SOUND LEVEL ASSESSMENT REPORT

Wild Meadows Wind Project
Alexandria & Danbury, NH

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1.0 EXECUTIVE SUMMARY

Epsilon Associates, Inc. (Epsilon) has conducted a sound level assessment of the Wild Meadows Wind Project, a 75.9 megawatt (MW) wind power generation facility proposed in Alexandria and Danbury, NH consisting of 23 Vestas V112-3.3 MW wind generators. The study included a sound-monitoring program to determine existing sound levels in the vicinity of the Project, computer modeling to predict future sound levels when the wind turbines are operational, and a comparison of the maximum operational sound levels associated with the wind turbines to relevant criteria.

Sound impacts associated with all 23 proposed wind turbine generators were modeled at 741 of the closest structures using Cadna/A noise calculation software. Maximum operational sound levels at all of the closest year-round occupied residential receptors are predicted to be equal to or less than 40 dBA. There are no federal or existing local noise regulations that apply to this project. However, the results of this sound level impact assessment show that the Project will easily comply with recent NH SEC approvals for comparable wind turbine projects in New Hampshire, (including the Lempster and Groton Wind Farms), community noise guidelines published by the World Health Organization[1], and noise guidelines put out by the US Environmental Protection Agency[2].

An evaluation was also performed to assess tonality and low frequency sound with respect to Project operation. No prominent discrete tones[3] were identified in the sound power level spectra for the Vestas V112-3.3 MW unit, or in the calculated received sound pressure levels at the closest year-round occupied residential receptor to the Project. Low frequency sound levels at all receptors are also well below the recommended criteria to avoid disturbance indoors as well as any potential vibration and rattle[4].

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[1] *"Guidelines for Community Noise,"* World Health Organization, Geneva, April 1999.

[2] *"Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety,"* U.S. Environmental Protection Agency, Office of Noise Abatement and Control, Report Number 550/9-74-004, March 1974

[3] American National Standards Institute. *"ANSI/ASA S12.9-2013: Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-term Measurements with an Observer Present."* Acoustical Society of America.

[4] O'Neal, Robert D., Hellweg Jr., Robert D., Lampeter, Richard M. *"Low Frequency Noise and Infrasound from Wind Turbines."* Noise Control Engineering Journal 59.2 (2011): 139. Print.

2.0 PROJECT OVERVIEW

Atlantic Wind LLC, a wholly owned subsidiary of Iberdrola Renewables, LLC, is proposing to install twenty-three (23) Vestas V112 3.3 MW wind turbines (or similar), with a hub height of 94 meters and a rotor diameter of 112 meters, at the proposed Wild Meadows Wind Project site (the Project) located in Alexandria and Danbury, NH. Epsilon Associates, Inc. performed background sound level monitoring to determine existing sound levels in the vicinity of the Project, computer modeling to predict future sound levels when the proposed wind turbines would be operational, and a comparison of these maximum operational sound levels to applicable criteria. The results of this analysis are presented herein.

3.0 SOUND METRICS

There are several ways in which sound levels are measured and quantified, all of which use the logarithmic decibel (dB) scale to accommodate the wide range of sound intensities found in the environment. An interesting property of the logarithmic scale is that the sound pressure levels of two distinct sounds are not directly additive. For example, if a sound of 50 dB is added to another sound of 50 dB, the total sound level is only a three-decibel increase (to 53 dB), not a doubling to 100 dB. Thus, every three dB change in sound level represents a doubling or halving of sound energy. A change in sound level of less than three dB is generally considered just perceptible to the human ear[5].

Another property of the decibel scale is that if one source of sound is 10 dB (or more) louder than another source, then the quieter source does not contribute significantly to the overall sound level which remains the same as that of the louder source. For example, the combined sound level of a source of sound at 60 dB plus another source of sound at 47 dB is simply 60 dB.

The sound level meter used to measure noise is a standardized instrument.[6] It contains "weighting networks" to adjust the frequency response of the instrument to approximate that of the human ear under various conditions. One network is the A-weighting network (there are also B- and C-weighting networks). The A-weighted scale (dBA) most closely approximates how the human ear responds to sound at various frequencies, and is typically used for community sound level measurements[7]. Sounds are frequently reported as detected with the A-weighting network of the sound level meter. A-weighted sound levels emphasize the middle frequency (*i.e.,* middle pitched – around 1,000 Hertz sounds), and de-emphasize lower and higher frequency sounds. A-weighted sound levels are reported in decibels designated as "dBA." For reference, sound pressure levels for some common indoor and outdoor environments are shown in Figure 3-1.

Two methods exist for describing sounds in our environment that vary with time: these are exceedance levels and the equivalent level, both of which are derived from a large number of moment-to-moment A-weighted sound level measurements. Several sound level metrics that are commonly reported in community sound monitoring programs are described below.

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[5] Bies, David A., and Hansen, Colin H. *Engineering Noise Control: Theory and Practice*. 4th ed. New York: Spon Press, 2009. 85. Print

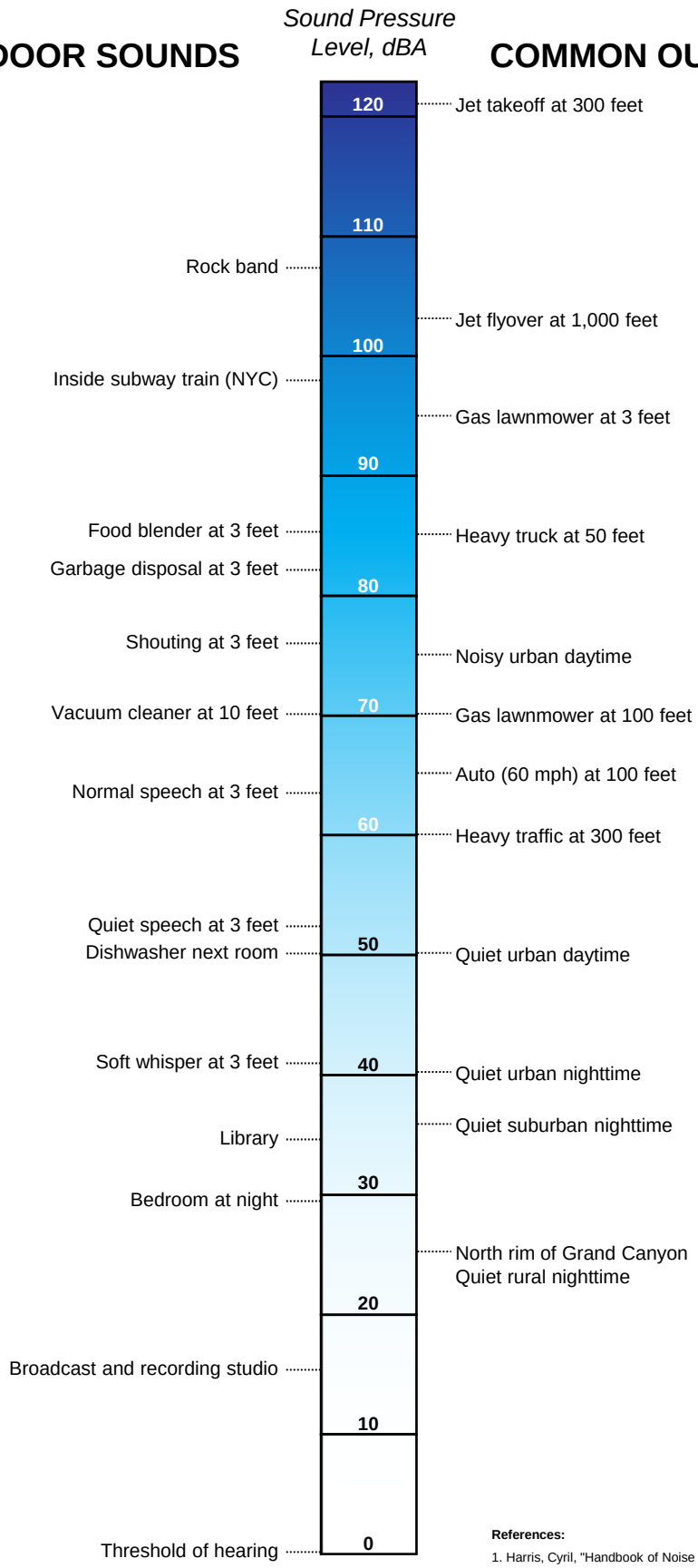
[6] American National Standards Institute. "*ANSI S1.4-1983: Specification for Sound Level Meters."* Acoustical Society of America.

[7] Bies, David A., and Hansen, Colin H. *Engineering Noise Control: Theory and Practice*. 4th ed. New York: Spon Press, 2009. 103. Print

- Exceedance levels, designated L_n, where n can have a value of 0 to 100 percent, are values from the cumulative amplitude distribution of all of the sound levels observed during a measurement period. L_{90} is the sound level in dBA exceeded 90 percent of the time during the measurement period and is close to the lowest sound level observed. It is essentially the residual sound level when there are no obvious nearby intermittent noise sources.

- L_{eq}, the equivalent level, is the level of a hypothetical steady sound that would have the same energy (*i.e.,* the same time-averaged mean square sound pressure) as the actual fluctuating sound observed. The equivalent level is designated L_{eq} and is also A-weighted. The equivalent level represents the time average of the fluctuating sound pressure, but because sound is represented on a logarithmic scale and the averaging is done with linear mean square sound pressure values, the L_{eq} is mostly determined by occasional loud noises, such as a passing vehicle or an aircraft flyover.

In short, by using various sound metrics it is possible to separate prevailing, steady sounds (the L_{90}) from occasional, louder sounds (L_{10}) in the acoustic environment or combined equivalent levels (L_{eq}).



References:

1. Harris, Cyril, "Handbook of Noise Acoustical Measurements and Noise Control", p 1-10., 1998
2. "Controlling Noise", USAF, AFMC, AFDTC, Elgin AFB, Fact Sheet, August 1996
3. California Dept. of Trans., "Technical Noise Supplement", Oct, 1998

Wild Meadows Wind Alexandria/Danbury, NH

Epsilon ASSOCIATES INC.

Figure 3-1

Common Indoor and Outdoor Sound Levels

4.0 NOISE REGULATIONS

4.1 Federal Regulations

There are no federal community noise regulations applicable to wind farms.

4.2 New Hampshire State Regulations

There are no State of New Hampshire Community noise regulations applicable to the wind farm. However, noise may be reviewed as part of the NH Site Evaluation Committee (SEC) process, which applies to any wind energy project over 30 MW or other facility that specifically requests SEC involvement. As part of the SEC approval for the Lempster (NH) Wind Farm, several noise conditions were implemented via the Agreement with the Town of Lempster. Similar conditions were subsequently adopted for the Groton (NH) Wind Farm. An overview of these conditions is provided below.

Lempster Wind – Noise conditions

1. Audible sound from the project shall not exceed 55 dBA measured at 300 feet from any existing occupied building, or at the property line if the property line is less than 300 feet from an existing occupied building for non-participating landowners.

2. Sound pressure levels shall not be exceeded for more than 3 minutes in any hour of the day, for non-participating landowners.

3. If the existing ambient sound pressure level exceeds 55 dBA, the standard shall be ambient dBA plus 5 dBA.

4. Sound from the project immediately outside any residence of a non-participating homeowner shall be limited to the greater of 45 dBA or 5 dBA above the ambient sound level, for non-participating landowners.

5. These thresholds implemented via the Town of Lempster were modified by the NH SEC to a level of 45 dBA.

Groton Wind – Noise conditions

1. Sound levels generated by the Project at the outside facades of homes should not exceed 55 dBA or 5 dBA greater than ambient, whichever is greater, in daytime and 45 dBA or 5 dBA greater than ambient, whichever is greater, at night.

2. Sound levels generated by the Project shall not exceed 40 dBA or 5 dBA greater than ambient, whichever is greater as measured within current boundaries of the Baker River Campground.

3. Any landowner may waive the noise restriction set forth in the SEC Certificate by signing a waiver of their rights, or by signing an agreement that contains provisions providing for a waiver of their rights.

4.3 Local Regulations

There are no applicable noise standards in the towns of Alexandria or Danbury, NH.

4.4 Other Criteria for Comparison

In the absence of applicable noise regulations, a useful guideline for putting sound levels in perspective is the "Guideline for Community Noise" (World Health Organization, Geneva, 1999). This document states that daytime and evening outdoor living area sound levels at a residence should not exceed an L_{eq} of 55 dBA to prevent serious annoyance and an L_{eq} of 50 dBA to prevent moderate annoyance from a steady, continuous noise. At night, sound levels at the outside facades of the living spaces should not exceed an L_{eq} of 45 dBA, so that people may sleep with bedroom windows open.

Another useful guideline for comparing sound levels is the "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety" (U.S. Environmental Protection Agency, Office of Noise Abatement and Control, Washington, DC, 550/9-74-004, March 1974). This document, often referred to as the "Levels" document, identifies an L_{dn} of 55 dBA outdoors in residential areas as the maximum level below which no effects on public health and welfare occur due to interference with speech or other activities. This level includes a 10 dBA "penalty" for sound levels at night (10 p.m. to 7 a.m.). This level will permit normal speech communication, and would also protect against sleep interference inside a home with the windows open. A constant sound level of 48.6 dBA 24 hours per day would be equal to an L_{dn} of 55 dBA.

5.0 EXISTING SOUND LEVELS

A comprehensive two-season sound level measurement program was conducted to characterize the existing acoustical environment under varying wind conditions in the vicinity of the Project. Current sound sources include: traffic on local roads and pathways, birds and other wildlife, aircraft flyovers, logging activities, residential maintenance activities, running water, rustling vegetation, wind, and insect noise (summertime only).

5.1 Sound Level Measurement Locations

The selection of the sound monitoring locations was intended to be representative of nearby residences in various directions from the wind farm. Figure 5-1 shows the proposed wind turbine layout and sound monitoring locations as well as the locations of the onsite towers, LIDAR, and ground-based weather stations overlaid upon an aerial photograph of the surrounding area. Each sound level monitoring location is described below. The coordinates for the sound level measurement locations shown in Table 5-1 were obtained by Epsilon staff in the field using a Global Positioning System (GPS) instrument with an accuracy of 3 meters or less. All distances shown are rounded to the nearest 100 feet. Two of the eight locations could not be retested during the winter program due to lack of permission from the landowner (L2 and L8).

- Location L1 – Wyman Road,
  - This location, in a clearing at the end of Wyman Road on H&H Investments, LLC property, is approximately 11,800 feet from the closest proposed wind turbine (#C8), and is representative of the residents to the west of the Project along Wyman Road.
- Location L2 – 343 Wild Meadows Road, (Summer Only)
  - This location, in a field immediately across from residence #343, setback approximately 50 feet from Wild Meadows Road, and approximately 8,800 feet from the closest proposed wind turbine (#C9), is representative of the residents to the southwest of the Project along Wild Meadows Road.
- Location L3 – Golden Valley Road
  - This location, in a field just north of Golden Valley Road, approximately 150 feet from an abandoned house on H&H Investments, LLC property, and approximately 4,200 feet from the closest proposed wind turbine (#C8), is representative of the nearest residents to the west of the Project along Wild Meadows Road.

- Location L4 – Old County Road
    - This location, along an ATV trail just off Old County Road on H&H Investments, LLC property, approximately 3,100 feet to the closest proposed wind turbine (#C9), is representative of the nearest residents to the southwest of the Project along Wild Meadows Road.
- Location L5 – Forbes Mountain Road
    - This location, at the end of Forbes Mountain Road about 10 feet due north of the H&H Investments, LLC property line marked by two rock walls, and approximately 4,300 feet to the closest proposed wind turbine (#E1), is representative of the nearest residents to the south of the Project along Forbes Mountain Road.
- Location L6 – Washburn Road
    - This location, in a clearing behind a turnout along Washburn Road on H&H Investments, LLC property, approximately 3,100 feet to the closest proposed wind turbine (#N4), is representative of the nearest residents to the north of the Project along Washburn Road.
- Location L8 – 452 Cass Mill Road, M&W Classics, LLC (Summer Only)
    - This location, in a wooded area behind the back parking lot of M&W Classics located at 452 Cass Mill Road, approximately 3,800 feet to the closest proposed wind turbine (#E8), is representative of the nearest residents to the east-northeast of the Project along Cass Mill Road.
- Location L9 – 380 Lakeview Heights, Oeschger Property
    - This location, in a wooded area along a dirt trail near the driveway of 380 Lakeview Heights, approximately 4,700 feet to the closest proposed wind turbine (#E7), is representative of the nearest residents to the east-southeast of the Project along Lakeview Heights.

G:\Projects2\NH\3364\F14_Layout\5-1.mxd

Orange

Grafton

Danbury

Alexandria

Hill

L1 L2 L3 L4 L5 L6 L8 L9

H1 H3 H6

3811 3812 3813 3814 3815 3816 3817

N1 N2 N3 N4

C1 C2 C3 C4 C5 C6 C7 C8 C9

G1 G2

E1 E2 E3 E4 E5 E6 E7 E8

Us Rt 4 · Turtle Hill Rd · Burnt Hill Rd · Private · Height Of Land Rd · Razor Hill Rd · Durgan Ln · Orange Pond Rd · Millbrook Rd · River Rd · Brook Hill Rd · Sleeper Rd · Razor Hill Rd · Skyline Trl · Wyman Rd · Church Hill Rd · Grafton Rd · Tunnel Rd · Northwood Estates Dr · Turnpike Rd · Bullocks Crossing Rd · Chery Hill Rd · Gifford Hill Rd · French Hill Rd · Wild Meadow Rd · Hodge Rd · Sargent Hill Rd · Lisby Ln · Ford Mill Rd · North Rdl · Brad Chase Rd · Private Aspen Ln · Hemlock Ln · Bohonnon Rd · Forbes Mountain Rd · Wild Meadow Rd · Millston Rd · Washburn Rd · Thomas Rd · Braley Hill Rd · Sargent Rd · Cole Hill Rd · Mount Cardigan Rd · Fowler River Rd · Fairview Ln · Gale Rd · North Rd · Washburn Rd · Bog Rd · Town Pound Rd · Private · Cass Mill Rd · Cross Rd · Private · Smith River Rd · Private · Poor Farm Rd · Ragged Mtn Hwy · Corliss Rd · Smith River Rd · Borough Rd · Cass Mill Rd

LEGEND

- Turbine (9/3/2013 Proposed Layout F14)
- Sound Level Monitoring Location
- 2m Weather Station
- On-site Met Tower
- On-site LIDAR Station

Receptors

- Residence/Permanent
- Periodically Occupied Residence/Seasonal
- Other Structure/Non-Residential/Unknown

Town Boundary

Scale 1:39,000
1 inch = 3,250 feet

0 1,625 3,250 Feet

Basemap: 2011 Aerial Imagery, ESRI

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Wild Meadows Wind Project **Alexandria and Danbury, NH**

Epsilon Associates Inc.

Figure 5-1: Aerial Locus

Sound Level Monitoring Locations

Table 5-1 Sound Level Measurement Locations NAD 1983 UTM Zone 11N [m])

Location	Easting	Northing
Location L1 – Wyman Road	265217	4831587
Location L2 – Wild Meadows Road (Summer Only)	265053	4828927
Location L3 – Golden Valley Road	267169	4830208
Location L4 – Old County Road	266940	4828316
Location L5 – Forbes Mountain Road	270036	4828364
Location L6 – Washburn Road	270242	4832684
Location L8 – Cass Mill Road (Summer Only)	273306	4830859
Location L9 – Lakeview Heights	273023	4829133

5.2 Sound Measurement Methodology

During the summertime monitoring program, approximately 20 days (480 hours) of ambient sound level measurements were collected between Tuesday, July 3, 2012 and Sunday, July 22, 2012. Continuous broadband (A-weighted) sound level measurements were made at all eight locations (L1, L2, L3, L4, L5, L6, L8, L9), with 1/3 octave-band sound level statistics collected at two locations (L3 and L5). Ground-level wind speeds were continuously measured and logged at three locations (H1, H3, and H6), with temperature, relative humidity, and precipitation collected at one location (H3), as shown in Figure 5-1. Field personnel checked on the integrity of the equipment during the first night, first day, and last day of monitoring, and during an interim field visit on July 11, 2012. An onsite LIDAR station with range gates every 10 meters also measured and logged hub height wind speeds during the sound level measurement period. Meteorological data from the nearby Lebanon Municipal Airport National Weather Service (NWS) station were also archived for the duration of the measurement period. These data are included in Appendix C.

During the wintertime monitoring program, approximately 23 days (550 hours) of ambient sound level measurements were collected between Monday, December 3, 2012 and Wednesday, December 26, 2012. Continuous broadband (A-weighted) sound level measurements were made at six locations (L1, L3, L4, L5, L6, L9), with 1/3 octave-band sound level statistics collected at three locations (L3, L5, and L9). Ground-level wind speeds were continuously measured and logged at two locations (H1 and H3) as shown in Figure 5-1. Field personnel checked on the integrity of the equipment during the first and last day of monitoring, as well as during an interim field visit on December 12, 2012. Onsite meteorological towers measured and logged wind speeds at 90 meters AGL every 10 minutes through December 16th, 2012 (no hub height wind speed data available after this

date). The onsite LIDAR station was non-operational during the measurement period. Meteorological data from the nearby Lebanon Municipal Airport National Weather Service (NWS) station were also archived for the duration of the measurement period. These data are included in Appendix C.

5.3 Sound Level Measurement Equipment

During the summertime measurement program, two Larson-Davis (LD) model 831 Sound Level Analyzers, equipped with an LD Type 1 Preamplifier, an LD 377B20 half-inch microphone, and an environmental protection kit were used to collect continuous A-weighted (dBA) and one-third octave-band ambient sound pressure level data at Locations L3 and L5. Six Larson Davis Model 820 sound level meters were used for the continuous A-weighted (dBA) ambient monitoring at Locations L1, L2, L4, L6, L8 and L9.

During the wintertime measurement program, three Larson-Davis (LD) model 831 Sound Level Analyzers, equipped with an LD Type 1 Preamplifier, an LD 377B20 half-inch microphone, and an environmental protection kit were used to collect continuous A-weighted (dBA) and one-third octave-band ambient sound pressure level data at Locations L3, L5, and L9. Three Larson Davis Model 820 sound level meters were used for the continuous A-weighted (dBA) ambient monitoring at Locations L1, L4, and L6.

All meters meet Type 1 ANSI S1.4-1983 standards for sound level meters and were calibrated and certified as accurate to standards set by the National Institute of Standards and Technology. These calibrations were conducted by an independent laboratory within the previous 12 months. All measurement equipment was also calibrated in the field before and after the surveys with the manufacturer's acoustical calibrator which meets the standards of IEC 942 Class 1L and ANSI S1.40-1984. Each meter was tripod-mounted at a height of five feet above ground level and programmed to log L_1, L_{10}, L_{50}, L_{90}, L_{max}, L_{min}, and L_{eq} statistical data every ten minutes with a one-minute time history ("fast" response). All sound equipment operated normally throughout the entire measurement period.

Ground level wind speed and direction were measured using HOBO H21-002 micro-weather stations (manufactured by Onset Computer Corporation) with tripod and data logger. The wind sensors were mounted at an approximate height of 6 feet 6 inches (2 meters) above ground level and data were logged continuously every 10 minutes. This wind instrument has a measurement range of 0 to 44 m/s (99 mph) and an accuracy of +/- 0.5 m/s (1.1 mph). The starting threshold is 0.5 m/s (1.1 mph). The wind direction measurement range is 0 to 358 degrees (2-degree dead band), with an accuracy of +/- 5 degrees.

5.4 Measured Sound Levels

The ANSI S12.18-1994 "Procedures for Outdoor Measurement of Sound Pressure Level"[8] methodology includes guidance on how to measure sound pressure levels outdoors, measurement of meteorological variables, and equipment specifications. This program followed "METHOD #1 – General method for routine measurements." One key parameter for METHOD 1 is that no sound level measurement shall be made when the average wind velocity exceeds 5 m/s (11.2 mph) at a height of 2+/- 0.2 meters above ground level. In addition, this method does not allow precipitation during measurements. The data collected during each measurement program were evaluated against these and other conditions, and any time periods that did not meet these criteria were discarded.

Worst-case reference sound data for the Vestas V112-3.3 unit (see Section 7 of this report) indicates that wind speeds at or above 7 m/s at 10 meters AGL will produce the highest sound level output from the turbines. This corresponds to hub height wind speeds at or above 10 m/s (22 mph) at 90m AGL assuming the following logarithmic profile specified by the International Electrotechnical Commission (IEC) standard IEC 61400-11, Wind Turbine Generator Systems-Part 11; Acoustic Noise Measurement Techniques:

$$V_s = V_z \left[\frac{\ln\left(\frac{z_{ref}}{z_{0ref}}\right)\ln\left(\frac{H}{z_0}\right)}{\ln\left(\frac{H}{z_{0ref}}\right)\ln\left(\frac{z}{z_0}\right)} \right]$$

where,

V_S is the wind speed at a reference height of 10m;
V_z is the wind speed at height z;
z_{0ref} is the reference roughness length of 0.05 m;
z_0 is the roughness length;
H is the rotor center height;
z_{ref} is the reference height, 10 m;
z is the anemometer height

Sound levels captured during both measurement programs corresponded to periods when ground-level winds were generally light (below 5m/s); however there were approximately 30 summertime hours and 90 wintertime hours (depending on location) during which

8 American National Standard, ANSI S12.18-1994, Acoustical Society of America

elevated wind speeds at 90 meters corresponded to these maximum turbine sound emissions. It should be noted that while the onsite wind speed data was provided at a height of 90 meters, the proposed Vestas V112-3.3 turbines will have a hub height of 94 meters. However, to avoid introducing greater uncertainty by scaling wind speeds from 90 meters to 94 meters, and with the difference being very small, 90 meter data were considered to represent wind speeds at approximately hub height.

5.4.1 Summertime Ambient Measurement Program (July 2012)

Several weather events were recorded during the 20-day (480 hours) measurement program by the "H3" HOBO weather station, which resulted in short-term increases in sound levels. These periods were excluded from the analysis, as per the measurement protocol specified in ANSI S12.18-1994: "Procedures for Outdoor Measurement of Sound Pressure Level," (§4.4.1.2). Epsilon technicians noted increased sound levels due to water falling through tree leaves up to one hour after a given rain event. To be conservative, each period of noted precipitation along with the two hours following were excluded from this analysis, totaling approximately 27 hours. Additionally, periods with hub height wind speeds below the cut-in of3 m/s (29 hours) as recorded by the onsite LIDAR station at 90 meters, periods when the onsite LIDAR station had a data recovery rate less of than 50% (78 hours), and periods contaminated by sound from the technician (1 hour) were removed. There were no periods with ground level wind speeds higher than 5 m/s to exclude from the analysis, per ANSI S12.18-1994.

After evaluating the data collected in July, 2012 against all relevant criteria, over 14 days (approximately 350 hours) of valid data remained. The range of valid ambient sound level data from the summertime measurement program are summarized in Table 5-2, and presented graphically along with hub height and ground level wind speeds in Figures A1 through A8 of Appendix A. The resultant data were also graphed using a scatter plot technique for each of the eight ambient measurement locations in Figures A9 through A16 of Appendix A. Each scatter plot is superimposed with a best-fit linear trend line (with equation and R^2 value shown) suggesting that the data do not show a strong correlation between sound level and hub height wind speed.

Table 5-2 Summary of Summertime Ambient Sound Levels (July 2012)

Monitoring Location	Min L_{eq} (dBA)	Max L_{eq} (dBA)	Median L_{eq} (dBA)	Average L_{eq} (dBA)	Min L_{90} (dBA)	Max L_{90} (dBA)	Median L_{90} (dBA)	Average L_{90} (dBA)
L1	19	57	32	32	19	44	25	26
L2	19	66	38	36	18	50	29	29
L3	16	66	33	32	14	51	25	26
L4	20	58	34	33	19	43	26	27
L5	19	65	32	32	17	46	25	26
L6	26	63	37	37	25	45	32	32
L8	24	60	36	35	22	46	29	29
L9	19	66	33	32	18	45	24	25
Average	**20**	**63**	**34**	**34**	**19**	**46**	**27**	**27**

5.4.2 Wintertime Ambient Measurement Program (December 2012)

Several weather events were recorded during the 23-day (552 hours) measurement program by the "H3" HOBO weather station, which resulted in short-term increases in sound levels. These periods were excluded from the analysis, as per the measurement protocol specified in ANSI S12.18-1994: "Procedures for Outdoor Measurement of Sound Pressure Level," (§4.4.1.2). Each period of noted precipitation were excluded from this analysis, totaling approximately 29 hours. Additionally, periods with hub height wind speeds below the cut-in of 3 m/s (10 hours) as recorded by the onsite meteorological tower at 90 meters, periods when the onsite meteorological tower was not operational due to icing (280 hours), and periods contaminated by sound from the technician (1 hour) were removed. There were 3 hours with ground level wind speeds higher than 5 m/s excluded from the analysis, per ANSI S12.18-1994.

After evaluating the data collected in December, 2012 against all relevant criteria, approximately 10 days (250 hours) of valid data remained. The range of valid ambient sound level data from the wintertime measurement program are summarized in Table 5-3, and presented graphically along with hub height and ground level wind speeds in Figures B1 through B6 of Appendix B. The resultant data were also graphed using a scatter plot technique for each of the six ambient measurement locations in Figures B7 through B12 of Appendix B. Each scatter plot is superimposed with a best-fit linear trend-line (with equation and R^2 value shown) suggesting that the data do show a moderately weak correlation between sound level and hub height wind speed.

Table 5-3 Summary of Wintertime Ambient Sound Levels (December 2012)

Monitoring Location	Min L_{eq} (dBA)	Max L_{eq} (dBA)	Median L_{eq} (dBA)	Average L_{eq} (dBA)	Min L_{90} (dBA)	Max L_{90} (dBA)	Median L_{90} (dBA)	Average L_{90} (dBA)
L1	21	63	30	31	20	56	26	27
L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
L3	24	54	33	34	23	46	31	31
L4	27	64	35	35	26	57	31	32
L5	18	60	32	33	18	53	27	28
L6	35	62	41	42	34	56	40	40
L8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
L9	25	63	32	33	24	61	30	31
Average	**25**	**61**	**34**	**35**	**24**	**55**	**31**	**32**

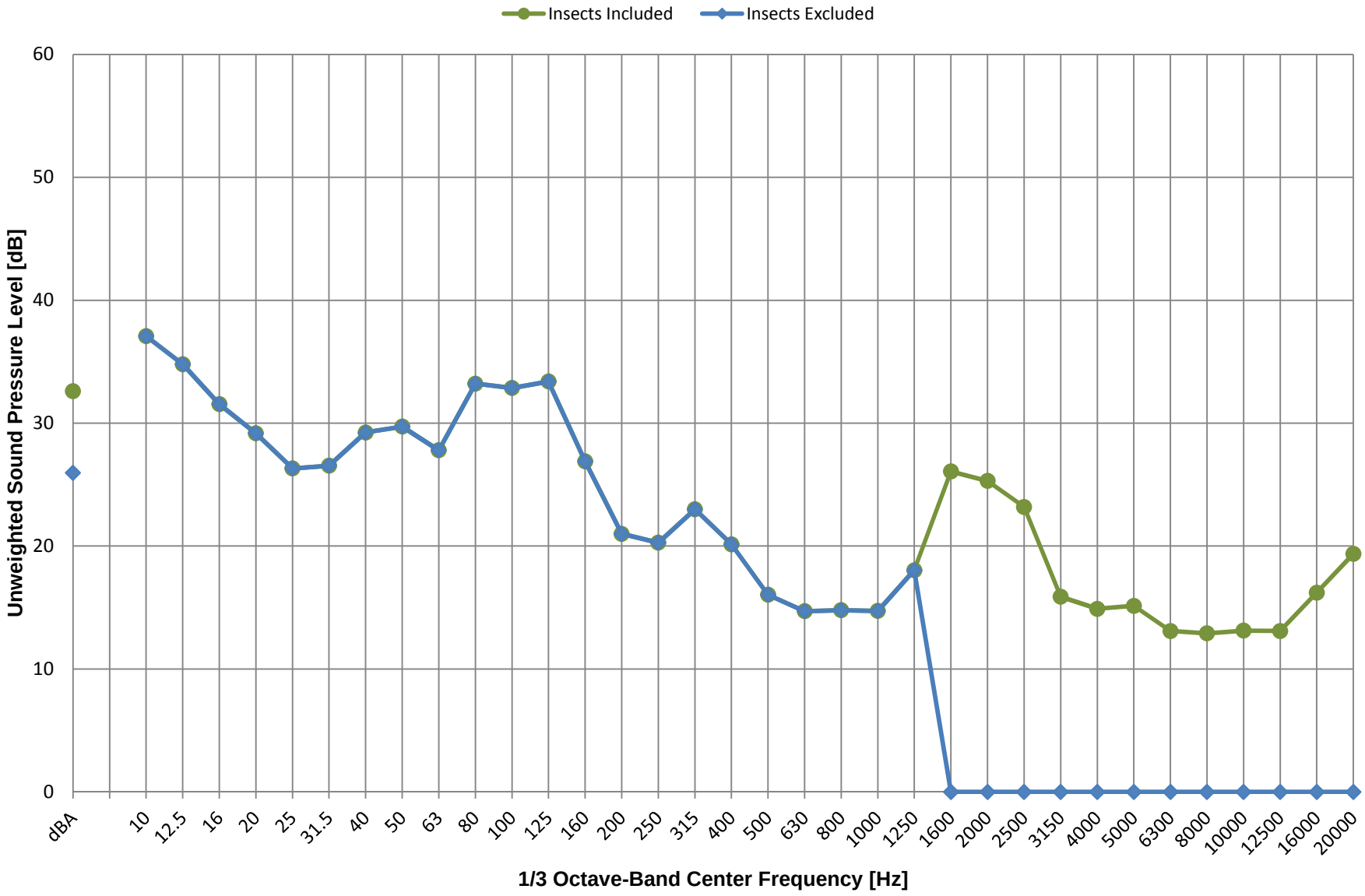
5.5 Insect Noise

During the winter, insects (crickets) are not a contributor to background sound levels. During the summer, however, there are times when insects cause a noticeable increase in broadband (A-weighted) sound levels. Sound from insects is a normal part of the background in this area for many months of the year, and therefore is included in the ambient sound levels. Figure 5-2 presents one-third octave-band data collected at Location 3 during an early evening period on July 7, 2012 (21:10 – 21:20) when insect noise was evident around 2,500 Hertz. In order to understand what effect cricket noise has on the background, the high-frequency energy associated with insects in general were

mathematically removed using the method of Schomer et al.[9] This technique removes all sound energy above the 1250 Hertz level. Applying this to the example shown in Figure 5-2 illustrates that the presence of insects caused an increase of approximately 5 -10 dBA at this location and time. It is important to understand that insects were not present throughout the entire survey and that there were in fact many instances of sound levels in the lowest 20 to 25 dBA range which were not influenced by crickets.

