EXHIBIT 11

Project Noise Study, Dated 3/8/2016, Prepared by Wilson Ihrig Associates

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

Diablo MX Ranch Noise Study – FINAL DRAFT

Contra Costa County, CA

8 March 2016

Prepared for:

Ron Mullin, Esq.
Mullin Law Firm
1355 Willow Way, Suite 110
Concord, CA 94520

Prepared by:

Richard Carman, PhD, P.E. (Senior Principal)
Leisa Nalls (Senior Consultant)
Timothy Johnson (Senior Consultant)

WI Project 16-005

Contents

Executive Summary

As required for a County Land Use Permit, this report presents a noise study prepared for the existing Diablo Motocross Ranch (DMXR) facility at 50 Camino Diablo in Contra Costa County, California. The DMXR facility will host dirt bike races on several weekends a year and allow dirt bike riders to practice on the motocross track and flat oval track on weekends and practice on the motocross track on weekdays.

The purpose of this noise study is to determine the typical noise levels to be expected from dirt bike activity at the DMXR facility. The projected noise levels are compared to the noise guidelines contained in the Noise Element of the Contra Costa County General Plan. This report provides a description of the noise study methodology, the noise measurements conducted during simulated dirt bike race and practice events, ambient noise measured over the course of a few days without bike activity, a discussion of Noise Element noise guidelines, and DMXR activity noise level projections at several points along the DMXR property line. Estimates of noise levels at nearby residences are also provided for a day when races are held.

This study addressed three different event scenarios for dirt bike activity at DMXR:

1. Weekend race day
2. Weekend practice day
3. Weekday practice
4. Friday or Saturday Night Under the Lights event

The analysis to assess these scenarios incorporates noise levels measured at the property line from simulated race and practice activities and existing ambient noise with no bike activity. Based on noise measurements of simulated races and practice activity and ambient noise data, the Day-Night Noise Level (L_{dn}) for each of the four scenarios was calculated based on race and practice activity levels provided by the applicants (John and Lori Ramirez). The noise levels presented herein are intended to represent a typical condition for each of the DMXR activity scenarios evaluated.

It is our understanding that the DMXR property and surrounding land parcels are all zoned as A-3 (Heavy Agricultural District). The Contra Costa General Plan Noise Element indicates that noise levels up to 75 L_{dn} are "Normally Acceptable" for land zoned for agriculture. Based on the model calculations performed for the four activity scenarios, 73 L_{dn} is the highest noise level projected at the DMXR property line due to dirt bike activity on a typical weekend race day. Therefore, the DMXR activity is within the "Normally Acceptable" noise guidelines at the property line.

The highest noise level at an adjacent residence is estimated to be 61 L_{dn} for a typical race day. Noise levels at the other residences are projected to be less for a race day. For weekend and weekday practice the noise levels will be even lower than those occurring on a race day. For Friday or Saturday Night Under the Lights, the highest L_{dn} at two residences is estimated to be 60.

1 Project Description

The DMXR facility is located at 50 Camino Diablo, near the intersection of Camino Diablo and Walnut Boulevard, in Contra Costa County (CCC). The nearest city is Brentwood. The facility has two race

tracks for dirt bike riding, a motocross (MX) track which is the main track and an oval track. The flat oval track that will be used but see less activity compared to the main track. The flat oval track will be used on events referred to as Friday or Saturday Night Under the Lights. The purpose of this noise study is to determine the typical noise levels to be expected from dirt bike activity at the DMXR facility. Four different scenarios for dirt bike activity were evaluated: a weekend race day, a weekend practice day, a weekday practice, and flat track only activity (Friday or Saturday Night Under the Lights event). Figure 1 is an aerial view of the DMXR facility. The oval track visible in this aerial view will be relocated 150 feet to the west of the existing oval track as noted.

Figure 1: Aerial View of DMXR Facility Showing Noise Measurement Locations

The hours of operation of the DMXR (i.e., hours during which the facility will be open to the public) are contained in the Land Use Permit. Figure 2 is a photo of the MX track looking to the southeast from a position near measurement Location 4.

