

**Exhibit G. Socioeconomic Report
(Public Version)**

Socioeconomic Report

Republic Wind Farm

Adams, Pleasant, Reed, Scipio, and Thompson Townships, Seneca County and
York Township, Sandusky County

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EXECUTIVE SUMMARY

This socioeconomic report is prepared in support of the proposed Republic Wind Farm (“the Facility”), a wind-powered electric generation facility in Sandusky and Seneca Counties of the State of Ohio (See Figure 1). The Facility will consist of 58 turbines, along with access roads, electric collection cables, a Facility substation, laydown yards for construction staging, an operations and maintenance (O&M) facility, and up to six meteorological towers. The Facility layout is illustrated in Figure 2. The energy generated at the Facility will deliver power to a single point of interconnection (POI) on the existing Fremont Center – Tiffin Center 138 kilovolt (kV) transmission line. The Facility will have an installed capacity of up to 198 megawatts (MW) and will deliver up to 640,000 megawatt-hours (MWh) of electrical power to the regional power grid. Construction is scheduled to begin in 2018.

The focus of this report is to assess the potential socioeconomic impacts of this Facility on local municipalities within a 5-mile radius from the Facility (“the Study Area”; see Figure 1), as well as across the State of Ohio. This involves a review of the past and current demographic and economic characteristics and trends in the Study Area, which includes 23 municipalities, and (where applicable) those of the greater region. The regional economy surrounding the Study Area is shaped in large part by the agricultural industries of Erie, Huron, Sandusky, and Seneca Counties as well as the metropolitan areas in northern Ohio and further afield. Potential impacts including those to employment, earnings, and overall economic output resulting from Facility construction and operation are assessed in light of socioeconomic conditions within the State of Ohio and the Study Area.

In short, the Republic Wind Farm is expected to produce a positive economic impact throughout the state and on the communities within the Study Area. Through lease payments to private landowners, short- and long-term job creation, and tax payments to each participating taxing jurisdiction, the Facility will supply a revenue stream to each of these jurisdictions without requiring significant services or expenditures on their behalf.

Part I: Introduction

This socioeconomic report is prepared in support of the proposed Republic Wind Farm (“the Facility”), a wind-powered electric generation facility in Sandusky and Seneca Counties of the State of Ohio (See Figure 1). The Facility will consist of 58 turbines, along with access roads, electric collection cables, a Facility substation, laydown yards for construction staging, an operations and maintenance (O&M) facility, and up to six meteorological towers. The Facility layout is illustrated in Figure 2. The energy generated at the Facility will deliver power to a single point of interconnection (POI) on the existing Fremont Center – Tiffin Center 138 kilovolt (kV) transmission line. The Facility will have an installed capacity of up to 198 megawatts (MW) and will deliver up to 640,000 megawatt-hours (MWh) of electrical power to the regional power grid. Construction is scheduled to begin in early 2018.

This analysis examines estimated impacts to the state and local economy generated from the construction and operation of the Facility. It includes a review of existing demographic and economic characteristics in the area, as well as several trends affecting both. When such comparison is informative, state and federal demographic and economic data are also included. Unless noted otherwise, the Study Area for this report includes the following 23 municipalities in Erie, Huron, Sandusky, and Seneca Counties; all of which are found wholly or partially within a 5-mile radius of the Facility (the Study Area):

- Village of Green Springs*
- City of Bellevue*
- City of Clyde
- City of Tiffin
- Adams Township
- Ballville Township
- Bloom Township
- Clinton Township
- Green Creek Township
- Groton Township
- Hopewell Township
- Jackson Township
- Liberty Township
- Lyme Township
- Norwich Township
- Pleasant Township
- Reed Township
- Scipio Township
- Sherman Township
- Thompson Township
- Townsend Township
- Venice Township
- York Township

*Note: The Village of Green Springs is geographically split between Sandusky and Seneca Counties. The City of Bellevue is geographically split between Erie, Huron, and Sandusky Counties

Part II of this report provides an examination of population trends within the State of Ohio and the Study Area, from 1990 through 2010, including projected population growth through 2030. In addition, Part II provides data regarding the civilian labor force for 2016 by state and county (latest data available). Part III reviews the types of potential impacts that could be experienced throughout the region, including those regarding housing demand, commercial and industrial employment, and transportation networks. Part IV describes the methods of analysis of potential economic benefits provided within this report, including an overview of the Job and Economic Development Impact (JEDI) Wind Model. This model was created by MRG & Associates, under contract with the National Renewable Energy Laboratory and is an industry standard for economic impact investigation. This is followed by the JEDI results (Part V), which describes the jobs created by the construction and operation of the Facility, as well as a summary of payments to landowners as a result of land leases for turbines. Part VI reviews potential impacts of the Facility from the perspective of local taxing jurisdictions. The findings of this report are summarized in Part VII, which is followed by a bibliography of cited sources in Part VIII.

Part II: Socioeconomic Profile

1. Population trends

Census data reveals that these communities have experienced a varied history of small population growth and decline over the past two decades. The 2010 population for the State of Ohio and Erie, Huron, Sandusky, and Seneca Counties is shown in Table 1 below. Ohio showed a notable increase in population (6.36%), mirrored by Huron County's comparable population increase of 6.0% from 1990 to 2010. Meanwhile however with Erie County experienced a much smaller population increase of 0.4% during the same time span and Sandusky and Seneca Counties experienced an overall decrease in population, -1.6% and -5.0%, respectively. As indicated in Table 2, a majority of the local municipalities also demonstrate a general decrease in population from 2000 to 2015. Notable exceptions include more urban settings, such as the Village of Green Springs, which experienced a population increase of 50.6% over the same time span. The City of Tiffin is the largest of the 23 municipalities within a 5-mile radius of the proposed turbines, and has experienced only a small decline of growth (-1.9%) (Table 2).

Table 1: Population Trends

County	1990 Population	2000 Population	2010 Population	% Change 1990-2010
Erie County	76,779	79,551	77,079	0.4%
Huron County	56,240	59,487	59,626	6.0%
Sandusky County	61,963	61,792	60,944	-1.6%
Seneca County	59,733	58,683	56,745	-5.0%
State of Ohio	10,847,115	11,353,140	11,536,504	6.36%

Source: U.S. Census Bureau, Decennial Census

For the purposes of this report, the trends experienced by each community from 2000 to 2015 are expected to continue regardless of whether the proposed Facility is built. Over the next two decades, the total population within the Study Area is projected to increase by 2% from 2010 to 2030, from 71,927 to 73,369; compared to the projected statewide increase of 4% during the same time span. Meanwhile, county population projections are expected to decline between the same time span. Seneca County is projected to experience the greatest decrease in population (-11%) from 2010-2030, while Huron County is projected to experience only a -3% decline in population during the same time span (see Table 1).

Table 2: Population Projections

Jurisdiction within 5-Miles Radius of Facility	2000 Pop.	2010 Pop.	2015 Pop.	% Change 2000-2015	Est. 2020 Pop.	Est. 2030 Pop.	% Change 2010-2030
City of Bellevue (Erie County) ¹	-	-	26	-	-	-	-
City of Bellevue (Huron County)	3,841	3,673	3,613	-5.9%	3,399	3,197	-13.0%
City of Bellevue (Sandusky County)	4,352	4,527	4,470	2.7%	4,591	4,716	4.2%
City of Clyde	6,064	6,325	6,305	4.0%	6,556	6,816	7.8%
City of Tiffin	18,135	17,963	17,793	-1.9%	17,457	17,128	-4.6%
Adams Township	1,337	1,320	1,435	7.3%	1,540	1,653	25.2%
Ballville Township	6,395	5,985	5,911	-7.6%	5,464	5,050	-15.6%
Bloom Township	1,937	1,799	1,591	-17.9%	1,307	1,073	-40.3%
Clinton Township	4,188	4,109	4,052	-3.2%	3,920	3,793	-7.7%
Green Creek Township ²	-	3,646	3,520	-3.5%	3,398	3,281	-10.0%
Groton Township	1,384	1,427	1,344	-2.9%	1,305	1,267	-11.2%
Hopewell Township	2,874	2,774	2,725	-5.2%	2,584	2,450	-11.7%
Jackson Township	1,609	1,608	1,702	5.8%	1,800	1,904	18.4%
Liberty Township	2,340	2,035	2,184	-6.7%	2,038	1,903	-6.5%
Lyme Township	968	853	690	-28.7%	492	351	-58.9%
Norwich Township	1,072	1,070	1,176	9.7%	1,290	1,415	32.3%
Pleasant Township	1,685	1,635	1,397	-17.1%	1,158	960	-41.3%
Reed Township	949	848	820	-13.6%	709	612	-27.8%
Scipio Township	1,831	1,729	1,704	-6.9%	1,586	1,476	-14.6%
Sherman Township	501	510	405	-19.2%	327	265	-48.1%
Thompson Township	1,422	1,443	1,446	1.7%	1,470	1,495	3.6%
Townsend Township	1,670	1,620	1,327	-20.5%	1,054	838	-48.3%
Venice Township	1,871	1,758	1,737	-7.2%	1,613	1,497	-14.8%
York Township	2,512	2,532	2,516	0.2%	2,520	2,524	-0.3%
Village of Green Springs	599	738	902	50.6%	1,358	2,045	177.1%
Total³	69,536	71,927	70,791	1.8%	72,069	73,369	2.0%

Source: U.S. Census Bureau, 2000 and 2010 Decennial Census and American Community Survey 5-Year Estimates 2011-2015, projections derived from each municipality's respective 2000-2015 growth rates.

Although construction employment related to the construction of the Facility will be substantial, this employment is relatively short term and is not expected to result in the permanent relocation of construction workers to the area;

¹ Denotes that entity did not exist as currently structured on April 1, 2010, Census Day

² Denotes that entity did not exist as currently structured on April 1, 2010, Census Day, % change is calculated from 2010-2015.

³ Totals calculated by formula, may reflect rounding errors.

therefore, the Facility is not anticipated to generate significant population growth within the Study Area. The number of potential short- and long-term employment opportunities associated with the construction and operation of the Facility is discussed in further detail below.

2. Employment statistics

Table 3 illustrates the size of the local labor force in counties located either wholly or partially within 5 miles of the proposed Facility, as well as the broader State of Ohio. The total annual unemployment rate for Sandusky and Seneca Counties has been relatively consistent with that of the state over the last two years; however, the total annual unemployment rate for Erie and Huron Counties has been slightly higher compared to that of the state. Annual average unemployment rates have decreased both statewide and countywide from 2014 to 2016. Table 4a through Table 4e illustrates employment figures in the State of Ohio and Erie, Huron, Sandusky, and Seneca Counties broken down by sector for 2015.

Table 3: Local Labor Force and Unemployment

Place	Labor Force	Employed	Unemployed	Unemployment rate	Unemployment rate, 2015 (annual)	Unemployment rate, 2014 (annual)
Erie County	37,127	35,100	2,027	5.5%	5.5%	6.4%
Huron County	27,864	26,063	1,801	6.5%	6.6%	8.0%
Sandusky County	30,908	29,465	1,443	4.7%	4.8%	5.7%
Seneca County	27,164	25,855	1,309	4.8%	4.8%	5.7%
State of Ohio	5,713,088	5,430,790	282,298	4.9%	4.9%	5.8%

Note: Not Seasonally Adjusted; Source: U.S. Bureau of Labor Statistics, 2016.

Table 4a: Employment and Payroll by NAICS Sector in the State of Ohio

NAICS code description	Paid employees for pay period including March 12, 2015	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)	Total establishments
Total for all sectors	4,719,985	52,632,423	213,161,303	251,668
Agriculture, forestry, fishing and hunting	1,204	8,631	39,876	269
Mining, quarrying, and oil and gas extraction	12,932	209,203	782,917	743
Utilities	23,839	772,796	2,334,102	667
Construction	179,883	2,139,534	10,690,205	19,731
Manufacturing	663,884	9,079,228	36,324,428	14,139
Wholesale trade	235,573	3,588,415	14,334,142	14,035
Retail trade	565,140	3,521,203	14,591,663	36,339
Transportation and warehousing	171,286	1,902,972	8,103,911	7,448
Information	84,415	1,472,345	5,770,568	3,752
Finance and insurance	241,764	5,486,773	18,452,171	17,247
Real estate and rental and leasing	65,324	839,757	3,144,738	10,075
Professional, scientific, and technical services	250,042	3,924,804	16,715,335	24,087
Management of companies and enterprises	150,099	4,165,339	15,062,999	2,186
Administrative and support and waste management and remediation services	397,326	2,874,844	12,629,484	13,526
Educational services	120,934	820,867	3,369,061	3,089
Health care and social assistance	824,772	8,466,783	35,979,928	28,976
Arts, entertainment, and recreation	67,047	480,459	2,442,370	3,766
Accommodation and food services	461,895	1,580,929	6,927,919	23,697
Other services (except public administration)	202,085	1,295,507	5,456,190	27,493
Industries not classified	541	2,034	9,296	403

Source: U.S. Census Bureau, 2015

Table 4b: Employment and Payroll by NAICS Sector in Erie County

NAICS code description	Paid employees for pay period including March 12, 2015	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)	Total establishments
Total for all sectors	30,596	261,881	1,152,632	1,854
Agriculture, forestry, fishing and hunting	a	D	D	3
Mining, quarrying, and oil and gas extraction	115	522	2,867	5
Utilities	b	D	D	5
Construction	782	8,596	46,306	130
Manufacturing	6,718	81,201	334,553	97
Wholesale trade	1,151	12,840	57,368	67
Retail trade	4,683	24,899	108,351	306
Transportation and warehousing	618	5,963	28,668	44
Information	466	3,877	15,919	20
Finance and insurance	624	9,876	36,739	111
Real estate and rental and leasing	272	2,186	9,774	70
Professional, scientific, and technical services	623	8,602	35,667	112
Management of companies and enterprises	198	2,816	10,935	13
Administrative and support and waste management and remediation services	611	4,248	21,754	80
Educational services	356	2,029	8,349	25
Health care and social assistance	4,886	46,861	201,401	221
Arts, entertainment, and recreation	1,272	20,713	106,854	71
Accommodation and food services	6,017	19,665	97,837	267
Other services (except public administration)	1,134	5,377	23,546	204
Industries not classified	7	19	24	3

a: 0-19 employees

b: 20-99 employees

D: Withheld to avoid disclosing data for individual companies; data are included in higher level totals.

Source: U.S. Census Bureau, 2015

Table 4c: Employment and Payroll by NAICS Sector in Huron County

NAICS code description	Paid employees for pay period including March 12, 2015	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)	Total establishments
Total for all sectors	16,689	145,737	668,873	1,132
Agriculture, forestry, fishing and hunting	a	D	D	2
Mining, quarrying, and oil and gas extraction	-	-	-	-
Utilities	b	D	D	3
Construction	1135	13530	96336	128
Manufacturing	4895	53,647	231,826	86
Wholesale trade	631	6,764	30,745	49
Retail trade	2,157	12,227	52,130	174
Transportation and warehousing	798	8,651	39,183	38
Information	135	1,607	6,731	17
Finance and insurance	428	4,878	18,711	72
Real estate and rental and leasing	143	965	4,127	43
Professional, scientific, and technical services	406	3,306	13,984	80
Management of companies and enterprises	b	D	D	2
Administrative and support and waste management and remediation services	371	1,749	8,354	39
Educational services	85	330	1,455	10
Health care and social assistance	2743	27,162	115,889	98
Arts, entertainment, and recreation	110	717	3,590	16
Accommodation and food services	1,555	4,036	18,370	111
Other services (except public administration)	986	4,750	20,282	163
Industries not classified	a	D	D	1

a: 0-19 employees

b: 20-99 employees

D: Withheld to avoid disclosing data for individual companies; data are included in higher level totals.

Source: U.S. Census Bureau, 2015

Table 4d: Employment and Payroll by NAICS Sector in Sandusky County

NAICS code description	Paid employees for pay period including March 12, 2015	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)	Total establishments
Total for all sectors	23,195	199,723	848,385	1,321
Agriculture, forestry, fishing and hunting	4	36	736	4
Mining, quarrying, and oil and gas extraction	c	D	D	3
Utilities	43	1021	3752	4
Construction	951	8,820	50,951	145
Manufacturing	9,031	98,612	406,383	106
Wholesale trade	699	7,696	31,861	53
Retail trade	2,491	14,558	60,862	197
Transportation and warehousing	915	9,831	42,732	56
Information	144	1,266	5,497	12
Finance and insurance	488	5,581	21,429	79
Real estate and rental and leasing	166	1,063	4,345	37
Professional, scientific, and technical services	404	3,612	15,089	77
Management of companies and enterprises	129	2,197	10,360	5
Administrative and support and waste management and remediation services	736	5,645	23,072	60
Educational services	65	267	1,136	9
Health care and social assistance	3,467	25,906	108,764	176
Arts, entertainment, and recreation	254	887	4,726	24
Accommodation and food services	1,983	5,105	23,744	120
Other services (except public administration)	1,049	4,924	20,948	153
Industries not classified	a	D	D	1

a: 0-19 employees

c: 100-249 employees

D: Withheld to avoid disclosing data for individual companies; data are included in higher level totals.

Source: U.S. Census Bureau, 2015

Table 4e: Employment and Payroll by NAICS Sector in Seneca County

NAICS code description	Paid employees for pay period including March 12, 2015	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)	Total establishments
Total for all sectors	17,109	135,030	571,777	1,128
Agriculture, forestry, fishing and hunting	b	D	D	2
Mining, quarrying, and oil and gas extraction	59	569	3,000	5
Utilities	101	2153	7699	7
Construction	849	7,914	42,559	117
Manufacturing	4,208	49,430	197,917	72
Wholesale trade	821	9,326	39,169	52
Retail trade	2,315	14,305	57,401	168
Transportation and warehousing	559	5,088	22,629	51
Information	137	1,095	4,228	13
Finance and insurance	409	5,251	20,931	66
Real estate and rental and leasing	79	516	2,306	27
Professional, scientific, and technical services	385	2,803	11,889	66
Management of companies and enterprises	81	1,410	6,814	7
Administrative and support and waste management and remediation services	325	2,180	11,018	39
Educational services	1697	9,624	40,030	11
Health care and social assistance	2,680	15,755	69,789	137
Arts, entertainment, and recreation	187	403	2,194	16
Accommodation and food services	1,389	3,546	16,009	106
Other services (except public administration)	805	3,447	15,121	163
Industries not classified	2	16	69	3

b: 20-99 employees

D: Withheld to avoid disclosing data for individual companies; data are included in higher level totals.

Source: U.S. Census Bureau, 2015

Part III: Regional Development Impacts

The regional economy surrounding the Study Area is shaped in large part by the agricultural industries of Erie, Huron, Sandusky, and Seneca Counties. While the Study Area is predominantly rural, the City of Toledo (west of the Study Area) and the City of Cleveland (east of the Study Area), both significant metropolitan regions, are each in relative proximity to the Study Area. Erie, Huron, Sandusky, and Seneca Counties are primarily agricultural in nature. The regional context for the development of this Facility is discussed in further detail below, concentrating on three primary components: housing, commercial and industrial development, and transportation. In addition, the compatibility of the proposed Facility with regional developmental goals and plans is reviewed.

1. Housing

As with all sectors of the economy, the housing market throughout the region has felt the impact of population loss. Owner-occupied vacancy rates in Erie, Huron, Sandusky, and Seneca Counties (ranging from 2.0% to 2.3%) are slightly higher than the statewide average of 1.9%. The rental vacancy rate in Huron County (11.7%), Sandusky County (9.7%), and Seneca County (7.1%) is substantially higher than the statewide average of 6.5%, while the rental vacancy rate in Erie County is only 0.1% higher than the statewide average.

Erie, Huron, Sandusky, and Seneca Counties feature a median monthly gross rent level of \$707, \$630, \$634, \$645, respectively, all of which is below the statewide average of \$730/month. Each county has a lower than statewide percentage of households whose rent accounts for more than 35% of their household income. In addition, the median housing values of Huron, Sandusky, and Seneca Counties are below the statewide average of \$129,900, while Erie County's median housing value (\$131,400) is slightly above the statewide average.

It is estimated that 13,631 housing units within Erie, Huron, Sandusky, and Seneca Counties are currently vacant. Given these figures, in addition to the population projections discussed in Part II of this report, it is not expected that the development of the Facility will have a significant impact on the regional housing market. While the Facility development may not represent a widespread boom for rental property owners, it is worth noting that the availability of vacant rental housing also indicates that the Facility should not have a destabilizing effect on current renters.

Table 5: Study Area Housing Characteristics

Municipality/County/ State	Total housing units	Occupied units	Vacant units	Vacancy rate		Median housing value of owner- occupied units	Median gross rent (monthly)	% of household s with gross rent > 35% of household income
				Home - owner	Rental			
Village of Green Springs	265	256	9	0.0%	0.0%	\$82,700	\$835	52.9%
City of Bellevue (Erie County)	13	13	0	0.0%	0.0%	(x)	(x)	(x)
City of Bellevue (Huron County)	1,662	1,451	211	2.6%	22.2%	\$89,900	\$644	22.8%
City of Bellevue (Sandusky County)	1,973	1,756	217	3.8%	6.3%	\$98,400	\$620	21.6%
City of Clyde	2,806	2,484	322	5.4%	4.6%	\$94,900	\$630	42.2%
City of Tiffin	7,403	6,593	810	1.6%	9.1%	\$91,600	\$657	36.4%
Adams Township	585	529	56	0.0%	0.0%	\$131,300	\$647	10.8%
Ballville Township	2,898	2,638	260	1.6%	16.8%	\$143,500	\$683	31.9%
Bloom Township	664	630	34	0.0%	9.5%	\$84,800	\$539	38.0%
Clinton Township	1,912	1,812	100	2.2%	3.9%	\$135,400	\$639	34.1%
Green Creek Township	1,478	1,427	51	0.0%	0.0%	\$97,100	\$650	6.9%
Groton Township	570	553	17	0.0%	0.0%	\$145,700	(x)	0.0%
Hopewell Township	1,167	1,017	150	0.0%	0.0%	\$114,800	\$752	19.0%
Jackson Township	651	596	55	0.9%	0.0%	\$126,500	\$621	48.1%
Liberty Township	925	863	62	2.6%	0.0%	\$83,700	\$659	48.2%
Lyme Township	296	288	8	0.0%	0.0%	\$153,500	(x)	0.0%
Norwich Township	439	414	25	0.0%	22.7%	\$126,300	\$821	89.9%
Pleasant Township	622	547	75	3.4%	0.0%	\$125,000	\$784	7.0%
Reed Township	346	310	36	0.0%	0.0%	\$95,000	\$1,043	15.9%
Scipio Township	769	702	67	1.0%	0.0%	\$123,000	\$715	34.5%
Sherman Township	182	167	15	0.0%	0.0%	\$138,300	(x)	0.0%
Thompson Township	522	455	67	7.3%	0.0%	\$131,800	(x)	(x)
Townsend Township	713	480	233	12.6%	21.8%	\$125,700	\$639	0.0%
Venice Township	857	697	160	7.5%	13.3%	\$88,300	\$700	25.8%
York Township	1,013	951	62	0.0%	0.0%	\$138,400	\$695	31.7%
Erie County	37,739	31,767	5,972	2.1%	6.4%	\$131,400	\$707	32.8%
Huron County	25,134	22,527	2,607	2.0%	11.7%	\$116,100	\$630	33.4%
Sandusky County	26,257	23,626	2,631	2.3%	9.7%	\$110,100	\$634	39.4%
Seneca County	23,959	21,538	2,421	2.1%	7.1%	\$96,900	\$645	36.3%
Ohio Statewide	5,140,902	4,585,084	555,818	1.9%	6.5%	\$129,900	\$730	40.3%

Source: U.S. Census Bureau, American Community Survey 5-Year Estimates 2011-2015. (x) = data unavailable

2. Commercial and Industrial Development

The diversification of Ohio's energy portfolio will have significant and positive economic impacts beyond a reduced dependence on coal imported from outside of the state. The Environment Ohio Research & Policy Center estimated that if the State of Ohio increased wind power production to 20% of the state's total energy portfolio by 2020, such development would create 3,100 permanent, full-time positions within the state, and result in cumulative wages totaling \$3.7 billion. This same analysis estimated that such a commitment would result in an increase in gross state product of approximately \$8.2 billion by 2020 (Environment Ohio, 2007).

These impacts are principally due to the impact of wind energy development on the manufacturing sector. The State of Ohio is uniquely positioned to take advantage of advanced manufacturing opportunities for the development and distribution of wind power technology, according to the Renewable Energy Policy Project's (2004) report, "Wind Turbine Development: Location of Manufacturing Activity." This analysis estimates that if the United States were to invest \$50 billion into 50,000 MW of new wind power production, Ohio manufacturers could stand to create 11,688 jobs in wind turbine and related manufacturing, accounting for 1.95% of the total investment; by way of comparison, the American Wind Energy Association estimates that the State of Ohio alone has enough wind resources to generate nearly 359 MW at 80m hub height and 110,439 MW at 110m hub height of onshore wind energy (AWEA, 2015).

The Environmental Law & Policy Center estimated that the State of Ohio is currently home to 106 wind power supply chain businesses, providing 1,000 to 2,000 jobs throughout the state (ELPC, 2011). Wind energy technology manufacturing opportunities include rotors, controls, drive trains, generators, and towers. Several of these manufacturers and other wind power-related businesses are located in the Greater Cleveland Region (AWEA, 2015).

Specific short- and long-term economic impacts of this Facility on commercial and industrial development throughout the region are described in further detail in Part V of this report.

3. Transportation

The region surrounding the Facility features numerous Interstates, U.S. and State highways, as well as county and local roadway networks, in addition to freight rail lines and small airports. These facilities are described in further detail below. The main transportation route to the Facility is I-80/90 (Ohio Turnpike), which runs just north of the 5-mile Study Area. U.S. Route 20 (north) and State Route 4 (east) run adjacent to the Facility. State Routes 53 and 269 provide direct access into the Facility. These and other primary routes facilitate transportation between the Facility and the surrounding metropolitan areas.

Workers coming to and from the site will most likely enter via State Route 4 or 20 from I-80/90. Construction traffic bound for the substations will likely use State Route 53 as the primary route, while traffic bound for the Operations and Maintenance area will most likely use U.S. Route 20 as the primary route. The proposed Facility is not expected to cause any substantial disruption to major transportation corridors serving the Study Area.

Freight rail lines connect several of the municipalities throughout the Study Area. CSX and Norfolk Southern operate the majority of Ohio's freight rail system, although smaller operators such as Ashland Railway, Northern Ohio and Western Railway, and Wheeling and Lake Erie Railway also operate in the area. Study Area municipalities connected to freight rail lines include the Cities of Bellevue, Clyde, and Tiffin, the Townships of Adams, Ballville, Bloom, Clinton, Green Creek, Groton, Hopewell, Jackson, Liberty, Lyme, Norwich, Pleasant, Reed, Scipio, Thompson, Venice, and York, and the Village of Green Springs. The rail system may be used for the transportation of a very small number of turbine component and equipment suppliers, but the Applicant does not anticipate making any modifications to the system.

The Study Area is also in proximity to the Huron County Airport, the Sandusky County Regional Airport, the Seneca County Airport, the Bandit Field Airport, the Fremont Airport, the Fostoria Airport, the Weiker Airport, and the Willard Airport. Construction and operation of the Facility will be designed according to Federal Aviation Administration (FAA) standards and are not expected to result in any adverse impacts to the regional air transportation network. The Applicant will file a notice of proposed construction or alteration (Form 7460-1) with the FAA to confirm the structure will not result in a substantial adverse impact.

4. Local and Regional Plan Compatibility

Several of the municipalities within the five-mile study area have adopted comprehensive land use plans, strategic downtown plans, and/or economic development plans. Each of these are summarized below.

- City of Bellevue Vision 2025 Comprehensive Master Plan: This plan, adopted in 2005 by the Bellevue City Council, identifies the need for a 20-year vision, in which the issues, concerns, goals, and priorities of the community are addressed through civic engagement. High-paying job creation in the manufacturing sector, as well as the retention of existing jobs and the preservation of existing farming operations are goals and issues presented in the plan (City of Bellevue, 2005). In terms of economic development, the Facility offers an opportunity for the use of local goods and services, including but not limited to labor, equipment, and maintenance. In addition, the payments associated with land leases provide additional income for landowners, including agricultural producers, and in doing so, improves the economic conditions for existing farming practices.

- 2016 City of Tiffin Downtown Strategic Growth and Development Plan: This strategic plan complements the previously-created 2010 Strategic Downtown Tiffin Plan, which “creates urban design solutions with policy recommendations to invigorate the urban core and community as a whole, with a revitalized and enhanced downtown” (City of Tiffin, 2010). Guided by revitalization principles for downtown areas and the local economy, the plan recommends that infill development utilize alternative energy when possible and support opportunities to develop local green tech industries. While the Facility does not directly impact the downtown area, it is compatible with the strategic plan through its diversification of the region's energy resource portfolio, adding resilience and reliability to the supply of energy resources to local businesses. The Facility also offers an opportunity for the use of local goods and services, including those provided by businesses located in the downtown area.
- 1995 Erie County Comprehensive Development Plan: This plan “determines the immediate and future needs of the community, and provides ways to allow the County to guide appropriate land uses to the most suited areas for that kind of development” (Erie County, 1995). By analyzing the existing conditions and growth trends of the County, along with issues facing the region, the plan identifies goals for future land use and policy making. The Facility is compatible with the Plan's goal to “promote community development through the improvement of infrastructure that meets development demands”.
- 2017 Huron County Comprehensive Land Use Plan: Originally developed in 2007 and last revised in 2017, the Huron County Commissioners, the Huron County Comprehensive plan aims to manage future growth within the County to cohesively guide development patterns over the next thirty years. A key goal is to promote Huron County as a development destination and to retain and expand existing businesses (Huron County, 2017). The Facility is compatible with this goal due to the positive impacts it will create for the local economy.
- 2013 Sandusky County Comprehensive Plan: This plan is an update to the 2003 Comprehensive Plan and is intended to be long-range plan used to guide growth and development using current existing condition, along with updated trends and priority project. A major goal of the plan is to facilitate the economic health and growth of the County and its municipalities by expanding on the tax and employment base. Furthermore, the plan “promotes and facilitates the proper placement and provision of energy infrastructure components throughout the County, including but not limited to wind farms and solar arrays” (Sandusky County, 2013). The Facility is compatible with these goals, specifically the placement and provision of alternative energy infrastructure.

- 2011 Seneca County Comprehensive Economic Development Strategy: The plan is intended to position Seneca County as a “redevelopment area,” as defined by the EDA, and thus to make its political subdivisions eligible to apply from the EDA Public Works and other programs. As specified by the plan, “the assumptions, goals, and strategies laid out in the plan create a blueprint for the County’s overall economic development and a summary of what is considered the most effective and proactive, targeted strategy to improve the economic position and climate of Seneca County” (Seneca County, 2011). The plan also specifies that the County recently approved a resolution to make Seneca County an “Alternative Energy Zone”, making it eligible for state tax incentives. The Facility is compatible with the plan’s priority action to improve the local economy and implement alternative energy.

The Facility is located in an area that is largely rural in nature with a majority of impacts from the Facility construction and operation occurring on land used for agriculture. The economic benefits of the turbines for local agriculturalists, as well as their overall compatibility with farming practices, will support and aid in the preservation of local farming operations. Furthermore, the jobs and economic development created by Facility may help to create and retain existing local employment opportunities. Therefore, the development of this Facility is compatible with the goals and strategies of existing local and regional plans.

5. Concurrent or secondary uses

Facility components will be located on portions of leased land with existing rural residential or agricultural uses. These existing uses are expected to continue throughout the lifetime of the Facility.

Part IV: Assessing Job and Economic Development Impacts

1. Jobs and Economic Development Impact (JEDI) Model

The proposed Republic Wind Farm is anticipated to have local and statewide economic benefits. Wind power development, like other commercial development projects, can expand the local, regional, and statewide economies through both direct and indirect means. Income generated from direct employment during the construction and operation phases of the wind farm is used to purchase local goods and services, creating a ripple effect throughout the state. The job and economic impacts of the Facility were assessed using the Job and Economic Impact (JEDI) wind model. The JEDI model allows users to estimate exactly the jobs and economic development impacts from wind power generation projects for both the construction and operation phases of a proposed project (USDOE NREL, 2017). These economic development impacts, categorized by the levels of impact and indicators described below, include onsite jobs and earnings, economic output from these onsite earnings, local revenue/supply chain jobs and earnings, economic output from these local revenue/supply chain earnings, induced jobs and earnings, and economic output from these induced jobs and earnings. The JEDI model was created by the National Renewable Energy Laboratory (NREL), a national laboratory of the United States Department of Energy. It then calculates the aforementioned indicators for each level of impact using project-specific data provided by the Applicant and geographically-defined multipliers. These multipliers are produced by IMPLAN Group, LLC using a software/database system called IMPLAN (IMpact analysis for PLANing), a widely-used and widely-accepted general input-output modeling software and data system that tracks unique industry groups in various levels of the regional data (IMPLAN Group, 2018).

Using the JEDI wind model, this report analyzes three levels of impact that the proposed Facility may have on the economy:

On-site labor impacts: These are the direct impacts experienced by the companies/individuals residing in the State of Ohio engaged in the onsite construction and operation of the Facility. These values represent expenditure of dollars on labor (wages, salaries and associated expenses) by Facility onsite construction personnel as well as operation and maintenance (O&M) personnel. On-site labor impacts do not reflect material expenditures. Most other input-output models consider this level as “direct impacts”, referring to changes in jobs, economic activity and earnings associated with the immediate impacts created by the investment, which would include the equipment installed onsite, the concrete used onsite, etc. However, the immediate economic impacts of the physical items used onsite, normally included in direct impacts, typically occur at some geographic distance from the project itself. Because of JEDI's focus on the local impacts of a Facility, only the labor associated with the on-site location of the Facility (Construction and Construction-Related Services) is counted at this level.

Local revenue and supply chain impacts: These impacts measure the estimated increase in demand for goods and services in industry sectors that supply or otherwise support the companies engaged in construction and operation (also known as “backward-linked” industries). These measures account for the demand for goods and services such as turbine components, project analysis, legal services, financing, insurance, etc. Most other input-output models consider this level as “indirect impacts”, referring to economic impacts associated with linked sectors in the economy that are upstream of the direct impacts, such as suppliers of hardware used to make the equipment installed onsite or the concrete used onsite. However, because of JEDI’s focus on the local impacts of the Facility, labor for components of this Facility (e.g. turbine manufacturers) occurring at off-site locations is also counted in this level as a local revenue and supply chain impact.

Induced impacts: Induced impacts measure the estimated effect of increased household income resulting from the project. Induced impacts reflect the reinvestment of earned wages, as measured throughout the first two levels of economic impact. This reinvestment can occur anywhere within the local, regional, or state economy, on household goods, entertainment, food, clothing, transportation, etc.

Each of these three levels of impact can be measured in terms of three indicators: jobs (as expressed through the increase in employment demand), the amount of money earned through those jobs, and the overall economic output associated with each level of economic impact. These indicators are described in further detail:

Jobs: Jobs refer to the increase in employment demand because of facility development. These positions are measured across each level of impact, so that they capture the estimated number of jobs on site, in supporting industries, and in the businesses, that benefit from household spending. For the purposes of this analysis, this term refers to the total number of year-long full-time equivalent (FTE) positions created by the Facility. Persons employed for less than full time or less than a full year are included in this total, each representing a fraction of a FTE position (e.g. a half-time, year-round position is 0.5 FTE).

Earnings: This measures the wages and salary compensation paid to the employees described above.

Output: Output refers to the value of industry production in the state economy, across all appropriate sectors, associated with each level of impact. For the manufacturing sector, output is calculated by total sales plus or minus changes in inventory. For the retail sector, output is equal to gross profit margin. For the service sector, it is equal to sales volume. For example, output would include the profits incurred by those businesses that sell electrical transmission line, concrete, or motor vehicle fuel to the Applicant.

2. Methodology

Calculating the number of jobs and economic output from a proposed facility using the JEDI model is a two-step process. The first step requires Facility-specific data inputs (such as year of construction, size of Facility, turbine size and location). Using this Facility-specific data, the JEDI model then creates a list of default values, which includes project cost values, default financial parameter values, default tax values, default lease payment values, and default local share of spending values. These default values are derived from 10 years of research by NREL, and stem from various sources, including interviews and surveys from leading project owners, developers, engineering and design firms, and construction firms active in the wind energy sector. The second step of the JEDI model methodology requires the review, and if warranted, the customization of default project cost values and financial parameter values to more reasonable estimates. The Applicant reviewed the default project cost values subtotaled by each of the following categories in the JEDI model: Equipment during Construction, Balance of Plant Construction, Labor during Operation & Maintenance, Materials and Services during Operation & Maintenance, Financial Parameters, Tax Parameters, Land Lease Parameters and Payroll Parameters and determined whether they were appropriate for the project under review. In this case, the Applicant reviewed the default values in January 2018 for the various categories in the JEDI model to determine whether they were on par with the real costs as experienced by the Applicant. As a result of that review, adjustments were made to specific default values (see Table 6). The remaining JEDI default values were reviewed and determined to be reasonable estimates based on the Applicant's previous experience in wind energy development.

Table 6: Adjustments Made to JEDI Model Cost

JEDI Cost Items (Annual Estimates)	Default Value	Adjusted Value	Change
Construction Equipment Costs	\$253,819,859	\$[REDACTED]	Decrease
Construction Materials Costs	\$53,187,609	\$[REDACTED]	Increase
Construction Labor Total Costs	\$21,564,182	\$[REDACTED]	Increase
Construction Foundation Hourly Wage	\$17.12/hour	\$[REDACTED]/hour	Increase
Construction Erection Labor Hourly Wage	\$19.39/hour	\$[REDACTED]/hour	Increase
Construction Management/Supervision Hourly Wage	\$34.92/hour	\$[REDACTED]	Increase
Development Costs	\$9,466,795	\$[REDACTED]	Decrease
Sales Tax for Construction Materials and Equipment	\$16,091,303	\$[REDACTED]	Decrease
Operating/Maintenance Labor Costs	\$699,030	\$[REDACTED]	Increase
Operating/Maintenance Materials and Services	\$4,100,970	\$[REDACTED]	Increase
Sales Tax for Operating/Maintenance Materials and Equipment	\$173,461	\$[REDACTED]	Decrease
Debt Repayment Period	10 years	[REDACTED] years	Increase
Land Lease Costs	\$600,000	\$[REDACTED]	Increase

Part V: Job and Economic Development Impacts on the Statewide Economy

An economic impact analysis was performed for the Republic Wind Farm (the Facility) to be constructed in 2018 with a rated capacity of 198 MW and an assumed 58 turbines, sized at 3.448 MW. The analysis presented here used the most currently available (2016) multiplier data specific to Ohio to estimate potential impacts on a statewide basis. The results of this analysis, estimated for both the construction and operation phases of the proposed Facility, are illustrated in Table 7 and summarized in the narrative that follows.

Table 7: Summary Results of Job and Economic Impact Analysis

	Jobs	Earnings (Millions)	Output (Millions)
Construction			
Project Development and Onsite Labor Total	166	\$10.8	\$11.0
Construction & Interconnection Labor	164	\$10.8	-
Construction Related Services	2	\$0.1	-
Turbine & Supply Chain Impacts	411	\$23.6	\$83.6
Induced Impacts	163	\$8.7	\$25.7
Total Impacts	740	\$43.1	\$120.3
Annual Operation			
Onsite Labor Impacts	12	\$0.8	\$0.8
Local Revenue and Supply Chain Impacts	18	\$1.2	\$3.7
Induced Impacts	9	\$0.5	\$1.4
Total Impacts	39	\$2.5	\$5.9

Source: NREL JEDI Model (version W12.23.16) (USDOE NREL, 2018)

Notes: Earnings and Output values are millions of dollars in 2018 dollars. Totals may not add up due to independent rounding. Results are based on model default values.

Demand for new jobs associated with the Facility will be created during both the initial construction period and the years following construction, in which the Facility is in operation. The money injected into the statewide economy through the creation of these jobs will have long-term, positive impacts on individuals and businesses in Ohio as it ripples through the economy.

1. Statewide Job and Economic Development Impact: Construction

Based upon JEDI model computations, it is anticipated that construction of the proposed Facility will directly generate employment of an estimated 166 FTE on-site construction and project development positions for Ohio residents, which will be for Construction and Interconnection Labor and Construction Related Services. The JEDI model estimates in a total of \$10.8 million for annual earnings of the 166 on-site construction jobs. Turbine manufacturing and supply chain

industries could in turn generate an additional 411 jobs across the State of Ohio over the course of Facility construction. In addition, Facility construction could induce demand for 163 jobs statewide through the spending of additional household income. Based on the results of the model, the total impact of potentially 740 new jobs could result in up to \$43.1 million of earnings, assuming a 2018 construction schedule and wage rates consistent with statewide averages. Facility construction labor wages for similar construction positions within the Toledo region range from an average of \$18.94 per hour for Construction Laborers, \$29.59 for Electricians, and \$45.86 for Construction Managers (Bureau of Labor Statistics, 2016). Local, regional, and statewide employment during the construction phase will primarily benefit those in the construction trades, including equipment operators, truck drivers, laborers, and electricians. Facility construction will also require workers with specialized skills, such as crane operators, turbine assemblers, specialized excavators, and high voltage electrical workers. It is anticipated that many of the highly-specialized workers will come from outside the area and will remain only for the duration of construction.

In addition to jobs and earnings, the construction of the Facility is expected to have a positive impact on statewide economic output, a measurement of the value of goods and services produced and sold by backward-linked industries. As described in the definition above, output provides a general measurement of the amount of profit earned by manufacturers, retailers, and service providers connected to a given project. Based on the results of the model, the value of economic output associated with Facility construction is estimated to be \$120.3 million. Between workers' additional household income and industries' increased production, the impacts associated with the Facility are likely to be experienced throughout many different sectors of the statewide economy. Pursuant to Section 5727.75 of the Ohio Revised Code (ORC), the Facility may qualify for tax incentives based on the degree to which it employs in-state construction labor (see Part VI). At the time of the publication of this report, it is not yet known what portion of construction labor will be Ohio-domiciled.

2. Statewide Job and Economic Development Impact: Operations and Management

Based upon JEDI model computations, the operation and maintenance of the proposed Facility is estimated to generate 12 full-time equivalent onsite jobs with combined estimated annual earnings of approximately \$0.8 million. These 12 jobs are anticipated to be comprised of Project Management, Technician, and Administrative personnel. Projected wage rates are projected to be consistent with statewide averages which are estimated to be \$18.66 per hour for Payroll and Timekeeping Clerks, \$25.22 per hour for Industrial Engineering Technicians, and, \$49.61 for Industrial Production Managers (Bureau of Labor Statistics, 2016). These 12 full-time local jobs generated by the wind energy facility comprise the Facility's direct long-term employment impact.

Operations and maintenance should also generate new jobs in other sectors of the economy through supply chain impacts and the expenditure of new and/or increased household earnings. Increased employment demand throughout

the supply chain is estimated to result in approximately 18 jobs with annual earnings of approximately \$1.2 million. In addition, it is estimated that 9 jobs with associated annual earnings of \$0.5 million will be induced through the increased household spending associated with Facility operations. In total, while in operation, this Facility is estimated to generate demand for 39 jobs per year with annual earnings of approximately \$2.5 million. Total economic output could also increase by an estimated \$5.9 million as a result of Facility operations and maintenance.

3. Land Lease Payments

Operation of the Project will result in payment to local landowners in association with the lease agreements executed to host Project components. These annual lease and easement payments will offer direct benefits to participating landowners, which will be in addition to any income generated from the surrounding land use (e.g. agricultural production). The Applicant estimates that these payments will total approximately \$[REDACTED] on an annual basis each year the Project is in operation, although this value is contingent upon project details still in development (e.g., turbine choice and layout). The Project will also generate lease payments during the construction phase; while the value is currently unknown, the lease payments will have a beneficial impact on the local economy during construction. These lease payments will have a positive impact on the region, to the extent that landowners will spend their revenue locally.

Part VI: Local Tax Revenues

1. Legislative Context

Wind energy projects in the State of Ohio can be exempted from tangible personal property and real property tax payments if they meet certain conditions. These conditions are enumerated in Section 5727.75 of the ORC. Operators of these exempted projects, known as qualified energy projects (QEP), are instead required to make annual payments in lieu of taxes (PILOT). In order to be certified as a QEP by the state, a project must meet all of the following criteria:

- an application for certification of the energy project as a QEP that complies with the requirements under Section 5727.75 of the ORC and Chapter 122:23-1 of the OAC must be submitted to the director of the Ohio Development Services Agency (ODSA) on or before December 31, 2020;
- an application under Section 4906.20 of the ORC must be submitted to the Ohio Power Siting Board (OPSB) on or before December 31, 2020;
- the county commissioners of a county in which property of the project is located must have adopted a resolution approving the application submitted to ODSA or the county commissioners must pass a resolution declaring the county an alternative energy zone (AEZ);
- at least 50% of the full-time equivalent construction and installation employees, as defined in Section 5727.75 of the ORC, must be Ohio-domiciled; and
- construction (defined as either the date the application for a certificate is filed with OPSB or the date the contract for construction or installation is entered into, whichever is earlier) must begin by January 1, 2021.

If an applicant is granted exemption from taxation for any of the tax years 2011 through 2021, the QEP will be exempt from taxation for tax year 2022 and all ensuing years if the property was placed into service before January 1, 2022. The amount of PILOT to be paid annually to the county treasurer, ranging from \$6,000 and \$8,000, is assessed per megawatt (MW) of nameplate capacity, with the rate dependent on the percentage of construction/installation employees who are domiciled in Ohio. The PILOT would be: \$6,000 per MW, if during construction the project employs 75% or more Ohio-domiciled employees; \$7,000 per MW, if during construction the project employs 60% or more Ohio-domiciled employees; and \$8,000 per MW, if during construction the project employs the minimum requirement of 50% or more Ohio-domiciled employees (Table 8). County commissioners may require an additional service payment, as long as the total of the additional payment and the PILOT do not exceed \$9,000 per MW.

Table 8: Service Payment per Megawatt Schedule

Annual Service Payment per Megawatt of Nameplate Capacity	Ratio of Ohio-Domiciled Full-Time Equivalent Employees
\$6,000	75% or More
\$7,000	60% to 74%
\$8,000	50% to 59%

2. Estimated Payments In Lieu Of Taxes

Turbines for the Republic Wind Farm are anticipated to be located in a total of five municipalities (Adams, Pleasant, Reed, Scipio, and Thompson Townships) in Seneca County and one municipality (York Township) in Sandusky County, along with four school districts (Bellevue City School District, Clyde-Green Springs Exempted Village School District, Old Fort Local School district, Seneca East Local School District) and one school district in Sandusky County (Bellevue City School District). Table 9 displays the total estimated PILOT revenues to be distributed throughout all taxing jurisdictions under the three scenarios identified in the payment schedule in Section 5727.75 of the ORC.

Table 9: Estimated Total PILOT Revenue

Total Facility capacity (MW)	PILOT at \$6,000/MW	PILOT at \$7,000/MW	PILOT at \$8,000/MW	PILOT at \$9,000/MW
198	\$1,188,000	\$1,386,000	\$1,584,000	\$1,782,000

Part VII: Conclusion

The socioeconomic effects of the Republic Wind Farm, when assessed in light of regional and local economic trends, will have a positive impact on the communities within the Study Area and across the State of Ohio. Lease payments, short- and long-term job creation, and PILOT revenues will benefit private landowners, businesses, and taxing jurisdictions. The Facility is not expected to generate significant expenditures on behalf of these beneficiaries; therefore, it will have a positive impact on the social and economic conditions of these communities and across Ohio.

1. Total Statewide Economic Benefit

The construction of the Republic Wind Farm is expected to produce \$43.1 million in employment earnings and \$120.3 million in total economic output. Subsequently, each year the Facility is operational it is expected to generate approximately \$2.5 million in earnings and \$5.9 million in total economic output.

2. Statewide Employment Benefits

During the construction period, the Facility is expected to support demand for a total of 740 onsite, supply chain, and induced employment positions. It is expected to support a total of 39 positions during each year of its operation.

3. Land Lease Revenues

The development of the Facility will result in \$[REDACTED] in annual lease payments made to participating landowners.

4. Property Tax Revenues

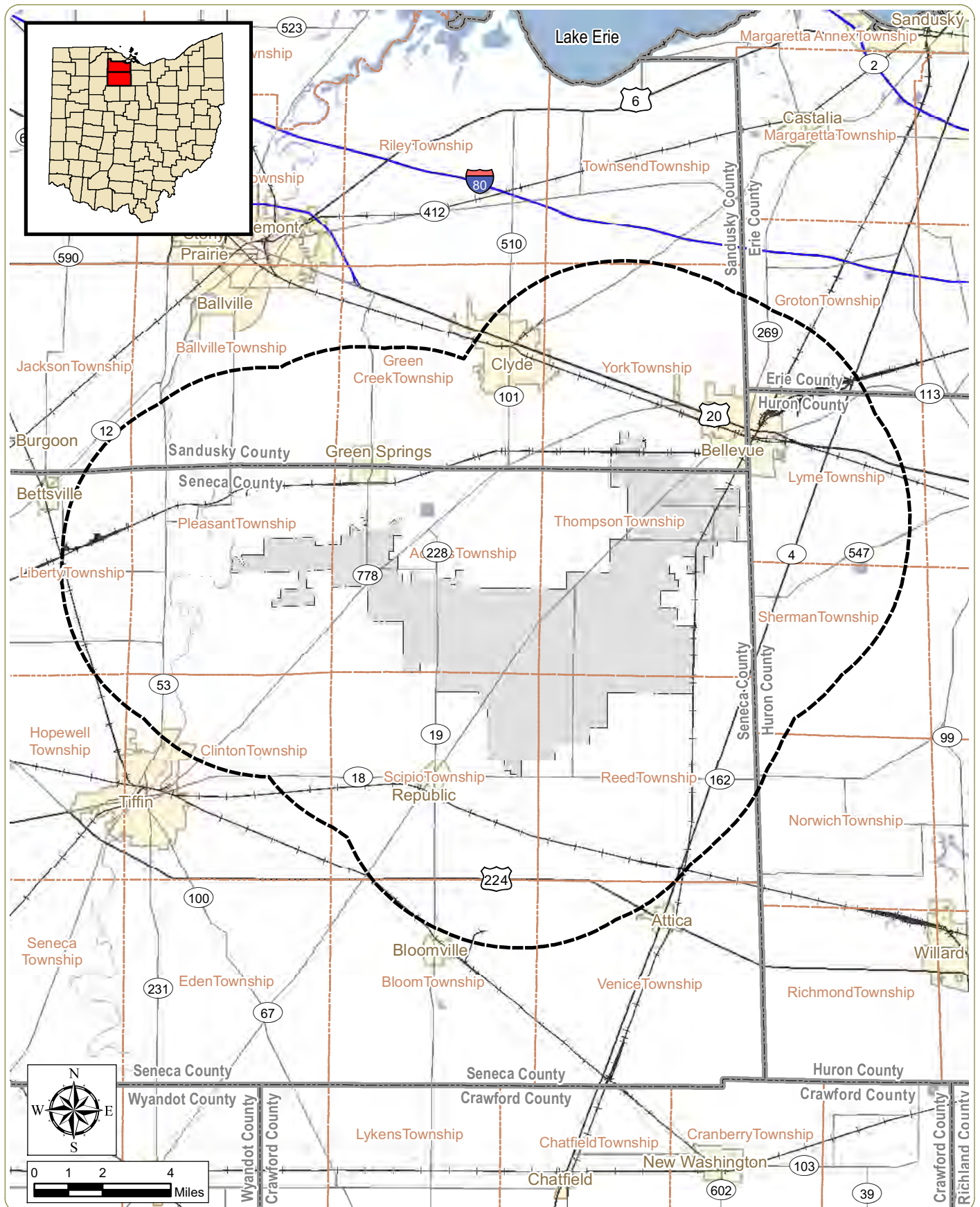
Construction of the proposed Republic Wind Farm will increase local government revenues through payments in lieu of taxes (PILOTs). Though the agreements outlining these payments are not yet finalized, it is estimated that annual PILOT revenues could amount to approximately \$1.188 million to \$1.782 million to be distributed to local taxing jurisdictions.

