

9

NOISE

9.1 INTRODUCTION

The purpose of the Noise chapter of this EIR is to describe the existing noise environment in the vicinity of the existing medium and large parcel size wineries and farm breweries throughout unincorporated Placer County that would be subject to the proposed Zoning Text Amendment. For each of the facilities, potential impacts related to noise level increases that could occur with implementation of the proposed project are analyzed and mitigation measures are prescribed where necessary. Documents referenced in this chapter include the Environmental Noise Analysis prepared for the proposed project by Bollard Acoustical Consultants, Inc. (see Appendix F),¹ the Placer County General Plan,² the Placer County General Plan EIR,³ and the *Placer County Noise Ordinance*.⁴

This chapter focuses on the ten existing medium (10- to 20-acre) and large (>20 acre) parcel-sized wineries and farm breweries that would be subject to the proposed Zoning Text Amendment, which are shown in Figure 3-1 of the Project Description chapter. Such facilities are referred to as *existing study facilities* throughout this EIR. Potential cumulative noise effects associated with future wineries and farm breweries that would be subject to the proposed Zoning Text Amendment are addressed in Chapter 12, Cumulative Impacts and Other CEQA Sections, of this EIR.

9.2 EXISTING ENVIRONMENTAL SETTING

The Existing Environmental Setting section includes a discussion of acoustical terminology and existing traffic noise and ambient noise levels in the project vicinity.

Fundamentals and Terminology

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), such variations 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 (dB) scale was devised. The dB 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

¹ Bollard Acoustical Consultants, Inc. *Environmental Noise Analysis, Proposed Winery and Farm Brewery Zoning Text Amendment Project*. April 2019.
² Placer County. *Countywide General Plan Policy Document*. August 1994 (updated May 2013).
³ Placer County. *Countywide General Plan EIR*. July 1994.
⁴ Placer County. *Placer County Noise Ordinance*. 2004.

to be expressed as 120 dB. Another useful aspect of the dB scale is that changes in noise levels correspond closely to human perception of relative loudness.

Because dB relies on a logarithmic scale, sound pressure levels (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, the two sources 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 substantially increase the higher sound level.

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 such sounds. 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 9-1 provides a summary of typical A-weighted noise levels for common noise sources.

Table 9-1 Typical Sound Levels of Common Noise Sources		
Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over 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/hour (50 miles/hour)	--80--	Food Blender at 1 meter (3 feet) 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 Heavy Traffic at 90 meters (300 feet)	--60--	Normal Speech at 1 meter (3 feet)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol, November 2009.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptors, day-night average level (L_{dn}) and the community noise equivalent level (CNEL), and exhibits strong correlation with community response to noise for the average person. The percentile-exceeded sound level, denoted 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). The median noise level descriptor, denoted L_{50} , represents the noise level which is exceeded 50 percent of the hour.

The L_{dn} is based upon the average noise level over a 24-hour day, with a +10 dB weighting applied to noise occurring during the nighttime hours of 10:00 PM to 7:00 AM. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, the metric tends to disguise short-term variations in the noise environment.

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. A 3-dB increase is equivalent to a doubling of sound energy (e.g., doubling the volume of traffic on a highway).

Existing Noise Sensitive Receptors

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 such activities.

Because of the rural nature of the portion of Placer County in which the existing study facilities 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

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used with existing traffic data obtained from the Traffic Impact Analysis prepared for the proposed project by KD Anderson & Associates, Inc. to model existing traffic noise levels on selected roadways within the project region. Detailed model inputs are included in Appendix F to this EIR. 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 9-2 for weekday conditions and in Table 9-3 for weekend conditions.

Roadway	Segment	Average Daily Traffic	L _{dn} at 100 feet from Centerline	Distance from Centerline (feet)		
				70 dB L _{dn}	65 dB L _{dn}	60 dB L _{dn}
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: Bollard Acoustical Consultants, Inc., 2019.

Roadway	Segment	Average Daily Traffic	L _{dn} at 100 feet from Centerline	Distance from Centerline (feet)		
				70 dB L _{dn}	65 dB L _{dn}	60 dB L _{dn}
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: Bollard Acoustical Consultants, Inc., 2019.

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 9-2 and Table 9-3 are considered to be conservative estimates of noise exposure along roadways in the project study area. In addition, it is 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.

