

APPENDIX K-2

Noise Addendum

Dt: 17 October 2019
Fm: Mark Storm (Dudek)
To: Harold (Dan) Hall (Bureau of Indian Affairs)
Cc: Matt Valerio (Dudek)
Re: **Campo Wind Project with Boulder Brush Facilities – EIS Noise Response to Comments Addendum Memo**

Att: Attachment A – Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

This noise technical memorandum was prepared to supplement Appendix K (the 2019 Acoustical Analysis Report [AAR]) of the Environmental Impact Statement (EIS) as an “Addendum” and thereby provide more detailed technical response to several public comments on the Draft EIS (DEIS). Specifically, some received public comments concerned the suitability of baseline outdoor ambient measurement data collected with American National Standards Institute (ANSI) Type 2 instruments. While the ANSI Type 2 instruments provide adequate baseline recording information as presented in the DEIS and AAR, updated baseline data collection was undertaken in the summer of 2019 with ANSI Type 1 instruments.

Following the organization of this document, the Addendum primarily serves three functions:

- I. Summarize updated baseline outdoor ambient sound pressure level (SPL) data collection performed at locations in the Project Vicinity with Dudek-deployed ANSI Type 1 unattended sound level meters (SLM);
- II. Summarize consequential updates to the EIS AAR predictive noise analyses and adverse effect assessments due to this updated baseline outdoor SPL data; and,
- III. Summarize updates to Sections 3.10 and 4.10 of the EIS stemming from the analysis supporting Sections I and II above.

I. UPDATED BASELINE SOUND LEVEL DATA COLLECTION

Executive Summary

The following are highlights of results and findings from the updated baseline outdoor ambient data collection effort, performed over the course of six (6) elapsed days between and including Thursday, August 29, 2019 and Wednesday, September 4, 2019.

- Data collection – SPL data was successfully collected over a consecutive 48-hour period at each of five SLM locations associated with the proximity of tagged long-term monitoring locations (LT) LT-2, LT-3, LT-6, LT-8, and LT-12 as currently presented in the Project EIS and supporting AAR. SPL data was collected at tagged locations LT-4, LT-5, LT-9, LT-10, and LT-11 for less than 48 hours due to encountered field conditions and instrument function.
- Key observations – While the ANSI Type 1 instruments demonstrated a capability of measuring SPL at lower magnitudes than the levels measured with ANSI Type 2 instruments deployed during the 2018 baseline outdoor ambient SPL survey, virtually all of the monitoring locations exhibited elevated evening and nighttime sound levels attributed to insect noise, as supported by brief audio recording samples triggered to occur during measured high noise levels detected by the unattended SLM deployments. The acoustical frequencies of the insect sounds and their duration correlates with a period between dusk and dawn, and is consistent with published research on cricket and katydid songs and their expected occurrence.¹

¹ <http://songsofinsects.com/crickets/spring-and-fall-field-crickets>

- Comparison of SPL – Calculated day-night sound level (L_{dn}) and community noise equivalent level (CNEL) values from this field survey of deployed ANSI Type 1 SLM at the tagged locations were compared with similarly calculated L_{dn} and CNEL values from the 2018 survey that were presented and used for noise impact assessment in the DEIS. Generally, L_{dn} and CNEL values from this field survey were comparable to those calculated from the 2018 field survey, which occurred at the same time of year (early September). As a result of these updated baseline outdoor L_{dn} and CNEL metrics, changes to the assessment of cumulative noise impacts on and off the Reservation are slight with respect to applicable criteria. Furthermore, the contribution of insect noise also affected the average A-weighted L_{90} values (i.e., the “background” sound) from which the Residual Background Sound Criterion (RBSC) would be calculated and used for Off-Reservation noise impact assessment per Section 6952 (Large Wind Turbine) of the County of San Diego Zoning Ordinance (a.k.a. “Wind Energy Turbine [WET] Guidelines”).

Methodology

Dudek personnel visited the Project Vicinity four (4) times over the anticipated course of six (6) elapsed days between and including Thursday, August 29, 2019 and Wednesday, September 3, 2019 to deploy, re-locate, and retrieve up to five (5) automated, unattended SPL monitoring systems in three successive cycles so as to conduct SPL measurements at a total of up to thirteen (13) survey locations comparable to those of the original 2018 field survey effort using ANSI Type 2 SLMs.

The five SLM deployments included the following equipment and features:

- Three (3) ANSI Type 1 Larson-Davis Model 831 Sound Level Meters (serial numbers [SN]: 1219, 2559, 3627), each enclosed within locked weatherproof heavy plastic (e.g., Pelican brand) cases. The locked case containing the data analyzer was secured to a nearby natural (tree trunk) or man-made feature (fence) via an insulated cable lock. SLM microphones and pre-amplifiers were connected to the encased data analyzer via signal cable. An “environmental shroud” comprising cylindrical windscreen and external “bird spikes” protected the microphone mounted atop a portable tripod. Please refer to Figure I-1 for a sample installation. One of these SLM setups also included a separately mounted (i.e., on its own tripod) Vaisala-brand meteorological data station, for the concurrent measurement and collection of outdoor ambient temperature, wind speed and direction, and relative humidity.
- One (1) ANSI Type 1 Larson-Davis Model 831C Sound Advisor (SN: 10576), with the same additional hardware as the above-described LD 831 kits.
- One (1) ANSI Type 1 Larson-Davis Model 820 Sound Level Meter with the same additional hardware as the above-described LD 831 kits. Unlike the Model 831 and 831C, however, the model 820 is an older design that lacks capability of data storage to a plugged-in USB key drive that can be conveniently swapped with another in the field between deployment locations.

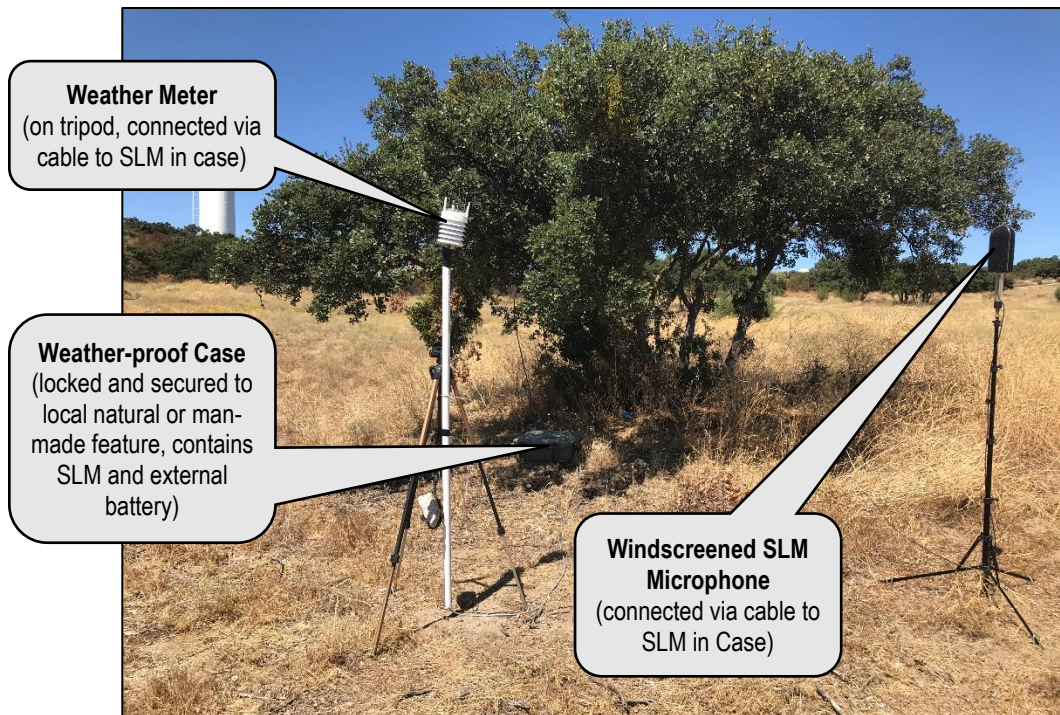


Figure I-1. Unattended SLM Deployment (with callouts of main features, including Weather Meter)

The SLM kits were deployed at the following locations as shown in Table I-1 below. In some cases, field conditions required the 2019 location be slightly off-set from the previous 2018 field survey location. The 2019 SLM location was generally within 200 feet of the 2018 location and was surrounded by comparable acoustical and environmental conditions. The approximate 2019 locations appear on Figure I-2.

Table I-1. Baseline Sound Pressure Level Survey Locations (2018 vs. 2019)

Sound Level Meter (SLM) Location Tag	2018 GPS Coordinates of SLM Deployments	2019 GPS Coordinates of SLM Deployments	On or Off Reservations?
LT-1	32°37'23.28"N, 116°21'4.71"W	32°37'27.27"N, 116°21'4.34"W	Off
LT-2	32°37'30.87"N, 116°21'48.58"W	32°37'29.22"N, 116°21'47.63"W	On
LT-3	32°38'25.00"N, 116°22'44.64"W	32°38'24.99"N, 116°22'45.85"W	On
LT-4	32°39'1.18"N, 116°22'5.32"W	32°39'2.50"N, 116°22'6.03"W	On
LT-5	32°39'9.90"N, 116°21'26.13"W	32°39'11.56"N, 116°21'25.04"W	On
LT-6	32°42'14.44"N, 116°23'37.85"W	32°42'12.61"N, 116°23'38.05"W	Off
LT-7	32°41'40.47"N, 116°20'43.37"W	32°41'40.51"N, 116°20'42.39"W	On
LT-8	32°42'56.90"N, 116°21'33.77"W	32°42'55.92"N, 116°21'34.17"W	On
LT-9	32°43'32.06"N, 116°21'20.41"W	32°43'32.28"N, 116°21'20.77"W	On
LT-10	32°44'3.57"N, 116°19'42.57"W	32°44'7.49"N, 116°19'44.48"W	On
LT-11	32°40'34.50"N, 116°21'21.68"W	32°40'40.88"N, 116°21'24.50"W	On
LT-12	32°42'38.15"N, 116°18'50.60"W	32°42'39.92"N, 116°19'2.95"W	On
LT-13	32°36'5.82"N, 116°23'10.79"W	32°36'5.25"N, 116°23'10.77"W	Off

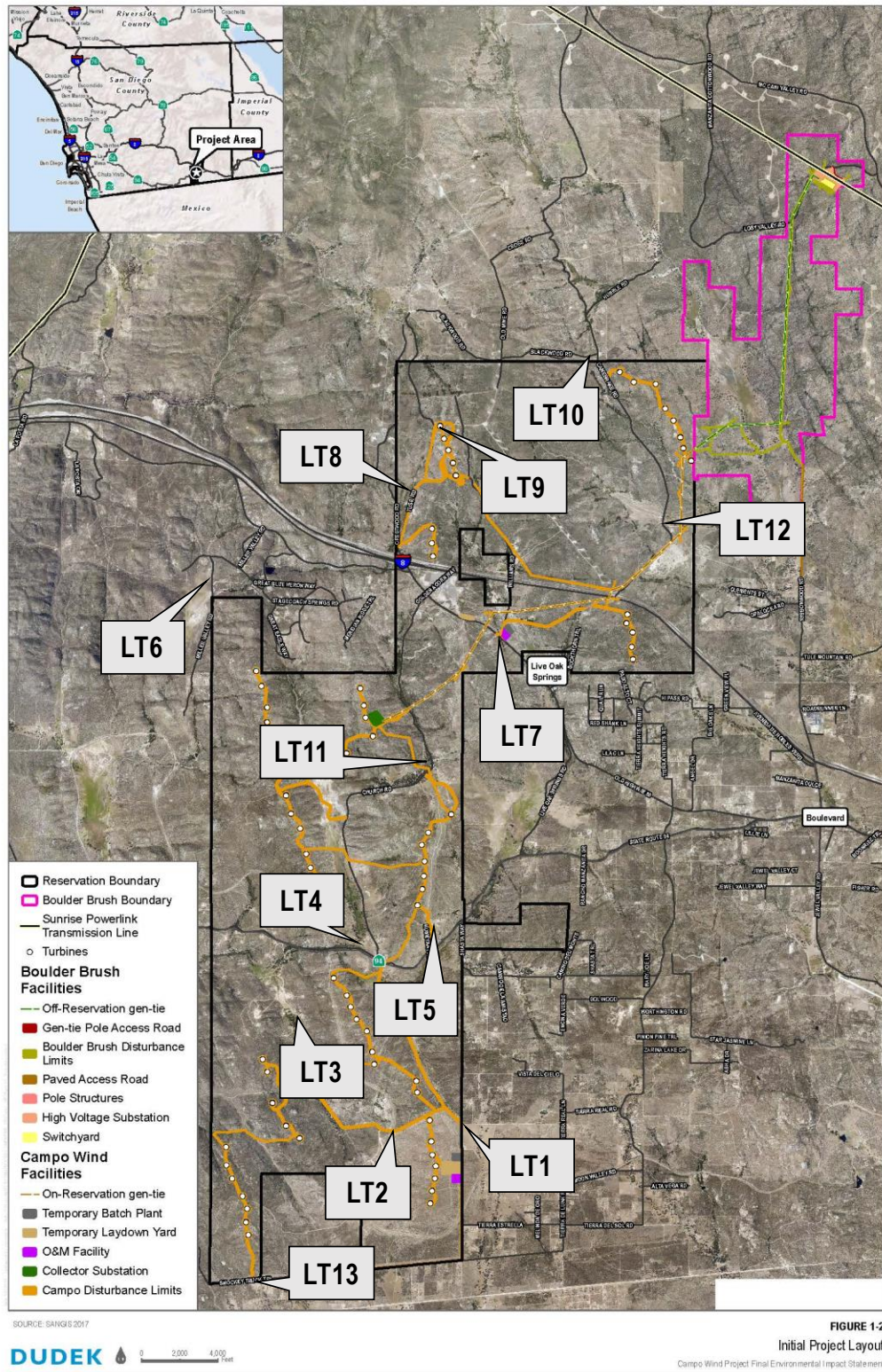


Figure I-2. Locations of Sound Level Meter (SLM) Deployments during 2019 Field Survey
(location tag callouts over background image of EIS Figure 1-2)

Measurement Data Highlights

Observed field conditions were seasonally consistent with late summer for the Project Vicinity: daytime temperatures ranging from the high 80s to low 100s (degrees Fahrenheit) and relative humidity ranging from 17% to 50%. Aside from generally sunny skies (or with overcast), precipitation did occur briefly during the measurement periods. Table I-2 presents a summary of the measurement data, along with previous metrics from the 2018 baseline outdoor field survey.

Table I-2. Summarized Baseline SPL Survey Data (2018 vs. 2019)

Sound Level Meter (SLM) Location Tag	Day-night Sound Level (L_{dn})			Community Noise Equivalent Level (CNEL)			Residual Background Sound Criterion (RBSC = $L_{90} + 5$ dBA)		
	2018 (dBA)	2019 (dBA)	Delta (dBA)	2018 (dBA)	2019 (dBA)	Delta (dBA)	2018 (dBA)	2019 (dBA)	Delta (dBA)
LT-1	51.5	n/a	n/a	51.8	n/a	n/a	40.1	n/a	n/a
LT-2	48.5	48.5	0.1	48.9	50.4	-1.5	40.4	36.2	4.2
LT-3	52.9	58.9	-6.0	53.8	59.2	-5.4	42.0	41.2	0.9
LT-4	56.1	51.1	5.1	56.2	51.9	4.3	40.1	42.6	-2.4
LT-5	56.6	54.0	2.7	57.0	54.4	2.6	40.1	39.0	1.2
LT-6	44.7	51.2	-6.5	45.6	51.4	-5.8	40.0	38.3	1.7
LT-7	67.3	n/a	n/a	67.4	n/a	n/a	44.0	n/a	n/a
LT-8	50.3	51.9	-1.6	50.7	52.2	-1.5	43.0	39.5	3.5
LT-9	43.5	56.1	-12.6	44.0	56.8	-12.8	37.6	44.4	-6.8
LT-10	45.2	48.3	-3.1	46.3	48.6	-2.3	37.8	36.7	1.2
LT-11	48.7	62.0	-13.3	50.3	63.1	-12.8	49.3	49.9	-0.6
LT-12	55.8	52.4	3.5	56.5	52.8	3.7	53.4	37.8	15.6
LT-13	50.4	n/a	n/a	50.7	n/a	n/a	41.3	n/a	n/a
Notes: 1. 2018 measurement data as appearing in Appendix B of the Acoustical Analysis Report (Appendix K) of the Campo Wind Project with Boulder Brush Facilities DEIS. 2. 2019 measurement data is, as applicable, the arithmetic average of values for up to two (2) consecutive 24-hour periods. 3. The "Delta" is the arithmetic difference of the 2018 value minus the 2019 value. 4. RBSC is calculated from the average of measured A-weighted hourly L_{90} for the listed SLM location. 5. "n/a" = not available, due to data on SLM lost when it was removed from 2019 survey site LT-7. Data for LT-1 and LT-13 was on the same LT-7 SLM and thus also lost.									

