



# Environmental Noise Assessment

**Bella Union Winery**  
Rutherford

**ENVIRONMENTAL NOISE ASSESSMENT**

22 April 2022

Prepared for: **Bella Union Winery**  
1695 St. Helena Hwy S  
Rutherford, CA 94574

Prepared by: **Salter**  
Eric A. Yee – Vice President

[eyee@salter-inc.com](mailto:eyee@salter-inc.com)

Salter Project 22-0171



130 Sutter Street, Floor 5  
San Francisco, CA 94104

tel 415.397.0442  
[salter-inc.com](http://salter-inc.com)

Acoustics  
Audiovisual  
Telecommunications  
Security

## INTRODUCTION

In January 2022, Bella Union Winery applied with the County of Napa to change its use permit. These changes include increased visitation from 68 daily visitors to 175 daily visitors Monday through Thursday and 225 daily visitors Friday through Sunday. Bella Union also proposes to increase its annual marketing from 36 events to 173 events (3 per week up to 50 guests, 12 per year up to 100 guests, and 1 annual event up to 500 guests). The winery would need to increase the permitted 12 employees to 45 employees (38 full time and 7 parttime).

Bella Union has opted to submit a noise study to analyze the potential noise increase and impact(s) caused by the increased visitation and expanded usage of their winery. The revised plan also includes outdoor use space previously approved under the former owner's permit. This study follows below.

## SUMMARY

The proposed modifications to the existing use permit would increase noise levels at the winery and could introduce new noise sources to the project site. With the recommended mitigation, these noise levels would not generate a significant increase to the existing noise levels.

## CRITERIA

Applicable criteria are contained in the Napa County Code and in the California Environmental Quality Act (CEQA) Appendix G: Acoustical Impacts.

## Napa County

Section 8.16 in the County Code provides the following table establishing the exterior noise limits at adjacent property lines.



**Table 8.16.070**  
**EXTERIOR NOISE LIMITS**  
(Levels not to be exceeded more than 30 minutes in any hour)

		Noise Level (dBA) Noise Zone Classification <sup>1</sup>		
Receiving Land Use Category	Time Period	Rural	Suburban	Urban
Residential Single and double	10 p.m. — 7 a.m.	45	45	50
	7 a.m. — 10 p.m.	50	55	60
Residential multiple and country	10 p.m. — 7 a.m.	45	50	55
	7 a.m. — 10 p.m.	50	55	60

### California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) guidelines include a checklist of items, some of which related to noise and vibration. One item asks if the project will exceed any established noise standards or substantially increase existing ambient noise levels. To address the future increase in noise levels from this project, a change of 3 dB or less is considered just noticeable and not expected to cause significant community response. A change of 4 to 5 dB is marginal but could be considered an impact if the resultant noise level exceeds “normally acceptable” levels. A change of more than 5 dB would be clearly noticeable and considered a significant impact, especially since it could potentially cause adverse community response.

### EXISTING CONDITIONS

To quantify the existing noise levels, sound level meters were deployed along the east property line adjacent to Highway 29. From 30 March 2022 to 4 April 2022, these meters measured the noise from the highway at the adjacent residence to Bella Union. Figure 1 shows the locations of these measurements. The nearest residences are located just north of Bella Union Winery along Highway 29.

Location 1 represents the continuous long-term meter that measured continuously over the course of the entire measurement period. Locations 2 and 3 represent the short term “spot” measurements simultaneously conducted with the long-term measurement. These measurements provided the offset from the long-term measurement data to project the noise at these varying distances from Highway 29. The orange band represents the noise levels 75 feet from the center line of Highway 29. The yellow band represents the noise levels 230 feet from the center line of Highway 29