Existing Ambient Noise Levels

The major source of noise affecting ambient conditions within the immediate vicinity of the existing study facilities is local surface traffic. Distant railroad and aircraft noise is periodically audible at locations within the project area; however, such sources are not dominant and do not appreciably affect local ambient conditions relative to local traffic noise. Similarly, while nearby agricultural operations can temporarily result in increased ambient noise levels, such activities/operations tend to be intermittent and highly localized.

In addition to the off-site noise-generation of project traffic, noise is generated during events held at wineries and breweries located within the county by on-site activities and events. 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 events depends on the noise generation of the event and the existing ambient conditions at the noise-sensitive uses.

To quantify existing ambient noise conditions in the immediate vicinity of existing study facilities, noise surveys were conducted at six wineries and one brewery in Placer County between September 2017 and March 2018. Table 9-4 summarizes the ambient noise survey results. Detailed ambient noise measurement results are presented in tabular and graphical formats in Appendix F to this EIR.

As shown in Table 9-4, ambient noise levels in the immediate vicinity of the study facilities 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 events were not occurring at the study facilities, in order to document background noise conditions at representative locations near the existing study facilities to establish a baseline for comparison against noise generated by events held at such locations. Although events held at the study facilities currently 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 the purpose of this analysis.

Table 9-4 Long-Term Noise Measurement Results						
Location	Date	Daytime (7AM to 7PM)		Evening (7PM to 10PM)		L_{dn}, dB
		L_{eq}, dB	L_{max}, dB	L_{eq}, dB	L_{max}, dB	
Lone Buffalo Vineyards	September 11, 2017	42	58	58	63	63
Wise Villa Winery and Bistro	October 8, 2017	48	64	36	54	46
Dono Dal Cielo Vineyard and Winery	December 16, 2017	52	70	48	67	52
Hillenbrand Farmhaus Brewery	March 11, 2018	55	74	45	62	54
Mt. Vernon Winery	March 10, 2018	49	68	45	64	52
Rancho Roble Vineyards	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., 2019.

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

9.3 REGULATORY CONTEXT

In order to limit exposure to physically and/or psychologically damaging noise levels, the State of California, various county governments, and most municipalities in the State have established standards and ordinances to control noise. The following provides a general overview of the existing State and local regulations that are relevant to the proposed project. Federal plans, policies, regulations, or laws related to noise are not directly applicable to the proposed project.

State Regulations

The following are the State environmental laws and policies relevant to noise.

California State Building Codes

The State Building Code, Title 24, Part 2 of the State of California Code of Regulations, establishes uniform minimum noise insulation performance standards to protect persons within new buildings which house people, including hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings.

Title 24 mandates that interior noise levels attributable to exterior sources shall not exceed 45 dB L_{dn} or CNEL in any habitable room. Title 24 also mandates that for structures containing noise-sensitive uses to be located where the L_{dn} or CNEL exceeds 60 dB, an acoustical analysis must be prepared to identify mechanisms for limiting exterior noise to the prescribed allowable interior

levels. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the structure must also specify a ventilation or air conditioning system to provide a habitable interior environment.

Local Regulations

The following are the local environmental goals and policies relevant to noise.

Placer County General Plan

The relevant goals and policies from the Placer County General Plan related to noise are presented below.

- Goal 9.A To protect County residents from the harmful and annoying effects of exposure to excessive noise.
- Policy 9.A.1 The County shall not allow development of new noise-sensitive uses where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 9-1 (see Table 9-5) 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 9-1 (see Table 9-5).
- Policy 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 9-1 (see Table 9-5) 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.
- Policy 9.A.6 The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to Table 9-3 (see Table 9-6).
- Policy 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 9-3 (see Table 9-6), unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 9-3 (see Table 9-6).

