rd	43	37	1	1	3
Fruitvale Rd	Fowler Rd to Gold Hill Rd	1,486	57	14	31	67
Gold Hill Rd	Virginiatown Rd to SR 193	1,542	58	15	32	69
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	3,545	56	12	27	57
Lone Star Rd	Bell Rd to SR 49	1,328	52	6	14	30
McCourtney Rd	Wise Rd to Big Ben Rd	1,192	56	12	27	58
Millertown Rd	Wise Rd to Vada Ranch Rd	150	43	2	3	7
Mt. Vernon Rd	Hastings Ln to Meyers Ln	2,021	59	18	38	82
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	2,995	60	23	50	107
Nicolaus Rd	Canal to Maverick Ln	3,064	61	23	50	109
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	9,470	63	35	76	165
Ridge Rd	Gold Hill Rd to Ophir Rd	789	50	5	10	21
Sierra College Blvd	Del Mar Rd to King Rd	12,762	66	52	111	239
SR 193	Sierra College Blvd to Fowler Rd	6,700	64	39	85	183
Virginiatown Rd	Coyote Ln to Fowler Rd	773	52	7	14	31
Wise Rd	McCourtney Rd to Crosby Herold Rd	2,575	60	21	45	97
Wise Rd	Crosby Herold Rd to Garden Bar Rd	1,857	58	17	36	78
Wise Rd	Garden Bar Rd to Wally Allan Rd	1,394	55	10	21	46
Wise Rd	County Lane to Crater Hill Rd	1,168	53	7	16	34
Wise Rd	Bald Hill Rd to Ophir Rd	1,000	51	5	11	25

Source: FHWA-RD-77-108 with inputs from KDA and BAC file data. A complete listing of traffic model inputs is provided in Appendix D.

Table 3
Existing Weekend Traffic Volumes and Traffic Noise Modeling Results
Placer County Winery and Farm Brewery Roadway Network

Roadway	Segment	Average Daily Traffic	Ldn at 100 feet from Centerline	Distance to Contour (feet)		
				70 dB Ldn	65 dB Ldn	60 dB Ldn
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	8,355	63	33	70	151
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	485	48	3	7	15
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	1,038	51	5	12	25
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	634	49	4	8	18
Bell Rd	Coyote Ridge Ct to Miracle Ln	1,329	57	13	29	62
Bell Rd	Mallard Way to Cramer Rd	543	53	7	16	34
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	262	45	2	5	10
Combie Rd	Placer Hills Rd to Wooley Creek Ln	2,477	55	10	21	45
Cramer Rd	Bell Rd to SR 49	549	48	4	8	17
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	582	49	4	8	17
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	1,171	52	6	13	27
Fowler Rd	Virginiatown Rd to SR 193	3,440	56	12	26	56
Fleming Rd	Gladding Rd to McCourtney Rd	92	41	1	2	5
Fruitvale Rd	Fowler Rd to Gold Hill Rd	1,186	56	12	27	58
Gold Hill Rd	Virginiatown Rd to SR 193	1,857	58	17	36	78
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	2,485	55	10	21	45
Lone Star Rd	Bell Rd to SR 49	1,223	52	6	13	28
McCourtney Rd	Wise Rd to Big Ben Rd	1,207	56	13	27	58
Millertown Rd	Wise Rd to Vada Ranch Rd	135	42	1	3	6
Mt. Vernon Rd	Hastings Ln to Meyers Ln	2,679	60	21	46	99
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	2,676	60	21	46	99
Nicolaus Rd	Canal to Maverick Ln	2,374	59	20	43	92
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	7,407	62	30	65	140
Ridge Rd	Gold Hill Rd to Ophir Rd	640	49	4	9	18
Sierra College Blvd	Del Mar Rd to King Rd	10,642	65	46	98	212
SR 193	Sierra College Blvd to Fowler Rd	6,700	64	39	85	183
Virginiatown Rd	Coyote Ln to Fowler Rd	994	53	8	17	37
Wise Rd	McCourtney Rd to Crosby Herold Rd	2,714	60	22	46	100
Wise Rd	Crosby Herold Rd to Garden Bar Rd	1,978	59	17	38	81
Wise Rd	Garden Bar Rd to Wally Allan Rd	1,304	55	9	20	44
Wise Rd	County Lane to Crater Hill Rd	931	52	6	13	29
Wise Rd	Bald Hill Rd to Ophir Rd	915	51	5	11	23

Source: FHWA-RD-77-108 with inputs from KDA and BAC file data. A complete listing of traffic model inputs is provided in Appendix D.

Existing Ambient Noise Environment at Representative Wineries and Breweries

In addition to the off-site noise-generation of project traffic, noise is also generated during events held at wineries and breweries located within the county by on-site activities. The most common noise sources associated with such events are music and speech, either amplified or natural. The degree by which noise generated during events affects noise-sensitive land uses located in the vicinity of the those events depends on the noise-generation of the event and the existing ambient conditions at those noise-sensitive uses.

To quantify existing ambient noise conditions in the immediate vicinity of existing representative wineries and breweries, noise surveys were conducted at six (6) wineries and one (1) brewery in Placer County between September 2017 and March 2018. The monitoring consisted of long-term (24-hour) samples using Larson Davis Model 820, Lxt and 831 Type I sound level meters during days when no events were being held at the venues.

The calibration of each meter was checked before each measurement to ensure the accuracy of the measurement results. The measurement systems comply with all pertinent requirements of the American National Standards Institute (ANSI) for Type I sound level meters. Table 4 summarizes the ambient noise survey results. The detailed ambient noise measurement results are presented in tabular and graphical formats in Appendices B and C, respectively.

**Table 4
Long-Term Noise Measurement Results
Vicinity of Representative Placer County Wineries and Breweries**

Location	Date	Daytime (7 am – 7 pm)		Evening (7 pm – 10 pm)		L _{dn} , dB
		Leq	L _{max}	Leq	L _{max}	
Lone Buffalo Winery	September 11, 2017	42	58	58	63	63
Wise Villa Winery	October 8, 2017	48	64	36	54	46
Dono Dal Cielo Winery	December 16, 2017	52	70	48	67	52
Hillenbrand Brewery	March 11, 2018	55	74	45	62	54
Mount Vernon Winery	March 10, 2018	49	68	45	64	52
Rancho Roble Winery	March 11, 2018	46	65	46	56	48
Vina Castellano Winery	March 28, 2018	48	66	43	61	49
	Average	49	66	46	61	52

Source: Bollard Acoustical Consultants, Inc. (BAC) 2017-2018

The ambient noise measurement results in Table 4 indicate that ambient noise levels in the immediate vicinity of the representative Placer County wineries and farm breweries averaged approximately 49 dB L_{eq} during daytime hours and 46 dB L_{eq} during evening hours. Measured maximum noise levels averaged 66 and 61 dB L_{max} during daytime and evening periods, respectively, and the average L_{dn} for the monitoring sites was 52 dB L_{dn}.

It should be noted that the ambient noise surveys were intentionally conducted on days when no events were occurring at the wineries and farm breweries. This was because the purpose of the ambient noise surveys was to document background noise conditions at representative locations near the existing wineries and farm breweries to establish a baseline for comparison against noise generated by events held at these locations. Although events held at the County wineries and

farm breweries occur more frequently during spring, summer and fall periods, because the focus of the ambient surveys was to avoid periods when events were occurring, the time of year when the surveys were conducted is considered appropriate for this survey.

With the exception of the data collected at the Lone Buffalo Winery, average ambient noise levels during evening hours were consistently lower than ambient conditions during daytime hours. The elevated ambient conditions noted at Lone Buffalo Winery were caused by natural sounds (crickets) which were present on the warm evening.

Criteria for Acceptable Noise Exposure in Placer County

Criteria for acceptable noise exposure in Placer County are included in both the County General Plan Noise Element and the County Noise Ordinance. In addition, the current Placer County Winery Ordinance references compliance with the County Noise Ordinance. Those criteria are described below.

Placer County General Plan Noise Element

The Noise Element of the Placer County General Plan provides goals and policies to ensure that county residents are not subjected to noise beyond acceptable levels. The General Plan includes noise criteria for the evaluation of proposed land uses subjected to non-transportation noise levels (Table 4) and transportation noise sources (Table 6). The General Plan Noise Element Policies which would be most applicable to the project are reproduced below:

Policies

- 9.A.1.** New development of noise-sensitive uses shall not be permitted where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 5 as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 5.
- 9.A.2** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 5 as measured immediately within the property line of lands designated for noise-sensitive uses: provided, however, the noise created by occasional events occurring within a stadium on land zoned for university purposes may temporarily exceed these standards as provided in an approved Specific Plan.
- 9.A.3** The County shall continue to enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) of the California Building Code and Placer County Code Article 9.36, Noise.
- 9.A.5** Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 5 at existing or planned noise-sensitive uses, the County shall require submission of an acoustical analysis as part of the environmental review process so that noise mitigation may be included

in the project design. The requirements for the content of an acoustical analysis are listed in Table 6.

- 9.A.6** The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to Table 7.
- 9.A.8.** New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources, including airports, which exceed the levels specified in Table 7, unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 7.
- 9.A.9.** Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 7 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.
- 9.A.10.** Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 5 or 7, the County shall require submission of an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design. At the discretion of the County, the requirement for an acoustical analysis may be waived provided that all of the following conditions are satisfied:
- a. The development is for less than five single-family dwellings or less than 10,000 square feet of total gross floor area for office buildings, churches, or meeting halls;
 - b. The noise source in question consists of a single roadway or railroad for which up-to-date noise exposure information is available. An acoustical analysis will be required when the noise source in question is a stationary noise source or airport, or when the noise source consists of multiple transportation noise sources;
 - c. The existing or projected future noise exposure at the exterior of buildings which will contain noise-sensitive uses or within proposed outdoor activity areas (other than outdoor sports and recreation areas) does not exceed 65 dB Ldn (or CNEL) prior to mitigation. For outdoor sports and recreation areas, the existing or projected future noise exposure may not exceed 75 dB Ldn (or CNEL) prior to mitigation;
 - d. The topography in the project area is essentially flat; that is, noise source and receiving land use are at the same grade; and e. Effective noise mitigation, as determined by the County, is incorporated into the project design to reduce noise exposure to the levels specified in Table 5 or 7. Such measures may include the use of building setbacks, building orientation, noise barriers, and the standard noise mitigations contained in

the Placer County Acoustical Design Manual. If closed windows are required for compliance with interior noise level standards, air conditioning or a mechanical ventilation system will be required.

9.A.11 The County shall require one or more of the following mitigation measures where existing noise levels significantly impact existing noise-sensitive land uses, or where the cumulative increase in noise levels resulting from new development significantly impacts noise-sensitive land uses:

- a. Rerouting traffic onto streets that have available traffic capacity and that do not adjoin noise-sensitive land uses;
- b. Lowering speed limits, if feasible and practical;
- c. Programs to pay for noise mitigation such as low cost loans to owners of noise-impacted property or establishment of developer fees;
- d. Acoustical treatment of buildings; or;
- e. Construction of noise barriers.

9.A.12 Where noise mitigation measures are required to achieve the standards of Tables 5 and 7, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.

**Table 5
Allowable Ldn Noise Levels Within Specified Zone Districts¹
Applicable to New Projects Affected by or Including Non-Transportation Noise Sources**

Zone District of Receptor	Property Line of Receiving Use	Interior Spaces ²
Residential Adjacent to Industrial ³	60	45
Other Residential ⁴	50	45
Office/Professional	70	45
Transient Lodging	65	45
Neighborhood Commercial	70	45
General Commercial	70	45
Heavy Commercial	75	45
Limited Industrial	75	45
Highway Service	75	45
Shopping Center	70	45
Industrial	--	45
Industrial Park	75	45
Industrial Reserve	--	45
Airport	--	45
Unclassified	--	--
Farm	(see footnote 6)	--
Agriculture Exclusive	(see footnote 6)	--
Forestry	--	--
Timberland Preserve	--	--
Recreation & Forestry	70	--
Open Space	--	--
Mineral Reserve	--	--

- Except where noted otherwise, noise exposures will be those which occur at the property line of the receiving use.
- Where existing transportation noise levels exceed the standards of this table, the allowable Ldn shall be raised to the same level as that of the ambient level.
- If the noise source generated by, or affecting, the uses shown above consists primarily of speech or music, of if the noise source is impulsive in nature, the noise standards shown above shall be decreased by 5 dB.
- Where a use permit has established noise level standards for an existing use, those standards shall supersede the levels specified in Table 4 and Table 5. Similarly, where an existing use which is not subject to a use permit causes noise in excess of the allowable levels in Tables 4 and 5, said excess noise shall be considered the allowable level. If a new development is proposed which will be affected by noise from such an existing use, it will ordinarily be assumed that the noise levels already existing or those levels allowed by the existing use permit, whichever are greater, are those levels actually produced by the existing use.
- Existing industry located in industrial zones will be given the benefit of the doubt in being allowed to emit increased noise consistent with the state of the art at the time of expansion. In no case will expansion of an existing industrial operation because to decrease allowable noise emission limits. Increased emissions above those normally allowable should be limited to a one-time 5 dB increase at the discretion of the decision making body.
- The noise level standards applicable to land uses containing incidental residential uses, such as caretaker dwellings at industrial facilities and homes on agriculturally zoned land, shall be the standards applicable to the zone district, not those applicable to residential uses.
- Where no noise level standards have been provided for a specific zone district, it is assumed that the interior and/or exterior spaces of these uses are effectively insensitive to noise.

1. Overriding policy on interpretation of allowable noise levels: Industrial-zoned properties are confined to unique areas of the County, and are irreplaceable. Industries which provide primary wage-earner jobs in the County, if forced to relocate, will likely be forced to leave the County. For this reason, industries operating upon industrial zoned properties must be afforded reasonable opportunity to exercise the rights/privileges conferred upon them by their zoning. Whenever the allowable noise levels herein fall subject to interpretation relative to industrial activities, the benefit of the doubt shall be afforded to the industrial use.

Where an industrial use is subject to infrequent and unplanned upset or breakdown of operations resulting in increased noise emissions, where such upsets and breakdowns are reasonable considering the type of industry, and where the industrial use exercises due diligence in preventing as well as correcting such upsets and breakdowns, noise generated during such upsets and breakdowns shall not be included in calculations to determine conformance with allowable noise levels. Interior spaces are defined as any locations where some degree of noise-sensitivity exists. Examples include all habitable rooms of residences, and areas where communication and speech intelligibility are essential, such as classrooms and offices.