### FIGURE 1 – MEASUREMENT LOCATIONS

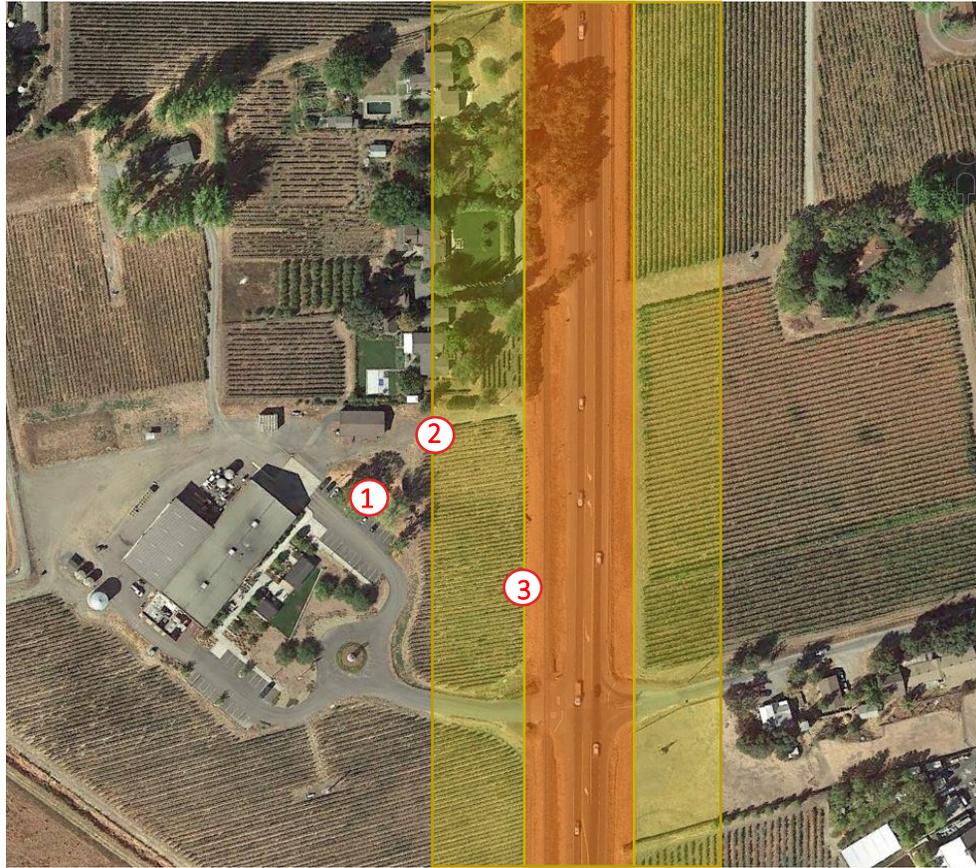
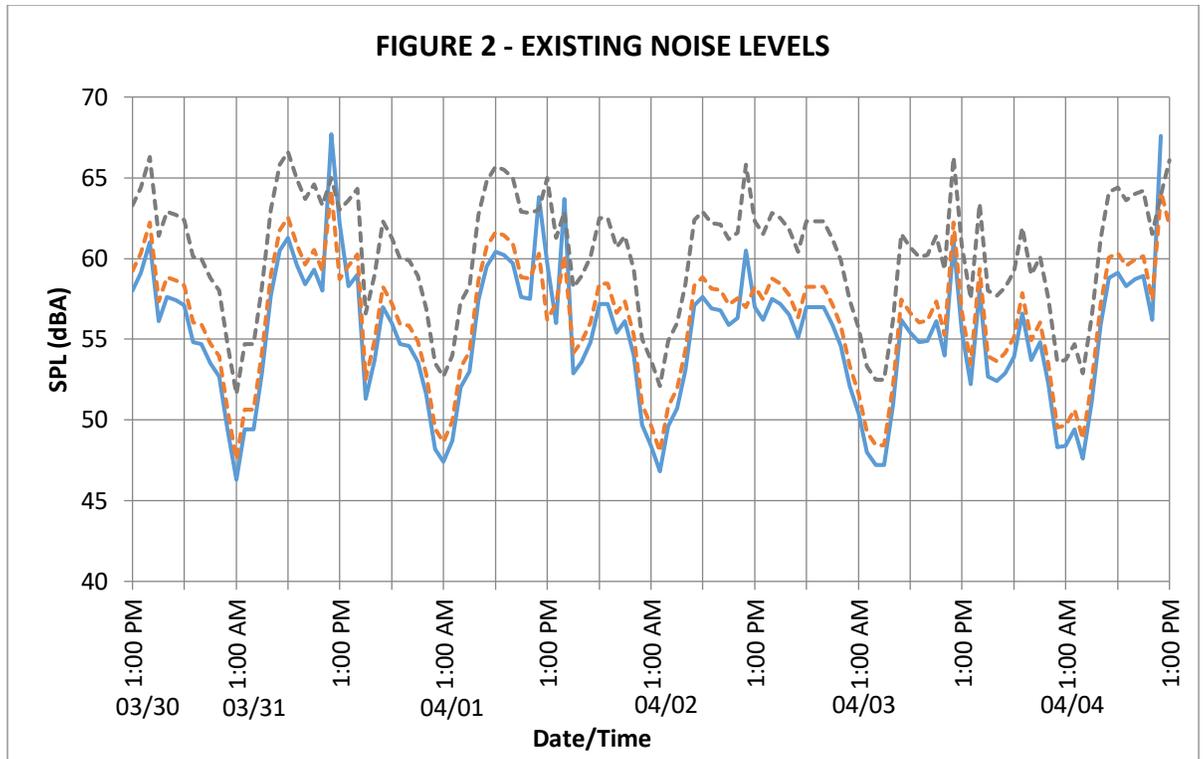