Figure 2: Diablo MX Ranch MX Track

2 Applicable Noise Guidelines

The applicable noise guidelines are contained in the Noise Element of the CCC General Plan (2005 - 2020). The noise guidelines are contained Figure 11-6 (Land Use Compatibility for Community Noise Environments) of the Noise Element, which is replicated herein in Figure 3. CCC Land Use Compatibility noise guidelines are based on the Day-Night Level (L_{dn}) metric. The L_{dn} is the equivalent noise exposure level for a 24-hour period. Noise occurring during the nighttime hours of 10:00 pm to 7:00 am are weighted by adding 10 decibels (dB) to the measured noise levels. The 10 dB weighting accounts for the greater sensitivity of people to noise during nighttime hours compared to noise occurring during the daytime.

Environmental noise levels are measured in terms of A-weighted decibels (dBA), which are closely correlated with the auditory response of the human ear. A-weighting is implicit in noise levels reported in terms of L_{dn} and normally not included when reporting L_{dn} levels. Environmental noise levels fluctuate over time. The term Equivalent Continuous Sound Exposure Level (L_{eq}) refers to a

noise level that is equivalent to a level of a steady noise containing the same total sound energy as the fluctuating noise level for a given period of time (typically one hour). The L_{dn} is determined from the hourly L_{eq} over a 24-hour period with the 10 dB weighting for nighttime hours. Figure 2 below presents the Land Use Compatibility noise guidelines as indicated in Figure 11-6 of the CCC Noise Element. It is our understanding that the land parcels adjacent to DMXR property are zoned agriculture and therefore noise levels up to 75 L_{dn} are considered "Normally Acceptable."

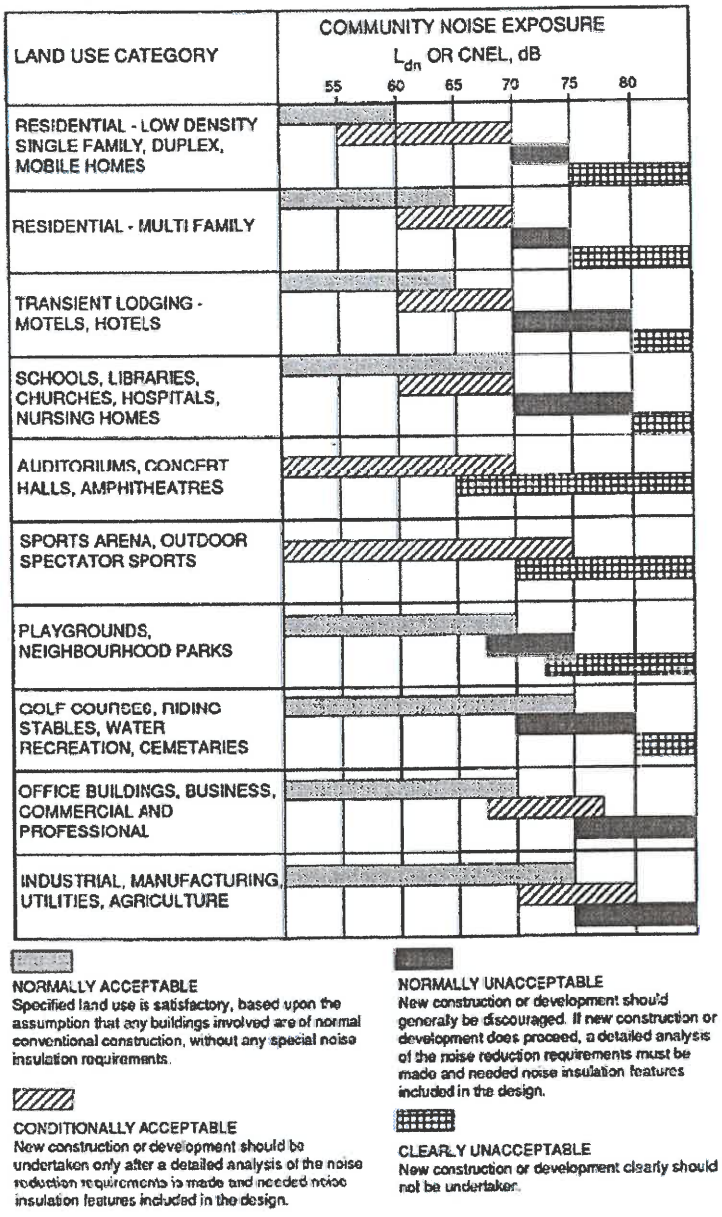

Figure 3: Land Use Compatibility Guidelines for Community Noise Environments (as provided in Figure 11-6 of the Noise Element of the Contra Costa County General Plan)

3 Noise Study Methodology

The noise measurements conducted for this study consisted of both short-term noise recordings and long-term noise measurement at five (5) locations along the DMXR property line. Table 1 summarizes the noise measurement locations and the types of measurements performed at each. Figure 1 shows the position of measurement locations for this noise study on an aerial image of the facility.