2. Interior spaces are defined as any locations where some degree of noise-sensitivity exists. Examples include all habitable rooms of residences, and areas where communication and speech intelligibility are essential, such as classrooms and offices.
3. Noise from industrial operations may be difficult to mitigate in a cost-effective manner. In recognition of this fact, the exterior noise standards for residential zone districts immediately adjacent to industrial, limited industrial, industrial park, and industrial reserve zone districts have been increased by 10 dB as compared to residential districts adjacent to other land uses.

For purposes of the Noise Element, residential zone districts are defined to include the following zoning classifications: AR, R-1, R-2, R-3, FR, RP, TR-1, TR-2, TR-3, and TR-4.

4. Where a residential zone district is located within an -SP combining district, the exterior noise level standards are applied at the outer boundary of the -SP district. If an existing industrial operation within an -SP district is expanded or modified, the noise level standards at the outer boundary of the -SP district may be increased as described above in these standards.
Where a new residential use is proposed in an -SP zone, an Administrative Review Permit is required, which may require mitigation measures at the residence for noise levels existing and/or allowed by use permit as described under "NOTES," above, in these standards.
5. State of the art should include the use of modern equipment with lower noise emissions, site design, and plant orientation to mitigate offsite noise impacts, and similar methodology.
6. Normally, agricultural uses are noise insensitive and will be treated in this way. However, conflicts with agricultural noise emissions can occur where single-family residences exist within agricultural zone districts. Therefore, where effects of agricultural noise upon residences located in these agricultural zones is a concern, an Ldn of 70 dBA will be considered acceptable outdoor exposure at a residence.

Table 6
Requirements for an Acoustical Analysis
(See Policy 9.A.5)

An acoustical analysis prepared pursuant to Policy 9.A.5 shall:	
1.	Be the financial responsibility of the applicant.
2.	Be prepared by a qualified person experience in the fields of environmental noise assessment and architectural acoustics.
3.	Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
4.	Estimate existing and projected cumulative (20 years) noise levels in terms of L _{dn} or CNEL and/or the standards of Table 9-1, and compare those levels to policies in this section. Noise prediction methodology must be consistent with the <i>Placer County Acoustical Design Manual</i> .
5.	Recommend appropriate mitigation to achieve compliance with the policies and standards of this section, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
6.	Estimate noise exposure after the prescribed mitigation measures have been implemented.
7.	Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

Table 7
Maximum Allowable Noise Exposure
Transportation Noise Sources

Noise Sensitive Land Uses (FY)	Outdoor Activity Areas ¹		Interior Spaces	
	L _{dn} /CNEL, dB	L _{dn} /CNEL, dB	L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	45	--
Transient Lodging ⁴	60 ³	45	45	--
Hospitals, Nursing Homes	60 ³	45	45	--
Theaters, Auditoriums, Music Halls	--	--	--	35
Churches, Meeting Halls	60 ³	--	--	40
Office Buildings	--	--	--	45
Schools, Libraries, Museums	--	--	--	45
Playgrounds, Neighborhood Parks	70	--	--	--

¹ Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

² As determined for a typical worst-case hour during period of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn} / CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn} / CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Placer County Code (Noise Ordinance)

The provisions of the Placer County Noise Ordinance which would be most applicable to this project are reproduced below. The complete text of the County Noise Ordinance is provided in Appendix E.

9.36.060 Sound limits for sensitive receptors

- A. It is unlawful for any person at any location to create any sound, or to allow the creation of any sound, on property owned, leased, occupied or otherwise controlled by such person that:
1. Causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by five dBA; or
 2. Exceeds the sound level standards as set forth in Table 8, whichever is the greater.

**Table 8
Sound Level Standards (On-Site)
Placer County Noise Ordinance**

Sound Level Descriptor	Daytime	Nighttime
	(7:00 a.m. to 10:00 p.m.)	(10:00 p.m. to 7:00 a.m.)
Hourly Average, (L_{eq}), dB	55	45
Maximum, (L_{max}) dB	70	65

- B. Each of the sound level standards specified in Table 8 shall be reduced by five dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus five dB.
- C. If the intruding sound source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient sound level can be measured, the sound level measured while the source is in operation shall be compared directly to the sound level standards of Table 1. (Ord. 5280-B, 2004)

Placer County Code (Winery Ordinance)

The provisions of the Current Placer County Winery Ordinance which would be most applicable to this project are reproduced below:

17.56.330 Wineries

- A. Purpose.** The purpose of this section is to provide for the orderly development of wineries within agricultural zoning districts and certain commercial, industrial and residential zoning districts; to encourage the economic development of the local agricultural industry; provide for the sampling and sales of value-added products; and protect the agricultural character and long-term agricultural production of agricultural lands.

B. Definitions.

"Administrative Review Permit" - See Zoning Ordinance Section 17.58.100.

"Conditional Use Permit" - See Zoning Ordinance Section 17.58.130.

"Large Winery" refers to a winery with annual production of 20,000 cases or greater.

"Minor Use Permit" - See Zoning Ordinance Section 17.58.120.

"Promotional Event" means an event sponsored by the property owner, an association of agricultural property owners, or similar organizations formed to assist the agricultural industry in the area, to promote the sale of Placer County wines, and which is intended to allow for the sampling and direct marketing and sales of wines produced on the premises or produced elsewhere from grapes grown on site. Such events include "winemaker's dinners."

"Public Tasting" refers to wine sampling by the general public.

"Small Winery" refers to a winery with annual production less than 20,000 cases.

"Temporary Outdoor Events" are events that are of limited duration and located primarily outdoors. If any buildings are used for the event, such use shall not exceed the occupancy load. Two events per year can be authorized on any given site through the Temporary Outdoor Event Permit process as described in Section 17.56.300(B)(1)(b). Any such authorization would be in addition to the promotional events authorized by this Section.

"Wine Case" contains 12 standard wine bottles (750 milliliters each).

"Winery" means a bonded winery facility comprising the building or buildings used to convert fruit juices (all or part of which are produced on the property) to wine, and to age, bottle, store, distribute and sell said wine. A winery, for the purposes of this section, includes crushing, fermenting and refermenting, bottling, blending, bulk and bottle storage, aging, shipping, receiving, laboratory equipment and maintenance facilities, sales, and administrative office functions, and may include tasting and promotional events.

- D. **Development and Operational Standards.** The following development and operational standards shall apply to all wineries. These standards will be applied with flexibility to encourage wine grape growing, consistent with the agricultural use of the property. For wineries on commercially and industrially-zoned parcels, commercial standards will apply. Wineries established prior to the adoption date of this ordinance will be afforded maximum flexibility in establishing reasonable standards when adding new uses.

7. Promotional Events

- a. **Application Requirements.** The application shall include the following information:

- i. number of annual events;
- ii. estimated number of participants,
- iii. description of parking and circulation, and
- iv. sanitation provisions.

b. Standards

- i. Duration. No single promotional event shall exceed more than two consecutive days.
- ii. Parking Requirements. Temporary, overflow parking may be utilized. The applicant shall demonstrate to the Development Review Committee the ability to provide safe access and parking, including providing attendants to monitor proper parking and access road clearance for emergency vehicles.
- iii. Noise Standards. Any promotional event proposing outdoor amplified music shall be subject to Placer County Code Article 9.36 (Noise Ordinance).

Placer County Community Plans

Various Community Plans have been adopted in Placer County over the years. These plans include the Auburn-Bowman Community Plan (1994), the Dry Creek West Placer Community Plan (1990), the Horseshoe Bar Community Plan (1994), the Meadow Vista Community Plan (1996), and the Ophir Community Plan (1983). With the exception of the Auburn-Bowman Community Plan, the Community Plans either reference the noise standards contained in the Placer County General Plan Noise Element or Noise Ordinance, or do not contain numeric noise standards. As a result, the Noise Standards referenced above in the County Noise Ordinance are applied to existing and future wineries and farm breweries, with the exception of the portion of the Auburn-Bowman Community Plan which is located within unincorporated Placer County.

As noted above in Table 8, the Placer County Noise Ordinance applies a 55 dB hourly average (L_{eq}) noise level standard to non-transportation noise sources during daytime hours (7 am – 10 pm). Table 14 of the Auburn-Bowman Community Plan indicates that the daytime standard for non-transportation noise sources is 50 dB L_{eq} . This more restrictive noise standard likely resulted from ambient conditions in Placer County being lower at the time the Auburn-Bowman Community Plan was adopted 25 years ago than they are today. Nonetheless, the more restrictive 50 dB L_{eq} daytime noise standard is applied to any existing or future wineries and farm breweries in the unincorporated areas within the Auburn-Bowman Community Plan boundaries.

Noise Impacts and Mitigation Measures

Significance Criteria

The following criteria have been established to quantify the level of significance of an adverse effect to noise and vibration evaluated pursuant to the California Environmental Quality Act

Criteria (CEQA). According to the CEQA guidelines, a project would result in significant noise or vibration impacts if the project would result in any of the following:

- A. Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.

For this project, Compliance with the applicable provisions of the Noise Ordinance is required. The Noise Ordinance standards identified in Table 8 are reduced by five dB because the on-site noise sources consist of speech and music.

It should be noted that the current winery ordinance requires compliance with the County's Noise Ordinance and that the proposed Winery and Farm Ordinance has the same requirement.

For existing or future wineries and farm breweries in the unincorporated areas within the Auburn-Bowman Community Plan boundaries, the noise standards contained in Table 14 of the Auburn-Bowman Community Plan are applied. It should be noted that these standards are identical to the County's Noise Ordinance standards except that the daytime average (L_{eq}) noise standard is 5 dB lower than the Noise Ordinance standard. The same 5 dB adjustment is applied to the Auburn-Bowman Community Plan standards for on-site noise sources consisting of speech or music.

- B. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

The existing ambient vibration environment in the vicinities of the wineries and farm breweries was evaluated as being imperceptible. Because the project does not propose the introduction of any perceptible vibration sources, an analysis of vibration impacts relative to CEQA is not warranted.

- C. A substantial permanent increase in ambient noise levels in the project vicinity above levels without the project.

For noise generated by on-site activities, the Noise Ordinance establishes a standard of 5 dB above ambient as the threshold of significance. For noise generated by off-site traffic noise, see discussion of what constitutes a substantial increase in ambient noise levels following CEQA Criteria D.

- D. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

For noise generated by on-site activities, the Noise Ordinance establishes a standard of 5 dB above ambient as the threshold of significance. For noise generated by off-site traffic noise, the following discussion is provided:

CEQA guidelines C and D above require identification of significant noise impacts if the project would result in substantial permanent or temporary increases in noise. However, the CEQA guidelines do not specify the numeric noise level increase which is considered substantial.

It is generally recognized that an increase of at least 3 dB for similar noise sources is usually required before most people will perceive a change in noise levels, and an increase of 6 dB is required before the change will be clearly noticeable.

The Federal Interagency Commission on Noise (FICON) has developed a graduated scale for use in the assessment of project related noise level increases. Table 9 was developed by FICON as a means of developing thresholds for impact identification for project related noise level increases. The FICON standards have been used extensively in recent years in the preparation of noise sections of Environmental Impact Reports that have been certified in many California Cities and Counties, including Placer County.

The rationale for the graduated scale used in the FICON standards is that test subjects' reactions to increases in noise levels varied depending on the starting level of noise. Specifically, with lower ambient noise environments, such as those below 60 dB Ldn, a larger increase in noise levels was required to achieve a negative reaction than was necessary in more elevated noise environments.

The use of the FICON standards are considered conservative relative to thresholds used by other agencies in the State of California. For example, the California Department of Transportation (Caltrans) requires a project related traffic noise level increase of 12 dB for a finding of significance, and the California Energy Commission (CEC) considers project related noise level increases between 5-10 dB significant, depending on local factors. Therefore, the use of the FICON standards, which set the threshold for finding of significant noise impacts as low as 1.5 dB, provides a conservative approach to impact assessment.

Table 9 Significance of Changes in Cumulative Noise Exposure	
Ambient Noise Level Without Project, Ldn	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more
Source: Federal Interagency Committee on Noise (FICON)	

Based on the FICON research, as shown in Table 9, a 5 dB increase in noise levels due to a project is required for a finding of significant noise impact where ambient noise levels without the project are less than 60 dB Ldn. Where pre-project ambient conditions are between 60 and 65 dB Ldn, a 3 dB increase is applied as the standard of significance. Finally, in areas already exposed to higher noise levels, specifically pre-project noise levels in excess of 65 dB Ldn, a 1.5 dB increase is considered by FICON as the threshold of significance.

This graduated scale indicates that in quieter noise environments, test subjects tolerated a higher increase in noise levels due to a project before the onset of adverse noise impacts than did test subjects in louder environments.

According to the FICON study, if screening analysis shows that noise-sensitive areas will be at or above DNL 65 dB and will have an increase of DNL 1.5 or more, further analysis should be conducted. The FICON study also reported the following: Every change in the noise environment does not necessarily impact public health and welfare.

Audibility is not a test of significance according to CEQA. If this were the case, any project which added any audible amount of noise to the environment would be considered unacceptable according to CEQA. Because every physical process creates noise, whether by the addition of a single vehicle on a roadway, or a tractor in an agricultural field, the use of audibility alone as significance criteria would be unworkable. CEQA requires a substantial increase in noise levels before noise impacts are identified, not simply an audible change.

- 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, exposure of people residing or working in the area to excessive noise levels resulting from the proposed project.
- F. For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

Because the subject wineries and farm breweries are not located within 2 miles of a public use airport or in the vicinity of private airstrips, consideration of noise impacts relative to CEQA criteria E and F would not be warranted for this evaluation. If, however, future wineries or farm breweries were proposed in close proximity to a County airport, the County Noise Element provisions applicable to aircraft noise exposure would be applicable to such applications.

Analysis Methodology

Because this Draft EIR considers the impacts associated with adoption of the Proposed Winery and Farm Brewery Zoning Text Amendment Project, the following methodology is employed: Noise impacts are identified if the proposed project would result in a substantial increase in off-site traffic noise levels, or if noise generated by on-site activities at existing or future wineries or farm breweries would either exceed the applicable County noise standards or result in a substantial increase in ambient noise levels.

Off-Site Traffic Noise Impacts: Agricultural Promotional and Special Events

Impact 1: Project-Related Changes in Off-Site Traffic Noise Levels Associated with Winery and Farm Brewery Events

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at a representative distance for both existing and future (cumulative), project and no-project condition. Noise impacts are identified at existing noise-sensitive areas if the noise level increases which result from the project exceed the significance

thresholds shown in Table 9. More specifically, this analysis estimates the increase in traffic noise levels along the off-site roadway network as a result of the traffic generated by additional events held by-right at existing winery and farm brewery facilities. The number of additional by-right events assumed to occur at existing facilities under the proposed ordinance, and the related traffic estimates, are described in the KD Anderson Traffic Study.