[9] Schomer, Paul D, Ian M. Slauch, George F. Hessler. *"Proposed "Ai"-Weighting; a weighting to remove insect noise from A-weighted field measurements."* INTER-NOISE 2010, Lisbon, Portugal.

Figure 5-2
Insect Contribution to A-Weighted Sound Pressure Levels
Location L3 - July 7, 2012 (21:10 - 21:20)



6.0 FUTURE CONDITIONS

6.1 Equipment and Operating Conditions

The twenty-three (23) 3.3 MW wind turbines proposed for the Wild Meadows Wind Project are Vestas V112-3.3 wind generators. Each three-bladed wind turbine will have a rotor diameter of 112 meters and a hub height of 94 meters. Table 6-1 shows the manufacturer-provided broadband sound power level with respect to wind speed for the 3.3 MW unit used as input to the model. Under peak sound-producing operating conditions, each turbine has an A-weighted sound power level of 106.5 dBA plus an uncertainty factor of 2.0 dBA, as provided by the manufacturer. Octave-band sound power levels for the V112-3.3, calculated from one-third octave-band data provided by the manufacturer, are presented in Table 6-2 for wind speeds of 10 m/s at 10 meters, corresponding to the maximum A-weighted sound power level output.

Table 6-1 Sound Power Level[1] as a Function of Wind Speed

	Wind Speed at Reference Height of 10m AGL (m/s)							
	3	4	5	6	7	8	9	10
Sound Power Level (dBA)	94.4	97.2	100.8	104.4	106.5	106.5	106.5	**106.5**

1. A-weighted sound power levels for V112-3.3 MW unit provided by Vestas, not including 2dBA uncertainty factor.

Table 6-2 Octave-Band Sound Power Levels[1]

31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
82.2	90.3	93.8	96.0	99.0	101.5	100.6	95.2	82.9

1. Octave-band sound power levels for V112-3.3 MW unit provided by Vestas at wind speeds of 10 m/s referenced to 10m AGL, not including uncertainty factor.

6.2 Modeling Methodology

Sound impacts associated with the proposed wind turbine generators were predicted using Cadna/A noise calculation software (DataKustik Corporation, 2005). This software, which implements the ISO 9613-2 international standard for sound propagation (Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation), offers a refined set of computations accounting for local topography, ground attenuation, drop-off with distance, barrier shielding, and atmospheric absorption of sound from multiple sound sources.

Inputs and significant parameters employed in the model are described below:

- *Project Layout:* A project layout comprised of a total of 23 wind turbine locations was provided by Atlantic Wind along with a shapefile detailing leased land parcels for use as input in the model.

- *Sensitive Receptors:* A shapefile of 741 structures was provided by Atlantic Wind and used as input to the model. All receptors were modeled with a height of 1.5 meters AGL to mimic the ears of a typical standing observer. These structures include abandoned buildings, outbuildings such as barns and garages, as well as camps, seasonal residences and year-round residences.

- *Terrain Elevation:* Elevation contours for the modeling domain were directly imported into Cadna/A which allowed for consideration of terrain shielding where appropriate. These contours were generated from elevation information derived from the National Elevation Database (NED) developed by the U.S. Geological Survey. This database has a 5 meter contour resolution.

- *Source Sound Levels & Controls:* Manufacturer-provided octave-band sound power levels for the Vestas V112-3.3 MW unit, presented above in Table 6-2, were used as input in the model. These levels represent maximum operational sound level emissions corresponding to wind speeds of 10 m/s referenced to 10m AGL.

- *Meteorological Conditions:* A temperature of 10ºC (50ºF) and a relative humidity of 70% was assumed in the model.

- *Ground Attenuation:* Spectral ground absorption was calculated using a G-factor of 0.5 to represent a moderately reflective surface.

Sound levels due to the operation of all 23 wind turbines were modeled with a sound power level of 106.5 + 2.0 dBA at 741 of the closest structures. In addition to these specific locations, sound levels were also modeled across a large grid of receptor points, spaced 100 meters apart, to create sound level isopleths across the entire Project area.

Several modeling assumptions inherent in the ISO 9613-2 calculation methodology, or selected as conditional inputs by the user, were implemented in the Cadna/A model to ensure conservative results (i.e., higher sound levels), and are described below:

- Modeled source sound power level inputs represent acoustic emissions measured in accordance with IEC 61400-11 corresponding to maximum sound power output, plus an additional manufacturer-provided uncertainty factor

- All modeled sources were assumed to be operating simultaneously and at the design wind speed corresponding to maximum sound power emissions.

- Predicted sound levels were computed with the assumption that each receptor was always located directly downwind from every turbine simultaneously. While a physical impossibility, this provides conservative results and is required by the ISO 9613-2 standard.

- As per ISO 9613-2, the model assumed favorable conditions for sound propagation, corresponding to a moderate, well-developed ground-based temperature inversion, as might occur on a calm, clear night.

- A mixture of hard and porous ground was assumed for the surrounding Project area to represent a surface that is partially reflective, a conservative assumption for much of the year when the ground would be covered in vegetation.

- Meteorological conditions assumed in the model (T = 10°C/RH = 70%) were selected to minimize atmospheric attenuation in the 500 Hz and 1 kHz octave-bands where the human ear is most sensitive.

- No additional attenuation due to tree shielding, air turbulence, or wind shadow effects was considered in the model.

6.3 Modeling Sound Level Results

Modeling results representing worst-case operational sound levels are illustrated in Figure 6-1 as iso-dBA contour lines overlaid on aerial imagery of the Project site. Results, ranging from 14 to 45 dBA are also presented in tabular form in Appendix D at all 741 discrete modeling receptors representing the closest structures to the Project. These predicted sound levels are "Project-only" and do not include any contributions from existing background sound sources.

G:\Projects2\NH\3364\F14_Layout\6-1_v2.mxd

Orange
Grafton
Alexandria
Danbury
Hill

Us Rt 4
Turtle Hill Rd
Private
Burnt Hill Rd
Height Of Land Rd
Razor Hill Rd
Durgan Ln
Orange Pond Rd
Millbrook Rd
River Rd
Brook Hill Rd
Sleeper Rd
Razor Hill Rd
Skyline Trl
Wyman Rd
Church Hill Rd
Grafton Rd
Washburn Rd
Thomas Rd
Cole Hill Rd
Mount Cardigan Rd
Gale Rd
Fowler River Rd
Fairview Ln
North Rd
Sargent Rd
Washburn Rd
Bog Rd
Town Pound Rd
Braley Hill Rd
Private
Cass Mill Rd
Northwood Estates Dr
Tunnel Rd
Turnpike Rd
Bullocks Crossing Rd
Gifford Hill Rd
French Hill Rd
Golden Valley Rd
Wild Meadow Rd
Cherry Hill Rd
Main St
Forbes Mountain Rd
Sargent Hill Rd
Hodge Rd
North Rd
Brad Chase Rd
Lisby Ln
Ford Mill Rd
Private Aspen Ln
Hemlock Ln
Bohonnon Rd
Millston
Poor Farm Rd
Ragged Mtn Hwy
Coriss Rd
Smith River Rd
Borough Rd
Cross Rd
Private
Private
Smith River Rd
Cass Mill Rd

N1 N2 N3 N4
C1 C2 C3 C4 C5 C6 C7 C8 C9
G1 G2
E1 E2 E3 E4 E5 E6 E7 E8

LEGEND

- Turbine (9/3/2013 Proposed Layout F14)

Receptors

- Residence/Permanent
- Periodically Occupied Residence/Seasonal
- Other Structure/Non-Residential/Unknown
- Town Boundary

Sound Level Contours (dBA)

- 30
- 40
- 50
- 35
- 45

Scale 1:39,000
1 inch = 3,250 feet

0 1,625 3,250 Feet

Basemap: 2011 Aerial Imagery, ESRI

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Wild Meadows Wind Project **Alexandria and Danbury, NH**

Epsilon Associates Inc.

Figure 6-1: Predicted Project-Only Sound Levels
Vestas V112-3.3 (94m HH)

7.0 EVALUATION OF SOUND LEVELS

7.1 NH SEC Criteria

As discussed in section 4.0, there are no State of New Hampshire community noise regulations applicable to the wind farm. Noise may be reviewed as part of the NH SEC process. As part of the SEC approval for the Lempster (NH) and Groton (NH) Wind Farms, several noise conditions were implemented. The most stringent of these was a limit of 45 dBA at the exterior of an inhabited residence.

A review of Figure 6-1 shows that the closest structure within the site (#53) will be approximately 45 dBA, though this structure is only periodically occupied, and is a summer camp of a participating landowner. At all year-round occupied residential receptors, the predicted worst-case sound levels from the Wild Meadows Wind Project will be at or below 40 dBA. Therefore, the Wild Meadows Wind Project will meet the noise criteria applied to the Lempster and Groton wind projects.

7.2 World Health Organization Guidelines

In the absence of applicable noise regulations, a useful guideline for putting sound levels in perspective is the "Guideline for Community Noise" (World Health Organization, Geneva, 1999). Daytime and evening outdoor living area sound levels at a residence should not exceed an L_{eq} of 55 dBA to prevent serious annoyance and an L_{eq} of 50 dBA to prevent moderate annoyance from a steady, continuous noise. At night, sound levels at the outside facades of living spaces should not exceed an L_{eq} of 45 dBA, so that people may sleep with bedroom windows open. This translates to an indoor guideline value for bedrooms of 30 dBA L_{eq} for a continuous noise. All year-round occupied residential structures will be well below 45 dBA for exterior sound from the Wild Meadows Wind Project.

7.3 Pure-Tone Considerations

An evaluation of the maximum one-third octave-band sound power levels (corresponding to wind speeds of 10 m/s at 10 meters AGL) for the Vestas V112-3.3 model is presented in Table 7-1, indicating that no prominent discrete tones shall be emitted, per ANSI/ASA S12.9-2013/PART 3, Annex B.

Table 7-1 Tonal Analysis & Compliance Evaluation: Sound Power Level Emissions

One-Third Octave-band Center Frequency (Hz)	Sound Power Level[1] (dB)	Average Sound Power Level of Contiguous Bands (dB)	Difference between Sound Power Level and Contiguous Average[2] (dB)	Tonal Limit (dB)	Meets Tonal Limit?[3]
25	117.9	-	-	-	-
32	116.0	116.3	0	15	Yes
40	114.6	114.1	1	15	Yes
50	112.2	113.4	-1	15	Yes
63	112.1	111.0	1	15	Yes
80	109.7	109.9	0	15	Yes
100	107.7	107.9	0	15	Yes
125	106.0	104.9	1	15	Yes
160	102.0	103.1	-1	8	Yes
200	100.2	101.4	-1	8	Yes
250	100.7	99.3	1	8	Yes
315	98.3	99.0	-1	8	Yes
400	97.2	97.7	-1	8	Yes
500	97.1	97.4	0	5	Yes
630	97.6	96.8	1	5	Yes
800	96.5	97.3	-1	5	Yes
1000	96.9	96.7	0	5	Yes
1250	96.8	96.5	0	5	Yes
1600	96.0	95.7	0	5	Yes
2000	94.6	94.6	0	5	Yes
2500	93.1	93.0	0	5	Yes
3150	91.3	91.3	0	5	Yes
4000	89.5	88.3	1	5	Yes
5000	85.3	85.3	0	5	Yes
6300	81.1	81.6	-1	5	Yes
8000	77.9	78.6	-1	5	Yes
10000	76.0	-	-	-	-

1. One-third octave-band sound power level for Vestas V112-3.3 MW turbine at wind speeds of 10m/s at 10 meters
2. Rounded to the nearest whole number decibel
3. Compliance evaluation of prominent discrete tone criteria per ANSI/ASA S12.9-2013/PART 3, Annex B

Additionally, one-third octave-band received sound pressure levels were calculated at the closest year-round occupied residential receptor (#63) to a turbine, accounting for geometric divergence and atmospheric absorption, at a distance of approximately 3,870 feet (1,180 meters). Results presented in Table 7-2 show that received sound levels due to the Project are not expected to result in any prominent discrete tones, per ANSI/ASA S12.9-2013/PART 3, Annex B.

Table 7-2 Tonal Analysis & Compliance Evaluation: Received Sound Pressure Levels—Receptor ID #63

One-Third Octave-band Center Frequency (Hz)	Received Sound Pressure Level[1] (dB)	Average Sound Pressure Level of Contiguous Bands (dB)	Difference between Sound Pressure Level and Contiguous Average[2] (dB)	Tonal Limit (dB)	Meets Tonal Limit?[3]
25	48.5	-	-	-	-
32	46.6	46.8	0	15	Yes
40	45.1	44.6	1	15	Yes
50	42.7	43.8	-1	15	Yes
63	42.5	41.4	1	15	Yes
80	40.1	40.3	0	15	Yes
100	38.0	38.1	0	15	Yes
125	36.2	35.0	1	15	Yes
160	31.9	33.0	-1	8	Yes
200	29.8	31.0	-1	8	Yes
250	30.0	28.5	1	8	Yes
315	27.1	27.7	-1	8	Yes
400	25.4	25.9	0	8	Yes
500	24.6	25.0	0	5	Yes
630	24.5	23.6	1	5	Yes
800	22.6	23.3	-1	5	Yes
1000	22.1	21.7	0	5	Yes
1250	20.7	20.1	1	5	Yes
1600	18.1	17.7	0	5	Yes
2000	14.6	14.4	0	5	Yes
2500	10.7	8.6	2	5	Yes
3150	2.5	5.3	-3	5	Yes
4000	0.0	1.2	-1	5	Yes
5000	0.0	0.0	0	5	Yes
6300	0.0	0.0	0	5	Yes
8000	0.0	0.0	0	5	Yes
10000	0.0	-	-	-	-

1. Calculated sound pressure level due to a single turbine at a distance of 3,870 feet, based on Vestas V112-3.3 one-third octave-band sound power level for wind speeds of 10 m/s at 10 meters
2. Rounded to the nearest whole number decibel
3. Compliance evaluation of prominent discrete tone criteria per ANSI/ASA S12.9-2013/PART 3, Annex B

7.4 Low Frequency Sound

Table 7-3 compares predicted Project-only sound levels in the 32, 63 and 125 Hz octave-bands to the equivalent outdoor sound pressure levels corresponding to the NC-30 noise criteria curve recommended for bedrooms and to levels associated with "moderately perceptible vibration and rattle."[10] Results indicate that of the ten residential locations of greatest potential Project impact, predicted sound levels are well below both relevant criteria, indicating that no low-frequency sound impacts are expected.

Table 7-3 Predicted Worst-Case Low Frequency Sound Levels

Modeling Receptor ID	Structure	Sound Pressure Level (dB)		
		31.5 Hz	63 Hz	125 Hz
		(dB)	(dB)	(dB)
63	Residence	63	58	47
178	Residence	61	56	45
49	Residence	62	57	46
51	Residence	62	56	45
164	Residence	62	56	45
33	Residence	62	56	45
61	Residence	61	56	45
28	Residence	62	56	45
30	Residence	61	56	45
60	Residence	61	56	45
NC-30 Equivalent Outdoor Sound Pressure Levels		74	66	57
Equivalent Outdoor Sound Pressure Levels for Moderately Perceptible Vibration & Rattle		71	79	NA

[10] O'Neal, Robert D., Hellweg Jr., Robert D., Lampeter, Richard M. "Low Frequency Noise and Infrasound from Wind Turbines." Noise Control Engineering Journal 59.2 (2011): 139. Print.

8.0 CONCLUSIONS

A comprehensive sound level assessment was conducted for the Wild Meadows Wind Project. Baseline sound levels were measured to characterize the existing background sound levels within the area. Turbine-only sound levels were then predicted throughout the entire wind farm, and off-site, so as to determine the future sound levels expected under worst-case operations.

Results of this analysis indicate that even with conservative assumptions, the predicted sound levels at each of the 741 modeled receptors are expected to be less than 40 dBA at all non-participating year-round occupied residential structures. These sound levels are expected to meet previously approved noise conditions from the NH SEC, the World Health Organization's 45-dBA nighttime guideline for residential locations, and the US EPA guideline of 48.6 dBA which is equal to an L_{dn} of 55 dBA. Additionally, no prominent discrete tones were identified in the Vestas V112-3.3 sound power level spectra, or in the calculated received sound pressure levels at the closest receptor. Low frequency sound levels at the closest receptors to the Project are well below the recommended criteria to avoid disturbance, vibration, and rattle indoors.

9.0 REFERENCES

1. *"Guidelines for Community Noise,"* World Health Organization, Geneva, April 1999.

2. *"Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety,"* U.S. Environmental Protection Agency, Office of Noise Abatement and Control, Report Number 550/9-74-004, March 1974

3. Bies, David A., and Hansen, Colin H. *"Engineering Noise Control: Theory and Practice."* 4th ed. New York: Spon Press, 2009. Print

4. Schomer, Paul D, Ian M. Slauch, George F. Hessler. *"Proposed "Ai"-Weighting; a weighting to remove insect noise from A-weighted field measurements."* INTER-NOISE 2010. Lisbon, Portugal.

5. O'Neal, Robert D., Hellweg Jr., Robert D., Lampeter, Richard M. *"Low Frequency Noise and Infrasound from Wind Turbines."* Noise Control Engineering Journal 59.2 (2011). Print.

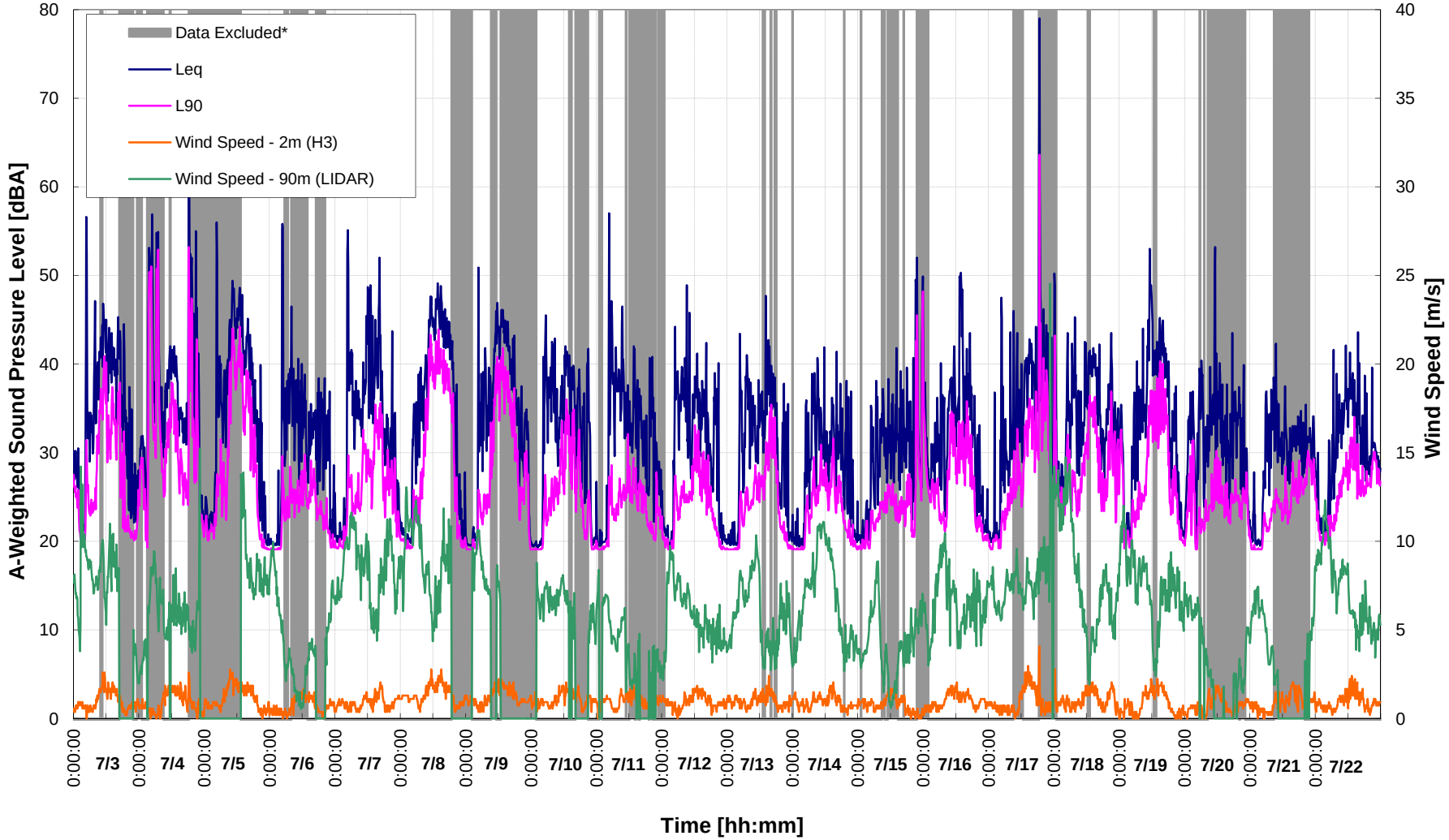
6. American National Standards Institute. *"ANSI S1.4-1983: Specification for Sound Level Meters."* Acoustical Society of America.

7. American National Standards Institute. *"ANSI S12.18-1994: Outdoor Measurement of Sound Pressure Level."* Acoustical Society of America.

8. American National Standards Institute. *"ANSI/ASA S12.9-2013: Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-term Measurements with an Observer Present."* Acoustical Society of America.

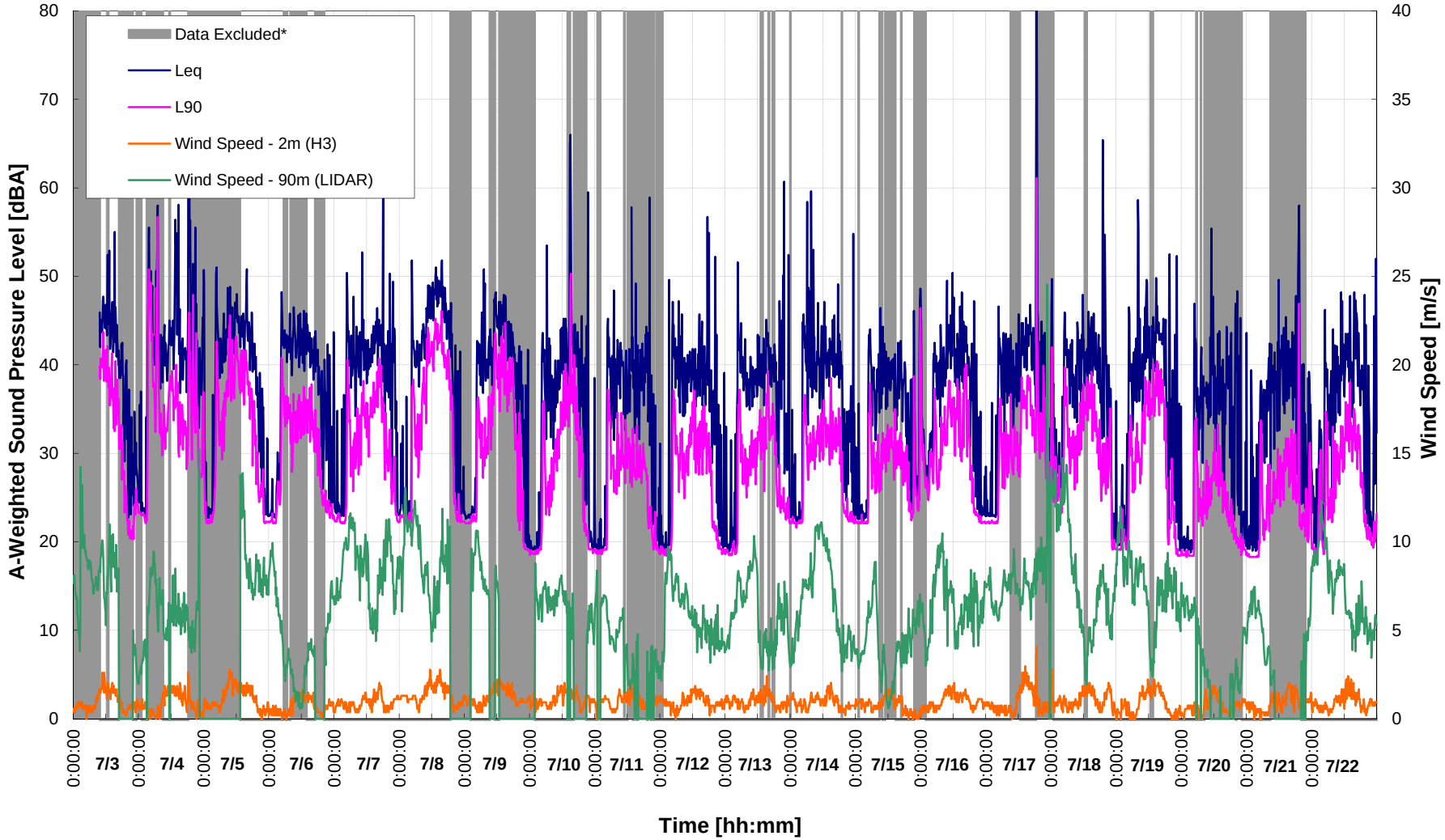
Appendix A
Sound Level Measurement Data – July 2012

Figure A1
A-Weighted Sound Pressure Levels & Wind Speeds - Location L1
Tuesday, July 3, 2012 through Sunday, July 22, 2012



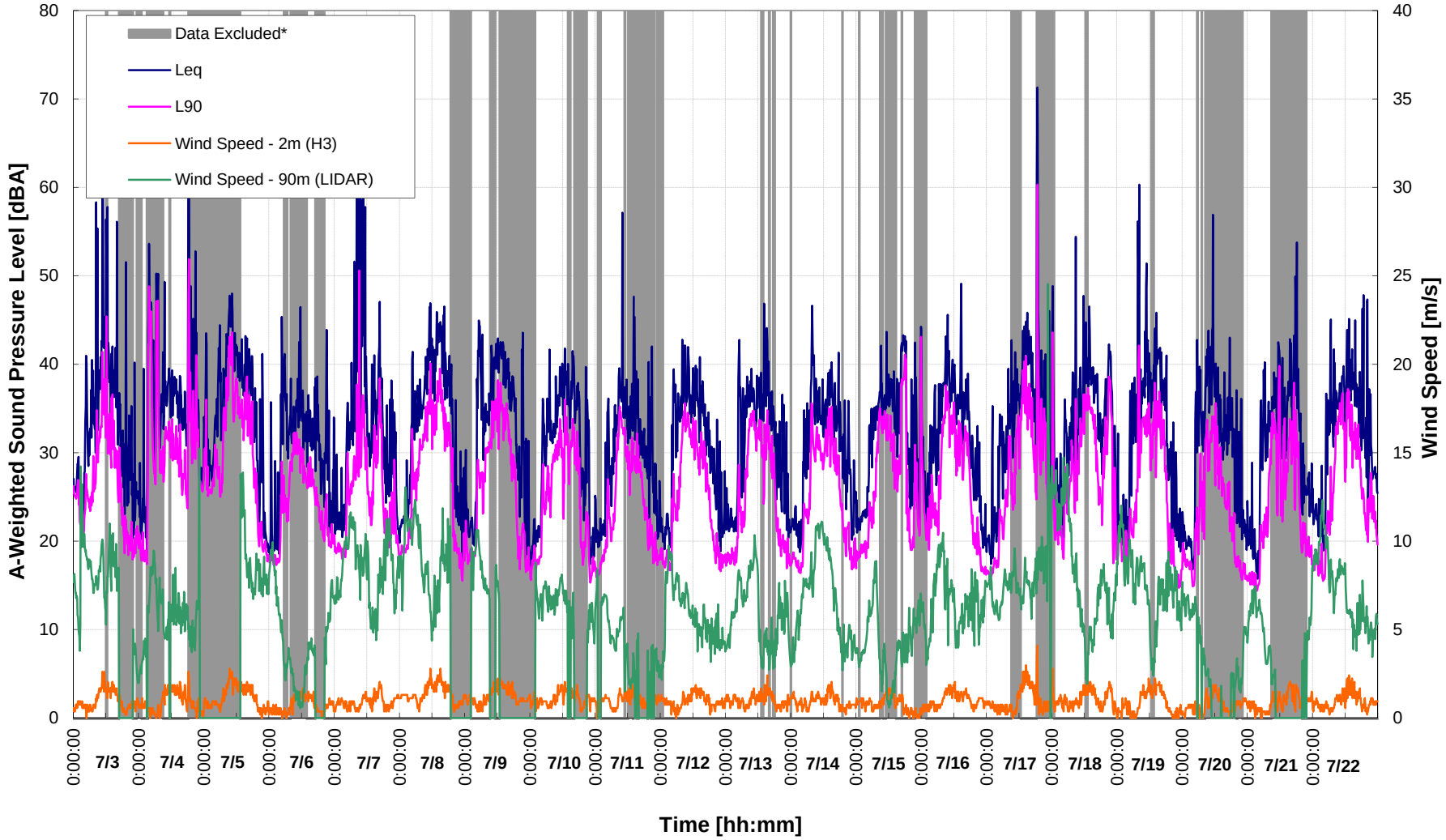
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A2
A-Weighted Sound Pressure Levels & Wind Speeds - Location L2
Tuesday, July 3, 2012 through Sunday, July 22, 2012



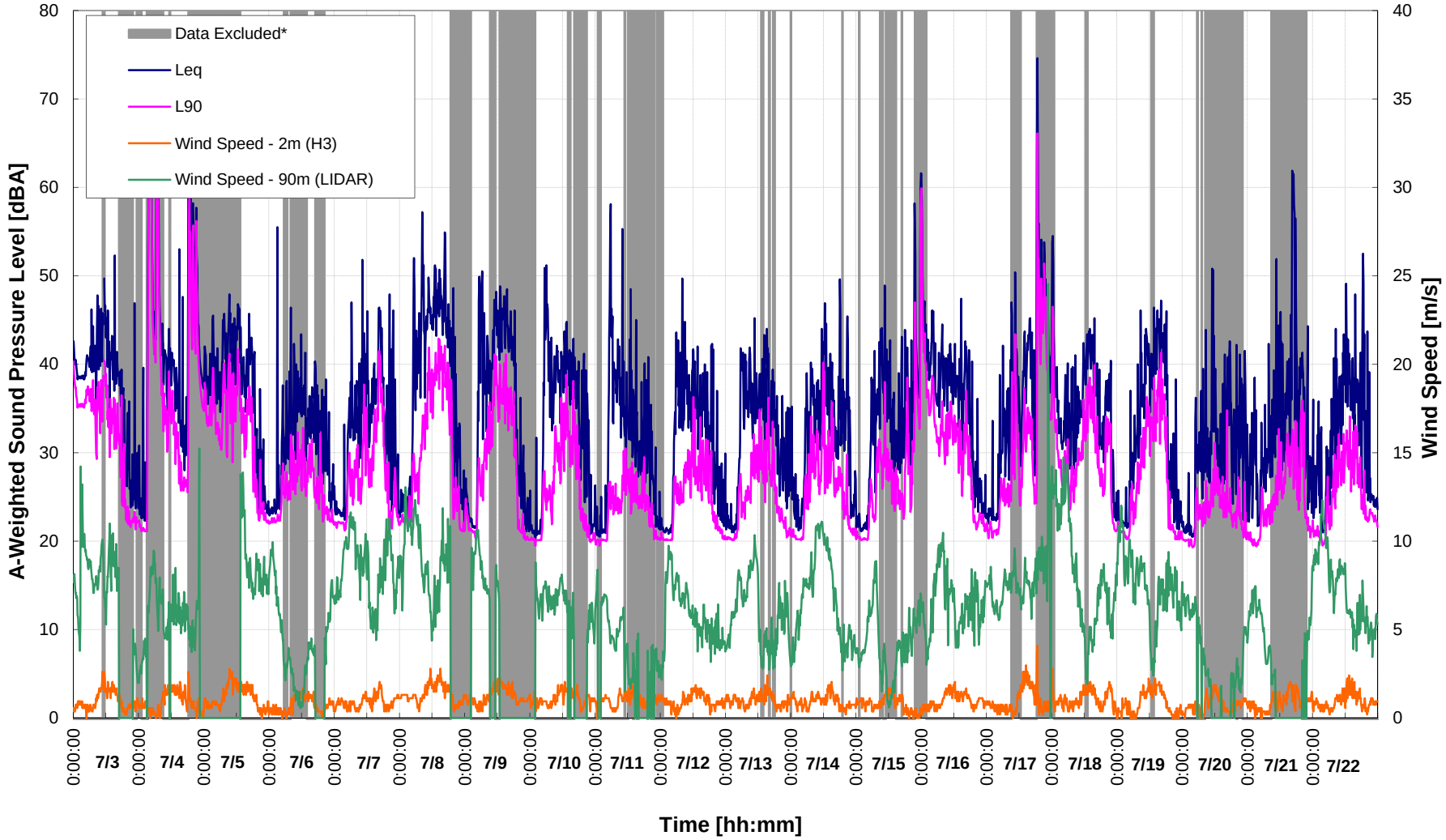
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A3
A-Weighted Sound Pressure Levels & Wind Speeds - Location L3
Tuesday, July 3, 2012 through Sunday, July 22, 2012