Long-Term Measurements

Hourly L_{eq} noise levels were measured along the property line of the site using five Type I logging sound level meters with windscreens. All measurements were calibrated. The noise loggers were left unattended for four full days, two weekdays and a weekend. The long-term loggers were placed at the locations indicated in Table 1and Figure 1 (Loc. 1 to Loc. 5), where they were secured to the fence or tree support post with extension poles. Microphone height for the long-term loggers was approximately 8 feet above the ground. All long-term meter microphones were provided with a 7 in. weatherproof windscreen to minimize noise created by turbulence at the microphone from wind. The sound meters logged noise levels continuously for several 24-hour periods, providing hourly L_{eq} throughout the measurement duration. The hourly L_{eq} logged were subsequently used to calculate the daily Day-Night Levels (L_{dn}) and typical hourly ambient L_{eq} at each location. Loc. 4 and Loc. 5 only logged data for three complete days due to a loss of battery power.

Short-Term Sound Recordings

Calibrated, digital recordings were made at all five locations to provide representative samples of dirt bike noise and its frequency content for a four-hour period during the simulated race and practice activity conducted on a weekday (Thursday, January 28th). Digital recordings were obtained with microphones at a height of 5 feet above the ground. Microphone windscreens were employed. The locations and descriptions of the measurements are indicated in Figure 1 and Table 1.

Table 1: Environmental and Dirt Bike Noise Measurement Locations

Label	Measurement Type	Location Description
Loc. 1	Long Term - 8 ft mic height Short Term – 5 ft mic height	East property line fence on extension pole, 250' north from north edge of neighbor's barn. On a hillside overlooking the flat track and much of the MX track.
Loc. 2	Long Term – 9.5 ft mic height Short Term – 5 ft mic height	Southeast property line at row of new cedar trees on extension pole, secured to tree support post. Near the MX track and in-line with the eastern edge of the water retention pond on site.
Loc. 3	Long Term – 8.5 ft mic height Short Term – 5 ft mic height	South-southeast property line fence, on extension pole, on MX track hill. Near the section of the MX track where the riders start the final decent off the hill.
Loc. 4	Long Term – 7.5 ft mic height Short Term – 5 ft mic height	West-northwest property line fence, at corner of fence line, on extension pole. Near the start line for the MX track.
Loc. 5	Long Term - 9 ft mic height Short Term – 5 ft mic height	West property line fence on extension pole, in-line with adjacent residence south façade. Farthest from both tracks, and near closest residence.

3.1 Dirt Bike Activity Noise Recordings

Simulated race day and practice activity were conducted with volunteers on 28 January 2016. Approximately fifty riders, with a mix of 2-stroke and 4-stroke bikes, were present over a four-hour period and ridden to simulate motocross (MX) races and practice activity on the MX track and the oval track. Two Wilson Ihrig personnel circulated between measurement Locations 1, 2, 4, and 5 during this four-hour period to observe the noise levels at each location in real time during the dirt bike activity. Loc. 3 was not accessible during the dirt bike activity for safety reasons.

Three race simulations were conducted on the MX track. Each race consisted of 10 laps, the first two races had 20 riders and the third race had 22 riders. Each of these three races had a typical duration of approximately 25 minutes. The bikes ridden during these simulations were a mix of 2 and 4-stroke engines, with a majority of 4-stroke engines. One race simulation, which consisted of 13 riders and 10 laps, was conducted on the flat oval track.

Following the four races the two tracks were opened for bike practice activity for the next 2.5 hours. The number of riders on the track varied throughout the practice time, with the highest number being 25 riders on the MX track and 10 riders on the oval track at the beginning of the practice simulation. A head count of riders was taken roughly every 30 minutes during the practice simulation, with the number of riders on the MX track decreasing by an approximately 5 riders with each 30-minute head count. At the end of the practice simulation there were five riders on the motocross track. The oval track was empty by the end of the first hour of practice time.

