



ENVIRONMENTAL NOISE IMPACT REPORT FOR:

Bell Wine Cellars Use Permit Modification
6200 Washington Street
County of Napa, CA
RGDL Project #: 15-051

PREPARED FOR:

County of Napa
1195 Third Street, Suite 210
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PREPARED BY:

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DATE:

12 February 2016

1. Introduction

Bell Wine Cellars is located on a 7.8 acre parcel on the east side of the State Highway 29 frontage road, Washington Street approximately 0.5 miles south of the town of Yountville. The winery site is located ± 2000 feet from the Highway. The parcel and its neighbors are within Napa County's AP (Agricultural Preserve) Zoning District and the General Plan Designation is AR (Agricultural Resource). The nearest residential land uses are houses on the parcels to the south and to the west.

The proposed project would modify the winery's use permit to allow increased wine production, increased visitation, increased number of large events and interior remodeling. This report assesses the potential noise impacts of the project by comparing winery generated noise levels to the County General Plan and Noise Ordinance standards as well as assessing the increase in noise.

2. Environmental Noise Fundamentals

Noise can be defined as unwanted sound. It is commonly measured with an instrument called a sound level meter. The sound level meter captures the sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels. To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local General Plans as well as federal and state noise regulations (e.g. Caltrans, EPA, OSHA and HUD). The abbreviation dBA is sometimes used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car passby or airplane flyover. To express the average noise level the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L_{90} which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (DNL or L_{dn}) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the L_{eq} except they include a 10 dB penalty during nighttime hours (and a 5 dB penalty during evening hours in the CNEL) to account for peoples increased sensitivity during these hours.

In environmental noise, a change in noise level of 3 dB is considered a just noticeable difference. A 5 dB change is clearly noticeable, but not dramatic. A 10 dB change is perceived as a halving or doubling in loudness.

3. Acoustical Criteria

3.1. Napa County General Plan

The Noise Element of the County’s General Plan has policies regarding noise and land use compatibility. Table 1 provides guidelines for the compatibility of land uses with various noise exposures. The County uses the Day-Night Average Sound Level (L_{dn}) descriptor. An L_{dn} of less than 55 dBA is considered “completely compatible” with residential land use which means that the specified land use is satisfactory and both the indoor and outdoor environments are pleasant. Residential land use exposed to an L_{dn} of 55-60 dBA is considered “tentatively compatible” which means that noise exposure may be of concern, but common building construction practices will make the indoor living environment acceptable, even for sleeping quarters, and the outdoor environment will be reasonably pleasant. It should be noted that the county’s compatibility standards are typically used to assess the compatibility of noise sensitive land use in potentially noisy areas and for determining the need for noise control measures for new noise sensitive development.

Table 1: Land Use Compatibility for Community Noise Environments

Land Use	Day-Night Average Sound Level, L_{dn}			
	Completely Compatible	Tentatively Compatible	Normally Incompatible	Completely Incompatible
Residential	Less than 55 dBA	55-60 dBA	60-75 dBA	Greater than 75 dBA
Commercial	Less than 65 dBA	65-75 dBA	75-80 dBA	Greater than 80 dBA
Industrial	Less than 70 dBA	70-80 dBA	80-85 dBA	Greater than 85 dBA

The following General Plan policy is applicable to the project since the winery is a noise commercial land use.

Policy CC-48: Where proposed commercial or industrial land uses are likely to produce noise levels exceeding the standards contained in this Element at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

3.2. Napa County Code of Ordinances

Chapter 8.16 of Napa County Code of Ordinances contains noise regulations which regulate the noise generation of land uses such as the Bell Wine Cellars winery by specifying noise limits for potentially affected land uses. These exterior noise limits are excerpted below.

8.16.070 - Exterior noise limits.

A. Maximum Permissible Sound Levels by Receiving Land Use.

- 1. The noise standards for the various categories of land use identified by the noise control officer, as presented in Tables 8.16.060 and 8.16.070 shall, unless otherwise specifically indicated, apply to all such property within a designated zone.*
- 2. No person shall operate, or cause to be operated, any source of sound at any location within the unincorporated area of the county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:*
 - a) The noise standard for that land use as specified in Table 8.16.070 for a cumulative period of more than thirty minutes in any hour [L_{50}]; or*
 - b) The noise standard plus five dB for a cumulative period of more than fifteen minutes in any hour [L_{25}]; or*
 - c) The noise standard plus ten dB for a cumulative period of more than five minutes in any hour [L_8]; or*
 - d) The noise standard plus fifteen dB for a cumulative period of more than one minute in any hour [L_2];*
 - e) The noise standard plus twenty dB or the maximum measured ambient level, for any period of time [L_{max}].*
- 3. If the measured ambient noise level differs from that permissible within any of the first four noise limit categories above, the allowable noise exposure standard shall be the ambient noise level.*
- 4. If the measurement location is on a boundary between two different zones, the sound level limit applicable to the quieter noise zone shall apply.*
- 5. Wherever possible, the ambient noise level shall be measured at the same location along the property line utilized in subsection (A)(2) with the alleged offending noise source inoperative. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period sufficient to measure the ambient noise level, the ambient noise level may be determined by traveling away from the noise source to a point where a steady-state decibel reading is achieved. If this test is not possible, the noise level measured while the source is in operation shall be compared directly to the noise level standards.*

- ##### *B. Correction for Character of Sound.*
- In the event the alleged offensive noise, as judged by the noise control officer, contains a steady, audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech, the standard limits set forth in Tables 8.16.060 and 8.16.070 shall be reduced by five dB, but not lower than forty-five.*

**Table 2 [Napa Code of Ordinances Table 8.16.070] Exterior Noise Limits
 (Levels not to be exceeded more than 30 minutes in any hour)**

Land Use Type	Time Period	Noise Level (dBA) By Noise Zone Classification		
		Rural	Suburban	Urban
Single-Family Homes and Duplexes	10 p.m. to 7 a.m.	45	45	50
	7 a.m. to 10 p.m.	50	55	60
Multiple Residential 3 or More Units Per Building (Triplex +)	10 p.m. to 7 a.m.	45	50	55
	7 a.m. to 10 p.m.	50	55	60
Office and Retail	10 p.m. to 7 a.m.	60		
	7 a.m. to 10 p.m.	65		
Industrial and Wineries	Anytime	75		

The lands neighboring the project site are designated by the county as agricultural. Since agricultural land use has a low sensitivity to noise, this study applies the Industrial and Wineries limit of 75 dBA, with an exception for the residences on the neighboring parcels. At the residences the Rural Single-Family noise limits are used. This is consistent with Napa County’s administrative practice of designating as residential the house, and the area around the house used in a residential capacity, when the house occurs on agricultural land¹. The noise ordinance limits that are applied to the project are shown in Table 3.