Table 9-5		
Allowable L_{dn} Noise Levels within Specified Zone Districts		
Applicable to New Projects Affected by or Including Non-Transportation Noise Sources¹		
Zone District of Receptor	Property Line of Receiving Use (L_{dn}, dB)	Interior Spaces²
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	---	---
Airport	---	45
Unclassified	---	---
Farm	--- ⁵	---
Agriculture Exclusive	--- ⁵	---
Forestry	---	---
Timberland Preserve	---	---
Recreation & Forestry	70	---
Open Space	---	---
Mineral Reserve	---	---

Notes:

- 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 L_{dn} 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, or 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 9-1 and Table 9-3 (see Table 9-5 and Table 9-6). Similarly, where an existing use which is not subject to a use permit causes noise in excess of the allowable levels in Tables 9-1 and 9-3 (see Table 9-5 and Table 9-6), 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. “State of the art” should include the use of modern equipment with lower noise emissions, site design, and plant orientation to mitigate off-site noise impacts, and similar methodology.
- 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.

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- 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.

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 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 L_{dn} of 70 dBA will be considered acceptable outdoor exposure at a residence. As noted in the Environmental Noise Analysis, this standard is considerably less restrictive than the County's Noise Ordinance standards shown in Table 9-8 below; thus, for the purposes of this analysis, the County's Noise Ordinance standards take precedence when enforcing standards for winery and farm brewery uses.

Source: Placer County General Plan, 2013.

Table 9-6 Maximum Allowable Noise Exposure Transportation Noise Sources			
Noise Sensitive Land Uses	Outdoor Activity Area¹	Interior Spaces	
	L_{dn}, dB	L_{dn}/CNEL, dB	L_{eq}, dB²
Residential	60 ³	45	--
Transient Lodging ⁴	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60 ³	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:

- 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 periods 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.

Source: Placer County General Plan, 2013.

Policy 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 9-3 (see Table 9-6) or the performance standards in Table 9-3 (see Table 9-6) at outdoor activity areas or interior spaces of existing noise sensitive land uses.

Policy 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 Tables 9-1 and 9-3 (see Table 9-5 and Table 9-6), 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 Tables 9-1 and 9-3 (see Table 9-5 and Table 9-6). 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.

Policy 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.

Policy 9.A.12 Where noise mitigation measures are required to achieve the standards of Tables 9-1 and 9-3 (see Table 9-5 and Table 9-6), the emphasis of such measure 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.

Placer County Community Plans

Various Community Plans have been adopted in Placer County over the years. 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 the Placer County Noise Ordinance (discussed below), or do not contain numeric noise standards.

As will be discussed below, 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 (see Table 9-7) of the Auburn/Bowman Community Plan indicates that the daytime standard for non-transportation noise sources is 50 dB L_{eq} , which is 5 dB more restrictive than the corresponding Noise Ordinance daytime standard.⁵

Table 9-7		
Noise Level Performance Standards		
For New Projects Affected by or Including Non-Transportation Sources		
Noise Level Descriptor	Daytime (7 AM to 10 PM)	Nighttime (10 PM to 7 AM)
Hourly L_{eq} , dB	50	45
Maximum level, dB	70	65
Note: Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).		
<i>Source: Auburn/Bowman Community Plan.</i>		

Placer County Noise Ordinance

Section 9.36.060 of the Placer County Code establishes non-transportation noise level standards for noise-sensitive receptors. The purpose of the Noise Ordinance is to implement the noise level standards identified in the Placer County General Plan. The specific language of Section 9.36.060 is provided below:

- 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:

⁵ 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.

1. Causes the exterior sound levels when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by five (5) dBA; or
2. Exceeds the sound level standards as set forth in Table 1 (see Table 9-8), whichever is the greater.

Table 9-8		
Noise Level Standards for Non-Transportation Noise Sources		
Sound Level Descriptor	Daytime (7 AM to 10 PM)	Nighttime (10 PM to 7 AM)
Hourly L_{eq} , dB	55	45
L_{max} , dB	70	65
<i>Source: Placer County Noise Ordinance.</i>		

- B. Each of the sound level standards specified in Table 1 (see Table 9-8) shall be reduced by five (5) 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 (5) 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 (see Table 9-8).

Winery Ordinance

Section 17.56.330 of the Placer County Code contains the County’s Winery Ordinance, as approved in 2008. Per Section 17.56.330(D)(7)(b)(iii) of the Winery Ordinance, any promotional event proposing outdoor amplified music which is covered by the Winery Ordinance shall be subject to the standards and regulations included in the County’s Noise Ordinance.