The data recorded from these simulated race and practice events were used to establish hourly L_{eq} and L_{dn} levels for the four scenarios for DMXR race and practice functions that were assessed: (1) a weekend race day, (2) a weekend practice day, (3) a weekday practice and (4) Friday or Saturday Night Under the Lights event.

3.2 Ambient Noise Measurement Results

The results of the ambient noise survey without bike activity reveal that the existing noise levels around the DMXR property line range from 47 to 56 L_{dn}. The logged hourly ambient noise levels were used to establish the typical ambient noise levels during the three DMXR function scenarios indicated above, outside the hours when the facility is open and bike activity occurs. The L_{dn} levels measured at each location are presented in Table 2 below.

Table 2: Measured Existing Ambient L_{dn} without DMXR Activity

	Day-Night Noise Level (L_{dn})				
Day	**Loc. 1**	**Loc. 2**	**Loc. 3**	**Loc. 4**	**Loc.5**
Friday, January 29	48	49	47	56	47
Saturday, January 30	50	50	47	55	47
Sunday, January 31*	53	56	56	53	48
Monday, February 1	54	54	52	--**	--**

* There appeared to be a least one dirt bike rider at the DMXR facility on Sunday, January 30, 2016 during the 3 pm hour

** No data was logged at these locations on this day due to a loss of battery power

3.3 Analysis of Measured and Recorded Noise Data

The results of the simulated race and practice events are summarized in Table 3 below. Sample L_{eq}'s at each site were taken during each of the simulated events. Sample L_{eq}'s obtained from the recordings during the simulated races ranged between 10-15 minutes. Samples obtained during the simulated practices were 30 minutes in duration. Typical weekend and weekday ambient levels for each hour are presented in the Appendix. At each site, the measured ambient hourly L_{eq}'s collected during Saturday and Sunday were averaged to calculate typical weekend ambient levels. Measured ambient hourly L_{eq}'s collected during weekdays were averaged to calculate typical weekday ambient levels.

Table 3: Measured Equivalent Noise Levels (L_{eq}) During Simulated DMXR Activity

Simulated Events	Equivalent Noise Level (L_{eq})				
	Loc. 1	Loc. 2	Loc. 3	Loc. 4	Loc.5
Simulated Race on MX Track*	66	74	69	78	65
Simulated Race on Oval Track**	70	58	66	62	70
Simulated MX and Oval Track Practice (10/5 riders)***	65	72	68	75	65
Simulated MX Practice (5 riders)***	64	71	68	74	64
Simulated Oval Track Practice (3 riders)****	64	52	60	56	64

* Samples taken during simulated race events on MX track ranged between 10 – 15 minutes.
** Samples taken during simulated race events on oval track were 10 minutes.
*** Samples taken during simulated practice events were 30 minutes.
**** Adjusted from 10 minute samples taken during simulated race events on oval track.

4 Noise Models for DMXR for Property Line Locations

The results of the ambient noise measurements (typical hourly L_{eq}) were combined with the calculated hourly L_{eq} for racing and practice events to arrive at typical L_{dn} values at the measurement locations. Four different scenarios were modeled based on how the facility will typically operate, including: a weekend race day, a weekend practice day, a weekday practice day, and a Friday or Saturday Night Under the Lights event.

The results of the ambient noise measurements during each hour of the day were averaged for a weekend day and for a weekday. This provided typical hourly L_{eq} during, for example, the 1:00 to 2:00 PM hour on a weekend and on a weekday. The typical ambient levels throughout the day were then combined with the dirt bike noise level for the racing, practice and special event scenarios to project L_{dn} values for these events.

4.1 Weekend MX Race Day

A weekend race day scenario was modeled at each of the five measurement locations. The maximum measured L_{eq} sample taken during the simulated racing events at each location was used as the reference sound level for this scenario. A typical weekend race day was assumed to consist of a total of seven hours of races and a one-hour break for lunch. It was assumed that a total of 33 races each lasting approximately 12.5 minutes would take place on the MX track during a typical weekend race day. Each race was assumed to have on average 15 riders. The noise exposure generated by dirt bike activity is determined by the amount of time riders spend riding and the number of riders doing so. Based on the parameters indicated the level of activity for a race day corresponds to a total of 105 bike rider hours (BRHs) on the MX track.