To describe existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions. To predict traffic noise levels in terms of L_{dn}, it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Traffic volumes for the short-term conditions and scenarios were obtained from KDA transportation consultants. Tables 10 and 11 show the predicted changes in existing traffic noise levels resulting from the project relative to both weekday and weekend conditions. Tables 10-11 are provided in terms of L_{dn} at a standard distance of 100 feet from the centerlines of the project-area roadways. Appendix D contains the FHWA model inputs for both existing and cumulative conditions.

Table 10
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases
Existing (Baseline) Weekday Conditions

Roadway	Segment Description	Traffic Noise Level at 100 feet, dB L _{dn}			Substantial Increase?
		Existing	Existing + Project	Increase	
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	62.8	62.8	0.0	No
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	47.0	47.0	0.0	No
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	52.1	52.3	0.3	No
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	50.8	50.9	0.1	No
Bell Rd	Coyote Ridge Ct to Miracle Ln	57.1	57.1	0.0	No
Bell Rd	Mallard Way to Cramer Rd	53.6	53.6	0.0	No
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	46.4	47.2	0.8	No
Combie Rd	Placer Hills Rd to Wooley Creek Ln	55.2	55.2	0.0	No
Cramer Rd	Bell Rd to SR 49	48.4	48.4	0.0	No
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	48.1	48.8	0.7	No
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	51.4	51.4	0.0	No
Fowler Rd	Virginiatown Rd to SR 193	56.2	56.4	0.2	No
Fleming Rd	Gladding Rd to McCourtney Rd	37.2	37.2	0.0	No
Fruitvale Rd	Fowler Rd to Gold Hill Rd	57.4	57.6	0.2	No
Gold Hill Rd	Virginiatown Rd to SR 193	57.6	58.0	0.4	No
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	56.4	56.4	0.0	No
Lone Star Rd	Bell Rd to SR 49	52.1	52.1	0.0	No
McCourtney Rd	Wise Rd to Big Ben Rd	56.4	56.6	0.2	No
Millertown Rd	Wise Rd to Vada Ranch Rd	42.6	42.6	0.0	No
Mt. Vernon Rd	Hastings Ln to Meyers Ln	58.7	58.8	0.1	No

Table 10
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases
Existing (Baseline) Weekday Conditions

Roadway	Segment Description	Traffic Noise Level at 100 feet, dB Ldn			Substantial Increase?
		Existing	Existing + Project	Increase	
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	60.4	60.5	0.1	No
Nicolaus Rd	Canal to Maverick Ln	60.5	60.5	0.0	No
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	63.2	63.2	0.0	No
Ridge Rd	Gold Hill Rd to Ophir Rd	49.9	49.9	0.0	No
Sierra College Blvd	Del Mar Rd to King Rd	65.7	65.8	0.1	No
SR 193	Sierra College Blvd to Fowler Rd	63.9	64.0	0.1	No
Virginiatown Rd	Coyote Ln to Fowler Rd	52.4	52.5	0.1	No
Wise Rd	McCourtney Rd to Crosby Herold Rd	59.8	60.0	0.2	No
Wise Rd	Crosby Herold Rd to Garden Bar Rd	58.4	58.7	0.3	No
Wise Rd	Garden Bar Rd to Wally Allan Rd	54.9	55.2	0.3	No
Wise Rd	County Lane to Crater Hill Rd	52.9	53.1	0.2	No
Wise Rd	Bald Hill Rd to Ophir Rd	50.9	51.0	0.1	No

Source: FHWA Model with inputs from KDA. Complete listing of FHWA Model inputs is provided in Appendix D.

Table 11
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases
Existing (Baseline) Weekend Conditions

Roadway	Segment Description	Traffic Noise Level at 100 feet, dB Ldn			Substantial Increase?
		Existing	Existing + Project	Increase	
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	62.7	62.7	0.0	No
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	47.7	47.7	0.0	No
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	51.0	51.4	0.4	No
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	48.9	49.1	0.2	No
Bell Rd	Coyote Ridge Ct to Miracle Ln	56.9	56.9	0.0	No
Bell Rd	Mallard Way to Cramer Rd	53.0	53.1	0.1	No
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	45.1	46.2	1.1	No
Combie Rd	Placer Hills Rd to Wooley Creek Ln	54.8	54.8	0.0	No
Cramer Rd	Bell Rd to SR 49	48.3	48.3	0.0	No
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	48.5	49.1	0.6	No
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	51.6	51.6	0.0	No
Fowler Rd	Virginiatown Rd to SR 193	56.3	56.5	0.2	No
Fleming Rd	Gladding Rd to McCourtney Rd	40.5	40.5	0.0	No
Fruitvale Rd	Fowler Rd to Gold Hill Rd	56.4	56.7	0.3	No
Gold Hill Rd	Virginiatown Rd to SR 193	58.4	58.7	0.3	No
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	54.8	54.9	0.1	No
Lone Star Rd	Bell Rd to SR 49	51.8	51.8	0.0	No
McCourtney Rd	Wise Rd to Big Ben Rd	56.5	56.7	0.2	No
Millertown Rd	Wise Rd to Vada Ranch Rd	42.2	42.2	0.0	No
Mt. Vernon Rd	Hastings Ln to Meyers Ln	60.0	60.0	0.1	No

Table 11
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases
Existing (Baseline) Weekend Conditions

Roadway	Segment Description	Traffic Noise Level at 100 feet, dB L _{dn}			Substantial Increase?
		Existing	Existing + Project	Increase	
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	59.9	60.0	0.1	No
Nicolaus Rd	Canal to Maverick Ln	59.4	59.4	0.0	No
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	62.2	62.2	0.0	No
Ridge Rd	Gold Hill Rd to Ophir Rd	48.9	48.9	0.0	No
Sierra College Blvd	Del Mar Rd to King Rd	64.9	65.0	0.1	No
SR 193	Sierra College Blvd to Fowler Rd	63.9	64.0	0.1	No
Virginiatown Rd	Coyote Ln to Fowler Rd	53.5	53.6	0.1	No
Wise Rd	McCourtney Rd to Crosby Herold Rd	60.0	60.2	0.2	No
Wise Rd	Crosby Herold Rd to Garden Bar Rd	58.6	58.9	0.3	No
Wise Rd	Garden Bar Rd to Wally Allan Rd	54.6	54.9	0.3	No
Wise Rd	County Lane to Crater Hill Rd	51.9	52.1	0.2	No
Wise Rd	Bald Hill Rd to Ophir Rd	50.5	50.6	0.1	No

Source: FHWA Model with inputs from KDA. Complete listing of FHWA Model inputs is provided in Appendix D.

The data in Tables 10 through 11 indicate that traffic generated by concurrent activities at each winery and farm brewery would result in traffic noise level increases ranging from 0.0 to 0.8 dB L_{dn} on weekdays and 0.0 to 1.1 dB L_{dn} on weekends. Relative to the significance criteria identified in Table 9, these increases would not be considered substantial. As a result, off-site traffic noise impacts related to increases in traffic resulting from the implementation of the project are identified as being *less than significant*.

Noise Impacts Associated with Parking and Vehicle Movements on Winery and Farm Brewery Sites: Ag-Promotional and Special Events (Including Weddings).

Impact 2: Noise Generated by Onsite Circulation during Winery and Farm Brewery Events

Two different types of events are being defined as part of the Proposed Winery and Farm Brewery Zoning Text Amendment Project. Agricultural Promotional Events would be limited to 50 attendees at one time per event and are predicted to generate a total of 20 peak hour vehicle trips. Special Events on large parcels (20+ acres) would be limited to 200 attendees at one time and are predicted to generate a total of 80 peak hour vehicle trips. Under the new Ordinance, weddings would be permitted as special events provided the noise generation of the wedding events do not exceed the County's Noise Ordinance standards at the nearest residences.

Using the FHWA Model with an assumed on-site vehicle speed of 15 mph the peak hour average noise generation of the Agricultural Promotional and Special events were computed to be 40 and 46 dB Leq at a reference distance of 50 feet from the on-site traffic route. Noise levels in this range would be satisfactory relative to the Placer County 55 dB Leq daytime noise level standard at the nearest off-site noise-sensitive receptors to the winery and farm brewery sites. These noise levels would also be satisfactory relative to the 5 dB more restrictive daytime noise standard

contained within the Auburn-Bowman Community Plan Area. In addition, the predicted on-site traffic noise generation would be at or below measured ambient noise levels in the project vicinity (Table 4). As a result, noise impacts related to on-site traffic during both Agricultural Promotional and Special Events are identified as being *less than significant*.

Noise Impacts Related to Proposed Ordinance Text Amendments

Impact 3: Noise Impacts Related to Implementation of the Proposed Winery and Farm Brewery Zoning Text Amendment at Existing Wineries and Farm Breweries

The proposed Winery and Farm Brewery Zoning Text Amendments would include the following substantive changes to the current Winery Ordinance:

- Add Definition of Farm Brewery to the Ordinance
- Add Definition of Boutique Winery to the Ordinance
- Define New 10-Acre Minimum Parcel Size
- Modify Event Definition
- Create Table Outlining Event Allowances, Maximum Capacity, and Use Permit Requirement
- Clarify Hours of Operation
- Update the standards for Potable Water and Waste Disposal
- Update the standards for Access Standards

While the proposed text amendments would provide clarification to the items listed above, no changes to the provisions of the existing Winery Ordinance which require all winery and farm brewery facilities to comply with the County's Noise Ordinance are proposed. As a result, events occurring at existing wineries and farm breweries within the County would still be required to fully comply with the County Noise Ordinance, just as such compliance is required currently. Similarly, these changes would not change the level of noise generation considered acceptable for existing or proposed uses located within the unincorporated areas of the Auburn-Bowman Community Plan Area.

Although no increase in the allowable noise generation of events is proposed as part of the proposed text amendments, the addition of "weddings" as special events does introduce a new type of noise source which could potentially generate more noise than other types of special events.

Although Agricultural Promotional events could occur with greater frequency than they may currently occur under the existing ordinance, the County Noise Ordinance does not require mitigation for events which are in compliance with the applicable noise standards, regardless of the number of events. The same is true regarding special events, which would also be subject to the County Noise Ordinance standards. The proposed text amendments do not affect the protection provided to the nearby residences by continuing to require that all events maintain compliance with the Noise Ordinance standards. However, weddings are now being included under the category of "special event", and weddings have the potential to generate higher noise levels than typical events. Noise generated by weddings is discussed under Noise Impact 5. However, because all types of events must comply with the County's Noise Ordinance under the

new Ordinance, just as they must under the existing Ordinance, this impact is considered ***less than significant***.

Noise Impacts Associated with On-Site Activities at Agricultural Promotional Events

Impact 4: Noise Impacts Related to Onsite Speech and Music Generated at Ag-Promotional Events for Future Facilities.

Under the proposed Ordinance language, an “Agricultural Promotional Event” is directly related to the education and marketing of wine and craft beer to consumers including but not limited to winemaker/brewmaster dinners, release parties, membership club parties, and private parties where the only alcohol served is produced by the winery/farm brewery. An Agricultural Promotional Event accommodates 50 people or less at one time. There are limited occurrences when greater than 50 people are in attendance and those shall be regulated in the same manner as a Special Event.

Due to the relatively small size and nature of the event, it is considered unlikely that events such as winemaker’s dinners would include amplified music similar to that which might occur at larger special events. It is more likely that, if music is to be present at agricultural-promotional events, it would be of the acoustic variety (acoustic guitar = 50 dBA at 100 feet). Furthermore, with 50 attendees or less present at one time, it is also unlikely that a public address system would be required for the speakers to be heard (person speaking in loud voice = 43 dBA at 100 feet). Finally, with half of the attendees speaking in normal voices during casual conversation (58 dBA at 3 feet), the computed hourly average noise level at a reference distance of 100 feet would be 41 dBA. The combined noise level of these sources would be approximately 51 dBA at a distance of 100 feet from the event. These computations assume the agricultural promotional event is occurring outside, as sound generated by events held indoors would be substantially contained within the building.

In light of the analysis presented above, noise generated by agricultural promotional events is predicted to be in compliance with the County’s Noise Ordinance standards provided such events occur beyond 100 feet from the property line of a noise-sensitive land use if they are held outdoors. For events located within the unincorporated areas of the Auburn-Bowman Community Plan Area, the noise generated by agricultural promotional events is predicted to be in compliance with the Auburn-Bowman Plan Standards provided such events occur beyond 200 feet from the property line of a noise-sensitive land use if they are held outdoors. As a result, this impact is considered ***less than significant***.

Noise Impacts Associated with On-Site Activities at Special Events

Impact 5: Noise Impacts Related to Onsite Speech and Music Generated at Special Events, Including Weddings, for both Existing and Future Facilities.

Sound levels generated during special events held at wineries and farm breweries can vary considerably at nearby noise-sensitive properties depending on the size and nature of the event.

For example, larger wedding receptions where amplified music is present tend to generate higher noise levels than smaller events where unamplified, acoustic music is present.

The proposed Winery and Farm Brewery Ordinance Text Amendments set maximum attendance limits for Special Events, such as a wedding, at 100 people for medium sized parcels (10-20 acres) and 200 people for large sized parcels (20+ acres).

Typical sound levels for a range of activities comparable to what might occur at special events of sizes similar to those allowed by the proposed Winery and Farm Brewery Zoning Text Amendment are shown below in Table 14. These data include a combination of noise measurement results conducted by BAC in recent years as well as published sound level data for persons conversing at various levels (*Handbook of Acoustical Measurements and Noise Control, Harris, McGraw Hill, 1998*).

Event or Activity	Typical Noise Level at 50 feet (dBA L_{eq})
Amplified speech / music at louder event (i.e. 200 person wedding reception)	75
Amplified speech/music at smaller event (i.e. 100 person reception)	72
Amplified speech only (no amplified music)	65
Non-amplified music (i.e. acoustic ensemble)	60
Non-amplified music (single acoustic guitar)	56
Raised conversations (100 people)	60
Raised conversations (50 people)	57
Source: Bollard Acoustical Consultants file data for similar types of events.	