9.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methodology used to analyze and determine the potential impacts of the proposed Zoning Text Amendment related to noise. In addition, a discussion of the project’s impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

According to CEQA Guidelines and the County’s Initial Study Checklist, a significant impact would occur related to noise and vibration if the implementation of the proposed Zoning Text Amendment would result in any of the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan, Community Plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Summary of Placer County Noise Standards

Applicable Placer County noise level standards from the Placer County General Plan and the Placer County Noise Ordinance are summarized below.

Transportation Noise

The Placer County General Plan Noise Element applies 60 dB L_{dn}/CNEL exterior and 45 dB L_{dn}/CNEL interior noise level standards at the property lines of residential uses affected by transportation noise sources. The County may conditionally allow exterior noise levels between 60 and 65 dB L_{dn} for residential uses, provided that practical noise reduction measures have been implemented and interior noise levels remain in compliance with the 45 dB L_{dn} interior standard.

Non-Transportation Noise

For non-transportation noise sources, the County's General Plan Noise Element applies a 50 dB L_{dn} noise level standard at the property lines of residential uses. In addition, as shown in Table 9-8, the Placer County Noise Ordinance includes daytime and nighttime standards for non-transportation noise sources which are generally more restrictive than those contained in the Placer County General Plan. Under the proposed Zoning Text Amendment, the County's Winery Ordinance would continue to require compliance with the Noise Ordinance for the study facilities, unless a more restrictive standard is specified in a community plan, as is the case for the Auburn/Bowman Community Plan. 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, given that the daytime average (L_{eq}) noise standard is more restrictive (i.e., 5 dB lower) than the Noise Ordinance standard. The two existing study facilities located within the Auburn/Bowman Community Plan are Mt. Vernon Winery and Vina Castellano Winery.

It should be noted that both the Auburn/Bowman Community Plan standards identified in Table 9-7, and the Noise Ordinance standards identified in Table 9-8, are reduced by five dB because the on-site noise sources associated with events at the study facilities consist of speech and music.

While the County’s General Plan noise standards shown in Table 9-5 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 study facilities, the County’s Noise Ordinance standards shown in Table 9-8 are more restrictive than the General Plan standards shown in Table 9-8. As a result, compliance with the Noise Ordinance standards identified in Table 9-8 would ensure compliance with the County’s General Plan standards as well. Therefore, the focus of this analysis is on compliance with the County’s Noise Ordinance standards rather than the General Plan standards.

Similarly, the daytime noise level standard identified in the Auburn/Bowman Community Plan (see Table 9-7) is more restrictive than both the corresponding General Plan and Noise Ordinance standards. As a result, compliance with the Auburn/Bowman Community Plan daytime standard identified in Table 9-8 would ensure compliance with the County’s General Plan and Noise Ordinance standards as well. Therefore, this analysis also addresses compliance with the Auburn/Bowman Community Plan daytime standard.

Substantial Increase Criteria

Generally, a project may have a significant effect on the environment if the project would substantially increase the ambient noise levels for adjoining areas or expose people to measurably severe noise levels. In practice, a noise impact may be considered significant if the project would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses.

For off-site traffic noise, Placer County, like many jurisdictions, does not have an adopted policy regarding significant increases in ambient noise. For the purpose of this analysis, Bollard Acoustical Consultants, Inc. relied on the graduated scale developed by the Federal Interagency Committee on Noise (FICON) (see Table 9-9).

Table 9-9	
Significance of Changes in Cumulative Noise Exposure	
Ambient Noise Level Without Project (L_{dn})	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60 to 65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more
<i>Source: Federal Interagency Committee on Noise, 1992.</i>	

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 L_{dn}, a larger increase in noise levels was required to achieve a negative reaction than was necessary in more elevated noise environments. Based on the FICON research, as shown in Table 9-9, 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 L_{dn}. Where pre-project ambient conditions are between 60 and 65 dB L_{dn}, a 3 dB increase is applied as the standard of significance. In areas already exposed to pre-project noise levels in excess of 65 dB L_{dn}, a 1.5 dB increase is considered significant.

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 and 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.

It should be noted that audibility is not a test of significance according to CEQA. If such were the case, any project that 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.