The model combined the measured racing L_{eq} obtained at each measurement location during the hours of the day when racing would occur with the measured weekend ambient levels during non-racing hours. The measured racing L_{eq} used in the model corresponds to the L_{eq} measured during the racing simulations even though the number of riders were in some cases more than number of riders the model assumes. During typical race days, it was also assumed that a public announcement (PA) system would be utilized. Typical sound levels from similar PA speakers were used to model sound levels at each location. See below for a discussion of the PA sound level and duration assumptions. The PA was assumed to be used during weekend race days once in the morning to play the national anthem and eight times per hour for announcements during the hours when there was racing. The hourly L_{eq}'s during racing hours and non-racing hours were combined to calculate the L_{dn} at each measurement location.

4.2 Weekend Practice Day

A typical weekend practice day scenario was modeled at each of the five measurement locations. The number of riders on the track at any one time during a practice day would be expected to vary. The noise recordings for simulated practice conditions included a number of different riders at different times in order to record a range of rider activity. The modeled noise level for a typical weekend practice day scenario assumes that there are on average 10 riders on the MX track at a time. The duration of a typical weekend practice event is 15 minutes, with a total of 4 hours of bike noise. A total of 40 BRHs would occur on the MX track. The oval track is expected to get much less use. A typical usage would be 5 riders on the oval track for 2 hours of riding. This corresponds to 10 BRHs on the oval track. No PA use is planned during weekend practice days. The maximum measured L_{eq} during simulated weekend practice was combined with the measured weekend ambient levels to calculate the L_{dn} at each measurement location.

4.3 Weekday Practice

A typical weekday practice was assumed to consist a total of 1.5 hours of bike noise based the typical number of riders expected and the average amount of time a rider would spend riding. Weekday afternoon practice consisted of 5 riders on average. This corresponds to 7.5 BRHs on the MX track. The oval track usage is expected to be 3 riders on average for 1 hour of riding on a typical weekday practice. This corresponds to 3 BRHs on the oval track. The computed L_{eq} from recorded samples were combined with the measured weekday ambient levels to calculate the L_{dn} at each measurement

location. No PA use is planned during practice days, so it was not included in the weekday practice scenario.

4.4 Friday or Saturday Night Under the Lights Event

DMXR will occasionally hold these special events in which the public will be able to use only the oval track and not the MX track. For this type of event a maximum usage would be 7 riders on average on the oval track riding for 4 hours. This corresponds to 28 BRHs on the oval track.

4.5 Public Address Loudspeaker Sound Levels

The applicant intends to use a PA system on race days. The existing PA system is not operable, but there is an existing loudspeaker mounted to a telephone pole in the parking lot in front of the MX track as show in Figure 4. Races that are promoted may employ their own PA system, but the loudspeaker(s) will be located next to the existing loudspeaker pole. Typical sound levels for the PA loudspeaker were assumed to be 90 dBA at 50 feet from the loudspeaker. This level is generally consistent with PA sound levels measured by Wilson Ihrig at another MX facility.

Figure 4: Existing PA Loudspeaker on Pole at SW Corner of Parking Lot

Announcements were assumed to occur before and after each race and create 15 seconds of sound each time. It is also anticipated that the national anthem will most likely be played at the beginning of race day. Although the anthem fluctuates in sound level and lasts about 200 seconds, for the purpose of analysis it was assumed that the sound level was constant at 90 dBA. These PA sound levels were factored into the calculation of L_{dn} levels, based on the parameters stated.

5 Noise Model for Adjacent Residences

There are five residences located on the adjacent agricultural land adjacent to DMXR as shown in Figure *5*. To model noise levels at the adjacent residences is more complicated than modeling noise levels at the measurement locations, because it requires accounting for attenuation with distance from multiple sources that are distributed over a large area and are constantly moving. Consequently, it was decided to construct a simplified model that assumed an aggregate noise sources concentrated at the approximate centers of the MX track and the oval track.