Table I-2 shows that at several locations, measured SPL during this reported 2019 field survey were—within a few dBA—comparable to the 2018 measurement data. Data for LT-1, LT-7, and LT-13 is unavailable for contrast with the 2018 measurement results. The SLM deployment at LT-7 was discovered to be removed by an unknown party. Unfortunately, as it contained the Model 820 SLM, data collected from LT-13 and LT-1 from previous deployments on its onboard memory was also lost along with any LT-7 data collection. At locations LT-9 and LT-11, where less than 24 hours of SPL data was collected during this 2019 field survey, the reported L_{dn} and CNEL values are calculated from the available hourly data. At LT-9, it was discovered during instrument retrieval that the signal cable connecting the microphone to the encased SLM was damaged, apparently after the 5:00 a.m. – 6:00 a.m. hour according to the collected data. At LT-11, technical issues with a USB key drive limited data recovery to a seven-hour period on August 29, 2019.

Attachment A of this Addendum presents tabulated hourly details for the collected SPL data at the 2019 survey locations, along with histogram plots to help illustrate how measured sound levels varied with time over the unattended measurement durations.

Field Observations

Based on documented observations by Dudek field investigators present during the field survey, as well as audio file samples logged during SPL measurement data collection and storage to instrument memory, the following is a summarized list of witnessed, perceived, or recorded audible acoustical contributors to the measured sound environment.

- Common to all SLM locations – Between dusk and dawn, insect noise was the dominant contributor to measured background sound, causing hourly L_{90} levels to exceed many during the daytime. Sounds of aircraft (both propeller-driven and jet-powered) overflights, as well as nearby and/or distant road vehicle pass-bys (including trucks, passenger cars, motorcycles and or all-terrain vehicles [ATV]) were also detected and contributed to the measured outdoor ambient sound levels. The sound of rustling leaves in nearby trees, shrubs, and grasses was also present when wind gusts and steady winds were sufficiently strong.
- Common to many SLM locations – Sounds of dog barks, birdsong, as well as nearby and/or distant road vehicle pass-bys were also detected and contributed to the measured outdoor ambient sound levels.
- Unique to some or singular SLM locations – included as follows:
 - LT-3 – music (low-frequency “bass”) during a vehicle pass-by
 - LT-5 – wind chimes from a nearby residence
 - LT-9 – audible wind turbines (operating Kumeyaay Wind turbines)

Additionally, the collected data and sample short-duration audio files indicate that rainstorms (including thunder and sounds from precipitation impacting the nearby ground surfaces and vegetation) occurred in the early or mid-afternoons of September 2nd, 3rd, and 4th.

II. CHANGES TO EIS APPENDIX K (ACOUSTICAL ANALYSIS REPORT)

Existing Noise Levels (Section 5.2.1)

Based on the newly-collected SPL data using ANSI Type 1 instrumentation as summarized in Section I of this Addendum, Table 6 of the AAR would now reflect the following L_{dn} values as shown in the suggested new Table 6 below, with the right-most parenthetical columns showing—for reader convenience—the previously presented L_{dn} values and the change in dB.

Table 6
Calculated A-Weighted Day/Night Sound Levels
from Field-Collected Survey Data

Receiver ID	Outdoor Ambient L_{dn} Noise Level (dBA)	(Previously Presented Ambient L_{dn} Noise Level [dBA])	(Change in Presented Ambient L_{dn} Noise Level [dBA])
LT-1	51	51	0
LT-2	48	48	0
LT-3	59	53	+6
LT-4	51	56	-5
LT-5	54	57	-3
LT-6	51	45	+6

Table 6
Calculated A-Weighted Day/Night Sound Levels
from Field-Collected Survey Data

Receiver ID	Outdoor Ambient L _{dn} Noise Level (dBA)	(Previously Presented Ambient L _{dn} Noise Level [dBA])	(Change in Presented Ambient L _{dn} Noise Level [dBA])
LT-7	67	67	0
LT-8	52	50	+2
LT-9	56	43	+13
LT-10	48	45	+3
LT-11	62	49	+13
LT-12	52	56	-4
LT-13	50	50	0

L_{dn} = day/night sound level; dBA = A-weighted decibels.

Aside from the +13 dBA change for LT-9 and LT-11, due to the calculation of L_{dn} from a smaller set of hourly values, the change in L_{dn} values for the set of locations varies from -5 dBA for LT-4 to +6 for LT-6.

Additionally, based on the 2019 data collected using the ANSI Type 1 instrumentation, the reported range in measured hourly L_{eq} values would range from 29 to 71 L_{eq1h}, which is similar to the previously reported 31 dBA to 70 dBA L_{eq1h} value range. The average hourly L₉₀ values over a 24-hour period for these thirteen (13) representative baseline locations now range from 26 to 63 dBA, which is wider than the previously reported 32 to 49 dBA average hourly L₉₀ values.

Although the measured L_{dn} between the 2018 and 2019 late-summer field surveys at several locations varied by several decibels, the range of values above is still considered representative of the Project Vicinity for the same reasons as listed in the DEIS AAR (repeated below for reference):

- Higher hourly sound levels, and corresponding calculated L_{dn}, tend to be closer to frequently travelled paved and unpaved roads;
- Lower outdoor sound levels would characterize areas that are remote from sources of regularly-occurring natural and man-made sound emission; and,
- The acoustical energy from short-duration, intermittent, or even impulsive sounds in proximity to the SLM, such as occasional pass-bys from recreational vehicles or the burst of a truck horn, can skew L_{eq}, L_{dn}, and CNEL values higher than what other acoustical metrics might suggest about the surveyed location.

Thresholds for Determining Impacts (Section 6.1.1)

In this section of the DEIS AAR, the last bullet on page 23 correctly describes the condition for “cumulatively considerable” with respect to a project’s acoustical contribution to a combined sound level from other projects; however, it does not clarify that this condition would be assessed when the predicted combined sound level exceeds 60 dBA CNEL per the County’s Report Format and Content Requirements for Noise² and using the County’s Noise Element exterior noise standard.

² <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/Noise-Report-Format.pdf>

On-Reservation Operational Noise Impacts (Section 6.3.2)

In this section of the AAR, predicted aggregate operating wind turbine noise from Project turbines was assessed with respect to a fixed value: 55 dBA L_{dn} , consistent with the U.S. EPA recommended outdoor noise threshold for noise-sensitive receptors such as residences. Because the U.S. EPA-recommended outdoor noise threshold is a fixed value, the revised baseline outdoor ambient sound levels would not change this noise assessment and the predicted adverse effects.

On-Reservation Cumulative Operational Noise Impacts (Section 6.3.5)

In this section of the AAR, predicted aggregate operating wind turbine noise from Project turbines was combined with a “cumulative + existing” outdoor ambient sound level to assess cumulative noise impact by Project turbines. Note that “cumulative + existing” is defined here (and in the AAR) as the logarithmic combination of the measured outdoor ambient sound level and the foreseeable predicted acoustic contribution from the proposed Torrey Wind project. Hence, Tables 12a, 12b, 12c, and 12d from the AAR would (for appropriate representative locations) have revised calculated cumulative values reflecting updates to the existing outdoor ambient components due to the newly collected baseline data presented in the preceding sections. The four revised tables for cumulative noise assessment are as follows, with bold-italicized values indicating changes from what appears in the AAR:

Table 12a
Predicted Future Cumulative Noise Levels due to Project Operation (at 10 m/s)

Receiver ID	Cumulative + Existing* L_{dn} (dBA)	Predicted Project Operations** L_{dn} (dBA)	Cumulative + Existing Plus Predicted Project*** L_{dn} (dBA)	Cumulative Impact caused by Project?****
LT-1	51	59	60	Yes
LT-2	49	56	57	Yes
LT-3	59	54	60	No
LT-4	51	55	56	Yes
LT-5	54	58	59	Yes
LT-6	51	44	52	No
LT-7	67	46	67	No
LT-8	52	56	57	Yes
LT-9	56	65	66	Yes
LT-10	50	58	59	Yes
LT-11	62	52	62	No
LT-12	53	48	54	No
LT-13	50	51	54	No

* Cumulative + Existing is the measured noise level, including operating Kumeyaay Wind and Tule Wind project turbines, and predicted foreseeable future Torrey Wind project turbines.

** Predicted Project Operations is from Table 11a, at an average wind speed of 10 meters per second (m/s).

*** This value is the logarithmic sum of Cumulative + Existing and Predicted Project, or what could be called a “future” outdoor ambient noise level.

**** A cumulative impact would be caused when the Cumulative + Existing Plus Predicted Project is more than 3 dB higher than the Cumulative + Existing level.

Table 12b
Predicted Future Cumulative Noise Levels due to Project Operation (at 7 m/s)

Receiver ID	Cumulative + Existing* L _{dn} (dBA)	Predicted Project Operations** L _{dn} (dBA)	Cumulative + Existing Plus Predicted Project*** L _{dn} (dBA)	Cumulative Impact caused by Project?****
LT-1	51	53	55	No
LT-2	49	50	53	No
LT-3	59	48	59	No
LT-4	51	49	53	No
LT-5	54	52	56	No
LT-6	51	38	51	No
LT-7	67	40	67	No
LT-8	52	50	54	No
LT-9	56	59	61	Yes
LT-10	50	52	54	No
LT-11	62	46	51	No
LT-12	53	42	53	No
LT-13	50	44	51	No

* Cumulative + Existing is the measured noise level, including operating Kumeyaay Wind and Tule Wind project turbines, and predicted foreseeable future Torrey Wind project turbines.

** Predicted Project Operations is from Table 11a, at an average wind speed of 7 meters per second (m/s).

*** This value is the logarithmic sum of Cumulative + Existing and Predicted Project, or what could be called a "future" outdoor ambient noise level.

**** A cumulative impact would be caused when the Cumulative + Existing Plus Predicted Project is more than 3 dB higher than the Cumulative + Existing level.

Table 12c
Predicted Future Cumulative Noise Levels due to Project Operation – Alternative 2 (at 10 m/s)

Receiver ID	Cumulative + Existing* L _{dn} (dBA)	Predicted Project Operations** L _{dn} (dBA)	Cumulative + Existing Plus Predicted Project*** L _{dn} (dBA)	Cumulative Impact caused by Project?****
LT-1	51	59	60	Yes
LT-2	49	56	57	Yes
LT-3	59	48	59	No
LT-4	51	53	55	No
LT-5	54	52	56	No
LT-6	51	42	52	No
LT-7	67	44	67	No
LT-8	52	47	53	No
LT-9	56	40	56	No
LT-10	50	58	59	Yes
LT-11	62	47	62	No

Receiver ID	Cumulative + Existing* L _{dn} (dBA)	Predicted Project Operations** L _{dn} (dBA)	Cumulative + Existing Plus Predicted Project*** L _{dn} (dBA)	Cumulative Impact caused by Project?****
LT-12	53	47	54	No
LT-13	50	44	51	No

* Cumulative + Existing is the measured noise level, including operating Kumeyaay Wind and Tule Wind project turbines, and predicted foreseeable future Torrey Wind project turbines.

** Predicted Project Operations is from Table 11b, at an average wind speed of 10 meters per second (m/s).

*** This value is the logarithmic sum of Cumulative + Existing and Predicted Project, or what could be called a “future” outdoor ambient noise level.

**** A cumulative impact would be caused when the Cumulative + Existing Plus Predicted Project is more than 3 dB higher than the Cumulative + Existing level.

Table 12d
Predicted Future Cumulative Noise Levels due to Project Operation – Alternative 2 (at 7 m/s)

Receiver ID	Cumulative + Existing* L _{dn} (dBA)	Predicted Project Operations** L _{dn} (dBA)	Cumulative + Existing Plus Predicted Project*** L _{dn} (dBA)	Cumulative Impact caused by Project?****
LT-1	51	53	55	No
LT-2	49	49	52	No
LT-3	59	42	59	No
LT-4	51	47	52	No
LT-5	54	46	55	No
LT-6	51	36	51	No
LT-7	67	38	67	No
LT-8	52	41	52	No
LT-9	56	34	56	No
LT-10	50	51	54	No
LT-11	62	41	62	No
LT-12	53	41	53	No
LT-13	50	38	50	No

* Cumulative + Existing is the measured noise level, including operating Kumeyaay Wind and Tule Wind project turbines, and predicted foreseeable future Torrey Wind project turbines.

** Predicted Project Operations is from Table 11b, at an average wind speed of 7 meters per second (m/s).

*** This value is the logarithmic sum of Cumulative + Existing and Predicted Project, or what could be called a “future” outdoor ambient noise level.

**** A cumulative impact would be caused when the Cumulative + Existing Plus Predicted Project is more than 3 dB higher than the Cumulative + Existing level.

In summary, the result of these changes to the “Cumulative + Existing” sound levels and the corresponding “Cumulative + Existing + Predicted Project” logarithmic summations are as follows:

- For the 76-turbine scenario, with hub-height average wind speed of 10 meters per second, LT-3 is no longer expected to experience a cumulative adverse effect; however, LT-4 and LT-5 would be adversely affected. Note that, although this analysis included 76 possible turbine locations, only 60 turbines would be allowed to be built under the Lease. The usage of 76 operating turbines as studied is therefore conservative, as it adds the noise contribution from 16 more operating wind turbines than the Project site would be allowed to install and operate. For some receptor locations, this

conservatism could be over-predicting aggregate Project operation noise by many decibels if they are proximate to one or more modeled turbine locations that, in reality, would not occur.

- For the 48-turbine scenario ("Alternative 2"), with hub-height average wind speed of 10 meters per second, or 7 meters per second, there are no predicted changes to the previously predicted cumulative adverse effects.

County Operational Analysis (General Plan - Section 6.4.1)

In this section of the AAR, predicted aggregate operating wind turbine noise from Project turbines was compared with the County of San Diego's Guidelines for Determining Significance of 60 dBA CNEL (or 10 dBA greater than the existing outdoor ambient CNEL) for the nine representative study locations located Off-Reservation (LT-1, LT-5, LT-6, LT-7, LT-8, LT-10, LT-11, LT-12, and LT-13). While the predicted wind turbine generator (WTG) sound levels depicted in Tables 13a and 13b are still considered accurate, the newly collected baseline SPL data shows that only LT-10 has an existing CNEL of 48 dBA—the CNEL values for the other eight studied locations are greater than 50 dBA; therefore, the threshold for LT-10 would be 58 dBA CNEL, and all other LTs would be 60 dBA CNEL. Since the predicted WTG noise levels for the 76-turbine scenario at the nine studied locations are less than 60 dBA CNEL (or meet 58 dBA CNEL at LT-10), no adverse effects are expected. Additionally, the 48-turbine scenario would also result in levels considered compatible with County's CNEL significance criteria for existing residential receptors on private lands under County jurisdiction.

County Operational Analysis (Municipal Code, Noise Ordinance Hourly - Section 6.4.2)

Existing outdoor ambient sound levels do not affect this aggregate WTG operation noise analysis.

County Operational Analysis (County WET Guidelines - Section 6.4.3)

In this section of the AAR, predicted aggregate operating wind turbine C-weighted noise from Project turbines was compared with the Residual Background Sound Criterion (RBSC), calculated from an A-weighted average L_{90} value plus 5 dB, at five representative study locations (LT-1, LT-10, LT-11, LT-12, and LT-13). The 2019 baseline outdoor sound level data has updated the RBSC for three of these locations and Tables 15a and 15b have been revised accordingly. Bold-italicized values indicate where the difference between the predicted C-weighted WTG operation noise and the RBSC is greater than 20 dB.

Table 15a
Predicted C-Weighted Aggregate Project Wind Turbine Noise Levels

Receiver ID	Predicted Hourly L_{eq} (dBC) minus Residual Background Sound Criterion (RBSC) at Indicated Average Wind Speed (m/s)						
	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	>= 10 m/s
LT-1	14	14	17	20	23	26	27
LT-10	16	16	19	22	25	28	29
LT-11	--	--	2	5	8	11	12
LT-12	7	7	10	13	16	19	20
LT-13	6	6	9	12	15	18	19

L_{eq} = equivalent continuous sound level; dBC = C-weighted decibels; m/s = meter per second.

Table 15b
Predicted C-Weighted Aggregate Project Wind Turbine Noise Levels – Alternative 2

Receiver ID	Predicted Hourly L_{eq} (dBC) minus Residual Background Sound Criterion (RBSC) at Indicated Average Wind Speed (m/s)						
	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	>= 10 m/s
LT-1	14	14	17	20	23	26	27
LT-10	16	16	19	22	25	28	29
LT-11	--	--	--	2	5	8	9
LT-12	6	6	9	12	15	18	19
LT-13	1	1	4	7	10	13	14

L_{eq} = equivalent continuous sound level; dBC = C-weighted decibels; m/s = meter per second.