Issues Not Discussed Further

The Initial Study prepared for the proposed project (see Appendix D) determined that the proposed Zoning Text Amendment would result in a less-than-significant impact related to the following:

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; and
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

In addition, the proposed Zoning Text Amendment would not directly result in any construction or other intermittent activity that could generate substantial vibration or result in substantial temporary or periodic noise level increases. It should be noted that under the current Winery Ordinance and following the proposed Zoning Text Amendment, existing study facilities would have the ability to expand permanent parking spaces within their sites in order to accommodate tasting room guests, agricultural activities, and event attendees. Concerns have been expressed during the NOP public review period for this project that the additional flexibility provided by the Zoning Text Amendment with respect to the ability to hold more events, could increase demand for parking. Grading and other construction activities associated with such parking lot expansion could generate groundborne vibration and/or result in temporary noise level increases.

However, per Section 9.36.030 of the Placer County Code, sound or noise emanating from construction activities occurring during the following time periods is exempt from the noise level standards included in the County's Noise Ordinance, provided that all construction equipment is fitted with factory-installed muffling devices and that all construction equipment is maintained in good working order: a) Monday through Friday, 6:00 AM to 8:00 PM (during daylight savings);

b) Monday through Friday, 7:00 AM to 8:00 PM (during standard time); and c) Saturdays, 8:00 AM to 6:00 PM. All construction activities associated with potential future parking lot expansion would be required to comply with such standards. Furthermore, any future parking lot construction activities would occur over a relatively short period of time and, thus, would not result in the prolonged exposure of sensitive receptors to excessive groundborne vibration or noise levels. Based on the above, no impact would occur with respect to the following:

- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

Accordingly, impacts related to the above are not further analyzed or discussed in this EIR.

Method of Analysis

Below are descriptions of the methodologies used to estimate traffic noise along area roadways, calculate existing ambient noise levels at the existing study facilities, and estimate typical noise levels associated with Special Events. Further modeling details and calculations are provided in Appendix F to this EIR. The results of the noise analyses were compared to the standards of significance discussed above in order to determine the associated level of impact.

Traffic Noise Methodology

As noted previously, the FHWA RD-77-108 model was used to model existing traffic noise levels on selected roadways within the project region. The model is based upon the CALVENO noise emission 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 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. Direct inputs to the model included traffic volumes provided by KD Anderson & Associates, Inc. Volumes were provided for Existing, Existing Plus Project, Cumulative No Project, and Cumulative Plus Project Conditions.

Ambient Noise Measurement Methodology

Long-term (24-hour) noise samples at certain existing study facilities were captured with Larson Davis Model 820, Lxt and 831 Type I sound level meters. 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).

Event Noise Methodology

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 Zoning Text Amendment are shown below in Table 9-10. Such data includes a combination of noise measurement results conducted by Bollard Acoustical Consultants, Inc. in recent years, as well as published sound level data for persons conversing at various levels.⁶

Table 9-10 Typical Sound Levels for Special Events	
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
<i>Source: Bollard Acoustical Consultants, Inc., 2019.</i>	

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 the 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 the 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 the same events were 10 to 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 level sources 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 to 8 dB lower than the reference sound levels shown in Table 9-10 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 9-10 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. Thus, 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

⁶ Harris, Cyril M. *Handbook of Acoustical Measurements and Noise Control*. 1998.

200 feet from the speakers (a doubling of distance from the 100-foot location), the expected sound level would be 12 dB lower, 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. The 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 9-10. In addition, an offset of -1.5 dB per thousand feet from the noise sources is required to account for atmospheric absorption.

According to the ambient noise level data contained in Table 9-4, daytime average ambient conditions in the rural areas of Placer County averaged approximately 50 dB L_{eq} . Thus, satisfaction with the County’s 55 dB L_{eq} Noise Ordinance 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 or less, 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 (7:00 PM to 10:00 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 non-transportation noise level increases in the Section 9.36.060.A.1 of the Placer County Code. The distances to the 45 and 50 dB L_{eq} noise contours are identified in Table 9-11 below.

Table 9-11		
Distances Required to Attenuate Event Noise		
Event/Activity	Distance to Contour (feet)	
	50 dB L_{eq}	45 dB L_{eq}
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
Note: The distances presented above do not include any additional attenuation which would result from shielding by intervening topography, structures, or vegetation.		
Source: <i>Bollard Acoustical Consultants, Inc., 2019.</i>		

Nighttime hours, defined by the Noise Ordinance and Auburn/Bowman Community Plan, as after 10 PM, do not need to be addressed given that the proposed Zoning Text Amendment prohibits events from occurring after 10 PM.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on implementation of the proposed project in comparison with the standards of significance identified above.