Table 3: Noise Ordinance Limits Applied to Nearby Lands

	L _{max}	L ₂	L ₈	L ₂₅	L ₅₀
Residences to the south and west - Daytime	70	65	60	55	50
Residences to the south and west – Daytime with speech or tonal sounds	65	60	55	50	45
Residences to the south and west - Nighttime	65	60	55	50	45
Nearby non-residential areas	95	90	85	80	75

¹ Telephone conversation with John McDowell, Deputy Planning Director, Napa County, 2 Nov. 2015

3.3. Increase in Noise

The California Environmental Quality Act (CEQA) Guidelines require the determination of whether a project will generate a substantial increase in noise levels in the project vicinity above levels existing without the project. CEQA does not specify a method for determining when a project would cause a significant increase in noise. Likewise, the County of Napa does not have criteria for determining when a noise increase is significant. An FAA Draft Policy discusses screening and impact thresholds for increases in aircraft noise. These thresholds are used to assess the significance of noise increases due to the project as follows – an increase in L_{dn} is significant if it is;

- 5 dBA or greater and the future L_{dn} is less than 60 dBA, or
- 3 dBA or greater and the future L_{dn} is 60 dBA or greater and less than 65 dBA, or
- 1.5 dBA or greater and the future L_{dn} is 65 dBA or greater.
-

4. Existing Noise Environment

To quantify the existing noise environment, noise measurements were made at the project site and at the adjacent property to the south. A long-term (one week) measurement was made at the south property line of the project site nearest the residences on the parcel to the south. Short-term noise measurements were conducted of HVAC/refrigeration equipment and activities on the project site including crushing/pressing as well as a relatively large outdoor event at the winery. The noise measurement locations and winery noise source locations are shown in Figure 1. Table 4 shows the results of the short-term noise measurements.

Figure 1: Site Plan and Ambient Noise Measurement Locations

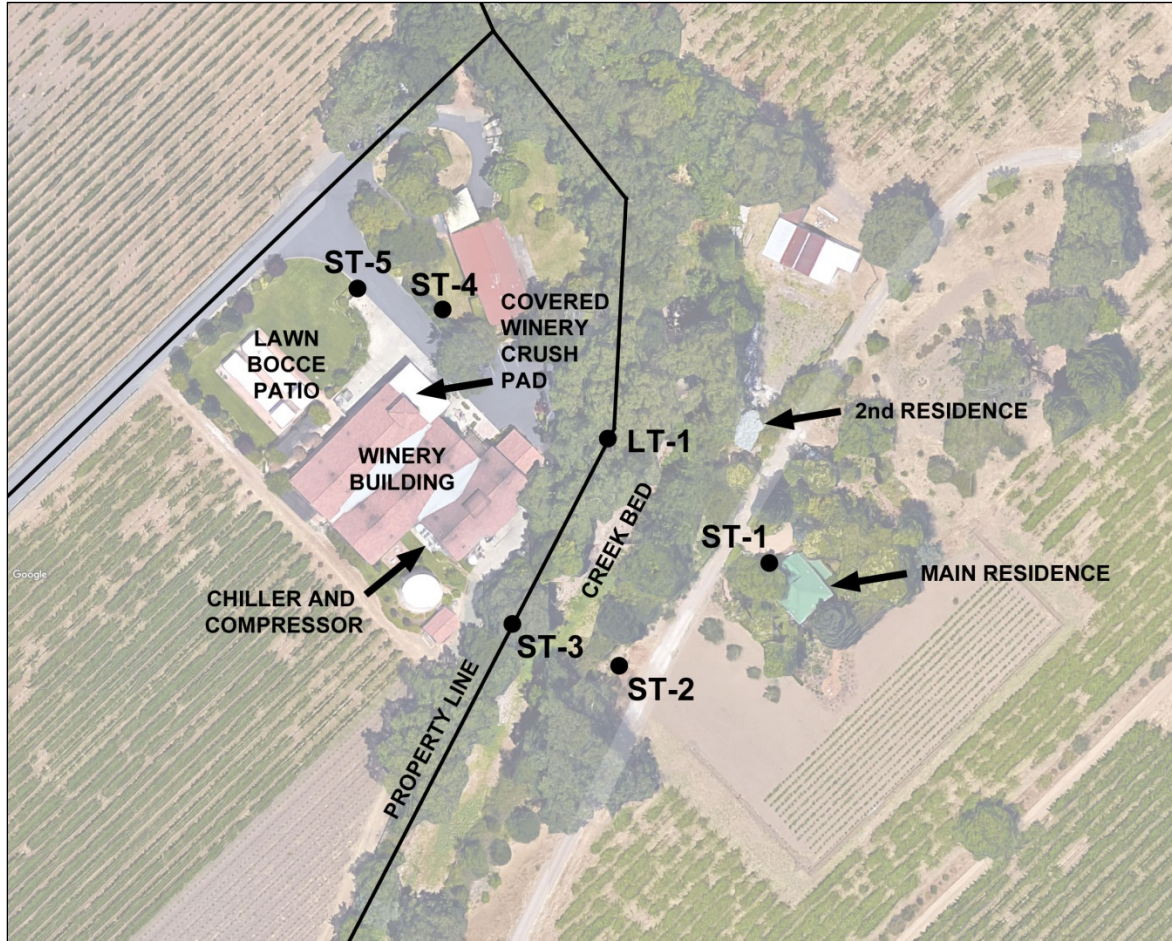


Table 4: Short-Term Noise Measurement Results

Location/Noise Source		Date/Time	A-Weighted Noise Level, dBA						
			L _{eq}	L _{max}	L ₂	L ₈	L ₂₅	L ₅₀	L ₉₀
ST-1	On patio in front of main residence during crushing and pressing	7 October 2015 10:19 - 11:19 AM	44	59	50	46	44	43	40
ST-2	Across creek from mech. equipment	7 October 2015 11:22 - 11:37 AM	48	52	50	50	49	48	41
ST-3	At property line near mech. equip.	6 October 2015 1:09 - 1:10 PM	63	65	64	64	63	63	63
ST-4	Outdoor winery party 145 feet from center	3 October 2015 2:45 - 3:18 PM	54	72	62	58	55	52	47
ST-5	Outdoor winery party 123 feet from center	3 October 2015 3:19 - 3:27 PM	60	74	69	65	60	56	51

The monitor at **Location LT-1** was located in a tree at the property line between the project site and the parcel to the south. It exposed to a variety of noise sources including activity in the adjacent winery parking lot and the winery crush pad. This location is shielded from most of the winery refrigeration equipment. Detailed charts of the noise levels for each day are shown in Appendix A. Table 5 summarizes the daily noise levels and includes the description of activities provided by Bell Wine Cellars.

