

# SOUND MODELING REPORT GOOSE CREEK WIND





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**Report Title:**

Sound Modeling Report Goose Creek Wind

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**Report Prepared for:**

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## 1.0 INTRODUCTION

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Goose Creek Wind, LLC (“Applicant” or “Goose Creek Wind”), an indirect subsidiary of Apex Clean Energy Holdings, LLC (“Apex”) is developing a 300 MW wind power generation facility (“Project”) proposed in Piatt County, Illinois. The Project will include installation of up to 50 wind turbines and associated infrastructure including a Project substation. As part of the Project’s special use permit application for the county, RSG conducted sound propagation modeling for the proposed turbine layout to assess compliance with County ordinances and Illinois Pollution Control Board (“IPCB”) standards. Included in this report are:

- A description of the Project;
- Identification of applicable sound level standards;
- Sound propagation modeling procedures and results; and,
- Conclusions.

Appendix A includes a primer on the science of sound, including descriptions of some of the acoustical terms used in this report, and Appendix B includes a discussion of sound topics that are particular to wind farms.

## 2.0 PROJECT DESCRIPTION

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The Goose Creek Wind Farm is proposed to be located in the most northerly section of Piatt County, Illinois, south and east of Farmer City and northwest of White Heath and Interstate 72. Up to 50 wind turbines are proposed with a total capacity of 300 MW. The area around the Project is composed primarily of agricultural land uses with rural and farm residences spread throughout the area. The terrain is mostly flat.

This study assesses a layout<sup>1</sup> that includes a total of 50 Vestas V162 6.0 MW wind turbines. In addition, this assessment includes two high-voltage transformers (166 MVA each) at the Project substation that step the voltage from 34.5 kV on the low side up to 345 kV on the high side.

The majority of the proposed wind turbines are between Interstate 74 to the north and Illinois Route 10 (IL-10) to the south. There are 13 turbines proposed north of Interstate 74 and up to 5 turbines proposed to the south of IL-10. From east to west, the Project stretches from the Piatt/Champaign County line to the Piatt/DeWitt County line. The Village of Mansfield lies within the Project area, but the closest wind turbine location, currently under consideration<sup>1</sup>, is approximately 2.9 kilometers (1.8 miles) to the north. Similarly, the village of De Land is located generally to the southwest of the Project area with the closest turbine location, currently under consideration<sup>1</sup>, approximately 1.4 kilometers (0.9 miles) to the northwest.

The Project substation would be located in the southern half of the Project area on N 700 East Road approximately 1.2 kilometers (0.75 miles) north of IL-10.

A map of the proposed Project, including the 50 turbine locations evaluated in this assessment, is provided in Figure 1. Given the scale of the map and the size of the Project substation, it is difficult to see where the substation is located, but it is just to the east of label “T61” in the southern portion of the Project area.

Sapphire Sky is another wind farm in the area that is currently under construction. It is located to the north in McLean County. At its closest point it is approximately 3.8 kilometers (2.4 miles) northwest of a Goose Creek turbine location currently under consideration<sup>1</sup>. Based on information available through McLean County regarding turbine locations and turbine models, we have included the sound emissions from Sapphire Sky in the sound propagation model in this assessment in addition to those of Goose Creek. This is discussed further in Section 4.0.

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<sup>1</sup> Layout 060 (20230210)

## Sound Modeling Report Goose Creek Wind

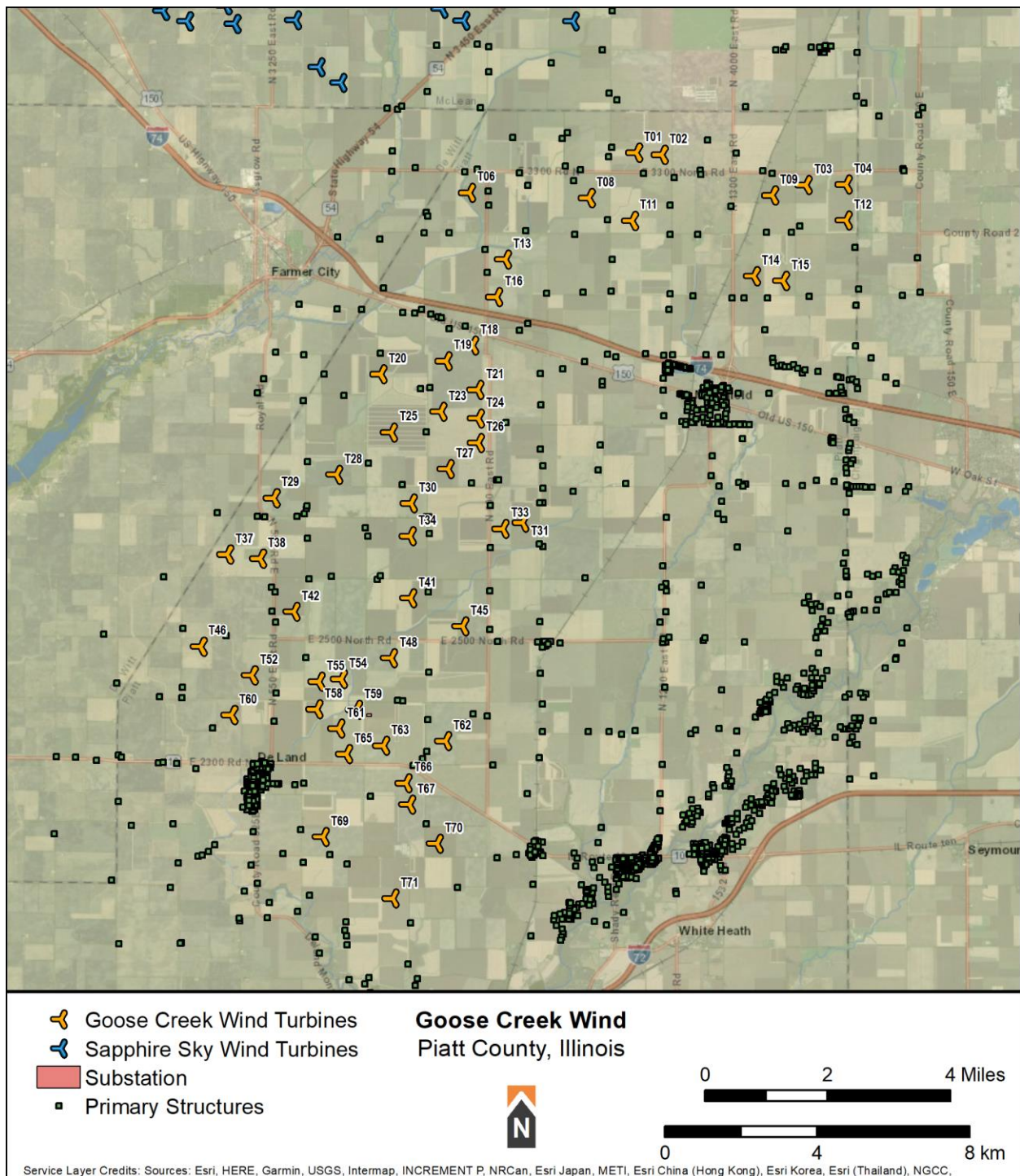


FIGURE 1: SITE MAP

## 3.0 NOISE STANDARDS

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### 3.1 LOCAL STANDARDS

Appendix A of the Piatt County Zoning Ordinance contains standards for wind turbines over 500 kW. Regarding noise, Section IX of the appendix states:

*Noise levels from each WECS or WECS project shall be in compliance with applicable Illinois pollution control board (IPCB) regulations. The applicant, through the use of a qualified professional as part of the special use application process, shall appropriately demonstrate compliance with the above noise requirements, with the condition that homes and families that are affected by wind turbine noise levels are given due consideration as it relates to the health and enjoyment of those individuals.*

### 3.2 STATE STANDARDS

The State of Illinois regulates noise through Title 35, Subtitle H of the Illinois Administrative Code (the “Code”). In Section 900.102 the Code states:

*No person shall cause or allow the emission of sound beyond the boundaries of his property, as property is defined in Section 25 of the Illinois Environmental Protection Act, so as to cause noise pollution in Illinois, or as to violate any provision of this Chapter.*

Noise pollution is defined in the Code as, “the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity.”

Part 910 details basic measurement procedures with references to several common ANSI standards.

Quantitative sound level limits that are applicable to the proposed Project are defined in Part 901: “Sound Emission Standards and Limitations for Property Line-Noise-Sources.” Section 901.102 and 901.103 provide sound pressure level limits for each full octave band center frequency from 31.5 Hz to 8 kHz.

The IPCB standard is based on the land use of the sound source and receiver. Both alternative energy sources and agriculture are considered Class C. Residences are considered Class A, as is the land subject to residential use directly surrounding them. Therefore, impacts to individual residences, and the land subject to residential use immediately surrounding them are evaluated according to the Class C to Class A standard. The applicable standards are shown in Table 1.

It is important to point out that the Illinois standard is frequency based, and thus is intended to protect against specific low-frequency noise impacts, as well as impacts due to overall sound levels.



**TABLE 1: ALLOWABLE OCTAVE BAND SOUND PRESSURE LEVELS (dBZ) OF SOUND EMITTED TO RECEIVING CLASS A LAND FROM CLASS C LAND**

| LIMIT TIME             | SOUND LEVEL LIMIT (dBZ) BY OCTAVE BAND CENTER FREQUENCY |       |        |        |        |       |       |       |       |
|------------------------|---------------------------------------------------------|-------|--------|--------|--------|-------|-------|-------|-------|
|                        | 31.5 Hz                                                 | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
| Class C to A Daytime   | 75                                                      | 74    | 69     | 64     | 58     | 52    | 47    | 43    | 40    |
| Class C to A Nighttime | 69                                                      | 67    | 62     | 54     | 47     | 41    | 36    | 32    | 32    |

Additionally, the regulation states that “no person shall cause or allow the emission of any prominent discrete tone.” In Section 900.101, the Code defines prominent discrete tones as:

*Prominent discrete tone: sound, having a one-third octave band sound pressure level which, when measured in a one-third octave band at the preferred frequencies, exceeds the arithmetic average of the sound pressure levels of the two adjacent one-third octave bands on either side of such one-third octave band by:*

*5 dB for such one-third octave band with a center frequency from 500 Hertz to 10,000 Hertz, inclusive. Provided: such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band, or;*

*8 dB for such one-third octave band with a center frequency from 160 Hertz to 400 Hertz, inclusive. Provided: such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band, or;*

*15 dB for such one-third octave band with a center frequency from 25 Hertz to 125 Hertz, inclusive. Provided: such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band.*

The regulation also adds the following clause for prominent discrete tones:

*This rule shall not apply to prominent discrete tones having a one-third octave band sound pressure level 10 or more dB below the allowable octave band sound pressure level specified in Sections 901.102 through 901.104 for the octave band which contains such one-third octave band. In the application of this sub-section, the applicable numeric standard for sound emitted from any existing property-line-noise-source to receiving Class A land, for both daytime and nighttime operations, is found in Section 901.102(a).*

Each residence has been evaluated using the nighttime Class C to Class A limits and for the presence of prominent discrete tones regardless of whether the residence is participating in the Project or not.

## 4.0 SOUND PROPAGATION MODELING

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### 4.1 MODEL 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 assumes downwind sound propagation between every source and every receiver, consequently, all wind directions, including the prevailing wind directions, are taken into account.

The sound modeling methodology follows the ANSI/ACP American National Standard for wind turbine sound modeling.<sup>2</sup> These include the use of a ground absorption factor of  $G=0.5$  (half hard/half porous ground) and a +2 dB uncertainty factor.

A search distance up to 8,000 meters (5 miles) allows for the contributions of distant turbines to be considered at receivers. Other modeling parameters can be found in Appendix C.

A total of 1,318 receptors were modeled at a height of 4 meters (13 feet) above ground level throughout the Project area. The receptors are the same locations as the primary structures identified in Figure 1. Most of the receptors are residences, but there are also 3 schools, 4 churches, and 48 businesses. In addition to the discrete receptors, a 30 meter by 30 meter (98 feet by 98 feet) grid of receptors was setup in the model covering 813 square kilometers (314

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<sup>2</sup> ANSI/ACP Standard 111-1, “Wind Turbine Sound Modeling,” American National Standards Institute, 2022.

square miles) in and around the Project. The grid is used to calculate the sound pressure level contours in the result maps.

As mentioned in Section 2.0, a layout of 50 Vestas V162 6.0 MW wind turbines was included in the sound propagation model along with two high voltage transformers at the Project substation and the Sapphire Sky wind turbines. Results for the receptors located between Goose Creek Wind and Sapphire Sky represent the potential cumulative impact in those areas.

## 4.2 MODEL RESULTS

The full model results by octave band for each receptor are provided in Appendix D. A summary of the highest results for each octave band with a comparison to the IPCB Class C to A nighttime limits is provided in Table 2. All receptors are below the IPCB Class C to A nighttime limit. The highest octave bands from the model results are 500 Hz and 1 kHz which are within 1 dBZ of the IPCB limits of 47 and 41 dBA, respectively, at a few receptors, but still under the limit.

**TABLE 2: SUMMARY OF HIGHEST MODELED SOUND LEVELS (dBZ) BY OCTAVE BAND**

| RECEPTOR<br>(PRIMARY<br>STRUCTURE ID)  | 31.5 Hz | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|----------------------------------------|---------|-------|--------|--------|--------|-------|-------|-------|-------|
| 5                                      | 58      | 56    | 51     | 48     | 45     | 40    | 31    | 10    | 0     |
| 678                                    | 59      | 57    | 51     | 49     | 45     | 40    | 31    | 10    | 0     |
| 846                                    | 59      | 57    | 52     | 49     | 45     | 40    | 31    | 11    | 0     |
| 1104                                   | 57      | 56    | 51     | 49     | 46     | 40    | 29    | 2     | 0     |
| <i>IPCB C to A<br/>Nighttime Limit</i> | 69      | 67    | 62     | 54     | 47     | 41    | 36    | 32    | 32    |

The results for each octave band are also shown in map format in Figures 2 through 10. The sound level contour lines in each map range from 30 dBZ (dark blue) to 70 dBZ (purple). The IPCB Class C to Class A nighttime limit for each octave band is represented by a black dashed line. The black dashed limit line is not visible in Figures 2 (31.5 Hz), 3 (63 Hz), 4 (125 Hz), 9 (4 kHz), and 10 (8 kHz) at the map scale because those sound levels occur close to the turbine or not at all.

## Sound Modeling Report Goose Creek Wind

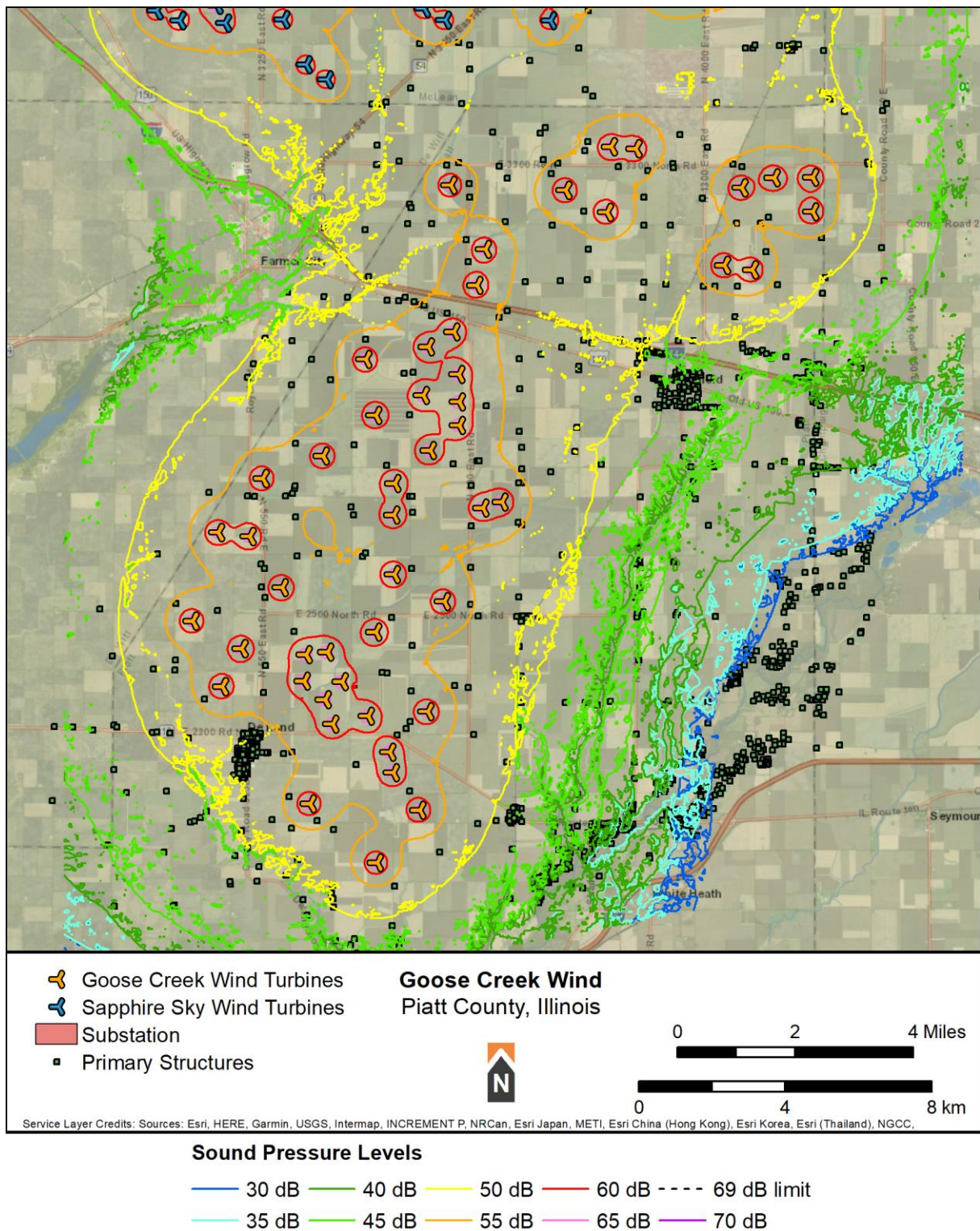


FIGURE 2: SOUND PROPAGATION MODEL RESULTS FOR 31.5 Hz



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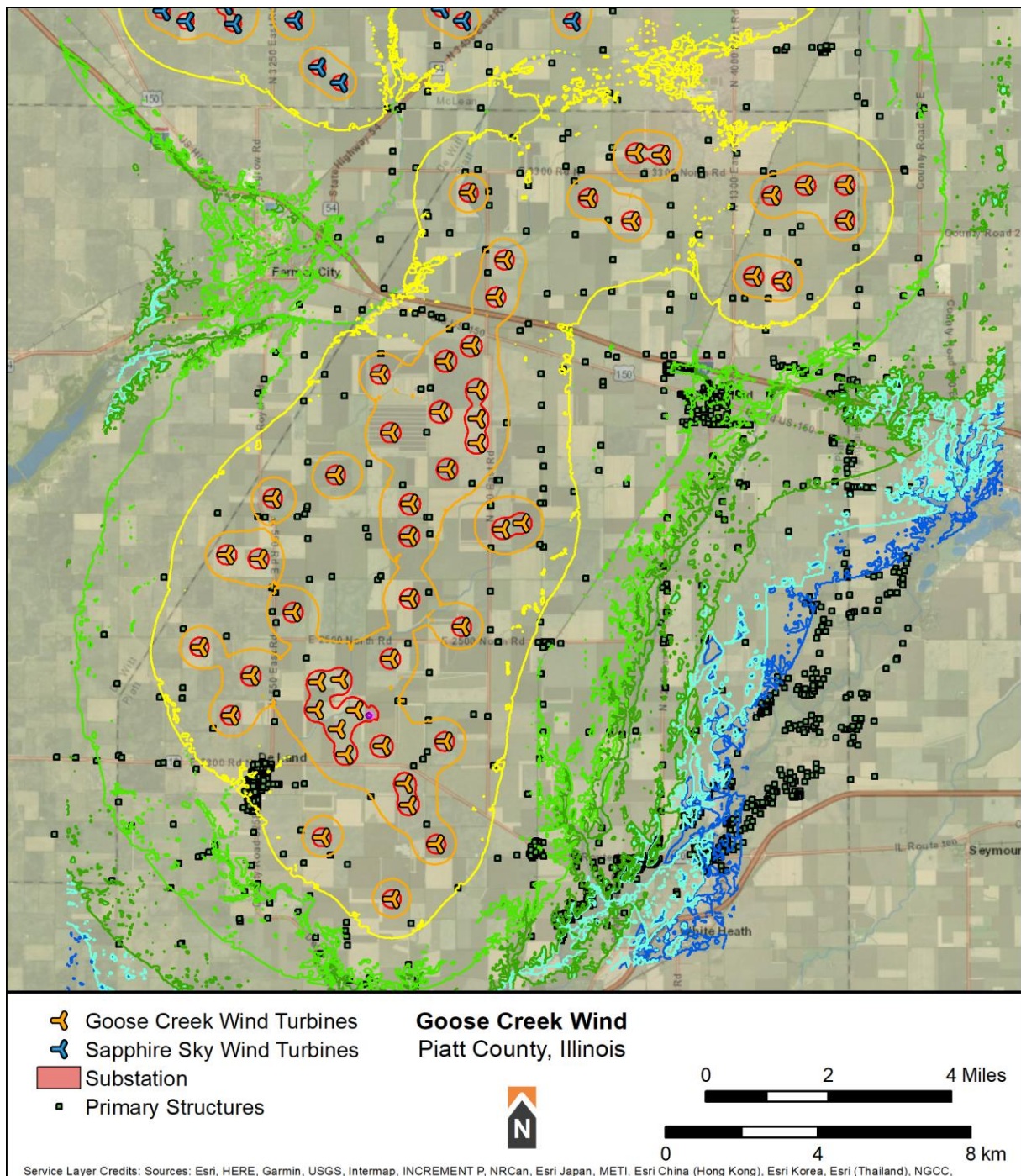
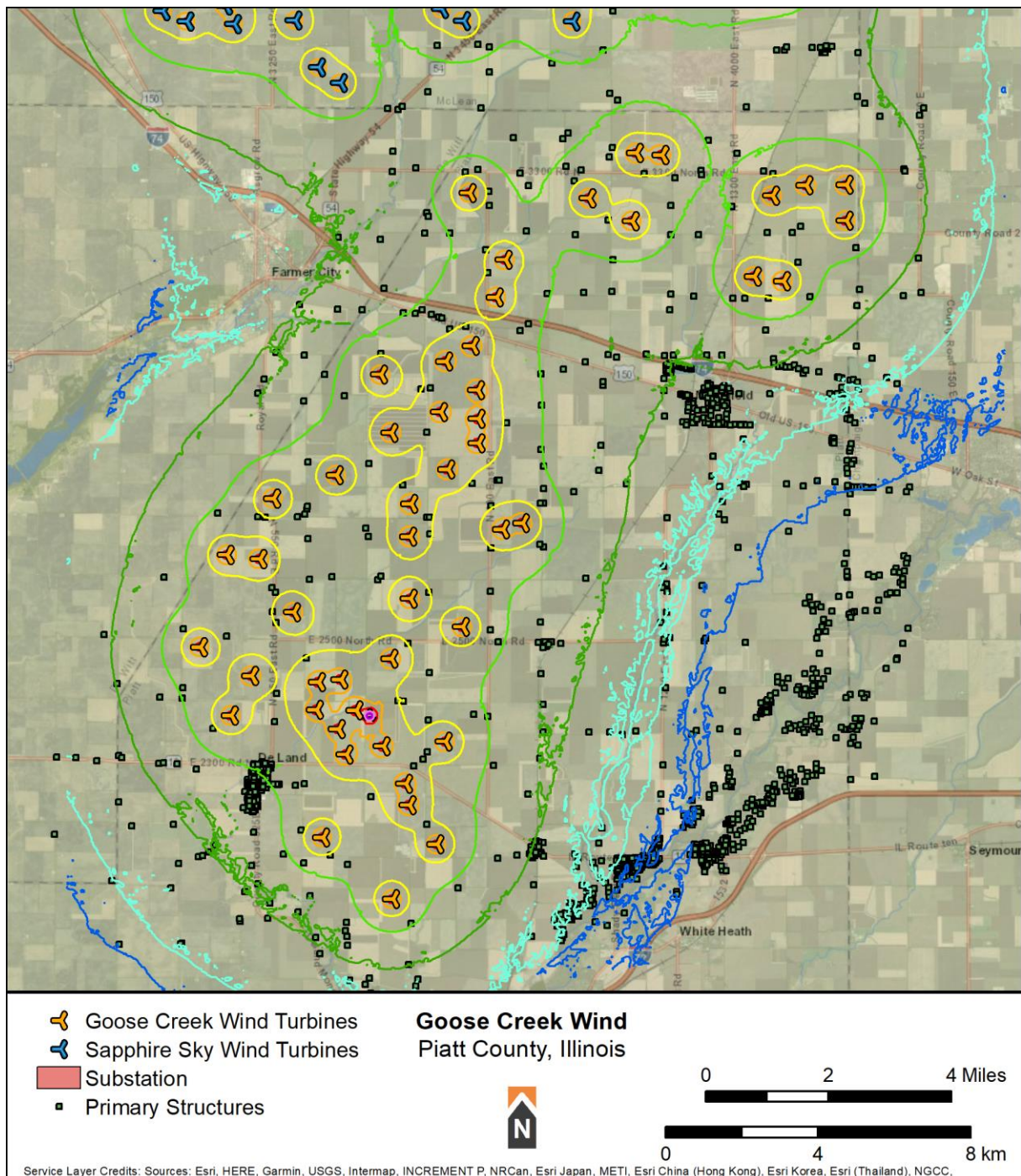


FIGURE 3: SOUND PROPAGATION MODEL RESULTS FOR 63 Hz



## Sound Modeling Report Goose Creek Wind



### Sound Pressure Levels

30 dB 40 dB 50 dB 60 dB 65 dB  
35 dB 45 dB 55 dB - - - 62 dB limit 70 dB

FIGURE 4: SOUND PROPAGATION MODEL RESULTS FOR 125 Hz



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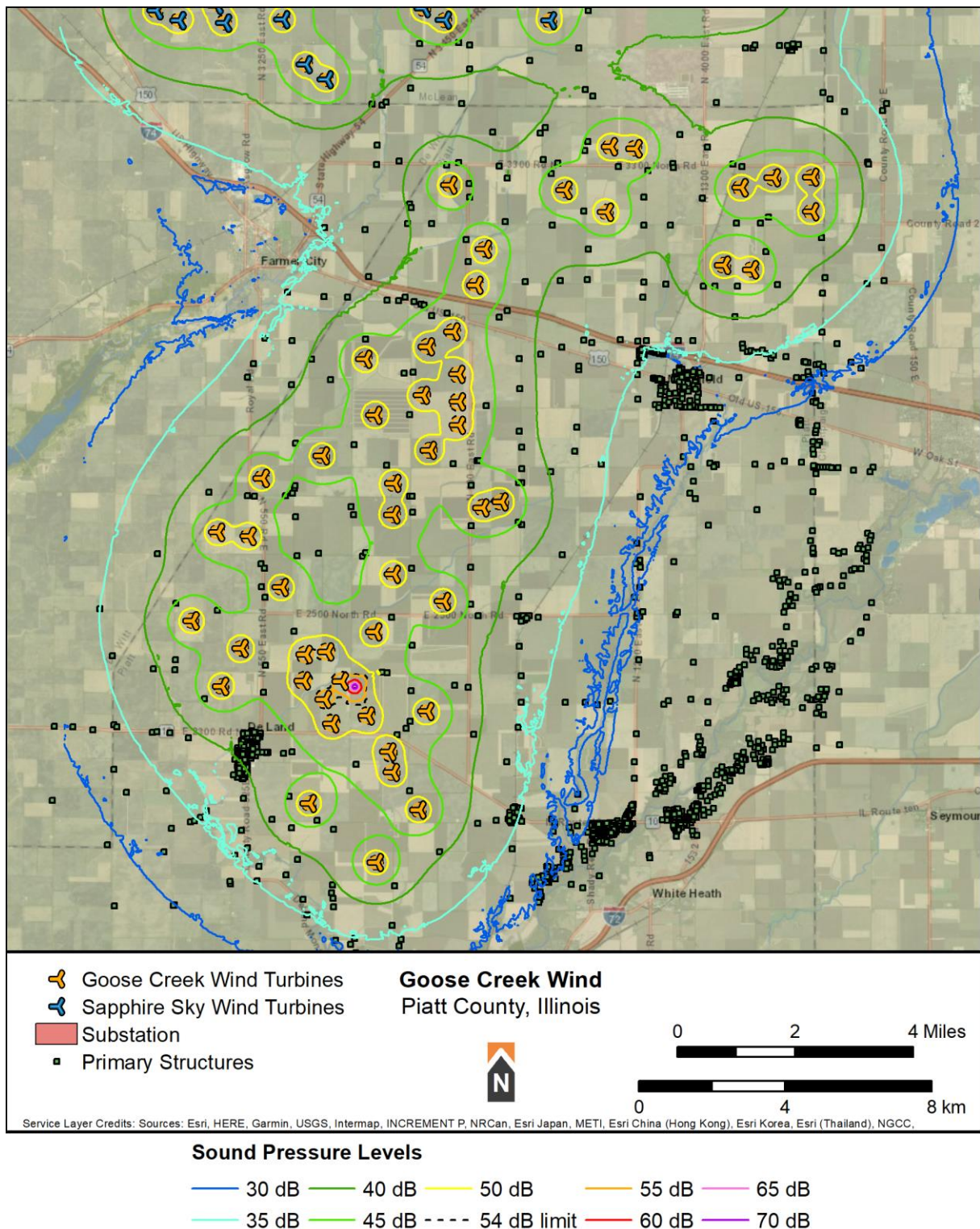


FIGURE 5: SOUND PROPAGATION MODEL RESULTS FOR 250 Hz



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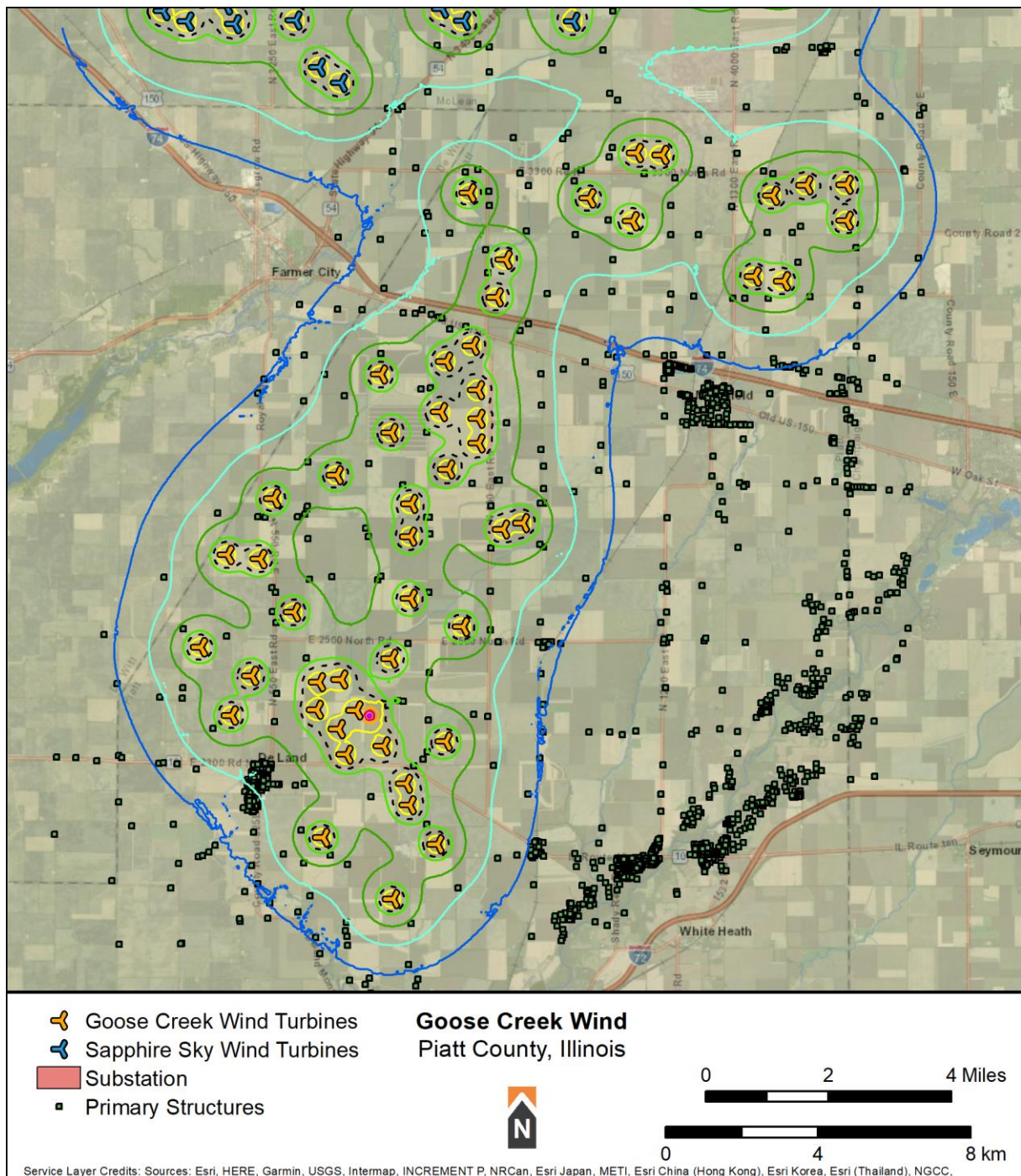