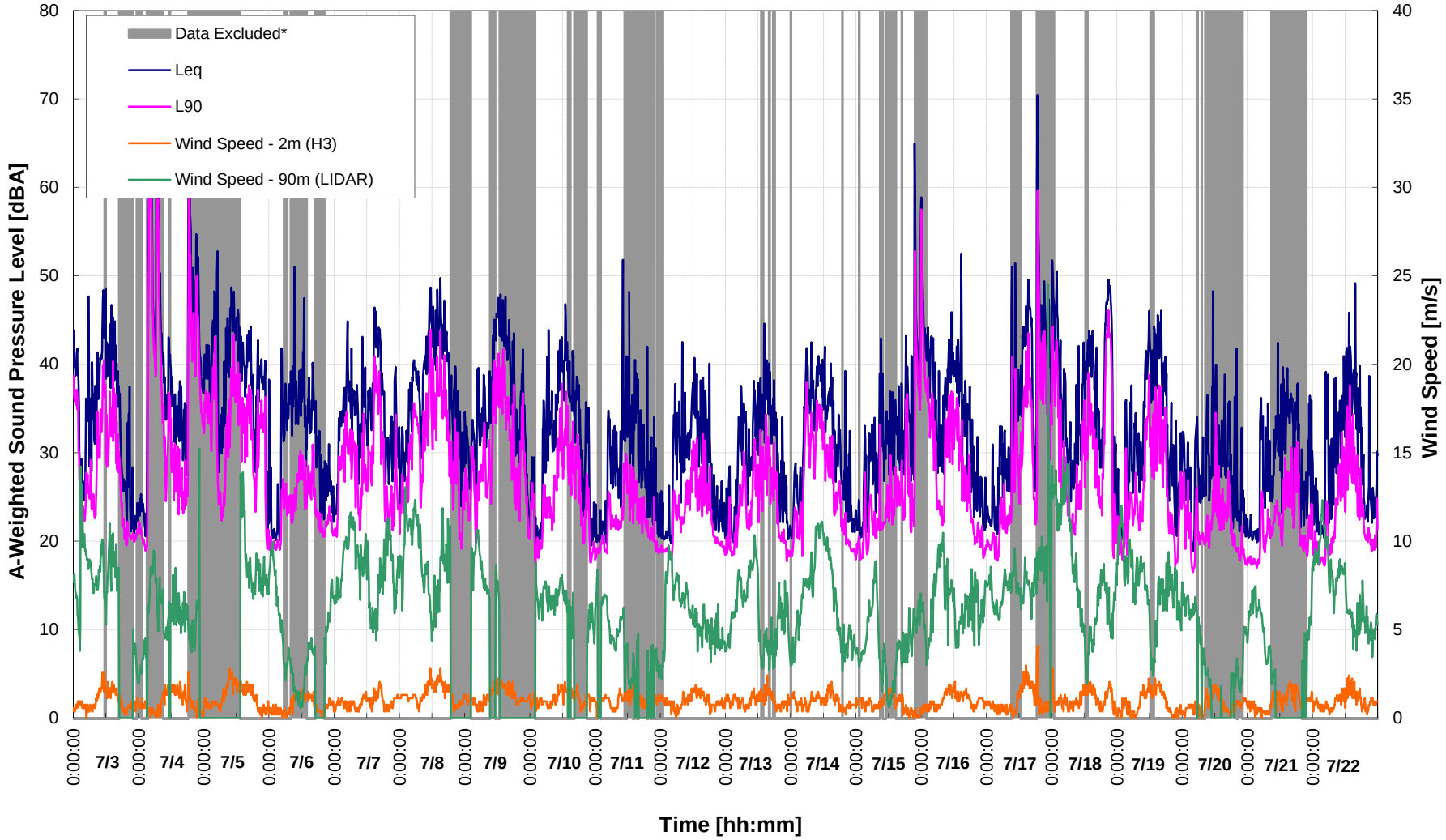
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A4
A-Weighted Sound Pressure Levels & Wind Speeds - Location L4
Tuesday, July 3, 2012 through Sunday, July 22, 2012



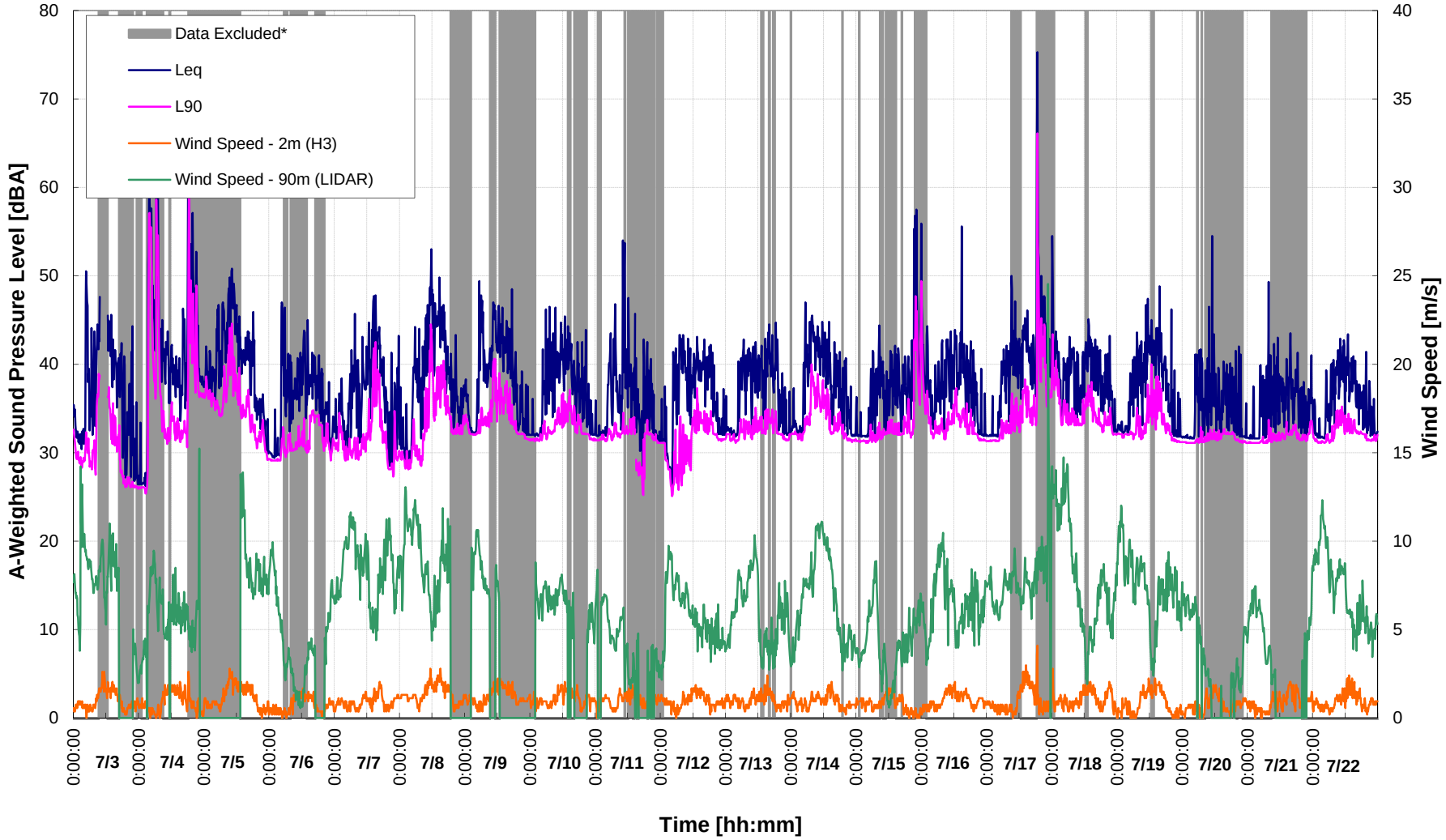
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A5
A-Weighted Sound Pressure Levels & Wind Speeds - Location L5
Tuesday, July 3, 2012 through Sunday, July 22, 2012



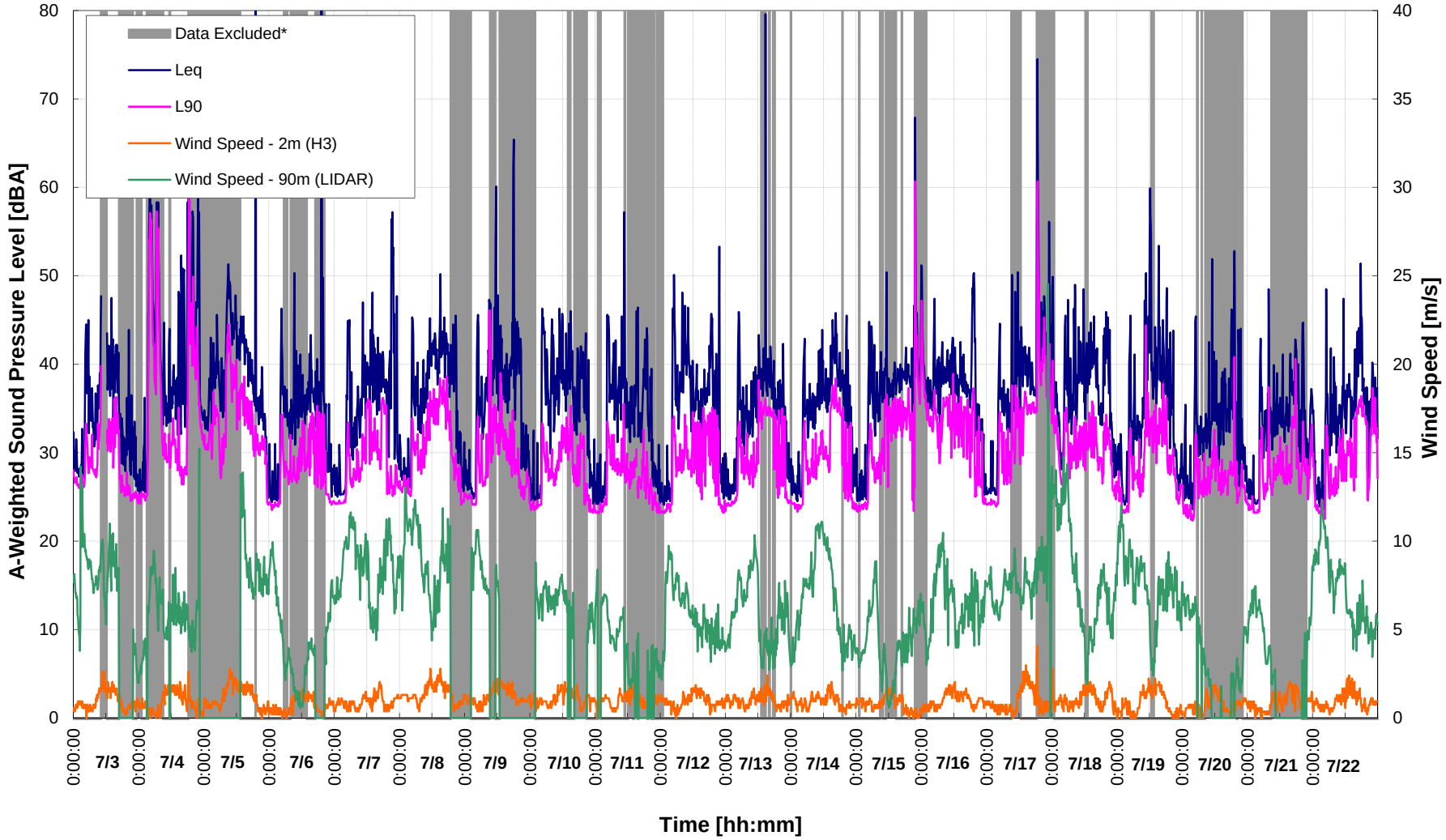
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A6
A-Weighted Sound Pressure Levels & Wind Speeds - Location L6
Tuesday, July 3, 2012 through Sunday, July 22, 2012



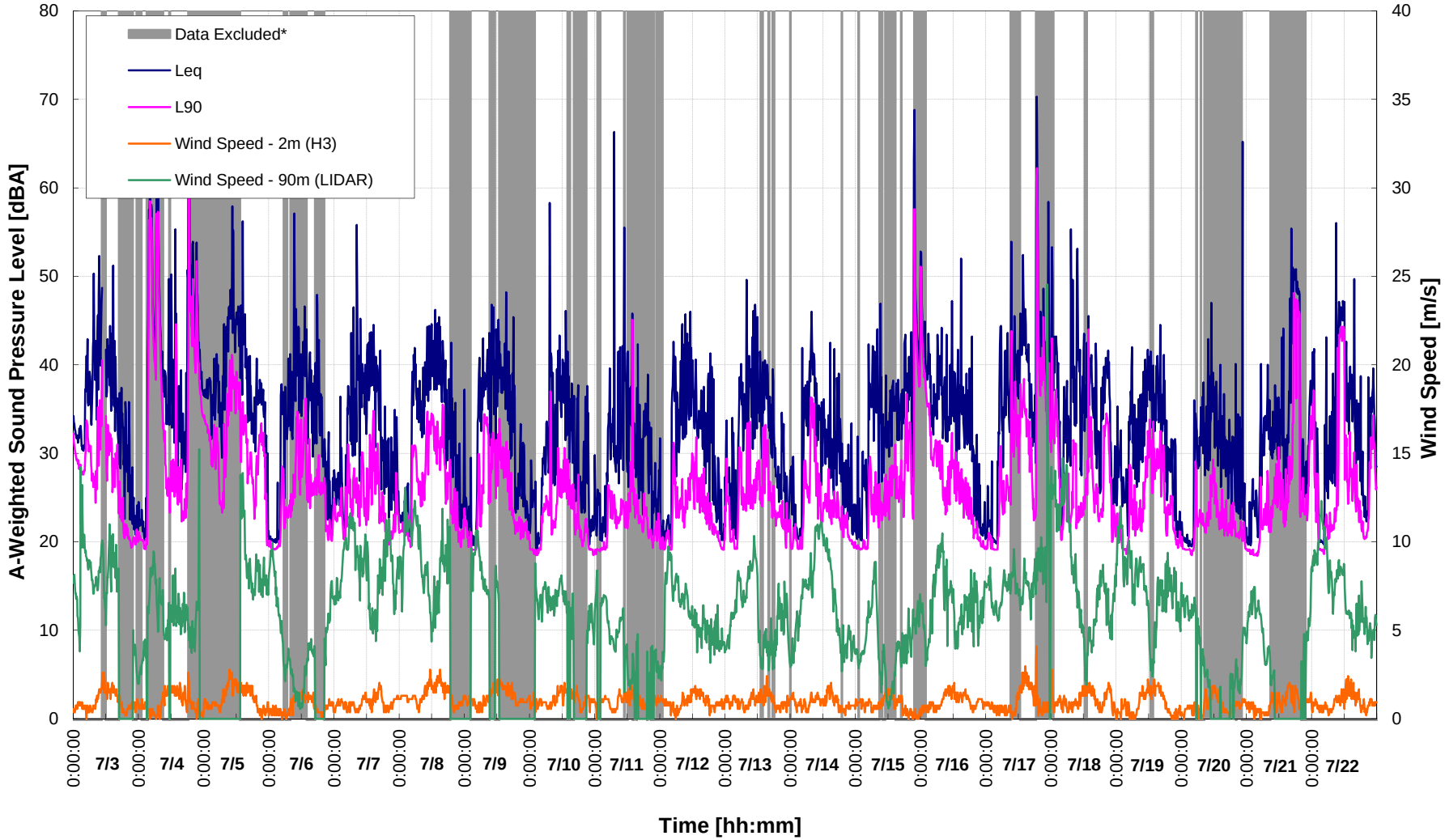
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A7
A-Weighted Sound Pressure Levels & Wind Speeds - Location L8
Tuesday, July 3, 2012 through Sunday, July 22, 2012



* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A8
A-Weighted Sound Pressure Levels & Wind Speeds - Location L9
Tuesday, July 3, 2012 through Sunday, July 22, 2012



* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure A9

A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 1

Tuesday, July 3, 2012 through Sunday, July 22, 2012

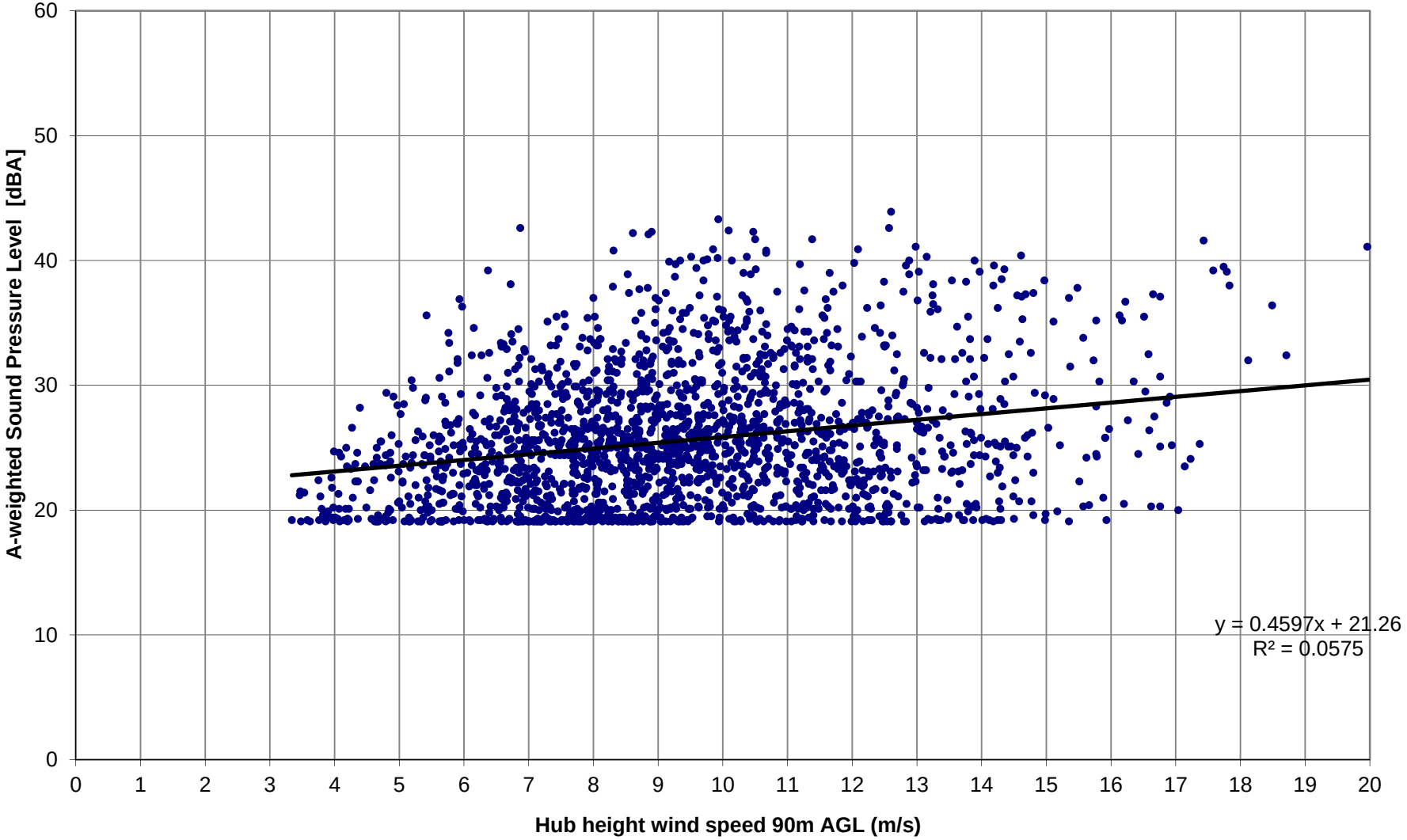


Figure A10

A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 2

Tuesday, July 3, 2012 through Sunday, July 22, 2012

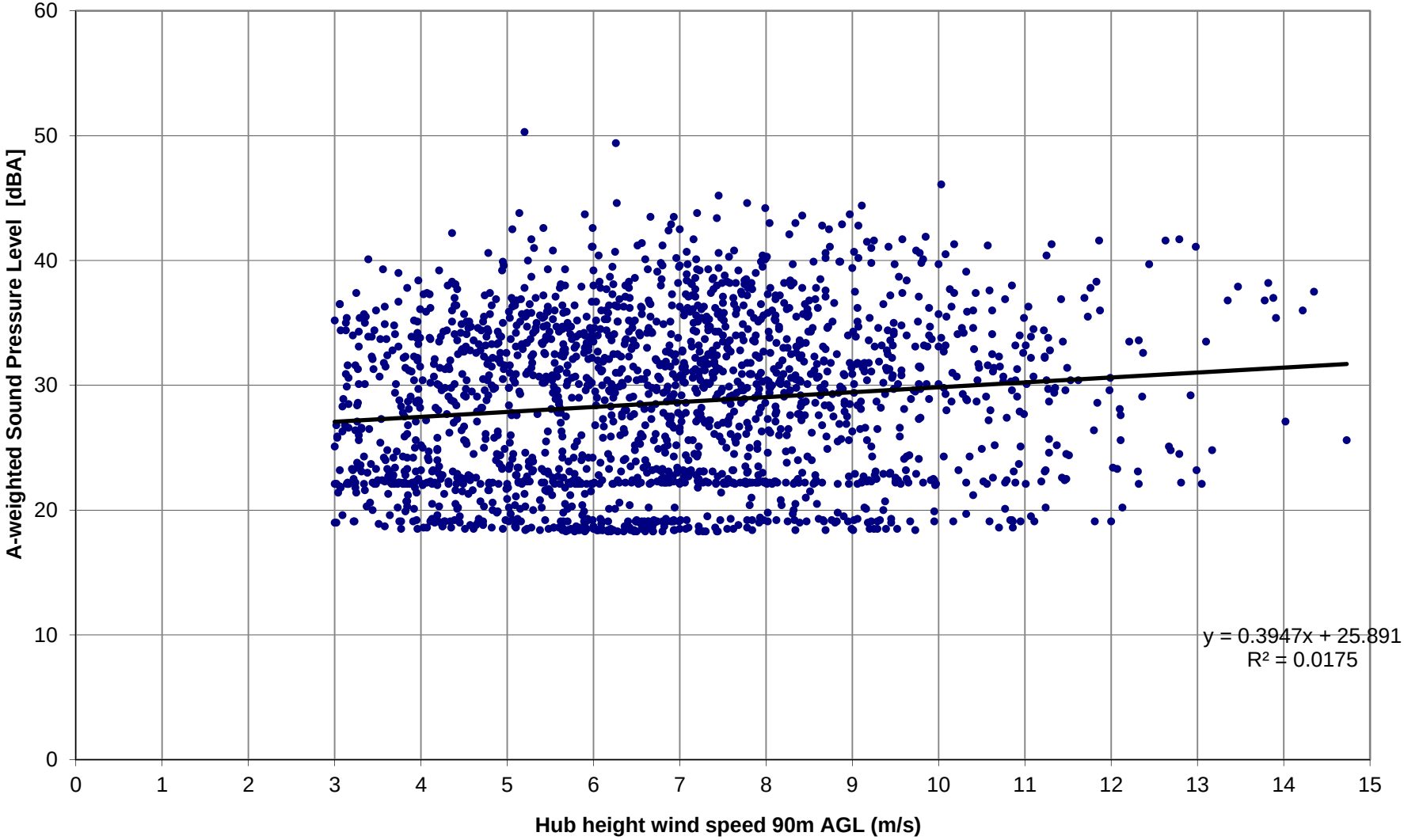


Figure A11
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 3
Tuesday, July 3, 2012 through Sunday, July 22, 2012

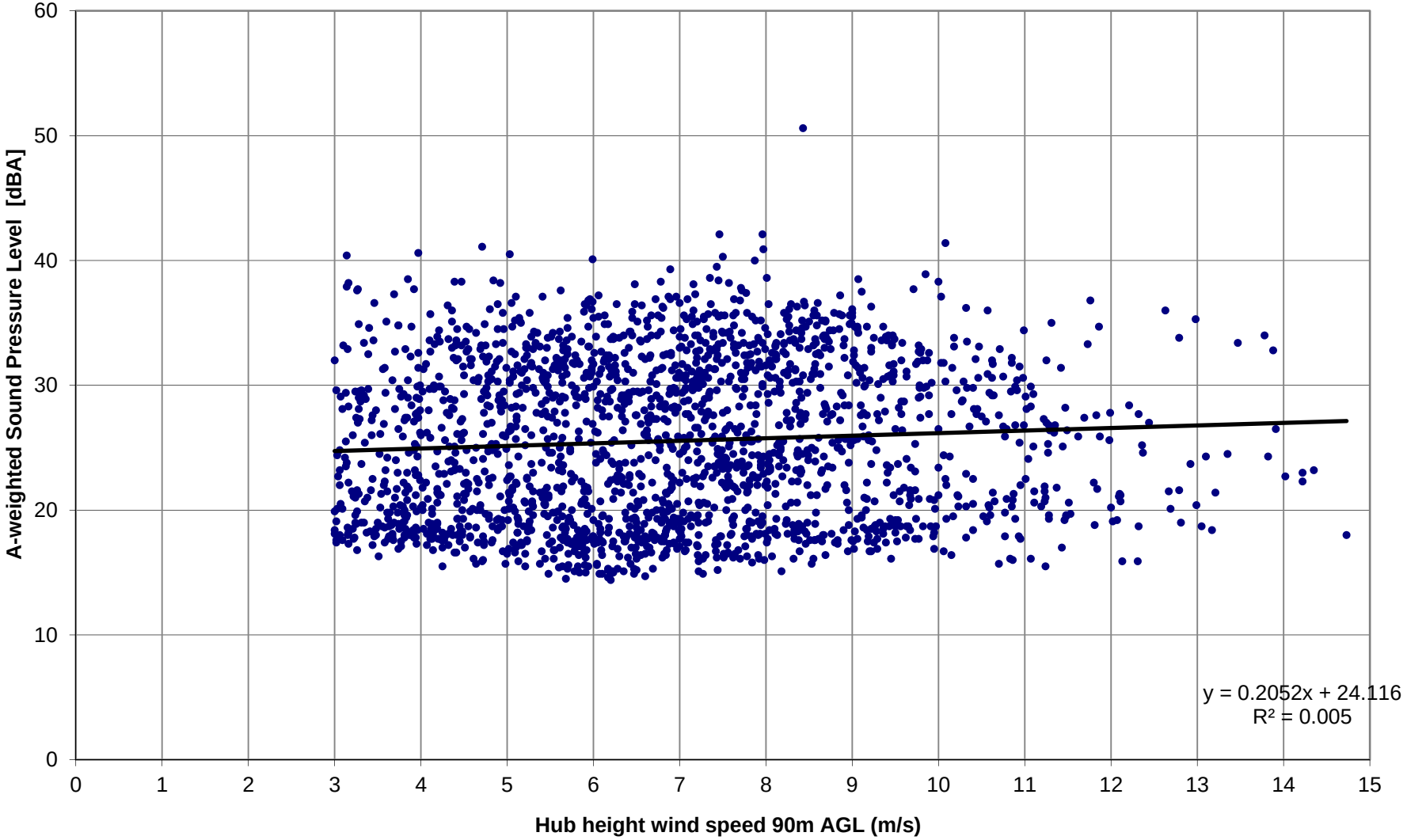


Figure A12
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 4
Tuesday, July 3, 2012 through Sunday, July 22, 2012