During the outdoor event on Saturday 10/3/2015 the sounds of people at in the Patio/Bocce/Lawn area were clearly audible at times, but other steady noise sources such as distant traffic and wind in the vegetation tended to dominate the noise levels.

Table 5: Daily Noise Levels at Location LT-1

Date	Winery Activities	Ldn, dBA	Highest L50
Sat 10/3	Club Event 1:00 – 4:00 PM, 85 guests Grape stomping from 2:45 to 3:45 PM	50*	49
Sun 10/4	--	54	54
Mon 10/5	--	53	53
Tues 10/6	Loaded white boxes onto truck for next day's harvest. 5:00 PM	53	50
Wed 10/7	Pressing and crushing activities on crush pad 8 AM to 3 PM	53	52
Thurs 10/8	Pressing activities 9 AM – 1:30 PM Winery Event for 35 people 4:00 – 7:30 PM	58	69
Fri 10/9	Beau Wine tour	54	54
Sat 10/10	Winery event for 14 people Inside winery building 5:30-8:00 PM	51	60
Sun 10/11	--	53	52
Mon 10/12	--	53*	53

*Measurement duration less than 24-hours, L_{dn} calculated using missing hourly noise levels from another day corresponding to the same day of the week.

The measurement at **Location ST-1** was made at the patio in front of the main residence located on the parcel to the south of the project site. During the noise measurement there were crushing and pressing activities occurring at the winery crush pad. Noise from crushing and pressing equipment was audible at times but did not necessarily dominate the average noise levels. Distant noise sources such as traffic on the highway and agricultural machinery contributed to the background noise levels. Table 6 presents the measured noise levels and sources based on observations during the short-term noise measurement.

Table 6: Observed Noise Sources at Location ST-1

Noise Source	Instantaneous Sound Level, dBA
Bell Winery Chiller on intermittently	44 - 45
Bird intermittent	50 - 55
Dog barking	56 - 59
Forklift clang	48
Dragging sound from crush pad	50
Distant traffic, crush/press machinery barely audible	40

5. Winery Noise Sources

The variety of noise sources associated with the winery are discussed and quantified below.

5.1. Visitors and Events

The measurements at Locations ST-4 and ST-5 quantified the noise levels from the winery club event. This event had a guest attendance of 85 people and with a live music act. The dominant noise sources were voices of attendants outdoors in the lawn/patio/bocce ball area. The measurement at ST-5 was conducted during the organized *grape stomping* activity which was a competition-like activity with intermittent loud cheering by participants and spectators. Tables 7 and 8 show the calculated event noise levels at the two nearest residential receivers. The calculations include the effect of distance (using a standard attenuation rate for a point source of 6 dB per doubling of distance) and acoustical shielding from the winery building. Since the project use permit allows events with an attendance of up to 200 people, the calculations also include a factor for increased attendance based on a standard rate of 3 dB per doubling of number of noise sources.

The noise from the outdoor activities shown in Tables 7 and 8 are considered to be a reasonable characterization of the maximum output since the measurement included loud sustained cheering and shouting. This activity is noisier than the more typical conversation generated noise levels. The calculated noise levels shown in Table 5, which include a factor for increased attendance, do not exceed the noise ordinance limits at the nearest residences.

The 2nd residence at the property to the south is somewhat closer to the winery. Also, a portion of the lawn/bocce/patio area has a line-of-sight to the 2nd residence that is not interrupted by the winery building. The calculated L₅₀ at the 2nd residence is 49 dBA for a large winery event which exceeds the Noise Ordinance standard of 45 dBA.



Table 7: Predicted Winery Event Noise Levels at Main Residence to the South

	L_{eq}	L_{max}	L₂	L₈	L₂₅	L₅₀
Outdoor winery party with grape stomping at a distance of 123 feet (ST-5)	60	74	69	65	60	56
Attenuation due to distance (380 feet)	-10	-10	-10	-10	-10	-10
Attenuation due to acoustical shielding provided by winery building	-10	-10	-10	-10	-10	-10
Increase in noise due to additional guests	+4	+4	+4	+4	+4	+4
Noise levels at main residence to the south	44	58	53	49	44	40
Noise Ordinance Criteria - Daytime Residential receiver, source containing speech	--	65	60	55	50	45

Table 8: Predicted Winery Event Noise Levels at Residence to the West

	L_{eq}	L_{max}	L₂	L₈	L₂₅	L₅₀
Outdoor winery party with grape stomping at a distance of 123 feet (ST-5)	60	74	69	65	60	56
Attenuation due to distance (635 feet) (includes factor for air absorption and excess attenuation)	-15	-15	-15	-15	-15	-15
Increase in noise due to additional guests	+4	+4	+4	+4	+4	+4
Noise levels at residence to the west	49	63	58	54	49	45
Noise Ordinance Criteria - Daytime Residential receiver, source containing speech	--	65	60	55	50	45

5.2. Mechanical Equipment (Refrigeration and HVAC)

Mechanical equipment is located outdoors along the southwest corner of the building (see Figure 1) generally associated the refrigeration of the building and processes. The primary noise source is the chiller which cycles on and off based on the demand of the winery. Other sources such as compressors and small air-conditioning units do not significantly affect the noise level at the property line or at the nearest residences to the south.

The chiller also sometimes operates for more than 50 percent of the time, based on our observations. We understand that the chiller operates during nighttime hours as well. Therefore, the chiller sound level at a location can be considered the L_{50} for comparison to the noise ordinance limits. At the nearest property line (Location ST-3) the chiller sound level is 63 dBA. This is less than the noise ordinance limit of 75 dBA applied to agricultural property. At location ST-2, to the south of the creek, the chiller sound level is 49 dBA. This level is also less than the noise ordinance limit of 75 dBA. The residential standard is not applied at this location because this portion of the parcel is not the area around the house used in a residential capacity.

The measurement at Location ST-1 included a noise contribution from the chiller which operated intermittently and contained a subtle, but noticeable tonal quality. Based on careful observations during the noise measurement, the noise level when the chiller operated was 44 to 45 dBA and the background noise level when the chiller was off was 40 dBA. The measured noise level of 44 to 45 dBA does not exceed the daytime noise limit of L_{50} 45 dBA for noise that contains an audible tone. By subtracting out the contribution of the background noise, it is possible to calculate that the noise contribution from the chiller alone was 42 to 43 dBA. Therefore, during the nighttime, when the background noise is quieter, the combined noise level (chiller plus ambient) would be in the 43 to 44 dBA range, and this would not exceed the nighttime noise ordinance standard for single family homes of L_{50} 45 dBA.

