



MEMORANDUM

DATE: July 18, 2024
TO: Monet Sheikhal, Senior Planner
FROM: Lou Kirk, Assistant Chief Building Official 
CC: Lizzette Marquez, Code Enforcement Officer
SUBJECT: Sound Survey Report
Flamingo Resort and Spa – 2777 4th Street, Santa Rosa

The purpose of this memo is to provide a report of my findings pertaining to a sound survey, completed on this date, of “pickleball” activities upon the subject property.

As the Assistant Chief Building Official for the City of Santa Rosa, my responsibilities include oversight and management of the Permit Services and Code Enforcement Divisions. I am certified as a Chief Building Official through the International Code Council and have been continuously engaged in the code enforcement profession for approximately 40 years. Specific to this report, I hold a certification through Rutgers University in Community/Vehicular Noise Enforcement and am authorized to investigate, inspect, identify, and act on conditions of violation upon public or private properties.

The subject property is a 3.66-acre parcel of land comprising part of the Flamingo Resort and Spa complex. It and the residential parcels to the northeast carry a PD 56-001 zoning designation, while the properties to the north and northwest are zoned R-1-6.

Three pairs of distinct sound surveys were conducted upon three different sites immediately adjacent to and on the subject property, with separate “ambient” (background) and “live” (active) surveys being taken. The sites are shown below:



Memorandum – Sound Survey Report

July 18, 2024

Page 2 of 6

The “ambient base noise level” (“ABNL”) within a R-1 or R-2 Residential zone (the affected zone) is 55 dB between the hours of 7:00 AM and 7:00 PM. The surveys that are the subject of this report were conducted between the hours of 7:55 AM and 9:24 AM. For a violation of code to occur, the ABNL would need to be exceeded by more than 5 dB, equating to a sound pressure level of more than 60 dB. Exceedance of the ABNL is the most objective standard to apply, in that it is the most consistent and reliable means of determining the existence of a violation.