FIGURE 6: SOUND PROPAGATION MODEL RESULTS FOR 500 Hz



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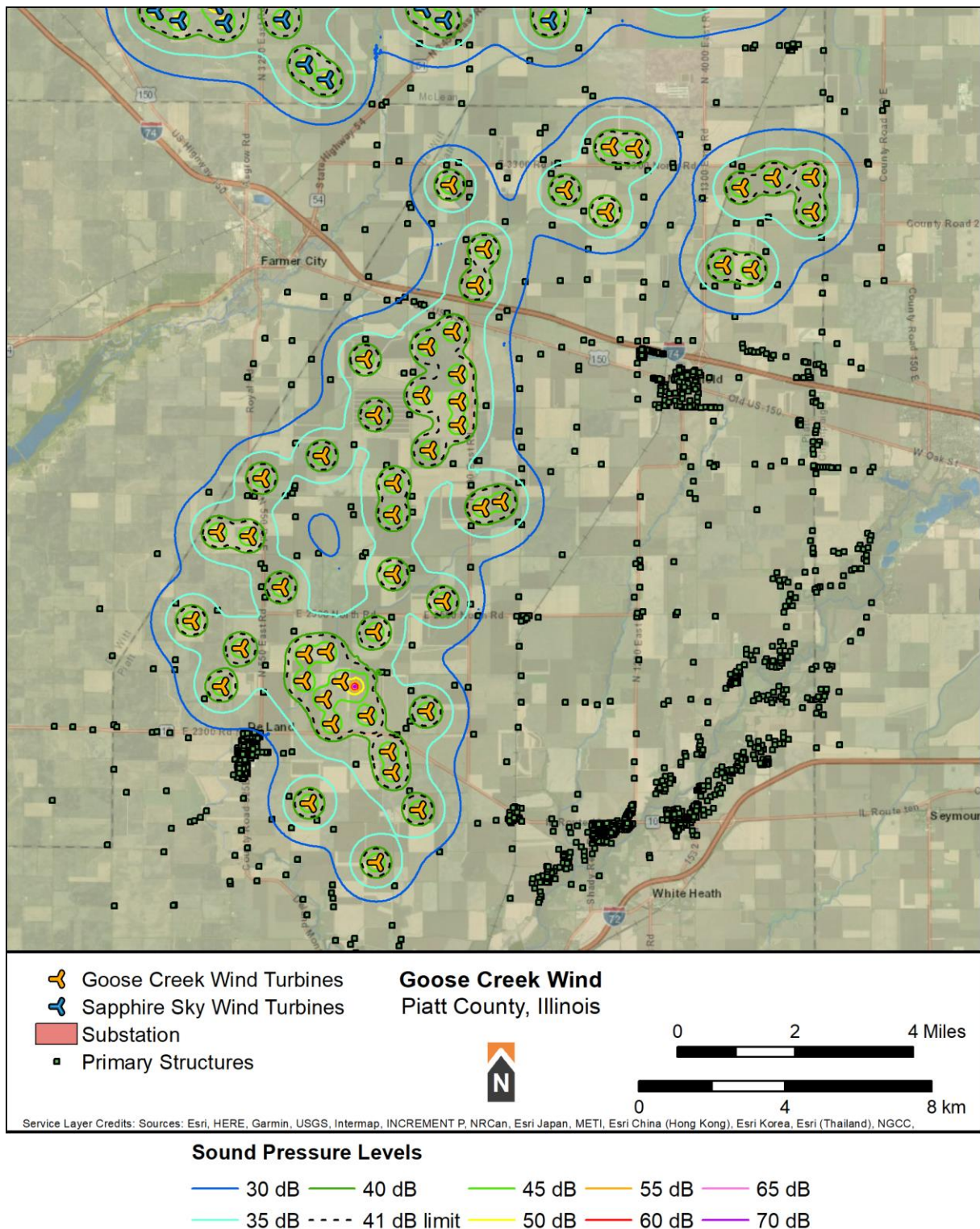
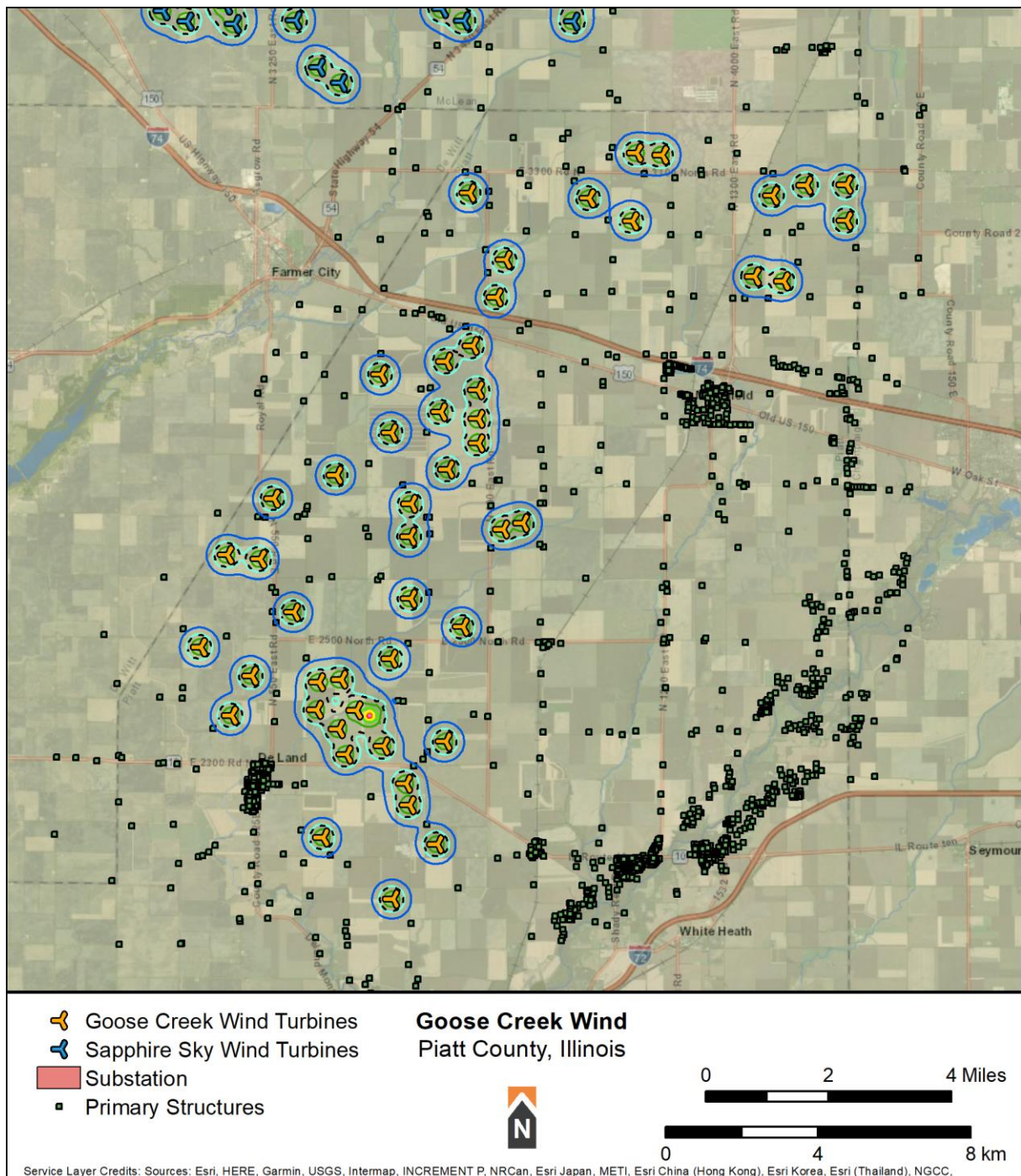


FIGURE 7: SOUND PROPAGATION MODEL RESULTS FOR 1 kHz

## Sound Modeling Report Goose Creek Wind



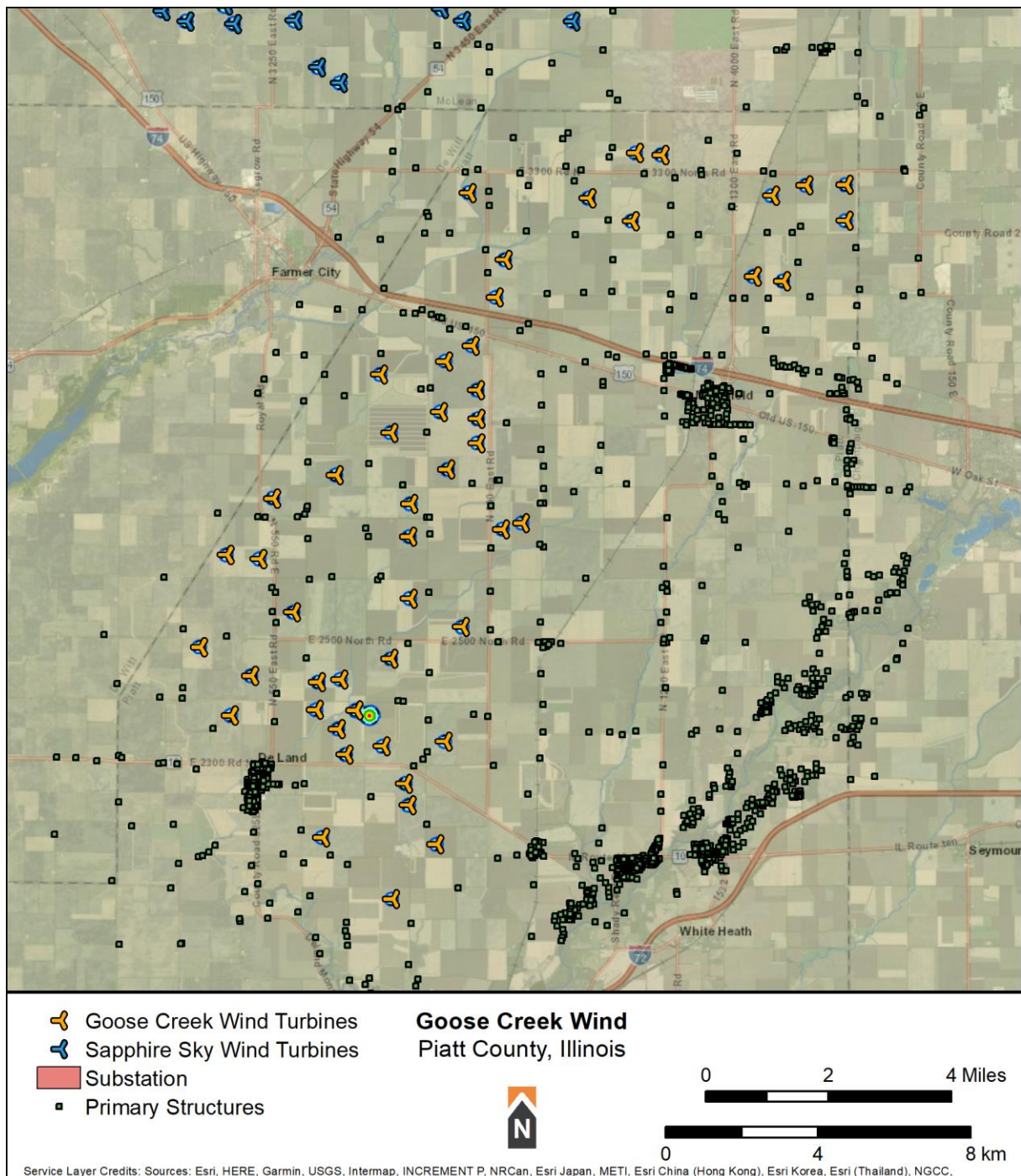
### Sound Pressure Levels



FIGURE 8: SOUND PROPAGATION MODEL RESULTS FOR 2 kHz



## Sound Modeling Report Goose Creek Wind

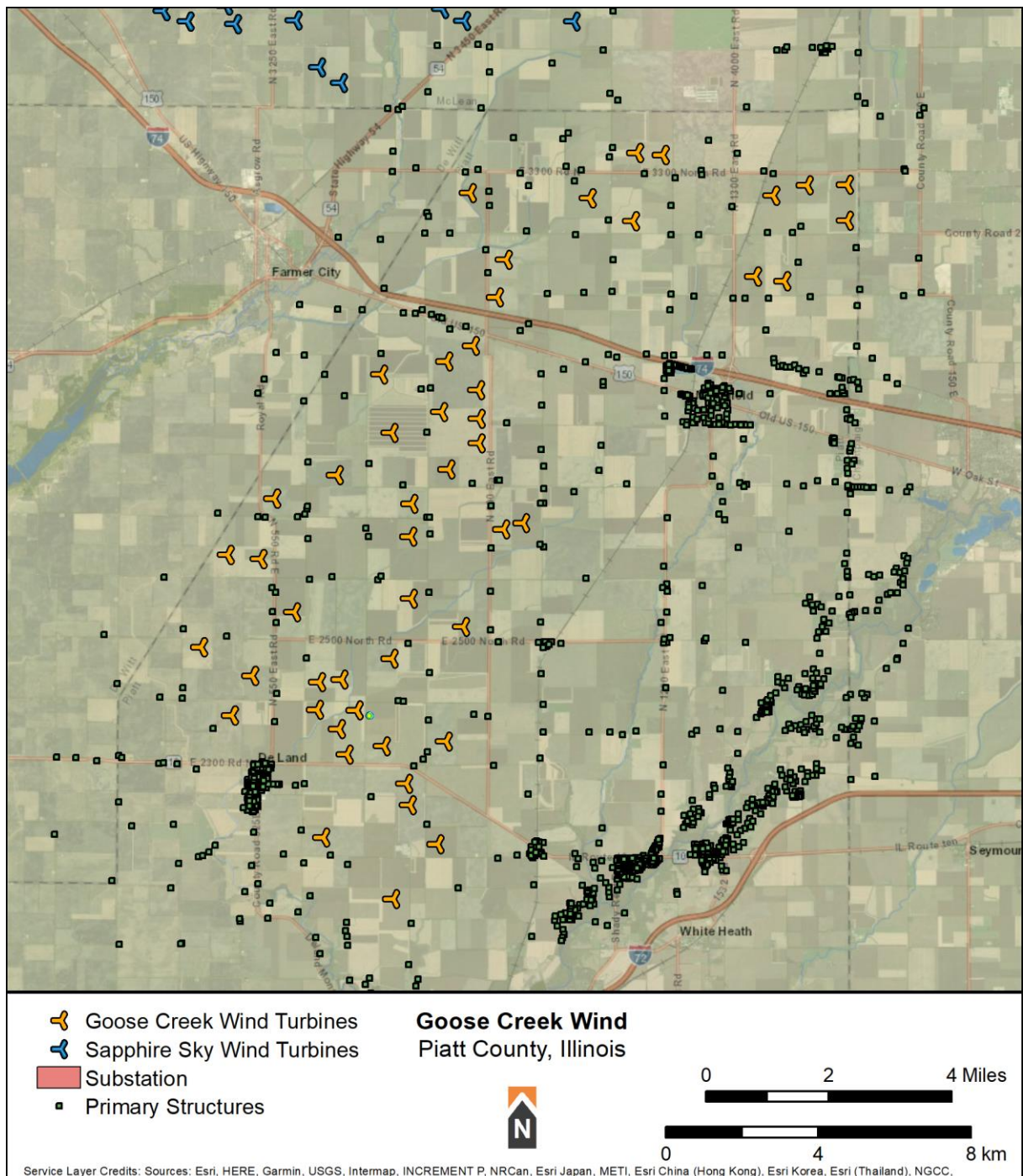


### Sound Pressure Levels



FIGURE 9: SOUND PROPAGATION MODEL RESULTS FOR 4 kHz





**Sound Pressure Levels**



FIGURE 10: SOUND PROPAGATION MODEL RESULTS FOR 8 kHz

## 5.0 CONCLUSIONS

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RSG conducted sound propagation modeling of the proposed Goose Creek Wind Farm in Piatt County, Illinois in preparation for the Project's special use permit application. The Project will include up to 50 turbines with a total capacity of up to 300 MW. For this assessment, 50 Vestas V162 6.0 MW turbines were modeled along with two high voltage transformers at the Project substation and the sound emissions from the Sapphire Sky Wind Farm which is currently under construction.

Noise from the Project is regulated in Appendix A of the Piatt County Zoning Ordinance which utilizes the IPCB limits to regulate sound from wind turbines. The most stringent IPCB limit is the Class C to Class A nighttime limit which is discussed in Section 3.2.

Sound levels from the Project were modeled at 1,318 receptors throughout the Project area, most of which are residences. Model results are presented in Section 4.2 and Appendix D. As shown in the model results, all of the 1,318 modeled receptors are below the IPCB Class C to Class A nighttime limit even with the potential cumulative impact with Sapphire Sky.

Given this, all primary structures are projected to meet the IPCB regulations and the noise requirements of the Piatt County Ordinance with all 50 turbine locations.

## APPENDIX A. PRIMER ON SOUND

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### ***Expressing Sound in Decibel Levels***

The varying air pressure that constitutes sound can be characterized in many different ways. The human ear is the basis for the metrics that are used in acoustics. Normal human hearing is sensitive to sound fluctuations over an enormous range of pressures, from about 20 micropascals (the “threshold of audibility”) to about 20 pascals (the “threshold of pain”).<sup>3</sup> This factor of one million in sound pressure difference is challenging to convey in engineering units. Instead, sound pressure is converted to sound “levels” in units of “decibels” (dB, named after Alexander Graham Bell). Once a measured sound is converted to dB, it is denoted as a level with the letter “L”.

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

Typical sound sources, and their sound pressure levels, are listed on the scale in Figure 11.

### ***Human Response to Sound Levels: Apparent Loudness***

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

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



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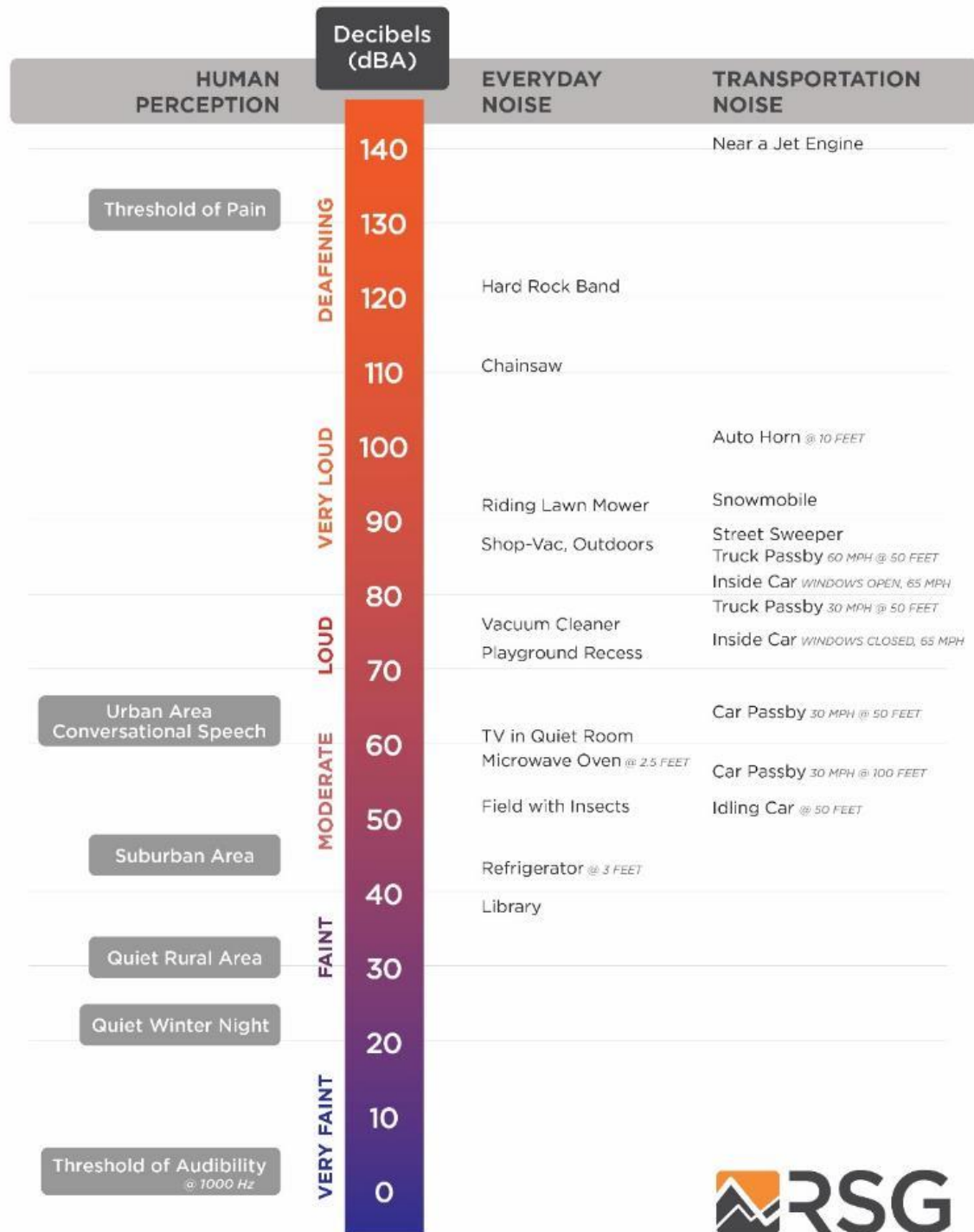


FIGURE 11: A SCALE OF SOUND PRESSURE LEVELS FOR TYPICAL SOUND SOURCES

### ***Frequency Spectrum of Sound***

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

### ***Human Response to Frequency: Weighting of Sound Levels***

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

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

1000 Hz: at this frequency, the filters neither attenuate nor amplify. G-weighting is a standardized weighting used to evaluate infrasound.

When a reported sound level has been filtered using a frequency weighting, the letter is appended to “dB”. For example, sound with A-weighting is usually denoted “dBA”. When no filtering is applied, the level is denoted “dB” or “dBZ”. The letter is also appended as a subscript to the level indicator “L”, for example “L<sub>A</sub>” for A-weighted levels.

### ***Time Response of Sound Level Meters***

Because sound levels can vary greatly from one moment to the next, the time over which sound is measured can influence the value of the levels reported. Often, sound is measured in real time, as it fluctuates. In this case, acousticians apply a so-called “time response” to the sound level meter, and this time response is often part of regulations for measuring sound. If the sound level is varying slowly, over a few seconds, “Slow” time response is applied, with a time constant of one second. If the sound level is varying quickly (for example, if brief events are mixed into the overall sound), “Fast” time response can be applied, with a time constant of one-eighth of a second.<sup>4</sup> The time response setting for a sound level measurement is indicated with the subscript “S” for Slow and “F” for Fast: L<sub>S</sub> or L<sub>F</sub>. A sound level meter set to Fast time response will indicate higher sound levels than one set to Slow time response when brief events are mixed into the overall sound, because it can respond more quickly.

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

### ***Accounting for Changes in Sound Over Time***

A sound level meter’s time response settings are useful for continuous monitoring. However, they are less useful in summarizing sound levels over longer periods. To do so, acousticians apply simple statistics to the measured sound levels, resulting in a set of defined types of sound level related to averages over time. An example is shown in Figure 12. The sound level at each instant of time is the grey trace going from left to right. Over the total time it was measured (1 hour in the figure), the sound energy spends certain fractions of time near various levels, ranging from the minimum (about 27 dB in the figure) to the maximum (about 65 dB in the figure). The simplest descriptor is the average sound level, known as the Equivalent Continuous

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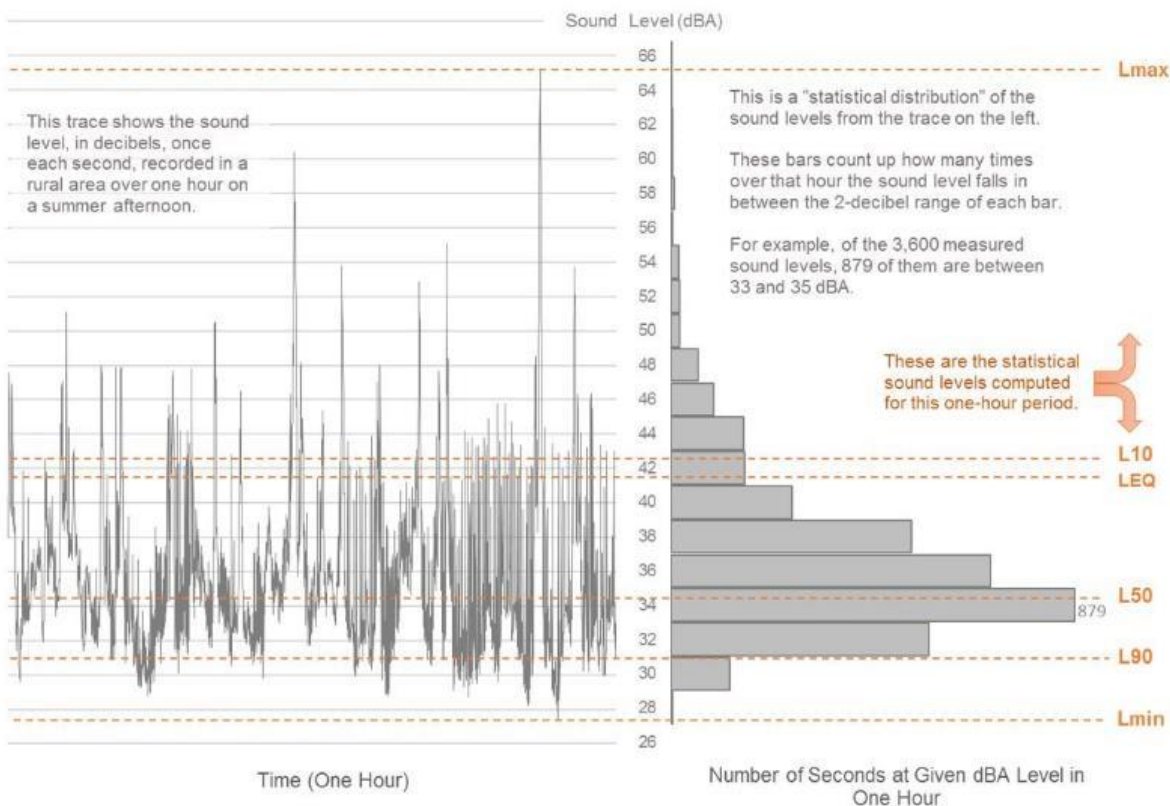
<sup>4</sup> There is a third time response defined by standards, the “Impulse” response. This response was defined to enable use of older, analog meters when measuring very brief sounds; it is no longer in common use.



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

### ***Equivalent Continuous Sound Level - $L_{eq}$***

One straightforward, common way of describing sound levels is in terms of the Continuous Equivalent Sound Level, or  $L_{eq}$ . The  $L_{eq}$  is the average sound pressure level over a defined period of time, such as one hour or one day.  $L_{eq}$  is the most commonly used descriptor in noise standards and regulations.  $L_{eq}$  is representative of the overall sound to which a person is exposed. Because of the logarithmic calculation of decibels,  $L_{eq}$  tends to favor higher sound levels: loud and infrequent sources have a larger impact on the resulting average sound level than quieter but more frequent sounds. For example, in Figure 12, even though the sound levels spends most of the time near about 34 dBA, the  $L_{eq}$  is 41 dBA, having been “inflated” by the maximum level of 65 dBA and other occasional spikes over the course of the hour.



**FIGURE 12: EXAMPLE OF DESCRIPTIVE TERMS OF SOUND MEASUREMENT OVER TIME**

### ***Percentile Sound Levels – $L_n$***

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

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

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

## APPENDIX B. WIND TURBINE ACOUSTICS

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### *Sources of Sound Generation by Wind Turbines*

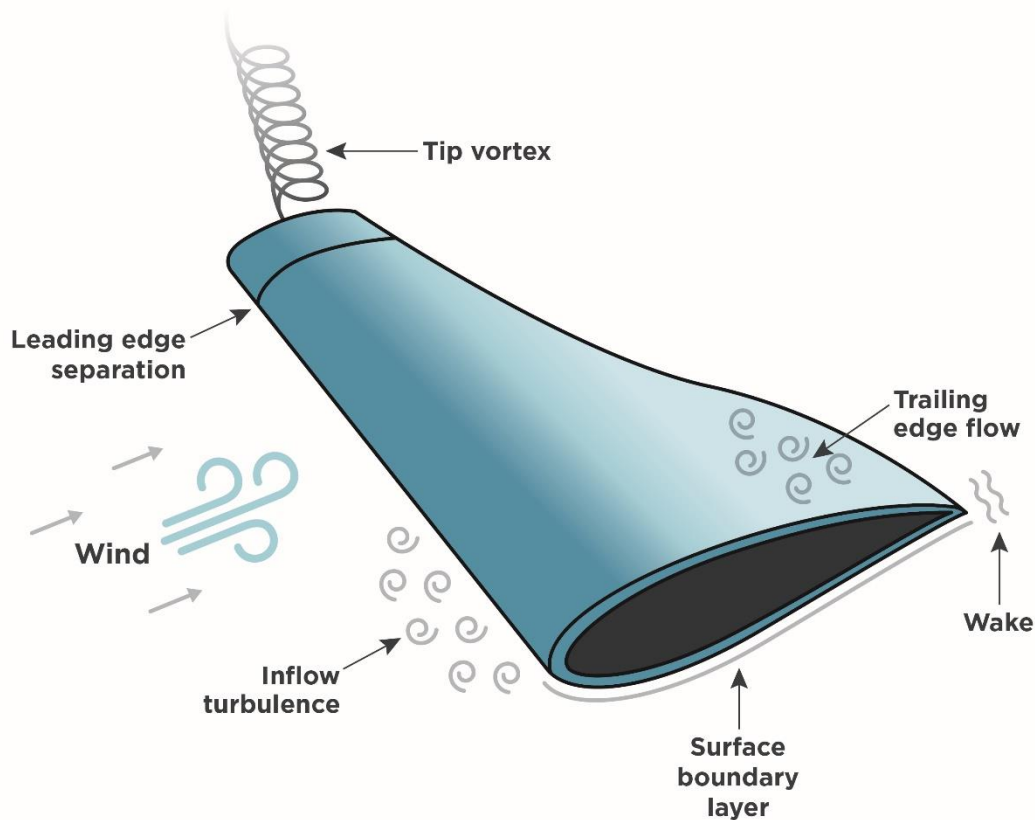
Wind turbines generate two principal types of sound: aerodynamic, produced from the flow of air around the blades, and mechanical, produced from mechanical and electrical components within the nacelle.

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

Wind turbines emit aerodynamic broadband sound as the rotating blades interact with atmospheric turbulence and as air flows along their surfaces. This produces a characteristic “whooshing” sound through several mechanisms (Figure 13):

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





**FIGURE 13: AIRFLOW AROUND A ROTOR BLADE**

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

### ***Amplitude Modulation***

Amplitude modulation (AM) is a fluctuation in sound level that occurs at the blade passage frequency. There is no consistent definition how much of a sound level fluctuation is necessary for blade swish to be considered AM. Fluctuations in individual 1/3 octave bands are typically greater. Fluctuations in individual 1/3 octave bands can sometimes synchronize and desynchronize over periods, leading to increases and decreases in magnitude of the A-weighted fluctuations. Similarly, in wind farms with multiple turbines, fluctuations can

synchronize and desynchronize, leading to variations in amplitude modulation depth.<sup>5</sup> Most amplitude modulation is in the mid-frequencies and most overall A-weighted AM is less than 4.5 dB in depth.<sup>6</sup>

There are many confirmed and hypothesized causes of amplitude modulation including: blade passage in front of the tower, blade tip sound emission directivity, wind shear, inflow turbulence, transient blade stall, and turbine blade yaw error. It has recently been noted that although wind shear can contribute to the extent of amplitude modulation, wind shear does not contribute to the existence of amplitude modulation in and of itself. Instead, there needs to be detachment of airflow from the blades for wind shear to contribute to amplitude modulation.<sup>7</sup> While factors like the blade passing in front of the tower are intrinsic to wind turbine design, other factors vary with turbine design, local meteorology, topography, and turbine layout. Mountainous areas, for example, are more likely to have turbulent airflow, less likely to have high wind shear, and less likely to have turbine layouts that allow for blade passage synchronization for multiple turbines. Amplitude modulation extent varies with the relative location of a receptor to the turbine. Amplitude Modulation is usually experienced most when the receptor is between 45 and 60 degrees from the downwind or upwind position and is experienced least directly with the receptor directly upwind or downwind of the turbines.

### **Meteorology**

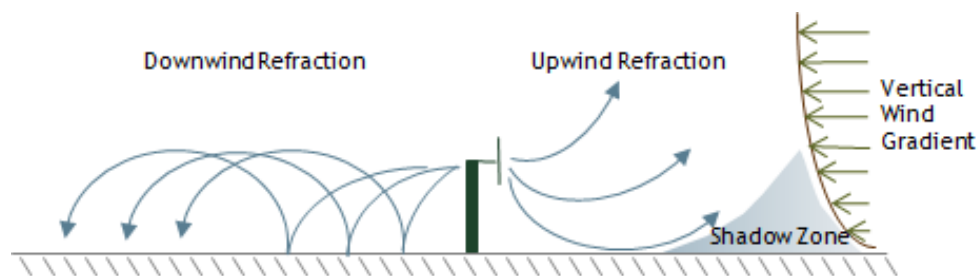
Meteorological conditions can significantly affect sound propagation. The two most important conditions to consider are wind shear and temperature lapse. Wind shear is the difference in wind speeds by elevation and temperature lapse rate is the temperature gradient by elevation. In conditions with high wind shear (large wind speed gradient), sound levels upwind from the source tend to decrease and sound levels downwind tend to increase due to the refraction, or bending, of the sound (Figure 14).

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<sup>5</sup> 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.

<sup>6</sup> RSG, et al., "Massachusetts Study on Wind Turbine Acoustics," Massachusetts Clean Energy Center and Massachusetts Department of Environmental Protection, 2016

<sup>7</sup> "Wind Turbine Amplitude Modulation: Research to Improve Understanding as to its Cause and Effect." *RenewableUK*. December 2013.



**FIGURE 14: SCHEMATIC OF THE REFRACTION OF SOUND DUE TO VERTICAL WIND GRADIENT (WIND SHEAR)**

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

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

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

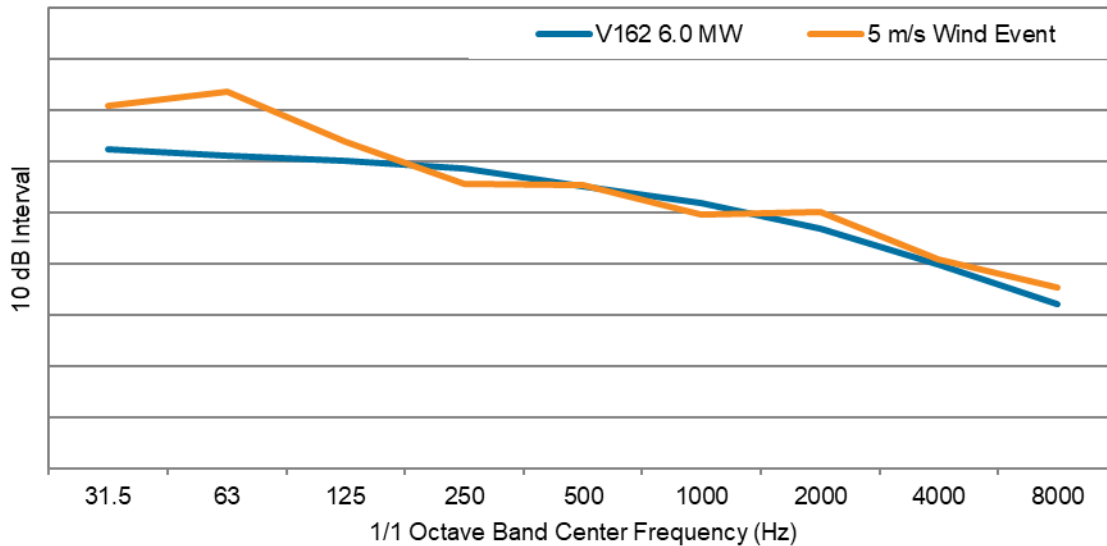
### ***Masking***

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

The sound from a wind turbine can often be masked by wind sound at downwind receptors because the frequency spectrum from wind is very similar to the frequency spectrum from a wind turbine. Figure 15 compares the shape of the sound spectrum measured during a 5 m/s wind event to that of the GE 1.6-97 wind turbine. As shown, the shapes of the spectra are very similar. As a result, the masking of turbine sound occurs at higher wind speeds for some meteorological conditions. Masking will occur most, when ground wind speeds are relatively high, creating wind-caused sound such as wind blowing through the trees and interaction of wind with structures.

It is important to note that while winds may be blowing at turbine height, there may be little to no wind at ground level. This is especially true during strong wind gradients (high wind shear),

which mostly occur at night. This can also occur on the leeward side of ridges where the ridge blocks the wind.



**FIGURE 15: COMPARISON OF NORMALIZED FREQUENCY SPECTRA FROM WIND AND THE V162 6.0 MW TURBINE<sup>8</sup>**

### ***Infrasound and Low Frequency Sound***

Infrasound is sound pressure fluctuations at frequencies below about 20 Hz. Sound below this frequency is only audible at very high magnitudes (90 dBG<sup>9</sup> and higher). Low frequency sound is in the audible range of human hearing, that is, above 20 Hz, but below 100 to 200 Hz depending on the definition.