The chiller noise at the 2nd residence on the property to the south would be less than at ST-1 since the 2nd residence is farther from the equipment area than the main residence.

5.3. Crushing and Pressing

The measurement at location ST-1 was made while wine making activities occurred at the covered outdoor crush pad (see Figure 1). Noise from the crushing and pressing machines was barely audible during the times when the ambient sources (i.e. distant traffic and birds) were at their quietest. Noticeable intermittent activities generated maximum noise levels of 48 to 50 dBA. These noise levels are well below the limit for daytime maximum noise levels (L_{max}) of 70 dBA at single-family residences. The crushing and pressing activity noise at the 2nd residence would be somewhat greater because it is closer, however, it is expected to be less than the standard.

5.4. Bottling

Bottling activities did not occur during our noise measurement program. We understand that bottling operations involve the use of a mobile bottling truck. Table 7 shows the results of measurements by others² of a normally operating mobile

² Illingworth & Rodkin, Inc., 14 March 2014, *Analysis of Mobile Bottling Noise, Yountville Hill Winery, Yountville, CA.*

truck line run by Signature Bottling at the Pine Ridge Winery. The noise levels were measured at a location 50 feet from the open end of the truck. Assuming that the bottling occurs near the crush pad then the distance between the area around the main residence to the south and the bottling is 260 feet. Table 9 shows the calculated attenuation due to distance and noise level at the residence to the south. This calculated noise level is 1 dBA greater than the noise ordinance L₅₀ daytime limit of 50 dBA for a single-family residence. The noise level at the 2nd residence to the south would be 2 dBA greater than at the main residence and, therefore, would be 3 dBA greater than the noise ordinance standard.

Table 9: Mobile Bottling Line Noise Levels at 50 feet from the Truck Opening

	A-weighted Noise Level, dBA				
	L _{max}	L ₂	L ₈	L ₂₅	L ₅₀
Bottling Noise Levels at 50 feet	74	69	65	60	56
Attenuation due to distance (260 feet)	-14	-14	-14	-14	-14
Noise Level at Main Residence to south	58	57	55	53	51
Noise Ordinance Criteria - Daytime Residential receiver	70	65	60	55	50

5.5. Deliveries and Shipping

Noise from deliveries and shipping are generally dominated by the noise of trucks. Based on the Federal Administration’s Traffic Noise Model (TNM) noise levels from medium size trucks at low speeds range from 68 to 73 at a distance of 50 feet (trucks idling generate less noise than these levels). Trucks in the parking lot are about 200 feet from the main residence to the south. With the attenuation due to distance this corresponds to truck noise levels of 56 to 61 dBA. The higher range of truck noise levels (61 dBA) would occur briefly and are, therefore, compared to L_{max} noise ordinance standard of 70 dBA. The lower range of noise levels (56 dBA) would occur for a longer duration (1 to 5 minutes in an hour) and is compared to the L₂ and L₈ standards of 65 and 60 dBA. Based on this analysis the delivery and shipping noise levels are less than the daytime noise ordinance limits for single family residences. Truck noise levels at the 2nd residence on the property to the south would be 2 dBA greater than at the main residence (due to the closer distance) and, also, would not exceed the daytime noise ordinance limits.

5.6. Increase in Noise

The project includes two aspects which have the potential to cause increased noise at the nearest residential uses; increased production capacity from 40,000 to 60,000 gallons and increased visitation.

The increase in production capacity represents an increase in activity of 50%. This increase can be applied to many of the noise sources associated with the winery including crushing, pressing, deliveries, shipping and usage of mechanical HVAC and refrigeration equipment. These noise sources while they are occurring are expected to generate the same noise levels as in the existing condition, except they will occur for a longer duration or occur more frequently. Based on a standard rate of noise increase of 3 dBA per doubling of sources (i.e. 100% increase), the 50% increase resulting from the project correlates to a 1.8 dBA increase in the contribution to long-term average noise levels, such as the L_{dn} descriptor.

The application for the use permit modification indicates that the winery currently averages approximately 30 visitors per day with a peak of 50 (210 visitors per week). The project would allow a maximum of 100 persons per day with a maximum of 420 per week. The increase from 30 visitors in the existing condition to 100 visitors per day with the project corresponds to an increase in the noise from visitation of 5.2 dBA.

The noise increases discussed above apply only to the winery related noise sources alone. However, the long-term average sound levels at the nearest residences are significantly influenced by ambient sources, such as distant traffic, wind in the vegetation, birds and dogs, etc. Since these ambient sources are not increasing due to the project, the overall increase in noise at these residences will be less than the increase of the winery sources alone. For example, the dominant noise source associated with the visitors is the noise of vehicles accessing the parking lot. Based on calculations with the FHWA Traffic Noise Model (TNM), the noise from 100 cars (a conservative estimate for 100 visitors) entering and leaving the parking lot closest to the main residence to the south, generates an L_{dn} of 32 dBA at the residence. The ambient L_{dn} at the residence to the south is estimated to be at least 40 dBA based on the ambient sound level from non-winery related sources measured at Location ST-1. Noise levels from multiple sources combine in a logarithmic manner, so the combination of the vehicle noise and the ambient noise is 41 dBA. That is the vehicle noise from visitors contributes 1 dBA to the overall noise level. Therefore, the overall increase in noise is less than 1 dBA. This result is illustrated in Table 10.

Table 10: Calculated Increase in Noise Due to Increased Visitation

Noise Source	Ldn, dBA		Increase in Ldn, dBA
	Existing	With Project	
Ambient	40.0	40.0	
Visitation noise	26.6	31.8	
Total	40.2	40.6	0.4

6. Analysis

To address the potential noise impacts of the project, this report uses the CEQA checklist questions.