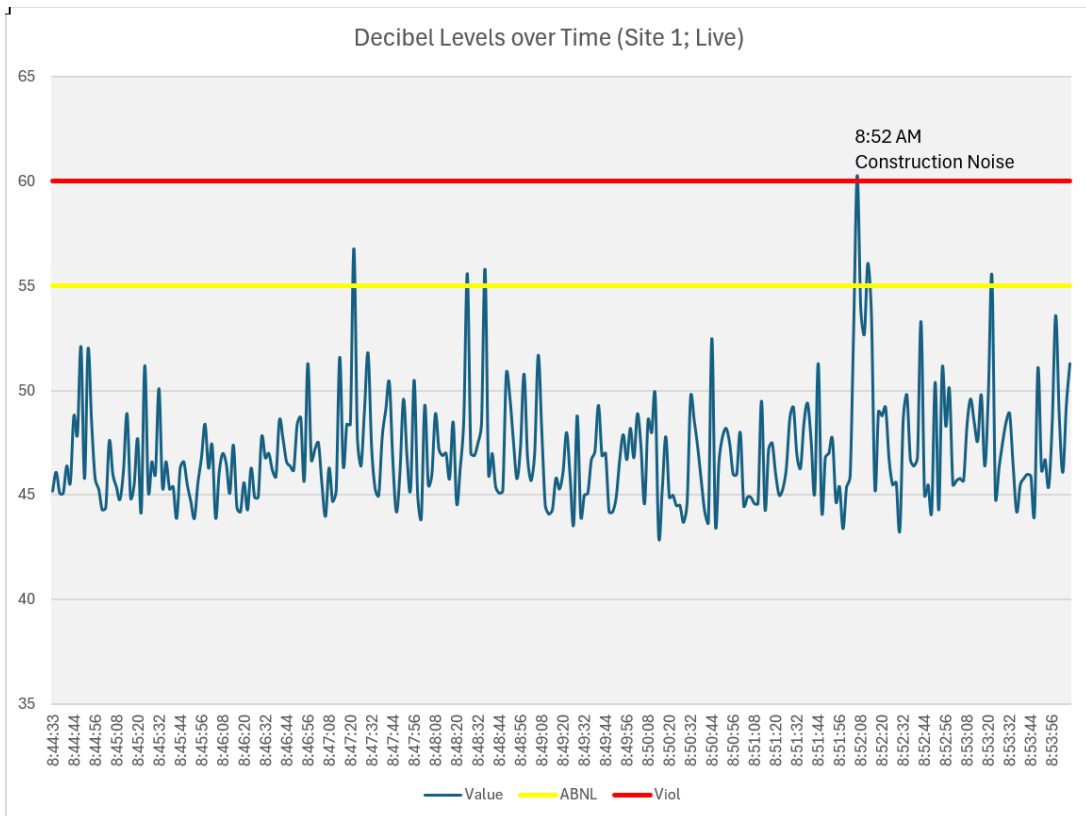
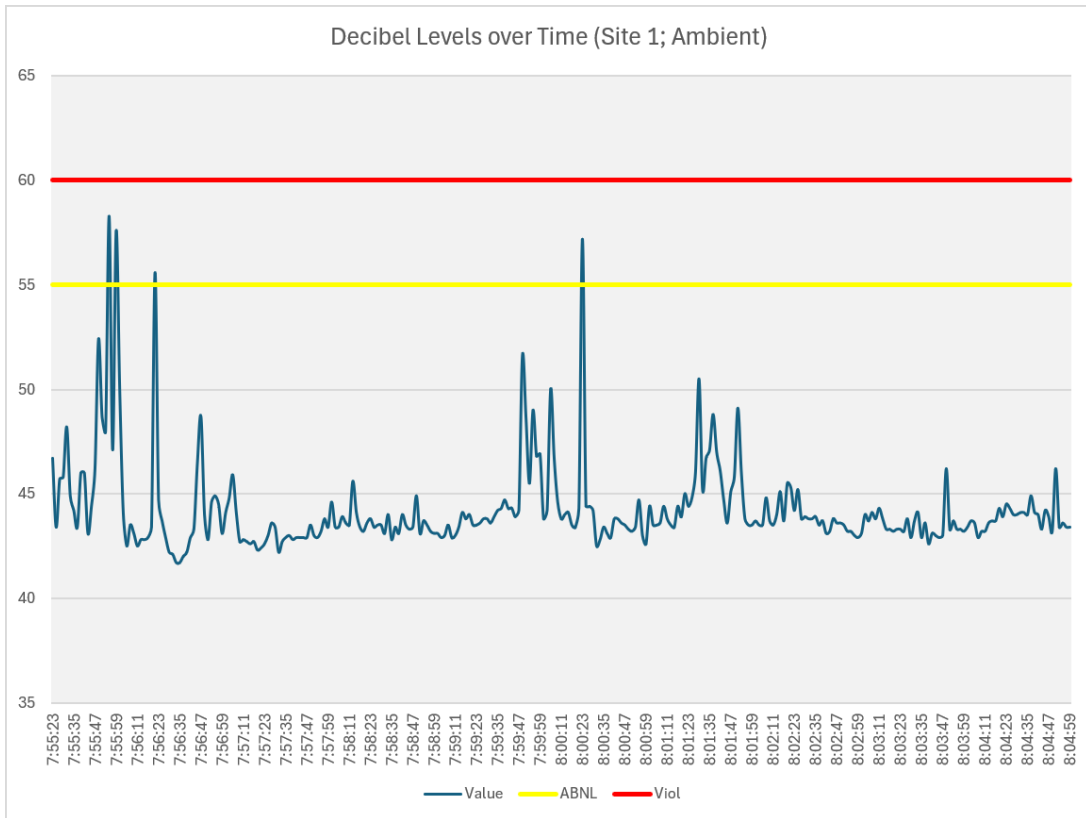
During a sound survey, observations are kept for extraneous noises that might materially affect the sound measurements; during these surveys, incidental or unexpected noises were attributed to crows; staff walking through dry brush or grass; airplanes passing overhead; and nearby construction. In instances where such extraneous noise sources impact survey results by exceeding 60 dB, a notation is made. Examples of this will be seen in the following table, as well as the series of charts provided later on in this report.