Part VIII: References

- American Wind Energy Association (AWEA). 2015. Ohio State Fact Sheet. Available at: <http://awea.files.cms-plus.com/FileDownloads/pdfs/ohio.pdf> (Accessed August 2017).
- Bureau of Labor Statistics. 2016. Metropolitan Area Occupational Employment and Wage Estimates for Toledo, Ohio and the State of Ohio. Available at https://www.bls.gov/oes/current/msa_def.htm#17460 (Accessed August 2017).
- City of Bellevue. 2005. City of Bellevue Vision 2025 Comprehensive Master Plan. Available at <http://www.cityofbellevue.com/Bellevue/city-master-plan-2025/> (Accessed June 2017).
- City of Tiffin. 2010. City of Tiffin Downtown Strategic Plan. Available at <https://senecasuccess.files.wordpress.com/2014/11/downtown-plan-2010.pdf> (Accessed June 2017).
- City of Tiffin. 2016. City of Tiffin Downtown Strategic Growth and Development Plan. Available at <https://senecasuccess.wordpress.com/tag/downtown-strategic-growth-and-development-plan/> (Accessed June 2017).
- Erie County. 1995. Erie County Comprehensive Development Plan. Available at <http://www.eriecounty.oh.gov/departments-and-agencies/economic-development/erie-regional-planning-commission/downloadable-documents/> (Accessed June 2017).
- Huron County. 2017. Huron County Comprehensive Land Use Plan. Available at http://www.huronswcd.com/uploads/2/7/9/7/27972647/2017_comp_land_use_plan_for_website.pdf (Accessed June 2017).
- IMPLAN Group LLC. 2018. General Information About Multipliers. Available at: <https://implanhelp.zendesk.com/hc/en-us/articles/115009505707-General-Information-About-Multipliers> Accessed January 2018
- Sandusky County. 2013. The Sandusky County Comprehensive Plan. Available at <https://www.sanduskycountyedc.net/site-selection/sc-comprehensive-plan/> (Accessed June 2017).
- Seneca County. 2011. Seneca County Comprehensive Economic Development Strategy. Available at <https://senecasuccess.files.wordpress.com/2014/11/economic-plan-ceds-2011.pdf> (Accessed June 2017).
- Environmental Law & Policy Center (ELPC). 2011. The Solar and Wind Energy Supply Chain of Ohio. Available at: <http://elpc.org/newsroom/publications/> (Accessed August 2017).
- Environment Ohio Research & Policy Center (Environment Ohio). 2007. Energizing Ohio's Economy: Creating Jobs and Reducing Pollution with Wind Power. Published by Environment Ohio and the Frontier Group. Available at: <http://www.frontiergroup.org/reports/fq/energizing-ohio%E2%80%99s-economy> (Accessed August 2017).
- State of Ohio. 2012. Section 5727. Ohio Revised Code. Available at: <http://codes.ohio.gov/orc/5727> (Accessed August 2017).
- U.S. Census Bureau. 2015. American Community Survey County – Household, Population and NAICS Characteristics (web database portal). Available at: <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml> (Accessed June 2017).

- U.S. Department of Energy (USDOE) National Renewable Energy Laboratory (NREL). 2017. Jobs and Economic Development Impact (JEDI) model release W12.23.16. Available at: <http://www.nrel.gov/analysis/jedi/download.html> (Accessed August 2017).
- U.S. Department of Labor (USDOL) Bureau of Labor Statistics (BLS). 2014-2016. Local Area Unemployment Statistics. Available at: <http://www.bls.gov/lau/data.html> (Accessed June 2017).
- U.S. Department of Labor (USDOL) Bureau of Labor Statistics (BLS). 2016. May 2016 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates: Toledo, OH Metropolitan Statistical Area. Available at: https://www.bls.gov/oes/current/oes_45780.htm#51-0000 (Accessed January 2018).

Figures



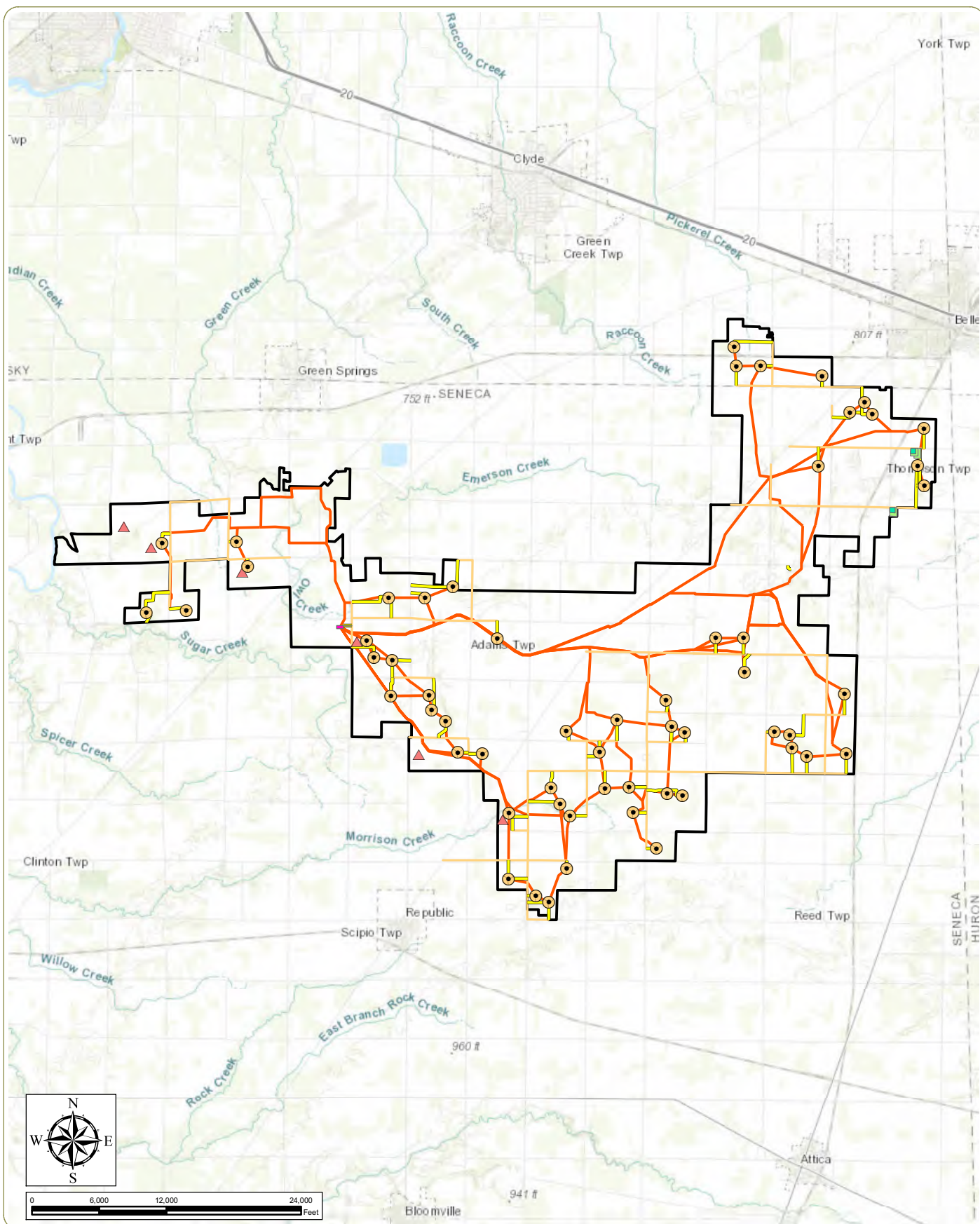
Republic Wind Farm

Seneca and Sandusky Counties, Ohio

Figure 1: 5-Mile Study Area

- Notes:**
1. Basemap: ESRI StreetMap North America, 2012.
 2. This map was generated in ArcMap on January 18, 2018.
 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- 5-Mile Study Area
- County Boundary
- Township Boundary
- Major Highways
- Highways
- Major Roads
- Main and Branch Rails
- Project Area



Republic Wind Farm

Sandusky and Seneca Counties, Ohio

Figure 2: Facility Layout

- Notes:**
1. Basemap: ESRI ArcGIS Online "World Topographic Map" map service.
 2. This map was generated in ArcMap on January 18, 2018.
 3. Only two met tower sites will be selected in the final design.
 4. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- ▲ Potential Met Tower Site
- Wind Turbine
- Access Road
- Collection Line
- Delivery Route
- Collection Substation
- Laydown Yard Option
- O&M Facility
- Project Boundary



Exhibit H. Noise Impact Assessment



REPORT

NOISE IMPACT ASSESSMENT FOR REPUBLIC WIND – SENECA AND SANDUSKY COUNTY, OHIO

12.22.2017



PREPARED FOR:
APEX CLEAN ENERGY

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**NOISE IMPACT ASSESSMENT FOR REPUBLIC WIND
– SENECA AND SANDUSKY COUNTY, OHIO**

**PREPARED FOR:
APEX CLEAN ENERGY**

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1.0 INTRODUCTION

Apex Clean Energy is proposing the Republic Wind project, in an area straddling the border between Seneca County and Sandusky County, Ohio between the towns of Republic and Bellevue. The project proposes installation of up to 58 wind turbines.

As part of the Ohio Power Siting Board (OPSB) permitting process, Apex Clean Energy retained RSG to conduct a pre-construction noise assessment. This assessment includes both long-term background sound monitoring and computer sound propagation modeling from the proposed turbines.

This report includes:

- A project description;
- A summary of sound level limits applicable to the project;
- Background sound level monitoring procedures and results;
- Discussion of acoustical concerns particular to wind turbine noise;
- Sound propagation modeling procedures and results;
- Construction noise modeling;
- Discussion; and
- Conclusions.

2.0 PROJECT DESCRIPTION

Republic Wind is proposed to span Seneca and Sandusky Counties in Ohio. The project rights have been acquired by Apex Clean Energy.

The project covers approximately 15,000 acres, with up to 58 wind turbines locations and a total project output of at least 200 MW. A map showing the project area is shown in Figure 1.

The project is roughly bounded by U.S. 20, which passes approximately two kilometers north of the project area, Ohio Route 4 on the east and Ohio Routes 18 and 162 on the South.

Terrain in the area is flat overall with small undulations. Southern parts of the project area generally have more elevation change. The Sandusky river passes just to the west of the project area. Land use is primarily agricultural. Most land is cultivated, with some scattered stands of trees.

A final wind turbine type has not been selected for the project. Currently considered are the Vestas V136 3.6 MW with a hub height of 105 meters; GE 3.6-137 with a 110-meter hub height; and Gamesa G132 3.465 MW with a 114-meter hub height. The project will also include a single 67/90/112 MVA transformer at the collector substation and individual pad-mounted transformers at the base of each turbine.

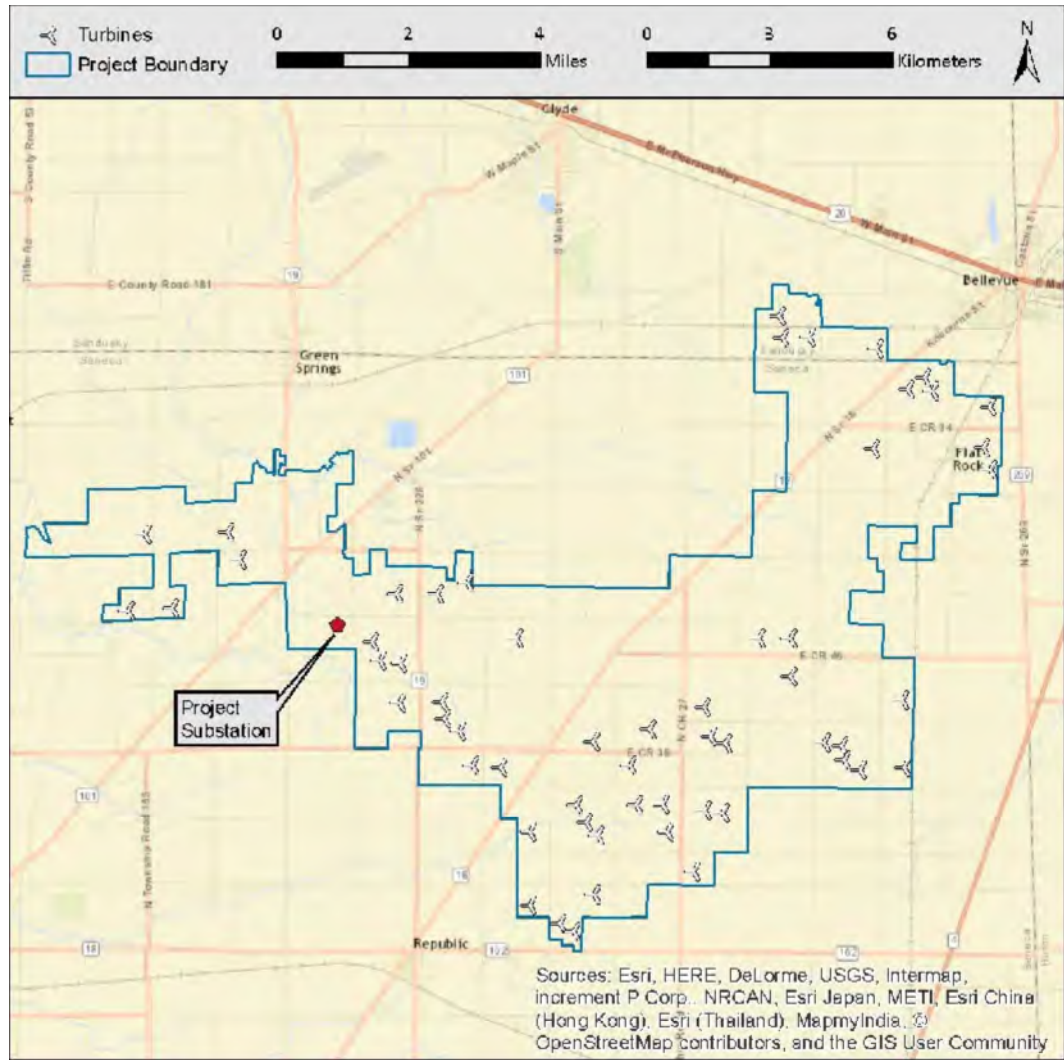


FIGURE 1: PROJECT AREA MAP

3.0 SOUND LEVEL LIMITS/GUIDELINES

3.1 | STATE STANDARDS

There are no Ohio state statutes or regulations establishing quantitative noise standards that are applicable to this wind power project.

3.2 | STANDARDS SET FOR WIND PROJECTS IN OHIO

The Ohio Power Siting Board (OPSB) has set sound level standards for other wind power projects within the state. For example, in the Timber Road II project, the OPSB applied the following condition:

“If preconstruction acoustic modeling indicates a facility contribution that exceeds the facility area nighttime LEQ (41 dBA) by greater than five dBA at the exterior of any nonparticipating residences within one mile of the facility boundary, the project shall be subject to further study of the potential impact and possible mitigation prior to construction. Mitigation, if required, shall consist of either reducing the impact so that the project contribution does not exceed the facility ambient nighttime LEQ (41 dBA) by greater than five dBA, or other means of mitigation approved by staff and Paulding Wind II in consultation with the affected receptor(s).”¹

This condition for the Timber Road II project sets a relative threshold for sound emitted by the wind power project of 5 dB above the nighttime ambient noise levels measured in the area, using the equivalent continuous sound level (L_{eq}) as the metric. In this area, the nighttime ambient L_{eq} was determined to be 41 dBA, yielding a practical threshold of 46 dBA for wind turbine sound.

In the case of another recently permitted wind power project, Greenwich Windpark, LLC, the OPSB applied the following condition:

“The facility shall be operated so that the facility noise contribution does not exceed the project area ambient nighttime Leq (46 dBA) by five dBA result at the exterior of any currently existing non-participating sensitive receptor. During daytime operation only from 7:00 a.m. to 10:00 p.m., the facility may operate at the greater of: the project area ambient nighttime Leq (46 dBA) plus five dBA; or the validly measured ambient Leq plus five dBA at the location of the sensitive receptor. After commencement of commercial operation, Greenwich shall conduct further review of the impact and possible mitigation of all facility related noise complaints through its complaint resolution process.”²

Similar to Timber Road II, this sets a relative threshold for sound emitted by the wind power project of 5 dB above the nighttime ambient noise levels measured in the area, using the equivalent continuous sound level (L_{eq}) as the metric. In this area, the nighttime ambient L_{eq}

¹ “Paulding Wind Farm II, LLC.” Opinion Order and Certificate. 10-369-EL-BGN. (Ohio 2010).

² “6011 Greenwich Windpark, LLC. Opinion Order and Certificate. 13-990-EL-BGN. (Ohio 2014).

was determined to be 46 dBA, yielding a practical threshold of 51 dBA for wind operations. However, unlike the Timber Road II condition, an allowance is made for potentially higher sound levels during the daytime, based upon a “validly measured” ambient L_{eq} plus 5 dB.

3.3 | NOISE THRESHOLD GOAL FOR REPUBLIC WIND

Based on ambient sound monitoring done at seven locations around the Republic Wind Project (see Section 4) which showed the nighttime background L_{eq} to be 41 dBA, the sound level limit for Republic Wind would be 46 dBA under the Timber Road II and Greenwich project standard methodology.

The 46 dBA $L_{eq(1-hr)}$ limit, developed according to OPSB precedents at Timber Road II and Greenwich Wind, is similar to environmental sound level guidelines established by the World Health Organization (WHO). In their “Guidelines for Community Noise”, the WHO reviewed the most current research on the health impacts of noise to develop guideline sound level limits for communities. To quote the foreword of the report, “The scope of WHO’s effort to derive guidelines for community noise is to consolidate actual scientific knowledge on the health impacts of community noise and to provide guidance to environmental health authorities and professionals trying to protect people from the harmful effect of noise in non-industrial environments.” The WHO concluded that the exterior sound level averaged over eight hours during nighttime should not exceed 45 dBA $L_{eq(8-hr)}$, to protect against potential health impacts due to noise (specifically sleep disturbance).

In 2009 WHO Europe published a report titled “Night Noise Guidelines for Europe”. This report concluded that, “There is no sufficient evidence that the biological effects observed at the level below 40 dBA $L_{night,outside}$ are harmful to health.” The metric “ $L_{night,outside}$ ” is defined as the nighttime sound level averaged over the entire year, as compared to the 1999 guideline sound levels that were averaged over a single eight-hour nighttime period. Given variations in wind speed, wind direction, and other meteorological conditions that affect sound generation and propagation, the yearly average sound level produced by wind turbines is typically at least 5 dB below their hourly maximum emitted sound levels.³

³ Kaliski, Ken and Duncan, Eddie. “Calculating Annualized Sound Levels.” *Proceedings of Meetings on Acoustics*. Baltimore, Maryland. (9) 2010.

4.0 PRE-CONSTRUCTION BACKGROUND SOUND LEVELS

Background sound monitoring was conducted to assess representative ambient sound levels in the project area to form the basis for the noise limit. This section of the report describes the monitoring performed and discusses the results obtained. It includes a description of the monitoring procedures, monitoring locations, sound data processing, and the results obtained for each of the monitoring locations. Observations and conclusions regarding the existing soundscape at each monitoring location are included

4.1 | DESCRIPTIONS OF THE MONITORING LOCATIONS

Background sound level monitoring was performed from February 3 through February 18, 2016 at seven different locations spread across the proposed project area. Each location was selected as representative of a given landscape or soundscape that would be in proximity of one or more of the proposed wind turbines. In placing monitors, consideration is also given to accessibility in winter weather and to the security of the monitoring equipment.

The seven sites are shown in Figure 2, and the reasons for selecting each are described below:

1. “North Boundary”: This location is near the northern extremity of the proposed project, on the boundary between Seneca and Sandusky Counties. This area represents a lower vehicle traffic agricultural area in the northern part of the project;
2. “Mixed Residential”: Flat Rock is one of the few higher-density residential areas within the proposed project boundary. It is also along a rail line with a crossing;
3. “Agricultural Operations”: Most of the area within the proposed project boundary is taken up with larger-scale agricultural operations and related low-density housing. Note that our monitoring took place in the winter and farming activities were not evident;
4. “Busy Roadway”: Most of the area is crossed with town roads (TR) and county roads (CR) with very light traffic. But the project area is also crossed by a few larger roadways. This site is near State Route 18 (SR18), which bisects the entire project area and where the traffic is significantly higher;
5. “Wooded Area”: The majority of the proposed project area is characterized by open agricultural fields. There are a few forested areas, where the soundscape includes a different mix of biogenic sources. This particular wooded area was selected because it was further from roadways but still accessible in wintertime;
6. “Remote Rural”: As stated above, most the area is open agricultural fields crossed by lightly-traveled roadways. This site represents an effort to find a quiet area that is still subject to agricultural activity; and,

7. “Southern Boundary”: This location is near the southern extremity of the proposed project. This location represents a lower traffic agricultural area in the southern part of the project.

Each monitoring location is described in detail below. Note that some of the installation photos were taken on February 2 or 3 when there had been no recent snowfall, while others were taken on February 11, when a light snow was on the ground.

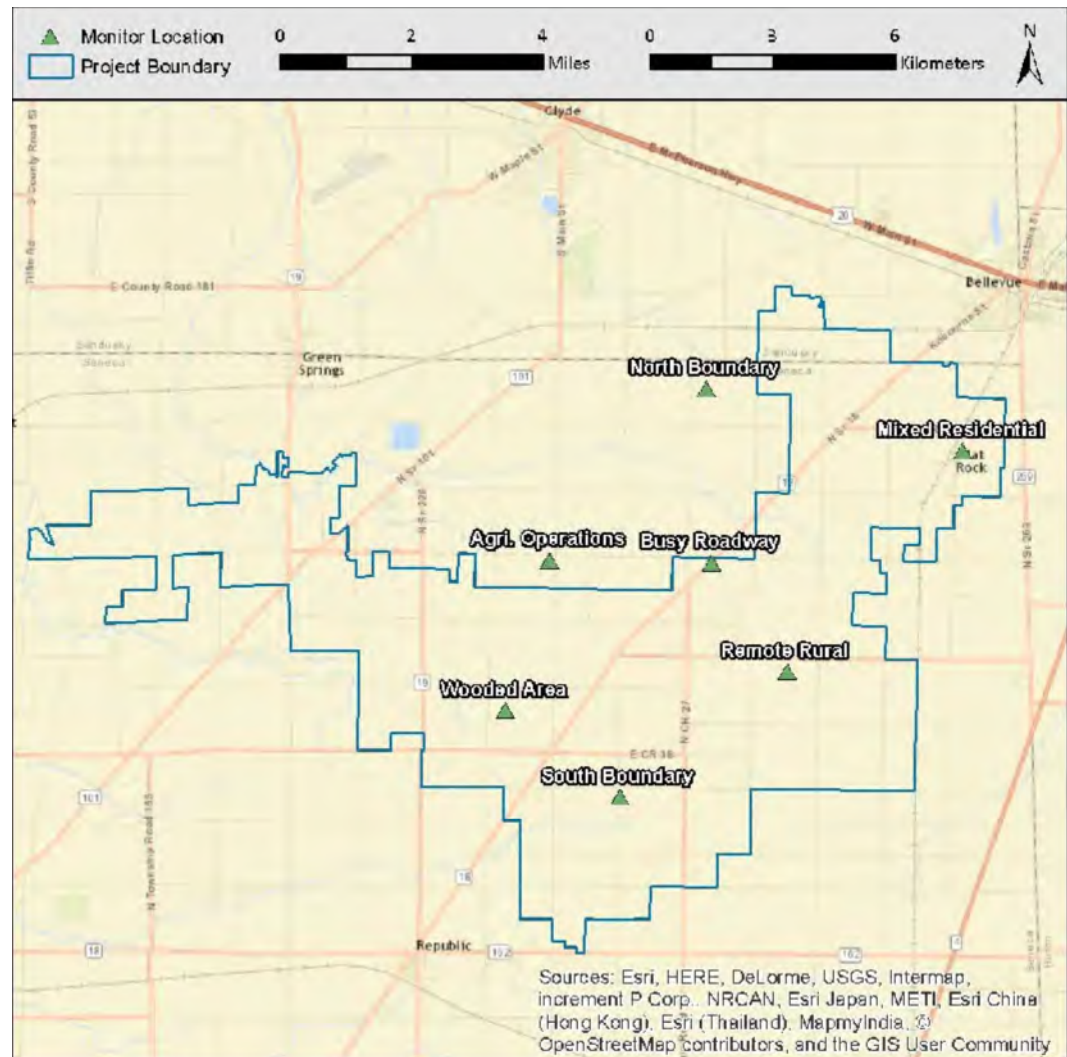


FIGURE 2: LONG-TERM MONITORING LOCATIONS FOR REPUBLIC WIND (PRE-CONSTRUCTION)

NORTH BOUNDARY

The monitor labeled “North Boundary” was located 375 meters (1,230 feet) east of Route TR79. The project boundary is located approximately 1,220 meters (4,000 feet) to the east, along TR80 and the border between Seneca and Sandusky Counties (County Route 62) is located approximately 700 meters (2,300 feet) to the north. The site is shown in Figure 3. A

two-building chicken operation was located about 454 meters (1,490 feet) to the north of the monitor.

The monitoring system and an anemometer were secured along the tree-line separating two parcels, as shown in Figure 4.

MIXED RESIDENTIAL

The monitor labeled “Mixed Residential” was in the village of Flat Rock. It was placed 208 meters (682 feet) east of North County Road 29, 106 meters (348 feet) northeast of the Flat Rock Care Center. The site is shown in Figure 5. To the west of the monitor was the residential area; to the east were agricultural fields. The monitor was 392 meters (1,286 feet) from the closest point of approach of the rail line, and 515 meters (1,690 feet) from the crossing of that rail line with CR29.

The monitoring system, an anemometer, and a thermometer were secured along the tree-line separating the residential parcels from the farm fields, as shown in Figure 6.

AGRICULTURAL OPERATIONS

The monitor labeled “Agricultural Operations” was located near the residence of an agricultural parcel at the corner of County Roads 32 and 21 in Clyde, Ohio as shown in Figure 7. The monitor was placed approximately 90 meters (300 feet) south of Country Road 32, and 120 meters (390 feet) west of Country Road 21. The participating parcel includes the residence, grain storage containers, and two equipment barns, all surrounded by agricultural fields.

The monitoring system and an anemometer were secured on the northern edge of the residential portion of the property, as shown in Figure 8.

BUSY ROADWAY

The monitor labeled “Busy Roadway” was located 85 meters (279 feet) southeast of State Route 18 (SR18) and 149 meters (489 feet) south of County Road 32 (CR32), as shown in Figure 9. The monitor was placed along a small grove of trees in an open, untilled patch bordered by three agricultural fields. A residence was located 210 meters (689 feet) to the northeast, across CR32.

The monitoring system was secured near one of the trees in the grove, as shown in Figure 10.

WOODED AREA

The monitor labeled “Wooded Area” was located 613 meters (2,011 feet) south of Town Road 138 (TR138) and 588 meters (1,929 feet) east of Town Road 179 (TR 179), as shown in Figure 11. The location was near a maple sugaring shack that was in operation for brief periods during monitoring. A large confinement facility was located across TR138, approximately 777 meters (2,550 feet) to the north of the monitor.

The monitoring system was secured within the trees on the northern edge of the woods, as shown in Figure 12.

REMOTE RURAL AREA

The monitor labeled “Remote Rural Area” was located 355 meters (1,165 feet) south of County Road 46 (CR46) and 874 meters (2,867 feet) east of Town Road 80 (TR80), as shown in Figure 13. It was on the edge of a small grove of trees in the center of the adjacent agricultural fields. This location was also 351 meters (1,152 feet) to the west of the boundary line of the proposed project area near CR46. While the location and density of residences is similar in this area to others selected for monitoring, it is further from more heavily-traveled roads. It was 3.22 kilometers (2 miles) due west of the rail line that passes through Flat Rock.

The monitoring system was secured along the edge of the field and tree-line, as shown in Figure 14. The microphone is highlighted in the photograph.

SOUTH BOUNDARY

The monitor labeled “South Boundary” was located 251 meters (823 feet) south of County Road 24 (CR24) and 96 meters (315 feet) east of Town Road 183 (TR183), as shown in Figure 15. This area is near the southern boundary of the proposed project area: the boundary follows CR24 and then jogs south to Town Road 124 (TR124) for just over one mile.

The monitoring system and an anemometer were secured along south edge of a stand of trees in this area, as shown in Figure 16.



FIGURE 3: MAP OF THE "NORTH BOUNDARY" MONITOR SITE WITH ORTHO-IMAGERY



FIGURE 4: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "NORTH BOUNDARY"



FIGURE 5: MAP OF THE "MIXED RESIDENTIAL" MONITOR LOCATION WITH ORTHO-IMAGERY



FIGURE 6: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "MIXED RESIDENTIAL"



FIGURE 7: MAP OF THE "AGRICULTURAL OPERATIONS" MONITOR LOCATION WITH ORTHO-IMAGERY



FIGURE 8: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "AGRICULTURAL OPERATIONS"

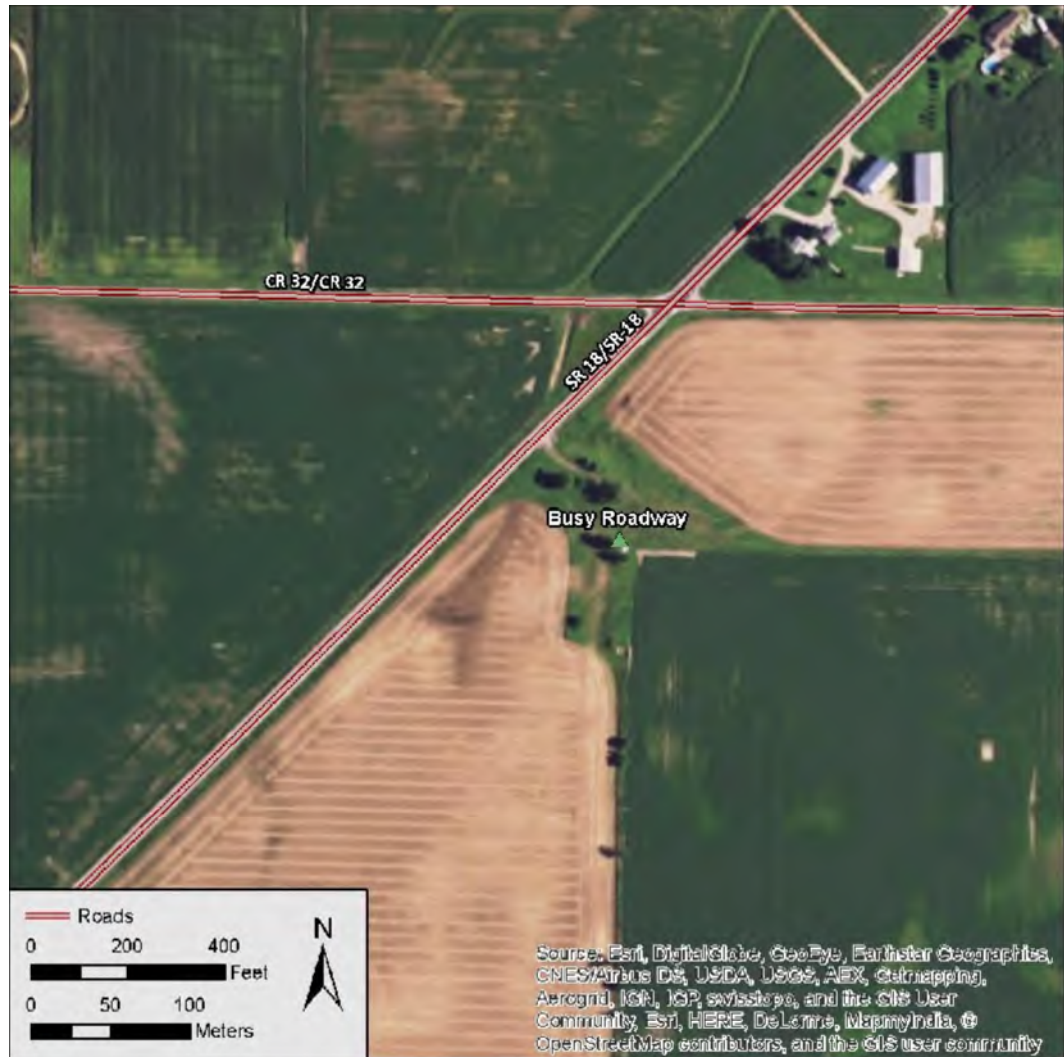


FIGURE 9: MAP OF THE "BUSY ROADWAY" MONITOR LOCATION WITH ORTHO-IMAGERY



FIGURE 10: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "BUSY ROADWAY"



FIGURE 11: MAP OF THE "WOODED AREA" MONITOR LOCATION WITH ORTHO-IMAGERY



FIGURE 12: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "WOODED AREA"



FIGURE 13: MAP OF THE "REMOTE RURAL AREA" MONITOR LOCATION WITH ORTHO-IMAGERY



FIGURE 14: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "REMOTE RURAL AREA"



FIGURE 15: MAP OF THE "SOUTH BOUNDARY" LOCATION WITH ORTHO-IMAGERY



FIGURE 16: PHOTOGRAPH OF THE MONITOR INSTALLATION AT "SOUTH BOUNDARY"

4.2 | MONITORING METHODOLOGY

DATA ACQUISITION

Sound levels at each monitoring location were measured using one of three sound level meters: the Cesva SC-310, Svantek SV979, or Rion NL-22. All sound level meters logged A-weighted equivalent continuous sound levels once each second. The Cesva and Svantek models are ANSI/IEC Type 1 sound level meters, and logged 1/3-octave-band spectral sound levels once each second. The Rion model used at the “Busy Roadway” location is an ANSI/IEC Type 2 sound level meter. It did not log spectral sound levels.

Each sound level meter’s microphone was mounted on a wooden stake at a height of approximately 1.2 meters (4 feet) and covered with a weather-resistant windscreen. The windscreen acts to reduce the influence of wind-induced self-noise on the measurements.

Real time audio was recorded continuously at each location using the signal acquired through the sound level meter microphone. The Svantek SV979 meters recorded WAV audio internally. The analog signals from each of the other meters were input to external digital audio recorders.

Average wind speeds and maximum gust speeds were logged once per minute at four locations throughout the site using ONSET Hoboware anemometers. Air temperature was logged once per minute at the “Mixed Residential” location.

DATA ANALYSIS

After the monitoring period, 1-second logged sound level data were compiled in 10-minute periods. Data from those periods during which weather conditions exceeded the operational ranges of the instrumentation were removed from results. These conditions include maximum gust speeds above 5 m/s (11 mph), temperatures below -10 °C (14 °F), or precipitation in the form of rain. (Snow periods are not excluded.) Other data periods were removed for seasonal sound sources (snow plows, snowmobiles, etc.), anomalous activities in the immediate vicinity of the microphones (such as interaction of people or animals with the equipment), and during station calibration/check-up.

For each monitor site, results are presented as graphs of sound levels and maximum wind (gust) speed as a function of time throughout the monitoring period. Two sound level metrics are plotted in each graph: equivalent continuous sound levels (L_{eq}) and 10th-percentile sound levels (L_{90}). The data which were excluded from summary processing are included in the graphs but shown in lighter colors.

4.3 | MONITORING RESULTS

SUMMARY OF METEOROLOGICAL DATA

Strong winds were common throughout the monitoring period, and temperatures dropped below -10 °C (14 °F) several times. Temperatures during the monitoring period ranged from a low of -19.1° C (-2.4° F) to a high of 15.6° C (60.1° F). The maximum wind speeds and

gusts recorded at the four sites equipped with anemometry are listed in Table 1. Over the 15 days of monitoring, precipitation fell as rain on February 8 and February 15.⁴ The exact rain periods at each site were verified from their respective audio recordings.

TABLE 1: MAXIMUM MEASURED WIND SPEEDS BY SITE

Monitoring Location	Max Wind Speed		Max Gust Speed		Average Wind Speed	
	m/s	mph	m/s	mph	m/s	mph
Agricultural Operations	9.1	20.3	12.1	27.0	1.7	3.8
Mixed Residential	7.1	15.8	11.3	25.3	1.4	3.2
North Boundary	6.8	15.2	10.8	24.2	1.3	2.9
Southern Boundary	10.3	23.1	13.6	30.4	1.6	3.5

SUMMARY OF SOUND LEVELS

The equivalent continuous sound level (L_{eq}) and tenth-percentile sound level (L_{90}) data logged at each monitoring location are plotted as time history graphs, along with the maximum 10-minute gust speed and temperature in Figures 17 through 37. (For an explanation of the sound level metrics and their use, see Appendix A, “A Primer on Sound and Noise”.) Each time history graph spans one calendar week for ease of viewing. Periods that have been excluded from the averaging of sound levels due to high wind, low temperature, rain, or anomalous events, are indicated on each graph. However, the original data for those periods are still shown, using lighter colors. Results specific to each monitor location are described in the following sections.

All the monitors were within audible range of freight train passby events (and their horns at crossings). Additionally, aircraft overflights, mostly by commercial jets operating at cruise altitudes, were evident at every site. All the monitors were near dormant farm fields. As the monitoring occurred in the winter, field farming activities were not evident in the data.

Summary sound levels for the monitoring period at all sites are presented in Table 2. They include the equivalent continuous average (L_{eq}), and the 10th-percentile (L_{90}), 50th-percentile (L_{50}) and 90th-percentile (L_{10}) statistical levels for the entire period, for the daytime periods, and for the nighttime periods.⁵

The Mixed Residential monitor was the closest monitor to a residential area (“in town”). It recorded the highest average levels as a result of frequent use of the nearby Flat Rock Care facility parking lot. The Busy Roadway monitor was exposed to regular high-speed car and truck pass bys.

⁴ Rain periods were identified from historical meteorology data available online Weather Underground stations KOHMONRO6 and KOHREPUB2, at <http://www.wunderground.com>.

⁵ Daytime is defined here as the period from 7:00 AM to 10:00 PM; nighttime is defined here as the period from 10:00 PM to 7:00 AM the following day.

The quietest sites were the Southern Boundary and the Wooded Area, which were more distant from roads and areas of frequent human activity.

The relatively larger differences between equivalent continuous levels (L_{eq}) and lower tenth-percentile levels (L_{90}) at most of the sites indicate that the soundscapes are dominated by transient events resulting from human activity. Weather patterns (mostly wind) also influenced sound levels. Thus, only some of the data show a typical anthropogenic diurnal pattern, where sound levels are higher during the day and lower at night.

The OPSB precedent sound level is calculated from the arithmetic average of the site-wide nighttime equivalent average sound levels (L_{eq}) plus 5 dB. The site-wide average sound levels are shown in the last row of Table 2. Among all seven sites in the Republic project area, the average nighttime L_{eq} is 41 dB, which results in an OPSB precedent project-only sound level limit of 46 dBA L_{eq} 1-hr.

TABLE 2: SUMMARY SOUND LEVELS FROM PRE-CONSTRUCTION MONITORING

Location	Sound Level (dBA)											
	Overall				Day				Night			
	L_{eq}	L_{90}	L_{50}	L_{10}	L_{eq}	L_{90}	L_{50}	L_{10}	L_{eq}	L_{90}	L_{50}	L_{10}
Agricultural Operations	43	26	35	46	44	29	37	47	40	24	30	41
Busy Roadway	50	27	39	54	52	32	42	55	47	24	33	49
Mixed Residential	51	29	36	47	51	31	37	47	51	27	34	46
North Boundary	47	27	33	42	48	28	34	42	44	25	31	41
Rural	42	24	32	44	43	26	34	45	39	21	30	40
Southern Boundary	37	21	31	39	38	23	32	39	34	17	28	37
Wooded Area	36	23	30	38	37	25	31	39	32	21	27	35
Arithmetic Average	44	25	34	44	45	28	35	45	41	23	30	41

RESULTS AT EACH MONITORING LOCATION

North Boundary

The overall L_{eq} at the North Boundary monitoring location was 47 dBA. The daytime and nighttime L_{eq} were 48 and 44 dBA, respectively. These levels were higher than the L_{10} for the same period, which indicates that the maximum sound levels over the period were brief, but relatively high. This is due to the preponderance of train horn blasts at the crossings of the east-west rail line about 1 mile (1.52 km) north of the site. The overall L_{90} , as an indication of the residual sound level, was lower: 27 dBA overall, 28 dBA daytime, and 25 dBA nighttime.

No sound anomalies were identified and excluded from the data analysis at this location.

None of the transient sounds were out of character for the area, and they did not take place abnormally close to the microphone.

The sound level meter was taken out of service for one hour after midnight on February 11, 2016 to download data and replace the system's batteries.

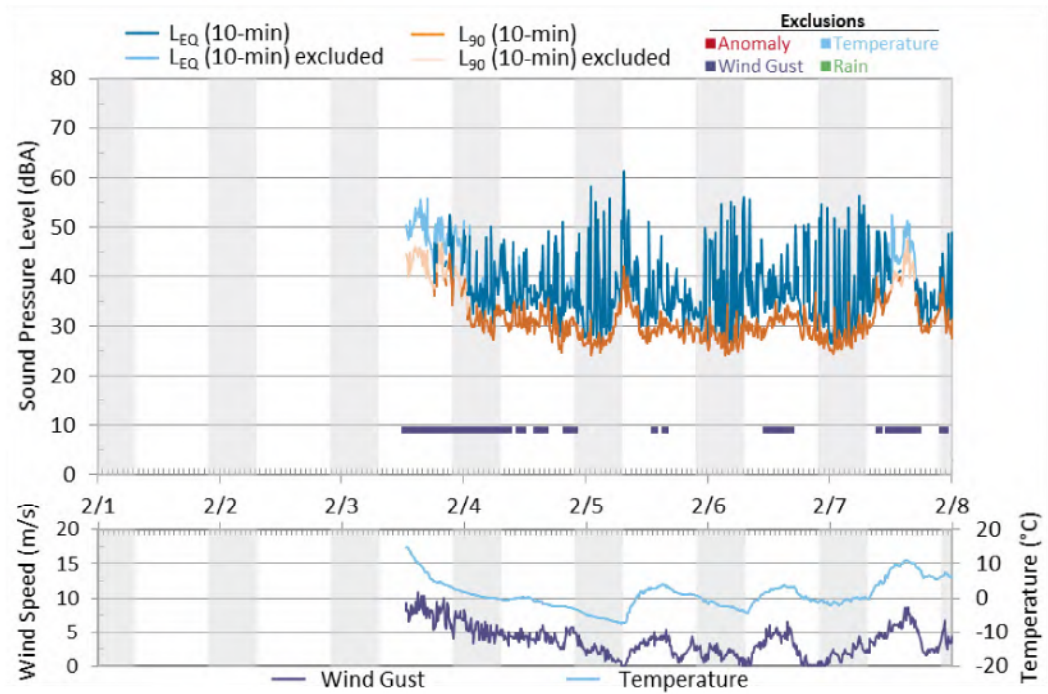


FIGURE 17: MONITOR DATA, NORTH BOUNDARY SITE, FEBRUARY 3-7, 2016

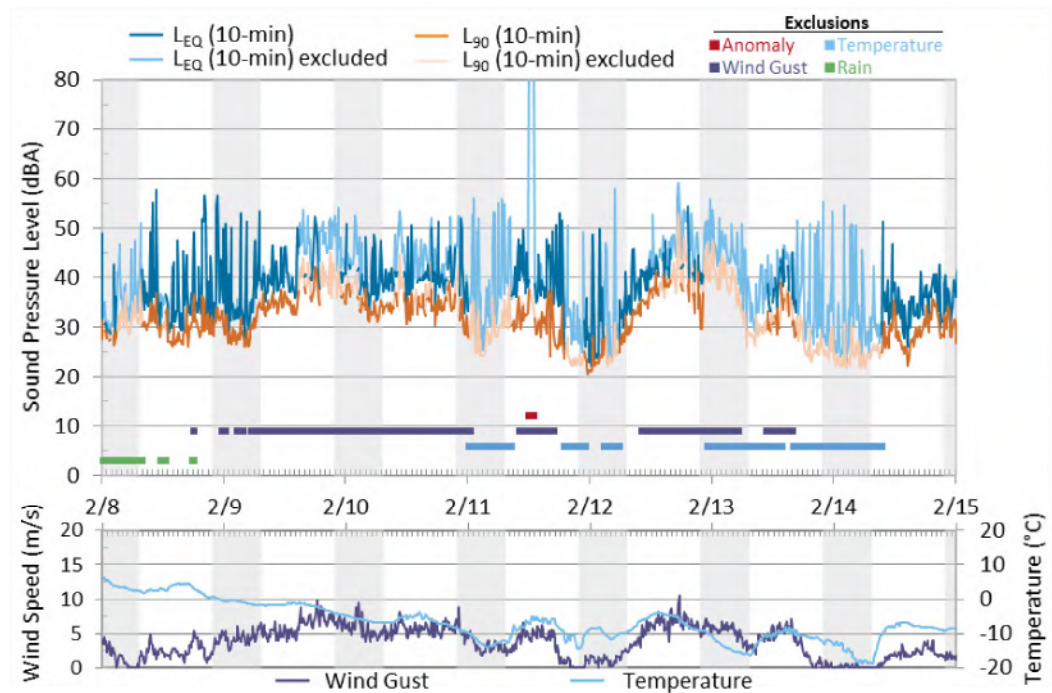


FIGURE 18: MONITOR DATA, NORTH BOUNDARY SITE, FEBRUARY 8-14, 2016

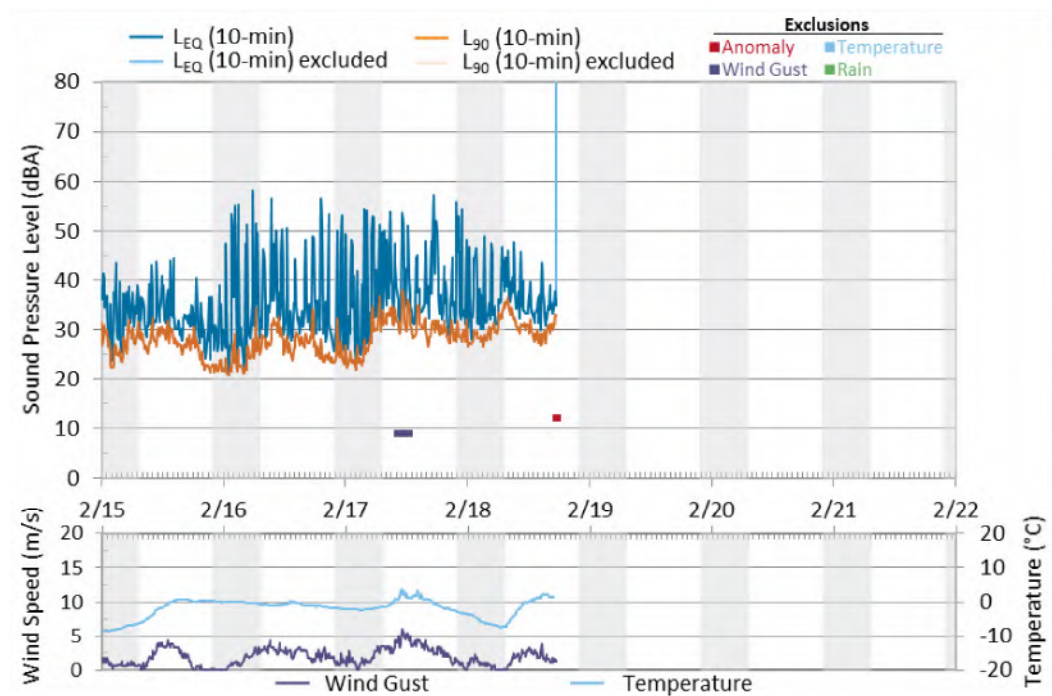


FIGURE 19: MONITOR DATA, NORTH BOUNDARY SITE, FEBRUARY 15-18, 2016

Mixed Residential

The overall L_{eq} at the Mixed Residential monitoring location was 51 dBA, the highest of the seven sites. The daytime and nighttime L_{eq} were the same, at 51 dBA. This indicates a relatively high amount of regular, but transient anthropogenic noise. It also indicates the proximity to the rail line, and the sounding of train horns both day and night. The overall L_{90} , was lower: 29 dBA overall, 31 dBA daytime, and 27 dBA nighttime.

Of the many transient events identified in the sound level data for this site, none were excluded as anomalies. This is because they were not out of character for the area, and they did not take place abnormally close to the microphone.

The sound level meter was taken out of service from 7:00 PM on February 10, 2016 until 11:30 AM on February 11, 2016 to download data and charge the system's batteries.

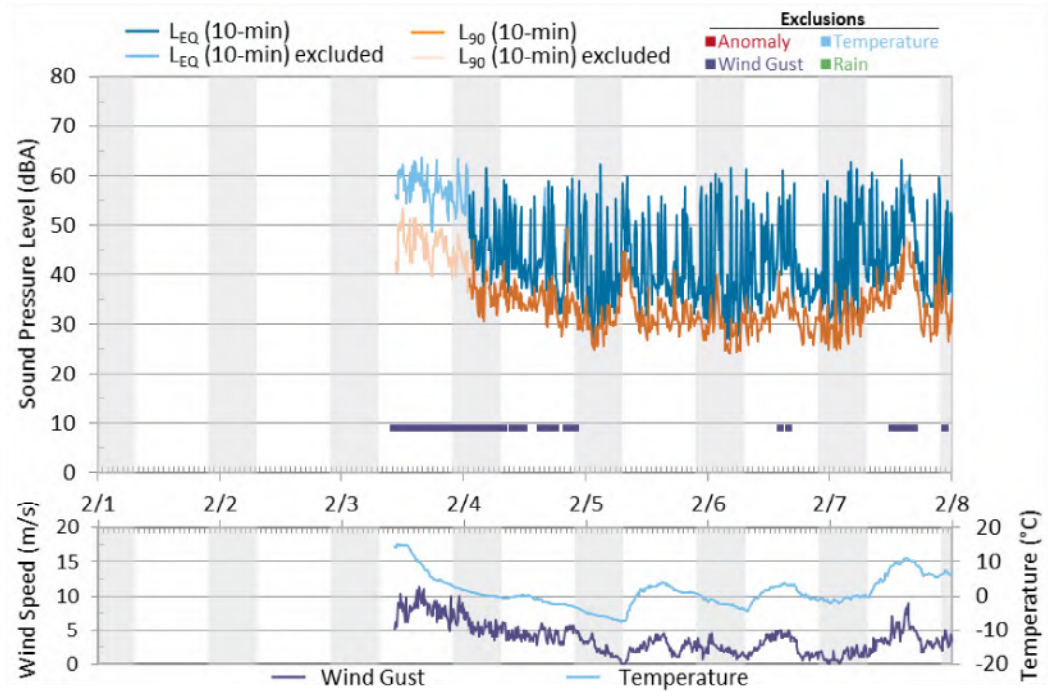


FIGURE 20: MONITOR DATA, MIXED RESIDENTIAL SITE, FEBRUARY 3-7, 2016

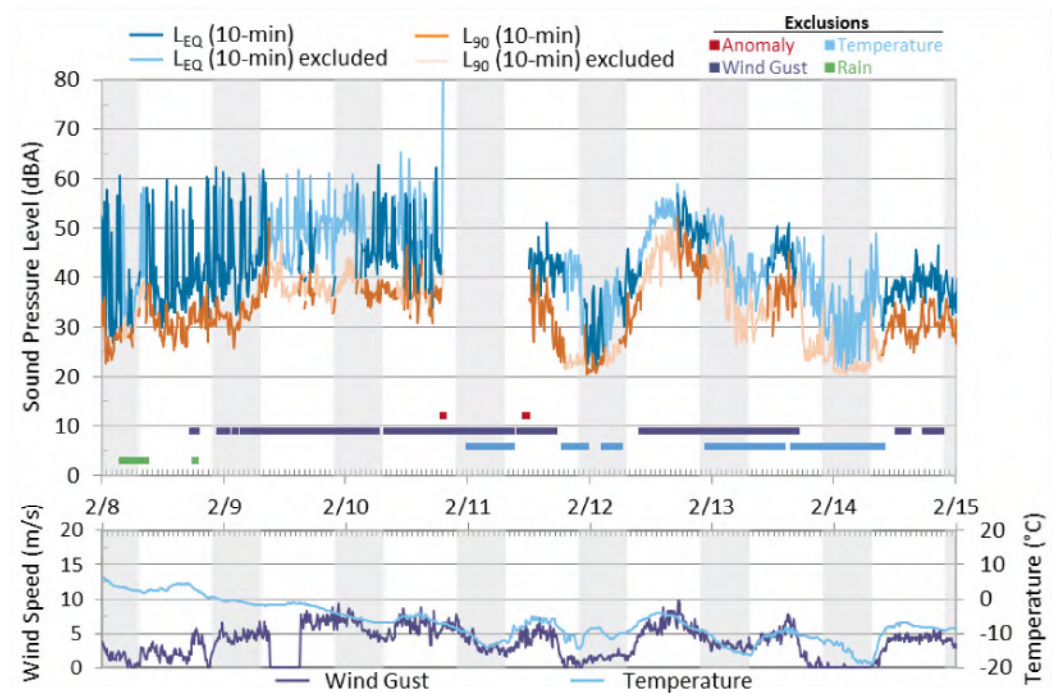


FIGURE 21: MONITOR DATA, MIXED RESIDENTIAL SITE, FEBRUARY 8-14, 2016

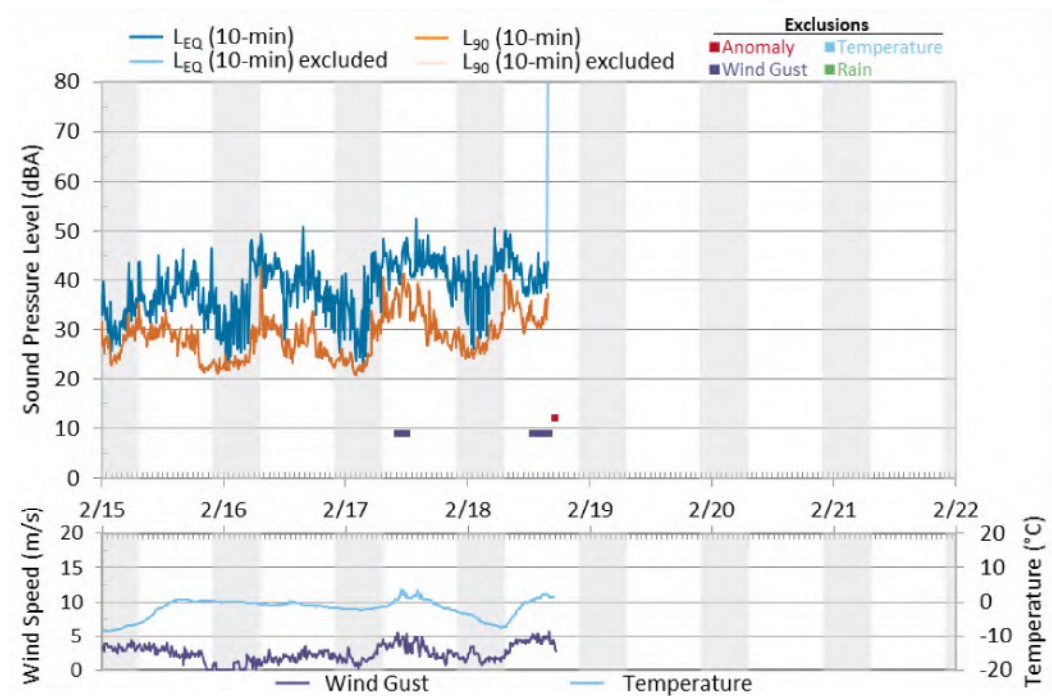


FIGURE 22: MONITOR DATA, MIXED RESIDENTIAL SITE, FEBRUARY 15-18, 2016

Agricultural Operations

The overall L_{eq} at the Agricultural Operations monitoring location was 43 dBA. The daytime and nighttime L_{eq} were 44 and 40 dBA, respectively. These levels were within 3 dB of the L_{10} for the same period. This is indicative of transient anthropogenic events. The overall L_{90} , as an indication of the background sound level, was lower: 26 dBA overall, 29 dBA daytime, and 24 dBA nighttime.