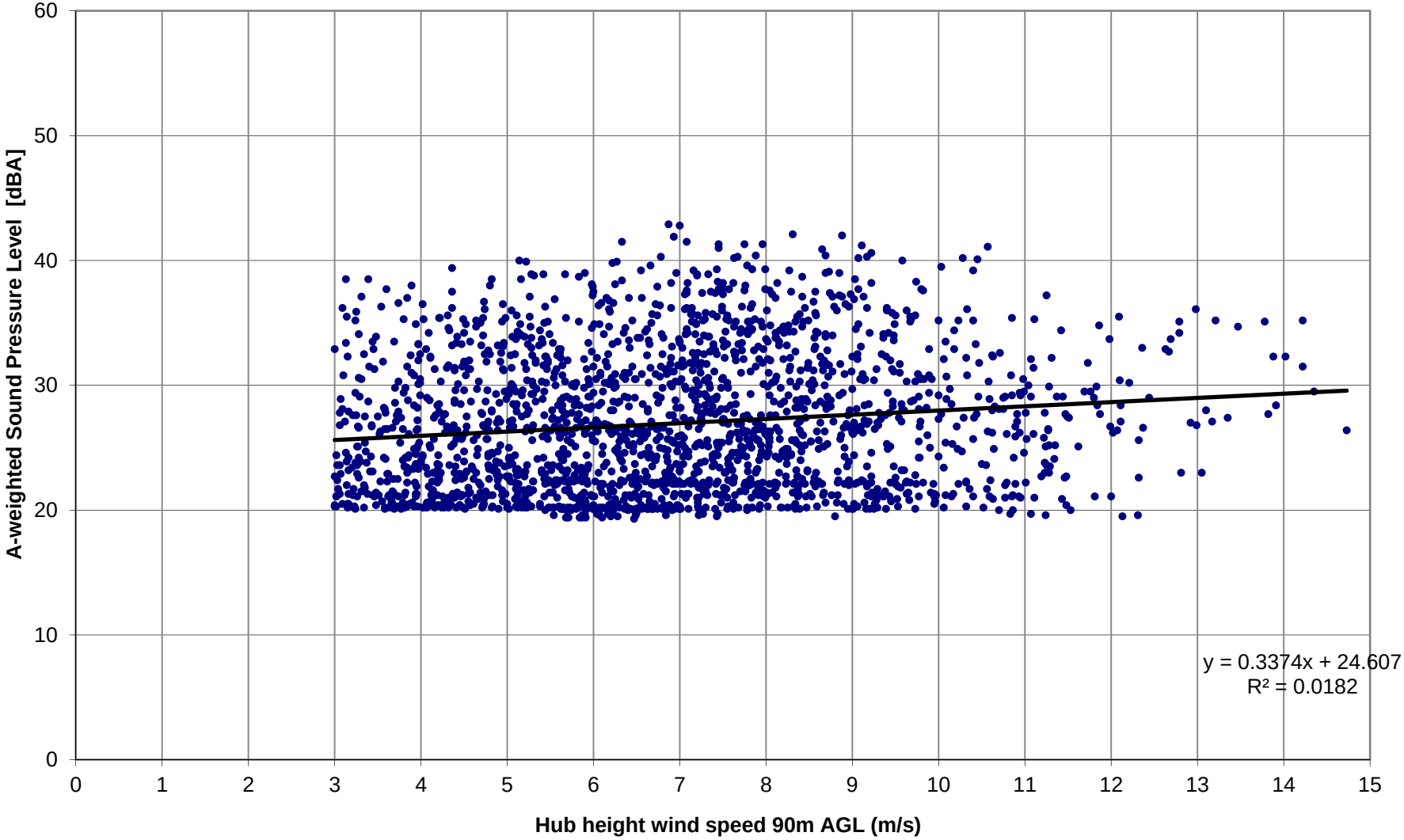


Figure A13

A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 5

Tuesday, July 3, 2012 through Sunday, July 22, 2012

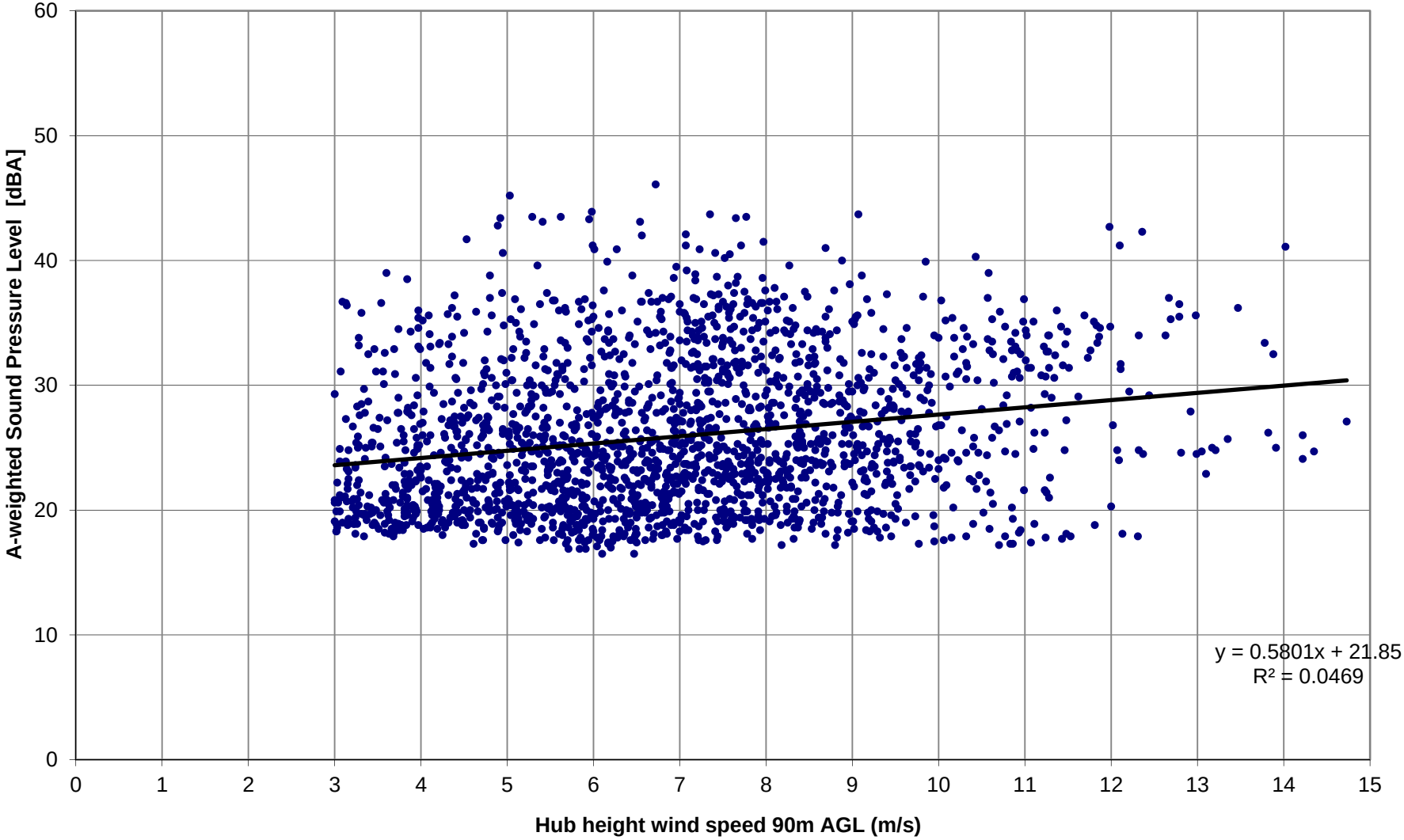


Figure A14

A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 6

Tuesday, July 3, 2012 through Sunday, July 22, 2012

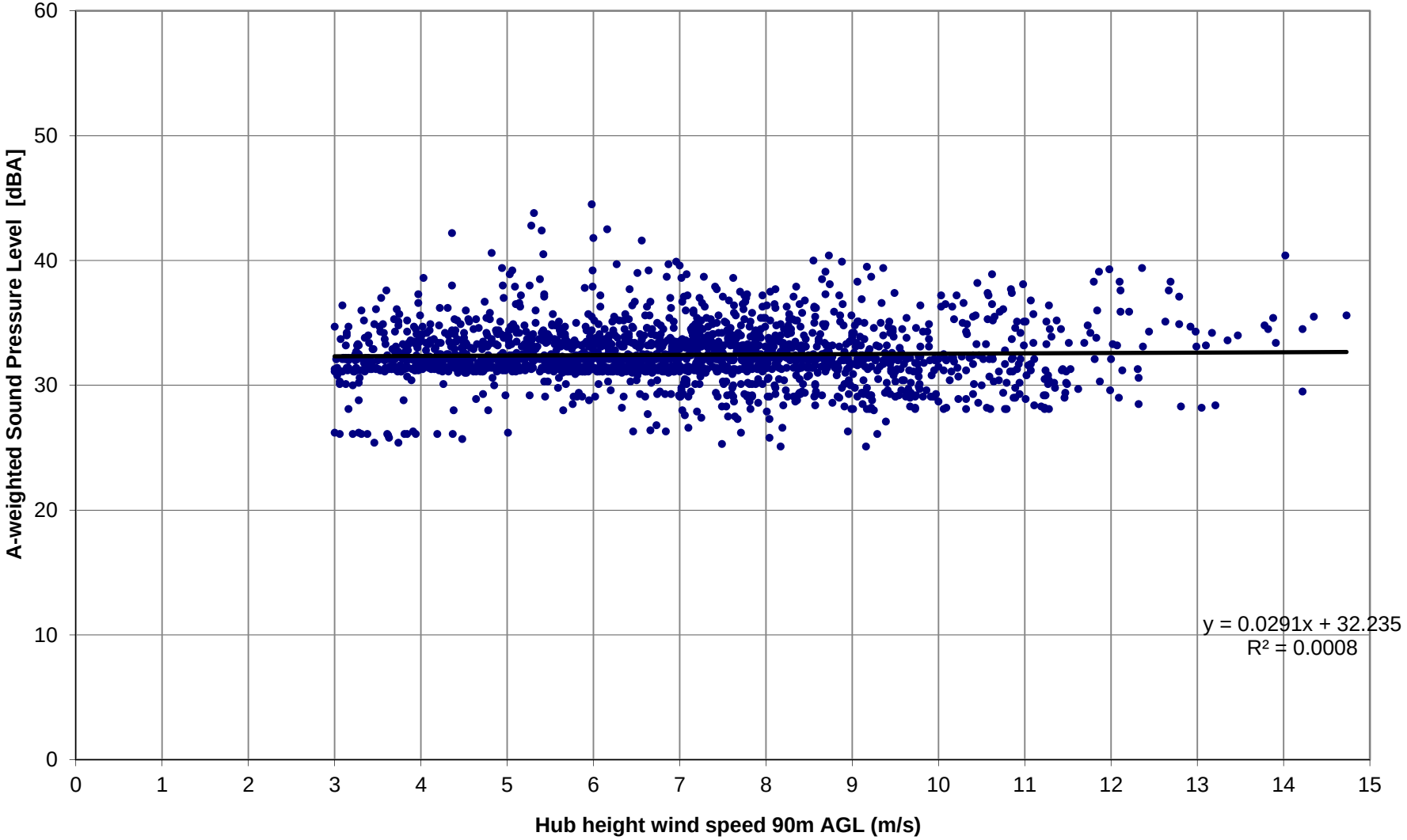


Figure A15
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 8
Tuesday, July 3, 2012 through Sunday, July 22, 2012

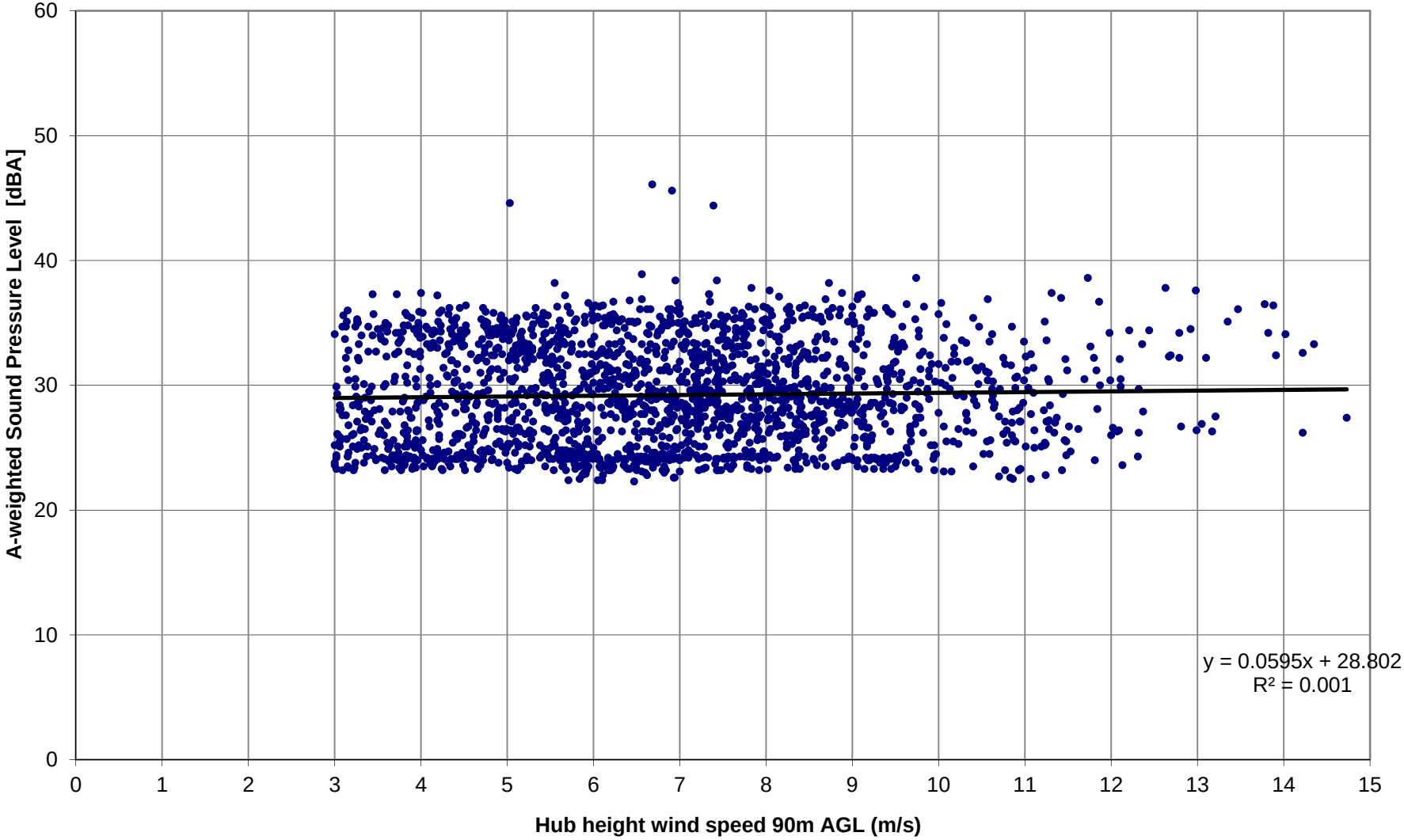
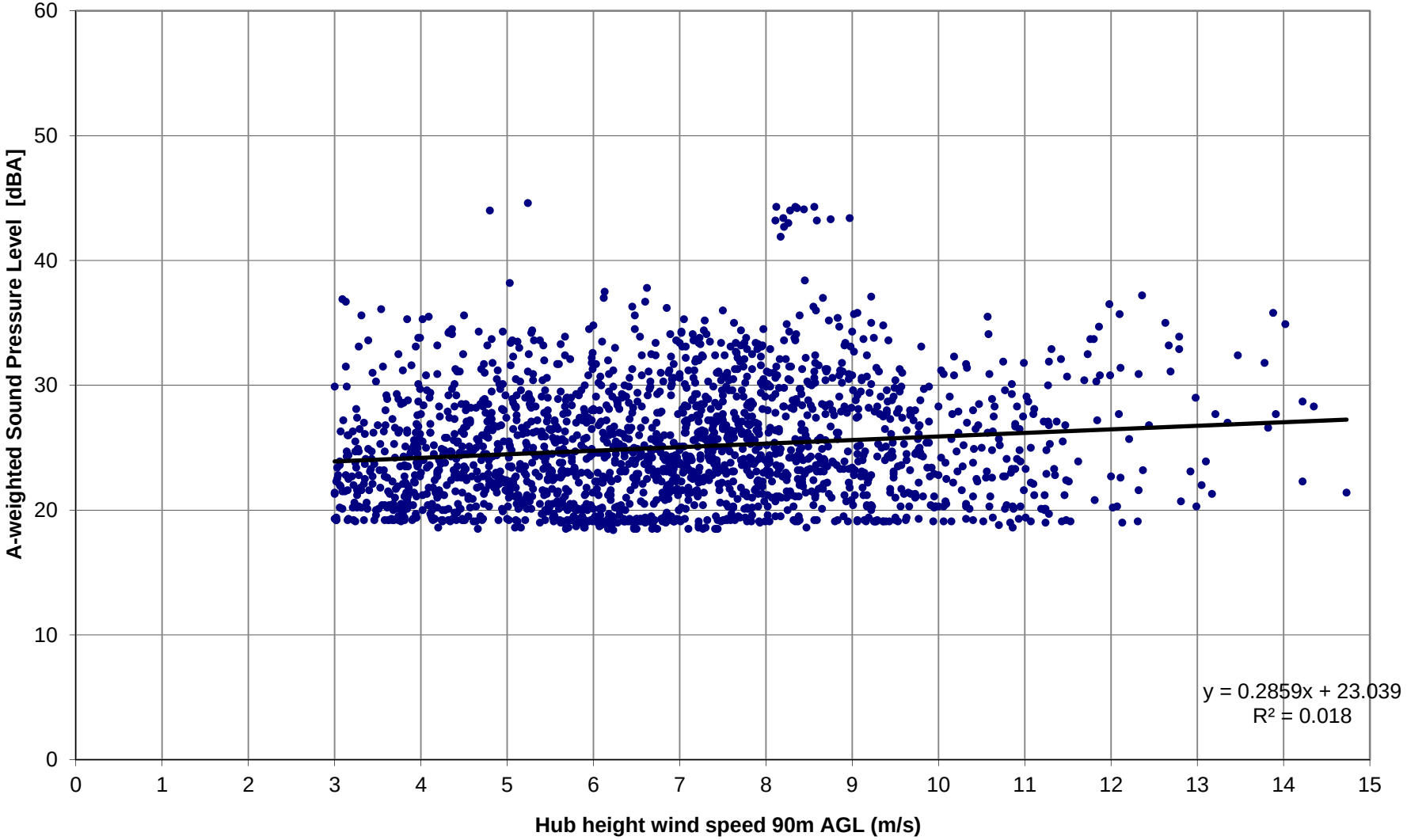
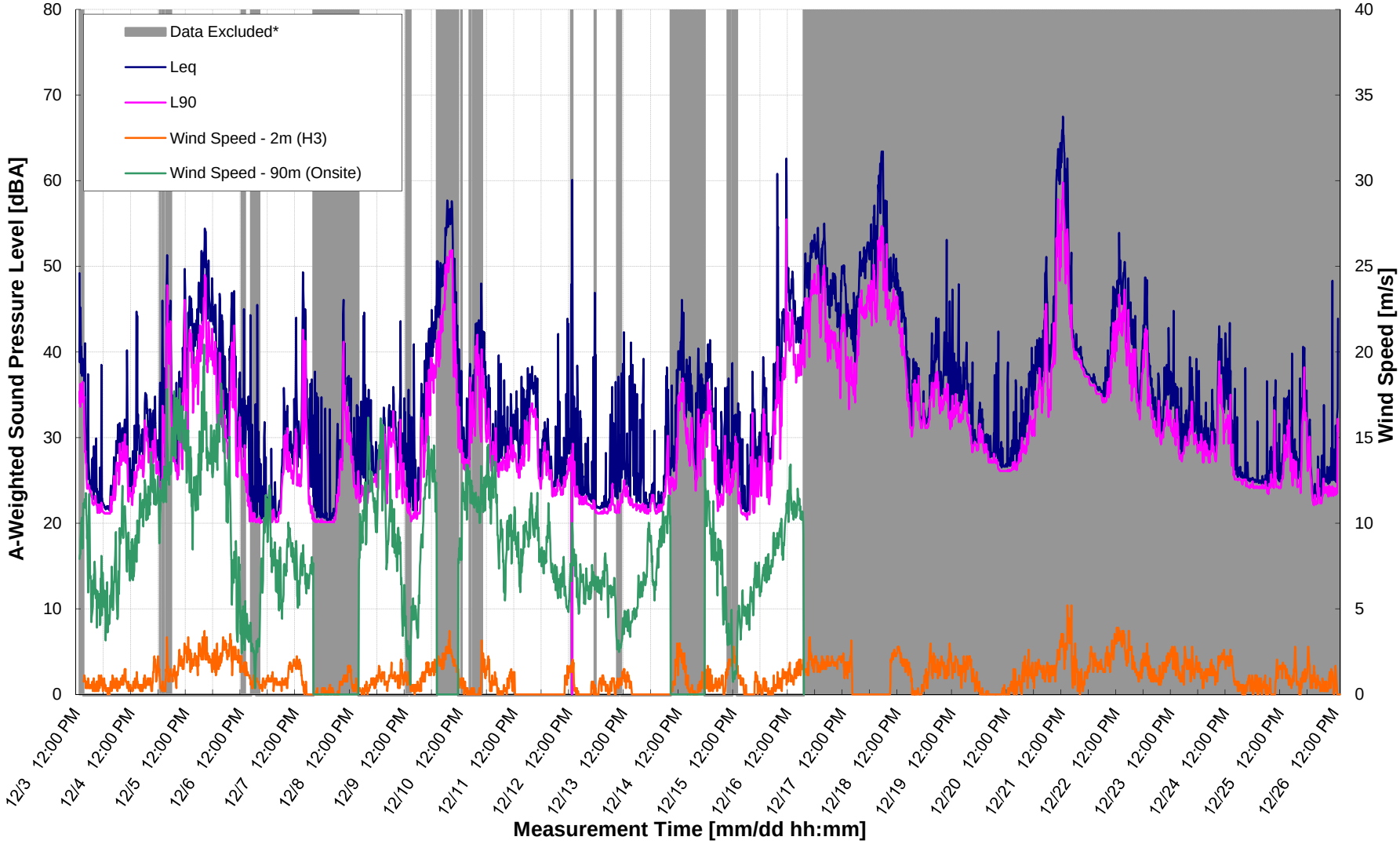


Figure A16
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 9
Tuesday, July 3, 2012 through Sunday, July 22, 2012



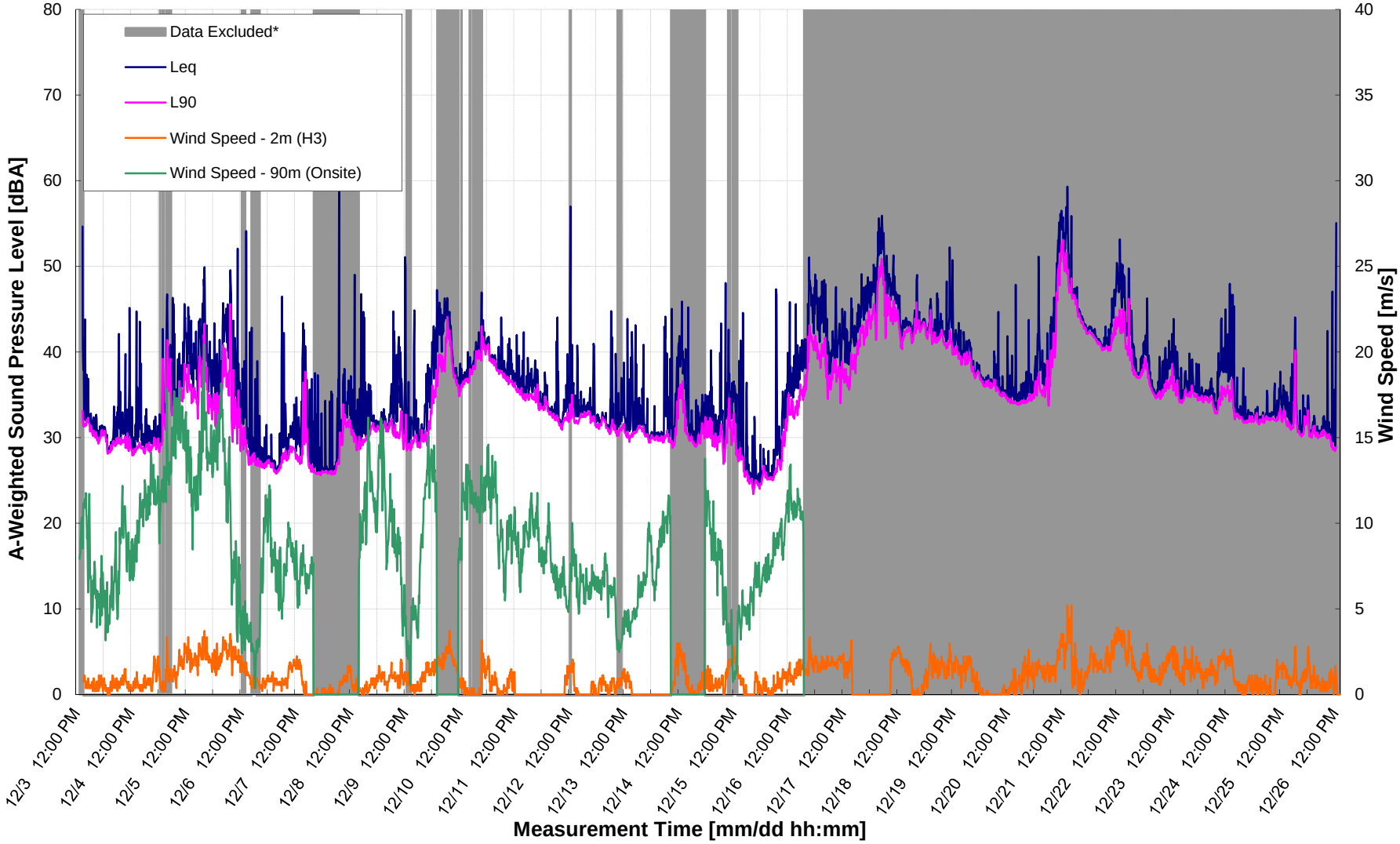
Appendix B
Sound Level Measurement Data – December 2012

Figure B1
A-Weighted Sound Pressure Levels & Wind Speeds - Location L1
Monday, December 3, 2012 through Wednesday, December 26, 2012



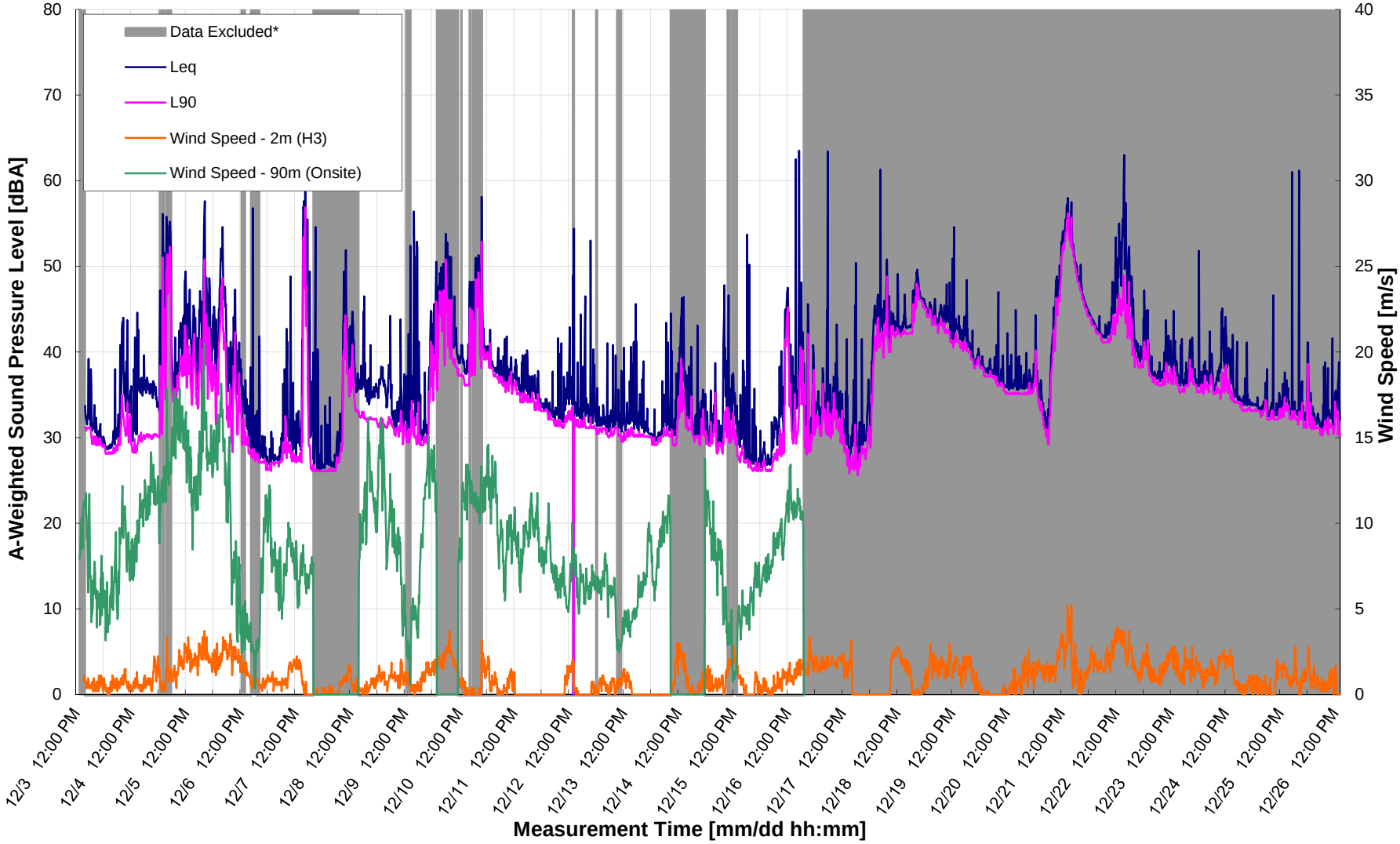
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure B2
A-Weighted Sound Pressure Levels & Wind Speeds - Location L3
Monday, December 3, 2012 through Wednesday, December 26, 2012



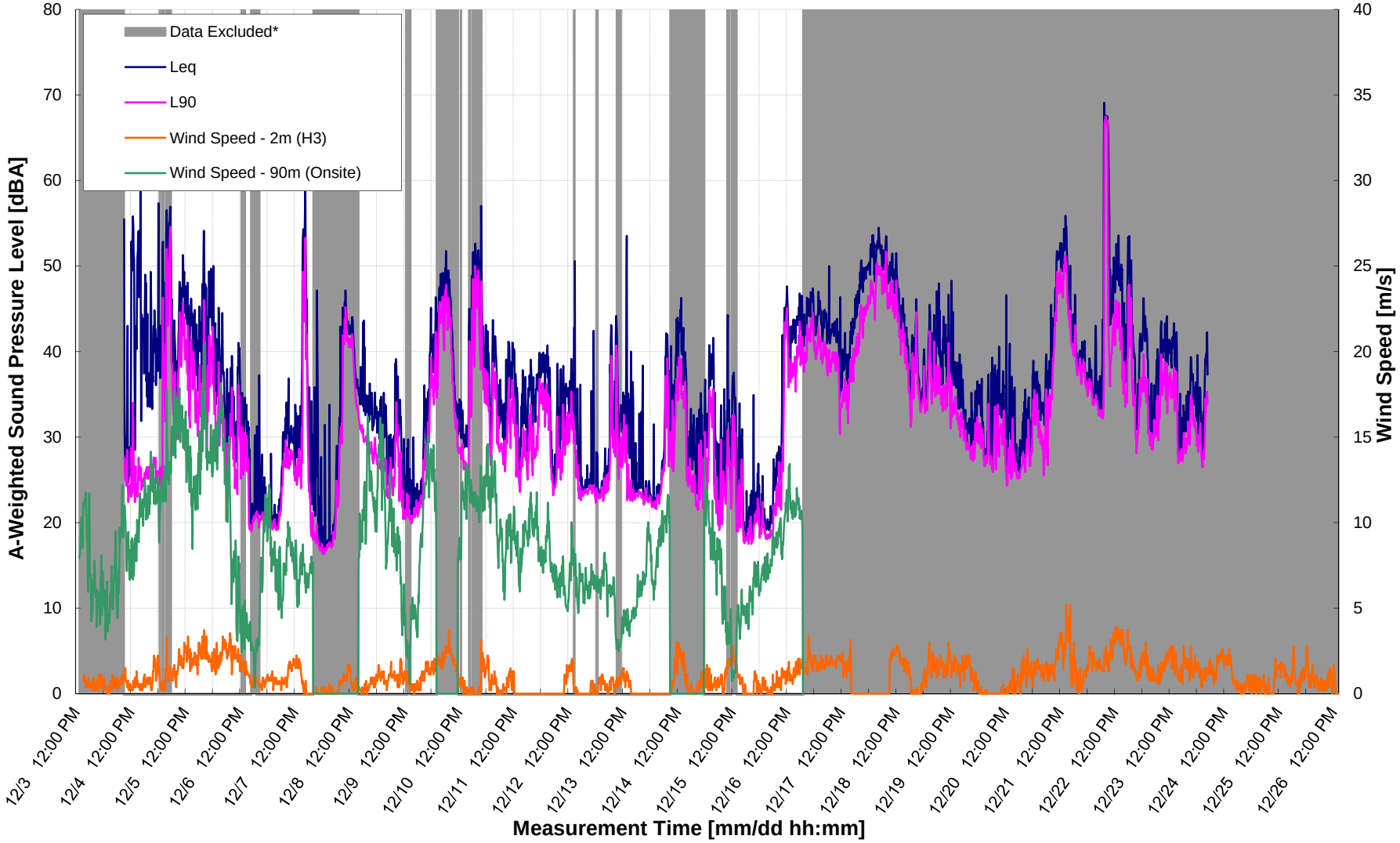
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure B3
A-Weighted Sound Pressure Levels & Wind Speeds - Location L4
Monday, December 3, 2012 through Wednesday, December 26, 2012



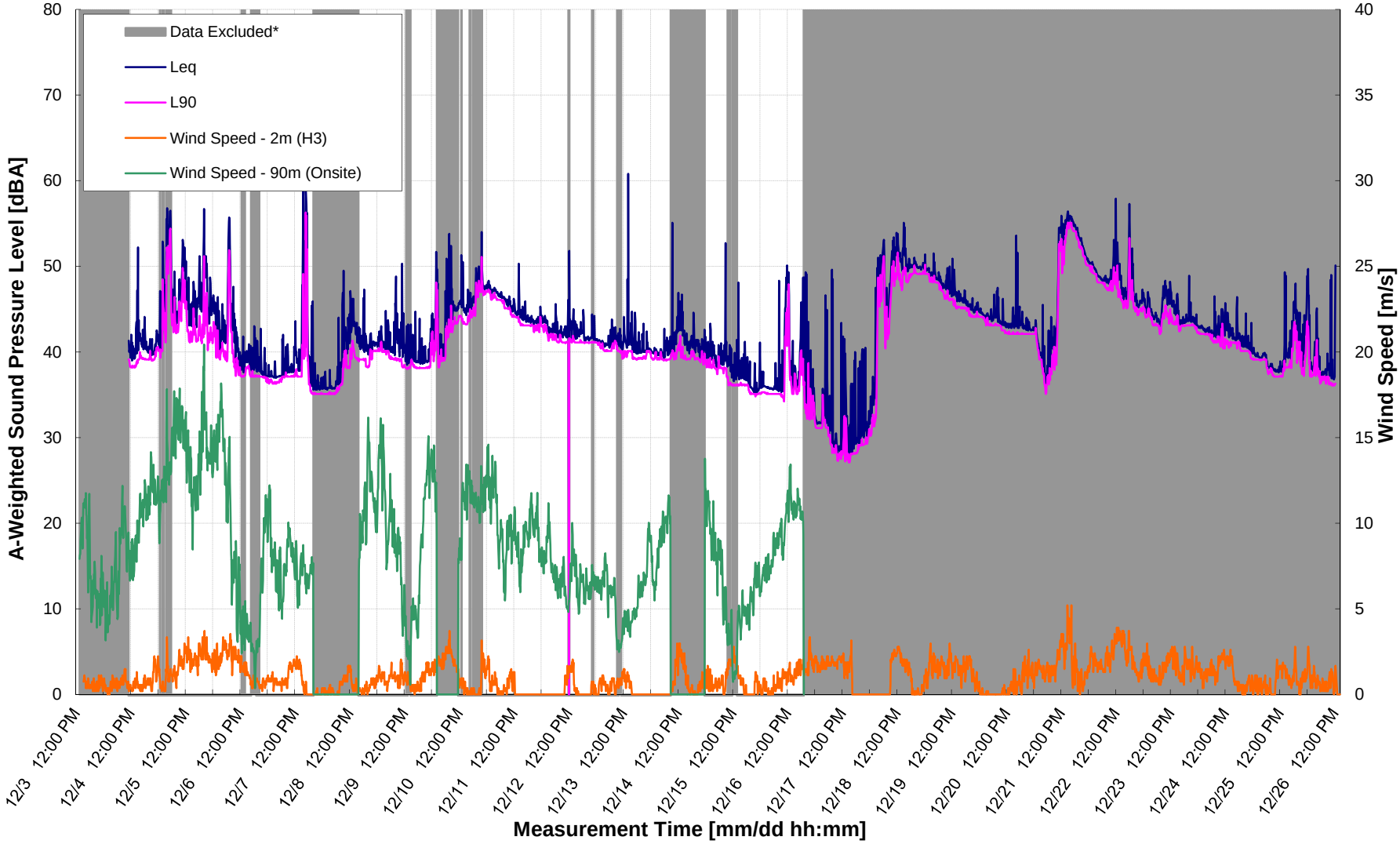
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure B4
A-Weighted Sound Pressure Levels & Wind Speeds - Location L5
Monday, December 3, 2012 through Wednesday, December 26, 2012



