Appendix B
Noise Analysis for the
Proposed Big Bend Wind Project

Big Bend Wind, LLC
Docket No. IP7013/WS-19-619
November 2020

PUBLIC DOCUMENT - NONPUBLIC DATA HAS BEEN EXCISED

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BIG BEND WIND, LLC

BIG BEND WIND PROJECT

Noise Assessment | October 28, 2020

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PROPRIETARY INFORMATION IN APPENDIX B REDACTED FOR PUBLIC RELEASE

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1.0 INTRODUCTION

Big Bend Wind, LLC (“Big Bend”) is developing the Big Bend Wind Project (“Project”) wind power facility proposed for Cottonwood and Watonwan Counties, in southwestern Minnesota. The Project will involve the construction of up to 55 turbines for a total capacity of up to 314 MW. The Project area is located north of Mountain Lake and south of MN Route 30 (MN-30).

As part of the applications for a certificate of need and site permit to the Minnesota Public Utilities Commission (MPUC), Big Bend has hired RSG to perform a noise assessment consistent with Minnesota Department of Commerce (MDOC) guidelines for comparison with Minnesota Pollution Control Agency (MPCA) sound level limits.

This report includes:

- A description of the Project;
- A description of sound level limits and guidelines applicable to the project;
- Some acoustical considerations particular to wind turbines;
- Background sound level monitoring procedures and results;
- Sound propagation modeling procedures and results; and
- Conclusions.

A primer for some of the acoustic-specific terminology is found in Appendix A.

2.0 PROJECT DESCRIPTION

The Project is proposed to be located in Cottonwood and Watonwan Counties, Minnesota. The northern extent of the Project area is MN-30, and the southern extent is MN Route 60 (MN-60) and the rail line that runs parallel to MN-60. The eastern extent of the Project area is 660th Avenue in Watonwan County, just east of Butterfield. The western extent is County Road 2 in Cottonwood County.

The Project is designed to included up to 55 wind turbines. Nine turbines are proposed for Watonwan County, and the rest would be located in Cottonwood County. There are three turbine models currently under consideration and modeled in this report. A summary of the turbine models and their hub height is provided in Table 1.

TABLE 1: WIND TURBINE MODELS UNDER CONSIDERATION

TURBINE MAKE/MODEL	TURBINE OUTPUT (MW)	HUB HEIGHT (m)	NUMBER OF TURBINES IN LAYOUT
Vestas V162	5.6	119	55
GE 5.5-158 LNTE[1]	5.5	107.4	55
Nordex N163 LNTE	5.7	108	54

The area around the Project is composed primarily of agricultural land uses with rural residences. Terrain in the area is mostly flat.

Butterfield is located at the southeastern corner with the nearest proposed turbine approximately 1.5 miles to the northwest. Mountain Lake is at the southern edge of the Project area with the nearest proposed turbine approximately 0.8 miles to the northeast.

A map of the project area is provided in Figure 1.

[1] Low-Noise Trailing Edge

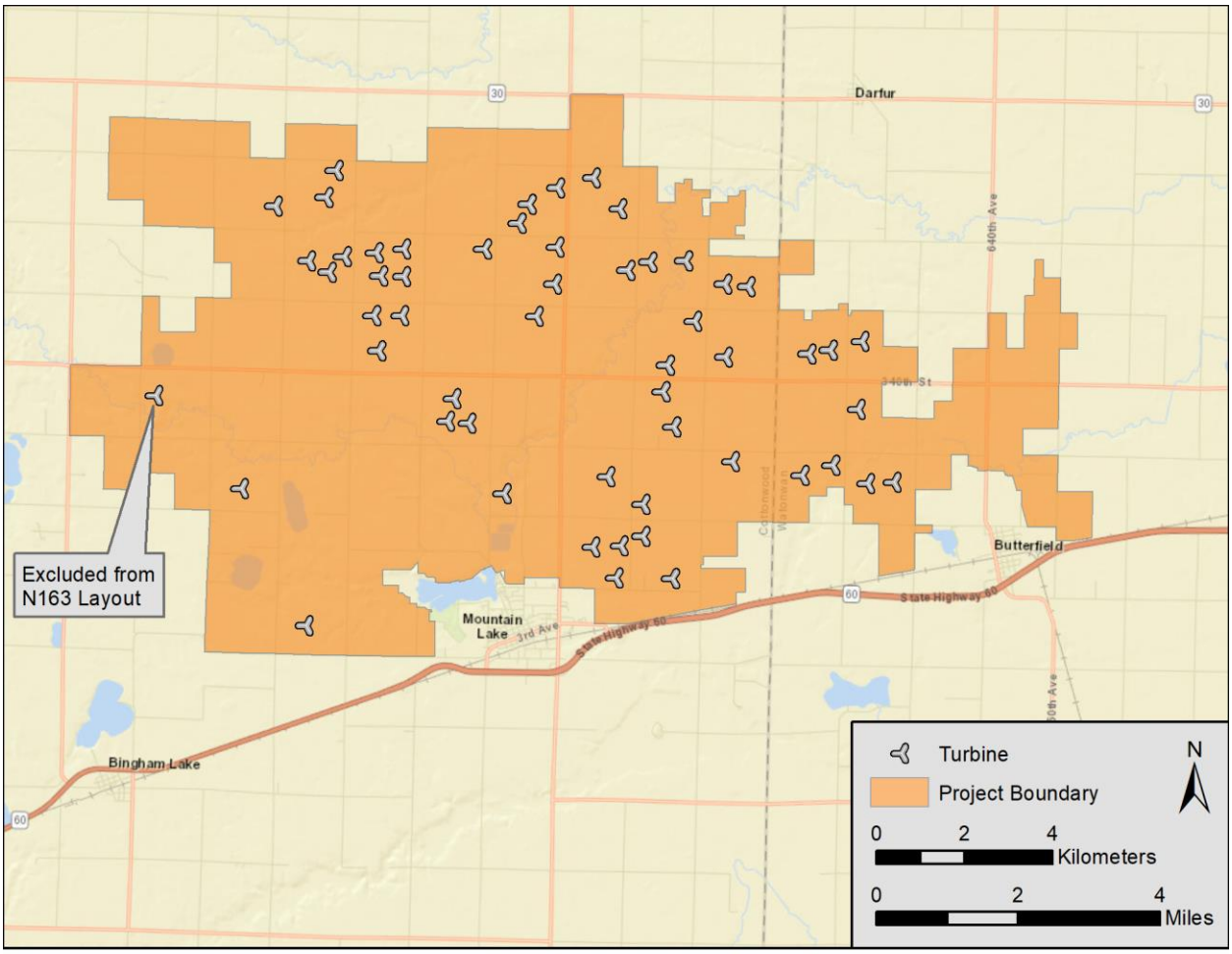

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FIGURE 1: PROJECT SITE MAP

3.0 SOUND LEVEL STANDARDS AND GUIDELINES

3.1 LOCAL STANDARDS

Watonwan County

Information on Watonwan County sound level limits for wind power project are found in Section 12.M.7 of the county's zoning regulation. This section is reproduced below.

> Noise standards are regulated by the Minnesota Pollution Control Agency under Chapter 7030. These rules establish the maximum night and daytime noise levels that effectively limit wind turbine noise to 50-dB (A) at farm residences and are incorporated here by reference. Additional local limits relative to impulsive and pure tone noises may be appropriate and set forth as a condition in the permit.

Cottonwood County

Sound level limits for Cottonwood County are found in Section 25 of the county's zoning regulations and references Chapter 7030 of the MPCA's rules.

3.2 STATE STANDARDS

Minnesota Statute §116.07 charges the Pollution Control Agency with adopting noise standards. These standards are set in Minnesota Rules Chapter 7030, for which a wind power project must demonstrate it will comply with to receive a site permit from the PUC. The rule provides daytime and nighttime[2] sound level limits (Table 2) for a variety of land uses, which are grouped into three categories identified by a Noise Area Classification (NAC). The sensitive land uses around the Project are primarily within NAC 1 which includes residences including farmhouses and contain the most restrictive sound limits.

TABLE 2: NOISE LIMITS (dBA) FROM MN RULES 7030.0040

NOISE AREA CLASSIFICATION	DAYTIME		NIGHTTIME	
	L_{50}	L_{10}	L_{50}	L_{10}
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

[2] MN Rules 7030.0020 define daytime as 7:00 a.m. to 10:00 p.m. and nighttime as 10:00 p.m. to 7:00 a.m.

The Rule says that the limits are for the "…preservation of public health and welfare" and that they are "…consistent with speech, sleep, annoyance, and hearing conservation requirements…", but that they "…do not, by themselves, identify the limiting levels of impulsive noise[3] needed for the preservation of public health and welfare."

[3] Impulsive noise is defined in Minnesota Rules Chapter 7030.0020. Typical, wind turbine sound at the distance of a residential receiver is not considered impulsive.

4.0 WIND TURBINE ACOUSTICS – SPECIAL CONSIDERATIONS

4.1 SOURCES OF SOUND GENERATION BY WIND TURBINES

Wind turbines generate two principle types of sound: aerodynamic, produced from the flow of air around the blades, and mechanical, produced from mechanical and electrical components within the nacelle.

Aerodynamic sound is the primary source of sound associated with wind turbines. These acoustic emissions can be either tonal or broadband. Tonal sound occurs at discrete frequencies, whereas broadband sound is distributed with little peaking across the frequency spectrum. While unusual, tonal sound can originate from unstable air flows over holes, slits, or blunt trailing edges on blades. The majority of audible aerodynamic sound from wind turbines is broadband at the middle frequencies, roughly between 200 Hz and 1,000 Hz.

Wind turbines emit aerodynamic broadband sound as the rotating blades interact with atmospheric turbulence and as air flows along their surfaces. This produces a characteristic “whooshing” sound through several mechanisms (Figure 2):

- Inflow turbulence sound occurs when the rotor blades encounter atmospheric turbulence as they pass through the air. Uneven pressure on a rotor blade causes variations in the local angle of attack, which affects the lift and drag forces, causing aerodynamic loading fluctuations. This generates sound that varies across a wide range of frequencies but is most significant at frequencies below 500 Hz.
- Trailing edge sound is produced as boundary-layer turbulence as the air passes into the wake, or trailing edge, of the blade. This sound is distributed across a wide frequency range but is most notable at high frequencies between 700 Hz and 2 kHz.
- Tip vortex sound occurs when tip turbulence interacts with the surface of the blade tip. While this is audible near the turbine, it tends to be a small component of the overall sound further away.
- Stall or separation sound occurs due to the interaction of turbulence with the blade surface.

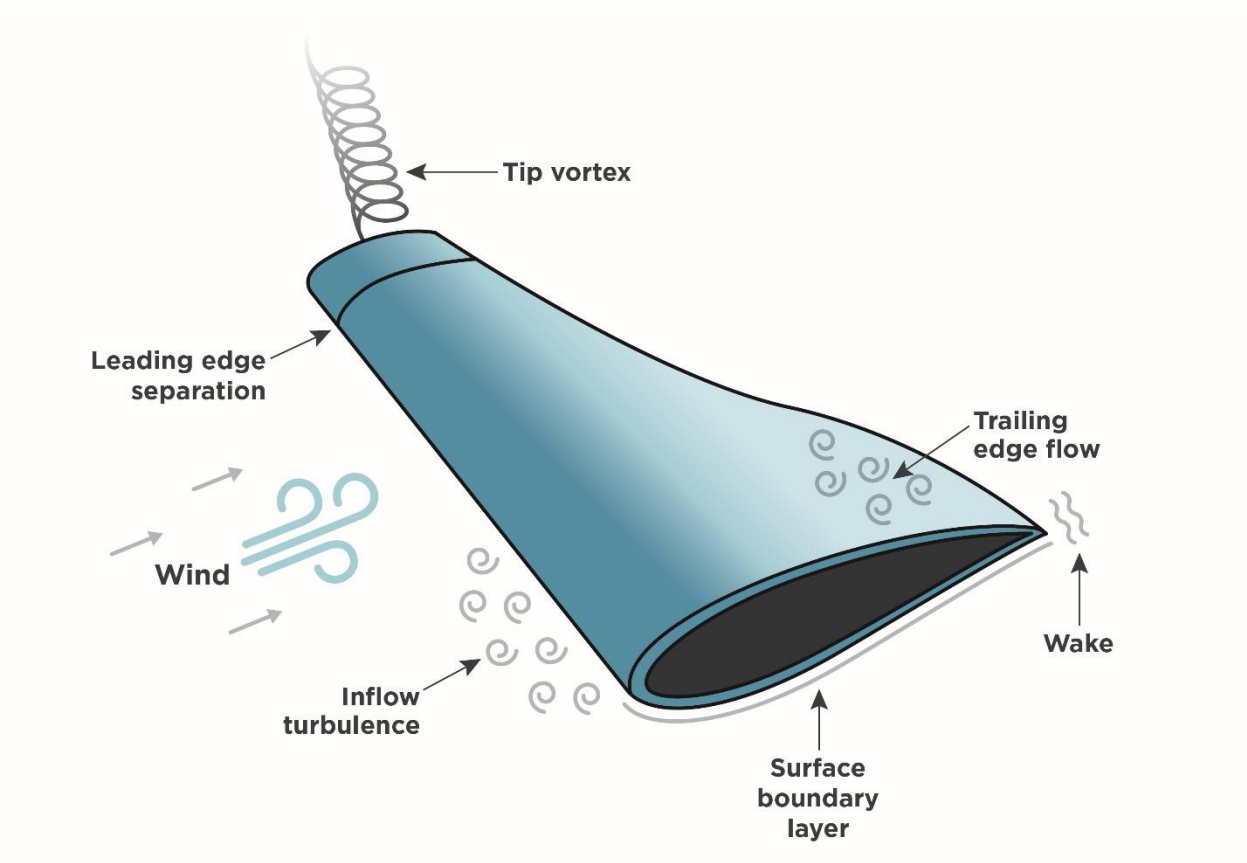


FIGURE 2: AIRFLOW AROUND A ROTOR BLADE

Mechanical sound from machinery inside the nacelle tends to be tonal in nature but can also have a broadband component. Potential sources of mechanical sound include the gearbox, generator, yaw drives, cooling fans, and auxiliary equipment. These components are housed within the nacelle, whose surfaces, if untreated, radiate the resulting sound. However modern wind turbines have nacelles that are designed to reduce the transmission of internal sound, and rarely is this a significant portion of the total wind turbine sound.

4.2 AMPLITUDE MODULATION

Amplitude modulation (AM) is a fluctuation in sound level that occurs at the blade passage frequency. There is no consistent definition how much of a sound level fluctuation is necessary for blade swish to be considered AM. Fluctuations can sometimes synchronize and desynchronize over periods, leading to increases and decreases in magnitude of the AM.[4] Most

[4] McCunney, Robert, et al. "Wind Turbines and Health: A Critical Review of the Scientific Literature." *Journal of Occupational and Environmental Medicine.* 56(11) November 2014: pp. e108-e130.

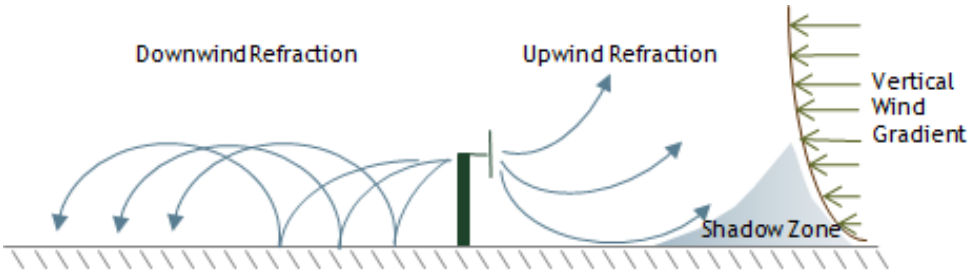
amplitude modulation is in the mid-frequencies and most overall A-weighted AM is less than 4.5 dB in depth.[5]

There are many confirmed and hypothesized causes of amplitude modulation including: blade passage in front of the tower, blade tip sound emission directivity, wind shear, inflow turbulence, transient blade stall, and turbine blade yaw error. It has recently been noted that although wind shear can contribute to the extent of amplitude modulation, wind shear does not contribute to the existence of amplitude modulation in and of itself. Instead, there needs to be detachment of airflow from the blades for wind shear to contribute to amplitude modulation.[6] While factors like the blade passing in front of the tower are intrinsic to wind turbine design, other factors vary with turbine design, local meteorology, topography, and turbine layout. Mountainous areas, for example, are more likely to have turbulent airflow, less likely to have high wind shear, and less likely to have turbine layouts that allow for blade passage synchronization for multiple turbines. Amplitude modulation extent varies with the relative location of a receptor to the turbine. Amplitude Modulation is usually experienced most when the receptor is between 45 and 60 degrees from the downwind or upwind position and is experienced least directly with the receptor directly upwind or downwind of the turbines.

4.3 METEOROLOGY

Meteorological conditions can significantly affect sound propagation. The two most important conditions to consider are wind shear and temperature lapse. Wind shear is the difference in wind speeds by elevation and temperature lapse rate is the temperature gradient by elevation. In conditions with high wind shear (large wind speed gradient), sound levels upwind from the source tend to decrease and sound levels downwind tend to increase due to the refraction, or bending, of the sound (Figure 3).

[5] RSG, et al., “Massachusetts Study on Wind Turbine Acoustics,” Massachusetts Clean Energy Center and Massachusetts Department of Environmental Protection, 2016
[6] “Wind Turbine Amplitude Modulation: Research to Improve Understanding as to its Cause and Effect.” *RenewableUK.* December 2013.



Not to scale

FIGURE 3: SCHEMATIC OF THE REFRACTION OF SOUND DUE TO VERTICAL WIND GRADIENT (WIND SHEAR)

With temperature lapse, when ground surface temperatures are higher than those aloft, sound will tend to refract upwards, leading to lower sound levels near the ground. The opposite is true when ground temperatures are lower than those aloft (an inversion condition).

High winds and/or high solar radiation can create turbulence which tends to break up and dissipate sound energy. Highly stable atmospheres, which tend to occur on clear nights with low ground-level wind speeds, tend to minimize atmospheric turbulence and are generally more favorable to downwind propagation.

In general terms, sound propagates along the ground best under stable conditions with a strong temperature inversion. This tends to occur during the night and is characterized by low ground level winds. As a result, worst-case conditions for wind turbines tend to occur downwind under moderate nighttime temperature inversions. Therefore, this is the default condition for modeling wind turbine sound.

4.4 MASKING

As mentioned above, sound levels from wind turbines are a function of wind speed. Background sound is also a function of wind speed, i.e., the stronger the winds, the louder the resulting background sound. This effect is amplified in areas covered by trees and other vegetation.

The sound from a wind turbine can often be masked by wind sound at downwind receptors because the frequency spectrum from wind is very similar to the frequency spectrum from a wind turbine. Figure 4 compares the shape of the sound spectrum measured during a 5 m/s wind event at the Project site to that of a wind turbine models under consideration. As shown, the shapes of the spectra are very similar. The masking of turbine sound occurs at higher wind speeds for some meteorological conditions. Masking will occur most, when ground wind speeds are relatively high, creating wind-caused sound such as wind blowing through the trees and interaction of wind with structures.

It is important to note that while winds may be blowing at turbine height, there may be little to no wind at ground level. This is especially true during strong wind gradients (high wind shear), which mostly occur at night. This can also occur on the leeward side of ridges where the ridge blocks the wind.

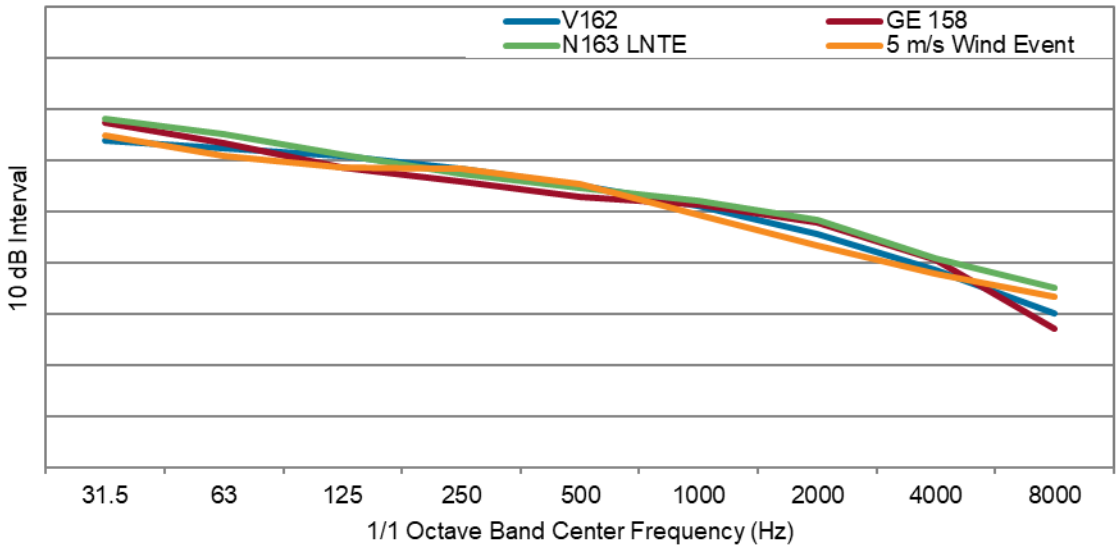


FIGURE 4: COMPARISON OF NORMALIZED FREQUENCY SPECTRA FROM THE WIND AND THE GE 158, V162, AND N163 LNTE[7]

4.5 INFRASOUND AND LOW FREQUENCY SOUND

Infrasound is sound pressure fluctuations at frequencies below about 20 Hz. Sound below this frequency is only audible at very high magnitudes. Low frequency sound is in the audible range of human hearing, that is, above 20 Hz, but below 100 to 200 Hz depending on the definition.

Low frequency aerodynamic tonal sound is typically associated with downwind rotors on horizontal axis wind turbines. In this configuration, the rotor plane is behind the tower relative to the oncoming wind. As the turbine blades rotate, each blade crosses behind the tower's aerodynamic wake and experiences brief load fluctuations. This causes short, low-frequency pulses or thumping sounds. Large modern wind turbines are "upwind", where the rotor plane is upwind of the tower. As a result, this type of low frequency sound is at a much lower magnitude with upwind turbines than downwind turbines, well below established infrasonic hearing thresholds.

[7] The purpose of this Figure is to show the shapes to two spectra relative to one another and not the actual sound level of the two sources of sound. The level of each source was normalized independently.

As an example of this, Figure 5 shows the sound levels 350 meters (1,148 feet) from a wind turbine when the wind turbine was operating (T-on) and shut down (T-off) for wind speeds at hub height greater than 9 m/s from a recent research study.[8] Measurements were made over approximately two weeks. The red 90 dBG line is shown here as the ISO 7196:1995 perceptibility threshold. As shown, the wind turbines generated measurable infrasound, but at least 20 dB below audibility thresholds.

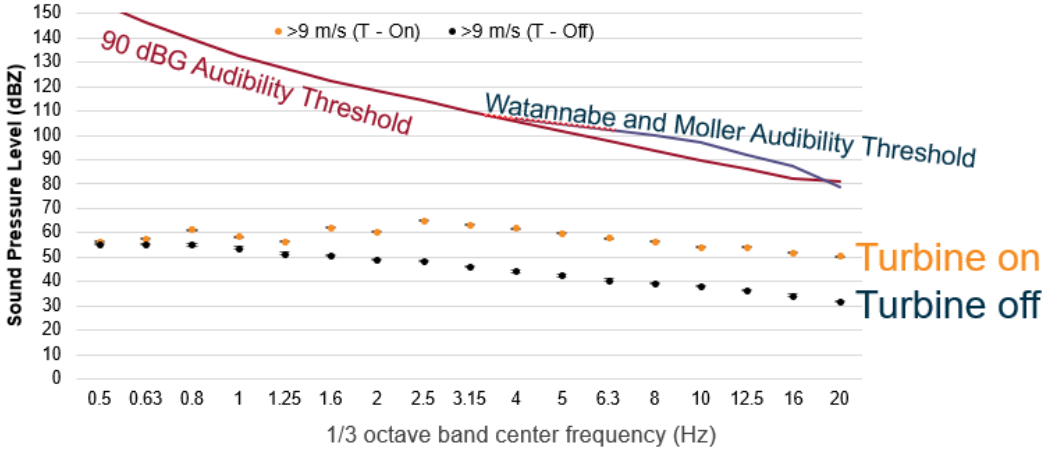


FIGURE 5: INFRASOUND FROM A WIND TURBINE AT 350 METERS (1,148 FEET) COMPARED WITH PERCEPTION THRESHOLDS

Low frequency sound is primarily generated by the generator and mechanical components. Much of the mechanical sound has been reduced in modern wind turbines through improved sound insulation at the hub. Low frequency sound can also be generated by the blades at higher wind speeds when the inflow air is very turbulent. However, at these wind speeds, low frequency sound from the wind turbine blades is often masked by wind sound at the downwind receptors.