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

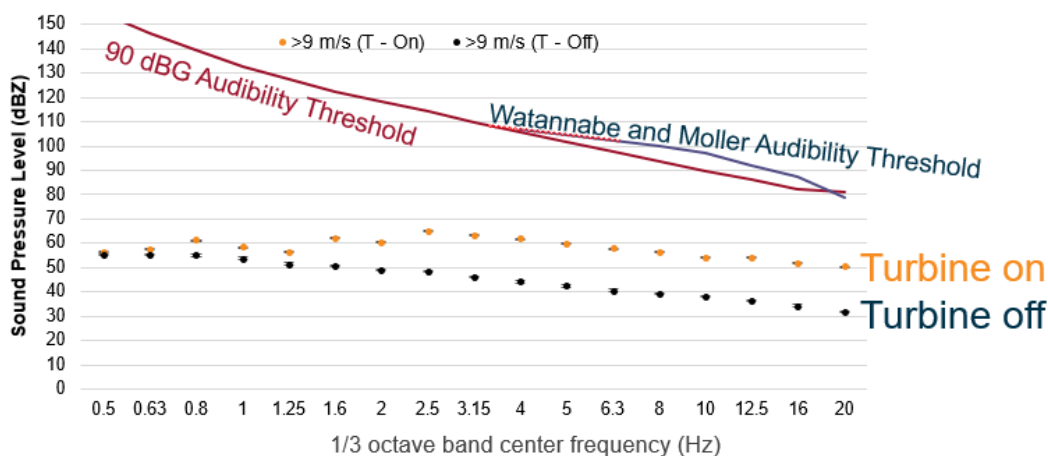
Figure 16 shows the sound levels 350 meters (1,148 feet) from a wind turbine when the wind turbine was operating (T-on) and shut down (T-off) for wind speeds at hub height greater than 9

<sup>8</sup> The purpose of this Figure is to show the shapes to two spectra relative to one another and not the actual sound level of the two sources of sound. The level of each source was normalized independently.

<sup>9</sup> See Appendix A for additional information on frequency-weighted sound levels.



m/s. Measurements were made over approximately two weeks.<sup>10</sup> The red 90 dBG line is shown here as the ISO 7196:1995 perceptibility threshold. As shown, the wind turbines generated measurable infrasound, but at least 20 dB below audibility thresholds.



**FIGURE 16: INFRASOUND FROM A WIND TURBINE AT 350 METERS (1,148 FEET) COMPARED WITH PERCEPTION THRESHOLDS**

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

Finally, low frequency sound is absorbed less by the atmosphere and ground than higher frequency sound. This is taken into account in our modeling by using frequency-specific ground attenuation and atmospheric absorption factors.

### ***Use of Sound Level Weighting Networks for Wind Turbine Sound***

The human ear is not equally sensitive to sound pressure levels at all frequencies and magnitudes. Some frequencies, despite being the same decibel level (that is, magnitude), seem louder than others. For example, a 500 Hz tone at 80 dB will sound louder than a 63 Hz tone at the same level. In addition, the relative loudness of these tones will change with magnitude. For example, the perceived difference in loudness between those two tones is less when both are at 110 dB than when they are at 40 dB.

<sup>10</sup> 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

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

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

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

The most appropriate weighting for wind turbine sound is A-weighting, for two reasons. The first is that sound pressure levels due to wind turbine sound are typically in the appropriate range for the A-weighting at typical receiver distances (50 dBA or less). The second is that various studies of wind turbine acoustics have shown that the potential effects of wind turbine noise on people are correlated with A-weighted sound level (i.e. Pedersen et al, 2008<sup>11</sup>) as well as to the perceived loudness of wind turbine sound.<sup>12,13</sup> Other researchers found that 51% of the energy making up a C-weighted measurement of wind turbine sound is not audible. Thus, it is more difficult to relate the level of C-weighted sound to human perception. That is, two sounds may be perceived exactly alike, but there could be significant variations in the C-weighted sound level depending on the content of inaudible sound in each.<sup>6</sup>

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<sup>11</sup> Pedersen, Eja and Waye, Kerstin. “Perception and annoyance due to wind turbine noise - a dose-response relation.” *Journal of the Acoustical Society of America*. 116(6). pp. 3460-3470.

<sup>12</sup> Yokoyama S., et al. “Perception of low frequency components in wind turbine noise.” *Noise Control Engr. J.* 62(5) 2014

<sup>13</sup> Yokoyama et al. “Loudness evaluation of general environmental noise containing low frequency components.” *Proceedings of InterNoise2013*, 2013

## APPENDIX C. MODEL INPUT DATA

TABLE 3: SOUND PROPAGATION MODELING PARAMETERS

| Parameter               | Setting                                        |
|-------------------------|------------------------------------------------|
| Ground Absorption       | Spectral for all sources, mixed ground (G=0.5) |
| Atmospheric Attenuation | Based on 10 Celsius, 70% relative humidity     |
| Receiver Height         | 4 meters for residences and isoline contours   |
| Search Distance         | 8,000 meters                                   |

TABLE 4: SOURCE 1/1 OCTAVE BAND SOUND POWER LEVEL SPECTRA (dBZ)

| Source             | Octave Band Center Frequency (Hz) |     |     |     |     |      |      |      |      |
|--------------------|-----------------------------------|-----|-----|-----|-----|------|------|------|------|
|                    | 31.5                              | 63  | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| Transformer (ONAF) | 91                                | 106 | 111 | 110 | 105 | 101  | 96   | 90   | 81   |

TABLE 5: MODELED SOURCES, TURBINE MODELS, AND LOCATIONS

| Turbine ID           | Turbine Model | Relative Height (m) | Coordinates IL State Plane (NAD 83) |        | Source Elevation (m) |
|----------------------|---------------|---------------------|-------------------------------------|--------|----------------------|
|                      |               |                     | X (m)                               | Y (m)  |                      |
| Goose Creek Turbines |               |                     |                                     |        |                      |
| T01                  | V162          | 105                 | 283340                              | 400139 | 342                  |
| T02                  | V162          | 105                 | 284004                              | 400092 | 342                  |
| T03                  | V162          | 105                 | 287797                              | 399294 | 343                  |
| T04                  | V162          | 105                 | 288839                              | 399306 | 338                  |
| T06                  | V162          | 105                 | 278968                              | 399098 | 324                  |
| T08                  | V162          | 105                 | 282096                              | 398957 | 326                  |
| T09                  | V162          | 105                 | 286898                              | 399021 | 348                  |
| T11                  | V162          | 105                 | 283229                              | 398360 | 329                  |
| T12                  | V162          | 105                 | 288838                              | 398366 | 341                  |
| T13                  | V162          | 105                 | 279907                              | 397342 | 324                  |
| T14                  | V162          | 105                 | 286419                              | 396906 | 342                  |
| T15                  | V162          | 105                 | 287196                              | 396782 | 349                  |
| T16                  | V162          | 105                 | 279680                              | 396359 | 324                  |
| T18                  | V162          | 105                 | 279050                              | 395093 | 324                  |
| T19                  | V162          | 105                 | 278349                              | 394686 | 324                  |
| T20                  | V162          | 105                 | 276646                              | 394338 | 325                  |
| T21                  | V162          | 105                 | 279190                              | 393930 | 324                  |
| T23                  | V162          | 105                 | 278215                              | 393353 | 326                  |
| T24                  | V162          | 105                 | 279198                              | 393174 | 325                  |
| T25                  | V162          | 105                 | 276920                              | 392815 | 325                  |
| T26                  | V162          | 105                 | 279191                              | 392541 | 326                  |
| T27                  | V162          | 105                 | 278406                              | 391847 | 326                  |

| Turbine ID            | Turbine Model | Relative Height (m) | Coordinates<br>IL State Plane (NAD 83) |        | Source Elevation (m) |
|-----------------------|---------------|---------------------|----------------------------------------|--------|----------------------|
|                       |               |                     | X (m)                                  | Y (m)  |                      |
| T28                   | V162          | 105                 | 275482                                 | 391702 | 326                  |
| T29                   | V162          | 105                 | 273830                                 | 391093 | 326                  |
| T30                   | V162          | 105                 | 277431                                 | 390946 | 326                  |
| T31                   | V162          | 105                 | 280364                                 | 390446 | 325                  |
| T33                   | V162          | 105                 | 279846                                 | 390286 | 325                  |
| T34                   | V162          | 105                 | 277412                                 | 390085 | 325                  |
| T37                   | V162          | 105                 | 272617                                 | 389612 | 324                  |
| T38                   | V162          | 105                 | 273473                                 | 389503 | 324                  |
| T41                   | V162          | 105                 | 277422                                 | 388465 | 323                  |
| T42                   | V162          | 105                 | 274364                                 | 388105 | 322                  |
| T45                   | V162          | 105                 | 278789                                 | 387721 | 323                  |
| T46                   | V162          | 105                 | 271912                                 | 387198 | 323                  |
| T48                   | V162          | 105                 | 276920                                 | 386887 | 321                  |
| T52                   | V162          | 105                 | 273258                                 | 386441 | 319                  |
| T54                   | V162          | 105                 | 275603                                 | 386346 | 322                  |
| T55                   | V162          | 105                 | 275017                                 | 386272 | 320                  |
| T58                   | V162          | 105                 | 274966                                 | 385548 | 319                  |
| T59                   | V162          | 105                 | 276003                                 | 385534 | 320                  |
| T60                   | V162          | 105                 | 272724                                 | 385400 | 321                  |
| T61                   | V162          | 105                 | 275541                                 | 385052 | 322                  |
| T62                   | V162          | 105                 | 278340                                 | 384716 | 321                  |
| T63                   | V162          | 105                 | 276704                                 | 384591 | 320                  |
| T65                   | V162          | 105                 | 275740                                 | 384377 | 320                  |
| T66                   | V162          | 105                 | 277302                                 | 383619 | 321                  |
| T67                   | V162          | 105                 | 277392                                 | 383050 | 320                  |
| T69                   | V162          | 105                 | 275120                                 | 382205 | 318                  |
| T70                   | V162          | 105                 | 278117                                 | 382026 | 319                  |
| T71                   | V162          | 105                 | 276951                                 | 380588 | 317                  |
| Two Transformers      | each          | 3.5                 | 276371                                 | 385394 | 218                  |
| Sapphire Sky Turbines |               |                     |                                        |        |                      |
| T-02                  | V150          | 105                 | 275595                                 | 401975 | 329                  |
| T-03                  | V150          | 105                 | 275016                                 | 402387 | 330                  |
| T-04                  | V150          | 105                 | 271564                                 | 403591 | 332                  |
| T-05                  | V150          | 105                 | 278819                                 | 403596 | 328                  |
| T-06                  | V150          | 105                 | 274403                                 | 403611 | 331                  |
| T-07                  | V150          | 105                 | 272803                                 | 403524 | 332                  |
| T-08                  | V150          | 105                 | 278240                                 | 403910 | 328                  |
| T-09                  | V150          | 105                 | 270929                                 | 403863 | 334                  |
| T-10                  | V150          | 105                 | 271984                                 | 404850 | 333                  |



| Turbine ID | Turbine Model | Relative Height (m) | Coordinates IL State Plane (NAD 83) |        | Source Elevation (m) |
|------------|---------------|---------------------|-------------------------------------|--------|----------------------|
|            |               |                     | X (m)                               | Y (m)  |                      |
| T-11       | V136          | 105                 | 272571                              | 404016 | 332                  |
| T-12       | V150          | 105                 | 287216                              | 404757 | 332                  |
| T-13       | V136          | 105                 | 285412                              | 404759 | 333                  |
| T-14       | V136          | 105                 | 274998                              | 404976 | 332                  |
| T-16       | V136          | 105                 | 274007                              | 404933 | 332                  |
| T-17       | V136          | 105                 | 284784                              | 405110 | 337                  |
| T-18       | V136          | 105                 | 273736                              | 405832 | 333                  |
| T-19       | V150          | 105                 | 281649                              | 405118 | 340                  |
| T-20       | V150          | 105                 | 271155                              | 405177 | 335                  |
| T-21       | V136          | 105                 | 273302                              | 405253 | 332                  |
| T-22       | V150          | 105                 | 286419                              | 405528 | 331                  |
| T-23       | V150          | 105                 | 282838                              | 405563 | 338                  |
| T-24       | V136          | 105                 | 285585                              | 405616 | 331                  |
| T-25       | V136          | 105                 | 275719                              | 405190 | 331                  |
| T-26       | V150          | 105                 | 272006                              | 405582 | 334                  |
| T-27       | V150          | 105                 | 282330                              | 405712 | 336                  |
| T-30       | V136          | 105                 | 278137                              | 406740 | 331                  |
| T-31       | V136          | 105                 | 275260                              | 405948 | 332                  |
| T-32       | V136          | 105                 | 286575                              | 406373 | 331                  |
| T-33       | V150          | 105                 | 279240                              | 406373 | 331                  |
| T-34       | V150          | 105                 | 271663                              | 406345 | 339                  |
| T-36       | V136          | 105                 | 281806                              | 406567 | 339                  |
| T-37       | V136          | 105                 | 285905                              | 406679 | 332                  |
| T-38       | V150          | 105                 | 284582                              | 406800 | 335                  |
| T-39       | V136          | 105                 | 277548                              | 406727 | 331                  |
| T-40       | V136          | 105                 | 285372                              | 407190 | 333                  |
| T-41       | V150          | 105                 | 288183                              | 407291 | 332                  |
| T-43       | V136          | 105                 | 286644                              | 407530 | 333                  |
| T-44       | V136          | 105                 | 277060                              | 407506 | 338                  |
| T-45       | V150          | 105                 | 287868                              | 408003 | 331                  |
| T-47       | V150          | 105                 | 280883                              | 407967 | 339                  |
| T-49       | V150          | 105                 | 275900                              | 408235 | 342                  |
| T-50       | V150          | 105                 | 277031                              | 408383 | 342                  |
| T-52       | V150          | 105                 | 274927                              | 408562 | 341                  |
| T-55       | V150          | 105                 | 281584                              | 409090 | 338                  |
| T-57       | V136          | 105                 | 284244                              | 409626 | 336                  |
| T-59       | V150          | 105                 | 273863                              | 409739 | 340                  |
| T-60       | V150          | 105                 | 284907                              | 409924 | 333                  |
| T-61       | V150          | 105                 | 277687                              | 409908 | 337                  |
| T-63       | V150          | 105                 | 281951                              | 410290 | 347                  |

| Turbine ID | Turbine Model | Relative Height (m) | Coordinates<br>IL State Plane (NAD 83) |        | Source Elevation (m) |
|------------|---------------|---------------------|----------------------------------------|--------|----------------------|
|            |               |                     | X (m)                                  | Y (m)  |                      |
| T-65       | V150          | 105                 | 274332                                 | 410478 | 340                  |
| T-67       | V150          | 105                 | 280457                                 | 410708 | 337                  |
| T-69       | V150          | 105                 | 275339                                 | 410805 | 340                  |
| T-71       | V150          | 105                 | 277323                                 | 411259 | 338                  |
| T-73       | V150          | 105                 | 273644                                 | 411279 | 340                  |
| T-76       | V150          | 105                 | 274368                                 | 411682 | 341                  |
| T-80       | V150          | 105                 | 278565                                 | 412187 | 337                  |
| T-81       | V150          | 105                 | 273430                                 | 412400 | 342                  |
| T-82       | V150          | 105                 | 272603                                 | 412412 | 342                  |
| T-84       | V150          | 105                 | 281684                                 | 404269 | 344                  |
| T-85       | V136          | 105                 | 277556                                 | 412738 | 342                  |
| T-88       | V150          | 105                 | 276824                                 | 412877 | 347                  |
| T-90       | V136          | 105                 | 278205                                 | 413038 | 341                  |
| T-97       | V150          | 105                 | 281683                                 | 403591 | 340                  |
| T-98       | V136          | 105                 | 282867                                 | 410568 | 351                  |

## APPENDIX D. MODEL RESULTS BY RECEPTOR<sup>14</sup>

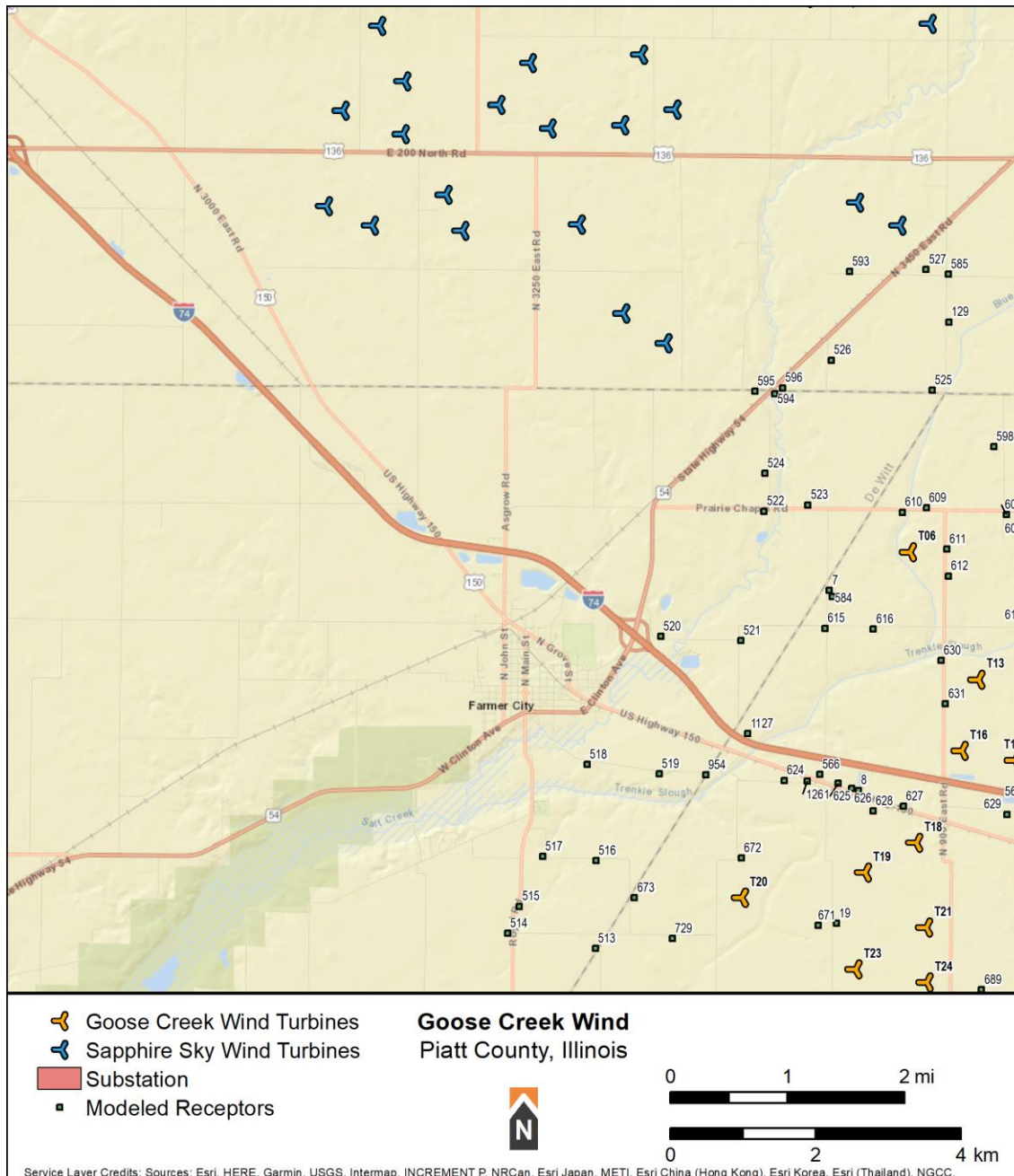


FIGURE 17: MAP OF RECEPTORS<sup>14</sup> - NORTHWEST AREA

<sup>14</sup> For modeling purposes in this assessment, the modeled discrete receptors are the same as the primary structures.

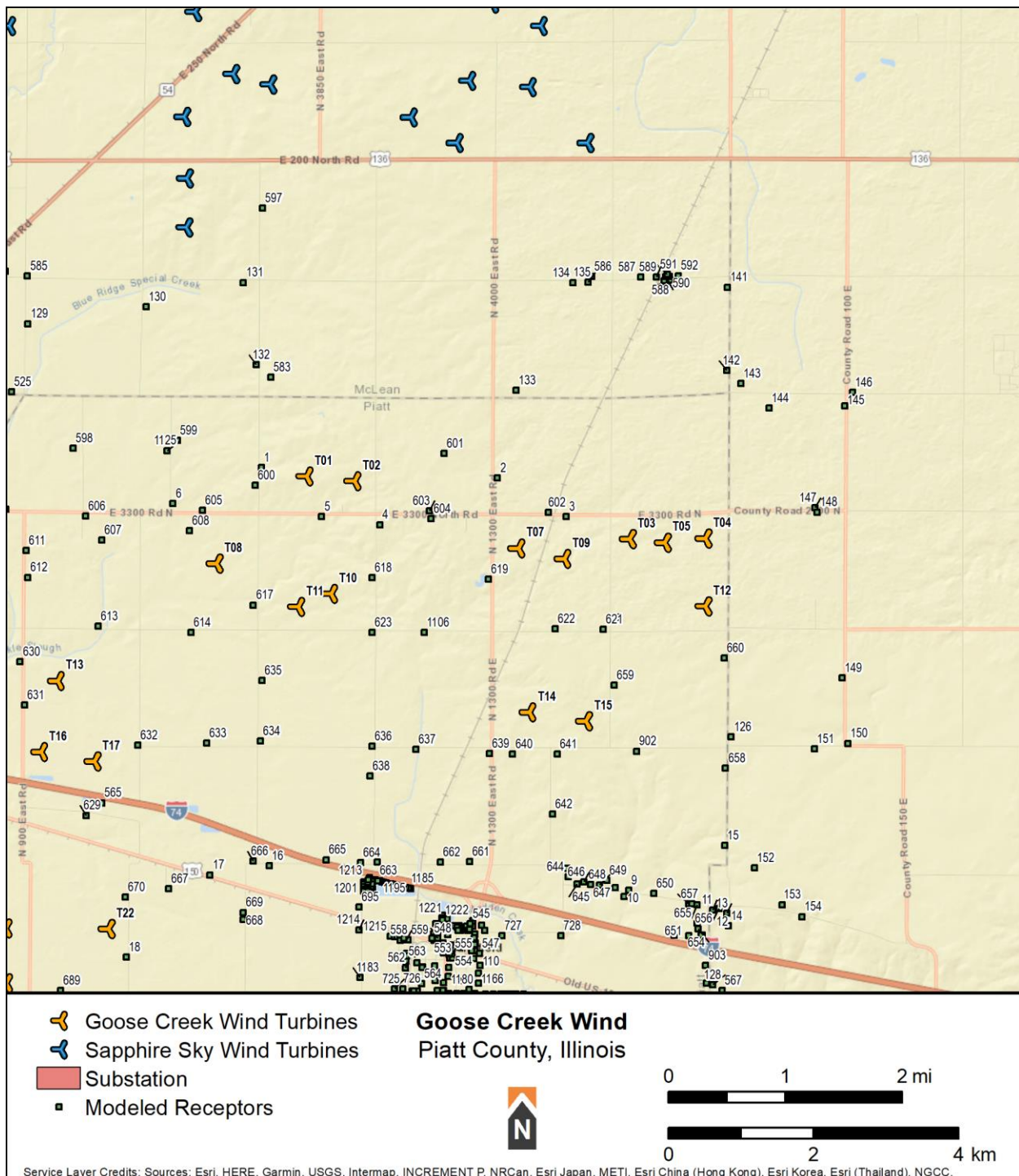


FIGURE 18: MAP OF MODELED RECEPTORS – NORTHEAST AREA



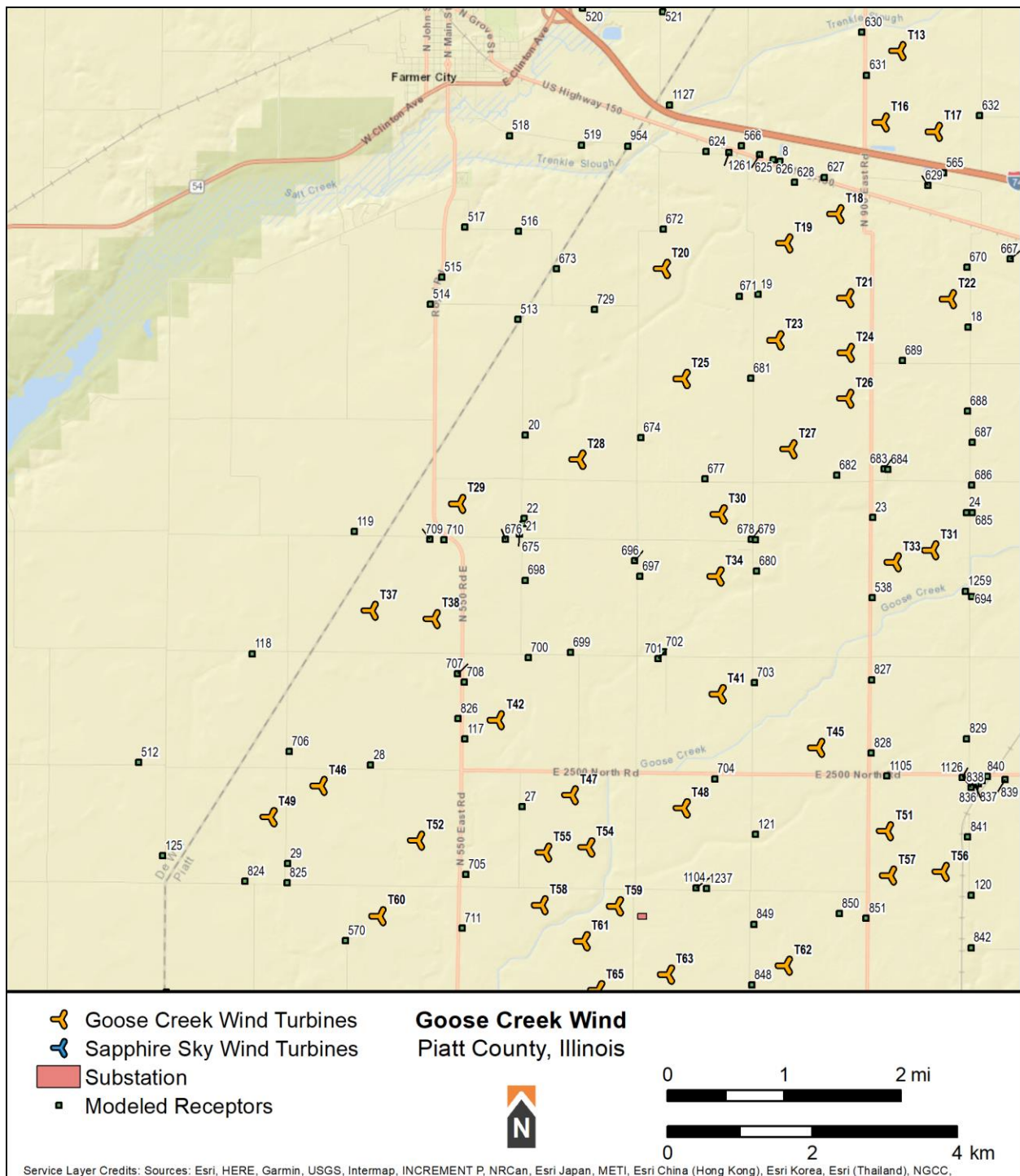


FIGURE 19: MAP OF MODELED RECEPTORS - CENTRAL-WEST AREA

## Sound Modeling Report Goose Creek Wind

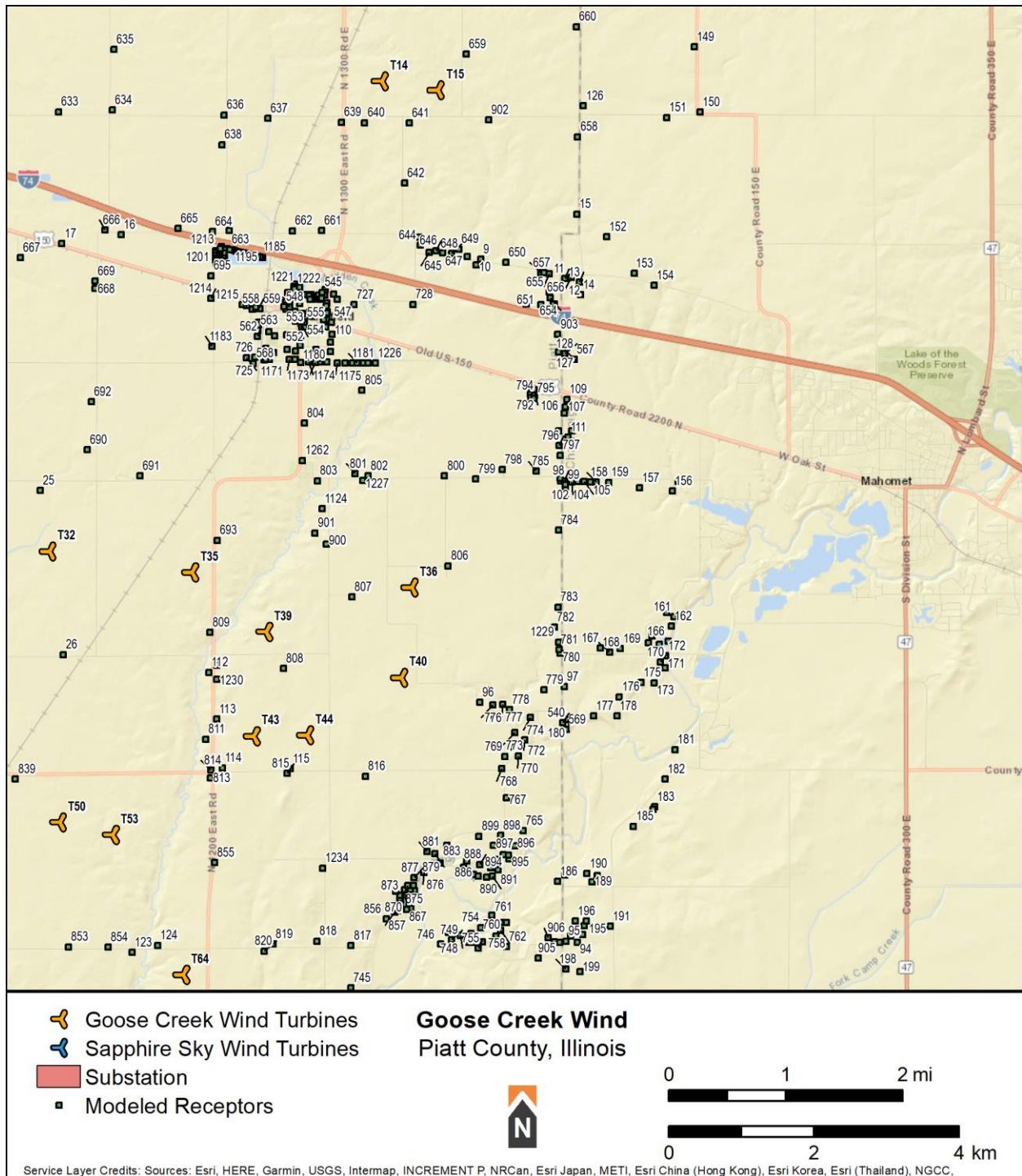
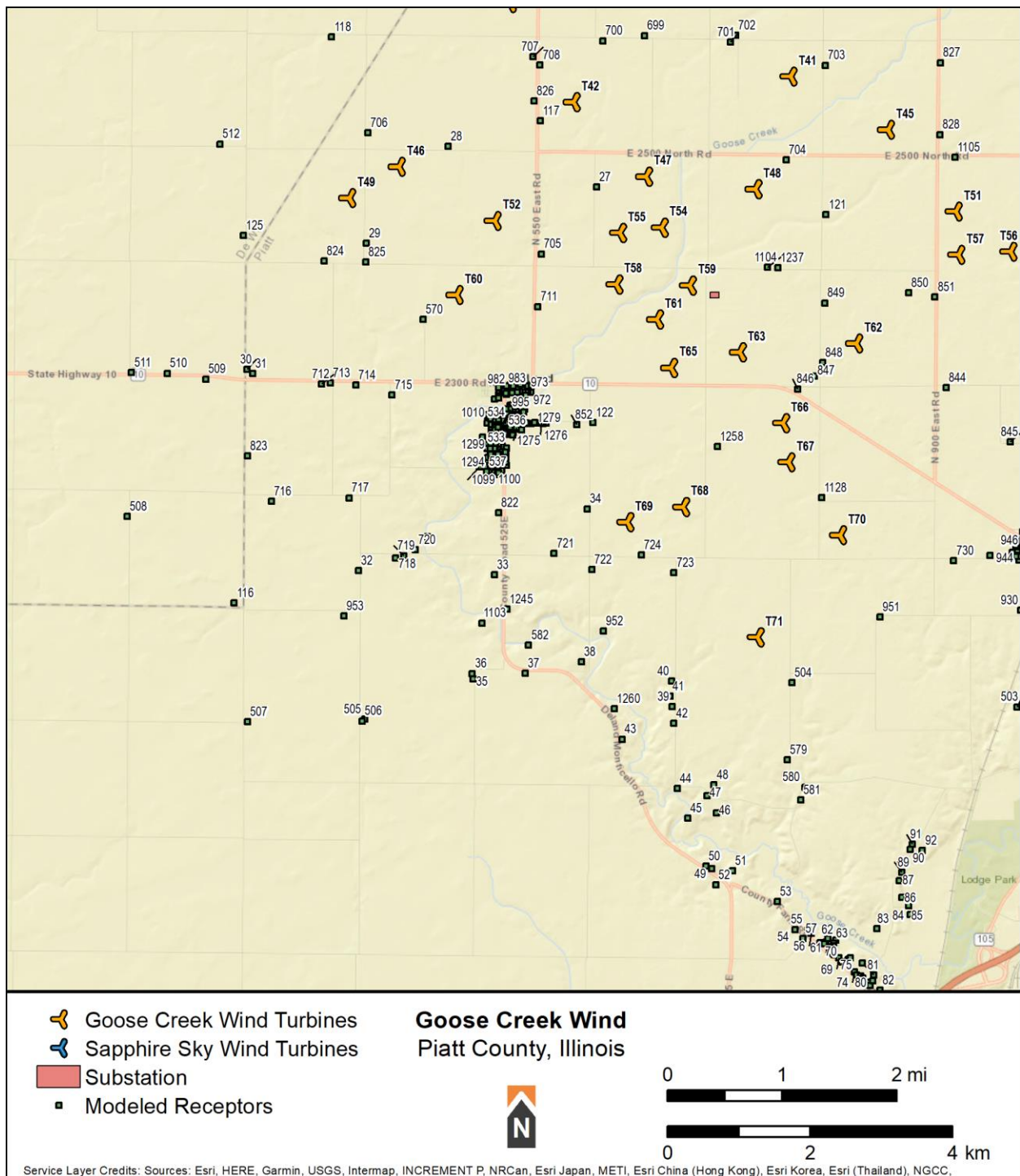