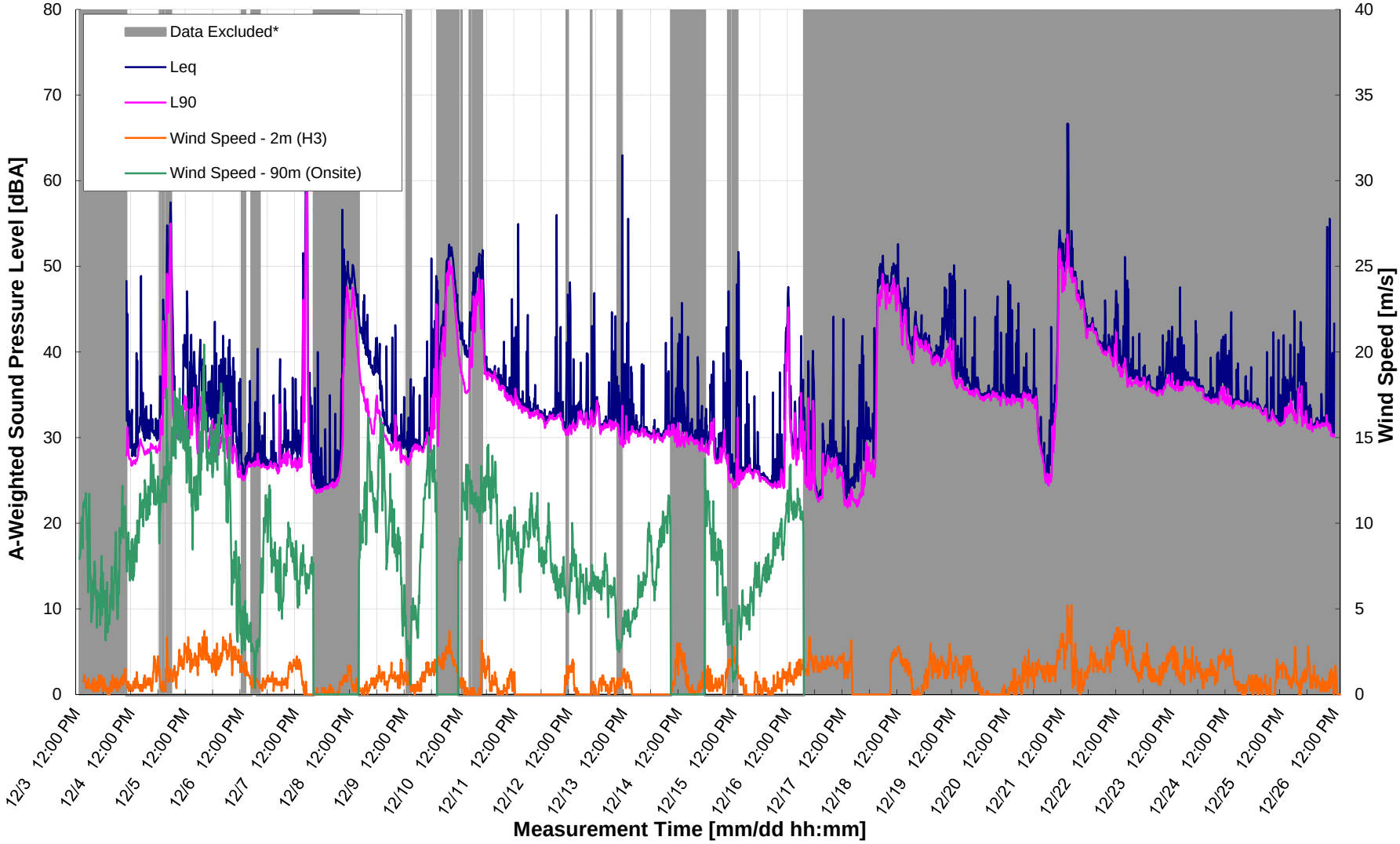
* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure B5
A-Weighted Sound Pressure Levels & Wind Speeds - Location L6
Monday, December 3, 2012 through Wednesday, December 26, 2012



* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure B6
A-Weighted Sound Pressure Levels & Wind Speeds - Location L9
Monday, December 3, 2012 through Wednesday, December 26, 2012



* Data excluded from analysis due to precipitation, unavailable wind or sound level data, or wind speeds outside the range of turbine operation

Figure B7

A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 1

Monday, December 3, 2012 through Wednesday, December 26, 2012

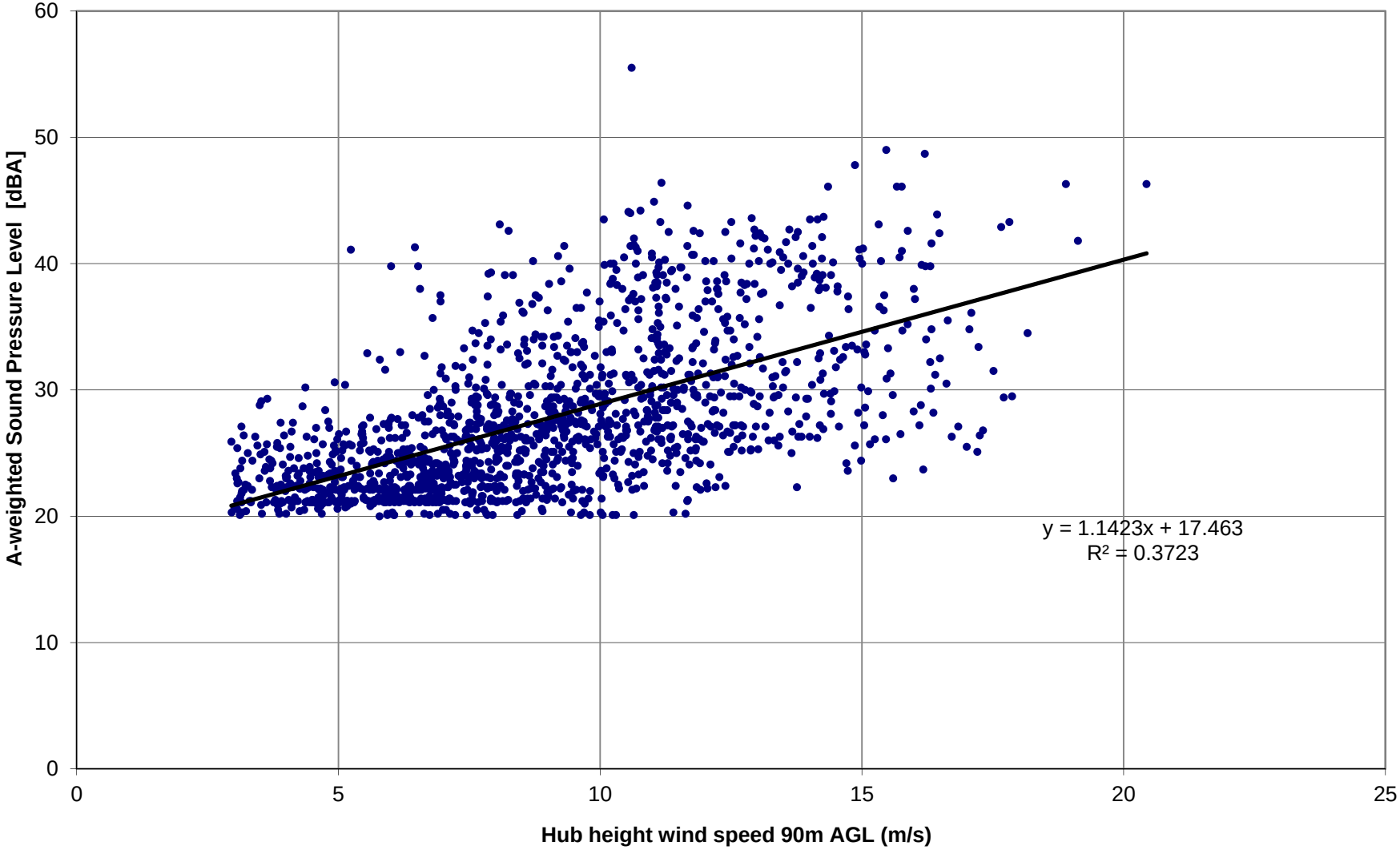


Figure B8
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 3
Monday, December 3, 2012 through Wednesday, December 26, 2012

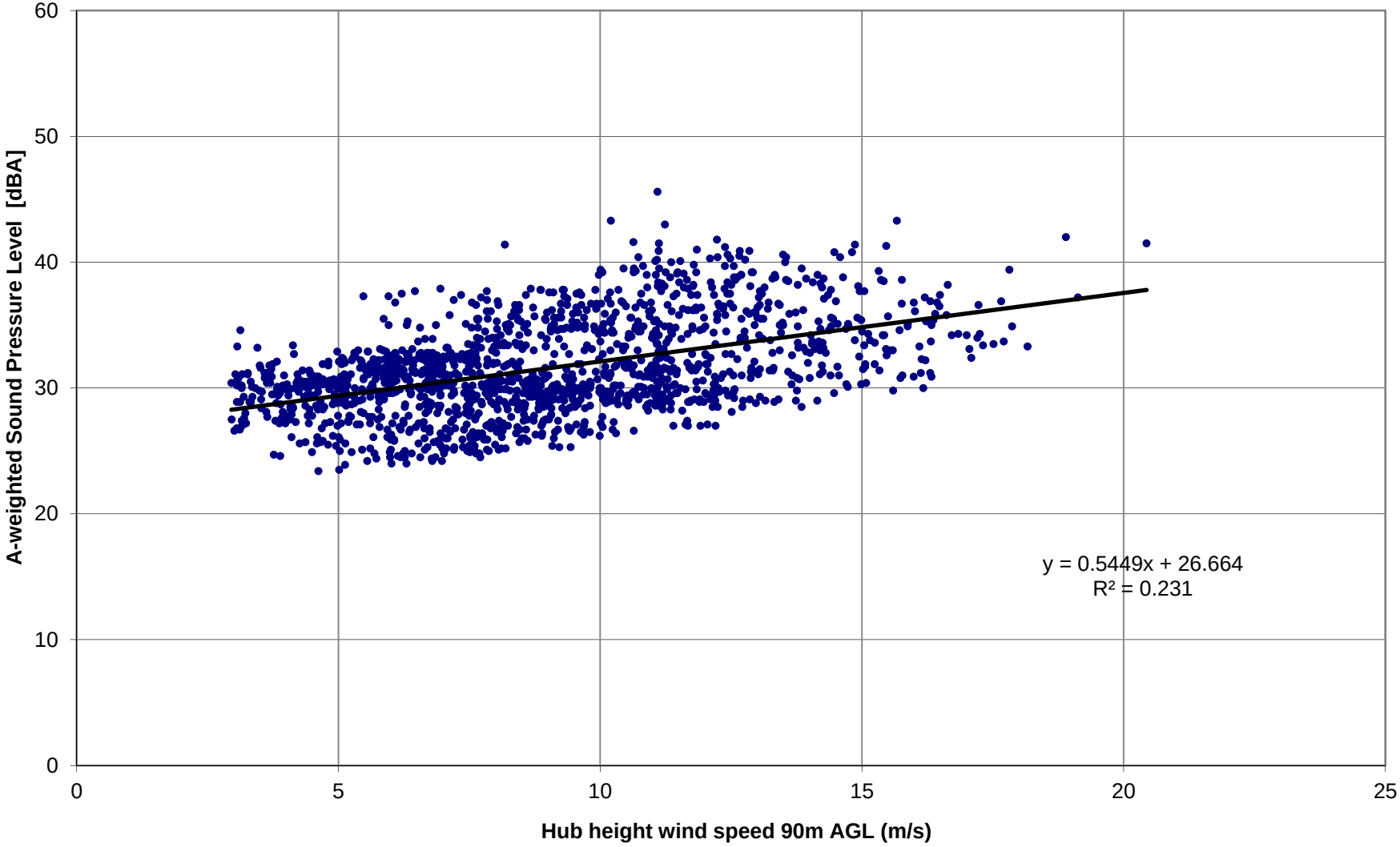


Figure B9

A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 4

Monday, December 3, 2012 through Wednesday, December 26, 2012

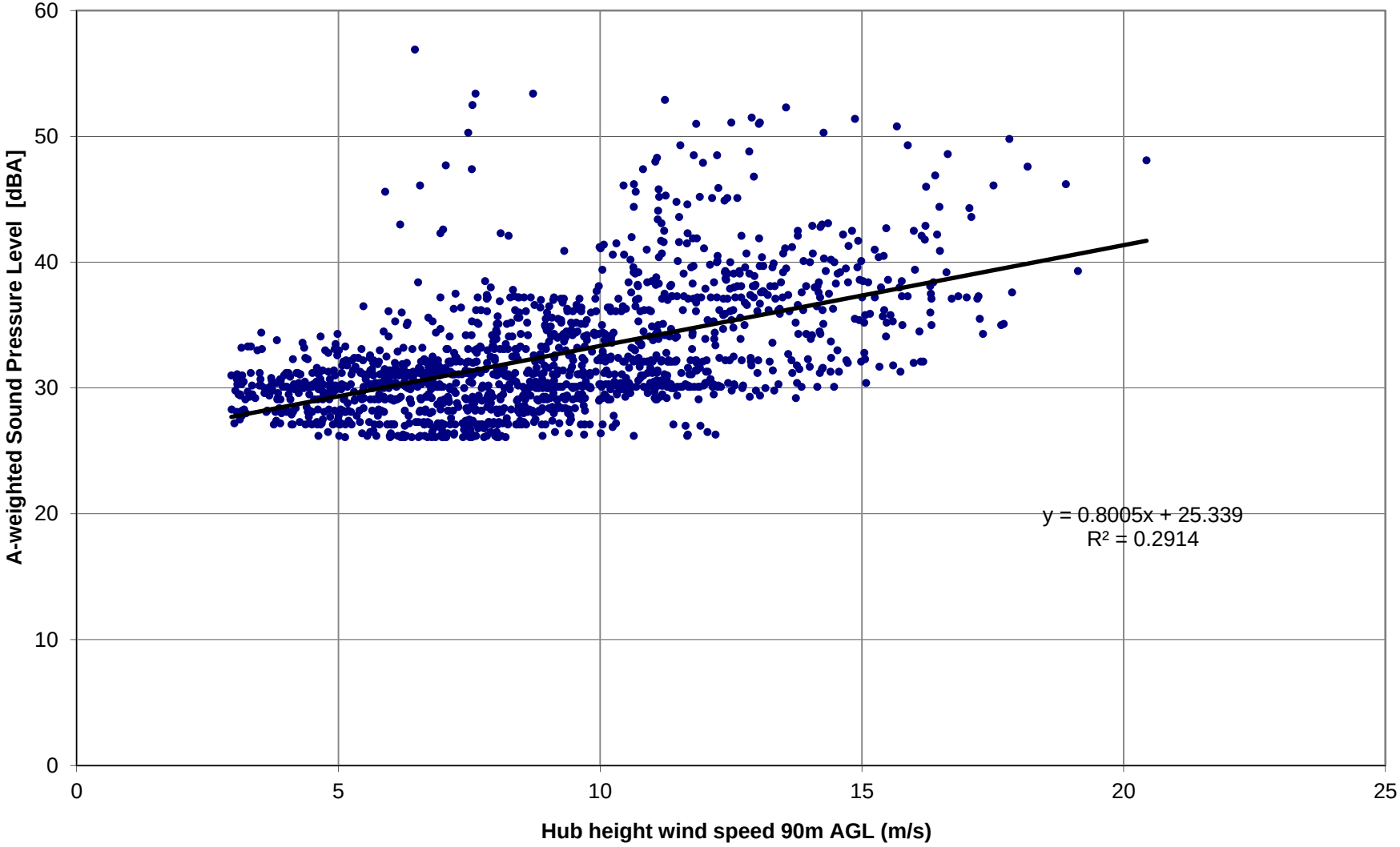


Figure B10
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 5
Monday, December 3, 2012 through Wednesday, December 26, 2012

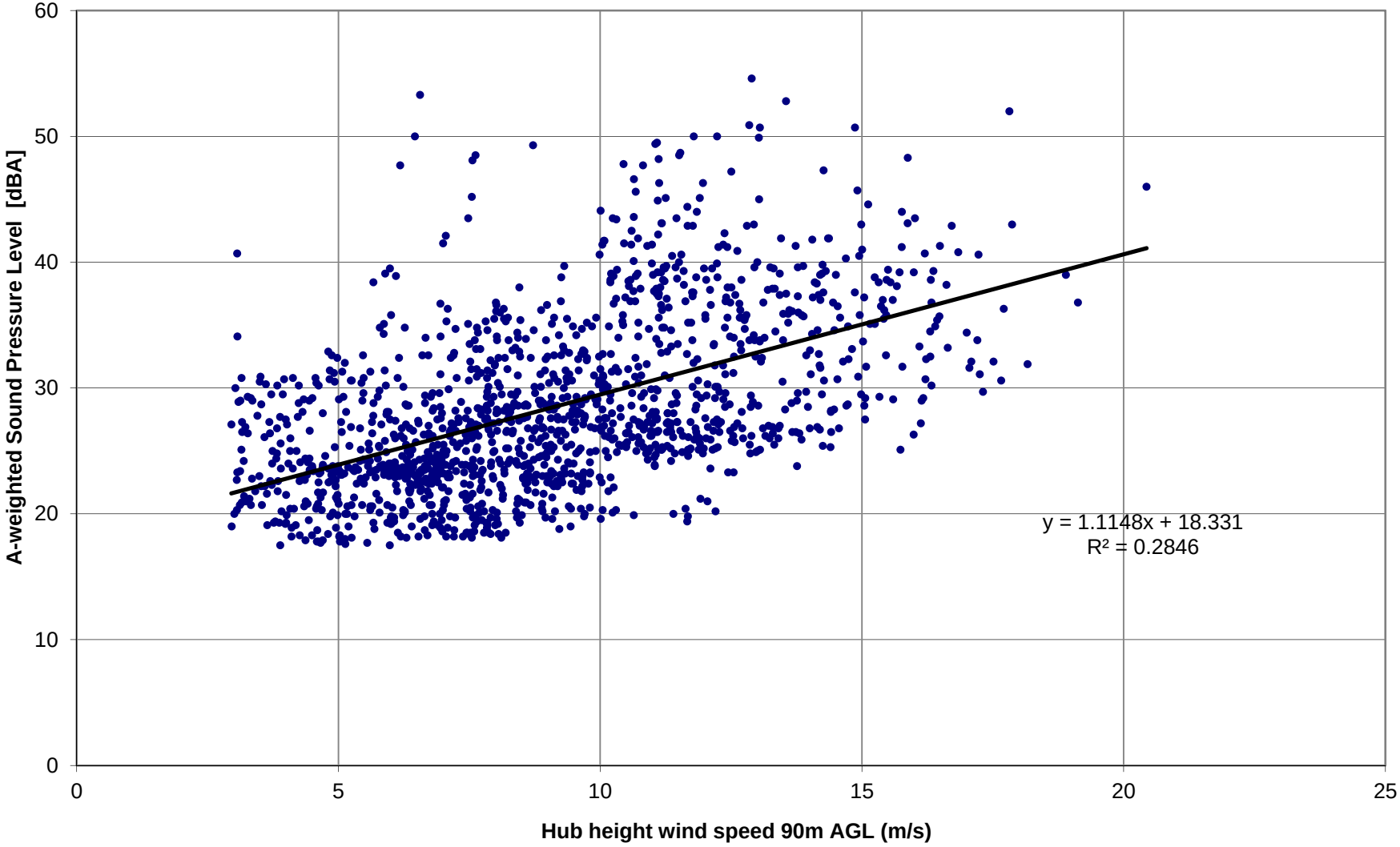


Figure B11
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 6
Monday, December 3, 2012 through Wednesday, December 26, 2012

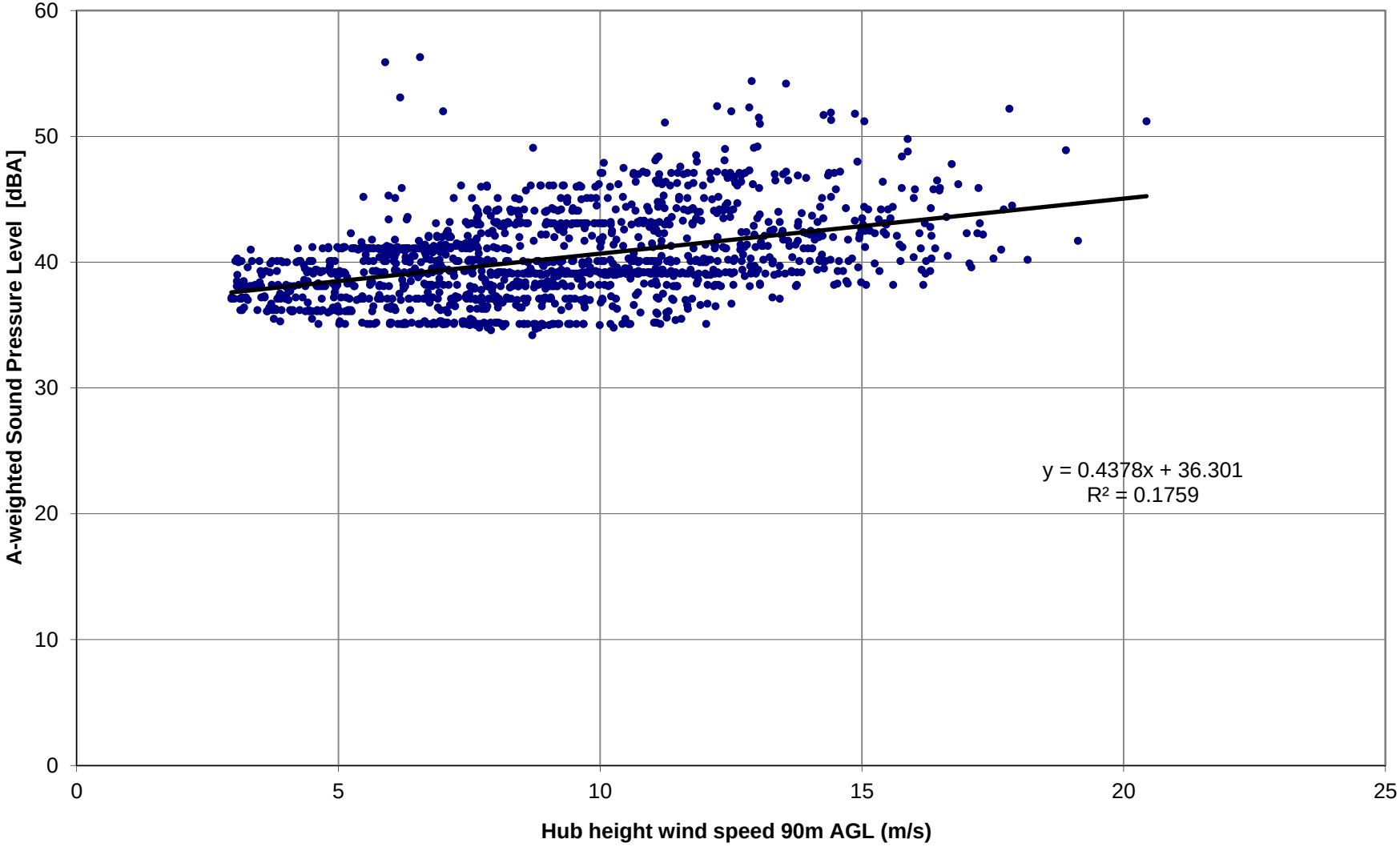
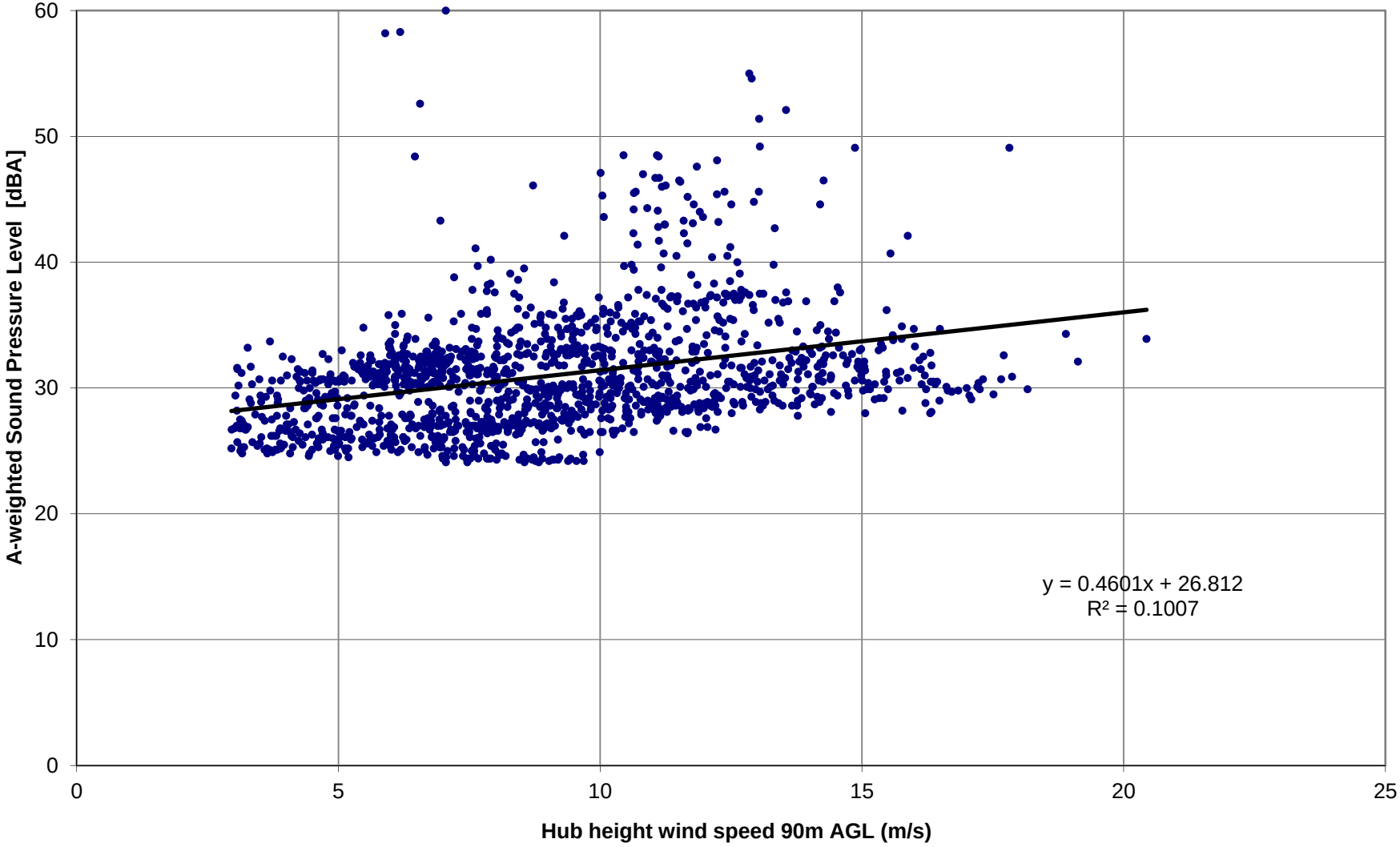


Figure B12
A-weighted Sound Pressure Level vs Hub Height Wind Speed - Location 9
Monday, December 3, 2012 through Wednesday, December 26, 2012



