EIGHT POINT WIND ENERGY CENTER

PRECONSTRUCTION SOUND LEVEL IMPACT ASSESSMENT

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1.0 EXECUTIVE SUMMARY

The Eight Point Wind Energy Center will be located in Steuben County, NY. The project capacity is certified for 101.8 MW using up to 31 wind turbines and ancillary structures. This updated Pre-construction Noise Impact Assessment (PNIA) presents model results reflecting different wind turbine models than the original PNIA. In addition, four of the original 35 wind turbine locations have been dropped from the analysis.

The sound level analysis included 31 wind turbines, six of which are alternates. There are two types of wind turbines proposed for this update: Siemens Gamesa Renewable Energy SG 5.0-145 units and General Electric 2.5-116 units. For this analysis, the most conservative mix of each turbine type from a noise perspective was assumed -- 24 SG 5.0-145 turbines and seven GE 2.5-116.

The expected future sound levels from the Modified Project were modeled at all sensitive sound receptors identified in the Project Area. The modeling focused on the following topics:

- Short-term (1-hour or 8-hour) A-weighted sound levels at homes and property lines
- Long-term (1 year) A-weighted sound levels at homes
- Short-term (1-hour) low frequency and infrasound at homes
- Short-term (1-hour or 8-hour) tonal sounds at homes

Certificate Conditions 64.d, 73(a), 73(b), 73(c), and 73(e) address the limits approved by the Siting Board for these sound levels.

Sound power levels from the wind turbine under maximum sound power conditions were used in the model to predict sound levels for these various scenarios. The first round of modeling (Base Case) found that some non-participating homes would not meet the applicable short-term A-weighted Certificate condition. Therefore, mitigation was applied to ten of the SG 5.0-145 wind turbines (Mitigated Case). The Mitigated Case results show compliance at all locations under the applicable short-term A-weighted Certificate condition. All other scenarios were met under both the Base Case and the Mitigated Case scenarios.

Based on the detailed analyses presented in this report, the operation of the Eight Point Wind Energy Center Project, as Modified, will comply with the Certificate noise conditions, as they relate to sound levels at residences and property lines. The Siemens Gamesa turbines have a sound power level of 109.3 dBA. Certificate Condition 64.c.ii imposes a 106.0 dBA limit on turbine sound power. In addition, Certificate Condition 64.c.ii imposes sound power level limits on the 16 Hz, 31.5, and 63 Hz octave bands (122 dBZ, 119 dBZ, 117 dBZ respectively) from wind turbines. The Siemens Gamesa turbines have worst-case sound power levels of 120.6 dBZ, 117.9 dBZ, and 117.3 dBZ respectively at these three octave bands.

As the Modified Project will comply with all residence and property line limits contained in the Certificate Conditions, the Certificate Holder respectfully requests that the A-weighted and 63 Hz octave band turbine sound power level limits either be revised to accommodate the Siemens Gamesa power level of 109.3 dBA and 117.3 dBZ (63 Hz) or eliminated entirely, as the Siting Board stopped imposing this type of limit on wind projects following the Eight Point Wind approval. This is consistent with the conditions adopted by the Siting Board in its certification of the Deer River Wind Energy project (Case 16-F-0267-Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions, dated June 30, 2020); the Alle-Cat Wind Energy project (Case 17-F-0282-Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions, dated June 3, 2020); the Canisteo Wind Energy project (Case 16-F-0205-Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions, dated March 13, 2020); the Bluestone Wind project (Case 16-F-0559-Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions, dated December 16, 2019); the Number Three Wind project (Case 16-F-0328-Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions, dated November 12, 2019); the Baron Winds project (Case 15-F-0122-Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions, dated September 12, 2019).

2.0 INTRODUCTION

This report is an update to the original PNIA for the certified Eight Point Wind Energy Center (Certified Project) . The original PNIA was dated August 25, 2017. Only the sections affected by this update are included in this report, and the original Section numbering scheme has been retained for ease of comparison.