9-1 Exposure of persons to or generation of off-site traffic noise levels in excess of standards established in the local General Plan, Community Plan or noise ordinance, or applicable standards of other agencies, or result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Based on the analysis below, the impact is *less than significant*.

Table 9-12 and Table 9-13 summarize the Existing Condition and predicted Existing Plus Project Condition traffic noise levels at a distance of 100 feet from the centerlines of roadway segments in the project area for the weekday and weekend scenarios, respectively. As shown in the tables, traffic noise generated by additional events held by-right at all existing study facilities concurrently would result in traffic noise level increases to the off-site roadway network ranging from 0.0 to 0.7 dB L_{dn} on weekdays and 0.0 to 1.1 dB L_{dn} on weekends. Relative to the FICON significance criteria identified in Table 9-9, such increases would not be substantial. The number of additional by-right events assumed to occur at existing study facilities under the proposed Zoning Text Amendment, and the related traffic estimates, are described in Chapter 10, Transportation and Circulation, of this EIR. Therefore, off-site traffic generated by the proposed Zoning Text Amendment would not result in a substantial increase in traffic noise levels under the Existing Plus Project Condition.

Based on the above, the proposed Zoning Text Amendment would not result in exposure of persons to or generation of off-site traffic noise levels in excess of standards established in the Placer County General Plan and Noise Ordinance, or applicable standards of other agencies, or result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Thus, a *less-than-significant* impact would occur.

Mitigation Measure(s)

None required.

**Table 9-12
Existing Plus Project Weekday Traffic Volumes and Traffic Noise Modeling Results**

Roadway	Segment	Traffic Noise Level at 100 feet (L _{dn} , dB)		
		Existing	Existing Plus Project	Increase
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	62.8	62.8	0.0
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	47.0	47.0	0.0
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	52.1	52.3	0.3
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	50.8	50.9	0.1
Bell Rd	Coyote Ridge Ct to Miracle Ln	57.1	57.1	0.0
Bell Rd	Mallard Way to Cramer Rd	53.6	53.6	0.0
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	46.4	47.2	0.8
Combie Rd	Placer Hills Rd to Wooley Creek Ln	55.2	55.2	0.0
Cramer Rd	Bell Rd to SR 49	48.4	48.4	0.0
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	48.1	48.8	0.7
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	51.4	51.4	0.0
Fowler Rd	Virginiatown Rd to SR 193	56.2	56.4	0.2
Fleming Rd	Gladding Rd to McCourtney Rd	37.2	37.2	0.0
Fruitvale Rd	Fowler Rd to Gold Hill Rd	57.4	57.6	0.2
Gold Hill Rd	Virginiatown Rd to SR 193	57.6	58.0	0.4
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	56.4	56.4	0.1
Lone Star Rd	Bell Rd to SR 49	52.1	52.1	0.0
McCourtney Rd	Wise Rd to Big Ben Rd	56.4	56.6	0.2
Millertown Rd	Wise Rd to Vada Ranch Rd	42.6	42.6	0.0
Mt. Vernon Rd	Hastings Ln to Meyers Ln	58.7	58.8	0.1
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	60.4	60.5	0.1
Nicolaus Rd	Canal to Maverick Ln	60.5	60.5	0.0
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	63.2	63.2	0.0
Ridge Rd	Gold Hill Rd to Ophir Rd	49.9	49.9	0.0
Sierra College Blvd	Del Mar Rd to King Rd	65.7	65.8	0.1
SR 193	Sierra College Blvd to Fowler Rd	63.9	64.0	0.1
Virginiatown Rd	Coyote Ln to Fowler Rd	52.4	52.5	0.1
Wise Rd	McCourtney Rd to Crosby Herold Rd	59.8	60.0	0.2
Wise Rd	Crosby Herold Rd to Garden Bar Rd	58.4	58.7	0.3
Wise Rd	Garden Bar Rd to Wally Allan Rd	54.9	55.2	0.3
Wise Rd	County Lane to Crater Hill Rd	52.9	53.1	0.2
Wise Rd	Bald Hill Rd to Ophir Rd	50.9	51.0	0.1

Source: Bollard Acoustical Consultants, Inc., 2019.