A basic overview of the six surveys conducted is provided in the table below:

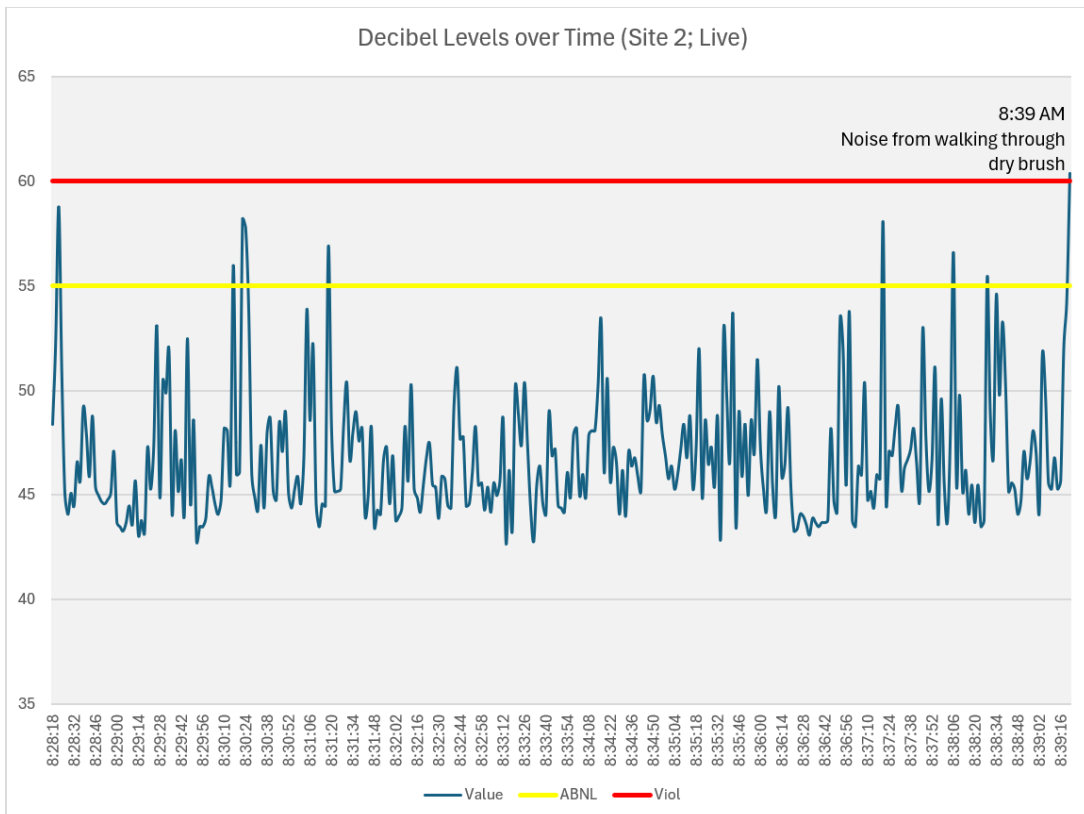
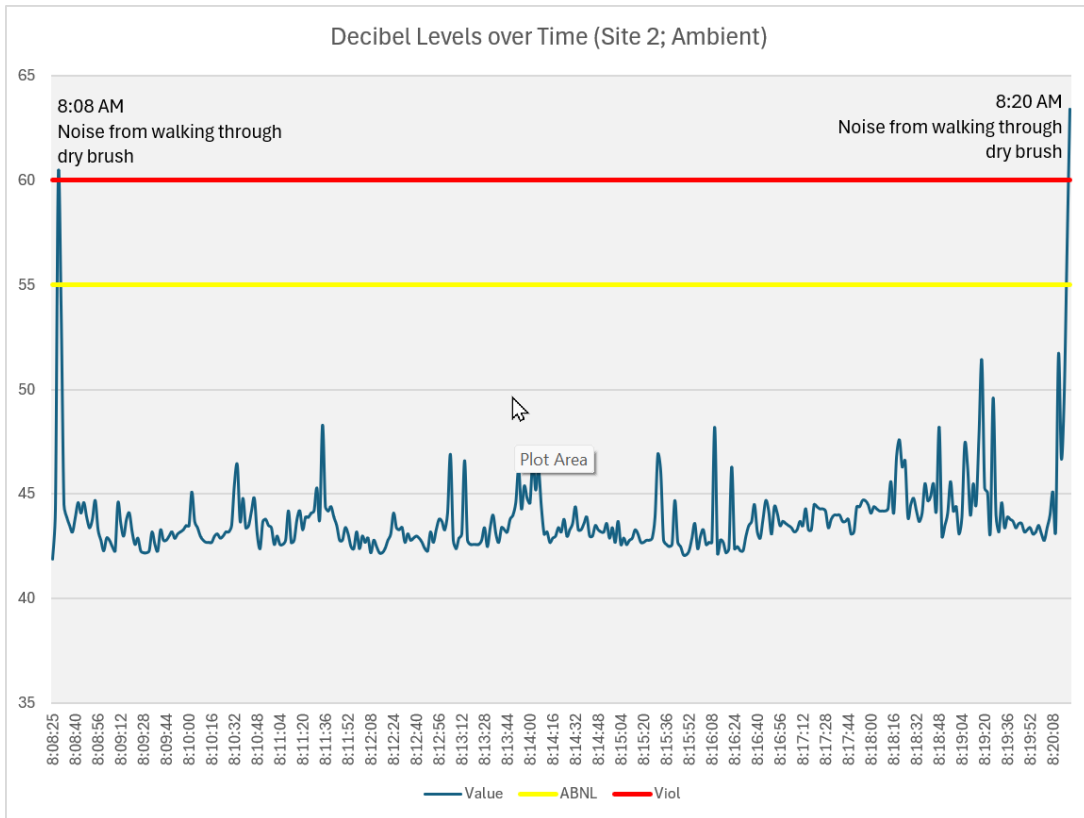
	Duration	L _{MAX}	L _{EQ}	Notes
Site 1 - Ambient	0:09:36	58.3 dB	45.4 dB	
Site 1 - Live	0:09:33	60.3 dB	48.2 dB	60 dB+ peak attributed to construction noise
Site 2 - Ambient	0:11:55	63.4 dB	45.5 dB	60 dB+ peak attributed to walking through dry brush
Site 2 - Live	0:11:04	60.4 dB	48.5 dB	60 dB+ peak attributed to walking through dry brush
Site 3 - Ambient	0:10:44	58.5 dB	46.9 dB	
Site 3 - Live	0:11:05	56.5 dB	48.4 dB	