Noise levels generated during special events occurring at three existing Placer County wineries were monitored in September and October of 2017, and March of 2018. Although the numbers of attendees at these events varied throughout the course of each event, event attendance reportedly exceeded 50 people and amplified music was present during each of the events. The measured average noise level during these events was 55 dB L_{eq} at the reference measurement distance of 200 feet from the approximate acoustic center of the event areas. Measured instantaneous maximum noise levels during these same events were 10-15 dB higher than the measured average noise levels, but the distances to the source of the maximum noise levels is more uncertain because the location of instantaneous maximum noise levels cannot be exactly pinpointed.

The measured special event noise levels, which were all within compliance with the County Noise Ordinance standards at the nearest noise-sensitive property lines, correspond to approximately 67 dB L_{eq} at a reference distance of 50 feet. The test results indicate that the measured special event noise levels were approximately 5-8 dB lower than the reference sound levels shown in Table 14 for amplified music. This difference may have been caused in part by additional sound absorption by intervening vineyards or variations in amplifier settings. To provide reasonably

conservative estimates of the potential noise generation of special events, the reference noise level data contained in Table 14 was applied to this analysis.

Sound radiating away from a fixed location decreases at a rate of approximately 6 dB for each doubling of distance from the noise source. So for a sound source (i.e. amplified music), that generates a median noise level of 75 dB at a distance of 50 feet from the speakers, the sound level at a distance of 100 feet from that same source would be 6 dB lower, or 69 dB. At a distance of 200 feet from the speakers (a doubling of distance from the 100 foot location), the expected sound level would be 6 dB lower still, or approximately 63 dB.

This 6 dB per doubling of distance attenuation rate assumes a direct line of sight between the noise source and receiver (i.e. no shielding by intervening buildings, topography, or vegetation), and does not include further decreases in sound which occur over distance with atmospheric absorption of sound. This 6 dB per doubling of distance attenuation rate was used to provide a conservative estimate of the distances to the critical noise contours for the various types of sound sources identified in Table 14.

According to the ambient noise level data contained in Table 2, daytime average ambient conditions in the rural areas of Placer County averaged approximately 50 dB L_{eq} . Given this general ambient condition, satisfaction with the County's 55 dB L_{eq} daytime threshold and 50 dB L_{eq} daytime threshold for events within the Auburn-Bowman Community Plan Area, would ensure that the noise level increase associated with winery and farm brewery events would be approximately 5 dB, which is consistent with the Noise Ordinance threshold. However, because the noise source in question consists of speech and/or music, a -5 dB penalty is applied to the County noise standard. As a result, the critical daytime noise threshold for speech or music generated during events would be 50 dB L_{eq} during daytime hours (45 dB L_{eq} for the Auburn-Bowman Community Plan Area). During evening hours (7 pm – 10 pm), average measured ambient conditions were approximately 45 dB L_{eq} . After upward adjustment by 5 dB for the allowable increase and downward adjustment by 5 dB because the noise source consists of speech or music, this analysis concludes that the appropriate evening sound level threshold for special events would be 45 dB L_{eq} at nearby sensitive areas, including uses within the Auburn-Bowman Community Plan Area. The 5 dB threshold is identified as the limit for noise level increases in the County Code section 9.36.060.A.1 (County Noise Ordinance discussion previously provided in this report). As a result, the distances to the 45 and 50 dB L_{eq} noise contours are identified in Table 15.

It should be noted that, while the County's General Plan noise standards shown in Table 5 would be applicable to new applications for wineries or farm breweries intending to hold special events, and to weddings held at both existing and future venues, the County's Noise Ordinance standards shown in Table 8, and the Auburn-Bowman Community Plan standards, are more restrictive than the General Plan standards shown in Table 5. As a result, compliance with the County's Noise Ordinance standards identified in Table 8 and the 5 dB more restrictive daytime average noise standard of the Auburn-Bowman Community Plan, would ensure compliance with the County's General Plan standards as well. Therefore, the focus of this impact statement is on compliance with the County's Noise Ordinance standards and Auburn-Bowman Community Plan noise standards, rather than the General Plan standards.

Table 15
Distances Required to Attenuate Typical Agricultural Promotional and Special Events Sound Levels to a State of Compliance with Daytime 50 dB Leq and Evening 45 dB Leq Noise Standard

Event or Activity	Distance to Contour (feet)	
	50 dB Leq	45 dB Leq
Amplified speech / music at louder event (i.e. wedding reception)	750	1,225
Amplified speech/music at quieter event (i.e. wine industry dinner)	550	925
Amplified speech only (no amplified music)	275	450
Non-amplified music (i.e. acoustic ensemble)	150	275
Non-amplified music (single acoustic guitar)	100	175
Raised conversations (100 people)	150	275
Raised conversations (50 people)	125	200

Source: Table 14 data with 6 dB decrease in sound levels per doubling of distance from the source and an offset of -1.5 dB per thousand feet to account for atmospheric absorption.
Note: These distances do not include any additional attenuation which would result from shielding by intervening topography, structures, or vegetation.
Evening hours are defined as 7 pm to 10 pm.

As shown in Table 15, the distances from the noise source, which are required to meet County noise standards, vary depending on the noise source. Non-amplified music requires relatively modest setbacks to meet County noise standards; and future winery and farm brewery facilities are generally expected to meet these distances due to parcel size and/or site planning. As would be expected, with amplification, the setback requirements increase, with the greatest setbacks being required for wedding receptions having amplified speech and music. Given the relatively large setback distances, between amplified noise sources and nearby sensitive receptors, that are required to meet County noise standards, it is possible that applications for new wineries and/or farm breweries could propose event venues within those setback distances.

With respect to existing facilities, except for weddings, the types of special events listed in Table 15 are currently allowed under the Winery Ordinance, and are required to comply with the County's Noise Ordinance. As discussed in Impact 3, the proposed Zoning Text Amendment would continue to require compliance with the County's Noise Ordinance for these events that are allowable under the current Winery Ordinance. Thus, as is appropriate, the special event discussion for existing facilities focuses only on weddings, as they would be a new special event use category under the proposed Zoning Text Amendment. Based upon a review of aerial photographs, it is anticipated that some existing facilities would not meet the setback distances, identified in Table 15, for wedding events. As a result, noise impacts associated with speech and music activities related to special events at winery and farm breweries are identified as being ***potentially significant***.

Mitigation for Impact 3: Project Specific Noise Measurements or Analysis

New Winery and Farm Brewery Applications. When reviewing applications for new winery and/or farm brewery building permits, Placer County should compare the appropriate Table 15 setback requirements to the actual distances between the proposed sound source location and nearest sensitive receptors property line. If the actual setback distances are greater than those identified in Table 15 for the proposed type of sound

source(s), then no additional acoustical analysis would typically be required. If, however, the actual distances between the proposed sound source locations and nearest sensitive receptor locations are less than those shown in Table 15, then a site-specific noise analysis should be required to evaluate compliance with the County's noise standards.

Existing Winery and Farm Brewery Applications. Prior to hosting any weddings under the special event allowances set forth in Table 3 of the Winery and Farm Brewery Ordinance, the owner/operator shall submit a site plan of the existing facility to the Placer County Community Development Resource Agency. The Site Plan shall identify the proposed outdoor location of the wedding reception and distance(s) to nearest residential receptors. The County shall review the Site Plan and compare the appropriate Table 15 setback requirements for wedding receptions to the actual distance(s) between the proposed sound source location and nearest sensitive receptor property line(s). If the actual setback distances are greater than those identified in Table 15, then no additional acoustical analysis shall be required. If, however, the actual distances between the proposed sound source location and nearest sensitive receptor locations are less than those shown in Table 15, then a site-specific noise analysis should be required to evaluate compliance with the County's noise standards.

As noted previously, the distances to the noise contours shown in Table 15 do not include any attenuation of sound caused by intervening structures, vegetation, or topography. In addition, the Table 15 contours do not take into account the directionality of amplified sound system speakers, which can be 10-15 dB lower behind the speaker than in front of the speaker. As a result, the Table 15 data should be considered worst-case. Therefore, it is likely that in most cases, the actual distances to the noise contours will be considerably less than those shown in Table 15. It is the function of the site-specific noise analysis to quantify the additional sound attenuation which would result from natural features, such as intervening topography (i.e. hills), structures, or vegetation, which are specific to the location for which the event permit is being processed. Specific information which should be included in project-specific noise analyses is as follows:

1. Shielding by Barriers, Structures or Topography

Shielding of noise sources, which results in reduced sound levels at locations affected by such shielding, can result from intervening noise barriers, structures or topography. Site specific noise studies should include an evaluation of such shielding. If needed for compliance with the County's noise standards, additional shielding of sound sources can be obtained by placing walls or other structures between the noise source and the receiver. The effectiveness of a barrier depends upon blocking line-of-sight between the source and receiver, and is improved with increasing the distance the sound must travel to pass over the barrier as compared to a straight line from source to receiver. The difference between the distance over a barrier and a straight line between source and receiver is called the "path length difference," and is the basis for calculating barrier noise reduction.

Barrier effectiveness depends upon the relative heights of the source, barrier and receiver. In general, barriers are most effective when placed close to either the receiver or the source. An intermediate barrier location yields a smaller path-length-

difference for a given increase in barrier height than does a location closer to either source or receiver.

As a rule of thumb, sound barriers located relatively close to the source or sensitive receptor generally provide an initial noise reduction of 5 dB once line of sight between the noise source and receiver has been interrupted by the barrier, and an additional noise reduction of approximately 1 dB per foot of barrier height after the barrier intercepts line of sight.

2. Shielding and Absorption Provided by Vegetation

Trees and other vegetation are often thought to provide significant noise attenuation. However, approximately 50 - 100 feet of dense foliage (so that no visual path extends through the foliage) is typically required to achieve a 5 dB attenuation of noise. Thus the use of vegetation as a noise barrier is, therefore, frequently an impractical method of noise control unless large tracts of dense foliage are part of the existing landscape. However, in cases where such vegetation exists between the proposed events and nearby sensitive receptors, an evaluation of the sound attenuation provided by such vegetation should be included in the project-specific noise analysis.

Vegetation can be used to acoustically "soften" intervening ground between a noise source and receiver, increasing ground absorption of sound and thus increasing the attenuation of sound with distance. Planting of trees and shrubs is also of aesthetic and psychological value, and may reduce adverse public reaction to a noise source by removing the source from view, even though noise levels will be largely unaffected.

In summary, the effects of vegetation upon noise transmission are minor unless there is considerable intervening vegetation between the source and receptor. Where the amount of intervening vegetation is not substantial, the benefits may be limited to some increased absorption of high frequency sounds and in reducing adverse public reaction to the noise by providing aesthetic benefits.

3. Direction of Sound Travel

Sound propagation is not affected by gravity. As a result, sound travels uphill similar to sound traveling downhill, provided all other variables are equal. In cases where sensitive receptors are located above or below a noise source with no intervening structures, topography, or substantial vegetation, no additional shielding offsets should be applied for these features.

4. Other Sound Mitigation Options

Other options for sound attenuation which should be considered when evaluating permit applications for winery and farm brewery events include the following:

- Locating the events or loudest components of those events indoors.
- Orienting speakers in directions away from the nearest sensitive receptors.
- Locating speakers in positions which provide the maximum distances to the nearest noise-sensitive receptors.

- Using a larger number of speakers with lower individual output arranged in such a manner as to focus the sound at the desired locations rather than fewer speakers with higher sound output.
- Setting limits on the sound level output of the amplified speech or music equipment.
- Restricting sound amplification equipment entirely.

Significance of Impact 3 following Mitigation: *Less than Significant*

Impact 6: Cumulative Changes in Traffic Noise Levels Associated with Winery and Farm Brewery Events

Tables 12 and 13 show the predicted changes in future (cumulative) traffic noise levels resulting from increased events at existing winery and farm brewery facilities and 30 new cumulative facilities, as well as cumulative background growth, relative to both weekday and weekend conditions. Traffic volumes for the cumulative conditions and scenarios were obtained from KDA transportation consultants.

The data in Tables 12 and 13 indicate that traffic generated by concurrent activities at each existing and future winery and farm brewery would result in traffic noise level increases ranging from 0.0 to 2.2 dB L_{dn} on weekdays and 0.0 to 1.2 dB L_{dn} on weekends. Relative to the significance criteria identified in Table 9, these increases would not be considered substantial. As a result, the project's incremental contribution to off-site traffic noise levels would be ***less than significant***.

Table 12
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases
Future (Cumulative) Weekday Conditions

Roadway	Segment Description	Traffic Noise Level at 100 feet, dB Ldn			Substantial Increase?
		Cumulative	Cumulative + Project	Increase	
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	64.5	64.6	0.0	No
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	48.9	49.6	0.7	No
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	53.8	54.0	0.2	No
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	52.7	53.3	0.6	No
Bell Rd	Coyote Ridge Ct to Miracle Ln	58.9	59.3	0.5	No
Bell Rd	Mallard Way to Cramer Rd	55.3	56.3	1.0	No
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	48.1	49.0	0.9	No
Combie Rd	Placer Hills Rd to Wooley Creek Ln	56.9	56.9	0.0	No
Cramer Rd	Bell Rd to SR 49	51.2	52.1	0.8	No
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	50.3	50.8	0.5	No
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	53.1	53.1	0.0	No
Fowler Rd	Virginiatown Rd to SR 193	58.0	58.6	0.6	No
Fleming Rd	Gladding Rd to McCourtney Rd	39.0	41.3	2.2	No
Fruitvale Rd	Fowler Rd to Gold Hill Rd	59.1	59.5	0.4	No
Gold Hill Rd	Virginiatown Rd to SR 193	59.3	60.0	0.7	No
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	58.1	58.1	0.0	No
Lone Star Rd	Bell Rd to SR 49	54.4	54.6	0.2	No
McCourtney Rd	Wise Rd to Big Ben Rd	58.2	58.6	0.4	No
Millertown Rd	Wise Rd to Vada Ranch Rd	44.4	44.4	0.0	No
Mt. Vernon Rd	Hastings Ln to Meyers Ln	60.6	60.9	0.3	No
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	62.2	62.4	0.3	No
Nicolaus Rd	Canal to Maverick Ln	62.3	62.3	0.0	No
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	65.0	65.0	0.0	No
Ridge Rd	Gold Hill Rd to Ophir Rd	51.6	51.6	0.0	No
Sierra College Blvd	Del Mar Rd to King Rd	67.9	68.1	0.2	No
SR 193	Sierra College Blvd to Fowler Rd	66.1	66.4	0.3	No
Virginiatown Rd	Coyote Ln to Fowler Rd	54.1	55.1	1.0	No
Wise Rd	McCourtney Rd to Crosby Herold Rd	61.5	62.3	0.8	No
Wise Rd	Crosby Herold Rd to Garden Bar Rd	60.2	60.7	0.5	No
Wise Rd	Garden Bar Rd to Wally Allan Rd	56.9	57.5	0.6	No
Wise Rd	County Lane to Crater Hill Rd	54.6	54.9	0.2	No
Wise Rd	Bald Hill Rd to Ophir Rd	52.6	52.7	0.1	No

Source: FHWA Model with inputs from KDA. Complete listing of FHWA Model inputs is provided in Appendix D.