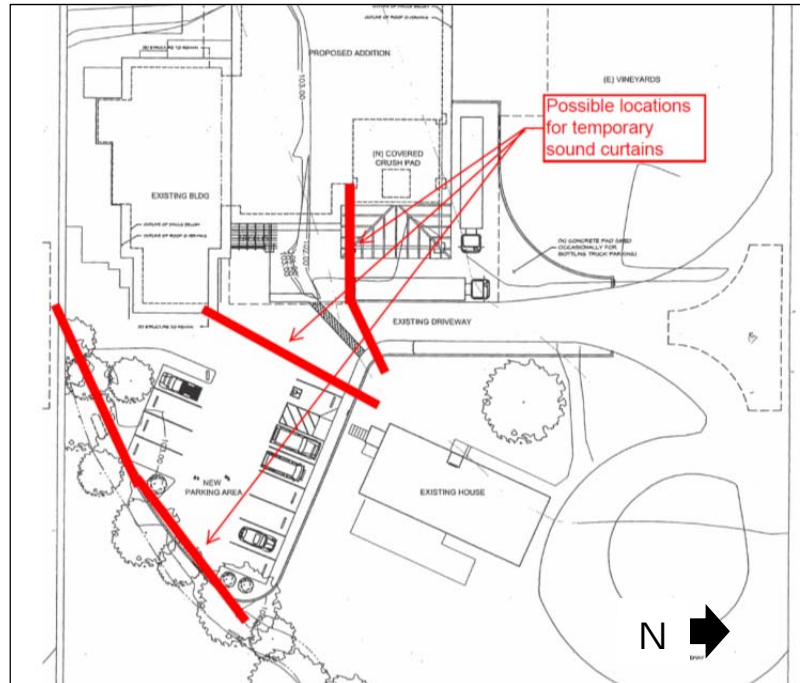
6.1. Will the project expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The noise from the winery meets the applicable noise ordinance standards at the property line and the nearest residences exception of noise from bottling activities received at the main and 2nd residences on the property to the south and from large outdoor event noise received at the 2nd residence on the property to the south.

Because the estimated bottling noise is greater than the noise ordinance limits, an evaluation of this noise source should be made during future bottling operations. If the noise level at the nearest residence is greater than the noise ordinance standard noise reduction measures would be required. Since the estimated noise level exceeds the standard by a relatively small amount, 1 to 3 dBA, it is likely that feasible noise control measures are readily available. These measures could include relocating or reorienting the bottling truck so that the noise sources are farther from the residence or shielded by the building or the truck. Sound absorptive treatments to the interior surfaces of the truck may also be effective. Alternatively a temporary or permanent noise barrier can be positioned near the truck or at the property line.

To reduce noise from large outdoor events, a temporary noise barrier (or sound curtain) 6 to 8 feet high along the property line or closer to the outdoor area, can be used (see Figure 2). The curtain material should be solid and have a minimum surface density of 1 pound per square foot. This would reduce the event noise by at least 5 dBA to meet the ordinance standard.

Figure 2: Possible Locations for Temporary Sound Curtains



6.2. Will the project expose people to or generate excessive groundborne vibration or groundborne noise levels?

The project operation does not include ground vibration sources that would affect the neighboring residential land uses.

6.3. Will the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Since the L_{dn} at the nearest residences is less than 60 dBA, the threshold for a significant increase in noise is an increase in L_{dn} of 5 dBA. The operation of the project will result in increased noise levels and at the residential areas near the project be noticeable over the background ambient noise levels. However, the long-term average noise levels (L_{dn}) will increase by less than 2 dBA. Therefore, this is a less than significant impact.

6.4. Will the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Winery operations and visitation will have periodic noise events such as deliveries and outdoor events. Although the project will allow more of these events to occur than the existing condition, the noise levels from during these periodic events is not expected to increase. Therefore, this is a less than significant impact.

6.5. 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, will the project expose people residing or working in the project area to excessive noise levels.

Not applicable.

6.6. For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels.

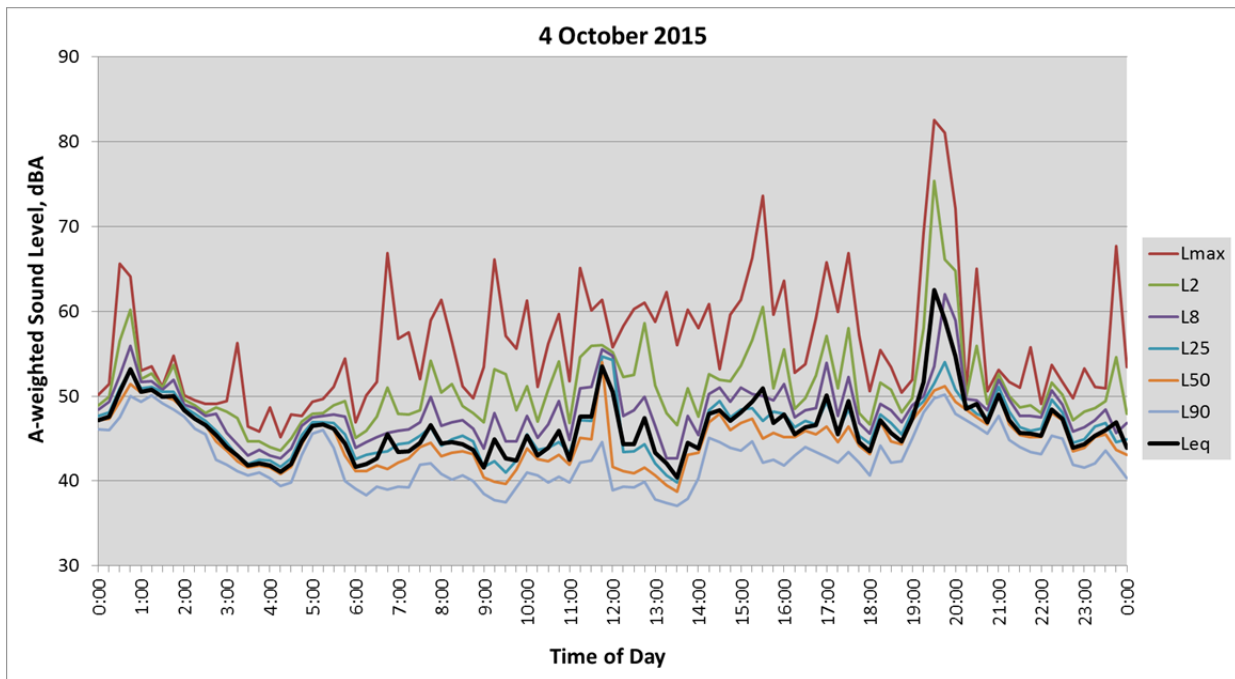
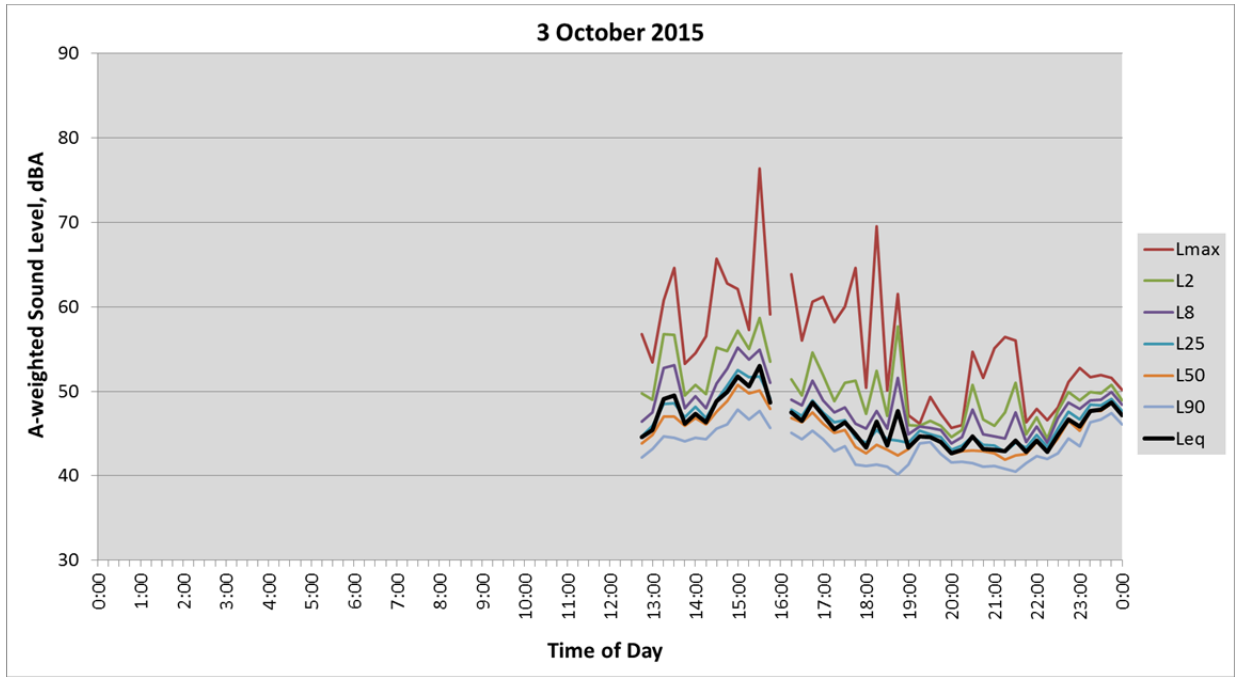
Not applicable.