In summary, and consistent with the analysis presented in the DEIS AAR, predicted noise levels at representative study locations LT-1 and LT-10 would exceed the allowable difference (i.e., predicted C-weighted minus RBSC) of 20 dB per the County's Zoning Ordinance relating to large wind energy turbines (WET) for both operation alternatives. The range of average hub-height wind speeds at which LT-1 would be adversely effected is unchanged, but the range for LT-10 has increased to include average hub-height wind speed as low as 7 meters per second. This means for LT-10, the frequency of occurrence for the WET standard to be exceeded would be greater, as it would take a lower average hub-height wind speed to foster the right conditions for aggregate Project operating wind turbine noise to cause the exceedance (i.e., predicted C-weighted noise higher than the RBSC value by more than 20 dB). No additional studied locations are anticipated to be adversely affected.

County Operational Analysis (Cumulative Discussion - Section 6.4.4)

In this section of the DEIS AAR, Table 16 presents the assessment of predicted cumulatively considerable noise increases due to Project turbines at five representative locations (LT-1, LT-10, LT-11, LT-12, and LT-13). The 2019 baseline outdoor sound level data has resulted in updated "cumulative + existing" CNEL levels, to which the predicted Project WTG operation noise is logarithmically added to determine an adverse effect—that is, where the result exceeds the County's criteria for a cumulative impact (60 dBA CNEL) and the Project has had a cumulatively considerable contribution. Table 16 below presents the updated analysis. Bold-italicized values indicate changes from what appears in the DEIS AAR.

Table 16
Predicted Cumulative Noise Levels from Project Operation

Receiver ID	Cumulative + Existing* CNEL (dBA)	Cumulative + Existing Plus Project Modeled CNEL (dBA)	Over 60 dBA CNEL Threshold and Cumulative Considerable?
LT1	52	60	No
L10	50	59	No
L11	63	63	No
L12	53	54	No
L13	51	54	No

CNEL = community noise equivalent level; dBA = A-weighted decibels.

* Cumulative + Existing is the measured noise level, including noise exposure from operating Kumeyaay Wind and Tule Wind project turbines, and predicted contribution from foreseeable future Torrey Wind project turbines.

The finding from the revised Table 16 is different from that of the previously presented Table 16 in the DEIS AAR: location LT-10 was previously and inaccurately expected to experience a cumulative adverse effect. This earlier finding was based on a misinterpretation of the applicable cumulative noise threshold, which was stated as either exceeding 60 dBA CNEL or the existing CNEL plus 10 dB. A subsequent review of the County's Report Format and Content Requirements for Noise³ suggests that only exceedance of 60 dBA CNEL due to the combination is the appropriate limit. Therefore, and even accounting for the higher cumulative + existing CNEL as a result of the newly-collected baseline data, LT-10 should not have a cumulative adverse effect.

III. CHANGES TO DEIS NOISE SECTIONS (3.10 and 4.10)

Existing Noise Environment (Section 3.10.2)

The "Existing Noise Measurements" paragraph would be updated to reflect the 2019 baseline outdoor ambient SPL data. The reported range in measured hourly L_{eq} values would now reflect 29 to 71 L_{eq1h} , which is similar to the previously reported 31 dBA to 70 dBA L_{eq1h} value range. The lowest hourly L_{90} values for the ten locations from the 2019 baseline SPL field survey baseline locations range from 19 to 30 dBA, which is lower than the previously reported 29 to 36 dBA range due to the usage of ANSI Type 1 SLMs for the more recent SPL data collection.

Effects (Section 4.10.2)

Upon review of potential Project impacts using baseline outdoor SPL data collected from the 2019 field survey with ANSI Type 1 SLMs, there would be no change to the Summary Table – Noise Effects and Mitigation.

For On-Reservation receptors, and in using the 2019 baseline SPL data for LT-9, anticipated cumulative noise adverse effects for LT-3 would be avoided for the 10 meters per second operation scenario, but would be incurred at LT-4 and LT-5 due to the lower measured outdoor ambient sound levels. For the 48-turbine scenario (Alternative 2), the 2019 baseline SPL data results in no changes to the predicted cumulative noise effects.

For Off-Reservation receptors, the 2019 baseline SPL data would not result in any changes to the conclusions with respect to predicted aggregate WTG operation spill-over noise increasing the outdoor ambient sound level and its comparison to the County's Guidelines for Determining Significance for Noise (i.e., 60 dBA CNEL or 10 dBA greater than the existing CNEL at outdoor living areas of pre-existing or reasonably foreseeable noise-sensitive land uses).

With respect to the County's noise ordinance (Section 36.404[a]) hourly L_{eq} thresholds, the 2019 baseline SPL data have no effect on the previous findings. Similarly, there is no change to the findings with respect to cumulative noise increase for the five studied locations representing areas where spill-over noise onto private lands under County jurisdiction might occur.

With respect to Section 6952 (Large Wind Turbine) of the County of San Diego Zoning Ordinance that includes a contrast between predicted C-weighted WTG noise level and the RBSC, the newly collected baseline SPL data would change some of the value contrast quantities (as presented in Section II of this Addendum) but not the locations of previously predicted significant adverse effect (i.e., LT-1 and LT-10 remain significantly adversely effected, while the other three locations are not).

³ <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/Noise-Report-Format.pdf>

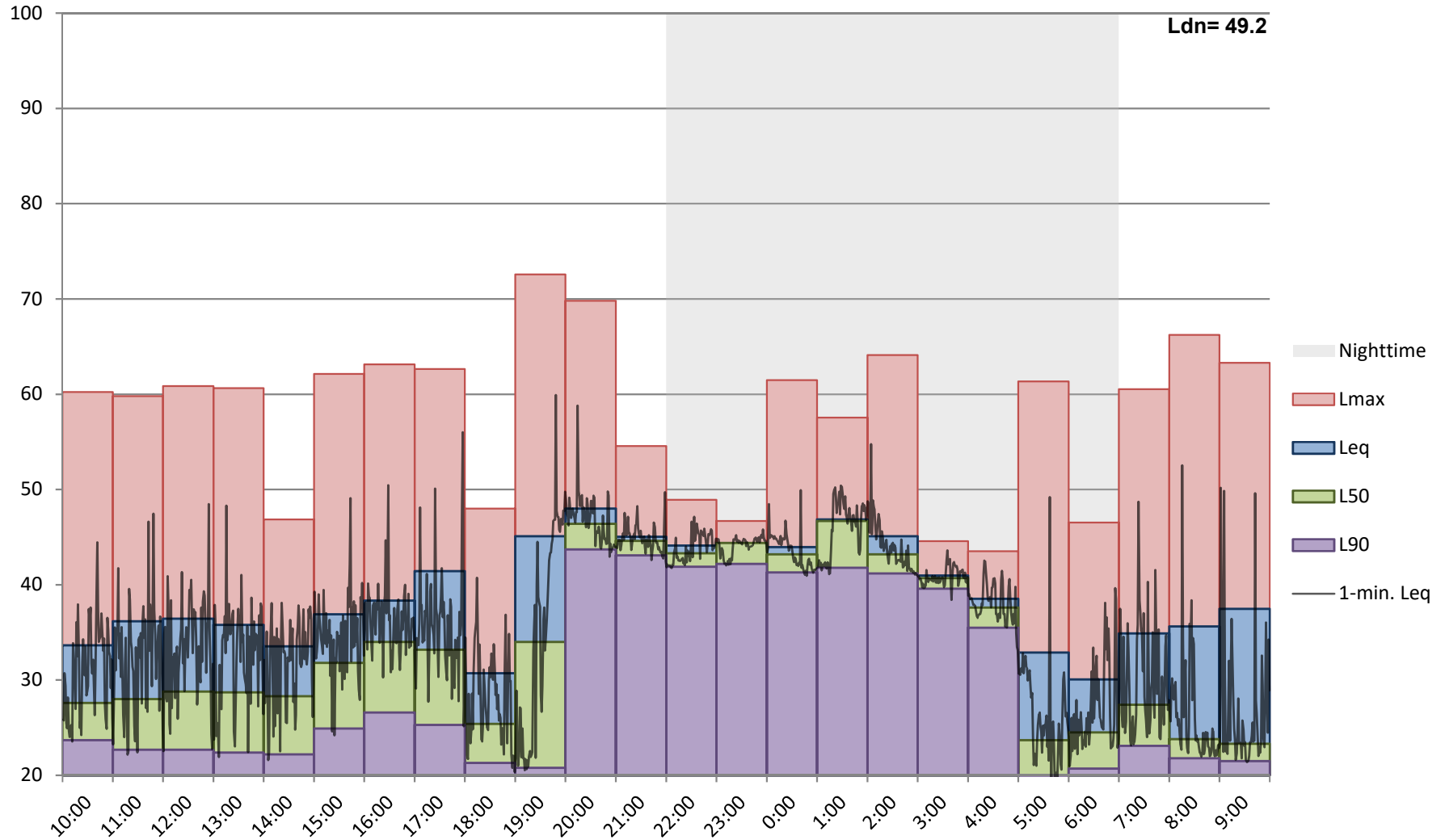
With respect to potential cumulative adverse effects due to Project spill-over noise at pre-existing and foreseeable future noise-sensitive receptors on private lands under County of San Diego jurisdiction, the newly-collected data still supports a finding of no cumulative adverse effects for the five studied locations (LT-1, LT-10, LT-11, LT-12, LT-13).

Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 29, 2019 to August 30, 2019
Site: LT2

Hour	Leq	Lmax	L50	L90		Lowermost Level			
10:00	33.6	60.2	27.6	23.7		Leq	Lmax	L50	L90
11:00	36.2	59.8	28.0	22.7	Daytime (7 a.m. - 10 p.m.)	30.7	46.9	23.3	20.8
12:00	36.4	60.9	28.8	22.7	Nighttime (10 p.m. - 7 a.m.)	30.1	43.5	23.7	19.2
13:00	35.8	60.6	28.7	22.4		Average Level			
14:00	33.6	46.9	28.3	22.2		Leq	Lmax	L50	L90
15:00	36.9	62.1	31.8	24.9	Daytime (7 a.m. - 10 p.m.)	40.9	60.8	31.0	25.7
16:00	38.3	63.1	34.0	26.6	Nighttime (10 p.m. - 7 a.m.)	43.0	52.7	38.6	35.9
17:00	41.4	62.6	33.2	25.3		Uppermost-Level			
18:00	30.7	48.0	25.4	21.3		Leq	Lmax	L50	L90
19:00	45.1	72.6	34.0	20.8	Daytime (7 a.m. - 10 p.m.)	48.0	72.6	46.4	43.7
20:00	48.0	69.8	46.4	43.7	Nighttime (10 p.m. - 7 a.m.)	46.9	64.1	46.7	42.2
21:00	45.1	54.6	44.6	43.1		Energy Distribution			
22:00	44.1	48.9	43.3	41.9		Daytime	50%		
23:00	44.2	46.7	44.4	42.2		Nighttime	50%		
0:00	44.0	61.5	43.2	41.3		Calculated CNEL, dBA			
1:00	46.9	57.6	46.7	41.8		50.9			
2:00	45.1	64.1	43.2	41.2		Calculated L _{dn} , dBA			
3:00	41.0	44.6	40.7	39.6		49.2			
4:00	38.5	43.5	37.6	35.5					
5:00	32.9	61.3	23.7	19.2					
6:00	30.1	46.5	24.5	20.7					
7:00	34.9	60.5	27.4	23.1					
8:00	35.6	66.2	23.8	21.8					
9:00	37.5	63.3	23.3	21.5					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT2
August 29, 2019 to August 30, 2019

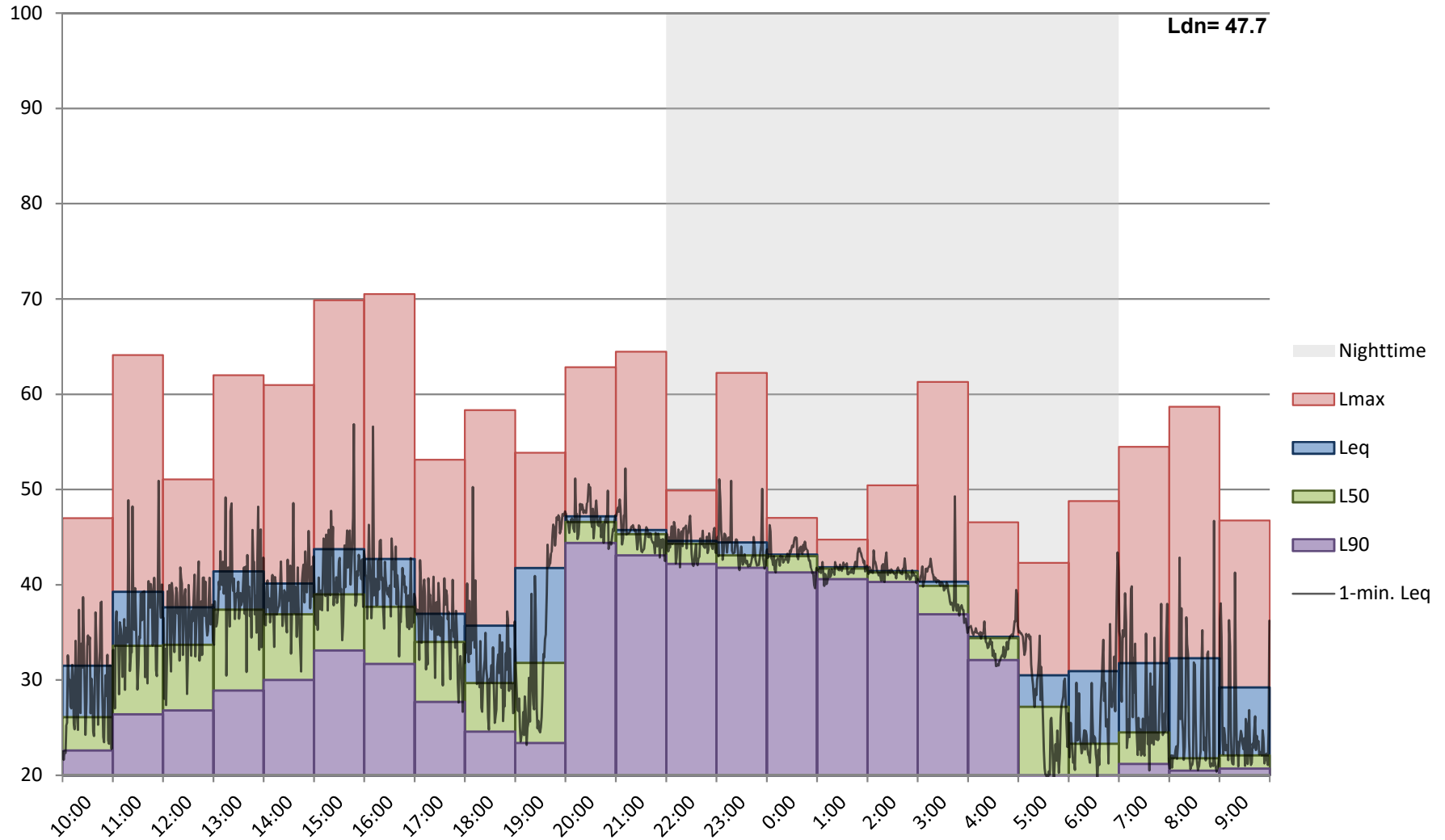


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 30, 2019 to August 31, 2019
Site: LT2

Hour	Leq	Lmax	L50	L90		Lowermost Level			
10:00	31.5	47.0	26.1	22.6		Leq	Lmax	L50	L90
11:00	39.3	64.1	33.6	26.4	Daytime (7 a.m. - 10 p.m.)	29.2	46.7	21.8	20.5
12:00	37.6	51.1	33.7	26.8	Nighttime (10 p.m. - 7 a.m.)	30.5	42.3	23.3	19.1
13:00	41.4	62.0	37.4	28.9		Average Level			
14:00	40.1	61.0	36.9	30.0		Leq	Lmax	L50	L90
15:00	43.7	69.9	39.0	33.1	Daytime (7 a.m. - 10 p.m.)	41.2	58.5	33.3	28.3
16:00	42.7	70.5	37.7	31.7	Nighttime (10 p.m. - 7 a.m.)	41.3	50.4	37.6	34.9
17:00	37.0	53.1	34.0	27.7		Uppermost-Level			
18:00	35.7	58.3	29.7	24.6		Leq	Lmax	L50	L90
19:00	41.8	53.9	31.8	23.4	Daytime (7 a.m. - 10 p.m.)	47.2	70.5	46.6	44.4
20:00	47.2	62.8	46.6	44.4	Nighttime (10 p.m. - 7 a.m.)	44.6	62.2	44.3	42.2
21:00	45.7	64.5	45.3	43.1		Energy Distribution			
22:00	44.6	49.9	44.3	42.2		Daytime		62%	
23:00	44.4	62.2	43.1	41.8		Nighttime		38%	
0:00	43.2	47.0	43.0	41.3		Calculated CNEL, dBA			
1:00	41.8	44.7	41.7	40.6		49.8			
2:00	41.4	50.4	41.3	40.3		Calculated L _{dn} , dBA			
3:00	40.3	61.3	39.9	36.9		47.7			
4:00	34.5	46.6	34.4	32.1					
5:00	30.5	42.3	27.2	19.1					
6:00	30.9	48.8	23.3	19.6					
7:00	31.8	54.5	24.5	21.2					
8:00	32.3	58.7	21.8	20.5					
9:00	29.2	46.7	22.1	20.7					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT2
August 30, 2019 to August 31, 2019