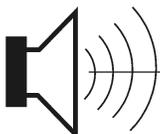
Table 13
Traffic Noise Modeling Results and Project-Related Traffic Noise Increases
Future (Cumulative) Weekend Conditions

Roadway	Segment Description	Traffic Noise Level at 100 feet, dB Ldn			Substantial Increase?
		Cumulative	Cumulative + Project	Increase	
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	64.4	64.4	0.0	No
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	49.7	50.3	0.6	No
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	52.7	53.0	0.2	No
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	51.4	52.2	0.8	No
Bell Rd	Coyote Ridge Ct to Miracle Ln	59.7	60.1	0.4	No
Bell Rd	Mallard Way to Cramer Rd	54.9	56.0	1.1	No
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	46.7	47.9	1.1	No
Combie Rd	Placer Hills Rd to Wooley Creek Ln	56.5	56.5	0.0	No
Cramer Rd	Bell Rd to SR 49	52.4	53.0	0.7	No
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	51.5	51.9	0.4	No
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	53.2	53.2	0.0	No
Fowler Rd	Virginiatown Rd to SR 193	58.1	58.7	0.6	No
Fleming Rd	Gladding Rd to McCourtney Rd	42.2	43.4	1.2	No
Fruitvale Rd	Fowler Rd to Gold Hill Rd	58.1	58.6	0.5	No
Gold Hill Rd	Virginiatown Rd to SR 193	60.0	60.6	0.6	No
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	56.5	56.6	0.0	No
Lone Star Rd	Bell Rd to SR 49	55.0	55.0	0.0	No
McCourtney Rd	Wise Rd to Big Ben Rd	58.2	58.6	0.4	No
Millertown Rd	Wise Rd to Vada Ranch Rd	43.9	43.9	0.0	No
Mt. Vernon Rd	Hastings Ln to Meyers Ln	61.8	62.1	0.2	No
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	61.6	61.9	0.3	No
Nicolaus Rd	Canal to Maverick Ln	61.1	61.1	0.0	No
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	63.8	63.8	0.0	No
Ridge Rd	Gold Hill Rd to Ophir Rd	50.6	50.6	0.0	No
Sierra College Blvd	Del Mar Rd to King Rd	67.5	67.7	0.2	No
SR 193	Sierra College Blvd to Fowler Rd	66.3	66.6	0.3	No
Virginiatown Rd	Coyote Ln to Fowler Rd	55.1	55.9	0.8	No
Wise Rd	McCourtney Rd to Crosby Herold Rd	62.1	62.8	0.7	No
Wise Rd	Crosby Herold Rd to Garden Bar Rd	60.6	61.1	0.5	No
Wise Rd	Garden Bar Rd to Wally Allan Rd	57.0	57.6	0.5	No
Wise Rd	County Lane to Crater Hill Rd	53.6	53.9	0.3	No
Wise Rd	Bald Hill Rd to Ophir Rd	52.2	52.3	0.2	No

Source: FHWA Model with inputs from KDA. Complete listing of FHWA Model inputs is provided in Appendix D.

Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.



BOLLARD

Acoustical Consultants

**Appendix B-1
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Lone Buffalo Winery
Monday, September 11, 2017**

Hour	Leq	Lmax	L50	L90
0:00	51	56	50	49
1:00	59	62	58	55
2:00	61	63	61	60
3:00	60	63	61	57
4:00	46	55	45	43
5:00	46	58	42	34
6:00	42	64	37	34
7:00	45	60	41	37
8:00	45	60	42	38
9:00	42	55	40	37
10:00	40	58	37	34
11:00	43	61	38	34
12:00	41	58	37	33
13:00	38	59	34	30
14:00	39	54	34	32
15:00	39	58	33	30
16:00	41	61	35	31
17:00	39	56	35	31
18:00	40	61	34	32
19:00	54	62	41	31
20:00	60	64	60	58
21:00	58	63	55	52
22:00	54	59	54	52
23:00	56	59	56	54

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	45	38	42	60	54	58	61	42	57
Lmax (Maximum)	61	54	58	64	62	63	64	55	60
L50 (Median)	42	33	37	60	41	52	61	37	51
L90 (Background)	38	30	33	58	31	47	60	34	49

Computed CNEL, dB	63
% Daytime Energy	3%
% Evening Energy	31%
% Nighttime Energy	66%

Appendix B-2
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Wise Villa Winery
Sunday, October 08, 2017

Hour	Leq	Lmax	L50	L90
0:00	30	41	28	26
1:00	38	69	28	26
2:00	29	48	27	25
3:00	29	37	26	25
4:00	28	41	26	25
5:00	30	49	27	26
6:00	34	47	31	28
7:00	37	49	34	30
8:00	44	67	34	31
9:00	46	66	39	34
10:00	45	60	42	38
11:00	47	65	42	37
12:00	48	63	45	39
13:00	49	72	44	40
14:00	49	64	47	43
15:00	49	61	46	41
16:00	49	64	46	42
17:00	50	68	46	41
18:00	47	66	42	35
19:00	36	55	32	30
20:00	37	56	33	30
21:00	35	52	32	29
22:00	34	54	31	28
23:00	32	49	29	27

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	50	37	48	37	35	36	38	28	33
Lmax (Maximum)	72	49	64	56	52	54	69	37	48
L50 (Median)	47	34	42	33	32	32	31	26	28
L90 (Background)	43	30	38	30	29	29	28	25	26

Computed CNEL, dB	46
% Daytime Energy	96%
% Evening Energy	2%
% Nighttime Energy	2%

**Appendix B-3
 Placer County Wine Ordinance
 Ambient Noise Monitoring Results - Dono Dal Cielo Vineyard
 Saturday, December 16, 2017**

Hour	Leq	Lmax	L50	L90
0:00	30	44	27	25
1:00	39	65	27	25
2:00	35	56	30	27
3:00	32	47	30	27
4:00	40	64	30	28
5:00	44	67	31	27
6:00	43	67	35	30
7:00	47	67	38	35
8:00	54	68	47	42
9:00	50	69	44	38
10:00	53	70	50	45
11:00	50	67	46	40
12:00	54	73	50	44
13:00	54	71	49	43
14:00	55	76	51	46
15:00	54	79	49	42
16:00	49	68	40	35
17:00	47	65	34	28
18:00	47	67	31	26
19:00	50	70	41	29
20:00	48	67	35	28
21:00	42	64	32	27
22:00	44	68	28	25
23:00	44	65	27	24

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	55	47	52	50	42	48	44	30	41
Lmax (Maximum)	79	65	70	70	64	67	68	44	61
L50 (Median)	51	31	44	41	32	36	35	27	29
L90 (Background)	46	26	39	29	27	28	30	24	26

Computed CNEL, dB	52
% Daytime Energy	87%
% Evening Energy	8%
% Nighttime Energy	5%

**Appendix B-4
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Hillenbrand Brewery
Sunday, March 11, 2018**

Hour	Leq	Lmax	L50	L90
0:00	41	61	40	38
1:00	40	50	39	37
1:00	39	45	38	36
3:00	40	59	38	37
4:00	39	59	38	36
5:00	43	66	38	35
6:00	47	71	41	37
7:00	47	69	43	39
8:00	48	68	41	36
9:00	52	76	39	34
10:00	45	64	38	34
11:00	50	67	44	37
12:00	52	69	47	43
13:00	53	79	46	43
14:00	55	82	47	44
15:00	56	79	47	44
16:00	63	88	54	46
17:00	53	81	41	36
18:00	47	67	44	39
19:00	45	62	43	40
20:00	43	57	42	40
21:00	45	66	42	39
22:00	43	56	41	38
23:00	43	56	41	37

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	63	45	55	45	43	45	47	39	42
Lmax (Maximum)	88	64	74	66	57	62	71	45	58
L50 (Median)	54	38	44	43	42	43	41	38	39
L90 (Background)	46	34	40	40	39	40	38	35	37

Computed CNEL, dB	54
% Daytime Energy	94%
% Evening Energy	2%
% Nighttime Energy	4%

**Appendix B-5
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Mt. Vernon Winery
Saturday, March 10, 2018**

Hour	Leq	Lmax	L50	L90
0:00	42	60	38	37
1:00	47	69	38	37
2:00	46	62	37	36
3:00	39	51	37	35
4:00	38	56	36	35
5:00	41	60	38	36
6:00	49	74	43	40
7:00	47	61	44	41
8:00	51	73	46	42
9:00	50	72	46	42
10:00	49	64	46	41
11:00	48	65	45	37
12:00	48	63	45	39
13:00	47	61	44	37
14:00	49	65	46	38
15:00	49	69	43	37
16:00	49	70	45	36
17:00	50	73	44	36
18:00	52	80	44	35
19:00	46	68	38	36
20:00	45	58	40	37
21:00	45	65	39	36
22:00	44	60	38	35
23:00	45	65	37	36

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	52	47	49	46	45	45	49	38	45
Lmax (Maximum)	80	61	68	68	58	64	74	51	62
L50 (Median)	46	43	45	40	38	39	43	36	38
L90 (Background)	42	35	38	37	36	36	40	35	36

Computed CNEL, dB	52
% Daytime Energy	75%
% Evening Energy	7%
% Nighttime Energy	19%

**Appendix B-6
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Rancho Roble Winery
Sunday, March 11, 2018**

Hour	Leq	Lmax	L50	L90
0:00	43	53	41	38
1:00	40	54	40	37
2:00	37	50	36	32
3:00	35	46	33	30
4:00	31	49	30	28
5:00	33	49	30	27
6:00	39	58	38	30
7:00	42	56	41	38
8:00	43	64	41	36
9:00	44	64	38	35
10:00	46	70	38	36
11:00	47	69	37	34
12:00	48	68	38	35
13:00	48	66	38	35
14:00	45	66	37	34
15:00	48	66	39	35
16:00	46	67	37	32
17:00	39	59	34	30
18:00	48	65	46	36
19:00	48	60	46	43
20:00	45	59	44	41
21:00	42	51	42	39
22:00	40	55	39	36
23:00	37	45	36	32

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	48	39	46	48	42	46	43	31	39
Lmax (Maximum)	70	56	65	60	51	56	58	45	51
L50 (Median)	46	34	39	46	42	44	41	30	36
L90 (Background)	38	30	35	43	39	41	38	27	32

Computed CNEL, dB	48
% Daytime Energy	73%
% Evening Energy	17%
% Nighttime Energy	10%

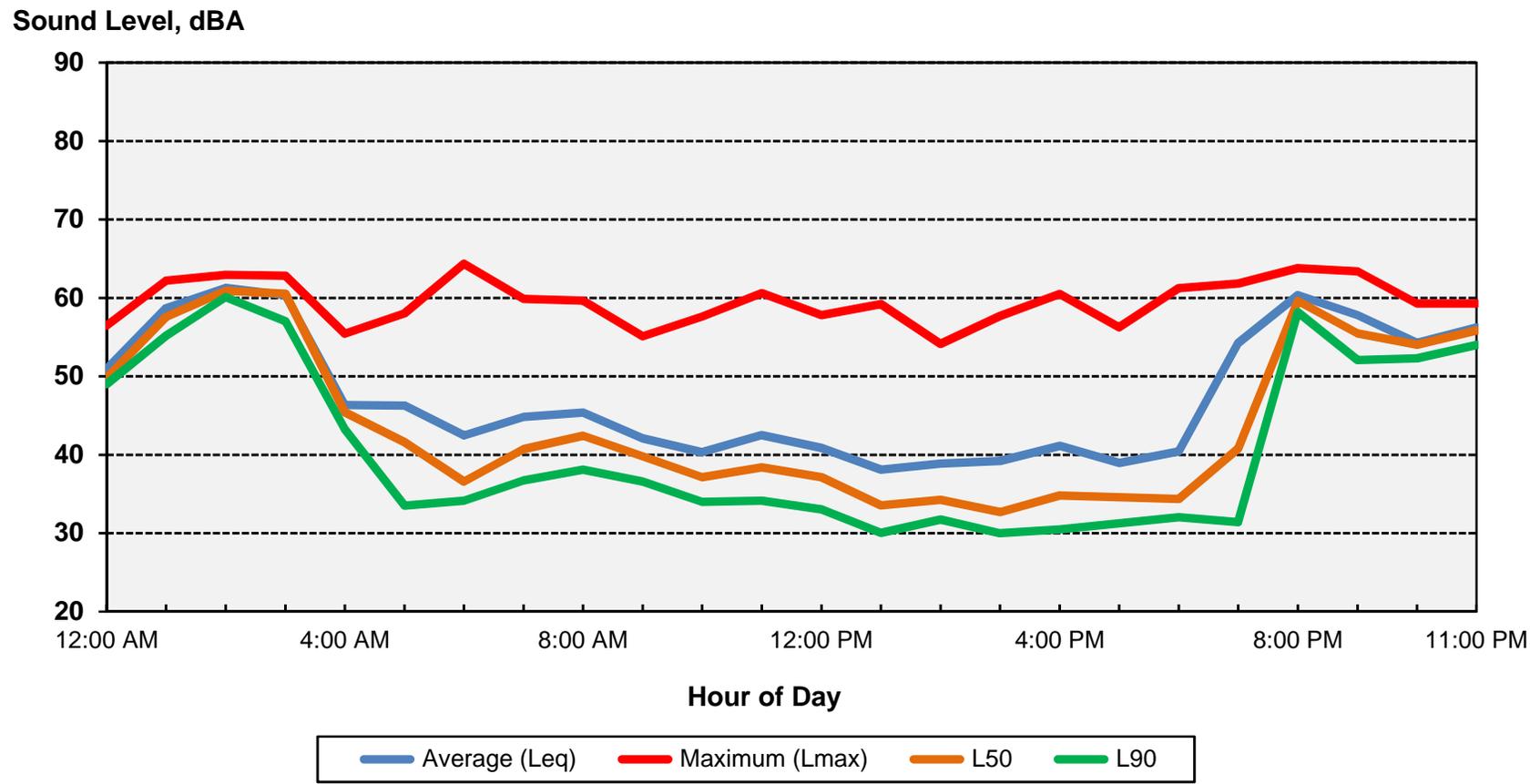
Appendix B-7
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Vina Castellano Winery
Wednesday, March 28, 2018