7. Noise Reduction Measures to be Considered

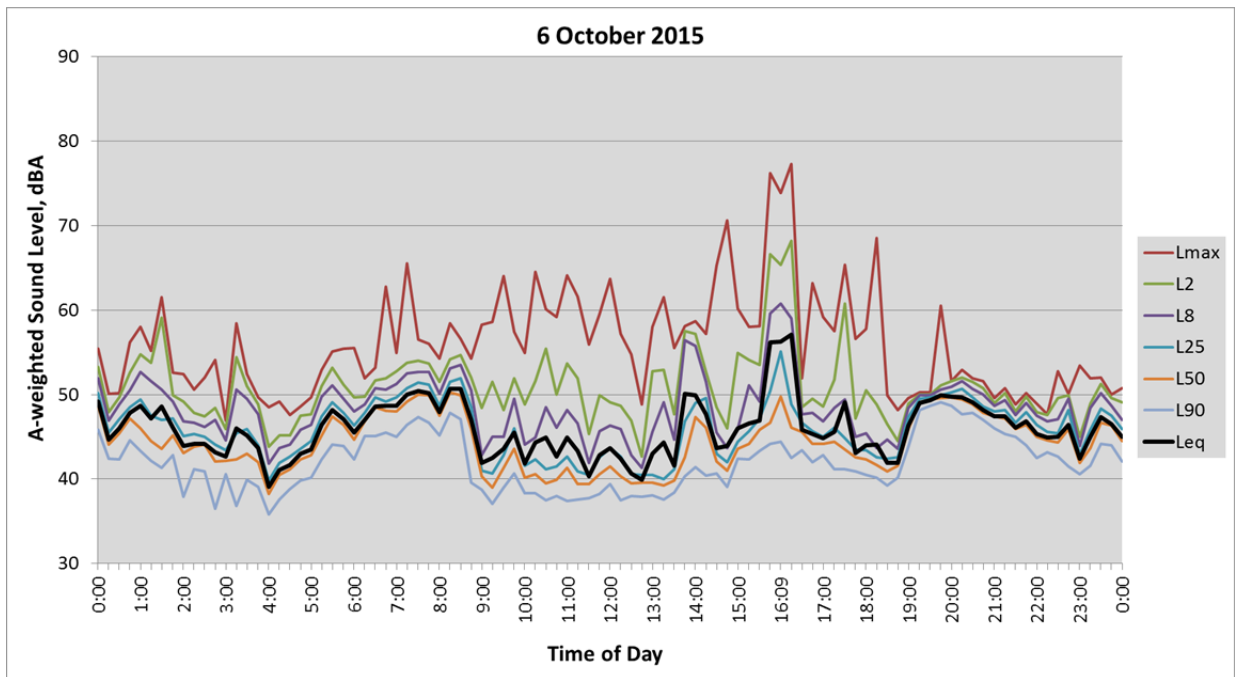
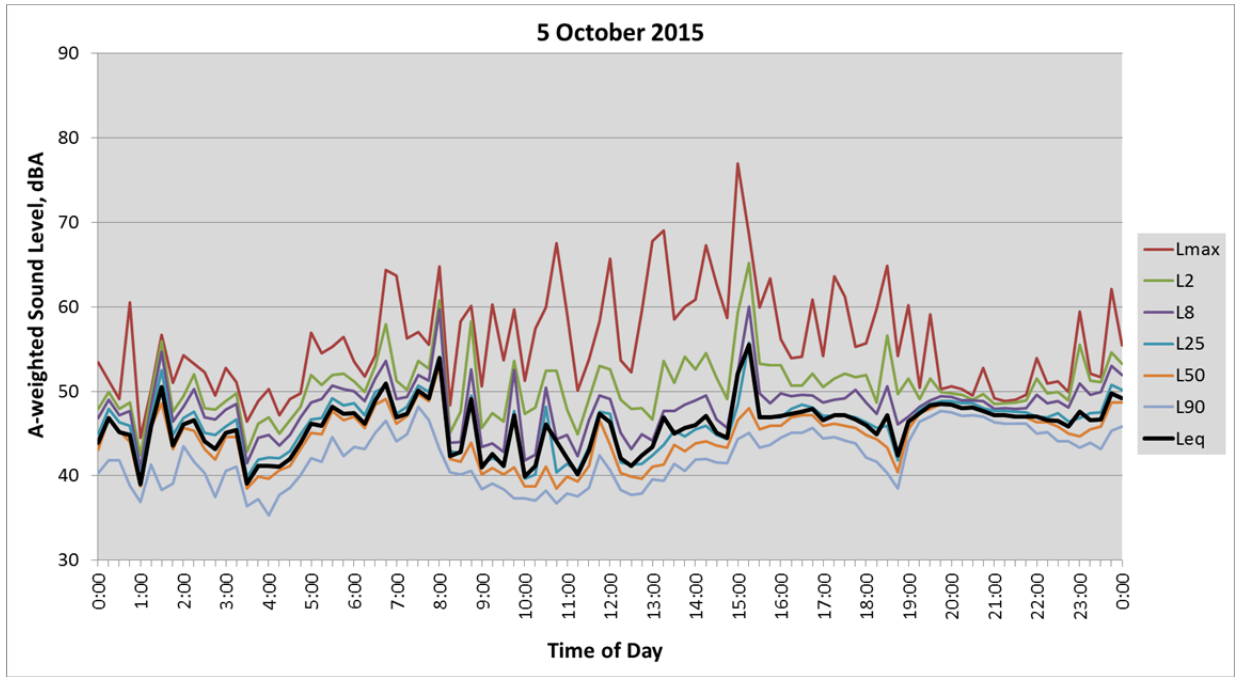
The winery property line nearest the residence to the south has a lattice fence. Since the lattice is not solid it does not provide any noise reduction properties. If the fence were constructed solid with a minimum surface density of 2 pounds per square foot, sound from vehicles, equipment and people in the outdoor areas near the parking lot and crush pad would be reduced by at least 5 dBA for a receiver near the residence to the south. A height of 6 to 8 feet would be effective for most noise sources.