Figure 2 below shows the noise levels. Long term measurements are represented by the solid blue line on the graph. The extrapolated noise levels 30 feet from Highway 29 are represented by the dashed gray line on the graph. The extrapolated noise levels 230 feet from Highway 29 are represented by the dashed orange line on the graph. This location approximates the highway noise exposure of the nearby residence.



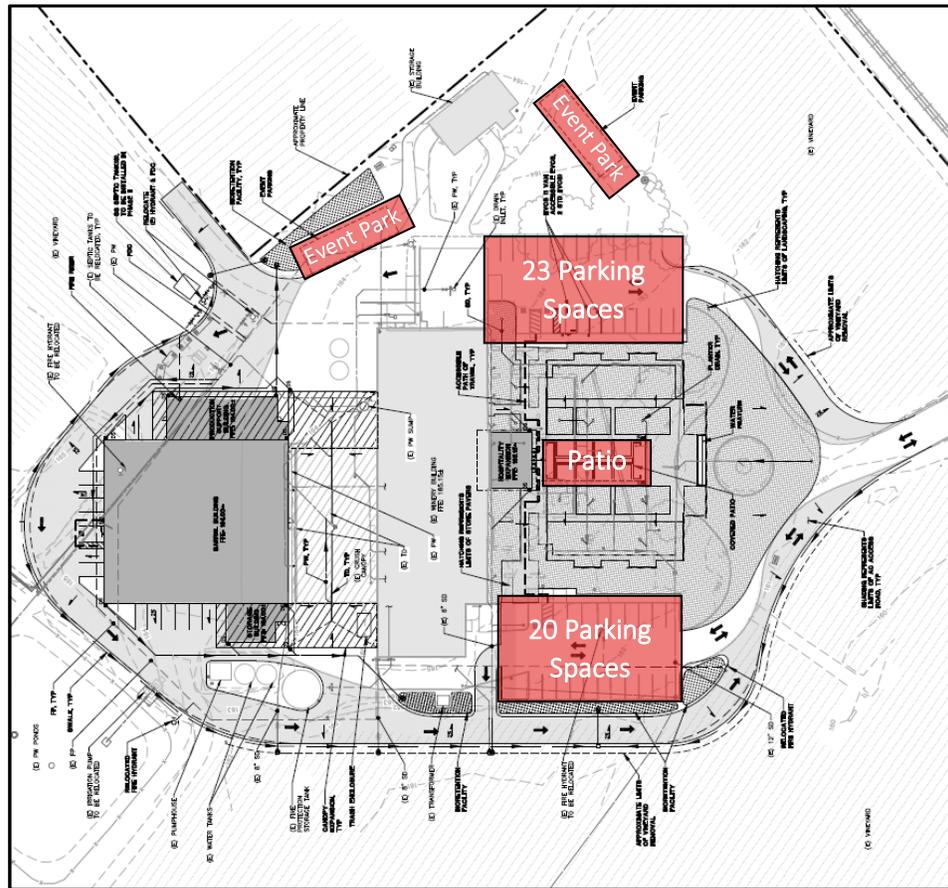
## ANALYSIS

This noise analysis compares the estimated existing noise levels with future noise projections and compares the anticipated noise levels to the Napa Ordinance and to CEQA guidelines. The analysis is broken down into the following noise-generating activities:

- Increased Visitation – including revised projections for weekdays, weekends, and special events
- Outdoor Use – including but not limited to day visitation and special gatherings including presentations/music
- Traffic and Parking Activities – including but not limited to daily traffic, instantaneous vehicle noise (engine starts, revs, fans)

Figure 3 shows potential locations of outdoor noise generating activities:

**FIGURE 3 - OUTDOOR NOISE SOURCES**



### Increased Visitation – Daily Use and 50-Person Events

The proposed permit increases weekday visitation from 25 guests to 175 guests and weekend visitation to 225 guests. The hours of operation are projected to be 10:30 a.m. to 6:30 p.m. The nearest residential property line is located 200 feet north of the proposed patio edge. This study uses this distance to project estimated noise levels from outdoor activities.

During the hours of operation, the winery could host an average of 20 to 30 guests per hour. The majority would arrive in parties of 2 to 4 guests per vehicle. At the peak hour, this study assumes a total of 60 guests at the winery (30 guests from the previous hour and 30 guests arriving on the hour).