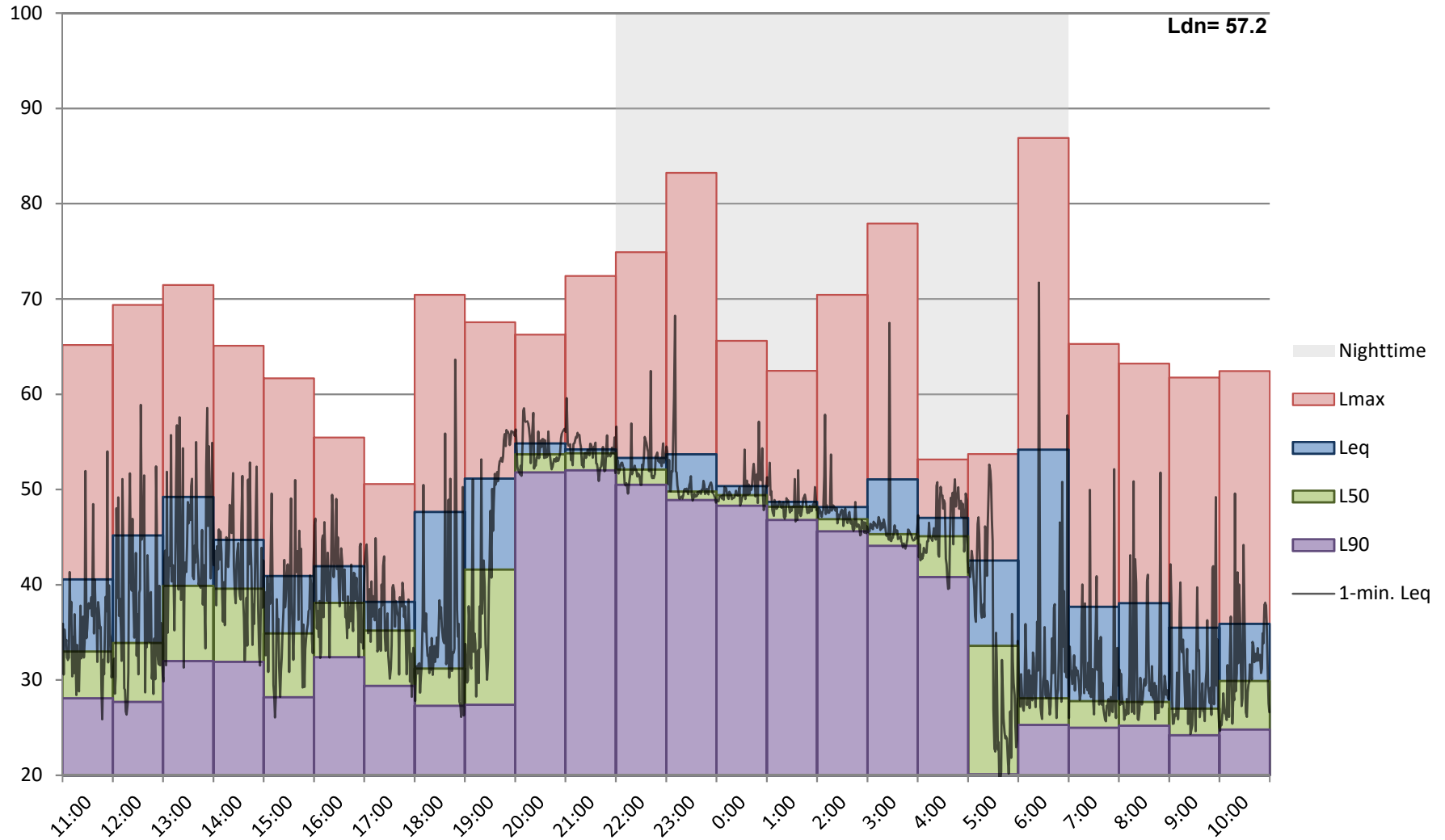


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 31, 2019 to September 01, 2019
Site: LT3

Hour	Leq	Lmax	L50	L90		Lowermost Level			
11:00	40.6	65.2	33.0	28.1		Leq	Lmax	L50	L90
12:00	45.2	69.4	33.9	27.7	Daytime (7 a.m. - 10 p.m.)	35.5	50.6	27.0	24.2
13:00	49.2	71.5	39.9	32.0	Nighttime (10 p.m. - 7 a.m.)	42.5	53.1	28.1	20.1
14:00	44.7	65.1	39.6	31.9		Average Level			
15:00	40.9	61.7	34.9	28.2		Leq	Lmax	L50	L90
16:00	41.9	55.4	38.1	32.4	Daytime (7 a.m. - 10 p.m.)	48.1	64.5	36.5	31.2
17:00	38.2	50.6	35.2	29.4	Nighttime (10 p.m. - 7 a.m.)	51.1	69.8	44.3	41.2
18:00	47.6	70.4	31.2	27.3		Uppermost-Level			
19:00	51.1	67.6	41.6	27.4		Leq	Lmax	L50	L90
20:00	54.8	66.2	53.7	51.8	Daytime (7 a.m. - 10 p.m.)	54.8	72.4	53.8	52.0
21:00	54.2	72.4	53.8	52.0	Nighttime (10 p.m. - 7 a.m.)	54.2	86.9	52.1	50.5
22:00	53.3	74.9	52.1	50.5		Energy Distribution			
23:00	53.7	83.2	49.8	48.9		Daytime	46%		
0:00	50.4	65.6	49.4	48.3		Nighttime	54%		
1:00	48.7	62.5	48.2	46.8		Calculated CNEL, dBA			
2:00	48.2	70.4	46.9	45.6		57.7			
3:00	51.1	77.9	45.3	44.1		Calculated L _{dn} , dBA			
4:00	47.0	53.1	45.1	40.8		57.2			
5:00	42.5	53.7	33.6	20.1					
6:00	54.2	86.9	28.1	25.3					
7:00	37.7	65.3	27.8	25.0					
8:00	38.1	63.2	27.7	25.2					
9:00	35.5	61.7	27.0	24.2					
10:00	35.9	62.4	29.9	24.8					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT3
August 31, 2019 to September 01, 2019

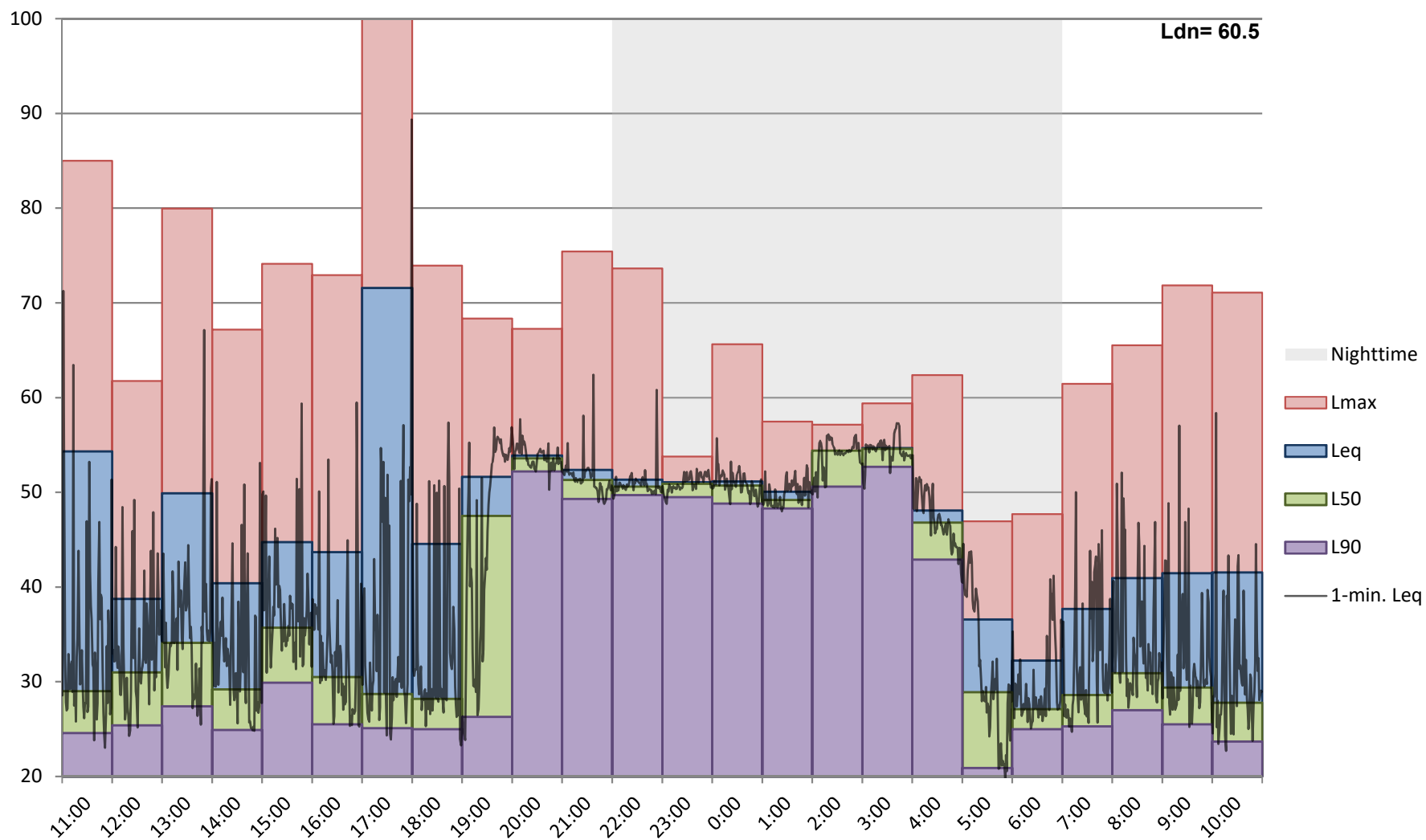


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: September 01, 2019 to September 02, 2019
Site: LT3

Hour	Leq	Lmax	L50	L90		Lowermost Level			
11:00	54.3	85.0	29.0	24.6		Leq	Lmax	L50	L90
12:00	38.7	61.8	31.0	25.4	Daytime (7 a.m. - 10 p.m.)	37.7	61.5	27.8	23.7
13:00	49.9	80.0	34.1	27.4	Nighttime (10 p.m. - 7 a.m.)	32.2	46.9	27.1	20.9
14:00	40.4	67.2	29.2	24.9		Average Level			
15:00	44.7	74.1	35.7	29.9		Leq	Lmax	L50	L90
16:00	43.7	72.9	30.5	25.5	Daytime (7 a.m. - 10 p.m.)	60.1	73.2	34.4	29.1
17:00	71.6	101.7	28.7	25.1	Nighttime (10 p.m. - 7 a.m.)	51.0	58.2	45.9	43.2
18:00	44.5	73.9	28.2	25.0		Uppermost-Level			
19:00	51.6	68.3	47.5	26.3		Leq	Lmax	L50	L90
20:00	53.9	67.2	53.6	52.2	Daytime (7 a.m. - 10 p.m.)	71.6	101.7	53.6	52.2
21:00	52.4	75.4	51.3	49.3	Nighttime (10 p.m. - 7 a.m.)	54.7	73.6	54.6	52.7
22:00	51.3	73.6	50.6	49.7		Energy Distribution			
23:00	51.1	53.8	50.9	49.5		Daytime	93%		
0:00	51.1	65.6	50.7	48.8		Nighttime	7%		
1:00	50.1	57.5	49.2	48.3		Calculated CNEL, dBA			
2:00	54.2	57.2	54.4	50.6		60.7			
3:00	54.7	59.4	54.6	52.7		Calculated L _{dn} , dBA			
4:00	48.1	62.4	46.8	42.9		60.5			
5:00	36.6	46.9	28.9	20.9					
6:00	32.2	47.7	27.1	25.0					
7:00	37.7	61.5	28.6	25.3					
8:00	41.0	65.5	30.9	27.0					
9:00	41.5	71.8	29.4	25.5					
10:00	41.5	71.1	27.8	23.7					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT3
September 01, 2019 to September 02, 2019

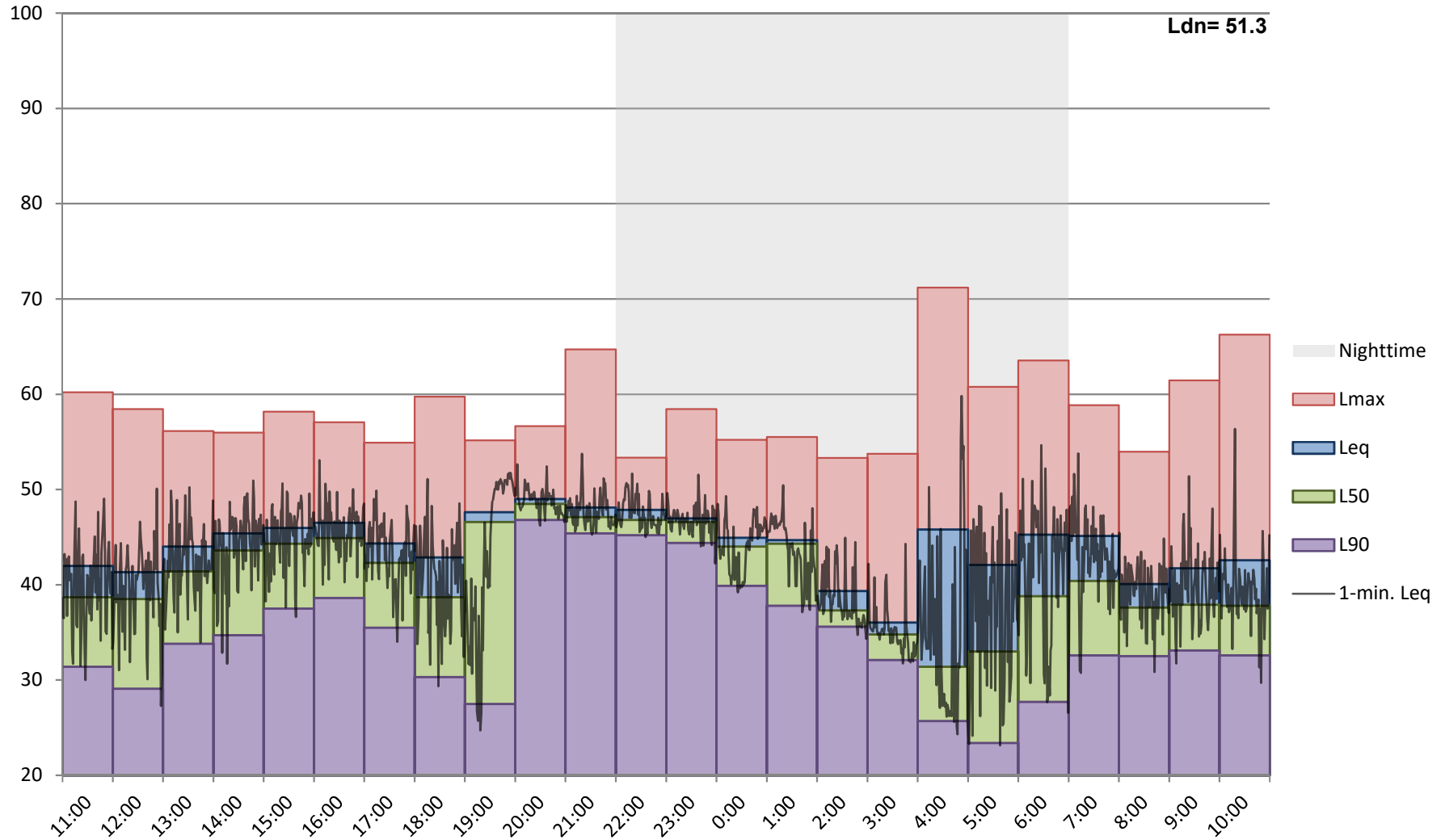


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 29, 2019 to August 30, 2019
Site: LT4