Finally, low frequency sound is absorbed less by the atmosphere and ground than higher frequency sound. Our modeling takes into account frequency-specific ground attenuation and atmospheric absorption factors that takes this into account.

4.6 USE OF SOUND LEVEL WEIGHTING NETWORKS FOR WIND TURBINE SOUND

The human ear is not equally sensitive to sound pressure levels at all frequencies and magnitudes. Some frequencies, despite being the same decibel level (that is, magnitude), seem

[8] RSG, et al., "Massachusetts Study on Wind Turbine Acoustics," Massachusetts Clean Energy Center and Massachusetts Department of Environmental Protection, 2016 – Graphic from RSG presentation to MassDEP WNTAG, March, 2016

louder than others. For example, a 500 Hz tone at 80 dB will sound louder than a 63 Hz tone at the same level. In addition, the relative loudness of these tones will change with magnitude. For example, the perceived difference in loudness between those two tones is less when both are at 110 dB than when they are at 40 dB.

To account for the difference in the perceived loudness of a sound by frequency and magnitude, acousticians apply frequency weightings to sound levels. The most common weighting scale used in environmental noise analysis is the "A-weighting", which represents the sensitivity of the human ear at lower sound pressure levels. The A-weighting is the most appropriate weighting when overall sound pressure levels are relatively low (up to about 70 dBA). The A-weighting de-emphasizes sounds at lower and very high frequencies, since the human ear is insensitive to sound at these frequencies at low magnitude. The A-weighting is indicated by "dBA" or "dB(A)".

At higher sound pressure levels (greater than approximately 70 dBA), a different weighting must be used since human hearing sensitivity does not change as much with frequency. The "C-weighting" mimics the sensitivity of the human ear for these moderate to higher sound levels (greater than approximately 70 dBA, which is higher ground-based sound levels produced by wind power projects). C-weighted sound levels are indicated by "dBC" or "dB(C)".

The "Z-weighting" does not emphasize or de-emphasize sound at any frequency. "Z" weighted sound levels are sometimes labeled as "Flat" or "Linear". The difference is that the "Z-weighting" is defined as being unweighted in a specific range, whereas "Flat" or "Linear" indicate that no weighting has been used. Z-weighting or unweighted levels are typically used when reporting sound levels at individual octave bands.

The most appropriate weighting for wind turbine sound is A-weighting, for two reasons. The first is that sound pressure levels due to wind turbine sound are typically in the appropriate range for the A-weighting at typical receiver distances (50 dBA or less). The second is that various studies of wind turbine acoustics have shown that the potential effects of wind turbine noise on people are correlated with A-weighted sound level (i.e. Pedersen et al, 2008[9]) as well as to the perceived loudness of wind turbine sound.[10,11] Other researchers found that 51% of the energy making up a C-weighted measurement of wind turbine sound is not audible. Thus, it is more difficult to relate the level of C-weighted sound to human perception. That is, two sounds may be perceived exactly alike, but there could be significant variations in the C-weighted sound level depending on the content of inaudible sound in each.[5]

[9] Pedersen, Eja and Waye, Kerstin. "Perception and annoyance due to wind turbine noise - a dose-response relation." Journal of the Acoustical Society of America. 116(6). pp. 3460-3470.
[10] Yokoyama S., et al. "Perception of low frequency components in wind turbine noise." Noise Control Engr. J. 62(5) 2014
[11] Yokoyama et al. "Loudness evaluation of general environmental noise containing low frequency components." Proceedings of InterNoise2013, 2013

5.0 SOUND LEVEL MONITORING

5.1 MONITORING PROCEDURES

Background sound level monitoring was conducted from November 12 to November 21, 2019 throughout the Project area to quantify the existing sound levels, including the nighttime L_{50}, and to identify existing sources of sound. Monitoring locations were selected per the guidance provided in the Department of Commerce's "Guidance for Large Wind Energy Conversion System Noise Study Protocol and Report," July 2019. The guidance recommends a minimum of three locations within the Project area. For this Project there were a total of five onsite locations and one offsite monitor. The guidance also recommends that one monitor location be in proximity to the worst-case modeled receptor. Monitors 2 and 3 are representative of the worst-case Project sound levels. A map of all the monitor locations is provided in Figure 6, and each monitor location is described further in Section 5.2.

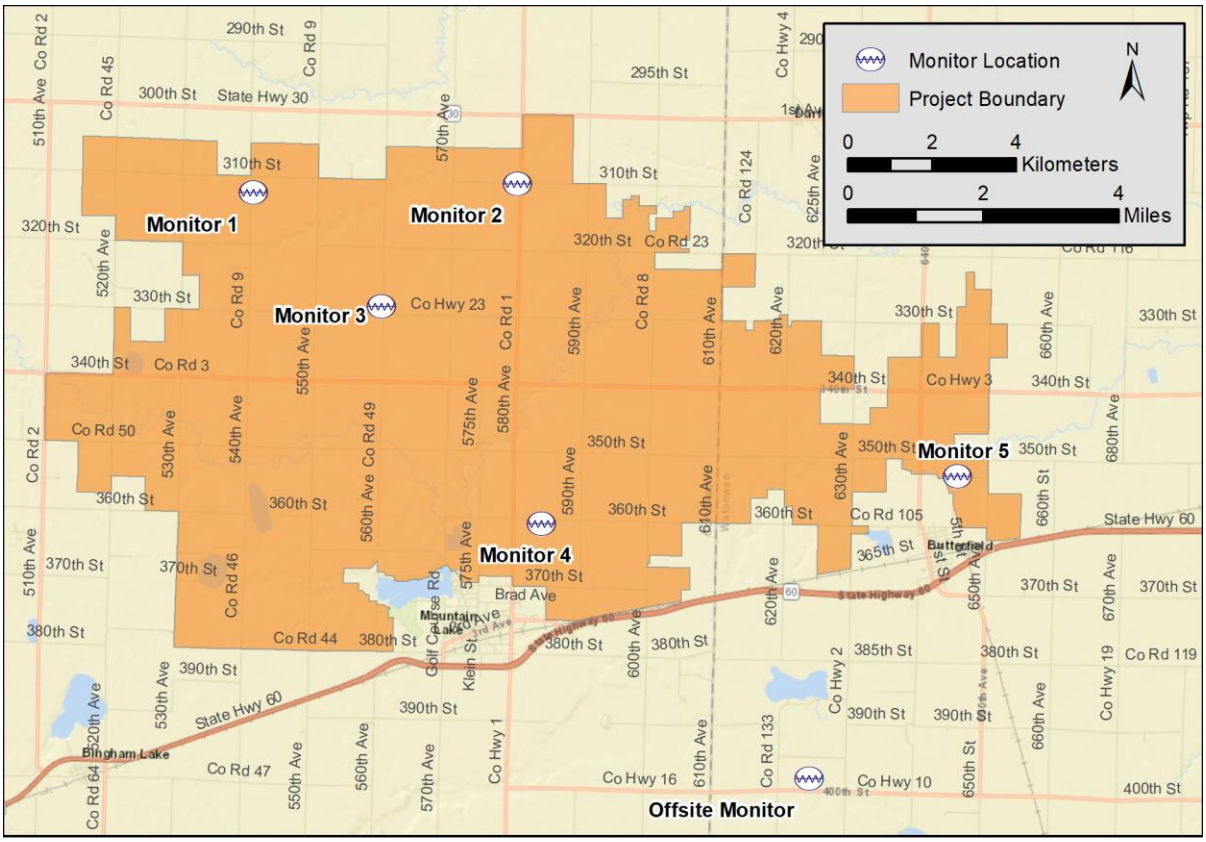


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FIGURE 6: MAP OF BACKGROUND SOUND MONITOR LOCATIONS

Equipment

Background sound level monitoring was performed with ANSI/IEC Class 1 Cesva SC310, Cirrus CR:171B, and Svantek 979 sound level meters with a minimum frequency range of 20 Hz to 10 kHz. Meters were set to log, at a minimum, 1/3 octave band sound levels once each second for the entire measurement period. Sound level meter microphones were mounted on wooden stakes at a height of approximately 1.5 meters (5 feet) and covered with 180 mm (7 inch) windscreens to minimize the impact of wind-caused distortion on measurements. The sound level meters either had internal audio recording or were connected to Edirol audio recorders, recording audio data at a minimum resolution of 96 kbps in .mp3 format. Before and after the measurement periods, the meters were calibrated with a B&K 4231 calibrator. The monitoring equipment meets LWECS Guidance.

A list of the equipment used at each monitor is shown in Table 3. At each site, an ONSET anemometer was located at microphone height. At Monitor 5, a wind direction sensor was also included in the setup. Monitor 3 also logged temperature and relative humidity. Wind data was logged at a rate of once each minute. Regional precipitation periods were collected from the FAA automated weather station KMWM in Windom, MN, about 12 miles to the southwest.

TABLE 3: SOUND MONITOR EQUIPMENT SPECIFICATIONS BY SITE

Monitor Location	Sound Level Meter	1/3 Octave Band Frequency Range	Audio Recorder	Weather Station
Monitor 1	Cesva SC310	10 Hz – 20 kHz	Edirol R-05	ONSET HOBO Wind Speed Sensor
Monitor 2	Cesva SC310	20 Hz – 10 kHz	Edirol R-05	ONSET HOBO Wind Speed Sensor
Monitor 3	Svantek 979	0.8 Hz – 20 kHz	Internal	ONSET HOBO Wind Speed and Temperature Sensors
Monitor 4	Cirrus CR: 171B	6.3 Hz – 20 kHz	Edirol R-05	ONSET HOBO Wind Speed Sensor
Monitor 5	Cirrus CR: 171B	6.3 Hz – 20 kHz	Edirol R-05	ONSET HOBO Wind Speed and Direction Sensors
Offsite	Cesva SC310	10 Hz – 20 kHz	Edirol R-05	ONSET HOBO Wind Speed Sensor

Data Processing

For each period A-, C-, and Z-weighted equivalent average sound levels (L_{eq}) were calculated. For A- and C-weighted sound levels, the L_{10}, L_{50}, and L_{90} statistical sound levels were also calculated.

A second set of data was also generated with periods removed from the data that either contained anomalous sound events or periods with conditions that could lead to false sound level readings.

Periods that were removed from the sound level data included:

- Wind speeds above 11 mph (5 m/s),
- Precipitation and thunderstorm events, and
- Personnel and animal interaction with equipment.

5.2 MONITOR LOCATION DESCRIPTIONS

Monitor 1

Monitor 1 was located at the edge of a field in the northwest corner of the Project area. The monitor was located 250 feet east of County Road 9 (540th Ave.), and 1,360 feet south of 310th Street. The nearest residence was a farm approximately 700 feet south of the monitor. The area around the monitor is largely agricultural with scattered farm residences, although little farming was being done at the time of the monitoring. A photograph of the monitor setup is provided in Figure 7, and a map of the surrounding area is shown in Figure 8.

FIGURE 7: PHOTOGRAPH OF MONITOR 1 LOOKING TO THE SOUTH

FIGURE 8: AERIAL VIEW OF MONITOR 1 AND THE SURROUNDING AREA

Monitor 2

Monitor 2 was located at a farm residence in the northern portion of the Project area. The monitor was located approximately 115 feet south of 310th Street, and 300 feet west of County Road 1 (580th Ave.). The area around the monitor is largely agricultural with scattered farm residences. The monitor was placed just west of a wind break. A photograph of the monitor setup is provided in Figure 9, and a map of the surrounding area is shown in Figure 10.

FIGURE 9: PHOTOGRAPH OF MONITOR 2 LOOKING TO THE NORTH

FIGURE 10: AERIAL VIEW OF MONITOR 2 AND THE SURROUNDING AREA

Monitor 3

Monitor 3 was located at a farm residence in the middle of the Project area. The monitor was located approximately 150 feet west of County Road 49, and 545 feet north of County Highway 23 (330th St.). The area around the monitor is largely agricultural with scattered farm residences. The monitor was located approximately 100 feet north-northeast of a large outbuilding and 320 feet north of the farm residence. A photograph of the monitor setup is provided in Figure 11, and a map of the surrounding area is shown in Figure 12.

FIGURE 11: PHOTOGRAPH OF MONITOR 3 LOOKING TO THE SOUTH

FIGURE 12: AERIAL VIEW OF MONITOR 3 AND THE SURROUNDING AREA

Monitor 4

Monitor 4 was located at a farm residence in the southern portion of the Project area. The monitor was located approximately 460 feet south of 360th Street and 2,200 feet east of Country Road 1. The area around the monitor is largely agricultural with scattered farm residences. Mountain Lake is located approximately 1.25 miles southwest of the monitor location. The monitor was located approximately 70 feet north-northeast of an outbuilding, and 170 feet north of a larger outbuilding. A photograph of the monitor setup is provided in Figure 13, and a map of the surrounding area is shown in Figure 14.

FIGURE 13: PHOTOGRAPH OF MONITOR 4 LOOKING TO THE SOUTH

FIGURE 14: AERIAL VIEW OF MONITOR 4 AND THE SURROUNDING AREA

Monitor 5

Monitor 5 was located in the southeastern portion of the Project area slightly less than a mile north-northeast of Butterfield. The monitor was located just under half a mile west of 650th Avenue and 0.75 miles north of Township Road 105. The area around the monitor is agricultural with scattered farm residences. There was a water treatment facility about a half a mile to west of the monitor. The monitor was located approximately 160 feet south of an outbuilding and 200 feet southeast of another outbuilding. A photograph of the monitor setup is provided in Figure 15, and a map of the surrounding area is shown in Figure 16.

FIGURE 15: PHOTOGRAPH OF MONITOR 5 LOOKING TO THE NORTH

FIGURE 16: AERIAL VIEW OF MONITOR 5 AND THE SURROUNDING AREA

Offsite Monitor

The offsite monitor was located at the edge of a field south-southeast of the Project area, over 4 miles from the nearest proposed turbine. The monitor was located just approximately 865 feet north of County Highway 10 (400th Street) and about half a mile east of County Road 133 (620th Ave.) The area around the monitor is primarily agricultural with scattered farm residences. The closest residence was approximately 760 feet south-southwest of the monitor. A photograph of the monitor setup is provided in Figure 17, and a map of the surrounding area is shown in Figure 18.

FIGURE 17: PHOTOGRAPH OF THE OFFSITE MONITOR LOOKING TO THE SOUTHEAST

FIGURE 18: AERIAL VIEW OF THE OFFSITE MONITOR AND THE SURROUNDING AREA

5.3 MONITORING RESULTS

For each monitor site, sound level time-history monitoring results are presented in a single chart in this report section. Each chart contains hourly sound levels, gust wind speed measured adjacent to each microphone, “hub height” average wind speed, precipitation events, and indications of data exclusions in conformance with LWECS Guidance. Points on the sound level graph represent data summarized for a single one-hour interval. The top portion of the chart displays A-weighted sound levels, the middle portion presents C-weighted levels, and the bottom portion shows wind speeds and times when there were data exclusions. All portions of the chart indicate day/night by shading: night is defined as 22:00 to 07:00 and shaded in grey.

The specific sound level metrics reported are L_{eq}, L_{90}, L_{50}, and L_{10}. Equivalent continuous sound levels (L_{eq}) are the energy-average level over one hour. Tenth-percentile sound levels (L_{90}) are the statistical value above which 90% of the sound levels occurred during one hour. Fiftieth-percentile sound levels (L_{50}) represent the median sound level of that one-hour period. Ninetieth-percentile sound levels (L_{10}) are the statistical value above which 10% of the sound levels occurred during one hour. Data that were excluded from processing (e.g., due to high wind and rain periods) are included in the graphs but shown in lighter colors. Furthermore, rectangular markers on the lower portion of the chart indicate periods for which data was

excluded and designate if the period was eliminated as a result of rain, wind gusts over 11 mph, or anomalous events.

Sound level data and wind gust data presented in the charts are those measured at each corresponding site. Wind data from the monitoring location, measured at the microphone height of 1.5 meters (5 feet), are presented as the maximum gust speed occurring at any time over a 10-minute interval; they are not averaged. The average 10-minute hub height wind speed extrapolated from the Project met-tower closest to the monitoring location is also displayed on the chart. Lastly, regional one-hour precipitation totals, as reported by KMWM in Windom, MN, are plotted with respect to the secondary axis on the right-hand side of the chart. Note that the precipitation may not line up exactly with precipitation exclusions because the airport is approximately 12 miles southwest of the project site and some localized rain events were not registered at the airport.

Lastly, one-third octave band statistical sound level results are also presented for periods when a representative wind speed (9 m/s) existed at a height of 109 meters (358 feet). This condition reflects the wind conditions that would result in turbines producing near maximum sound power (9 m/s wind speed or greater at hub height). Only periods with this representative wind speed were used for the unweighted statistical one-third octave band metrics in the figures, providing a baseline for direct comparison with post-construction measurements. Each vertical orange and grey bar shows the lower 10th, median, and upper 10th percentile (L_{90}, L_{50}, and L_{10}) sound level for a single 1/3 octave band. The top of the orange bar is the upper 10th percentile sound pressure level, the white dot is the median, and the bottom of the grey bar is the lower 10th percentile sound level. The entire length of the bar indicates the middle 80th percentile of sound pressure levels. The blue dots indicate the equivalent continuous sound pressure level (L_{eq}) for that 1/3 octave band. At the far right of the chart are the A-, C-, and Z-weighted overall levels.

Results Summary

Exclusion Periods

Periods were excluded at each monitor through both manual identification and automated processing. Manual processing included the review of spectrograms created from the measured one-second one-third octave band data, accompanied by audio recordings made through the sound level meter's microphone. In this way, typical sources and anomalous events were identified.

Exact rain periods were manually identified from the spectrogram to ensure that data during rain events at each monitor were excluded. Automated processing of wind speed permitted the identification of gusts above 5 m/s (11.2 mph) on a one-minute basis. That is, if a gust within a specific one-minute period was measured above 5 m/s (11.2 mph), then that whole minute was eliminated.

A summary of each monitor's total runtime and the amount of time excluded from the reported sound levels for rain, wind, and anomalous events are shown in Table 4.

TABLE 4: SUMMARY OF EXCLUSION PERIODS AT EACH MONITOR

Location	Run-Time	Exclusion Statistics							
		Rain		Wind		Anomalies		Total	
	(hr)	(hr)	(%)	(hr)	(%)	(hr)	(%)	(hr)	(%)
1	210	27.4	13.1	54.6	26.0	11.4	5.4	87.3	41.6
2	210	27.4	13.1	34.7	16.5	7.8	3.7	64.8	30.9
3	210	27.4	13.1	25.8	12.3	0.2	0.1	50.8	24.2
4	210	27.4	13.1	68.4	32.6	8.9	4.3	95.3	45.4
5	215	26.3	12.2	25.8	12.0	0.4	0.2	53.1	24.7
Offsite	214	26.3	12.3	46.1	21.5	0.4	0.2	71.5	33.4

Overall Sound Levels

The A-weighted sound levels are listed for all seven sites in Table 5, and the C-weighted sound levels are listed Table 6. The reported levels represent all valid periods, that is, all periods that were not excluded due to weather or anomalous activity, as discussed in the previous section. In both tables, the equivalent continuous levels (L_{eq}) at night are less than (or equal to) daytime levels at all sites except at Monitor 1, which is typical and indicate the influence of human activity on the measured sound levels during the day.

As shown in Table 5, the average nighttime L_{50} across all the onsite monitors was 33 dBA with more rural locations (Monitors 1, 2, and 3) resulting in slightly lower levels and less rural locations (Monitors 4 and 5) having slightly higher levels.

TABLE 5: PRECONSTRUCTION MONITORING SUMMARY (A-WEIGHTED RESULTS)

Location	Sound Levels (dBA)											
	Overall				Day				Night			
	L_{eq}	L_{90}	L_{50}	L_{10}	L_{eq}	L_{90}	L_{50}	L_{10}	L_{eq}	L_{90}	L_{50}	L_{10}
Monitor 1	48	25	35	46	44	27	36	45	50	23	32	55
Monitor 2	50	26	37	53	51	31	40	54	47	23	31	50
Monitor 3	46	25	34	48	48	27	36	51	39	23	31	42
Monitor 4	42	28	39	46	43	32	40	46	42	26	36	46
Monitor 5	42	31	38	46	43	31	39	47	41	31	36	42
Onsite Average	*46*	*27*	*36*	*48*	*46*	*29*	*38*	*48*	*44*	*25*	*33*	*47*
Offsite	41	28	35	42	42	30	36	42	38	26	33	41

TABLE 6: PRECONSTRUCTION MONITORING SUMMARY (C-WEIGHTED RESULTS)

Location	Sound Levels (dBC)											
	Overall				Day				Night			
	L_{eq}	L_{90}	L_{50}	L_{10}	L_{eq}	L_{90}	L_{50}	L_{10}	L_{eq}	L_{90}	L_{50}	L_{10}
Monitor 1	57	44	52	61	57	45	53	61	57	44	51	61
Monitor 2	59	40	49	60	61	44	51	62	55	38	45	56
Monitor 3	62	41	50	59	63	44	51	62	52	39	46	55
Monitor 4	57	45	54	60	57	48	55	60	56	43	52	59
Monitor 5	56	44	52	59	57	46	54	60	54	42	50	57
Onsite Average	*58*	*43*	*52*	*60*	*59*	*45*	*53*	*61*	*55*	*41*	*49*	*58*
Offsite	58	45	53	58	60	46	53	59	55	44	52	58

Meteorology

As discussed above, local meteorological data was collected from anemometers alongside the monitors, Project met towers, and the Windom Airport ASOS station (KMWM). According to the temperature sensor at Monitor 3, local temperatures ranged from -8.9°C to 11.0°C (16°F to 52°F) during the monitoring period. According to KMWM, precipitation events took place on November 18th and 20th. Based on review of the spectrograms, a precipitation event was also identified on November 16th that lasted into the 17th. All of the monitor sites had a light layer of snow on the ground during the monitor setup, but the snow had melted by the end of the monitoring period.

A summary of the 1.5-meter (5-foot) wind speeds measured at each monitoring location over the deployment period at each site is provided in Table 7.

TABLE 7: SUMMARY OF MEASURED 1.5-METER (5-FOOT) WIND SPEEDS

Location	Measured 1.5-meter Wind (mph)			
	10-min Wind Speed		10-min Gust Speed	
	Average	Maximum	Average	Maximum
1	4.3	11.0	9.0	22.5
2	3.0	19.4	5.7	31.5
3	2.9	14.8	6.6	24.8
4	5.7	18.6	10.2	29.9
5	2.9	14.8	6.6	24.8
Offsite	5.0	16.8	9.2	28.7

Monitor 1

Monitoring results for Monitor 1 are presented in Figure 19. The primary noise sources at this location were occasional car passbys, biogenic sounds (birds especially), aircraft overflights, occasional distant agricultural equipment, and wind rustling through trees. The location's sound levels generally exhibited a diurnal pattern. It also had the second greatest amount of wind exclusions during the monitoring period. The quietest nighttime periods were between 20 and 25 dBA, and some higher nighttime periods were between 40 and 45 dBA. The highest nighttime hourly L_{50} at this site was 60 dBA which occurred for several hours during one night (11/13/19) due to sound from nearby agricultural activity. Nighttime hourly L_{50}s were less than 50 dBA at all other times. Over the entire monitoring period, the daytime L_{50} at this site was 36 dBA and the nighttime L_{50} was 32 dBA.