To clarify some terms used in this report, “L_{MAX}” refers to the maximum sound pressure level measured at any given moment during a survey, whereas “L_{EQ}” stands for “Equivalent Continuous Sound Level” and refers to the equalized average sound pressure level recorded during a survey. L_{EQ} is not a simple average, but a logarithmic one which represents the constant sound level that would have the same total sound energy as the fluctuating noise being measured. It considers how much sound energy is present, not just the average volume.

A set of six charts is included below. They are intended to provide a clearer representation of each of the surveys taken. Each chart shows dB levels over time as a dynamic line graph (in blue). Additional baselines are included and represent the 55 dB ABNL (in yellow) and the 60 dB limit (in red) above which sound levels would constitute a violation. These charts are as follows:



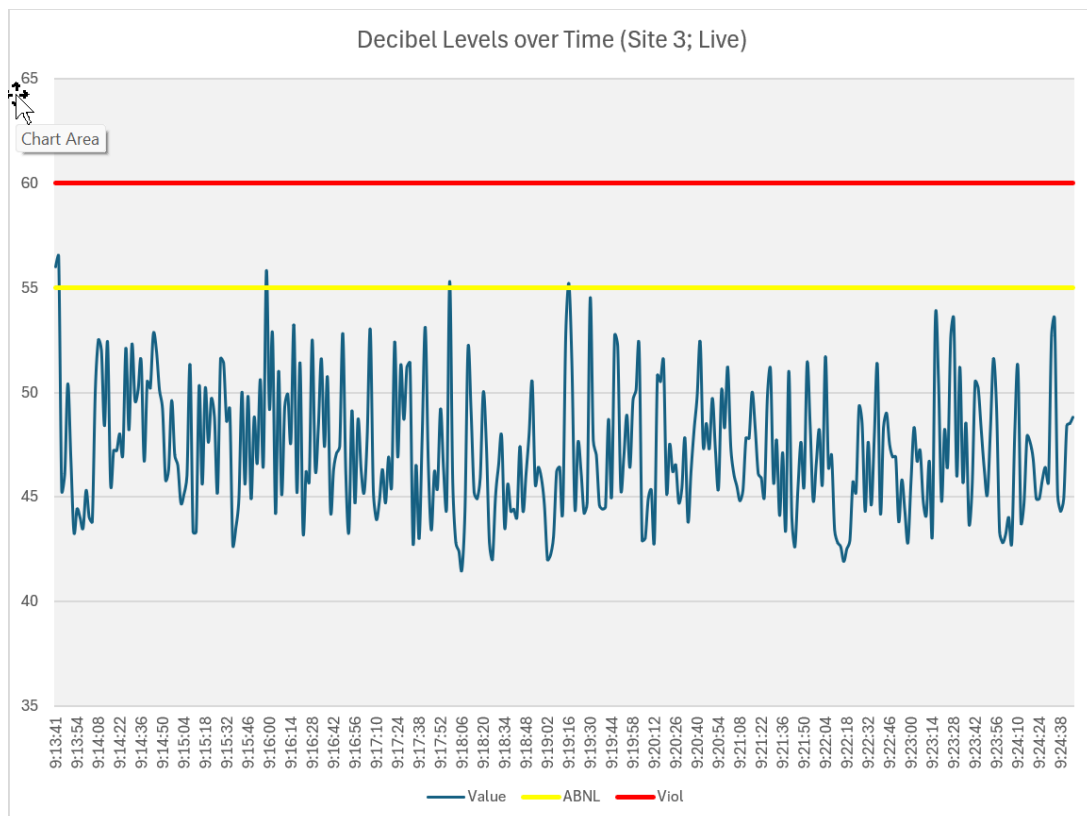
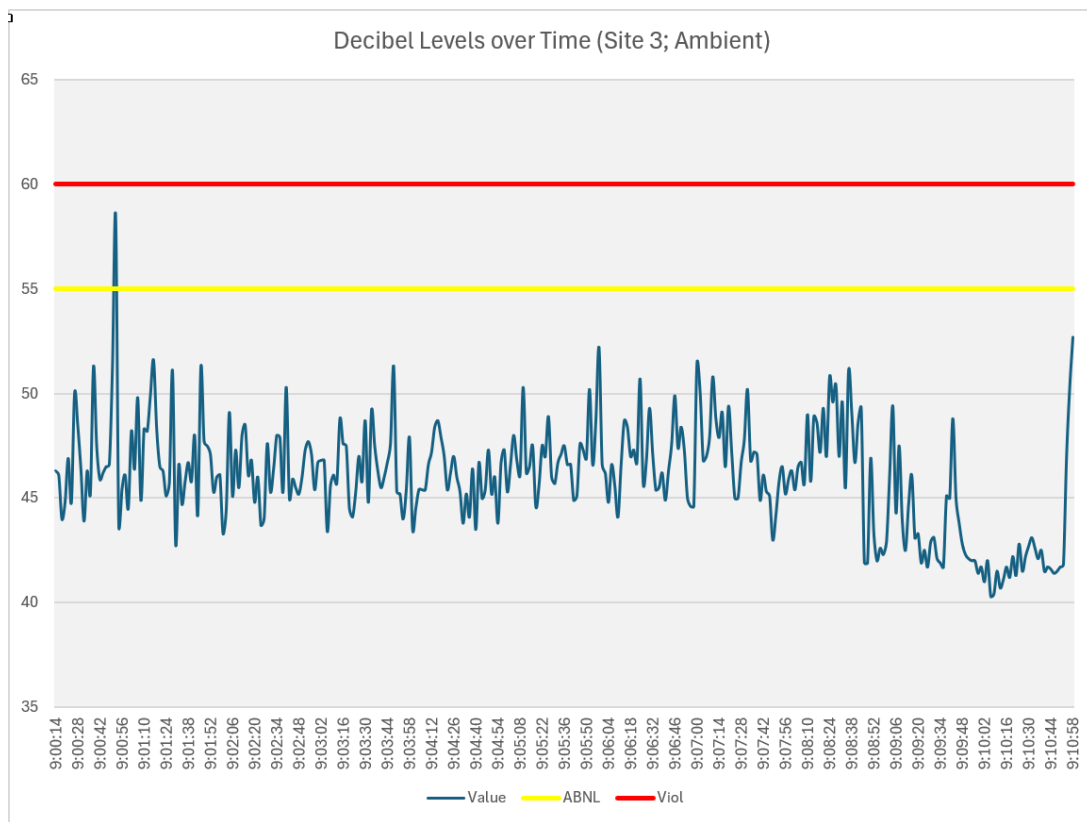
Memorandum – Sound Survey Report
July 18, 2024
Page 4 of 6