**Table 9-13
Existing Plus Project Weekend Traffic Volumes and Traffic Noise Modeling Results**

Roadway	Segment	Traffic Noise Level at 100 feet (L _{dn} , dB)		
		Existing	Existing Plus Project	Increase
Auburn Folsom Rd	Dick Cook Rd to Horseshoe Bar Rd	62.7	62.7	0.0
Ayers Holmes Rd	Mt. Vernon Rd to Wise Rd	47.7	47.7	0.0
Bald Hill Rd	Crater Hill Rd to Valle Vista Ct	51.0	51.4	0.3
Baxter Grade Rd	Wise Rd to Mt. Vernon Rd	48.9	49.1	0.2
Bell Rd	Coyote Ridge Ct to Miracle Ln	56.9	56.9	0.0
Bell Rd	Mallard Way to Cramer Rd	53.0	53.1	0.0
Chili Hill Rd	Lozanos Rd to Gold Hill Rd	45.1	46.2	1.1
Combie Rd	Placer Hills Rd to Wooley Creek Ln	54.8	54.8	0.0
Cramer Rd	Bell Rd to SR 49	48.3	48.3	0.0
Crosby Herold Rd	Wise Rd to Meadow Creek Rd	48.5	49.1	0.6
Del Mar Ln	Sierra College Blvd to Rock Hill Winery	51.6	51.6	0.0
Fowler Rd	Virginiatown Rd to SR 193	56.3	56.5	0.2
Fleming Rd	Gladding Rd to McCourtney Rd	40.5	40.5	0.0
Fruitvale Rd	Fowler Rd to Gold Hill Rd	56.4	56.7	0.2
Gold Hill Rd	Virginiatown Rd to SR 193	58.4	58.7	0.4
Horseshoe Bar Rd	Val Verde Rd to Auburn Folsom Rd	54.8	54.9	0.1
Lone Star Rd	Bell Rd to SR 49	51.8	51.8	0.0
McCourtney Rd	Wise Rd to Big Ben Rd	56.5	56.7	0.2
Millertown Rd	Wise Rd to Vada Ranch Rd	42.2	42.2	0.0
Mt. Vernon Rd	Hastings Ln to Meyers Ln	60.0	60.0	0.1
Mt. Vernon Rd	Vineyard Dr to Millerstown Rd	59.9	60.0	0.1
Nicolaus Rd	Canal to Maverick Ln	59.4	59.4	0.0
Placer Hills Rd	Pinewood Wy to Winchester Club Dr	62.2	62.2	0.0
Ridge Rd	Gold Hill Rd to Ophir Rd	48.9	48.9	0.0
Sierra College Blvd	Del Mar Rd to King Rd	64.9	65.0	0.1
SR 193	Sierra College Blvd to Fowler Rd	63.9	64.0	0.1
Virginiatown Rd	Coyote Ln to Fowler Rd	53.5	53.6	0.1
Wise Rd	McCourtney Rd to Crosby Herold Rd	60.0	60.2	0.2
Wise Rd	Crosby Herold Rd to Garden Bar Rd	58.6	58.9	0.3
Wise Rd	Garden Bar Rd to Wally Allan Rd	54.6	54.9	0.3
Wise Rd	County Lane to Crater Hill Rd	51.9	52.1	0.2
Wise Rd	Bald Hill Rd to Ophir Rd	50.5	50.6	0.1

Source: Bollard Acoustical Consultants, Inc., 2019.

9-2 Exposure of persons to or generation of on-site traffic noise levels in excess of standards established in the local General Plan, Community Plan or noise ordinance, or applicable standards of other agencies, or result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Based on the analysis below, the impact is *less than significant*.

In addition to traffic noise associated with increased vehicle trip generation on local roadways, events occurring under the proposed Zoning Text Amendment could result in traffic noise associated with on-site vehicle circulation at each study facility (i.e., parking lots and driveways). As noted previously, two different types of events are being defined as part of the proposed Zoning Text Amendment: Agricultural Promotional Events and Special Events. 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 proposed Zoning Text Amendment, weddings would be permitted as Special Events provided that the noise generation of the wedding events do not exceed the County's Noise Ordinance standards at the nearest residences. Wedding event noise is discussed in Impact 9-3.