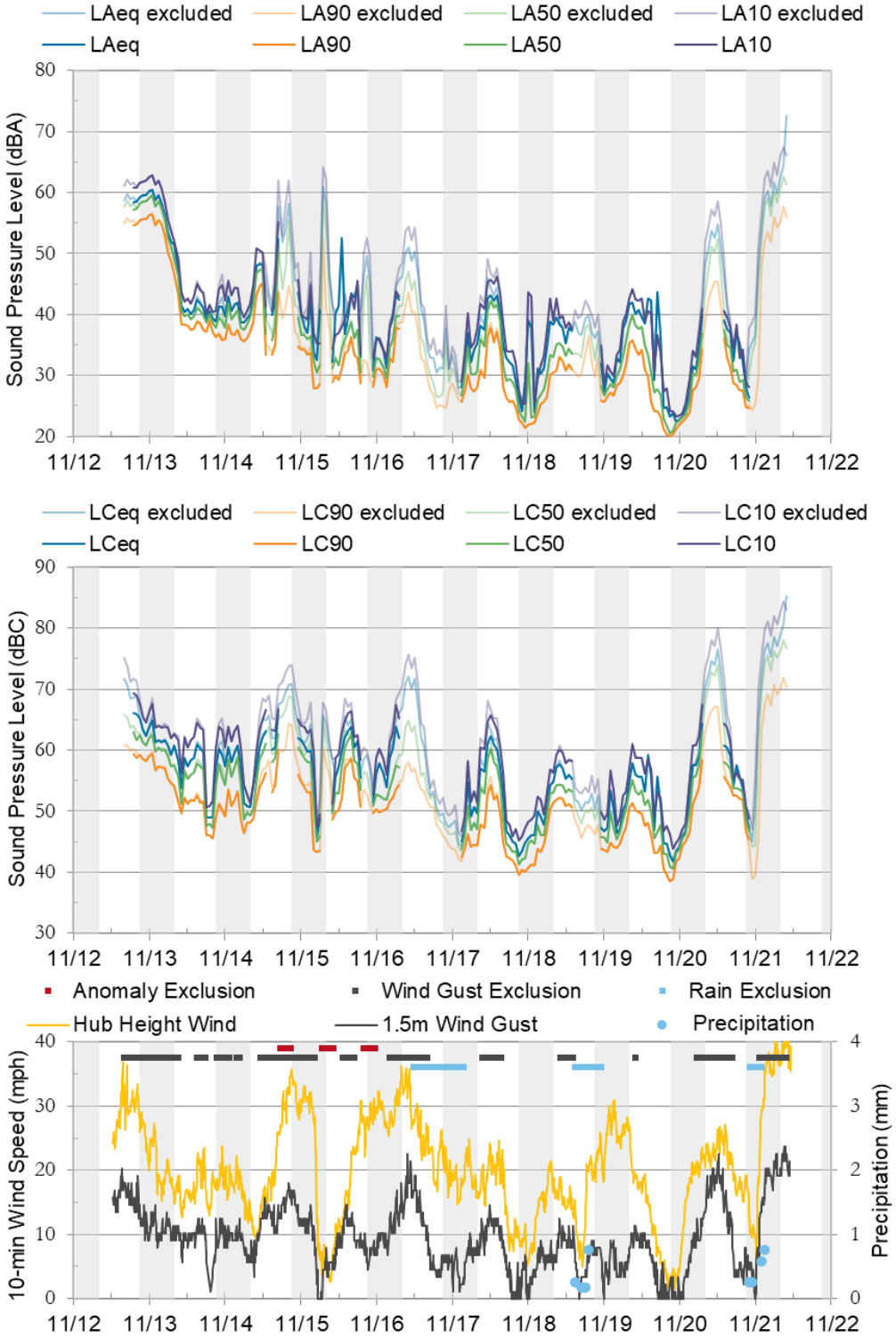

FIGURE 19: PRE-CONSTRUCTION MONITORING RESULTS AT MONITOR 1

Monitor 2

Results for Monitor 2 are presented in Figure 20. The primary noise sources at this location were car and truck passbys, biogenic sounds (birds especially), occasional aircraft overflights, distant agricultural equipment, local agricultural operations, and wind rustling through trees. The location generally exhibited a diurnal pattern. The quietest nighttime periods were between 20 and 25 dBA, and some higher nighttime periods were between 40 and 45 dBA. The highest nighttime hourly L_{50} at this site was 58 dBA which occurred for a few hours during one early morning (11/21/19) due to sound from nearby agricultural activity. Nighttime hourly L_{50}s were less than 50 dBA at all other times. Over the entire monitoring period, the daytime L_{50} at this site was 40 dBA and the nighttime L_{50} was 31 dBA.

Monitor 2 represents one of the areas with the highest projected sound levels by the pre-construction sound propagation model, so the statistical spectral levels for a representative wind speed (9 m/s) at a representative hub height (109 meters) are presented in Figure 21.

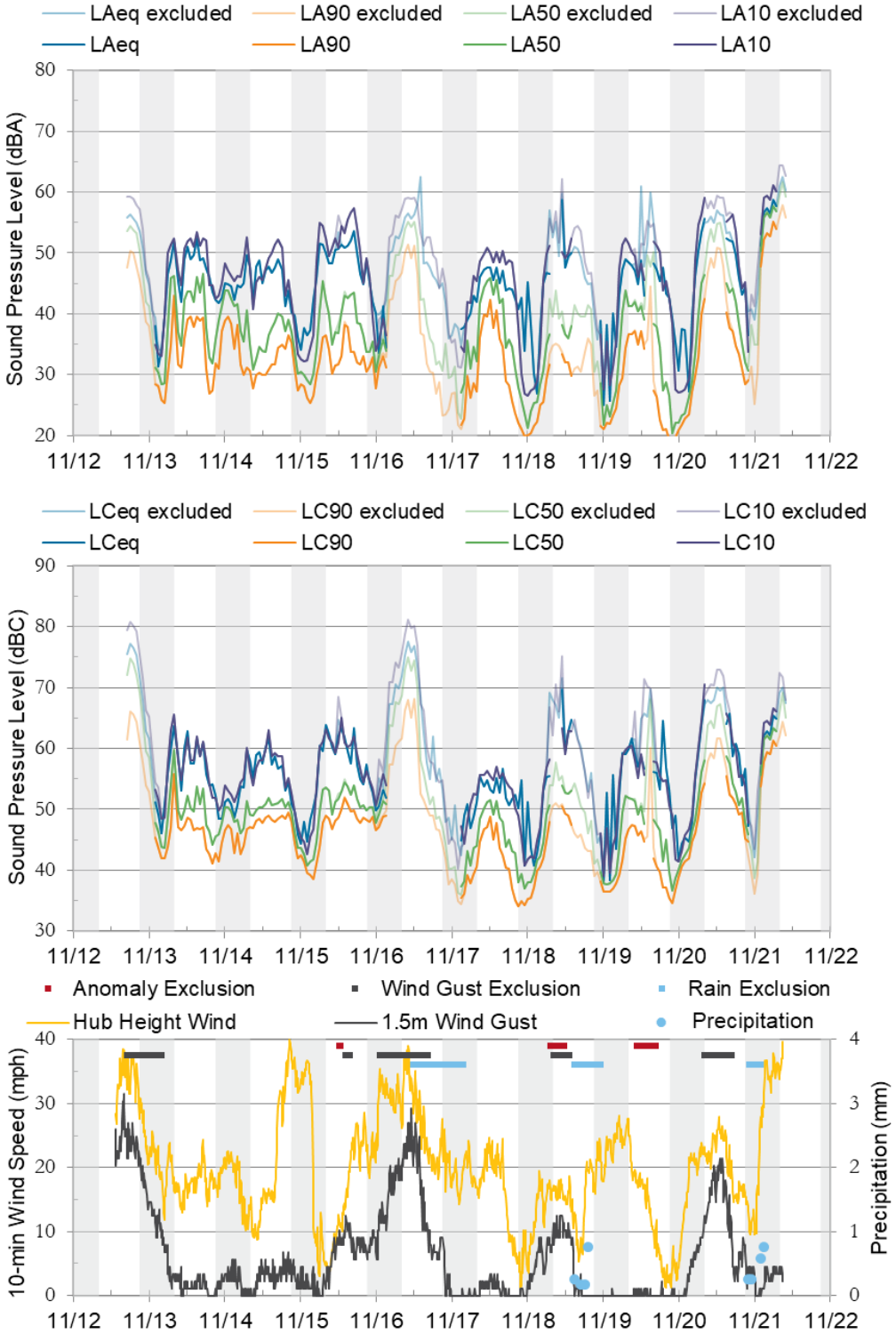

FIGURE 20: PRE-CONSTRUCTION MONITORING RESULTS AT MONITOR 2

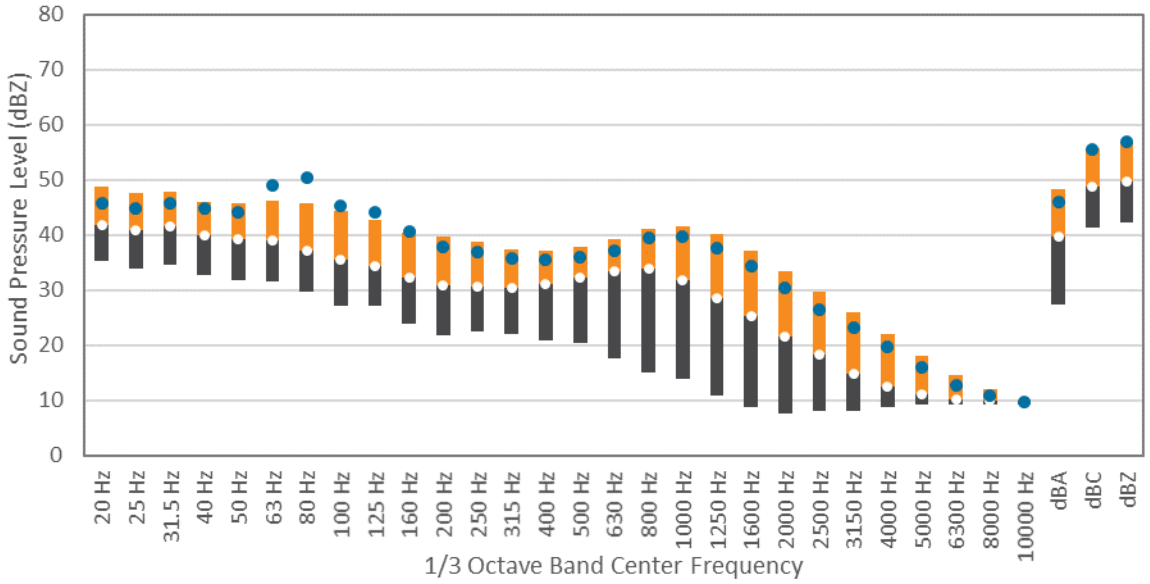

FIGURE 21: 1/3 OCTAVE BAND AND OVERALL STATISTICAL SOUND LEVELS AT MONITOR 2 (FOR PERIODS WITH 9 m/s WIND SPEED AT HUB HEIGHT)

Monitor 3

Results for Monitor 3 are presented in Figure 22. The primary noise sources at this location were occasional vehicle passbys, biogenic sounds (birds especially), occasional aircraft overflights, distant agricultural equipment, distant train horn, and wind rustling through trees. The location generally exhibited a diurnal pattern. The quietest nighttime periods were between 20 and 25 dBA, and some higher nighttime periods were around 40 dBA. The highest nighttime hourly L_{50} at this site was 49 dBA. Over the entire monitoring period, the daytime L_{50} at this site was 36 dBA and the nighttime L_{50} was 31 dBA.

Monitor 3 represents one of the areas with the highest projected sound levels by the pre-construction sound propagation model, so the statistical spectral levels for a representative wind speed (9 m/s) at a representative hub height (109 meters) are presented in Figure 23.

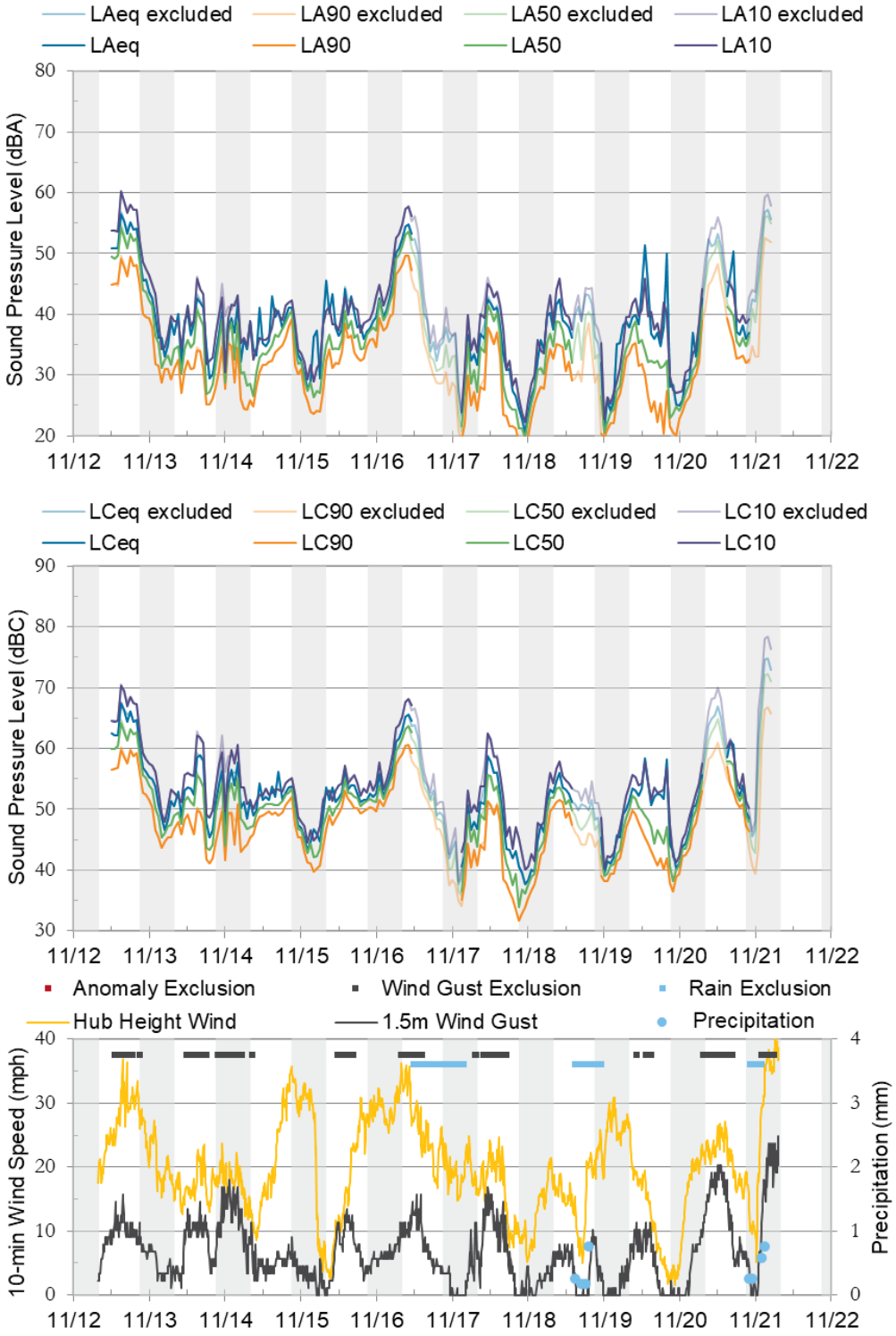

FIGURE 22: PRE-CONSTRUCTION MONITORING RESULTS AT MONITOR 3

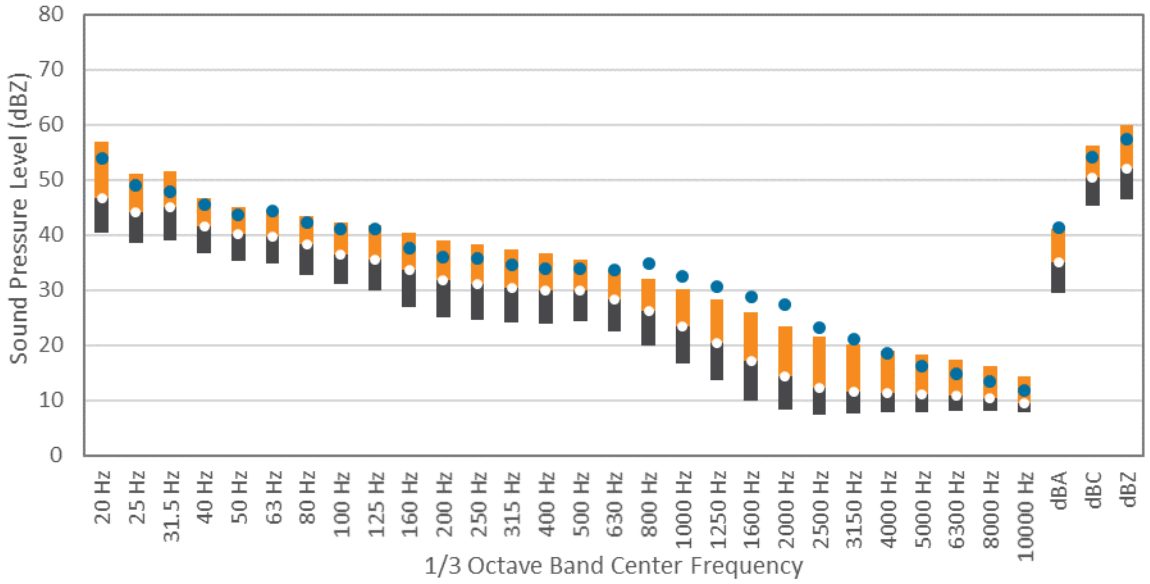

FIGURE 23: 1/3 OCTAVE BAND AND OVERALL STATISTICAL SOUND LEVELS AT MONITOR 3 (FOR PERIODS WITH 9 m/s WIND SPEED AT HUB HEIGHT)

Monitor 4

Results for Monitor 4 are presented in Figure 24. The primary noise sources at this location were occasional vehicle passbys, distant traffic, biogenic sounds, occasional aircraft overflights, local agricultural operations, and distant train passbys. The location generally exhibited a diurnal pattern, and had the highest number of exclusions due to wind speed. The quietest nighttime periods were between 25 and 30 dBA, and some higher nighttime periods were between 40 and 50 dBA. The highest nighttime hourly L_{50} at this site was 47 dBA. Over the entire monitoring period, the daytime L_{50} at this site was 40 dBA and the nighttime L_{50} was 36 dBA.

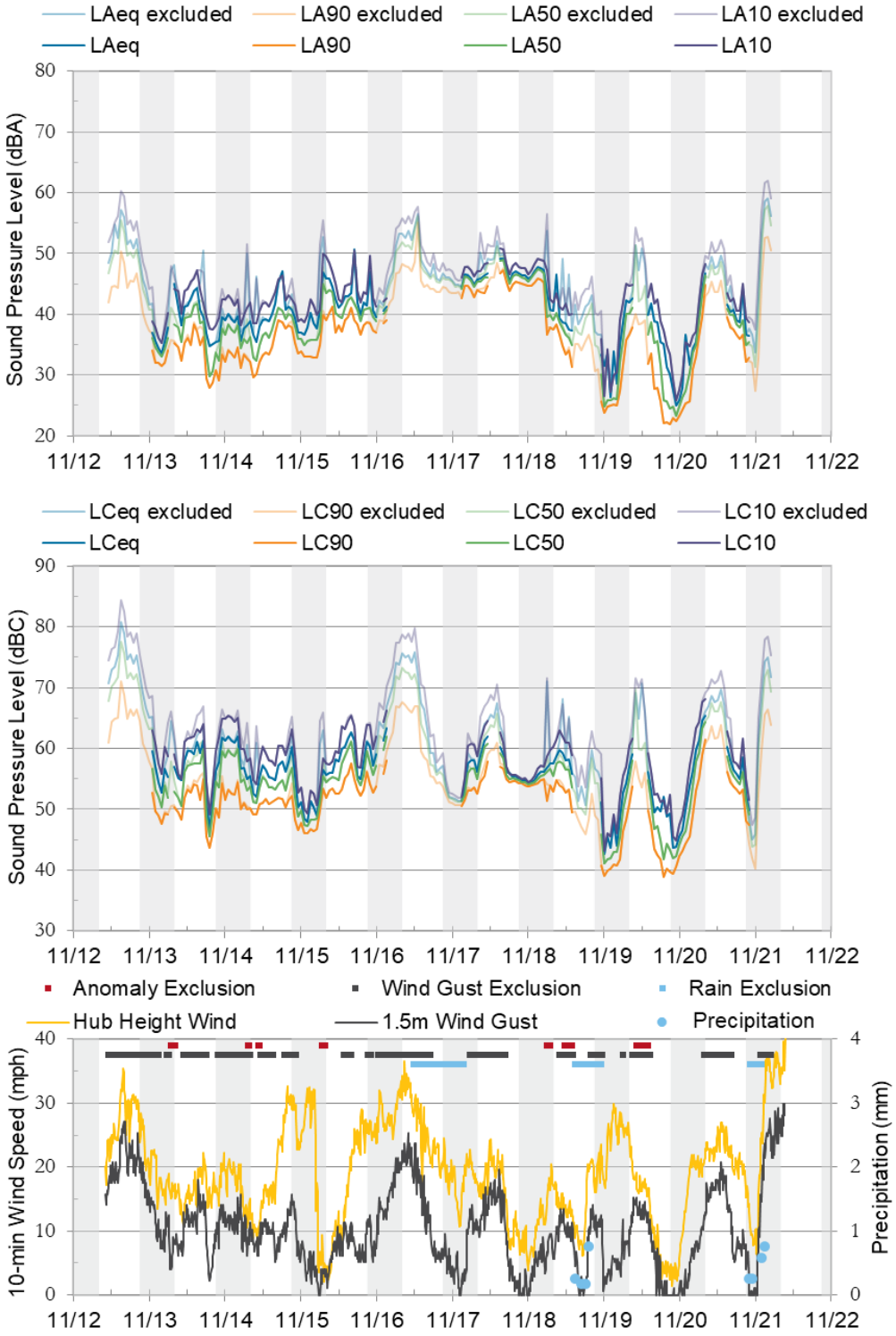

FIGURE 24: PRE-CONSTRUCTION MONITORING RESULTS AT MONITOR 4

Monitor 5

Results for Monitor 5 are presented in Figure 25. Monitor 5 was similar in soundscape to Monitor 4. The primary noise sources at this location were, distant traffic, biogenic sounds (primarily birds), distant mechanical equipment, occasional aircraft overflights, distant train passbys, and wind rustling through trees. The location generally exhibited a diurnal pattern. The quietest nighttime periods were between 25 and 30 dBA, and some higher nighttime periods were between 40 and 50 dBA. The highest nighttime hourly L_{50} at this site was 44 dBA. Over the entire monitoring period, the daytime L_{50} at this site was 39 dBA and the nighttime L_{50} was 36 dBA.

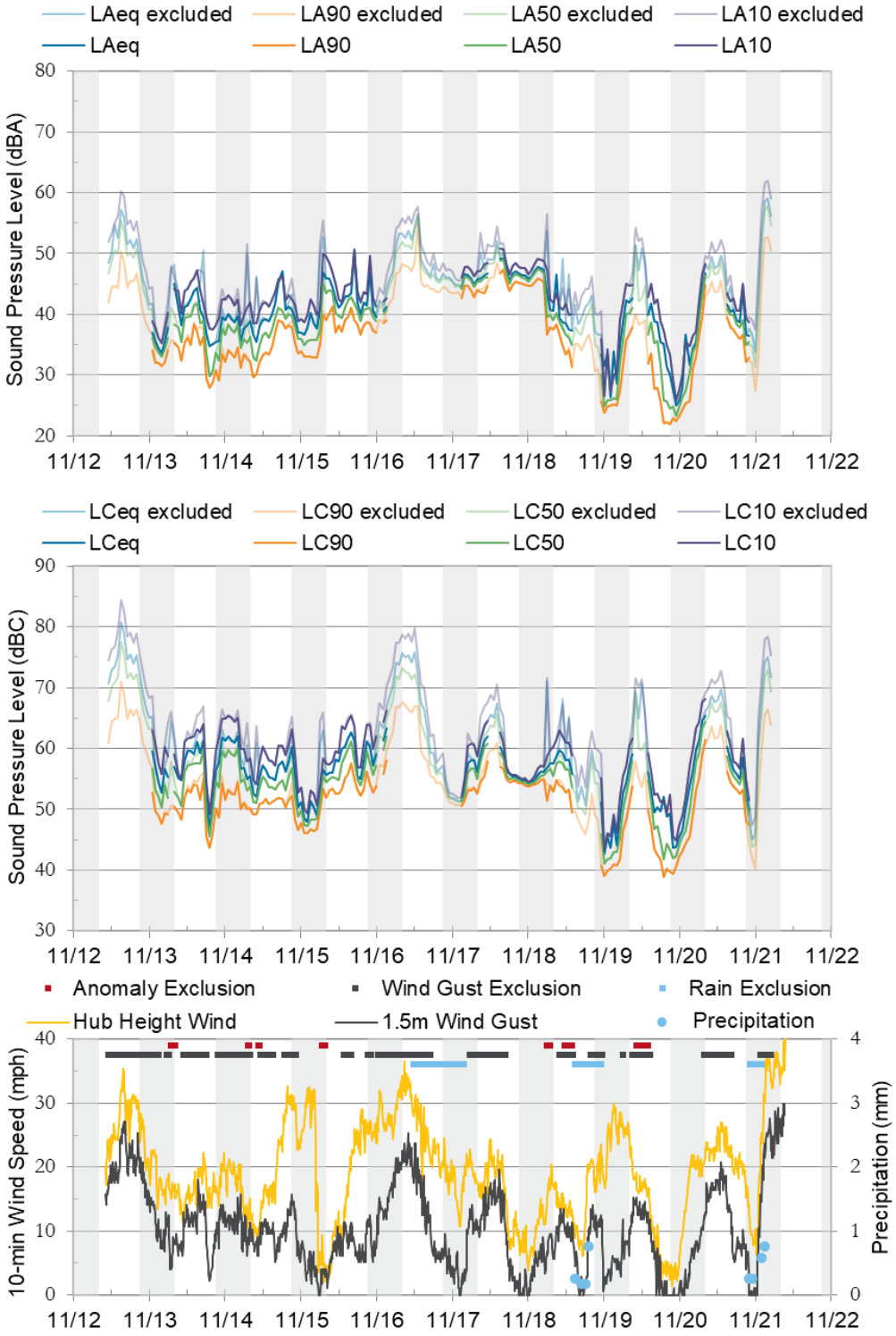

FIGURE 25: PRE-CONSTRUCTION MONITORING RESULTS AT MONITOR 5

Offsite Monitor

Results for the offsite monitor are presented in Figure 26. The primary noise sources at this location were distant traffic, biogenic sounds, occasional vehicle passbys, occasional aircraft overflights, local agricultural operations, distant train horn, and wind rustling through trees. The location generally exhibited a diurnal pattern, and sound levels were more similar to Monitors 1 through 3 than Monitors 4 and 5. The quietest nighttime periods were around 25 dBA, and some higher nighttime periods were between 40 and 45 dBA. Over the entire monitoring period, the daytime L_{50} at this site was 36 dBA and the nighttime L_{50} was 33 dBA.