Hour	Leq	Lmax	L50	L90
0:00	35	46	34	33
1:00	37	58	33	31
2:00	35	55	33	31
3:00	34	57	30	29
4:00	39	60	31	30
5:00	42	66	32	30
6:00	45	69	38	33
7:00	49	66	45	39
8:00	47	66	43	38
9:00	46	62	42	35
10:00	50	69	43	37
11:00	49	66	41	35
12:00	49	71	39	32
13:00	48	66	42	34
14:00	47	64	41	33
15:00	47	64	42	34
16:00	47	67	42	34
17:00	47	62	42	33
18:00	47	73	38	31
19:00	43	61	37	32
20:00	44	66	39	37
21:00	42	58	39	37
22:00	42	62	37	35
23:00	37	55	35	34

	Statistical Summary								
	Daytime (7 a.m. - 7 p.m.)			Evening (7 p.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average	High	Low	Average
Leq (Average)	50	46	48	44	42	43	45	34	40
Lmax (Maximum)	73	62	66	66	58	61	69	46	59
L50 (Median)	45	38	42	39	37	39	38	30	34
L90 (Background)	39	31	35	37	32	35	35	29	32

Computed CNEL, dB	49
% Daytime Energy	82%
% Evening Energy	7%
% Nighttime Energy	10%

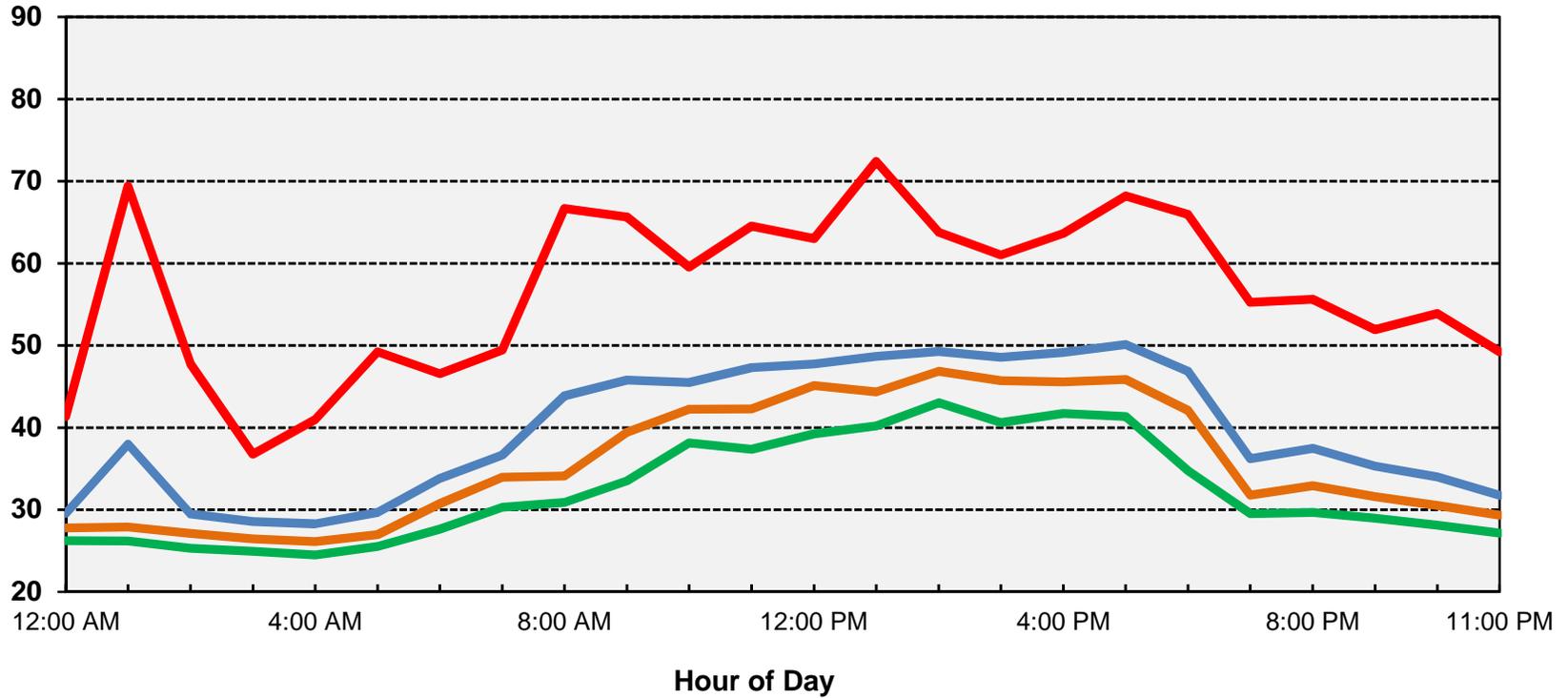
**Appendix C-1
 Placer County Wine Ordinance
 Ambient Noise Monitoring Results - Lone Buffalo Winery
 Monday, September 11, 2017**



CNEL: 63 dB

**Appendix C-2
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Wise Villa Winery
Sunday, October 08, 2017**

Sound Level, dBA

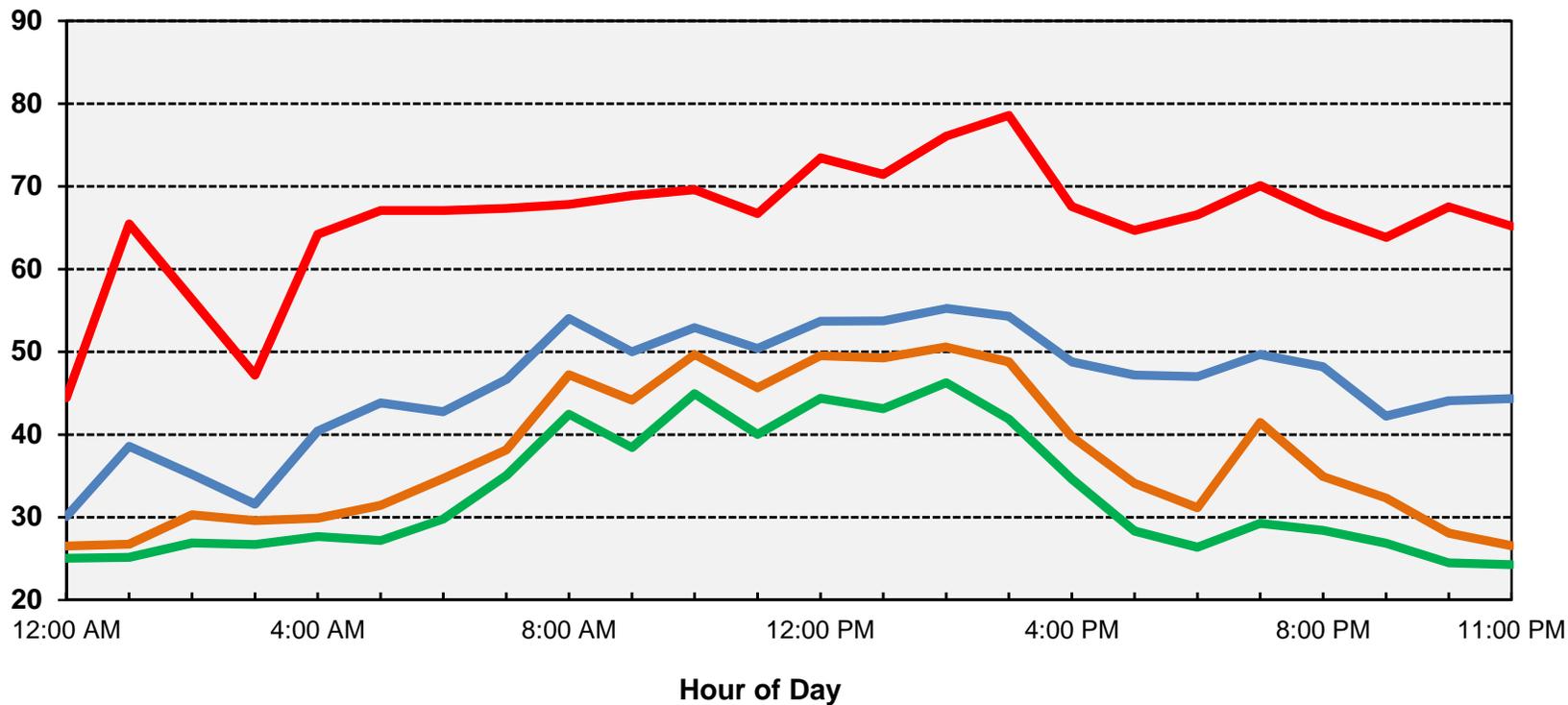


— Average (Leq)
 — Maximum (Lmax)
 — L50
 — L90

CNEL: 46 dB

**Appendix C-3
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Dono Dal Cielo Vineyard
Saturday, December 16, 2017**

Sound Level, dBA

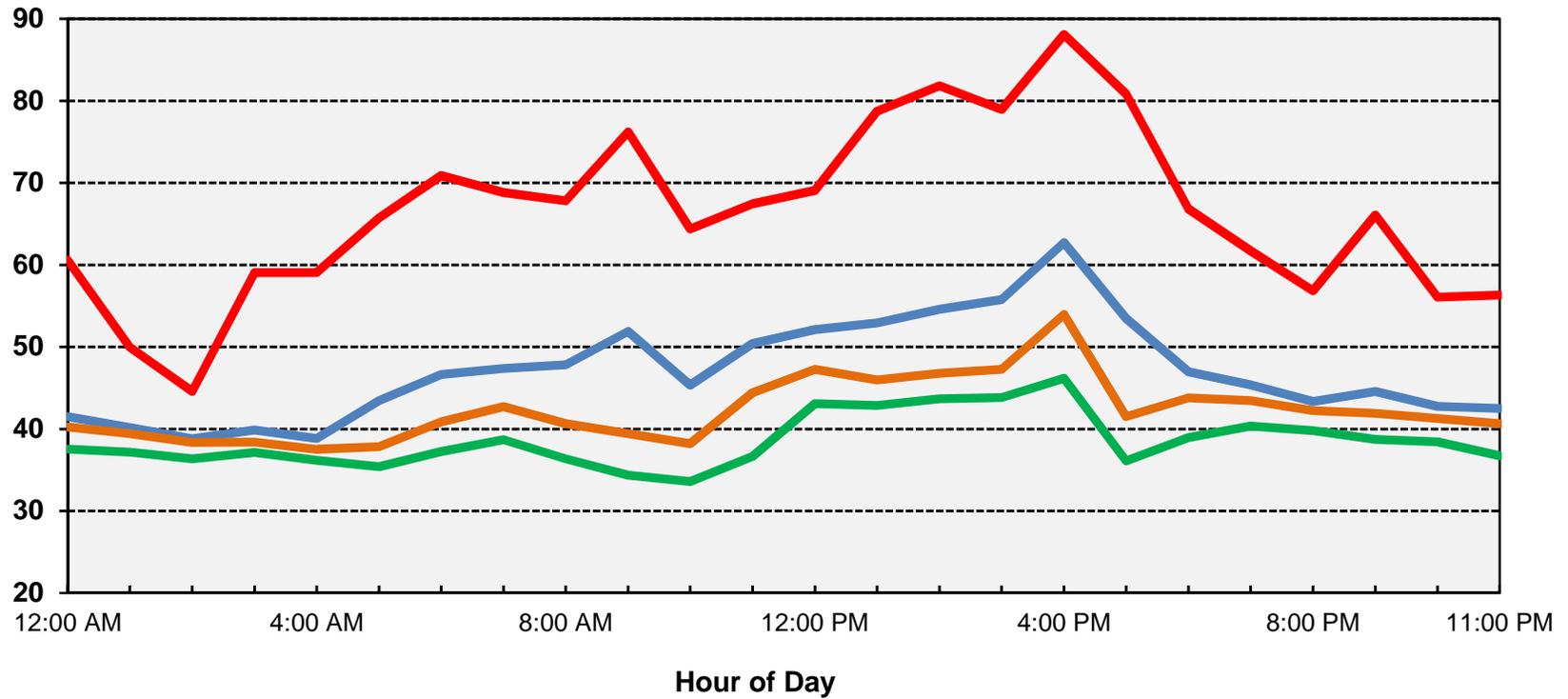


— Average (Leq)
 — Maximum (Lmax)
 — L50
 — L90

CNEL: 52 dB

**Appendix C-4
Placer County Wine Ordinance
Ambient Noise Monitoring Results - Hillenbrand Brewery
Sunday, March 11, 2018**