A solid fence at the property line near the winery outdoor mechanical equipment might not be effective in reduction the equipment noise received at the residence since the line of sight is already interrupted by the winery building. Instead, equipment noise could be reduced by installing sound absorptive barriers and baffles around the individual equipment items, particularly the chiller. The treatment would need to be designed carefully not to significantly impede airflow for the equipment. It is possible that a noise reduction of up to 5 dBA could be achieved.

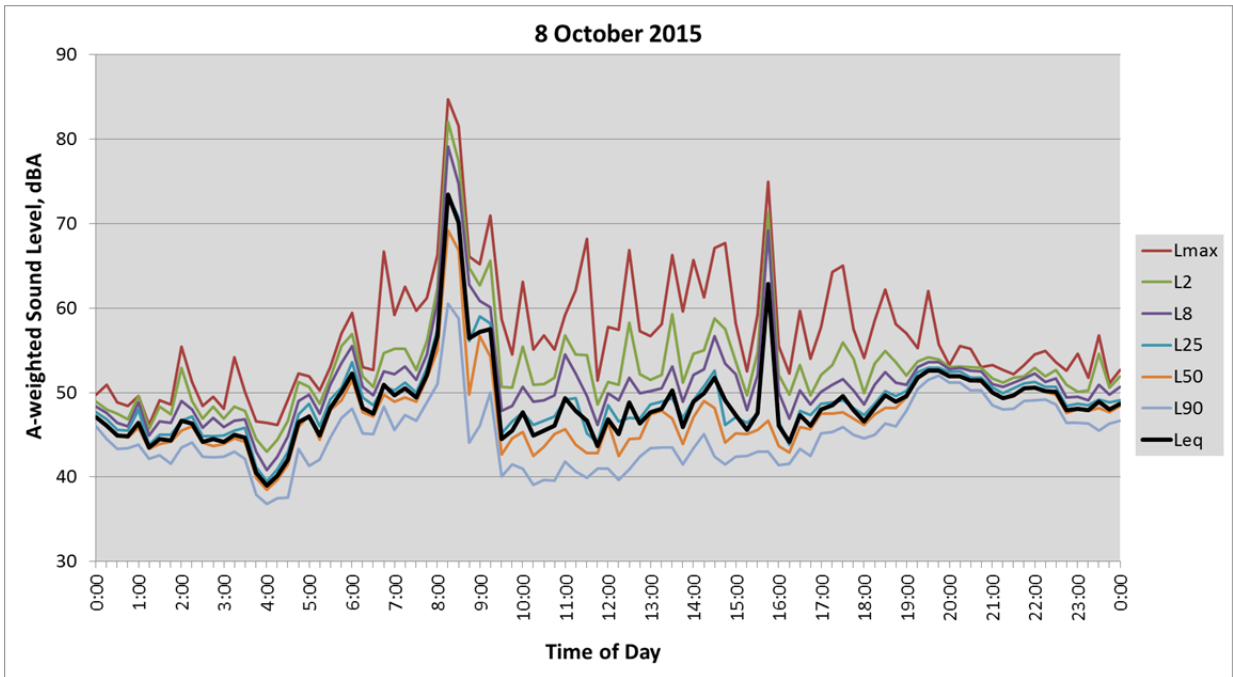
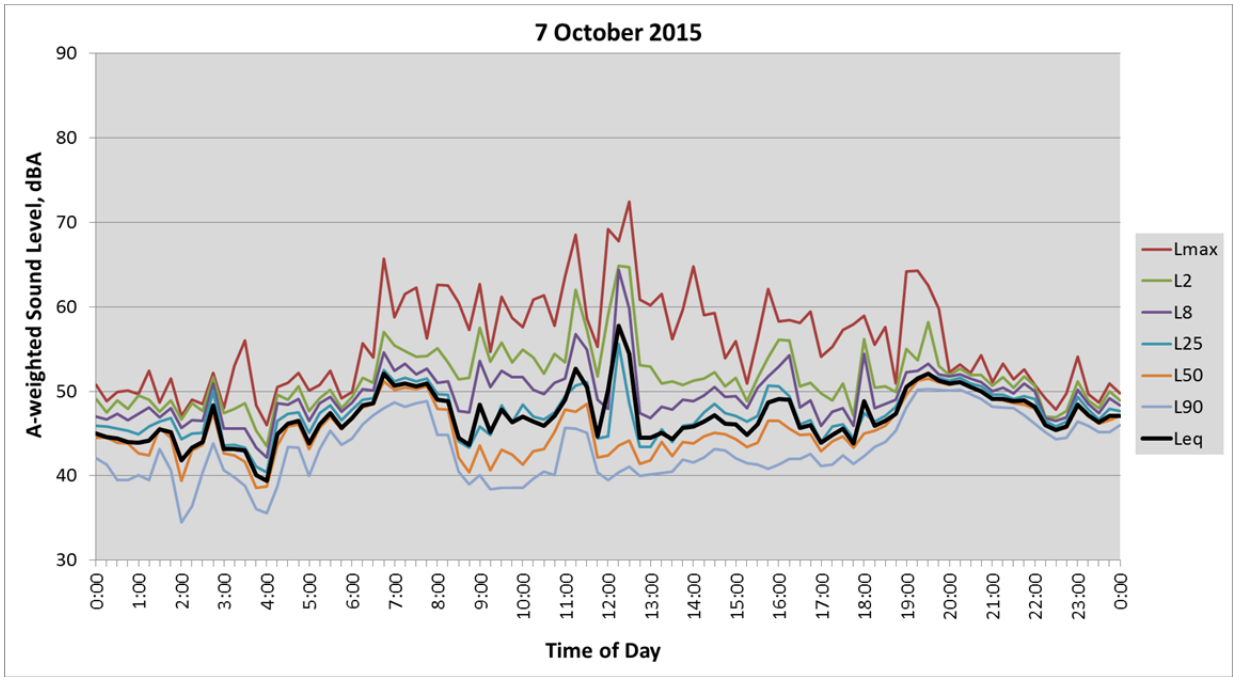
APPENDIX A: LONG TERM NOISE MEASUREMENT RESULTS AT LOCATION LT-1