Statistical spectral levels for a representative wind speed (9 m/s) at a representative hub height (109 meters) are presented in Figure 27.

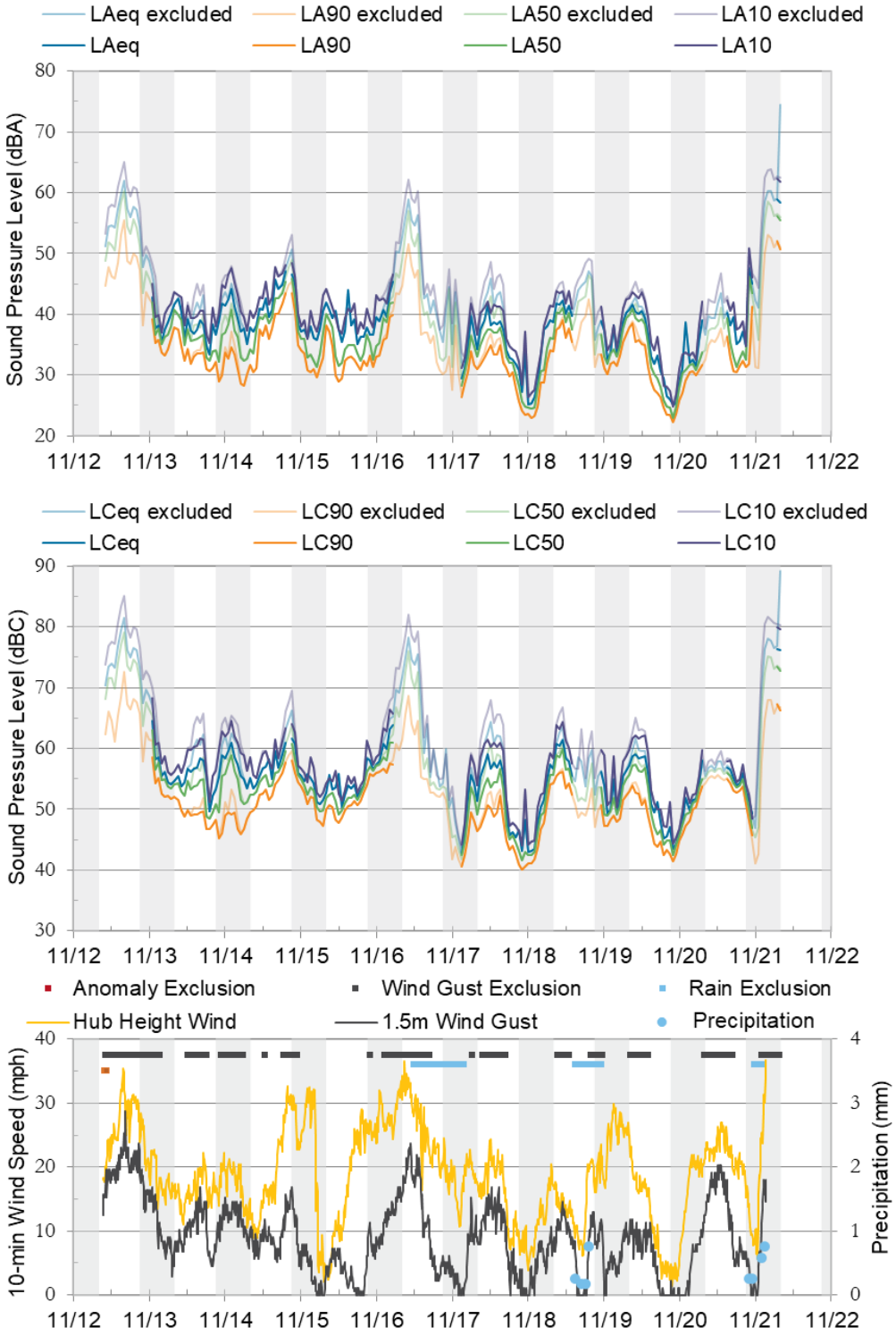

FIGURE 26: PRE-CONSTRUCTION MONITORING RESULTS AT THE OFFSITE MONITOR

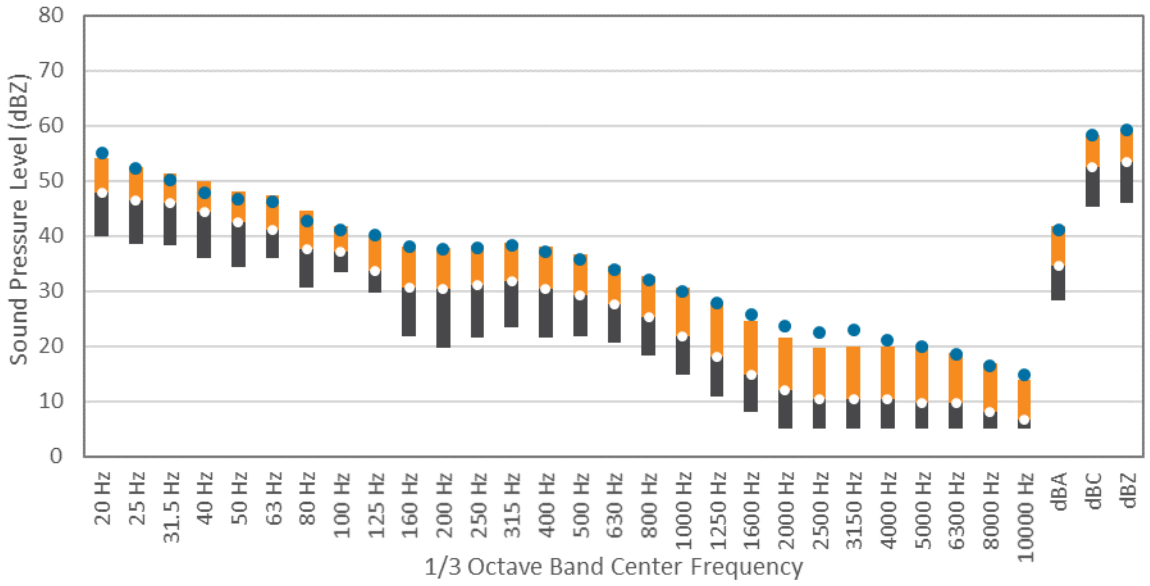

FIGURE 27: 1/3 OCTAVE BAND AND OVERALL STATISTICAL SOUND LEVELS AT THE OFFSITE MONITOR (FOR PERIODS WITH 9 m/s WIND SPEED AT HUB HEIGHT)

6.0 SOUND PROPAGATION MODELING

6.1 MODELING PROCEDURES

Modeling for the Project was in accordance with the standard ISO 9613-2, "Acoustics – Attenuation of sound during propagation outdoors, Part 2: General Method of Calculation." The ISO standard states,

> This part of ISO 9613 specifies an engineering method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous A-weighted sound pressure level … under meteorological conditions favorable to propagation from sources of known sound emissions. These conditions are for downwind propagation … or, equivalently, propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs at night.

The model takes into account source sound power levels, surface reflection and absorption, atmospheric absorption, geometric divergence, meteorological conditions, walls, barriers, berms, and terrain. The acoustical modeling software used here was CadnaA, from Datakustik GmbH. CadnaA is a widely accepted acoustical propagation modeling tool, used by many noise control professionals in the United States and internationally.

ISO 9613-2 also assumes downwind sound propagation between every source and every receiver, consequently, all wind directions, including the prevailing wind directions, are taken into account.

Model input parameters are listed in Appendix B including the modeled sound power spectra for each turbine model.

For this analysis, we utilized a ground absorption factor of G=0.7, which is appropriate for comparing modeled results to the L50 metric used in the state standard, particularly when summing model results with the monitored L50 levels.[12] As is common practice, a 2-dB factor was added to the turbine sound power level to account for uncertainty.[13]

[12] Generally accepted wind turbine modeling procedure calls for a ground absorption factor of G = 0.5, with a 2 dB uncertainty factor added to the manufacturer's guaranteed levels, to predict a maximum $L_{eq(1\text{-}hr)}$. In this case, the Minnesota state limit utilizes an L_{50} metric instead of maximum $L_{eq\ (1\text{-}hr),}$ which means a ground factor of G=0.7 can be used. Based on data from the Massachusetts Study on Wind Turbine Acoustics (2016) by MassCEC, the L_{50} from wind turbines is typically 0.7 to 1.0 dB lower than the L_{eq}. Using a ground factor of G=0.7 instead of 0.5 lowers the sound level projection of the model by 0.7 dB, on average, and as such serves as an adjustment factor to shift from an L_{eq}-based model to an L_{50}-based model to adhere to the Minnesota L_{50} noise standard.

[13] Kaliski, et. al., Regulating and predicting wind turbine sound in the U.S., Inter-Noise 2018.

Residences were modeled as discrete receivers at a height of 4 meters (13 feet) above ground level.[14] A total of 969 residences were modeled throughout and around the Project area. The grid, represented in the results maps by sound pressure level contours, is also calculated at a height of 4 meters (13 feet). Use of a 4-meter receiver height in the model results in a conservative calculation of the expected sound levels at 1.5 meters (5 feet) which may be used for post-construction compliance monitoring. Modeling at a height of 4 meters is supported by post-construction monitoring at a number of projects,[13] and by the Institute of Acoustics' Good Practice Guide on Wind Turbine Noise (2013), "as it has the effect of reducing the potential oversensitivity of the calculation to the receiver region ground factor compared to lower receiver heights." The sound pressure level contours represent turbine-only sound levels.

A search distance up to 8,000 meters (5 miles) allows for the contributions of distant turbines to be considered at receivers. The contribution of distant turbines will depend on the geometry and geography of the Project.

The model included the 55 turbine locations for each turbine model, except for the Nordex N163 which only included 54 turbine locations. The Nordex N163 and GE 5.5-158 included mitigation in the form of Low-Noise Trailing Edge (LNTE) blades. No LNTE or STE[15] was used for the Vestas V162 wind turbine. No Noise Reduced Operating modes (NROs) were included in the model.

6.2 MODELING RESULTS

Overall A-weighted Model Results

A summary of the sound propagation model results is presented in Table 8. For each turbine model, results are presented as turbine-only sound levels from the sound propagation model and total sound levels. The latter is calculated by summing (logarithmically)[16] the modeled turbine-only sound levels with the average monitored nighttime background L_{50} across all monitor locations, which was 33 dBA.

The highest modeled turbine-only sound level (L_{50}) at a non-participating residence is 43 dBA for the V162 and the N163, and the average turbine-only L_{50} across all non-participating residences is 32 dBA. The highest modeled turbine-only sound level at a participating residence is 46 dBA for the V162 and N163, and the average turbine-only L_{50} across all participating residences is 37 to 39 dBA depending on which turbine model is selected. For all turbine

[14] Some other site permit applications (PUC Docket Nos. 17-307, 18-179, and 19-394, for example) have used receiver heights of 1.5 meters as opposed to 4 meters. However, using a receiver height of 4 meters is more conservative and results in a projected sound level that is 1.6 dB higher, on average, than the results modeled at a height of 1.5 meters.

[15] Serrated Trailing Edge

[16] $L_{p1,2} = 10 \times \log_{10}\left(10^{L_{p1}/10} + 10^{L_{p2}/10}\right)$

models, when added with the average monitored nighttime background L_{50} across all monitor locations, 33 dBA in Table 5, the total sound level is less than the 50 dBA noise standard.

Maps of model results for each turbine model are shown in Figures 28 through 30. Results are presented as contour lines representing 5-dB increments of calculated A-weighted sound pressure levels. Appendix C provides a list of the calculated sound pressure levels at each receiver in tabular format and a map showing all receiver identification numbers for reference in the appendix table.

TABLE 8: MODEL RESULTS SUMMARY

TURBINE MODEL	SOUND SOURCE	STATISTICAL L_{50} METRIC[17]	RESIDENCE CLASSIFICATION		
			ALL RESIDENCES	PARTICIPATING	NON-PARTICIPATING
V162	Turbine-Only	Avg	32	39	32
		Max	46	46	43
		Min	19	24	19
	Total Sound (Background + Turbine)	Avg	36	40	35
		Max	46	46	44
		Min	33	34	33
GE 5.5-158 LNTE	Turbine-Only	Avg	31	37	32
		Max	45	45	42
		Min	18	23	18
	Total Sound (Background + Turbine)	Avg	35	39	35
		Max	45	45	42
		Min	33	33	33
N163 LNTE	Turbine-Only	Avg	32	38	32
		Max	46	46	43
		Min	19	23	19
	Total Sound (Background + Turbine)	Avg	36	39	35
		Max	46	46	44
		Min	33	33	33

[17] The average L_{50} across all residences is provided as a simple means of compare the overall potential impact across the project area between the different turbine models being considered. The maximum L_{50} represents the worst-case receptors. The minimum L_{50} represents the receptor with the least projected wind turbine sound.

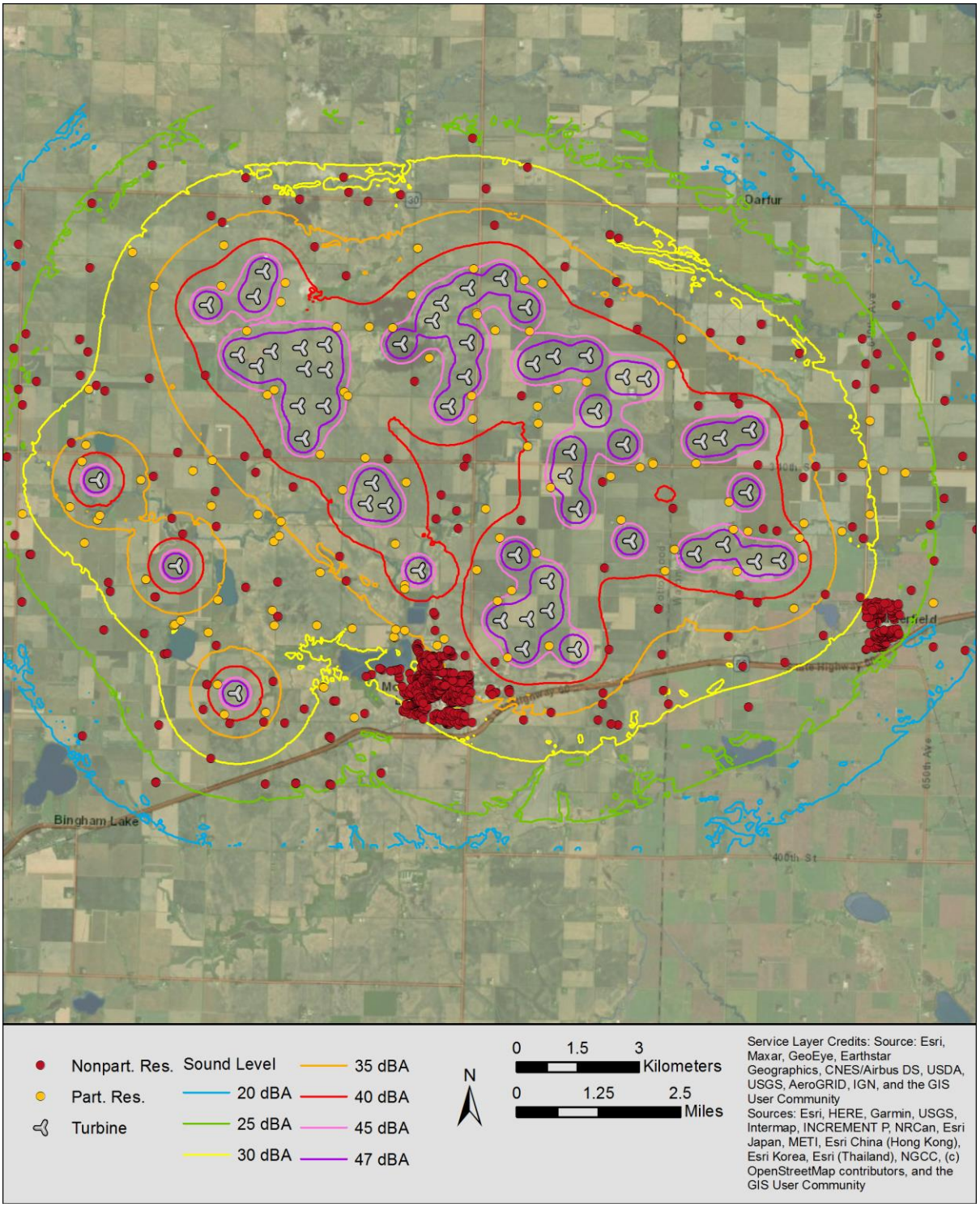

FIGURE 28: SOUND PROPAGATION MODEL RESULTS (TURBINE-ONLY SOUND LEVEL, L_{50}) VESTAS V162

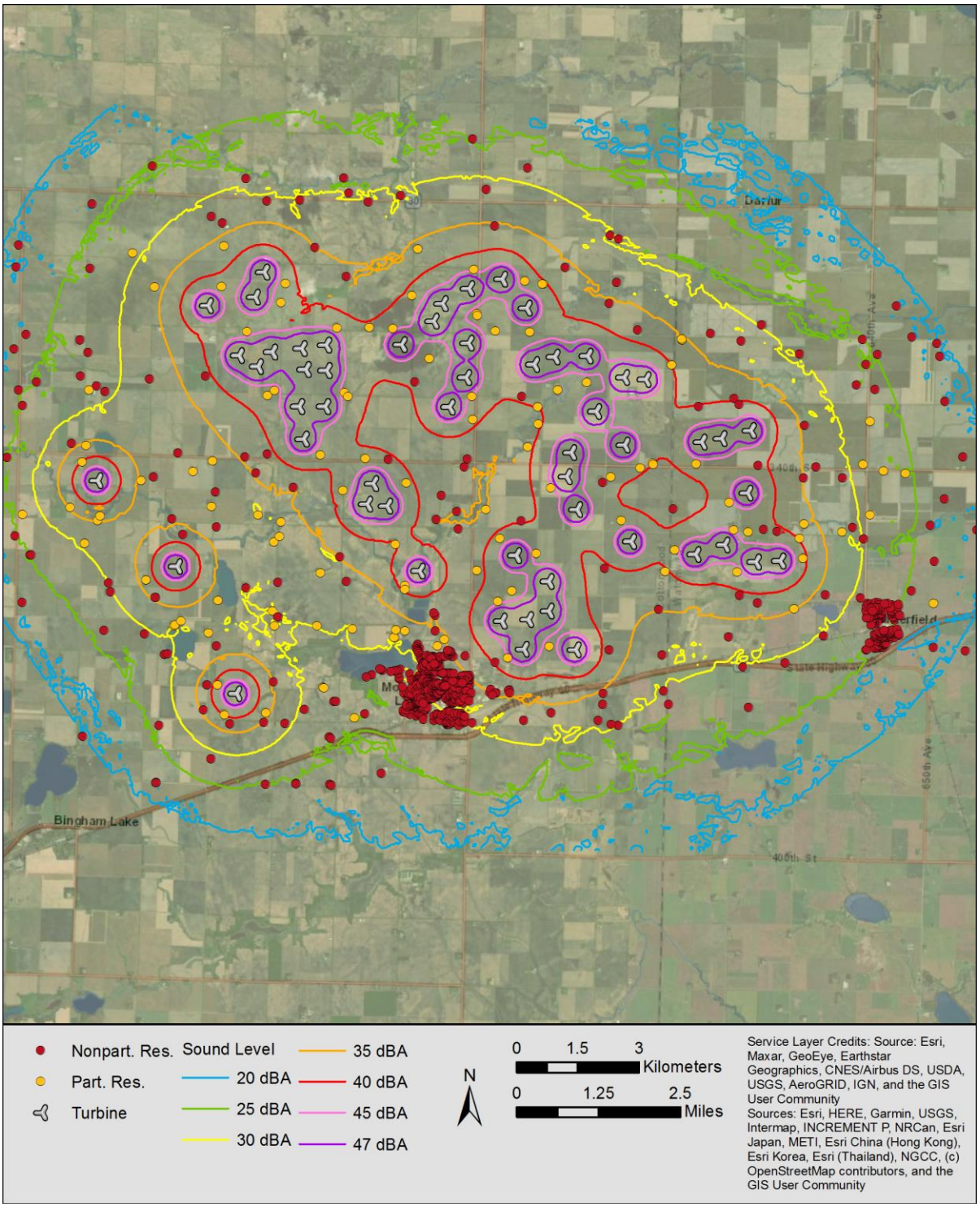

FIGURE 29: SOUND PROPAGATION MODEL RESULTS (TURBINE-ONLY SOUND LEVEL, L_{50}) GE 5.5-158 LNTE

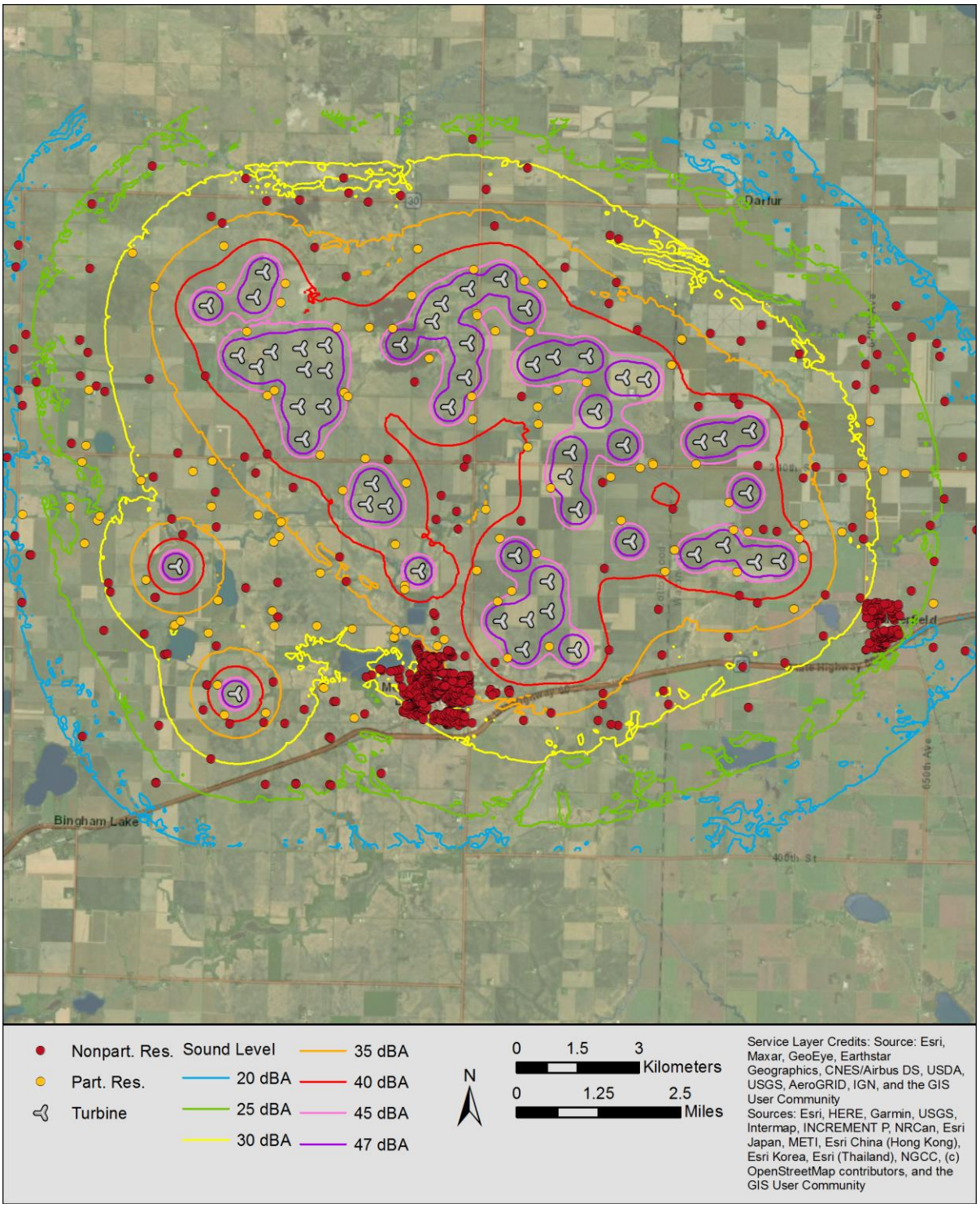

FIGURE 30: SOUND PROPAGATION MODEL RESULTS (TURBINE-ONLY SOUND LEVEL, L_{50}) NORDEX N163 LNTE

Model Results Added to Background L_{50}

If the state noise regulations are applied to the total sound level, that is background sound plus turbine sound, then the model results must be summed (logarithmically)[16] with the monitored background sound levels (L_{50}) to determine the projected cumulative sound level that could occur when the Project is operating. Background sound levels vary geospatially and temporally as do sound emission from the proposed project. As an example, and an indication of the probability of compliance should state noise regulations apply to the total level, the background monitor results from each monitor are summed with the turbine-only model results for each monitor location. This analysis is presented in Table 9 for each monitor location. As shown in the Table, the model results summed with the overall[18] nighttime L_{50} for each background monitor location are less than the 50 dBA noise standard.