Sound Level, dBA

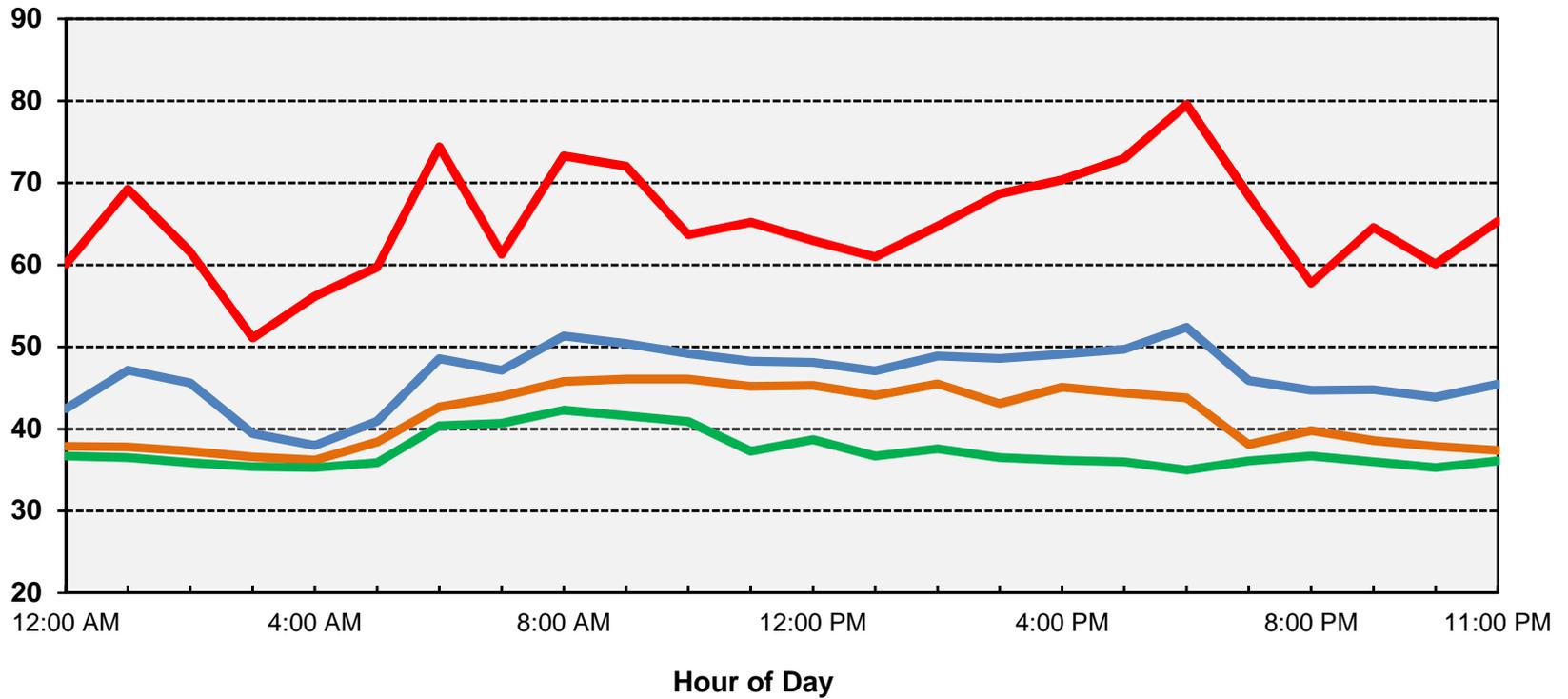


— Average (Leq) — Maximum (Lmax) — L50 — L90

CNEL: 54 dB

**Appendix C-5
 Placer County Wine Ordinance
 Ambient Noise Monitoring Results - Mt. Vernon Winery
 Saturday, March 10, 2018**

Sound Level, dBA

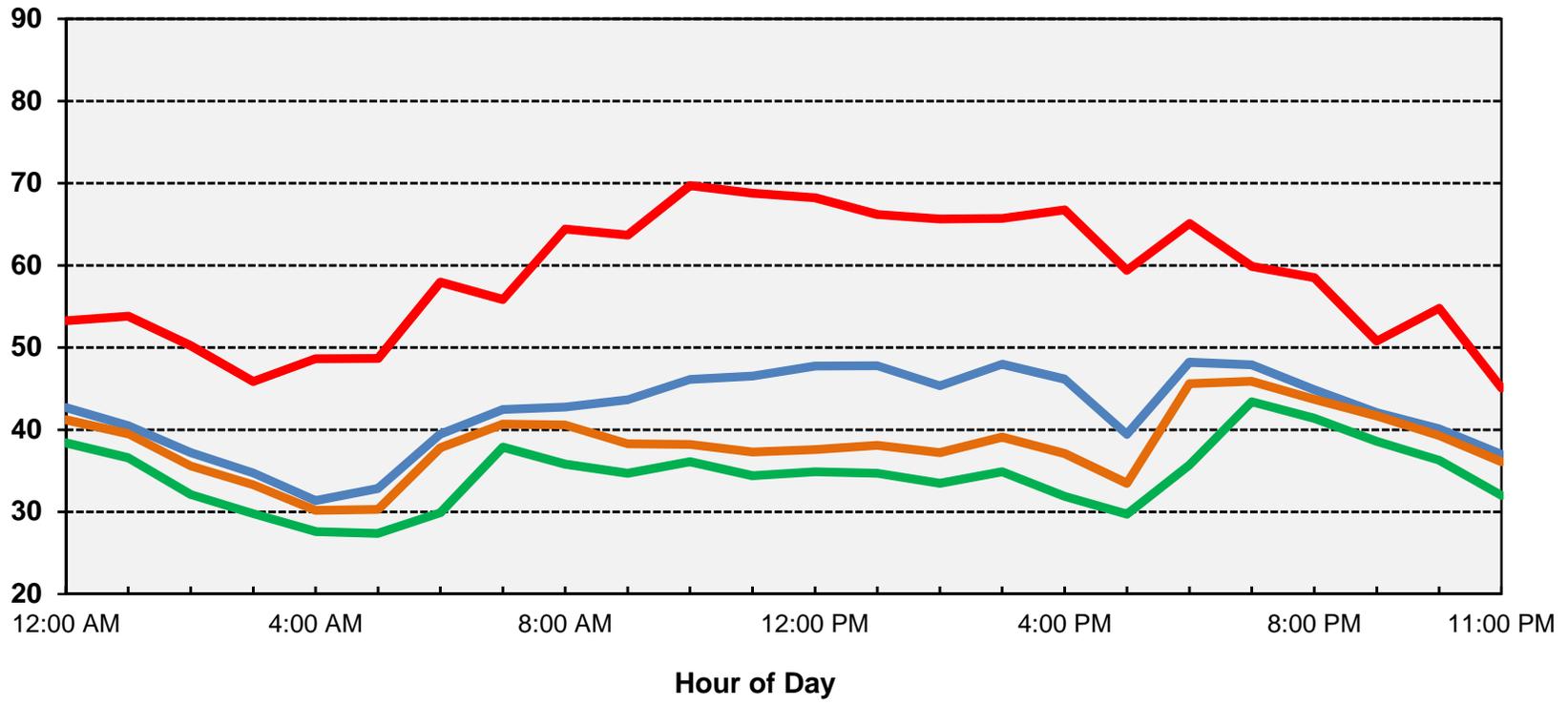


— Average (Leq) — Maximum (Lmax) — L50 — L90

CNEL: 52 dB

**Appendix C-6
 Placer County Wine Ordinance
 Ambient Noise Monitoring Results - Rancho Roble Winery
 Sunday, March 11, 2018**

Sound Level, dBA



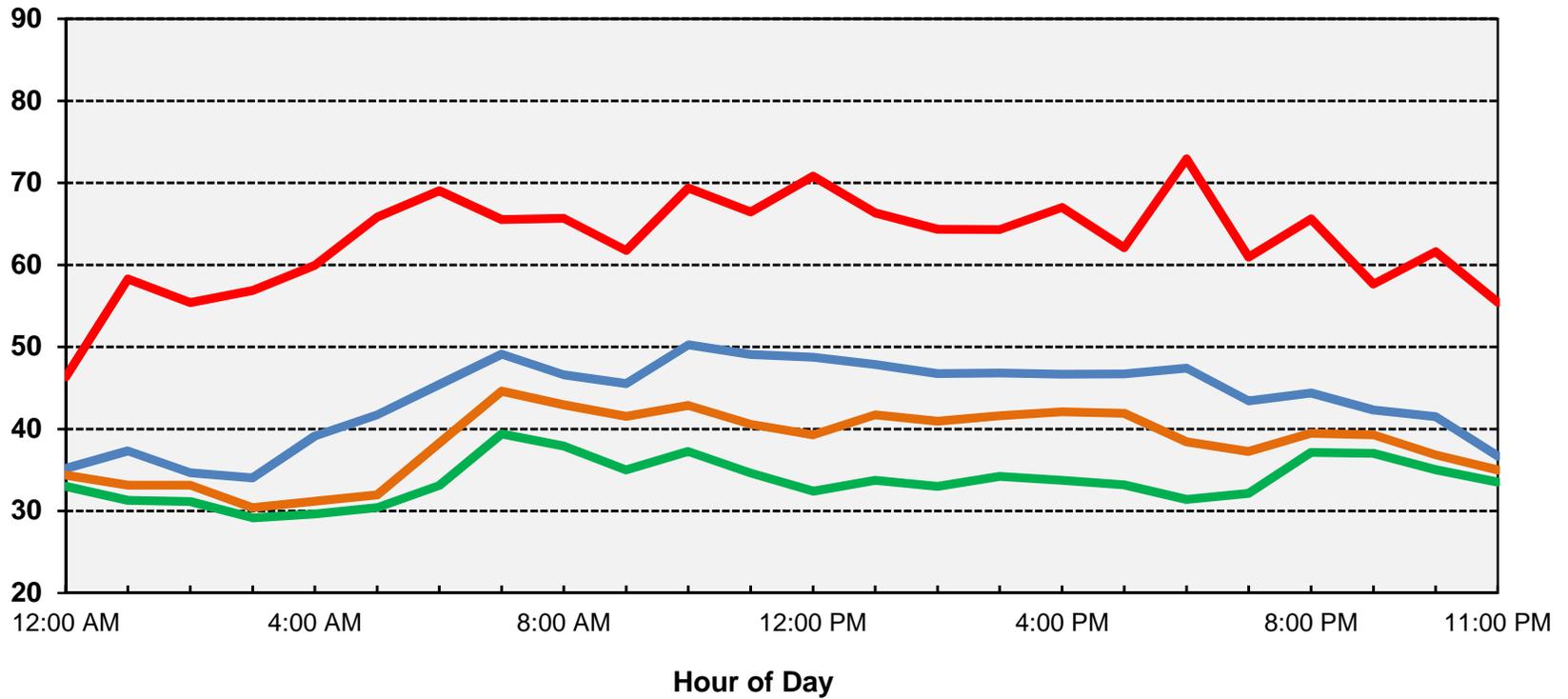
— Average (Leq) — Maximum (Lmax) — L50 — L90

CNEL: 48 dB



**Appendix C-7
 Placer County Wine Ordinance
 Ambient Noise Monitoring Results - Vina Castellano Winery
 Wednesday, March 28, 2018**

Sound Level, dBA



— Average (Leq) — Maximum (Lmax) — L50 — L90

CNEL: 49 dB



Appendix D-1

FHWA Traffic Noise Prediction Model Inputs - Existing Conditions

Roadway Name	Segment Description	Weekday Plus		Weekend Plus		Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance
		Weekday	Project	Weekend	Project						
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	8,573	8,617	8,355	8,399	80	20	2	1	45	100
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	412	412	485	485	80	20	2	1	35	100
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	1,309	1,387	1,038	1,116	80	20	2	1	35	100
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	971	997	634	660	80	20	2	1	35	100
Bell Rd	Coyote Ridge Ct to Miracle Ln	1,400	1,400	1,329	1,329	80	20	2	1	55	100
Bell Rd	Mallard Way to Cramer Rd	614	618	543	547	80	20	2	1	55	100
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	355	431	262	338	80	20	2	1	35	100
Combie Rd	Placer Hills Rd to Wooley Creek Ln	2,688	2,688	2,477	2,477	80	20	2	1	35	100
Cramer Rd	Bell Rd to SR 49	558	560	549	551	80	20	2	1	35	100
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	525	613	582	670	80	20	2	1	35	100
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	1,126	1,126	1,171	1,171	80	20	2	1	35	100
Fowler Rd	Virginiatown Rd to SR 193	3,412	3,592	3,440	3,620	80	20	2	1	35	100
Fleming Rd	Gladding Rd to McCourtney Rd	43	43	92	92	80	20	2	1	35	100
Fruitvale Rd	Fowler Rd to Gold Hill Rd	1,486	1,556	1,186	1,256	80	20	2	1	55	100
Gold Hill Rd	Virginiatown Rd to SR 193	1,542	1,704	1,857	2,019	80	20	2	1	55	100
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	3,545	3,589	2,485	2,529	80	20	2	1	35	100
Lone Star Rd	Bell Rd to SR 49	1,328	1,330	1,223	1,225	80	20	2	1	35	100
McCourtney Rd	Wise Rd to Big Ben Rd	1,192	1,240	1,207	1,255	80	20	2	1	55	100
Millertown Rd	Wise Rd to Vada Ranch Rd	150	150	135	135	80	20	2	1	35	100
Mt. Vernon Rd	Hastings Ln to Meyers Ln	2,021	2,069	2,679	2,727	80	20	2	1	55	100
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	2,995	3,057	2,676	2,738	80	20	2	1	55	100
Nicolaus Rd	Canal to Maverick Ln	3,064	3,064	2,374	2,374	80	20	2	1	55	100
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	9,470	9,470	7,407	7,407	80	20	2	1	45	100
Ridge Rd	Gold Hill Rd to Ophir Rd	789	789	640	640	80	20	2	1	35	100
Sierra College Blvd	Del Mar Rd to King Rd	12,762	13,014	10,642	10,894	80	20	2	1	50	100
SR 193	Sierra College Blvd to Fowler Rd	6,700	6,858	6,700	6,858	80	20	2	1	55	100
Virginiatown Rd	Coyote Ln to Fowler Rd	773	795	994	1,016	80	20	2	1	45	100
Wise Rd	McCourtney Rd to Crosby Herold Rd	2,575	2,697	2,714	2,838	80	20	2	1	55	100
Wise Rd	Crosby Herold Rd to Garden Bar Rd	1,857	1,985	1,978	2,106	80	20	2	1	55	100
Wise Rd	Garden Bar Rd to Wally Allan Rd	1,394	1,490	1,304	1,400	80	20	2	1	45	100
Wise Rd	County Lane to Crater Hill Rd	1,168	1,214	931	977	80	20	2	1	40	100
Wise Rd	Bald Hill Rd to Ophir Rd	1,000	1,016	915	931	80	20	2	1	35	100