Memorandum – Sound Survey Report

July 18, 2024

Page 5 of 6



Summarized below are overall findings as well as individual findings for each of the three survey sites:

General:

Conditions for all three sites were optimal for survey taking. The weather was clear with little to no wind (1 MPH out of the west); the temperature was 58° F; the humidity was 85% and the pressure was 29.98 (inHG). The ambient environment was stable, with the only extraneous noise sources being nearby construction; passing aircraft; birds; and noise created by staff walking through dry grass and brush.

- **Site 1:**

A comparison of the ambient and live measurements clearly reflects that there was greater sound activity when the pickleball courts were in use. The sound generated by the live activity, however, did not meaningfully differ from the ambient, and at no time violated the noise ordinance. The only point in time where sound readings exceeded 60dB is attributed to nearby construction noise.

- **Site 2:**

Similar to the findings for Site 1, Site 2 clearly reflects that the live pickleball activity was measurable but did not meaningfully differ from the ambient and at no time violated the noise ordinance. The three points in time where sound readings exceeded 60dB are attributed to walking through the dry brush to and from the meter location.

- **Site 3:**

Measurements taken at Site 3 revealed a more dynamic ambient sound level activity than at the prior two sites; this is attributable to the absence of trees and solid fencing between the sound sources and the meter, and results in less of a difference between the ambient and live environments. Again, however, consistent with Sites 1 and 2, there was no meaningful difference between the live activity and the ambient, and at no point did the sound level violate the noise ordinance.

In conclusion, it is my finding that the activity observed and measured this date does not violate the provisions of the City's noise ordinance.

Attachments: (3) Noise Measurement Worksheets



Noise Measurement Worksheet

Case No.: CE22-1216		Officer: Kirk, L. (E08281)		Date: 07/18/2024	
Location: 2777 4th Street, Santa Rosa CA 95405				Site No.: 1 of 3	
Sound Level Meter: Extech SDL600	Serial No.: Z414660	Cert. No.: 281408	Cert. Date: 07/12/23	Cert. Valid?: ☐ Yes	
Calibrator: Extech 407722	Serial No.: Z414435	Cert. No.: 281296	Cert. Date: 07/06/23	Cert. Valid?: ☐ Yes	
Calibration time (before): 7:55 AM	Offset, dB (before): 94.0 dB/94.0 dB	Calibration time (after): 10:03 AM	Offset, dB (after): 94.0 dB/94.0 dB		
Meter Settings: A-Weighting, Fast, 2-Second Interval, Windscreen Installed.					