Anomalies at this site that were excluded from data analysis included children playing very near the microphone on February 15 and February 16, 2016, along with car horn and automobile door slams during the same periods.

The sound level meter was taken out of service from 6:00 PM on February 10 until 10:00 AM on February 11 to download data and charge the system's batteries.

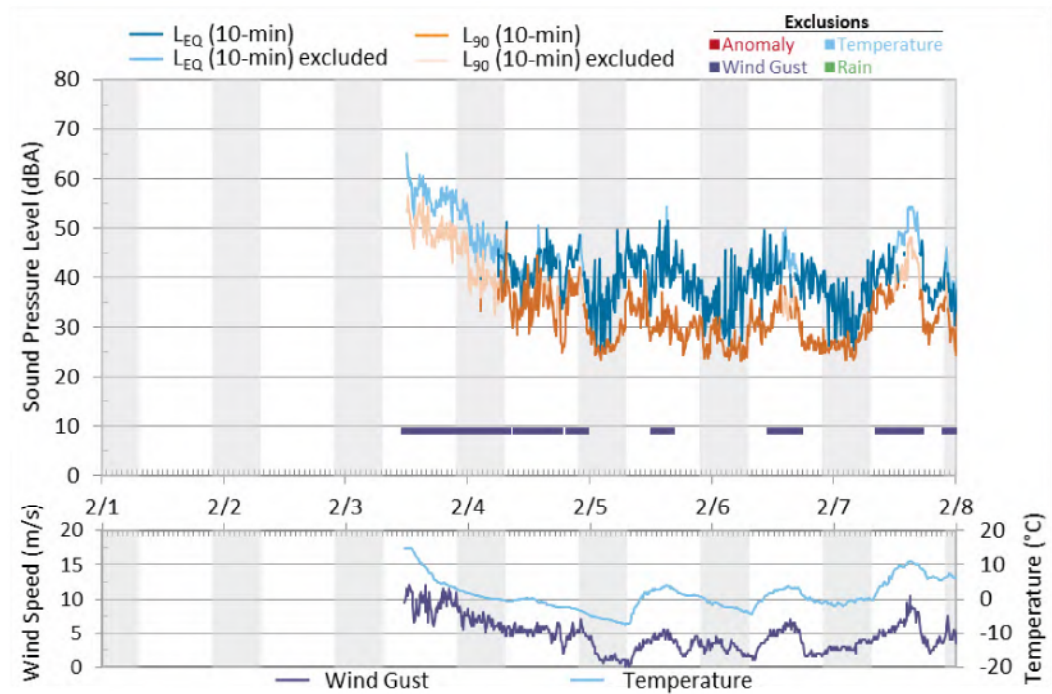


FIGURE 23: MONITOR DATA, AGRICULTURAL OPERATIONS SITE, FEBRUARY 3-7, 2016

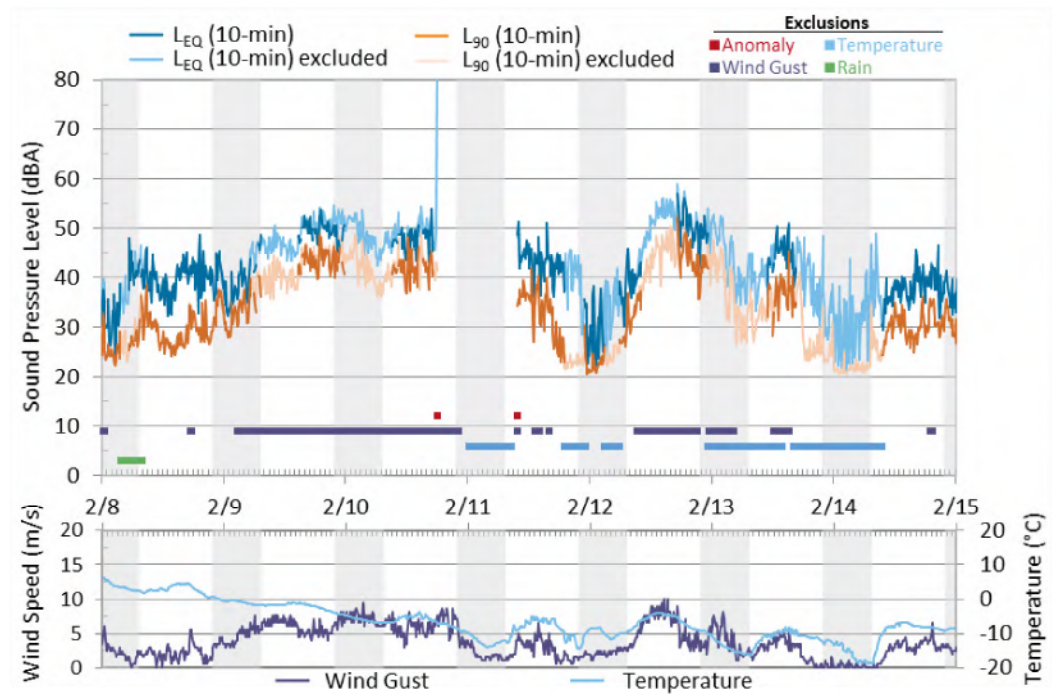


FIGURE 24: MONITOR DATA, AGRICULTURAL OPERATIONS SITE, FEBRUARY 8-14, 2016

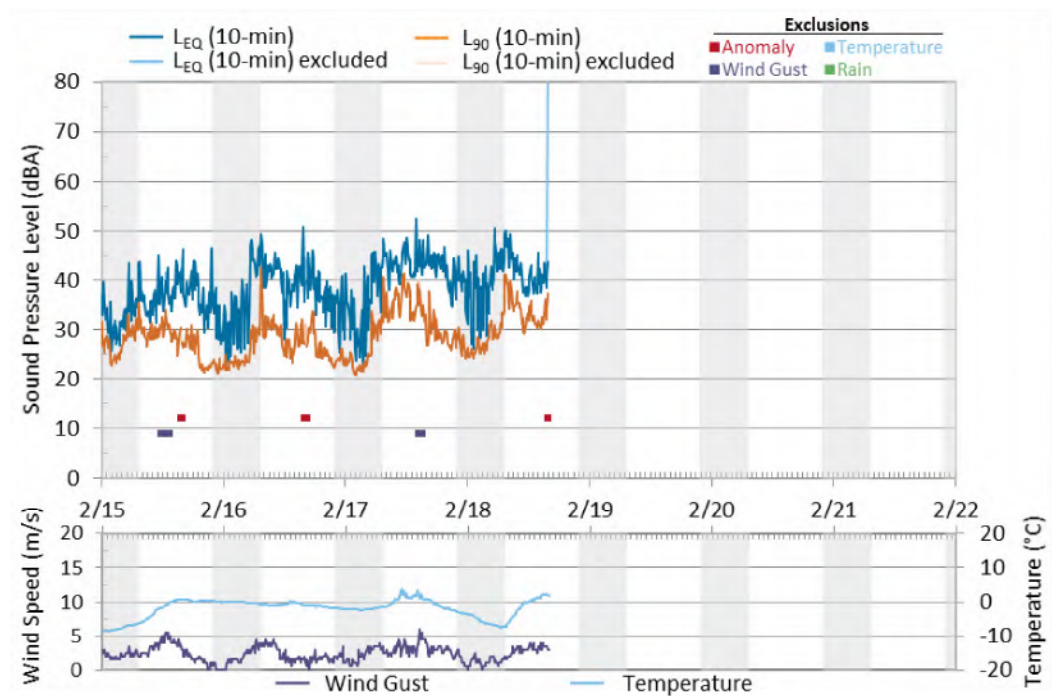


FIGURE 25: MONITOR DATA, AGRICULTURAL OPERATIONS SITE, FEBRUARY 15-18, 2016

Busy Roadway

The overall L_{eq} at the Busy Roadway monitoring location was 50 dBA. The daytime and nighttime L_{eq} were 52 and 47 dBA, respectively. The overall L_{90} was 27 dBA overall, 32 dBA daytime, and 24 dBA nighttime. These patterns are indicative of transient anthropogenic noise. The 8 dB difference between daytime and nighttime L_{90} indicate a diurnal pattern, mostly caused by reduced roadway traffic at night. Confirmation of this can be found by the convergence of the L_{eq} and L_{90} at night, indicating a reduction in transient sounds such as car passbys.

No sound anomalies were identified and excluded from the data analysis at this location. None of the transient sounds out of character for the area, and they did not take place abnormally close to the microphone. A long period of data, from 7:50 PM on February 8 until 2:00 PM on February 10, 2016, was excluded due to wind noise. The exact wind speed was not available, because the anemometer arm froze, but the sound levels (and lack of diurnal pattern) were indicative of very high winds. After comparing to the conditions at the other sites, that entire time period was excluded.

The sound level meter was not taken out of service, but the audio recorder was disconnected from 7:00 PM on February 10 until 11:30 AM on February 11, 2016 to download data.

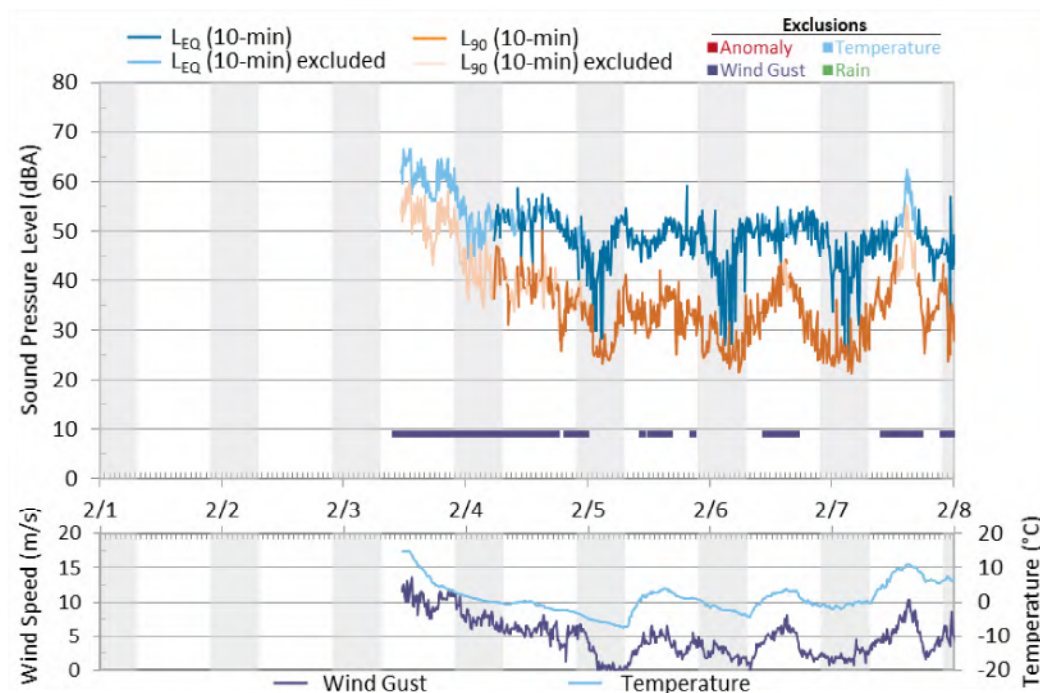


FIGURE 26: MONITOR DATA, BUSY ROADWAY SITE, FEBRUARY 3-7, 2016

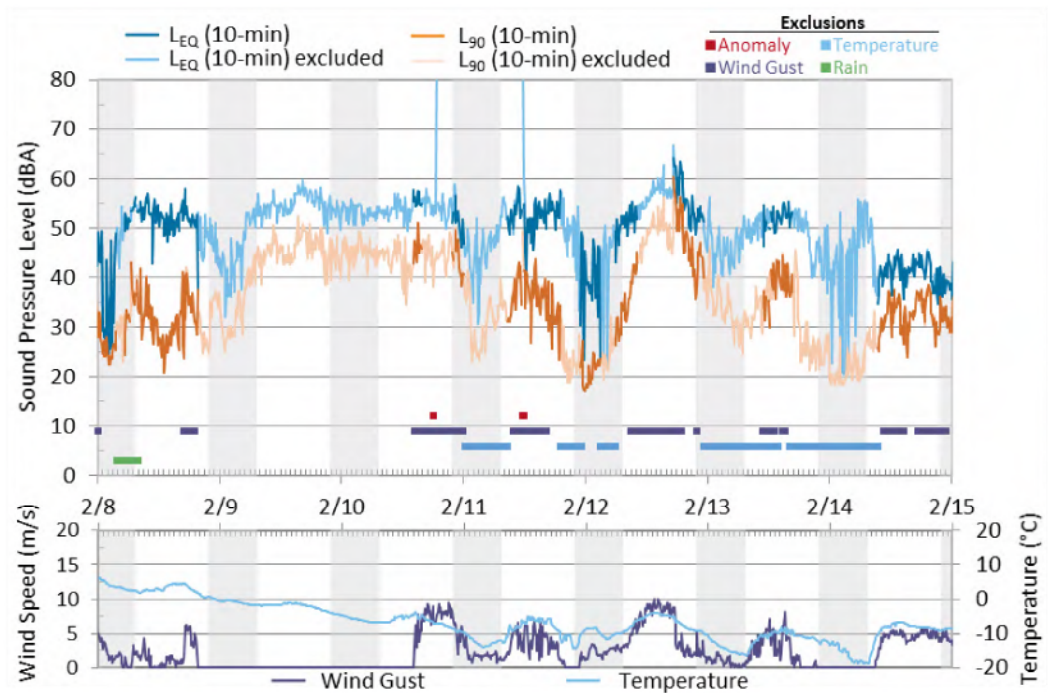


FIGURE 27: MONITOR DATA, BUSY ROADWAY SITE, FEBRUARY 8-14, 2016

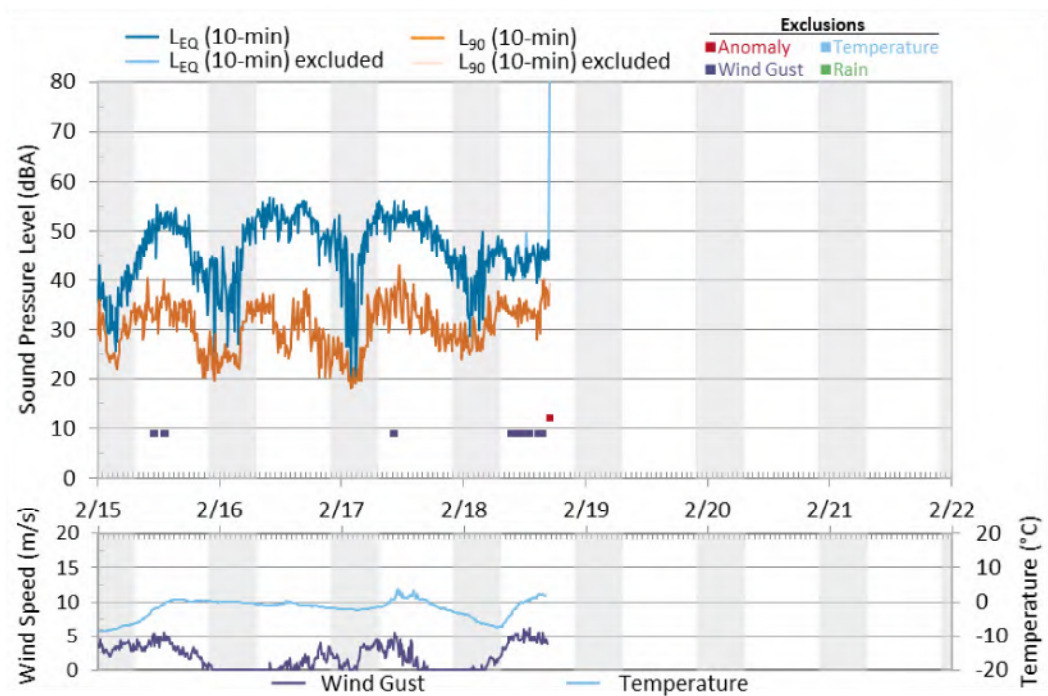


FIGURE 28: MONITOR DATA, BUSY ROADWAY SITE, FEBRUARY 15-18, 2016

Wooded Area

The overall L_{eq} at the Wooded Area monitoring location was 36 dBA, the quietest of monitored locations. The daytime and nighttime L_{eq} were 37 and 34 dBA, respectively. These levels were within 3 dB of the L_{10} for the same period, indicating some amount of transient anthropogenic noise. The overall L_{90} was 23 dBA overall, 25 dBA daytime, and 21 dBA nighttime. The small difference (4 dB) between daytime and nighttime levels indicates that background sound in the area does not follow a strong diurnal pattern.

Anomalies excluded from data analysis at this site included:

- A very low military aircraft flight directly over the microphone on February 4;
- Tractor operations in the woods very near the microphone on February 6;
- A group of people partying in the woods on February 7;
- Gunshots near the microphone on February 7 and February 14; and
- An unmuffled ATV approaching the microphone on February 16 and February 18.

The sound level meter was taken out of service from 6:15 PM on February 10 until 10:00 AM on February 11, 2016 to download data and charge the system's batteries.

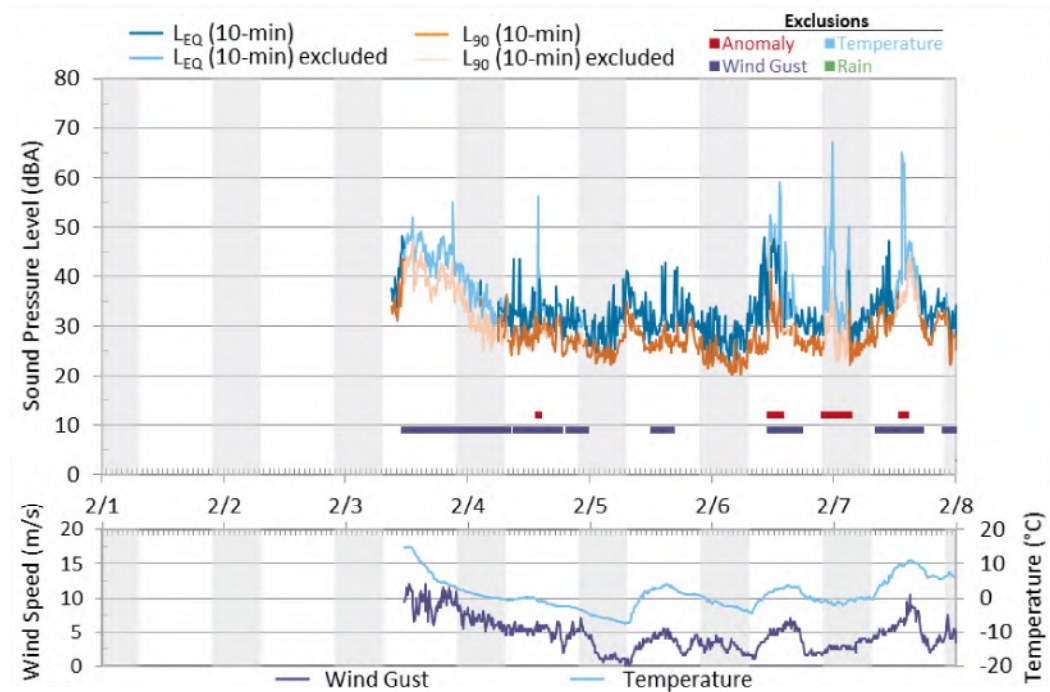


FIGURE 29: MONITOR DATA, WOODED AREA SITE, FEBRUARY 3-7, 2016

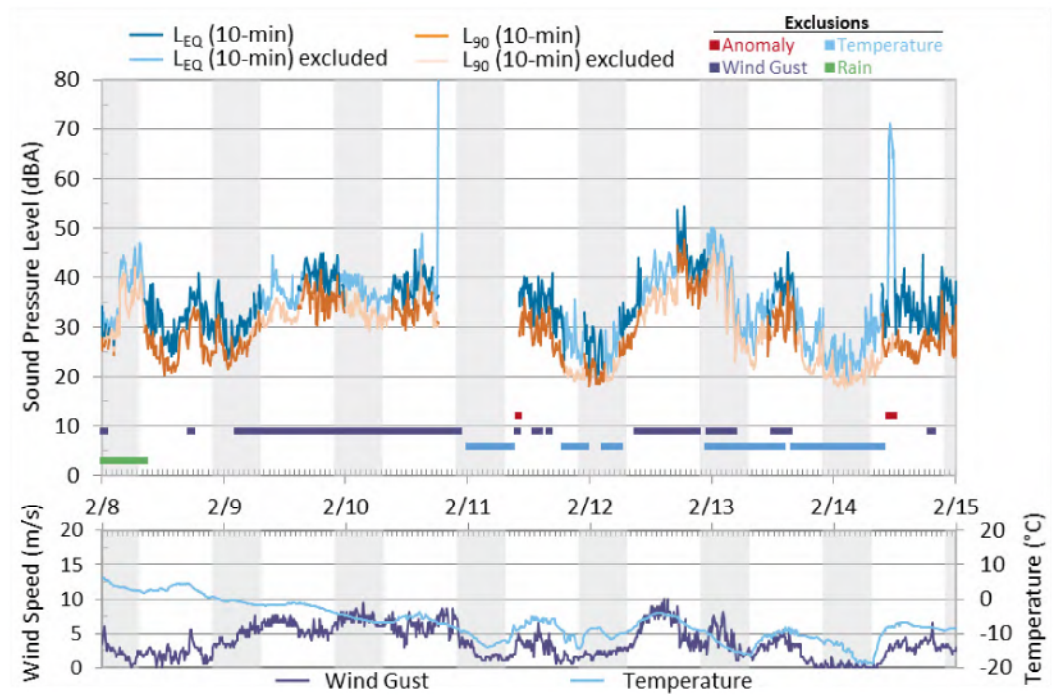


FIGURE 30: MONITOR DATA, WOODED AREA SITE, FEBRUARY 8-14, 2016

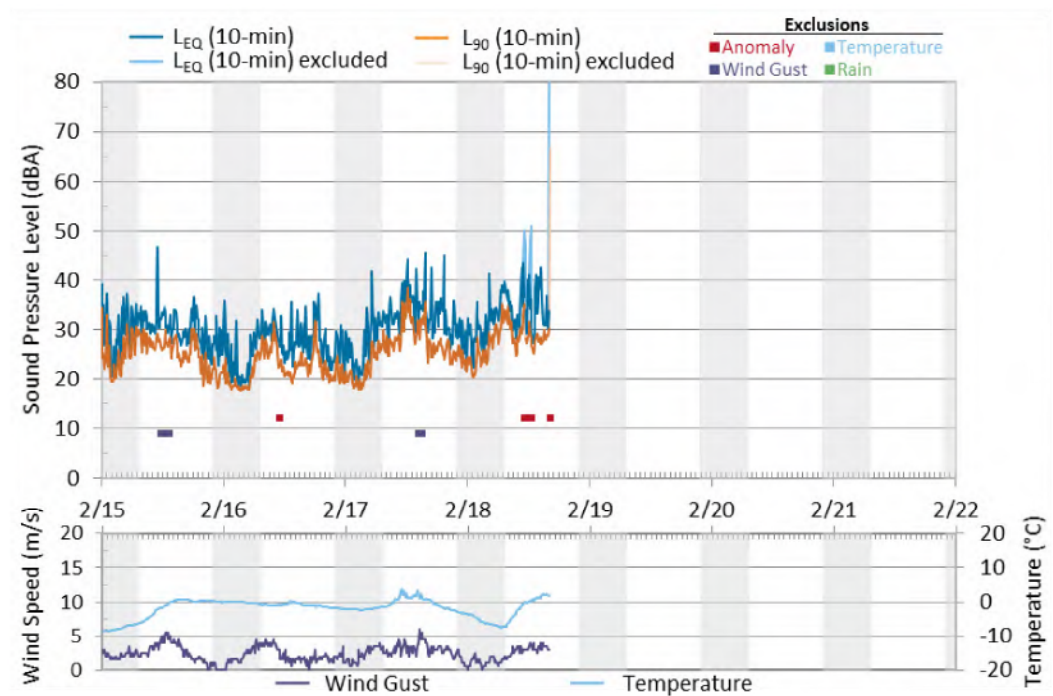


FIGURE 31: MONITOR DATA, WOODED AREA SITE, FEBRUARY 15-18, 2016

Remote Rural

The overall L_{eq} at the Remote Rural Area monitoring location was 42 dB. The daytime and nighttime L_{eq} were 43 and 39 dBA, respectively. These levels were within 2 dB of the L_{10} for the same period, indicating transient anthropogenic noise. The overall L_{90} was 24 dBA overall, 26 dBA daytime, and 21 dBA nighttime. The sound levels tended to follow a diurnal pattern, but train horns at nearby crossings during the night raised the nighttime L_{eq} .

No sound anomalies were identified and excluded from the data analysis at this location. None of the transient sounds out of character for the area, and they did not take place abnormally close to the microphone.

The sound level meter was taken out of service from midnight on February 10 until 11:10 AM on February 11, 2016 to download data and charge the system's batteries.

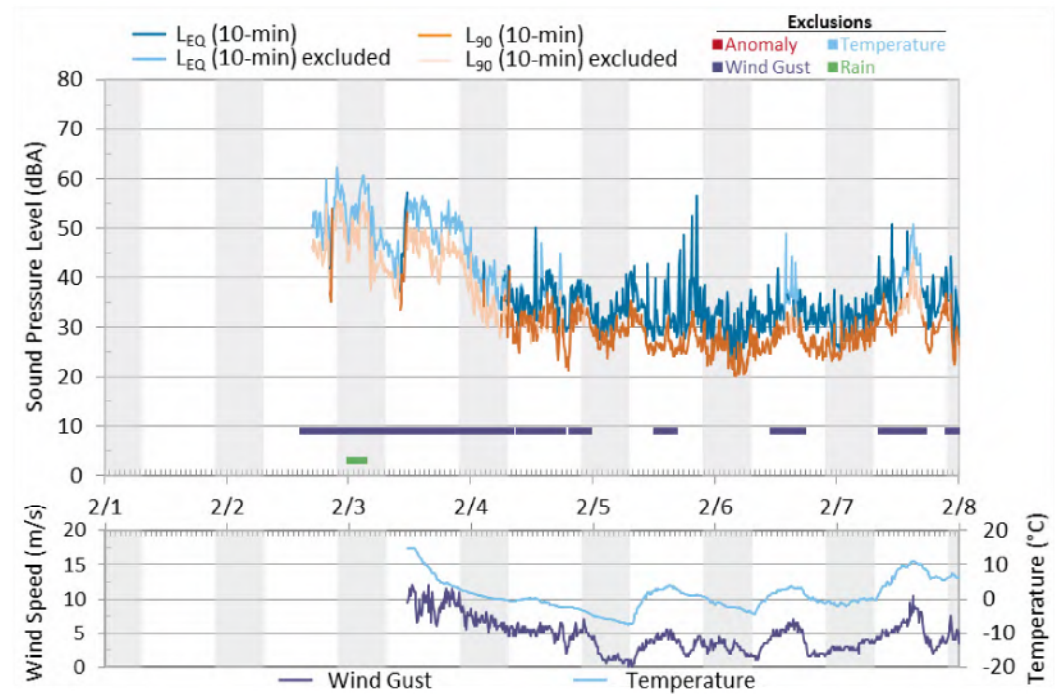


FIGURE 32: MONITOR DATA, REMOTE RURAL SITE, FEBRUARY 3-7, 2016

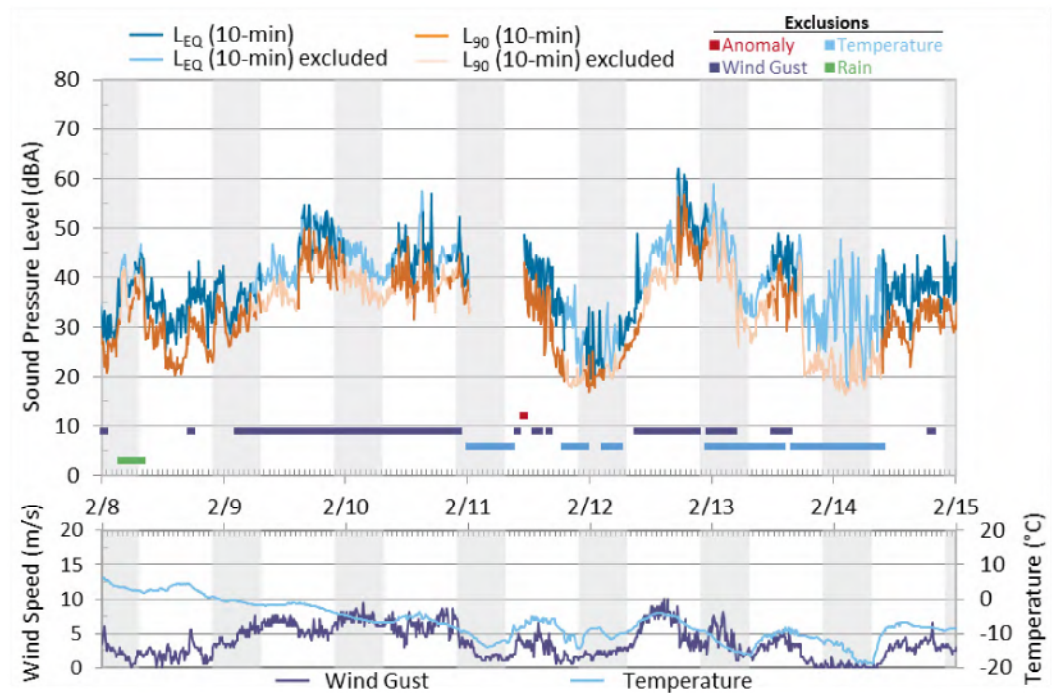


FIGURE 33: MONITOR DATA, REMOTE RURAL AREA, FEBRUARY 8-14, 2016

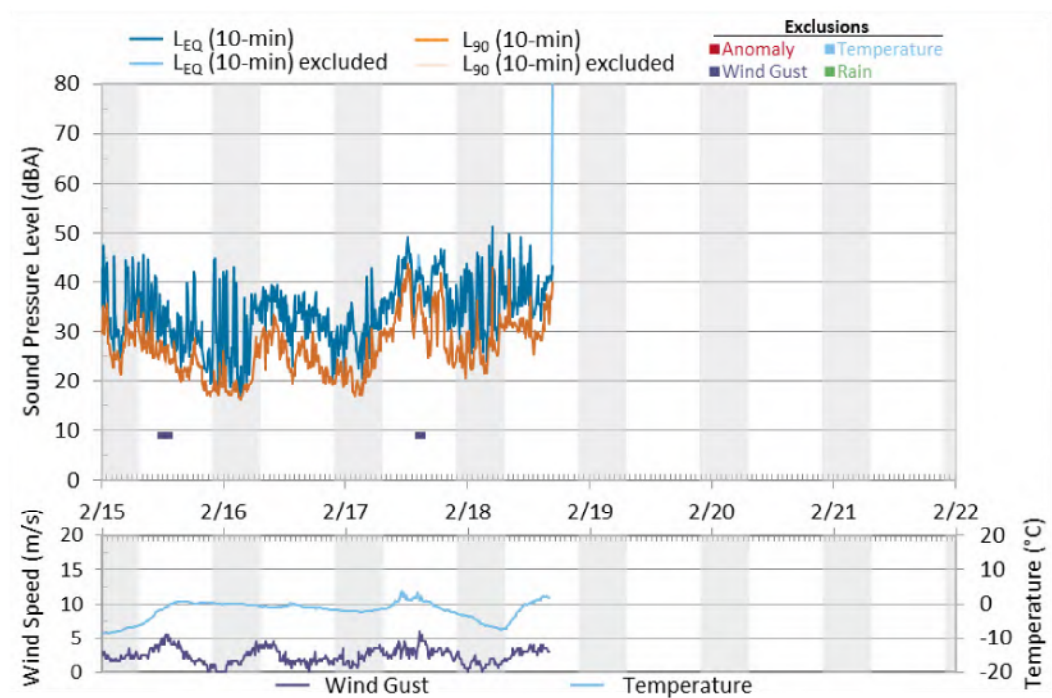


FIGURE 34: MONITOR DATA, REMOTE RURAL AREA, FEBRUARY 15-18, 2016

Southern Boundary

The overall L_{eq} at the Southern Boundary monitoring location was 37 dBA, the second-quietest monitoring location. The daytime and nighttime L_{eq} were similar, at 38 and 34 dBA, respectively. These levels were within 3 dB of the L_{10} for the same period. This indicates a relatively high amount of transient anthropogenic noise. The overall L_{90} was lower: 21 dBA overall, 23 dBA daytime, and 17 dBA nighttime. These were the lowest of all the sites and tended to be more strongly diurnal. Train horns were not as prevalent.

A single anomaly was excluded from data analysis at this site: an unmuffled ATV approached the monitor on February 6, 2016.

The sound level meter was taken out of service from 6:30 PM on February 10 until 10:30 AM on February 11, 2016 to download data and charge the system's batteries.

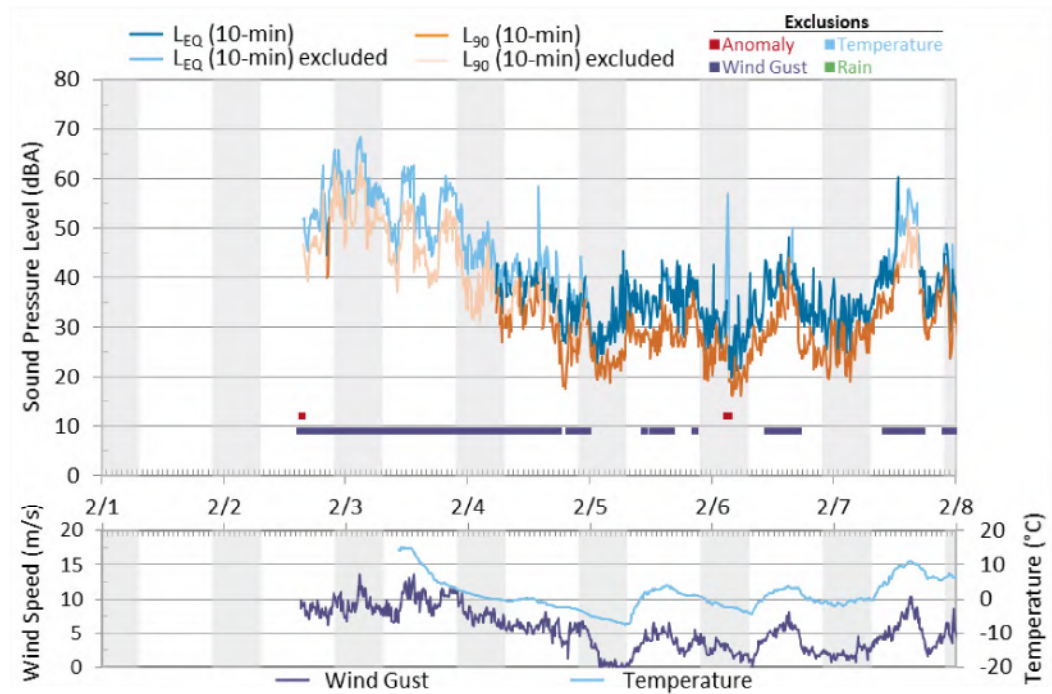


FIGURE 35: MONITOR DATA, SOUTH BOUNDARY SITE, FEBRUARY 3-7, 2016

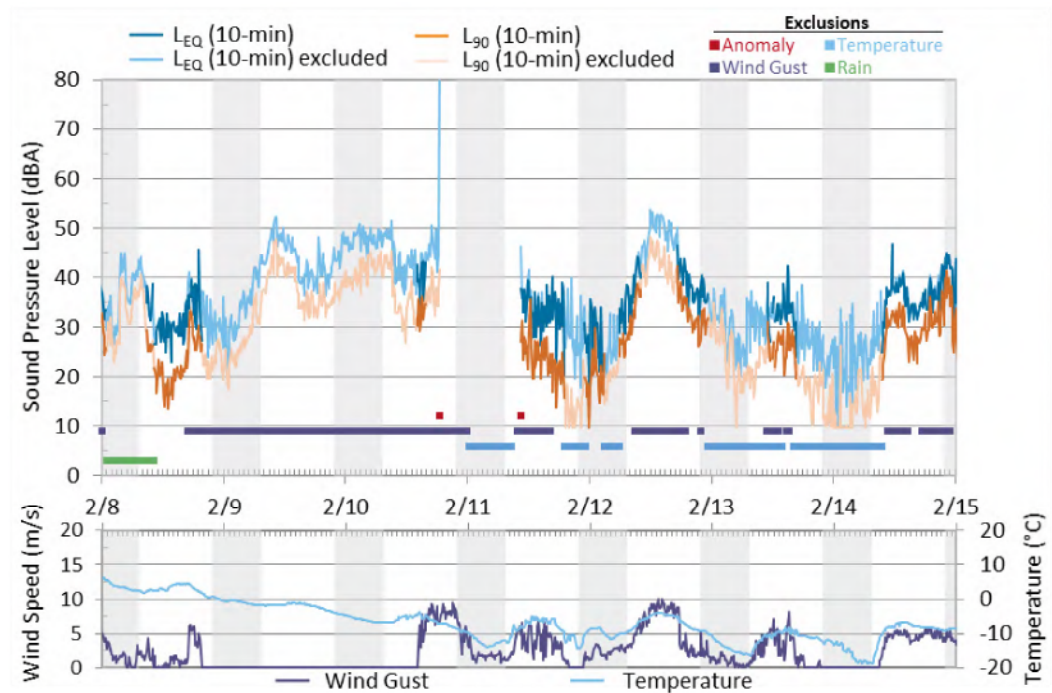


FIGURE 36: MONITOR DATA, SOUTH BOUNDARY SITE, FEBRUARY 8-14, 2016

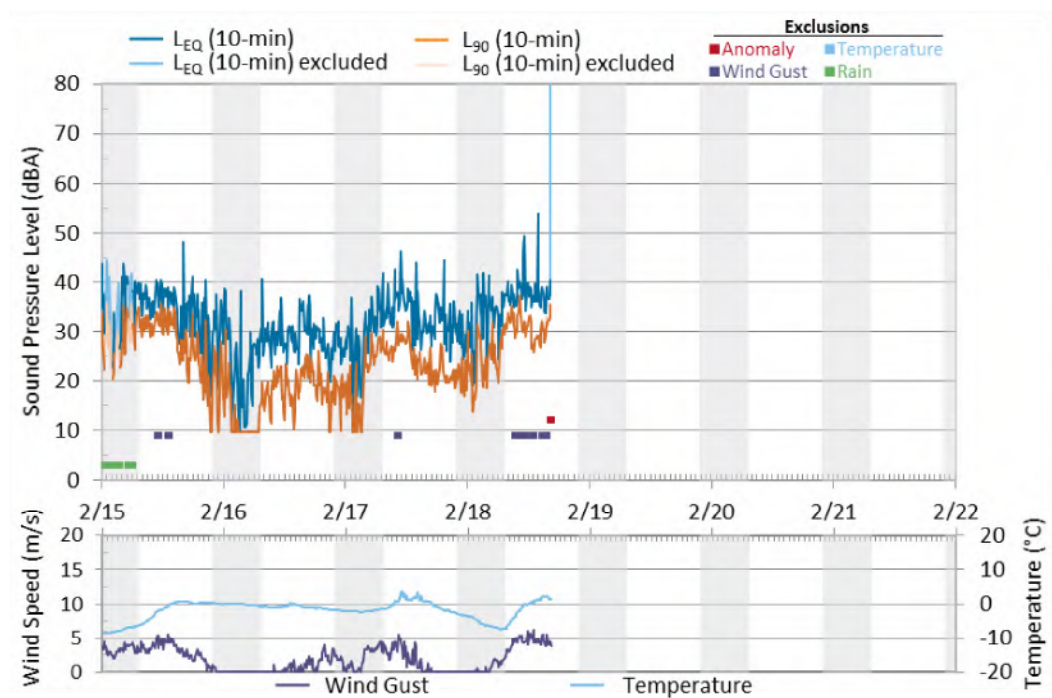


FIGURE 37: MONITOR DATA, SOUTH BOUNDARY SITE, FEBRUARY 8-14, 2016

5.0 ISSUES SPECIFIC TO WIND TURBINE SOUND

5.1 | SOUND EMISSIONS FROM WIND TURBINES

Wind turbines generate two principle types of noise: aerodynamic noise, produced from the flow of air around the blades, and mechanical noise, primarily from the gearbox and generator within the nacelle.

AERODYNAMIC NOISE

Aerodynamic (airflow) sound is the primary source of noise associated with wind turbines. These acoustic emissions can be either tonal (with an identifiable pitch) or broadband (spread over many frequencies).

Wind turbines emit aerodynamic broadband noise as air flows over and around the moving blades, and as those blades interact with atmospheric turbulence. These mechanisms result in a characteristic “whooshing” sound through several mechanisms (refer to Figure 38):

- **Flow separation:** When air flows quickly over any wing, it begins with a smooth “laminar” flow, but soon separates from the wing surface, becoming turbulent or “rough”. In most cases, including turbine blades, the amount of separation is related to the angle of the blade relative to the incoming air. The greater the angle, the more separation turbulence occurs: the more turbulence generated by the wing, the more sound is produced by the turbulence. In the limit, the wing can “stall”; there is so much turbulence that it is no longer providing lift. This is the noisiest condition for blade-induced turbulence. Wind turbines are programmed to avoid stall conditions.
- **Inflow turbulence:** As each blade passes around its full circle, it encounters many variations in the speed of the air flowing into the blade. In particular, the wind itself will naturally have eddies of different sizes, which is also a form of turbulence. Inflow turbulence noise occurs when the rotor blades encounter this atmospheric turbulence. The quick variations in air pressure on a rotor blade causes fluctuating aerodynamic loading on the blade. A small portion of the energy in these fluctuations can translate into sound. Sound from inflow turbulence varies across a wide range of frequencies, but for wind turbines it is most significant at frequencies below 500 Hz.
- **Trailing edge turbulence:** As the air passes the rear, or trailing edge, of the blade, it forms a wake. Depending on the blade speed and details of its geometry, this trailing edge wake can contain several different types of turbulence. Each type of trailing edge turbulence is capable of generating some sound. The energy in this sound is distributed across a wide frequency range, but it is most notable at higher frequencies between 700 Hz and 2 kHz.
- **Tip vortices:** Not all of the air entrained by a wind turbine blade flows directly over it. Because it is spinning, some of the air flows outward along the blade, and exits

the blade at its tip. The air speeds here can be quite high, and the mixing of the blade flow with the rest of the air can generate a special type of turbulence called a “tip vortex”. Like the other forms of turbulence, a small fraction of the tip vortex energy can be converted into noise. Tip vortex noise is often audible when one is near a turbine as a high-pitched whistling sound that passes with each tip: it tends to be a small component of the overall noise further away from the turbine.

Early wind turbines (designed in the 1970’s) often had the blades behind the tower. As each blade in turn passed behind the tower, it encountered the tower’s wind wake, a deep deficit in the airflow into the blade. This created a relatively strong blade impulse noise, sometimes referred to as a “thump”. Most modern wind turbines, like those proposed here, are built so that their rotors are located upstream of the tower. Since the blades no longer experience tower wake to the same extent, there is little to no blade impulse noise.

As a result of the turbulence-related mechanisms listed above, the majority of audible aerodynamic noise from wind turbines is broadly spread over the middle frequencies, roughly between 200 Hz and 1,000 Hz. In some unusual cases, tonal noise can originate from unstable airflows over holes, slits, or blunt trailing edges on the blades.

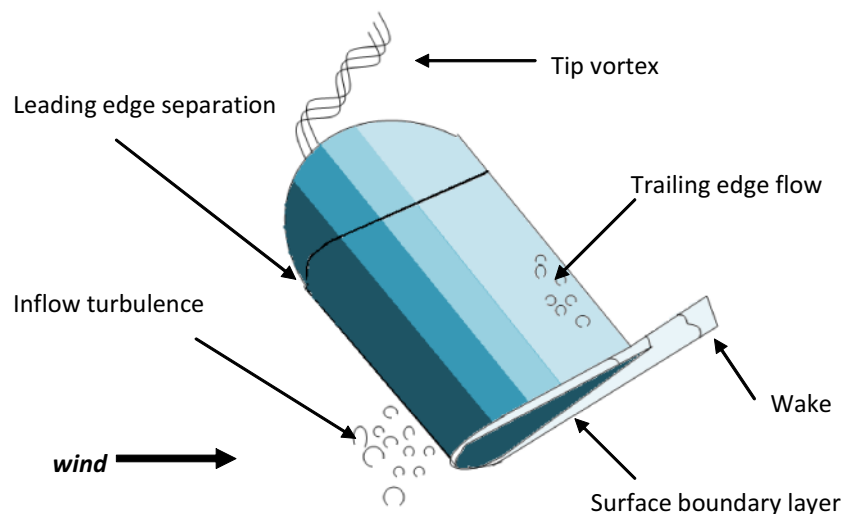


FIGURE 38: AIRFLOW AROUND A ROTOR BLADE

MECHANICAL NOISE

As the rotor of a wind turbine turns at a relatively slow speed (a few revolutions per minute), the shaft from the rotor drives a gearbox that converts to the much higher speed (hundreds of RPM) at which the generator must turn. Mechanical noise from the gearbox and associated machinery inside the nacelle tends to be tonal in nature but can also have a broadband component. Potential sources of mechanical noise include the gears inside the gearbox, generator, yaw drives, cooling fans, and other auxiliary equipment. This sound can escape the nacelle both via cooling vents and through its walls. However, modern wind turbine machinery is designed to generate less noise, and the nacelles are designed to better

contain that noise. As a result, mechanical noise is rarely a significant contribution to the total noise emitted from an operating wind turbine.

AMPLITUDE MODULATION

When the level of a relatively constant sound varies in a consistent manner, the effect is known as “Amplitude Modulation”, or AM. (This is the principle by which AM radio works, except that the waves are radio waves rather than sound waves.) Because the aerodynamic mechanisms of sound generation in wind turbines are moving with the blades around a very large circle, the sound received at some distance away varies at the same rate; it is perceived as being amplitude-modulated. Amplitude modulation occurs at a rate known as the Blade Passage Frequency (BPF). This frequency is the product of the number of blades times the rotor RPM divided by 60. For a relatively close observer, it is characterized by a “swish-swish-swish” sound. The amount of the fluctuation itself, expressed in dB, is known as the “modulation depth”.

Exaggerated blade swish can go by the names of “Amplitude Modulation” (AM), “Exaggerated Amplitude Modulation” (EAM), or “Other Amplitude Modulation” (OAM). There is no consistent definition of how much of a sound level fluctuation is necessary for blade swish to be considered amplitude-modulated. However, fluctuations in the A-weighted sound level from a wind turbine can reach as high as 10 dB close to the turbine. Fluctuations in individual 1/3-octave bands are typically higher and can exceed 15 dB. However, these amplitude modulation depths are relatively rare and short-lived. One recent study found 99.9 percent of modulation depth to be below 4.5 dB.⁶ Fluctuations in individual 1/3-octave bands can sometimes synchronize and desynchronize over long periods, leading to long-term increases and decreases in the magnitude of the amplitude modulation. Similarly, in wind farms with multiple turbines, fluctuations reaching a distant observer can synchronize and desynchronize, leading to variations in amplitude modulation depth.⁷

Amplitude modulation of wind turbine sound has many potential causes: some have been confirmed and others remain hypothetical. These causes include: blade passage in front of the tower, the non-uniform directivity of sound emissions from the blade tip, the action of wind shear, inflow turbulence, and turbine blade yaw error. (Recently, it was reported that although wind shear can contribute to the depth of amplitude modulation, it does not cause amplitude modulation in and of itself. Instead, there needs to be detachment of airflow from the blades for wind shear to contribute to amplitude modulation.⁸) While factors like the blade passing in front of the tower are intrinsic to wind turbine design, other factors vary with turbine design, local meteorology, topography, and the layout of multiple turbines.

⁶ RSG, et al., “Massachusetts Study on Wind Turbine Acoustics,” Massachusetts Clean Energy Center and Massachusetts Department of Environmental Protection, 2016.

⁷ McCunney, Robert, et al. “Wind Turbines and Health: A Critical Review of the Scientific Literature.” *Journal of Occupational and Environmental Medicine*. 56(11) November 2014: pp. e108-e130.

⁸ “Wind Turbine Amplitude Modulation: Research to Improve Understanding as to its Cause and Effect.” *RenewableUK*. December 2013.

Amplitude modulation depth varies with the relative location of an observer to the turbine. Amplitude modulation depth is largest when the receiver is between 45 and 60 degrees away from the downwind or upwind directions; it is least when the receiver is directly upwind or downwind of a turbine.

5.2 | EFFECTS OF METEOROLOGY

Meteorological conditions can significantly affect how sound propagates over long distances. The two most important conditions to consider are wind shear and temperature lapse. Wind shear is the difference in wind speeds with altitude; temperature lapse rate is the change in temperature with altitude. In both cases, sound is bent, or “refracted”, away from a straight path.

In conditions with high wind shear (a large wind speed gradient), sound levels upwind from the source tend to decrease, and sound levels downwind from the source tend to increase (Figure 39).