This PNIA report includes the following updated elements:

- Discussion of sound level regulations and approved Certificate Conditions for the Certified Project (Section 4)
- Sound level propagation modeling inputs and procedures (Section 9)
- Sound level modeling results (Section 9)
- Evaluation of modeling results to the approved Certificate Conditions (Section 13)
- Detailed model inputs and results tables (Appendices D, E, F)

4.0 REGULATIONS AND EVALUATION CRITERIA

4.1 Local Regulations

Eight Point Wind is located within the Towns of West Union and Greenwood, Steuben County, NY. Steuben County does not have any noise regulations applicable to wind turbine operation. In West Union, Local Law No. 2 of 2006 entitled "Wind Energy Facilities" Section 15.A limits sound levels generated by WTGs to 50 dBA (L_{10}) measured over an hour at a residence. This standard applies day or night. If the ambient exceeds 50 dBA, the standard is ambient plus 6 dBA. In addition, each WTG must be located at least 1,400 feet from the exterior of an off-site residence. In Greenwood, Local Law No. 1 of 2017 entitled "Amended Wind Energy Facility Law" Section 15.A contains the same exact sound standards as the Town of West Union.

4.2 New York State

The NY State Board on Electric Generation Siting and the Environment issued an "Order Granting Certificate of Environmental Compatibility and Public Need, With Conditions" (Certificate") on August 20, 2019.

Condition 64.d of the Certificate requires the following:

d. Revised sound modeling using the same or a more conservative methodology as in the Application but with the specifications of the wind turbine model selected for construction to demonstrate that the project is modeled to meet the substantive provisions of the Local Laws on Noise for the Towns of Greenwood and West Union and the regulatory limits of Conditions 73(a), 73(b), 73(c), 73(d) and 73(e). The revised sound modeling will also show conformance with the design goals listed below. Conformance with items i, ii, and iii below will be demonstrated utilizing updated sound modeling and sound contours:

(i) 40 dBA L (night-outside), annual equivalent continuous average sound level from the Facility outside any existing permanent or seasonal non- participating residence;

(ii) 50 dBA L(night-outside), annual equivalent continuous average sound level from the Facility outside any existing participating residence;

(iii) 55 dBA L-8-hour across any portion of a non- participating property except for portions delineated as wet lands; and

(iv) 65 dBZ L (1-hour), maximum 1-hour equivalent continuous average sound level from the Facility at the 16 Hz, 31.5 Hz, and 63 Hz full octave bands outside any existing non-participating residence.

Condition 73 of the Certificate requires the following:

73. Noise levels from all noise sources from the Wind Generating Facility, related facilities and ancillary equipment shall:

a. Comply with a maximum noise limit of 42 (dBA) Leq (8- hour) at any permanent or seasonal non-participant residence existing as of the issuance date of this Certificate and 52 dBA Leq (8-hour) for any participant residence existing as of the issuance date of this Certificate;

b. Not produce any audible prominent tones, as defined under ANSI S12.9 Part 4-2005 Annex C at any non- participant residences existing as of the issuance date of this Certificate. Should a prominent tone occur, the broadband overall (dBA) noise level at the evaluated position shall be increased by 5 dBA for evaluation of compliance with sub-condition 73(a);

c. Comply with a maximum noise limit of 65 dB Leq at the full octave frequency bands of 16, 31.5, and 63 Hertz outside of any non-participant residence existing as of the issuance date of this Certificate in accordance with Annex D of ANSI standard S12.9-2005/Part 4 Section D.2(1) (Sounds with strong low-frequency content);

d. Not produce human perceptible vibrations inside any non-participant residence existing as of the issuance date of this Certificate that exceed the limits for residential use recommended in ANSI Standard S2.71-1983 (August 6, 2012) “Guide of evaluation of human exposure to vibration in Buildings;” and

e. Comply with a limit of 40 dBA Leq(1-hour) at the outside of any non-participating residence from the collector substation equipment, if subject to the tonal penalties of sub-condition 73(b).