Appendix C
NWS Meteorological Data – Lebanon Municipal Airport, Grafton, NH

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/2/2012 0:00	64.0	0	0.0	0	87	
7/2/2012 1:00	64.9	0	0.0	0	87	
7/2/2012 2:00	62.1	0	0.0	0	90	
7/2/2012 3:00	59.0	0	0.0	0	90	
7/2/2012 4:00	59.0	0	0.0	0	93	
7/2/2012 5:00	62.1	0	0.0	0	90	
7/2/2012 6:00	64.9	0	0.0	0	84	
7/2/2012 7:00	69.1	0	0.0	0	70	
7/2/2012 8:00	73.0	0	2.6	0	57	
7/2/2012 9:00	75.0	0	3.1	320	54	
7/2/2012 10:00	79.0	0	5.1	340	45	
7/2/2012 11:00	79.0	0	4.1	300	44	
7/2/2012 12:00	80.1	0	4.1	340	41	
7/2/2012 13:00	80.1	0	4.1	310	38	
7/2/2012 14:00	82.0	0	3.6	300	35	
7/2/2012 15:00	79.0	0	2.6	290	41	
7/2/2012 16:00	82.0	0	5.1	280	37	
7/2/2012 17:00	82.0	0	2.1	0	38	
7/2/2012 18:00	82.0	0	2.6	330	38	
7/2/2012 19:00	79.0	0	1.5	310	41	
7/2/2012 20:00	66.9	0	0.0	0	73	
7/2/2012 21:00	63.0	0	0.0	0	81	
7/2/2012 22:00	64.0	0.24	1.5	90	84	Light Rain, Light Thunder Storm
7/2/2012 23:00	61.0	0	1.5	110	93	
7/3/2012 0:00	57.9	0	0.0	0	97	Mist
7/3/2012 1:00	60.1	0	0.0	0	93	Fog
7/3/2012 2:00	60.1	0	1.5	170	93	Mist
7/3/2012 3:00	60.1	0	1.5	170	93	Fog
7/3/2012 4:00	60.1	0	0.0	0	93	Mist
7/3/2012 5:00	57.9	0	1.5	170	97	Fog
7/3/2012 6:00	59.0	0	0.0	0	93	Mist
7/3/2012 7:00	62.1	0	0.0	0	84	
7/3/2012 8:00	66.0	0	0.0	0	75	
7/3/2012 9:00	72.0	0.01	2.6	20	66	
7/3/2012 10:00	77.0	0	5.7	340	47	
7/3/2012 11:00	80.1	0	3.6	350	39	
7/3/2012 12:00			0.0			
7/3/2012 13:00	82.0	0	4.6	360	32	
7/3/2012 14:00	82.9	0	3.6	310	31	
7/3/2012 15:00	84.0	0	3.1	350	30	
7/3/2012 16:00	84.0	0	2.6	350	30	
7/3/2012 17:00	78.1	0	0.0	0	47	
7/3/2012 18:00	73.9	0	1.5	140	62	
7/3/2012 19:00	69.1	0	0.0	0	70	
7/3/2012 20:00	64.9	0	0.0	0	78	
7/3/2012 21:00	62.1	0	0.0	0	80	
7/3/2012 22:00	60.1	0	0.0	0	86	
7/3/2012 23:00	61.0	0	0.0	0	87	
7/4/2012 0:00	62.1	0	0.0	0	84	
7/4/2012 1:00	63.0	0	0.0	0	84	
7/4/2012 2:00	62.1	0.04	0.0	0	90	Light Rain
7/4/2012 3:00	62.1	0.12	0.0	0	90	Moderate Rain
7/4/2012 4:00	62.1	0.03	0.0	0	93	
7/4/2012 5:00	62.1	0.05	0.0	0	93	Moderate Rain
7/4/2012 6:00	63.0	0.16	0.0	0	90	
7/4/2012 7:00	64.9	0	0.0	0	87	
7/4/2012 8:00	66.9	0	3.1	230	87	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/4/2012 9:00	70.0	0	2.1	230	81	
7/4/2012 10:00	75.9	0	0.0	0	74	
7/4/2012 11:00	78.1	0	0.0	0	69	
7/4/2012 12:00	82.0	0	1.5	0	60	
7/4/2012 13:00	84.0	0	1.5	240	53	
7/4/2012 14:00	84.9	0	0.0	0	50	
7/4/2012 15:00	88.0	0	5.1	240	45	
7/4/2012 16:00	86.0	0	2.6	230	51	
7/4/2012 17:00	87.1	0	3.6	250	46	
7/4/2012 18:00	75.9	0	3.6	40	67	
7/4/2012 19:00	71.1	0.03	7.2	340	84	Thunder Storm
7/4/2012 20:00	69.1	0.03	1.5	360	90	Light Rain
7/4/2012 21:00	68.0	0.01	0.0	0	90	
7/4/2012 22:00	66.9	0	1.5	0	90	
7/4/2012 23:00	64.9	0	0.0	0	93	Mist
7/5/2012 0:00	64.9	0	0.0	0	93	Fog
7/5/2012 1:00	64.9	0	1.5	100	93	Fog
7/5/2012 2:00	63.0	0	0.0	0	93	Mist
7/5/2012 3:00	64.0	0	2.6	50	93	Fog
7/5/2012 4:00	62.1	0	0.0	0	93	Mist
7/5/2012 5:00	61.0	0	0.0	0	93	
7/5/2012 6:00	66.0	0	2.1	350	87	
7/5/2012 7:00	69.1	0	0.0	0	78	
7/5/2012 8:00	73.9	0	3.6	10	64	
7/5/2012 9:00	73.0	0	3.6	350	61	
7/5/2012 10:00	73.9	0	3.1	30	60	
7/5/2012 11:00	75.9	0	3.6	20	58	
7/5/2012 12:00	75.9	0	2.1	30	58	
7/5/2012 13:00	77.0	0	2.6	360	56	
7/5/2012 14:00	79.0	0	3.1	340	54	
7/5/2012 15:00	80.1	0	2.6	340	51	
7/5/2012 16:00	78.1	0	2.6	360	54	
7/5/2012 17:00	75.0	0	4.1	30	64	
7/5/2012 18:00	73.9	0	3.1	30	66	
7/5/2012 19:00	73.0	0	2.6	20	68	
7/5/2012 20:00	66.9	0	0.0	0	81	
7/5/2012 21:00	64.0	0	0.0	0	87	
7/5/2012 22:00	62.1	0	0.0	0	90	
7/5/2012 23:00	59.0	0	0.0	0	93	Mist
7/6/2012 0:00	59.0	0	0.0	0	93	Mist
7/6/2012 1:00	57.9	0	0.0	0	90	Mist
7/6/2012 2:00	60.1	0.01	0.0	0	93	Mist
7/6/2012 3:00	60.1	0	0.0	0	93	Mist
7/6/2012 4:00	60.1	0	0.0	0	93	Mist
7/6/2012 5:00	61.0	0	2.6	330	90	Mist
7/6/2012 6:00	62.1	0	0.0	0	86	
7/6/2012 7:00	62.1	0	0.0	0	86	Mist
7/6/2012 8:00	64.0	0	0.0	0	84	
7/6/2012 9:00	71.1	0	0.0	0	68	
7/6/2012 10:00	75.0	0	0.0	0	60	
7/6/2012 11:00	79.0	0	0.0	0	52	
7/6/2012 12:00	82.9	0	2.1	0	46	
7/6/2012 13:00	84.0	0	0.0	0	41	
7/6/2012 14:00	86.0	0	1.5	0	40	
7/6/2012 15:00	86.0	0	1.5	170	39	
7/6/2012 16:00	86.0	0	1.5	160	43	
7/6/2012 17:00	84.9	0	1.5	240	45	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/6/2012 18:00	82.0	0	2.1	170	58	
7/6/2012 19:00	79.0	0	0.0	0	72	
7/6/2012 20:00	72.0	0	1.5	160	84	
7/6/2012 21:00	70.0	0	0.0	0	84	
7/6/2012 22:00	68.0	0	0.0	0	87	
7/6/2012 23:00	68.0	0	0.0	0	87	
7/7/2012 0:00	66.9	0	0.0	0	90	
7/7/2012 1:00	66.0	0	0.0	0	90	
7/7/2012 2:00	66.0	0	0.0	0	90	
7/7/2012 3:00	66.9	0	0.0	0	90	
7/7/2012 4:00	68.0	0	0.0	0	87	
7/7/2012 5:00	68.0	0	0.0	0	87	
7/7/2012 6:00	68.0	0	0.0	0	90	
7/7/2012 7:00	71.1	0	0.0	0	84	
7/7/2012 8:00	73.0	0	0.0	0	79	
7/7/2012 9:00	73.0	0	1.5	250	79	
7/7/2012 10:00	75.9	0	0.0	0	74	
7/7/2012 11:00	78.1	0	0.0	0	67	
7/7/2012 12:00	77.0	0	0.0	0	74	Light Rain
7/7/2012 13:00	73.9	0.02	2.1	300	76	
7/7/2012 14:00	73.0	0	2.1	180	81	
7/7/2012 15:00	77.0	0	0.0	0	66	
7/7/2012 16:00	79.0	0	0.0	0	60	
7/7/2012 17:00	81.0	0	3.6	290	54	
7/7/2012 18:00	81.0	0	4.1	310	47	
7/7/2012 19:00	75.0	0	0.0	0	69	
7/7/2012 20:00	66.9	0	0.0	0	87	
7/7/2012 21:00	66.0	0	1.5	140	87	
7/7/2012 22:00	64.0	0	0.0	0	90	
7/7/2012 23:00	62.1	0	0.0	0	90	
7/8/2012 0:00	63.0	0	0.0	0	90	
7/8/2012 1:00	62.1	0	0.0	0	90	
7/8/2012 2:00	59.0	0	0.0	0	93	
7/8/2012 3:00	62.1	0	0.0	0	90	
7/8/2012 4:00	62.1	0	0.0	0	90	
7/8/2012 5:00	62.1	0	1.5	20	90	Mist
7/8/2012 6:00	62.1	0	0.0	0	93	Fog
7/8/2012 7:00	64.9	0	0.0	0	90	
7/8/2012 8:00	73.9	0	2.1	320	60	
7/8/2012 9:00	77.0	0	3.1	350	45	
7/8/2012 10:00	80.1	0	3.1	0	44	
7/8/2012 11:00	81.0	0	3.6	340	39	
7/8/2012 12:00	81.0	0	4.1	320	39	
7/8/2012 13:00	82.0	0	5.1	330	38	
7/8/2012 14:00	82.0	0	5.1	360	40	
7/8/2012 15:00	82.0	0	4.1	330	37	
7/8/2012 16:00	81.0	0	4.1	350	35	
7/8/2012 17:00	81.0	0	3.6	330	33	
7/8/2012 18:00	77.0	0	3.6	350	35	
7/8/2012 19:00	73.9	0	2.6	350	43	
7/8/2012 20:00	71.1	0	3.6	360	49	
7/8/2012 21:00	64.0	0	0.0	0	67	
7/8/2012 22:00	59.0	0	0.0	0	77	
7/8/2012 23:00	55.0	0	0.0	0	86	
7/9/2012 0:00	54.0	0	0.0	0	90	
7/9/2012 1:00	53.1	0	0.0	0	89	
7/9/2012 2:00	51.1	0	0.0	0	89	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/9/2012 3:00	51.1	0	0.0	0	89	
7/9/2012 4:00	50.0	0	0.0	0	86	
7/9/2012 5:00	48.9	0	0.0	0	90	
7/9/2012 6:00	54.0	0	0.0	0	90	
7/9/2012 7:00	59.0	0	0.0	0	81	
7/9/2012 8:00	64.9	0	0.0	0	63	
7/9/2012 9:00	71.1	0	2.1	0	51	
7/9/2012 10:00	75.0	0	2.6	0	36	
7/9/2012 11:00	75.9	0	4.6	350	33	
7/9/2012 12:00	79.0	0	6.2	340	29	
7/9/2012 13:00	79.0	0	3.6	350	30	
7/9/2012 14:00	79.0	0	2.6	330	30	
7/9/2012 15:00	80.1	0	4.1	300	29	
7/9/2012 16:00	80.1	0	5.1	310	28	
7/9/2012 17:00	79.0	0	3.1	310	27	
7/9/2012 18:00	77.0	0	3.6	340	24	
7/9/2012 19:00	70.0	0	2.6	40	41	
7/9/2012 20:00	60.1	0	0.0	0	64	
7/9/2012 21:00	55.9	0	0.0	0	72	
7/9/2012 22:00	54.0	0	0.0	0	77	
7/9/2012 23:00	51.1	0	0.0	0	79	
7/10/2012 0:00	50.0	0	0.0	0	83	
7/10/2012 1:00	48.9	0	0.0	0	86	
7/10/2012 2:00	48.9	0	0.0	0	86	
7/10/2012 3:00	46.9	0	0.0	0	86	
7/10/2012 4:00	46.9	0	0.0	0	86	
7/10/2012 5:00	46.9	0	0.0	0	86	
7/10/2012 6:00	50.0	0	0.0	0	89	
7/10/2012 7:00	55.9	0	0.0	0	75	
7/10/2012 8:00	61.0	0	0.0	0	64	
7/10/2012 9:00	68.0	0	0.0	0	53	
7/10/2012 10:00	73.9	0	0.0	0	43	
7/10/2012 11:00	75.0	0	0.0	0	37	
7/10/2012 12:00	79.0	0	4.1	330	36	
7/10/2012 13:00	80.1	0	1.5	0	31	
7/10/2012 14:00	78.1	0	0.0	0	35	
7/10/2012 15:00	79.0	0	0.0	0	35	
7/10/2012 16:00	81.0	0	2.1	290	33	
7/10/2012 17:00	77.0	0	1.5	310	37	
7/10/2012 18:00	78.1	0	0.0	0	36	
7/10/2012 19:00	70.0	0	0.0	0	66	
7/10/2012 20:00	62.1	0	0.0	0	78	
7/10/2012 21:00	59.0	0	0.0	0	81	
7/10/2012 22:00	57.9	0	0.0	0	84	
7/10/2012 23:00	55.9	0	0.0	0	87	
7/11/2012 0:00	55.0	0	0.0	0	89	
7/11/2012 1:00	53.1	0	0.0	0	89	
7/11/2012 2:00	52.0	0	0.0	0	89	
7/11/2012 3:00	50.0	0	0.0	0	93	Mist
7/11/2012 4:00	50.0	0	0.0	0	89	
7/11/2012 5:00	50.0	0	0.0	0	86	Mist
7/11/2012 6:00	55.0	0	0.0	0	89	
7/11/2012 7:00	60.1	0	0.0	0	78	
7/11/2012 8:00	64.0	0	0.0	0	67	
7/11/2012 9:00	71.1	0	0.0	0	57	
7/11/2012 10:00	77.0	0	0.0	0	48	
7/11/2012 11:00	80.1	0	2.1	270	36	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/11/2012 12:00	82.0	0	1.5	0	29	
7/11/2012 13:00	84.0	0	0.0	0	27	
7/11/2012 14:00	84.9	0	2.1	210	27	
7/11/2012 15:00	84.9	0	2.6	240	27	
7/11/2012 16:00	86.0	0	0.0	0	26	
7/11/2012 17:00	84.9	0	1.5	250	27	
7/11/2012 18:00	82.9	0	0.0	0	36	
7/11/2012 19:00	73.9	0	0.0	0	64	
7/11/2012 20:00	66.9	0	0.0	0	68	
7/11/2012 21:00	61.0	0	0.0	0	75	
7/11/2012 22:00	60.1	0	0.0	0	80	
7/11/2012 23:00	59.0	0	0.0	0	81	
7/12/2012 0:00	57.0	0	0.0	0	83	
7/12/2012 1:00	55.0	0	0.0	0	89	
7/12/2012 2:00	54.0	0	0.0	0	90	
7/12/2012 3:00	54.0	0	0.0	0	86	
7/12/2012 4:00	54.0	0	0.0	0	90	
7/12/2012 5:00	54.0	0	0.0	0	90	
7/12/2012 6:00	57.9	0	0.0	0	87	
7/12/2012 7:00	62.1	0	0.0	0	78	
7/12/2012 8:00	68.0	0	1.5	280	68	
7/12/2012 9:00	75.0	0	0.0	0	62	
7/12/2012 10:00	80.1	0	0.0	0	54	
7/12/2012 11:00	86.0	0	0.0	0	35	
7/12/2012 12:00	87.1	0	3.6	230	32	
7/12/2012 13:00	89.1	0	3.1	270	24	
7/12/2012 14:00	90.0	0	3.6	270	23	
7/12/2012 15:00	91.9	0	2.6	340	23	
7/12/2012 16:00	91.0	0	3.6	300	24	
7/12/2012 17:00	89.1	0	2.1	190	25	
7/12/2012 18:00	86.0	0	1.5	170	40	
7/12/2012 19:00	77.0	0	0.0	0	62	
7/12/2012 20:00	71.1	0	0.0	0	68	
7/12/2012 21:00	66.9	0	0.0	0	76	
7/12/2012 22:00	64.9	0	0.0	0	81	
7/12/2012 23:00	64.9	0	2.1	170	78	
7/13/2012 0:00	61.0	0	0.0	0	87	
7/13/2012 1:00	59.0	0	0.0	0	93	
7/13/2012 2:00	59.0	0	0.0	0	93	Mist
7/13/2012 3:00	59.0	0	2.6	50	90	Mist
7/13/2012 4:00	57.9	0	1.5	50	93	Mist
7/13/2012 5:00	57.9	0	0.0	0	93	Mist
7/13/2012 6:00	62.1	0	0.0	0	86	
7/13/2012 7:00	66.0	0	0.0	0	81	
7/13/2012 8:00	70.0	0	0.0	0	73	
7/13/2012 9:00	75.0	0	0.0	0	64	
7/13/2012 10:00	81.0	0	0.0	0	51	
7/13/2012 11:00	84.9	0	1.5	110	46	
7/13/2012 12:00	89.1	0	3.1	180	35	
7/13/2012 13:00	91.0	0	3.1	220	30	
7/13/2012 14:00	91.0	0	3.1	220	29	
7/13/2012 15:00	93.0	0	2.1	0	27	
7/13/2012 16:00	91.9	0	3.1	240	28	
7/13/2012 17:00	91.0	0	3.6	240	29	
7/13/2012 18:00	89.1	0	2.6	250	33	
7/13/2012 19:00	78.1	0	0.0	0	62	
7/13/2012 20:00	72.0	0	0.0	0	68	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/13/2012 21:00	69.1	0	0.0	0	73	
7/13/2012 22:00	66.0	0	2.1	160	81	
7/13/2012 23:00	64.9	0	0.0	0	81	
7/14/2012 0:00			0.0			
7/14/2012 1:00			0.0			
7/14/2012 2:00	64.0	0	0.0	0	87	Mist
7/14/2012 3:00	62.1	0	0.0	0	90	Mist
7/14/2012 4:00	62.1	0	0.0	0	93	Mist
7/14/2012 5:00	63.0	0	0.0	0	90	Mist
7/14/2012 6:00	64.9	0	0.0	0	87	Mist
7/14/2012 7:00	69.1	0	0.0	0	78	
7/14/2012 8:00	71.1	0	0.0	0	76	
7/14/2012 9:00	77.0	0	0.0	0	66	
7/14/2012 10:00	80.1	0	2.1	220	58	
7/14/2012 11:00	81.0	0	0.0	0	56	
7/14/2012 12:00	82.0	0	0.0	0	60	
7/14/2012 13:00	84.0	0	1.5	0	55	
7/14/2012 14:00	88.0	0	2.6	250	43	
7/14/2012 15:00	88.0	0	1.5	140	42	
7/14/2012 16:00	91.0	0	0.0	0	38	
7/14/2012 17:00	89.1	0	1.5	30	42	
7/14/2012 18:00	84.0	0	0.0	0	61	
7/14/2012 19:00	79.0	0	1.5	130	74	
7/14/2012 20:00	72.0	0	0.0	0	82	
7/14/2012 21:00	69.1	0	0.0	0	84	
7/14/2012 22:00	68.0	0	1.5	160	87	Mist
7/14/2012 23:00	66.9	0	0.0	0	87	Mist
7/15/2012 0:00	64.9	0	0.0	0	90	Mist
7/15/2012 1:00	64.9	0	0.0	0	90	Mist
7/15/2012 2:00	64.0	0	1.5	50	87	Mist
7/15/2012 3:00	60.1	0	1.5	160	90	Mist
7/15/2012 4:00	63.0	0	0.0	0	93	Mist
7/15/2012 5:00	62.1	0	0.0	0	93	Fog
7/15/2012 6:00	63.0	0	0.0	0	93	Mist
7/15/2012 7:00	68.0	0	0.0	0	84	
7/15/2012 8:00	73.0	0	0.0	0	71	
7/15/2012 9:00	78.1	0	0.0	0	64	
7/15/2012 10:00	84.0	0	0.0	0	53	
7/15/2012 11:00	86.0	0	2.1	270	51	
7/15/2012 12:00	87.1	0	3.6	200	46	
7/15/2012 13:00	88.0	0	5.1	220	39	
7/15/2012 14:00	86.0	0	4.1	210	45	
7/15/2012 15:00	84.0	0	3.6	170	53	
7/15/2012 16:00	84.0	0	4.1	200	44	
7/15/2012 17:00	79.0	0	2.6	220	58	Light Rain
7/15/2012 18:00	72.0	0.07	1.5	160	87	Light Rain
7/15/2012 19:00	72.0	0.01	0.0	0	87	Mist
7/15/2012 20:00	71.1	0	0.0	0	93	Light Rain
7/15/2012 21:00	71.1	0	0.0	0	93	Mist
7/15/2012 22:00	72.0	0.02	0.0	0	93	Light Rain
7/15/2012 23:00	71.1	0.01	0.0	0	93	Mist
7/16/2012 0:00	70.0	0.01	0.0	0	93	Light Rain
7/16/2012 1:00	68.0	0	0.0	0	93	Mist
7/16/2012 2:00	66.9	0	2.6	180	93	Mist
7/16/2012 3:00	66.0	0.01	0.0	0	93	Mist
7/16/2012 4:00	66.9	0	0.0	0	93	Fog
7/16/2012 5:00	66.0	0	2.1	180	96	Fog

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/16/2012 6:00	68.0	0	0.0	0	93	Mist
7/16/2012 7:00	68.0	0	0.0	0	93	Mist
7/16/2012 8:00	71.1	0	0.0	0	87	Mist
7/16/2012 9:00	77.0	0	0.0	0	74	
7/16/2012 10:00	81.0	0	2.1	250	65	
7/16/2012 11:00	82.0	0	2.1	230	63	
7/16/2012 12:00	87.1	0	4.1	300	50	
7/16/2012 13:00	87.1	0	3.6	320	50	
7/16/2012 14:00	90.0	0	4.1	350	44	
7/16/2012 15:00	89.1	0	5.7	330	44	
7/16/2012 16:00	88.0	0	3.6	300	47	
7/16/2012 17:00	88.0	0	3.1	0	47	
7/16/2012 18:00	84.9	0	2.1	310	50	
7/16/2012 19:00	82.9	0	0.0	0	57	
7/16/2012 20:00	73.0	0	2.1	130	84	
7/16/2012 21:00	73.0	0	0.0	0	81	
7/16/2012 22:00	70.0	0	2.1	160	87	
7/16/2012 23:00	69.1	0	0.0	0	90	Mist
7/17/2012 0:00	69.1	0	0.0	0	87	Mist
7/17/2012 1:00	66.9	0	1.5	160	90	Mist
7/17/2012 2:00	68.0	0	0.0	0	90	Mist
7/17/2012 3:00	64.9	0	0.0	0	90	Mist
7/17/2012 4:00	66.9	0	0.0	0	90	Mist
7/17/2012 5:00	66.0	0	0.0	0	93	Mist
7/17/2012 6:00	69.1	0	0.0	0	87	Mist
7/17/2012 7:00	72.0	0	0.0	0	84	
7/17/2012 8:00	75.0	0	0.0	0	79	
7/17/2012 9:00	75.0	0	2.6	200	76	
7/17/2012 10:00	77.0	0	2.1	180	71	
7/17/2012 11:00	82.0	0	3.6	210	58	
7/17/2012 12:00	88.0	0	6.2	230	47	
7/17/2012 13:00	91.9	0	4.1	220	41	
7/17/2012 14:00	93.9	0	5.7	210	37	
7/17/2012 15:00	96.1	0	7.2	250	36	
7/17/2012 16:00	93.9	0	5.1	240	37	
7/17/2012 17:00	91.0	0	3.6	210	44	
7/17/2012 18:00	75.0	0.49	0.0	0	88	Thunder Storm
7/17/2012 19:00	73.9	0	0.0	0	91	Light Rain
7/17/2012 20:00	75.0	0.01	1.5	210	90	Light Rain
7/17/2012 21:00	75.0	0.03	3.6	170	90	Light Rain
7/17/2012 22:00	73.0	0	1.5	0	90	
7/17/2012 23:00	73.0	0	0.0	0	90	Thunder Storm
7/18/2012 0:00	73.0	0.03	1.5	0	87	
7/18/2012 1:00	71.1	0	2.6	160	93	Mist
7/18/2012 2:00	72.0	0	1.5	20	91	
7/18/2012 3:00	71.1	0	0.0	0	93	Light Rain
7/18/2012 4:00	70.0	0	0.0	0	93	Mist
7/18/2012 5:00	72.0	0	1.5	30	87	
7/18/2012 6:00	72.0	0	0.0	0	84	
7/18/2012 7:00	73.0	0	0.0	0	84	
7/18/2012 8:00	73.9	0	2.6	320	74	
7/18/2012 9:00	75.0	0	2.1	0	69	
7/18/2012 10:00	75.9	0	1.5	70	69	
7/18/2012 11:00	81.0	0	0.0	0	56	
7/18/2012 12:00	82.0	0	0.0	0	47	
7/18/2012 13:00	84.9	0	4.1	320	42	
7/18/2012 14:00	84.9	0	5.7	360	39	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/18/2012 15:00	84.9	0	3.1	330	42	
7/18/2012 16:00	84.0	0	2.6	320	43	
7/18/2012 17:00	82.0	0	3.6	340	46	
7/18/2012 18:00	80.1	0	3.6	10	51	
7/18/2012 19:00	75.9	0	5.7	360	52	
7/18/2012 20:00	72.0	0	2.6	360	55	
7/18/2012 21:00	70.0	0	4.1	10	59	
7/18/2012 22:00	66.9	0	1.5	350	66	
7/18/2012 23:00	59.0	0	0.0	0	83	
7/19/2012 0:00	57.0	0	0.0	0	87	
7/19/2012 1:00	57.9	0	2.1	20	84	
7/19/2012 2:00	54.0	0	0.0	0	93	
7/19/2012 3:00	55.0	0	0.0	0	89	
7/19/2012 4:00	53.1	0	1.5	160	93	
7/19/2012 5:00	53.1	0	0.0	0	93	
7/19/2012 6:00	55.9	0	1.5	20	90	
7/19/2012 7:00	60.1	0	0.0	0	80	
7/19/2012 8:00	63.0	0	0.0	0	70	
7/19/2012 9:00	69.1	0	1.5	280	51	
7/19/2012 10:00	72.0	0	3.6	260	44	
7/19/2012 11:00	77.0	0	3.6	350	37	
7/19/2012 12:00	79.0	0	4.6	360	36	
7/19/2012 13:00	80.1	0	6.2	320	33	
7/19/2012 14:00	81.0	0	5.1	350	33	
7/19/2012 15:00		0	0.0			
7/19/2012 16:00		0	0.0			
7/19/2012 17:00			0.0			
7/19/2012 18:00	71.6	0	5.1	360	50	
7/19/2012 19:00	68.0	0	2.1	20	53	
7/19/2012 20:00	68.0	0	2.1	30	53	
7/19/2012 21:00	66.2	0	0.0			
7/19/2012 22:00		0	0.0			
7/19/2012 23:00		0	0.0			
7/20/2012 0:00		0	0.0			
7/20/2012 1:00		0	0.0			
7/20/2012 2:00		0	0.0			
7/20/2012 3:00		0	0.0			
7/20/2012 4:00		0	0.0			
7/20/2012 5:00		0	0.0			
7/20/2012 6:00		0	0.0			
7/20/2012 7:00		0	0.0			
7/20/2012 8:00		0	0.0			
7/20/2012 9:00		0	0.0			
7/20/2012 10:00		0	0.0			
7/20/2012 11:00			0.0			
7/20/2012 12:00			0.0			
7/20/2012 13:00	75.9	0	0.0	0	42	
7/20/2012 14:00	79.0	0	0.0	0	36	
7/20/2012 15:00	79.0	0	1.5	40	35	
7/20/2012 16:00	78.1	0	0.0	0	35	
7/20/2012 17:00	75.9	0	0.0	0	45	
7/20/2012 18:00	75.9	0	0.0	0	45	
7/20/2012 19:00	70.0	0	2.1	170	66	
7/20/2012 20:00	64.9	0	2.1	160	73	
7/20/2012 21:00	61.0	0	0.0	0	83	
7/20/2012 22:00	59.0	0	0.0	0	87	
7/20/2012 23:00	57.9	0	0.0	0	87	

Time Beginning (EDT)	Temp (F)	Precip (in)	Wind Speed (m/s)	Wind Direction (°)	Relative Humidity (%)	Observations
7/21/2012 0:00	55.9	0	0.0	0	90	
7/21/2012 1:00	55.0	0	0.0	0	93	
7/21/2012 2:00	54.0	0	0.0	0	93	Mist
7/21/2012 3:00	53.1	0	0.0	0	93	Mist
7/21/2012 4:00	55.0	0	0.0	0	96	Mist
7/21/2012 5:00	55.9	0	0.0	0	93	Mist
7/21/2012 6:00	55.9	0	0.0	0	93	Fog
7/21/2012 7:00	57.0	0	0.0	0	89	Mist
7/21/2012 8:00	61.0	0	0.0	0	81	
7/21/2012 9:00	66.9	0	0.0	0	68	
7/21/2012 10:00	73.9	0	0.0	0	52	
7/21/2012 11:00	78.1	0	1.5	0	37	
7/21/2012 12:00	82.0	0	3.1	40	32	
7/21/2012 13:00	81.0	0	2.6	0	30	
7/21/2012 14:00	82.0	0	1.5	0	28	
7/21/2012 15:00	84.0	0	2.6	0	25	
7/21/2012 16:00	82.9	0	3.6	210	28	
7/21/2012 17:00	82.9	0	2.6	180	30	
7/21/2012 18:00	81.0	0	2.1	190	29	
7/21/2012 19:00	71.1	0	1.5	170	61	
7/21/2012 20:00	64.0	0	0.0	0	70	
7/21/2012 21:00	61.0	0	1.5	170	78	
7/21/2012 22:00	60.1	0	0.0	0	78	
7/21/2012 23:00	62.1	0	0.0	0	75	
7/22/2012 0:00	64.0	0	0.0	0	67	
7/22/2012 1:00	66.9	0	3.6	180	66	
7/22/2012 2:00	64.9	0	3.1	190	70	
7/22/2012 3:00	63.0	0	2.1	190	78	
7/22/2012 4:00	61.0	0	0.0	0	81	
7/22/2012 5:00	62.1	0	0.0	0	78	
7/22/2012 6:00	64.0	0	2.1	180	75	
7/22/2012 7:00	68.0	0	1.5	0	68	
7/22/2012 8:00	71.1	0	2.1	180	61	
7/22/2012 9:00	75.0	0	2.1	0	55	
7/22/2012 10:00	78.1	0	0.0	0	52	
7/22/2012 11:00	81.0	0	2.6	170	47	
7/22/2012 12:00	82.9	0	3.1	190	44	
7/22/2012 13:00	86.0	0	4.6	200	35	
7/22/2012 14:00	88.0	0	4.6	280	33	
7/22/2012 15:00	86.0	0	2.6	240	35	
7/22/2012 16:00	87.1	0	4.1	210	34	
7/22/2012 17:00	86.0	0	1.5	270	35	
7/22/2012 18:00	87.1	0	2.6	270	34	
7/22/2012 19:00	77.0	0	0.0	0	60	
7/22/2012 20:00	73.0	0	2.1	170	66	
7/22/2012 21:00	69.1	0	0.0	0	75	
7/22/2012 22:00	69.1	0	2.6	170	73	
7/22/2012 23:00	71.1	0	3.6	180	68	

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/3/2012 0:00	45.0	0		6.9	170	90
12/3/2012 1:00	44.1	0		4.6	30	89
12/3/2012 2:00	45.0	0		0.0	0	90
12/3/2012 3:00	45.0	0		0.0	0	90
12/3/2012 4:00	43.0	0		6.9	20	89
12/3/2012 5:00	44.1	0		0.0	0	89
12/3/2012 6:00	43.0	0		0.0	0	89
12/3/2012 7:00	43.0	0		3.5	60	93
12/3/2012 8:00	44.1	0		0.0	0	93
12/3/2012 9:00	46.9	0		0.0	0	83
12/3/2012 10:00	50.0	0		9.2	20	68
12/3/2012 11:00	48.9	0		10.4	10	66
12/3/2012 12:00	50.0	0		8.1	30	61
12/3/2012 13:00	48.0	0		8.1	50	63
12/3/2012 14:00	46.0	0		8.1	20	68
12/3/2012 15:00	43.0	0		6.9	40	73
12/3/2012 16:00	37.9	0		5.8	30	79
12/3/2012 17:00	37.0	0		4.6	20	82
12/3/2012 18:00	30.9	0		0.0	0	89
12/3/2012 19:00	30.0	0		4.6	170	88
12/3/2012 20:00	33.1	0		4.6	40	88
12/3/2012 21:00	34.0	0		0.0	0	88
12/3/2012 22:00	35.1	0		3.5	40	85
12/3/2012 23:00	35.1	0		0.0	0	88
12/4/2012 0:00	30.9	0		3.5	150	89
12/4/2012 1:00	32.0	0		0.0	0	88
12/4/2012 2:00	28.9	0		0.0	0	89
12/4/2012 3:00	30.0	0		0.0	0	88
12/4/2012 4:00	30.9	0		3.5	140	92
12/4/2012 5:00	30.9	0		0.0	0	92
12/4/2012 6:00	32.0	0		0.0	0	92
12/4/2012 7:00	33.1	0		0.0	0	92
12/4/2012 8:00	34.0	0		0.0	0	88
12/4/2012 9:00	36.0	0		0.0	0	89
12/4/2012 10:00	37.9	0.02		0.0	0	89
12/4/2012 11:00	39.9	0		0.0	0	89
12/4/2012 12:00	43.0	0		0.0	0	86
12/4/2012 13:00	45.0	0		3.5	180	86
12/4/2012 14:00	45.0	0		0.0	0	90
12/4/2012 15:00	44.1	0		0.0	0	89
12/4/2012 16:00	44.1	0		0.0	0	89
12/4/2012 17:00	45.0	0		0.0	0	86
12/4/2012 18:00	45.0	0		0.0	0	90
12/4/2012 19:00	50.0	0		8.1	220	89
12/4/2012 20:00	52.0	0		11.5	200	86
12/4/2012 21:00	53.1	0		11.5	200	86
12/4/2012 22:00	54.0	0		10.4	200	86
12/4/2012 23:00	54.0	0		3.5	250	86
12/5/2012 0:00	54.0	0		4.6	230	86
12/5/2012 1:00	54.0	0.04		11.5	190	86
12/5/2012 2:00	54.0	0		11.5	190	90
12/5/2012 3:00	52.0	0.09		3.5	0	83
12/5/2012 4:00	50.0	0.03		6.9	290	89
12/5/2012 5:00	48.9	0.01		3.5	310	77