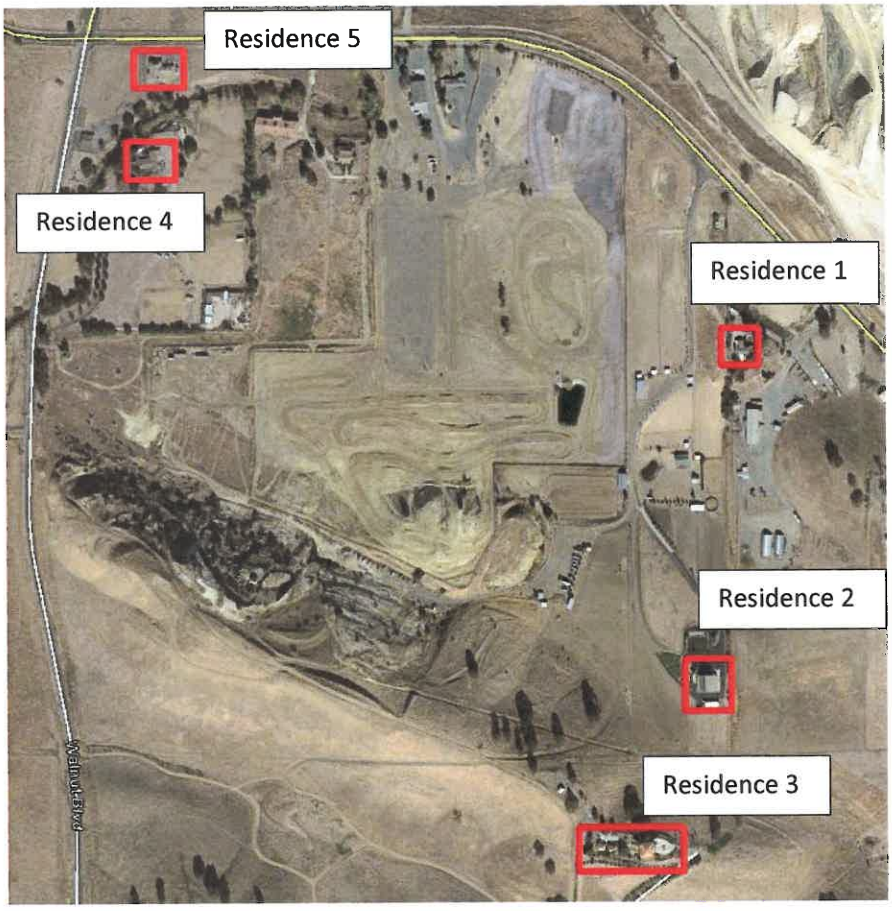

Figure 5: Location of Residences Adjacent to DMXR

Sound from a single source attenuates at a rate of 6 dB/doubling of distance, not accounting for excess attenuation due to ground effects. Excess attenuation would mean lower noise levels at the residences.

Using the calculated L_{dn} for the measurement locations (Loc. 1 through 5), the distance from the MX track center to each measurement location and the oval track to each measurement location, and this simple model, the L_{dn} for each of the five residences was calculated. The L_{dn} for the measurement location(s) in the general direction of each residence was used as a reference from which to project to the residence. For Residences 2, 3 4 and 5, there are two measurement locations that can be used for each residence. For these four residences the data for more than one measurement location were used to estimate the L_{dn} at those residences with emphasis on the measurement location that was more representative.

6 Noise Study Results for DMXR Property Line

The results of the noise modeling are included in Table 4 below. The modeled L_{dn} at all five measurement locations are indicated.

Table 4: Modeled Property Line L_{dn} During DMXR Typical Operating Scenarios

Operating Scenario	Day-Night Noise Level (L_{dn})				
	Loc. 1	Loc. 2	Loc. 3	Loc. 4	Loc.5
Weekend Race Day*	61	69	64	73	60
Weekend Practice	58	64	60	68	58
Weekday Practice	56	61	58	64	56
Friday or Saturday Night Under the Lights	60	52	57	56	60

* Weekend race day levels include PA usage

6.1 Race Day

The results of the analysis for a typical weekend race day scenario indicate that the maximum L_{dn} of 73 dBA would occur at Location 4. The predicted L_{dn} at the other locations range between 60 to 69.

6.2 Weekend Practice Day

The results of the analysis for the typical weekend practice day scenario indicate that the maximum L_{dn} of 68 would occur at Location 4. The results at the other four measurement locations indicate L_{dn} ranging from 58 to 64.