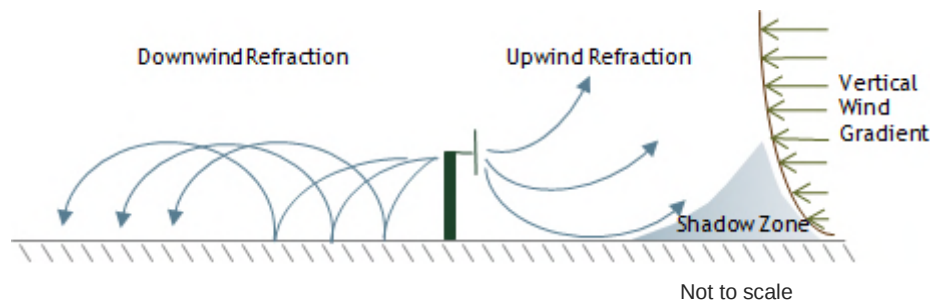


FIGURE 39: SCHEMATIC OF THE REFRACTION OF SOUND DUE TO VERTICAL WIND GRADIENT (WIND SHEAR)

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

High winds and/or high solar radiation can create turbulence that tends to break up and scatter sound energy. When this occurs, sound levels are reduced more than would normally be expected with distance. Highly stable atmospheres on the other hand, which tend to occur on clear nights with low ground-level wind speeds, tend to minimize atmospheric turbulence and are generally more favorable to downwind propagation.

In general terms, sound propagates along the ground best under stable atmospheric conditions with a strong temperature inversion. This tends to occur during the night and is characterized by low ground-level winds. However, strong inversions are also often accompanied by light surface winds. As a result, worst-case conditions for wind turbines tend to occur downwind under moderate nighttime temperature inversions when wind speeds are higher. Therefore, this is the default meteorological condition assumed for modeling wind turbine sound.

5.3 | MASKING OF SOUND

As mentioned above, sound levels from wind turbines are a function of wind speed. Background sound is also a function of wind speed, i.e., the stronger the ground-level winds, the louder the resulting background sound. This effect is greatest in areas covered by trees and other vegetation. Wind noise itself often can mask the sound from a wind turbine at downwind receivers, because the frequency spectrum from wind noise is very similar to the frequency spectrum from a wind turbine. Figure 40 compares the sound spectrum measured during a 5 m/s wind event to that generated by the Vestas V136, GE 3.6-137, and Gamesa G132 wind turbine. The shapes of the spectra are very similar at lower frequencies. At higher frequencies, the sounds from the masking wind noise are louder than the wind turbine. As a result, the masking of turbine noise is possible at higher ground-level wind speeds.

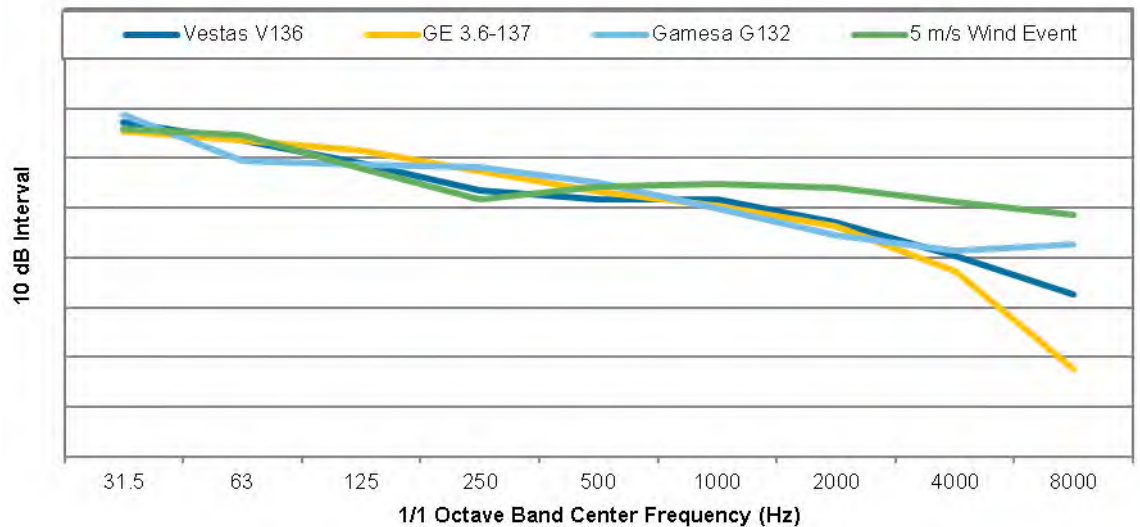


FIGURE 40: COMPARISON OF NORMALIZED FREQUENCY SPECTRA MEASURED FROM A 5 M/S WIND EVENT AND THE SOUND POWER SPECTRA FROM VESTAS V136, GE 3.6-137, AND GAMESA G132 WIND TURBINES⁹

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

5.4 | INFRASOUND AND LOW-FREQUENCY SOUND

Infrasound is defined as any sound having its frequency content below about 20 Hz. Sound below this frequency is audible only if it has very high amplitude. Low-frequency sound is defined as being within the audible range of human hearing, that is, above 20 Hz, but below 100 to 200 Hz, depending on the application.

⁹ The purpose of this Figure is to show the shapes to two spectra relative to one another and not the actual sound level of the two sources of sound.

Low-frequency aerodynamic tonal noise is typically associated with downwind rotors on horizontal axis wind turbines, as explained in Section 5.1 above. Modern, large wind turbines have their rotor plane placed upwind of the tower. As a result, this type of low-frequency noise is of a much lower magnitude from upwind turbines than downwind turbines: it is well below established infrasonic hearing thresholds, as is shown in Figure 41. In the Figure, the curve corresponding to a sound level of 90 dBG is considered to be about 5 dB below the mean threshold of human hearing. The low-frequency sound measured at 1,150 feet from a wind turbine is 15 dB or more below the 90 dBG perceptibility curve.

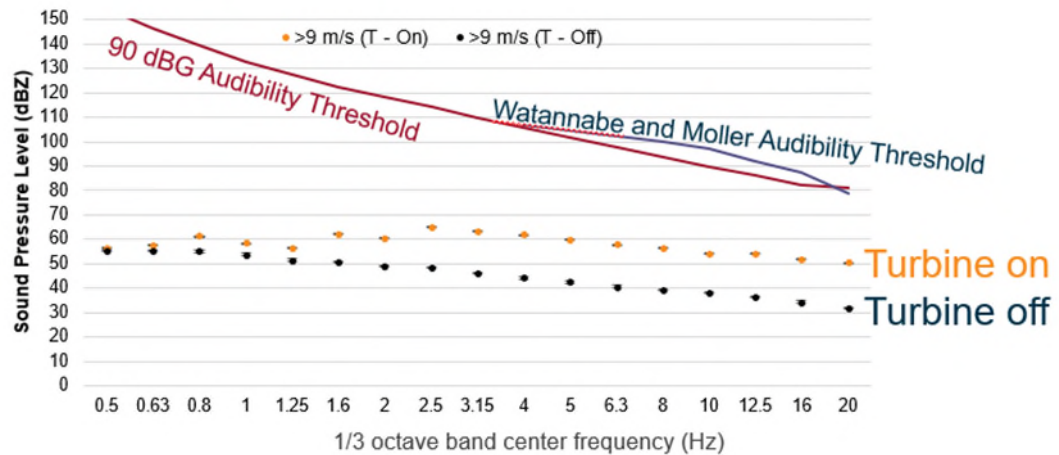


FIGURE 41: MEASURED HUMAN AUDIBILITY THRESHOLD AND THE 90 DBG CURVE (AN ASSUMED HUMAN PERCEPTION THRESHOLD) COMPARED WITH SOUND LEVEL MEASURED 350 METERS (1,150 FEET) FROM A WIND TURBINE¹⁰

Low-frequency sound from a wind turbine is generated primarily by the generator and mechanical components. Much of the mechanical noise has been reduced in modern wind turbines through improved sound insulation in the nacelle. Low-frequency sound can also be generated by the blades when the inflow air is very turbulent, a condition more common at higher wind speeds. However, at these wind speeds, low-frequency sound generated by the wind turbine blades is often masked by ground-level wind noise at downwind receivers.

Low-frequency sound is absorbed less by the atmosphere and ground than higher frequency sound. This enables it to propagate at an audible level further than higher frequency sound. (An example of this is the “clap” of thunder heard close to a lightning strike, but the “rumble” of thunder heard far from a strike.) The atmospheric propagation modeling applied to wind turbine sound accounts for frequency-specific ground attenuation and atmospheric absorption.

¹⁰ RSG, et al., “Massachusetts Study on Wind Turbine Acoustics,” Massachusetts Clean Energy Center and Massachusetts Department of Environmental Protection, 2016 – Graphic from RSG presentation to MassDEP WNTAG, March, 2016.

6.0 SOUND PROPAGATION MODELING

6.1 | PROCEDURES

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

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

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

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

Model configuration parameters are listed in Appendix B and are summarized here.

In the model, a grid of receivers¹¹ spaced 40-meter by 40-meter was set up at a height of 1.5 meters (5 feet) above the ground, covering approximately 501 sq. km. (186 sq. mi.) around the Project area.

In addition to the grid, 3,325 discrete receivers were included in the model, representing residences and other sensitive locations within the calculation area. Each was placed at a height of 4 meters (13 feet) above the ground, representing a second-floor bedroom window. Sound levels estimated at these receivers are summarized in Appendix C for each turbine model.

The Project area was modeled acoustically as having “mixed ground” ($G=0.5$), that is, half hard and half porous ground. An additional uncertainty factor of 2 dB was added to the

¹¹ A receiver is a point above the ground at which the computer model calculates a sound level.

results. Foliage was not modeled. Taken together, these model parameters have been shown to yield conservative results in estimating a one-hour L_{eq} from wind turbines.^{12,13,14}

Fifty-eight turbines were modeled as sound sources. Turbines were modeled at the manufacturer’s guaranteed maximum apparent sound power level. All turbine data used is the most recently available from the manufacturer at the time of this report. These sound power levels are marked as confidential by the manufacturers and are not included in the report.

Modeled spectra for the collector substation transformer and pad-mounted transformers are shown in Table 6. In each case, the sound power level is based on the NEMA TR-1 standard sound pressure level, along with data obtained from measurements of similarly-sized transformers measured by RSG.

TABLE 3: PROJECT TRANSFORMER SOUND POWER LEVELS

Source Description	1/1 Octave Band Sound Power (dBZ)									Sum (dBA)	Sum (dBZ)
	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		
Pad Transformer	79	83	87	83	82	76	71	67	62	83	91
Power Transformer ONAF	85	97	99	99	103	97	88	80	68	102	107

6.2 | RESULTS OF SOUND PROPAGATION MODELING

Sound propagation modeling was performed for each of three turbine models (Gamesa G132 3.465 MW, Vestas V136 3.6 MW, and GE 3.6-137) at all 58 turbine locations. The Gamesa G132 3.465 MW was modeled at a 114-meter hub height, the GE 3.6-137 at a 110-meter hub height, and the Vestas V136 3.6 MW at a 105-meter hub height.

In the instance that modeled sound levels exceeded the project’s 46 dBA noise limit at non-participating residences, select turbines were placed into Noise Reduced Operations (NROs).¹⁵ Sound propagation modeling results under this scenario are shown in Figure 42 for the Gamesa G132 3.465 MW, Figure 43 for the Vestas V136 3.6 MW, and Figure 44 for the GE 3.6-137. For the GE turbine, the NRO mode listed is the integer reduction in turbine sound power level in decibels, so “NRO 1” is a sound power reduction of 1 dB. The Vestas turbines have four NRO modes reported by the manufacturer (Mode 1 through Mode 4) which are used for modeling and the Gamesa G132 3.465 MW has five specific noise modes reported by the manufacturer (NL 1 through NL 5). These do not necessarily correspond to whole-number sound power level reductions.

¹² Duncan, E., and Kaliski, K., “Improving Sound Propagation Modeling for Wind Power Projects”, Acoustics ’08, 2008, Paris, France.
¹³ Bowdler, D. et al., “Prediction and Assessment of Wind Turbine Noise: Agreement about Relevant Factors for Noise Assessment from Wind Energy Projects.” Acoustics Bulletin. 34(2), pp. 35-37.
¹⁴ Evans, T. and Cooper, J., “Comparison of Predicted and Measured Wind Farm Noise Levels and Implications for Assessments of New Wind Farms.” Acoustics Australia: April 2012. Vol. 40, No. 1.
¹⁵ Noise Reduced Operations modes are turbine modes that reduce the maximum sound power emissions of turbines. This is typically accomplished through slowing down the rotational speed of the turbine’s rotor.

The results show that Project-only sound levels in each of these three mitigated scenarios do not exceed 46 dBA at any non-participating residence.

Note that particular turbine locations that are in NRO may change due to modifications to turbine locations, the final number of turbines built, and changes in manufacturer-published turbine sound emissions data. Specific NRO plans may include provisions for different NRO settings to be used depending on the time of day and meteorological conditions. The total number of turbines in each NRO mode are summarized in Table 4.

TABLE 4: NUMBER OF TURBINES IN EACH NOISE MODE

Gamesa G132 - 3.465 MW		GE 3.6 - 137		Vestas V136 - 3.6 MW	
Operational Mode	Turbine Count	Operational Mode	Turbine Count	Operational Mode	Turbine Count
Full Sound Power	40	Full Sound Power	42	Mode 0	52
NL 1	13	1 dB NRO	9	Mode 1	6
NL 2	2	2 dB NRO	5	Mode 2	0
NL 3	3	3 dB NRO	2	Mode 3	0
NL 4	0	4 dB NRO	0	Mode 4	0

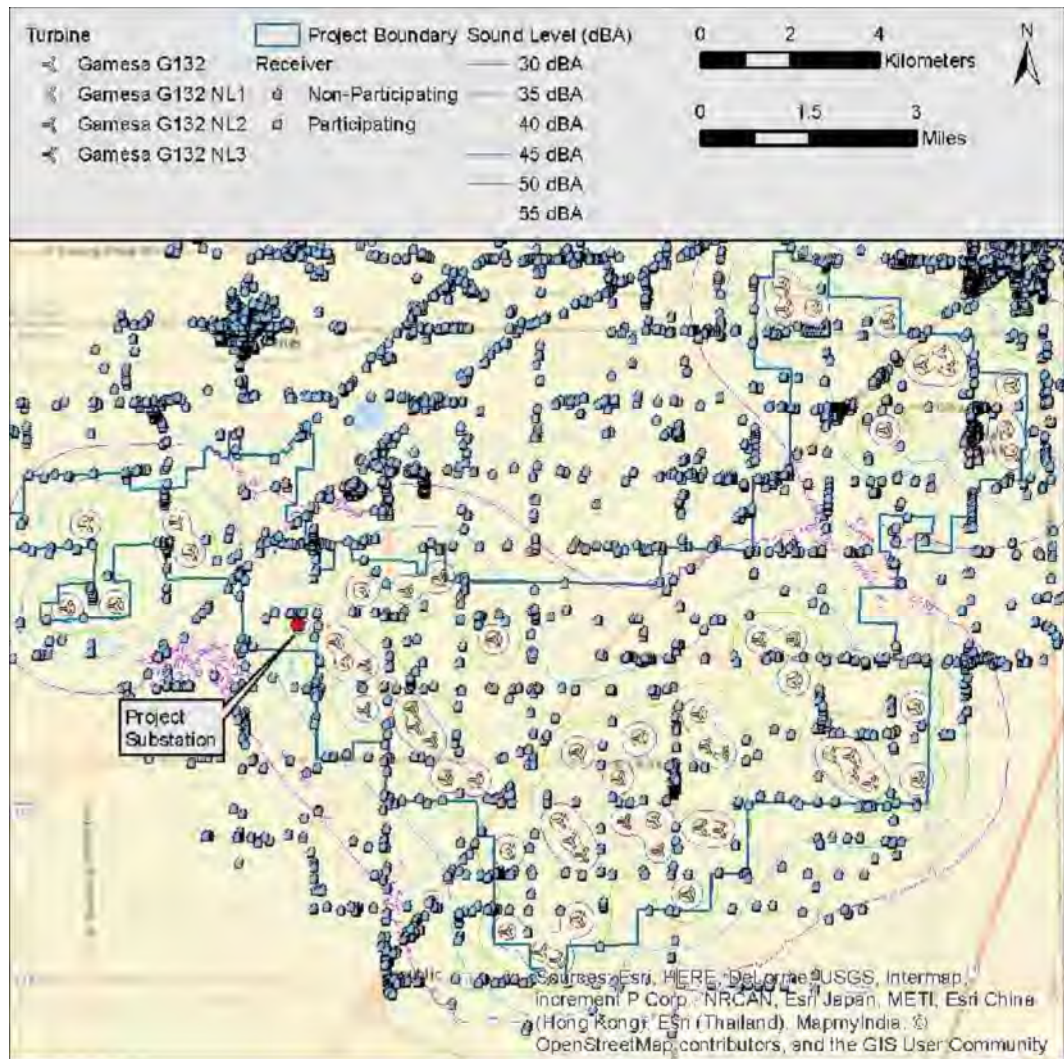


FIGURE 42: SOUND PROPAGATION MODELING RESULTS - GAMESA G132

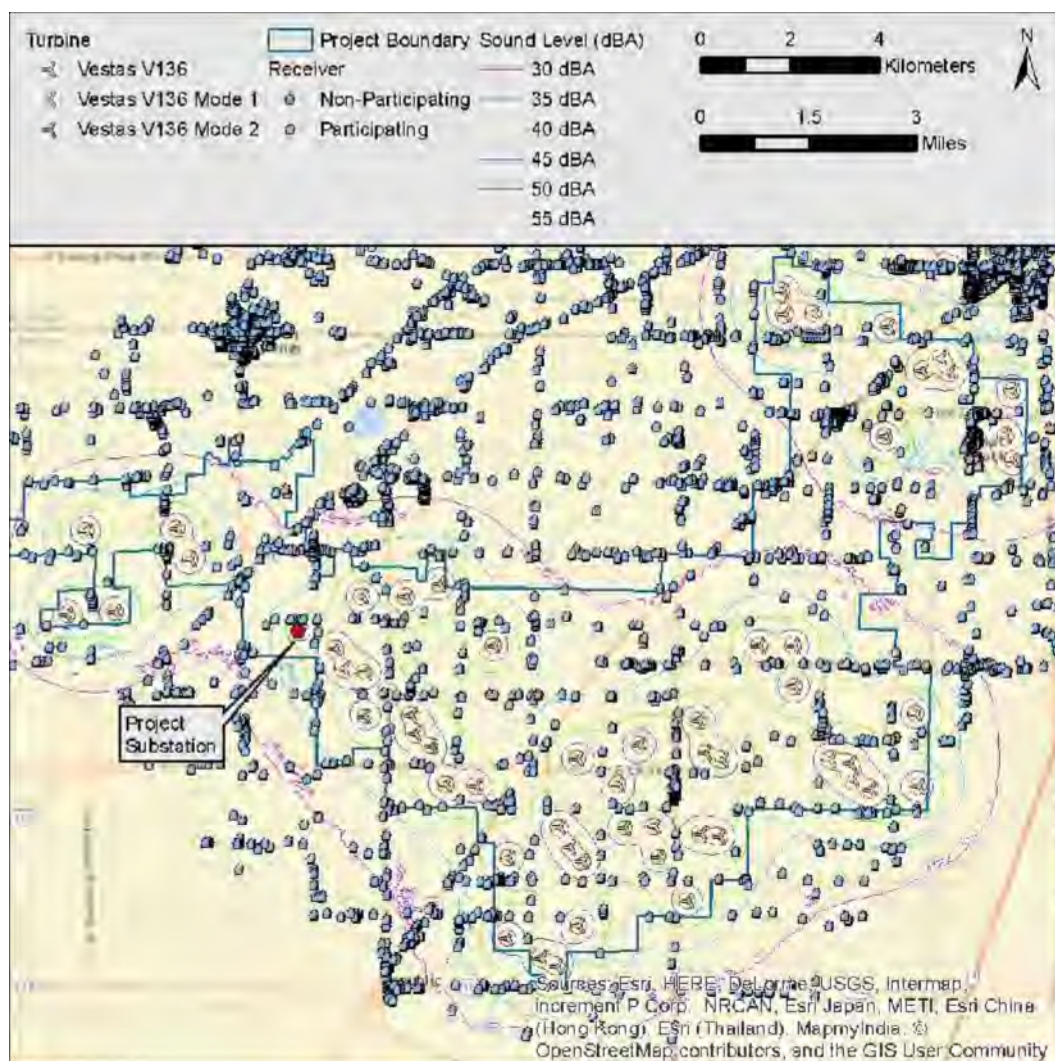


FIGURE 43: SOUND PROPAGATION MODELING RESULTS – VESTAS V136 3.6 MW

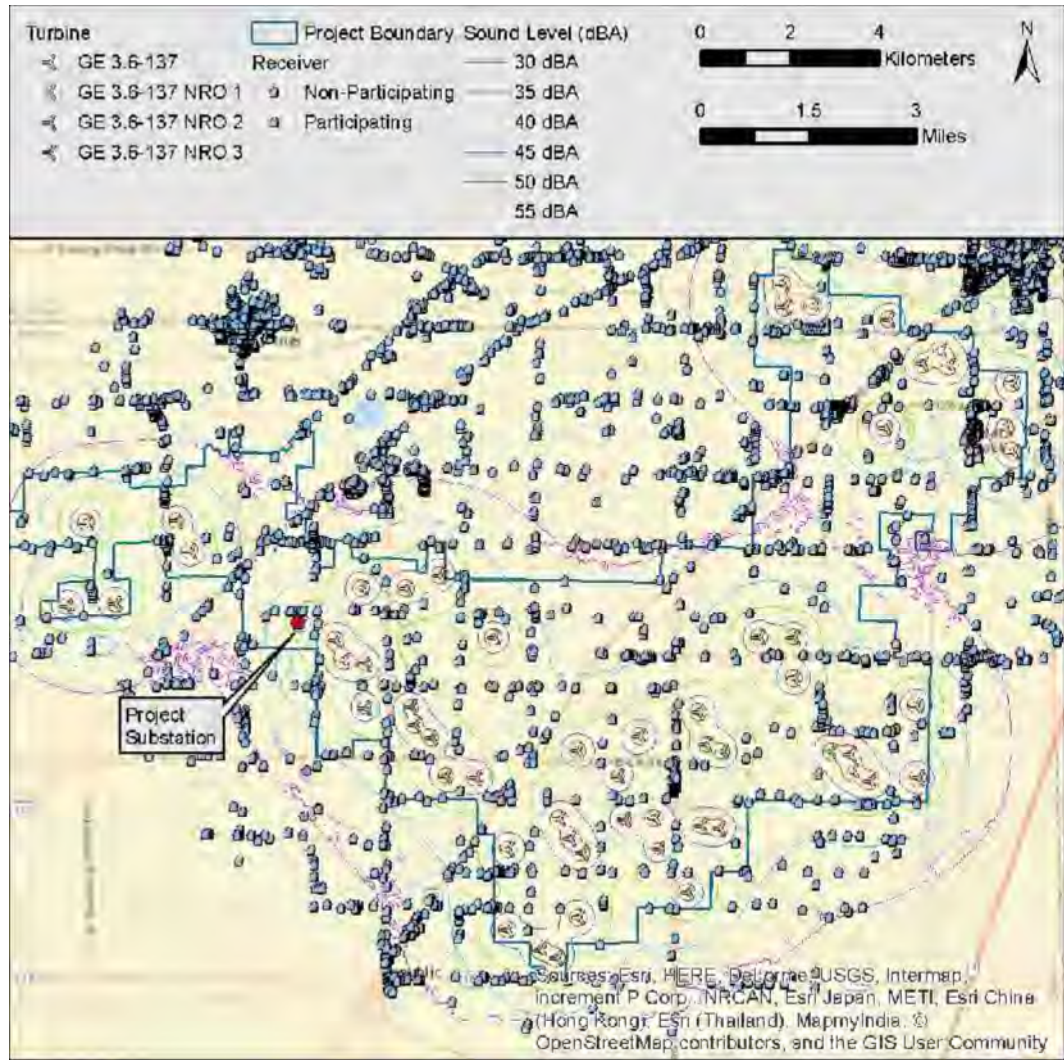


FIGURE 44: SOUND PROPAGATION MODELING RESULTS - GE 3.6-137

CONSTRUCTION ACTIVITY SOUND EMISSIONS

Wind turbine construction will be primarily at the turbine sites. While there may be activity closer to residences for road construction and utility work, such work will have a relatively short duration.

Equipment used for construction will vary. Some of the louder pieces of equipment are shown in Table 5 along with the approximate maximum sound pressure levels at 50 feet (15.2 m) and 1,457 feet (457 meters), the closest distance between a turbine site and a non-participating residence.¹⁶

TABLE 5: MAXIMUM SOUND LEVELS FROM VARIOUS TYPES OF CONSTRUCTION EQUIPMENT ASSUMING NO ATTENUATION FROM TREES OR TERRAIN

Equipment	Maximum Sound Pressure Level at 444 meters (1,457 feet) (dBA) ¹⁷	Maximum Sound Pressure Level at 15 meters (50 feet)
M-250 Liftcrane	48	83
2250 S3 Liftcrane	43	78
Excavator	51	83
Dump truck being loaded	54	86
Dump truck at 25 mph accelerating	44	76
Tractor trailer at 25 mph accelerating	49	80
Concrete truck	46	81
Bulldozer	50	85
Rock drill	62	100
Loader	42	80
Backhoe	45	80
Wood chipper	64	96

Major construction work, such as clearing for the access roads and any drilling and blasting, will occur during the day. Some construction activity such extended concrete pours, blade lifts, and minor construction work may extend earlier or later.

Work on the turbine sites will be at least 1/4 mile from the nearest non-participating residence. Due to the distances between residences and construction locations, the time-of-day restrictions on drilling and blasting, and the limited duration of construction, construction noise will not create an undue adverse impact.

¹⁷ Assumes hard ground around construction site, and ISO 9613-2 propagation with no vegetation reduction. Actual sound levels will likely be lower given the prevalence of vegetation and soft ground around the site.

7.0 SUMMARY AND CONCLUSIONS

The Republic Wind Project is a wind power project located in an area straddling the border between Seneca County and Sandusky County, Ohio, between the towns of Republic and Bellevue. In preparation for Ohio Power Siting Board (OPSB) permitting, Apex Clean Energy retained RSG to perform background sound level monitoring of the existing environment in and around the project area and sound propagation modeling to predict project-only sound levels at nearby residences. Summary and conclusions are as follows:

- Republic Wind is proposed to include up to 58 turbine locations. Currently three turbine models are being considered: the Gamesa G132 which is a 3.465-megawatt (MW) turbine with a 132-meter diameter rotor and a 114-meter hub height, the Vestas V136 3.6 MW with a 136-meter diameter rotor and a hub height of 105 meters, and the GE 3.6-137 with a 137-meter diameter rotor and a 110-meter hub height. Each turbine will include a pad-mounted transformer at its base and the collector substation will include a single 67/90/112 MVA transformer.
- There are no quantitative noise standards that apply to this project. The precedent from the Timber Road II, and Greenwich wind power projects has set the applicable nighttime noise limit modeled at a home to 5 dBA above the facility area nighttime ambient noise levels (L_{eq}).
- Background sound level monitoring was performed at seven locations throughout the project area. Daytime and nighttime equivalent continuous sound levels (L_{eq}) ranged from 37 to 52 dBA and 32 to 51 dBA respectively. Daytime and nighttime lower tenth-percentile sound levels (L_{90}) ranged from 23 to 32 dBA and 17 to 27 dBA respectively.
- The facility average nighttime sound level is 41 dBA, resulting in a noise goal for the Project of 46 dBA, based on the OPSB precedent methodology cited above.
- Sound propagation modeling was performed in accordance with international standard ISO 9613-2 at 3,325 discrete receivers that surround the project. Modeling was performed assuming half hard and half porous ground ($G=0.5$) and an additional 2 dB uncertainty factor was added to the results.
- With noise reduced operations applied to some turbine locations, the highest sound level modeled at a non-participating receiver was 46 dBA which is at or below the nighttime background L_{eq} plus 5 dB.
- Other than extended concrete pours and similar events, major construction will take place during normal business hours. Aside from road construction, these activities will take place at over 1,457 feet (444 meters) from the nearest residences.

APPENDIX A: A PRIMER ON SOUND AND NOISE

This report will use a variety of terms used to describe sound levels. Since sound can have many characteristics, there are many different ways to describe sound.

A.1 | SOUND AS A WAVE

Sound is the rapid oscillation of particles in any medium. Using this definition, the sound we experience day-to-day is the rapid vibration of air that we can sense with our ears. However, sound can also propagate through solids such as steel, rock, or wood and through liquids such as water.

Through air, sound propagates as a compression wave. That is, sound travels as fluctuations of air pressure above and below the atmospheric pressure. Sound can also be described in terms of vibrating of air particles where, at certain points along the wave, air particles are compressed and, at other points, the air particles are spread out.

Figure 45 illustrates two ways of describing sound. The blue section at the bottom shows an example of a compression wave, with air particles represented in blue. The green at the top of the figure shows a transverse wave. A transverse wave is similar to a vibrating string. While sound does not physically propagate as a transverse wave, the transverse wave can be used to describe the two main properties of waves in general: amplitude and wavelength.

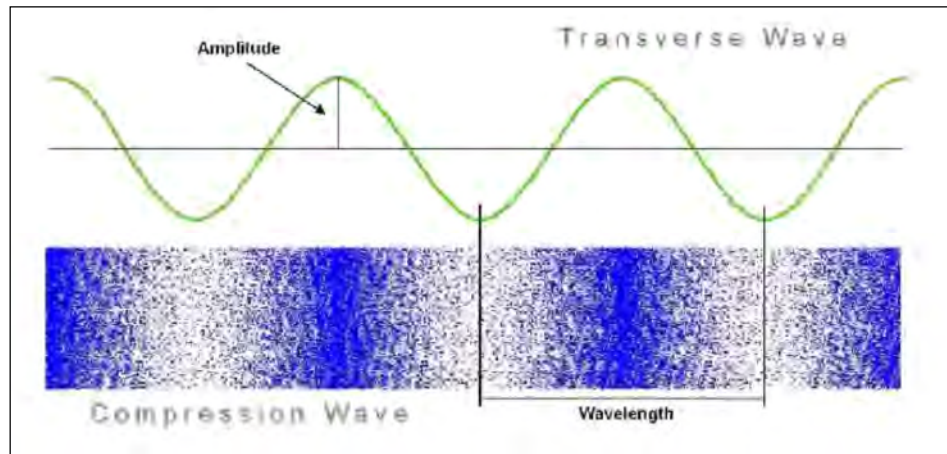


FIGURE 45: SOUND AS A WAVE

In reference to sound, amplitude is what we perceive as the sound pressure level or how loud a source is. The higher the amplitude of the sound wave, the louder it is. Physically, sound amplitude is a measure of the extent to which the air pressure, due to a sound wave, fluctuates above and below atmospheric pressure. In terms of the compression wave shown in Figure 45, amplitude is expressed by how compressed or spread out the air particles are at the various points along the sound wave.

Wavelength is the distance between two maximum compression locations in a sound wave. One wavelength is one complete cycle of the sound wave. Wavelength is important because it is directly related to the frequency of the sound, which is what the human ear perceives as pitch. Sound with longer wavelengths are lower in frequency, and shorter wavelengths are higher in frequency. Frequency is dealt with in greater depth in Section A.3 | Spectral Sound Levels.

A.2 | SOUND PRESSURE LEVEL

The level of a sound is typically quantified by the pressure it exerts. The air pressures from sound that humans can hear range from 20 μPa to over 10,000,000 μPa . In order to scale the range down and better approximate the human perception of relative loudness, we use a logarithmic scale for sound pressure level. The unit used for the logarithmic scale is the decibel (dB).

The lower threshold of human hearing is 0 dB at 1000 Hz and the threshold of pain is around 130 dB. A typical conversation in a room is between 50 and 60 dBA (“dBA” indicates that these levels are A-weighted. A-weighting is discussed in Section A.3 | Spectral Sound Levels).

Sound is difficult to describe in individual instantaneous measurements, which gives the sound pressure level at an exact moment in time. The level reading could be 62 dB, but a second later it could 57 dB. Sound pressure levels are constantly changing. It is for this reason that it makes sense to describe sound levels over time.

Take as an example, the sound levels measured over time shown in Figure 46. Instantaneous measurements are shown as a ragged grey line. The sound levels that occur over this time can be described verbally, but it is much easier to describe the recorded levels statistically. This is done using a variety of “levels” which are described below.

LMIN AND LMAX

Lmin and Lmax are simply the minimum and maximum sound level, respectively, monitored over a period of time. Note that “maximum” is not the same as “peak”. Peak levels have a different meaning, which is more applicable to sounds which can create hearing damage, which is not dealt with here.

PERCENTILE SOUND LEVEL - LN

Ln is the sound level exceeded n percent of the time. This type of statistical sound level, also shown in Figure 46, gives us information about the distribution of sound levels. For example, the L10 is the sound level that is exceeded 10 percent of the time, while the L90 is the sound level exceeded 90 percent of the time. The L50 is the median and is exceeded half the time. The L90 is often described as the “residual” level, describing a condition when most short-term contaminating sources are removed.

EQUIVALENT CONTINUOUS SOUND LEVEL - LEQ

One of the most common ways of describing noise levels is in terms of the equivalent continuous sound level (L_{eq}). The L_{eq} is the average of the sound *pressure* over an entire monitoring period and expressed as a decibel:

$$Leq_T = 10 * \log_{10} \left(\frac{1}{T} \int_0^T p_A^2(t) dt / p_0^2 \right)$$

where p_0^2 is the squared instantaneous weighted sound pressure signal, as a function of elapsed time t , p_0 is the reference pressure of $20\mu\text{Pa}$, and T is the stated time interval.

The monitoring period, T , can be for any amount of time. It could be one second ($L_{eq \text{ 1-sec}}$), one hour ($L_{eq(1)}$), or 24 hours ($L_{eq(24)}$). Because L_{eq} is a logarithmic function of the average pressure, loud and infrequent sounds have a greater effect on the resulting L_{eq} than quieter and more frequent sounds. For example, in Figure 46, the L_{50} (median) is about 47 dB, but the L_{eq} is 53 dB. Because it tends to weight the higher sound levels and is representative of sound that takes place over time, the L_{eq} is the most commonly used descriptor in noise standards and regulations.

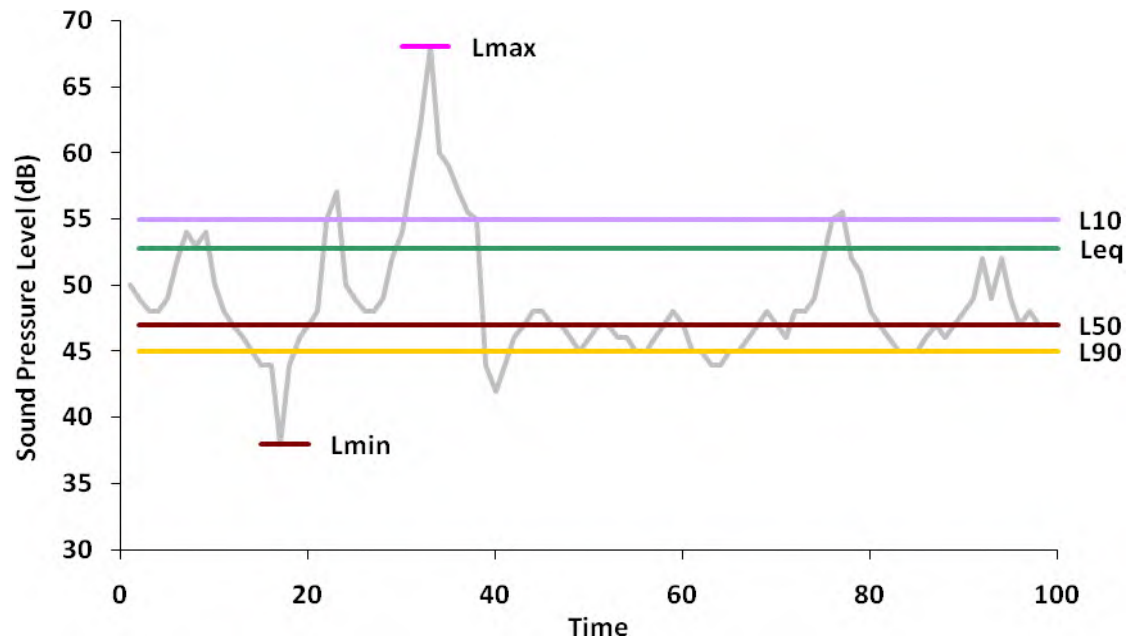


FIGURE 46: EXAMPLE OF DESCRIPTIVE TERMS OF SOUND MEASUREMENT OVER TIME

A.3 | SPECTRAL SOUND LEVELS

As previously stated, frequency is inversely related to wavelength. The unit used for frequency is cycles per second or hertz (Hz). The relationship between wavelength and frequency is dependent on the speed of sound.

$$\lambda = \frac{c}{f}$$

where λ is wavelength, c is the speed of sound, and f is frequency.

Figure 47 shows corresponding wavelengths and frequencies for sound in air at 68°F. People can generally hear sounds at frequencies between 20 and 20,000 Hz (also designated as 20 kHz). As shown, wavelengths in the range of human hearing vary considerably from 56 feet at 20 Hz, to less than an inch at 20 kHz.

Sound below 20 Hz is known as infrasound. Sometimes, we can perceive frequencies below 20 Hz, but that is typically due to our sense of vibration rather than hearing or if the levels are very high. Infrasound wavelengths are very long, with sound at 1 Hz having a wavelength of just over 1,000 feet. Sound above 20 kHz is called ultrasound and is not perceptible by the human ear.

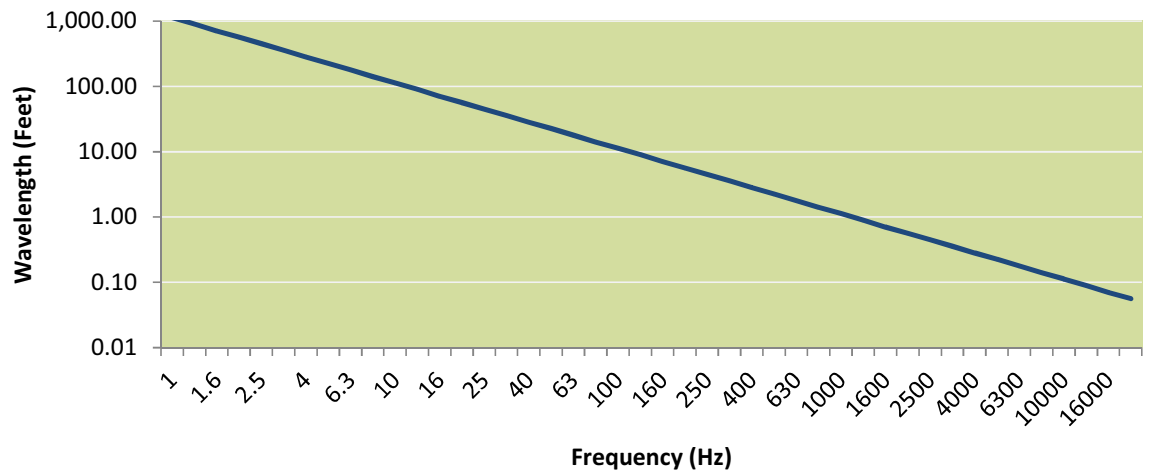


FIGURE 47: RELATIONSHIP BETWEEN FREQUENCY AND WAVELENGTH

Most sources are complex and composed of a wide range of frequencies at different sound levels. The range of frequencies and their corresponding sound levels is called a frequency spectrum.

Some sources are tonal, like the individual notes on a piano. Others are broadband, like fans. Human speech typically occurs between 200 Hz and 5 kHz.

OCTAVE BANDS

For analysis purposes, sound is typically broken down into different frequency divisions, or bands. The most common division is the standard octave band. An octave is a band of frequencies whose lower frequency limit is half of the upper frequency limit. An octave band is identified by its center frequency. As an example, the 500 Hz octave band contains all frequencies between 360 Hz and 720 Hz. An octave higher would be twice this. That is, it would be centered at 1,000 Hz with a range between 720 and 1,440 Hz. The range of human

hearing is divided into 10 standardized octave bands: 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, and 16 kHz. For analyses that require even further frequency detail, each octave band is often broken down into parts, such as 1/3 octave bands.

FREQUENCY WEIGHTING

As previously mentioned, sound pressure levels are expressed in terms of decibels. Since the human ear is not sensitive to all frequencies equally, some frequencies, despite being the same decibel level, seem louder than others. For example, a 500 Hz tone at 80 dB sounds louder than a 63 Hz tone at 80 dB. For this reason, frequency weightings are applied to sound levels (Figure 48). The most common weighting scale used in environmental noise analysis is the A-weight, which more accurately represents the sensitivity of the human ear at low to moderate sound energy. An A-weighted sound level is usually denoted with the unit dBA or dB(A).

The C-weighting is often used for high-energy sounds such as explosions. It weights low-frequency sounds more than the A-weighting. The Z-weighting is used to designate no weighting.

Recently, a new weighting has been proposed – the Ai weighting.¹⁸ This is the A-weighted sound level with all sound above 1,250 Hz eliminated. This weighting is intended to be used to filter out biogenic sound that occurs at high frequencies, such as insects and birds.

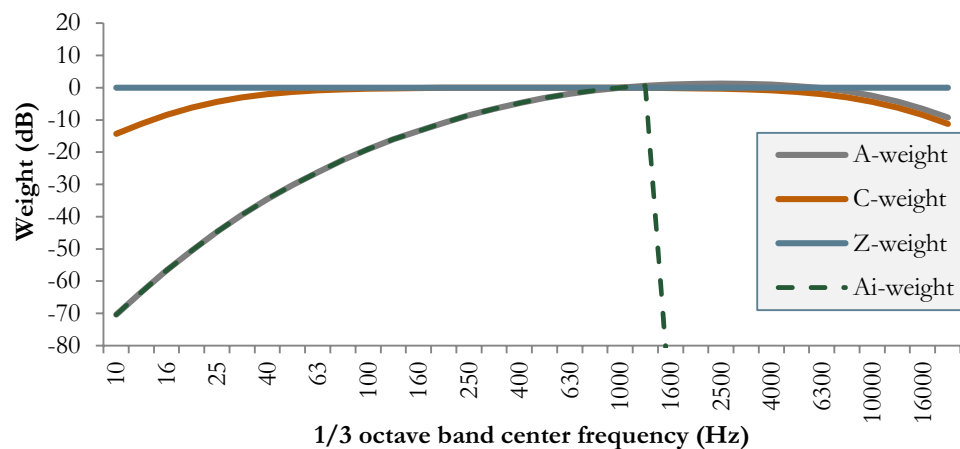


FIGURE 48: SOUND WEIGHTING SCHEMES

¹⁸ Schomer Paul, D.; Slauch Ian, M.; Hessler George, F, “Proposed "Ai"-weighting; A weighting to remove insect noise from A-weighted field measurements”, INTER-NOISE and NOISE-CON Congress and Conference Proceedings, InterNoise10, Lisbon PORTUGAL, pages 3543-4457 pp. 3991-4000(10)

A.4 | SOUND LEVEL METER RESPONSE

As noted in Section 0.2, sound levels vary over time. In fact, the variation is so fast, that one would not be able to reliably read the level on a sound level meter. For that reason, the level shown on sound level meters is often subject to exponential time response, which dampens the reading showed on the meter display to make it readable.

There are three responses available on most sound level meters: slow, fast, and impulse. These levels are denoted as L_s , L_f , and L_i , respectively. These may also be designated with a weighting, such as L_{Af} for A-weighted fast –response level. Fast response has a time constant of 125 ms. This response is similar to the response of the human ear. The slow response has a time constant of 1 second. This is often used in environmental noise measurement in that it has a slow rise and fall time, which eliminates very short spikes in noise that are not related to the measurement. The impulse response has a very fast rise time of 35 ms and a slow decay time of 1.5 seconds. It is rarely used in environmental noise measurements, but can be used with other metrics to evaluate the impulsivity of a sound event.

Fast, slow, and impulse sound levels cannot be averaged, since they are not representative of the actual sound level over time – they are simply applied to the actual sound level to slow the meter reading. So, an integration of fast, slow, or impulse sound levels will not give an accurate representation of the energy average sound level over time. However, percentiles can be used when this is needed. A true energy average, or equivalent average sound level can be calculated using the L_{eq} metric, which is independent of the sound level meter response setting.

APPENDIX B: SOUND SOURCE INFORMATION

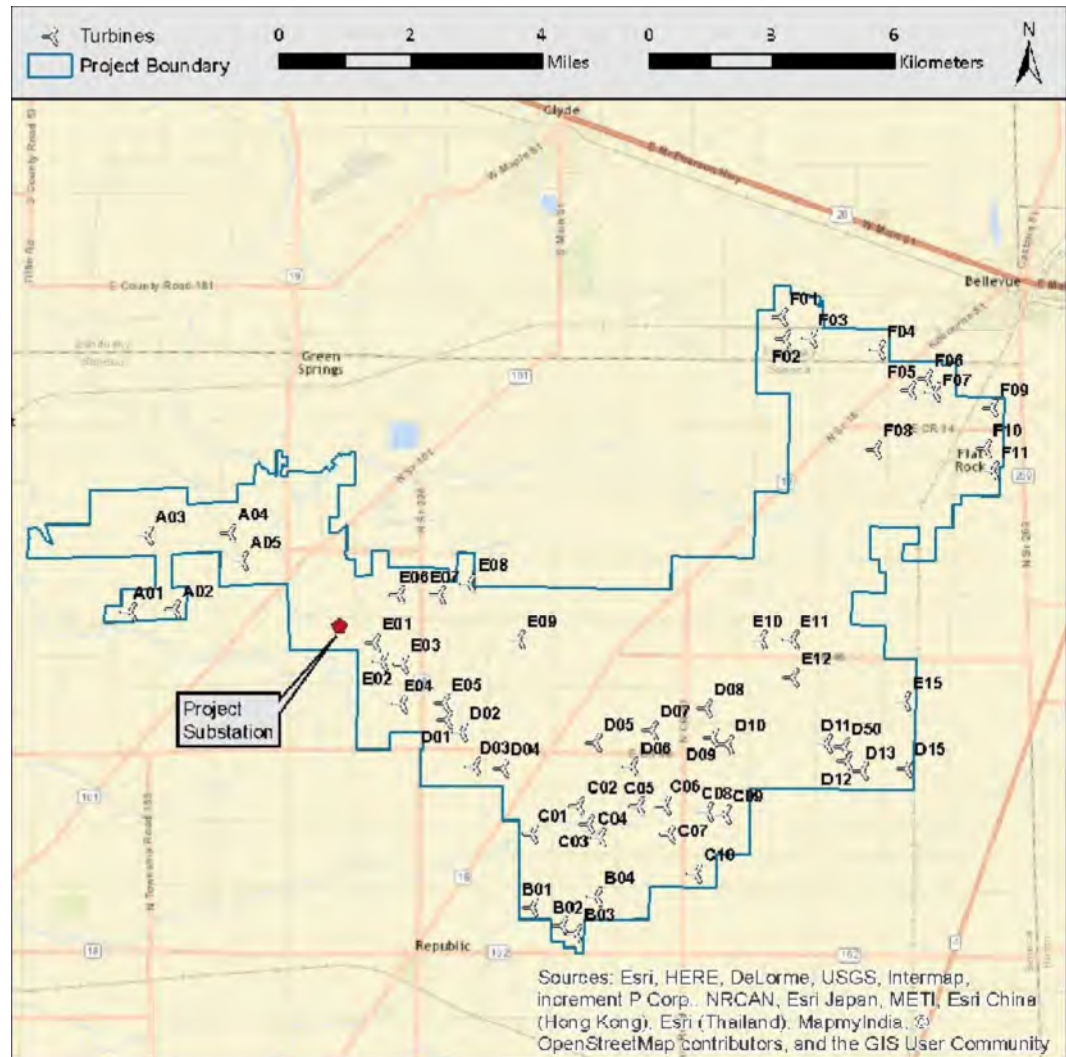


FIGURE 49: SOUND SOURCE MAP

TABLE 6: SOUND PROPAGATION MODELING PARAMETERS

Parameter	Setting
Ground Absorption	Spectral for all sources, Mixed Ground (G=0.5)
Atmospheric Attenuation	Based on 10 Degrees Celsius, 70% Relative Humidity
Reflections	None
Receiver Height	4 meters for residences, 1.5 meters for grid
Search Distance	8,000 meters