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/5/2012 6:00	45.0	0		5.8	250	82
12/5/2012 7:00	46.9	0		6.9	240	71
12/5/2012 8:00	48.9	0		6.9	270	61
12/5/2012 9:00	51.1	0		12.7	260	54
12/5/2012 10:00	48.9	0		17.3	270	56
12/5/2012 11:00	46.9	0		12.7	270	52
12/5/2012 12:00	45.0	0		12.7	310	53
12/5/2012 13:00	42.1	0		10.4	300	50
12/5/2012 14:00	39.0	0		11.5	280	52
12/5/2012 15:00	37.0	0		9.2	330	61
12/5/2012 16:00	34.0	0		8.1	320	72
12/5/2012 17:00	34.0	0		15.0	330	54
12/5/2012 18:00	33.1	0		9.2	330	51
12/5/2012 19:00	32.0	0		8.1	350	54
12/5/2012 20:00	30.0	0		12.7	340	60
12/5/2012 21:00	30.0	0		10.4	350	55
12/5/2012 22:00	30.0	0		11.5	350	58
12/5/2012 23:00	30.0	0		8.1	330	63
12/6/2012 0:00	30.0	0		9.2	340	53
12/6/2012 1:00	28.9	0		13.8	340	58
12/6/2012 2:00	28.9	0		10.4	320	56
12/6/2012 3:00	28.9	0		16.1	10	56
12/6/2012 4:00	28.0	0		8.1	340	55
12/6/2012 5:00	27.0	0		8.1	340	58
12/6/2012 6:00	26.1	0		8.1	330	60
12/6/2012 7:00	26.1	0		5.8	330	60
12/6/2012 8:00	28.9	0		6.9	0	56
12/6/2012 9:00	30.9	0		8.1	10	51
12/6/2012 10:00	33.1	0		8.1	320	49
12/6/2012 11:00	33.1	0		5.8	0	49
12/6/2012 12:00	35.1	0		9.2	20	45
12/6/2012 13:00	37.0	0		0.0	0	42
12/6/2012 14:00	37.0	0		0.0	0	42
12/6/2012 15:00	32.0	0		0.0	0	54
12/6/2012 16:00	25.0	0		0.0	0	74
12/6/2012 17:00	24.1	0		0.0	0	74
12/6/2012 18:00	21.9	0		0.0	0	81
12/6/2012 19:00	23.0	0		0.0	0	78
12/6/2012 20:00	23.0	0		4.6	30	81
12/6/2012 21:00	21.9	0		0.0	0	81
12/6/2012 22:00	21.0	0		0.0	0	81
12/6/2012 23:00	24.1	0		0.0	0	81
12/7/2012 0:00	23.0	0		0.0	0	85
12/7/2012 1:00	21.9	0		0.0	0	84
12/7/2012 2:00	24.1	0		0.0	0	81
12/7/2012 3:00	24.1	0		0.0	0	81
12/7/2012 4:00	24.1	0		0.0	0	84
12/7/2012 5:00	24.1	0		0.0	0	81
12/7/2012 6:00	24.1	0		0.0	0	84
12/7/2012 7:00	24.1	0		0.0	0	84
12/7/2012 8:00	27.0	0		0.0	0	78
12/7/2012 9:00	30.9	0		0.0	0	66
12/7/2012 10:00	34.0	0		4.6	230	59
12/7/2012 11:00	35.1	0		9.2	200	58

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/7/2012 12:00	37.0	0		8.1	200	59
12/7/2012 13:00	37.0	0		11.5	190	61
12/7/2012 14:00	37.0	0		9.2	180	64
12/7/2012 15:00	37.0	0		5.8	200	67
12/7/2012 16:00	35.1	0		3.5	200	82
12/7/2012 17:00	34.0	0.04		0.0	0	88
12/7/2012 18:00	34.0	0.02		0.0	0	88
12/7/2012 19:00	34.0	0		0.0	0	88
12/7/2012 20:00	34.0	0		0.0	0	88
12/7/2012 21:00	34.0	0		0.0	0	88
12/7/2012 22:00	34.0	0		0.0	0	88
12/7/2012 23:00	34.0	0		0.0	0	92
12/8/2012 0:00	34.0	0		0.0	0	92
12/8/2012 1:00	34.0	0		0.0	0	92
12/8/2012 2:00	34.0	0		0.0	0	92
12/8/2012 3:00	34.0	0		0.0	0	92
12/8/2012 4:00	34.0	0		0.0	0	92
12/8/2012 5:00	34.0	0		0.0	0	96
12/8/2012 6:00	34.0	0.01		0.0	0	92
12/8/2012 7:00	34.0	0.01		0.0	0	96
12/8/2012 8:00	35.1	0		0.0	0	92
12/8/2012 9:00	36.0	0.01		0.0	0	89
12/8/2012 10:00	36.0	0		0.0	0	92
12/8/2012 11:00	36.0	0		0.0	0	92
12/8/2012 12:00	37.0	0		0.0	0	92
12/8/2012 13:00	37.9	0		0.0	0	89
12/8/2012 14:00	37.9	0		0.0	0	89
12/8/2012 15:00	37.9	0		0.0	0	89
12/8/2012 16:00	37.9	0		0.0	0	89
12/8/2012 17:00	37.0	0		0.0	0	92
12/8/2012 18:00	37.9	0		0.0	0	92
12/8/2012 19:00	37.9	0		0.0	0	92
12/8/2012 20:00	39.0	0		0.0	0	89
12/8/2012 21:00	37.9	0		0.0	0	92
12/8/2012 22:00	37.0	0		0.0	0	92
12/8/2012 23:00	37.9	0		0.0	0	92
12/9/2012 0:00	37.9	0		0.0	0	92
12/9/2012 1:00	36.0	0		3.5	40	89
12/9/2012 2:00	34.0	0		4.6	80	92
12/9/2012 3:00	33.1	0		0.0	0	92
12/9/2012 4:00	30.9	0		0.0	0	92
12/9/2012 5:00	33.1	0		0.0	0	92
12/9/2012 6:00	32.0	0		5.8	40	88
12/9/2012 7:00	30.0	0		3.5	160	88
12/9/2012 8:00	30.9	0		4.6	160	92
12/9/2012 9:00	39.0	0		0.0	0	72
12/9/2012 10:00	41.0	0		0.0	0	65
12/9/2012 11:00	42.1	0		5.8	360	53
12/9/2012 12:00	42.1	0		5.8	30	53
12/9/2012 13:00	43.0	0		0.0	0	47
12/9/2012 14:00	43.0	0		0.0	0	47
12/9/2012 15:00	39.9	0		6.9	360	59
12/9/2012 16:00	37.0	0		4.6	30	61
12/9/2012 17:00	35.1	0		0.0	0	64

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/9/2012 18:00	33.1	0		0.0	0	78
12/9/2012 19:00	32.0	0		0.0	0	78
12/9/2012 20:00	33.1	0		0.0	0	75
12/9/2012 21:00	33.1	0		0.0	0	78
12/9/2012 22:00	33.1	0		0.0	0	78
12/9/2012 23:00	37.0	0.01		0.0	0	75
12/10/2012 0:00	37.0	0.02		0.0	0	82
12/10/2012 1:00	35.1	0.01		0.0	0	88
12/10/2012 2:00	35.1	0.01		0.0	0	92
12/10/2012 3:00	35.1	0.06		0.0	0	92
12/10/2012 4:00	35.1	0.07		0.0	0	92
12/10/2012 5:00	36.0	0.03		0.0	0	92
12/10/2012 6:00	36.0	0.05		0.0	0	92
12/10/2012 7:00	37.0	0.09		0.0	0	92
12/10/2012 8:00	37.0	0.06		0.0	0	92
12/10/2012 9:00	37.9	0.15		0.0	0	92
12/10/2012 10:00	39.0	0.01		0.0	0	89
12/10/2012 11:00	41.0	0		3.5	290	89
12/10/2012 12:00	42.1	0		0.0	0	89
12/10/2012 13:00	44.1	0		0.0	0	85
12/10/2012 14:00	43.0	0		0.0	0	89
12/10/2012 15:00	43.0	0		0.0	0	89
12/10/2012 16:00	42.1	0.04		0.0	0	92
12/10/2012 17:00	42.1	0.03		0.0	0	92
12/10/2012 18:00	42.1	0.04		0.0	0	92
12/10/2012 19:00	42.1	0		0.0	0	92
12/10/2012 20:00	43.0	0.02		4.6	30	89
12/10/2012 21:00	44.1	0.04		3.5	350	93
12/10/2012 22:00	44.1	0		10.4	30	82
12/10/2012 23:00	42.1	0		5.8	40	85
12/11/2012 0:00	41.0	0		0.0	0	89
12/11/2012 1:00	41.0	0		3.5	60	82
12/11/2012 2:00	39.0	0		0.0	0	93
12/11/2012 3:00	39.0	0		0.0	0	93
12/11/2012 4:00	39.0	0		3.5	0	89
12/11/2012 5:00	39.0	0		4.6	360	89
12/11/2012 6:00	37.9	0		0.0	0	89
12/11/2012 7:00	37.9	0		8.1	310	82
12/11/2012 8:00	37.0	0		0.0	0	85
12/11/2012 9:00	37.0	0		5.8	340	82
12/11/2012 10:00	36.0	0		6.9	350	82
12/11/2012 11:00	36.0	0		6.9	350	75
12/11/2012 12:00	36.0	0		4.6	310	73
12/11/2012 13:00	37.4	0		5.8	330	70
12/11/2012 14:00						
12/11/2012 15:00						
12/11/2012 16:00						
12/11/2012 17:00						
12/11/2012 18:00						
12/11/2012 19:00						
12/11/2012 20:00	30.9	0		6.9	290	63
12/11/2012 21:00	27.0	0		0.0	0	74
12/11/2012 22:00	24.1	0		0.0	0	84
12/11/2012 23:00	26.1	0		0.0	0	77

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/12/2012 0:00	24.1	0		0.0	0	81
12/12/2012 1:00	26.1	0		0.0	0	81
12/12/2012 2:00	23.0	0		0.0	0	85
12/12/2012 3:00	21.0	0		0.0	0	84
12/12/2012 4:00	19.9	0		0.0	0	84
12/12/2012 5:00	21.0	0		4.6	30	88
12/12/2012 6:00	19.0	0		0.0	0	88
12/12/2012 7:00	19.0	0		0.0	0	80
12/12/2012 8:00	25.0	0		0.0	0	85
12/12/2012 9:00	28.0	0		0.0	0	77
12/12/2012 10:00	33.1	0		0.0	0	66
12/12/2012 11:00	36.0	0		0.0	0	54
12/12/2012 12:00	37.0	0		0.0	0	52
12/12/2012 13:00	39.9	0		0.0	0	46
12/12/2012 14:00	39.0	0		10.4	280	50
12/12/2012 15:00	37.0	0		0.0	0	52
12/12/2012 16:00	27.0	0		3.5	160	85
12/12/2012 17:00	25.0	0		0.0	0	85
12/12/2012 18:00	25.0	0		0.0	0	81
12/12/2012 19:00	24.1	0		0.0	0	84
12/12/2012 20:00	21.9	0		0.0	0	84
12/12/2012 21:00	24.1	0		0.0	0	88
12/12/2012 22:00	26.1	0		0.0	0	84
12/12/2012 23:00	28.0	0		0.0	0	81
12/13/2012 0:00	27.0	0		0.0	0	89
12/13/2012 1:00	27.0	0		0.0	0	85
12/13/2012 2:00	23.0	0		0.0	0	88
12/13/2012 3:00	23.0	0		0.0	0	88
12/13/2012 4:00	19.9	0		0.0	0	88
12/13/2012 5:00	19.9	0		0.0	0	88
12/13/2012 6:00	19.9	0		0.0	0	84
12/13/2012 7:00	19.0	0		0.0	0	84
12/13/2012 8:00	24.1	0		0.0	0	88
12/13/2012 9:00	26.1	0		0.0	0	88
12/13/2012 10:00	30.9	0		0.0	0	78
12/13/2012 11:00	35.1	0		0.0	0	66
12/13/2012 12:00	39.0	0		0.0	0	52
12/13/2012 13:00	41.0	0		0.0	0	46
12/13/2012 14:00	39.9	0		3.5	170	48
12/13/2012 15:00	33.1	0		0.0	0	72
12/13/2012 16:00	28.0	0		0.0	0	85
12/13/2012 17:00	27.0	0		0.0	0	81
12/13/2012 18:00	24.1	0		0.0	0	84
12/13/2012 19:00	23.0	0		0.0	0	85
12/13/2012 20:00	21.9	0		0.0	0	84
12/13/2012 21:00	21.0	0		0.0	0	84
12/13/2012 22:00	21.9	0		0.0	0	84
12/13/2012 23:00	23.0	0		0.0	0	85
12/14/2012 0:00	23.0	0		0.0	0	88
12/14/2012 1:00	21.9	0		0.0	0	88
12/14/2012 2:00	21.9	0		0.0	0	84
12/14/2012 3:00	21.0	0		0.0	0	84
12/14/2012 4:00	19.0	0		0.0	0	84
12/14/2012 5:00	17.1	0		0.0	0	83

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/14/2012 6:00	18.0	0		3.5	170	80
12/14/2012 7:00	19.0	0		0.0	0	80
12/14/2012 8:00	24.1	0		0.0	0	88
12/14/2012 9:00	28.0	0		0.0	0	81
12/14/2012 10:00	34.0	0		3.5	270	69
12/14/2012 11:00	39.9	0		8.1	210	53
12/14/2012 12:00	44.1	0		11.5	250	43
12/14/2012 13:00	44.1	0		10.4	280	43
12/14/2012 14:00	44.1	0		6.9	260	47
12/14/2012 15:00	42.1	0		6.9	270	49
12/14/2012 16:00	37.9	0		0.0	0	59
12/14/2012 17:00	37.0	0		4.6	0	64
12/14/2012 18:00	39.9	0		3.5	280	57
12/14/2012 19:00	36.0	0		0.0	0	69
12/14/2012 20:00	35.1	0		3.5	160	75
12/14/2012 21:00	37.0	0		0.0	0	67
12/14/2012 22:00	37.9	0		6.9	360	62
12/14/2012 23:00	37.9	0		4.6	320	62
12/15/2012 0:00	37.0	0		4.6	350	61
12/15/2012 1:00	36.0	0		8.1	330	62
12/15/2012 2:00	30.9	0		8.1	30	72
12/15/2012 3:00	32.0	0		5.8	10	66
12/15/2012 4:00	30.0	0		0.0	0	71
12/15/2012 5:00	28.0	0		0.0	0	71
12/15/2012 6:00	26.1	0		4.6	40	71
12/15/2012 7:00	25.0	0		3.5	40	74
12/15/2012 8:00	30.9	0		4.6	10	58
12/15/2012 9:00	32.0	0		6.9	20	56
12/15/2012 10:00	33.1	0		8.1	40	47
12/15/2012 11:00	34.0	0		0.0	0	40
12/15/2012 12:00	36.0	0		4.6	30	34
12/15/2012 13:00	36.0	0		0.0	0	32
12/15/2012 14:00	34.0	0		6.9	50	36
12/15/2012 15:00	32.0	0		4.6	30	37
12/15/2012 16:00	26.1	0		3.5	40	52
12/15/2012 17:00	26.1	0		3.5	30	50
12/15/2012 18:00	21.0	0		0.0	0	70
12/15/2012 19:00	24.1	0		4.6	50	54
12/15/2012 20:00	24.1	0		0.0	0	52
12/15/2012 21:00	21.0	0		4.6	50	65
12/15/2012 22:00	21.9	0		4.6	40	71
12/15/2012 23:00	21.9	0		0.0	0	68
12/16/2012 0:00	23.0	0		0.0	0	68
12/16/2012 1:00	24.1	0		0.0	0	60
12/16/2012 2:00	24.1	0		0.0	0	57
12/16/2012 3:00	24.1	0		0.0	0	60
12/16/2012 4:00	25.0	0		0.0	0	60
12/16/2012 5:00	25.0	0		0.0	0	66
12/16/2012 6:00	26.1	0		0.0	0	65
12/16/2012 7:00	27.0	0		0.0	0	58
12/16/2012 8:00	27.0	0		3.5	120	58
12/16/2012 9:00	27.0	0		6.9	0	55
12/16/2012 10:00	26.1	0		3.5	110	57
12/16/2012 11:00	25.0	0		3.5	150	71

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/16/2012 12:00	24.1	0.01		8.1	40	81
12/16/2012 13:00	24.1	0		6.9	50	81
12/16/2012 14:00	24.1	0.01		5.8	50	81
12/16/2012 15:00	24.1	0.01		4.6	50	81
12/16/2012 16:00	24.1	0.01		4.6	60	81
12/16/2012 17:00	24.1	0.02		3.5	30	84
12/16/2012 18:00	24.1	0.01		3.5	50	84
12/16/2012 19:00	25.0	0		0.0	0	81
12/16/2012 20:00	25.0	0		0.0	0	85
12/16/2012 21:00	26.1	0.01		0.0	0	81
12/16/2012 22:00	27.0	0.01		6.9	160	78
12/16/2012 23:00	27.0	0		3.5	150	78
12/17/2012 0:00	28.0	0		5.8	160	75
12/17/2012 1:00	28.0	0		0.0	0	77
12/17/2012 2:00	28.0	0		3.5	0	77
12/17/2012 3:00	28.0	0.01		0.0	0	85
12/17/2012 4:00	28.0	0.05		0.0	0	88
12/17/2012 5:00	28.0	0.05		0.0	0	88
12/17/2012 6:00	28.0	0.02		0.0	0	88
12/17/2012 7:00	28.9	0		0.0	0	89
12/17/2012 8:00	30.0	0		0.0	0	85
12/17/2012 9:00	32.0	0		0.0	0	78
12/17/2012 10:00	33.1	0		3.5	130	75
12/17/2012 11:00	32.0	0		5.8	200	81
12/17/2012 12:00	32.0	0		0.0	0	81
12/17/2012 13:00	32.0	0		3.5	160	85
12/17/2012 14:00	32.0	0.01		0.0	0	88
12/17/2012 15:00	32.0	0		0.0	0	92
12/17/2012 16:00	33.1	0.01		0.0	0	88
12/17/2012 17:00	33.1	0		3.5	350	92
12/17/2012 18:00	33.1	0		0.0	0	92
12/17/2012 19:00	33.1	0		0.0	0	92
12/17/2012 20:00	34.0	0		0.0	0	88
12/17/2012 21:00	34.0	0		0.0	0	88
12/17/2012 22:00	34.0	0		0.0	0	88
12/17/2012 23:00	34.0	0		3.5	330	92
12/18/2012 0:00	35.1	0		4.6	340	88
12/18/2012 1:00	37.0	0		3.5	0	85
12/18/2012 2:00	36.0	0.01		0.0	0	89
12/18/2012 3:00	37.0	0.04		4.6	50	89
12/18/2012 4:00	37.9	0.01		4.6	50	85
12/18/2012 5:00	36.0	0.01		0.0	0	92
12/18/2012 6:00	37.0	0.06		4.6	0	89
12/18/2012 7:00	35.1	0.08		0.0	0	92
12/18/2012 8:00	35.1	0.01		3.5	320	92
12/18/2012 9:00	35.6	0.01		0.0	0	93
12/18/2012 10:00	37.9	0.03		0.0	0	89
12/18/2012 11:00	37.9	0.01		0.0	0	92
12/18/2012 12:00	37.9	0.04		4.6	360	92
12/18/2012 13:00	37.0	0		3.5	0	92
12/18/2012 14:00	37.9	0		0.0	0	92
12/18/2012 15:00	37.0	0.06		0.0	0	92
12/18/2012 16:00	36.0	0.02		0.0	0	92
12/18/2012 17:00	37.0	0.04		0.0	0	92

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/18/2012 18:00	36.0	0.01		0.0	0	92
12/18/2012 19:00	36.0	0.01		0.0	0	96
12/18/2012 20:00	36.0	0.01		0.0	0	92
12/18/2012 21:00	36.0	0.01		0.0	0	89
12/18/2012 22:00	35.1	0		0.0	0	92
12/18/2012 23:00	35.1	0.02		0.0	0	92
12/19/2012 0:00	35.1	0		0.0	0	92
12/19/2012 1:00	37.0	0		0.0	0	89
12/19/2012 2:00	37.0	0		0.0	0	89
12/19/2012 3:00	37.0	0		5.8	20	85
12/19/2012 4:00	36.0	0		0.0	0	89
12/19/2012 5:00	37.0	0		3.5	0	78
12/19/2012 6:00	36.0	0		6.9	310	82
12/19/2012 7:00	36.0	0		5.8	320	82
12/19/2012 8:00	37.0	0		0.0	0	82
12/19/2012 9:00	39.0	0		4.6	0	76
12/19/2012 10:00	39.0	0		6.9	340	70
12/19/2012 11:00	39.9	0		8.1	340	67
12/19/2012 12:00	39.9	0		9.2	340	67
12/19/2012 13:00	41.0	0		11.5	350	65
12/19/2012 14:00	39.9	0		10.4	330	65
12/19/2012 15:00	39.0	0		8.1	330	67
12/19/2012 16:00	37.9	0		9.2	350	70
12/19/2012 17:00	37.9	0		4.6	310	70
12/19/2012 18:00	37.9	0		5.8	330	67
12/19/2012 19:00	37.9	0		6.9	360	67
12/19/2012 20:00	37.9	0		0.0	0	70
12/19/2012 21:00	37.0	0		4.6	290	75
12/19/2012 22:00	37.0	0		3.5	320	75
12/19/2012 23:00	36.0	0		0.0	0	75
12/20/2012 0:00	36.0	0		0.0	0	73
12/20/2012 1:00	36.0	0		3.5	0	69
12/20/2012 2:00	35.1	0		5.8	360	69
12/20/2012 3:00	34.0	0		0.0	0	72
12/20/2012 4:00	33.1	0		0.0	0	75
12/20/2012 5:00	34.0	0		0.0	0	72
12/20/2012 6:00	34.0	0		4.6	350	72
12/20/2012 7:00	34.0	0		3.5	360	72
12/20/2012 8:00	34.0	0		0.0	0	72
12/20/2012 9:00	35.1	0		3.5	340	69
12/20/2012 10:00	36.0	0		0.0	0	67
12/20/2012 11:00	36.0	0		0.0	0	67
12/20/2012 12:00	36.0	0		0.0	0	67
12/20/2012 13:00	36.0	0		3.5	10	67
12/20/2012 14:00	36.0	0		0.0	0	67
12/20/2012 15:00	36.0	0		0.0	0	69
12/20/2012 16:00	35.1	0		0.0	0	72
12/20/2012 17:00	36.0	0		0.0	0	67
12/20/2012 18:00	36.0	0		4.6	140	67
12/20/2012 19:00	36.0	0		8.1	140	64
12/20/2012 20:00	36.0	0		0.0	0	67
12/20/2012 21:00	36.0	0		5.8	170	67
12/20/2012 22:00	36.0	0		8.1	170	67
12/20/2012 23:00	36.0	0		10.4	140	69

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/21/2012 0:00	35.1	0		3.5	0	78
12/21/2012 1:00	34.0	0.03		4.6	0	85
12/21/2012 2:00	35.1	0.01		3.5	0	82
12/21/2012 3:00	34.0	0.04		0.0	0	88
12/21/2012 4:00	34.0	0.08		3.5	0	88
12/21/2012 5:00	36.0	0		0.0	0	82
12/21/2012 6:00	35.1	0		0.0	0	88
12/21/2012 7:00	37.9	0		6.9	0	82
12/21/2012 8:00	39.0	0.01		8.1	110	79
12/21/2012 9:00	39.0	0.16		10.4	80	82
12/21/2012 10:00	39.9	0.14		0.0	0	83
12/21/2012 11:00	43.0	0.19		12.7	110	79
12/21/2012 12:00	46.0	0.03		15.0	100	79
12/21/2012 13:00	48.0	0.03		15.0	100	80
12/21/2012 14:00	51.1	0.07		15.0	190	83
12/21/2012 15:00	51.1	0.05		11.5	140	71
12/21/2012 16:00	45.0	0.02		13.8	230	76
12/21/2012 17:00	39.0	0		8.1	180	72
12/21/2012 18:00	37.9	0		13.8	180	76
12/21/2012 19:00	37.9	0		8.1	190	76
12/21/2012 20:00	37.0	0		10.4	190	75
12/21/2012 21:00	37.9	0		8.1	190	73
12/21/2012 22:00	37.9	0		9.2	190	70
12/21/2012 23:00	37.9	0		9.2	200	67
12/22/2012 0:00	37.9	0		10.4	210	67
12/22/2012 1:00	37.0	0		8.1	190	70
12/22/2012 2:00	37.0	0		8.1	200	70
12/22/2012 3:00	37.0	0		6.9	200	70
12/22/2012 4:00	37.0	0		10.4	180	72
12/22/2012 5:00	36.0	0		11.5	170	75
12/22/2012 6:00	35.1	0		8.1	180	78
12/22/2012 7:00	36.0	0		10.4	210	67
12/22/2012 8:00	35.1	0		8.1	270	75
12/22/2012 9:00	34.0	0		15.0	280	54
12/22/2012 10:00	33.1	0		13.8	260	53
12/22/2012 11:00	32.0	0		9.2	240	54
12/22/2012 12:00	30.9	0		13.8	320	53
12/22/2012 13:00	28.9	0		10.4	310	61
12/22/2012 14:00	28.0	0		6.9	280	63
12/22/2012 15:00	28.0	0		3.5	0	58
12/22/2012 16:00	27.0	0		10.4	280	55
12/22/2012 17:00	26.1	0		12.7	320	60
12/22/2012 18:00	25.0	0		9.2	330	68
12/22/2012 19:00	25.0	0		6.9	300	66
12/22/2012 20:00	25.0	0		4.6	350	74
12/22/2012 21:00	24.1	0		3.5	340	81
12/22/2012 22:00	25.0	0		0.0	0	78
12/22/2012 23:00	25.0	0		11.5	290	66
12/23/2012 0:00	24.1	0		9.2	300	65
12/23/2012 1:00	24.1	0		4.6	0	57
12/23/2012 2:00	23.0	0		8.1	290	54
12/23/2012 3:00	21.9	0		4.6	360	60
12/23/2012 4:00	21.0	0		4.6	30	62
12/23/2012 5:00	19.9	0		0.0	0	68

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/23/2012 6:00	17.1	0		0.0	0	76
12/23/2012 7:00	16.0	0		0.0	0	80
12/23/2012 8:00	21.9	0		0.0	0	71
12/23/2012 9:00	24.1	0		0.0	0	62
12/23/2012 10:00	28.9	0		3.5	0	53
12/23/2012 11:00	33.1	0		0.0	0	45
12/23/2012 12:00	34.0	0		0.0	0	43
12/23/2012 13:00	34.0	0		10.4	250	47
12/23/2012 14:00	34.0	0		6.9	290	49
12/23/2012 15:00	33.1	0		5.8	240	53
12/23/2012 16:00	33.1	0		8.1	210	58
12/23/2012 17:00	33.1	0		10.4	200	61
12/23/2012 18:00	33.1	0		10.4	190	63
12/23/2012 19:00	34.0	0		11.5	210	59
12/23/2012 20:00	34.0	0		8.1	220	61
12/23/2012 21:00	34.0	0		6.9	200	59
12/23/2012 22:00	34.0	0		6.9	210	61
12/23/2012 23:00	34.0	0		5.8	220	59
12/24/2012 0:00	34.0	0		3.5	250	64
12/24/2012 1:00	34.0	0		4.6	250	61
12/24/2012 2:00	32.0	0		8.1	10	69
12/24/2012 3:00	30.0	0		4.6	340	69
12/24/2012 4:00	28.9	0		5.8	360	66
12/24/2012 5:00	28.0	0		3.5	340	65
12/24/2012 6:00	24.1	0		0.0	0	68
12/24/2012 7:00	21.9	0		0.0	0	75
12/24/2012 8:00	28.0	0		4.6	330	53
12/24/2012 9:00	30.0	0		10.4	340	47
12/24/2012 10:00	30.9	0		8.1	350	47
12/24/2012 11:00	32.0	0		5.8	310	45
12/24/2012 12:00	33.1	0		5.8	290	43
12/24/2012 13:00	34.0	0		6.9	340	43
12/24/2012 14:00	34.0	0		6.9	310	43
12/24/2012 15:00	30.9	0		3.5	340	49
12/24/2012 16:00	25.0	0		0.0	0	68
12/24/2012 17:00	26.1	0		0.0	0	65
12/24/2012 18:00	25.0	0		0.0	0	71
12/24/2012 19:00	25.0	0		0.0	0	74
12/24/2012 20:00	25.0	0		0.0	0	74
12/24/2012 21:00	25.0	0		0.0	0	74
12/24/2012 22:00	23.0	0		0.0	0	74
12/24/2012 23:00	24.1	0		0.0	0	71
12/25/2012 0:00	21.9	0		4.6	360	78
12/25/2012 1:00	21.0	0		0.0	0	81
12/25/2012 2:00	21.9	0		0.0	0	78
12/25/2012 3:00	21.9	0		4.6	20	78
12/25/2012 4:00	21.9	0		4.6	20	78
12/25/2012 5:00	21.9	0.02		0.0	0	84
12/25/2012 6:00	21.9	0.01		0.0	0	84
12/25/2012 7:00	21.9	0.01		0.0	0	84
12/25/2012 8:00	21.9	0.01		3.5	330	81
12/25/2012 9:00	23.0	0		3.5	360	81
12/25/2012 10:00	24.1	0		4.6	350	77
12/25/2012 11:00	26.1	0		3.5	330	74

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/25/2012 12:00	27.0	0		0.0	0	72
12/25/2012 13:00	30.0	0		4.6	20	69
12/25/2012 14:00	30.0	0		3.5	350	69
12/25/2012 15:00	28.9	0		5.8	350	72
12/25/2012 16:00	24.1	0		4.6	50	81
12/25/2012 17:00	21.9	0		3.5	30	81
12/25/2012 18:00	21.0	0		6.9	30	77
12/25/2012 19:00	21.0	0		5.8	360	74
12/25/2012 20:00	15.1	0		0.0	0	83
12/25/2012 21:00	14.0	0		0.0	0	84
12/25/2012 22:00	12.9	0		0.0	0	88
12/25/2012 23:00	12.9	0		3.5	20	84
12/26/2012 0:00	12.9	0		3.5	10	77
12/26/2012 1:00	10.9	0		0.0	0	80
12/26/2012 2:00	10.0	0		0.0	0	80
12/26/2012 3:00	10.9	0		3.5	50	80
12/26/2012 4:00	9.0	0		0.0	0	80
12/26/2012 5:00	7.0	0		0.0	0	79
12/26/2012 6:00	7.0	0		0.0	0	83
12/26/2012 7:00	8.1	0		0.0	0	79
12/26/2012 8:00	14.0	0		0.0	0	77
12/26/2012 9:00	17.1	0		3.5	310	70
12/26/2012 10:00	19.0	0		0.0	0	70
12/26/2012 11:00	21.0	0		0.0	0	62
12/26/2012 12:00	23.0	0		4.6	310	59
12/26/2012 13:00	25.0	0		5.8	350	60
12/26/2012 14:00	25.0	0		4.6	350	60
12/26/2012 15:00	24.1	0		3.5	10	62
12/26/2012 16:00	24.1	0		5.8	360	62
12/26/2012 17:00	24.1	0		5.8	360	65
12/26/2012 18:00	24.1	0		0.0	0	65
12/26/2012 19:00	24.1	0		0.0	0	68
12/26/2012 20:00	24.1	0		3.5	10	71
12/26/2012 21:00	25.0	0		0.0	0	71
12/26/2012 22:00	30.0	0		4.6	0	55
12/26/2012 23:00	25.0	0.01		6.9	320	81
12/27/2012 0:00	26.1	0.07		9.2	40	84
12/27/2012 1:00	26.1	0.06		0.0	0	88
12/27/2012 2:00	26.1	0.01		3.5	350	88
12/27/2012 3:00	28.0	0.02		3.5	320	88
12/27/2012 4:00	28.9	0.02		0.0	0	89
12/27/2012 5:00	30.0	0.02		0.0	0	85
12/27/2012 6:00	33.1	0		9.2	40	78
12/27/2012 7:00	32.0	0.02		4.6	300	88
12/27/2012 8:00	32.0	0.07		8.1	20	85
12/27/2012 9:00	33.1	0.03		16.1	40	85
12/27/2012 10:00	34.0	0		5.8	0	79
12/27/2012 11:00	32.0	0		5.8	340	85
12/27/2012 12:00	30.9	0		5.8	350	85
12/27/2012 13:00	30.9	0.03		6.9	340	89
12/27/2012 14:00	30.9	0.09		9.2	340	89
12/27/2012 15:00	30.0	0.06		5.8	330	88
12/27/2012 16:00	28.9	0.05		9.2	340	85
12/27/2012 17:00	28.0	0.01		8.1	320	81

Time Beginning	Temp	Precip	Snow	Wind Speed	Wind Direction	relHu
(EDT)	(F)	(in)	(in)	(m/s)	(º)	(%)
12/27/2012 18:00	27.0	0		4.6	0	81
12/27/2012 19:00	26.1	0		5.8	350	77
12/27/2012 20:00	25.0	0		6.9	340	78
12/27/2012 21:00	25.0	0		9.2	340	74
12/27/2012 22:00	25.0	0		5.8	350	74
12/27/2012 23:00	25.0	0		6.9	330	74
12/28/2012 0:00	25.0	0		9.2	340	74
12/28/2012 1:00	25.0	0		9.2	340	74
12/28/2012 2:00	25.0	0		9.2	330	68
12/28/2012 3:00	25.0	0		8.1	340	71
12/28/2012 4:00	24.1	0		5.8	310	74
12/28/2012 5:00	24.1	0		4.6	330	71
12/28/2012 6:00	24.1	0		9.2	330	68
12/28/2012 7:00	24.1	0		8.1	310	74
12/28/2012 8:00	25.0	0		3.5	330	74
12/28/2012 9:00	27.0	0		4.6	310	72
12/28/2012 10:00	28.0	0		8.1	330	69
12/28/2012 11:00	28.9	0		3.5	330	69
12/28/2012 12:00	30.0	0		0.0	0	69
12/28/2012 13:00	30.9	0		4.6	340	66
12/28/2012 14:00	30.9	0		8.1	320	66
12/28/2012 15:00	32.0	0		3.5	310	63
12/28/2012 16:00	30.0	0		5.8	340	66
12/28/2012 17:00	19.9	0		0.0	0	88
12/28/2012 18:00	19.0	0		0.0	0	84
12/28/2012 19:00	18.0	0		0.0	0	84
12/28/2012 20:00	15.1	0		0.0	0	83
12/28/2012 21:00	16.0	0		0.0	0	84
12/28/2012 22:00	10.9	0		0.0	0	84
12/28/2012 23:00	10.9	0		0.0	0	80