FIGURE 20: MAP OF MODELED RECEPTORS - CENTRAL-EAST AREA



**FIGURE 21: MAP OF MODELED RECEPTORS - SOUTHWESTERN AREA**



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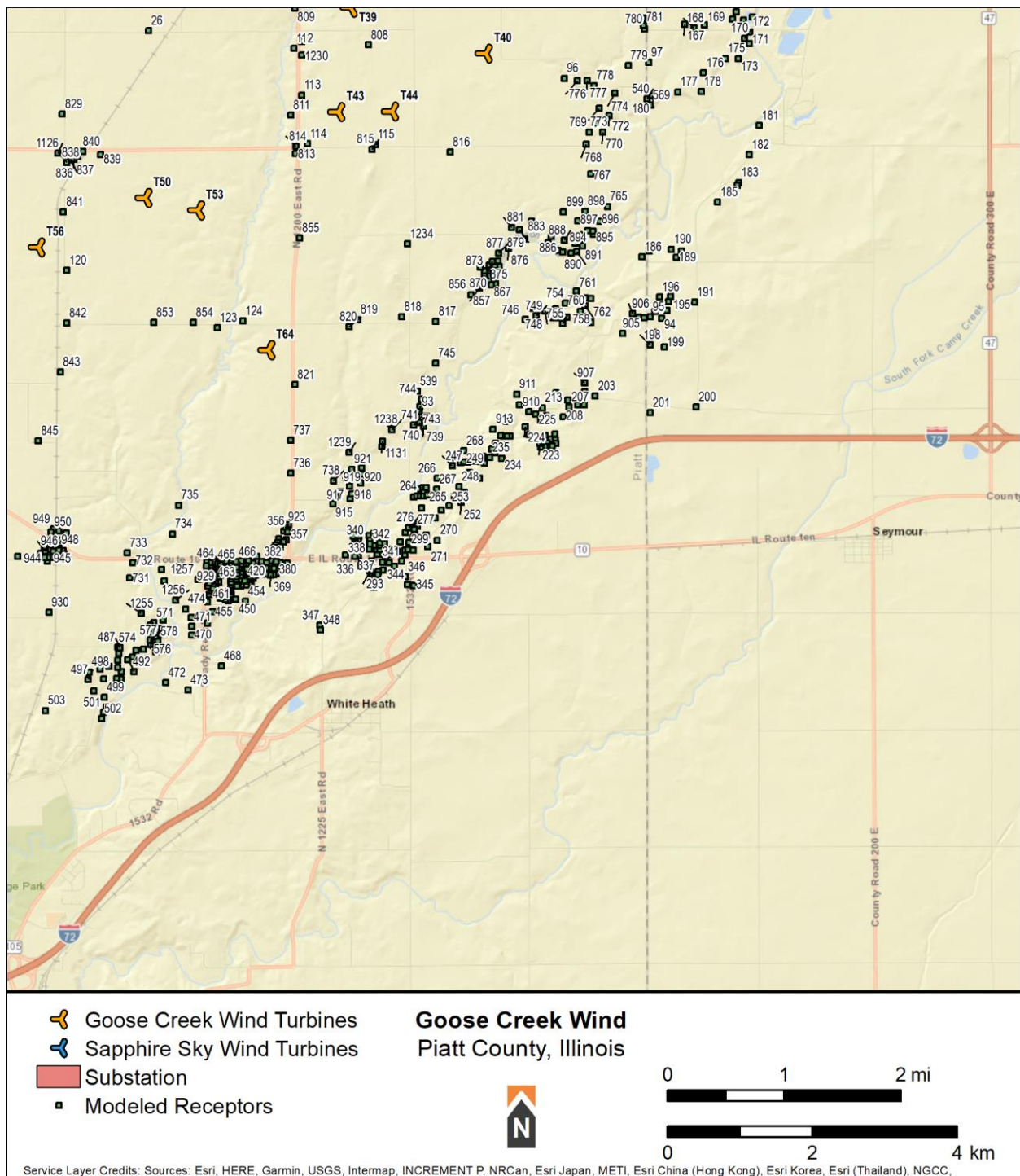


FIGURE 22: MAP OF MODELED RECEPTORS - SOUTHEASTERN AREA



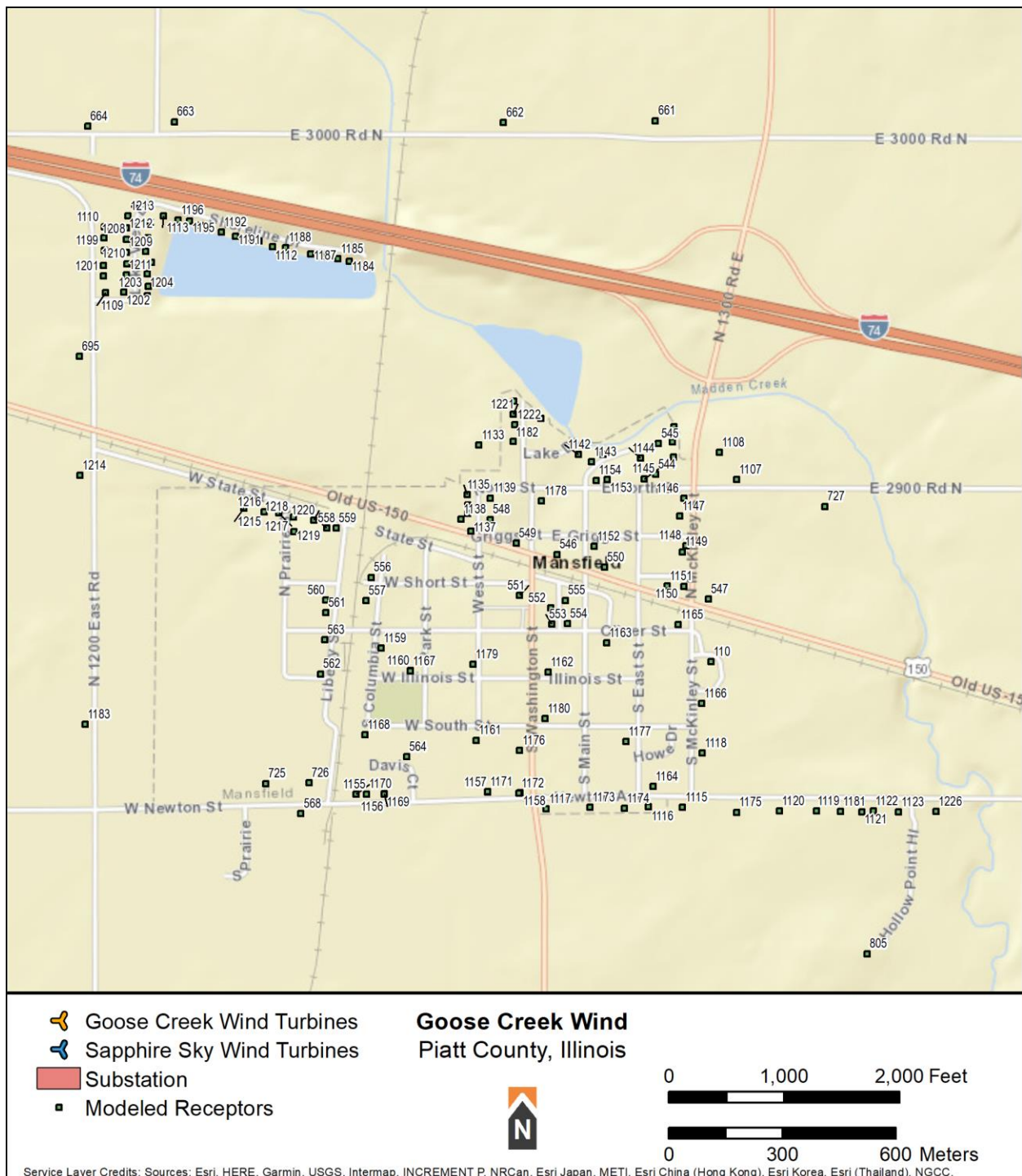


FIGURE 23: MAP OF MODELED RECEPTORS - MANSFIELD AREA

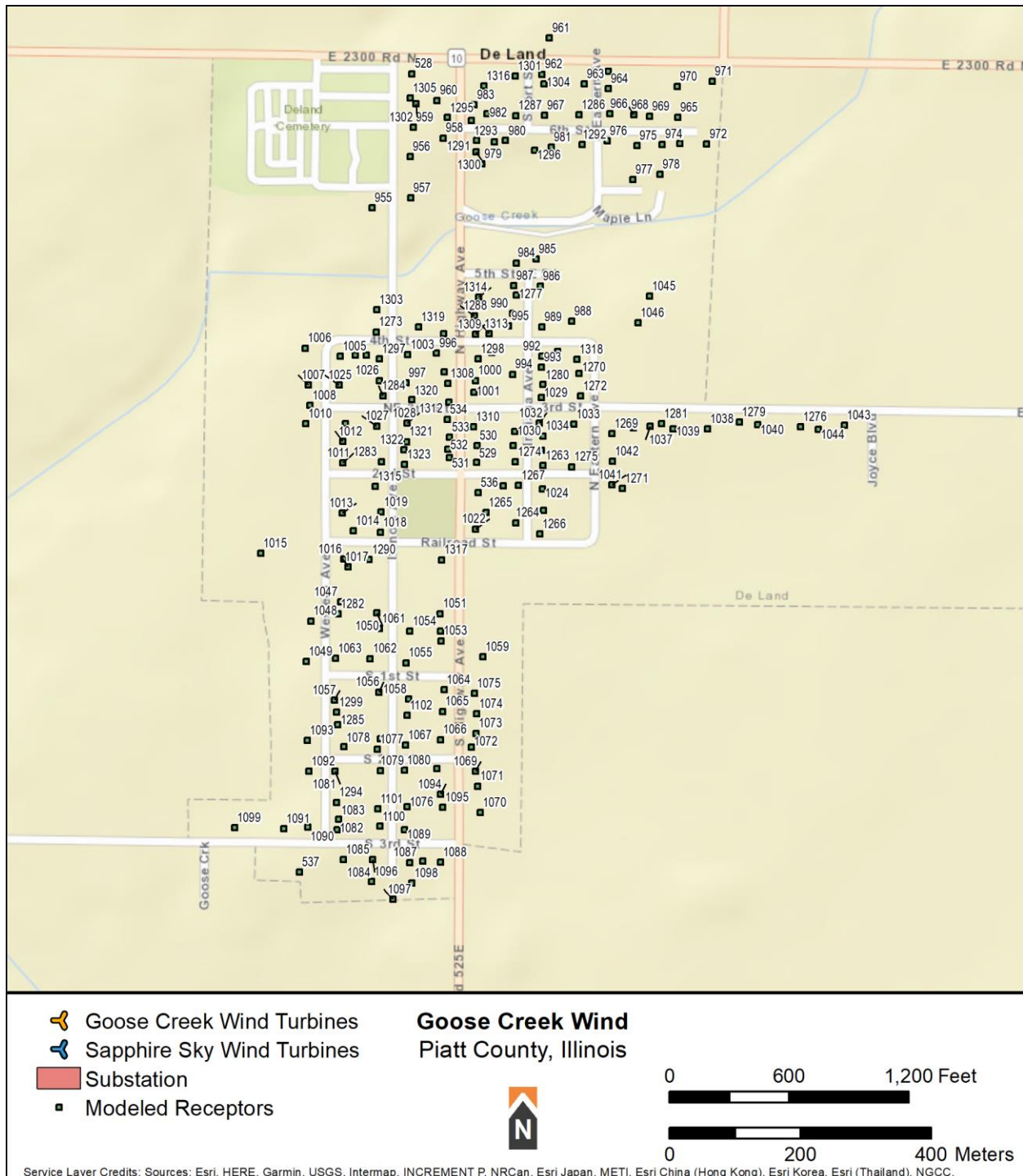


FIGURE 24: MAP OF MODELED RECEPTORS – DE LAND AREA

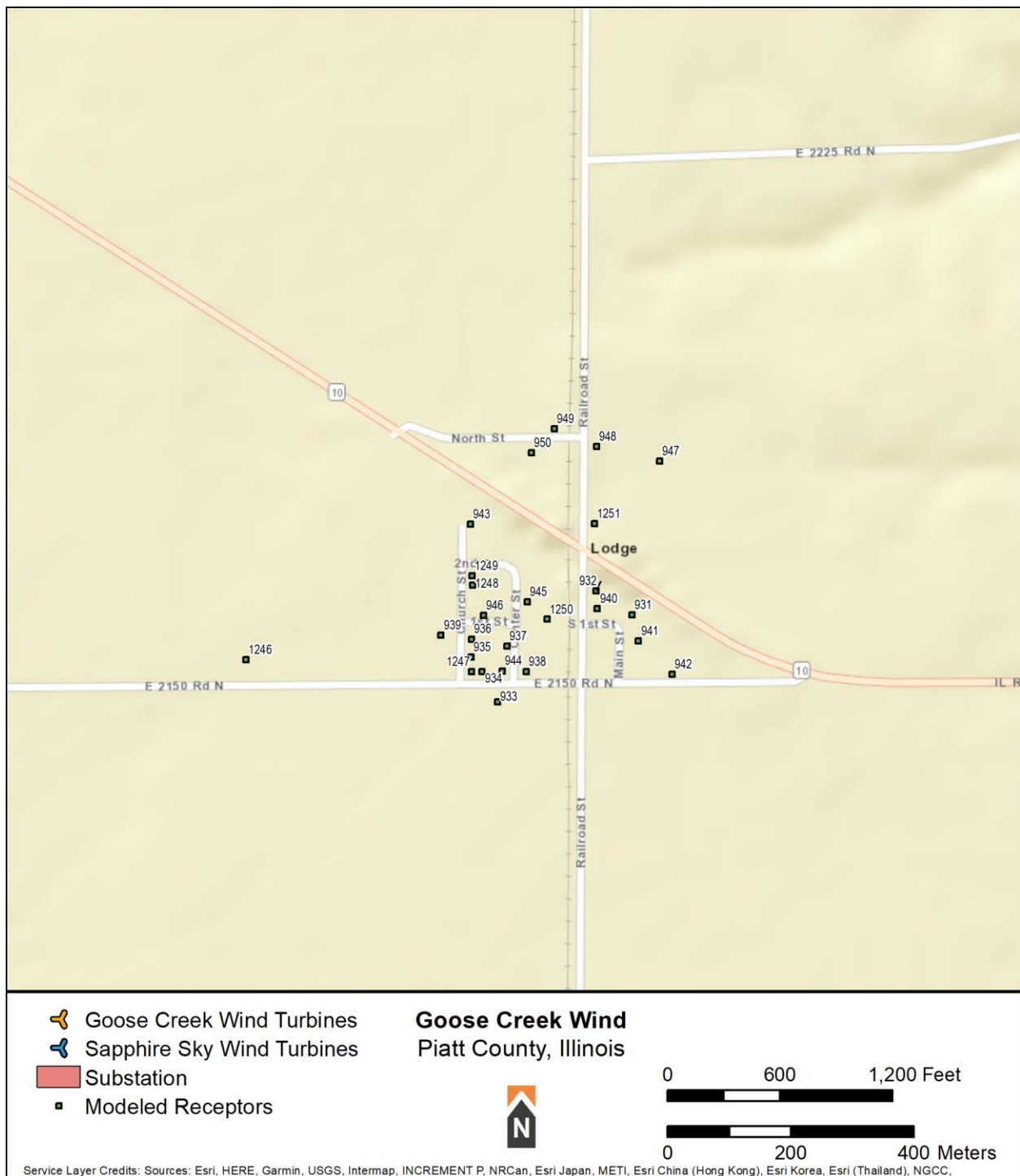


FIGURE 25: MAP OF MODELED RECEPTORS - LODGE AREA

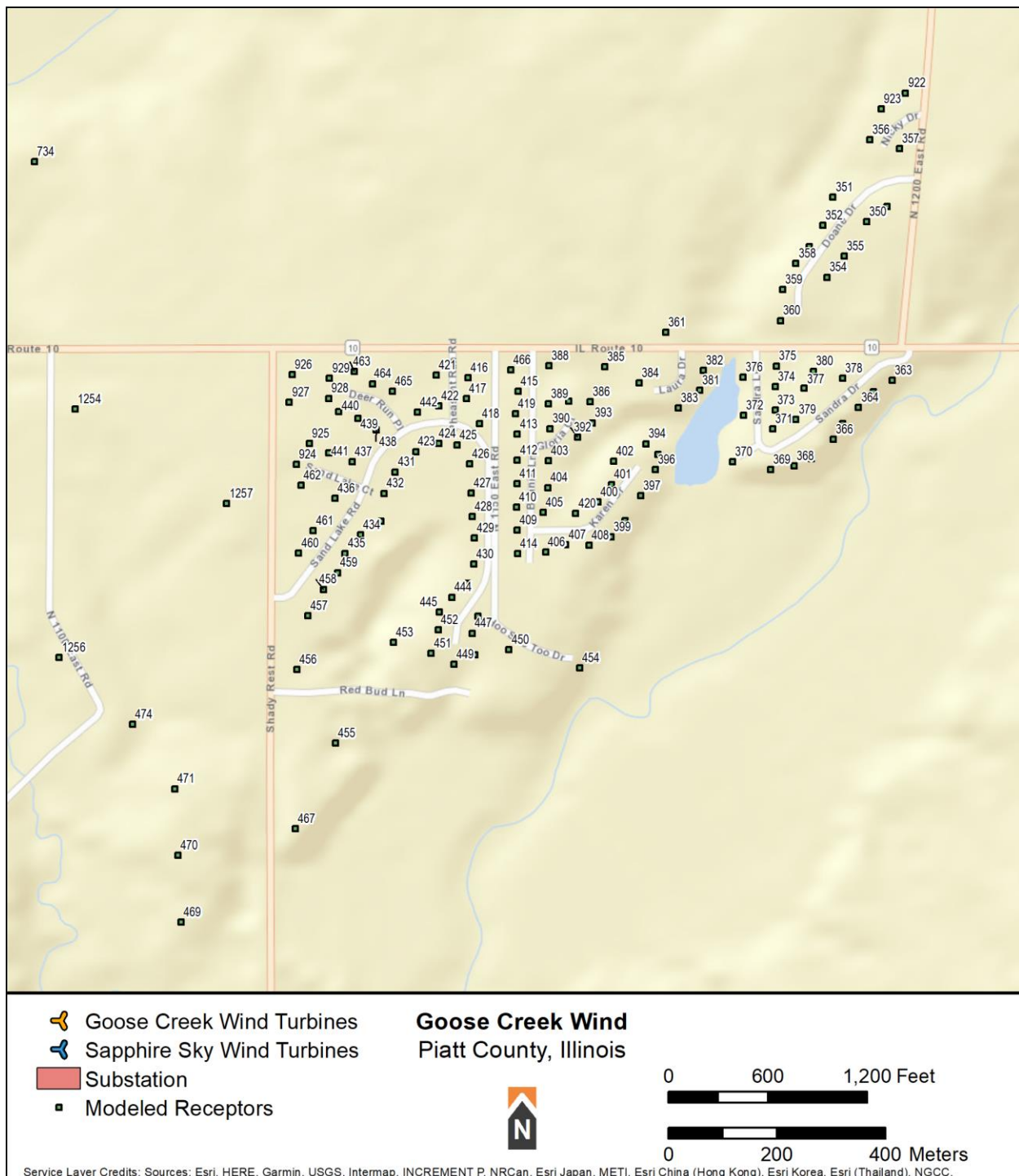


FIGURE 26: MAP OF MODELED RECEPTORS - SAND LAKE AREA



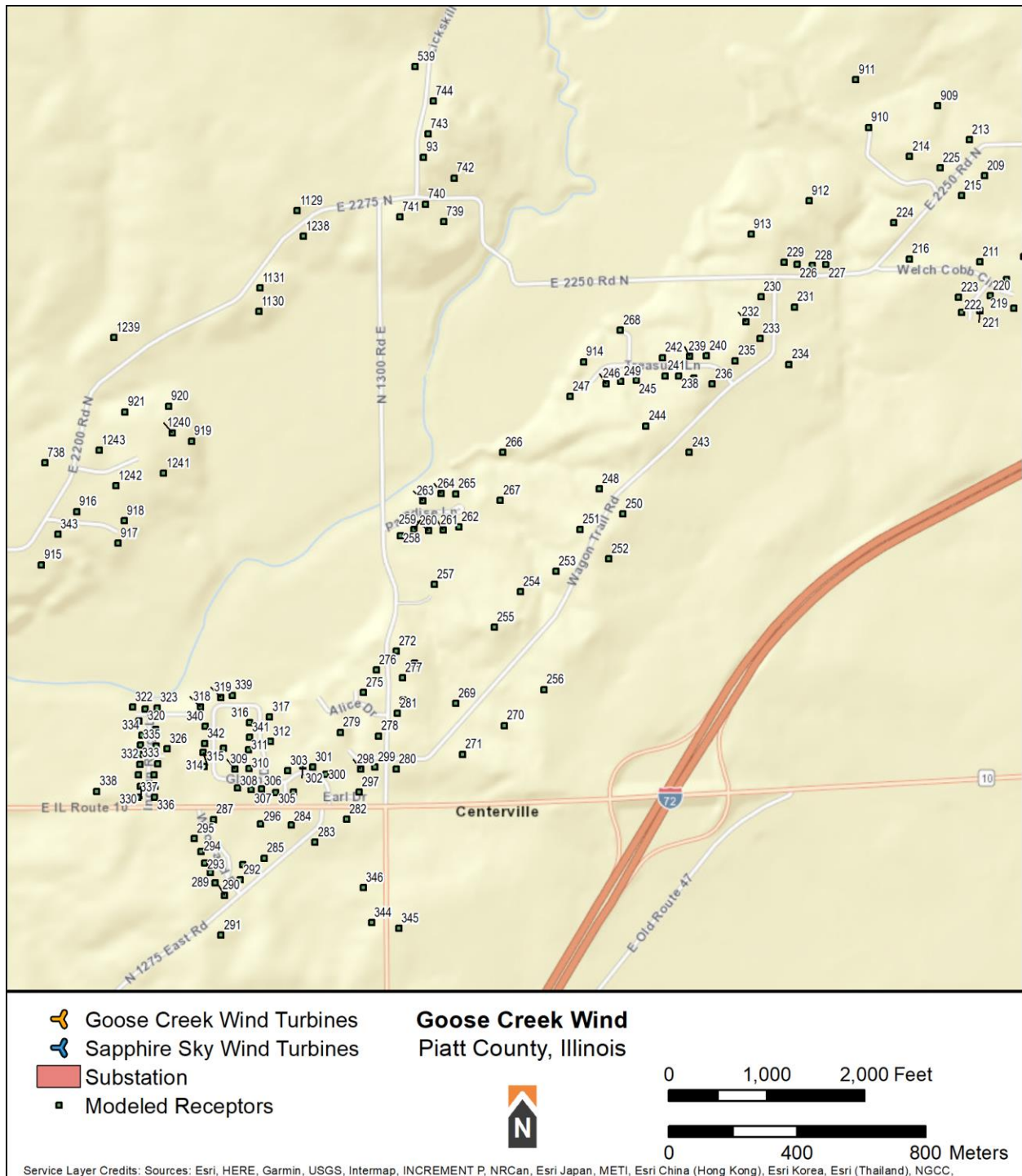


FIGURE 27: MAP OF MODELED RECEPTORS - CENTERVILLE AREA

TABLE 6: DISCRETE RECEPTOR<sup>14</sup> MODEL RESULTS

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1                                                 | 57                                                             | 55 | 49  | 46  | 43  | 37   | 28   | 6    | 0    | 282739                                    | 400281 | 236                          |
| 2                                                 | 53                                                             | 51 | 45  | 41  | 36  | 29   | 14   | 0    | 0    | 285994                                    | 400136 | 248                          |
| 3                                                 | 57                                                             | 55 | 49  | 47  | 43  | 38   | 29   | 8    | 0    | 286944                                    | 399604 | 243                          |
| 4                                                 | 56                                                             | 54 | 48  | 45  | 42  | 36   | 26   | 3    | 0    | 284372                                    | 399494 | 246                          |
| 5                                                 | 58                                                             | 56 | 51  | 48  | 45  | 40   | 31   | 10   | 0    | 283569                                    | 399604 | 235                          |
| 6                                                 | 54                                                             | 52 | 46  | 43  | 38  | 32   | 20   | 0    | 0    | 281518                                    | 399787 | 226                          |
| 7                                                 | 53                                                             | 51 | 44  | 41  | 36  | 29   | 16   | 0    | 0    | 277875                                    | 398569 | 224                          |
| 8                                                 | 56                                                             | 54 | 47  | 45  | 40  | 34   | 22   | 0    | 0    | 278273                                    | 395816 | 223                          |
| 9                                                 | 45                                                             | 43 | 39  | 34  | 28  | 20   | 0    | 0    | 0    | 287806                                    | 394450 | 232                          |
| 10                                                | 44                                                             | 42 | 37  | 34  | 28  | 19   | 0    | 0    | 0    | 287743                                    | 394369 | 231                          |
| 11                                                | 46                                                             | 44 | 37  | 32  | 26  | 16   | 0    | 0    | 0    | 288961                                    | 394183 | 244                          |
| 12                                                | 45                                                             | 43 | 37  | 32  | 26  | 15   | 0    | 0    | 0    | 289053                                    | 394202 | 245                          |
| 13                                                | 44                                                             | 42 | 36  | 32  | 25  | 15   | 0    | 0    | 0    | 289161                                    | 394136 | 246                          |
| 14                                                | 39                                                             | 38 | 35  | 30  | 23  | 12   | 0    | 0    | 0    | 289179                                    | 393961 | 243                          |
| 15                                                | 48                                                             | 45 | 39  | 35  | 29  | 19   | 0    | 0    | 0    | 289126                                    | 395072 | 244                          |
| 16                                                | 51                                                             | 49 | 42  | 37  | 30  | 19   | 0    | 0    | 0    | 282845                                    | 394789 | 227                          |
| 17                                                | 52                                                             | 50 | 43  | 38  | 32  | 22   | 0    | 0    | 0    | 282028                                    | 394665 | 226                          |
| 18                                                | 53                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 280872                                    | 393533 | 227                          |
| 19                                                | 59                                                             | 57 | 51  | 48  | 45  | 39   | 29   | 5    | 0    | 277972                                    | 393984 | 224                          |
| 20                                                | 56                                                             | 54 | 48  | 45  | 41  | 35   | 24   | 0    | 0    | 274759                                    | 392037 | 224                          |
| 21                                                | 56                                                             | 54 | 48  | 45  | 40  | 34   | 22   | 0    | 0    | 274725                                    | 390816 | 225                          |
| 22                                                | 56                                                             | 54 | 48  | 45  | 40  | 34   | 23   | 0    | 0    | 274742                                    | 390886 | 225                          |
| 23                                                | 57                                                             | 56 | 50  | 47  | 43  | 37   | 27   | 4    | 0    | 279556                                    | 390901 | 225                          |
| 24                                                | 56                                                             | 54 | 48  | 45  | 41  | 36   | 26   | 2    | 0    | 280854                                    | 390971 | 225                          |
| 25                                                | 52                                                             | 50 | 43  | 40  | 35  | 27   | 11   | 0    | 0    | 281727                                    | 391260 | 226                          |
| 26                                                | 51                                                             | 49 | 42  | 37  | 31  | 22   | 3    | 0    | 0    | 282045                                    | 388998 | 224                          |
| 27                                                | 58                                                             | 56 | 50  | 48  | 44  | 38   | 27   | 2    | 0    | 274711                                    | 386911 | 220                          |
| 28                                                | 56                                                             | 54 | 48  | 45  | 41  | 35   | 25   | 0    | 0    | 272623                                    | 387482 | 221                          |
| 29                                                | 54                                                             | 52 | 46  | 42  | 38  | 31   | 18   | 0    | 0    | 271474                                    | 386122 | 221                          |
| 30                                                | 48                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 269800                                    | 384349 | 220                          |
| 31                                                | 49                                                             | 47 | 39  | 34  | 28  | 17   | 0    | 0    | 0    | 269878                                    | 384294 | 219                          |
| 32                                                | 48                                                             | 46 | 38  | 33  | 26  | 14   | 0    | 0    | 0    | 271365                                    | 381524 | 220                          |

<sup>15</sup> Please note that the primary structure IDs are not numbered sequentially so the number of receptors does not match the highest primary structure ID.

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 33                                                | 50                                                             | 48 | 41  | 37  | 31  | 22   | 4    | 0    | 0    | 273275                                    | 381466 | 218                          |
| 34                                                | 56                                                             | 54 | 49  | 46  | 42  | 37   | 29   | 8    | 0    | 274577                                    | 382393 | 219                          |
| 35                                                | 48                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 272979                                    | 380002 | 217                          |
| 36                                                | 48                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 272965                                    | 380079 | 217                          |
| 37                                                | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 273707                                    | 380083 | 218                          |
| 38                                                | 50                                                             | 48 | 41  | 37  | 32  | 23   | 4    | 0    | 0    | 274500                                    | 380246 | 216                          |
| 39                                                | 49                                                             | 47 | 42  | 38  | 33  | 26   | 11   | 0    | 0    | 275776                                    | 379615 | 215                          |
| 40                                                | 49                                                             | 47 | 42  | 39  | 34  | 28   | 14   | 0    | 0    | 275766                                    | 379973 | 212                          |
| 41                                                | 51                                                             | 49 | 42  | 39  | 34  | 26   | 12   | 0    | 0    | 275741                                    | 379758 | 215                          |
| 42                                                | 50                                                             | 48 | 41  | 37  | 32  | 25   | 9    | 0    | 0    | 275793                                    | 379381 | 215                          |
| 43                                                | 49                                                             | 46 | 40  | 35  | 29  | 20   | 0    | 0    | 0    | 275071                                    | 379157 | 215                          |
| 44                                                | 42                                                             | 41 | 38  | 34  | 27  | 18   | 0    | 0    | 0    | 275845                                    | 378463 | 212                          |
| 45                                                | 46                                                             | 43 | 37  | 33  | 26  | 17   | 0    | 0    | 0    | 275990                                    | 378047 | 213                          |
| 46                                                | 39                                                             | 37 | 35  | 32  | 26  | 16   | 0    | 0    | 0    | 276397                                    | 378122 | 212                          |
| 47                                                | 46                                                             | 44 | 38  | 34  | 28  | 19   | 0    | 0    | 0    | 276265                                    | 378359 | 215                          |
| 48                                                | 45                                                             | 43 | 38  | 35  | 29  | 20   | 2    | 0    | 0    | 276362                                    | 378516 | 213                          |
| 49                                                | 45                                                             | 43 | 36  | 31  | 24  | 13   | 0    | 0    | 0    | 276333                                    | 377340 | 212                          |
| 50                                                | 42                                                             | 40 | 36  | 30  | 23  | 13   | 0    | 0    | 0    | 276250                                    | 377376 | 213                          |
| 51                                                | 44                                                             | 42 | 36  | 31  | 24  | 13   | 0    | 0    | 0    | 276624                                    | 377308 | 209                          |
| 52                                                | 45                                                             | 43 | 35  | 30  | 23  | 12   | 0    | 0    | 0    | 276389                                    | 377112 | 208                          |
| 53                                                | 44                                                             | 42 | 34  | 29  | 22  | 11   | 0    | 0    | 0    | 277249                                    | 376874 | 205                          |
| 54                                                | 42                                                             | 39 | 32  | 27  | 20  | 8    | 0    | 0    | 0    | 277499                                    | 376480 | 198                          |
| 55                                                | 42                                                             | 39 | 32  | 27  | 20  | 8    | 0    | 0    | 0    | 277682                                    | 376485 | 197                          |
| 56                                                | 41                                                             | 39 | 32  | 27  | 20  | 8    | 0    | 0    | 0    | 277728                                    | 376427 | 196                          |
| 57                                                | 43                                                             | 40 | 33  | 27  | 20  | 8    | 0    | 0    | 0    | 277612                                    | 376356 | 196                          |
| 58                                                | 43                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 277849                                    | 376301 | 194                          |
| 59                                                | 43                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 277935                                    | 376308 | 194                          |
| 60                                                | 43                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 277909                                    | 376283 | 194                          |
| 61                                                | 42                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 277963                                    | 376359 | 195                          |
| 62                                                | 43                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 278070                                    | 376338 | 194                          |
| 63                                                | 43                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 278044                                    | 376291 | 194                          |
| 64                                                | 42                                                             | 40 | 32  | 27  | 20  | 7    | 0    | 0    | 0    | 278035                                    | 376257 | 193                          |
| 65                                                | 42                                                             | 40 | 32  | 27  | 19  | 7    | 0    | 0    | 0    | 277996                                    | 376224 | 193                          |
| 66                                                | 42                                                             | 40 | 32  | 27  | 19  | 6    | 0    | 0    | 0    | 277982                                    | 376186 | 192                          |
| 67                                                | 42                                                             | 40 | 32  | 27  | 19  | 6    | 0    | 0    | 0    | 278028                                    | 376152 | 192                          |
| 68                                                | 42                                                             | 40 | 32  | 27  | 19  | 6    | 0    | 0    | 0    | 278051                                    | 376129 | 191                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 69                                                | 42                                                             | 40 | 32  | 27  | 19  | 6    | 0    | 0    | 0    | 278116                                    | 376087 | 191                          |
| 70                                                | 42                                                             | 40 | 32  | 26  | 19  | 5    | 0    | 0    | 0    | 278162                                    | 376031 | 190                          |
| 71                                                | 42                                                             | 40 | 32  | 26  | 18  | 5    | 0    | 0    | 0    | 278444                                    | 376012 | 189                          |
| 72                                                | 42                                                             | 40 | 32  | 26  | 19  | 6    | 0    | 0    | 0    | 278250                                    | 376068 | 190                          |
| 73                                                | 42                                                             | 40 | 32  | 27  | 19  | 6    | 0    | 0    | 0    | 278280                                    | 376087 | 190                          |
| 74                                                | 41                                                             | 39 | 31  | 26  | 18  | 4    | 0    | 0    | 0    | 278337                                    | 375888 | 187                          |
| 75                                                | 41                                                             | 39 | 31  | 26  | 18  | 4    | 0    | 0    | 0    | 278365                                    | 375843 | 186                          |
| 76                                                | 41                                                             | 39 | 31  | 26  | 18  | 4    | 0    | 0    | 0    | 278425                                    | 375831 | 186                          |
| 77                                                | 41                                                             | 39 | 31  | 25  | 18  | 4    | 0    | 0    | 0    | 278450                                    | 375797 | 185                          |
| 78                                                | 41                                                             | 39 | 31  | 25  | 17  | 4    | 0    | 0    | 0    | 278516                                    | 375741 | 184                          |
| 79                                                | 41                                                             | 39 | 31  | 25  | 17  | 3    | 0    | 0    | 0    | 278554                                    | 375695 | 183                          |
| 80                                                | 41                                                             | 39 | 31  | 25  | 17  | 4    | 0    | 0    | 0    | 278594                                    | 375768 | 184                          |
| 81                                                | 41                                                             | 39 | 31  | 25  | 18  | 4    | 0    | 0    | 0    | 278603                                    | 375846 | 185                          |
| 82                                                | 41                                                             | 39 | 30  | 25  | 17  | 3    | 0    | 0    | 0    | 278692                                    | 375629 | 181                          |
| 83                                                | 41                                                             | 39 | 32  | 27  | 19  | 7    | 0    | 0    | 0    | 278651                                    | 376495 | 195                          |
| 84                                                | 43                                                             | 40 | 33  | 27  | 20  | 7    | 0    | 0    | 0    | 279118                                    | 376696 | 196                          |
| 85                                                | 43                                                             | 41 | 33  | 28  | 20  | 8    | 0    | 0    | 0    | 279099                                    | 376819 | 197                          |
| 86                                                | 42                                                             | 39 | 32  | 27  | 20  | 8    | 0    | 0    | 0    | 279000                                    | 376933 | 197                          |
| 87                                                | 35                                                             | 33 | 30  | 23  | 15  | 3    | 0    | 0    | 0    | 278969                                    | 377172 | 196                          |
| 88                                                | 45                                                             | 42 | 35  | 30  | 23  | 11   | 0    | 0    | 0    | 278990                                    | 377409 | 207                          |
| 89                                                | 36                                                             | 33 | 30  | 24  | 16  | 4    | 0    | 0    | 0    | 279004                                    | 377288 | 198                          |
| 90                                                | 44                                                             | 41 | 34  | 29  | 23  | 11   | 0    | 0    | 0    | 279117                                    | 377606 | 207                          |
| 91                                                | 40                                                             | 38 | 32  | 28  | 21  | 11   | 0    | 0    | 0    | 279152                                    | 377680 | 207                          |
| 92                                                | 40                                                             | 38 | 32  | 27  | 20  | 10   | 0    | 0    | 0    | 279290                                    | 377595 | 206                          |
| 93                                                | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285786                                    | 383736 | 220                          |
| 94                                                | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289138                                    | 385028 | 217                          |
| 95                                                | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288977                                    | 385048 | 221                          |
| 96                                                | 34                                                             | 31 | 22  | 16  | 6   | 0    | 0    | 0    | 0    | 287790                                    | 388339 | 217                          |
| 97                                                | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288953                                    | 388557 | 217                          |
| 98                                                | 42                                                             | 40 | 32  | 26  | 17  | 2    | 0    | 0    | 0    | 288959                                    | 391395 | 224                          |
| 99                                                | 40                                                             | 38 | 31  | 25  | 16  | 2    | 0    | 0    | 0    | 288968                                    | 391339 | 224                          |
| 100                                               | 40                                                             | 38 | 29  | 24  | 16  | 1    | 0    | 0    | 0    | 288968                                    | 391270 | 224                          |
| 101                                               | 34                                                             | 33 | 29  | 23  | 13  | 0    | 0    | 0    | 0    | 288969                                    | 391211 | 223                          |
| 102                                               | 42                                                             | 39 | 31  | 25  | 17  | 2    | 0    | 0    | 0    | 289055                                    | 391381 | 224                          |
| 103                                               | 42                                                             | 39 | 31  | 25  | 17  | 2    | 0    | 0    | 0    | 289144                                    | 391384 | 224                          |
| 104                                               | 40                                                             | 38 | 31  | 25  | 16  | 1    | 0    | 0    | 0    | 289227                                    | 391384 | 224                          |