APPENDIX C: RECEIVER INFORMATION

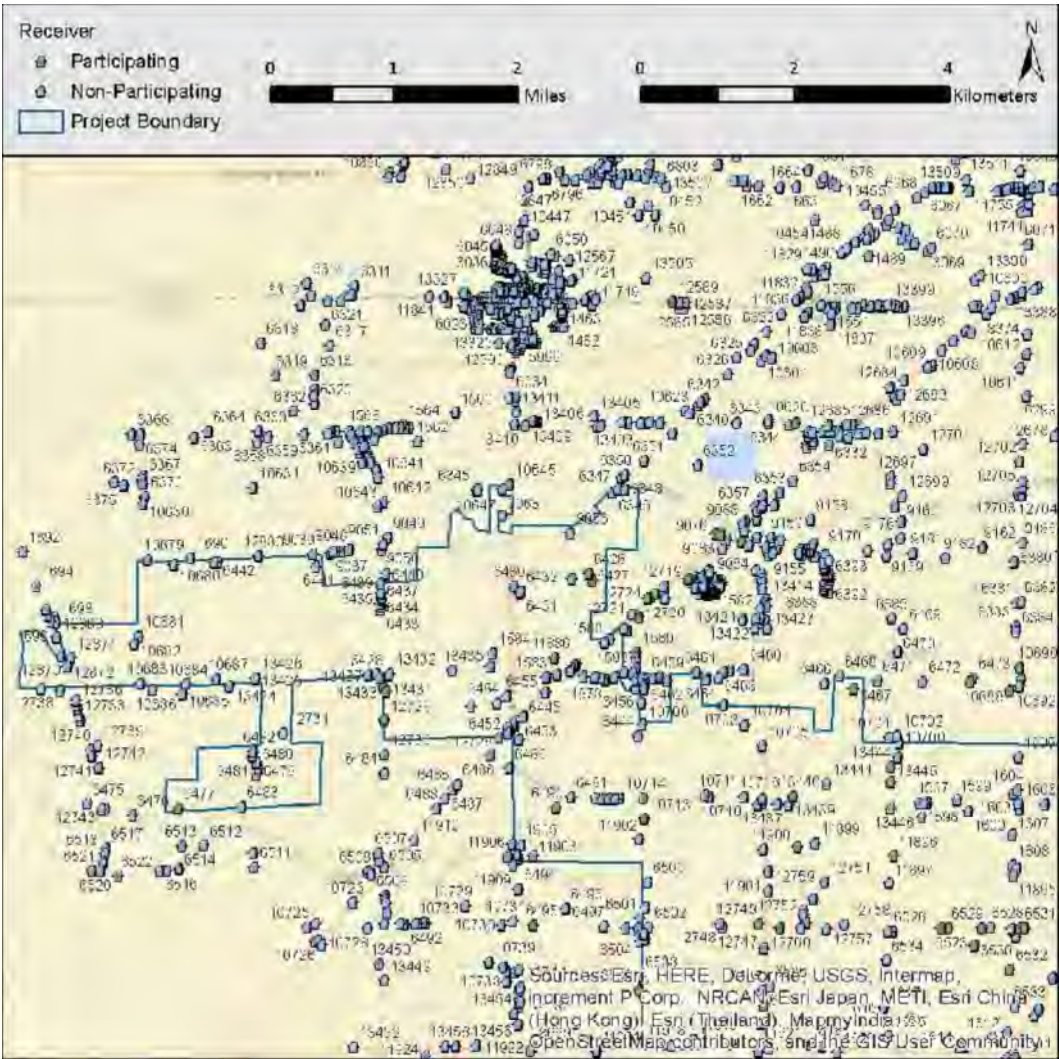


FIGURE 50: RECEIVER LOCATIONS - NW QUAD

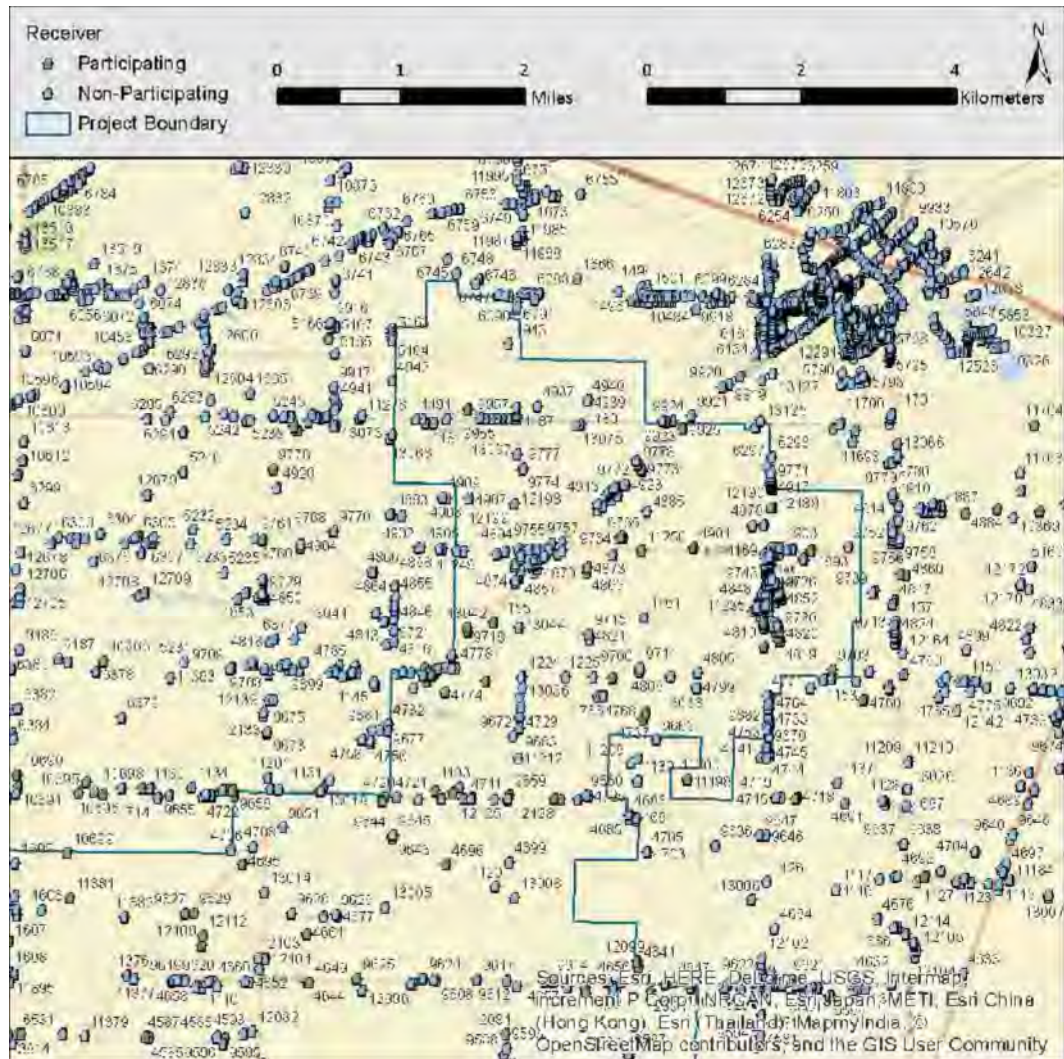


FIGURE 51: RECEIVER LOCATIONS - NE QUAD

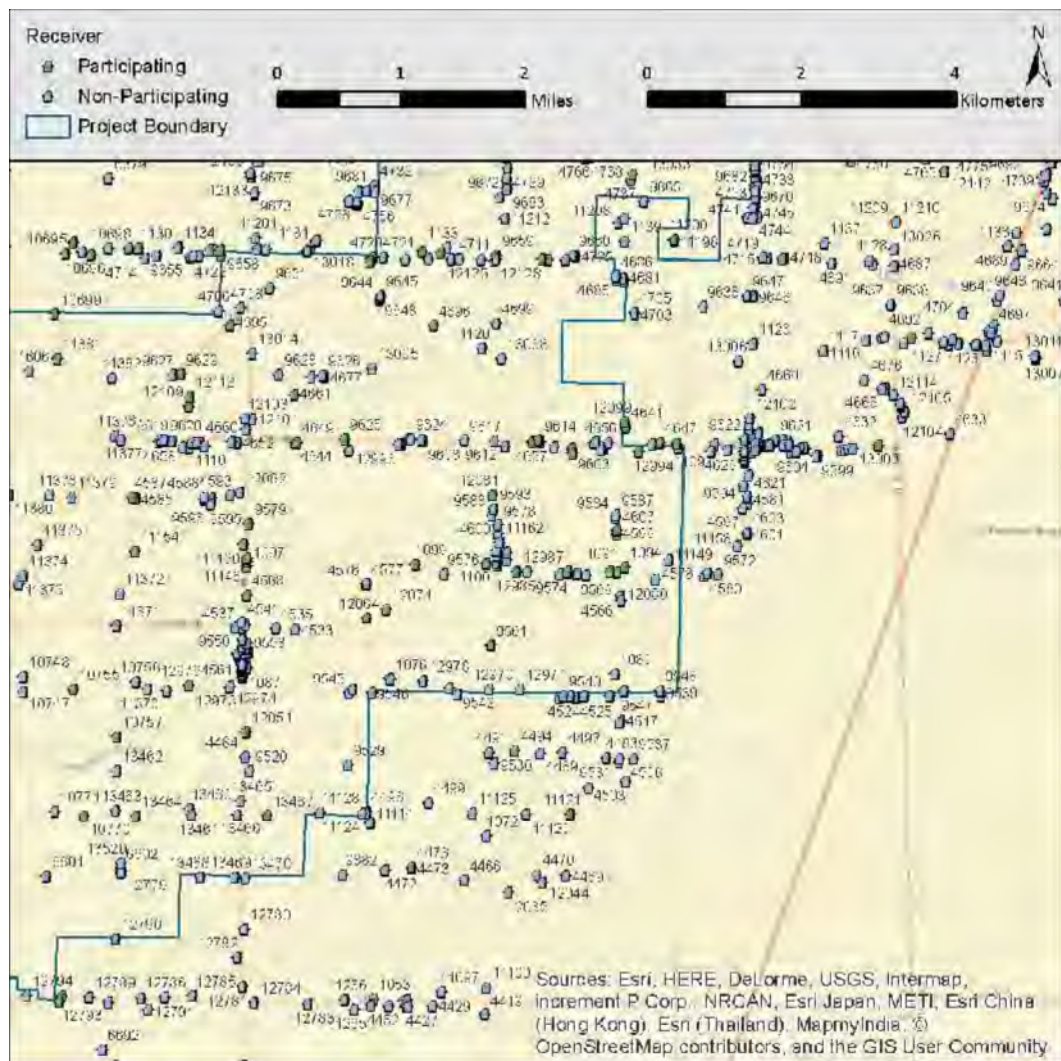


FIGURE 52: RECEIVER LOCATIONS - SE QAD

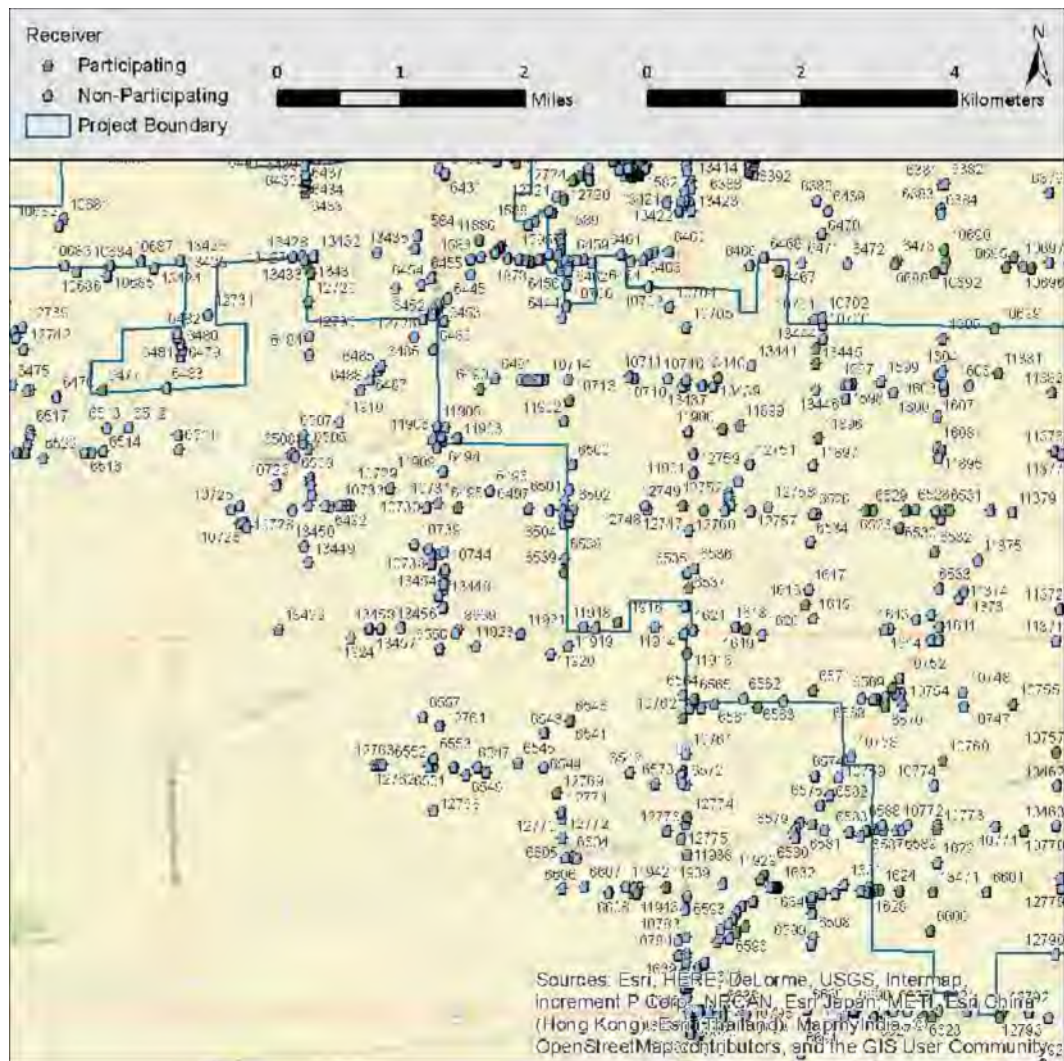


FIGURE 53: RECEIVER LOCATIONS - SW QUAD

TABLE 7: DISCRETE RECEIVER RESULTS

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1051	Non Participating	31	29	31	4	565302	162009	281
1052	Non Participating	31	29	31	4	565346	162021	280
1053	Non Participating	32	30	31	4	564913	162025	278
1072	Non Participating	34	32	34	4	566374	164142	276
1076	Non Participating	40	39	40	4	565125	166183	269
1077	Non Participating	43	43	44	4	563209	166205	264
1078	Non Participating	43	43	44	4	563209	166224	264
1079	Non Participating	43	43	44	4	563205	166243	264
1080	Non Participating	45	44	46	4	568046	166246	268
1085	Non Participating	43	43	43	4	563201	166278	265
1087	Non Participating	43	43	43	4	563212	166301	266
1091	Participating	43	42	43	4	568164	167627	264
1094	Participating	43	42	43	4	568174	167637	264
1097	Non Participating	45	44	45	4	563272	167646	261
1098	Non Participating	44	43	44	4	566514	167662	263
1099	Participating	40	39	40	4	565452	167673	262
1100	Participating	43	42	43	4	566381	167688	263
1101	Non Participating	43	43	44	4	566501	167694	263
1102	Non Participating	31	29	31	4	570517	169174	260
1103	Non Participating	37	36	37	4	567899	169177	259
1104	Non Participating	31	30	31	4	570423	169177	261
1106	Non Participating	34	32	34	4	569734	169180	258
1107	Non Participating	31	29	31	4	570508	169180	260
1108	Participating	37	36	37	4	567485	169183	260
1109	Non Participating	37	36	37	4	568863	169183	257
1110	Non Participating	36	35	37	4	562518	169186	258
1111	Non Participating	31	30	31	4	570442	169187	260
1112	Non Participating	36	35	36	4	562436	169194	258
1113	Non Participating	38	37	38	4	567259	169196	256
1114	Non Participating	41	40	41	4	566614	169201	259
1115	Non Participating	26	25	26	4	572866	170447	253
1116	Non Participating	30	28	29	4	570749	170453	256
1117	Non Participating	30	28	29	4	570743	170454	256
1120	Non Participating	38	38	38	4	566319	170491	253
1121	Non Participating	26	25	26	4	572859	170516	253
1122	Non Participating	27	25	26	4	572722	170532	252
1123	Non Participating	27	25	26	4	572726	170532	252
1124	Non Participating	25	23	25	4	572374	170534	253

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1125	Non Participating	26	24	26	4	572502	170543	252
1126	Non Participating	31	29	31	4	569842	170549	251
1127	Non Participating	27	26	27	4	572301	170555	254
1128	Non Participating	30	29	31	4	571667	171766	249
1129	Non Participating	31	29	30	4	561860	171774	251
1130	Non Participating	31	29	30	4	561849	171782	251
1131	Non Participating	31	29	31	4	564099	171789	253
1132	Non Participating	31	29	30	4	562382	171789	250
1133	Non Participating	33	32	33	4	565859	171789	249
1134	Non Participating	31	29	30	4	562380	171793	250
1135	Non Participating	27	26	27	4	573145	171801	248
1136	Non Participating	28	26	27	4	573140	171807	248
1137	Non Participating	32	30	32	4	570760	171846	251
1138	Non Participating	32	30	32	4	568164	171865	252
1139	Non Participating	32	30	32	4	568172	171868	252
1142	Non Participating	30	29	30	4	564769	173099	249
1143	Non Participating	38	36	38	4	571430	173099	249
1145	Non Participating	30	29	30	4	564750	173148	249
1146	Non Participating	32	30	32	4	572524	173150	248
1147	Non Participating	32	30	32	4	572570	173155	248
1148	Non Participating	34	33	34	4	572116	173157	249
1149	Non Participating	33	31	33	4	572353	173157	250
1150	Non Participating	33	31	33	4	572417	173157	250
1151	Participating	32	30	32	4	566203	173162	249
1152	Participating	31	30	31	4	565428	173163	251
1153	Non Participating	40	39	41	4	571016	173165	251
1154	Non Participating	42	41	42	4	569951	173921	247
1155	Participating	34	32	34	4	566300	173923	250
1156	Non Participating	41	40	41	4	571519	173931	248
1157	Non Participating	41	40	41	4	571523	173934	248
1158	Non Participating	31	29	31	4	564886	173939	247
1159	Non Participating	31	29	31	4	565010	173973	247
1161	Non Participating	43	42	43	4	568260	173995	243
1162	Non Participating	41	40	41	4	569774	174001	246
1164	Non Participating	41	40	41	4	569767	174008	246
1165	Non Participating	41	40	41	4	569812	174023	247
1167	Non Participating	44	43	45	4	567848	174806	245
1168	Non Participating	35	34	35	4	566350	174812	245

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1169	Non Participating	42	41	42	4	569818	174814	245
1170	Non Participating	39	38	39	4	567141	174815	244
1171	Non Participating	36	35	36	4	566668	174819	246
1172	Non Participating	38	37	38	4	566983	174819	245
1173	Non Participating	43	42	43	4	569967	174819	245
1174	Non Participating	43	42	43	4	569992	174820	245
1175	Non Participating	42	41	43	4	569914	174822	245
1176	Non Participating	42	41	43	4	569895	174823	245
1177	Non Participating	43	42	43	4	570015	174826	245
1178	Non Participating	42	41	43	4	569944	174828	245
1179	Non Participating	35	34	36	4	566450	174849	246
1180	Non Participating	42	41	43	4	567433	176492	243
1181	Non Participating	43	42	43	4	565527	176507	243
1182	Non Participating	43	42	43	4	565427	176509	243
1183	Non Participating	43	42	43	4	565530	176515	243
1184	Non Participating	43	42	43	4	565427	176520	243
1185	Non Participating	33	31	33	4	563897	176526	242
1186	Non Participating	33	31	33	4	563902	176533	242
1187	Non Participating	43	42	43	4	566615	176562	242
1188	Non Participating	44	43	45	4	565694	176562	246
1189	Non Participating	43	42	43	4	566571	176566	242
1190	Non Participating	43	42	43	4	565376	176567	244
1191	Non Participating	42	41	43	4	565291	176571	244
1192	Non Participating	34	32	34	4	564067	176576	243
1245	Non Participating	35	34	36	4	569931	177579	235
1246	Non Participating	36	34	36	4	569928	177544	235
1247	Non Participating	36	34	36	4	569926	177500	235
1248	Non Participating	36	35	36	4	569926	177439	236
1249	Non Participating	36	34	36	4	569961	177469	236
1250	Non Participating	36	34	36	4	570002	177500	236
1251	Non Participating	35	34	36	4	570046	177531	235
1252	Non Participating	36	34	36	4	569764	177602	236
1253	Non Participating	36	34	36	4	569764	177641	236
1254	Non Participating	35	34	36	4	569767	177677	237
1255	Non Participating	35	34	35	4	569769	177720	237
1256	Non Participating	35	33	35	4	569769	177753	237
1257	Non Participating	35	33	35	4	569769	177805	237
1265	Non Participating	32	30	31	4	564662	161894	280
1266	Non Participating	32	31	32	4	564541	162016	277

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1440	Non Participating	31	30	32	4	571376	177705	232
1441	Non Participating	31	30	32	4	571384	177726	233
1442	Non Participating	31	30	31	4	571389	177755	234
1443	Non Participating	31	29	31	4	571391	177784	234
1444	Non Participating	31	29	31	4	571374	177860	233
1445	Non Participating	31	29	31	4	571381	177926	233
1446	Non Participating	30	29	31	4	571389	177971	232
1447	Non Participating	30	29	31	4	571416	178011	233
1448	Non Participating	30	28	30	4	571455	178064	233
1449	Non Participating	30	28	30	4	571503	178071	233
1450	Non Participating	30	28	30	4	571509	178043	233
1451	Non Participating	30	28	30	4	571500	178020	233
1452	Non Participating	30	29	31	4	571498	177976	233
1453	Non Participating	24	23	24	4	553802	176266	220
1454	Non Participating	24	23	24	4	553719	176257	220
1455	Non Participating	24	23	24	4	553721	176306	220
1456	Non Participating	24	23	24	4	553724	176317	220
1457	Non Participating	24	23	24	4	553733	176339	220
1458	Non Participating	24	22	23	4	553737	176353	220
1459	Non Participating	24	22	23	4	554076	176387	220
1460	Non Participating	24	22	23	4	554109	176395	220
1461	Non Participating	24	22	23	4	554141	176383	220
1462	Non Participating	24	22	23	4	554171	176380	221
1463	Non Participating	24	22	23	4	554197	176381	220
1464	Non Participating	24	22	23	4	554180	176506	220
1465	Non Participating	23	22	23	4	554182	176544	219
1466	Non Participating	23	21	22	4	552951	176699	215
1467	Non Participating	22	21	22	4	553011	176697	215
1468	Non Participating	22	20	21	4	553049	176703	216
1469	Non Participating	23	21	23	4	553096	176701	216
1470	Non Participating	22	20	22	4	553151	176709	216
1471	Non Participating	23	22	23	4	553191	176697	215
1472	Non Participating	23	22	23	4	553247	176699	215
1473	Non Participating	23	22	23	4	553297	176699	215
1474	Non Participating	23	22	23	4	553336	176704	215
1475	Non Participating	22	20	22	4	553402	176699	215
1476	Non Participating	23	22	23	4	553467	176690	216
1477	Non Participating	23	22	23	4	553519	176697	216

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1478	Non Participating	22	20	21	4	553566	176698	216
1479	Non Participating	18	15	17	4	558109	177570	227
1480	Non Participating	19	18	18	4	558142	177607	227
1481	Non Participating	18	16	17	4	558163	177635	227
1482	Non Participating	19	18	19	4	558241	177581	227
1483	Non Participating	19	18	19	4	558186	177545	227
1484	Non Participating	20	18	19	4	558132	177512	226
1485	Non Participating	18	16	17	4	557988	177485	227
1486	Non Participating	18	15	17	4	557842	177364	227
1487	Non Participating	18	16	18	4	557803	177344	226
1488	Non Participating	19	16	18	4	557884	177403	227
1489	Non Participating	20	18	19	4	558155	177299	228
1490	Non Participating	20	17	19	4	557612	177151	228
1491	Non Participating	21	19	20	4	560159	177955	232
1492	Non Participating	35	34	35	4	568615	178158	241
1493	Non Participating	35	34	35	4	568652	178157	242
1494	Non Participating	35	33	35	4	568289	178292	241
1495	Non Participating	35	34	35	4	568227	178273	241
1496	Non Participating	36	34	36	4	567928	178210	240
1497	Non Participating	34	32	34	4	569385	178145	241
1498	Non Participating	34	33	35	4	569318	178085	240
1499	Non Participating	35	33	35	4	568693	178165	240
1500	Non Participating	35	34	36	4	568291	178247	241
1501	Non Participating	35	34	36	4	568306	178197	240
1502	Non Participating	33	32	34	4	570907	177468	239
1503	Non Participating	33	32	34	4	570903	177481	239
1504	Non Participating	33	32	33	4	570902	177514	238
1505	Non Participating	31	29	32	4	570666	178199	234
1506	Non Participating	31	30	32	4	570666	178190	234
1507	Non Participating	31	30	32	4	570665	178162	234
1508	Non Participating	31	29	31	4	570665	178137	234
1509	Non Participating	32	30	32	4	570663	178117	235
1510	Non Participating	32	30	32	4	570660	178077	236
1511	Non Participating	32	30	32	4	570648	178073	235
1512	Non Participating	32	30	32	4	570592	178078	233
1513	Non Participating	32	30	32	4	570573	178079	233
1514	Non Participating	32	30	32	4	570539	178080	233
1515	Non Participating	32	30	32	4	570513	178080	233
1516	Non Participating	32	30	32	4	570484	178078	234

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1517	Non Participating	32	30	32	4	570452	178075	235
1531	Non Participating	29	28	29	4	571467	178382	233
1532	Non Participating	29	27	29	4	570932	178779	235
1533	Non Participating	29	28	29	4	570901	178754	236
1534	Non Participating	29	28	30	4	570885	178738	236
1535	Non Participating	30	28	30	4	570825	178706	236
1536	Non Participating	30	28	30	4	570803	178688	236
1537	Non Participating	30	28	30	4	570765	178672	236
1538	Non Participating	30	28	30	4	570724	178643	236
1539	Non Participating	30	28	30	4	570686	178609	237
1540	Non Participating	30	28	30	4	570661	178587	236
1541	Non Participating	30	29	31	4	570636	178558	236
1542	Non Participating	30	29	31	4	570630	178546	236
1543	Non Participating	30	29	31	4	570604	178514	235
1544	Non Participating	23	21	22	4	558354	176647	233
1545	Non Participating	21	19	20	4	558309	176645	232
1546	Non Participating	22	20	21	4	558268	176654	231
1547	Non Participating	22	21	22	4	558184	176642	231
1548	Non Participating	22	19	21	4	558082	176653	232
1549	Non Participating	22	21	21	4	558006	176624	233
1550	Non Participating	22	20	21	4	557942	176628	232
1551	Non Participating	19	17	19	4	557730	176634	229
1552	Non Participating	21	19	20	4	557684	176638	230
1553	Non Participating	20	18	20	4	557619	176627	230
1554	Non Participating	21	19	20	4	557672	176538	231
1555	Non Participating	18	16	18	4	557549	177107	227
1556	Non Participating	19	17	18	4	557501	177049	228
1557	Non Participating	26	25	26	4	553576	175421	220
1558	Non Participating	26	25	26	4	553575	175473	219
1559	Non Participating	25	24	25	4	553498	175461	220
1560	Non Participating	27	26	27	4	552797	175257	219
1561	Non Participating	28	26	28	4	552191	175058	217
1562	Non Participating	28	27	28	4	552306	174887	219
1563	Non Participating	28	26	28	4	552147	175058	217
1564	Non Participating	27	26	27	4	552111	175106	216
1565	Non Participating	28	26	28	4	552072	175059	216
1566	Non Participating	28	26	28	4	552010	175060	216
1567	Non Participating	28	26	28	4	551915	175053	216

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1568	Non Participating	28	27	28	4	551849	175039	216
1569	Non Participating	28	27	28	4	551784	175014	216
1570	Non Participating	32	30	32	4	556696	173215	242
1571	Non Participating	32	31	32	4	556238	173009	244
1572	Non Participating	32	31	32	4	556248	173020	244
1573	Non Participating	32	31	32	4	556248	173042	244
1574	Non Participating	32	30	32	4	556251	173061	243
1575	Non Participating	31	29	31	4	556213	173085	242
1576	Non Participating	32	30	32	4	556180	173093	241
1577	Non Participating	31	29	31	4	556164	173096	241
1578	Non Participating	31	29	31	4	556147	173103	240
1579	Non Participating	31	29	31	4	556142	173103	240
1580	Non Participating	32	30	32	4	556200	173022	243
1581	Non Participating	32	31	32	4	556204	173011	243
1582	Non Participating	32	31	32	4	556225	173002	243
1583	Non Participating	35	33	35	4	553969	171821	234
1584	Non Participating	38	37	38	4	553280	172133	227
1585	Non Participating	33	32	33	4	555027	172433	242
1586	Non Participating	33	31	33	4	554980	172451	240
1587	Non Participating	33	32	33	4	554802	172311	241
1588	Non Participating	33	32	33	4	554724	172264	241
1589	Non Participating	34	33	34	4	555145	172145	242
1590	Non Participating	34	33	34	4	555135	172082	242
1591	Non Participating	35	33	35	4	555144	172024	242
1592	Non Participating	35	34	35	4	555143	171952	242
1593	Non Participating	35	34	35	4	555128	171896	241
1594	Non Participating	35	34	35	4	555095	171880	241
1595	Non Participating	35	33	35	4	554982	171888	241
1596	Non Participating	42	41	42	4	558822	170195	249
1597	Non Participating	42	41	42	4	558914	170212	250
1598	Non Participating	44	43	44	4	558837	170015	251
1599	Non Participating	42	41	42	4	559295	170240	251
1600	Non Participating	43	42	43	4	559448	170095	253
1601	Non Participating	37	36	37	4	560114	170118	254
1602	Non Participating	37	36	37	4	560105	170204	253
1603	Non Participating	37	36	37	4	560032	170325	252
1604	Non Participating	36	35	36	4	560094	170368	250
1605	Non Participating	35	33	35	4	560099	170797	253
1606	Non Participating	35	33	35	4	560441	170187	252

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1607	Non Participating	39	38	39	4	560021	169793	256
1608	Non Participating	39	37	39	4	560021	169390	256
1609	Non Participating	40	39	41	4	560045	167057	257
1610	Non Participating	40	39	41	4	559950	166886	259
1611	Non Participating	40	39	40	4	560052	166883	259
1612	Non Participating	40	39	40	4	559754	167154	260
1613	Non Participating	41	40	41	4	559403	167031	258
1614	Non Participating	41	41	42	4	559340	167023	258
1615	Non Participating	44	44	44	4	558410	167174	254
1616	Participating	44	44	44	4	558312	167357	255
1617	Non Participating	43	43	44	4	558351	167549	256
1618	Non Participating	45	45	45	4	557406	167057	256
1619	Participating	46	45	46	4	557546	167027	255
1620	Non Participating	46	46	46	4	557748	166949	252
1621	Non Participating	41	41	41	4	556800	167023	255
1622	Non Participating	42	41	42	4	560023	163991	272
1623	Participating	44	44	45	4	559529	163622	273
1624	Participating	43	42	44	4	559265	163637	269
1625	Participating	43	42	43	4	559210	163633	269
1626	Non Participating	42	41	43	4	559138	163683	269
1627	Non Participating	43	42	43	4	559161	163604	270
1628	Non Participating	43	42	43	4	559137	163604	270
1629	Non Participating	43	42	43	4	559099	163611	270
1630	Non Participating	42	41	42	4	559027	163628	269
1631	Non Participating	40	39	40	4	558818	163706	265
1632	Non Participating	36	34	36	4	557954	163673	268
1633	Non Participating	35	33	35	4	557920	163670	267
1634	Non Participating	35	34	35	4	557891	163667	266
1635	Non Participating	31	29	31	4	556868	162506	267
1636	Non Participating	29	27	29	4	556929	162641	265
1637	Non Participating	31	30	31	4	556995	162674	267
1638	Non Participating	31	29	30	4	556741	162588	266
1639	Non Participating	30	29	30	4	556740	162549	266
1640	Non Participating	30	29	30	4	556760	162497	267
1641	Non Participating	30	29	30	4	556742	162435	268
1642	Non Participating	30	29	30	4	556746	162385	267
1661	Non Participating	18	16	17	4	556585	178213	218
1662	Non Participating	18	16	17	4	556733	178206	218

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
1663	Non Participating	17	15	16	4	557008	178189	220
1664	Non Participating	17	15	16	4	557215	178200	220
1665	Non Participating	29	28	30	4	563146	176898	242
1666	Non Participating	36	34	36	4	567383	178384	241
1667	Non Participating	32	30	32	4	567129	179463	239
1668	Non Participating	32	30	32	4	567073	179461	240
1669	Non Participating	31	29	31	4	566984	179513	238
1670	Non Participating	30	28	31	4	566841	179477	237
1671	Non Participating	30	29	31	4	566754	179470	237
1672	Non Participating	32	31	32	4	566737	179393	240
1673	Non Participating	32	30	32	4	566785	179405	240
1674	Non Participating	24	22	24	4	561778	178340	231
1675	Non Participating	23	21	23	4	561212	178311	232
1676	Non Participating	17	15	16	4	557637	178279	221
1677	Non Participating	17	15	16	4	557687	178246	222
1678	Non Participating	17	15	16	4	557745	178216	221
1679	Non Participating	16	14	15	4	557535	178255	221
1680	Non Participating	16	14	15	4	557571	178321	221
1681	Non Participating	16	14	14	4	557372	178417	220
1682	Non Participating	10	9	9	4	556997	178921	218
1683	Non Participating	8	5	7	4	556961	178974	217
1684	Non Participating	0	0	0	4	556901	179162	220
1685	Non Participating	0	0	0	4	556847	179257	220
1686	Non Participating	0	0	0	4	556806	179315	218
1690	Non Participating	34	32	34	4	549358	173377	215
1692	Non Participating	25	22	25	4	547181	173454	213
1694	Non Participating	27	25	27	4	547351	173011	214
1697	Non Participating	28	27	28	4	547583	172615	214
1698	Non Participating	28	27	29	4	547603	172536	214
1699	Non Participating	28	27	28	4	547536	172539	214
3814	Non Participating	37	36	38	4	560067	168466	256
4419	Non Participating	29	28	29	4	566358	161839	282
4427	Non Participating	31	29	30	4	565338	161928	281
4428	Non Participating	31	29	30	4	565356	161930	281
4429	Non Participating	30	28	30	4	565681	161933	282
4432	Non Participating	31	29	31	4	565103	161942	277
4466	Non Participating	32	31	32	4	566086	163566	276
4469	Non Participating	32	30	32	4	567411	163629	276
4470	Non Participating	31	30	31	4	567030	163638	277

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4472	Non Participating	36	35	36	4	565058	163698	276
4473	Participating	35	33	35	4	565409	163718	278
4476	Participating	35	34	35	4	565403	163734	278
4483	Non Participating	37	36	37	4	567929	165155	270
4484	Non Participating	46	46	46	4	563243	165172	266
4489	Non Participating	38	36	38	4	567079	165218	269
4491	Non Participating	37	36	37	4	566415	165224	267
4492	Non Participating	38	37	38	4	567364	165233	270
4494	Participating	38	36	38	4	566744	165251	269
4496	Non Participating	39	38	39	4	564822	164459	274
4499	Non Participating	36	35	36	4	565622	164575	273
4503	Non Participating	34	33	35	4	567699	164773	272
4506	Non Participating	35	34	36	4	568178	164855	272
4517	Non Participating	40	39	40	4	568120	165640	267
4524	Non Participating	44	43	44	4	567326	165938	266
4525	Non Participating	44	44	45	4	567543	165941	267
4526	Non Participating	45	44	45	4	567531	165949	267
4528	Non Participating	45	44	45	4	567640	165955	267
4529	Non Participating	45	44	45	4	567648	165957	267
4530	Non Participating	43	42	44	4	567973	165957	268
4531	Non Participating	45	44	45	4	567456	165958	267
4533	Non Participating	46	46	46	4	563897	166823	267
4535	Non Participating	45	44	45	4	563643	166840	264
4536	Non Participating	43	42	43	4	563209	166842	260
4537	Non Participating	43	42	43	4	563115	166854	260
4539	Non Participating	43	42	43	4	563243	166891	260
4541	Non Participating	43	42	43	4	563202	166918	260
4546	Non Participating	43	42	43	4	563251	166420	265
4547	Non Participating	43	42	43	4	563180	166422	265
4549	Non Participating	43	42	43	4	563218	166439	265
4557	Non Participating	43	42	43	4	563217	166467	265
4561	Non Participating	43	42	43	4	563168	166482	265
4562	Non Participating	43	42	43	4	563213	166483	265
4566	Non Participating	43	42	43	4	568111	167263	264
4568	Participating	44	43	44	4	563262	167276	261
4576	Non Participating	43	42	43	4	564815	167418	265
4577	Non Participating	43	42	43	4	564821	167419	265
4578	Non Participating	42	41	43	4	568574	167476	264

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4580	Non Participating	40	39	40	4	569203	167530	260
4581	Non Participating	36	34	36	4	569767	168464	259
4584	Non Participating	40	39	40	4	562714	168525	261
4585	Participating	38	37	38	4	561827	168527	259
4586	Non Participating	40	39	40	4	562812	168530	260
4587	Participating	38	37	38	4	561786	168543	258
4588	Non Participating	40	39	40	4	562717	168546	261
4590	Non Participating	36	34	36	4	569764	168552	258
4593	Non Participating	40	39	40	4	563053	168572	260
4597	Non Participating	36	35	37	4	569758	168059	260
4599	Participating	43	42	44	4	568072	168067	262
4600	Non Participating	42	41	42	4	566524	168069	260
4601	Non Participating	36	35	37	4	569759	168073	260
4603	Non Participating	36	35	37	4	569758	168084	260
4607	Participating	43	42	44	4	568071	168119	262
4621	Non Participating	34	33	35	4	569777	168826	255
4627	Non Participating	34	33	34	4	569724	169004	254
4629	Non Participating	34	33	34	4	569720	169031	255
4631	Non Participating	33	31	33	4	569817	169335	258
4632	Non Participating	30	28	30	4	570949	169335	260
4633	Non Participating	27	25	26	4	572389	169367	255
4634	Non Participating	33	31	33	4	569905	169383	259
4636	Non Participating	33	31	33	4	569782	169422	258
4637	Non Participating	37	35	37	4	563257	169424	258
4639	Participating	36	35	36	4	568178	169447	258
4641	Participating	36	35	36	4	568187	169459	259
4642	Non Participating	33	31	33	4	569781	169492	257
4643	Non Participating	32	31	33	4	570044	169246	260
4644	Participating	39	38	39	4	563892	169247	257
4645	Non Participating	37	36	37	4	567775	169248	260
4647	Participating	37	36	37	4	568628	169252	257
4648	Non Participating	32	31	32	4	570081	169253	260
4649	Participating	39	38	39	4	563915	169254	258
4650	Non Participating	36	35	36	4	562561	169255	258
4651	Non Participating	37	36	37	4	567948	169255	259
4652	Non Participating	37	36	37	4	563139	169255	256
4654	Non Participating	36	35	36	4	562663	169257	258
4655	Non Participating	36	35	36	4	562616	169257	258
4656	Non Participating	37	36	37	4	567792	169258	260

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4657	Participating	38	37	38	4	567077	169260	254
4658	Non Participating	36	35	36	4	562125	169261	257
4659	Participating	39	38	39	4	566967	169262	255
4660	Non Participating	37	36	37	4	563074	169263	255
4661	Participating	37	36	37	4	563881	169885	258
4664	Non Participating	31	30	31	4	569950	169945	255
4665	Non Participating	28	26	28	4	571551	169960	256
4666	Non Participating	28	26	28	4	571508	169964	256
4676	Non Participating	29	27	29	4	571281	170075	256
4677	Non Participating	39	38	38	4	564275	170110	256
4678	Non Participating	38	37	37	4	564100	170110	257
4681	Non Participating	32	30	32	4	568156	171357	248
4682	Non Participating	32	30	32	4	568072	171367	248
4683	Non Participating	32	30	32	4	568147	171386	248
4684	Non Participating	32	30	32	4	568153	171386	248
4685	Non Participating	32	30	32	4	568063	171417	247
4686	Non Participating	32	30	32	4	568057	171419	247
4687	Non Participating	30	28	30	4	571668	171551	249
4688	Non Participating	30	29	30	4	571393	171567	250
4689	Non Participating	27	25	27	4	573244	171570	248
4691	Non Participating	31	30	31	4	570862	171583	250
4692	Non Participating	27	25	27	4	572111	170686	258
4693	Non Participating	27	25	26	4	572887	170717	250
4695	Participating	33	31	33	4	563048	170778	256
4696	Participating	38	37	37	4	565690	170778	253
4697	Non Participating	27	25	26	4	572959	170778	250
4699	Non Participating	36	35	36	4	566507	170808	250
4703	Non Participating	32	30	32	4	568306	170935	249
4704	Non Participating	27	25	27	4	572555	170943	250
4705	Non Participating	32	30	32	4	568291	170944	250
4706	Non Participating	32	31	32	4	562898	170962	255
4708	Non Participating	33	31	32	4	563186	171007	256
4710	Participating	33	32	33	4	564875	171646	256
4711	Non Participating	33	32	33	4	566016	171646	250
4712	Non Participating	32	30	32	4	570014	171649	252
4713	Non Participating	31	29	30	4	561946	171649	251
4714	Non Participating	31	29	30	4	561943	171651	251
4715	Non Participating	32	30	32	4	569959	171653	252

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4716	Non Participating	32	30	32	4	570024	171654	251
4718	Participating	32	30	32	4	570243	171656	250
4719	Non Participating	32	30	32	4	569968	171658	252
4720	Participating	33	32	33	4	564900	171661	257
4721	Non Participating	33	32	33	4	565044	171661	253
4722	Non Participating	31	30	31	4	562538	171661	250
4723	Non Participating	31	30	31	4	562534	171664	250
4725	Non Participating	32	31	32	4	567534	171674	247
4726	Non Participating	31	29	30	4	562655	171677	251
4727	Non Participating	31	29	30	4	562647	171681	251
4728	Non Participating	35	33	35	4	569876	172555	250
4729	Non Participating	32	31	32	4	566646	172559	249
4730	Non Participating	31	29	31	4	564939	172595	247
4731	Non Participating	35	33	35	4	569861	172596	250
4732	Non Participating	31	29	31	4	564929	172598	247
4733	Non Participating	35	34	35	4	569892	172636	250
4734	Non Participating	27	25	27	4	573618	172655	249
4735	Non Participating	32	31	32	4	566643	172663	248
4736	Non Participating	32	31	32	4	566639	172667	248
4737	Participating	34	32	34	4	568247	172670	248
4738	Non Participating	32	30	32	4	566641	172706	248
4739	Non Participating	27	26	27	4	573579	172707	249
4741	Non Participating	33	32	33	4	569765	172175	252
4742	Non Participating	33	32	33	4	569768	172176	252
4744	Non Participating	33	31	33	4	569847	172193	252
4745	Non Participating	33	31	33	4	569892	172194	250
4752	Non Participating	34	32	34	4	569864	172312	249
4753	Non Participating	34	32	34	4	569845	172315	250
4755	Non Participating	31	30	31	4	564699	172360	249
4756	Non Participating	31	30	31	4	564703	172363	249
4757	Non Participating	31	30	31	4	564701	172394	249
4758	Non Participating	31	30	31	4	564592	172399	248
4760	Participating	38	37	38	4	571107	172916	251
4761	Non Participating	28	26	28	4	563392	172924	249
4762	Non Participating	29	27	29	4	563442	172924	251
4763	Non Participating	37	35	37	4	569890	172938	249
4764	Non Participating	37	35	37	4	569892	172944	249
4765	Non Participating	34	32	34	4	572082	172954	248
4766	Non Participating	35	33	35	4	567653	172960	248

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4767	Non Participating	35	33	35	4	567691	172964	247
4768	Non Participating	35	33	35	4	567728	172964	247
4769	Non Participating	33	31	33	4	566639	172966	248
4770	Non Participating	27	25	27	4	573734	172967	247
4771	Non Participating	37	35	37	4	569854	172974	250
4772	Non Participating	27	26	27	4	573680	172983	249
4773	Non Participating	27	26	28	4	573660	172993	249
4774	Participating	31	29	31	4	565675	173022	249
4775	Non Participating	32	30	32	4	572497	173030	248
4776	Non Participating	33	32	34	4	572165	173031	249
4777	Non Participating	29	27	28	4	562904	173330	248
4778	Non Participating	32	30	32	4	565808	173331	249
4779	Non Participating	31	29	31	4	565409	173335	249
4780	Non Participating	31	29	31	4	565703	173337	250
4781	Non Participating	31	29	31	4	565638	173340	250
4782	Non Participating	31	29	31	4	565671	173347	249
4784	Non Participating	30	28	30	4	564503	173356	248
4785	Non Participating	30	28	30	4	564299	173361	248
4786	Non Participating	29	27	28	4	563546	173369	248
4789	Non Participating	28	27	28	4	563120	173374	247
4790	Non Participating	37	36	38	4	571631	173246	249
4791	Non Participating	31	29	31	4	565429	173247	250
4792	Non Participating	29	27	28	4	563390	173252	247
4793	Participating	42	41	43	4	570688	173252	249
4794	Non Participating	29	28	29	4	564430	173256	247
4796	Participating	31	30	31	4	565531	173262	251
4797	Non Participating	30	28	30	4	564289	173262	248
4798	Non Participating	30	29	30	4	564525	173262	248
4799	Non Participating	36	34	36	4	568948	173266	248
4800	Non Participating	31	29	30	4	565064	173267	247
4801	Non Participating	30	28	30	4	564471	173269	248
4802	Non Participating	30	28	29	4	564191	173271	249
4803	Non Participating	31	29	31	4	565231	173271	249
4804	Non Participating	31	29	31	4	565419	173274	250
4805	Non Participating	36	34	36	4	568949	173274	247
4806	Non Participating	36	35	37	4	568201	173281	248
4808	Non Participating	30	28	30	4	573265	173531	246
4809	Non Participating	33	32	34	4	572438	173566	251

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4810	Participating	40	38	40	4	569806	173605	248
4811	Participating	40	38	40	4	569811	173606	248
4812	Non Participating	28	26	28	4	573755	173609	245
4813	Non Participating	31	29	30	4	564917	173635	248
4814	Non Participating	40	39	40	4	571523	173639	248
4815	Non Participating	40	39	40	4	571517	173666	249
4816	Non Participating	30	29	30	4	565008	173670	248
4818	Non Participating	29	27	28	4	563401	173674	246
4819	Participating	41	40	42	4	570007	173684	248
4820	Participating	42	41	42	4	570032	173689	248
4821	Non Participating	39	38	40	4	567545	173691	245
4822	Non Participating	30	28	30	4	573216	173703	246
4823	Non Participating	29	27	28	4	563452	173704	245
4824	Non Participating	40	39	41	4	571532	173718	249
4825	Participating	42	40	42	4	570000	173730	248
4826	Non Participating	28	26	28	4	563313	174328	246
4827	Non Participating	43	42	43	4	569958	174336	247
4828	Non Participating	42	41	42	4	569879	174336	248
4829	Non Participating	43	42	44	4	571252	174336	245
4830	Non Participating	42	41	42	4	569835	174341	247
4831	Non Participating	43	42	44	4	570006	174343	247
4832	Non Participating	42	40	42	4	569809	174345	246
4833	Non Participating	30	29	30	4	573251	174357	246
4834	Non Participating	43	42	43	4	569963	174357	247
4835	Non Participating	42	41	43	4	569884	174365	248
4836	Non Participating	42	41	42	4	569847	174376	247
4837	Non Participating	43	42	43	4	569969	174394	247
4838	Non Participating	43	42	44	4	570005	174398	247
4839	Non Participating	42	40	42	4	569838	174173	247
4840	Non Participating	42	41	42	4	569875	174173	247
4841	Non Participating	43	42	43	4	569955	174188	247
4842	Non Participating	41	40	41	4	569765	174196	247
4843	Non Participating	41	40	42	4	569795	174196	247
4844	Non Participating	42	41	42	4	569878	174202	247
4845	Non Participating	42	40	42	4	569830	174203	248
4846	Non Participating	31	29	31	4	565024	174209	247
4847	Non Participating	41	40	41	4	571501	174210	247
4848	Non Participating	41	40	41	4	569743	174212	247
4849	Non Participating	29	27	28	4	563295	174218	246

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4850	Non Participating	29	27	28	4	563337	174221	246
4851	Non Participating	41	40	41	4	569761	174225	247
4852	Non Participating	44	43	44	4	570039	174229	248
4853	Non Participating	28	26	28	4	562986	174234	246
4854	Non Participating	41	40	42	4	569792	174235	247
4855	Non Participating	31	29	31	4	565032	174252	247
4856	Non Participating	42	41	42	4	569827	174254	247
4857	Non Participating	36	35	36	4	566639	174505	248
4858	Non Participating	42	41	42	4	569845	174513	246
4859	Non Participating	42	41	42	4	569842	174536	246
4860	Participating	39	38	40	4	571652	174543	245
4861	Participating	40	39	40	4	571586	174553	245
4862	Non Participating	42	41	42	4	569844	174557	245
4863	Non Participating	37	36	37	4	566824	174572	246
4864	Non Participating	31	29	31	4	564743	174578	246
4865	Participating	44	43	44	4	567514	174582	245
4866	Non Participating	31	29	31	4	564730	174589	246
4867	Non Participating	42	41	43	4	569885	174600	245
4868	Non Participating	42	41	42	4	569842	174605	245
4869	Non Participating	36	35	36	4	566659	174605	248
4870	Non Participating	37	36	38	4	566876	174622	246
4871	Non Participating	42	41	43	4	569880	174627	245
4872	Non Participating	42	41	42	4	569830	174637	245
4873	Participating	44	43	44	4	567526	174641	245
4874	Non Participating	36	34	36	4	566572	174654	247
4875	Non Participating	41	40	41	4	571477	175150	244
4876	Non Participating	43	42	44	4	569665	175177	239
4877	Non Participating	41	40	41	4	571477	175189	244
4878	Non Participating	43	42	43	4	569815	175191	238
4879	Non Participating	40	39	41	4	571501	175225	243
4880	Non Participating	40	39	40	4	571560	175256	243
4881	Non Participating	34	32	34	4	565115	175303	249
4882	Non Participating	33	32	33	4	564977	175329	248
4883	Non Participating	33	32	33	4	564969	175332	249
4884	Participating	34	32	34	4	572427	175339	243
4885	Non Participating	43	42	44	4	568294	175361	243
4886	Non Participating	37	35	37	4	571955	175363	242
4887	Non Participating	36	34	36	4	572116	175367	242

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4888	Non Participating	37	35	37	4	566769	174873	245
4889	Non Participating	44	43	44	4	570151	174873	245
4890	Non Participating	37	35	37	4	566803	174874	245
4891	Non Participating	37	36	37	4	566830	174875	245
4892	Non Participating	36	35	37	4	566671	174875	245
4893	Participating	45	44	46	4	570425	174877	245
4894	Non Participating	36	35	36	4	566626	174883	245
4895	Non Participating	44	43	44	4	570178	174885	245
4896	Non Participating	33	32	34	4	565642	174886	247
4897	Non Participating	33	32	34	4	565600	174889	246
4898	Non Participating	33	31	33	4	565325	174892	247
4899	Non Participating	42	41	43	4	569897	174894	245
4900	Non Participating	43	41	43	4	569962	174895	245
4901	Participating	42	41	42	4	568901	174896	241
4902	Non Participating	33	31	33	4	565327	174897	247
4903	Non Participating	43	42	43	4	570020	174900	245
4904	Non Participating	30	28	30	4	563799	174902	245
4905	Non Participating	33	31	33	4	565370	174904	247
4906	Non Participating	41	40	41	4	567831	175524	245
4907	Non Participating	36	35	37	4	565983	175537	245
4908	Non Participating	36	34	36	4	565693	175539	249
4909	Non Participating	36	34	36	4	565644	175550	248
4910	Non Participating	40	39	40	4	571488	175552	242
4911	Non Participating	41	40	42	4	567927	175566	246
4912	Non Participating	41	40	42	4	567917	175568	246
4913	Non Participating	41	39	41	4	567775	175582	244
4914	Non Participating	40	39	40	4	571482	175594	242
4915	Non Participating	41	40	41	4	567807	175616	244
4916	Non Participating	41	40	41	4	567812	175630	244
4917	Non Participating	44	43	45	4	569923	175656	237
4918	Non Participating	41	40	42	4	567853	175664	244
4919	Non Participating	45	44	45	4	569907	175670	237
4920	Non Participating	30	28	30	4	563495	175672	245
4921	Non Participating	41	40	42	4	567880	175682	243
4922	Non Participating	45	44	45	4	569907	175701	237
4923	Non Participating	42	41	43	4	568013	175709	243
4937	Non Participating	42	41	43	4	566872	176723	242
4938	Non Participating	35	34	36	4	564274	176738	242
4939	Non Participating	44	44	45	4	567531	176804	243

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
4940	Non Participating	44	43	45	4	567520	176807	243
4941	Non Participating	35	34	36	4	564248	176819	242
4942	Non Participating	42	41	43	4	564986	177069	244
4943	Non Participating	45	44	45	4	566498	177532	240
5159	Non Participating	27	25	27	4	574068	174167	245
5160	Non Participating	30	28	30	4	573291	174662	246
5161	Non Participating	42	41	43	4	564992	177732	241
5162	Non Participating	42	42	43	4	564987	177673	242
5163	Non Participating	43	42	43	4	564992	177632	242
5164	Non Participating	43	42	43	4	564983	177580	242
5165	Non Participating	36	34	36	4	564243	177415	242
5166	Participating	35	34	35	4	564164	177608	241
5167	Non Participating	35	34	36	4	564251	177750	242
5168	Non Participating	35	34	35	4	564192	177747	242
5169	Non Participating	29	27	29	4	571317	178657	233
5170	Non Participating	29	27	29	4	571248	178595	232
5171	Non Participating	29	27	29	4	571195	178523	228
5172	Non Participating	26	24	27	4	571123	178462	229
5173	Non Participating	29	26	29	4	571072	178390	233
5174	Non Participating	29	27	30	4	571056	178365	234
5175	Non Participating	30	28	30	4	571039	178339	235
5176	Non Participating	30	29	31	4	571015	178311	234
5177	Non Participating	31	29	31	4	570962	178239	233
5178	Non Participating	31	29	31	4	570911	178181	233
5179	Non Participating	31	29	31	4	570867	178132	234
5180	Non Participating	31	30	32	4	570842	178101	235
5181	Non Participating	31	29	31	4	570816	178065	236
5182	Non Participating	32	30	32	4	570724	178004	238
5183	Non Participating	29	27	29	4	570744	178987	235
5184	Non Participating	29	27	29	4	570778	178938	236
5185	Non Participating	29	27	29	4	570811	178910	236
5186	Non Participating	29	27	29	4	570842	178877	236
5187	Non Participating	29	27	29	4	570852	178866	236
5188	Non Participating	29	27	29	4	570885	178838	236
5189	Non Participating	29	27	29	4	570939	178800	235
5190	Non Participating	29	27	29	4	570952	178782	235
5191	Non Participating	29	27	29	4	570980	178751	235
5192	Non Participating	29	28	29	4	571005	178713	234