Assuming that 50% of guests wish to enjoy the outdoor space, the patio would introduce 30 additional outdoor people per hour between 10:00 a.m. and 5:00 p.m. (assuming guests stay one hour passed closing.) To estimate the noise from the patio, we assume that 15 people (half) would be talking at once using a raised voice. A single raised voice typically measures 70 dBA at 3 feet. If 15 people are talking with raised voices at once, the overall noise level would be 82 dBA, 10 times the logarithmic ratio of patrons (i.e.  $10 \cdot \log(15 \text{ guests}_{\text{actual}} / 1 \text{ guest}_{\text{ref}})$ ) at 3 feet. This volume of speech would drop off to 45 dBA at the

nearest residential neighbor. Speech drops off at a rate of 20 times the logarithmic ratio of distances (i.e.  $20 \cdot \log(3 \text{ feet distance}_{\text{ref}} / 200 \text{ feet distance}_{\text{actual}})$ ).

Objectively, speech levels of 45 dBA comply with the County's noise requirements.

According to the measurements, the average hourly noise level (Leq) at the nearest residential receivers ranges from 52 dBA to 62 dBA between the hours of 10:00 a.m. and 7:00 p.m. (i.e. the proposed hours of operations at Bella Union). Subjectively, maximum speech levels at 45 dBA would be mostly inaudible, masked by traffic noise from Highway 29 except for an occasional single voice.

**Mitigation: No further mitigation would be required.**

### **Increased Visitation – 100 Person Events**

The proposed permit allows up to one medium events per month (12 annually). These events allow up to 100 guests on property. The hours of these events may extend beyond the normal hours (i.e. 10:30 a.m. to 6:30 p.m.) to include evening dinner service. The nearest residential property line is still located 200 feet north of the proposed patio edge. This study uses this distance to project estimated noise levels from potential outdoor guests.