Using the FHWA Model with an assumed on-site vehicle speed of 15 mph, the peak hour average traffic noise generation associated with the Agricultural Promotional and Special events was computed to be 40 and 46 dB L_{eq} at a reference distance of 50 feet from the on-site traffic routes. Such noise levels would comply with the Placer County 55 dB L_{eq} daytime noise level standard at the nearest off-site noise-sensitive receptors to the existing study facilities. These noise levels would also be satisfactory relative to the 50 dB L_{eq} 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 vicinity of the existing study facilities (as shown in Table 9-4). Thus, traffic noise related to on-site traffic during both Agricultural Promotional and Special Events would not result in exposure of persons to or generation of noise levels in excess of standards established in the Placer County General Plan and Noise Ordinance, or applicable standards of other agencies, or result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Therefore, a *less-than-significant* impact would occur.

Mitigation Measure(s)

None required.

9-3 Exposure of persons to or generation of non-transportation noise levels in excess of standards established in the local General Plan, Community Plan or noise ordinance, or applicable standards of other agencies. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

Events occurring at existing study facilities within the County would continue to be required to comply with the County's Noise Ordinance, just as such compliance is required currently. For facilities within the Auburn/Bowman Community Plan, the Zoning Text

Amendment requires existing study facilities to comply with the Community Plan's more restrictive daytime standard, which would also ensure compliance with the Noise Ordinance. The two existing study facilities located within the Auburn/Bowman Community Plan are Mt. Vernon Winery and Vina Castellano Winery.

Although Agricultural Promotional events could occur with greater frequency than currently occurs under the adopted Winery Ordinance, the County Noise Ordinance, and Auburn/Bowman Community Plan, do 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 same standards. The proposed Zoning Text Amendment does not affect the protection provided to the nearby residences by continuing to require that all events maintain compliance with the Noise Ordinance or more restrictive Auburn/Bowman Community Plan standards.

However, while increases in the allowable noise generation of events is not included in the proposed Zoning Text Amendment, the addition of "weddings" as a type of Special Event would introduce a new type of noise source which could potentially generate more noise than other types of Special Events. 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 Zoning Text Amendment sets maximum attendance limits for Special Events, including weddings, at 100 people for medium parcel-sized study facilities, and 200 people for large parcel-sized facilities.

As noted previously, the Environmental Noise Analysis included an assessment of the distances required to attenuate sound levels associated with weddings and other events to the County's established noise level standards. Table 9-11 provides the required setback distances for various types of events and activities. The setback distances included in Table 9-11 do not account for shielding that may be provided by topography and existing structures in the vicinity of the event area. In order to meet such standards, wedding receptions with amplified speech and music occurring at existing facilities within all areas of the County except the Auburn/Bowman Community Plan area, would require a 750-foot setback from the nearest sensitive receptor during daytime hours and a 1,225-foot setback during evening hours. For the two facilities within the Auburn/Bowman Community Plan area, wedding receptions with amplified speech and music would require a 1,225-foot setback from the nearest sensitive receptors during both daytime and evening hours. Per Bollard Acoustical Consultants, Inc., based on a review of aerial photographs, some existing facilities would not include sufficient setback distances for weddings.

Based on the above non-transportation noise associated with weddings, which would be a new type of Special Event allowable under the proposed Zoning Text Amendment, could conflict with the County's established thresholds at the property lines of the nearest sensitive receptors. Therefore, the proposed Zoning Text Amendment could result in a **significant** impact related to exposure of persons to or generation of non-transportation noise levels in excess of standards established in the Placer County General Plan,

Auburn/Bowman Community Plan, the Placer County Noise Ordinance, or applicable standards of other agencies.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

- 9-3 *The Zoning Text Amendment shall be revised to state that 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 9-11 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 or equal to those identified in Table 9-11, then additional acoustical analysis shall not 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 9-11, a site-specific noise analysis shall be required to evaluate compliance with the County's noise standards.*

The distances to the noise contours shown in Table 9-11 do not include any attenuation of sound caused by intervening structures, vegetation, or topography. In addition, the Table 9-11 contours do not take into account the directionality of amplified sound system speakers, which can be 10 to 15 dB lower behind the speaker than in front of the speaker. As a result, the Table 9-11 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 9-11. It shall be 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 shall 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 to 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.*