Hour	Leq	Lmax	L50	L90		Lowermost Level			
11:00	42.0	60.2	38.7	31.4		Leq	Lmax	L50	L90
12:00	41.3	58.4	38.5	29.1	Daytime (7 a.m. - 10 p.m.)	40.1	54.0	37.6	27.5
13:00	44.0	56.1	41.4	33.8	Nighttime (10 p.m. - 7 a.m.)	36.0	53.3	31.4	23.4
14:00	45.4	56.0	43.6	34.7		Average Level			
15:00	46.0	58.2	44.3	37.5		Leq	Lmax	L50	L90
16:00	46.5	57.1	44.9	38.6	Daytime (7 a.m. - 10 p.m.)	45.2	58.5	41.9	34.8
17:00	44.3	54.9	42.3	35.5	Nighttime (10 p.m. - 7 a.m.)	44.8	58.3	39.7	34.6
18:00	42.9	59.7	38.7	30.3		Uppermost-Level			
19:00	47.6	55.2	46.6	27.5		Leq	Lmax	L50	L90
20:00	49.0	56.7	48.5	46.8	Daytime (7 a.m. - 10 p.m.)	49.0	66.3	48.5	46.8
21:00	48.1	64.7	47.1	45.4	Nighttime (10 p.m. - 7 a.m.)	47.9	71.2	46.8	45.2
22:00	47.9	53.3	46.8	45.2		Energy Distribution			
23:00	47.0	58.4	46.6	44.4		Daytime		65%	
0:00	44.9	55.2	44.0	39.9		Nighttime		35%	
1:00	44.7	55.5	44.3	37.8					
2:00	39.3	53.3	37.3	35.6					
3:00	36.0	53.8	34.8	32.1					
4:00	45.8	71.2	31.4	25.7					
5:00	42.1	60.8	33.0	23.4					
6:00	45.3	63.5	38.8	27.7		Calculated CNEL, dBA			
7:00	45.1	58.8	40.4	32.6		51.8			
8:00	40.1	54.0	37.6	32.5					
9:00	41.7	61.5	37.9	33.1		Calculated L _{dn} , dBA			
10:00	42.6	66.3	37.8	32.6		51.3			

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT4
August 29, 2019 to August 30, 2019

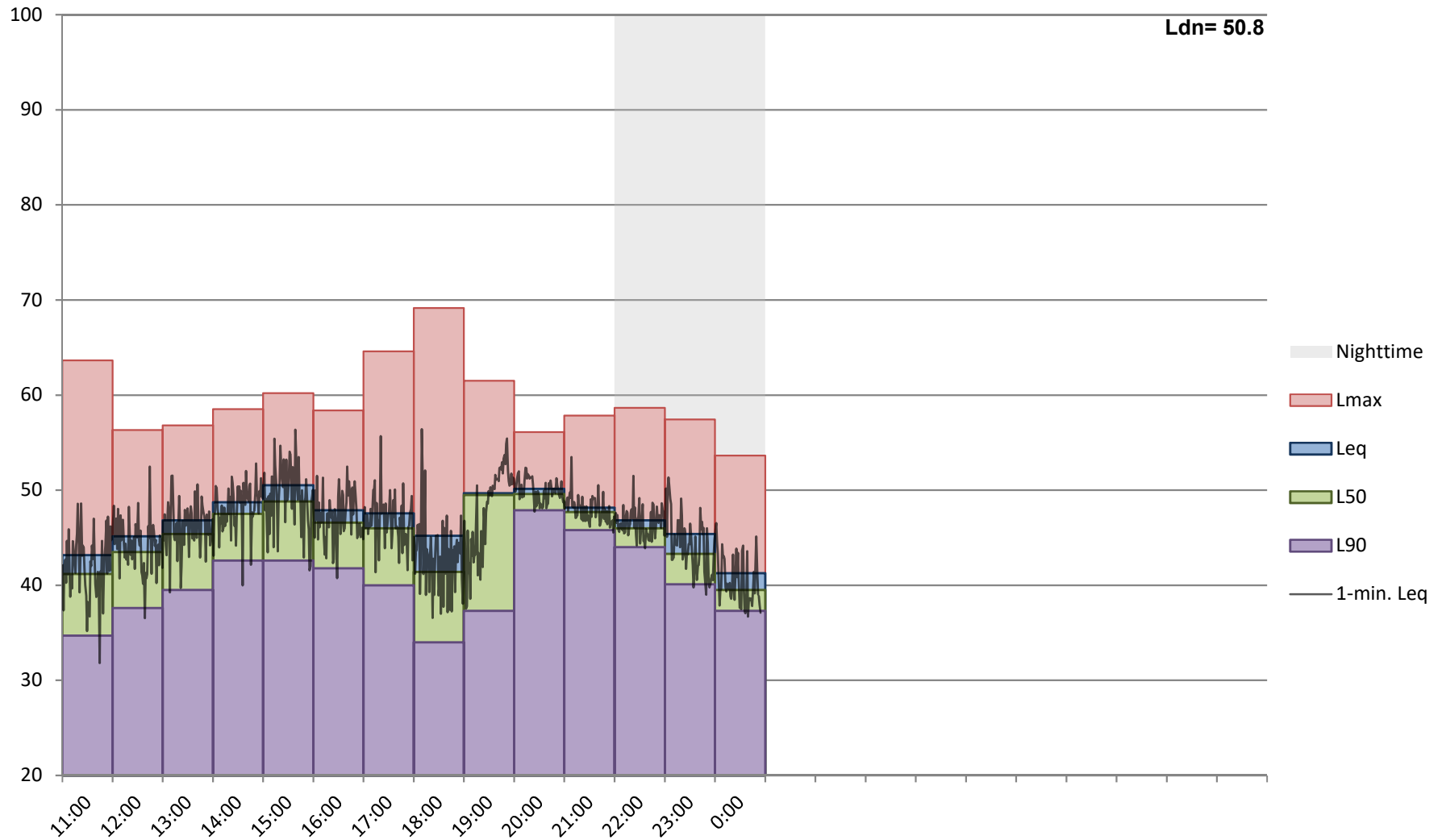


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 30, 2019
Site: LT4

Hour	Leq	Lmax	L50	L90		Lowermost Level			
11:00	43.2	63.7	41.2	34.7		Leq	Lmax	L50	L90
12:00	45.1	56.3	43.5	37.6	Daytime (7 a.m. - 10 p.m.)	43.2	56.1	41.2	34.0
13:00	46.8	56.8	45.4	39.5	Nighttime (10 p.m. - 7 a.m.)	41.3	53.7	39.5	37.3
14:00	48.7	58.5	47.5	42.6		Average Level			
15:00	50.5	60.2	48.8	42.6		Leq	Lmax	L50	L90
16:00	47.9	58.4	46.6	41.8	Daytime (7 a.m. - 10 p.m.)	46.7	60.3	46.1	40.3
17:00	47.6	64.6	46.0	40.0	Nighttime (10 p.m. - 7 a.m.)	40.3	56.6	42.9	40.5
18:00	45.2	69.2	41.4	34.0		Uppermost-Level			
19:00	49.7	61.5	49.5	37.3		Leq	Lmax	L50	L90
20:00	50.1	56.1	49.6	47.9	Daytime (7 a.m. - 10 p.m.)	50.5	69.2	49.6	47.9
21:00	48.2	57.8	47.7	45.8	Nighttime (10 p.m. - 7 a.m.)	46.8	58.7	46.0	44.0
22:00	46.8	58.7	46.0	44.0		Energy Distribution			
23:00	45.4	57.5	43.3	40.1		Daytime	88%		
0:00	41.3	53.7	39.5	37.3		Nighttime	12%		
						Calculated CNEL, dBA			
						52.0			
						Calculated L _{dn} , dBA			
						50.8			

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT4
August 30, 2019

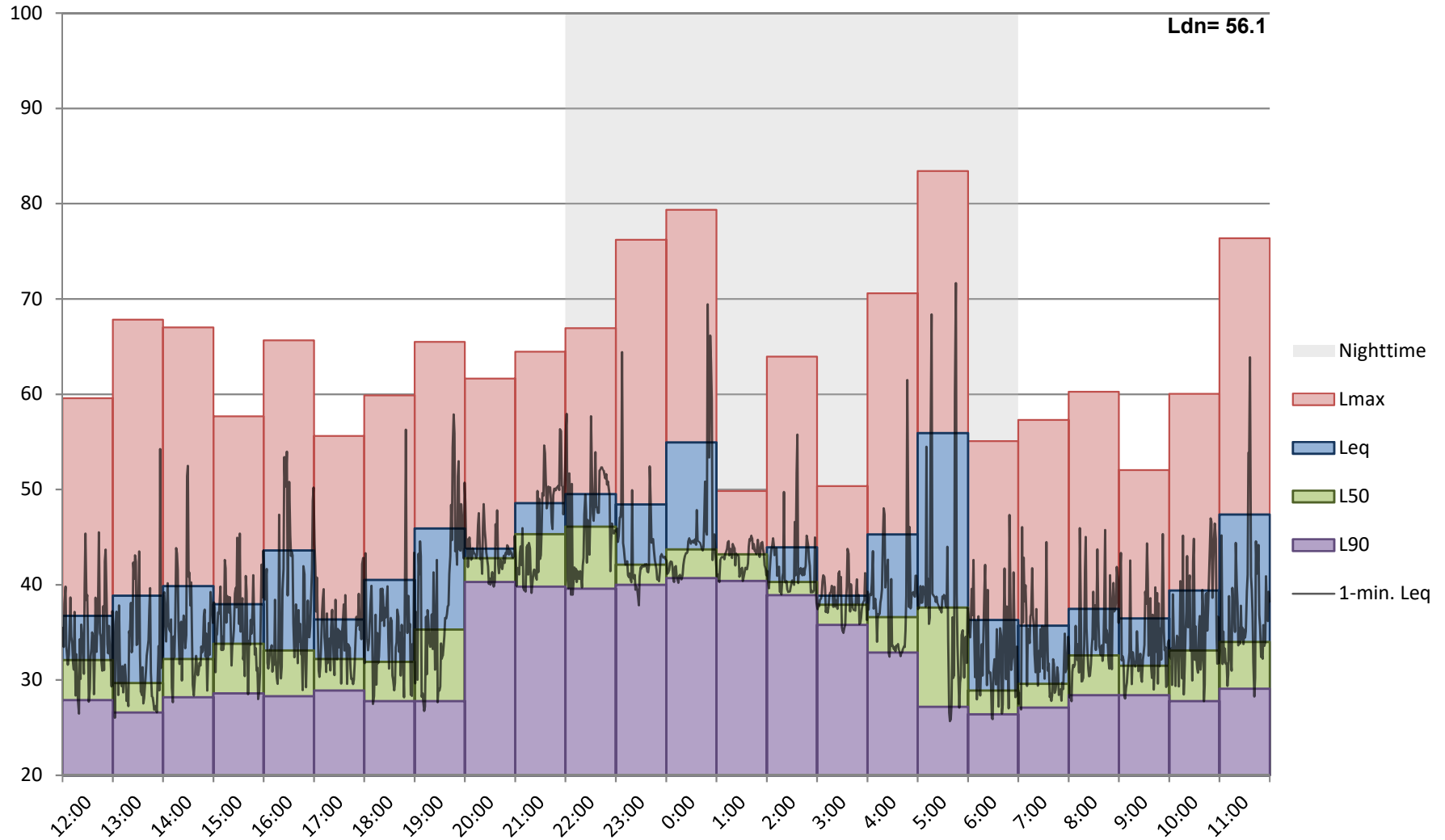


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 31, 2019 to September 01, 2019
Site: LT5

Hour	Leq	Lmax	L50	L90		Lowermost Level			
12:00	36.7	59.6	32.1	27.9		Leq	Lmax	L50	L90
13:00	38.9	67.8	29.7	26.6	Daytime (7 a.m. - 10 p.m.)	35.7	52.0	29.6	26.6
14:00	39.8	67.0	32.2	28.2	Nighttime (10 p.m. - 7 a.m.)	36.3	49.8	28.9	26.4
15:00	38.0	57.7	33.8	28.6		Average Level			
16:00	43.6	65.7	33.1	28.3		Leq	Lmax	L50	L90
17:00	36.4	55.6	32.2	28.9	Daytime (7 a.m. - 10 p.m.)	42.7	62.1	33.9	29.7
18:00	40.5	59.9	31.9	27.8	Nighttime (10 p.m. - 7 a.m.)	50.2	66.2	39.6	35.8
19:00	45.9	65.5	35.3	27.8		Uppermost-Level			
20:00	43.8	61.6	42.8	40.3		Leq	Lmax	L50	L90
21:00	48.6	64.5	45.3	39.8	Daytime (7 a.m. - 10 p.m.)	48.6	76.4	45.3	40.3
22:00	49.5	66.9	46.1	39.6	Nighttime (10 p.m. - 7 a.m.)	55.9	83.4	46.1	40.7
23:00	48.4	76.2	42.1	40.0		Energy Distribution			
0:00	54.9	79.4	43.7	40.7		Daytime		23%	
1:00	43.1	49.8	43.2	40.4		Nighttime		77%	
2:00	43.9	64.0	40.3	38.9					
3:00	38.9	50.4	37.9	35.8					
4:00	45.3	70.6	36.6	32.9					
5:00	55.9	83.4	37.6	27.2					
6:00	36.3	55.1	28.9	26.4					
7:00	35.7	57.3	29.6	27.1		Calculated CNEL, dBA			
8:00	37.5	60.3	32.6	28.4		56.2			
9:00	36.5	52.0	31.5	28.4					
10:00	39.4	60.1	33.1	27.8		Calculated L _{dn} , dBA			
11:00	47.4	76.4	34.0	29.1		56.1			

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT5
August 31, 2019 to September 01, 2019

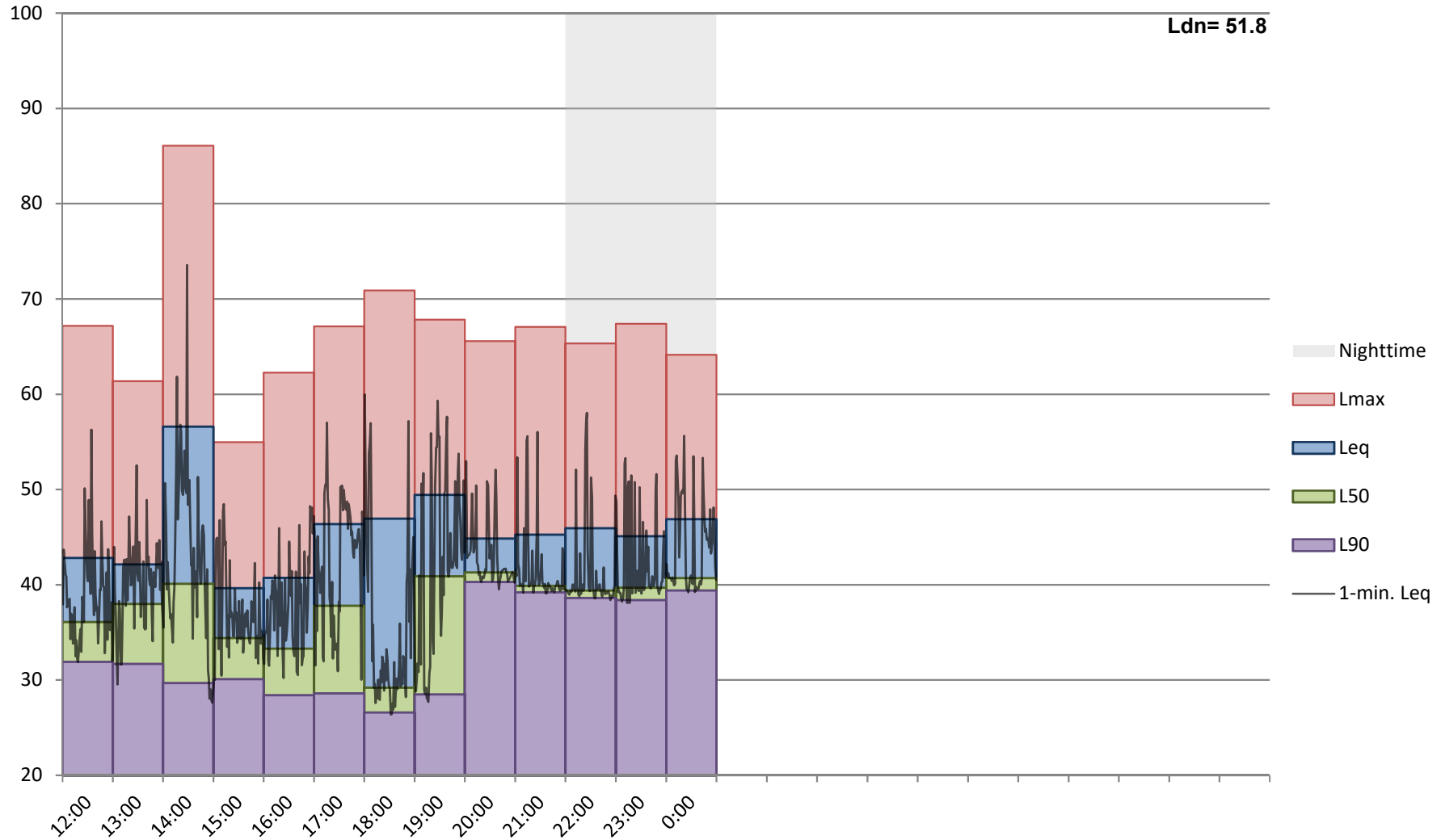


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: September 01, 2019
Site: LT5