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
5193	Non Participating	29	28	29	4	571021	178695	234
5194	Non Participating	29	28	30	4	571064	178633	234
5195	Non Participating	30	28	30	4	571123	178572	232
5196	Non Participating	29	27	29	4	571169	178523	229
5197	Non Participating	29	27	29	4	571241	178480	230
5198	Non Participating	30	28	30	4	571297	178442	232
5199	Non Participating	30	28	30	4	571356	178367	233
5200	Non Participating	31	30	32	4	571453	177633	234
5201	Non Participating	31	30	32	4	571445	177687	234
5202	Non Participating	31	29	31	4	571445	177771	234
5203	Non Participating	31	29	31	4	571445	177825	233
5204	Non Participating	31	29	31	4	571422	177874	233
5205	Non Participating	31	29	32	4	571363	177605	233
5206	Non Participating	32	30	32	4	571315	177587	233
5207	Non Participating	32	30	32	4	571264	177577	233
5208	Non Participating	32	31	32	4	571195	177544	234
5209	Non Participating	32	31	33	4	571189	177508	234
5210	Non Participating	32	30	32	4	571223	177551	233
5211	Non Participating	33	31	33	4	571123	177446	235
5212	Non Participating	33	31	33	4	571041	177436	237
5213	Non Participating	33	32	34	4	570854	177492	239
5214	Non Participating	32	31	33	4	570793	177805	238
5215	Non Participating	32	31	33	4	570795	177838	238
5216	Non Participating	32	30	32	4	570808	177894	238
5217	Non Participating	32	30	32	4	570824	177955	237
5231	Non Participating	28	27	28	4	562294	173409	248
5232	Non Participating	26	24	25	4	562405	175132	245
5233	Non Participating	27	25	26	4	562372	174958	245
5234	Non Participating	28	26	28	4	562840	175012	245
5235	Non Participating	28	26	27	4	562801	174573	247
5236	Participating	26	25	26	4	561890	174969	245
5237	Non Participating	26	24	26	4	561887	175036	247
5238	Non Participating	29	28	30	4	563102	176548	243
5239	Non Participating	26	24	26	4	562276	176395	245
5240	Non Participating	27	25	27	4	562283	175880	245
5241	Non Participating	28	26	28	4	562632	176810	242
5242	Non Participating	28	26	28	4	562567	176603	243
5243	Non Participating	28	26	28	4	562807	176629	243
5244	Non Participating	29	27	29	4	562934	176605	243

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
5245	Non Participating	31	29	31	4	563443	176607	244
5246	Non Participating	43	43	44	4	566492	176566	241
5247	Non Participating	44	43	44	4	566418	176564	242
5248	Non Participating	44	43	44	4	566352	176568	243
5788	Non Participating	34	32	34	4	571064	177167	237
5789	Non Participating	35	33	35	4	570826	177161	237
5790	Non Participating	35	34	36	4	570813	177008	238
5791	Non Participating	35	33	35	4	570891	177045	238
5792	Non Participating	35	33	35	4	570940	177025	238
5793	Non Participating	34	33	35	4	571140	177056	240
5794	Non Participating	33	31	33	4	571429	177307	237
5795	Non Participating	32	31	33	4	571453	177347	236
5796	Non Participating	32	31	32	4	571450	177377	235
5797	Non Participating	32	30	32	4	571452	177408	235
5798	Non Participating	32	30	32	4	571455	177440	235
5799	Non Participating	32	30	32	4	571453	177472	235
5800	Non Participating	32	30	32	4	571452	177485	235
5801	Non Participating	29	27	29	4	572634	177598	240
5837	Non Participating	29	27	29	4	572468	177540	240
5838	Non Participating	29	27	29	4	572463	177571	240
5839	Non Participating	29	27	29	4	572463	177599	240
5840	Non Participating	29	27	29	4	572464	177625	240
5841	Non Participating	29	27	29	4	572464	177652	240
5842	Non Participating	29	27	29	4	572461	177705	240
5843	Non Participating	28	26	28	4	572452	177768	237
5844	Non Participating	29	27	29	4	572506	177691	240
5845	Non Participating	29	27	29	4	572548	177687	240
5846	Non Participating	29	27	29	4	572577	177682	240
5847	Non Participating	29	27	29	4	572616	177677	240
5848	Non Participating	29	27	29	4	572629	177679	240
5849	Non Participating	28	27	28	4	572653	177680	239
5850	Non Participating	28	27	28	4	572687	177684	240
5851	Non Participating	28	26	28	4	572722	177691	240
5852	Non Participating	28	26	28	4	572747	177692	240
5853	Non Participating	27	25	27	4	572773	177724	240
5854	Non Participating	28	26	28	4	572769	177550	241
5886	Non Participating	32	30	32	4	571104	177762	236
5887	Non Participating	32	30	32	4	571128	177801	237

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
5888	Non Participating	31	30	32	4	571145	177828	237
5889	Non Participating	31	30	32	4	571162	177855	237
5890	Non Participating	31	29	31	4	571181	177882	236
5891	Non Participating	31	29	31	4	571198	177916	236
5892	Non Participating	31	29	31	4	571210	177944	236
5893	Non Participating	31	29	31	4	571223	177960	236
5894	Non Participating	31	29	31	4	571244	177980	236
5895	Non Participating	32	30	32	4	571414	177617	233
5896	Non Participating	32	30	32	4	571358	177635	232
5897	Non Participating	32	30	32	4	571319	177658	233
5898	Non Participating	32	30	32	4	571300	177667	233
5899	Non Participating	32	30	32	4	571280	177680	233
5900	Non Participating	32	30	32	4	571263	177695	233
5901	Non Participating	31	30	32	4	571243	177719	232
5902	Non Participating	32	30	32	4	571208	177744	235
5903	Non Participating	32	30	32	4	571204	177750	235
5953	Non Participating	19	17	19	4	553370	177130	214
5954	Non Participating	20	18	20	4	553356	177146	214
5955	Non Participating	21	19	21	4	553354	177167	214
5956	Non Participating	22	20	21	4	553353	177197	214
5957	Non Participating	22	20	21	4	553353	177226	213
5958	Non Participating	22	20	21	4	553356	177248	213
5959	Non Participating	22	20	21	4	553358	177279	213
5960	Non Participating	22	20	21	4	553359	177291	213
5961	Non Participating	22	20	21	4	553395	177289	213
5962	Non Participating	22	20	21	4	553397	177281	213
5963	Non Participating	22	20	21	4	553396	177248	213
5964	Non Participating	22	20	21	4	553396	177236	213
5965	Non Participating	22	20	21	4	553394	177212	214
5966	Non Participating	17	15	16	4	554151	176906	212
5967	Non Participating	20	18	20	4	554126	176870	215
5968	Non Participating	21	18	21	4	554092	176870	215
5969	Non Participating	21	18	20	4	554088	176828	216
5970	Non Participating	22	20	21	4	554127	176825	216
5971	Non Participating	23	21	22	4	553973	176741	218
5972	Non Participating	23	22	23	4	554031	176745	219
5973	Non Participating	22	20	21	4	554082	176749	218
5974	Non Participating	21	19	21	4	553945	176742	218
5975	Non Participating	22	21	22	4	553905	176738	218

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
5976	Non Participating	23	21	22	4	553891	176797	218
5977	Non Participating	22	20	22	4	553900	176828	217
5978	Non Participating	21	18	21	4	553931	176871	216
5979	Non Participating	22	20	22	4	553896	176868	217
5980	Non Participating	21	19	21	4	553864	176866	217
5981	Non Participating	22	20	22	4	553840	176869	217
5982	Non Participating	23	21	22	4	553771	176870	218
5983	Non Participating	23	21	22	4	553760	176890	217
5984	Non Participating	22	20	21	4	553913	177197	217
5985	Non Participating	22	20	21	4	553864	177193	217
5986	Non Participating	22	20	21	4	553849	177194	217
5987	Non Participating	25	23	24	4	553627	176080	220
5988	Non Participating	25	23	24	4	553630	176094	220
5989	Non Participating	25	23	24	4	553653	176134	220
5990	Non Participating	25	23	24	4	553570	176048	219
5991	Non Participating	25	23	24	4	553583	176089	219
5992	Non Participating	25	23	24	4	553591	176125	220
5993	Non Participating	25	23	24	4	553603	176153	220
5994	Non Participating	24	23	24	4	553624	176208	220
5995	Non Participating	24	23	24	4	553647	176231	220
5996	Non Participating	24	23	24	4	553654	176264	220
5997	Non Participating	24	23	24	4	553663	176289	220
5998	Non Participating	24	23	24	4	553678	176322	220
5999	Non Participating	24	23	24	4	553672	176168	220
6000	Non Participating	24	23	24	4	553693	176232	220
6001	Non Participating	24	23	24	4	553256	176356	217
6002	Non Participating	23	21	22	4	553329	176841	215
6003	Non Participating	23	21	22	4	553325	176887	215
6004	Non Participating	20	19	20	4	553583	177051	212
6005	Non Participating	22	20	21	4	553619	177035	215
6006	Non Participating	19	17	19	4	553640	177033	214
6007	Non Participating	21	19	20	4	553676	177016	216
6008	Non Participating	23	21	22	4	553654	176963	216
6009	Non Participating	21	20	21	4	553600	176975	214
6010	Non Participating	22	21	21	4	553906	177097	217
6011	Non Participating	22	20	21	4	553905	177142	217
6012	Non Participating	22	20	21	4	553790	177172	217
6013	Non Participating	22	20	21	4	553786	177214	217

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6014	Non Participating	24	22	23	4	553329	176608	216
6015	Non Participating	23	22	23	4	553522	176565	217
6016	Non Participating	22	21	22	4	553576	176563	217
6017	Non Participating	23	21	22	4	553570	176516	217
6018	Non Participating	23	21	22	4	553571	176465	217
6019	Non Participating	23	21	22	4	553572	176342	217
6020	Non Participating	23	21	23	4	553575	176299	219
6021	Non Participating	23	21	23	4	553604	176381	219
6022	Non Participating	24	22	23	4	553683	176380	220
6023	Non Participating	23	22	23	4	552962	176641	216
6024	Non Participating	24	22	23	4	552960	176617	215
6025	Non Participating	24	22	23	4	552995	176638	216
6026	Non Participating	24	22	23	4	553001	176598	215
6027	Non Participating	24	22	23	4	553058	176603	215
6028	Non Participating	24	22	23	4	553053	176638	215
6029	Non Participating	23	22	23	4	553045	176668	216
6030	Non Participating	23	22	23	4	553106	176668	216
6031	Non Participating	24	22	23	4	553104	176642	215
6032	Non Participating	24	22	23	4	553101	176597	215
6033	Non Participating	25	24	25	4	553511	175851	218
6034	Non Participating	25	24	25	4	553508	175815	218
6035	Non Participating	21	20	21	4	553311	177143	214
6036	Non Participating	21	20	21	4	553311	177164	214
6037	Non Participating	21	19	21	4	553315	177180	214
6038	Non Participating	21	20	21	4	553318	177196	214
6039	Non Participating	21	20	21	4	553322	177228	213
6040	Non Participating	22	20	21	4	553325	177247	213
6041	Non Participating	22	20	21	4	553320	177291	213
6042	Non Participating	22	20	21	4	553320	177298	213
6043	Non Participating	22	20	21	4	553317	177350	212
6044	Non Participating	22	20	21	4	553317	177374	212
6045	Non Participating	22	20	21	4	553317	177385	212
6046	Non Participating	21	20	21	4	553318	177413	212
6047	Non Participating	21	20	21	4	553318	177428	212
6048	Non Participating	21	20	21	4	553320	177445	213
6049	Non Participating	22	20	21	4	554092	177294	218
6050	Non Participating	21	20	21	4	554030	177322	218
6051	Non Participating	23	20	22	4	561444	178166	234
6052	Non Participating	24	22	24	4	561503	178168	233

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6053	Non Participating	24	22	24	4	561559	178169	234
6054	Non Participating	20	18	21	4	561304	178237	230
6055	Non Participating	24	22	24	4	561642	178243	232
6056	Non Participating	17	14	16	4	560962	178095	228
6057	Non Participating	21	20	21	4	560733	178179	231
6058	Non Participating	25	23	24	4	561766	177802	235
6059	Non Participating	24	22	24	4	562029	177681	240
6060	Non Participating	26	24	26	4	562081	177700	240
6061	Non Participating	26	24	26	4	562216	177757	241
6062	Non Participating	27	25	27	4	562487	177808	237
6063	Non Participating	27	25	27	4	562549	177917	242
6064	Non Participating	19	18	19	4	559097	178188	225
6065	Non Participating	19	18	19	4	559050	178187	225
6066	Non Participating	19	18	18	4	558980	178189	225
6067	Non Participating	19	18	18	4	558887	178133	227
6068	Non Participating	19	18	18	4	558787	178062	227
6069	Non Participating	20	18	19	4	558923	177361	232
6070	Non Participating	18	16	18	4	558967	177399	232
6071	Non Participating	20	18	20	4	560232	177444	234
6072	Non Participating	23	21	24	4	561739	177758	235
6073	Non Participating	24	22	24	4	561746	177786	235
6074	Non Participating	25	23	25	4	561768	177883	234
6075	Non Participating	25	23	25	4	561774	177735	237
6076	Non Participating	24	22	24	4	561760	177680	236
6077	Non Participating	24	22	24	4	561857	177748	235
6078	Non Participating	24	22	24	4	561845	177719	236
6079	Non Participating	24	23	24	4	561847	177677	237
6080	Non Participating	25	23	25	4	561856	177630	238
6081	Non Participating	25	23	25	4	561842	177561	240
6082	Non Participating	40	39	40	4	566368	178177	240
6083	Non Participating	39	38	40	4	566512	178151	240
6084	Non Participating	39	38	39	4	566608	178117	240
6085	Non Participating	38	37	39	4	566682	178188	241
6086	Non Participating	38	37	39	4	566748	178187	241
6087	Non Participating	38	37	38	4	566822	178183	241
6088	Non Participating	38	36	38	4	566894	178185	241
6089	Non Participating	38	37	39	4	566836	178105	242
6090	Non Participating	39	38	40	4	566609	178076	240

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6091	Non Participating	40	39	40	4	566612	178016	240
6092	Non Participating	34	33	35	4	569009	178153	238
6093	Non Participating	34	33	35	4	569095	178090	236
6094	Non Participating	34	32	35	4	569139	178067	236
6095	Non Participating	34	32	34	4	569187	178082	236
6096	Non Participating	34	32	34	4	569229	178082	238
6097	Non Participating	34	33	35	4	569263	178091	238
6098	Non Participating	34	32	34	4	569253	178170	237
6099	Non Participating	34	32	34	4	569194	178188	237
6100	Non Participating	35	33	35	4	569960	177739	235
6101	Non Participating	34	33	35	4	569962	177780	234
6102	Non Participating	34	33	35	4	569964	177806	234
6103	Non Participating	34	33	35	4	569964	177834	234
6104	Non Participating	34	33	34	4	569963	177857	234
6105	Non Participating	34	32	34	4	569962	177874	235
6106	Non Participating	34	32	34	4	569962	177890	235
6107	Non Participating	34	32	34	4	569962	177910	235
6108	Non Participating	34	32	34	4	569867	178041	236
6109	Non Participating	34	32	34	4	569862	178012	235
6110	Non Participating	34	32	34	4	569856	177985	235
6111	Non Participating	34	32	34	4	569859	177958	235
6112	Non Participating	34	32	34	4	569861	177927	235
6113	Non Participating	34	33	35	4	570050	177760	236
6114	Non Participating	34	33	34	4	570053	177799	236
6115	Non Participating	34	32	34	4	570050	177823	236
6116	Non Participating	34	32	34	4	570048	177854	236
6117	Non Participating	34	32	34	4	570047	177871	236
6118	Non Participating	34	32	34	4	570048	177893	237
6119	Non Participating	34	32	34	4	570048	177910	237
6120	Non Participating	34	32	34	4	570048	177925	237
6121	Non Participating	34	32	34	4	570017	177928	235
6122	Non Participating	34	32	34	4	570004	177914	235
6123	Non Participating	34	32	34	4	570003	177882	235
6124	Non Participating	34	32	34	4	570004	177857	234
6125	Non Participating	34	33	34	4	570004	177838	234
6126	Non Participating	34	33	35	4	570006	177812	234
6127	Non Participating	34	33	35	4	570012	177791	234
6128	Non Participating	34	33	35	4	570013	177768	234
6129	Non Participating	35	33	35	4	570018	177719	235

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6130	Non Participating	35	33	35	4	570012	177693	235
6131	Non Participating	33	32	34	4	569763	178129	237
6132	Non Participating	33	32	34	4	569814	178147	236
6133	Non Participating	33	32	33	4	569860	178147	236
6134	Non Participating	37	35	37	4	569703	177400	238
6135	Non Participating	34	32	34	4	570980	177351	237
6136	Non Participating	33	31	33	4	571046	177478	236
6137	Non Participating	33	31	33	4	571033	177477	237
6138	Non Participating	33	31	33	4	570973	177478	238
6139	Non Participating	33	31	33	4	570996	177497	237
6140	Non Participating	33	31	33	4	570997	177509	237
6141	Non Participating	33	31	33	4	571018	177538	238
6142	Non Participating	32	30	33	4	571053	177544	237
6143	Non Participating	33	31	33	4	571002	177477	237
6144	Non Participating	32	31	33	4	571063	177602	237
6145	Non Participating	32	31	33	4	571085	177602	236
6146	Non Participating	32	30	32	4	571121	177605	236
6147	Non Participating	31	30	32	4	571171	177592	234
6148	Non Participating	32	30	32	4	571197	177601	233
6149	Non Participating	33	31	33	4	570352	177980	236
6150	Non Participating	33	31	33	4	570374	177975	235
6151	Non Participating	33	31	33	4	570414	177977	233
6152	Non Participating	33	31	33	4	570432	177973	233
6153	Non Participating	32	31	33	4	570450	177970	233
6154	Non Participating	32	31	33	4	570471	177966	233
6155	Non Participating	32	30	32	4	570489	177950	233
6156	Non Participating	32	30	32	4	570511	177936	234
6157	Non Participating	32	30	33	4	570523	177916	235
6158	Non Participating	36	34	36	4	569904	177477	235
6159	Non Participating	36	34	36	4	569907	177499	235
6160	Non Participating	39	38	39	4	569497	177118	238
6161	Non Participating	36	35	36	4	569763	177535	236
6162	Non Participating	32	30	32	4	570390	178272	233
6163	Non Participating	32	30	32	4	570368	178249	233
6164	Non Participating	32	30	32	4	570394	178220	233
6165	Non Participating	32	30	32	4	570409	178215	233
6166	Non Participating	32	30	32	4	570431	178215	234
6167	Non Participating	32	30	32	4	570456	178208	234

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6168	Non Participating	32	30	32	4	570486	178197	233
6169	Non Participating	33	31	33	4	570092	178139	236
6170	Non Participating	32	30	32	4	570110	178135	236
6171	Non Participating	31	30	32	4	570160	178152	235
6172	Non Participating	32	30	32	4	570201	178153	236
6173	Non Participating	31	29	31	4	570267	178183	235
6174	Non Participating	33	31	33	4	570270	178067	237
6175	Non Participating	32	31	33	4	570293	178082	237
6176	Non Participating	33	31	33	4	570295	178058	237
6177	Non Participating	33	31	33	4	570301	178026	237
6178	Non Participating	33	31	33	4	570301	178011	237
6179	Non Participating	33	31	33	4	570245	177973	238
6198	Non Participating	28	26	29	4	571099	178889	233
6199	Non Participating	29	27	29	4	571027	178845	235
6200	Non Participating	29	27	29	4	570995	178826	235
6201	Non Participating	29	27	29	4	570976	178807	235
6202	Non Participating	28	26	28	4	571937	178225	232
6203	Non Participating	29	27	29	4	571953	178243	231
6204	Non Participating	29	27	29	4	572006	178284	232
6205	Non Participating	28	26	28	4	572072	178310	232
6206	Non Participating	28	26	28	4	572085	178329	232
6207	Non Participating	28	26	28	4	572135	178357	232
6208	Non Participating	28	26	28	4	572233	178385	234
6209	Non Participating	28	26	28	4	572258	178395	234
6210	Non Participating	28	26	28	4	572302	178423	235
6211	Non Participating	28	26	28	4	570819	179009	235
6212	Non Participating	29	27	29	4	570778	178990	235
6213	Non Participating	28	26	28	4	571121	179217	233
6214	Non Participating	28	26	28	4	571118	179173	233
6215	Non Participating	28	26	28	4	571231	179025	233
6216	Non Participating	28	26	28	4	571360	178886	233
6217	Non Participating	28	26	28	4	571370	178861	233
6218	Non Participating	28	26	28	4	571386	178842	233
6219	Non Participating	28	26	28	4	571341	178895	233
6220	Non Participating	28	26	28	4	571310	178930	233
6221	Non Participating	28	26	28	4	571291	178962	233
6222	Non Participating	28	26	28	4	571234	179069	233
6223	Non Participating	28	26	28	4	571219	179091	233
6224	Non Participating	28	26	28	4	571181	179154	232

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6241	Non Participating	27	26	27	4	572390	178486	234
6242	Non Participating	28	26	28	4	572315	178458	234
6243	Non Participating	28	26	28	4	572113	178395	231
6244	Non Participating	29	27	29	4	571984	178335	232
6245	Non Participating	27	25	27	4	571578	178914	230
6246	Non Participating	28	26	28	4	571612	178858	228
6247	Non Participating	27	25	27	4	570447	179560	237
6248	Non Participating	28	26	28	4	570400	179485	238
6249	Non Participating	28	26	28	4	570359	179428	234
6250	Non Participating	28	26	28	4	570315	179340	233
6251	Non Participating	28	26	28	4	570289	179308	233
6252	Non Participating	28	26	28	4	570261	179277	234
6253	Non Participating	28	26	29	4	570252	179267	235
6254	Non Participating	27	25	27	4	570204	179374	236
6255	Non Participating	26	24	26	4	570192	179399	235
6256	Non Participating	24	22	24	4	570211	179444	233
6257	Non Participating	28	25	28	4	570274	179478	232
6258	Non Participating	28	26	28	4	570283	179513	232
6259	Non Participating	27	25	27	4	570299	179651	233
6260	Non Participating	29	27	29	4	570759	178996	235
6261	Non Participating	29	27	29	4	570847	179006	235
6278	Non Participating	32	30	32	4	569943	178420	238
6279	Non Participating	32	30	32	4	569940	178467	239
6280	Non Participating	31	29	31	4	569940	178546	239
6281	Non Participating	30	28	30	4	569933	178565	238
6282	Non Participating	30	28	31	4	569848	178643	238
6283	Non Participating	32	30	32	4	569852	178543	240
6284	Non Participating	32	30	32	4	569855	178508	240
6285	Non Participating	32	30	32	4	569861	178451	240
6286	Non Participating	32	30	32	4	569864	178420	240
6287	Non Participating	32	31	33	4	569877	178325	237
6288	Non Participating	33	31	33	4	569883	178294	237
6289	Non Participating	33	31	33	4	569886	178256	237
6290	Non Participating	25	23	25	4	561830	177213	244
6291	Non Participating	27	26	28	4	562568	177178	242
6292	Non Participating	27	26	27	4	562551	177223	241
6293	Non Participating	26	25	26	4	562104	176660	242
6294	Non Participating	26	24	26	4	562046	176552	243

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6295	Non Participating	26	24	25	4	561806	176567	244
6296	Non Participating	45	44	45	4	569905	175891	239
6297	Non Participating	45	44	45	4	569854	175974	241
6298	Non Participating	44	43	44	4	569918	176071	241
6299	Non Participating	24	22	23	4	560206	175482	244
6300	Non Participating	25	24	25	4	560660	175030	247
6301	Non Participating	26	24	25	4	560812	175024	247
6302	Non Participating	25	24	25	4	560895	175025	246
6303	Non Participating	26	24	25	4	561013	175024	246
6304	Non Participating	26	24	25	4	561205	175081	246
6305	Non Participating	26	24	26	4	561690	175041	246
6306	Non Participating	25	23	25	4	561646	175032	245
6307	Non Participating	26	25	26	4	561792	174959	245
6308	Non Participating	26	24	26	4	561520	174955	244
6309	Non Participating	22	20	22	4	551380	176785	210
6310	Non Participating	23	21	22	4	551312	176716	211
6311	Non Participating	22	21	22	4	551480	176909	210
6312	Non Participating	23	21	23	4	550786	176653	211
6313	Non Participating	23	21	22	4	550916	176777	210
6314	Non Participating	20	18	20	4	550870	176942	209
6315	Non Participating	23	21	22	4	551139	176715	210
6316	Non Participating	25	24	25	4	550968	175753	212
6317	Non Participating	24	23	24	4	551163	176130	211
6318	Non Participating	23	21	23	4	550270	176164	211
6319	Non Participating	23	21	23	4	550467	175749	210
6320	Non Participating	26	24	26	4	550967	175570	214
6321	Non Participating	22	20	22	4	551109	176403	211
6322	Non Participating	23	21	22	4	556827	176318	228
6323	Non Participating	22	20	22	4	556671	176158	228
6324	Non Participating	23	22	23	4	556620	176075	227
6325	Non Participating	20	18	20	4	556439	175986	226
6326	Non Participating	24	23	24	4	556325	175769	228
6327	Non Participating	25	24	25	4	557565	175012	235
6328	Non Participating	23	21	23	4	557641	175009	236
6329	Non Participating	25	23	25	4	557702	175010	238
6330	Non Participating	24	22	24	4	557771	175013	239
6331	Non Participating	26	24	25	4	557785	174956	240
6332	Non Participating	26	25	26	4	557647	174838	241
6333	Non Participating	26	24	26	4	557362	174848	236

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6334	Non Participating	26	24	26	4	557362	174805	236
6335	Non Participating	26	24	26	4	557425	174848	237
6336	Non Participating	25	23	25	4	557433	174890	236
6337	Non Participating	25	23	24	4	557368	174954	234
6338	Non Participating	26	24	26	4	557371	175014	234
6339	Non Participating	26	24	25	4	557425	174999	234
6340	Non Participating	25	23	24	4	555945	175350	228
6341	Non Participating	25	24	25	4	555984	175408	228
6342	Participating	25	24	25	4	556031	175451	228
6343	Non Participating	20	18	20	4	556439	175131	228
6344	Non Participating	25	24	25	4	556855	175121	230
6345	Non Participating	30	29	30	4	553061	174259	221
6346	Non Participating	29	27	28	4	554835	174222	227
6347	Non Participating	27	26	27	4	554899	174264	224
6348	Non Participating	28	27	28	4	554993	174256	226
6349	Non Participating	27	25	27	4	554944	174420	227
6350	Non Participating	27	25	27	4	554995	174454	228
6351	Non Participating	27	25	26	4	555238	174634	229
6352	Non Participating	27	25	27	4	555938	174576	228
6353	Non Participating	28	26	28	4	557000	174225	240
6354	Non Participating	28	26	28	4	557178	174376	241
6355	Non Participating	27	25	27	4	556790	174177	238
6356	Non Participating	28	26	28	4	556706	174053	238
6357	Non Participating	28	26	28	4	556677	174035	238
6358	Non Participating	28	26	28	4	550223	174879	213
6359	Non Participating	28	26	28	4	550357	174946	214
6360	Non Participating	27	26	27	4	550231	175013	213
6361	Non Participating	28	26	28	4	550831	174982	214
6362	Non Participating	27	25	27	4	550697	175282	214
6363	Non Participating	27	25	27	4	549406	174934	212
6364	Non Participating	27	25	27	4	549581	175009	212
6365	Non Participating	26	24	26	4	548706	174976	212
6366	Non Participating	25	24	25	4	548593	174979	211
6367	Non Participating	27	26	27	4	548743	174440	214
6368	Non Participating	27	26	28	4	548731	174381	214
6369	Non Participating	28	26	28	4	548742	174342	214
6370	Non Participating	28	27	28	4	548762	174163	213
6371	Non Participating	27	26	27	4	548489	174304	215

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6372	Non Participating	26	24	26	4	548363	174355	214
6373	Non Participating	27	26	27	4	548483	174310	214
6374	Non Participating	26	24	26	4	548696	174840	212
6375	Non Participating	27	26	27	4	548485	174309	214
6376	Non Participating	26	24	25	4	561110	174731	245
6377	Non Participating	29	27	29	4	563724	173706	247
6378	Non Participating	28	27	28	4	561149	173289	247
6379	Non Participating	29	28	29	4	561474	172694	251
6380	Non Participating	29	28	29	4	560047	173315	245
6381	Non Participating	30	29	30	4	560077	172794	246
6382	Non Participating	30	29	30	4	560133	172809	246
6383	Non Participating	31	29	31	4	560065	172490	247
6384	Non Participating	31	30	31	4	560068	172411	247
6385	Non Participating	34	33	34	4	558455	172586	244
6386	Non Participating	33	32	33	4	557645	172936	246
6387	Non Participating	33	32	33	4	557586	172955	245
6388	Non Participating	33	31	33	4	557579	172981	245
6389	Non Participating	33	31	33	4	557581	173006	245
6390	Non Participating	33	31	32	4	557590	173045	245
6391	Non Participating	32	31	32	4	557592	173077	244
6392	Non Participating	32	31	32	4	557647	173045	244
6393	Non Participating	32	31	32	4	557654	173086	244
6394	Non Participating	29	28	29	4	556009	173138	237
6395	Non Participating	29	27	29	4	555969	173130	236
6396	Non Participating	28	27	28	4	555957	173130	236
6397	Non Participating	28	26	28	4	555933	173127	235
6398	Non Participating	27	26	27	4	555936	173107	236
6399	Non Participating	28	27	28	4	555957	173108	236
6400	Non Participating	30	28	30	4	555983	173107	238
6401	Non Participating	31	29	31	4	556009	173108	239
6402	Non Participating	31	29	31	4	556021	173115	239
6403	Non Participating	31	29	31	4	555917	173075	239
6404	Non Participating	31	29	31	4	555916	173058	239
6405	Non Participating	32	30	32	4	555916	173044	240
6406	Non Participating	31	29	31	4	555921	173019	240
6407	Non Participating	32	31	32	4	556042	172972	242
6408	Non Participating	32	31	32	4	556041	172982	242
6409	Non Participating	32	31	32	4	556041	172997	242
6410	Non Participating	31	29	32	4	556041	173008	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6411	Non Participating	31	29	31	4	556041	173020	241
6412	Non Participating	31	29	31	4	556058	173020	240
6413	Non Participating	31	29	31	4	556058	173003	241
6414	Non Participating	32	31	32	4	556058	172997	242
6415	Non Participating	32	31	32	4	556058	172985	242
6416	Non Participating	32	31	32	4	556057	172977	242
6417	Non Participating	32	31	32	4	556056	172969	242
6418	Non Participating	32	31	32	4	556055	172953	242
6419	Non Participating	32	31	32	4	556055	172937	241
6420	Non Participating	32	31	32	4	556055	172927	241
6421	Non Participating	32	31	32	4	556087	172976	242
6422	Non Participating	32	31	32	4	556086	172986	242
6423	Non Participating	32	30	32	4	556017	173043	241
6424	Non Participating	32	31	32	4	556000	173043	241
6425	Non Participating	31	29	31	4	556074	173150	238
6426	Non Participating	27	25	26	4	556033	173170	232
6427	Participating	31	30	31	4	554563	173082	228
6428	Participating	31	30	31	4	554519	173167	229
6429	Non Participating	31	30	31	4	554310	173106	226
6430	Non Participating	34	33	34	4	553550	173013	228
6431	Non Participating	34	33	34	4	553633	172914	226
6432	Non Participating	33	32	34	4	553639	172938	226
6433	Non Participating	43	43	43	4	551826	172685	220
6434	Non Participating	42	42	42	4	551837	172745	220
6435	Non Participating	42	42	42	4	551813	172778	220
6436	Participating	41	41	41	4	551833	172832	220
6437	Participating	41	41	41	4	551837	172855	220
6438	Non Participating	40	40	40	4	551826	172914	220
6439	Non Participating	39	38	39	4	551819	173043	219
6440	Non Participating	38	37	38	4	551895	173166	219
6441	Non Participating	36	35	36	4	550977	173263	218
6442	Non Participating	35	34	36	4	549710	173323	216
6443	Non Participating	37	36	37	4	555213	171486	241
6444	Non Participating	38	37	38	4	555161	171067	243
6445	Non Participating	36	35	36	4	553671	171316	239
6446	Non Participating	36	35	36	4	553518	171159	239
6447	Non Participating	36	35	36	4	553561	171193	239
6448	Non Participating	36	35	36	4	553545	171231	239

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6449	Non Participating	36	35	36	4	553498	171135	239
6450	Non Participating	36	35	36	4	553474	171179	238
6451	Non Participating	36	35	36	4	553475	171098	238
6452	Non Participating	37	35	37	4	553352	171040	238
6453	Non Participating	36	34	36	4	553622	171019	240
6454	Non Participating	38	37	38	4	553331	171492	235
6455	Non Participating	37	36	37	4	553461	171578	234
6456	Non Participating	36	34	36	4	555130	171687	241
6457	Non Participating	38	37	38	4	556349	171909	243
6458	Non Participating	38	36	38	4	556277	171896	243
6459	Non Participating	36	35	36	4	555435	171826	243
6460	Non Participating	38	37	38	4	556538	171930	243
6461	Non Participating	37	36	37	4	555921	171886	242
6462	Non Participating	37	36	37	4	555543	171782	242
6463	Non Participating	38	37	38	4	556211	171805	239
6464	Non Participating	38	37	38	4	556050	171794	241
6465	Non Participating	35	34	36	4	555139	171786	242
6466	Non Participating	41	40	41	4	557591	171742	246
6467	Participating	42	41	42	4	557968	171675	246
6468	Non Participating	40	39	40	4	557777	171840	245
6469	Non Participating	34	32	34	4	558604	172448	244
6470	Non Participating	36	35	36	4	558529	172148	245
6471	Non Participating	40	39	40	4	558270	171772	245
6472	Non Participating	37	35	37	4	558856	171768	247
6473	Non Participating	34	33	34	4	559507	171807	249
6474	Non Participating	33	32	33	4	548246	170125	219
6475	Non Participating	32	31	32	4	548019	170194	220
6476	Non Participating	36	35	36	4	548600	170040	221
6477	Participating	43	42	43	4	549194	170130	223
6478	Non Participating	45	44	45	4	550211	170565	226
6479	Non Participating	44	44	45	4	550232	170643	224
6480	Non Participating	44	43	44	4	550208	170720	226
6481	Non Participating	43	42	43	4	550160	170804	227
6482	Non Participating	43	42	43	4	550164	170860	226
6483	Non Participating	45	44	45	4	550018	170156	227
6484	Non Participating	38	37	39	4	551875	170593	230
6485	Non Participating	36	34	36	4	552763	170380	239
6486	Non Participating	36	35	36	4	552815	170439	240
6487	Non Participating	35	34	36	4	552662	170268	239

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6488	Non Participating	35	34	35	4	552544	170136	240
6489	Non Participating	35	33	35	4	553492	170653	243
6490	Participating	36	35	36	4	554096	170142	242
6491	Non Participating	37	36	37	4	554291	170277	243
6492	Non Participating	32	30	32	4	552135	168626	242
6493	Non Participating	31	30	31	4	552075	168630	242
6494	Non Participating	34	33	34	4	553611	169077	245
6495	Participating	34	33	34	4	553802	168606	244
6496	Non Participating	36	35	36	4	554221	168831	244
6497	Non Participating	38	37	38	4	554720	168602	245
6498	Non Participating	40	39	40	4	555001	168573	245
6499	Non Participating	43	42	43	4	555252	168834	245
6500	Non Participating	46	45	46	4	555288	169172	242
6501	Non Participating	42	41	42	4	555184	168699	244
6502	Non Participating	42	41	42	4	555305	168591	241
6503	Non Participating	41	40	41	4	555158	168573	243
6504	Non Participating	40	40	41	4	555180	168483	244
6505	Non Participating	31	29	31	4	551868	169369	225
6506	Non Participating	34	32	34	4	551798	169460	234
6507	Non Participating	35	34	35	4	551794	169550	236
6508	Non Participating	34	33	35	4	551650	169306	236
6509	Non Participating	33	32	33	4	551694	169274	236
6510	Non Participating	38	37	38	4	550167	169548	224
6511	Non Participating	37	36	38	4	550181	169369	230
6512	Non Participating	40	39	40	4	549529	169645	221
6513	Non Participating	38	37	39	4	549247	169641	225
6514	Non Participating	36	34	36	4	549206	169336	222
6515	Non Participating	35	34	35	4	549049	169320	227
6516	Non Participating	35	33	35	4	548959	169318	227
6517	Non Participating	32	31	32	4	548255	169610	220
6518	Non Participating	32	30	32	4	548251	169543	218
6519	Non Participating	31	30	32	4	548221	169419	221
6520	Non Participating	31	29	31	4	548195	169317	222
6521	Non Participating	30	29	31	4	548079	169321	222
6522	Non Participating	31	30	32	4	548422	169249	222
6523	Participating	39	38	39	4	559188	168574	253
6524	Participating	39	38	39	4	559095	168580	254
6525	Non Participating	40	39	40	4	558464	168529	254

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6526	Non Participating	40	39	40	4	558413	168532	253
6527	Non Participating	37	36	38	4	560007	168563	256
6528	Non Participating	38	37	38	4	559735	168591	258
6529	Participating	38	37	38	4	559618	168577	257
6530	Participating	38	37	38	4	559531	168352	254
6531	Participating	37	36	37	4	560126	168580	257
6532	Participating	38	37	38	4	559990	168044	255
6533	Non Participating	39	38	40	4	560049	167559	261
6534	Non Participating	41	40	41	4	558383	168168	254
6535	Non Participating	45	45	45	4	556776	167767	251
6536	Non Participating	46	46	46	4	556875	167825	251
6537	Participating	44	44	44	4	556801	167567	250
6538	Non Participating	38	38	38	4	555188	167947	245
6539	Participating	38	37	38	4	555175	167778	245
6540	Non Participating	32	31	32	4	553560	168008	244
6541	Participating	32	31	32	4	555257	165838	255
6542	Non Participating	33	32	33	4	556035	165169	259
6543	Non Participating	31	30	31	4	554929	165679	254
6544	Non Participating	31	29	30	4	554920	165238	256
6545	Non Participating	29	28	29	4	554579	165299	255
6546	Participating	32	31	32	4	555259	165845	255
6547	Non Participating	29	28	29	4	554054	165241	255
6548	Non Participating	29	28	29	4	554172	165164	255
6549	Non Participating	28	27	28	4	553908	165134	254
6550	Non Participating	29	27	28	4	553748	165243	253
6551	Non Participating	27	25	27	4	553492	165247	251
6552	Non Participating	27	25	26	4	553433	165252	250
6553	Non Participating	28	27	28	4	553492	165355	251
6556	Non Participating	30	29	30	4	553568	166769	246
6557	Non Participating	28	27	28	4	553355	165892	248
6558	Non Participating	37	36	37	4	556822	166044	253
6559	Non Participating	37	36	37	4	556815	166000	254
6560	Non Participating	38	37	38	4	556966	166007	252
6561	Non Participating	38	38	39	4	557128	166064	255
6562	Non Participating	41	40	41	4	557511	166127	251
6563	Participating	41	41	41	4	557692	166011	259
6564	Non Participating	37	37	37	4	556722	166181	255
6565	Participating	37	37	38	4	556865	166123	255
6566	Non Participating	43	42	43	4	559239	166123	262

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6567	Non Participating	43	42	43	4	559185	166117	262
6568	Non Participating	44	44	45	4	559041	166125	262
6569	Non Participating	42	41	43	4	559353	166155	261
6570	Participating	42	41	42	4	559353	166028	263
6571	Participating	46	46	46	4	558417	166237	262
6572	Non Participating	34	33	34	4	556766	165006	261
6573	Non Participating	33	32	33	4	556372	165026	259
6574	Non Participating	39	38	40	4	558436	165120	264
6575	Non Participating	39	38	39	4	558505	164743	267
6576	Non Participating	38	36	38	4	558244	164514	266
6577	Non Participating	38	37	38	4	558401	164500	266
6578	Non Participating	37	36	37	4	558194	164434	264
6579	Non Participating	36	35	37	4	558148	164377	261
6580	Non Participating	37	35	37	4	558180	164311	260
6581	Non Participating	39	37	39	4	558564	164420	260
6582	Non Participating	40	39	40	4	558635	164874	266
6583	Non Participating	42	41	42	4	559094	164400	267
6584	Non Participating	43	42	43	4	559226	164430	263
6585	Non Participating	43	42	44	4	559257	164431	264
6586	Participating	43	43	44	4	559284	164431	266
6587	Non Participating	44	43	44	4	559333	164413	267
6588	Non Participating	44	43	45	4	559300	164484	267
6589	Non Participating	44	43	44	4	559526	164416	268
6590	Non Participating	34	32	34	4	557485	163437	265
6591	Non Participating	33	32	34	4	557418	163350	266
6592	Non Participating	33	32	33	4	557368	163263	267
6593	Non Participating	33	31	33	4	557320	163204	267
6594	Participating	33	32	33	4	557423	163094	268
6595	Participating	34	32	34	4	557528	163171	268
6596	Non Participating	33	31	33	4	557331	163010	268
6597	Non Participating	38	37	38	4	558405	163332	268
6598	Non Participating	38	37	38	4	558413	163029	267
6599	Non Participating	37	36	38	4	558388	162932	268
6600	Participating	47	46	47	4	559936	163117	271
6601	Non Participating	46	45	46	4	560666	163617	275
6602	Non Participating	43	42	43	4	561633	163721	273
6603	Non Participating	29	28	29	4	555318	164050	252
6604	Non Participating	29	27	29	4	555280	164069	252

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6605	Non Participating	29	28	29	4	555199	164058	253
6606	Non Participating	28	26	27	4	555153	163656	258
6607	Non Participating	28	27	28	4	555439	163689	255
6608	Non Participating	30	28	29	4	555763	163600	260
6621	Non Participating	44	43	44	4	560031	162076	280
6622	Participating	42	41	43	4	559952	162001	279
6623	Participating	42	41	42	4	559846	161990	277
6624	Non Participating	40	39	40	4	559453	162068	274
6625	Non Participating	41	40	42	4	559638	162070	276
6626	Non Participating	39	38	40	4	559348	161996	274
6627	Non Participating	39	37	39	4	559206	161993	278
6628	Non Participating	37	36	37	4	558827	162005	279
6629	Non Participating	38	37	38	4	558964	162066	280
6630	Non Participating	35	34	35	4	558331	162096	274
6631	Non Participating	31	29	30	4	557088	162003	272
6632	Non Participating	28	26	29	4	557024	161981	271
6633	Non Participating	30	29	30	4	557010	162054	272
6634	Non Participating	29	28	29	4	556943	162067	271
6635	Non Participating	31	29	31	4	557064	162066	271
6636	Non Participating	31	30	31	4	557222	162072	273
6637	Non Participating	31	29	31	4	557241	162009	272
6638	Non Participating	31	29	31	4	557169	162005	273
6690	Non Participating	38	37	38	4	558938	162087	279
6691	Non Participating	32	31	33	4	558252	161520	273
6692	Non Participating	36	35	36	4	561387	161378	286
6693	Non Participating	35	33	35	4	561550	161173	286
6700	Non Participating	25	23	25	4	563160	160899	219
6722	Non Participating	27	25	27	4	559890	160961	241
6723	Non Participating	29	27	29	4	559935	161034	267
6737	Non Participating	31	29	31	4	563717	178396	243
6738	Non Participating	31	29	31	4	563658	178364	242
6739	Non Participating	31	29	31	4	563595	178311	242
6740	Non Participating	30	29	30	4	563598	178546	243
6741	Non Participating	34	32	34	4	564258	178364	240
6742	Non Participating	33	31	33	4	564304	178678	242
6743	Non Participating	33	32	33	4	564476	178785	240
6744	Non Participating	33	32	34	4	564661	178879	241
6745	Non Participating	38	36	38	4	565711	178637	241
6746	Non Participating	39	37	39	4	566117	178374	240

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6747	Non Participating	40	39	40	4	566076	178316	241
6748	Non Participating	39	38	39	4	565818	178453	240
6749	Non Participating	33	31	33	4	566468	179351	240
6750	Non Participating	30	29	31	4	566609	179746	235
6751	Non Participating	30	28	30	4	566621	179920	235
6752	Non Participating	30	28	30	4	566614	179959	235
6753	Non Participating	30	28	30	4	566611	180017	234
6754	Non Participating	29	28	30	4	567079	179983	236
6755	Non Participating	31	29	31	4	567429	179477	239
6756	Non Participating	33	32	34	4	565864	179286	241
6757	Non Participating	33	31	33	4	565789	179283	242
6758	Non Participating	33	32	33	4	565709	179260	242
6759	Non Participating	33	32	34	4	565629	179238	241
6760	Non Participating	33	32	34	4	565498	179231	240
6761	Non Participating	33	32	34	4	565183	179124	241
6762	Non Participating	33	32	34	4	564874	179037	241
6763	Non Participating	34	32	34	4	564919	178950	241
6764	Non Participating	34	32	34	4	564995	178981	241
6765	Non Participating	34	33	34	4	565062	178993	241
6766	Non Participating	34	33	35	4	565006	178911	241
6767	Non Participating	35	33	35	4	564956	178833	242
6768	Non Participating	21	20	21	4	560759	178279	233
6769	Non Participating	18	16	18	4	560846	179565	229
6770	Non Participating	15	13	15	4	560792	179526	230
6771	Non Participating	14	12	14	4	560739	179489	227
6772	Non Participating	15	12	14	4	560684	179460	227
6773	Non Participating	15	12	14	4	560664	179513	227
6774	Non Participating	14	12	14	4	560708	179545	227
6775	Non Participating	17	13	16	4	560740	179591	228
6776	Non Participating	15	12	15	4	560819	179651	228
6777	Non Participating	15	13	15	4	560887	179683	228
6778	Non Participating	16	13	16	4	560923	179715	229
6779	Non Participating	17	14	17	4	560964	179743	229
6780	Non Participating	17	15	17	4	561010	179777	228
6781	Non Participating	18	15	18	4	561039	179797	228
6782	Non Participating	15	13	15	4	561069	179821	227
6783	Non Participating	21	19	20	4	560967	179668	232
6784	Non Participating	21	19	20	4	560923	179613	232

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
6785	Non Participating	20	18	19	4	560582	179468	227
6786	Non Participating	17	15	16	4	554749	178356	212
6787	Non Participating	13	11	12	4	554863	178265	214
6788	Non Participating	14	12	13	4	553669	179322	207
6789	Non Participating	11	9	11	4	553788	179311	207
6790	Non Participating	14	12	13	4	553798	179264	208
6791	Non Participating	15	14	14	4	553798	179173	208
6792	Non Participating	16	14	15	4	553774	179061	209
6793	Non Participating	16	14	15	4	553749	178920	209
6794	Non Participating	16	15	15	4	553749	178824	210
6795	Non Participating	18	16	17	4	554216	178292	213
6796	Non Participating	13	11	13	4	554349	178289	212
6797	Non Participating	17	14	16	4	554141	178390	213
6798	Non Participating	18	16	17	4	553979	178299	211
6799	Non Participating	0	0	0	4	556114	179480	217
6800	Non Participating	0	0	0	4	556066	179490	216
6801	Non Participating	0	0	0	4	556039	179504	216
6802	Non Participating	16	14	15	4	555405	178321	217
6803	Non Participating	15	14	14	4	555461	178318	218
6804	Non Participating	18	16	17	4	555303	178407	219
6805	Non Participating	18	16	17	4	555318	178492	219
6806	Non Participating	15	13	14	4	555269	178320	218
6807	Non Participating	18	16	17	4	555153	178350	219
6808	Non Participating	17	15	16	4	555022	178364	218
6809	Non Participating	17	15	16	4	554959	178349	215
6810	Non Participating	18	15	17	4	554829	178354	214
6811	Non Participating	19	17	18	4	554783	178359	213
6812	Non Participating	18	16	17	4	554834	178415	214
6813	Non Participating	17	15	16	4	554781	178500	214
6814	Non Participating	17	15	16	4	554848	178553	214
6815	Non Participating	16	13	16	4	554906	178603	213
6816	Non Participating	17	15	16	4	554792	178577	214
8374	Non Participating	22	20	21	4	559688	176541	244
8669	Non Participating	31	30	31	4	553808	167022	247
8823	Non Participating	29	27	29	4	556930	161746	272
8824	Non Participating	29	28	29	4	556910	161724	272
9035	Non Participating	35	34	35	4	551312	173455	216
9036	Non Participating	35	34	35	4	551242	173452	217
9037	Non Participating	35	34	35	4	551169	173437	218

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9038	Non Participating	35	34	35	4	551203	173458	217
9039	Non Participating	35	34	35	4	550941	173418	218
9048	Non Participating	35	34	35	4	551410	173476	217
9049	Non Participating	34	33	34	4	551914	173642	219
9050	Non Participating	35	34	35	4	551835	173484	219
9051	Non Participating	35	34	35	4	551863	173552	219
9056	Non Participating	30	29	30	4	554286	173699	227
9063	Non Participating	30	28	30	4	553401	173921	220
9076	Participating	30	28	30	4	556167	173688	237
9077	Non Participating	29	27	29	4	556313	173602	233
9083	Participating	30	28	30	4	556237	173678	236
9084	Non Participating	25	23	25	4	556255	173487	229
9086	Non Participating	29	27	29	4	556708	173867	239
9087	Non Participating	29	27	29	4	556562	173847	240
9088	Non Participating	29	27	28	4	556525	173817	240
9092	Non Participating	30	29	30	4	556705	173643	235
9093	Participating	27	26	27	4	556513	173581	229
9094	Non Participating	30	28	30	4	556549	173714	239
9095	Non Participating	25	23	25	4	556606	173534	230
9098	Non Participating	29	27	29	4	557577	173407	241
9099	Non Participating	29	27	29	4	557598	173413	240
9100	Non Participating	31	29	31	4	557429	173406	243
9101	Non Participating	31	29	31	4	557462	173387	242
9116	Non Participating	29	27	29	4	557414	173460	240
9117	Non Participating	28	26	28	4	557395	173466	238
9118	Non Participating	31	29	30	4	557351	173474	241
9119	Non Participating	31	29	30	4	557310	173481	243
9120	Non Participating	31	29	31	4	557265	173478	243
9121	Non Participating	30	28	30	4	557441	173555	240
9137	Non Participating	31	30	31	4	557289	173414	242
9138	Non Participating	31	29	31	4	557252	173432	244
9148	Non Participating	31	29	31	4	556967	173500	243
9149	Non Participating	28	26	28	4	557010	173609	239
9150	Non Participating	29	28	29	4	556889	173644	240
9155	Non Participating	28	27	29	4	556857	173411	238
9156	Non Participating	30	29	30	4	556914	173444	241
9157	Non Participating	30	29	30	4	556823	173514	237
9158	Non Participating	29	28	29	4	557397	173866	238

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9160	Non Participating	29	27	29	4	558580	173850	242
9162	Non Participating	29	28	29	4	559635	173515	245
9169	Non Participating	30	29	30	4	558383	173395	244
9170	Non Participating	30	28	30	4	558148	173471	245
9171	Non Participating	30	28	30	4	558407	173548	243
9176	Non Participating	28	27	28	4	558568	173627	244
9181	Non Participating	30	28	30	4	558730	173439	244
9182	Non Participating	30	28	29	4	559153	173382	245
9186	Non Participating	28	27	28	4	560158	173570	245
9187	Non Participating	28	27	28	4	560656	173457	245
9481	Non Participating	31	30	31	4	564878	161948	280
9520	Non Participating	45	45	45	4	563304	164989	267
9529	Non Participating	44	44	44	4	564578	165072	273
9530	Non Participating	37	35	37	4	566481	165092	271
9531	Non Participating	37	35	37	4	568093	165105	271
9535	Non Participating	37	36	37	4	568099	165143	271
9537	Non Participating	37	35	37	4	568282	165152	269
9539	Non Participating	43	42	43	4	568635	165961	267
9540	Non Participating	45	44	45	4	567373	165965	266
9542	Non Participating	39	38	39	4	565997	165986	269
9545	Non Participating	43	42	43	4	564595	166000	268
9546	Non Participating	41	40	41	4	564886	166000	267
9547	Non Participating	43	42	44	4	568157	166027	269
9548	Non Participating	44	43	44	4	568624	166031	267
9550	Non Participating	43	42	43	4	563143	166504	264
9552	Non Participating	43	42	43	4	563254	166526	264
9553	Non Participating	43	42	43	4	563287	166529	262
9554	Non Participating	43	42	43	4	563251	166562	264
9555	Non Participating	43	42	43	4	563212	166563	265
9556	Non Participating	43	42	43	4	563253	166574	264
9558	Non Participating	43	42	43	4	563212	166597	264
9561	Participating	45	44	45	4	566433	166618	268
9562	Non Participating	43	42	43	4	563264	166642	263
9565	Non Participating	43	42	43	4	563208	166694	262
9569	Non Participating	43	43	44	4	567665	167532	262
9571	Non Participating	44	43	44	4	567525	167544	262
9572	Non Participating	39	38	39	4	569386	167548	260
9574	Non Participating	45	44	45	4	567320	167550	261
9575	Non Participating	44	43	44	4	567553	167550	262