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| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 105                                               | 41                                                             | 38 | 30  | 24  | 16  | 1    | 0    | 0    | 0    | 289314                                    | 391381 | 223                          |
| 106                                               | 38                                                             | 37 | 33  | 27  | 18  | 5    | 0    | 0    | 0    | 288959                                    | 392329 | 226                          |
| 107                                               | 43                                                             | 41 | 33  | 28  | 20  | 7    | 0    | 0    | 0    | 288969                                    | 392413 | 227                          |
| 108                                               | 36                                                             | 36 | 32  | 26  | 17  | 3    | 0    | 0    | 0    | 289057                                    | 392085 | 225                          |
| 109                                               | 43                                                             | 41 | 33  | 28  | 21  | 8    | 0    | 0    | 0    | 288994                                    | 392519 | 228                          |
| 110                                               | 49                                                             | 46 | 38  | 33  | 26  | 14   | 0    | 0    | 0    | 285754                                    | 393416 | 226                          |
| 111                                               | 43                                                             | 40 | 32  | 27  | 19  | 5    | 0    | 0    | 0    | 289006                                    | 391994 | 226                          |
| 112                                               | 46                                                             | 44 | 36  | 31  | 24  | 11   | 0    | 0    | 0    | 284053                                    | 388754 | 217                          |
| 113                                               | 41                                                             | 39 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 284162                                    | 388109 | 220                          |
| 114                                               | 46                                                             | 43 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 284243                                    | 387437 | 220                          |
| 115                                               | 34                                                             | 34 | 31  | 25  | 15  | 1    | 0    | 0    | 0    | 285178                                    | 387426 | 222                          |
| 116                                               | 45                                                             | 42 | 35  | 29  | 20  | 5    | 0    | 0    | 0    | 269618                                    | 381072 | 218                          |
| 117                                               | 58                                                             | 56 | 50  | 48  | 44  | 39   | 30   | 11   | 0    | 273919                                    | 387841 | 221                          |
| 118                                               | 52                                                             | 49 | 43  | 39  | 34  | 26   | 10   | 0    | 0    | 270987                                    | 389021 | 224                          |
| 119                                               | 54                                                             | 52 | 46  | 43  | 38  | 32   | 19   | 0    | 0    | 272394                                    | 390706 | 224                          |
| 120                                               | 51                                                             | 49 | 41  | 37  | 30  | 20   | 0    | 0    | 0    | 280919                                    | 385689 | 220                          |
| 121                                               | 55                                                             | 53 | 48  | 45  | 40  | 33   | 20   | 0    | 0    | 277936                                    | 386525 | 221                          |
| 122                                               | 55                                                             | 53 | 47  | 44  | 39  | 32   | 17   | 0    | 0    | 274663                                    | 383607 | 219                          |
| 123                                               | 45                                                             | 42 | 37  | 31  | 23  | 9    | 0    | 0    | 0    | 282997                                    | 384893 | 212                          |
| 124                                               | 47                                                             | 44 | 36  | 31  | 22  | 8    | 0    | 0    | 0    | 283350                                    | 384991 | 216                          |
| 125                                               | 50                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 269750                                    | 386233 | 223                          |
| 126                                               | 49                                                             | 47 | 42  | 38  | 33  | 26   | 9    | 0    | 0    | 289219                                    | 396568 | 242                          |
| 127                                               | 43                                                             | 41 | 34  | 29  | 22  | 10   | 0    | 0    | 0    | 288964                                    | 393204 | 232                          |
| 128                                               | 38                                                             | 37 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 288965                                    | 393150 | 232                          |
| 129                                               | 53                                                             | 50 | 44  | 40  | 36  | 28   | 12   | 0    | 0    | 279517                                    | 402265 | 227                          |
| 130                                               | 53                                                             | 51 | 45  | 42  | 38  | 31   | 17   | 0    | 0    | 281146                                    | 402501 | 231                          |
| 131                                               | 52                                                             | 50 | 45  | 42  | 38  | 32   | 19   | 0    | 0    | 282489                                    | 402834 | 238                          |
| 132                                               | 53                                                             | 51 | 44  | 41  | 36  | 28   | 10   | 0    | 0    | 282664                                    | 401700 | 239                          |
| 133                                               | 49                                                             | 47 | 42  | 38  | 33  | 24   | 2    | 0    | 0    | 286250                                    | 401346 | 240                          |
| 134                                               | 52                                                             | 49 | 43  | 39  | 34  | 26   | 7    | 0    | 0    | 287037                                    | 402831 | 232                          |
| 135                                               | 51                                                             | 49 | 43  | 38  | 34  | 26   | 7    | 0    | 0    | 287246                                    | 402834 | 232                          |
| 136                                               | 51                                                             | 48 | 42  | 37  | 32  | 23   | 2    | 0    | 0    | 288231                                    | 402768 | 232                          |
| 137                                               | 51                                                             | 48 | 42  | 37  | 32  | 23   | 2    | 0    | 0    | 288264                                    | 402773 | 232                          |
| 138                                               | 51                                                             | 48 | 42  | 37  | 32  | 23   | 2    | 0    | 0    | 288310                                    | 402773 | 232                          |
| 139                                               | 51                                                             | 48 | 42  | 37  | 32  | 24   | 3    | 0    | 0    | 288297                                    | 402862 | 232                          |
| 140                                               | 51                                                             | 48 | 42  | 37  | 32  | 23   | 2    | 0    | 0    | 288373                                    | 402864 | 232                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 141                                               | 50                                                             | 47 | 41  | 36  | 30  | 20   | 0    | 0    | 0    | 289168                                    | 402768 | 231                          |
| 142                                               | 49                                                             | 47 | 41  | 37  | 31  | 22   | 1    | 0    | 0    | 289157                                    | 401621 | 235                          |
| 143                                               | 51                                                             | 48 | 41  | 37  | 32  | 23   | 3    | 0    | 0    | 289352                                    | 401442 | 235                          |
| 144                                               | 50                                                             | 47 | 41  | 37  | 32  | 23   | 5    | 0    | 0    | 289739                                    | 401101 | 234                          |
| 145                                               | 49                                                             | 46 | 39  | 35  | 29  | 19   | 0    | 0    | 0    | 290783                                    | 401134 | 235                          |
| 146                                               | 48                                                             | 46 | 39  | 34  | 28  | 18   | 0    | 0    | 0    | 290890                                    | 401320 | 233                          |
| 147                                               | 50                                                             | 48 | 42  | 39  | 34  | 27   | 11   | 0    | 0    | 290371                                    | 399726 | 236                          |
| 148                                               | 50                                                             | 48 | 42  | 39  | 34  | 26   | 11   | 0    | 0    | 290406                                    | 399666 | 236                          |
| 149                                               | 48                                                             | 46 | 40  | 36  | 31  | 22   | 3    | 0    | 0    | 290750                                    | 397379 | 235                          |
| 150                                               | 47                                                             | 45 | 38  | 34  | 28  | 18   | 0    | 0    | 0    | 290825                                    | 396479 | 236                          |
| 151                                               | 47                                                             | 45 | 39  | 35  | 29  | 20   | 0    | 0    | 0    | 290365                                    | 396405 | 238                          |
| 152                                               | 41                                                             | 39 | 37  | 32  | 25  | 15   | 0    | 0    | 0    | 289537                                    | 394760 | 247                          |
| 153                                               | 40                                                             | 39 | 36  | 30  | 23  | 11   | 0    | 0    | 0    | 289917                                    | 394254 | 248                          |
| 154                                               | 43                                                             | 41 | 35  | 30  | 22  | 10   | 0    | 0    | 0    | 290194                                    | 394089 | 244                          |
| 155                                               | 39                                                             | 37 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 290524                                    | 391387 | 216                          |
| 156                                               | 30                                                             | 29 | 27  | 21  | 12  | 0    | 0    | 0    | 0    | 290445                                    | 391258 | 218                          |
| 157                                               | 35                                                             | 33 | 29  | 22  | 12  | 0    | 0    | 0    | 0    | 289993                                    | 391300 | 221                          |
| 158                                               | 41                                                             | 38 | 30  | 24  | 16  | 1    | 0    | 0    | 0    | 289396                                    | 391378 | 223                          |
| 159                                               | 41                                                             | 38 | 30  | 24  | 16  | 1    | 0    | 0    | 0    | 289569                                    | 391374 | 223                          |
| 160                                               | 24                                                             | 22 | 19  | 14  | 4   | 0    | 0    | 0    | 0    | 290369                                    | 389580 | 217                          |
| 161                                               | 24                                                             | 21 | 17  | 9   | 0   | 0    | 0    | 0    | 0    | 290471                                    | 389518 | 213                          |
| 162                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290435                                    | 389392 | 216                          |
| 163                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290166                                    | 389255 | 216                          |
| 164                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290117                                    | 389161 | 215                          |
| 165                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290267                                    | 389142 | 211                          |
| 166                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290387                                    | 389185 | 212                          |
| 167                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289450                                    | 389087 | 218                          |
| 168                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289583                                    | 389031 | 218                          |
| 169                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289729                                    | 389079 | 217                          |
| 170                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290278                                    | 388893 | 212                          |
| 171                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290343                                    | 388818 | 211                          |
| 172                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290349                                    | 388980 | 210                          |
| 173                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290195                                    | 388609 | 212                          |
| 174                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289941                                    | 388566 | 216                          |
| 175                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290016                                    | 388613 | 214                          |
| 176                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289715                                    | 388416 | 216                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 177                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289361                                    | 388152 | 218                          |
| 178                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289680                                    | 388156 | 214                          |
| 179                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289074                                    | 388116 | 213                          |
| 180                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289003                                    | 388101 | 214                          |
| 181                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290479                                    | 387689 | 210                          |
| 182                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290347                                    | 387285 | 213                          |
| 183                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290201                                    | 386901 | 213                          |
| 184                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 290176                                    | 386864 | 210                          |
| 185                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289909                                    | 386631 | 215                          |
| 186                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288862                                    | 385872 | 209                          |
| 187                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288964                                    | 385956 | 210                          |
| 188                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289409                                    | 385952 | 222                          |
| 189                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289339                                    | 385866 | 221                          |
| 190                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289268                                    | 385979 | 217                          |
| 191                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289590                                    | 385251 | 223                          |
| 192                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289040                                    | 385120 | 218                          |
| 193                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289229                                    | 385258 | 221                          |
| 194                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289205                                    | 385135 | 218                          |
| 195                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289258                                    | 385326 | 220                          |
| 196                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289105                                    | 385323 | 217                          |
| 197                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289054                                    | 384831 | 222                          |
| 198                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288975                                    | 384661 | 221                          |
| 199                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289171                                    | 384627 | 223                          |
| 200                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 289609                                    | 383803 | 222                          |
| 201                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288976                                    | 383724 | 222                          |
| 202                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288072                                    | 384009 | 221                          |
| 203                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288218                                    | 383950 | 224                          |
| 204                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288061                                    | 383832 | 219                          |
| 205                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287975                                    | 383834 | 218                          |
| 206                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287840                                    | 383896 | 217                          |
| 207                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287852                                    | 383800 | 219                          |
| 208                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287776                                    | 383667 | 220                          |
| 209                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287536                                    | 383678 | 221                          |
| 210                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287658                                    | 383426 | 224                          |
| 211                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287521                                    | 383410 | 221                          |
| 212                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287604                                    | 383355 | 222                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 213                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287489                                    | 383791 | 220                          |
| 214                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287302                                    | 383739 | 219                          |
| 215                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287463                                    | 383617 | 219                          |
| 216                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287301                                    | 383419 | 217                          |
| 217                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287667                                    | 383346 | 224                          |
| 218                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287672                                    | 383296 | 223                          |
| 219                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287626                                    | 383266 | 221                          |
| 220                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287553                                    | 383304 | 220                          |
| 221                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287521                                    | 383257 | 219                          |
| 222                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287463                                    | 383252 | 218                          |
| 223                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287453                                    | 383299 | 219                          |
| 224                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287252                                    | 383532 | 218                          |
| 225                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287397                                    | 383703 | 219                          |
| 226                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286950                                    | 383402 | 214                          |
| 227                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287040                                    | 383403 | 212                          |
| 228                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286998                                    | 383399 | 213                          |
| 229                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286910                                    | 383408 | 215                          |
| 230                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286839                                    | 383301 | 221                          |
| 231                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286943                                    | 383269 | 216                          |
| 232                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286792                                    | 383223 | 224                          |
| 233                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286836                                    | 383170 | 221                          |
| 234                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286926                                    | 383090 | 220                          |
| 235                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286758                                    | 383101 | 221                          |
| 236                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286686                                    | 383029 | 222                          |
| 237                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286629                                    | 383047 | 226                          |
| 238                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286581                                    | 383054 | 222                          |
| 239                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286616                                    | 383115 | 224                          |
| 240                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286668                                    | 383117 | 224                          |
| 241                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286539                                    | 383054 | 219                          |
| 242                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286531                                    | 383111 | 218                          |
| 243                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286615                                    | 382815 | 221                          |
| 244                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286479                                    | 382898 | 228                          |
| 245                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286449                                    | 383041 | 217                          |
| 246                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286355                                    | 383030 | 216                          |
| 247                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286242                                    | 382990 | 211                          |
| 248                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286334                                    | 382702 | 223                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 249                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286401                                    | 383037 | 217                          |
| 250                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286407                                    | 382624 | 226                          |
| 251                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286274                                    | 382576 | 226                          |
| 252                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286362                                    | 382483 | 226                          |
| 253                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286198                                    | 382445 | 224                          |
| 254                                               | 24                                                             | 22 | 19  | 14  | 3   | 0    | 0    | 0    | 0    | 286088                                    | 382381 | 223                          |
| 255                                               | 33                                                             | 31 | 22  | 16  | 6   | 0    | 0    | 0    | 0    | 286006                                    | 382270 | 226                          |
| 256                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286161                                    | 382076 | 229                          |
| 257                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285819                                    | 382403 | 213                          |
| 258                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285713                                    | 382555 | 207                          |
| 259                                               | 28                                                             | 27 | 25  | 18  | 7   | 0    | 0    | 0    | 0    | 285756                                    | 382574 | 207                          |
| 260                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285801                                    | 382572 | 207                          |
| 261                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285846                                    | 382572 | 208                          |
| 262                                               | 36                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285896                                    | 382583 | 210                          |
| 263                                               | 37                                                             | 34 | 26  | 19  | 9   | 0    | 0    | 0    | 0    | 285783                                    | 382664 | 207                          |
| 264                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285840                                    | 382688 | 207                          |
| 265                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285886                                    | 382686 | 208                          |
| 266                                               | 34                                                             | 31 | 24  | 18  | 8   | 0    | 0    | 0    | 0    | 286033                                    | 382816 | 206                          |
| 267                                               | 36                                                             | 34 | 25  | 18  | 9   | 0    | 0    | 0    | 0    | 286025                                    | 382666 | 212                          |
| 268                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286400                                    | 383197 | 210                          |
| 269                                               | 24                                                             | 22 | 18  | 10  | 1   | 0    | 0    | 0    | 0    | 285886                                    | 382033 | 219                          |
| 270                                               | 26                                                             | 26 | 22  | 14  | 3   | 0    | 0    | 0    | 0    | 286038                                    | 381963 | 227                          |
| 271                                               | 34                                                             | 31 | 22  | 16  | 6   | 0    | 0    | 0    | 0    | 285907                                    | 381874 | 226                          |
| 272                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285700                                    | 382195 | 218                          |
| 273                                               | 28                                                             | 27 | 24  | 18  | 7   | 0    | 0    | 0    | 0    | 285757                                    | 382158 | 220                          |
| 274                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285722                                    | 382043 | 221                          |
| 275                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285598                                    | 382067 | 214                          |
| 276                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285638                                    | 382137 | 213                          |
| 277                                               | 37                                                             | 34 | 26  | 19  | 9   | 0    | 0    | 0    | 0    | 285720                                    | 382112 | 218                          |
| 278                                               | 34                                                             | 32 | 25  | 18  | 9   | 0    | 0    | 0    | 0    | 285645                                    | 381931 | 220                          |
| 279                                               | 30                                                             | 30 | 25  | 18  | 8   | 0    | 0    | 0    | 0    | 285526                                    | 381942 | 217                          |
| 280                                               | 34                                                             | 32 | 25  | 18  | 8   | 0    | 0    | 0    | 0    | 285700                                    | 381827 | 221                          |
| 281                                               | 37                                                             | 34 | 26  | 19  | 9   | 0    | 0    | 0    | 0    | 285704                                    | 382001 | 220                          |
| 282                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285546                                    | 381671 | 220                          |
| 283                                               | 32                                                             | 30 | 25  | 18  | 8   | 0    | 0    | 0    | 0    | 285447                                    | 381599 | 216                          |
| 284                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285373                                    | 381654 | 218                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 285                                               | 37                                                             | 34 | 26  | 20  | 10  | 0    | 0    | 0    | 0    | 285289                                    | 381550 | 215                          |
| 286                                               | 37                                                             | 34 | 26  | 20  | 10  | 0    | 0    | 0    | 0    | 285221                                    | 381529 | 216                          |
| 287                                               | 35                                                             | 32 | 25  | 19  | 10  | 0    | 0    | 0    | 0    | 285131                                    | 381670 | 213                          |
| 288                                               | 30                                                             | 28 | 27  | 20  | 10  | 0    | 0    | 0    | 0    | 285120                                    | 381506 | 219                          |
| 289                                               | 29                                                             | 27 | 23  | 17  | 8   | 0    | 0    | 0    | 0    | 285136                                    | 381472 | 218                          |
| 290                                               | 29                                                             | 27 | 23  | 16  | 7   | 0    | 0    | 0    | 0    | 285165                                    | 381434 | 219                          |
| 291                                               | 29                                                             | 27 | 24  | 18  | 9   | 0    | 0    | 0    | 0    | 285154                                    | 381309 | 226                          |
| 292                                               | 35                                                             | 32 | 25  | 18  | 9   | 0    | 0    | 0    | 0    | 285214                                    | 381483 | 217                          |
| 293                                               | 37                                                             | 35 | 27  | 21  | 11  | 0    | 0    | 0    | 0    | 285102                                    | 381535 | 217                          |
| 294                                               | 30                                                             | 28 | 25  | 20  | 10  | 0    | 0    | 0    | 0    | 285091                                    | 381570 | 216                          |
| 295                                               | 30                                                             | 28 | 27  | 20  | 10  | 0    | 0    | 0    | 0    | 285070                                    | 381610 | 216                          |
| 296                                               | 37                                                             | 34 | 26  | 20  | 10  | 0    | 0    | 0    | 0    | 285278                                    | 381656 | 215                          |
| 297                                               | 27                                                             | 25 | 21  | 14  | 5   | 0    | 0    | 0    | 0    | 285585                                    | 381755 | 216                          |
| 298                                               | 30                                                             | 28 | 23  | 16  | 6   | 0    | 0    | 0    | 0    | 285590                                    | 381827 | 216                          |
| 299                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 285634                                    | 381834 | 219                          |
| 300                                               | 27                                                             | 25 | 21  | 14  | 4   | 0    | 0    | 0    | 0    | 285480                                    | 381811 | 216                          |
| 301                                               | 28                                                             | 25 | 22  | 15  | 7   | 0    | 0    | 0    | 0    | 285439                                    | 381834 | 217                          |
| 302                                               | 28                                                             | 27 | 26  | 18  | 8   | 0    | 0    | 0    | 0    | 285409                                    | 381837 | 219                          |
| 303                                               | 37                                                             | 34 | 26  | 20  | 10  | 0    | 0    | 0    | 0    | 285362                                    | 381822 | 219                          |
| 304                                               | 29                                                             | 28 | 26  | 18  | 8   | 0    | 0    | 0    | 0    | 285379                                    | 381756 | 218                          |
| 305                                               | 37                                                             | 34 | 26  | 20  | 10  | 0    | 0    | 0    | 0    | 285325                                    | 381755 | 217                          |
| 306                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285280                                    | 381766 | 216                          |
| 307                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285248                                    | 381764 | 215                          |
| 308                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285206                                    | 381768 | 214                          |
| 309                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285198                                    | 381827 | 215                          |
| 310                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285242                                    | 381829 | 216                          |
| 311                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285240                                    | 381889 | 214                          |
| 312                                               | 37                                                             | 34 | 27  | 21  | 11  | 0    | 0    | 0    | 0    | 285307                                    | 381914 | 213                          |
| 313                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285161                                    | 381892 | 213                          |
| 314                                               | 40                                                             | 37 | 29  | 22  | 13  | 0    | 0    | 0    | 0    | 285098                                    | 381880 | 213                          |
| 315                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285101                                    | 381836 | 212                          |
| 316                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285242                                    | 381973 | 213                          |
| 317                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285305                                    | 381990 | 211                          |
| 318                                               | 31                                                             | 30 | 28  | 21  | 11  | 0    | 0    | 0    | 0    | 285090                                    | 382022 | 212                          |
| 319                                               | 35                                                             | 32 | 25  | 19  | 10  | 0    | 0    | 0    | 0    | 285153                                    | 382051 | 208                          |
| 320                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284917                                    | 382015 | 206                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 321                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284897                                    | 381977 | 207                          |
| 322                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284878                                    | 382022 | 205                          |
| 323                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284955                                    | 382019 | 206                          |
| 324                                               | 33                                                             | 33 | 29  | 21  | 11  | 0    | 0    | 0    | 0    | 284949                                    | 381952 | 207                          |
| 325                                               | 35                                                             | 33 | 29  | 21  | 11  | 0    | 0    | 0    | 0    | 284951                                    | 381899 | 210                          |
| 326                                               | 31                                                             | 29 | 26  | 21  | 11  | 0    | 0    | 0    | 0    | 284986                                    | 381891 | 209                          |
| 327                                               | 40                                                             | 37 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284956                                    | 381844 | 212                          |
| 328                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284945                                    | 381809 | 213                          |
| 329                                               | 40                                                             | 37 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284947                                    | 381774 | 213                          |
| 330                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284903                                    | 381774 | 211                          |
| 331                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284895                                    | 381809 | 211                          |
| 332                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284902                                    | 381843 | 211                          |
| 333                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284898                                    | 381873 | 210                          |
| 334                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284907                                    | 381933 | 208                          |
| 335                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284902                                    | 381903 | 209                          |
| 336                                               | 40                                                             | 37 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284946                                    | 381740 | 213                          |
| 337                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284894                                    | 381740 | 211                          |
| 338                                               | 41                                                             | 39 | 30  | 24  | 15  | 0    | 0    | 0    | 0    | 284766                                    | 381758 | 210                          |
| 339                                               | 30                                                             | 29 | 26  | 19  | 9   | 0    | 0    | 0    | 0    | 285189                                    | 382058 | 208                          |
| 340                                               | 34                                                             | 33 | 29  | 21  | 11  | 0    | 0    | 0    | 0    | 285104                                    | 381961 | 212                          |
| 341                                               | 39                                                             | 36 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 285242                                    | 381926 | 213                          |
| 342                                               | 40                                                             | 37 | 29  | 22  | 13  | 0    | 0    | 0    | 0    | 285103                                    | 381907 | 213                          |
| 343                                               | 33                                                             | 30 | 26  | 20  | 11  | 0    | 0    | 0    | 0    | 284646                                    | 382560 | 211                          |
| 344                                               | 34                                                             | 31 | 23  | 16  | 7   | 0    | 0    | 0    | 0    | 285623                                    | 381349 | 224                          |
| 345                                               | 29                                                             | 26 | 22  | 15  | 4   | 0    | 0    | 0    | 0    | 285709                                    | 381331 | 228                          |
| 346                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 285597                                    | 381457 | 222                          |
| 347                                               | 41                                                             | 39 | 30  | 24  | 15  | 0    | 0    | 0    | 0    | 284417                                    | 380788 | 215                          |
| 348                                               | 41                                                             | 39 | 30  | 24  | 15  | 0    | 0    | 0    | 0    | 284424                                    | 380721 | 216                          |
| 349                                               | 43                                                             | 41 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 283949                                    | 381967 | 212                          |
| 350                                               | 43                                                             | 41 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 283911                                    | 381938 | 212                          |
| 351                                               | 39                                                             | 36 | 32  | 25  | 16  | 1    | 0    | 0    | 0    | 283849                                    | 381984 | 211                          |
| 352                                               | 39                                                             | 37 | 32  | 26  | 16  | 1    | 0    | 0    | 0    | 283831                                    | 381931 | 211                          |
| 353                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283806                                    | 381892 | 212                          |
| 354                                               | 38                                                             | 37 | 32  | 26  | 16  | 1    | 0    | 0    | 0    | 283839                                    | 381836 | 211                          |
| 355                                               | 43                                                             | 41 | 32  | 27  | 18  | 3    | 0    | 0    | 0    | 283870                                    | 381875 | 212                          |
| 356                                               | 43                                                             | 40 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 283917                                    | 382089 | 210                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 357                                               | 43                                                             | 40 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 283972                                    | 382073 | 211                          |
| 358                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283781                                    | 381861 | 212                          |
| 359                                               | 43                                                             | 40 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283756                                    | 381813 | 211                          |
| 360                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283752                                    | 381756 | 211                          |
| 361                                               | 38                                                             | 36 | 33  | 26  | 17  | 2    | 0    | 0    | 0    | 283541                                    | 381734 | 212                          |
| 362                                               | 34                                                             | 31 | 27  | 20  | 11  | 0    | 0    | 0    | 0    | 283924                                    | 381625 | 206                          |
| 363                                               | 34                                                             | 31 | 27  | 20  | 11  | 0    | 0    | 0    | 0    | 283959                                    | 381646 | 203                          |
| 364                                               | 34                                                             | 31 | 27  | 20  | 11  | 0    | 0    | 0    | 0    | 283896                                    | 381596 | 207                          |
| 365                                               | 35                                                             | 34 | 32  | 25  | 16  | 1    | 0    | 0    | 0    | 283867                                    | 381566 | 211                          |
| 366                                               | 34                                                             | 31 | 27  | 21  | 12  | 0    | 0    | 0    | 0    | 283850                                    | 381537 | 208                          |
| 367                                               | 34                                                             | 31 | 28  | 21  | 13  | 0    | 0    | 0    | 0    | 283810                                    | 381502 | 208                          |
| 368                                               | 34                                                             | 32 | 29  | 23  | 16  | 1    | 0    | 0    | 0    | 283777                                    | 381489 | 209                          |
| 369                                               | 37                                                             | 35 | 29  | 23  | 16  | 1    | 0    | 0    | 0    | 283735                                    | 381481 | 209                          |
| 370                                               | 43                                                             | 40 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 283664                                    | 381496 | 207                          |
| 371                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283739                                    | 381556 | 210                          |
| 372                                               | 41                                                             | 39 | 31  | 26  | 17  | 3    | 0    | 0    | 0    | 283685                                    | 381582 | 207                          |
| 373                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283743                                    | 381591 | 210                          |
| 374                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283743                                    | 381635 | 209                          |
| 375                                               | 34                                                             | 33 | 31  | 25  | 16  | 1    | 0    | 0    | 0    | 283745                                    | 381672 | 208                          |
| 376                                               | 34                                                             | 32 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 283684                                    | 381652 | 205                          |
| 377                                               | 43                                                             | 41 | 32  | 27  | 18  | 3    | 0    | 0    | 0    | 283796                                    | 381631 | 210                          |
| 378                                               | 35                                                             | 35 | 32  | 25  | 16  | 1    | 0    | 0    | 0    | 283867                                    | 381650 | 211                          |
| 379                                               | 43                                                             | 41 | 32  | 27  | 18  | 3    | 0    | 0    | 0    | 283781                                    | 381574 | 211                          |
| 380                                               | 43                                                             | 41 | 32  | 27  | 18  | 3    | 0    | 0    | 0    | 283813                                    | 381663 | 210                          |
| 381                                               | 34                                                             | 32 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 283604                                    | 381628 | 205                          |
| 382                                               | 34                                                             | 32 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 283611                                    | 381665 | 206                          |
| 383                                               | 34                                                             | 32 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 283564                                    | 381595 | 205                          |
| 384                                               | 38                                                             | 38 | 33  | 26  | 17  | 3    | 0    | 0    | 0    | 283492                                    | 381642 | 210                          |
| 385                                               | 40                                                             | 37 | 31  | 25  | 17  | 4    | 0    | 0    | 0    | 283428                                    | 381671 | 208                          |
| 386                                               | 35                                                             | 34 | 31  | 26  | 17  | 3    | 0    | 0    | 0    | 283401                                    | 381606 | 210                          |
| 387                                               | 39                                                             | 38 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 283362                                    | 381607 | 211                          |
| 388                                               | 35                                                             | 33 | 30  | 25  | 17  | 3    | 0    | 0    | 0    | 283326                                    | 381673 | 209                          |
| 389                                               | 44                                                             | 41 | 33  | 28  | 20  | 5    | 0    | 0    | 0    | 283325                                    | 381602 | 212                          |
| 390                                               | 39                                                             | 37 | 33  | 27  | 17  | 3    | 0    | 0    | 0    | 283328                                    | 381557 | 212                          |
| 391                                               | 35                                                             | 33 | 30  | 25  | 17  | 3    | 0    | 0    | 0    | 283357                                    | 381516 | 211                          |
| 392                                               | 35                                                             | 33 | 30  | 25  | 17  | 3    | 0    | 0    | 0    | 283379                                    | 381541 | 211                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 393                                               | 34                                                             | 32 | 29  | 23  | 15  | 3    | 0    | 0    | 0    | 283405                                    | 381568 | 209                          |
| 394                                               | 34                                                             | 32 | 28  | 22  | 13  | 0    | 0    | 0    | 0    | 283504                                    | 381529 | 207                          |
| 395                                               | 34                                                             | 32 | 28  | 22  | 13  | 1    | 0    | 0    | 0    | 283527                                    | 381509 | 207                          |
| 396                                               | 34                                                             | 32 | 28  | 22  | 13  | 0    | 0    | 0    | 0    | 283522                                    | 381481 | 207                          |
| 397                                               | 34                                                             | 32 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 283495                                    | 381434 | 207                          |
| 398                                               | 34                                                             | 32 | 28  | 22  | 14  | 2    | 0    | 0    | 0    | 283466                                    | 381387 | 209                          |
| 399                                               | 35                                                             | 33 | 31  | 26  | 17  | 2    | 0    | 0    | 0    | 283440                                    | 381357 | 211                          |
| 400                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283416                                    | 381422 | 212                          |
| 401                                               | 36                                                             | 36 | 33  | 26  | 17  | 2    | 0    | 0    | 0    | 283441                                    | 381454 | 211                          |
| 402                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283445                                    | 381497 | 210                          |
| 403                                               | 35                                                             | 33 | 32  | 26  | 17  | 3    | 0    | 0    | 0    | 283325                                    | 381498 | 211                          |
| 404                                               | 35                                                             | 34 | 32  | 26  | 17  | 3    | 0    | 0    | 0    | 283324                                    | 381448 | 211                          |
| 405                                               | 38                                                             | 36 | 31  | 26  | 18  | 4    | 0    | 0    | 0    | 283315                                    | 381403 | 211                          |
| 406                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283320                                    | 381329 | 211                          |
| 407                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283357                                    | 381343 | 212                          |
| 408                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283400                                    | 381342 | 212                          |
| 409                                               | 42                                                             | 40 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283267                                    | 381370 | 211                          |
| 410                                               | 38                                                             | 36 | 31  | 26  | 18  | 4    | 0    | 0    | 0    | 283266                                    | 381412 | 211                          |
| 411                                               | 43                                                             | 41 | 33  | 28  | 20  | 5    | 0    | 0    | 0    | 283267                                    | 381455 | 212                          |
| 412                                               | 38                                                             | 37 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 283268                                    | 381499 | 212                          |
| 413                                               | 37                                                             | 35 | 31  | 27  | 18  | 4    | 0    | 0    | 0    | 283268                                    | 381547 | 212                          |
| 414                                               | 41                                                             | 39 | 32  | 27  | 19  | 5    | 0    | 0    | 0    | 283268                                    | 381327 | 211                          |
| 415                                               | 43                                                             | 41 | 33  | 28  | 20  | 5    | 0    | 0    | 0    | 283269                                    | 381626 | 211                          |
| 416                                               | 44                                                             | 41 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283177                                    | 381651 | 212                          |
| 417                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283174                                    | 381612 | 212                          |
| 418                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283198                                    | 381566 | 213                          |
| 419                                               | 41                                                             | 38 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 283264                                    | 381585 | 212                          |
| 420                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283375                                    | 381400 | 211                          |
| 421                                               | 39                                                             | 37 | 34  | 27  | 18  | 4    | 0    | 0    | 0    | 283118                                    | 381655 | 212                          |
| 422                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283123                                    | 381599 | 213                          |
| 423                                               | 45                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 283081                                    | 381515 | 213                          |
| 424                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283123                                    | 381530 | 213                          |
| 425                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283156                                    | 381527 | 213                          |
| 426                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283180                                    | 381493 | 213                          |
| 427                                               | 44                                                             | 41 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283183                                    | 381439 | 213                          |
| 428                                               | 41                                                             | 39 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283184                                    | 381395 | 213                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 429                                               | 43                                                             | 41 | 33  | 28  | 20  | 6    | 0    | 0    | 0    | 283188                                    | 381355 | 213                          |
| 430                                               | 44                                                             | 41 | 33  | 28  | 20  | 6    | 0    | 0    | 0    | 283187                                    | 381308 | 212                          |
| 431                                               | 44                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 283043                                    | 381477 | 213                          |
| 432                                               | 45                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 283022                                    | 381438 | 213                          |
| 433                                               | 45                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 283016                                    | 381387 | 213                          |
| 434                                               | 45                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 282979                                    | 381361 | 213                          |
| 435                                               | 45                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 282950                                    | 381327 | 213                          |
| 436                                               | 40                                                             | 38 | 34  | 28  | 19  | 5    | 0    | 0    | 0    | 282931                                    | 381428 | 213                          |
| 437                                               | 43                                                             | 41 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 282963                                    | 381496 | 213                          |
| 438                                               | 40                                                             | 38 | 34  | 28  | 19  | 5    | 0    | 0    | 0    | 283008                                    | 381555 | 214                          |
| 439                                               | 44                                                             | 42 | 35  | 29  | 21  | 7    | 0    | 0    | 0    | 282974                                    | 381576 | 214                          |
| 440                                               | 45                                                             | 42 | 35  | 29  | 21  | 7    | 0    | 0    | 0    | 282939                                    | 381589 | 214                          |
| 441                                               | 45                                                             | 42 | 35  | 29  | 21  | 7    | 0    | 0    | 0    | 282920                                    | 381513 | 214                          |
| 442                                               | 43                                                             | 41 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283084                                    | 381587 | 212                          |
| 443                                               | 37                                                             | 37 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 283175                                    | 381272 | 212                          |
| 444                                               | 38                                                             | 37 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 283147                                    | 381246 | 212                          |
| 445                                               | 44                                                             | 41 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283124                                    | 381219 | 212                          |
| 446                                               | 44                                                             | 41 | 33  | 28  | 20  | 5    | 0    | 0    | 0    | 283195                                    | 381211 | 212                          |
| 447                                               | 44                                                             | 41 | 33  | 28  | 20  | 5    | 0    | 0    | 0    | 283184                                    | 381180 | 212                          |
| 448                                               | 44                                                             | 41 | 33  | 28  | 20  | 5    | 0    | 0    | 0    | 283189                                    | 381141 | 212                          |
| 449                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283151                                    | 381123 | 212                          |
| 450                                               | 43                                                             | 41 | 33  | 27  | 19  | 5    | 0    | 0    | 0    | 283252                                    | 381150 | 211                          |
| 451                                               | 37                                                             | 35 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 283109                                    | 381143 | 212                          |
| 452                                               | 44                                                             | 41 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283122                                    | 381187 | 212                          |
| 453                                               | 43                                                             | 41 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283039                                    | 381163 | 213                          |
| 454                                               | 34                                                             | 31 | 28  | 21  | 12  | 0    | 0    | 0    | 0    | 283383                                    | 381116 | 205                          |
| 455                                               | 35                                                             | 33 | 30  | 25  | 18  | 4    | 0    | 0    | 0    | 282933                                    | 380978 | 211                          |
| 456                                               | 36                                                             | 34 | 32  | 28  | 19  | 5    | 0    | 0    | 0    | 282861                                    | 381113 | 210                          |
| 457                                               | 41                                                             | 40 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 282881                                    | 381212 | 212                          |
| 458                                               | 38                                                             | 37 | 34  | 28  | 19  | 5    | 0    | 0    | 0    | 282910                                    | 381261 | 213                          |
| 459                                               | 45                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 282936                                    | 381292 | 213                          |
| 460                                               | 44                                                             | 42 | 35  | 29  | 21  | 7    | 0    | 0    | 0    | 282865                                    | 381328 | 213                          |
| 461                                               | 44                                                             | 42 | 34  | 29  | 21  | 7    | 0    | 0    | 0    | 282892                                    | 381369 | 212                          |
| 462                                               | 42                                                             | 40 | 35  | 29  | 20  | 7    | 0    | 0    | 0    | 282869                                    | 381453 | 213                          |
| 463                                               | 41                                                             | 40 | 35  | 29  | 20  | 6    | 0    | 0    | 0    | 282967                                    | 381662 | 214                          |
| 464                                               | 45                                                             | 42 | 35  | 29  | 21  | 7    | 0    | 0    | 0    | 283001                                    | 381640 | 214                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 465                                               | 36                                                             | 34 | 32  | 28  | 19  | 5    | 0    | 0    | 0    | 283037                                    | 381626 | 213                          |
| 466                                               | 44                                                             | 42 | 34  | 28  | 20  | 6    | 0    | 0    | 0    | 283255                                    | 381665 | 211                          |
| 467                                               | 35                                                             | 33 | 30  | 24  | 17  | 4    | 0    | 0    | 0    | 282858                                    | 380820 | 210                          |
| 468                                               | 43                                                             | 40 | 32  | 27  | 19  | 5    | 0    | 0    | 0    | 283054                                    | 380224 | 208                          |
| 469                                               | 36                                                             | 36 | 34  | 28  | 19  | 5    | 0    | 0    | 0    | 282648                                    | 380648 | 207                          |
| 470                                               | 41                                                             | 39 | 34  | 28  | 20  | 7    | 0    | 0    | 0    | 282642                                    | 380771 | 210                          |
| 471                                               | 45                                                             | 42 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282636                                    | 380893 | 211                          |
| 472                                               | 43                                                             | 41 | 33  | 28  | 20  | 7    | 0    | 0    | 0    | 282286                                    | 379994 | 204                          |
| 473                                               | 44                                                             | 41 | 33  | 28  | 20  | 6    | 0    | 0    | 0    | 282592                                    | 379895 | 208                          |
| 474                                               | 36                                                             | 34 | 31  | 25  | 16  | 5    | 0    | 0    | 0    | 282558                                    | 381013 | 205                          |
| 475                                               | 46                                                             | 43 | 36  | 30  | 23  | 10   | 0    | 0    | 0    | 282079                                    | 380523 | 214                          |
| 476                                               | 37                                                             | 36 | 33  | 28  | 20  | 7    | 0    | 0    | 0    | 282213                                    | 380655 | 212                          |
| 477                                               | 36                                                             | 34 | 30  | 25  | 17  | 6    | 0    | 0    | 0    | 282248                                    | 380456 | 209                          |
| 478                                               | 45                                                             | 43 | 35  | 30  | 22  | 10   | 0    | 0    | 0    | 282229                                    | 380747 | 213                          |
| 479                                               | 37                                                             | 35 | 32  | 26  | 18  | 6    | 0    | 0    | 0    | 282251                                    | 380862 | 207                          |
| 480                                               | 36                                                             | 34 | 31  | 26  | 20  | 7    | 0    | 0    | 0    | 282151                                    | 380419 | 212                          |
| 481                                               | 46                                                             | 44 | 36  | 31  | 23  | 11   | 0    | 0    | 0    | 281873                                    | 380443 | 213                          |
| 482                                               | 43                                                             | 41 | 36  | 30  | 22  | 10   | 0    | 0    | 0    | 281974                                    | 380458 | 214                          |
| 483                                               | 45                                                             | 43 | 36  | 30  | 23  | 11   | 0    | 0    | 0    | 281824                                    | 380350 | 213                          |
| 484                                               | 45                                                             | 43 | 36  | 31  | 23  | 11   | 0    | 0    | 0    | 281756                                    | 380311 | 211                          |
| 485                                               | 38                                                             | 36 | 34  | 29  | 22  | 10   | 0    | 0    | 0    | 281624                                    | 380305 | 210                          |
| 486                                               | 38                                                             | 36 | 34  | 30  | 22  | 10   | 0    | 0    | 0    | 281638                                    | 380397 | 210                          |
| 487                                               | 43                                                             | 41 | 35  | 30  | 23  | 11   | 0    | 0    | 0    | 281619                                    | 380484 | 211                          |
| 488                                               | 37                                                             | 34 | 31  | 25  | 17  | 4    | 0    | 0    | 0    | 281667                                    | 380045 | 206                          |
| 489                                               | 37                                                             | 36 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 281611                                    | 380053 | 210                          |
| 490                                               | 37                                                             | 36 | 33  | 27  | 20  | 9    | 0    | 0    | 0    | 281672                                    | 380148 | 208                          |
| 491                                               | 37                                                             | 36 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 281623                                    | 380202 | 211                          |
| 492                                               | 37                                                             | 35 | 33  | 29  | 21  | 8    | 0    | 0    | 0    | 281845                                    | 380147 | 208                          |
| 493                                               | 46                                                             | 44 | 36  | 31  | 24  | 12   | 0    | 0    | 0    | 281499                                    | 380222 | 213                          |
| 494                                               | 45                                                             | 42 | 36  | 31  | 24  | 12   | 0    | 0    | 0    | 281378                                    | 380186 | 212                          |
| 495                                               | 46                                                             | 44 | 36  | 31  | 24  | 12   | 0    | 0    | 0    | 281431                                    | 380048 | 210                          |
| 496                                               | 38                                                             | 38 | 36  | 30  | 22  | 10   | 0    | 0    | 0    | 281291                                    | 379879 | 212                          |
| 497                                               | 40                                                             | 38 | 34  | 30  | 23  | 11   | 0    | 0    | 0    | 281213                                    | 380038 | 211                          |
| 498                                               | 42                                                             | 39 | 34  | 29  | 23  | 12   | 0    | 0    | 0    | 281228                                    | 380143 | 210                          |
| 499                                               | 46                                                             | 43 | 36  | 31  | 23  | 11   | 0    | 0    | 0    | 281437                                    | 379793 | 210                          |
| 500                                               | 40                                                             | 38 | 35  | 29  | 21  | 9    | 0    | 0    | 0    | 281464                                    | 379659 | 211                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 501                                               | 36                                                             | 34 | 31  | 25  | 17  | 6    | 0    | 0    | 0    | 281427                                    | 379582 | 208                          |
| 502                                               | 36                                                             | 34 | 31  | 25  | 17  | 6    | 0    | 0    | 0    | 281397                                    | 379500 | 209                          |
| 503                                               | 46                                                             | 44 | 37  | 32  | 25  | 14   | 0    | 0    | 0    | 280623                                    | 379610 | 212                          |
| 504                                               | 54                                                             | 52 | 46  | 43  | 39  | 33   | 23   | 0    | 0    | 277457                                    | 379953 | 216                          |
| 505                                               | 46                                                             | 44 | 36  | 30  | 22  | 8    | 0    | 0    | 0    | 271456                                    | 379438 | 218                          |
| 506                                               | 45                                                             | 43 | 36  | 30  | 21  | 7    | 0    | 0    | 0    | 271417                                    | 379413 | 219                          |
| 507                                               | 41                                                             | 39 | 31  | 25  | 16  | 0    | 0    | 0    | 0    | 269804                                    | 379405 | 217                          |
| 508                                               | 43                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 268116                                    | 382286 | 218                          |
| 509                                               | 47                                                             | 45 | 37  | 32  | 25  | 13   | 0    | 0    | 0    | 269218                                    | 384216 | 221                          |
| 510                                               | 45                                                             | 43 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 268676                                    | 384296 | 222                          |
| 511                                               | 46                                                             | 43 | 36  | 30  | 22  | 9    | 0    | 0    | 0    | 268176                                    | 384305 | 220                          |
| 512                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 269415                                    | 387518 | 224                          |
| 513                                               | 53                                                             | 50 | 44  | 40  | 34  | 26   | 7    | 0    | 0    | 274653                                    | 393638 | 224                          |
| 514                                               | 51                                                             | 49 | 41  | 37  | 30  | 20   | 0    | 0    | 0    | 273447                                    | 393847 | 222                          |
| 515                                               | 50                                                             | 48 | 41  | 36  | 30  | 20   | 0    | 0    | 0    | 273607                                    | 394218 | 224                          |
| 516                                               | 51                                                             | 49 | 42  | 38  | 32  | 23   | 4    | 0    | 0    | 274663                                    | 394851 | 224                          |
| 517                                               | 50                                                             | 48 | 41  | 36  | 30  | 19   | 0    | 0    | 0    | 273925                                    | 394908 | 223                          |
| 518                                               | 50                                                             | 48 | 40  | 36  | 29  | 18   | 0    | 0    | 0    | 274541                                    | 396175 | 223                          |
| 519                                               | 51                                                             | 49 | 42  | 38  | 32  | 23   | 4    | 0    | 0    | 275534                                    | 396044 | 222                          |
| 520                                               | 50                                                             | 48 | 40  | 36  | 29  | 17   | 0    | 0    | 0    | 275551                                    | 397934 | 220                          |
| 521                                               | 50                                                             | 48 | 42  | 37  | 31  | 21   | 0    | 0    | 0    | 276657                                    | 397880 | 221                          |
| 522                                               | 50                                                             | 48 | 42  | 38  | 32  | 23   | 4    | 0    | 0    | 276976                                    | 399659 | 223                          |
| 523                                               | 52                                                             | 50 | 43  | 39  | 34  | 26   | 11   | 0    | 0    | 277580                                    | 399745 | 223                          |
| 524                                               | 51                                                             | 49 | 42  | 38  | 33  | 24   | 4    | 0    | 0    | 276988                                    | 400181 | 224                          |
| 525                                               | 52                                                             | 50 | 43  | 39  | 34  | 24   | 4    | 0    | 0    | 279292                                    | 401324 | 225                          |
| 526                                               | 53                                                             | 50 | 43  | 40  | 35  | 26   | 7    | 0    | 0    | 277902                                    | 401739 | 225                          |
| 527                                               | 55                                                             | 53 | 47  | 44  | 41  | 36   | 26   | 2    | 0    | 279206                                    | 402990 | 227                          |
| 528                                               | 53                                                             | 51 | 45  | 42  | 37  | 29   | 14   | 0    | 0    | 273338                                    | 384136 | 218                          |
| 529                                               | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273437                                    | 383541 | 218                          |
| 530                                               | 53                                                             | 51 | 44  | 41  | 36  | 27   | 8    | 0    | 0    | 273438                                    | 383568 | 218                          |
| 531                                               | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273396                                    | 383549 | 218                          |
| 532                                               | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273393                                    | 383562 | 218                          |
| 533                                               | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273395                                    | 383580 | 218                          |
| 534                                               | 53                                                             | 51 | 44  | 41  | 36  | 27   | 8    | 0    | 0    | 273392                                    | 383607 | 218                          |
| 536                                               | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273440                                    | 383495 | 218                          |
| 537                                               | 50                                                             | 48 | 43  | 39  | 33  | 24   | 4    | 0    | 0    | 273166                                    | 382915 | 218                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 538                                               | 58                                                             | 56 | 50  | 47  | 43  | 38   | 29   | 9    | 0    | 279552                                    | 389795 | 225                          |
| 539                                               | 33                                                             | 30 | 26  | 18  | 8   | 0    | 0    | 0    | 0    | 285758                                    | 384018 | 211                          |
| 540                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288936                                    | 388058 | 216                          |
| 541                                               | 48                                                             | 45 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 285656                                    | 394037 | 224                          |
| 542                                               | 49                                                             | 46 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 285652                                    | 393998 | 225                          |
| 543                                               | 49                                                             | 47 | 39  | 34  | 28  | 17   | 0    | 0    | 0    | 285654                                    | 393958 | 226                          |
| 544                                               | 49                                                             | 47 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 285608                                    | 393912 | 226                          |
| 545                                               | 49                                                             | 46 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 285615                                    | 393994 | 225                          |
| 546                                               | 49                                                             | 47 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285347                                    | 393700 | 226                          |
| 547                                               | 48                                                             | 46 | 39  | 33  | 26  | 15   | 0    | 0    | 0    | 285747                                    | 393582 | 225                          |
| 548                                               | 49                                                             | 46 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285170                                    | 393792 | 225                          |
| 549                                               | 46                                                             | 45 | 39  | 33  | 26  | 15   | 0    | 0    | 0    | 285240                                    | 393729 | 225                          |
| 550                                               | 49                                                             | 47 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285473                                    | 393666 | 225                          |
| 551                                               | 49                                                             | 47 | 39  | 34  | 26  | 15   | 0    | 0    | 0    | 285248                                    | 393592 | 226                          |
| 552                                               | 47                                                             | 45 | 39  | 33  | 26  | 14   | 0    | 0    | 0    | 285331                                    | 393559 | 226                          |
| 553                                               | 49                                                             | 46 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 285333                                    | 393515 | 226                          |
| 554                                               | 48                                                             | 46 | 39  | 33  | 26  | 14   | 0    | 0    | 0    | 285374                                    | 393517 | 225                          |
| 555                                               | 47                                                             | 45 | 39  | 33  | 26  | 14   | 0    | 0    | 0    | 285369                                    | 393578 | 226                          |
| 556                                               | 45                                                             | 43 | 37  | 33  | 25  | 14   | 0    | 0    | 0    | 284855                                    | 393639 | 225                          |
| 557                                               | 46                                                             | 44 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 284842                                    | 393577 | 226                          |
| 558                                               | 47                                                             | 45 | 38  | 32  | 24  | 11   | 0    | 0    | 0    | 284738                                    | 393769 | 226                          |
| 559                                               | 47                                                             | 45 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 284763                                    | 393769 | 226                          |
| 560                                               | 49                                                             | 47 | 39  | 34  | 27  | 14   | 0    | 0    | 0    | 284735                                    | 393580 | 226                          |
| 561                                               | 49                                                             | 46 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 284735                                    | 393546 | 226                          |
| 562                                               | 49                                                             | 47 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 284721                                    | 393384 | 226                          |
| 563                                               | 48                                                             | 46 | 39  | 34  | 26  | 13   | 0    | 0    | 0    | 284733                                    | 393474 | 225                          |
| 564                                               | 49                                                             | 47 | 39  | 33  | 26  | 13   | 0    | 0    | 0    | 284949                                    | 393165 | 227                          |
| 565                                               | 54                                                             | 52 | 46  | 43  | 39  | 32   | 19   | 0    | 0    | 280536                                    | 395659 | 224                          |
| 566                                               | 54                                                             | 52 | 46  | 42  | 38  | 30   | 15   | 0    | 0    | 277743                                    | 396034 | 224                          |
| 567                                               | 42                                                             | 40 | 33  | 28  | 21  | 10   | 0    | 0    | 0    | 289091                                    | 393070 | 230                          |
| 568                                               | 49                                                             | 47 | 39  | 34  | 26  | 13   | 0    | 0    | 0    | 284669                                    | 393015 | 228                          |
| 569                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288976                                    | 387966 | 213                          |
| 570                                               | 57                                                             | 55 | 49  | 46  | 43  | 37   | 29   | 9    | 0    | 272275                                    | 385056 | 221                          |
| 571                                               | 46                                                             | 44 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 282119                                    | 380824 | 214                          |
| 572                                               | 46                                                             | 44 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 282068                                    | 380787 | 214                          |
| 573                                               | 46                                                             | 43 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 282085                                    | 380738 | 214                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 574                                               | 38                                                             | 36 | 33  | 28  | 21  | 10   | 0    | 0    | 0    | 281653                                    | 380475 | 210                          |
| 575                                               | 39                                                             | 37 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282083                                    | 380662 | 214                          |
| 576                                               | 37                                                             | 35 | 33  | 29  | 21  | 8    | 0    | 0    | 0    | 282084                                    | 380624 | 214                          |
| 577                                               | 40                                                             | 39 | 35  | 30  | 21  | 8    | 0    | 0    | 0    | 282067                                    | 380576 | 214                          |
| 578                                               | 40                                                             | 38 | 32  | 27  | 20  | 8    | 0    | 0    | 0    | 282177                                    | 380564 | 211                          |
| 579                                               | 46                                                             | 44 | 40  | 36  | 31  | 23   | 7    | 0    | 0    | 277393                                    | 378869 | 215                          |
| 580                                               | 46                                                             | 44 | 38  | 34  | 29  | 20   | 1    | 0    | 0    | 277638                                    | 378483 | 210                          |
| 581                                               | 46                                                             | 44 | 38  | 34  | 28  | 19   | 0    | 0    | 0    | 277584                                    | 378305 | 212                          |
| 582                                               | 50                                                             | 48 | 41  | 36  | 30  | 21   | 2    | 0    | 0    | 273755                                    | 380478 | 216                          |
| 583                                               | 53                                                             | 51 | 45  | 41  | 36  | 29   | 13   | 0    | 0    | 282868                                    | 401525 | 243                          |
| 584                                               | 52                                                             | 50 | 44  | 41  | 36  | 29   | 16   | 0    | 0    | 277913                                    | 398485 | 225                          |
| 585                                               | 54                                                             | 52 | 46  | 43  | 39  | 33   | 21   | 0    | 0    | 279510                                    | 402924 | 228                          |
| 586                                               | 52                                                             | 49 | 43  | 39  | 34  | 26   | 8    | 0    | 0    | 287294                                    | 402915 | 232                          |
| 587                                               | 48                                                             | 46 | 42  | 38  | 32  | 24   | 5    | 0    | 0    | 287970                                    | 402906 | 231                          |
| 588                                               | 51                                                             | 48 | 42  | 37  | 32  | 24   | 3    | 0    | 0    | 288313                                    | 402914 | 232                          |
| 589                                               | 49                                                             | 47 | 42  | 37  | 32  | 24   | 4    | 0    | 0    | 288183                                    | 402910 | 232                          |
| 590                                               | 50                                                             | 48 | 42  | 37  | 32  | 23   | 3    | 0    | 0    | 288370                                    | 402920 | 232                          |
| 591                                               | 51                                                             | 48 | 42  | 37  | 32  | 24   | 3    | 0    | 0    | 288337                                    | 402945 | 232                          |
| 592                                               | 49                                                             | 46 | 42  | 37  | 31  | 23   | 2    | 0    | 0    | 288487                                    | 402927 | 231                          |
| 593                                               | 55                                                             | 52 | 47  | 44  | 41  | 35   | 24   | 0    | 0    | 278150                                    | 402957 | 227                          |
| 594                                               | 52                                                             | 49 | 43  | 39  | 35  | 27   | 10   | 0    | 0    | 277125                                    | 401279 | 223                          |
| 595                                               | 52                                                             | 50 | 44  | 40  | 36  | 28   | 13   | 0    | 0    | 276852                                    | 401309 | 226                          |
| 596                                               | 52                                                             | 50 | 43  | 39  | 35  | 27   | 9    | 0    | 0    | 277231                                    | 401357 | 224                          |
| 597                                               | 55                                                             | 52 | 47  | 44  | 41  | 35   | 22   | 0    | 0    | 282750                                    | 403860 | 245                          |
| 598                                               | 51                                                             | 49 | 43  | 39  | 34  | 25   | 7    | 0    | 0    | 280137                                    | 400548 | 226                          |
| 599                                               | 53                                                             | 51 | 44  | 40  | 35  | 27   | 10   | 0    | 0    | 281577                                    | 400658 | 229                          |
| 600                                               | 56                                                             | 54 | 48  | 46  | 42  | 36   | 26   | 3    | 0    | 282649                                    | 400038 | 236                          |
| 601                                               | 52                                                             | 51 | 45  | 41  | 37  | 29   | 15   | 0    | 0    | 285255                                    | 400477 | 250                          |
| 602                                               | 56                                                             | 54 | 48  | 45  | 42  | 36   | 27   | 4    | 0    | 286694                                    | 399664 | 245                          |
| 603                                               | 54                                                             | 52 | 46  | 42  | 38  | 31   | 18   | 0    | 0    | 285053                                    | 399687 | 250                          |
| 604                                               | 54                                                             | 52 | 45  | 42  | 38  | 31   | 17   | 0    | 0    | 285077                                    | 399576 | 250                          |
| 605                                               | 56                                                             | 54 | 47  | 45  | 41  | 35   | 25   | 0    | 0    | 281921                                    | 399694 | 227                          |
| 606                                               | 52                                                             | 50 | 44  | 41  | 36  | 28   | 13   | 0    | 0    | 280311                                    | 399612 | 226                          |
| 607                                               | 53                                                             | 51 | 44  | 41  | 36  | 29   | 14   | 0    | 0    | 280534                                    | 399280 | 225                          |
| 608                                               | 57                                                             | 55 | 49  | 46  | 43  | 37   | 29   | 8    | 0    | 281744                                    | 399414 | 226                          |
| 609                                               | 55                                                             | 53 | 47  | 45  | 41  | 36   | 27   | 5    | 0    | 279209                                    | 399706 | 226                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 610                                               | 56                                                             | 54 | 49  | 46  | 42  | 37   | 29   | 9    | 0    | 278880                                    | 399646 | 224                          |
| 611                                               | 57                                                             | 55 | 49  | 46  | 43  | 38   | 30   | 11   | 0    | 279492                                    | 399135 | 226                          |
| 612                                               | 56                                                             | 54 | 48  | 45  | 42  | 36   | 27   | 6    | 0    | 279512                                    | 398767 | 224                          |
| 613                                               | 54                                                             | 52 | 46  | 43  | 39  | 33   | 21   | 0    | 0    | 280484                                    | 398096 | 223                          |
| 614                                               | 55                                                             | 52 | 46  | 43  | 39  | 32   | 20   | 0    | 0    | 281766                                    | 398005 | 224                          |
| 615                                               | 52                                                             | 50 | 44  | 40  | 35  | 27   | 11   | 0    | 0    | 277812                                    | 398047 | 224                          |
| 616                                               | 54                                                             | 52 | 45  | 42  | 37  | 31   | 18   | 0    | 0    | 278479                                    | 398037 | 225                          |
| 617                                               | 57                                                             | 55 | 50  | 47  | 44  | 38   | 29   | 8    | 0    | 282626                                    | 398385 | 225                          |
| 618                                               | 54                                                             | 52 | 46  | 43  | 39  | 32   | 20   | 0    | 0    | 284261                                    | 398761 | 238                          |
| 619                                               | 54                                                             | 52 | 46  | 43  | 38  | 32   | 19   | 0    | 0    | 285867                                    | 398741 | 245                          |
| 620                                               | 56                                                             | 54 | 48  | 45  | 41  | 35   | 23   | 0    | 0    | 287661                                    | 398214 | 247                          |
| 621                                               | 55                                                             | 53 | 47  | 45  | 41  | 34   | 22   | 0    | 0    | 287449                                    | 398049 | 249                          |
| 622                                               | 55                                                             | 53 | 47  | 45  | 41  | 35   | 23   | 0    | 0    | 286790                                    | 398058 | 250                          |
| 623                                               | 53                                                             | 51 | 45  | 42  | 38  | 31   | 18   | 0    | 0    | 284266                                    | 398005 | 233                          |
| 624                                               | 53                                                             | 51 | 45  | 41  | 37  | 29   | 12   | 0    | 0    | 277251                                    | 395954 | 225                          |
| 625                                               | 55                                                             | 53 | 46  | 43  | 39  | 32   | 18   | 0    | 0    | 277992                                    | 395915 | 224                          |
| 626                                               | 55                                                             | 53 | 47  | 44  | 40  | 33   | 21   | 0    | 0    | 278180                                    | 395841 | 223                          |
| 627                                               | 58                                                             | 56 | 51  | 48  | 44  | 39   | 30   | 11   | 0    | 278891                                    | 395598 | 224                          |
| 628                                               | 57                                                             | 55 | 49  | 47  | 43  | 37   | 27   | 3    | 0    | 278475                                    | 395530 | 223                          |
| 629                                               | 55                                                             | 53 | 47  | 44  | 39  | 33   | 20   | 0    | 0    | 280322                                    | 395486 | 225                          |
| 630                                               | 57                                                             | 55 | 49  | 47  | 43  | 38   | 29   | 9    | 0    | 279409                                    | 397604 | 224                          |
| 631                                               | 58                                                             | 56 | 51  | 48  | 45  | 39   | 31   | 11   | 0    | 279473                                    | 397008 | 223                          |
| 632                                               | 54                                                             | 52 | 45  | 42  | 37  | 30   | 16   | 0    | 0    | 281031                                    | 396452 | 224                          |
| 633                                               | 52                                                             | 50 | 44  | 40  | 34  | 25   | 6    | 0    | 0    | 281980                                    | 396483 | 225                          |
| 634                                               | 52                                                             | 50 | 43  | 39  | 33  | 25   | 6    | 0    | 0    | 282724                                    | 396508 | 225                          |
| 635                                               | 54                                                             | 51 | 45  | 42  | 37  | 31   | 18   | 0    | 0    | 282746                                    | 397343 | 226                          |
| 636                                               | 52                                                             | 49 | 42  | 39  | 33  | 24   | 5    | 0    | 0    | 284266                                    | 396441 | 228                          |
| 637                                               | 52                                                             | 50 | 43  | 39  | 34  | 26   | 10   | 0    | 0    | 284866                                    | 396395 | 229                          |
| 638                                               | 51                                                             | 49 | 42  | 38  | 32  | 23   | 2    | 0    | 0    | 284236                                    | 396030 | 228                          |
| 639                                               | 54                                                             | 53 | 47  | 44  | 40  | 34   | 24   | 0    | 0    | 285885                                    | 396340 | 237                          |
| 640                                               | 55                                                             | 54 | 48  | 46  | 42  | 37   | 28   | 7    | 0    | 286203                                    | 396332 | 237                          |
| 641                                               | 57                                                             | 55 | 50  | 47  | 44  | 39   | 30   | 9    | 0    | 286815                                    | 396329 | 242                          |
| 642                                               | 51                                                             | 49 | 43  | 40  | 36  | 29   | 16   | 0    | 0    | 286756                                    | 395501 | 237                          |
| 643                                               | 50                                                             | 47 | 41  | 37  | 32  | 23   | 5    | 0    | 0    | 286957                                    | 394754 | 230                          |
| 644                                               | 49                                                             | 47 | 40  | 36  | 31  | 22   | 4    | 0    | 0    | 286966                                    | 394642 | 229                          |
| 645                                               | 49                                                             | 47 | 40  | 36  | 30  | 22   | 3    | 0    | 0    | 287089                                    | 394542 | 230                          |