6.3 Weekday Practice

The results of the analysis for the typical weekday afternoon practice were lower due to shorter hours of activity. The maximum L_{dn} of 64 is projected to occur at Location 4, with the levels at the other four locations ranging from 54 to 60.

6.4 Friday or Saturday Night Under the Lights Events

The results of the analysis for this special event activity indicate that the maximum L_{dn} of 60 would occur at Locations 1 and 5. The results at the other three measurement locations indicate L_{dn} ranging from 52 to 57.

7 Estimate of Noise Levels at Adjacent Residences

At the nearby residences, the noise level is estimated to be in the range of L_{dn} 58 to 61 at Residence 2 on a typical weekend race day. The L_{dn} at the other residences (Residence 1, 3, 4, and 5) are estimated to be in range of 55 to 60. On weekend and weekday practices, the L_{dn} at residences would be lower than on a typical weekend race day. For a Friday or Saturday Night Under the Lights event the highest L_{dn} is estimated to be 60 for Residences 1 and 4. For this particular type of event the L_{dn} for the other residences would be less than 60. The L_{dn} are expected to be lower than these estimates due to excess attenuation from ground effects, and for Residences 2 and 3 they are expected to be lower due to acoustic shielding by the terrain.

8 Conclusions and Recommendations

The results of the analysis indicate that the maximum day-night noise level would occur during a typical weekend race day scenario. This is to be suspected due to the high number of riders and duration of racing compared to a typical practice day scenario. The predicted levels at all modeled property line locations is below the Noise Element guideline of 75 L_{dn}, which is considered Normally Acceptable for agriculture land. The highest noise level (73 L_{dn}) is projected to occur at Location 4 on the DMXR property line.

Based on the results of this noise study, no mitigation measures are recommended for the DMXR facility other than to implement a noise measurement program for weekend race and practice day bikes following the State of California procedure for controlling individual bike noise emission levels. That procedure requires noise levels measured 20 inches from the exhaust pipe of a stationary bike not exceed 96 dBA when the bike is operated at a specified RPM based on the year, make and model of the bike (i.e., half the manufacturer's rated maximum RPM).

APPENDIX – AMBIENT NOISE DATA

Table A-1: Typical Measured Weekend Ambient Hourly L_{eq}

Hour of Day	Typical L_{eq} (dBA)				
	Loc. 1	Loc. 2	Loc. 3	Loc. 4	Loc.5
0:00	42	42	38	49	39
1:00	41	39	44	48	36
2:00	42	40	37	42	35
3:00	42	38	36	41	36
4:00	36	37	35	43	35
5:00	38	36	36	39	38
6:00	41	41	40	40	41
7:00	44	50	41	40	43
8:00	47	45	43	44	45
9:00	45	45	43	42	47
10:00	46	45	44	44	47
11:00	46	44	43	44	46
12:00	47	52	47	45	47
13:00	47	47	47	46	47
14:00	46	50	45	49	46
15:00	51	55	57	55	50
16:00	49	50	49	49	49
17:00	44	49	42	45	43
18:00	49	46	45	48	45
19:00	47	46	44	49	44
20:00	49	45	43	50	45
21:00	50	47	42	49	44
22:00	48	46	42	48	41
23:00	47	47	42	47	39

Table A-2: Typical Measured Weekday Ambient Hourly L_{eq}

Hour of Day	Typical L_{eq} (dBA)				
	Loc. 1	Loc. 2	Loc. 3	Loc. 4	Loc.5
0:00	44	41	43	45	38
1:00	45	40	42	48	38
2:00	41	38	37	49	32
3:00	40	38	39	46	33
4:00	41	41	40	45	39
5:00	45	43	44	43	44
6:00	46	46	44	46	45
7:00	46	46	53	43	47
8:00	46	49	43	40	45
9:00	45	46	43	45	44
10:00	46	43	45	41	43
11:00	46	46	45	39	43
12:00	46	50	46	41	43
13:00	46	46	47	39	43
14:00	44	42	43	40	41
15:00	44	43	44	42	43
16:00	42	41	42	43	42
17:00	43	43	41	52	44
18:00	46	44	42	53	45
19:00	46	45	44	53	45
20:00	45	43	42	53	43
21:00	42	43	41	53	43
22:00	40	41	40	53	39
23:00	40	39	37	50	38