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9576	Non Participating	41	40	41	4	565826	167551	262
9578	Non Participating	41	40	42	4	566527	168183	258
9579	Participating	44	44	45	4	563293	168203	260
9584	Non Participating	43	42	43	4	568058	168278	262
9587	Non Participating	43	42	43	4	568062	168316	262
9588	Non Participating	42	41	42	4	566442	168318	260
9593	Non Participating	42	41	42	4	566469	168397	260
9594	Non Participating	36	35	37	4	569698	168410	260
9595	Non Participating	40	39	40	4	562798	168447	261
9596	Non Participating	40	39	40	4	562796	168456	261
9598	Non Participating	30	29	31	4	570674	169078	260
9599	Non Participating	31	29	31	4	570653	169078	260
9600	Non Participating	34	32	34	4	569725	169086	255
9603	Participating	37	36	38	4	567497	169112	259
9604	Non Participating	32	30	32	4	570351	169124	261
9605	Participating	34	32	34	4	569815	169127	259
9606	Non Participating	32	30	32	4	570326	169131	261
9607	Non Participating	32	30	32	4	570209	169270	261
9608	Non Participating	46	45	46	4	565554	169272	260
9609	Non Participating	36	35	36	4	562227	169273	258
9610	Non Participating	32	30	32	4	570281	169276	260
9611	Non Participating	36	35	36	4	562296	169278	258
9612	Non Participating	42	41	42	4	566477	169278	259
9613	Non Participating	32	30	32	4	570184	169279	261
9614	Participating	38	37	38	4	567053	169281	253
9615	Non Participating	36	35	36	4	562145	169281	258
9616	Non Participating	46	45	46	4	565529	169281	260
9617	Non Participating	46	45	46	4	566090	169281	259
9618	Non Participating	32	30	32	4	570221	169282	260
9619	Non Participating	36	35	36	4	562151	169282	258
9620	Non Participating	36	35	36	4	562194	169282	258
9621	Non Participating	32	31	32	4	570122	169283	260
9622	Non Participating	33	32	33	4	569727	169298	258
9623	Non Participating	46	45	46	4	565357	169299	259
9624	Non Participating	46	45	46	4	565390	169299	259
9625	Participating	42	41	41	4	564535	169300	256
9626	Non Participating	38	37	38	4	564252	170132	256
9627	Non Participating	34	32	34	4	562302	170139	255

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9628	Non Participating	36	35	36	4	563682	170145	257
9629	Participating	34	32	33	4	562411	170149	255
9636	Non Participating	31	29	31	4	569187	171021	249
9637	Non Participating	29	27	29	4	571621	171045	250
9638	Non Participating	29	27	29	4	571625	171046	250
9640	Non Participating	27	25	26	4	573007	171104	249
9641	Non Participating	24	22	23	4	573878	171111	250
9642	Non Participating	23	21	23	4	573991	171117	249
9643	Non Participating	35	34	35	4	564993	171119	254
9644	Non Participating	35	34	35	4	565002	171152	254
9645	Non Participating	35	34	35	4	565002	171161	254
9646	Non Participating	31	29	31	4	569839	171162	252
9647	Non Participating	31	29	31	4	569755	171165	252
9648	Non Participating	27	25	27	4	573040	171171	249
9649	Non Participating	25	23	24	4	573927	171171	249
9651	Non Participating	33	31	32	4	563570	171263	254
9653	Non Participating	24	22	24	4	574065	171293	249
9655	Non Participating	31	29	30	4	562101	171683	251
9656	Non Participating	31	29	30	4	562092	171683	251
9657	Non Participating	31	29	30	4	562571	171687	250
9658	Participating	31	29	30	4	562941	171687	252
9659	Participating	33	31	33	4	566506	171689	250
9660	Non Participating	32	30	32	4	567498	171690	247
9661	Non Participating	31	29	30	4	562574	171692	250
9663	Participating	33	32	33	4	565780	171719	250
9664	Non Participating	27	25	27	4	573321	171741	248
9665	Non Participating	33	31	33	4	568419	172400	250
9666	Non Participating	31	30	31	4	564596	172405	248
9668	Non Participating	27	25	27	4	573727	172430	249
9670	Non Participating	34	33	34	4	569880	172443	250
9671	Non Participating	34	33	34	4	569877	172445	250
9672	Non Participating	32	30	32	4	566550	172448	248
9673	Non Participating	30	28	29	4	563368	172485	249
9674	Non Participating	27	25	27	4	573644	172498	248
9675	Non Participating	30	28	29	4	563369	172513	248
9677	Non Participating	31	29	31	4	564928	172524	247
9678	Non Participating	31	29	30	4	564720	172526	248
9680	Non Participating	31	29	31	4	564823	172529	248
9681	Non Participating	31	29	31	4	564824	172532	248

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9682	Non Participating	35	33	35	4	569860	172538	250
9683	Non Participating	32	31	32	4	566644	172554	249
9686	Non Participating	27	26	28	4	573677	173035	248
9687	Non Participating	28	26	28	4	573497	173037	248
9688	Non Participating	28	26	28	4	573504	173037	248
9689	Non Participating	28	27	28	4	573410	173050	248
9690	Non Participating	28	26	28	4	573542	173051	249
9691	Non Participating	28	27	28	4	573419	173058	248
9692	Non Participating	29	27	29	4	573302	173059	247
9695	Non Participating	41	40	41	4	571178	173286	250
9696	Non Participating	30	28	29	4	564252	173286	248
9697	Non Participating	31	29	31	4	565129	173286	249
9698	Non Participating	31	29	31	4	565470	173288	251
9699	Non Participating	29	28	29	4	563789	173298	247
9700	Non Participating	37	35	37	4	568191	173298	248
9702	Non Participating	29	28	29	4	563655	173305	249
9703	Participating	43	42	43	4	570697	173305	249
9704	Non Participating	29	28	29	4	563693	173309	248
9705	Non Participating	29	27	28	4	563388	173310	248
9707	Non Participating	31	30	31	4	565553	173320	251
9708	Non Participating	28	26	28	4	563329	173321	246
9709	Non Participating	29	27	28	4	562881	173323	248
9710	Non Participating	31	29	31	4	565578	173325	251
9711	Non Participating	37	35	37	4	568202	173328	249
9712	Non Participating	32	30	32	4	565766	173329	249
9713	Non Participating	41	40	41	4	571498	173743	249
9715	Non Participating	40	39	41	4	567538	173776	247
9716	Non Participating	41	40	41	4	571508	173794	249
9717	Non Participating	41	40	41	4	571512	173796	249
9718	Participating	32	31	32	4	565966	173802	250
9719	Non Participating	41	40	42	4	569954	173805	248
9720	Participating	42	41	42	4	570013	173805	247
9721	Non Participating	31	29	31	4	565008	173821	248
9722	Participating	40	39	41	4	569811	173843	246
9723	Non Participating	42	41	42	4	569878	174258	248
9725	Non Participating	41	40	42	4	569794	174263	247
9726	Non Participating	43	42	44	4	570010	174267	248
9727	Non Participating	28	27	28	4	563251	174268	246

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9728	Non Participating	42	41	42	4	569827	174270	247
9729	Non Participating	29	27	28	4	563323	174271	246
9730	Non Participating	41	40	42	4	569796	174279	247
9731	Non Participating	42	40	42	4	569805	174291	247
9732	Non Participating	42	41	42	4	569872	174291	248
9733	Non Participating	42	41	42	4	569821	174293	247
9734	Non Participating	41	40	42	4	569793	174299	247
9735	Non Participating	43	42	44	4	570004	174301	248
9736	Non Participating	28	26	27	4	563291	174303	246
9737	Non Participating	42	41	42	4	569839	174307	247
9739	Non Participating	44	43	44	4	571215	174316	246
9741	Non Participating	28	26	28	4	563088	174319	246
9742	Non Participating	37	36	37	4	566801	174654	247
9743	Non Participating	42	41	42	4	569830	174669	245
9744	Non Participating	42	41	43	4	569885	174672	245
9745	Non Participating	37	36	37	4	566835	174673	247
9746	Non Participating	42	41	43	4	569898	174676	245
9747	Non Participating	37	36	37	4	566846	174688	247
9748	Non Participating	36	34	36	4	566586	174689	247
9749	Non Participating	37	35	37	4	566778	174691	246
9750	Non Participating	42	41	43	4	569891	174701	245
9751	Non Participating	37	36	38	4	566869	174708	246
9752	Non Participating	45	45	46	4	570903	174907	245
9753	Non Participating	39	37	39	4	567163	174924	244
9754	Non Participating	30	28	30	4	563797	174938	245
9755	Non Participating	38	37	38	4	567059	174949	245
9756	Non Participating	40	39	41	4	571484	174954	244
9757	Non Participating	39	38	39	4	567193	174962	244
9758	Non Participating	40	39	40	4	571569	174965	244
9759	Non Participating	40	39	41	4	571487	174996	244
9760	Participating	29	27	29	4	563303	175004	245
9761	Non Participating	29	27	28	4	563208	175019	246
9762	Non Participating	40	39	40	4	571581	175020	244
9763	Participating	42	41	42	4	567983	175024	240
9764	Participating	42	41	42	4	567925	175026	239
9765	Participating	42	41	42	4	567954	175041	239
9766	Non Participating	41	39	41	4	571483	175053	244
9767	Non Participating	41	39	41	4	571484	175093	244
9768	Non Participating	31	29	31	4	564225	175104	245

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9769	Non Participating	41	40	41	4	571483	175106	244
9770	Non Participating	31	29	31	4	564230	175115	245
9771	Non Participating	44	44	45	4	569920	175709	237
9772	Non Participating	42	41	43	4	568010	175722	243
9773	Non Participating	45	44	45	4	568231	175896	243
9774	Non Participating	38	37	39	4	566679	175907	244
9775	Non Participating	45	44	45	4	568221	175910	243
9776	Participating	30	28	30	4	563441	175919	245
9777	Non Participating	38	37	39	4	566686	175931	244
9778	Non Participating	44	43	44	4	568171	175982	242
9779	Non Participating	38	37	39	4	571419	175989	243
9780	Non Participating	38	37	38	4	571475	176003	243
9882	Non Participating	38	37	38	4	564510	163643	277
9916	Non Participating	35	34	35	4	564191	177811	241
9917	Non Participating	35	34	36	4	564231	176981	244
9918	Non Participating	36	34	36	4	568928	177981	243
9919	Non Participating	40	39	41	4	569355	177011	238
9920	Non Participating	41	40	41	4	569278	176976	238
9921	Non Participating	45	44	45	4	568874	176607	236
9922	Non Participating	45	44	45	4	568618	176538	240
9923	Non Participating	45	44	45	4	568541	176530	241
9924	Non Participating	45	44	45	4	568495	176541	242
9925	Participating	46	45	46	4	568761	176443	239
9926	Non Participating	30	28	30	4	571425	178273	234
9927	Non Participating	30	28	30	4	571445	178245	233
9928	Non Participating	30	28	30	4	571473	178211	233
9929	Non Participating	30	28	30	4	571499	178183	233
9930	Non Participating	30	28	30	4	571553	178122	233
9931	Non Participating	29	27	29	4	571601	178058	231
9932	Non Participating	30	28	30	4	571619	178037	232
9933	Non Participating	26	24	26	4	571752	179112	226
9934	Non Participating	27	25	27	4	571668	179020	227
9935	Non Participating	27	25	27	4	571560	178915	230
9936	Non Participating	27	25	27	4	571537	178887	231
9937	Non Participating	28	26	28	4	571520	178864	231
9938	Non Participating	27	25	27	4	571581	178956	230
9939	Non Participating	26	23	26	4	571614	178971	228
9940	Non Participating	27	25	27	4	571645	178992	228

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
9941	Non Participating	27	26	27	4	571709	179056	227
9942	Non Participating	28	26	28	4	571461	178820	232
9943	Non Participating	29	27	29	4	571417	178764	234
9944	Non Participating	29	27	29	4	571328	178672	233
9945	Non Participating	30	28	30	4	570875	177963	235
9946	Non Participating	31	29	31	4	571003	177963	237
9947	Non Participating	31	29	31	4	571126	177963	235
9955	Non Participating	44	43	44	4	566274	176565	243
9956	Non Participating	44	43	45	4	566204	176568	243
9957	Non Participating	44	43	45	4	566127	176572	243
10322	Non Participating	28	26	28	4	572801	177549	241
10323	Non Participating	28	26	28	4	572835	177543	241
10324	Non Participating	29	27	29	4	572788	177481	242
10325	Non Participating	28	27	28	4	572868	177490	242
10326	Non Participating	28	26	28	4	572917	177499	242
10327	Non Participating	28	26	28	4	572941	177500	242
10351	Non Participating	32	30	32	4	571183	177783	236
10352	Non Participating	32	30	32	4	571160	177815	237
10353	Non Participating	31	30	32	4	571145	177831	237
10354	Non Participating	31	29	31	4	571116	177847	237
10355	Non Participating	31	30	32	4	571085	177861	238
10356	Non Participating	32	30	32	4	571045	177875	239
10357	Non Participating	32	30	32	4	570997	177898	239
10358	Non Participating	31	29	31	4	570981	177907	239
10359	Non Participating	31	29	32	4	570956	177927	239
10360	Non Participating	31	29	31	4	570939	177944	238
10366	Non Participating	28	26	28	4	573730	175471	244
10367	Participating	30	28	30	4	573385	175365	247
10368	Non Participating	30	29	30	4	573153	175636	245
10369	Non Participating	31	29	31	4	573049	175283	245
10393	Non Participating	24	23	24	4	553850	176170	220
10394	Non Participating	24	23	24	4	553815	176181	220
10395	Non Participating	24	23	24	4	553791	176182	220
10396	Non Participating	24	23	24	4	553757	176216	220
10397	Non Participating	24	23	24	4	553800	176220	220
10398	Non Participating	23	21	22	4	553759	176912	217
10399	Non Participating	22	21	22	4	553706	176872	217
10400	Non Participating	22	20	21	4	553670	176870	217
10401	Non Participating	21	20	21	4	553618	176877	214

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10402	Non Participating	21	20	21	4	553607	176877	213
10403	Non Participating	21	19	20	4	553579	176877	213
10404	Non Participating	21	19	20	4	553558	176876	214
10405	Non Participating	23	21	22	4	553508	176876	215
10406	Non Participating	23	21	22	4	553469	176879	215
10407	Non Participating	23	21	22	4	553442	176879	215
10408	Non Participating	23	21	22	4	553382	176883	215
10409	Non Participating	23	21	22	4	553356	176879	215
10410	Non Participating	22	21	22	4	553500	177096	214
10411	Non Participating	22	21	22	4	553483	177096	215
10412	Non Participating	21	20	21	4	553455	177107	215
10413	Non Participating	20	18	20	4	553435	177111	215
10414	Non Participating	20	17	19	4	553403	177120	215
10415	Non Participating	19	17	19	4	553395	177123	215
10416	Non Participating	18	16	19	4	553377	177127	215
10417	Non Participating	24	23	24	4	553281	176353	217
10418	Non Participating	24	23	24	4	553295	176350	217
10419	Non Participating	24	23	24	4	553309	176350	217
10420	Non Participating	24	23	24	4	553326	176351	217
10421	Non Participating	24	23	24	4	553378	176356	217
10422	Non Participating	24	23	24	4	553404	176357	218
10423	Non Participating	24	23	24	4	553437	176354	218
10424	Non Participating	23	21	22	4	553498	176351	216
10425	Non Participating	25	23	24	4	553516	176119	220
10426	Non Participating	25	23	24	4	553527	176153	220
10427	Non Participating	23	21	22	4	553138	176763	216
10428	Non Participating	23	21	22	4	553166	176760	216
10429	Non Participating	23	21	22	4	553201	176758	216
10430	Non Participating	23	21	22	4	553239	176762	216
10431	Non Participating	23	21	22	4	553277	176754	215
10432	Non Participating	23	21	22	4	553321	176755	215
10433	Non Participating	23	22	23	4	553388	176760	215
10434	Non Participating	23	22	23	4	553424	176741	215
10435	Non Participating	23	22	23	4	553443	176739	215
10436	Non Participating	23	22	23	4	553485	176745	215
10437	Non Participating	23	22	23	4	553498	176746	215
10438	Non Participating	23	22	23	4	553529	176746	215
10439	Non Participating	23	21	22	4	553646	176742	217

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10440	Non Participating	22	21	22	4	553657	176776	218
10441	Non Participating	20	17	19	4	553631	176825	214
10442	Non Participating	19	17	18	4	553590	176833	213
10443	Non Participating	22	20	22	4	553549	176836	215
10444	Non Participating	23	21	22	4	553442	176839	215
10445	Non Participating	23	21	22	4	553379	176839	215
10446	Non Participating	20	18	19	4	553814	177575	214
10447	Non Participating	19	17	18	4	553690	177757	213
10448	Non Participating	21	19	20	4	553619	177617	213
10449	Non Participating	20	18	19	4	553623	177472	212
10450	Non Participating	20	18	19	4	555172	177824	218
10451	Non Participating	17	15	16	4	555064	177991	222
10452	Non Participating	19	18	18	4	555387	177828	218
10453	Non Participating	19	18	18	4	555295	177949	218
10454	Non Participating	18	17	17	4	557458	177766	222
10455	Non Participating	18	16	17	4	558116	177959	223
10456	Non Participating	25	23	25	4	561762	177473	241
10457	Non Participating	25	23	25	4	561713	177441	240
10458	Non Participating	25	23	25	4	561677	177435	241
10459	Non Participating	24	22	24	4	561503	177344	241
10460	Non Participating	23	21	22	4	561170	177267	238
10461	Non Participating	22	21	22	4	561057	178125	233
10462	Non Participating	21	19	21	4	560678	178177	232
10463	Non Participating	20	18	20	4	560650	178182	232
10464	Non Participating	19	17	19	4	560613	178178	231
10465	Non Participating	21	19	21	4	560556	178169	232
10466	Non Participating	21	20	21	4	560726	178244	233
10467	Non Participating	22	20	21	4	560837	178235	229
10468	Non Participating	20	15	20	4	560875	178237	227
10469	Non Participating	22	20	22	4	561020	178250	231
10470	Non Participating	20	18	22	4	561051	178247	231
10471	Non Participating	23	21	22	4	561100	178246	232
10472	Non Participating	23	21	23	4	561136	178241	232
10473	Non Participating	20	17	21	4	561312	178175	231
10474	Non Participating	21	18	21	4	561354	178171	232
10475	Non Participating	35	33	35	4	568778	178159	240
10476	Non Participating	35	33	35	4	568879	178165	240
10477	Non Participating	36	34	36	4	568618	178089	240
10478	Non Participating	36	34	36	4	568588	178089	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10479	Non Participating	36	34	36	4	568551	178091	241
10480	Non Participating	36	34	36	4	568516	178093	241
10481	Non Participating	36	34	36	4	568487	178091	241
10482	Non Participating	36	34	36	4	568439	178089	241
10483	Non Participating	36	34	36	4	568394	178096	241
10484	Non Participating	36	35	36	4	568320	178073	242
10485	Non Participating	35	33	35	4	570009	177653	235
10486	Non Participating	35	34	36	4	570030	177563	235
10487	Non Participating	35	34	35	4	570047	177581	235
10488	Non Participating	35	33	35	4	570068	177608	235
10489	Non Participating	35	33	35	4	570093	177620	235
10490	Non Participating	35	33	35	4	570115	177637	234
10491	Non Participating	34	33	34	4	570254	177707	234
10492	Non Participating	33	32	34	4	570369	177778	235
10493	Non Participating	33	31	33	4	570382	177789	235
10494	Non Participating	33	32	34	4	570422	177818	237
10495	Non Participating	33	32	33	4	570437	177832	237
10496	Non Participating	33	31	33	4	570456	177849	237
10497	Non Participating	33	31	33	4	570485	177862	237
10498	Non Participating	35	34	36	4	569975	177541	235
10499	Non Participating	35	34	36	4	570000	177555	234
10500	Non Participating	35	33	35	4	569981	177638	235
10501	Non Participating	35	33	35	4	569966	177658	235
10502	Non Participating	35	33	35	4	569964	177687	235
10503	Non Participating	35	33	35	4	569960	177714	235
10504	Non Participating	32	30	32	4	571218	177605	232
10505	Non Participating	32	30	32	4	571229	177646	232
10506	Non Participating	32	30	32	4	571213	177656	233
10507	Non Participating	32	30	32	4	571179	177655	234
10508	Non Participating	32	30	32	4	571134	177651	236
10509	Non Participating	32	31	32	4	571073	177649	237
10510	Non Participating	31	29	31	4	570917	178258	232
10511	Non Participating	31	29	31	4	570910	178260	232
10512	Non Participating	31	29	31	4	570900	178264	233
10513	Non Participating	31	29	31	4	570886	178270	233
10514	Non Participating	33	31	33	4	570227	177972	238
10515	Non Participating	33	32	33	4	570202	177973	238
10516	Non Participating	33	32	33	4	570175	177973	238

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10517	Non Participating	33	32	34	4	570164	177973	238
10518	Non Participating	33	32	34	4	570143	177972	238
10519	Non Participating	33	32	34	4	570111	177971	237
10520	Non Participating	33	32	34	4	570069	177969	237
10521	Non Participating	34	32	34	4	570035	177975	236
10522	Non Participating	34	32	34	4	570005	177974	236
10523	Non Participating	34	32	34	4	569958	177973	235
10524	Non Participating	34	32	34	4	569914	177973	236
10525	Non Participating	34	32	34	4	569908	178000	236
10526	Non Participating	34	32	34	4	569910	178021	236
10527	Non Participating	33	32	34	4	569946	178064	236
10528	Non Participating	33	32	33	4	570017	178059	237
10529	Non Participating	33	31	33	4	570109	178062	238
10530	Non Participating	33	31	33	4	570124	178062	238
10531	Non Participating	33	31	33	4	570166	178076	238
10532	Non Participating	33	31	33	4	570211	178080	238
10538	Non Participating	26	24	26	4	572176	178710	229
10539	Non Participating	26	24	26	4	572154	178684	229
10540	Non Participating	26	24	26	4	572101	178647	231
10541	Non Participating	28	26	28	4	572085	178637	231
10542	Non Participating	28	26	28	4	572003	178716	230
10555	Non Participating	25	22	25	4	571474	179242	229
10556	Non Participating	28	26	27	4	571423	179188	231
10557	Non Participating	27	25	27	4	571382	179135	231
10558	Non Participating	28	26	28	4	571338	179091	232
10559	Non Participating	28	26	28	4	571266	179021	233
10560	Non Participating	28	27	28	4	571206	178968	233
10561	Non Participating	29	27	29	4	571146	178924	233
10562	Non Participating	28	26	28	4	571679	178782	229
10563	Non Participating	28	26	28	4	571710	178757	230
10564	Non Participating	28	26	28	4	571808	178637	230
10565	Non Participating	28	26	28	4	571861	178596	229
10566	Non Participating	28	26	28	4	571886	178574	230
10567	Non Participating	28	26	28	4	571953	178502	231
10568	Non Participating	28	26	28	4	571968	178486	231
10570	Non Participating	27	25	27	4	571984	178924	230
10571	Non Participating	27	26	27	4	571940	178873	229
10590	Non Participating	27	24	27	4	570469	179588	239
10591	Non Participating	23	21	23	4	561237	177220	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10592	Non Participating	23	21	23	4	561287	177234	241
10593	Non Participating	22	20	22	4	561008	177185	239
10594	Non Participating	23	21	23	4	560747	176977	242
10595	Non Participating	23	21	23	4	560743	176984	242
10596	Non Participating	22	21	22	4	560357	176891	239
10597	Non Participating	22	20	21	4	560302	176858	241
10598	Non Participating	22	20	22	4	560057	176756	241
10599	Non Participating	22	20	22	4	560143	176784	241
10600	Non Participating	22	20	22	4	560146	176823	241
10601	Non Participating	24	23	23	4	556767	175931	229
10602	Non Participating	23	21	22	4	556820	176009	229
10603	Non Participating	24	22	23	4	556904	175969	231
10604	Non Participating	22	20	22	4	559104	176078	243
10605	Non Participating	23	21	22	4	559254	176203	243
10606	Non Participating	22	19	21	4	559410	176323	243
10607	Non Participating	22	20	22	4	559482	176300	244
10608	Non Participating	24	22	23	4	558982	175883	243
10609	Non Participating	24	22	23	4	558923	175855	243
10610	Non Participating	23	21	23	4	558609	175683	242
10611	Non Participating	24	22	23	4	560128	175841	242
10612	Non Participating	23	22	23	4	560200	176032	241
10613	Non Participating	23	21	22	4	560210	176275	241
10614	Non Participating	30	28	30	4	563152	176556	243
10615	Non Participating	45	44	45	4	569899	175727	237
10616	Non Participating	45	44	45	4	569907	175766	238
10617	Non Participating	45	44	45	4	569903	175788	239
10618	Non Participating	45	44	45	4	569906	175826	239
10619	Non Participating	45	44	45	4	569905	175865	239
10620	Non Participating	25	24	25	4	556856	175155	229
10621	Non Participating	26	24	25	4	557124	175103	232
10622	Participating	26	24	25	4	557207	175128	233
10623	Non Participating	24	22	24	4	555776	175289	225
10624	Non Participating	26	24	25	4	555841	175252	228
10625	Non Participating	27	25	26	4	555607	174985	228
10626	Non Participating	25	24	25	4	555973	175394	228
10627	Non Participating	26	24	26	4	555452	175125	224
10628	Non Participating	26	24	26	4	555271	175124	222
10629	Non Participating	26	25	26	4	555307	175141	223

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10630	Non Participating	29	27	29	4	548736	174071	213
10631	Non Participating	30	29	30	4	550164	174279	214
10632	Non Participating	29	28	29	4	551618	174771	216
10633	Non Participating	29	28	29	4	551634	174736	216
10634	Non Participating	29	28	29	4	551650	174708	216
10635	Non Participating	29	28	29	4	551661	174680	217
10636	Non Participating	29	28	29	4	551677	174650	217
10637	Non Participating	29	28	29	4	551698	174615	217
10638	Non Participating	29	28	30	4	551586	174605	215
10639	Non Participating	29	27	29	4	551556	174733	215
10640	Non Participating	29	28	29	4	551773	174509	217
10641	Non Participating	30	29	30	4	551792	174419	215
10642	Non Participating	32	31	32	4	551864	174099	219
10643	Non Participating	32	31	32	4	551782	174036	219
10644	Non Participating	30	28	30	4	553402	174264	218
10645	Participating	29	28	29	4	553490	174326	220
10646	Non Participating	30	29	30	4	553075	174266	221
10647	Non Participating	30	29	30	4	553073	174240	220
10648	Non Participating	30	29	30	4	553084	174260	221
10649	Non Participating	32	31	32	4	557644	173132	244
10650	Non Participating	32	30	32	4	557646	173174	244
10651	Non Participating	32	31	32	4	557591	173168	244
10652	Non Participating	32	30	32	4	557586	173200	244
10653	Non Participating	32	30	31	4	557586	173221	244
10654	Non Participating	32	30	31	4	557586	173248	243
10655	Non Participating	31	30	31	4	557573	173305	243
10656	Non Participating	31	30	31	4	557647	173346	243
10657	Non Participating	32	30	32	4	556764	173159	242
10658	Non Participating	32	31	32	4	556763	173100	242
10659	Non Participating	32	31	32	4	555986	173045	241
10660	Non Participating	32	31	32	4	555969	173045	241
10661	Non Participating	32	30	32	4	555945	173046	240
10662	Non Participating	31	29	31	4	555933	173053	240
10663	Non Participating	31	29	31	4	555948	173054	241
10664	Non Participating	32	30	32	4	555961	173052	241
10665	Non Participating	32	30	32	4	555980	173052	241
10666	Non Participating	32	30	32	4	555991	173054	241
10667	Non Participating	32	30	31	4	556004	173057	241
10668	Non Participating	32	30	31	4	556014	173059	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10669	Non Participating	31	30	31	4	556034	173092	239
10670	Non Participating	31	30	31	4	556037	173102	239
10671	Non Participating	31	30	31	4	556043	173113	239
10672	Non Participating	31	29	31	4	556053	173121	238
10673	Non Participating	31	29	31	4	556063	173132	238
10674	Non Participating	30	28	30	4	556043	173150	237
10675	Non Participating	30	28	30	4	556035	173149	237
10676	Non Participating	29	27	29	4	556020	173143	236
10677	Non Participating	29	27	29	4	555998	173137	236
10678	Non Participating	35	34	35	4	549667	173324	216
10679	Non Participating	32	30	32	4	548801	173358	214
10680	Non Participating	33	32	34	4	549137	173286	215
10681	Non Participating	34	33	34	4	548685	172347	217
10682	Non Participating	34	32	34	4	548627	172253	217
10683	Non Participating	35	33	35	4	548700	171747	219
10684	Non Participating	38	37	39	4	549293	171737	220
10685	Non Participating	38	37	38	4	549256	171603	220
10686	Non Participating	36	34	36	4	548862	171656	219
10687	Non Participating	42	41	42	4	549690	171800	220
10688	Participating	34	33	34	4	559474	171763	249
10689	Participating	32	31	32	4	560135	171803	248
10690	Participating	32	31	32	4	560115	171945	249
10691	Non Participating	33	31	32	4	560107	171703	249
10692	Participating	33	31	33	4	559990	171652	250
10693	Participating	31	29	30	4	561016	171858	254
10694	Non Participating	31	29	30	4	561129	171734	254
10695	Participating	31	29	30	4	560914	171714	254
10696	Participating	31	29	30	4	561244	171702	252
10697	Non Participating	31	29	30	4	561476	171776	252
10698	Participating	31	29	30	4	561737	171777	251
10699	Participating	33	32	33	4	560771	170926	253
10700	Non Participating	42	41	42	4	558540	170974	248
10701	Non Participating	44	43	44	4	558422	171047	248
10702	Non Participating	42	42	43	4	558525	171073	248
10703	Non Participating	41	40	41	4	556271	171463	237
10704	Non Participating	44	43	44	4	556547	171206	245
10705	Non Participating	46	45	46	4	556770	170937	247
10706	Non Participating	38	37	38	4	555215	171221	243

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10707	Non Participating	41	40	41	4	554616	170268	243
10708	Non Participating	42	42	42	4	554701	170258	244
10709	Non Participating	44	43	44	4	554785	170259	244
10710	Non Participating	45	44	45	4	556093	170281	247
10711	Non Participating	45	44	45	4	556028	170300	247
10712	Non Participating	43	42	43	4	555234	170268	244
10713	Participating	45	45	45	4	555244	169991	245
10714	Non Participating	43	43	44	4	554924	170268	243
10715	Non Participating	44	44	44	4	554860	170258	243
10716	Non Participating	44	43	44	4	556533	170283	245
10717	Non Participating	32	31	32	4	551887	168998	240
10718	Non Participating	32	31	33	4	551882	168951	241
10719	Non Participating	32	31	32	4	551894	168891	241
10720	Non Participating	32	31	32	4	551904	168772	243
10721	Non Participating	32	30	32	4	551867	168629	239
10722	Non Participating	32	30	32	4	551654	168575	240
10723	Non Participating	33	32	33	4	551455	168907	241
10724	Non Participating	32	30	32	4	550975	168631	235
10725	Non Participating	32	31	32	4	550860	168590	233
10726	Non Participating	31	29	31	4	550973	168405	239
10727	Non Participating	31	30	31	4	551013	168417	241
10728	Non Participating	28	26	28	4	551064	168360	237
10729	Non Participating	32	31	32	4	552924	168864	242
10730	Non Participating	33	31	33	4	553394	168606	243
10731	Non Participating	33	32	33	4	553544	168665	242
10732	Non Participating	32	30	32	4	552407	168637	244
10733	Non Participating	31	29	31	4	552369	168641	244
10734	Non Participating	31	30	31	4	552307	168637	242
10735	Non Participating	31	30	32	4	552268	168630	242
10736	Non Participating	32	31	32	4	553618	168036	245
10737	Non Participating	32	31	32	4	553460	167997	245
10738	Non Participating	32	31	32	4	553416	168069	246
10739	Non Participating	32	30	32	4	553235	168131	246
10740	Non Participating	32	31	32	4	553463	167884	245
10741	Non Participating	32	31	32	4	553619	167646	246
10742	Non Participating	32	31	32	4	553610	167739	246
10743	Non Participating	32	31	32	4	553635	167774	245
10744	Non Participating	32	31	32	4	553632	167808	245
10745	Non Participating	32	31	32	4	553624	167559	246

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10746	Non Participating	44	44	44	4	558028	166097	259
10747	Non Participating	45	44	45	4	560363	166021	265
10748	Non Participating	43	42	44	4	560362	166210	266
10749	Non Participating	42	41	42	4	559560	166201	262
10750	Non Participating	42	41	42	4	559482	166183	260
10751	Participating	42	41	42	4	559437	166266	260
10752	Non Participating	42	41	42	4	559535	166390	261
10753	Non Participating	42	41	42	4	559548	166108	261
10754	Non Participating	42	41	42	4	559579	166036	262
10755	Participating	45	44	45	4	561010	166049	266
10756	Non Participating	45	46	46	4	561828	166141	268
10757	Participating	45	45	45	4	561573	165435	267
10758	Non Participating	42	41	42	4	558906	165372	264
10759	Non Participating	41	40	41	4	558749	165111	266
10760	Participating	45	44	45	4	560091	165325	265
10761	Non Participating	35	34	35	4	556769	165415	260
10762	Participating	36	36	36	4	556716	165881	255
10763	Non Participating	34	33	34	4	556719	165184	260
10764	Non Participating	34	33	34	4	556702	165135	260
10765	Non Participating	44	43	44	4	559503	164419	267
10766	Non Participating	44	43	44	4	559567	164418	268
10767	Non Participating	45	44	45	4	559640	164486	268
10768	Non Participating	41	40	41	4	558881	164393	264
10769	Non Participating	41	40	42	4	559032	164335	268
10770	Participating	45	45	46	4	561152	164401	273
10771	Non Participating	45	45	45	4	560775	164464	273
10772	Non Participating	43	42	44	4	560021	164486	271
10773	Participating	43	42	43	4	560027	164423	271
10774	Non Participating	45	44	45	4	559982	165000	264
10781	Participating	30	29	30	4	556072	163608	261
10782	Non Participating	31	29	31	4	556670	162990	267
10783	Non Participating	31	30	31	4	556767	163028	266
10784	Non Participating	31	29	30	4	556665	162795	267
10785	Non Participating	31	29	31	4	556770	162812	267
10786	Non Participating	31	29	31	4	556771	162764	267
10787	Non Participating	29	28	30	4	556764	162703	265
10788	Non Participating	31	30	31	4	557004	162699	267
10789	Non Participating	32	31	32	4	557168	162964	269

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10790	Non Participating	32	31	32	4	557205	163026	268
10791	Non Participating	33	31	33	4	557211	163139	267
10792	Non Participating	32	30	32	4	556760	163386	267
10793	Non Participating	34	33	34	4	557633	163494	267
10794	Non Participating	31	29	31	4	557478	162014	273
10795	Non Participating	32	30	32	4	557541	162016	273
10799	Non Participating	30	28	30	4	556820	161998	271
10800	Non Participating	30	28	30	4	556824	161978	271
10801	Non Participating	30	28	30	4	556824	161954	271
10802	Non Participating	30	28	30	4	556818	161919	272
10803	Non Participating	30	28	30	4	556872	161905	272
10832	Non Participating	30	28	30	4	556874	161852	273
10856	Non Participating	17	16	17	4	552113	178485	208
10858	Non Participating	17	15	16	4	552092	178339	209
10859	Non Participating	12	10	11	4	551935	178385	205
10860	Non Participating	18	17	18	4	551925	178326	208
10862	Non Participating	34	32	34	4	564696	178868	241
10863	Non Participating	33	32	33	4	564724	178955	242
10864	Non Participating	33	32	33	4	564668	178931	242
10865	Non Participating	33	31	33	4	564590	178916	241
10866	Non Participating	33	31	33	4	564552	178899	241
10867	Non Participating	33	31	33	4	564494	178862	242
10868	Non Participating	33	31	33	4	564454	178833	242
10869	Non Participating	31	29	31	4	564263	179068	235
10870	Non Participating	30	28	30	4	564169	179313	235
10871	Non Participating	30	28	30	4	564181	179375	237
10872	Non Participating	30	28	30	4	564268	179380	237
10873	Non Participating	28	26	28	4	564189	179666	233
10874	Non Participating	29	27	29	4	564334	179772	233
10875	Non Participating	29	27	29	4	564402	179826	233
10876	Non Participating	31	29	31	4	564121	178616	242
10877	Non Participating	32	30	32	4	563920	178504	242
10878	Non Participating	32	30	32	4	563881	178482	243
10879	Non Participating	31	30	32	4	563799	178437	243
10880	Non Participating	31	30	31	4	563762	178417	243
10881	Non Participating	19	17	18	4	560623	179497	227
10882	Non Participating	19	17	19	4	560524	179451	226
10883	Non Participating	17	15	17	4	560475	179410	226
10884	Non Participating	17	15	17	4	560425	179368	226

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
10885	Non Participating	19	17	19	4	560398	179344	226
10886	Non Participating	18	14	18	4	560359	179317	226
10887	Non Participating	18	15	17	4	560333	179301	226
10888	Non Participating	18	15	17	4	560275	179252	227
10889	Non Participating	16	13	16	4	559899	179003	226
10890	Non Participating	15	12	15	4	559931	179059	225
10891	Non Participating	17	15	16	4	554715	178529	212
10892	Non Participating	17	16	16	4	554669	178483	212
10893	Non Participating	16	14	16	4	554828	178640	213
10894	Non Participating	12	10	11	4	555044	178807	216
10895	Non Participating	13	12	12	4	555153	178933	217
10896	Non Participating	10	9	9	4	555480	179081	217
10897	Non Participating	18	16	16	4	556201	178483	221
10898	Non Participating	16	14	15	4	556443	178596	220
10899	Non Participating	18	16	17	4	556424	178284	218
10900	Non Participating	18	16	17	4	556538	178282	218
10901	Non Participating	16	13	15	4	554550	178400	212
10902	Non Participating	15	12	15	4	554502	178361	212
10903	Non Participating	13	11	12	4	554555	178255	212
10904	Non Participating	13	11	12	4	554596	178252	212
10905	Non Participating	13	11	12	4	554650	178255	213
10906	Non Participating	13	10	12	4	554672	178356	211
10907	Non Participating	11	9	10	4	554695	178396	211
10908	Non Participating	17	16	16	4	554744	178449	213
10909	Non Participating	17	16	16	4	554778	178471	213
10965	Non Participating	28	27	28	4	560780	173410	246
10966	Participating	28	27	28	4	561234	173425	248
11097	Non Participating	29	28	29	4	565791	162115	282
11100	Non Participating	30	28	29	4	566381	162177	283
11114	Non Participating	38	37	38	4	564863	164315	276
11120	Non Participating	34	33	34	4	566888	164423	272
11121	Participating	34	33	34	4	567466	164424	272
11122	Non Participating	39	38	39	4	564818	164434	275
11124	Non Participating	39	38	39	4	564765	164440	274
11125	Non Participating	35	33	35	4	566191	164445	271
11128	Non Participating	42	41	42	4	564217	164451	273
11129	Non Participating	43	42	43	4	563264	166322	266
11130	Non Participating	43	43	43	4	563212	166324	266

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11139	Non Participating	43	42	43	4	563216	166365	266
11146	Participating	45	44	45	4	563271	167705	262
11147	Non Participating	44	43	44	4	566634	167726	261
11149	Non Participating	44	44	45	4	568744	167737	263
11150	Participating	45	44	45	4	563272	167749	261
11151	Non Participating	43	42	43	4	566508	167789	262
11153	Non Participating	43	42	43	4	566638	167831	260
11154	Participating	42	41	42	4	561818	167846	261
11155	Non Participating	42	42	43	4	566514	167852	261
11158	Non Participating	37	36	37	4	569638	167910	260
11160	Participating	44	44	45	4	563222	167934	261
11162	Non Participating	42	41	42	4	566551	167961	261
11163	Non Participating	37	35	37	4	562717	169210	257
11164	Non Participating	32	30	32	4	570264	169211	260
11165	Non Participating	33	31	33	4	569983	169216	260
11166	Non Participating	33	31	33	4	570015	169218	260
11167	Non Participating	32	30	32	4	570225	169218	260
11168	Non Participating	33	31	33	4	569939	169222	259
11169	Non Participating	32	31	33	4	570052	169222	260
11170	Participating	28	27	28	4	571465	169222	258
11171	Non Participating	35	34	35	4	569337	169224	257
11172	Non Participating	45	45	45	4	565267	169228	258
11173	Non Participating	33	31	33	4	569904	169229	259
11174	Non Participating	32	30	32	4	570308	169231	260
11175	Non Participating	37	36	37	4	568525	169232	256
11176	Non Participating	45	45	45	4	565230	169233	257
11178	Participating	37	35	37	4	568840	169239	257
11179	Non Participating	33	32	33	4	569867	169242	259
11180	Non Participating	28	26	28	4	571796	170559	258
11181	Non Participating	27	26	27	4	572310	170561	255
11184	Non Participating	26	25	26	4	573005	170575	251
11185	Non Participating	29	27	29	4	571307	170588	257
11186	Non Participating	26	24	26	4	572422	170601	252
11188	Participating	28	26	28	4	571902	170624	259
11189	Non Participating	29	27	28	4	571512	170625	254
11190	Participating	28	26	28	4	571896	170628	259
11191	Non Participating	29	27	28	4	571547	170639	255
11196	Non Participating	27	25	26	4	572920	170680	251
11198	Participating	31	30	31	4	568815	171880	250

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11199	Non Participating	31	30	31	4	564173	171880	252
11200	Participating	32	30	32	4	568813	171889	250
11201	Non Participating	31	29	30	4	563377	171916	250
11202	Non Participating	27	26	27	4	573253	171983	248
11205	Non Participating	26	24	26	4	573647	172031	249
11208	Non Participating	32	31	32	4	568086	172113	247
11209	Non Participating	32	30	32	4	571686	172118	248
11210	Non Participating	32	30	32	4	571688	172121	248
11211	Non Participating	33	31	33	4	568172	172163	247
11212	Non Participating	32	30	32	4	566619	172166	248
11213	Non Participating	33	32	33	4	569843	172170	252
11214	Non Participating	41	40	41	4	570592	173177	249
11216	Non Participating	41	40	41	4	570582	173180	249
11217	Non Participating	41	40	42	4	570679	173190	250
11218	Non Participating	41	40	42	4	570694	173192	250
11219	Participating	36	35	36	4	567847	173209	248
11220	Non Participating	33	32	33	4	566675	173214	248
11221	Non Participating	36	34	36	4	568604	173218	249
11222	Non Participating	34	33	34	4	572176	173219	249
11223	Non Participating	33	32	33	4	566672	173219	248
11224	Non Participating	35	34	35	4	567237	173219	248
11225	Non Participating	36	35	36	4	567591	173222	249
11226	Non Participating	30	28	30	4	564350	173226	248
11228	Non Participating	36	34	36	4	568599	173232	248
11229	Participating	31	30	31	4	565508	173236	250
11230	Non Participating	31	29	31	4	565383	173239	250
11233	Non Participating	30	28	30	4	564778	174049	248
11234	Non Participating	41	40	42	4	569829	174064	247
11235	Non Participating	40	39	41	4	569671	174076	246
11236	Non Participating	42	41	42	4	569879	174078	247
11237	Non Participating	31	29	31	4	565019	174087	247
11238	Non Participating	41	40	41	4	569740	174089	247
11239	Non Participating	41	40	41	4	569766	174093	247
11241	Non Participating	41	40	42	4	569835	174119	247
11242	Non Participating	41	39	41	4	569703	174123	247
11243	Non Participating	41	39	41	4	569718	174132	247
11244	Non Participating	31	29	31	4	565018	174143	247
11245	Non Participating	42	41	42	4	569873	174144	247

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11246	Non Participating	42	40	42	4	569836	174150	247
11247	Non Participating	41	40	41	4	571475	174165	247
11248	Non Participating	35	34	36	4	566447	174853	246
11249	Non Participating	34	32	34	4	565912	174854	246
11250	Participating	43	42	43	4	568224	174858	246
11251	Non Participating	34	32	34	4	565823	174862	247
11252	Participating	45	44	46	4	570416	174864	245
11253	Non Participating	38	36	38	4	566980	174866	245
11254	Non Participating	39	38	39	4	567194	174868	245
11255	Non Participating	38	36	38	4	566949	174868	246
11256	Non Participating	38	37	38	4	567023	174868	245
11257	Non Participating	36	35	37	4	566701	174870	245
11258	Non Participating	36	35	37	4	566734	174870	246
11259	Non Participating	44	43	44	4	570178	174871	245
11260	Non Participating	37	36	38	4	566903	174871	245
11261	Non Participating	37	35	37	4	566800	174871	245
11262	Non Participating	43	42	44	4	570110	174872	245
11263	Non Participating	37	36	37	4	566860	174873	245
11264	Non Participating	37	35	37	4	566761	174873	245
11265	Non Participating	37	35	37	4	564565	176576	244
11266	Non Participating	34	32	34	4	564062	176581	243
11267	Non Participating	33	32	34	4	564003	176585	242
11268	Non Participating	37	35	37	4	564561	176585	244
11269	Non Participating	31	30	32	4	563574	176590	243
11270	Non Participating	34	33	34	4	564142	176590	242
11271	Non Participating	32	30	32	4	563629	176590	244
11272	Non Participating	32	30	32	4	563684	176591	243
11273	Non Participating	32	30	32	4	563669	176593	243
11274	Non Participating	31	30	32	4	563578	176598	243
11275	Non Participating	34	33	35	4	564147	176598	242
11276	Non Participating	37	36	37	4	564600	176606	243
11277	Participating	43	42	44	4	566613	176612	242
11278	Non Participating	33	32	33	4	563949	176618	241
11279	Participating	46	45	46	4	565966	176690	247
11280	Non Participating	35	34	35	4	564242	176696	242
11281	Non Participating	45	44	45	4	566601	176719	241
11350	Non Participating	35	33	35	4	569769	177833	236
11351	Non Participating	35	33	35	4	569769	177858	236
11352	Non Participating	34	33	35	4	569769	177876	236

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11353	Non Participating	36	34	36	4	569772	177569	235
11354	Non Participating	35	34	35	4	570089	177554	235
11355	Non Participating	35	33	35	4	570146	177600	234
11356	Non Participating	34	33	35	4	570189	177618	234
11357	Non Participating	34	32	34	4	570281	177661	236
11358	Non Participating	34	32	34	4	570325	177718	235
11359	Non Participating	34	32	34	4	570366	177748	236
11360	Non Participating	33	32	34	4	570430	177802	237
11361	Non Participating	33	31	33	4	570481	177838	237
11362	Non Participating	33	31	33	4	570509	177861	237
11363	Non Participating	33	31	33	4	570565	177894	238
11364	Non Participating	33	31	33	4	570593	177922	238
11365	Non Participating	32	31	33	4	570629	177945	237
11366	Non Participating	32	30	32	4	570673	177979	237
11369	Non Participating	46	46	46	4	562226	166025	268
11370	Non Participating	46	46	46	4	561970	166049	268
11371	Non Participating	45	45	46	4	561571	166872	263
11372	Non Participating	44	44	45	4	561619	167300	261
11373	Non Participating	41	40	41	4	560308	167427	261
11374	Non Participating	41	40	41	4	560365	167528	260
11375	Non Participating	39	38	40	4	560550	167925	258
11376	Non Participating	35	33	35	4	561549	169339	254
11377	Non Participating	35	34	35	4	561638	169291	253
11378	Non Participating	37	36	37	4	560708	168581	256
11379	Non Participating	37	36	38	4	560996	168548	257
11380	Participating	37	36	37	4	560181	168574	255
11381	Participating	34	33	34	4	560808	170348	254
11382	Non Participating	34	32	34	4	561514	170097	254
11383	Non Participating	28	27	28	4	562112	173208	246
11690	Non Participating	30	29	31	4	571499	177946	233
11691	Non Participating	31	29	31	4	571499	177914	233
11692	Non Participating	31	29	31	4	571495	177899	233
11693	Non Participating	31	29	31	4	571483	177868	233
11694	Non Participating	30	29	31	4	571481	177857	233
11695	Participating	38	37	39	4	570712	176438	241
11696	Non Participating	38	36	38	4	570801	176514	239
11697	Non Participating	38	36	38	4	570996	176416	240
11698	Non Participating	39	38	39	4	570965	176265	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11699	Non Participating	36	34	36	4	571449	176514	242
11700	Non Participating	35	34	36	4	571460	176583	242
11701	Non Participating	35	34	35	4	571468	176619	242
11702	Non Participating	36	35	37	4	571544	176245	242
11703	Non Participating	30	28	30	4	573140	175868	243
11704	Participating	29	27	29	4	573323	176491	242
11707	Non Participating	22	20	22	4	554185	176565	219
11708	Non Participating	23	22	23	4	554183	176602	219
11709	Non Participating	21	19	21	4	554168	176680	218
11710	Non Participating	23	21	22	4	554189	176682	218
11711	Non Participating	23	21	22	4	554228	176679	217
11712	Non Participating	23	21	22	4	554246	176679	217
11713	Non Participating	23	21	22	4	554264	176677	217
11714	Non Participating	22	20	22	4	554282	176677	217
11715	Non Participating	21	19	21	4	554320	176677	217
11716	Non Participating	23	22	22	4	554563	176660	217
11717	Non Participating	23	21	22	4	554535	176773	217
11718	Non Participating	22	20	21	4	554571	176786	217
11719	Non Participating	23	21	22	4	554613	176740	218
11720	Non Participating	22	21	22	4	554481	176730	216
11721	Non Participating	22	21	22	4	554314	176992	217
11722	Non Participating	22	21	22	4	554295	176972	216
11723	Non Participating	21	18	21	4	554156	176952	214
11724	Non Participating	21	20	21	4	553611	176695	215
11725	Non Participating	23	22	23	4	553695	176690	220
11726	Non Participating	23	22	23	4	553882	176624	220
11727	Non Participating	23	22	23	4	553838	176648	220
11728	Non Participating	22	20	21	4	553828	176703	219
11729	Non Participating	21	19	21	4	553963	176810	217
11730	Non Participating	21	19	21	4	554004	176876	216
11731	Non Participating	20	16	20	4	554052	176879	215
11732	Non Participating	21	19	20	4	554053	176809	217
11733	Non Participating	23	22	23	4	553923	176680	219
11734	Non Participating	23	22	23	4	553990	176689	219
11735	Non Participating	24	22	23	4	553889	176586	220
11736	Non Participating	24	22	23	4	553823	176516	220
11737	Non Participating	24	22	23	4	553809	176535	220
11738	Non Participating	24	22	23	4	553518	176451	217
11739	Non Participating	24	22	23	4	553517	176472	218

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11740	Non Participating	24	22	23	4	553519	176519	217
11741	Non Participating	18	15	17	4	560137	177868	231
11742	Non Participating	19	17	19	4	560229	177883	233
11743	Non Participating	21	19	20	4	560240	177966	233
11744	Non Participating	21	19	20	4	560243	178110	230
11745	Non Participating	18	16	18	4	560149	178153	229
11746	Non Participating	21	19	20	4	560255	178176	231
11747	Non Participating	21	19	20	4	560288	178185	231
11748	Non Participating	21	19	20	4	560372	178199	232
11749	Non Participating	18	16	18	4	560118	178189	229
11750	Non Participating	20	18	20	4	560052	178189	229
11751	Non Participating	19	17	19	4	559996	178188	229
11752	Non Participating	19	17	19	4	559873	178156	230
11753	Non Participating	18	15	17	4	559826	178146	230
11754	Non Participating	20	18	19	4	559952	178166	230
11755	Non Participating	19	18	19	4	559461	178140	230
11756	Non Participating	18	16	17	4	559199	178189	226
11757	Non Participating	19	16	18	4	559168	178192	226
11758	Non Participating	33	32	33	4	570903	177535	238
11759	Non Participating	33	31	33	4	570907	177569	238
11760	Non Participating	33	31	33	4	570906	177589	238
11761	Non Participating	33	31	33	4	570904	177605	238
11762	Non Participating	33	31	33	4	570908	177660	238
11763	Non Participating	32	31	33	4	570924	177737	238
11764	Non Participating	32	31	32	4	570923	177784	238
11765	Non Participating	32	31	33	4	570896	177788	238
11766	Non Participating	32	31	33	4	570853	177791	238
11767	Non Participating	32	31	33	4	570852	177816	238
11768	Non Participating	32	30	32	4	570902	177856	239
11769	Non Participating	32	30	32	4	570920	177859	239
11770	Non Participating	32	30	32	4	570941	177862	239
11771	Non Participating	32	30	32	4	570958	177863	239
11772	Non Participating	32	30	32	4	570971	177863	239
11773	Non Participating	35	33	35	4	570057	177710	235
11774	Non Participating	34	33	35	4	570053	177733	235
11775	Non Participating	32	31	33	4	570423	178074	235
11776	Non Participating	32	30	32	4	570505	178145	233
11777	Non Participating	32	30	32	4	570513	178169	233