TABLE 9: MODEL RESULTS SUMMED WITH MONITORED BACKGROUND SOUND LEVELS (L_{50}, dBA)

Scenario	Metric	Monitor Location				
		Monitor 1	Monitor 2	Monitor 3	Monitor 4	Monitor 5
Background Monitor Results	Overall Nighttime L_{50}	32	31	31	36	36
	Maximum 1-hr Nighttime L_{50}	60	58	49	47	44
	Minimum 1-hr Nighttime L_{50}	21	20	20	23	28
V162	Modeled Sound Level	40	43	43	43	25
	Summed with Overall Nighttime	41	44	44	44	37
GE 5.5-158 LNTE	Modeled Sound Level	39	43	43	42	24
	Summed with Overall Nighttime	40	43	43	43	37
N163 LNTE	Modeled Sound Level	41	44	44	43	26
	Summed with Overall Nighttime	41	44	44	44	37

The background L_{50} does and will vary from hour to hour, as shown in the monitor results in Section 5.0. The average overall nighttime L_{50} across all the monitor sites was 33 dBA, but there were some nighttime hours during the monitoring period when the L_{50} was above 40 dBA and as high as 60 dBA. As noted in Section 5.3, the were only a few hours at Monitors 1 and 2 when the nighttime hourly L_{50} exceeded 50 dBA, and this was due to nearby agricultural operations on one night for each monitor. Thus, in Appendix C, the model results are summed with a range of potential background L_{50} values ranging from 35 dBA to 50 dBA in 5 dB increments.

[18] The overall nighttime L_{50} is the median sound level for all nighttime periods monitored. The hourly L_{50} will vary from hour to hour, the range of which is represented by the minimum and maximum 1-hour nighttime L_{50}.

7.0 CONCLUSION

The Big Bend Wind Project is a proposed wind power generation facility in Cottonwood and Watonwan Counties, Minnesota. The facility will include up to 55 wind turbines with a total capacity of up to 314 MW. For SPA, RSG performed a noise assessment of the Project based on the preliminary turbine layout including all turbine locations and three turbine models under consideration.

Conclusions of the assessment are as follows:

1. Background sound levels vary around the Project site, but are slightly higher at night in the southern portion of the project area that is closer to MN-60 and the parallel rail line. The overall daytime L_{50} ranged from 36 dBA at Monitors 1 and 3 to 40 dBA at Monitors 2 and 4. The overall nighttime L_{50} ranged from 31 dBA at Monitors 2 and 3 to 36 dBA at Monitors 4 and 5.
2. Minimum 1-hour nighttime L_{50}s were between 20 and 28 dBA across the Project area, while maximum 1-hour nighttime L_{50}s were between 44 and 60 dBA. The only nighttime 1-hour L_{50}s above 50 dBA were due to nearby agricultural operations that occurred for a few hours, and hourly sound levels above 50 dBA were not a regular occurrence during the monitoring period.
3. State noise regulations require that wind power generation facilities show compliance with a nighttime limit of 50 dBA (L_{50}) and a daytime limit of 60 dBA (L_{50}) at residences.
4. Sound propagation modeling was performed in accordance with ISO 9613-2 at 969 discrete receivers modeled at a height of 4 meters above grade, with spectral ground attenuation and a ground factor of G=0.7. These modeling parameters are meant to represent the highest hourly L_{50} of the proposed facility.
5. Modeling was completed for three turbine models under consideration, the Vestas V162, the GE 5.5-158 LNTE, and the Nordex N163 LNTE. The modeled sound power level for each turbine model is provided in Appendix B.
6. Projected sound levels from the Project are less than 47 dBA at all residences. The highest projected turbine-only sound level (L_{50}) at a participating residence is 46 dBA, and the highest projected turbine-only sound level (L_{50}) at a non-participating residence is 43 dBA. The average sound level (L_{50}) across all modeled residences is 31 to 32 dBA depending on the turbine model.
7. When added to the overall nighttime L_{50} from monitored locations, sound levels remain below 50 dBA, but the background L_{50} does and will vary from hour to hour, as shown in the monitoring results. With turbine-only sound levels less than 47 dBA, and existing

background sound levels (nighttime 1-hour L50s) typically less than 50 dBA, the Project is not expected to exceed the noise regulations on a turbine-only basis, nor significantly contribute to sound levels in excess of 50 dBA.

APPENDIX A. ACOUSTICS PRIMER

Expressing Sound in Decibel Levels

The varying air pressure that constitutes sound can be characterized in many different ways. The human ear is the basis for the metrics that are used in acoustics. Normal human hearing is sensitive to sound fluctuations over an enormous range of pressures, from about 20 micropascals (the "threshold of audibility") to about 20 pascals (the "threshold of pain").[19] This factor of one million in sound pressure difference is challenging to convey in engineering units. Instead, sound pressure is converted to sound "levels" in units of "decibels" (dB, named after Alexander Graham Bell). Once a measured sound is converted to dB, it is denoted as a level with the letter "L".

The conversion from sound pressure in pascals to sound level in dB is a four-step process. First, the sound wave's measured amplitude is squared and the mean is taken. Second, a ratio is taken between the mean square sound pressure and the square of the threshold of audibility (20 micropascals). Third, using the logarithm function, the ratio is converted to factors of 10. The final result is multiplied by 10 to give the decibel level. By this decibel scale, sound levels range from 0 dB at the threshold of audibility to 120 dB at the threshold of pain.

Typical sound sources, and their sound pressure levels, are listed on the scale in Figure 31.

Human Response to Sound Levels: Apparent Loudness

For every 20 dB increase in sound level, the sound pressure increases by a *factor* of 10; the sound *level* range from 0 dB to 120 dB covers 6 factors of 10, or one million, in sound *pressure*. However, for an increase of 10 dB in sound *level* as measured by a meter, humans perceive an approximate doubling of apparent loudness: to the human ear, a sound level of 70 dB sounds about "twice as loud" as a sound level of 60 dB. Smaller changes in sound level, less than 3 dB up or down, are generally not perceptible.

[19] The pascal is a measure of pressure in the metric system. In Imperial units, they are themselves very small: one pascal is only 145 millionths of a pound per square inch (psi). The sound pressure at the threshold of audibility is only 3 one-billionths of one psi: at the threshold of pain, it is about 3 one-thousandths of one psi.

FIGURE 31: A SCALE OF SOUND PRESSURE LEVELS FOR TYPICAL SOUND SOURCES

Frequency Spectrum of Sound

The “frequency” of a sound is the rate at which it fluctuates in time, expressed in Hertz (Hz), or cycles per second. Very few sounds occur at only one frequency: most sound contains energy at many different frequencies, and it can be broken down into different frequency divisions, or bands. These bands are similar to musical pitches, from low tones to high tones. The most common division is the standard octave band. An octave is the range of frequencies whose upper frequency limit is twice its lower frequency limit, exactly like an octave in music. An octave band is identified by its center frequency: each successive band’s center frequency is twice as high (one octave) as the previous band. For example, the 500 Hz octave band includes all sound whose frequencies range between 354 Hz (Hertz, or cycles per second) and 707 Hz. The next band is centered at 1,000 Hz with a range between 707 Hz and 1,414 Hz. The range of human hearing is divided into 10 standard octave bands: 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1,000 Hz, 2,000 Hz, 4,000 Hz, 8,000 Hz, and 16,000 Hz. For analyses that require finer frequency detail, each octave-band can be subdivided. A commonly-used subdivision creates three smaller bands within each octave band, or so-called 1/3-octave bands.

Human Response to Frequency: Weighting of Sound Levels

The human ear is not equally sensitive to sounds of all frequencies. Sounds at some frequencies seem louder than others, despite having the same decibel level as measured by a sound level meter. In particular, human hearing is much more sensitive to medium pitches (from about 500 Hz to about 4,000 Hz) than to very low or very high pitches. For example, a tone measuring 80 dB at 500 Hz (a medium pitch) sounds quite a bit louder than a tone measuring 80 dB at 60 Hz (a very low pitch). The frequency response of normal human hearing ranges from 20 Hz to 20,000 Hz. Below 20 Hz, sound pressure fluctuations are not “heard”, but sometimes can be “felt”. This is known as “infrasound”. Likewise, above 20,000 Hz, sound can no longer be heard by humans; this is known as “ultrasound”. As humans age, they tend to lose the ability to hear higher frequencies first; many adults do not hear very well above about 16,000 Hz. Most natural and man-made sound occurs in the range from about 40 Hz to about 4,000 Hz. Some insects and birdsongs reach to about 8,000 Hz.

To adjust measured sound pressure levels so that they mimic human hearing response, sound level meters apply filters, known as “frequency weightings”, to the signals. There are several defined weighting scales, including “A”, “B”, “C”, “D”, “G”, and “Z”. The most common weighting scale used in environmental noise analysis and regulation is A-weighting. This weighting represents the sensitivity of the human ear to sounds of low to moderate level. It attenuates sounds with frequencies below 1000 Hz and above 4000 Hz; it amplifies very slightly sounds between 1000 Hz and 4000 Hz, where the human ear is particularly sensitive. The C-weighting scale is sometimes used to describe louder sounds. The B- and D- scales are seldom used. All of these frequency weighting scales are normalized to the average human hearing response at

1000 Hz: at this frequency, the filters neither attenuate nor amplify. When a reported sound level has been filtered using a frequency weighting, the letter is appended to “dB”. For example, sound with A-weighting is usually denoted “dBA”. When no filtering is applied, the level is denoted “dB” or “dBZ”. The letter is also appended as a subscript to the level indicator “L”, for example “L_A” for A-weighted levels.

Time Response of Sound Level Meters

Because sound levels can vary greatly from one moment to the next, the time over which sound is measured can influence the value of the levels reported. Often, sound is measured in real time, as it fluctuates. In this case, acousticians apply a so-called “time response” to the sound level meter, and this time response is often part of regulations for measuring sound. If the sound level is varying slowly, over a few seconds, “Slow” time response is applied, with a time constant of one second. If the sound level is varying quickly (for example, if brief events are mixed into the overall sound), “Fast” time response can be applied, with a time constant of one-eighth of a second.[20] The time response setting for a sound level measurement is indicated with the subscript “S” for Slow and “F” for Fast: L_S or L_F. A sound level meter set to Fast time response will indicate higher sound levels than one set to Slow time response when brief events are mixed into the overall sound, because it can respond more quickly.

In some cases, the maximum sound level that can be generated by a source is of concern. Likewise, the minimum sound level occurring during a monitoring period may be required. To measure these, the sound level meter can be set to capture and hold the highest and lowest levels measured during a given monitoring period. This is represented by the subscript “max”, denoted as “L_{max}”. One can define a “max” level with Fast response L_{Fmax} (1/8-second time constant), Slow time response L_{Smax} (1-second time constant), or Continuous Equivalent level over a specified time period $L_{eq\text{-}max}$.

Accounting for Changes in Sound Over Time

A sound level meter’s time response settings are useful for continuous monitoring. However, they are less useful in summarizing sound levels over longer periods. To do so, acousticians apply simple statistics to the measured sound levels, resulting in a set of defined types of sound level related to averages over time. An example is shown in Figure 32. The sound level at each instant of time is the grey trace going from left to right. Over the total time it was measured (1 hour in the figure), the sound energy spends certain fractions of time near various levels, ranging from the minimum (about 27 dB in the figure) to the maximum (about 65 dB in the figure). The simplest descriptor is the average sound level, known as the Equivalent Continuous

[20] There is a third time response defined by standards, the “Impulse” response. This response was defined to enable use of older, analog meters when measuring very brief sounds; it is no longer in common use.

Sound Level. Statistical levels are used to determine for what percentage of time the sound is louder than any given level. These levels are described in the following sections.

Equivalent Continuous Sound Level - L_{eq}

One straightforward, common way of describing sound levels is in terms of the Continuous Equivalent Sound Level, or L_{eq}. The L_{eq} is the average sound pressure level over a defined period of time, such as one hour or one day. L_{eq} is the most commonly used descriptor in noise standards and regulations. L_{eq} is representative of the overall sound to which a person is exposed. Because of the logarithmic calculation of decibels, L_{eq} tends to favor higher sound levels: loud and infrequent sources have a larger impact on the resulting average sound level than quieter but more frequent sounds. For example, in Figure 32, even though the sound levels spends most of the time near about 34 dBA, the L_{eq} is 41 dBA, having been "inflated" by the maximum level of 65 dBA and other occasional spikes over the course of the hour.

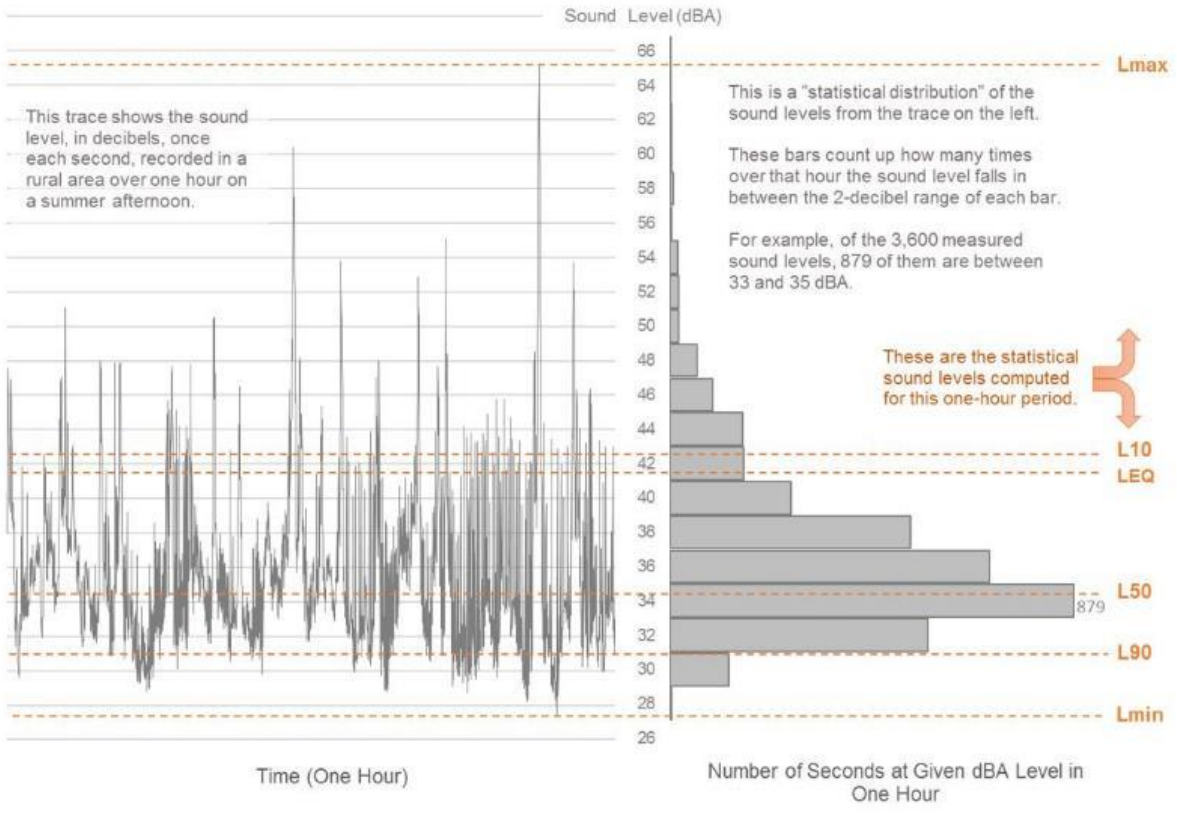

FIGURE 32: EXAMPLE OF DESCRIPTIVE TERMS OF SOUND MEASUREMENT OVER TIME

Percentile Sound Levels – L_n

Percentile sound levels describe the statistical distribution of sound levels over time. "L_N" is the level above which the sound spends "N" percent of the time. For example, L_{90} (sometimes called the "residual base level") is the sound level exceeded 90% of the time: the sound is louder than L_{90} most of the time. L_{10} is the sound level that is exceeded only 10% of the time. L_{50} (the "median level") is exceeded 50% of the time: half of the time the sound is louder than L_{50}, and half the time it is quieter than L_{50}. Note that L_{50} (median) and L_{eq} (pressure mean) are not always the same, for reasons described in the previous section.

L_{90} is often a good representation of the "ambient sound" in an area. This is the sound that persists for longer periods, and below which the overall sound level seldom falls. It tends to filter out other short-term environmental sounds that aren't part of the source being investigated. L_{10} represents the higher, but less frequent, sound levels. These could include such events as barking dogs, vehicles driving by and aircraft flying overhead, gusts of wind, and work operations. L_{90} represents the background sound that is present when these event sounds are excluded.

Note that if one sound source is very constant and dominates the soundscape in an area, all of the descriptive sound levels mentioned here tend toward the same value. It is when the sound is varying widely from one moment to the next that the statistical descriptors are useful.

NONPUBLIC DATA BEGINS...

APPENDIX B. MODEL INPUT DATA

TABLE 10: SOUND PROPAGATION MODELING PARAMETERS

PARAMETER	SETTING
Ground Absorption	Spectral for all sources, mixed ground (G=0.7)
Atmospheric Attenuation	Based on 10˚ Celsius, 70% relative humidity
Structure Reflections	None
Receiver Height	4 meters for residences, 1.5 meters for grid
Search Distance	8,000 meters

TABLE 11: TURBINE HUB HEIGHT AND 1/1 OCTAVE BAND MODELED SPECTRA (dBZ UNLESS OTHERWISE INDICATED)

SOUND SOURCE	HUB HEIGHT	1/1 OCTAVE BAND CENTER FREQUENCY (HZ)									SUM (dBA)	SUM (dBZ)
		31.5	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*		
V162	119 m	[redacted]										
GE 5.5-158 LNTE	107.4 m	[redacted]										
N163 LNTE	108 m	[redacted]										

TABLE 12: MODELED TURBINE SOUND POWER LEVELS & LOCATIONS[21]

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T01	V162	[redacted]	119	340884	4877490	519
T02	V162		119	346729	4877323	483
T03	V162		119	345911	4877089	482
T04	V162		119	340652	4876880	521
T06	V162		119	339499	4876669	515
T07	V162		119	347323	4876612	485
T08	V162		119	345042	4876283	488
T09	V162		119	345902	4875742	489
T10	V162		119	344251	4875707	495
T11	V162		119	342407	4875698	511
T12	V162		119	341804	4875616	517
T13	V162		119	341076	4875529	517
T14	V162		119	340260	4875437	516
T15	V162		119	348824	4875427	490

[21] A map showing the location of the turbines by Turbine ID is provided in Figure 33 after this Table.

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T16	V162		119	348019	4875399	488
T17	V162		119	347510	4875217	487
T18	V162		119	340721	4875176	517
T19	V162		119	341896	4875093	517
T20	V162		119	342413	4875069	517
T21	V162		119	345845	4874903	494
T24	V162		119	341742	4874189	516
T25	V162		119	342374	4874188	516
T26	V162		119	345435	4874178	501
T28	V162		119	352840	4873598	484
T29	V162		119	352114	4873403	488
T31	V162		119	351627	4873321	491
T32	V162		119	349730	4873238	489
T33	V162		119	348416	4873059	491
T34	V162		119	348311	4872464	493
T35	V162		119	336778	4872370	531
T36	V162		119	343556	4872299	515
T38	V162		119	352749	4872064	484
T39	V162		119	343408	4871791	514
T40	V162		119	343898	4871740	514
T41	V162		119	348563	4871655	498
T42	V162		119	349886	4870868	495
T43	V162		119	352182	4870785	483
T44	V162		119	351475	4870558	490
T45	V162		119	347063	4870534	507
T46	V162		119	353567	4870395	483
T47	V162		119	352962	4870375	486
T48	V162		119	338731	4870263	528
T49	V162		119	344694	4870149	510
T50	V162		119	347864	4869894	504
T51	V162		119	347861	4869165	508
T53	V162		119	346710	4868925	511
T54	V162		119	347246	4868232	509
T55	V162		119	348531	4868217	507

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T56	V162	[redacted]	119	340192	4867139	534
T05	V162		119	345267	4876719	484
T22	V162		119	349723	4874904	488
T23	V162		119	350250	4874850	490
T27	V162		119	349034	4874065	489
T30	V162		119	341852	4873393	517
T52	V162		119	347362	4868960	510
T01	GE 5.5-158 LNTE		107.4	340884	4877490	507
T02	GE 5.5-158 LNTE		107.4	346729	4877323	471
T03	GE 5.5-158 LNTE		107.4	345911	4877089	471
T04	GE 5.5-158 LNTE		107.4	340652	4876880	509
T06	GE 5.5-158 LNTE		107.4	339499	4876669	504
T07	GE 5.5-158 LNTE		107.4	347323	4876612	474
T08	GE 5.5-158 LNTE		107.4	345042	4876283	476
T09	GE 5.5-158 LNTE		107.4	345902	4875742	477
T10	GE 5.5-158 LNTE		107.4	344251	4875707	483
T11	GE 5.5-158 LNTE		107.4	342407	4875698	499
T12	GE 5.5-158 LNTE		107.4	341804	4875616	506
T13	GE 5.5-158 LNTE		107.4	341076	4875529	505
T14	GE 5.5-158 LNTE		107.4	340260	4875437	505
T15	GE 5.5-158 LNTE		107.4	348824	4875427	478
T16	GE 5.5-158 LNTE		107.4	348019	4875399	476
T17	GE 5.5-158 LNTE		107.4	347510	4875217	476
T18	GE 5.5-158 LNTE		107.4	340721	4875176	506

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T19	GE 5.5-158 LNTE	[redacted]	107.4	341896	4875093	505
T20	GE 5.5-158 LNTE		107.4	342413	4875069	506
T21	GE 5.5-158 LNTE		107.4	345845	4874903	482
T24	GE 5.5-158 LNTE		107.4	341742	4874189	505
T25	GE 5.5-158 LNTE		107.4	342374	4874188	505
T26	GE 5.5-158 LNTE		107.4	345435	4874178	490
T28	GE 5.5-158 LNTE		107.4	352840	4873598	473
T29	GE 5.5-158 LNTE		107.4	352114	4873403	476
T31	GE 5.5-158 LNTE		107.4	351627	4873321	479
T32	GE 5.5-158 LNTE		107.4	349730	4873238	477
T33	GE 5.5-158 LNTE		107.4	348416	4873059	479
T34	GE 5.5-158 LNTE		107.4	348311	4872464	481
T35	GE 5.5-158 LNTE		107.4	336778	4872370	520
T36	GE 5.5-158 LNTE		107.4	343556	4872299	503
T38	GE 5.5-158 LNTE		107.4	352749	4872064	472
T39	GE 5.5-158 LNTE		107.4	343408	4871791	503
T40	GE 5.5-158 LNTE		107.4	343898	4871740	502
T41	GE 5.5-158 LNTE		107.4	348563	4871655	486
T42	GE 5.5-158 LNTE		107.4	349886	4870868	483
T43	GE 5.5-158 LNTE		107.4	352182	4870785	471
T44	GE 5.5-158 LNTE		107.4	351475	4870558	479