Hour	Leq	Lmax	L50	L90		Lowermost Level			
12:00	42.8	67.2	36.1	31.9		Leq	Lmax	L50	L90
13:00	42.1	61.4	38.0	31.7	Daytime (7 a.m. - 10 p.m.)	39.6	55.0	29.2	26.6
14:00	56.6	86.1	40.1	29.7	Nighttime (10 p.m. - 7 a.m.)	45.1	64.1	39.4	38.4
15:00	39.6	55.0	34.4	30.1		Average Level			
16:00	40.7	62.3	33.3	28.4		Leq	Lmax	L50	L90
17:00	46.4	67.1	37.8	28.6	Daytime (7 a.m. - 10 p.m.)	47.0	67.0	37.1	31.5
18:00	46.9	70.9	29.2	26.6	Nighttime (10 p.m. - 7 a.m.)	41.3	65.6	39.9	38.8
19:00	49.4	67.8	40.9	28.5		Uppermost-Level			
20:00	44.8	65.6	41.3	40.3		Leq	Lmax	L50	L90
21:00	45.3	67.1	39.9	39.2	Daytime (7 a.m. - 10 p.m.)	56.6	86.1	41.3	40.3
22:00	45.9	65.3	39.4	38.6	Nighttime (10 p.m. - 7 a.m.)	46.9	67.4	40.7	39.4
23:00	45.1	67.4	39.7	38.4		Energy Distribution			
0:00	46.9	64.1	40.7	39.4		Daytime	86%		
						Nighttime	14%		
						Calculated CNEL, dBA			
						52.5			
						Calculated L _{dn} , dBA			
						51.8			

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT5
September 01, 2019

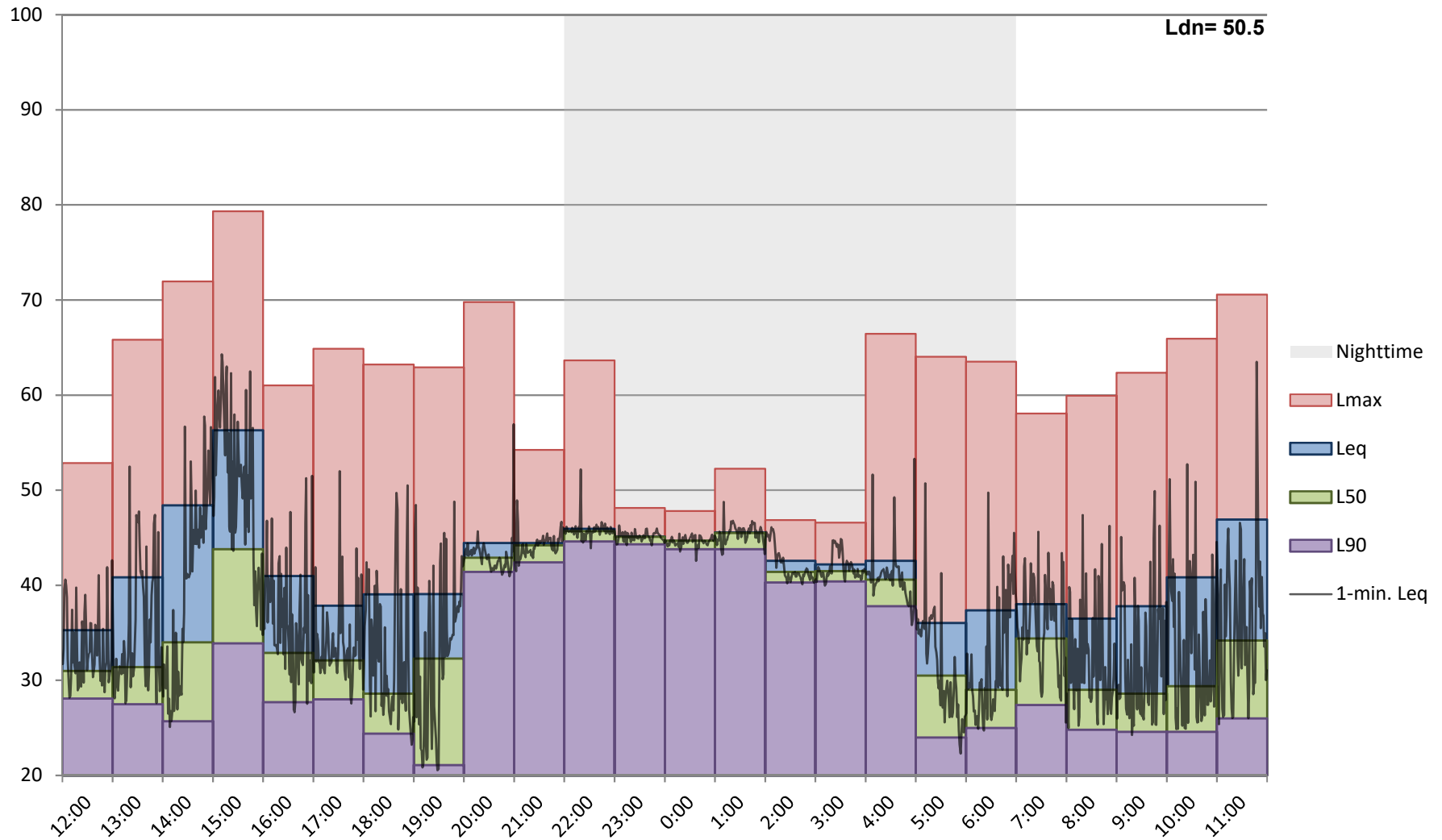


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: September 02, 2019 to September 03, 2019
Site: LT6

Hour	Leq	Lmax	L50	L90		Lowermost Level			
12:00	35.3	52.9	31.0	28.1		Leq	Lmax	L50	L90
13:00	40.8	65.8	31.4	27.5	Daytime (7 a.m. - 10 p.m.)	35.3	52.9	28.6	21.1
14:00	48.4	72.0	34.0	25.7	Nighttime (10 p.m. - 7 a.m.)	36.0	46.6	29.0	24.0
15:00	56.3	79.3	43.8	33.9		Average Level			
16:00	41.0	61.0	32.9	27.7		Leq	Lmax	L50	L90
17:00	37.9	64.9	32.1	28.0	Daytime (7 a.m. - 10 p.m.)	46.6	64.2	33.9	28.5
18:00	39.0	63.2	28.6	24.4	Nighttime (10 p.m. - 7 a.m.)	43.5	55.5	40.4	38.2
19:00	39.1	62.9	32.3	21.1		Uppermost-Level			
20:00	44.4	69.8	42.9	41.4		Leq	Lmax	L50	L90
21:00	44.4	54.2	44.2	42.4	Daytime (7 a.m. - 10 p.m.)	56.3	79.3	44.2	42.4
22:00	45.9	63.7	45.7	44.6	Nighttime (10 p.m. - 7 a.m.)	45.9	66.4	45.7	44.6
23:00	45.1	48.1	45.1	44.3		Energy Distribution			
0:00	44.6	47.8	44.7	43.8		Daytime		77%	
1:00	45.6	52.3	45.5	43.8		Nighttime		23%	
2:00	42.6	46.9	41.4	40.3		Calculated CNEL, dBA			
3:00	42.2	46.6	41.5	40.4		50.7			
4:00	42.6	66.4	40.6	37.8		Calculated L _{dn} , dBA			
5:00	36.0	64.0	30.5	24.0		50.5			
6:00	37.4	63.5	29.0	25.0					
7:00	38.0	58.1	34.4	27.4					
8:00	36.5	59.9	29.0	24.8					
9:00	37.8	62.4	28.6	24.6					
10:00	40.8	65.9	29.4	24.6					
11:00	46.9	70.6	34.2	26.0					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT6
September 02, 2019 to September 03, 2019

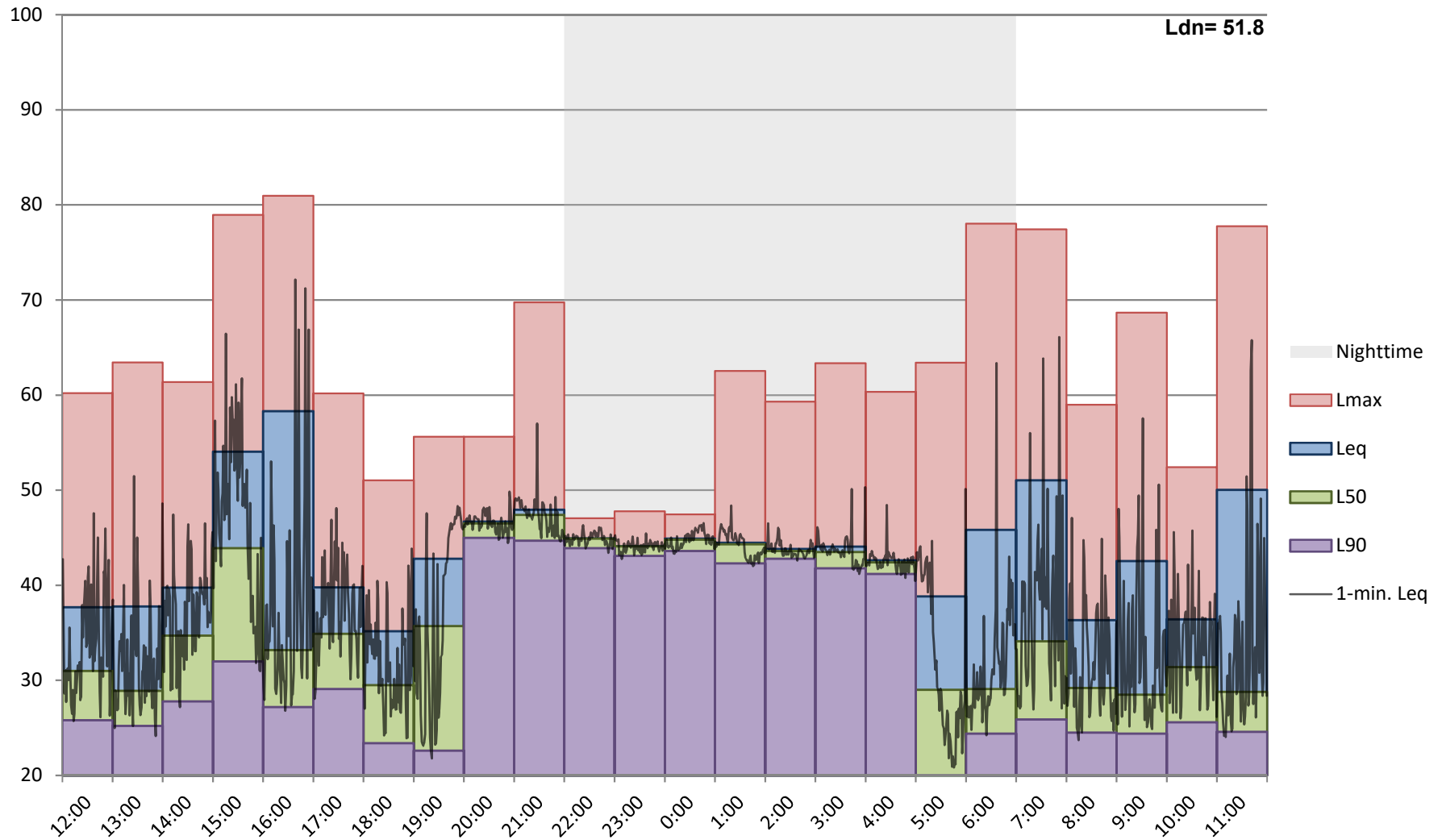


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: September 03, 2019 to September 04, 2019
Site: LT6

Hour	Leq	Lmax	L50	L90		Lowermost Level			
12:00	37.7	60.2	31.0	25.8		Leq	Lmax	L50	L90
13:00	37.8	63.4	28.9	25.2	Daytime (7 a.m. - 10 p.m.)	35.2	51.0	28.5	22.6
14:00	39.7	61.4	34.7	27.8	Nighttime (10 p.m. - 7 a.m.)	38.8	47.1	29.0	20.0
15:00	54.1	79.0	43.9	32.0		Average Level			
16:00	58.3	80.9	33.2	27.2		Leq	Lmax	L50	L90
17:00	39.8	60.2	34.9	29.1	Daytime (7 a.m. - 10 p.m.)	49.5	64.8	34.5	28.5
18:00	35.2	51.0	29.5	23.4	Nighttime (10 p.m. - 7 a.m.)	44.1	58.8	40.6	38.1
19:00	42.8	55.6	35.7	22.6		Uppermost-Level			
20:00	46.7	55.6	46.5	45.0		Leq	Lmax	L50	L90
21:00	47.9	69.8	47.4	44.7	Daytime (7 a.m. - 10 p.m.)	58.3	80.9	47.4	45.0
22:00	44.9	47.1	44.9	43.9	Nighttime (10 p.m. - 7 a.m.)	45.8	78.0	44.9	43.9
23:00	44.1	47.8	44.1	43.1		Energy Distribution			
0:00	44.9	47.5	44.8	43.6		Daytime	85%		
1:00	44.5	62.5	44.3	42.3		Nighttime	15%		
2:00	43.8	59.3	43.6	42.8		Calculated CNEL, dBA			
3:00	44.1	63.4	43.5	41.8		52.1			
4:00	42.6	60.3	42.4	41.2		Calculated L _{dn} , dBA			
5:00	38.8	63.4	29.0	20.0		51.8			
6:00	45.8	78.0	29.1	24.4					
7:00	51.0	77.4	34.1	25.9					
8:00	36.3	59.0	29.2	24.5					
9:00	42.5	68.7	28.5	24.4					
10:00	36.4	52.4	31.4	25.6					
11:00	50.0	77.8	28.8	24.6					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT6
September 03, 2019 to September 04, 2019



Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

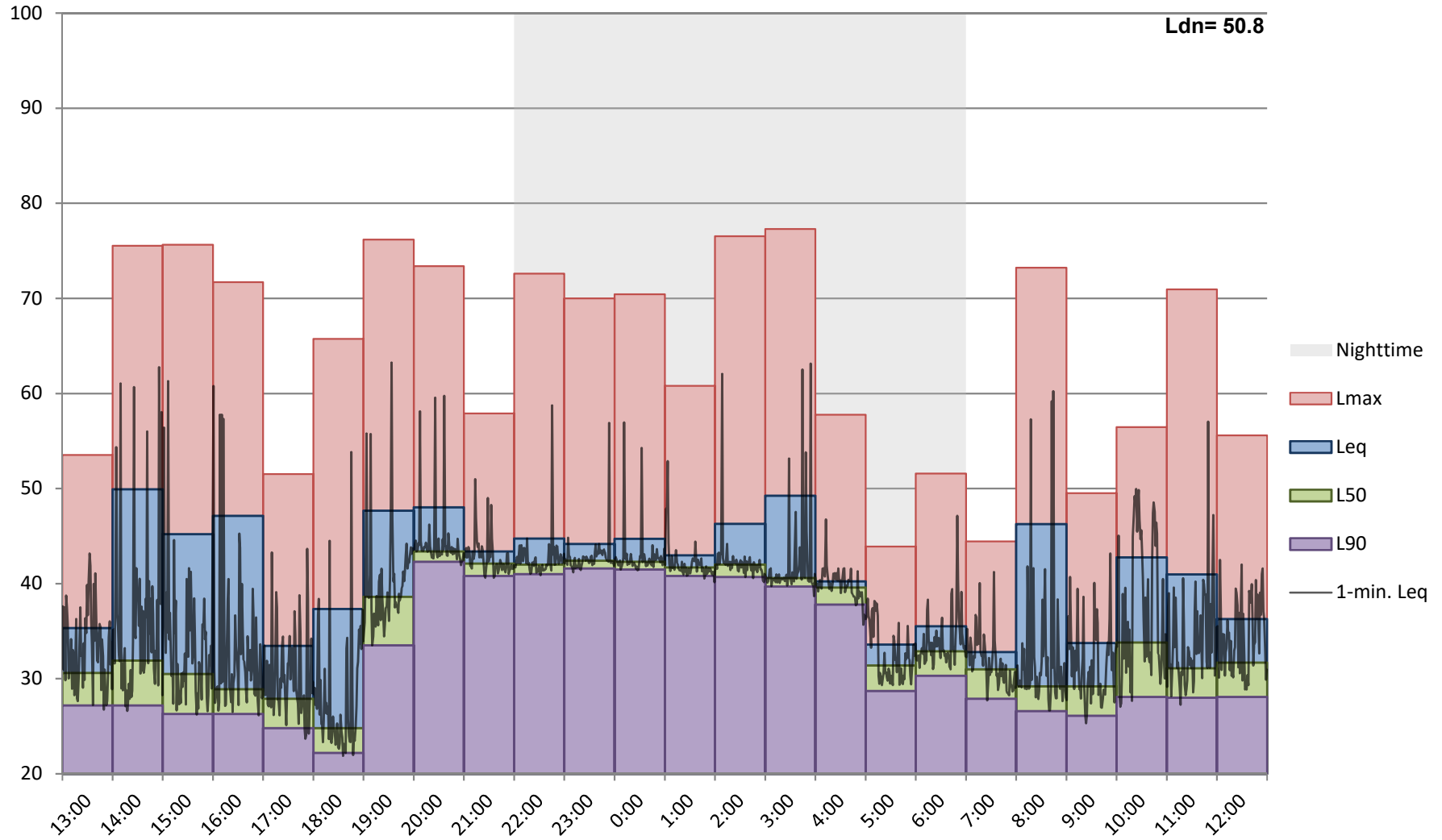
Project: 10212 - Campo Wind Project with Boulder Brush Facilities