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| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 646                                               | 49                                                             | 47 | 40  | 36  | 30  | 22   | 3    | 0    | 0    | 287187                                    | 394569 | 230                          |
| 647                                               | 48                                                             | 46 | 40  | 36  | 30  | 22   | 2    | 0    | 0    | 287281                                    | 394534 | 231                          |
| 648                                               | 48                                                             | 46 | 39  | 35  | 30  | 21   | 2    | 0    | 0    | 287399                                    | 394528 | 230                          |
| 649                                               | 48                                                             | 46 | 39  | 35  | 30  | 22   | 2    | 0    | 0    | 287502                                    | 394590 | 230                          |
| 650                                               | 48                                                             | 45 | 38  | 34  | 29  | 19   | 0    | 0    | 0    | 288147                                    | 394407 | 232                          |
| 651                                               | 43                                                             | 41 | 36  | 31  | 25  | 14   | 0    | 0    | 0    | 288629                                    | 393827 | 239                          |
| 652                                               | 38                                                             | 38 | 35  | 31  | 23  | 13   | 0    | 0    | 0    | 288820                                    | 393835 | 238                          |
| 653                                               | 38                                                             | 37 | 36  | 31  | 23  | 13   | 0    | 0    | 0    | 288807                                    | 393831 | 239                          |
| 654                                               | 43                                                             | 41 | 36  | 31  | 24  | 14   | 0    | 0    | 0    | 288759                                    | 393919 | 240                          |
| 655                                               | 44                                                             | 42 | 37  | 32  | 25  | 15   | 0    | 0    | 0    | 288750                                    | 394000 | 241                          |
| 656                                               | 46                                                             | 44 | 37  | 33  | 27  | 17   | 0    | 0    | 0    | 288751                                    | 394248 | 242                          |
| 657                                               | 45                                                             | 43 | 37  | 33  | 27  | 17   | 0    | 0    | 0    | 288631                                    | 394266 | 241                          |
| 658                                               | 49                                                             | 47 | 41  | 37  | 32  | 24   | 6    | 0    | 0    | 289139                                    | 396138 | 242                          |
| 659                                               | 56                                                             | 54 | 48  | 46  | 42  | 37   | 27   | 5    | 0    | 287603                                    | 397281 | 250                          |
| 660                                               | 54                                                             | 52 | 47  | 44  | 40  | 35   | 24   | 0    | 0    | 289122                                    | 397657 | 240                          |
| 661                                               | 49                                                             | 47 | 41  | 36  | 31  | 22   | 3    | 0    | 0    | 285607                                    | 394847 | 228                          |
| 662                                               | 50                                                             | 48 | 41  | 36  | 30  | 21   | 0    | 0    | 0    | 285205                                    | 394842 | 227                          |
| 663                                               | 50                                                             | 48 | 41  | 36  | 29  | 18   | 0    | 0    | 0    | 284335                                    | 394845 | 227                          |
| 664                                               | 50                                                             | 48 | 41  | 36  | 29  | 18   | 0    | 0    | 0    | 284106                                    | 394833 | 227                          |
| 665                                               | 49                                                             | 47 | 40  | 36  | 29  | 18   | 0    | 0    | 0    | 283630                                    | 394873 | 227                          |
| 666                                               | 51                                                             | 49 | 42  | 37  | 31  | 20   | 0    | 0    | 0    | 282625                                    | 394856 | 226                          |
| 667                                               | 52                                                             | 50 | 44  | 40  | 34  | 25   | 4    | 0    | 0    | 281456                                    | 394473 | 228                          |
| 668                                               | 51                                                             | 49 | 42  | 37  | 31  | 20   | 0    | 0    | 0    | 282487                                    | 394047 | 226                          |
| 669                                               | 51                                                             | 49 | 42  | 37  | 31  | 20   | 0    | 0    | 0    | 282487                                    | 394146 | 227                          |
| 670                                               | 53                                                             | 51 | 45  | 41  | 36  | 29   | 11   | 0    | 0    | 280859                                    | 394359 | 224                          |
| 671                                               | 58                                                             | 56 | 50  | 47  | 43  | 38   | 27   | 0    | 0    | 277717                                    | 393957 | 225                          |
| 672                                               | 57                                                             | 55 | 49  | 47  | 43  | 38   | 29   | 10   | 0    | 276663                                    | 394884 | 222                          |
| 673                                               | 53                                                             | 51 | 44  | 40  | 35  | 28   | 12   | 0    | 0    | 275190                                    | 394337 | 225                          |
| 674                                               | 57                                                             | 55 | 49  | 46  | 42  | 35   | 24   | 0    | 0    | 276351                                    | 392006 | 224                          |
| 675                                               | 56                                                             | 54 | 47  | 44  | 40  | 34   | 22   | 0    | 0    | 274675                                    | 390673 | 224                          |
| 676                                               | 56                                                             | 54 | 48  | 45  | 41  | 35   | 24   | 0    | 0    | 274481                                    | 390603 | 224                          |
| 677                                               | 59                                                             | 57 | 51  | 48  | 44  | 39   | 30   | 11   | 0    | 277240                                    | 391437 | 226                          |
| 678                                               | 59                                                             | 57 | 51  | 49  | 45  | 40   | 31   | 10   | 0    | 277878                                    | 390600 | 225                          |
| 679                                               | 58                                                             | 57 | 51  | 48  | 44  | 39   | 30   | 8    | 0    | 277938                                    | 390597 | 225                          |
| 680                                               | 58                                                             | 56 | 51  | 48  | 44  | 39   | 30   | 10   | 0    | 277949                                    | 390158 | 224                          |
| 681                                               | 59                                                             | 57 | 51  | 48  | 45  | 39   | 29   | 6    | 0    | 277874                                    | 392824 | 224                          |