Appendix D-2

FHWA Traffic Noise Prediction Model Inputs - Cumulative Conditions

Roadway Name	Segment Description	Weekday Plus		Weekend Plus		Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance
		Weekday	Project	Weekend	Project						
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	12,740	12,784	12,250	12,294	80	20	2	1	45	100
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	630	738	760	868	80	20	2	1	35	100
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	1,945	2,031	1,525	1,611	80	20	2	1	35	100
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	1,520	1,749	1,115	1,344	80	20	2	1	35	100
Bell Rd	Coyote Ridge Ct to Miracle Ln	2,080	2,318	2,535	2,773	80	20	2	1	55	100
Bell Rd	Mallard Way to Cramer Rd	915	1,157	835	1,077	80	20	2	1	55	100
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	530	646	385	501	80	20	2	1	35	100
Combie Rd	Placer Hills Rd to Wooley Creek Ln	3,995	3,995	3,630	3,630	80	20	2	1	35	100
Cramer Rd	Bell Rd to SR 49	1,080	1,308	1,410	1,638	80	20	2	1	35	100
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	880	988	1,150	1,258	80	20	2	1	35	100
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	1,675	1,675	1,720	1,720	80	20	2	1	35	100
Fowler Rd	Virginiatown Rd to SR 193	5,155	5,893	5,290	6,028	80	20	2	1	35	100
Fleming Rd	Gladding Rd to McCourtney Rd	65	109	135	179	80	20	2	1	35	100
Fruitvale Rd	Fowler Rd to Gold Hill Rd	2,210	2,432	1,740	1,962	80	20	2	1	55	100
Gold Hill Rd	Virginiatown Rd to SR 193	2,290	2,682	2,725	3,117	80	20	2	1	55	100
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	5,270	5,310	3,645	3,685	80	20	2	1	35	100
Lone Star Rd	Bell Rd to SR 49	2,255	2,369	2,560	2,574	80	20	2	1	35	100
McCourtney Rd	Wise Rd to Big Ben Rd	1,770	1,958	1,770	1,958	80	20	2	1	55	100
Millertown Rd	Wise Rd to Vada Ranch Rd	225	225	200	200	80	20	2	1	35	100
Mt. Vernon Rd	Hastings Ln to Meyers Ln	3,085	3,303	4,140	4,358	80	20	2	1	55	100
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	4,450	4,752	3,925	4,227	80	20	2	1	55	100
Nicolaus Rd	Canal to Maverick Ln	4,555	4,555	3,480	3,480	80	20	2	1	55	100
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	14,075	14,075	10,860	10,860	80	20	2	1	45	100
Ridge Rd	Gold Hill Rd to Ophir Rd	1,175	1,175	940	940	80	20	2	1	35	100
Sierra College Blvd	Del Mar Rd to King Rd	21,370	22,408	19,180	20,218	80	20	2	1	50	100
SR 193	Sierra College Blvd to Fowler Rd	10,980	11,856	11,420	12,296	80	20	2	1	55	100
Virginiatown Rd	Coyote Ln to Fowler Rd	1,150	1,448	1,460	1,758	80	20	2	1	45	100
Wise Rd	McCourtney Rd to Crosby Herold Rd	3,840	4,600	4,360	5,120	80	20	2	1	55	100
Wise Rd	Crosby Herold Rd to Garden Bar Rd	2,840	3,204	3,125	3,489	80	20	2	1	55	100
Wise Rd	Garden Bar Rd to Wally Allan Rd	2,205	2,503	2,260	2,558	80	20	2	1	45	100
Wise Rd	County Lane to Crater Hill Rd	1,735	1,831	1,365	1,461	80	20	2	1	40	100
Wise Rd	Bald Hill Rd to Ophir Rd	1,485	1,533	1,340	1,388	80	20	2	1	35	100

Appendix E – Placer County Noise Ordinance

9.36.010 Declaration of findings, purposes, and policy.

Excessive sound and vibration are a serious hazard to the public health and welfare, safety, and the quality of life. The people of Placer County have a right to and should be ensured an environment free from unnecessary, offensive and excessive sound and vibration that may jeopardize their health or welfare or safety or degrade the quality of life.

Therefore, it is declared to be the policy of Placer County in its exercise of the police power to prohibit unnecessary, excessive and offensive sounds. At certain levels, such sounds become noise and are detrimental to the health and welfare of the citizenry and, in the public interest, are systematically proscribed. This article is intended to work in concert with and supplement Penal Code Section 370 (Public Nuisances) and Section 415 (Disturbing the Peace) and to establish local community standards for noise regulation. (Ord. 5280-B, 2004)

9.36.020 Definitions

The following words, phrases and terms as used in this article shall have the following meanings:

“Acoustic specialist” means a person or persons trained in acoustic sampling, qualified to measure sound levels consistent with criteria contained within this article.

“Ambient sound level” means the composite of normal or existing sound from all sources measured at a given location for a specified time of the day or night. The ambient sound level shall be measured with a sound level meter, using slow response and “A” weighting. The ambient sound level shall be determined with the sound source at issue silent.

“Approving authority” means the designated body or persons authorized to grant approval or deny a discretionary permit or an exception to this article.

“A-weighting” means the standard A-weighted frequency response of a sound level meter, which de-emphasizes low and high frequencies of sound in a manner similar to the human ear for moderate sounds.

“C-weighting” means the standard C-weighted frequency response of a sound level meter, which de-emphasizes high frequencies of sound in a manner similar to the human ear for relatively loud sounds.

“Decibel” means a unit for measuring the relative amplitude of sound equal approximately to the smallest difference normally detectable by the human ear, whose range includes approximately one hundred thirty (130) decibels on a scale beginning with zero decibels for the faintest detectable sound. The sound pressure associated with zero decibels is twenty (20) micropascals.

“Discretionary permit” means a permit issued by the county other than ministerial permits, including but not limited to conditional use permits, tentative subdivision maps, design review permits and administrative permits.

“Enforcement officer” means the Placer County sheriff, the planning director, and/or the health officer and the employee(s) designated by the sheriff, the planning director, and/or the health officer as code enforcement officer(s) to enforce the provisions of this article.

“Equivalent hourly sound level (Leq)” means the sound level corresponding to a steady state A-weighted sound level containing the same total energy as the actual time-varying sound level over a one-hour period.

“Fixed sound source” means a device or machine which creates sounds while fixed or stationary, including but not limited to residential, agricultural, industrial and commercial machinery and equipment, pumps, fans, compressors, air conditioners and refrigeration equipment, also includes motor vehicles operated on private property.

“Impulsive sound” means a single noise event or series of single noise events, which result in a high peak sound level of short duration (less than one second). Examples include, but are not limited to guns shots, blasting, or hammering.

“Intruding sound level” means the sound level created, caused, maintained or originating from an alleged offensive source, measured in decibels, at a specified location while the alleged offensive source is in operation.

“Maximum sound level (Lmax)” means the maximum noise level measured on a sound level meter.

“Motor vehicle” means any vehicle that is propelled by other than human or animal power on land.

“Noise” means any loud discordant or disagreeable sound or sounds.

“One-third octave band” means a band of frequencies, in hertz (Hz), which is one-third of an octave wide. The center frequencies of one-third-octave bands increase by a factor of 1.26 (cube root of 2). Examples of one-third octave band center frequencies in the range of audible sound include 20, 25, 31.5, 40 and 63 hertz. Describing sound pressure levels in one-third octave bands provides information as to the tone or pitch, of noise (low frequency versus high frequency), as well as the amplitude of the sound.

“Pleasure motor boat” means any boat which is powered by an in-board, out-board or in-board/out-board motor and is used for recreational purposes, including boats that are or may be used commercially to support recreational use. This includes, but is not limited to, commercial fishing and sightseeing. A vessel competing in a regatta, boat race, or trial runs pursuant to the terms of a duly authorized government permit shall not be considered a “pleasure motor boat” for purposes of this article.

“Property line or plane” means a vertical plane including the property line that determines the property boundaries in space.

“Public property” means any property owned by a public agency and held open to the public, including but not limited to parks, streets, sidewalks, and alleys.

“Residential property” means a parcel of real property that is zoned for residential use.

“School” means institutions conducting regular academic instruction at preschool, kindergarten, elementary, secondary or collegiate levels.

“Sensitive receptor” means a land use in which there is a reasonable degree of sensitivity to noise. Such uses include single-family and multi-family residential uses, frequently used outbuildings, schools, hospitals, churches, rest homes, cemeteries, public libraries and other sensitive uses as determined by the enforcement officer.

“Simple tone noise” means any sound that is distinctly audible as a single pitch (frequency) or set of pitches. Includes sound consisting of speech and music.

“Sound level” means the sound pressure level in decibels as measured with a sound level meter using the A-weighting and C-weighting networks or one-third-octave band frequency. The unit of measurement is referred to herein as dBA, dBC or one-third octave band.

“Sound level meter” means an instrument meeting American National Standard Institute standard S1 .4A-1985 for Type 1 or Type 2 sound level meters or an instrument and the associated recording and analyzing equipment that will provide equivalent data. (Ord. 5280-B, 2004)

9.36.030 Exemptions.

- A. Sound or noise emanating from the following sources and activities are exempt from the provisions of this title:
1. Sound sources typically associated with residential uses (e.g., children at play, air conditioners in good working order, etc.);
 2. Sound sources associated with property maintenance (e.g., lawn mowers, edgers, snow blowers, blowers, pool pumps, power tools, etc.) provided such activities take place between the hours of seven a.m. and nine p.m.;
 3. Safety, warning and alarm devices, including house and car alarms, and other warning devices that are designed to protect the health, safety and welfare, provided such devices are not negligently maintained or operated;
 4. The normal operation of public and private schools typically consisting of classes and other school-sponsored activities;
 5. Maintenance (e.g., lawn mowers, edgers, aerators, blowers, etc.) of golf courses, provided such activities take place between the hours of five a.m. and nine p.m. May through September, and seven a.m. and six p.m. October through April;

6. Emergencies, involving the execution of the duties of duly authorized governmental personnel and others providing emergency response to the general public, including but not limited to sworn peace officers, emergency personnel, utility personnel, and the operation of emergency response vehicles and equipment;
7. Construction (e.g., construction, alteration or repair activities) between the hours of six a.m. and eight a.m. Monday through Friday, and between the hours of eight a.m. and eight p.m. Saturday and Sunday provided, however, that all construction equipment shall be fitted with factory installed muffling devices and that all construction equipment shall be maintained in good working order.

9.36.040 Sound measurement methodology.

- A. Compliance with this article shall be determined using methodology described in this section. Sound measurement, except as otherwise provided in this article, shall be made with a sound level meter using the A-weighting network at slow meter response, except that fast meter response shall be used for impulsive type sounds.
- B. Calibration of the measurement equipment utilizing an acoustical calibrator meeting American National Standards Institute (ANSI) Type 1 or Type 2 standard shall be performed immediately prior to recording any sound data. Calibration equipment shall be certified annually.
- C. Exterior sound levels shall be measured at the property line or at any location within the property of the affected sensitive receptor. Sound measurements shall be taken in such a manner and location so that it can be determined whether sound level standards are exceeded at the property line. Where practical, the microphone of the sound level meter shall be positioned three to five feet above ground and away from reflective surfaces. The actual location of the sound level measurements shall be at the discretion of the enforcement officer. (Ord. 5280-B, 2004)

9.36.050 Duty to cooperate.

It is unlawful for any person to refuse to cooperate with or to obstruct any governmental agent, officer or employee in determining the ambient sound level of a sound source. Such cooperation shall include, but is not limited to, the shutting off or quieting of any sound source so that an ambient sound level can be measured. (Ord. 5280-B, 2004)

9.36.060 Sound limits for sensitive receptors

- A. It is unlawful for any person at any location to create any sound, or to allow the creation of any sound, on property owned, leased, occupied or otherwise controlled by such person that:
 1. Causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by five dBA; or
 2. Exceeds the sound level standards as set forth in Table 8, whichever is the greater.

**Table 8
Sound Level Standards (On-Site)
Placer County Noise Ordinance**

Sound Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly Average, (L_{eq}), dB	55	45
Maximum, (L_{max}) dB	70	65

- B. Each of the sound level standards specified in Table 8 shall be reduced by five dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus five dB.
- C. If the intruding sound source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient sound level can be measured, the sound level measured while the source is in operation shall be compared directly to the sound level standards of Table 1. (Ord. 5280-B, 2004)

9.36.080 Exceptions.

- A. An exception may be requested from any provision of this article. Requests for exceptions shall be made on forms provided by the county. Notice of the request for exception must be given to all the surrounding properties that would be impacted by the exception, i.e., those properties that would experience a noise level at their property line that exceeds Table 1 of Section 9.36.060.
- B. If the applicant can show to the county that a diligent investigation of available sound suppression techniques for construction-related noise indicates that immediate compliance with the requirements of this article would be impractical or unreasonable, due to the temporary nature or short duration of the exception, a permit to allow exception from the provisions contained in all or a portion of this article may be issued. Factors that the approving authority must consider for construction related exceptions shall include but not be limited to the following:
 - 1. Conformance with the intent of this article;
 - 2. Uses of property and existence of sensitive receptors within the area affected by sound;
 - 3. Factors related to initiating and completing all remedial work;
 - 4. The time of the day or night the exception will occur;
 - 5. The duration of the exception; and
 - 6. The general public interest, welfare and safety.
- C. If the applicant can show to the county that the characteristics of a special event indicate that immediate compliance with the requirements of this article would be impractical due to the type of event or unreasonable due to its temporary nature or short duration, a permit allowing an exception from the provisions of this article may be issued. Factors considered for special events related exceptions shall include but not be limited to the following:

1. Conformance with the intent of this article;
 2. Uses of property and existence of sensitive receptors within the area affected by sound;
 3. Hardship to the applicant, or community of not granting the exception;
 4. The time of the day or night the exception will occur;
 5. The duration of the exception; and
 6. The general public interest, welfare and safety.
- D. If the applicant can show to the county, or his or her designee that immediate compliance with the requirements of this article would not result in a hazardous condition or nuisance, and strict compliance would be unreasonable due to the circumstances of the requested exception, a permit to allow exception from the provisions contained in all or a portion of this article may be issued. Factors considered for all requests for exceptions, other than construction or special events, shall include but not be limited to the following:
1. Conformance with the intent of this article and general plan policies;
 2. Uses of property and existence of sensitive receptors within the area affected by sound;
 3. Factors related to initiating and completing all remedial work;
 4. Age and useful life of the existing sound source;
 5. Hardship to the applicant, or community of not granting the exception;
 6. The time of the day or night the exception will occur;
 7. The duration of the exception; and
 8. The general public interest, welfare and safety.
- E. Within thirty (30) days of receipt of the application, the county shall either (1) approve or conditionally approve such request in whole or in part, (2) deny the request, or (3) refer the request directly to the board of supervisors for action at the next available board meeting. In the event the exception is approved, reasonable conditions may be imposed which minimize the public detriment and may include restrictions on sound level, sound duration and operating hours, an approved method of achieving compliance and a time schedule for its implementation.
- F. Where a request for exception is associated with a discretionary permit, the exception shall be processed concurrently with the discretionary permit. The approving authority for the discretionary permit shall also be the approving authority for the exception. Factors that the approving authority must consider for requests for exception shall be those factors identified above, depending upon the type of exception requested. The approving authority for an exception processed with a discretionary permit shall either (1) approve or conditionally approve such request in whole or in part, or (2) deny the request.

- G. Where an approving authority has approved an exception and complaints are received related to the exception the approving body has the authority to take action, as he or she deems necessary to reduce the sound impacts including modification or revocation of the exception.
- H. Any person aggrieved by the decision of the approving authority may appeal to the board of supervisors by filing written notice of appeal with the board clerk within ten (10) days of the decision. The board of supervisor's decision shall be final and shall be based upon the considerations set forth in this section. (Ord. 5280-B, 2004)