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T45	GE 5.5-158 LNTE	[redacted]	107.4	347063	4870534	495
T46	GE 5.5-158 LNTE		107.4	353567	4870395	471
T47	GE 5.5-158 LNTE		107.4	352962	4870375	475
T48	GE 5.5-158 LNTE		107.4	338731	4870263	516
T49	GE 5.5-158 LNTE		107.4	344694	4870149	499
T50	GE 5.5-158 LNTE		107.4	347864	4869894	492
T51	GE 5.5-158 LNTE		107.4	347861	4869165	496
T53	GE 5.5-158 LNTE		107.4	346710	4868925	499
T54	GE 5.5-158 LNTE		107.4	347246	4868232	498
T55	GE 5.5-158 LNTE		107.4	348531	4868217	495
T56	GE 5.5-158 LNTE		107.4	340192	4867139	523
T05	GE 5.5-158 LNTE		107.4	345267	4876719	472
T22	GE 5.5-158 LNTE		107.4	349723	4874904	477
T23	GE 5.5-158 LNTE		107.4	350250	4874850	479
T27	GE 5.5-158 LNTE		107.4	349034	4874065	477
T30	GE 5.5-158 LNTE		107.4	341852	4873393	506
T52	GE 5.5-158 LNTE		107.4	347362	4868960	498
T01	N163 LNTE		108	340884	4877490	508
T02	N163 LNTE		108	346729	4877323	472
T03	N163 LNTE		108	345911	4877089	471
T04	N163 LNTE		108	340652	4876880	510
T06	N163 LNTE		108	339499	4876669	504
T07	N163 LNTE		108	347323	4876612	474
T08	N163 LNTE		108	345042	4876283	477

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T09	N163 LNTE	[redacted]	108	345902	4875742	478
T10	N163 LNTE		108	344251	4875707	484
T11	N163 LNTE		108	342407	4875698	500
T12	N163 LNTE		108	341804	4875616	506
T13	N163 LNTE		108	341076	4875529	506
T14	N163 LNTE		108	340260	4875437	505
T15	N163 LNTE		108	348824	4875427	479
T16	N163 LNTE		108	348019	4875399	477
T17	N163 LNTE		108	347510	4875217	476
T18	N163 LNTE		108	340721	4875176	506
T19	N163 LNTE		108	341896	4875093	506
T20	N163 LNTE		108	342413	4875069	506
T21	N163 LNTE		108	345845	4874903	483
T24	N163 LNTE		108	341742	4874189	505
T25	N163 LNTE		108	342374	4874188	505
T26	N163 LNTE		108	345435	4874178	490
T28	N163 LNTE		108	352840	4873598	473
T29	N163 LNTE		108	352114	4873403	477
T31	N163 LNTE		108	351627	4873321	480
T32	N163 LNTE		108	349730	4873238	478
T33	N163 LNTE		108	348416	4873059	480
T34	N163 LNTE		108	348311	4872464	482
T36	N163 LNTE		108	343556	4872299	504
T38	N163 LNTE		108	352749	4872064	473
T39	N163 LNTE		108	343408	4871791	503
T40	N163 LNTE		108	343898	4871740	503
T41	N163 LNTE		108	348563	4871655	487
T42	N163 LNTE		108	349886	4870868	484
T43	N163 LNTE		108	352182	4870785	472
T44	N163 LNTE		108	351475	4870558	479
T45	N163 LNTE		108	347063	4870534	496
T46	N163 LNTE		108	353567	4870395	472
T47	N163 LNTE		108	352962	4870375	475
T48	N163 LNTE		108	338731	4870263	517

TURBINE ID	TURBINE MODEL	MODELED SOUND POWER LEVEL (dBA)	HUB HEIGHT (M)	COORDINATES (UTM NAD 83 Z15N)		GROUND ELEVATION + HUB HEIGHT (m)
				X (m)	Y (m)	
T49	N163 LNTE	[redacted]	108	344694	4870149	499
T50	N163 LNTE		108	347864	4869894	493
T51	N163 LNTE		108	347861	4869165	497
T53	N163 LNTE		108	346710	4868925	500
T54	N163 LNTE		108	347246	4868232	498
T55	N163 LNTE		108	348531	4868217	496
T56	N163 LNTE		108	340192	4867139	523
T05	N163 LNTE		108	345267	4876719	473
T22	N163 LNTE		108	349723	4874904	477
T23	N163 LNTE		108	350250	4874850	479
T27	N163 LNTE		108	349034	4874065	478
T30	N163 LNTE		108	341852	4873393	506
T52	N163 LNTE		108	347362	4868960	499

...NONPUBLIC DATA ENDS

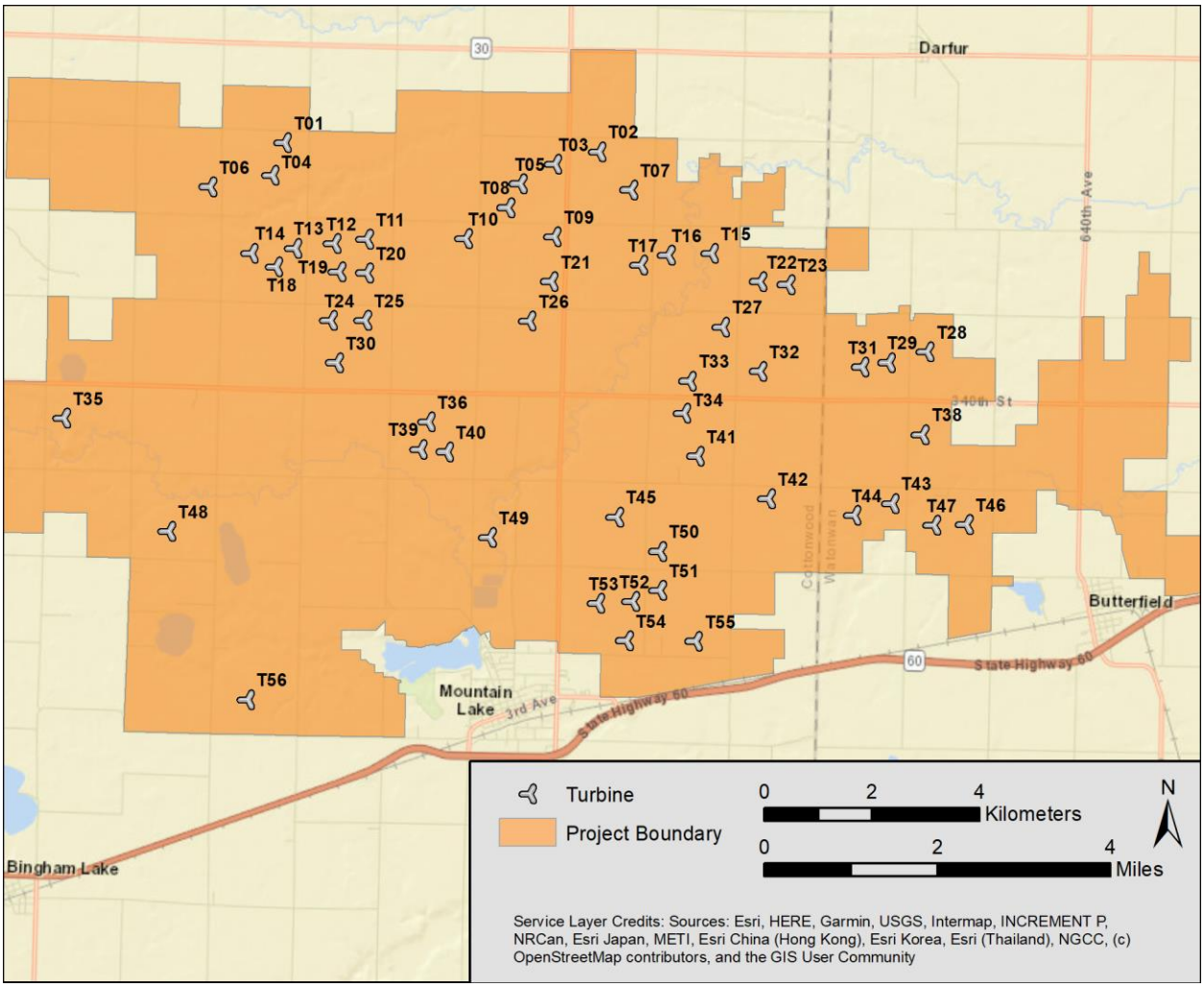

FIGURE 33: TURBINE ID MAP

APPENDIX C. RECEIVER INFORMATION

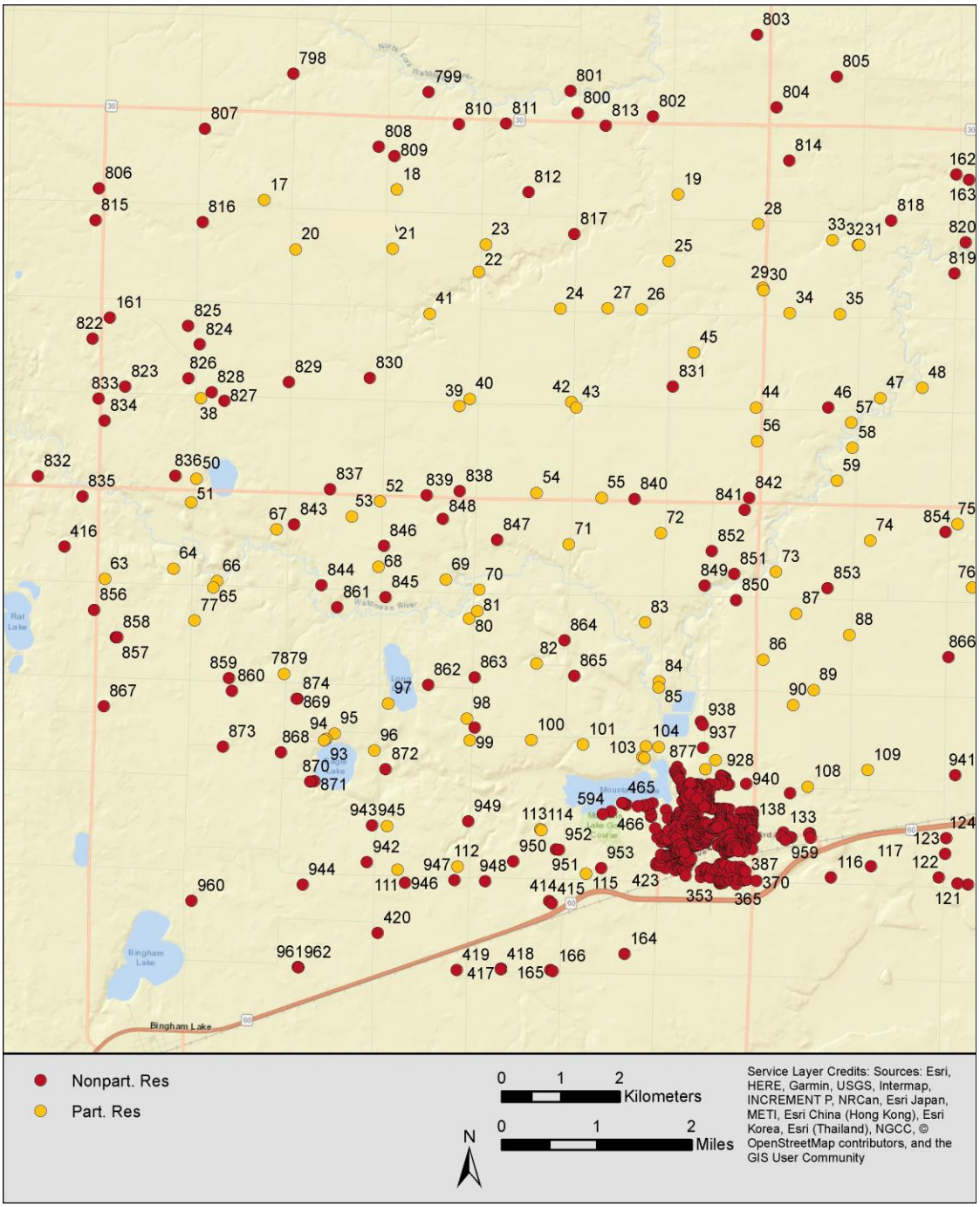

FIGURE 34: MAP OF MODELED RECEPTORS (WESTERN SECTION)

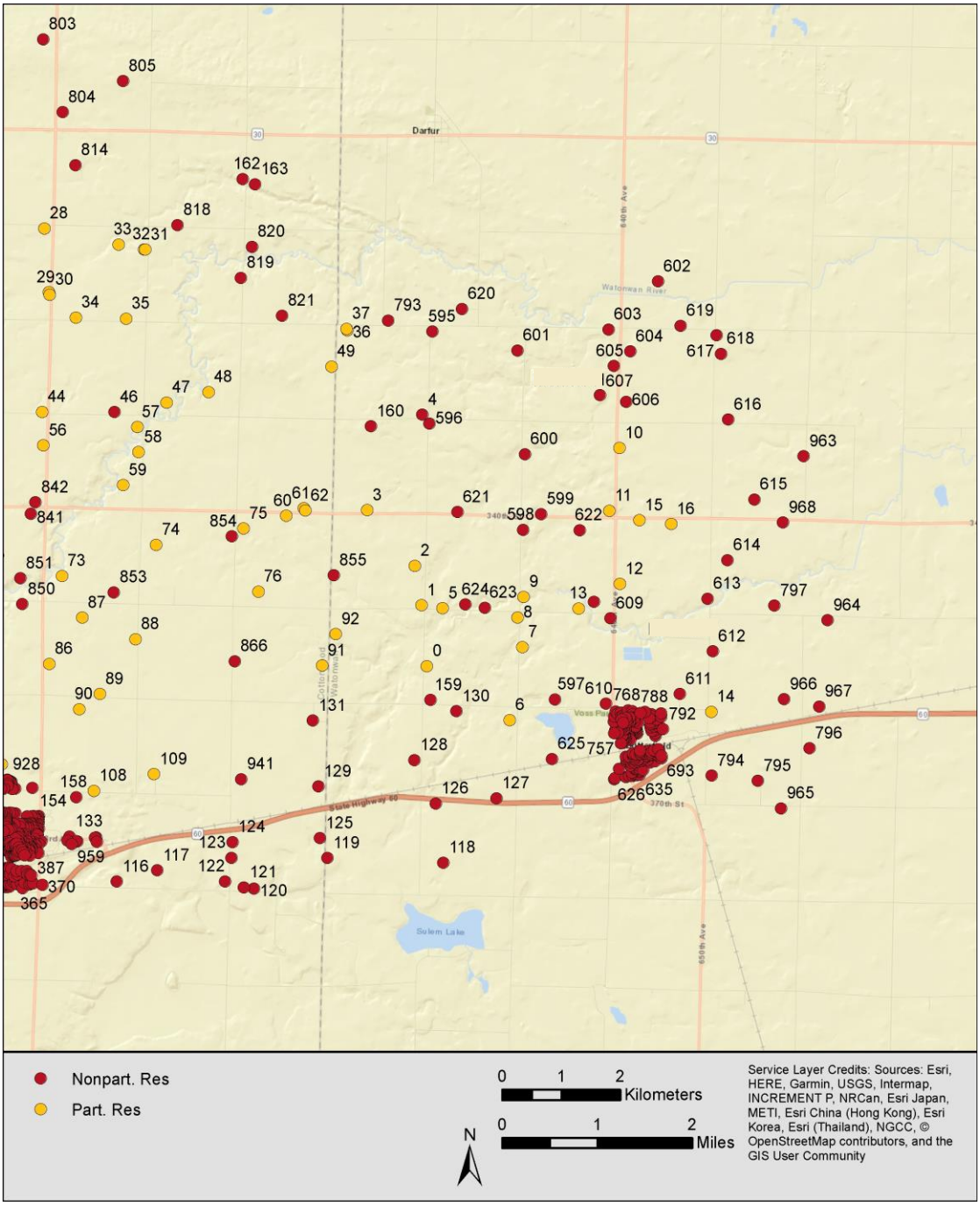

FIGURE 35: MAP OF MODELED RECEPTORS (EASTER SECTION)

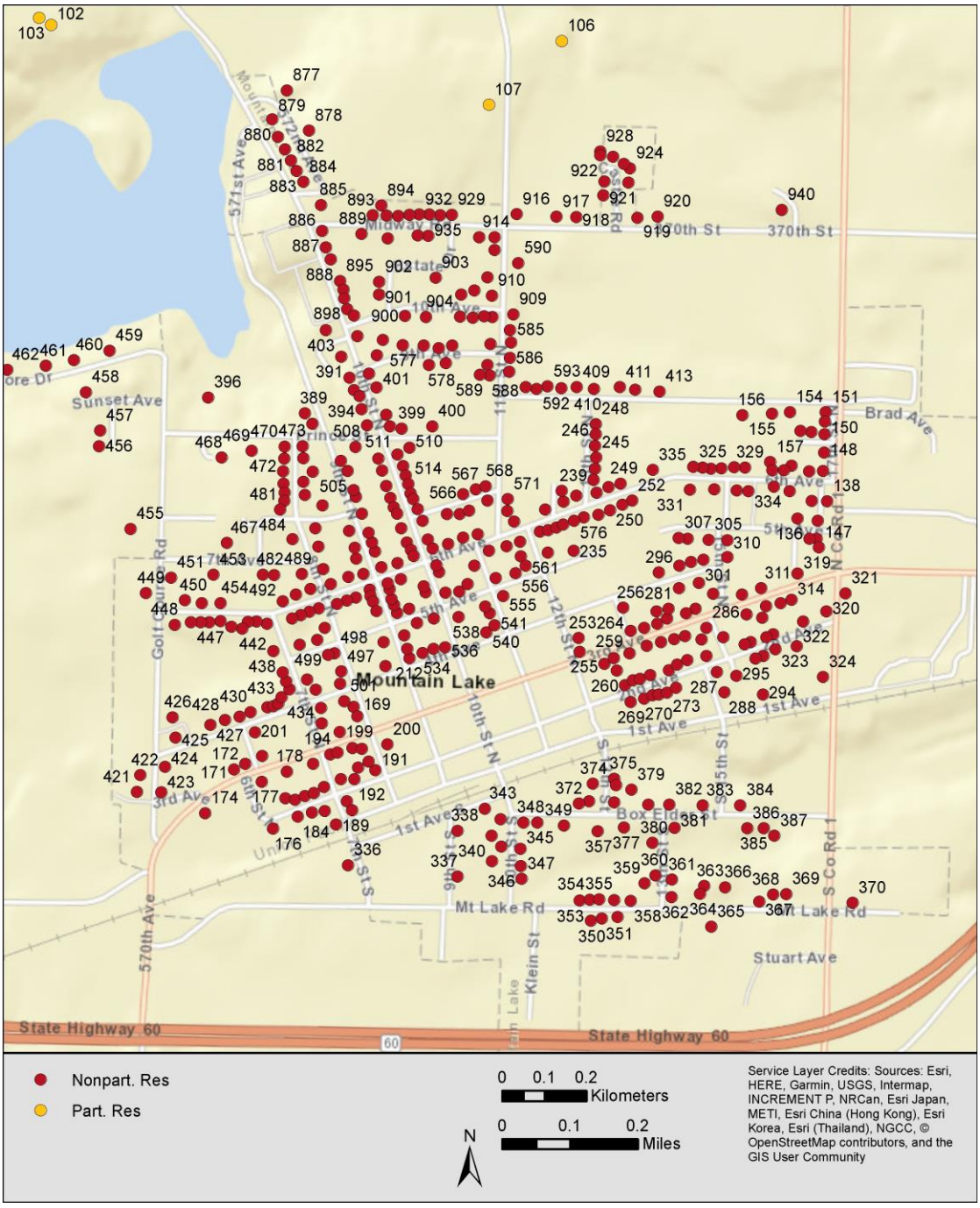

FIGURE 36: MAP OF MODELED RECEPTORS (MOUNTAIN LAKE AREA)

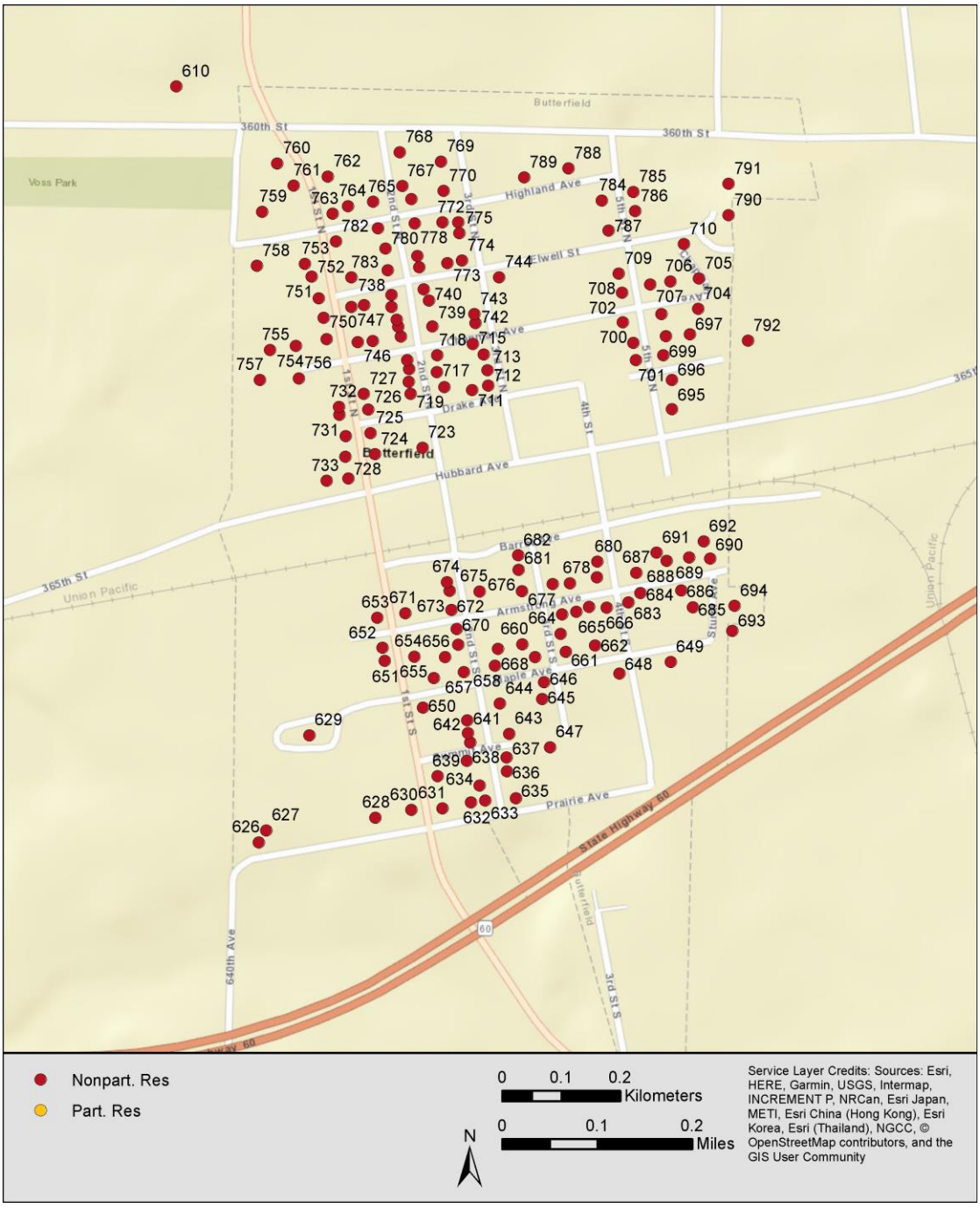

FIGURE 37: MAP OF MODELED RECEPTORS (BUTTERFIELD AREA)

TABLE 13: MODELED RECEIVER RESULTS, WITH AND WITHOUT BACKGROUND SOUND LEVELS (L_{50})