Conditions:		
Skies: Clear	Wind: 2 MPH from the West	Ambient Baseline: 55.0 dB
Temp.: 58 Degrees F	Humidity: 85%	Pressure (inHG): 29.98
Notes: Excellent conditions for survey. Loud bang from nearby construction noted at 8:52 AM (60.3 dB)		

Series	Start	Duration	Active	L _{MAX}	L _{eq}	Notes
1	7:55:23 AM	0:09:36	0:09:36	58.3 dB	45.4 dB	Ambient
2	8:44:33 AM	0:09:33	0:09:33	60.3 dB	48.2 dB	Live
3						
4						



Noise Measurement Worksheet

Case No.: CE22-1216		Officer: Kirk, L. (E08281)		Date: 07/18/2024	
Location: 2777 4th Street, Santa Rosa CA 95405				Site No.: 2 of 3	
Sound Level Meter: Extech SDL600	Serial No.: Z414660	Cert. No.: 281408	Cert. Date: 07/12/23	Cert. Valid?: ☐ Yes	
Calibrator: Extech 407722	Serial No.: Z414435	Cert. No.: 281296	Cert. Date: 07/06/23	Cert. Valid?: ☐ Yes	
Calibration time (before): 7:55 AM	Offset, dB (before): 94.0 dB/94.0 dB	Calibration time (after): 10:03 AM	Offset, dB (after): 94.0 dB/94.0 dB		
Meter Settings: A-Weighting, Fast, 2-Second Interval, Windscreen Installed.					

Conditions:		
Skies: Clear	Wind: 2 MPH from the West	Ambient Baseline: 55.0 dB
Temp.: 58 Degrees F	Humidity: 85%	Pressure (inHG): 29.98
Notes: Excellent conditions for survey. Noise from walking through dry grass to/from meter location noted: Series 1: 8:08 AM (60.2 dB) and again at 8:20 AM (63.4 dB) Series 2: 8:28 AM (58.8 dB) and again at 8:39 AM (60.4 dB)		

Series	Start	Duration	Active	L _{MAX}	L _{eq}	Notes
1	7:55:23 AM	0:11:55	0:11:55	63.4 dB	45.5 dB	Ambient
2	8:44:33 AM	0:11:04	0:11:04	60.4 dB	48.5 dB	Live
3						
4						



Noise Measurement Worksheet

Case No.:		Officer:		Date:	
CE22-1216		Kirk, L. (E08281)		07/18/2024	
Location:				Site No.:	
2777 4 th Street, Santa Rosa CA 95405				3 of 3	
Sound Level Meter:	Serial No.:	Cert. No.:	Cert. Date:	Cert. Valid?:	
Extech SDL600	Z414660	281408	07/12/23	☐ Yes	
Calibrator:	Serial No.:	Cert. No.:	Cert. Date:	Cert. Valid?:	
Extech 407722	Z414435	281296	07/06/23	☐ Yes	
Calibration time (before):	Offset, dB (before):	Calibration time (after):	Offset, dB (after):		
7:55 AM	94.0 dB/94.0 dB	10:03 AM	94.0 dB/94.0 dB		
Meter Settings:					
A-Weighting, Fast, 2-Second Interval, Windscreen Installed.					

Conditions:		
Skies:	Wind:	Ambient Baseline:
Clear	2 MPH from the West	55.0 dB
Temp.:	Humidity:	Pressure (inHG):
58 Degrees F	85%	29.98
Notes:		
Excellent conditions for survey.		

Series	Start	Duration	Active	L _{MAX}	L _{eq}	Notes
1	7:55:23 AM	0:10:44	0:10:44	58.5 dB	46.9 dB	Ambient
2	8:44:33 AM	0:11:05	0:11:05	56.5 dB	48.4 dB	Live
3						
4						