Appendix D
Cadna/A Modeling Results

Cadna/A Modeling Results
Project-Only Broadband Sound Levels
Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
53	Periodically Occupied (Seasonal), Participating	45	267697	4829752	443
204	Other Structure (Hunting Cabin), Participating	44	270189	4830513	514
55	Other Structure (Abandoned), Participating	42	267443	4829959	417
54	Other Structure (Abandoned), Participating	41	267313	4829953	412
63	**Residence (Assumed), Non-participating**	**40**	**271220**	**4831201**	**425**
58	Other Structure (Abandoned), Participating	39	267214	4830185	415
178	Residence, Non-participating	39	267071	4828356	342
49	Residence (Assumed), Non-participating	39	266862	4829473	411
51	Residence	39	266851	4829591	408
164	Residence	39	266928	4829870	412
33	Residence	38	269742	4828490	379
61	Residence	38	267288	4830646	428
28	Residence	38	269234	4828171	364
30	Residence	38	270013	4828274	388
27	Other Structure	38	269175	4828112	357
60	Residence	38	267045	4830310	412
682	Periodically Occupied	38	270033	4832793	417
206	Residence	37	270131	4832826	413
34	Residence	37	266638	4828669	343
50	Residence	37	266664	4829514	396
62	Residence	37	267353	4831077	465
40	Other Structure	37	266566	4828950	357
177	Periodically Occupied	37	266827	4828193	320
202	Residence	37	266650	4828486	333
31	Residence	37	266689	4828386	327
121	Residence	37	268541	4832606	502
186	Residence	37	267790	4832030	557
32	Residence	37	266646	4828442	330
250	Residence	37	273347	4829984	256
137	Residence	37	270621	4832671	389
29	Residence	36	266688	4828296	322
159	Residence	36	266565	4828548	334
179	Other Structure	36	266572	4828526	333
248	Residence	36	273116	4829566	315
681	Residence	36	268343	4832509	513
25	Periodically Occupied	36	266862	4828065	319
157	Other Structure	36	272751	4831671	338
180	Periodically Occupied	36	266528	4828637	337
694	Residence	36	272847	4831616	351
100	Residence	36	268271	4832476	517
133	Other Structure	36	270743	4832637	377
162	Residence	36	266447	4829373	376
615	Residence	36	273385	4830697	259
70	Residence	36	271621	4831823	359
185	Periodically Occupied	36	267528	4831620	501
625	Residence	36	273450	4830320	257
683	Periodically Occupied	36	270712	4832518	361
71	Periodically Occupied	36	271544	4831923	364
182	Other Structure	36	273059	4829192	322
64	Periodically Occupied	36	267402	4831494	487
67	Other Structure	36	267681	4831846	531
93	Other Structure	36	268156	4832438	520
107	Residence	36	268242	4832516	522

Cadna/A Modeling Results
Project-Only Broadband Sound Levels
Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
111	Residence	36	268291	4832556	520
624	Residence	36	273479	4830366	255
191	Periodically Occupied	36	268172	4832420	517
249	Residence	36	273245	4829884	252
623	Residence	36	273464	4830452	256
626	Periodically Occupied	36	273517	4830320	249
740	Residence	36	266448	4828686	337
251	Residence	36	273472	4830019	245
739	Residence	36	266417	4828733	339
68	Other Structure	36	267523	4831867	523
72	Residence	36	267637	4832127	557
96	Residence	36	268065	4832446	523
176	Residence	36	266876	4827905	320
611	Residence	36	273346	4830880	260
620	Residence	36	273489	4830527	249
116	Residence	36	271025	4832506	368
135	Periodically Occupied	36	270924	4832640	387
635	Residence	36	273504	4830039	242
698	Residence	36	273529	4830200	251
36	Residence	35	266352	4828839	344
66	Residence	35	267513	4831782	512
103	Residence	35	271090	4832389	349
110	Residence	35	268133	4832553	532
161	Residence	35	266360	4829066	352
619	Residence	35	273481	4830622	246
634	Residence	35	273566	4830265	242
77	Residence	35	271712	4832076	328
160	Residence	35	266359	4828773	342
163	Residence	35	266564	4829457	384
181	Residence	35	266340	4828998	349
614	Other Structure	35	273484	4830766	244
622	Residence	35	273530	4830594	241
680	Residence	35	268028	4832480	527
98	Residence	35	267945	4832463	525
115	Residence	35	271115	4832501	361
23	Residence	35	266916	4827774	320
252	Residence	35	273549	4829930	236
613	Residence	35	273487	4830828	242
24	Residence	35	266664	4827956	342
22	Residence	35	266968	4827693	319
86	Other Structure	35	271418	4832289	328
175	Other Structure	35	267316	4827513	312
203	Residence	35	267699	4832355	549
627	Residence	35	273612	4830386	237
636	Residence	35	273539	4829740	265
44	Residence	35	266473	4829132	357
78	Residence	35	271832	4832095	308
84	Residence	35	267648	4832369	552
122	Residence	35	271229	4832530	360
158	Periodically Occupied	35	267087	4827615	314
26	Residence	35	266475	4828124	358
88	Residence	35	267703	4832417	549
92	Residence	35	267753	4832442	543

Cadna/A Modeling Results
Project-Only Broadband Sound Levels
Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
192	Other Structure	35	267691	4832442	550
609	Residence	35	273317	4831064	243
46	Residence	35	273036	4829065	314
621	Residence	35	273630	4830599	233
628	Residence	35	273662	4830438	234
83	Residence	35	271858	4832196	299
90	Periodically Occupied	35	267606	4832433	555
189	Residence	35	271972	4832207	297
253	Residence	35	273631	4829905	231
105	Residence	34	267709	4832515	550
108	Residence	34	271651	4832436	317
608	Residence	34	273358	4831189	240
101	Residence	34	271868	4832361	304
196	Other Structure	34	267699	4832531	551
254	Residence	34	273654	4829848	234
255	Other Structure	34	273677	4829948	228
610	Residence	34	273482	4830999	231
616	Periodically Occupied	34	273639	4830728	227
42	Residence	34	266087	4829068	378
114	Residence	34	271754	4832481	325
612	Residence	34	273592	4830949	221
618	Residence	34	273697	4830683	227
632	Residence	34	273703	4830620	230
631	Periodically Occupied	34	273779	4830466	229
738	Periodically Occupied	34	266058	4829100	380
126	Residence	34	271668	4832561	330
198	Residence	34	271807	4832485	325
261	Residence	34	273658	4829688	247
21	Periodically Occupied	34	267372	4827287	317
117	Residence	34	271868	4832491	321
128	Other Structure	34	271875	4832561	324
169	Periodically Occupied	34	267708	4832673	550
262	Residence	34	273695	4829758	237
617	Periodically Occupied	34	273670	4830857	217
697	Residence	34	266035	4829031	383
134	Residence	34	267745	4832741	544
629	Residence	34	273775	4830625	224
695	Residence	34	273768	4830590	225
41	Residence	34	265985	4828971	390
129	Other Structure	34	267589	4832714	567
144	Residence	34	267769	4832835	544
699	Residence	34	273751	4829698	233
97	Other Structure	34	267362	4832476	563
139	Other Structure	34	271831	4832651	336
147	Other Structure	34	267974	4833017	557
630	Periodically Occupied	34	273849	4830524	222
18	Residence	34	267958	4827068	302
20	Residence	34	268834	4827211	296
260	Residence	34	273826	4829695	231
633	Residence	34	273858	4830176	228
38	Residence	33	265922	4828876	388
138	Residence	33	272054	4832636	317
197	Other Structure	33	272530	4832403	293

Cadna/A Modeling Results
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Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
256	Residence	33	273826	4830018	228
257	Residence	33	273849	4829768	229
607	Residence	33	273497	4831333	223
82	Residence	33	273016	4832137	261
258	Residence	33	273876	4829842	228
141	Residence	33	272151	4832656	317
132	Periodically Occupied	33	272347	4832584	307
145	Residence	33	272046	4832731	316
188	Other Structure	33	273051	4832157	258
605	Residence	33	273458	4831383	225
140	Residence	33	272287	4832639	310
174	Residence	33	267558	4827044	312
259	Residence	33	273909	4829704	234
263	Residence	33	273941	4829622	232
706	Residence	33	265836	4828795	384
264	Residence	33	273966	4829577	228
14	Residence	33	267764	4826912	312
37	Residence	33	265786	4828870	391
171	Other Structure	33	267537	4826966	309
173	Other Structure	33	267232	4827048	314
700	Residence	33	274001	4829729	233
99	Residence	33	272830	4832314	250
193	Residence	33	272817	4832307	253
265	Residence	33	274022	4829527	223
266	Residence	33	274043	4829614	222
12	Residence	32	267918	4826824	310
17	Residence	32	267182	4827014	317
19	Residence	32	266933	4827137	337
172	Other Structure	32	267056	4827046	331
195	Residence	32	273089	4832334	228
707	Residence	32	265721	4828765	382
85	Residence	32	273107	4832194	248
104	Residence	32	273118	4832334	228
15	Residence	32	267073	4826984	327
118	Residence	32	272530	4832468	292
13	Residence	32	267213	4826918	313
109	Residence	32	273154	4832380	227
130	Residence	32	272942	4832539	245
150	Other Structure	32	267421	4833226	634
9	Residence	32	269208	4826707	289
10	Residence	32	269051	4826721	288
102	Residence	32	273147	4832322	226
106	Residence	32	273195	4832353	223
119	Residence	32	272755	4832465	261
684	Residence	32	273222	4832382	222
5	Residence	32	268686	4826639	289
6	Residence	32	268913	4826640	285
7	Residence	32	269014	4826658	287
4	Residence	32	268977	4826622	286
113	Residence	32	273256	4832422	226
124	Residence	32	273200	4832470	232
11	Residence	32	269359	4826750	292
194	Other Structure	32	273279	4832311	222

Cadna/A Modeling Results
Project-Only Broadband Sound Levels
Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
153	Residence	32	272030	4833280	350
168	Residence	32	273300	4832473	232
701	Residence	32	274025	4829414	222
710	Residence	32	268429	4826560	292
3	Residence	31	268316	4826532	292
8	Periodically Occupied	31	269387	4826686	291
125	Residence	31	273336	4832498	232
95	Residence	31	273300	4832276	223
207	Other Structure	31	267143	4832977	638
211	Residence	31	268490	4826504	289
606	Residence	31	273423	4831377	231
711	Periodically Occupied	31	269052	4826501	279
136	Residence	31	273312	4832572	238
210	Residence	31	268091	4826481	302
267	Residence	31	274060	4829339	221
386	Residence	31	266809	4826831	338
663	Residence	31	269195	4826484	291
686	Residence	31	273605	4832330	218
16	Residence	31	272018	4826843	362
143	Residence	31	272586	4832674	271
146	Residence	31	273215	4832708	246
664	Periodically Occupied	31	269634	4826547	289
214	Residence	31	268722	4826364	292
595	Residence	31	273453	4832207	221
687	Residence	31	273686	4832317	220
212	Residence	31	268500	4826329	292
213	Residence	31	268566	4826335	291
218	Residence	31	268943	4826336	282
568	Residence	31	274277	4831218	225
603	Residence	31	273446	4831493	228
688	Residence	31	273722	4832365	222
569	Residence	31	274194	4829566	204
594	Residence	31	273538	4832199	218
709	Periodically Occupied	31	268524	4826305	292
215	Residence	31	268806	4826226	292
217	Residence	31	268922	4826228	285
219	Residence	31	269059	4826259	268
566	Residence	31	274257	4831412	235
567	Residence	31	274307	4831356	231
689	Residence	30	273840	4832397	226
721	Residence	30	268531	4826203	292
722	Residence	30	268765	4826187	292
216	Residence	30	268896	4826153	285
306	Residence	30	268332	4826192	292
602	Residence	30	273511	4831554	222
723	Residence	30	268659	4826178	290
35	Other Structure	30	265346	4828748	377
719	Periodically Occupied	30	268180	4826161	298
736	Periodically Occupied	30	268957	4826132	282
307	Residence	30	268277	4826127	295
601	Residence	30	273524	4831616	220
720	Periodically Occupied	30	268147	4826134	298
209	Other Structure	30	272380	4833724	391

Cadna/A Modeling Results
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Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
310	Residence	30	268474	4826074	300
312	Residence	30	268250	4826089	297
313	Residence	30	268203	4826114	297
314	Residence	30	268181	4826092	297
327	Residence	30	268641	4826053	287
596	Residence	30	273507	4832176	219
690	Residence	30	273875	4832596	222
309	Residence	30	268503	4826038	300
311	Residence	30	268223	4826059	297
167	Other Structure	30	266490	4832509	559
308	Residence	30	268288	4826039	299
315	Periodically Occupied	30	268054	4826049	289
273	Residence	30	274152	4828203	268
316	Periodically Occupied	30	268030	4826024	287
600	Residence	30	273553	4831687	221
737	Periodically Occupied	30	268217	4825981	298
319	Residence	30	268004	4825984	286
325	Other Structure	30	268382	4825924	307
328	Residence	30	268655	4825922	282
725	Residence	30	269090	4825948	268
317	Residence	30	268051	4825960	288
318	Periodically Occupied	30	267946	4825961	283
324	Residence	29	268280	4825883	303
326	Residence	29	268453	4825847	307
563	Residence	29	274046	4832700	226
604	Periodically Occupied	29	273409	4831497	237
322	Residence	29	267898	4825905	282
599	Residence	29	273606	4831746	217
320	Residence	29	268025	4825850	286
598	Residence	29	273582	4831807	222
272	Residence	29	274312	4828462	229
321	Residence	29	267958	4825836	283
552	Residence	29	273960	4832975	227
323	Residence	29	268171	4825747	293
329	Periodically Occupied	29	268660	4825694	289
597	Residence	29	273616	4831847	217
94	Residence	29	273174	4832269	225
545	Residence	29	273739	4833277	252
547	Residence	29	273772	4833241	250
548	Residence	29	273803	4833229	248
550	Residence	29	273867	4833156	241
551	Residence	29	273956	4833105	235
2	Residence	29	271195	4825934	262
330	Residence	29	268708	4825610	284
543	Residence	29	273661	4833328	255
544	Residence	29	273716	4833296	253
558	Residence	29	274303	4832817	207
675	Periodically Occupied	29	273835	4833266	252
685	Residence	29	273612	4831900	218
691	Residence	29	273993	4833081	232
692	Residence	29	274287	4832841	207
718	Periodically Occupied	29	267970	4825699	282
170	Other Structure	29	271240	4825908	262

Cadna/A Modeling Results
Project-Only Broadband Sound Levels
Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
553	Residence	29	274092	4833038	224
557	Residence	29	274255	4832856	208
676	Residence	29	273851	4833321	256
220	Residence	29	269175	4825906	257
542	Residence	29	273658	4833406	262
546	Residence	29	273784	4833347	257
549	Residence	29	273925	4833295	252
555	Residence	29	274234	4832928	212
556	Other Structure	29	274217	4832833	202
561	Residence	29	274414	4832696	198
1	Residence	29	270967	4825625	274
91	Residence	29	273216	4832256	226
271	Residence	29	274342	4828663	208
285	Residence	29	274143	4827675	256
660	Residence	29	267756	4825619	270
662	Periodically Occupied	29	267847	4825619	273
87	Other Structure	28	273282	4832234	226
570	Residence	28	274774	4828506	178
293	Residence	28	273844	4827096	233
294	Residence	28	273784	4827085	240
565	Residence	28	274472	4832639	193
658	Residence	28	267537	4825565	281
659	Residence	28	267719	4825507	267
661	Residence	28	267840	4825533	271
277	Residence	28	274576	4827967	224
279	Other Structure	28	274581	4827937	223
339	Residence	28	270466	4825589	292
340	Residence	28	270760	4825384	298
656	Residence	28	267686	4825466	267
657	Residence	28	267587	4825521	276
729	Residence	28	270878	4825382	291
278	Residence	28	274585	4827890	222
287	Residence	28	273989	4827169	226
331	Residence	28	268723	4825345	273
341	Residence	28	270813	4825333	298
586	Periodically Occupied	28	272047	4825486	270
655	Residence	28	267651	4825427	267
717	Periodically Occupied	28	267797	4825473	267
274	Periodically Occupied	28	274469	4828143	227
286	Residence	28	273983	4827093	223
300	Other Structure	28	273490	4826670	262
342	Periodically Occupied	28	270845	4825286	298
350	Residence	28	271371	4825433	268
715	Residence	28	267592	4825414	266
730	Residence	28	273170	4826476	266
291	Residence	28	273932	4827009	225
298	Residence	28	273563	4826686	254
299	Residence	28	273626	4826724	250
332	Residence	28	268795	4825279	270
343	Residence	28	270935	4825281	291
344	Residence	28	270994	4825265	286
712	Residence	28	274083	4827170	221
716	Residence	28	267619	4825381	263

Cadna/A Modeling Results
Project-Only Broadband Sound Levels
Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
290	Residence	28	273964	4826976	223
296	Residence	28	273721	4826778	241
346	Other Structure	28	271074	4825358	273
560	Other Structure	28	274345	4832690	200
571	Residence	28	274912	4828310	172
654	Residence	28	267667	4825324	258
674	Residence	28	273409	4833874	318
289	Residence	28	273969	4826945	223
292	Residence	28	273905	4826886	225
333	Residence	28	268741	4825188	270
345	Residence	28	271086	4825236	276
347	Residence	28	271180	4825277	264
348	Other Structure	28	271173	4825161	272
693	Other Structure	28	274424	4832582	193
268	Residence	28	273983	4829024	231
284	Residence	28	274360	4827242	222
304	Residence	28	272973	4826282	270
352	Residence	28	271542	4825153	247
541	Residence	28	273392	4833567	270
559	Residence	28	274247	4832756	201
572	Residence	28	274814	4827861	207
275	Residence	27	274506	4828038	224
297	Residence	27	273604	4826639	246
354	Residence	27	271593	4825103	247
540	Residence	27	273266	4833525	266
584	Other Structure	27	272326	4825961	281
724	Residence	27	268512	4825392	292
592	Residence	27	271179	4824938	288
228	Residence	27	270284	4824969	317
288	Residence	27	274154	4826891	208
301	Residence	27	273578	4826413	248
353	Residence	27	271670	4825148	247
355	Residence	27	271558	4825037	248
362	Residence	27	272618	4825118	287
590	Residence	27	271256	4824864	285
356	Residence	27	271726	4824974	247
359	Residence	27	272516	4824996	272
539	Residence	27	273310	4833639	275
585	Residence	27	272423	4825972	270
589	Residence	27	271308	4824795	284
591	Residence	27	271159	4824809	302
349	Other Structure	27	271240	4825285	257
357	Residence	27	271802	4824925	247
364	Residence	27	272919	4825206	299
374	Residence	27	267217	4825447	309
734	Residence	27	272256	4824870	245
270	Residence	27	274037	4828789	212
303	Residence	27	273046	4826361	270
358	Residence	27	272505	4824922	272
360	Residence	27	272603	4824956	278
361	Residence	27	272757	4824986	297
538	Residence	27	273196	4833771	282
578	Residence	27	274532	4827088	214

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Project-Only Broadband Sound Levels
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Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
587	Residence	27	271485	4824811	264
588	Residence	27	271351	4824740	283
735	Residence	27	272416	4825995	272
363	Residence	27	272894	4825024	303
365	Residence	27	273031	4825145	305
581	Residence	27	274274	4826758	193
732	Residence	27	271226	4824736	297
708	Residence	27	274134	4828790	205
713	Residence	27	274303	4826774	192
726	Periodically Occupied	27	270267	4825522	289
269	Residence	27	274190	4828878	197
351	Residence	27	271619	4825204	245
537	Other Structure	27	273245	4833898	302
577	Residence	27	274550	4826953	207
237	Residence	27	271377	4824544	288
238	Residence	27	271498	4824498	277
280	Residence	27	274448	4827778	230
302	Residence	27	273149	4826372	260
366	Residence	27	273071	4824956	313
371	Residence	27	273363	4825114	306
536	Residence	27	273225	4833938	302
580	Residence	27	274318	4826681	187
582	Residence	27	274224	4826593	194
573	Residence	26	274656	4826975	204
576	Residence	26	274602	4826918	205
225	Residence	26	269744	4824960	264
241	Residence	26	271595	4824392	268
338	Residence	26	270226	4825612	291
574	Residence	26	274692	4826949	202
575	Residence	26	274641	4826890	203
653	Periodically Occupied	26	265011	4825791	347
562	Residence	26	274137	4832737	213
579	Residence	26	274600	4826768	194
665	Residence	26	272910	4824653	322
731	Residence	26	273509	4825033	309
236	Residence	26	271255	4824542	299
367	Residence	26	273159	4824730	337
527	Residence	26	273121	4834176	294
368	Residence	26	273247	4824695	344
369	Residence	26	273160	4824670	340
370	Residence	26	273690	4825057	314
583	Residence	26	274346	4826008	248
733	Residence	26	271112	4824296	302
554	Residence	26	274147	4832857	199
637	Residence	26	264210	4827497	255
235	Residence	26	271050	4824296	303
564	Residence	26	274121	4832677	219
705	Residence	26	263990	4827601	262
240	Residence	26	271397	4824277	283
242	Residence	26	271513	4824094	276
334	Periodically Occupied	26	269528	4824164	252
226	Residence	25	269830	4824986	273
247	Residence	25	271484	4823798	277

Cadna/A Modeling Results
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Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
593	Residence	25	270004	4825285	275
227	Residence	25	270020	4824738	277
39	Residence	25	265076	4828980	388
57	Other Structure	25	264931	4830266	420
199	Other Structure	25	265419	4832988	506
243	Residence	25	271349	4823928	282
305	Residence	25	272750	4825969	258
239	Residence	25	271340	4824359	288
391	Residence	25	264556	4827389	257
229	Residence	25	270196	4824401	264
336	Residence	25	269827	4825079	270
295	Residence	25	273650	4826978	252
45	Residence	25	264885	4829318	399
56	Other Structure	24	264864	4830095	424
184	Other Structure	24	264602	4831243	429
276	Residence	24	274417	4827971	235
727	Residence	24	269674	4825078	257
221	Residence	24	269590	4825210	257
246	Residence	24	271219	4823785	270
508	Periodically Occupied	24	271502	4834366	379
728	Residence	24	269712	4825022	261
245	Residence	24	271164	4823852	273
443	Residence	24	262535	4829835	352
445	Other Structure	24	262509	4829881	354
224	Residence	24	269647	4825111	254
59	Residence	24	264356	4830341	372
65	Residence	24	265100	4831715	464
434	Residence	24	262933	4829152	337
43	Residence	24	264391	4829197	359
335	Residence	24	270003	4824558	255
495	Other Structure	24	269713	4834968	423
496	Residence	24	270182	4834861	421
183	Other Structure	24	264574	4829490	378
384	Residence	24	265451	4827066	259
392	Residence	24	264143	4827635	258
385	Residence	24	265347	4827145	262
395	Residence	24	263838	4827681	261
512	Residence	24	272455	4834185	324
513	Residence	24	272506	4834113	330
670	Residence	24	270338	4834884	417
413	Residence	23	263661	4829144	320
414	Residence	23	263662	4829198	322
485	Residence	23	268541	4836162	439
514	Residence	23	272645	4834126	317
517	Other Structure	23	272830	4834089	316
638	Residence	23	262450	4830291	363
244	Residence	23	271149	4823993	280
381	Other Structure	23	265821	4825302	260
387	Residence	23	265093	4827326	255
511	Residence	23	272389	4834353	310
516	Residence	23	272755	4834194	307
48	Residence	23	264430	4829537	361
494	Periodically Occupied	23	269773	4835163	401

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Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
510	Residence	23	272324	4834431	313
515	Residence	23	272680	4834273	300
337	Residence	23	269863	4825248	266
388	Residence	23	264943	4827458	258
389	Residence	23	264723	4827477	257
474	Residence	23	268997	4835147	397
509	Residence	23	272208	4834552	305
518	Residence	23	272903	4834173	302
222	Residence	23	269699	4825185	257
283	Periodically Occupied	23	274451	4827483	229
382	Residence	23	265810	4826390	258
472	Residence	23	268840	4835169	403
492	Residence	23	270334	4835186	384
507	Other Structure	23	271575	4834654	335
519	Periodically Occupied	23	273004	4834167	295
205	Other Structure	23	264757	4831823	447
234	Residence	23	271065	4824238	298
281	Residence	23	274536	4827686	220
377	Residence	23	266582	4825817	256
418	Other Structure	23	264323	4830082	360
426	Residence	23	263229	4828426	300
490	Other Structure	23	270380	4835217	377
491	Other Structure	23	270314	4835229	382
493	Residence	23	270113	4835254	409
506	Residence	23	271851	4834745	302
52	Other Structure	23	264338	4829722	349
223	Residence	23	269721	4825116	260
282	Residence	23	274444	4827582	232
489	Other Structure	23	270383	4835261	375
666	Periodically Occupied	23	271861	4835353	309
165	Residence	23	264656	4831697	439
166	Other Structure	23	264656	4831759	442
486	Residence	23	269696	4835350	384
503	Residence	23	271680	4834946	315
671	Periodically Occupied	23	271815	4834582	326
127	Other Structure	23	265154	4832774	485
376	Periodically Occupied	23	266571	4825697	252
473	Residence	23	268915	4835295	391
504	Residence	23	271479	4834880	329
505	Residence	23	271867	4834923	302
520	Periodically Occupied	23	272867	4834405	274
528	Residence	23	273232	4834188	289
529	Residence	23	273293	4834177	290
47	Residence	22	264181	4829394	336
201	Other Structure	22	267069	4834692	528
444	Residence	22	262717	4829786	331
471	Other Structure	22	268769	4835328	390
696	Residence	22	264164	4829643	331
378	Periodically Occupied	22	266404	4825720	253
500	Residence	22	270582	4835350	363
530	Residence	22	273360	4834155	289
390	Residence	22	264728	4827323	253
470	Other Structure	22	268388	4835325	438

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Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
533	Residence	22	273603	4834080	280
714	Periodically Occupied	22	266684	4825527	252
417	Residence	22	264063	4829583	326
428	Residence	22	263180	4828461	302
475	Residence	22	269025	4835478	383
477	Residence	22	269197	4835505	372
499	Residence	22	270798	4835412	355
531	Residence	22	273520	4834182	268
532	Other Structure	22	273579	4834124	272
75	Residence	22	264658	4832259	448
383	Residence	22	265539	4826206	255
416	Residence	22	264047	4829341	337
469	Other Structure	22	268007	4835263	502
476	Residence	22	269123	4835514	377
478	Periodically Occupied	22	269192	4835542	373
502	Residence	22	271067	4835368	332
521	Residence	22	272866	4834623	247
375	Residence	22	266858	4825325	258
522	Other Structure	22	272788	4834699	237
534	Periodically Occupied	22	273613	4834189	263
69	Residence	22	264450	4832029	439
373	Residence	22	266879	4825271	256
412	Residence	22	264027	4828857	321
526	Residence	22	273229	4834536	233
535	Residence	22	273760	4834151	268
498	Other Structure	22	270432	4835642	357
112	Residence	22	264673	4832693	452
372	Other Structure	22	266998	4825122	260
425	Residence	22	263241	4828365	291
479	Residence	22	269529	4835689	347
480	Residence	22	269472	4835719	354
523	Residence	22	272982	4834760	225
415	Residence	22	263862	4829347	317
481	Residence	22	269527	4835739	351
482	Residence	22	269628	4835728	337
497	Other Structure	22	270508	4835691	357
524	Residence	22	272958	4834810	224
704	Residence	22	264109	4827677	261
74	Residence	21	264327	4832268	438
379	Residence	21	266098	4825459	262
394	Residence	21	263894	4827718	262
411	Residence	21	263848	4828730	296
457	Periodically Occupied	21	262749	4832042	359
483	Residence	21	269469	4835833	358
501	Other Structure	21	271140	4835671	338
423	Residence	21	263376	4828337	292
380	Other Structure	21	266059	4825407	255
525	Residence	21	273150	4834925	225
73	Residence	21	264178	4832237	428
484	Residence	21	269265	4835930	372
80	Residence	21	264203	4832390	434
393	Residence	21	263932	4827815	265
408	Residence	21	263728	4828464	291

Cadna/A Modeling Results
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Vestas V112-3.3 MW (94m HH)

Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
409	Residence	21	263698	4828712	308
76	Residence	21	264118	4832319	426
208	Other Structure	21	264073	4833538	432
401	Residence	21	263810	4828121	284
644	Residence	21	262053	4833558	450
397	Residence	21	263842	4827914	266
407	Residence	21	263695	4828342	292
410	Residence	21	263648	4828584	299
456	Residence	21	262635	4831894	363
679	Residence	21	264090	4832346	424
79	Residence	21	264049	4832367	421
81	Residence	21	264083	4832412	425
396	Residence	21	263787	4827869	263
398	Residence	21	263762	4827961	270
402	Residence	21	263712	4828078	278
230	Periodically Occupied	21	270732	4824242	287
406	Residence	21	263594	4828338	291
458	Residence	21	262896	4832145	357
89	Residence	20	264060	4832542	427
399	Residence	20	263704	4827958	267
400	Residence	20	263669	4828011	270
640	Residence	20	261626	4833281	422
668	Residence	20	270092	4835544	367
678	Residence	20	263980	4832419	417
231	Residence	20	270825	4824189	284
403	Residence	20	263581	4828145	278
405	Residence	20	263558	4828244	287
703	Residence	20	263555	4828167	279
233	Other Structure	20	270976	4824155	283
404	Residence	20	263535	4828195	281
187	Periodically Occupied	20	263793	4832296	402
190	Residence	20	263911	4832524	412
232	Residence	20	270953	4824104	281
420	Other Structure	20	263442	4828273	288
461	Residence	20	263043	4832314	361
702	Residence	20	263473	4828247	286
120	Residence	20	263951	4832748	414
419	Periodically Occupied	20	263441	4828223	283
422	Residence	20	263406	4828299	290
677	Residence	20	263901	4832597	413
421	Residence	20	263376	4828270	287
459	Periodically Occupied	20	262913	4832245	358
460	Residence	20	262965	4832439	361
639	Other Structure	20	261562	4832991	420
123	Residence	20	263849	4832771	406
131	Residence	20	263901	4832848	404
641	Residence	20	261724	4833500	428
649	Residence	20	261487	4834605	447
468	Residence	20	268216	4836343	438
424	Other Structure	20	263258	4828246	277
427	Residence	20	263144	4828416	293
741	Residence	20	263163	4828389	289
142	Residence	19	263752	4832945	386

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Receptor ID	Structure Type	Project-Only Broadband Sound Level [dBA]	Receptor Location		
			Easting_X (m)	Northing_Y (m)	Elevation_Z (m)
429	Residence	19	263097	4828447	294
154	Residence	19	263289	4833805	387
431	Residence	19	263010	4828722	316
432	Residence	19	262975	4828827	321
435	Residence	19	262913	4829211	333
442	Residence	19	262582	4829615	331
645	Residence	19	261623	4834054	436
648	Residence	19	261456	4834339	433
430	Residence	19	262974	4828673	308
433	Residence	19	262957	4828901	326
437	Other Structure	19	262860	4829321	329
438	Residence	19	262825	4829287	327
448	Residence	19	262860	4830612	339
454	Residence	19	262956	4831067	358
466	Periodically Occupied	19	262962	4835459	474
149	Residence	19	263696	4833237	379
155	Residence	19	263254	4834038	392
436	Residence	19	262796	4829360	325
446	Residence	19	262781	4829749	327
447	Residence	19	262788	4829776	327
449	Residence	19	262828	4830714	342
450	Residence	19	262823	4830741	342
451	Residence	19	262863	4830805	343
439	Residence	19	262736	4829503	322
452	Other Structure	19	262806	4830882	342
647	Other Structure	19	261450	4834278	431
453	Residence	19	262796	4831006	346
151	Residence	19	263562	4833346	378
440	Residence	19	262601	4829414	329
441	Residence	19	262574	4829487	328
462	Residence	19	263144	4832595	373
148	Residence	19	263383	4833186	373
152	Residence	19	263574	4833513	381
464	Residence	19	263125	4832702	372
465	Residence	19	263232	4832931	369
455	Residence	18	262669	4831457	352
463	Residence	18	263133	4832773	368
200	Periodically Occupied	18	263237	4834490	406
669	Residence	18	270131	4835528	366
487	Residence	18	269894	4835641	353
650	Residence	17	261542	4834817	457
156	Residence	17	263533	4835308	464
488	Residence	16	270041	4835569	365
642	Residence	15	261559	4833794	427
643	Residence	15	261597	4833871	432
467	Other Structure	15	263289	4836498	592
646	Residence	15	261458	4833943	421
673	Residence	15	261496	4834010	427
672	Periodically Occupied	15	261445	4834102	427
651	Residence	14	261539	4835152	485
652	Other Structure	14	263399	4837506	613
667	Periodically Occupied	14	262285	4836829	503