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| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 682                                               | 57                                                             | 55 | 50  | 47  | 43  | 37   | 26   | 1    | 0    | 279060                                    | 391486 | 226                          |
| 683                                               | 56                                                             | 54 | 48  | 45  | 41  | 35   | 22   | 0    | 0    | 279712                                    | 391571 | 227                          |
| 684                                               | 56                                                             | 54 | 48  | 45  | 41  | 34   | 22   | 0    | 0    | 279769                                    | 391566 | 226                          |
| 685                                               | 55                                                             | 53 | 47  | 45  | 41  | 35   | 25   | 0    | 0    | 280934                                    | 390970 | 226                          |
| 686                                               | 55                                                             | 52 | 46  | 43  | 39  | 32   | 19   | 0    | 0    | 280927                                    | 391351 | 225                          |
| 687                                               | 54                                                             | 52 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 280929                                    | 391940 | 227                          |
| 688                                               | 54                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 280868                                    | 392369 | 227                          |
| 689                                               | 57                                                             | 55 | 49  | 47  | 43  | 37   | 26   | 0    | 0    | 279969                                    | 393071 | 225                          |
| 690                                               | 50                                                             | 48 | 42  | 37  | 31  | 21   | 0    | 0    | 0    | 282380                                    | 391824 | 226                          |
| 691                                               | 50                                                             | 48 | 40  | 35  | 29  | 18   | 0    | 0    | 0    | 283105                                    | 391466 | 225                          |
| 692                                               | 49                                                             | 47 | 42  | 37  | 30  | 20   | 0    | 0    | 0    | 282438                                    | 392486 | 226                          |
| 693                                               | 48                                                             | 46 | 38  | 32  | 25  | 12   | 0    | 0    | 0    | 284168                                    | 390575 | 226                          |
| 694                                               | 55                                                             | 53 | 47  | 44  | 40  | 34   | 24   | 0    | 0    | 280928                                    | 389812 | 224                          |
| 695                                               | 50                                                             | 48 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 284083                                    | 394224 | 228                          |
| 696                                               | 56                                                             | 54 | 47  | 44  | 40  | 33   | 19   | 0    | 0    | 276268                                    | 390303 | 225                          |
| 697                                               | 56                                                             | 54 | 47  | 44  | 40  | 33   | 20   | 0    | 0    | 276336                                    | 390090 | 225                          |
| 698                                               | 55                                                             | 53 | 47  | 43  | 39  | 31   | 17   | 0    | 0    | 274754                                    | 390035 | 224                          |
| 699                                               | 55                                                             | 53 | 47  | 43  | 38  | 30   | 15   | 0    | 0    | 275385                                    | 389041 | 223                          |
| 700                                               | 56                                                             | 54 | 48  | 44  | 40  | 33   | 21   | 0    | 0    | 274799                                    | 388968 | 224                          |
| 701                                               | 56                                                             | 54 | 48  | 45  | 40  | 33   | 21   | 0    | 0    | 276592                                    | 388950 | 224                          |
| 702                                               | 56                                                             | 54 | 48  | 45  | 40  | 34   | 22   | 0    | 0    | 276666                                    | 389046 | 224                          |
| 703                                               | 58                                                             | 56 | 50  | 48  | 44  | 39   | 30   | 11   | 0    | 277923                                    | 388623 | 223                          |
| 704                                               | 58                                                             | 56 | 50  | 47  | 43  | 38   | 28   | 7    | 0    | 277374                                    | 387293 | 222                          |
| 705                                               | 58                                                             | 56 | 50  | 47  | 43  | 37   | 26   | 0    | 0    | 273934                                    | 385973 | 220                          |
| 706                                               | 56                                                             | 54 | 48  | 45  | 42  | 36   | 27   | 6    | 0    | 271495                                    | 387672 | 222                          |
| 707                                               | 57                                                             | 55 | 49  | 46  | 42  | 36   | 26   | 0    | 0    | 273819                                    | 388744 | 222                          |
| 708                                               | 57                                                             | 55 | 49  | 47  | 43  | 37   | 27   | 3    | 0    | 273916                                    | 388627 | 223                          |
| 709                                               | 57                                                             | 55 | 49  | 46  | 43  | 37   | 28   | 6    | 0    | 273438                                    | 390602 | 224                          |
| 710                                               | 58                                                             | 56 | 50  | 47  | 44  | 38   | 30   | 10   | 0    | 273631                                    | 390593 | 225                          |
| 711                                               | 56                                                             | 54 | 49  | 46  | 41  | 35   | 22   | 0    | 0    | 273887                                    | 385233 | 219                          |
| 712                                               | 50                                                             | 48 | 41  | 37  | 31  | 21   | 1    | 0    | 0    | 270847                                    | 384145 | 219                          |
| 713                                               | 51                                                             | 48 | 41  | 37  | 31  | 22   | 2    | 0    | 0    | 270972                                    | 384159 | 219                          |
| 714                                               | 51                                                             | 49 | 42  | 38  | 32  | 24   | 6    | 0    | 0    | 271328                                    | 384129 | 219                          |
| 715                                               | 49                                                             | 47 | 43  | 39  | 33  | 25   | 9    | 0    | 0    | 271838                                    | 383994 | 219                          |
| 716                                               | 48                                                             | 46 | 38  | 32  | 25  | 12   | 0    | 0    | 0    | 270145                                    | 382501 | 220                          |
| 717                                               | 49                                                             | 47 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 271231                                    | 382547 | 218                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 718                                               | 49                                                             | 47 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 271888                                    | 381701 | 218                          |
| 719                                               | 49                                                             | 47 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 272001                                    | 381733 | 219                          |
| 720                                               | 50                                                             | 47 | 40  | 35  | 29  | 18   | 0    | 0    | 0    | 272166                                    | 381817 | 218                          |
| 721                                               | 53                                                             | 51 | 44  | 41  | 37  | 30   | 18   | 0    | 0    | 274114                                    | 381766 | 218                          |
| 722                                               | 53                                                             | 52 | 46  | 43  | 39  | 33   | 23   | 0    | 0    | 274642                                    | 381537 | 218                          |
| 723                                               | 54                                                             | 52 | 46  | 43  | 39  | 33   | 21   | 0    | 0    | 275798                                    | 381494 | 219                          |
| 724                                               | 57                                                             | 55 | 49  | 47  | 43  | 38   | 30   | 12   | 0    | 275341                                    | 381746 | 218                          |
| 725                                               | 49                                                             | 47 | 39  | 34  | 26  | 13   | 0    | 0    | 0    | 284576                                    | 393094 | 226                          |
| 726                                               | 49                                                             | 46 | 39  | 33  | 26  | 13   | 0    | 0    | 0    | 284690                                    | 393096 | 227                          |
| 727                                               | 47                                                             | 45 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 286055                                    | 393827 | 225                          |
| 728                                               | 46                                                             | 44 | 38  | 33  | 27  | 17   | 0    | 0    | 0    | 286865                                    | 393828 | 227                          |
| 729                                               | 54                                                             | 52 | 46  | 43  | 38  | 32   | 19   | 0    | 0    | 275713                                    | 393776 | 225                          |
| 730                                               | 51                                                             | 49 | 42  | 38  | 33  | 25   | 9    | 0    | 0    | 279730                                    | 381662 | 215                          |
| 731                                               | 38                                                             | 36 | 33  | 28  | 21  | 10   | 0    | 0    | 0    | 281789                                    | 381446 | 212                          |
| 732                                               | 40                                                             | 38 | 37  | 31  | 23  | 11   | 0    | 0    | 0    | 281830                                    | 381650 | 213                          |
| 733                                               | 39                                                             | 37 | 34  | 29  | 22  | 12   | 0    | 0    | 0    | 281752                                    | 381785 | 211                          |
| 734                                               | 45                                                             | 43 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 282377                                    | 382049 | 212                          |
| 735                                               | 44                                                             | 42 | 37  | 31  | 23  | 10   | 0    | 0    | 0    | 282462                                    | 382446 | 211                          |
| 736                                               | 40                                                             | 38 | 32  | 26  | 17  | 2    | 0    | 0    | 0    | 284012                                    | 382891 | 214                          |
| 737                                               | 43                                                             | 41 | 33  | 27  | 19  | 3    | 0    | 0    | 0    | 284013                                    | 383340 | 214                          |
| 738                                               | 37                                                             | 36 | 31  | 24  | 14  | 0    | 0    | 0    | 0    | 284604                                    | 382783 | 214                          |
| 739                                               | 27                                                             | 25 | 20  | 13  | 2   | 0    | 0    | 0    | 0    | 285849                                    | 383535 | 212                          |
| 740                                               | 27                                                             | 25 | 21  | 13  | 3   | 0    | 0    | 0    | 0    | 285791                                    | 383590 | 214                          |
| 741                                               | 35                                                             | 33 | 26  | 19  | 9   | 0    | 0    | 0    | 0    | 285711                                    | 383550 | 219                          |
| 742                                               | 27                                                             | 25 | 20  | 13  | 2   | 0    | 0    | 0    | 0    | 285882                                    | 383671 | 213                          |
| 743                                               | 37                                                             | 34 | 26  | 19  | 9   | 0    | 0    | 0    | 0    | 285800                                    | 383809 | 220                          |
| 744                                               | 38                                                             | 36 | 27  | 20  | 11  | 0    | 0    | 0    | 0    | 285816                                    | 383912 | 218                          |
| 745                                               | 27                                                             | 25 | 20  | 13  | 2   | 0    | 0    | 0    | 0    | 286010                                    | 384405 | 208                          |
| 746                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287252                                    | 385012 | 211                          |
| 747                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287357                                    | 385166 | 212                          |
| 748                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287520                                    | 385125 | 224                          |
| 749                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287403                                    | 385064 | 217                          |
| 750                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287636                                    | 385033 | 225                          |
| 751                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287671                                    | 385155 | 224                          |
| 752                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287823                                    | 385038 | 226                          |
| 753                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287732                                    | 385034 | 224                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 754                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287807                                    | 385235 | 216                          |
| 755                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287765                                    | 384951 | 224                          |
| 756                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288046                                    | 385047 | 218                          |
| 757                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288016                                    | 385116 | 222                          |
| 758                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288078                                    | 385198 | 218                          |
| 759                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288080                                    | 385305 | 216                          |
| 760                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288156                                    | 385303 | 213                          |
| 761                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287958                                    | 385403 | 210                          |
| 762                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288157                                    | 384972 | 218                          |
| 763                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288895                                    | 385033 | 221                          |
| 764                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288822                                    | 385039 | 221                          |
| 765                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288384                                    | 386569 | 214                          |
| 766                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287991                                    | 386625 | 217                          |
| 767                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288159                                    | 387022 | 220                          |
| 768                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288095                                    | 387426 | 216                          |
| 769                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288135                                    | 387594 | 215                          |
| 770                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288324                                    | 387597 | 216                          |
| 771                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288233                                    | 387720 | 215                          |
| 772                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288412                                    | 387825 | 214                          |
| 773                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288270                                    | 387924 | 218                          |
| 774                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288486                                    | 388133 | 215                          |
| 775                                               | 33                                                             | 31 | 22  | 15  | 6   | 0    | 0    | 0    | 0    | 287995                                    | 388136 | 218                          |
| 776                                               | 25                                                             | 24 | 22  | 14  | 3   | 0    | 0    | 0    | 0    | 287973                                    | 388304 | 215                          |
| 777                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288108                                    | 388310 | 215                          |
| 778                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288200                                    | 388239 | 214                          |
| 779                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288672                                    | 388515 | 218                          |
| 780                                               | 24                                                             | 23 | 20  | 14  | 3   | 0    | 0    | 0    | 0    | 288898                                    | 389019 | 218                          |
| 781                                               | 33                                                             | 31 | 22  | 16  | 6   | 0    | 0    | 0    | 0    | 288883                                    | 389070 | 218                          |
| 782                                               | 37                                                             | 34 | 25  | 19  | 9   | 0    | 0    | 0    | 0    | 288820                                    | 389378 | 219                          |
| 783                                               | 37                                                             | 34 | 26  | 19  | 10  | 0    | 0    | 0    | 0    | 288866                                    | 389654 | 220                          |
| 784                                               | 39                                                             | 37 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 288878                                    | 390713 | 221                          |
| 785                                               | 42                                                             | 40 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 288566                                    | 391529 | 225                          |
| 786                                               | 42                                                             | 40 | 32  | 26  | 17  | 2    | 0    | 0    | 0    | 288902                                    | 391391 | 224                          |
| 787                                               | 43                                                             | 41 | 33  | 27  | 19  | 6    | 0    | 0    | 0    | 288879                                    | 392082 | 226                          |
| 788                                               | 44                                                             | 42 | 34  | 29  | 22  | 9    | 0    | 0    | 0    | 288497                                    | 392672 | 227                          |
| 789                                               | 44                                                             | 42 | 34  | 29  | 22  | 9    | 0    | 0    | 0    | 288492                                    | 392629 | 227                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 790                                               | 44                                                             | 42 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 288490                                    | 392584 | 227                          |
| 791                                               | 44                                                             | 42 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 288496                                    | 392543 | 227                          |
| 792                                               | 44                                                             | 42 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 288542                                    | 392617 | 227                          |
| 793                                               | 44                                                             | 42 | 34  | 29  | 22  | 9    | 0    | 0    | 0    | 288542                                    | 392652 | 227                          |
| 794                                               | 44                                                             | 42 | 34  | 29  | 21  | 9    | 0    | 0    | 0    | 288543                                    | 392574 | 227                          |
| 795                                               | 44                                                             | 42 | 34  | 29  | 21  | 8    | 0    | 0    | 0    | 288542                                    | 392533 | 227                          |
| 796                                               | 43                                                             | 40 | 32  | 27  | 19  | 5    | 0    | 0    | 0    | 288881                                    | 391878 | 226                          |
| 797                                               | 43                                                             | 40 | 32  | 26  | 18  | 4    | 0    | 0    | 0    | 288900                                    | 391747 | 227                          |
| 798                                               | 38                                                             | 36 | 32  | 26  | 16  | 2    | 0    | 0    | 0    | 288099                                    | 391550 | 225                          |
| 799                                               | 43                                                             | 40 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 287731                                    | 391420 | 225                          |
| 800                                               | 43                                                             | 40 | 33  | 27  | 19  | 4    | 0    | 0    | 0    | 287304                                    | 391466 | 227                          |
| 801                                               | 46                                                             | 43 | 35  | 29  | 21  | 6    | 0    | 0    | 0    | 286068                                    | 391495 | 223                          |
| 802                                               | 45                                                             | 42 | 35  | 29  | 20  | 6    | 0    | 0    | 0    | 286250                                    | 391462 | 226                          |
| 803                                               | 38                                                             | 36 | 34  | 28  | 19  | 5    | 0    | 0    | 0    | 285549                                    | 391395 | 221                          |
| 804                                               | 47                                                             | 44 | 37  | 31  | 23  | 9    | 0    | 0    | 0    | 285373                                    | 392189 | 227                          |
| 805                                               | 40                                                             | 39 | 36  | 30  | 21  | 9    | 0    | 0    | 0    | 286166                                    | 392644 | 224                          |
| 806                                               | 39                                                             | 36 | 30  | 23  | 14  | 0    | 0    | 0    | 0    | 287355                                    | 390222 | 223                          |
| 807                                               | 44                                                             | 41 | 33  | 27  | 18  | 3    | 0    | 0    | 0    | 286028                                    | 389796 | 223                          |
| 808                                               | 37                                                             | 36 | 34  | 27  | 18  | 4    | 0    | 0    | 0    | 285085                                    | 388807 | 223                          |
| 809                                               | 41                                                             | 39 | 36  | 31  | 22  | 10   | 0    | 0    | 0    | 284070                                    | 389306 | 219                          |
| 810                                               | 46                                                             | 44 | 36  | 31  | 23  | 11   | 0    | 0    | 0    | 284163                                    | 388851 | 219                          |
| 811                                               | 46                                                             | 44 | 36  | 31  | 23  | 9    | 0    | 0    | 0    | 284011                                    | 387833 | 217                          |
| 812                                               | 46                                                             | 43 | 35  | 30  | 22  | 8    | 0    | 0    | 0    | 284157                                    | 387322 | 220                          |
| 813                                               | 43                                                             | 42 | 36  | 30  | 21  | 7    | 0    | 0    | 0    | 284075                                    | 387300 | 219                          |
| 814                                               | 46                                                             | 44 | 36  | 30  | 22  | 8    | 0    | 0    | 0    | 284085                                    | 387403 | 219                          |
| 815                                               | 42                                                             | 40 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 285135                                    | 387361 | 225                          |
| 816                                               | 38                                                             | 36 | 28  | 22  | 13  | 0    | 0    | 0    | 0    | 286215                                    | 387322 | 218                          |
| 817                                               | 30                                                             | 29 | 27  | 19  | 9   | 0    | 0    | 0    | 0    | 286015                                    | 384984 | 215                          |
| 818                                               | 40                                                             | 37 | 29  | 23  | 13  | 0    | 0    | 0    | 0    | 285546                                    | 385048 | 216                          |
| 819                                               | 41                                                             | 39 | 31  | 25  | 16  | 0    | 0    | 0    | 0    | 284942                                    | 385007 | 216                          |
| 820                                               | 43                                                             | 40 | 32  | 26  | 17  | 1    | 0    | 0    | 0    | 284818                                    | 384912 | 214                          |
| 821                                               | 44                                                             | 42 | 34  | 28  | 19  | 4    | 0    | 0    | 0    | 284066                                    | 384109 | 215                          |
| 822                                               | 52                                                             | 49 | 43  | 39  | 33  | 25   | 7    | 0    | 0    | 273334                                    | 382339 | 219                          |
| 823                                               | 48                                                             | 45 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 269803                                    | 383137 | 220                          |
| 824                                               | 52                                                             | 50 | 43  | 40  | 34  | 27   | 11   | 0    | 0    | 270881                                    | 385877 | 219                          |
| 825                                               | 54                                                             | 52 | 45  | 42  | 37  | 30   | 17   | 0    | 0    | 271466                                    | 385858 | 219                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 826                                               | 58                                                             | 56 | 50  | 47  | 44  | 38   | 30   | 10   | 0    | 273830                                    | 388123 | 221                          |
| 827                                               | 55                                                             | 53 | 46  | 43  | 38  | 31   | 17   | 0    | 0    | 279544                                    | 388660 | 224                          |
| 828                                               | 56                                                             | 53 | 47  | 44  | 40  | 34   | 25   | 0    | 0    | 279539                                    | 387649 | 223                          |
| 829                                               | 52                                                             | 50 | 43  | 39  | 33  | 24   | 4    | 0    | 0    | 280855                                    | 387848 | 224                          |
| 830                                               | 52                                                             | 49 | 42  | 38  | 32  | 22   | 1    | 0    | 0    | 281023                                    | 387321 | 224                          |
| 831                                               | 52                                                             | 50 | 42  | 38  | 32  | 22   | 2    | 0    | 0    | 280928                                    | 387332 | 222                          |
| 832                                               | 52                                                             | 49 | 42  | 38  | 32  | 22   | 1    | 0    | 0    | 280978                                    | 387280 | 223                          |
| 833                                               | 52                                                             | 49 | 42  | 38  | 32  | 22   | 2    | 0    | 0    | 280914                                    | 387264 | 222                          |
| 834                                               | 52                                                             | 49 | 42  | 38  | 31  | 22   | 1    | 0    | 0    | 281018                                    | 387261 | 223                          |
| 835                                               | 52                                                             | 49 | 42  | 38  | 32  | 22   | 2    | 0    | 0    | 280972                                    | 387330 | 223                          |
| 836                                               | 52                                                             | 49 | 42  | 38  | 32  | 22   | 1    | 0    | 0    | 280968                                    | 387212 | 223                          |
| 837                                               | 52                                                             | 49 | 42  | 38  | 31  | 22   | 1    | 0    | 0    | 281016                                    | 387223 | 224                          |
| 838                                               | 52                                                             | 49 | 42  | 38  | 32  | 22   | 2    | 0    | 0    | 280917                                    | 387176 | 222                          |
| 839                                               | 49                                                             | 47 | 41  | 36  | 30  | 20   | 0    | 0    | 0    | 281388                                    | 387283 | 224                          |
| 840                                               | 51                                                             | 49 | 42  | 38  | 31  | 21   | 0    | 0    | 0    | 281105                                    | 387326 | 224                          |
| 841                                               | 50                                                             | 48 | 42  | 37  | 31  | 21   | 0    | 0    | 0    | 280870                                    | 386493 | 222                          |
| 842                                               | 50                                                             | 47 | 41  | 37  | 30  | 20   | 0    | 0    | 0    | 280914                                    | 384962 | 219                          |
| 843                                               | 49                                                             | 47 | 41  | 36  | 30  | 20   | 0    | 0    | 0    | 280830                                    | 384287 | 219                          |
| 844                                               | 53                                                             | 51 | 44  | 41  | 36  | 28   | 13   | 0    | 0    | 279622                                    | 384095 | 222                          |
| 845                                               | 50                                                             | 48 | 41  | 37  | 31  | 21   | 0    | 0    | 0    | 280524                                    | 383336 | 218                          |
| 846                                               | 59                                                             | 57 | 52  | 49  | 45  | 40   | 31   | 11   | 0    | 277535                                    | 384076 | 219                          |
| 847                                               | 58                                                             | 56 | 50  | 48  | 44  | 38   | 28   | 3    | 0    | 277774                                    | 384260 | 220                          |
| 848                                               | 58                                                             | 57 | 51  | 48  | 45  | 39   | 30   | 11   | 0    | 277887                                    | 384445 | 221                          |
| 849                                               | 57                                                             | 55 | 49  | 46  | 42  | 36   | 26   | 2    | 0    | 277917                                    | 385285 | 222                          |
| 850                                               | 54                                                             | 52 | 46  | 43  | 38  | 31   | 19   | 0    | 0    | 279097                                    | 385430 | 221                          |
| 851                                               | 53                                                             | 51 | 45  | 41  | 36  | 29   | 15   | 0    | 0    | 279466                                    | 385370 | 221                          |
| 852                                               | 55                                                             | 53 | 46  | 43  | 38  | 31   | 15   | 0    | 0    | 274433                                    | 383575 | 219                          |
| 853                                               | 49                                                             | 47 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 282117                                    | 384969 | 219                          |
| 854                                               | 42                                                             | 40 | 36  | 31  | 23  | 9    | 0    | 0    | 0    | 282664                                    | 384965 | 216                          |
| 855                                               | 42                                                             | 40 | 35  | 28  | 19  | 4    | 0    | 0    | 0    | 284133                                    | 386133 | 218                          |
| 856                                               | 24                                                             | 21 | 17  | 9   | 0   | 0    | 0    | 0    | 0    | 286502                                    | 385353 | 208                          |
| 857                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286615                                    | 385445 | 209                          |
| 858                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286661                                    | 385469 | 210                          |
| 859                                               | 24                                                             | 21 | 17  | 9   | 0   | 0    | 0    | 0    | 0    | 286639                                    | 385527 | 211                          |
| 860                                               | 24                                                             | 21 | 17  | 9   | 0   | 0    | 0    | 0    | 0    | 286692                                    | 385575 | 209                          |
| 861                                               | 24                                                             | 22 | 20  | 14  | 3   | 0    | 0    | 0    | 0    | 286688                                    | 385636 | 212                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 862                                               | 24                                                             | 22 | 18  | 11  | 2   | 0    | 0    | 0    | 0    | 286692                                    | 385678 | 213                          |
| 863                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286771                                    | 385615 | 212                          |
| 864                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286760                                    | 385546 | 209                          |
| 865                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286840                                    | 385567 | 209                          |
| 866                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286841                                    | 385500 | 208                          |
| 867                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286783                                    | 385485 | 207                          |
| 868                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286840                                    | 385631 | 211                          |
| 869                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286836                                    | 385696 | 211                          |
| 870                                               | 24                                                             | 21 | 17  | 10  | 0   | 0    | 0    | 0    | 0    | 286767                                    | 385694 | 212                          |
| 871                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286892                                    | 385742 | 210                          |
| 872                                               | 24                                                             | 21 | 17  | 10  | 0   | 0    | 0    | 0    | 0    | 286836                                    | 385756 | 211                          |
| 873                                               | 24                                                             | 21 | 17  | 10  | 0   | 0    | 0    | 0    | 0    | 286755                                    | 385757 | 212                          |
| 874                                               | 24                                                             | 21 | 17  | 10  | 0   | 0    | 0    | 0    | 0    | 286877                                    | 385817 | 213                          |
| 875                                               | 24                                                             | 22 | 17  | 10  | 0   | 0    | 0    | 0    | 0    | 286800                                    | 385812 | 213                          |
| 876                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287018                                    | 385993 | 212                          |
| 877                                               | 24                                                             | 22 | 18  | 12  | 3   | 0    | 0    | 0    | 0    | 286880                                    | 385923 | 215                          |
| 878                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287247                                    | 386123 | 205                          |
| 879                                               | 33                                                             | 31 | 22  | 15  | 6   | 0    | 0    | 0    | 0    | 287173                                    | 386251 | 215                          |
| 880                                               | 25                                                             | 25 | 22  | 14  | 4   | 0    | 0    | 0    | 0    | 287068                                    | 386410 | 213                          |
| 881                                               | 24                                                             | 22 | 19  | 14  | 4   | 0    | 0    | 0    | 0    | 287062                                    | 386281 | 215                          |
| 882                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287338                                    | 386368 | 208                          |
| 883                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287608                                    | 386153 | 215                          |
| 884                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287567                                    | 386069 | 215                          |
| 885                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287702                                    | 385964 | 208                          |
| 886                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287767                                    | 385942 | 206                          |
| 887                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287883                                    | 385927 | 208                          |
| 888                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287787                                    | 386106 | 211                          |
| 889                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287939                                    | 386063 | 210                          |
| 890                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287966                                    | 385946 | 207                          |
| 891                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288039                                    | 386030 | 208                          |
| 892                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287996                                    | 386104 | 210                          |
| 893                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288117                                    | 386237 | 211                          |
| 894                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288191                                    | 386182 | 209                          |
| 895                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288189                                    | 386229 | 210                          |
| 896                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288273                                    | 386362 | 211                          |
| 897                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287979                                    | 386370 | 215                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 898                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288077                                    | 386504 | 214                          |
| 899                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287778                                    | 386495 | 216                          |
| 900                                               | 40                                                             | 38 | 33  | 27  | 18  | 4    | 0    | 0    | 0    | 285674                                    | 390522 | 225                          |
| 901                                               | 45                                                             | 43 | 35  | 29  | 21  | 6    | 0    | 0    | 0    | 285519                                    | 390676 | 224                          |
| 902                                               | 53                                                             | 51 | 46  | 43  | 39  | 34   | 23   | 0    | 0    | 287913                                    | 396371 | 241                          |
| 903                                               | 44                                                             | 42 | 35  | 30  | 24  | 12   | 0    | 0    | 0    | 288865                                    | 393416 | 236                          |
| 904                                               | 44                                                             | 42 | 35  | 30  | 23  | 11   | 0    | 0    | 0    | 288878                                    | 393171 | 232                          |
| 905                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288597                                    | 384815 | 218                          |
| 906                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288736                                    | 385092 | 217                          |
| 907                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 288073                                    | 384133 | 221                          |
| 908                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287678                                    | 383996 | 219                          |
| 909                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287390                                    | 383897 | 215                          |
| 910                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287174                                    | 383829 | 213                          |
| 911                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287134                                    | 383978 | 211                          |
| 912                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286989                                    | 383601 | 216                          |
| 913                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286808                                    | 383497 | 218                          |
| 914                                               | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 286285                                    | 383098 | 210                          |
| 915                                               | 42                                                             | 39 | 31  | 25  | 16  | 0    | 0    | 0    | 0    | 284594                                    | 382465 | 214                          |
| 916                                               | 36                                                             | 34 | 30  | 23  | 13  | 0    | 0    | 0    | 0    | 284704                                    | 382631 | 213                          |
| 917                                               | 40                                                             | 38 | 30  | 24  | 15  | 0    | 0    | 0    | 0    | 284832                                    | 382533 | 212                          |
| 918                                               | 32                                                             | 29 | 25  | 18  | 9   | 0    | 0    | 0    | 0    | 284851                                    | 382602 | 210                          |
| 919                                               | 31                                                             | 29 | 25  | 17  | 7   | 0    | 0    | 0    | 0    | 285061                                    | 382851 | 208                          |
| 920                                               | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 284990                                    | 382960 | 211                          |
| 921                                               | 41                                                             | 39 | 30  | 24  | 15  | 0    | 0    | 0    | 0    | 284854                                    | 382942 | 212                          |
| 922                                               | 43                                                             | 41 | 32  | 26  | 18  | 3    | 0    | 0    | 0    | 283983                                    | 382175 | 212                          |
| 923                                               | 43                                                             | 41 | 32  | 27  | 18  | 3    | 0    | 0    | 0    | 283938                                    | 382146 | 211                          |
| 924                                               | 45                                                             | 43 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282861                                    | 381492 | 213                          |
| 925                                               | 45                                                             | 43 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282885                                    | 381530 | 214                          |
| 926                                               | 45                                                             | 43 | 35  | 30  | 22  | 8    | 0    | 0    | 0    | 282852                                    | 381657 | 214                          |
| 927                                               | 45                                                             | 43 | 35  | 30  | 22  | 8    | 0    | 0    | 0    | 282847                                    | 381606 | 214                          |
| 928                                               | 45                                                             | 43 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282920                                    | 381613 | 215                          |
| 929                                               | 45                                                             | 43 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282921                                    | 381650 | 214                          |
| 930                                               | 48                                                             | 46 | 39  | 34  | 28  | 18   | 0    | 0    | 0    | 280673                                    | 380969 | 216                          |
| 931                                               | 49                                                             | 47 | 39  | 35  | 29  | 18   | 0    | 0    | 0    | 280867                                    | 381813 | 217                          |
| 932                                               | 49                                                             | 46 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280809                                    | 381852 | 217                          |
| 933                                               | 47                                                             | 45 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280649                                    | 381672 | 217                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 934                                               | 49                                                             | 47 | 40  | 36  | 29  | 20   | 0    | 0    | 0    | 280624                                    | 381721 | 218                          |
| 935                                               | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280605                                    | 381745 | 217                          |
| 936                                               | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280606                                    | 381774 | 217                          |
| 937                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280664                                    | 381763 | 217                          |
| 938                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280695                                    | 381721 | 217                          |
| 939                                               | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280557                                    | 381780 | 217                          |
| 940                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280811                                    | 381823 | 217                          |
| 941                                               | 47                                                             | 45 | 39  | 35  | 28  | 18   | 0    | 0    | 0    | 280878                                    | 381771 | 217                          |
| 942                                               | 49                                                             | 46 | 39  | 35  | 28  | 18   | 0    | 0    | 0    | 280933                                    | 381717 | 217                          |
| 943                                               | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280605                                    | 381961 | 216                          |
| 944                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280656                                    | 381722 | 218                          |
| 945                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280697                                    | 381834 | 216                          |
| 946                                               | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280626                                    | 381813 | 216                          |
| 947                                               | 49                                                             | 47 | 40  | 35  | 29  | 18   | 0    | 0    | 0    | 280912                                    | 382063 | 216                          |
| 948                                               | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280809                                    | 382087 | 216                          |
| 949                                               | 49                                                             | 47 | 40  | 36  | 29  | 19   | 0    | 0    | 0    | 280741                                    | 382116 | 216                          |
| 950                                               | 49                                                             | 47 | 40  | 36  | 29  | 20   | 0    | 0    | 0    | 280704                                    | 382077 | 216                          |
| 951                                               | 51                                                             | 49 | 44  | 40  | 36  | 29   | 16   | 0    | 0    | 278695                                    | 380875 | 217                          |
| 952                                               | 49                                                             | 47 | 42  | 39  | 34  | 26   | 11   | 0    | 0    | 274807                                    | 380674 | 213                          |
| 953                                               | 47                                                             | 45 | 37  | 32  | 24  | 11   | 0    | 0    | 0    | 271158                                    | 380886 | 219                          |
| 954                                               | 52                                                             | 50 | 43  | 39  | 34  | 25   | 8    | 0    | 0    | 276174                                    | 396030 | 222                          |
| 955                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 11   | 0    | 0    | 273277                                    | 383931 | 218                          |
| 956                                               | 54                                                             | 52 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 273336                                    | 384010 | 219                          |
| 957                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 12   | 0    | 0    | 273336                                    | 383946 | 217                          |
| 958                                               | 52                                                             | 50 | 45  | 42  | 36  | 28   | 11   | 0    | 0    | 273386                                    | 384038 | 218                          |
| 959                                               | 54                                                             | 52 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273341                                    | 384054 | 219                          |
| 960                                               | 54                                                             | 52 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273377                                    | 384096 | 220                          |
| 961                                               | 54                                                             | 52 | 46  | 42  | 38  | 30   | 14   | 0    | 0    | 273549                                    | 384191 | 218                          |
| 962                                               | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273538                                    | 384136 | 219                          |
| 963                                               | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273602                                    | 384121 | 218                          |
| 964                                               | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273639                                    | 384113 | 217                          |
| 965                                               | 54                                                             | 52 | 46  | 43  | 38  | 30   | 13   | 0    | 0    | 273745                                    | 384069 | 216                          |
| 966                                               | 54                                                             | 52 | 46  | 42  | 37  | 29   | 13   | 0    | 0    | 273641                                    | 384075 | 217                          |
| 967                                               | 53                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 273541                                    | 384073 | 218                          |
| 968                                               | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273678                                    | 384073 | 217                          |
| 969                                               | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273702                                    | 384071 | 217                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 970                                               | 54                                                             | 52 | 46  | 43  | 38  | 30   | 13   | 0    | 0    | 273744                                    | 384117 | 216                          |
| 971                                               | 54                                                             | 52 | 46  | 43  | 38  | 30   | 13   | 0    | 0    | 273798                                    | 384125 | 217                          |
| 972                                               | 54                                                             | 52 | 46  | 42  | 38  | 30   | 12   | 0    | 0    | 273790                                    | 384029 | 216                          |
| 973                                               | 54                                                             | 52 | 46  | 42  | 37  | 30   | 12   | 0    | 0    | 273749                                    | 384030 | 216                          |
| 974                                               | 54                                                             | 52 | 46  | 42  | 37  | 29   | 12   | 0    | 0    | 273722                                    | 384028 | 216                          |
| 975                                               | 54                                                             | 52 | 46  | 42  | 37  | 29   | 12   | 0    | 0    | 273683                                    | 384026 | 217                          |
| 976                                               | 54                                                             | 52 | 46  | 42  | 37  | 29   | 12   | 0    | 0    | 273637                                    | 384034 | 217                          |
| 977                                               | 54                                                             | 52 | 46  | 42  | 37  | 29   | 12   | 0    | 0    | 273677                                    | 383975 | 217                          |
| 978                                               | 54                                                             | 52 | 46  | 42  | 37  | 29   | 12   | 0    | 0    | 273718                                    | 383983 | 216                          |
| 979                                               | 53                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 273445                                    | 383999 | 216                          |
| 980                                               | 52                                                             | 50 | 45  | 41  | 37  | 29   | 12   | 0    | 0    | 273482                                    | 384034 | 216                          |
| 981                                               | 53                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 273551                                    | 384024 | 216                          |
| 982                                               | 53                                                             | 51 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273454                                    | 384075 | 219                          |
| 983                                               | 54                                                             | 52 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273434                                    | 384088 | 219                          |
| 984                                               | 53                                                             | 51 | 45  | 42  | 36  | 28   | 10   | 0    | 0    | 273498                                    | 383847 | 218                          |
| 985                                               | 53                                                             | 51 | 45  | 42  | 36  | 28   | 10   | 0    | 0    | 273528                                    | 383853 | 217                          |
| 986                                               | 53                                                             | 51 | 45  | 42  | 36  | 28   | 10   | 0    | 0    | 273535                                    | 383811 | 218                          |
| 987                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273494                                    | 383812 | 218                          |
| 988                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273583                                    | 383758 | 218                          |
| 989                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273537                                    | 383749 | 218                          |
| 990                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273492                                    | 383770 | 218                          |
| 992                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273537                                    | 383704 | 218                          |
| 993                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273536                                    | 383687 | 218                          |
| 994                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273493                                    | 383676 | 218                          |
| 995                                               | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273486                                    | 383751 | 218                          |
| 996                                               | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273376                                    | 383709 | 218                          |
| 997                                               | 53                                                             | 51 | 44  | 41  | 36  | 27   | 9    | 0    | 0    | 273330                                    | 383663 | 219                          |
| 1000                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273436                                    | 383667 | 218                          |
| 1001                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273433                                    | 383649 | 218                          |
| 1002                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 9    | 0    | 0    | 273269                                    | 383706 | 219                          |
| 1003                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273332                                    | 383706 | 219                          |
| 1004                                              | 52                                                             | 50 | 44  | 41  | 35  | 27   | 9    | 0    | 0    | 273252                                    | 383705 | 218                          |
| 1005                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 9    | 0    | 0    | 273229                                    | 383704 | 218                          |
| 1006                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 9    | 0    | 0    | 273175                                    | 383716 | 218                          |
| 1007                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273180                                    | 383660 | 219                          |
| 1008                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273182                                    | 383629 | 219                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1009                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273237                                    | 383601 | 219                          |
| 1010                                              | 53                                                             | 50 | 44  | 40  | 35  | 27   | 8    | 0    | 0    | 273176                                    | 383601 | 219                          |
| 1011                                              | 53                                                             | 51 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273233                                    | 383541 | 218                          |
| 1012                                              | 53                                                             | 51 | 44  | 40  | 35  | 27   | 8    | 0    | 0    | 273233                                    | 383574 | 219                          |
| 1013                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273232                                    | 383464 | 218                          |
| 1014                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273248                                    | 383437 | 218                          |
| 1015                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273107                                    | 383402 | 218                          |
| 1016                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273234                                    | 383394 | 218                          |
| 1017                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273241                                    | 383382 | 218                          |
| 1018                                              | 53                                                             | 51 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273290                                    | 383435 | 219                          |
| 1019                                              | 53                                                             | 51 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273291                                    | 383466 | 218                          |
| 1021                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 8    | 0    | 0    | 273540                                    | 383468 | 218                          |
| 1022                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 7    | 0    | 0    | 273436                                    | 383440 | 218                          |
| 1023                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273478                                    | 383506 | 218                          |
| 1024                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 8    | 0    | 0    | 273538                                    | 383501 | 219                          |
| 1025                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273227                                    | 383660 | 219                          |
| 1026                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 9    | 0    | 0    | 273288                                    | 383667 | 219                          |
| 1027                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273285                                    | 383597 | 219                          |
| 1028                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273331                                    | 383602 | 219                          |
| 1029                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273537                                    | 383641 | 218                          |
| 1030                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 8    | 0    | 0    | 273496                                    | 383589 | 218                          |
| 1031                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 8    | 0    | 0    | 273493                                    | 383568 | 219                          |
| 1032                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273533                                    | 383602 | 219                          |
| 1033                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273586                                    | 383600 | 219                          |
| 1034                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273539                                    | 383582 | 219                          |
| 1035                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 8    | 0    | 0    | 273536                                    | 383560 | 219                          |
| 1036                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273677                                    | 383595 | 219                          |
| 1037                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273703                                    | 383597 | 219                          |
| 1038                                              | 53                                                             | 51 | 45  | 42  | 36  | 28   | 10   | 0    | 0    | 273791                                    | 383593 | 219                          |
| 1039                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273738                                    | 383593 | 219                          |
| 1040                                              | 53                                                             | 51 | 45  | 42  | 37  | 29   | 10   | 0    | 0    | 273867                                    | 383599 | 219                          |
| 1041                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273645                                    | 383507 | 218                          |
| 1042                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273645                                    | 383543 | 218                          |
| 1043                                              | 54                                                             | 52 | 46  | 42  | 37  | 29   | 11   | 0    | 0    | 274001                                    | 383598 | 218                          |
| 1044                                              | 54                                                             | 52 | 45  | 42  | 37  | 29   | 11   | 0    | 0    | 273960                                    | 383592 | 219                          |
| 1045                                              | 54                                                             | 51 | 45  | 42  | 37  | 29   | 10   | 0    | 0    | 273702                                    | 383796 | 219                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1046                                              | 53                                                             | 51 | 45  | 42  | 37  | 28   | 10   | 0    | 0    | 273684                                    | 383755 | 219                          |
| 1047                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273229                                    | 383328 | 217                          |
| 1048                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 6    | 0    | 0    | 273184                                    | 383299 | 218                          |
| 1049                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 5    | 0    | 0    | 273176                                    | 383237 | 218                          |
| 1050                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273284                                    | 383312 | 218                          |
| 1051                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273382                                    | 383310 | 219                          |
| 1052                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273382                                    | 383283 | 219                          |
| 1053                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273383                                    | 383269 | 219                          |
| 1054                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273335                                    | 383283 | 219                          |
| 1055                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273329                                    | 383235 | 219                          |
| 1056                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273288                                    | 383190 | 219                          |
| 1057                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 5    | 0    | 0    | 273220                                    | 383178 | 219                          |
| 1058                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273334                                    | 383180 | 219                          |
| 1059                                              | 53                                                             | 51 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273447                                    | 383244 | 219                          |
| 1060                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 6    | 0    | 0    | 273290                                    | 383119 | 218                          |
| 1061                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273289                                    | 383287 | 218                          |
| 1062                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273275                                    | 383241 | 218                          |
| 1063                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 5    | 0    | 0    | 273221                                    | 383242 | 218                          |
| 1064                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273388                                    | 383194 | 218                          |
| 1065                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273385                                    | 383161 | 218                          |
| 1066                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273382                                    | 383118 | 218                          |
| 1067                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273328                                    | 383109 | 218                          |
| 1068                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273377                                    | 383073 | 218                          |
| 1069                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273435                                    | 383069 | 218                          |
| 1070                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 7    | 0    | 0    | 273443                                    | 383006 | 217                          |
| 1071                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273439                                    | 383046 | 217                          |
| 1072                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273429                                    | 383106 | 218                          |
| 1073                                              | 52                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273436                                    | 383127 | 218                          |
| 1074                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273437                                    | 383157 | 218                          |
| 1075                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273434                                    | 383188 | 219                          |
| 1076                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 6    | 0    | 0    | 273331                                    | 383015 | 218                          |
| 1077                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 6    | 0    | 0    | 273285                                    | 383103 | 218                          |
| 1078                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 5    | 0    | 0    | 273234                                    | 383107 | 218                          |
| 1079                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 6    | 0    | 0    | 273290                                    | 383070 | 219                          |
| 1080                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 6    | 0    | 0    | 273327                                    | 383070 | 218                          |
| 1081                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 5    | 0    | 0    | 273221                                    | 383069 | 218                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1082                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 5    | 0    | 0    | 273224                                    | 382980 | 218                          |
| 1083                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 5    | 0    | 0    | 273226                                    | 382995 | 218                          |
| 1084                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 6    | 0    | 0    | 273278                                    | 382934 | 217                          |
| 1085                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 5    | 0    | 0    | 273233                                    | 382934 | 218                          |
| 1086                                              | 51                                                             | 49 | 43  | 39  | 34  | 25   | 6    | 0    | 0    | 273335                                    | 382929 | 216                          |
| 1087                                              | 51                                                             | 49 | 43  | 39  | 34  | 25   | 6    | 0    | 0    | 273355                                    | 382932 | 216                          |
| 1088                                              | 50                                                             | 48 | 43  | 39  | 33  | 25   | 7    | 0    | 0    | 273382                                    | 382930 | 217                          |
| 1089                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 6    | 0    | 0    | 273327                                    | 382980 | 218                          |
| 1090                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 5    | 0    | 0    | 273179                                    | 382984 | 219                          |
| 1091                                              | 51                                                             | 49 | 43  | 39  | 33  | 24   | 4    | 0    | 0    | 273142                                    | 382981 | 219                          |
| 1092                                              | 51                                                             | 49 | 43  | 39  | 34  | 25   | 5    | 0    | 0    | 273181                                    | 383069 | 218                          |
| 1093                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 5    | 0    | 0    | 273178                                    | 383116 | 218                          |
| 1094                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 7    | 0    | 0    | 273382                                    | 383034 | 218                          |
| 1095                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 7    | 0    | 0    | 273385                                    | 383014 | 218                          |
| 1096                                              | 51                                                             | 49 | 43  | 39  | 34  | 25   | 6    | 0    | 0    | 273276                                    | 382901 | 216                          |
| 1097                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 6    | 0    | 0    | 273309                                    | 382873 | 216                          |
| 1098                                              | 51                                                             | 49 | 43  | 39  | 34  | 25   | 6    | 0    | 0    | 273338                                    | 382898 | 216                          |
| 1099                                              | 52                                                             | 50 | 43  | 39  | 33  | 24   | 4    | 0    | 0    | 273067                                    | 382983 | 217                          |
| 1100                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 6    | 0    | 0    | 273290                                    | 382985 | 218                          |
| 1101                                              | 52                                                             | 50 | 43  | 40  | 34  | 25   | 6    | 0    | 0    | 273286                                    | 383012 | 218                          |
| 1102                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273331                                    | 383155 | 218                          |
| 1103                                              | 49                                                             | 47 | 40  | 36  | 29  | 19   | 0    | 0    | 0    | 273097                                    | 380789 | 216                          |
| 1104                                              | 57                                                             | 56 | 51  | 49  | 46  | 40   | 29   | 2    | 0    | 277116                                    | 385789 | 222                          |
| 1105                                              | 54                                                             | 52 | 46  | 42  | 38  | 31   | 19   | 0    | 0    | 279748                                    | 387331 | 223                          |
| 1106                                              | 52                                                             | 50 | 44  | 41  | 36  | 28   | 11   | 0    | 0    | 284983                                    | 398006 | 237                          |
| 1107                                              | 47                                                             | 45 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 285822                                    | 393898 | 225                          |
| 1108                                              | 48                                                             | 45 | 39  | 34  | 27  | 17   | 0    | 0    | 0    | 285776                                    | 393970 | 227                          |
| 1109                                              | 50                                                             | 47 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 284153                                    | 394393 | 227                          |
| 1110                                              | 49                                                             | 47 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284149                                    | 394567 | 227                          |
| 1111                                              | 50                                                             | 48 | 40  | 36  | 29  | 17   | 0    | 0    | 0    | 284230                                    | 394625 | 226                          |
| 1112                                              | 47                                                             | 44 | 38  | 32  | 25  | 12   | 0    | 0    | 0    | 284594                                    | 394515 | 224                          |
| 1113                                              | 48                                                             | 46 | 39  | 34  | 28  | 16   | 0    | 0    | 0    | 284306                                    | 394595 | 226                          |
| 1114                                              | 48                                                             | 46 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 284264                                    | 394384 | 227                          |
| 1115                                              | 48                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285679                                    | 393031 | 226                          |
| 1116                                              | 47                                                             | 45 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285589                                    | 393033 | 226                          |
| 1117                                              | 48                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285318                                    | 393027 | 227                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1118                                              | 47                                                             | 44 | 37  | 32  | 25  | 13   | 0    | 0    | 0    | 285731                                    | 393174 | 226                          |
| 1119                                              | 48                                                             | 46 | 38  | 32  | 25  | 13   | 0    | 0    | 0    | 286033                                    | 393022 | 226                          |
| 1120                                              | 48                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285935                                    | 393021 | 226                          |
| 1121                                              | 44                                                             | 42 | 37  | 32  | 24  | 12   | 0    | 0    | 0    | 286153                                    | 393019 | 225                          |
| 1122                                              | 46                                                             | 43 | 37  | 32  | 24  | 12   | 0    | 0    | 0    | 286184                                    | 393022 | 225                          |
| 1123                                              | 48                                                             | 45 | 38  | 32  | 25  | 13   | 0    | 0    | 0    | 286250                                    | 393019 | 225                          |
| 1124                                              | 46                                                             | 43 | 35  | 29  | 21  | 6    | 0    | 0    | 0    | 285615                                    | 391011 | 224                          |
| 1125                                              | 53                                                             | 51 | 44  | 40  | 35  | 27   | 10   | 0    | 0    | 281437                                    | 400516 | 228                          |
| 1126                                              | 52                                                             | 50 | 43  | 38  | 32  | 23   | 4    | 0    | 0    | 280795                                    | 387309 | 222                          |
| 1127                                              | 52                                                             | 50 | 43  | 39  | 33  | 24   | 4    | 0    | 0    | 276752                                    | 396599 | 223                          |
| 1128                                              | 58                                                             | 56 | 51  | 48  | 45  | 39   | 30   | 9    | 0    | 277871                                    | 382553 | 219                          |
| 1129                                              | 35                                                             | 33 | 26  | 20  | 11  | 0    | 0    | 0    | 0    | 285392                                    | 383570 | 214                          |
| 1130                                              | 37                                                             | 35 | 28  | 21  | 13  | 0    | 0    | 0    | 0    | 285271                                    | 383255 | 212                          |
| 1131                                              | 32                                                             | 29 | 26  | 20  | 11  | 0    | 0    | 0    | 0    | 285276                                    | 383328 | 212                          |
| 1132                                              | 46                                                             | 43 | 37  | 33  | 27  | 16   | 0    | 0    | 0    | 285233                                    | 394105 | 224                          |
| 1133                                              | 49                                                             | 47 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285140                                    | 393990 | 227                          |
| 1134                                              | 48                                                             | 46 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285110                                    | 393831 | 226                          |
| 1135                                              | 48                                                             | 46 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285110                                    | 393858 | 226                          |
| 1136                                              | 48                                                             | 46 | 38  | 33  | 27  | 15   | 0    | 0    | 0    | 285111                                    | 393809 | 225                          |
| 1137                                              | 49                                                             | 46 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285119                                    | 393761 | 225                          |
| 1138                                              | 48                                                             | 46 | 38  | 33  | 26  | 15   | 0    | 0    | 0    | 285093                                    | 393793 | 225                          |
| 1139                                              | 49                                                             | 46 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 285171                                    | 393849 | 226                          |
| 1140                                              | 46                                                             | 44 | 38  | 33  | 27  | 16   | 0    | 0    | 0    | 285304                                    | 394060 | 223                          |
| 1141                                              | 49                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285468                                    | 393965 | 224                          |
| 1142                                              | 43                                                             | 42 | 38  | 33  | 26  | 15   | 0    | 0    | 0    | 285403                                    | 393964 | 223                          |
| 1143                                              | 49                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285437                                    | 393945 | 224                          |
| 1144                                              | 49                                                             | 47 | 39  | 34  | 28  | 17   | 0    | 0    | 0    | 285568                                    | 393955 | 226                          |
| 1145                                              | 49                                                             | 47 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285577                                    | 393900 | 226                          |
| 1146                                              | 49                                                             | 47 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285682                                    | 393848 | 226                          |
| 1147                                              | 48                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285671                                    | 393801 | 226                          |
| 1148                                              | 47                                                             | 45 | 39  | 33  | 26  | 15   | 0    | 0    | 0    | 285687                                    | 393724 | 225                          |
| 1149                                              | 47                                                             | 45 | 38  | 33  | 26  | 15   | 0    | 0    | 0    | 285678                                    | 393707 | 225                          |
| 1150                                              | 48                                                             | 46 | 39  | 34  | 26  | 15   | 0    | 0    | 0    | 285682                                    | 393616 | 225                          |
| 1151                                              | 48                                                             | 46 | 39  | 33  | 26  | 15   | 0    | 0    | 0    | 285637                                    | 393616 | 225                          |
| 1152                                              | 48                                                             | 45 | 39  | 34  | 26  | 15   | 0    | 0    | 0    | 285445                                    | 393721 | 226                          |
| 1153                                              | 49                                                             | 47 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285479                                    | 393898 | 225                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1154                                              | 49                                                             | 47 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285450                                    | 393896 | 225                          |
| 1155                                              | 49                                                             | 46 | 39  | 33  | 26  | 13   | 0    | 0    | 0    | 284815                                    | 393066 | 227                          |
| 1156                                              | 48                                                             | 46 | 39  | 33  | 25  | 12   | 0    | 0    | 0    | 284890                                    | 393068 | 227                          |
| 1157                                              | 49                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285163                                    | 393072 | 226                          |
| 1158                                              | 49                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285249                                    | 393070 | 226                          |
| 1159                                              | 49                                                             | 47 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 284881                                    | 393452 | 226                          |
| 1160                                              | 49                                                             | 47 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 284959                                    | 393393 | 226                          |
| 1161                                              | 48                                                             | 46 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 285133                                    | 393208 | 226                          |
| 1162                                              | 49                                                             | 46 | 39  | 33  | 26  | 14   | 0    | 0    | 0    | 285323                                    | 393388 | 225                          |
| 1163                                              | 49                                                             | 46 | 39  | 33  | 26  | 14   | 0    | 0    | 0    | 285478                                    | 393466 | 225                          |
| 1164                                              | 47                                                             | 44 | 38  | 32  | 25  | 12   | 0    | 0    | 0    | 285601                                    | 393087 | 226                          |
| 1165                                              | 49                                                             | 46 | 39  | 33  | 26  | 15   | 0    | 0    | 0    | 285667                                    | 393514 | 225                          |
| 1166                                              | 47                                                             | 45 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 285730                                    | 393306 | 226                          |
| 1167                                              | 49                                                             | 47 | 39  | 34  | 26  | 14   | 0    | 0    | 0    | 284958                                    | 393391 | 226                          |
| 1168                                              | 49                                                             | 47 | 39  | 34  | 26  | 13   | 0    | 0    | 0    | 284839                                    | 393223 | 226                          |
| 1169                                              | 48                                                             | 46 | 39  | 33  | 25  | 12   | 0    | 0    | 0    | 284890                                    | 393066 | 227                          |
| 1170                                              | 49                                                             | 47 | 39  | 33  | 26  | 13   | 0    | 0    | 0    | 284843                                    | 393066 | 227                          |
| 1171                                              | 49                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285163                                    | 393073 | 226                          |
| 1172                                              | 49                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285245                                    | 393068 | 226                          |
| 1173                                              | 48                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285433                                    | 393031 | 227                          |
| 1174                                              | 48                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285525                                    | 393029 | 226                          |
| 1175                                              | 48                                                             | 46 | 38  | 33  | 25  | 12   | 0    | 0    | 0    | 285822                                    | 393018 | 226                          |
| 1176                                              | 49                                                             | 46 | 38  | 33  | 26  | 13   | 0    | 0    | 0    | 285248                                    | 393181 | 226                          |
| 1177                                              | 49                                                             | 46 | 38  | 33  | 26  | 13   | 0    | 0    | 0    | 285529                                    | 393205 | 227                          |
| 1178                                              | 44                                                             | 42 | 37  | 33  | 26  | 15   | 0    | 0    | 0    | 285306                                    | 393842 | 223                          |
| 1179                                              | 49                                                             | 46 | 39  | 33  | 26  | 14   | 0    | 0    | 0    | 285124                                    | 393409 | 226                          |
| 1180                                              | 49                                                             | 46 | 38  | 33  | 26  | 13   | 0    | 0    | 0    | 285315                                    | 393265 | 226                          |
| 1181                                              | 47                                                             | 44 | 38  | 32  | 25  | 12   | 0    | 0    | 0    | 286096                                    | 393020 | 226                          |
| 1182                                              | 48                                                             | 46 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285230                                    | 393999 | 226                          |
| 1183                                              | 50                                                             | 47 | 40  | 34  | 27  | 14   | 0    | 0    | 0    | 284099                                    | 393251 | 228                          |
| 1184                                              | 46                                                             | 44 | 37  | 32  | 25  | 14   | 0    | 0    | 0    | 284797                                    | 394475 | 224                          |
| 1185                                              | 46                                                             | 44 | 37  | 32  | 24  | 12   | 0    | 0    | 0    | 284767                                    | 394482 | 224                          |
| 1186                                              | 46                                                             | 44 | 37  | 32  | 24  | 12   | 0    | 0    | 0    | 284732                                    | 394489 | 224                          |
| 1187                                              | 46                                                             | 44 | 38  | 32  | 24  | 12   | 0    | 0    | 0    | 284696                                    | 394495 | 225                          |
| 1188                                              | 47                                                             | 44 | 38  | 32  | 25  | 12   | 0    | 0    | 0    | 284630                                    | 394512 | 225                          |
| 1189                                              | 47                                                             | 45 | 38  | 32  | 25  | 13   | 0    | 0    | 0    | 284558                                    | 394529 | 226                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1190                                              | 47                                                             | 44 | 38  | 32  | 25  | 13   | 0    | 0    | 0    | 284529                                    | 394537 | 225                          |
| 1191                                              | 46                                                             | 44 | 38  | 32  | 25  | 13   | 0    | 0    | 0    | 284497                                    | 394542 | 225                          |
| 1192                                              | 47                                                             | 45 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 284459                                    | 394553 | 226                          |
| 1193                                              | 48                                                             | 45 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 284429                                    | 394560 | 226                          |
| 1194                                              | 47                                                             | 45 | 38  | 33  | 25  | 13   | 0    | 0    | 0    | 284403                                    | 394570 | 225                          |
| 1195                                              | 47                                                             | 45 | 39  | 33  | 25  | 14   | 0    | 0    | 0    | 284375                                    | 394582 | 226                          |
| 1196                                              | 47                                                             | 45 | 39  | 33  | 26  | 16   | 0    | 0    | 0    | 284345                                    | 394584 | 226                          |
| 1197                                              | 49                                                             | 47 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284272                                    | 394578 | 226                          |
| 1198                                              | 50                                                             | 48 | 40  | 36  | 29  | 17   | 0    | 0    | 0    | 284148                                    | 394538 | 227                          |
| 1199                                              | 50                                                             | 48 | 40  | 36  | 29  | 17   | 0    | 0    | 0    | 284149                                    | 394505 | 227                          |
| 1200                                              | 50                                                             | 48 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284148                                    | 394465 | 227                          |
| 1201                                              | 50                                                             | 48 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284147                                    | 394436 | 227                          |
| 1202                                              | 50                                                             | 47 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 284201                                    | 394393 | 226                          |
| 1203                                              | 46                                                             | 44 | 40  | 35  | 27  | 16   | 0    | 0    | 0    | 284265                                    | 394409 | 226                          |
| 1204                                              | 50                                                             | 47 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284263                                    | 394442 | 226                          |
| 1205                                              | 47                                                             | 45 | 40  | 35  | 28  | 16   | 0    | 0    | 0    | 284274                                    | 394472 | 226                          |
| 1206                                              | 49                                                             | 47 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284259                                    | 394502 | 226                          |
| 1207                                              | 50                                                             | 48 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284265                                    | 394537 | 226                          |
| 1208                                              | 50                                                             | 48 | 40  | 36  | 29  | 17   | 0    | 0    | 0    | 284208                                    | 394534 | 226                          |
| 1209                                              | 48                                                             | 46 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284208                                    | 394499 | 226                          |
| 1210                                              | 49                                                             | 47 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284209                                    | 394469 | 227                          |
| 1211                                              | 50                                                             | 48 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 284207                                    | 394440 | 227                          |
| 1212                                              | 50                                                             | 48 | 40  | 35  | 29  | 17   | 0    | 0    | 0    | 284207                                    | 394564 | 226                          |
| 1213                                              | 50                                                             | 48 | 40  | 36  | 29  | 17   | 0    | 0    | 0    | 284212                                    | 394595 | 226                          |
| 1214                                              | 49                                                             | 47 | 40  | 35  | 27  | 15   | 0    | 0    | 0    | 284085                                    | 393909 | 227                          |
| 1215                                              | 50                                                             | 47 | 40  | 35  | 27  | 15   | 0    | 0    | 0    | 284519                                    | 393822 | 227                          |
| 1216                                              | 49                                                             | 47 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 284572                                    | 393812 | 227                          |
| 1217                                              | 49                                                             | 47 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 284611                                    | 393809 | 227                          |
| 1218                                              | 49                                                             | 47 | 39  | 34  | 27  | 15   | 0    | 0    | 0    | 284649                                    | 393799 | 227                          |
| 1219                                              | 49                                                             | 46 | 39  | 34  | 27  | 14   | 0    | 0    | 0    | 284651                                    | 393760 | 226                          |
| 1220                                              | 47                                                             | 45 | 38  | 32  | 24  | 12   | 0    | 0    | 0    | 284704                                    | 393790 | 226                          |
| 1221                                              | 46                                                             | 44 | 38  | 33  | 27  | 16   | 0    | 0    | 0    | 285231                                    | 394071 | 225                          |
| 1222                                              | 47                                                             | 45 | 39  | 34  | 27  | 16   | 0    | 0    | 0    | 285235                                    | 394043 | 225                          |
| 1223                                              | 48                                                             | 46 | 39  | 35  | 30  | 21   | 1    | 0    | 0    | 287618                                    | 394487 | 230                          |
| 1224                                              | 45                                                             | 43 | 37  | 33  | 26  | 17   | 0    | 0    | 0    | 288679                                    | 394263 | 242                          |
| 1225                                              | 46                                                             | 44 | 37  | 32  | 26  | 15   | 0    | 0    | 0    | 288429                                    | 393834 | 238                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1226                                              | 44                                                             | 42 | 36  | 31  | 24  | 12   | 0    | 0    | 0    | 286349                                    | 393020 | 224                          |
| 1227                                              | 41                                                             | 40 | 34  | 28  | 19  | 4    | 0    | 0    | 0    | 286178                                    | 391400 | 225                          |
| 1228                                              | 42                                                             | 40 | 32  | 26  | 17  | 3    | 0    | 0    | 0    | 288899                                    | 391431 | 225                          |
| 1229                                              | 26                                                             | 26 | 22  | 14  | 4   | 0    | 0    | 0    | 0    | 288880                                    | 389172 | 220                          |
| 1230                                              | 46                                                             | 44 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 284166                                    | 388658 | 220                          |
| 1231                                              | 34                                                             | 31 | 22  | 16  | 6   | 0    | 0    | 0    | 0    | 287898                                    | 388510 | 217                          |
| 1232                                              | 39                                                             | 26 | 16  | 9   | 3   | 0    | 0    | 0    | 1    | 287998                                    | 386178 | 212                          |
| 1233                                              | 24                                                             | 22 | 18  | 11  | 3   | 0    | 0    | 0    | 0    | 286634                                    | 385734 | 214                          |
| 1234                                              | 40                                                             | 38 | 29  | 23  | 14  | 0    | 0    | 0    | 0    | 285625                                    | 386055 | 216                          |
| 1235                                              | 51                                                             | 49 | 42  | 37  | 31  | 21   | 0    | 0    | 0    | 281140                                    | 387328 | 223                          |
| 1236                                              | 51                                                             | 49 | 42  | 38  | 31  | 21   | 0    | 0    | 0    | 281066                                    | 387267 | 223                          |
| 1237                                              | 57                                                             | 55 | 50  | 47  | 43  | 37   | 25   | 0    | 0    | 277258                                    | 385778 | 222                          |
| 1238                                              | 37                                                             | 35 | 27  | 20  | 11  | 0    | 0    | 0    | 0    | 285410                                    | 383489 | 209                          |
| 1239                                              | 37                                                             | 35 | 30  | 23  | 14  | 0    | 0    | 0    | 0    | 284819                                    | 383174 | 210                          |
| 1240                                              | 36                                                             | 34 | 28  | 22  | 13  | 0    | 0    | 0    | 0    | 285002                                    | 382877 | 212                          |
| 1241                                              | 32                                                             | 29 | 25  | 18  | 9   | 0    | 0    | 0    | 0    | 284975                                    | 382751 | 211                          |
| 1242                                              | 41                                                             | 39 | 30  | 24  | 15  | 0    | 0    | 0    | 0    | 284825                                    | 382711 | 213                          |
| 1243                                              | 32                                                             | 30 | 27  | 22  | 13  | 0    | 0    | 0    | 0    | 284774                                    | 382822 | 211                          |
| 1244                                              | 43                                                             | 43 | 40  | 35  | 28  | 17   | 0    | 0    | 0    | 272329                                    | 382005 | 215                          |
| 1245                                              | 50                                                             | 48 | 41  | 37  | 31  | 22   | 3    | 0    | 0    | 273451                                    | 380983 | 215                          |
| 1246                                              | 50                                                             | 48 | 41  | 37  | 31  | 22   | 3    | 0    | 0    | 280240                                    | 381740 | 216                          |
| 1247                                              | 49                                                             | 47 | 40  | 36  | 29  | 20   | 0    | 0    | 0    | 280607                                    | 381721 | 217                          |
| 1248                                              | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280608                                    | 381862 | 217                          |
| 1249                                              | 49                                                             | 47 | 40  | 36  | 30  | 20   | 0    | 0    | 0    | 280607                                    | 381877 | 217                          |
| 1250                                              | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280729                                    | 381807 | 216                          |
| 1251                                              | 49                                                             | 47 | 40  | 35  | 29  | 19   | 0    | 0    | 0    | 280806                                    | 381961 | 217                          |
| 1252                                              | 42                                                             | 40 | 36  | 30  | 22  | 9    | 0    | 0    | 0    | 282265                                    | 381401 | 210                          |
| 1253                                              | 46                                                             | 44 | 36  | 31  | 24  | 11   | 0    | 0    | 0    | 282230                                    | 381554 | 211                          |
| 1254                                              | 46                                                             | 44 | 36  | 31  | 23  | 10   | 0    | 0    | 0    | 282453                                    | 381593 | 214                          |
| 1255                                              | 41                                                             | 39 | 34  | 30  | 22  | 10   | 0    | 0    | 0    | 281945                                    | 380950 | 213                          |
| 1256                                              | 46                                                             | 43 | 36  | 30  | 22  | 9    | 0    | 0    | 0    | 282423                                    | 381136 | 209                          |
| 1257                                              | 44                                                             | 42 | 35  | 29  | 21  | 8    | 0    | 0    | 0    | 282732                                    | 381419 | 214                          |
| 1258                                              | 57                                                             | 55 | 49  | 46  | 42  | 36   | 24   | 0    | 0    | 276407                                    | 383269 | 220                          |
| 1259                                              | 56                                                             | 54 | 48  | 45  | 41  | 36   | 26   | 1    | 0    | 280840                                    | 389884 | 223                          |
| 1260                                              | 49                                                             | 47 | 40  | 36  | 31  | 22   | 2    | 0    | 0    | 274958                                    | 379585 | 214                          |
| 1261                                              | 54                                                             | 52 | 46  | 42  | 37  | 30   | 15   | 0    | 0    | 277569                                    | 395942 | 224                          |



## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1262                                              | 47                                                             | 45 | 37  | 31  | 23  | 8    | 0    | 0    | 0    | 285346                                    | 391675 | 226                          |
| 1263                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 8    | 0    | 0    | 273539                                    | 383537 | 219                          |
| 1264                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273498                                    | 383449 | 219                          |
| 1265                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273452                                    | 383465 | 218                          |
| 1266                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273534                                    | 383432 | 219                          |
| 1267                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 8    | 0    | 0    | 273502                                    | 383506 | 218                          |
| 1268                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273460                                    | 383710 | 218                          |
| 1269                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273644                                    | 383586 | 219                          |
| 1270                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273594                                    | 383678 | 218                          |
| 1271                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273661                                    | 383502 | 218                          |
| 1272                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273596                                    | 383643 | 219                          |
| 1273                                              | 52                                                             | 50 | 44  | 41  | 35  | 27   | 9    | 0    | 0    | 273283                                    | 383741 | 217                          |
| 1274                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 8    | 0    | 0    | 273497                                    | 383543 | 218                          |
| 1275                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273583                                    | 383535 | 218                          |
| 1276                                              | 53                                                             | 51 | 45  | 42  | 37  | 29   | 11   | 0    | 0    | 273933                                    | 383596 | 219                          |
| 1277                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273498                                    | 383798 | 218                          |
| 1278                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273562                                    | 383712 | 218                          |
| 1279                                              | 54                                                             | 51 | 45  | 42  | 37  | 28   | 10   | 0    | 0    | 273840                                    | 383603 | 219                          |
| 1280                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273539                                    | 383661 | 219                          |
| 1281                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273720                                    | 383601 | 219                          |
| 1282                                              | 52                                                             | 50 | 44  | 40  | 34  | 26   | 6    | 0    | 0    | 273226                                    | 383310 | 217                          |
| 1283                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 7    | 0    | 0    | 273292                                    | 383542 | 218                          |
| 1284                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273294                                    | 383644 | 219                          |
| 1285                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 5    | 0    | 0    | 273225                                    | 383140 | 219                          |
| 1286                                              | 54                                                             | 52 | 46  | 42  | 37  | 29   | 13   | 0    | 0    | 273594                                    | 384073 | 217                          |
| 1287                                              | 52                                                             | 50 | 45  | 42  | 36  | 28   | 12   | 0    | 0    | 273497                                    | 384072 | 218                          |
| 1288                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273434                                    | 383766 | 217                          |
| 1289                                              | 52                                                             | 50 | 45  | 41  | 37  | 29   | 12   | 0    | 0    | 273465                                    | 384032 | 216                          |
| 1290                                              | 53                                                             | 50 | 44  | 40  | 35  | 26   | 6    | 0    | 0    | 273273                                    | 383393 | 218                          |
| 1291                                              | 52                                                             | 50 | 45  | 41  | 37  | 29   | 12   | 0    | 0    | 273437                                    | 384035 | 216                          |
| 1292                                              | 53                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 273599                                    | 384028 | 216                          |
| 1293                                              | 52                                                             | 51 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273429                                    | 384065 | 218                          |
| 1294                                              | 52                                                             | 50 | 43  | 39  | 34  | 25   | 5    | 0    | 0    | 273223                                    | 383021 | 218                          |
| 1295                                              | 53                                                             | 51 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273392                                    | 384069 | 219                          |
| 1296                                              | 53                                                             | 51 | 45  | 42  | 37  | 29   | 12   | 0    | 0    | 273526                                    | 384019 | 216                          |
| 1297                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 9    | 0    | 0    | 273288                                    | 383700 | 219                          |

## Sound Modeling Report Goose Creek Wind

| Receptor<br>(Primary<br>Structures) <sup>15</sup> | Modeled Sound Pressure Level (dBZ) by<br>Full Octave Band (Hz) |    |     |     |     |      |      |      |      | Coordinates<br>IL State Plane<br>(NAD 83) |        | Receptor<br>Elevation<br>(m) |
|---------------------------------------------------|----------------------------------------------------------------|----|-----|-----|-----|------|------|------|------|-------------------------------------------|--------|------------------------------|
|                                                   | 31.5                                                           | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | X (m)                                     | Y (m)  |                              |
| <i>IPCB Limit</i>                                 | 69                                                             | 67 | 62  | 54  | 47  | 41   | 36   | 32   | 32   |                                           |        |                              |
| 1298                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273439                                    | 383700 | 217                          |
| 1299                                              | 52                                                             | 50 | 44  | 40  | 34  | 25   | 5    | 0    | 0    | 273223                                    | 383160 | 219                          |
| 1300                                              | 52                                                             | 50 | 45  | 41  | 36  | 29   | 12   | 0    | 0    | 273437                                    | 384017 | 216                          |
| 1301                                              | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273496                                    | 384133 | 219                          |
| 1302                                              | 54                                                             | 52 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273345                                    | 384090 | 219                          |
| 1303                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 10   | 0    | 0    | 273285                                    | 383775 | 215                          |
| 1304                                              | 54                                                             | 52 | 46  | 42  | 37  | 30   | 13   | 0    | 0    | 273540                                    | 384121 | 219                          |
| 1305                                              | 54                                                             | 52 | 45  | 42  | 37  | 29   | 13   | 0    | 0    | 273336                                    | 384099 | 219                          |
| 1306                                              | 54                                                             | 52 | 46  | 42  | 38  | 30   | 13   | 0    | 0    | 273639                                    | 384140 | 217                          |
| 1307                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273387                                    | 383680 | 218                          |
| 1308                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273393                                    | 383663 | 218                          |
| 1309                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273436                                    | 383738 | 217                          |
| 1310                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 8    | 0    | 0    | 273433                                    | 383596 | 218                          |
| 1311                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273387                                    | 383738 | 217                          |
| 1312                                              | 53                                                             | 51 | 44  | 41  | 36  | 27   | 8    | 0    | 0    | 273395                                    | 383633 | 218                          |
| 1313                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273457                                    | 383738 | 217                          |
| 1314                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 10   | 0    | 0    | 273440                                    | 383794 | 217                          |
| 1315                                              | 53                                                             | 51 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273282                                    | 383505 | 218                          |
| 1316                                              | 54                                                             | 52 | 46  | 42  | 37  | 29   | 13   | 0    | 0    | 273448                                    | 384118 | 219                          |
| 1317                                              | 53                                                             | 51 | 44  | 40  | 35  | 26   | 7    | 0    | 0    | 273383                                    | 383393 | 219                          |
| 1318                                              | 53                                                             | 51 | 45  | 41  | 36  | 28   | 9    | 0    | 0    | 273591                                    | 383699 | 218                          |
| 1319                                              | 53                                                             | 51 | 45  | 41  | 36  | 27   | 9    | 0    | 0    | 273348                                    | 383749 | 217                          |
| 1320                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273338                                    | 383638 | 219                          |
| 1321                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273330                                    | 383573 | 218                          |
| 1322                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273326                                    | 383561 | 218                          |
| 1323                                              | 53                                                             | 51 | 44  | 41  | 35  | 27   | 8    | 0    | 0    | 273327                                    | 383539 | 218                          |