During these events, the winery could host up to 100 guests. The majority would arrive in parties of 2 to 4 guests per vehicle or by charter shuttle.

Assuming that 50% of guests wish to enjoy the outdoor space, the patio would introduce up to 50 additional outdoor people. To estimate the noise from the patio, we assume that 25 people (half) would be talking at once using a raised voice. A single raised voice typically measures 70 dBA at 3 feet. If 25 people are talking with raised voices at once, the overall noise level would be 84 dBA, 10 times the logarithmic ratio of patrons (i.e.  $10 \cdot \log(50 \text{ guests}_{\text{actual}} / 1 \text{ guest}_{\text{ref}})$ ) at 3 feet. This volume of speech would drop off to 47 dBA at the nearest residential neighbor. Speech drops off at a rate of 20 times the logarithmic ratio of distances (i.e.  $20 \cdot \log(3 \text{ feet distance}_{\text{ref}} / 200 \text{ feet distance}_{\text{actual}})$ ).

Objectively, speech levels of 47 dBA comply with the County's daytime noise requirements. Nighttime noise could exceed allowable levels by 2 decibels.

According to the measurements, the average hourly noise level (Leq) at the nearest residential receivers ranges from 48 dBA to 62 dBA between the hours of 10:00 a.m. and 12:00 a.m. (i.e. assuming parties end by midnight). Subjectively, maximum speech levels at 47 dBA could be more audible toward the latter part of the event.

**Mitigation: To reduce the potential disturbance to neighbors, the following measures may be considered:**

1. Bella Union may choose to limit the end time of these events to 10:00 p.m. to stay within ordinance compliance and reduce potential sleep disturbance and conflicts.
2. Alternatively, event activities may be required to be indoors after a certain hour to reduce outdoor noise to the nearby neighbors.

3. All doors and windows facing the northside neighbors should remain closed during the duration of the event.

### **Increased Visitation – 500 Person Event**

The proposed permit allows up to one large event per year. This event allows up to 500 guests on property. The hours of these events may extend beyond the normal hours (i.e. 10:30 a.m. to 6:30 p.m.) to include evening dinner service. The nearest residential property line is still located 200 feet north of the proposed patio edge. This study uses this distance to project estimated noise levels from potential outdoor guests.

During these events, the winery could host up to 500 guests. The majority would arrive by charter shuttle as the Bella Union Winery grounds lacks sufficient parking to accommodate this number of vehicles (i.e. 100 cars or more).

Assuming that 50% of guests wish to enjoy the outdoor space, the patio would introduce up to 250 additional outdoor people. To estimate the noise from the patio, we assume that 125 people (half) would be talking at once using a raised voice. A single raised voice typically measures 70 dBA at 3 feet. If 125 people are talking with raised voices at once, the overall noise level would be 91 dBA, 10 times the logarithmic ratio of patrons (i.e.  $10 \cdot \log(125 \text{ guests}_{\text{actual}} / 1 \text{ guest}_{\text{ref}})$  at 3 feet. This volume of speech would drop off to 55 dBA at the nearest residential neighbor. Speech drops off at a rate of 20 times the logarithmic ratio of distances (i.e.  $20 \cdot \log(3 \text{ feet distance}_{\text{ref}} / 200 \text{ feet distance}_{\text{actual}})$ ).

Objectively, speech levels of 55 dBA comply with the County's daytime noise requirements. Nighttime noise could exceed allowable levels by up to 10 decibels.

According to the measurements, the average hourly noise level (Leq) at the nearest residential receivers ranges from 48 dBA to 62 dBA between the hours of 10:00 a.m. and 12:00 a.m. (i.e. assuming parties end by midnight). Subjectively, maximum speech levels at 55 dBA could be more audible toward the latter part of the event.

If permitted events opt for entertainment (i.e. live or pre-recorded music). The objective noise levels of such events are unknown. Given the distinct and easily recognizable nature of noise from music, these activities could cause a negative response from the neighbors if the volume were excessive.