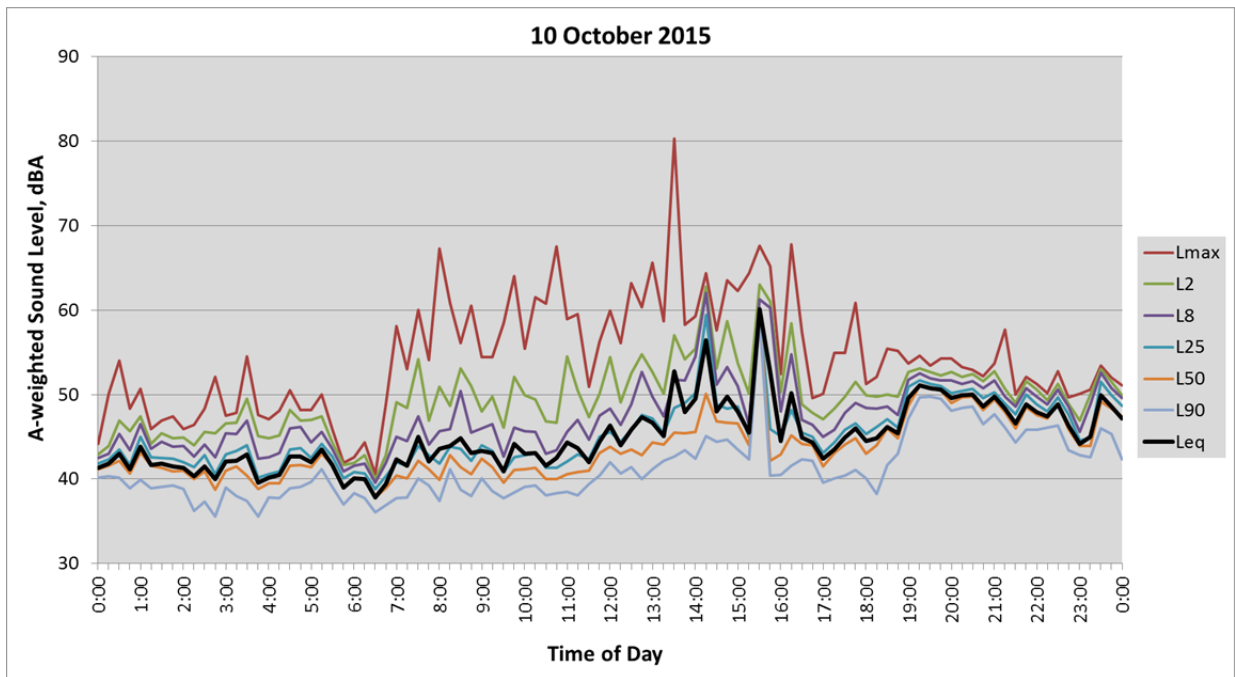
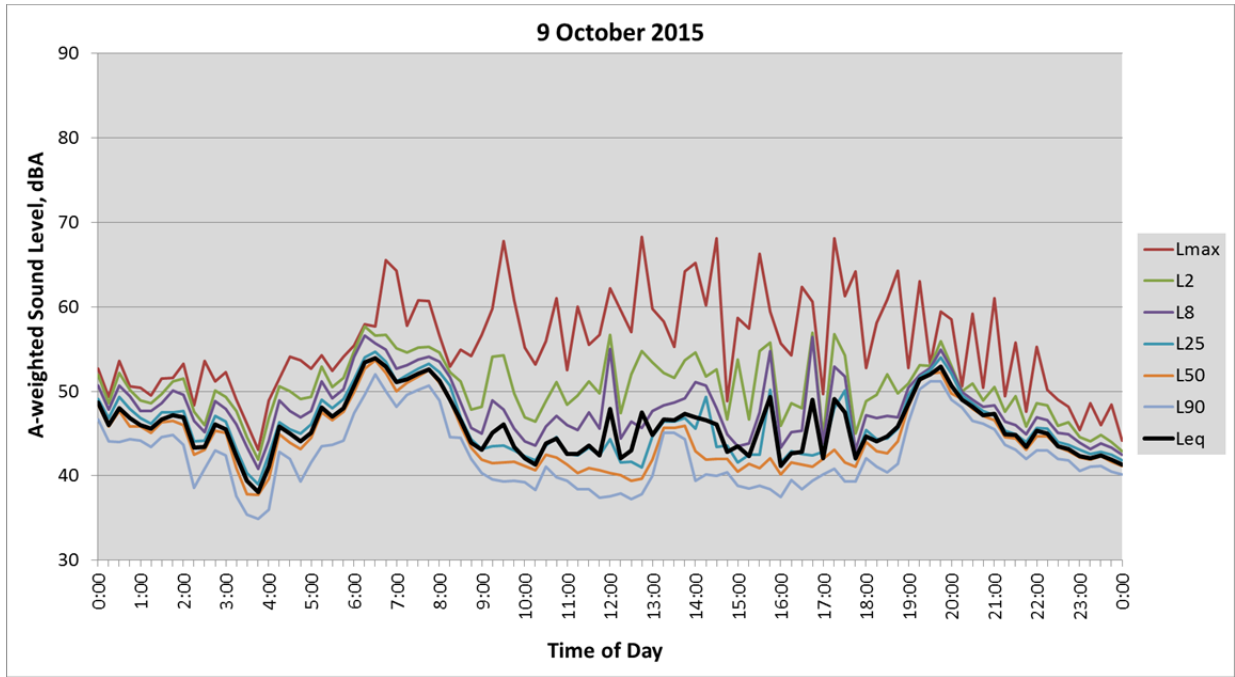
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