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11778	Non Participating	32	30	32	4	570513	178184	233
11779	Non Participating	32	30	32	4	570519	178215	233
11780	Non Participating	32	30	32	4	570562	178135	233
11781	Non Participating	32	30	32	4	570562	178152	233
11782	Non Participating	32	30	32	4	570563	178189	233
11783	Non Participating	32	30	32	4	570563	178211	233
11784	Non Participating	32	30	32	4	570563	178237	233
11785	Non Participating	31	30	32	4	570564	178272	233
11786	Non Participating	31	30	32	4	570567	178302	234
11787	Non Participating	31	30	32	4	570486	178308	234
11788	Non Participating	32	30	32	4	570459	178259	234
11789	Non Participating	32	30	32	4	570440	178259	234
11790	Non Participating	32	30	32	4	570433	178270	234
11791	Non Participating	32	30	32	4	570417	178278	234
11800	Non Participating	27	25	27	4	571329	179368	232
11801	Non Participating	27	26	27	4	571291	179346	232
11802	Non Participating	28	26	28	4	571168	179324	232
11803	Non Participating	28	26	28	4	571105	179314	232
11804	Non Participating	28	26	28	4	571045	179277	233
11805	Non Participating	28	26	28	4	571020	179229	232
11806	Non Participating	28	27	28	4	570986	179113	233
11807	Non Participating	29	27	29	4	570945	179069	233
11808	Non Participating	29	26	29	4	570869	179034	234
11809	Non Participating	30	29	31	4	570592	178505	234
11810	Non Participating	30	28	30	4	570576	178489	234
11811	Non Participating	30	29	31	4	570904	178363	236
11812	Non Participating	31	29	31	4	570891	178363	236
11813	Non Participating	31	29	31	4	570730	178414	235
11814	Non Participating	31	29	31	4	570570	178467	235
11815	Non Participating	31	29	31	4	570456	178505	236
11816	Non Participating	31	29	31	4	570390	178527	236
11817	Non Participating	31	29	31	4	570365	178546	236
11818	Non Participating	31	29	31	4	570337	178659	235
11819	Non Participating	30	29	30	4	570315	178766	234
11820	Non Participating	30	28	30	4	570390	178814	235
11821	Non Participating	30	28	30	4	570409	178873	234
11822	Non Participating	29	27	29	4	570419	178958	233
11823	Non Participating	30	28	30	4	570431	178981	233
11824	Non Participating	28	26	28	4	570573	178965	233

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11825	Non Participating	29	27	29	4	570702	178981	235
11826	Non Participating	18	16	18	4	557453	177034	227
11827	Non Participating	21	19	20	4	557596	177055	227
11828	Non Participating	19	16	18	4	557428	177130	225
11829	Non Participating	19	18	19	4	557353	177123	223
11830	Non Participating	20	17	19	4	557343	176897	227
11831	Non Participating	22	20	21	4	557363	176832	228
11832	Non Participating	22	20	21	4	557261	176756	228
11833	Non Participating	22	20	21	4	557225	176728	227
11834	Non Participating	22	20	21	4	557370	176568	229
11835	Non Participating	20	18	19	4	557542	176654	228
11836	Non Participating	22	21	22	4	557026	176542	228
11837	Non Participating	22	20	21	4	557664	176410	231
11838	Non Participating	22	21	22	4	557319	176503	229
11839	Non Participating	23	22	23	4	552693	176700	214
11840	Non Participating	23	21	22	4	552647	176776	213
11841	Non Participating	23	22	23	4	552454	176772	213
11842	Non Participating	23	21	22	4	551451	176792	210
11843	Non Participating	28	27	28	4	551746	174903	216
11844	Non Participating	28	27	28	4	551612	174864	216
11845	Non Participating	28	27	28	4	551582	174882	215
11846	Non Participating	28	27	28	4	551552	174890	215
11847	Non Participating	28	27	28	4	551562	175021	215
11848	Non Participating	28	27	28	4	551653	175009	215
11849	Non Participating	28	26	28	4	551417	175006	213
11850	Non Participating	28	26	28	4	551435	174963	214
11851	Non Participating	28	27	28	4	551485	174869	212
11852	Non Participating	29	27	29	4	551526	174799	215
11853	Non Participating	29	27	29	4	551608	174812	216
11854	Non Participating	28	27	28	4	551246	175014	214
11855	Non Participating	28	27	28	4	551188	175012	214
11856	Non Participating	28	26	28	4	551142	174994	211
11857	Non Participating	29	27	28	4	551273	174868	212
11858	Non Participating	27	25	27	4	550972	175382	214
11859	Non Participating	25	23	25	4	550955	175486	213
11860	Non Participating	33	31	32	4	556165	172913	241
11861	Non Participating	33	31	32	4	556141	172914	241
11862	Non Participating	33	31	32	4	556130	172915	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11863	Non Participating	33	31	32	4	556117	172915	241
11864	Non Participating	33	31	32	4	556105	172915	241
11865	Non Participating	32	31	32	4	556083	172908	240
11866	Non Participating	32	31	32	4	556071	172897	239
11867	Non Participating	32	31	32	4	556048	172905	240
11868	Non Participating	32	31	32	4	556035	172902	239
11869	Non Participating	32	31	32	4	556019	172902	239
11870	Non Participating	32	31	32	4	556008	172902	239
11871	Non Participating	32	30	32	4	555984	172902	238
11872	Non Participating	32	30	32	4	555969	172903	238
11873	Non Participating	32	30	32	4	555955	172907	237
11874	Non Participating	32	31	32	4	556043	172939	241
11875	Non Participating	32	31	32	4	556042	172954	242
11876	Non Participating	32	31	32	4	556042	172963	242
11877	Non Participating	34	33	34	4	554859	171816	239
11878	Participating	34	33	34	4	554744	171791	240
11879	Non Participating	34	32	34	4	554678	171814	239
11880	Non Participating	34	32	34	4	554600	171817	239
11881	Non Participating	34	33	34	4	554450	171832	239
11882	Non Participating	34	32	34	4	554367	171992	238
11883	Non Participating	34	33	34	4	554340	171969	238
11884	Non Participating	34	33	34	4	554304	171939	239
11885	Non Participating	34	32	34	4	554287	171902	238
11886	Participating	34	33	34	4	554078	172079	235
11887	Non Participating	34	33	34	4	554109	171851	236
11888	Non Participating	35	34	35	4	553961	171622	239
11889	Non Participating	36	34	36	4	555204	171806	242
11890	Non Participating	36	35	36	4	555297	171808	243
11891	Non Participating	36	35	36	4	555352	171811	243
11892	Non Participating	36	35	36	4	555239	171717	242
11893	Non Participating	36	35	36	4	555237	171672	241
11894	Non Participating	38	37	38	4	560082	169357	255
11895	Non Participating	38	37	38	4	560032	169253	256
11896	Participating	41	40	41	4	558476	169507	252
11897	Non Participating	40	39	40	4	558418	169154	251
11898	Participating	41	40	41	4	557235	169631	248
11899	Non Participating	40	40	40	4	557463	169677	248
11900	Non Participating	43	42	42	4	556789	169590	247
11901	Non Participating	43	43	43	4	556853	169304	248

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11902	Non Participating	46	45	46	4	555177	169725	245
11903	Non Participating	35	34	35	4	553798	169513	243
11904	Non Participating	35	33	35	4	553641	169649	243
11905	Non Participating	34	33	34	4	553531	169660	243
11906	Non Participating	34	33	34	4	553474	169505	241
11907	Non Participating	34	32	34	4	553602	169474	243
11908	Non Participating	34	33	34	4	553593	169522	241
11909	Non Participating	34	32	34	4	553537	169382	242
11910	Non Participating	34	33	34	4	552264	169720	240
11911	Non Participating	41	41	41	4	556861	167015	255
11912	Non Participating	40	40	41	4	556729	166963	254
11913	Participating	39	39	40	4	556784	166717	254
11914	Non Participating	39	39	39	4	556369	167050	253
11915	Non Participating	42	42	43	4	556754	167328	252
11916	Participating	38	37	38	4	555877	167123	250
11917	Non Participating	36	36	37	4	555593	167045	247
11918	Non Participating	36	35	36	4	555432	167058	249
11919	Non Participating	34	33	34	4	555240	166800	246
11920	Non Participating	34	33	34	4	555003	166703	247
11921	Non Participating	33	32	33	4	554621	166969	245
11922	Non Participating	30	29	30	4	553771	166974	246
11923	Non Participating	31	30	31	4	554036	166800	248
11924	Non Participating	29	27	28	4	552408	166912	247
11928	Non Participating	35	33	35	4	557857	163682	265
11929	Participating	35	34	35	4	557773	163829	266
11930	Non Participating	38	36	38	4	558391	163473	267
11931	Non Participating	38	36	38	4	558393	163509	267
11932	Non Participating	38	36	38	4	558395	163545	265
11933	Non Participating	38	37	39	4	558522	163591	265
11934	Non Participating	40	38	40	4	558700	163591	268
11935	Participating	35	33	35	4	557729	163779	266
11936	Non Participating	33	31	33	4	557241	163716	261
11937	Non Participating	31	30	31	4	556783	163554	263
11938	Non Participating	32	30	32	4	556780	164092	256
11939	Participating	31	30	31	4	556499	163678	260
11940	Non Participating	31	29	30	4	556156	163676	259
11941	Non Participating	30	29	30	4	556079	163668	261
11942	Non Participating	30	29	30	4	555974	163682	261

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
11943	Participating	30	29	30	4	556125	163593	260
11944	Non Participating	28	27	28	4	555347	164053	251
11952	Non Participating	30	28	30	4	556799	162056	269
11956	Non Participating	30	29	30	4	556777	162258	269
11979	Non Participating	32	30	32	4	566846	179424	240
11980	Non Participating	32	31	32	4	566684	179397	240
11981	Non Participating	33	31	33	4	566635	179300	241
11982	Non Participating	33	31	33	4	566679	179269	241
11983	Non Participating	33	31	33	4	566691	179201	241
11984	Non Participating	34	33	34	4	566676	178995	241
11985	Non Participating	34	33	35	4	566688	178887	242
11986	Non Participating	34	33	35	4	566664	178928	242
11987	Non Participating	35	34	35	4	566607	178829	243
11988	Non Participating	35	33	35	4	566611	178880	242
11989	Non Participating	34	33	35	4	566611	178923	241
11990	Non Participating	32	31	33	4	566556	179354	239
11991	Non Participating	30	28	31	4	566693	179501	236
11992	Non Participating	31	30	32	4	566723	179582	237
11993	Non Participating	31	30	32	4	566688	179588	237
11994	Non Participating	31	30	32	4	566655	179594	237
11995	Non Participating	31	29	31	4	566609	179663	236
11996	Non Participating	0	0	0	4	556745	179342	218
11997	Non Participating	0	0	0	4	556680	179392	218
11998	Non Participating	0	0	0	4	556607	179395	218
11999	Non Participating	0	0	0	4	556542	179334	217
12000	Non Participating	0	0	0	4	556692	179283	217
12001	Non Participating	0	0	0	4	556724	179231	217
12002	Non Participating	0	0	0	4	556784	179197	218
12003	Non Participating	8	5	7	4	556722	178930	219
12004	Non Participating	10	9	9	4	556693	178853	220
12005	Non Participating	0	0	0	4	556898	179523	219
12006	Non Participating	0	0	0	4	556504	179421	217
12007	Non Participating	0	0	0	4	556467	179451	216
12008	Non Participating	0	0	0	4	556411	179478	215
12009	Non Participating	0	0	0	4	556382	179398	215
12010	Non Participating	0	0	0	4	556325	179421	215
12011	Non Participating	0	0	0	4	556273	179434	217
12012	Non Participating	0	0	0	4	556179	179458	218
12035	Non Participating	31	30	31	4	566665	163407	276

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12044	Non Participating	32	30	32	4	567102	163532	277
12051	Participating	46	46	47	4	563251	165487	269
12063	Non Participating	40	39	40	4	568104	165620	267
12064	Participating	43	43	43	4	564818	166982	266
12071	Participating	41	41	41	4	565077	167088	265
12080	Non Participating	43	42	43	4	568120	167211	264
12081	Participating	43	42	43	4	566458	168575	261
12082	Non Participating	41	40	41	4	563175	168606	259
12085	Non Participating	35	34	36	4	569708	168689	259
12099	Participating	36	34	36	4	568168	169530	258
12100	Non Participating	36	35	36	4	563331	169560	258
12101	Non Participating	36	35	36	4	563340	169562	258
12102	Non Participating	32	31	32	4	569790	169571	257
12103	Non Participating	36	35	36	4	563249	169575	259
12104	Non Participating	27	25	27	4	571773	169580	256
12105	Non Participating	28	26	27	4	571805	169657	256
12108	Non Participating	28	26	27	4	571763	169728	256
12109	Participating	35	34	35	4	562513	169730	259
12110	Non Participating	27	26	27	4	571753	169761	256
12112	Participating	34	33	34	4	562528	169857	259
12114	Non Participating	28	26	28	4	571653	169883	257
12115	Non Participating	31	30	31	4	570859	171586	250
12116	Participating	33	32	33	4	564867	171609	256
12117	Non Participating	33	32	33	4	566482	171618	250
12118	Non Participating	31	29	31	4	571349	171620	249
12119	Non Participating	32	31	32	4	567405	171623	248
12120	Participating	32	31	32	4	567171	171626	251
12121	Participating	32	31	32	4	567175	171629	251
12122	Non Participating	32	31	32	4	567403	171631	248
12123	Non Participating	33	32	33	4	565326	171631	252
12124	Non Participating	32	30	32	4	565914	171633	250
12125	Non Participating	33	32	33	4	566312	171633	250
12126	Non Participating	33	32	33	4	565624	171635	250
12127	Non Participating	32	30	32	4	565913	171637	250
12128	Non Participating	33	31	33	4	566499	171637	250
12129	Participating	33	31	32	4	567096	171639	252
12130	Non Participating	33	32	33	4	566017	171642	250
12131	Participating	32	30	32	4	570220	171644	251

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12132	Non Participating	35	34	36	4	569870	172717	250
12133	Non Participating	30	28	29	4	563323	172719	250
12134	Non Participating	35	34	36	4	569864	172719	250
12137	Non Participating	27	25	27	4	573647	172741	248
12138	Participating	34	32	34	4	568275	172745	247
12139	Non Participating	30	28	29	4	563316	172758	251
12142	Non Participating	32	30	32	4	572318	172786	249
12143	Non Participating	36	34	36	4	569876	172798	250
12145	Non Participating	36	34	36	4	569866	172814	250
12146	Non Participating	32	31	32	4	566654	172825	249
12147	Non Participating	36	35	36	4	569864	172861	250
12148	Non Participating	27	25	27	4	573709	172892	247
12149	Non Participating	27	26	27	4	573807	173374	246
12150	Non Participating	28	27	28	4	563194	173376	248
12152	Non Participating	29	28	29	4	563618	173386	248
12154	Non Participating	29	27	28	4	563165	173410	248
12155	Non Participating	29	28	29	4	563847	173410	248
12157	Non Participating	32	30	32	4	565759	173453	248
12158	Non Participating	32	30	32	4	565759	173468	248
12159	Non Participating	27	25	27	4	573916	173479	245
12160	Non Participating	32	30	32	4	565764	173501	247
12163	Non Participating	30	28	30	4	573261	173526	246
12164	Non Participating	39	38	39	4	571616	173529	249
12165	Non Participating	39	38	39	4	571613	173530	249
12166	Non Participating	42	41	42	4	569848	174403	246
12167	Non Participating	42	41	43	4	569882	174403	247
12168	Non Participating	31	30	31	4	565019	174406	247
12169	Non Participating	43	42	43	4	569958	174418	246
12170	Non Participating	31	29	31	4	573142	174422	246
12171	Non Participating	42	41	42	4	569847	174426	246
12172	Non Participating	31	29	31	4	573148	174430	246
12173	Non Participating	42	41	43	4	569880	174431	247
12174	Non Participating	36	34	36	4	566586	174440	248
12175	Non Participating	43	42	44	4	570004	174442	246
12176	Non Participating	43	42	43	4	569957	174442	246
12177	Non Participating	28	27	28	4	563314	174474	246
12178	Non Participating	36	34	36	4	566585	174474	247
12179	Non Participating	42	41	43	4	569885	174475	247
12180	Non Participating	28	27	28	4	563310	174482	246

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12181	Non Participating	42	41	43	4	569892	174489	246
12182	Non Participating	43	41	43	4	569919	174492	246
12183	Non Participating	36	35	37	4	571988	175367	242
12184	Non Participating	37	36	37	4	571896	175368	242
12185	Non Participating	36	35	36	4	572039	175375	242
12186	Non Participating	40	39	40	4	567655	175386	244
12187	Participating	32	30	32	4	572837	175404	243
12188	Non Participating	37	36	38	4	571835	175409	241
12189	Participating	44	43	44	4	569926	175423	240
12190	Participating	44	43	44	4	569898	175425	240
12191	Non Participating	40	39	41	4	567725	175429	245
12192	Non Participating	40	39	40	4	571563	175433	242
12193	Non Participating	40	39	40	4	571558	175436	242
12194	Non Participating	35	34	36	4	572112	175440	242
12195	Non Participating	36	34	36	4	572048	175453	242
12196	Non Participating	36	35	36	4	572001	175463	242
12197	Non Participating	40	39	40	4	567648	175464	246
12198	Non Participating	37	35	37	4	566581	175465	244
12199	Non Participating	37	35	37	4	566572	175466	244
12285	Non Participating	32	30	32	4	570783	178022	237
12286	Non Participating	32	30	32	4	570811	177894	238
12287	Non Participating	33	31	33	4	570790	177779	238
12288	Non Participating	33	31	33	4	570790	177738	238
12289	Non Participating	33	31	33	4	570808	177666	238
12290	Non Participating	33	31	33	4	570834	177613	238
12291	Non Participating	33	32	34	4	570847	177546	239
12292	Non Participating	33	32	34	4	570849	177505	239
12293	Non Participating	34	32	34	4	570849	177421	239
12294	Non Participating	34	32	34	4	570862	177411	239
12295	Non Participating	34	32	34	4	570936	177411	239
12296	Non Participating	33	31	33	4	571028	177426	237
12297	Non Participating	32	30	33	4	571054	177428	236
12298	Non Participating	33	31	33	4	571105	177434	235
12299	Non Participating	33	31	33	4	571179	177480	234
12300	Non Participating	32	30	32	4	571266	177569	233
12301	Non Participating	32	30	32	4	571410	177613	233
12503	Non Participating	35	33	35	4	571066	177035	240
12504	Non Participating	34	33	35	4	571048	177097	238

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12505	Non Participating	34	33	34	4	571102	177120	238
12521	Non Participating	29	28	30	4	572448	177447	242
12522	Non Participating	30	28	30	4	572417	177437	242
12524	Non Participating	30	28	30	4	572358	177433	242
12525	Non Participating	30	28	30	4	572312	177433	242
12526	Non Participating	30	28	30	4	572242	177425	241
12527	Non Participating	34	32	34	4	570891	177433	239
12528	Non Participating	33	32	34	4	570896	177444	239
12529	Non Participating	33	32	34	4	570933	177486	238
12530	Non Participating	33	32	33	4	570943	177499	238
12531	Non Participating	33	31	33	4	570962	177542	238
12532	Non Participating	33	31	33	4	570977	177560	238
12533	Non Participating	33	31	33	4	570989	177579	238
12534	Non Participating	33	31	33	4	571012	177605	238
12535	Non Participating	33	31	33	4	571027	177634	238
12536	Non Participating	32	30	32	4	571045	177666	238
12537	Non Participating	31	29	32	4	571071	177708	236
12538	Non Participating	32	30	32	4	571084	177724	236
12539	Non Participating	32	30	32	4	571100	177754	236
12557	Non Participating	21	20	21	4	553396	177195	214
12558	Non Participating	19	17	19	4	553402	177183	214
12559	Non Participating	19	17	19	4	553410	177163	214
12560	Non Participating	21	18	21	4	553431	177152	215
12561	Non Participating	21	20	21	4	553460	177142	215
12562	Non Participating	21	19	20	4	553470	177138	215
12563	Non Participating	22	21	22	4	553489	177131	215
12564	Non Participating	22	21	22	4	553512	177123	214
12565	Non Participating	22	21	22	4	553522	177122	214
12566	Non Participating	22	21	22	4	553526	177120	214
12567	Non Participating	22	20	21	4	554270	177243	218
12568	Non Participating	22	20	21	4	554136	177100	217
12569	Non Participating	22	21	22	4	554051	177005	215
12570	Non Participating	22	21	21	4	553968	177081	217
12571	Non Participating	21	20	21	4	553974	177137	217
12572	Non Participating	22	20	21	4	553979	177178	217
12573	Non Participating	22	20	21	4	553954	177186	217
12574	Non Participating	24	22	23	4	553368	176605	216
12575	Non Participating	24	22	23	4	553394	176606	216
12576	Non Participating	24	22	23	4	553441	176606	216

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12577	Non Participating	24	22	23	4	553470	176610	216
12578	Non Participating	24	22	23	4	553393	176552	216
12579	Non Participating	24	22	23	4	553368	176544	217
12580	Non Participating	24	22	23	4	553315	176553	216
12581	Non Participating	24	22	23	4	553250	176613	216
12582	Non Participating	23	21	23	4	552936	176790	214
12583	Non Participating	23	21	22	4	553619	176438	219
12584	Non Participating	24	22	23	4	553717	176446	221
12585	Non Participating	23	21	22	4	555697	176619	220
12586	Non Participating	23	21	22	4	555769	176622	220
12587	Non Participating	23	21	22	4	555776	176688	220
12588	Non Participating	23	21	22	4	555702	176688	220
12589	Participating	23	21	22	4	555603	176702	219
12590	Non Participating	25	24	25	4	553502	175785	218
12591	Non Participating	28	26	28	4	562730	177996	239
12592	Non Participating	27	25	28	4	562780	178016	240
12593	Non Participating	28	26	28	4	562965	178103	243
12594	Non Participating	29	27	29	4	563045	178060	241
12595	Non Participating	26	24	27	4	562864	178234	241
12596	Non Participating	28	27	28	4	562986	178217	241
12597	Non Participating	27	25	27	4	562569	177755	238
12598	Non Participating	26	24	27	4	562549	177687	240
12599	Non Participating	27	26	27	4	562573	177605	241
12600	Non Participating	28	26	28	4	562643	177464	243
12601	Non Participating	27	26	28	4	562594	177437	243
12602	Non Participating	27	26	27	4	562564	177307	241
12603	Non Participating	28	26	28	4	562623	177272	241
12604	Non Participating	28	26	28	4	562581	177254	241
12605	Non Participating	34	33	35	4	564249	178203	240
12606	Non Participating	30	28	30	4	563368	178232	242
12607	Non Participating	39	38	40	4	566460	178165	240
12608	Non Participating	34	33	34	4	569860	177899	235
12609	Non Participating	34	33	35	4	569866	177860	235
12610	Non Participating	34	33	35	4	569869	177832	235
12611	Non Participating	35	33	35	4	569868	177801	235
12612	Non Participating	35	33	35	4	569865	177718	235
12613	Non Participating	35	34	36	4	569865	177602	235
12614	Non Participating	35	34	36	4	569816	177656	236

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12615	Non Participating	35	34	35	4	569811	177718	237
12616	Non Participating	35	33	35	4	569818	177768	236
12617	Non Participating	34	33	35	4	569819	177850	236
12618	Non Participating	33	32	34	4	569828	178084	237
12619	Non Participating	33	32	34	4	569762	178080	236
12620	Non Participating	33	32	34	4	569730	178081	236
12621	Non Participating	34	32	34	4	569703	178083	238
12622	Non Participating	34	32	34	4	569653	178082	240
12623	Non Participating	34	32	34	4	569636	178150	239
12624	Non Participating	33	32	34	4	569682	178130	238
12625	Non Participating	36	34	36	4	569813	177506	236
12626	Non Participating	33	32	34	4	569849	178078	236
12627	Non Participating	30	28	30	4	572220	177554	239
12628	Non Participating	30	28	30	4	572189	177601	240
12629	Non Participating	30	28	30	4	572148	177651	238
12630	Non Participating	30	28	30	4	572069	177724	236
12631	Non Participating	29	28	30	4	572038	177758	235
12632	Non Participating	29	28	30	4	572028	177784	234
12633	Non Participating	30	28	30	4	572012	177865	234
12634	Non Participating	29	27	29	4	571956	178193	233
12635	Non Participating	29	27	29	4	572126	178196	234
12636	Non Participating	28	27	28	4	572157	178203	234
12637	Non Participating	28	26	28	4	572482	178149	234
12638	Non Participating	28	26	28	4	572564	178180	235
12642	Non Participating	27	26	27	4	572406	178461	234
12659	Non Participating	24	22	25	4	570252	179658	230
12660	Non Participating	23	21	23	4	570201	179642	230
12661	Non Participating	24	22	24	4	570170	179636	232
12662	Non Participating	26	23	26	4	570119	179604	235
12663	Non Participating	27	24	27	4	570091	179582	235
12664	Non Participating	28	27	28	4	570066	179544	237
12665	Non Participating	29	27	29	4	570053	179516	237
12666	Non Participating	29	27	29	4	570034	179475	237
12667	Non Participating	27	25	27	4	570028	179447	236
12668	Non Participating	27	25	27	4	570006	179403	236
12669	Non Participating	28	25	28	4	569987	179396	237
12670	Non Participating	27	25	27	4	569924	179396	237
12671	Non Participating	26	24	27	4	569899	179485	235
12672	Non Participating	28	26	28	4	569899	179525	235

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12673	Non Participating	28	26	28	4	569899	179592	236
12674	Non Participating	28	26	28	4	569902	179651	234
12675	Non Participating	28	26	28	4	569911	179674	234
12676	Non Participating	26	24	25	4	560886	174956	246
12677	Non Participating	25	24	25	4	560566	174957	248
12678	Non Participating	26	24	25	4	560159	174846	245
12679	Non Participating	26	24	26	4	561809	175582	245
12680	Non Participating	25	23	24	4	558535	175505	242
12681	Non Participating	22	20	22	4	558491	175475	240
12682	Non Participating	25	23	24	4	558525	175436	242
12683	Non Participating	25	23	24	4	558571	175502	241
12684	Non Participating	23	21	23	4	558433	175590	242
12685	Non Participating	26	24	25	4	557956	175101	243
12686	Non Participating	26	24	25	4	557870	175101	241
12687	Non Participating	26	24	25	4	557889	174926	242
12688	Non Participating	26	24	25	4	558035	174986	243
12689	Non Participating	26	24	25	4	558128	175000	243
12690	Non Participating	26	24	25	4	558283	174990	244
12691	Non Participating	26	24	25	4	558479	175005	245
12692	Non Participating	25	23	25	4	557633	175091	235
12693	Non Participating	29	28	29	4	556702	173982	239
12694	Non Participating	29	27	29	4	556759	174027	240
12695	Non Participating	29	27	29	4	556788	174055	240
12696	Non Participating	29	27	29	4	556934	174061	241
12697	Non Participating	27	26	27	4	558438	174433	244
12698	Non Participating	28	26	27	4	558442	174339	243
12699	Non Participating	26	24	26	4	558596	174176	241
12700	Non Participating	28	27	28	4	558497	174040	243
12701	Non Participating	26	25	26	4	558871	174788	243
12702	Non Participating	26	25	26	4	560112	174625	245
12703	Non Participating	26	25	26	4	560099	174201	244
12704	Non Participating	27	26	27	4	560150	174191	243
12705	Non Participating	27	25	26	4	560152	174284	243
12706	Non Participating	27	25	26	4	560161	174368	245
12707	Non Participating	26	24	25	4	561734	174832	244
12708	Non Participating	27	26	27	4	561694	174274	245
12709	Non Participating	27	26	27	4	561777	174314	245
12710	Non Participating	32	30	32	4	555916	173006	241

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12711	Non Participating	32	30	32	4	555902	172987	241
12712	Non Participating	32	31	32	4	556019	172954	242
12713	Non Participating	32	31	32	4	556015	172990	242
12714	Non Participating	32	31	32	4	556015	172998	242
12715	Non Participating	32	31	32	4	556012	173013	241
12716	Participating	29	28	29	4	555813	173101	230
12717	Non Participating	32	30	32	4	555494	172927	239
12718	Non Participating	30	28	30	4	555514	172847	238
12719	Non Participating	32	30	32	4	555500	173013	241
12720	Participating	33	31	33	4	555178	172605	241
12721	Non Participating	32	31	32	4	555084	172646	240
12722	Non Participating	31	30	31	4	555333	172875	241
12723	Participating	32	30	32	4	555380	172909	241
12724	Participating	31	30	31	4	555292	172853	240
12725	Non Participating	29	27	29	4	556081	173214	234
12726	Non Participating	30	29	31	4	556100	173179	236
12727	Non Participating	41	40	41	4	552990	171445	230
12728	Non Participating	36	34	36	4	553239	170811	239
12729	Participating	42	41	42	4	551869	171278	228
12730	Non Participating	39	38	40	4	551875	170831	228
12731	Non Participating	42	41	42	4	550555	171106	227
12732	Non Participating	31	30	32	4	547930	171256	219
12733	Non Participating	31	30	31	4	547903	171325	218
12734	Non Participating	31	29	31	4	547892	171407	218
12735	Non Participating	31	29	31	4	547874	171463	218
12736	Non Participating	31	29	31	4	547865	171520	218
12737	Non Participating	30	28	30	4	547666	171651	217
12738	Non Participating	29	27	29	4	547419	171674	217
12739	Non Participating	33	31	33	4	548149	170941	220
12740	Non Participating	32	31	32	4	548048	170885	219
12741	Non Participating	32	31	33	4	548072	170800	219
12742	Non Participating	33	32	33	4	548171	170662	220
12743	Non Participating	33	32	33	4	548202	170121	220
12744	Non Participating	40	39	40	4	555184	168402	246
12745	Non Participating	41	40	41	4	555248	168426	245
12746	Non Participating	41	40	41	4	555246	168495	244
12747	Non Participating	46	46	46	4	556262	168583	248
12748	Non Participating	46	46	46	4	556224	168633	248
12749	Participating	44	44	44	4	556723	168634	250

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12750	Non Participating	41	41	41	4	557436	168956	249
12751	Non Participating	40	40	40	4	557588	169166	250
12752	Non Participating	42	42	43	4	557312	168799	249
12753	Non Participating	43	43	43	4	557315	168748	250
12754	Non Participating	43	44	44	4	557346	168649	251
12755	Non Participating	44	45	45	4	557276	168574	250
12756	Participating	44	44	44	4	557001	168576	251
12757	Non Participating	43	44	44	4	557605	168569	249
12758	Non Participating	42	42	42	4	557833	168621	253
12759	Non Participating	43	43	43	4	556854	169054	248
12760	Non Participating	45	45	45	4	556797	168313	250
12761	Non Participating	29	28	28	4	553562	165770	249
12762	Non Participating	27	26	26	4	552737	165270	248
12763	Non Participating	27	26	26	4	552774	165276	248
12764	Non Participating	27	26	26	4	552789	165274	248
12765	Non Participating	27	26	26	4	552826	165271	248
12768	Non Participating	27	26	27	4	553483	164678	253
12769	Participating	30	29	30	4	555092	164904	259
12770	Non Participating	30	29	30	4	555156	164565	261
12771	Non Participating	30	29	30	4	555148	164654	261
12772	Non Participating	29	28	29	4	555156	164311	257
12773	Non Participating	33	32	33	4	556764	164491	258
12774	Participating	33	32	33	4	556783	164582	259
12775	Non Participating	33	31	33	4	556700	164303	258
12776	Non Participating	32	31	32	4	556518	164406	259
12777	Non Participating	34	33	34	4	556710	165030	261
12778	Non Participating	43	42	43	4	561639	163690	273
12779	Non Participating	43	42	43	4	561633	163662	273
12780	Non Participating	38	37	38	4	563229	162932	277
12781	Non Participating	34	33	35	4	563211	162182	274
12782	Non Participating	36	35	36	4	563145	162563	278
12783	Non Participating	33	31	33	4	564053	161960	280
12784	Non Participating	34	32	34	4	563364	161982	279
12785	Non Participating	35	34	35	4	562562	162068	278
12786	Non Participating	36	35	36	4	562203	162048	275
12787	Non Participating	37	36	37	4	561894	162044	275
12788	Non Participating	39	38	39	4	561468	161983	277
12789	Non Participating	41	40	41	4	561219	162054	273

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12790	Non Participating	41	40	42	4	561559	162808	280
12791	Non Participating	36	35	36	4	561986	161896	278
12792	Participating	44	43	44	4	560865	162064	279
12793	Participating	43	42	43	4	560831	161996	276
12794	Non Participating	46	45	46	4	560414	162075	279
12812	Non Participating	30	28	30	4	563225	161176	284
12829	Non Participating	25	24	25	4	562951	179814	230
12830	Non Participating	26	24	26	4	563068	179824	231
12831	Non Participating	25	24	25	4	562997	179847	231
12832	Non Participating	27	25	27	4	563082	179243	234
12833	Non Participating	28	26	28	4	563056	178352	238
12834	Non Participating	24	22	24	4	563056	178446	237
12835	Non Participating	30	28	30	4	563487	178284	242
12836	Non Participating	30	28	30	4	563448	178270	242
12837	Non Participating	30	28	30	4	563482	178345	241
12838	Non Participating	25	23	25	4	561983	178238	235
12839	Non Participating	25	23	24	4	561702	178064	234
12840	Non Participating	22	20	21	4	560843	178279	230
12841	Non Participating	22	20	21	4	560841	178318	232
12842	Non Participating	21	20	21	4	560838	178349	232
12843	Non Participating	21	20	21	4	560817	178422	232
12844	Non Participating	21	20	21	4	560771	178362	233
12845	Non Participating	21	20	21	4	560766	178327	233
12846	Non Participating	18	16	17	4	553928	178298	211
12847	Non Participating	18	16	17	4	553749	178202	211
12848	Non Participating	11	9	10	4	553691	179499	208
12849	Non Participating	17	16	17	4	552987	178318	209
12850	Non Participating	16	15	16	4	552669	178434	207
12851	Non Participating	17	15	16	4	552546	178652	207
12852	Non Participating	15	13	15	4	552128	178523	207
12863	Non Participating	27	25	27	4	547505	172624	213
12864	Non Participating	28	26	28	4	547477	172702	214
12868	Non Participating	29	27	29	4	547622	172338	215
12870	Non Participating	29	27	29	4	547680	172101	215
12871	Non Participating	30	28	30	4	547803	172069	216
12872	Non Participating	30	28	30	4	547757	171960	216
12880	Non Participating	35	34	36	4	550241	173397	217
12969	Non Participating	42	41	42	4	564637	166050	269
12970	Non Participating	41	40	41	4	566415	166052	268

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
12971	Non Participating	43	42	43	4	566813	166053	268
12972	Non Participating	39	38	39	4	565900	166066	269
12973	Non Participating	45	44	45	4	563033	166074	266
12974	Non Participating	45	44	45	4	563055	166088	266
12976	Participating	46	45	46	4	562514	166096	268
12978	Non Participating	39	38	39	4	565558	166154	267
12979	Non Participating	40	39	40	4	565125	166175	269
12980	Non Participating	40	39	40	4	569244	167560	261
12981	Non Participating	44	43	44	4	567557	167560	262
12982	Participating	44	43	45	4	567444	167563	262
12983	Participating	42	41	43	4	568072	167575	263
12984	Participating	44	43	44	4	567424	167578	261
12985	Non Participating	46	45	46	4	566903	167580	263
12986	Participating	42	41	43	4	567977	167581	263
12987	Participating	46	45	46	4	566770	167585	264
12992	Non Participating	34	32	34	4	569724	169134	256
12993	Non Participating	31	30	31	4	570395	169135	261
12994	Participating	38	36	38	4	568349	169135	257
12995	Non Participating	36	34	36	4	569296	169138	258
12996	Non Participating	42	41	41	4	564596	169152	254
12997	Non Participating	33	32	33	4	569872	169155	259
12998	Non Participating	37	36	37	4	567858	169155	259
12999	Non Participating	30	28	30	4	570984	169156	259
13000	Non Participating	35	33	35	4	569514	169159	254
13001	Non Participating	29	28	29	4	571033	169165	259
13002	Non Participating	29	27	29	4	571075	169169	260
13003	Non Participating	29	27	29	4	571126	169173	259
13005	Non Participating	42	42	42	4	564891	170221	253
13006	Non Participating	31	29	31	4	569649	170320	252
13007	Non Participating	25	23	25	4	573504	170345	252
13008	Non Participating	38	37	38	4	566572	170353	252
13011	Non Participating	25	23	25	4	573499	170382	251
13014	Non Participating	34	33	34	4	563333	170420	255
13016	Participating	33	31	33	4	565542	171744	250
13017	Non Participating	31	29	31	4	564045	171746	252
13018	Non Participating	31	29	30	4	564060	171748	252
13019	Participating	30	29	30	4	562835	171749	252
13020	Participating	30	29	30	4	562922	171750	251

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13022	Non Participating	27	25	27	4	573323	171753	248
13023	Non Participating	30	29	30	4	562783	171757	251
13024	Non Participating	31	30	31	4	563511	171759	251
13025	Non Participating	31	30	31	4	563407	171761	251
13026	Non Participating	30	29	31	4	571670	171763	249
13027	Non Participating	31	30	31	4	563518	171763	251
13028	Non Participating	37	36	38	4	571445	173061	249
13029	Non Participating	37	36	38	4	571438	173063	249
13030	Non Participating	29	27	29	4	573308	173063	247
13031	Non Participating	39	38	40	4	570418	173065	250
13032	Non Participating	30	28	30	4	573009	173065	246
13033	Non Participating	35	34	35	4	568946	173068	250
13034	Non Participating	31	29	31	4	565258	173075	251
13035	Non Participating	35	34	36	4	568927	173076	250
13036	Non Participating	33	32	33	4	566676	173076	249
13037	Non Participating	39	38	40	4	570422	173076	250
13039	Non Participating	31	29	31	4	572704	173082	247
13040	Non Participating	41	40	41	4	571515	173850	248
13041	Non Participating	29	27	29	4	563812	173854	247
13042	Participating	32	31	32	4	565955	173856	249
13043	Participating	40	39	41	4	569806	173858	247
13044	Non Participating	35	33	35	4	566635	173858	247
13045	Non Participating	30	28	30	4	573273	173860	245
13046	Non Participating	30	28	30	4	573261	173860	246
13048	Non Participating	41	40	42	4	569926	173871	247
13049	Non Participating	42	41	42	4	569998	173880	247
13050	Non Participating	41	40	41	4	571500	173890	249
13051	Participating	41	40	41	4	569814	173905	246
13052	Non Participating	46	45	46	4	570334	174739	246
13053	Non Participating	37	36	37	4	566836	174748	246
13054	Non Participating	42	41	43	4	569892	174751	245
13055	Non Participating	45	44	46	4	570323	174755	246
13056	Non Participating	36	35	36	4	566652	174755	247
13057	Non Participating	37	36	38	4	566917	174758	246
13058	Non Participating	42	41	42	4	569821	174759	245
13059	Non Participating	42	41	43	4	569908	174779	245
13060	Non Participating	38	36	38	4	566951	174787	246
13061	Non Participating	42	41	43	4	569892	174789	245
13062	Non Participating	36	35	36	4	566648	174791	246

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13063	Non Participating	36	35	36	4	566656	174791	246
13064	Non Participating	44	43	44	4	568153	176023	242
13065	Non Participating	37	36	38	4	571550	176067	241
13066	Non Participating	37	36	37	4	571550	176081	241
13067	Non Participating	39	38	40	4	566615	176107	242
13068	Non Participating	38	37	38	4	564965	176309	244
13069	Non Participating	38	37	39	4	564982	176361	245
13070	Participating	32	30	32	4	563765	176422	248
13071	Participating	32	30	32	4	563716	176462	245
13072	Participating	32	30	32	4	563719	176469	244
13073	Non Participating	35	33	35	4	564258	176471	244
13074	Non Participating	34	33	35	4	564228	176476	244
13075	Non Participating	42	41	42	4	567373	176484	243
13124	Non Participating	43	42	44	4	569703	176464	237
13125	Non Participating	42	41	43	4	569762	176543	238
13126	Non Participating	38	37	39	4	569785	177068	236
13127	Non Participating	38	36	38	4	569926	177152	238
13128	Non Participating	35	34	36	4	569923	177615	235
13129	Non Participating	35	33	35	4	569926	177679	235
13130	Non Participating	35	33	35	4	569926	177723	235
13131	Non Participating	34	33	35	4	569931	177794	235
13132	Non Participating	34	33	34	4	569931	177848	234
13133	Non Participating	34	32	34	4	569931	177879	235
13134	Non Participating	34	32	34	4	569928	177922	235
13135	Non Participating	34	32	34	4	569926	177966	236
13304	Non Participating	30	29	31	4	570913	177974	236
13305	Non Participating	30	28	31	4	570908	177989	234
13306	Non Participating	29	27	30	4	570902	178014	233
13307	Non Participating	30	28	30	4	570897	178021	233
13308	Non Participating	33	31	33	4	571149	177461	234
13309	Non Participating	33	31	33	4	571173	177472	234
13310	Non Participating	32	31	33	4	571205	177504	234
13311	Non Participating	32	31	33	4	571234	177532	233
13312	Non Participating	32	30	32	4	571258	177562	233
13313	Non Participating	32	30	32	4	571289	177606	232
13314	Non Participating	32	30	32	4	571328	177638	232
13315	Non Participating	32	30	32	4	571345	177659	233
13316	Non Participating	25	23	24	4	553360	176170	218

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13317	Non Participating	24	23	24	4	553050	176365	216
13318	Non Participating	24	22	24	4	553047	176416	216
13319	Non Participating	24	22	23	4	553045	176451	216
13320	Non Participating	24	22	23	4	553041	176492	215
13321	Non Participating	24	22	23	4	553098	176525	215
13322	Non Participating	24	22	23	4	553094	176487	215
13323	Non Participating	24	22	23	4	553092	176448	215
13324	Non Participating	24	23	24	4	553107	176406	216
13325	Non Participating	24	23	24	4	553101	176349	216
13326	Non Participating	23	22	23	4	552904	176646	215
13327	Non Participating	23	21	22	4	552903	176812	214
13328	Non Participating	19	17	18	4	558275	177897	225
13329	Non Participating	19	17	18	4	558269	177840	226
13330	Non Participating	19	17	18	4	558400	177719	226
13331	Non Participating	19	17	18	4	558381	177702	225
13332	Non Participating	19	18	18	4	558424	177765	227
13333	Non Participating	19	17	18	4	558502	177898	227
13334	Non Participating	19	17	18	4	558546	177662	227
13335	Non Participating	20	18	19	4	558632	177626	230
13336	Non Participating	20	18	19	4	558587	177514	230
13337	Non Participating	19	16	18	4	558690	177512	230
13338	Non Participating	19	17	18	4	558655	177445	231
13339	Non Participating	19	17	18	4	558747	177453	233
13340	Non Participating	36	35	36	4	568224	178086	241
13341	Non Participating	36	35	36	4	568166	178084	240
13342	Non Participating	36	35	37	4	568091	178097	241
13343	Non Participating	36	34	36	4	568177	178170	240
13344	Non Participating	36	34	36	4	568231	178174	240
13345	Non Participating	36	34	36	4	568289	178152	241
13346	Non Participating	36	34	36	4	568346	178151	240
13347	Non Participating	36	34	36	4	568388	178154	240
13348	Non Participating	35	34	36	4	568449	178157	241
13349	Non Participating	35	34	36	4	568487	178157	242
13350	Non Participating	35	34	36	4	568531	178167	241
13351	Non Participating	35	34	36	4	568567	178154	241
13352	Non Participating	31	29	31	4	570871	178274	233
13353	Non Participating	31	29	31	4	570857	178279	233
13354	Non Participating	31	29	31	4	570835	178283	233
13355	Non Participating	31	29	31	4	570805	178292	234

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13356	Non Participating	31	29	31	4	570782	178301	234
13357	Non Participating	31	29	31	4	570772	178307	234
13358	Non Participating	31	29	31	4	570751	178315	234
13359	Non Participating	31	29	31	4	570733	178322	234
13360	Non Participating	31	29	31	4	570660	178279	234
13361	Non Participating	31	30	31	4	570663	178250	234
13362	Non Participating	31	30	32	4	570663	178234	234
13363	Non Participating	31	30	32	4	570665	178217	234
13364	Non Participating	28	26	27	4	571975	178820	230
13365	Non Participating	27	25	27	4	571959	178955	229
13376	Non Participating	28	26	28	4	571893	178826	230
13377	Non Participating	28	26	28	4	571871	178792	230
13378	Non Participating	28	26	28	4	571852	178769	229
13379	Non Participating	28	26	28	4	571798	178735	229
13380	Non Participating	27	25	27	4	571782	178725	229
13381	Non Participating	28	26	28	4	571723	178650	231
13382	Non Participating	28	26	28	4	571707	178637	232
13383	Non Participating	27	24	27	4	571666	178584	232
13384	Non Participating	27	25	27	4	571644	178558	233
13385	Non Participating	28	27	29	4	571631	178549	234
13386	Non Participating	29	27	29	4	571562	178477	235
13387	Non Participating	29	27	29	4	571537	178445	234
13388	Non Participating	22	20	22	4	560000	176735	242
13389	Non Participating	19	16	18	4	559538	176990	236
13390	Non Participating	21	18	20	4	559604	177049	236
13391	Non Participating	20	18	19	4	559801	176788	241
13392	Non Participating	19	16	19	4	559577	176648	240
13393	Non Participating	16	14	16	4	559517	176643	239
13394	Non Participating	20	18	20	4	559753	176636	243
13395	Non Participating	22	20	21	4	558615	176640	231
13396	Non Participating	23	21	22	4	558550	176632	230
13397	Non Participating	23	21	22	4	558510	176647	230
13398	Non Participating	23	21	22	4	558456	176664	231
13399	Non Participating	22	20	21	4	558404	176666	233
13400	Non Participating	26	25	26	4	555196	175128	222
13401	Non Participating	26	25	26	4	555040	175128	222
13402	Non Participating	27	25	26	4	554955	175135	221
13403	Non Participating	26	24	25	4	554626	175081	220

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13404	Non Participating	26	25	26	4	554679	175089	220
13405	Non Participating	26	25	26	4	554593	175211	220
13406	Non Participating	27	25	26	4	553859	175139	219
13407	Non Participating	26	24	26	4	553828	175136	219
13408	Non Participating	27	25	26	4	553785	175143	219
13409	Non Participating	27	25	27	4	553701	175092	219
13410	Non Participating	27	26	27	4	553562	175097	219
13411	Non Participating	27	25	26	4	553580	175277	218
13412	Non Participating	32	31	32	4	556769	173054	242
13413	Non Participating	33	31	33	4	556777	172975	244
13414	Non Participating	33	32	33	4	556831	172843	243
13415	Non Participating	34	32	33	4	556820	172788	242
13416	Non Participating	34	32	34	4	556831	172748	241
13417	Non Participating	34	32	34	4	556748	172719	240
13418	Non Participating	34	33	34	4	556817	172558	240
13419	Non Participating	33	32	33	4	556756	172592	239
13420	Non Participating	33	31	33	4	556695	172571	239
13421	Non Participating	34	32	34	4	556520	172569	236
13422	Non Participating	35	34	35	4	556681	172449	243
13423	Non Participating	35	34	35	4	556837	172454	244
13424	Non Participating	42	41	42	4	549859	171704	221
13425	Non Participating	44	43	44	4	550206	171794	221
13426	Non Participating	44	43	44	4	550197	171810	221
13427	Non Participating	43	42	43	4	551663	171852	225
13428	Non Participating	44	44	44	4	551769	171863	227
13429	Non Participating	46	45	46	4	551930	171846	227
13430	Participating	44	44	44	4	551859	171704	227
13431	Participating	45	44	45	4	551893	171638	225
13432	Non Participating	46	45	46	4	551936	171871	228
13433	Non Participating	44	44	44	4	551814	171806	228
13434	Non Participating	38	38	39	4	553242	171954	228
13435	Non Participating	44	44	44	4	552751	171913	227
13436	Non Participating	43	42	43	4	556772	170204	244
13437	Non Participating	43	42	43	4	556719	170181	245
13438	Non Participating	43	42	43	4	556968	170191	241
13439	Non Participating	43	42	43	4	557122	170179	243
13440	Participating	45	44	44	4	557173	170294	245
13441	Non Participating	45	44	44	4	557609	170445	247
13442	Non Participating	44	43	43	4	556768	170259	246

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13443	Non Participating	42	41	42	4	558540	170795	248
13444	Participating	42	41	42	4	558443	170663	248
13445	Participating	41	40	41	4	558445	170476	247
13446	Non Participating	41	40	41	4	558447	170127	249
13447	Non Participating	42	41	42	4	558874	170200	249
13448	Non Participating	32	31	32	4	553627	167618	246
13449	Non Participating	30	28	30	4	551867	167897	244
13450	Non Participating	30	29	30	4	551807	168107	244
13452	Non Participating	28	26	27	4	551475	167020	245
13454	Non Participating	31	30	31	4	553552	167466	246
13455	Non Participating	31	30	31	4	553612	167321	246
13456	Non Participating	29	28	29	4	553060	167044	246
13457	Non Participating	29	28	29	4	552800	167031	246
13458	Non Participating	29	28	29	4	552656	167032	247
13459	Non Participating	40	39	40	4	559948	167214	259
13460	Non Participating	43	43	43	4	562519	164496	274
13461	Non Participating	43	42	43	4	562546	164412	273
13462	Non Participating	46	46	46	4	561579	164993	267
13463	Non Participating	44	44	44	4	561568	164476	270
13464	Participating	42	42	43	4	561825	164409	274
13465	Non Participating	45	45	45	4	563183	164599	269
13466	Non Participating	44	44	45	4	563147	164418	271
13467	Participating	45	45	46	4	563525	164412	272
13468	Non Participating	40	39	40	4	562660	163611	275
13469	Non Participating	43	43	44	4	563112	163610	277
13470	Non Participating	44	44	45	4	563243	163598	276
13471	Participating	43	42	44	4	559962	163618	274
13472	Non Participating	30	28	30	4	556870	161874	273
13473	Non Participating	30	28	29	4	556808	161843	274
13474	Non Participating	30	28	29	4	556822	161875	273
13481	Non Participating	30	29	30	4	556795	162376	268
13482	Non Participating	30	29	30	4	556813	162413	268
13483	Non Participating	31	29	30	4	556829	162441	268
13484	Non Participating	30	28	29	4	556825	161821	274
13485	Non Participating	30	28	29	4	556818	161798	274
13486	Non Participating	29	28	29	4	556819	161777	274
13504	Non Participating	13	11	13	4	552539	178656	205
13505	Non Participating	22	21	21	4	555264	177014	219

Receiver ID	Receiver Status	Sound Pressure Level (dBA)			Relative Height (m)	Coordinates (Ohio State Plane)		
		GE 3.6-137	Vestas V136	Gamesa G132		X (m)	Y (m)	Z (m)
13506	Non Participating	15	13	15	4	554914	178244	215
13507	Non Participating	18	17	17	4	555525	178197	222
13508	Non Participating	19	17	18	4	559565	178691	228
13509	Non Participating	18	16	18	4	559428	178286	226
13510	Non Participating	20	18	19	4	560129	178407	228
13511	Non Participating	16	14	16	4	559394	178642	227
13512	Non Participating	14	12	14	4	559290	178569	226
13513	Non Participating	17	15	17	4	559979	179061	227
13514	Non Participating	15	12	15	4	560229	178950	226
13515	Non Participating	18	16	18	4	560202	178850	228
13516	Non Participating	19	17	19	4	560226	178787	228
13517	Non Participating	19	17	19	4	560239	178812	228
13518	Non Participating	18	15	17	4	560238	178853	229
13519	Non Participating	22	20	21	4	561122	178574	231
13520	Non Participating	43	42	43	4	561627	163787	273

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Case No(s). 17-2295-EL-BGN

Summary: Application Exhibits G and H electronically filed by Teresa Orahod on behalf of Sally W. Bloomfield