### **Mitigation: To reduce the potential disturbance to neighbors, the following measures may be considered:**

4. Bella Union may choose to limit the end time of these events to 10:00 p.m. to stay within ordinance compliance and reduce potential sleep disturbance and conflicts.
5. Alternatively, event activities may be required to be indoors after a certain hour to reduce outdoor noise to the nearby neighbors.
6. All doors and windows facing the northside neighbors should remain closed during the duration of the event.



7. Position outdoor entertain to face away from the nearest neighbors and provide localized barriers to reduce noise bleed.
8. Limit the kinds of entertainment that may be permitted. For instance, only allow non-amplified music or smaller single “busking” amplifiers.
9. Provide outdoor speakers with limiters to restrict volume output of a future sound system.

## Traffic and Parking Lot Noise

Traffic and parking noise depend on the number of vehicles and proximity to the north property line. Under the proposed use permit, the following three typical scenarios will be evaluated:

- Daily Use and 50-Person Events
- Medium Events (100 People)
- Large Events (500 People)

Daily use and 50-person events would generate up to 25 round trips per hour at the two existing parking lots. These lots can accommodate up to 43 vehicles (20 to the south and 23 to the north). The closest stalls at the north parking lot are within 275 feet of the nearby residence.

Vehicle parking lot noise includes engine starts, car alarm “chirping”, and conversations. Typical noise levels of these events range from 60 to 75 dBA at 3 feet. This volume of activities would drop off to 36 dBA at the nearest residential neighbor. Single event noise drops off at a rate of 20 times the logarithmic ratio of distances (i.e.  $20 \cdot \log(3 \text{ feet distance}_{ref} / 275 \text{ feet distance}_{actual})$ ).

Objectively, Noise levels of 36 dBA comply with the County’s noise requirements. Subjectively, most parking lot noise would be inaudible with the exception of the occasional car alarm “chirping”. Prior to the sale of the winery to Bella Union, these noises existed on site under the old winery.

**Mitigation: No further mitigation would be required.**

100-person events would generate up to 50 round trips at the two existing parking lots. These lots can accommodate up to 43 vehicles (20 to the south and 23 to the north). The closest stalls at the north parking lot are within 275 feet of the nearby residence.

Vehicle parking lot noise includes engine starts, car alarm “chirping”, and conversations. Typical noise levels of these events range from 60 to 75 dBA at 3 feet. This volume of activities would drop off to 36 dBA at the nearest residential neighbor. Single event noise drops off at a rate of 20 times the logarithmic ratio of distances (i.e.  $20 \cdot \log(3 \text{ feet distance}_{ref} / 275 \text{ feet distance}_{actual})$ ).

Objectively, Noise levels of 36 dBA comply with the County’s noise requirements. Subjectively, most parking lot noise would be inaudible with the exception of the occasional car alarm “chirping”.

The existing parking should be able to accommodate all vehicles for 100-person events. There would be no operational changes.

**Mitigation: No further mitigation would be required.**

500-person events would generate up to 50 round trips at the two existing parking lots and potentially more onsite trips to the two event overflow parking areas. As previously discussed, typical parking lot noise does not require any special mitigation. For large events, the proposed overflow parking encroaches on the north residence. One lot, which can accommodate up to 10 vehicles is located 50 feet from the residence.

Vehicle parking lot noise includes engine starts, car alarm “chirping”, and conversations. Typical noise levels of these events range from 60 to 75 dBA at 3 feet. This noise of activities would drop off to a level of 50 dBA at the nearest residential neighbor. Single event noise drops off at a rate of 20 times the logarithmic ratio of distances (i.e.  $20 \cdot \log(3 \text{ feet distance}_{\text{ref}} / 50 \text{ feet distance}_{\text{actual}})$ ). These noise events happen less than 2% of a total hour and would result in an hourly (Leq) of 35 dBA at the nearest residence.