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
0	Part.	45	46	46	48	51	44	45	45	48	51	45	46	46	48	51	352523	4870126	371
1	Part.	46	46	47	48	51	45	45	46	48	51	46	46	47	48	51	352429	4871159	374
2	Part.	45	45	46	48	51	44	44	45	47	51	45	45	46	48	51	352317	4871827	375
3	Part.	44	45	46	48	51	43	44	45	47	51	44	45	46	48	51	351507	4872770	376
4	Non-Part.	41	42	43	46	51	39	41	43	46	50	41	42	43	46	51	352444	4874389	367
5	Part.	44	45	46	48	51	43	44	45	47	51	44	45	46	48	51	352788	4871107	368
6	Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	353923	4869212	371
7	Part.	43	43	44	47	51	41	42	44	47	51	43	43	45	47	51	354138	4870450	368
8	Part.	41	42	43	46	51	40	41	43	46	50	41	42	43	46	51	354060	4870950	368
9	Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	354160	4871301	365
10	Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355786	4873825	353
11	Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	355611	4872760	356
12	Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	355788	4871518	360
13	Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	355093	4871103	361
14	Part.	24	35	40	45	50	23	35	40	45	50	25	35	40	45	50	357338	4869349	358
15	Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	356120	4872599	354
16	Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	356660	4872537	351
17	Part.	31	36	41	45	50	29	36	40	45	50	31	36	40	45	50	337669	4877954	410
18	Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	339916	4878129	402

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
19	Part.	38	40	42	46	50	36	39	42	46	50	38	40	42	46	50	344680	4878049	371
20	Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	338203	4877119	404
21	Part.	44	45	45	48	51	43	43	45	47	51	44	45	46	48	51	339845	4877128	410
22	Part.	44	45	46	48	51	43	43	45	47	51	44	45	46	48	51	341306	4876736	397
23	Part.	44	44	45	47	51	42	43	44	47	51	44	44	45	47	51	341423	4877202	398
24	Part.	45	46	46	48	51	44	45	45	48	51	45	46	46	48	51	342686	4876113	391
25	Part.	43	44	45	47	51	42	43	44	47	51	43	44	45	47	51	344526	4876919	377
26	Part.	46	46	47	48	51	45	45	46	48	51	46	46	47	48	51	344063	4876099	380
27	Part.	42	43	44	47	51	41	42	43	46	50	42	43	44	47	51	343489	4876121	387
28	Part.	46	46	47	48	51	44	45	46	48	51	46	46	47	48	51	346045	4877547	371
29	Part.	45	46	47	48	51	44	45	46	48	51	46	46	47	48	51	346121	4876467	371
30	Part.	45	46	46	48	51	44	45	45	48	51	45	46	47	48	51	346133	4876425	371
31	Part.	42	43	44	47	51	41	42	43	46	50	42	43	44	47	51	347751	4877191	369
32	Part.	42	43	44	47	51	41	42	43	46	51	42	43	44	47	51	347732	4877194	369
33	Part.	45	45	46	48	51	43	44	45	47	51	45	45	46	48	51	347298	4877275	366
34	Part.	44	45	46	48	51	43	43	45	47	51	44	45	46	48	51	346577	4876037	372
35	Part.	45	45	46	48	51	44	44	45	47	51	45	46	46	48	51	347426	4876019	373
36	Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	351171	4875823	368
37	Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	351159	4875846	368
38	Part.	30	36	40	45	50	29	36	40	45	50	28	36	40	45	50	336591	4874598	421
39	Part.	45	45	46	48	51	43	44	45	47	51	45	45	46	48	51	340973	4874461	405
40	Part.	46	46	47	48	51	44	45	46	48	51	46	46	47	48	51	341151	4874584	403
41	Part.	46	46	47	48	51	44	45	46	48	51	46	46	47	48	51	340476	4876025	401

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
42	Part.	45	46	47	48	51	44	45	46	48	51	45	46	47	48	51	342874	4874531	402
43	Part.	45	45	46	48	51	43	44	45	47	51	45	45	46	48	51	342955	4874439	401
44	Part.	46	46	47	48	51	45	45	46	48	51	46	46	47	48	51	346003	4874437	382
45	Part.	44	45	46	48	51	43	43	45	47	51	44	45	46	48	51	344951	4875368	382
46	Non-Part.	42	43	44	47	51	41	42	43	46	50	42	43	44	47	51	347229	4874434	376
47	Part.	44	44	45	47	51	42	43	44	47	51	44	44	45	47	51	348113	4874596	373
48	Part.	45	46	46	48	51	44	44	45	47	51	45	46	46	48	51	348826	4874772	374
49	Part.	41	42	44	47	51	40	41	43	46	50	41	42	44	47	51	350906	4875206	373
50	Part.	37	39	42	46	50	36	38	41	45	50	27	36	40	45	50	336518	4873233	428
51	Part.	41	42	44	47	51	40	41	43	46	50	27	36	40	45	50	336426	4872830	427
52	Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	339628	4872846	407
53	Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	339152	4872589	407
54	Part.	44	44	45	47	51	42	43	44	47	51	44	44	45	47	51	342284	4872991	402
55	Part.	43	44	45	47	51	42	43	44	47	51	43	44	45	47	51	343385	4872908	401
56	Part.	43	43	45	47	51	41	42	44	47	51	43	43	45	47	51	346021	4873868	385
57	Part.	42	43	44	47	51	40	41	43	46	50	42	42	44	47	51	347619	4874180	376
58	Part.	41	42	44	47	51	40	41	43	46	50	41	42	44	47	51	347637	4873755	377
59	Part.	41	42	43	46	50	39	41	43	46	50	41	42	43	46	50	347374	4873197	382
60	Part.	42	43	44	47	51	41	42	43	46	51	42	43	44	47	51	350141	4872674	375
61	Part.	42	42	44	47	51	40	41	43	46	50	42	42	44	47	51	350439	4872803	375
62	Part.	41	42	44	47	51	40	41	43	46	50	41	42	44	47	51	350460	4872763	374
63	Part.	29	36	40	45	50	27	36	40	45	50	23	35	40	45	50	334966	4871532	437

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
64	Part.	37	39	42	46	50	36	38	41	45	50	27	36	40	45	50	336130	4871707	431
65	Part.	37	39	42	46	50	35	38	41	45	50	28	36	40	45	50	336802	4871389	431
66	Part.	38	40	42	46	50	36	39	42	46	50	29	36	40	45	50	336866	4871494	430
67	Part.	36	39	41	46	50	35	38	41	45	50	31	36	40	45	50	337877	4872372	417
68	Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	339605	4871738	408
69	Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	340748	4871519	401
70	Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	341312	4871350	398
71	Part.	44	44	45	47	51	43	43	44	47	51	44	44	45	47	51	342830	4872120	401
72	Part.	43	44	45	47	51	42	42	44	47	51	43	44	45	47	51	344389	4872311	399
73	Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	346342	4871655	390
74	Part.	46	46	47	48	51	44	45	46	48	51	46	46	47	48	51	347938	4872183	383
75	Part.	43	43	45	47	51	41	42	44	47	51	43	43	45	47	51	349417	4872460	378
76	Part.	44	44	45	47	51	42	43	44	47	51	44	44	45	47	51	349669	4871388	380
77	Part.	33	37	41	45	50	31	36	41	45	50	28	36	40	45	50	336487	4870827	431
78	Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	338000	4869923	424
79	Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	338000	4869923	424
80	Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	341142	4870860	404
81	Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	341279	4870990	403
82	Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	342281	4870098	405
83	Part.	42	42	44	47	51	40	41	43	46	50	42	42	44	47	51	344122	4870798	398
84	Part.	44	44	45	47	51	42	43	44	47	51	44	44	45	47	51	344360	4869798	400
85	Part.	42	43	44	47	51	41	42	43	46	51	42	43	44	47	51	344353	4869692	397
86	Part.	41	42	43	46	50	39	41	43	46	50	41	42	43	46	50	346127	4870164	397

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
87	Part.	43	44	45	47	51	42	43	44	47	51	43	44	45	47	51	346682	4870947	393
88	Part.	45	45	46	48	51	44	44	45	47	51	45	46	46	48	51	347586	4870582	390
89	Part.	45	45	46	48	51	44	44	45	47	51	45	45	46	48	51	346980	4869652	395
90	Part.	46	46	47	48	51	44	45	46	48	51	46	46	47	48	51	346633	4869395	397
91	Part.	41	42	43	46	51	40	41	43	46	50	41	42	43	46	51	350747	4870134	379
92	Part.	44	45	46	48	51	43	44	45	47	51	44	45	46	48	51	350980	4870668	378
93	Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	338684	4868796	425
94	Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	338712	4868821	425
95	Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	338858	4868915	423
96	Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	339533	4868625	411
97	Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	339769	4869422	404
98	Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	341105	4869168	409
99	Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	341155	4868800	412
100	Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	342192	4868804	408
101	Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	343071	4868728	404
102	Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	344109	4868502	402
103	Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	344081	4868518	403
104	Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	344140	4868696	400
105	Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	344353	4868681	387
106	Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345320	4868463	391
107	Part.	36	38	41	46	50	34	38	41	45	50	36	38	41	45	50	345147	4868312	398
108	Part.	46	46	47	48	51	45	45	46	48	51	46	46	47	48	51	346879	4868012	396
109	Part.	46	46	47	48	51	44	45	46	48	51	46	46	47	48	51	347898	4868294	396

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
110	Part.	43	44	45	47	51	42	43	44	47	51	43	44	45	47	51	339746	4867346	419
111	Part.	41	42	44	46	51	40	41	43	46	50	41	42	44	47	51	339927	4866608	423
112	Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	340942	4866660	417
113	Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	342343	4867290	403
114	Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	342365	4867276	404
115	Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	343118	4866540	408
116	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	347271	4866472	395
117	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	347952	4866662	398
118	Non-Part.	28	36	40	45	50	27	36	40	45	50	29	36	40	45	50	352799	4866793	387
119	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	350835	4866871	392
120	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	349596	4866355	394
121	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	349422	4866374	394
122	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	349103	4866475	394
123	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	349213	4866873	392
124	Non-Part.	36	38	41	46	50	34	38	41	45	50	36	38	41	46	50	349228	4867141	396
125	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	350713	4867207	390
126	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	352670	4867794	383
127	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	353699	4867885	376
128	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	352311	4868532	383

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
129	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	350682	4868084	386
130	Non-Part.	39	41	43	46	50	38	40	42	46	50	39	41	43	46	50	353023	4869360	377
131	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	350592	4869202	386
132	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	346440	4867166	399
133	Non-Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	346470	4867238	398
134	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345927	4867324	399
135	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345925	4867282	400
136	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345907	4867282	400
137	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345913	4867372	398
138	Non-Part.	36	38	41	46	50	34	38	41	45	50	36	38	41	45	50	345950	4867371	398
139	Non-Part.	36	39	41	46	50	35	38	41	45	50	36	39	41	46	50	345940	4867443	397
140	Non-Part.	36	39	41	46	50	34	38	41	45	50	36	38	41	46	50	345907	4867442	397
141	Non-Part.	36	38	41	46	50	34	38	41	45	50	36	38	41	45	50	345865	4867455	398
142	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345847	4867444	398
143	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345820	4867444	398
144	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345860	4867395	398
145	Non-Part.	36	38	41	45	50	34	37	41	45	50	36	38	41	45	50	345824	4867406	398
146	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345879	4867329	399

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
147	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345930	4867261	400
148	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345942	4867487	396
149	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345944	4867530	396
150	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345945	4867560	396
151	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345946	4867582	395
152	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345912	4867536	396
153	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345886	4867537	396
154	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345861	4867583	395
155	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	41	46	50	345819	4867579	396
156	Non-Part.	36	38	41	46	50	34	38	41	45	50	36	38	41	46	50	345748	4867576	396
157	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345815	4867464	398
158	Non-Part.	42	43	44	47	51	41	42	43	46	50	42	43	44	47	51	346580	4867902	395
159	Non-Part.	40	42	43	46	50	39	40	43	46	50	40	42	43	46	50	352582	4869550	377
160	Non-Part.	42	43	44	47	51	40	42	43	46	50	42	43	44	47	51	351577	4874192	382
161	Non-Part.	25	35	40	45	50	23	35	40	45	50	23	35	40	45	50	335051	4875960	428
162	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	349402	4878386	368
163	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	349614	4878299	368
164	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	36	40	45	50	343773	4865177	408

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
165	Non-Part.	25	35	40	45	50	24	35	40	45	50	25	35	40	45	50	342515	4864903	416
166	Non-Part.	25	35	40	45	50	24	35	40	45	50	25	35	40	45	50	342556	4864887	416
167	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344750	4866880	403
168	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344826	4866883	402
169	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344835	4866860	402
170	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344751	4866843	403
171	Non-Part.	29	36	40	45	50	27	36	40	45	50	28	36	40	45	50	344543	4866734	399
172	Non-Part.	29	36	40	45	50	26	36	40	45	50	28	36	40	45	50	344570	4866748	399
173	Non-Part.	29	36	40	45	50	27	36	40	45	50	28	36	40	45	50	344610	4866766	400
174	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344475	4866630	398
175	Non-Part.	30	36	40	45	50	28	36	40	45	50	29	36	40	45	50	344609	4866705	399
176	Non-Part.	30	36	40	45	50	28	36	40	45	50	29	36	40	45	50	344635	4866594	398
177	Non-Part.	30	36	40	45	50	27	36	40	45	50	29	36	40	45	50	344665	4866665	399
178	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344668	4866729	401
179	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344688	4866662	400
180	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344731	4866747	402
181	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344712	4866671	401
182	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344732	4866678	401

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
183	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344756	4866692	401
184	Non-Part.	30	36	40	45	50	28	36	40	45	50	29	36	40	45	50	344694	4866622	400
185	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344728	4866632	401
186	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344759	4866635	402
187	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344811	4866658	402
188	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344797	4866711	402
189	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344785	4866604	401
190	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344828	4866711	402
191	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344878	4866732	402
192	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344823	4866637	402
193	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344772	4866770	402
194	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344788	4866774	402
195	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344824	4866785	402
196	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344846	4866783	402
197	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344837	4866739	402
198	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344863	4866753	402
199	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344794	4866823	402
200	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344907	4866794	402

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
201	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344593	4866823	402
202	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344902	4866980	402
203	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344898	4867036	402
204	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344758	4867070	399
205	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344832	4867143	399
206	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344811	4867135	399
207	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344787	4867127	399
208	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344744	4867116	399
209	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344722	4867109	400
210	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344701	4867101	401
211	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344681	4867093	401
212	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344959	4866998	401
213	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344953	4867020	401
214	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344946	4867052	402
215	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344930	4867105	400
216	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344923	4867124	399
217	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344916	4867138	399
218	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344912	4867161	399

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
219	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344865	4867161	399
220	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344867	4867146	399
221	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344873	4867132	399
222	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344881	4867110	400
223	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344908	4867176	399
224	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344892	4867214	399
225	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344772	4867174	399
226	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344814	4867192	399
227	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344850	4867198	399
228	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344833	4867234	400
229	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344878	4867252	400
230	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344870	4867273	400
231	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344829	4867261	400
232	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344816	4867301	400
233	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344862	4867296	400
234	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345372	4867332	402
235	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345349	4867253	400
236	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345407	4867339	403

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
237	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345281	4867351	402
238	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345325	4867370	402
239	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345320	4867395	402
240	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345354	4867384	402
241	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	345402	4867392	402
242	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345431	4867404	401
243	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345396	4867421	401
244	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345400	4867448	400
245	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345402	4867474	400
246	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345399	4867503	399
247	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345401	4867530	399
248	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345401	4867554	397
249	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345460	4867413	400
250	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	345434	4867349	402
251	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345465	4867362	402
252	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345487	4867372	401
253	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345360	4867046	400
254	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345362	4867014	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
255	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345422	4866985	401
256	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345466	4867118	402
257	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345444	4866998	402
258	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345451	4866969	401
259	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345481	4867010	401
260	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345470	4866934	401
261	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345489	4866945	401
262	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345506	4866950	401
263	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345522	4867027	401
264	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345484	4867063	402
265	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345530	4866958	401
266	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345516	4867070	402
267	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345556	4867036	402
268	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345574	4866969	401
269	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345484	4866894	401
270	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345515	4866902	401
271	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345535	4866911	402
272	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345550	4866912	402

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
273	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345570	4866916	402
274	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345591	4866928	402
275	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345586	4867044	402
276	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345594	4866983	401
277	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345546	4867080	402
278	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345570	4867093	402
279	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345615	4867105	402
280	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345545	4867110	401
281	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345573	4867116	401
282	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345612	4867051	402
283	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345618	4866994	401
284	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345663	4867004	401
285	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345652	4867042	401
286	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345663	4867071	401
287	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345688	4866966	401
288	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345706	4866917	401
289	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345704	4867048	401
290	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345754	4867031	401

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
291	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345780	4866997	400
292	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345798	4867004	400
293	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	345768	4867037	401
294	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345797	4866912	400
295	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345734	4866956	400
296	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345551	4867201	401
297	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345598	4867165	400
298	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345599	4867217	400
299	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345627	4867227	400
300	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345656	4867232	400
301	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345646	4867177	400
302	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345637	4867115	401
303	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345679	4867151	400
304	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345713	4867279	400
305	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345669	4867279	399
306	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345619	4867282	399
307	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345598	4867284	400
308	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345748	4867149	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
309	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345759	4867103	401
310	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345713	4867238	400
311	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345793	4867164	400
312	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345805	4867122	401
313	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345796	4867094	401
314	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345865	4867137	401
315	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345839	4867129	401
316	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345821	4867055	400
317	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345805	4867048	401
318	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345893	4867086	400
319	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345879	4867199	400
320	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345948	4867109	400
321	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345993	4867152	399
322	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345878	4867027	401
323	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	345827	4867019	400
324	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	345940	4866954	400
325	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345632	4867452	400
326	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345654	4867450	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
327	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345674	4867448	399
328	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345699	4867449	399
329	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345729	4867451	398
330	Non-Part.	36	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345755	4867451	398
331	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345624	4867398	400
332	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345682	4867399	400
333	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345735	4867396	399
334	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345763	4867394	399
335	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345536	4867445	399
336	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344813	4866507	401
337	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	345073	4866480	401
338	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	345073	4866588	402
339	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	345155	4866517	401
340	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	345154	4866577	401
341	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345177	4866551	401
342	Non-Part.	31	36	41	45	50	30	36	40	45	50	31	36	41	45	50	345230	4866608	401
343	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345138	4866641	401
344	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345175	4866616	401

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
345	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345223	4866546	401
346	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	345224	4866505	401
347	Non-Part.	31	36	40	45	50	29	36	40	45	50	30	36	40	45	50	345225	4866474	401
348	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345263	4866608	401
349	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345325	4866601	400
350	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	345389	4866375	402
351	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	40	45	50	345415	4866380	402
352	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345452	4866384	401
353	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345363	4866423	401
354	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345387	4866425	401
355	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345409	4866426	401
356	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	345444	4866424	401
357	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345406	4866588	400
358	Non-Part.	31	36	41	45	50	30	36	40	45	50	31	36	41	45	50	345484	4866422	401
359	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345516	4866464	399
360	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345542	4866483	398
361	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345582	4866473	399
362	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345581	4866431	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
363	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345658	4866458	399
364	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345648	4866439	400
365	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345675	4866361	399
366	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345708	4866454	399
367	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345789	4866420	399
368	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345822	4866437	399
369	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345852	4866438	399
370	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	346010	4866417	404
371	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345385	4866659	400
372	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345361	4866653	400
373	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345444	4866656	400
374	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345394	4866700	400
375	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345445	4866712	399
376	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345449	4866697	399
377	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345467	4866597	400
378	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345526	4866650	400
379	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345486	4866686	399
380	Non-Part.	30	36	40	45	50	27	36	40	45	50	29	36	40	45	50	345535	4866560	397

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
381	Non-Part.	31	37	41	45	50	29	36	40	45	50	31	36	41	45	50	345588	4866595	400
382	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345575	4866651	399
383	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345654	4866648	398
384	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345744	4866649	398
385	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345760	4866595	396
386	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	345799	4866595	396
387	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345824	4866577	395
388	Non-Part.	33	37	41	45	50	31	36	40	45	50	33	37	41	45	50	344729	4867554	401
389	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344711	4867579	400
390	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344798	4867714	396
391	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344817	4867664	397
392	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344828	4867635	399
393	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344841	4867620	399
394	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344846	4867589	399
395	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344858	4867551	400
396	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344482	4867617	390
397	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344913	4867548	400
398	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344904	4867576	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
399	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344941	4867543	399
400	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345013	4867549	399
401	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344881	4867641	400
402	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344863	4867674	398
403	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344761	4867777	397
404	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344836	4867763	396
405	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344882	4867717	398
406	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344896	4867754	398
407	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344993	4867740	397
408	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345319	4867639	395
409	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345356	4867641	395
410	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345397	4867638	395
411	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345458	4867642	396
412	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345494	4867635	396
413	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345552	4867631	395
414	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	342499	4866075	414
415	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	342542	4866036	414
416	Non-Part.	26	36	40	45	50	25	35	40	45	50	21	35	40	45	50	334279	4872084	438

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
417	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	341679	4864929	418
418	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	35	40	45	50	341682	4864918	418
419	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	340928	4864906	422
420	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	339590	4865531	426
421	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344313	4866680	401
422	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344321	4866721	400
423	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344371	4866680	399
424	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344380	4866740	399
425	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344405	4866810	399
426	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344397	4866858	398
427	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	344487	4866840	400
428	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344522	4866852	402
429	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344557	4866860	403
430	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344582	4866871	403
431	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344622	4866882	403
432	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344636	4866885	403
433	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344648	4866891	403
434	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344656	4866906	402

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
435	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344674	4866924	402
436	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344667	4866943	401
437	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344659	4866965	399
438	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344637	4867015	399
439	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344621	4867080	402
440	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344596	4867085	402
441	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344576	4867084	402
442	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344562	4867069	401
443	Non-Part.	30	36	40	45	50	28	36	40	45	50	29	36	40	45	50	344537	4867073	401
444	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344511	4867086	402
445	Non-Part.	31	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344485	4867084	402
446	Non-Part.	31	36	40	45	50	29	36	40	45	50	30	36	40	45	50	344464	4867084	402
447	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	344441	4867084	401
448	Non-Part.	30	36	40	45	50	28	36	40	45	50	29	36	40	45	50	344403	4867078	400
449	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	344334	4867153	401
450	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344427	4867136	402
451	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344394	4867190	401
452	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344467	4867129	402

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
453	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344494	4867196	401
454	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344511	4867129	403
455	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344298	4867305	402
456	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344223	4867501	399
457	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344226	4867539	398
458	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344192	4867630	397
459	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344248	4867728	392
460	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344164	4867706	391
461	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344097	4867692	390
462	Non-Part.	31	37	41	45	50	29	36	40	45	50	31	36	41	45	50	344005	4867683	387
463	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	343806	4867708	389
464	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	343763	4867732	389
465	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	343735	4867738	389
466	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	343547	4867593	389
467	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344526	4867272	402
468	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344514	4867474	400
469	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344585	4867490	401
470	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344663	4867500	401

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
471	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344662	4867472	401
472	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344660	4867442	402
473	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344706	4867502	401
474	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344707	4867473	401
475	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344729	4867441	401
476	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344707	4867416	401
477	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344711	4867386	402
478	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344661	4867413	402
479	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344663	4867391	402
480	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344662	4867372	402
481	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344652	4867351	402
482	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344612	4867197	401
483	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344639	4867196	400
484	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344682	4867281	402
485	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344690	4867150	400
486	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344725	4867163	400
487	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344743	4867263	401
488	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344755	4867210	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
489	Non-Part.	31	37	41	45	50	29	36	40	45	50	31	36	41	45	50	344704	4867198	399
490	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344736	4867307	402
491	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344753	4867361	401
492	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344659	4867134	402
493	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344717	4866947	402
494	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344699	4867030	399
495	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344737	4866923	402
496	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344741	4867042	399
497	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344797	4866967	402
498	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344782	4867010	401
499	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344766	4867006	400
500	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	344795	4866938	402
501	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	41	45	50	344804	4866896	402
502	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344847	4867342	400
503	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344832	4867381	401
504	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344826	4867397	400
505	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344813	4867442	400
506	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344797	4867466	399

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
507	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344885	4867472	399
508	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344831	4867500	400
509	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344894	4867443	400
510	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344959	4867498	399
511	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344931	4867482	400
512	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344944	4867454	399
513	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344951	4867432	399
514	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344957	4867412	399
515	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344962	4867389	399
516	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344968	4867376	400
517	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344914	4867379	400
518	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344904	4867407	400
519	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344922	4867357	400
520	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344930	4867341	400
521	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344939	4867307	401
522	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344979	4867352	400
523	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344990	4867325	400
524	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345002	4867280	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
525	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344953	4867273	400
526	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344962	4867255	400
527	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344969	4867241	400
528	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344939	4867186	399
529	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344958	4867116	400
530	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344998	4867155	399
531	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344993	4867169	399
532	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344931	4867224	399
533	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344977	4867082	401
534	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	344990	4867011	401
535	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345016	4867020	401
536	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	345044	4867024	401
537	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345017	4867093	400
538	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345076	4867096	400
539	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345045	4867154	400
540	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345142	4867060	400
541	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345161	4867076	400
542	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345150	4867105	399