Date: August 31, 2019 to September 01, 2019

Site: LT8

Hour	Leq	Lmax	L50	L90		Lowermost Level			
13:00	35.3	53.5	30.6	27.2		Leq	Lmax	L50	L90
14:00	49.9	75.5	31.9	27.2	Daytime (7 a.m. - 10 p.m.)	32.8	44.4	24.8	22.2
15:00	45.2	75.6	30.5	26.3	Nighttime (10 p.m. - 7 a.m.)	33.6	43.9	31.4	28.7
16:00	47.1	71.7	28.9	26.3		Average Level			
17:00	33.5	51.5	27.9	24.8		Leq	Lmax	L50	L90
18:00	37.3	65.8	24.8	22.2	Daytime (7 a.m. - 10 p.m.)	44.5	63.4	32.3	29.0
19:00	47.7	76.2	38.6	33.5	Nighttime (10 p.m. - 7 a.m.)	44.4	64.5	39.4	38.0
20:00	48.0	73.4	43.4	42.3		Uppermost-Level			
21:00	43.4	57.9	42.1	40.8		Leq	Lmax	L50	L90
22:00	44.7	72.6	42.0	41.0	Daytime (7 a.m. - 10 p.m.)	49.9	76.2	43.4	42.3
23:00	44.2	70.0	42.4	41.6	Nighttime (10 p.m. - 7 a.m.)	49.3	77.3	42.4	41.6
0:00	44.7	70.4	42.3	41.5		Energy Distribution			
1:00	43.0	60.8	41.7	40.8		Daytime	63%		
2:00	46.3	76.5	42.0	40.7		Nighttime	37%		
3:00	49.3	77.3	40.6	39.7		Calculated CNEL, dBA			
4:00	40.2	57.8	39.6	37.8		51.3			
5:00	33.6	43.9	31.4	28.7		Calculated L _{dn} , dBA			
6:00	35.5	51.6	32.9	30.3		50.8			
7:00	32.8	44.4	31.0	27.9					
8:00	46.3	73.2	29.2	26.6					
9:00	33.8	49.5	29.2	26.1					
10:00	42.8	56.5	33.8	28.1					
11:00	41.0	71.0	31.1	28.0					
12:00	36.3	55.6	31.7	28.1					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT8
August 31, 2019 to September 01, 2019



Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

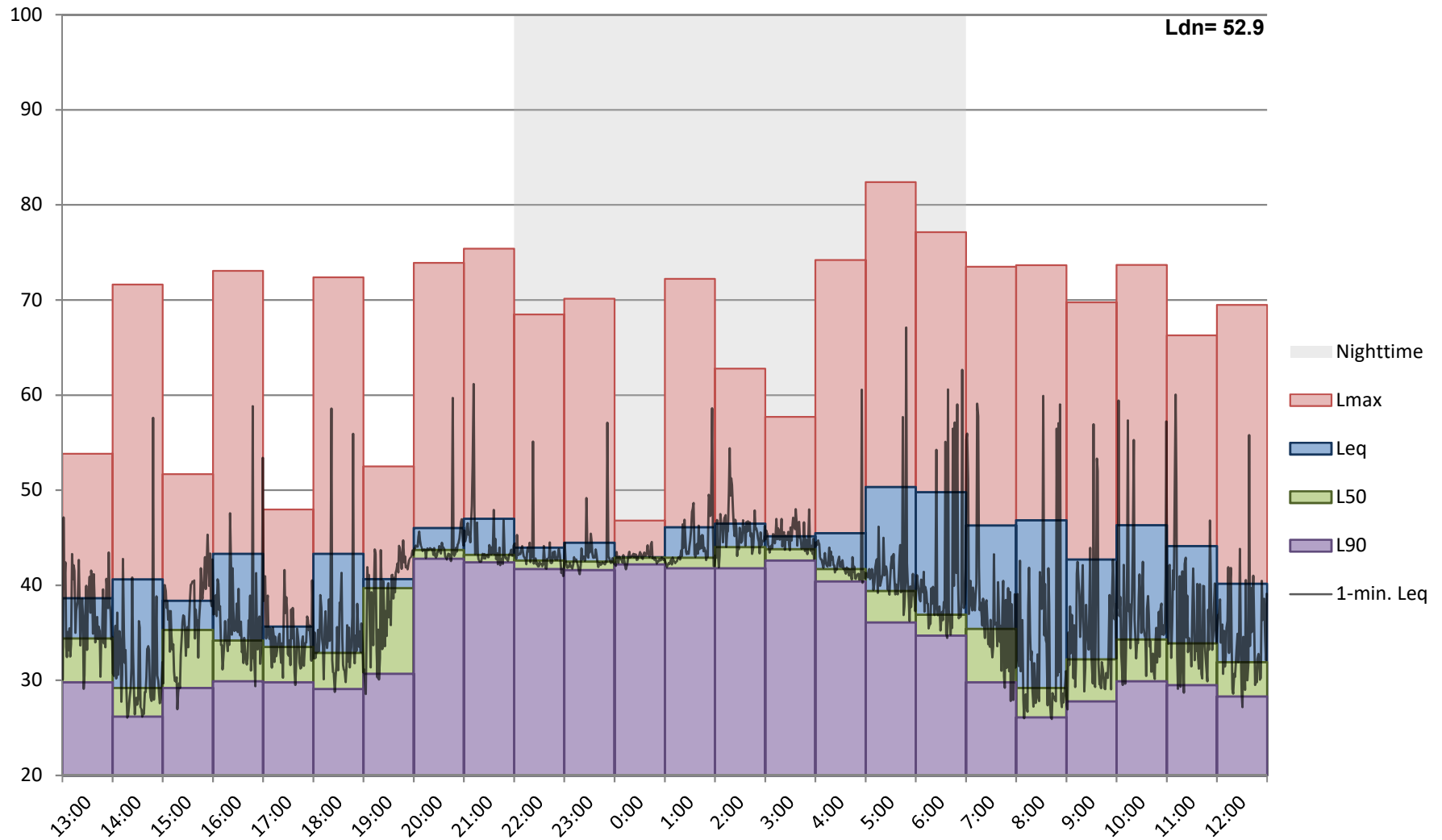
Project: 10212 - Campo Wind Project with Boulder Brush Facilities

Date: September 01, 2019 to September 02, 2019

Site: LT8

Hour	Leq	Lmax	L50	L90		Lowermost Level			
13:00	38.6	53.8	34.4	29.8		Leq	Lmax	L50	L90
14:00	40.6	71.6	29.2	26.2	Daytime (7 a.m. - 10 p.m.)	35.7	48.0	29.2	26.1
15:00	38.4	51.7	35.3	29.2	Nighttime (10 p.m. - 7 a.m.)	42.9	46.8	36.9	34.7
16:00	43.3	73.1	34.2	29.9		Average Level			
17:00	35.7	48.0	33.5	29.8		Leq	Lmax	L50	L90
18:00	43.3	72.4	32.9	29.1	Daytime (7 a.m. - 10 p.m.)	43.8	66.6	34.9	30.8
19:00	40.7	52.5	39.7	30.7	Nighttime (10 p.m. - 7 a.m.)	46.8	68.0	41.9	40.3
20:00	46.0	73.9	43.7	42.8		Uppermost-Level			
21:00	47.0	75.4	43.2	42.4		Leq	Lmax	L50	L90
22:00	44.0	68.5	42.6	41.7	Daytime (7 a.m. - 10 p.m.)	47.0	75.4	43.7	42.8
23:00	44.5	70.1	42.5	41.6	Nighttime (10 p.m. - 7 a.m.)	50.3	82.4	44.0	42.6
0:00	42.9	46.8	42.9	42.2		Energy Distribution			
1:00	46.1	72.2	42.9	41.8		Daytime		46%	
2:00	46.5	62.8	44.0	41.8		Nighttime		54%	
3:00	45.2	57.7	43.8	42.6		Calculated CNEL, dBA			
4:00	45.5	74.2	41.7	40.4		53.1			
5:00	50.3	82.4	39.4	36.1		Calculated L _{dn} , dBA			
6:00	49.8	77.1	36.9	34.7		52.9			
7:00	46.3	73.5	35.4	29.8					
8:00	46.8	73.7	29.2	26.1					
9:00	42.7	69.7	32.2	27.8					
10:00	46.3	73.7	34.3	29.9					
11:00	44.1	66.3	33.9	29.5					
12:00	40.2	69.5	31.9	28.3					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT8
September 01, 2019 to September 02, 2019

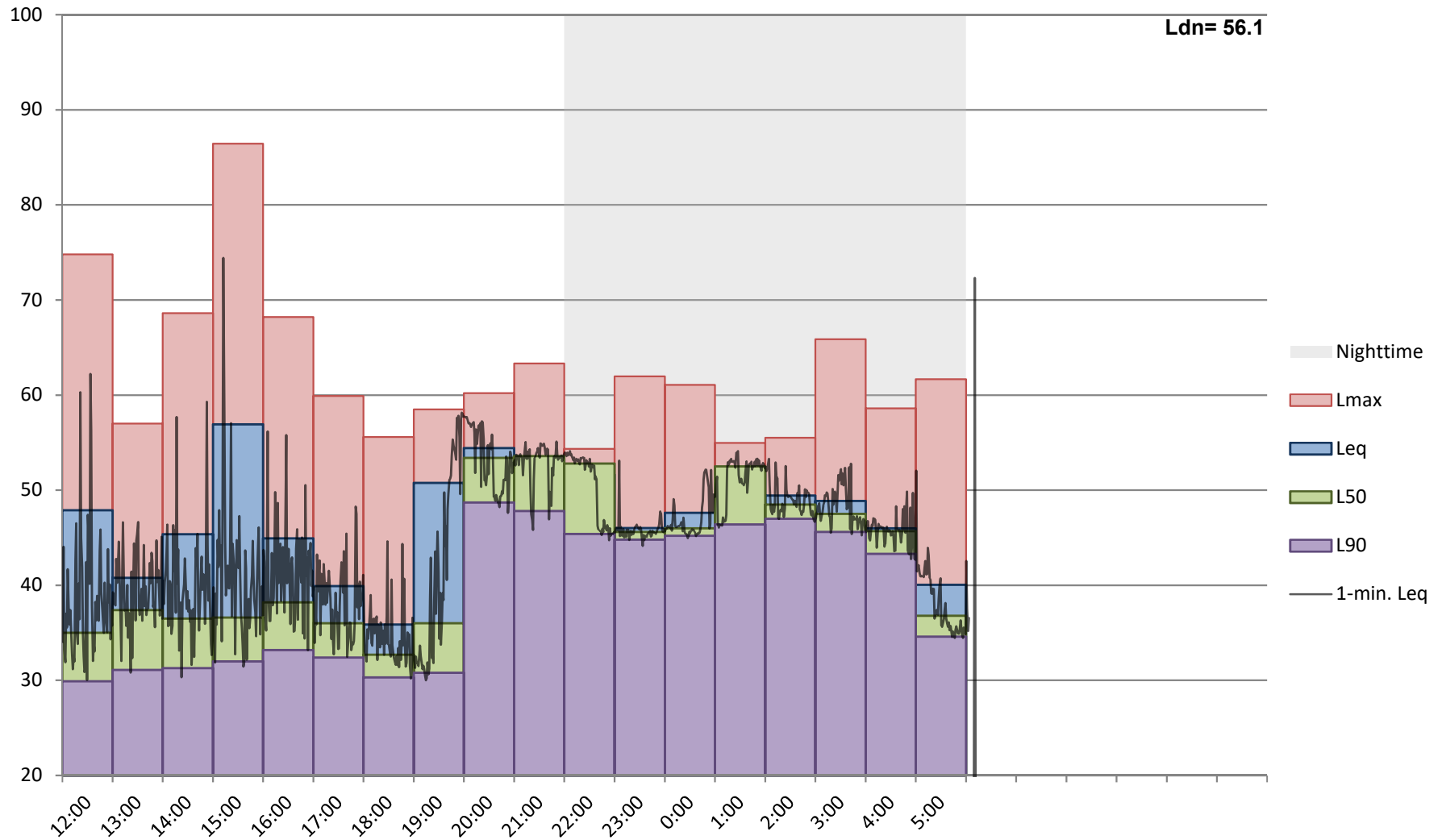


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 29, 2019
Site: LT9

Hour	Leq	Lmax	L50	L90		Lowermost Level			
12:00	47.9	74.8	35.0	29.9		Leq	Lmax	L50	L90
13:00	40.8	57.0	37.4	31.1	Daytime (7 a.m. - 10 p.m.)	35.9	55.6	32.7	29.9
14:00	45.4	68.6	36.5	31.3	Nighttime (10 p.m. - 7 a.m.)	40.1	54.4	36.8	34.6
15:00	56.9	86.4	36.6	32.0		Average Level			
16:00	44.9	68.2	38.2	33.2		Leq	Lmax	L50	L90
17:00	39.9	59.9	36.0	32.4	Daytime (7 a.m. - 10 p.m.)	49.2	65.3	39.5	34.8
18:00	35.9	55.6	32.7	30.3	Nighttime (10 p.m. - 7 a.m.)	48.3	59.3	46.9	44.0
19:00	50.8	58.5	36.0	30.8		Uppermost-Level			
20:00	54.4	60.2	53.4	48.7		Leq	Lmax	L50	L90
21:00	53.3	63.3	53.6	47.8	Daytime (7 a.m. - 10 p.m.)	56.9	86.4	53.6	48.7
22:00	51.6	54.4	52.8	45.4	Nighttime (10 p.m. - 7 a.m.)	51.8	65.9	52.8	47.0
23:00	46.0	62.0	45.6	44.8		Energy Distribution			
0:00	47.6	61.1	46.0	45.2		Daytime	67%		
1:00	51.8	55.0	52.5	46.4		Nighttime	33%		
2:00	49.4	55.5	48.5	47.0					
3:00	48.9	65.9	47.5	45.6					
4:00	46.0	58.6	45.7	43.3					
5:00	40.1	61.7	36.8	34.6					
						Calculated CNEL, dBA			
						56.8			
						Calculated L _{dn} , dBA			
						56.1			

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT9
August 29, 2019

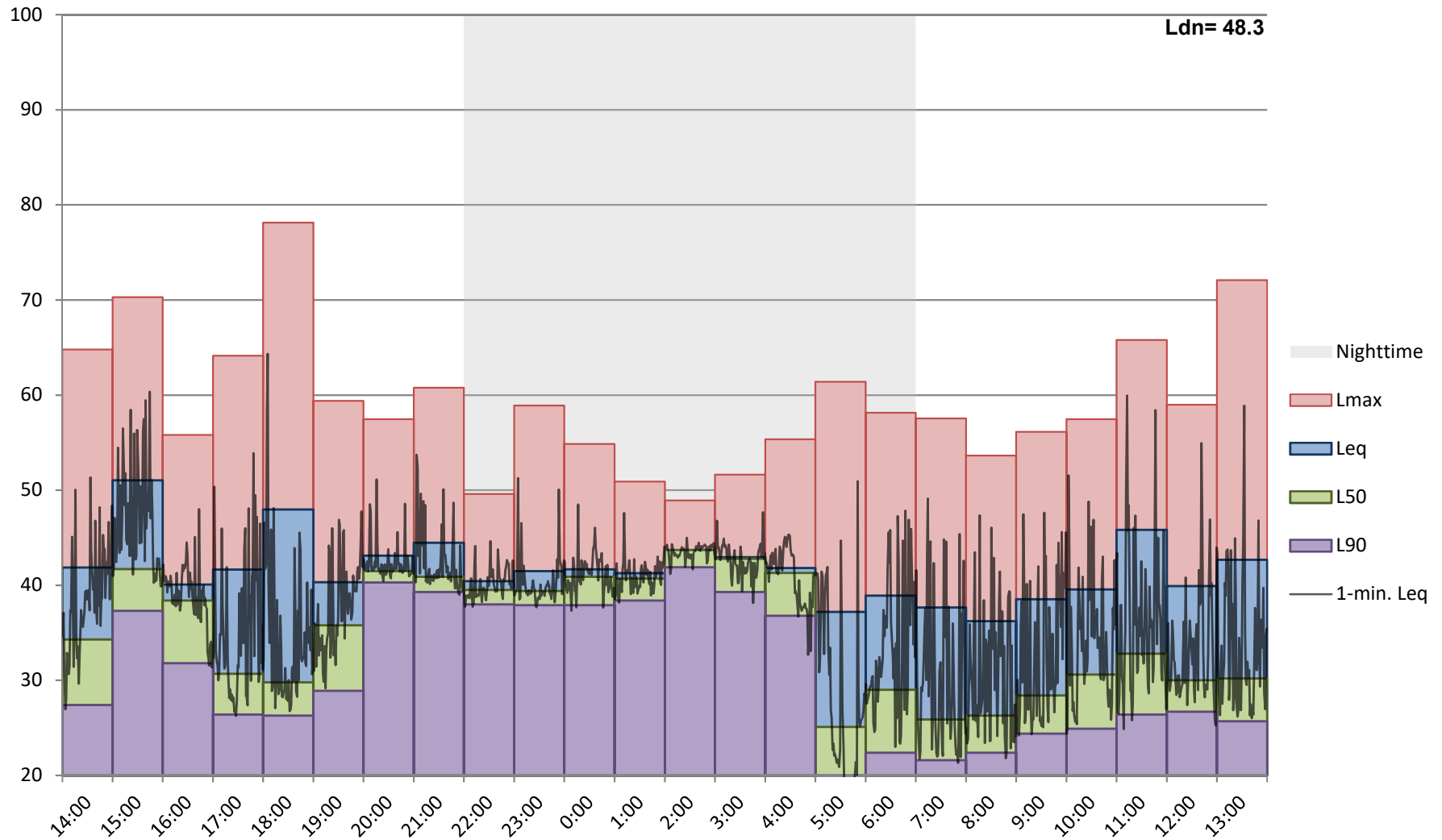


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: September 02, 2019 to September 03, 2019
Site: LT10