Objectively, Noise levels of 34 dBA comply with the County’s daytime noise requirements. Subjectively, these parking lot noises would be audible during the few minutes, while the event occurs. Based on measurements and observations at similar activities, patrons often laugh and converse at elevated noise levels. This short event may cause disturbances at the neighboring property especially during the nighttime hours after an event ends.

**Mitigation: To reduce the potential disturbance to neighbors, the following measures may be considered:**

1. During large events, do not allow patrons to self-park their vehicles at these overflow parking lots. Bella Union should consider valet only parking for these spaces once the two front parking lots fill up.
2. Alternatively, relocate overflow parking to the south side of the property away from the north property line residences.

June 7, 2022

Emily Hedge, Planner III  
Planning, Building, & Environmental Services  
County of Napa  
1195 Third Street, Room 210  
Napa, CA 94559  
[emily.hedge@countyofnapa.org](mailto:emily.hedge@countyofnapa.org)

Re: Marketing Plan Noise Reduction Measures

Dear Emily:

Included in our application submittal materials was an Environmental Noise Assessment for Bella Union Winery prepared by Salter, Inc. (April 4, 2022). The report analyzed the potential for increased noise on adjoining residential parcels resulting from the Winery's proposed increase in visitation and marketing events (e.g., voices, vehicles, events).

In summary, the report determined that the distance of the nearest residential parcel from its property line to the closest edge of the Winery's outdoor patio is 200 feet (although the residence itself is further away). During normal business hours (between 10:00 a.m. and 7:00 p.m.), noise resulting from visitation and daytime events would be indiscernible to the nearest residence. This conclusion was based on Highway 29 traffic, ranging from 52 dBA to 62 dBA between the hours of 10:00 a.m. and 7:00 p.m., which masks the Winery's speech levels at 45 dBA.

However, it could be possible for Winery events to introduce new noise sources to the project during the evening hours, as the average hourly noise level from background traffic is lower later in the day. (The average hourly noise level at the nearest residential parcel is slightly lower when including the evening hours, with a range from 48 dBA to 62 dBA between the hours of 10:00 a.m. and 12:00 midnight, which indicates that noise levels in the evening are lower.) For the Winery's proposed 100-person events, held once monthly, and the proposed 500-person event, held once yearly, maximum speech levels described might be more audible toward the latter part of the event.

Specifically, speech at the nearest residential property line would be 47 dBA during the monthly events after 6:30 p.m. (which is below the base 48 dBA ambient noise level) and 55 dBA during the annual event (which is in the middle of the 48 dBA to 62 dBA range of the ambient noise level). Moreover, the distinct and recognizable nature of parking starts and of

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noise from music during the annual marketing event might be discernible to neighbors. To address this issue, the report provides some suggestions for reducing noise levels for the monthly and annual events. The list is not all-inclusive or prescriptive, but rather contains varied approaches to reduce audible speech, music and parking noise during the largest events.

In order to delineate the mitigation approach more clearly, we propose to include as a part of our Marketing Plan the following measures:

1. Evening events will end not later than 10:00 p.m.; clean-up will end at 10:30 p.m.
2. No sound amplification devices are allowed for the monthly events; acoustic or indoors only.
3. Sound amplification devices allowed for the annual event will be turned off not later than 9:00 p.m.
4. Operable doors and windows located on the north side of the winery will be closed after 9:00 p.m. during evening events.
5. Cars parked onsite for the annual event will be valet-only.
6. These measures will be posted on premises in the employee break room and included in our contracts with event vendors.
7. Advanced notice of valet parking for the annual event will be provided to attendees and signage will also be posted on the evening of the event.

The combination of these measures, included in the proposed Marketing Plan, will ensure that discernable noise levels are reduced to normally acceptable levels as provided in the Salter Environmental Noise Assessment for Bella Union Winery.

Very truly yours,



Katherine Philippakis

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