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
543	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345139	4867121	399
544	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345077	4867156	399
545	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345097	4867175	399
546	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345030	4867203	400
547	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	345023	4867219	400
548	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345015	4867259	401
549	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345113	4867217	400
550	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345050	4867270	401
551	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345086	4867285	401
552	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345148	4867253	400
553	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345164	4867188	399
554	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345121	4867293	401
555	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345181	4867146	399
556	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	345211	4867200	399
557	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345189	4867264	400
558	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345222	4867275	400
559	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345223	4867240	400
560	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345287	4867249	400

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
561	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345235	4867218	399
562	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345208	4867323	400
563	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345048	4867340	401
564	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345079	4867340	401
565	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	345101	4867348	401
566	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345086	4867388	400
567	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345116	4867399	400
568	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345139	4867406	400
569	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345144	4867372	400
570	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345191	4867347	400
571	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345192	4867376	401
572	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345268	4867298	401
573	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345288	4867302	401
574	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345308	4867308	401
575	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	345324	4867315	402
576	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345349	4867325	402
577	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344944	4867742	399
578	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345006	4867695	399

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
579	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345046	4867699	398
580	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	345028	4867734	397
581	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	345060	4867741	397
582	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345144	4867694	397
583	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345151	4867744	396
584	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345197	4867777	395
585	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345200	4867747	395
586	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345197	4867711	396
587	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345196	4867679	396
588	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345149	4867669	397
589	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	38	41	45	50	345126	4867671	397
590	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345217	4867936	393
591	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345235	4867642	395
592	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345260	4867638	394
593	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345286	4867644	394
594	Non-Part.	30	36	40	45	50	28	36	40	45	50	29	36	40	45	50	343409	4867547	386
595	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	352617	4875800	361
596	Non-Part.	42	43	44	47	51	41	42	43	46	51	42	43	44	47	51	352567	4874236	367

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
597	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	354694	4869562	366
598	Non-Part.	37	39	42	46	50	35	38	41	45	50	36	39	42	46	50	354152	4872437	366
599	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	354454	4872703	360
600	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	354182	4873719	360
601	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	354055	4875479	358
602	Non-Part.	23	35	40	45	50	22	35	40	45	50	24	35	40	45	50	356437	4876650	347
603	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	355599	4875833	347
604	Non-Part.	26	36	40	45	50	25	35	40	45	50	27	36	40	45	50	355966	4875462	347
605	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355687	4875216	348
606	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355901	4874606	348
607	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355455	4874722	352
608	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	355352	4871213	363
609	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	355630	4870935	360
610	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	355553	4869487	366
611	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356806	4869653	360
612	Non-Part.	25	35	40	45	50	23	35	40	45	50	25	35	40	45	50	357363	4870377	357
613	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	35	40	45	50	357276	4871269	354
614	Non-Part.	24	35	40	45	50	23	35	40	45	50	24	35	40	45	50	357615	4871921	351

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
615	Non-Part.	23	35	40	45	50	21	35	40	45	50	23	35	40	45	50	358069	4872952	347
616	Non-Part.	23	35	40	45	50	22	35	40	45	50	24	35	40	45	50	357627	4874308	346
617	Non-Part.	22	35	40	45	50	21	35	40	45	50	23	35	40	45	50	357430	4875734	347
618	Non-Part.	22	35	40	45	50	21	35	40	45	50	23	35	40	45	50	357505	4875420	348
619	Non-Part.	23	35	40	45	50	22	35	40	45	50	24	35	40	45	50	356819	4875899	346
620	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	353119	4876184	359
621	Non-Part.	43	43	45	47	51	41	42	44	47	51	43	43	45	47	51	353038	4872739	367
622	Non-Part.	33	37	41	45	50	31	36	40	45	50	33	37	41	45	50	355110	4872432	360
623	Non-Part.	43	43	45	47	51	41	42	44	47	51	43	43	45	47	51	353501	4871117	369
624	Non-Part.	43	44	45	47	51	42	43	44	47	51	43	44	45	47	51	353171	4871171	367
625	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	37	41	45	50	354643	4868550	372
626	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	355692	4868205	367
627	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	355705	4868226	366
628	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	355890	4868247	367
629	Non-Part.	27	36	40	45	50	26	35	40	45	50	28	36	40	45	50	355778	4868387	367
630	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	355951	4868260	367
631	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356003	4868263	367
632	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356051	4868273	367

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
633	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356076	4868276	367
634	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356066	4868302	368
635	Non-Part.	25	35	40	45	50	23	35	40	45	50	25	35	40	45	50	356128	4868280	366
636	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356112	4868326	367
637	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356112	4868349	366
638	Non-Part.	26	35	40	45	50	23	35	40	45	50	25	35	40	45	50	356044	4868344	367
639	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	355995	4868317	367
640	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	35	40	45	50	356050	4868375	366
641	Non-Part.	26	36	40	45	50	24	35	40	45	50	25	35	40	45	50	356046	4868391	366
642	Non-Part.	26	35	40	45	50	24	35	40	45	50	25	35	40	45	50	356045	4868412	365
643	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356116	4868389	365
644	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356100	4868440	364
645	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356172	4868448	364
646	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356176	4868477	364
647	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356186	4868367	364
648	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356303	4868492	364
649	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	36	40	45	50	356390	4868511	365
650	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	355970	4868434	368

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
651	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	355906	4868513	366
652	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	355902	4868535	366
653	Non-Part.	28	36	40	45	50	26	35	40	45	50	28	36	40	45	50	355893	4868586	366
654	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	355956	4868520	365
655	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	35	40	45	50	355989	4868484	365
656	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356007	4868520	364
657	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356040	4868494	364
658	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356092	4868505	364
659	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356160	4868520	364
660	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356139	4868541	364
661	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356212	4868528	365
662	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356262	4868539	364
663	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356203	4868559	364
664	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356206	4868592	365
665	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356230	4868596	365
666	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356282	4868604	364
667	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356251	4868605	364
668	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356097	4868534	364

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
669	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356030	4868540	364
670	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356027	4868567	365
671	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	355940	4868594	365
672	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356018	4868599	365
673	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356015	4868632	366
674	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356011	4868647	366
675	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356066	4868631	365
676	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356138	4868631	365
677	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356190	4868643	365
678	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356219	4868645	365
679	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356265	4868655	365
680	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356265	4868681	365
681	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356132	4868668	365
682	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356131	4868692	365
683	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356318	4868612	365
684	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356339	4868628	365
685	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356427	4868604	365
686	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356408	4868633	365

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
687	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356331	4868663	365
688	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356383	4868682	365
689	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356421	4868689	365
690	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356457	4868686	366
691	Non-Part.	26	36	40	45	50	25	35	40	45	50	26	36	40	45	50	356366	4868697	365
692	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356446	4868715	365
693	Non-Part.	26	35	40	45	50	24	35	40	45	50	25	35	40	45	50	356494	4868564	364
694	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	35	40	45	50	356498	4868606	365
695	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356392	4868940	364
696	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356392	4868989	364
697	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356422	4869067	364
698	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356382	4869063	364
699	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356377	4869031	364
700	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356327	4869052	364
701	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356331	4869023	364
702	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356309	4869087	364
703	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356374	4869101	364
704	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356437	4869110	364

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
705	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356438	4869161	364
706	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356390	4869157	364
707	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356355	4869151	364
708	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	356307	4869137	364
709	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	356302	4869170	364
710	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356412	4869220	364
711	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356053	4868972	364
712	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356080	4868980	364
713	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356079	4869006	364
714	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356073	4869033	364
715	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356055	4869050	364
716	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356006	4868977	365
717	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355993	4869003	365
718	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355994	4869031	365
719	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355949	4868966	366
720	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355946	4868986	366
721	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355947	4869008	365
722	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355943	4869023	365

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
723	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355969	4868875	367
724	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355889	4868864	366
725	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355881	4868899	366
726	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355878	4868939	366
727	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355870	4868966	366
728	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355844	4868823	367
729	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355839	4868859	367
730	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355839	4868894	367
731	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355829	4868931	367
732	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355828	4868944	367
733	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355807	4868818	367
734	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355933	4869063	365
735	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355928	4869079	365
736	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355926	4869091	365
737	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355917	4869113	365
738	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355917	4869134	365
739	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355986	4869080	364
740	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355980	4869124	364

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
741	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355971	4869143	364
742	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356059	4869086	364
743	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356057	4869101	364
744	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356099	4869163	363
745	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355885	4869055	365
746	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355860	4869054	366
747	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355849	4869113	366
748	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355870	4869117	366
749	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355807	4869058	367
750	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355802	4869095	367
751	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355794	4869128	367
752	Non-Part.	29	36	40	45	50	28	36	40	45	50	29	36	40	45	50	355782	4869165	367
753	Non-Part.	29	36	40	45	50	28	36	40	45	50	29	36	40	45	50	355770	4869187	367
754	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355755	4869047	368
755	Non-Part.	29	36	40	45	50	28	36	40	45	50	29	36	40	45	50	355711	4869040	368
756	Non-Part.	29	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355760	4868992	368
757	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355694	4868990	368
758	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	355689	4869183	367

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
759	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	355698	4869275	367
760	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	355723	4869356	366
761	Non-Part.	30	36	40	45	50	28	36	40	45	50	30	36	40	45	50	355751	4869319	366
762	Non-Part.	29	36	40	45	50	28	36	40	45	50	29	36	40	45	50	355809	4869334	366
763	Non-Part.	29	36	40	45	50	28	36	40	45	50	29	36	40	45	50	355817	4869271	366
764	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355843	4869284	366
765	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355886	4869292	365
766	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355951	4869296	364
767	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355935	4869318	365
768	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355931	4869376	364
769	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	356001	4869360	364
770	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	356005	4869310	364
771	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	356030	4869257	363
772	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356003	4869256	363
773	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356012	4869188	363
774	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	356036	4869192	363
775	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	356032	4869238	363
776	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355964	4869180	364

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
777	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355961	4869199	364
778	Non-Part.	29	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355956	4869255	364
779	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	355911	4869176	365
780	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	355907	4869212	365
781	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355894	4869247	366
782	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355823	4869224	367
783	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	355849	4869163	367
784	Non-Part.	28	36	40	45	50	26	35	40	45	50	28	36	40	45	50	356273	4869294	364
785	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	356327	4869308	365
786	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	356329	4869276	365
787	Non-Part.	27	36	40	45	50	26	35	40	45	50	27	36	40	45	50	356285	4869243	364
788	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356217	4869348	364
789	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	356142	4869333	363
790	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356488	4869268	363
791	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	356488	4869322	362
792	Non-Part.	26	36	40	45	50	24	35	40	45	50	26	36	40	45	50	356521	4869056	363
793	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	351866	4875985	362
794	Non-Part.	23	35	40	45	50	22	35	40	45	50	23	35	40	45	50	357345	4868269	362

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
795	Non-Part.	21	35	40	45	50	20	35	40	45	50	21	35	40	45	50	358127	4868180	359
796	Non-Part.	19	35	40	45	50	18	35	40	45	50	20	35	40	45	50	359000	4868732	355
797	Non-Part.	22	35	40	45	50	21	35	40	45	50	23	35	40	45	50	358409	4871152	351
798	Non-Part.	27	36	40	45	50	25	35	40	45	50	27	36	40	45	50	338161	4880092	389
799	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	340457	4879785	381
800	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	342979	4879428	377
801	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	342860	4879804	370
802	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344257	4879373	369
803	Non-Part.	28	36	40	45	50	26	36	40	45	50	28	36	40	45	50	346022	4880757	379
804	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	346353	4879521	372
805	Non-Part.	30	36	40	45	50	29	36	40	45	50	30	36	40	45	50	347374	4880046	376
806	Non-Part.	23	35	40	45	50	21	35	40	45	50	23	35	40	45	50	334869	4878152	419
807	Non-Part.	26	35	40	45	50	24	35	40	45	50	26	35	40	45	50	336665	4879160	405
808	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	339609	4878853	398
809	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	339876	4878698	398
810	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	340969	4879236	389
811	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	341771	4879253	378
812	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	342147	4878086	385

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
813	Non-Part.	32	37	41	45	50	31	36	40	45	50	32	37	41	45	50	343459	4879213	375
814	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	346568	4878623	369
815	Non-Part.	23	35	40	45	50	22	35	40	45	50	23	35	40	45	50	334807	4877612	422
816	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	336624	4877581	415
817	Non-Part.	38	40	42	46	50	36	39	41	46	50	38	40	42	46	50	342925	4877379	383
818	Non-Part.	38	39	42	46	50	36	38	41	46	50	38	39	42	46	50	348298	4877605	367
819	Non-Part.	38	40	42	46	50	36	39	42	46	50	38	40	42	46	50	349372	4876711	370
820	Non-Part.	36	38	41	45	50	34	37	41	45	50	35	38	41	45	50	349560	4877237	365
821	Non-Part.	39	41	43	46	50	38	40	42	46	50	39	41	43	46	50	350071	4876070	370
822	Non-Part.	25	35	40	45	50	24	35	40	45	50	24	35	40	45	50	334761	4875604	432
823	Non-Part.	27	36	40	45	50	25	35	40	45	50	25	35	40	45	50	335312	4874792	434
824	Non-Part.	29	36	40	45	50	28	36	40	45	50	29	36	40	45	50	336576	4875510	417
825	Non-Part.	29	36	40	45	50	27	36	40	45	50	28	36	40	45	50	336378	4875819	419
826	Non-Part.	29	36	40	45	50	28	36	40	45	50	28	36	40	45	50	336384	4874934	417
827	Non-Part.	31	36	41	45	50	30	36	40	45	50	29	36	40	45	50	336991	4874550	417
828	Non-Part.	31	36	40	45	50	29	36	40	45	50	29	36	40	45	50	336774	4874696	418
829	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	338085	4874866	409
830	Non-Part.	40	41	43	46	50	39	40	42	46	50	40	41	43	46	50	339459	4874939	407

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
831	Non-Part.	42	43	44	47	51	41	42	43	46	50	42	43	44	47	51	344595	4874794	386
832	Non-Part.	24	35	40	45	50	22	35	40	45	50	19	35	40	45	50	333832	4873272	432
833	Non-Part.	26	36	40	45	50	25	35	40	45	50	24	35	40	45	50	334862	4874592	435
834	Non-Part.	27	36	40	45	50	26	35	40	45	50	24	35	40	45	50	334958	4874215	435
835	Non-Part.	28	36	40	45	50	26	36	40	45	50	23	35	40	45	50	334586	4872932	425
836	Non-Part.	35	38	41	45	50	34	37	41	45	50	27	36	40	45	50	336162	4873279	428
837	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	338786	4873051	407
838	Non-Part.	40	41	43	46	50	39	40	42	46	50	40	41	43	46	50	340983	4873020	405
839	Non-Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	340423	4872948	407
840	Non-Part.	43	43	44	47	51	41	42	44	47	51	43	43	45	47	51	343945	4872887	401
841	Non-Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	345816	4872706	388
842	Non-Part.	39	40	42	46	50	37	39	42	46	50	38	40	42	46	50	345892	4872903	388
843	Non-Part.	35	38	41	45	50	33	37	41	45	50	31	36	41	45	50	338174	4872453	415
844	Non-Part.	36	38	41	45	50	34	38	41	45	50	35	38	41	45	50	338637	4871428	412
845	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	339725	4871223	404
846	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	339698	4872091	408
847	Non-Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	341617	4872198	403
848	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	340697	4872553	406

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
849	Non-Part.	39	41	43	46	50	38	40	42	46	50	39	41	43	46	50	345132	4871418	397
850	Non-Part.	39	40	42	46	50	37	39	42	46	50	39	40	42	46	50	345666	4871176	397
851	Non-Part.	38	40	42	46	50	36	39	42	46	50	38	40	42	46	50	345635	4871615	392
852	Non-Part.	39	40	42	46	50	37	39	42	46	50	39	40	42	46	50	345255	4872003	395
853	Non-Part.	41	42	44	47	51	40	41	43	46	50	41	42	44	46	51	347220	4871377	390
854	Non-Part.	43	44	45	47	51	42	42	44	47	51	43	44	45	47	51	349219	4872327	377
855	Non-Part.	40	41	43	46	50	39	40	42	46	50	40	41	43	46	50	350944	4871667	375
856	Non-Part.	26	36	40	45	50	24	35	40	45	50	20	35	40	45	50	334781	4871010	436
857	Non-Part.	27	36	40	45	50	25	35	40	45	50	22	35	40	45	50	335152	4870543	433
858	Non-Part.	27	36	40	45	50	26	35	40	45	50	23	35	40	45	50	335176	4870542	432
859	Non-Part.	32	37	41	45	50	30	36	40	45	50	31	36	40	45	50	337070	4869855	432
860	Non-Part.	31	37	41	45	50	30	36	40	45	50	31	36	40	45	50	337119	4869638	432
861	Non-Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	338904	4871049	403
862	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	340446	4869737	409
863	Non-Part.	33	37	41	45	50	31	36	41	45	50	32	37	41	45	50	341233	4869865	407
864	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	342758	4870493	404
865	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	342923	4869891	405
866	Non-Part.	41	42	43	46	50	39	41	43	46	50	41	42	43	46	50	349266	4870209	385

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
867	Non-Part.	23	35	40	45	50	21	35	40	45	50	20	35	40	45	50	334947	4869374	437
868	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	40	45	50	337953	4868597	428
869	Non-Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	338227	4869503	424
870	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	40	45	50	338448	4868102	425
871	Non-Part.	31	36	41	45	50	29	36	40	45	50	31	36	40	45	50	338518	4868105	422
872	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	339725	4868307	411
873	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	336967	4868688	432
874	Non-Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	338219	4869504	424
875	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	341232	4869013	412
876	Non-Part.	32	37	41	45	50	30	36	40	45	50	32	37	41	45	50	341232	4869013	412
877	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344669	4868346	395
878	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344721	4868250	401
879	Non-Part.	33	37	41	45	50	31	36	40	45	50	32	37	41	45	50	344634	4868277	392
880	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	344647	4868236	396
881	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344664	4868206	399
882	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344679	4868180	400
883	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344691	4868155	402
884	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344708	4868129	402

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
			Combined Background + Modeled SPL (L50, dBA)					Combined Background + Modeled SPL (L50, dBA)					Combined Background + Modeled SPL (L50, dBA)						
		Modeled Turbine-Only Sound Level (L50, dBA)	35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	Modeled Turbine-Only Sound Level (L50, dBA)	35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	Modeled Turbine-Only Sound Level (L50, dBA)	35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
885	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344749	4868074	403
886	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344752	4868013	402
887	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344761	4867974	401
888	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344773	4867945	401
889	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344846	4868005	400
890	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344907	4867995	398
891	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	344933	4868048	399
892	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344905	4868049	400
893	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344872	4868050	401
894	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344892	4868073	401
895	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344795	4867894	400
896	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344803	4867873	400
897	Non-Part.	34	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344805	4867852	399
898	Non-Part.	33	37	41	45	50	31	37	41	45	50	33	37	41	45	50	344812	4867827	397
899	Non-Part.	33	37	41	45	50	32	37	41	45	50	33	37	41	45	50	344828	4867812	397
900	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344949	4867811	396
901	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344887	4867861	397
902	Non-Part.	34	37	41	45	50	32	37	41	45	50	34	37	41	45	50	344887	4867891	397

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
903	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345021	4867901	396
904	Non-Part.	34	38	41	45	50	32	37	41	45	50	34	37	41	45	50	344998	4867808	396
905	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345080	4867809	396
906	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345110	4867806	396
907	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345136	4867810	395
908	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345156	4867808	395
909	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345205	4867815	393
910	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345155	4867859	395
911	Non-Part.	35	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345113	4867871	395
912	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345144	4867902	395
913	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345161	4867967	394
914	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345161	4867998	394
915	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345124	4867997	394
916	Non-Part.	35	38	41	45	50	34	37	41	45	50	35	38	41	45	50	345213	4868052	392
917	Non-Part.	36	38	41	45	50	34	38	41	45	50	36	38	41	45	50	345307	4868046	391
918	Non-Part.	36	38	41	46	50	34	38	41	45	50	36	38	41	45	50	345355	4868046	391
919	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345499	4868043	391
920	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345548	4868047	391

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
921	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345419	4868097	389
922	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345422	4868130	389
923	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345479	4868127	390
924	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345482	4868161	390
925	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	345467	4868172	390
926	Non-Part.	37	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345442	4868188	389
927	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345411	4868192	390
928	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345411	4868201	390
929	Non-Part.	35	38	41	45	50	33	37	41	45	50	35	38	41	45	50	345060	4868051	396
930	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345032	4868050	397
931	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345006	4868052	398
932	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344982	4868051	398
933	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344959	4868051	399
934	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	344979	4868001	397
935	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345003	4868001	396
936	Non-Part.	34	38	41	45	50	33	37	41	45	50	34	38	41	45	50	345082	4867861	395
937	Non-Part.	37	39	42	46	50	35	38	41	45	50	36	39	42	46	50	345108	4868670	390
938	Non-Part.	38	40	42	46	50	36	39	41	46	50	38	39	42	46	50	345101	4869058	393

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
939	Non-Part.	38	40	42	46	50	36	39	41	46	50	38	39	42	46	50	345073	4869116	392
940	Non-Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	345842	4868063	394
941	Non-Part.	40	41	43	46	50	38	40	42	46	50	40	41	43	46	50	349380	4868208	392
942	Non-Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	339407	4866737	425
943	Non-Part.	39	41	43	46	50	38	40	42	46	50	39	41	43	46	50	339495	4867354	419
944	Non-Part.	29	36	40	45	50	27	36	40	45	50	28	36	40	45	50	338320	4866355	432
945	Non-Part.	39	41	43	46	50	38	40	42	46	50	39	41	43	46	50	339495	4867354	419
946	Non-Part.	39	40	42	46	50	37	39	42	46	50	39	40	42	46	50	340056	4866386	422
947	Non-Part.	36	38	41	46	50	35	38	41	45	50	36	39	41	46	50	340891	4866430	418
948	Non-Part.	33	37	41	45	50	31	36	41	45	50	33	37	41	45	50	341412	4866409	413
949	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	341126	4867426	409
950	Non-Part.	31	36	40	45	50	29	36	40	45	50	31	36	40	45	50	341891	4866747	411
951	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	342614	4866948	406
952	Non-Part.	29	36	40	45	50	27	36	40	45	50	29	36	40	45	50	342664	4866947	407
953	Non-Part.	28	36	40	45	50	27	36	40	45	50	28	36	40	45	50	343379	4866634	407
954	Non-Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	346917	4867222	398
955	Non-Part.	38	40	42	46	50	37	39	42	46	50	38	40	42	46	50	346902	4867214	399
956	Non-Part.	38	40	42	46	50	36	39	42	46	50	38	40	42	46	50	346932	4867149	397

Rec. ID	Status	Vestas V162 @ 119m					GE 5.5-158 LNTE @ 107.4 m					Nordex N 163 LNTE @ 108m					Coordinates (UTM NAD83 Z15N)		
		Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)				Modeled Turbine-Only Sound Level (L50, dBA)	Combined Background + Modeled SPL (L50, dBA)						
			35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background		35 dBA Background	40 dBA Background	45 dBA Background	50 dBA Background	X (m)	Y (m)	Z (m)
957	Non-Part.	37	39	42	46	50	36	38	41	45	50	37	39	42	46	50	346601	4867154	399
958	Non-Part.	37	39	42	46	50	35	38	41	45	50	37	39	42	46	50	346574	4867159	399
959	Non-Part.	36	39	42	46	50	35	38	41	45	50	36	39	42	46	50	346504	4867107	399
960	Non-Part.	21	35	40	45	50	20	35	40	45	50	21	35	40	45	50	336434	4866082	426
961	Non-Part.	23	35	40	45	50	21	35	40	45	50	23	35	40	45	50	338235	4864957	427
962	Non-Part.	24	35	40	45	50	22	35	40	45	50	23	35	40	45	50	338247	4864948	426
963	Non-Part.	20	35	40	45	50	19	35	40	45	50	21	35	40	45	50	358904	4873683	347
964	Non-Part.	20	35	40	45	50	19	35	40	45	50	20	35	40	45	50	359310	4870903	353
965	Non-Part.	19	35	40	45	50	18	35	40	45	50	19	35	40	45	50	358522	4867711	356
966	Non-Part.	21	35	40	45	50	20	35	40	45	50	22	35	40	45	50	358572	4869564	355
967	Non-Part.	19	35	40	45	50	18	35	40	45	50	20	35	40	45	50	359166	4869439	353
968	Non-Part.	22	35	40	45	50	20	35	40	45	50	22	35	40	45	50	358553	4872560	349

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