Hour	Leq	Lmax	L50	L90		Lowermost Level			
14:00	41.9	64.8	34.3	27.4		Leq	Lmax	L50	L90
15:00	51.0	70.3	41.7	37.3	Daytime (7 a.m. - 10 p.m.)	36.2	53.6	25.9	21.6
16:00	40.1	55.8	38.4	31.8	Nighttime (10 p.m. - 7 a.m.)	37.2	48.9	25.1	18.8
17:00	41.7	64.1	30.7	26.4		Average Level			
18:00	48.0	78.1	29.8	26.3		Leq	Lmax	L50	L90
19:00	40.3	59.4	35.8	28.9	Daytime (7 a.m. - 10 p.m.)	44.1	62.2	33.2	28.7
20:00	43.1	57.5	41.5	40.3	Nighttime (10 p.m. - 7 a.m.)	41.4	54.4	38.0	34.6
21:00	44.5	60.8	40.9	39.3		Uppermost-Level			
22:00	40.4	49.6	39.5	38.0		Leq	Lmax	L50	L90
23:00	41.5	58.9	39.4	37.9	Daytime (7 a.m. - 10 p.m.)	51.0	78.1	41.7	40.3
0:00	41.7	54.9	40.9	37.9	Nighttime (10 p.m. - 7 a.m.)	43.6	61.4	43.7	41.9
1:00	41.3	50.9	40.7	38.4		Energy Distribution			
2:00	43.6	48.9	43.7	41.9		Daytime	75%		
3:00	43.0	51.6	42.8	39.3		Nighttime	25%		
4:00	41.8	55.3	41.3	36.8		Calculated CNEL, dBA			
5:00	37.2	61.4	25.1	18.8		48.6			
6:00	38.9	58.1	29.0	22.4		Calculated L _{dn} , dBA			
7:00	37.7	57.5	25.9	21.6		48.3			
8:00	36.2	53.6	26.3	22.4					
9:00	38.5	56.1	28.4	24.4					
10:00	39.6	57.5	30.6	24.9					
11:00	45.8	65.8	32.8	26.4					
12:00	39.9	59.0	30.0	26.7					
13:00	42.7	72.1	30.2	25.7					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT10
September 02, 2019 to September 03, 2019



Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 29, 2019
Site: LT11

Hour	Leq	Lmax	L50	L90
17:00	57.6	80.7	36.3	28.7
18:00	57.3	80.3	33.1	26.1
19:00	56.5	77.7	48.1	26.8
20:00	57.9	76.8	55.7	54.8
21:00	56.4	73.7	54.2	52.9
22:00	55.7	73.8	52.8	51.9
23:00	56.7	79.4	52.7	51.9

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Lowermost Level			
Leq	Lmax	L50	L90
56.4	73.7	33.1	26.1
55.7	73.8	52.7	51.9

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

Average Level			
Leq	Lmax	L50	L90
52.4	77.8	45.5	37.9
49.7	76.6	52.8	51.9

Daytime (7 a.m. - 10 p.m.)
 Nighttime (10 p.m. - 7 a.m.)

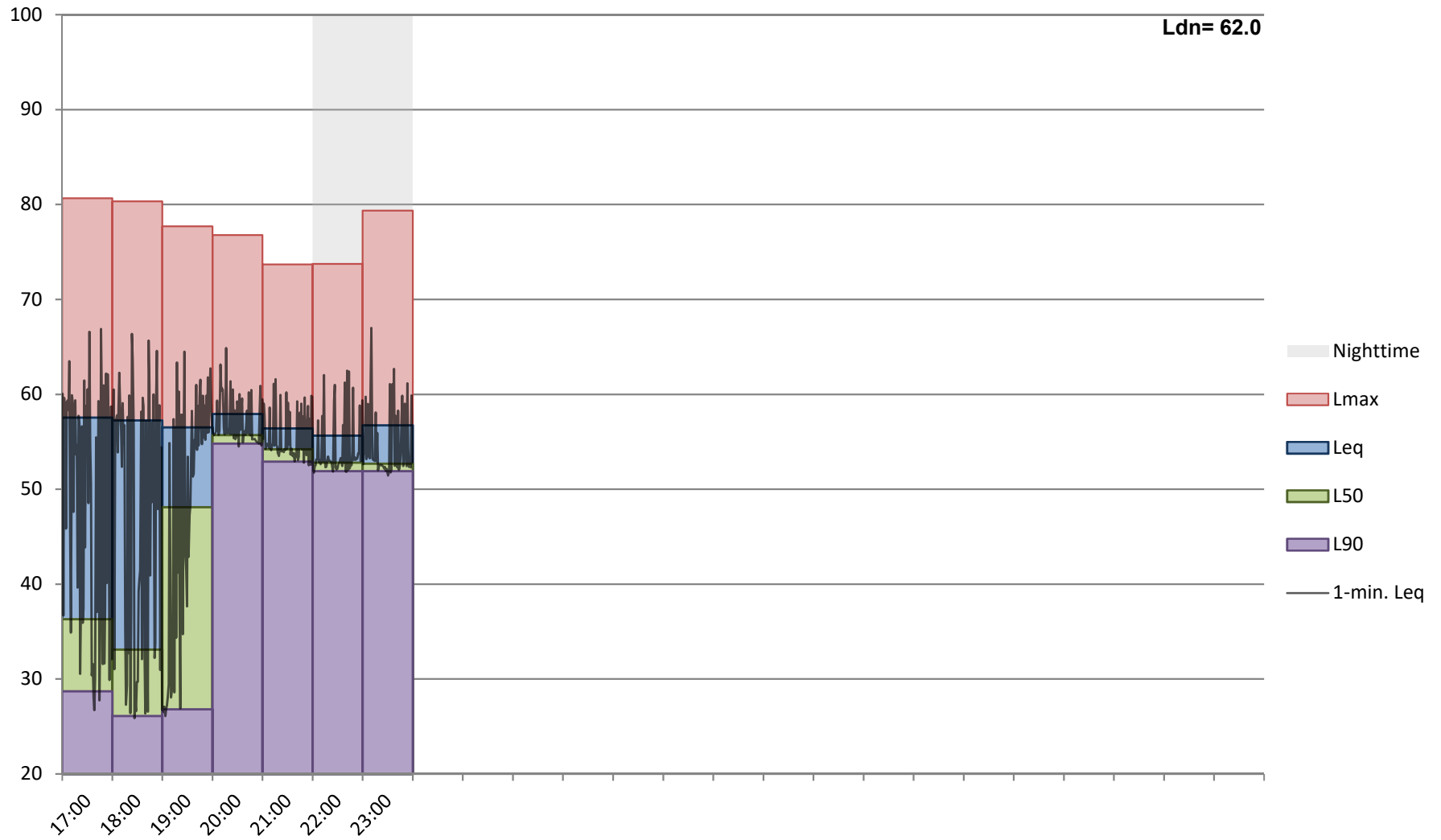
Uppermost-Level			
Leq	Lmax	L50	L90
57.9	80.7	55.7	54.8
56.7	79.4	52.8	51.9

Energy Distribution	
Daytime	76%
Nighttime	24%

Calculated CNEL, dBA
63.1

Calculated L _{dn} , dBA
62.0

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT11
August 29, 2019

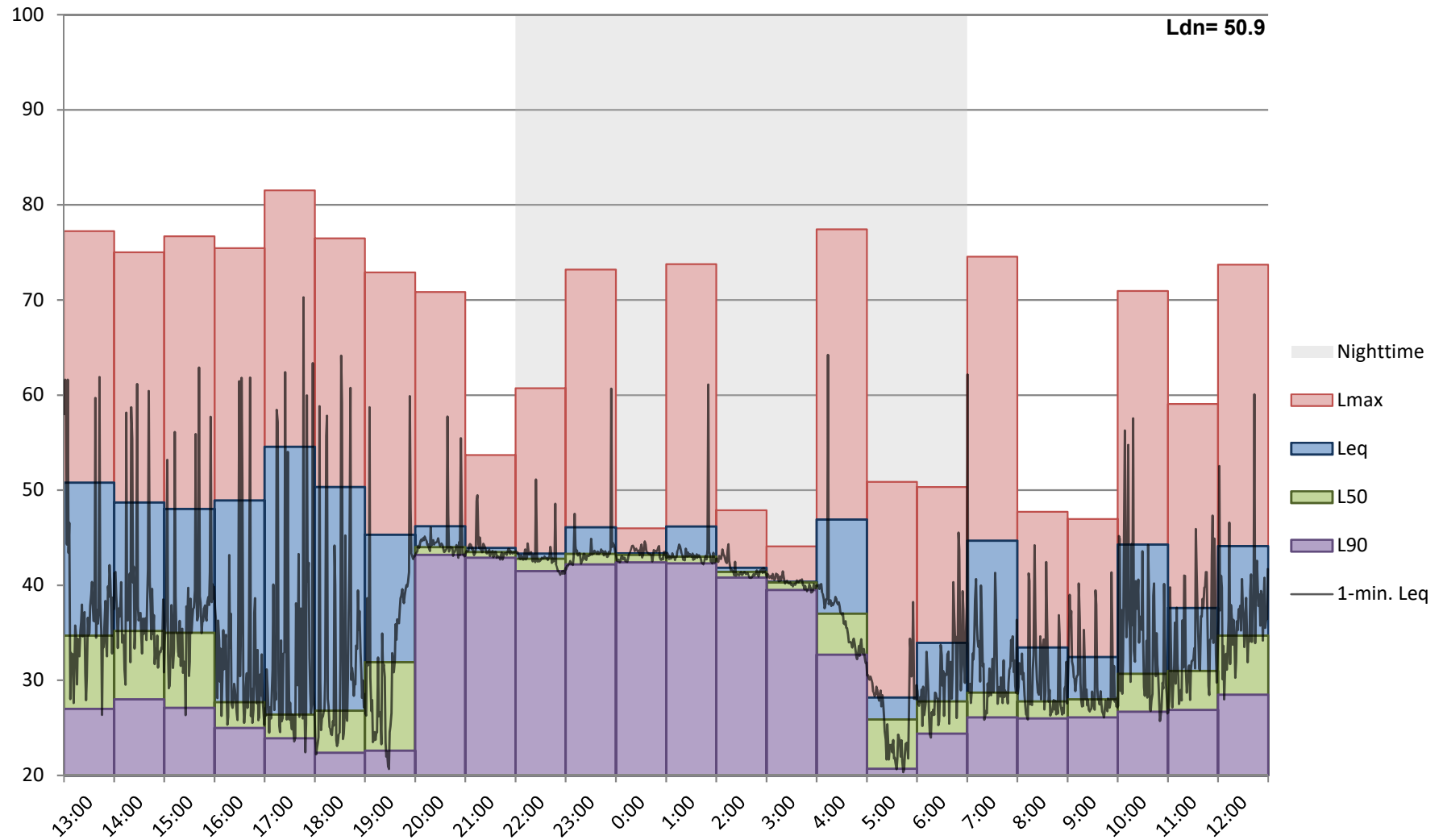


Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: August 31, 2019 to September 01, 2019
Site: LT12

Hour	Leq	Lmax	L50	L90		Lowermost Level			
13:00	50.8	77.2	34.7	27.0		Leq	Lmax	L50	L90
14:00	48.7	75.0	35.2	28.0	Daytime (7 a.m. - 10 p.m.)	32.4	47.0	26.4	22.4
15:00	48.0	76.7	35.0	27.1	Nighttime (10 p.m. - 7 a.m.)	28.2	44.1	25.9	20.7
16:00	48.9	75.5	27.7	25.0		Average Level			
17:00	54.6	81.5	26.4	23.9		Leq	Lmax	L50	L90
18:00	50.3	76.5	26.8	22.4	Daytime (7 a.m. - 10 p.m.)	47.9	68.9	32.4	28.2
19:00	45.3	72.9	31.9	22.6	Nighttime (10 p.m. - 7 a.m.)	43.5	58.3	38.3	36.3
20:00	46.2	70.8	44.0	43.2		Uppermost-Level			
21:00	43.9	53.7	43.5	42.9		Leq	Lmax	L50	L90
22:00	43.3	60.7	42.8	41.5	Daytime (7 a.m. - 10 p.m.)	54.6	81.5	44.0	43.2
23:00	46.1	73.2	43.3	42.2	Nighttime (10 p.m. - 7 a.m.)	46.9	77.4	43.3	42.4
0:00	43.4	46.0	43.2	42.4		Energy Distribution			
1:00	46.2	73.8	43.0	42.3		Daytime	82%		
2:00	41.8	47.9	41.4	40.8		Nighttime	18%		
3:00	40.4	44.1	40.3	39.5		Calculated CNEL, dBA			
4:00	46.9	77.4	37.0	32.7		51.2			
5:00	28.2	50.9	25.9	20.7		Calculated L _{dn} , dBA			
6:00	33.9	50.3	27.8	24.4		50.9			
7:00	44.7	74.6	28.7	26.1					
8:00	33.5	47.7	27.8	26.0					
9:00	32.4	47.0	28.0	26.1					
10:00	44.3	71.0	30.7	26.7					
11:00	37.6	59.1	31.0	26.9					
12:00	44.1	73.7	34.7	28.5					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT12
August 31, 2019 to September 01, 2019



Attachment A
Tabular Hourly Data and Histograms of 2019 ANSI Type 1 Baseline Outdoor SPL Data

Project: 10212 - Campo Wind Project with Boulder Brush Facilities
Date: September 01, 2019 to September 02, 2019
Site: LT12

Hour	Leq	Lmax	L50	L90		Lowermost Level			
13:00	47.8	76.7	36.4	29.4		Leq	Lmax	L50	L90
14:00	35.8	60.8	28.9	25.2	Daytime (7 a.m. - 10 p.m.)	32.6	49.8	28.0	24.4
15:00	63.9	91.6	31.5	25.5	Nighttime (10 p.m. - 7 a.m.)	33.0	48.6	27.2	24.8
16:00	50.4	77.5	33.4	27.2		Average Level			
17:00	46.5	76.2	28.9	26.3		Leq	Lmax	L50	L90
18:00	32.6	52.3	28.0	25.6	Daytime (7 a.m. - 10 p.m.)	53.4	70.3	33.9	29.1
19:00	53.0	82.0	38.0	24.4	Nighttime (10 p.m. - 7 a.m.)	44.5	59.4	39.2	37.6
20:00	50.6	74.5	45.0	44.0		Uppermost-Level			
21:00	45.2	56.3	44.7	43.9		Leq	Lmax	L50	L90
22:00	49.3	75.2	43.5	42.7		63.9	91.6	45.0	44.0
23:00	43.7	48.6	43.7	42.8	Daytime (7 a.m. - 10 p.m.)	49.3	75.2	44.0	43.2
0:00	43.3	52.5	43.1	42.5	Nighttime (10 p.m. - 7 a.m.)	Energy Distribution			
1:00	44.1	52.1	44.0	43.2		Daytime	93%		
2:00	47.1	73.9	42.5	41.6		Nighttime	7%		
3:00	45.2	73.5	41.4	40.0		Calculated CNEL, dBA			
4:00	38.1	48.7	38.0	34.9		54.3			
5:00	33.0	49.1	29.4	26.2		Calculated L _{dn} , dBA			
6:00	37.0	61.4	27.2	24.8		53.8			
7:00	36.9	49.8	32.4	26.2					
8:00	35.8	50.8	29.5	26.7					
9:00	49.7	80.0	31.6	27.5					
10:00	45.9	76.2	35.2	29.6					
11:00	47.1	74.2	33.7	28.0					
12:00	46.6	75.2	31.7	27.5					

Attachment A
10212 - Campo Wind Project with Boulder Brush Facilities - LT12
September 01, 2019 to September 02, 2019