4.3 Federal Guidelines

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

9.0 FUTURE SOUND LEVELS

9.1 Sound Propagation

The noise impacts associated with the proposed Project were predicted using the Cadna/A noise calculation software developed by DataKustik GmbH. This software implements the ISO 9613-2 international standard for sound propagation (Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation). The benefits of this software are a more refined set of computations due to the inclusion of topography, ground attenuation, multiple building reflections, drop-off with distance, and atmospheric absorption. The Cadna/A software allows for octave band calculation of sound from multiple sources as well as computation of diffraction.

9.2 Equipment and Operating Conditions

9.2.1 Wind Turbines

The sound level analysis includes 31 wind turbines, six of which are alternate wind turbines. Thus the estimates of predicted sound levels will be overly conservative. The wind turbine layout consists of 24 SG 5.0-145 units and seven GE 2.5-116 LNTE (low-noise trailing edge) units. The 24 three-blade SG 5.0-145 turbines (including five alternates) will have a rotor diameter of 145 meters and placed atop 127.5-meter towers and the seven three-blade GE 2.5-116 LNTE turbines (including one alternate) will have a rotor diameter of 116 meters and placed atop 90-meter towers. Technical reports from SG[1] and GE[2] were provided by the Certificate Holder for each wind turbine model which documented the expected sound power levels associated with the proposed wind turbines.

Table 9-1 shows the broadband sound power levels as a function of wind speed from these technical reports. The sound level data in Table 9-1 include the effects of noise reduction add-ons attached to the blades (SG 5.0-145) and LNTE blades (GE 2.5-116). Under peak sound level producing conditions[3], the SG 5.0-145 wind turbine has an A-weighted sound power level of <BEGIN CONFIDENTIAL INFORMATION> dBA and the GE 2.5-116 wind turbine has an A-weighted sound power level of dBA <END CONFIDENTIAL INFORMATION>. The respective octave band sound power spectra for this sound power level condition are presented in Table 9-2a (A-weighted) and Table 9-2b (unweighted). The sound power levels presented in both tables do not include an uncertainty factor. <BEGIN CONFIDENTIAL INFORMATION>

1 Siemens Gamesa Renewable Energy, Developer Package, SG 5.0-145, Document ID: GD410616 R7, 2020.08.31.

2 General Electric Company, Technical Documentation Wind Turbine Generator Systems 2.5-116 with LNTE - 60 Hz Product Acoustic Specifications, 2016.

3 Hub height wind speed of at least 9.5 m/s for the SG 5.0-145 and at least 10 m/s for the GE 2.5-116.

Table 9-1 Wind Turbine Broadband Sound Power Levels vs. Wind Speed

Hub Height Wind Speed (m/s)	3	4	5	6	7	8	9	10
SG 5.0-145 Broadband Sound Power Level (dBA)								
GE 2.5-116 LNTE Broadband Sound Power Level (dBA)								

Note: 1. Sound power level is constant from the respective wind speed to the cut-out wind speed.
ND=No data. The manufacturer does not present sound levels at this wind speed.

Table 9-2a Wind Turbine Sound Power Levels at a Peak Hub Height Wind Speed (dBA)

Wind Turbine Type	Broadband Sound Power Level dBA	Sound Power Levels per Octave-Band Center Frequency (Hz)									
		16	31.5	63	125	250	500	1k	2k	4k	8k
		dBA	dBA	dBA	dBA	dBA	dBA	dBA	dBA	dBA	dBA
SG 5.0-145											
GE 2.5-116 LNTE											

Table 9-2b Wind Turbine Sound Power Levels at a Peak Hub Height Wind Speed (dB)

Wind Turbine Type	Broadband Sound Power Level dBA	Sound Power Levels per Octave-Band Center Frequency (Hz)									
		16	31.5	63	125	250	500	1k	2k	4k	8k
		dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
SG 5.0-145											
GE 2.5-116 LNTE											

<END CONFIDENTIAL INFORMATION>

9.2.2 Collection Substation

In addition to the wind turbines, there will be a collector substation located within the Project area. One 34.5/115 kV step-up transformer rated at 115 MVA is proposed for the substation. In the absence of manufacturer-provided sound power data, Epsilon has estimated the sound emissions using the techniques in the Electric Power Plant Environmental Noise Guide (Edison Electric Institute), Table 9-5 Sound Power Levels of Transformers. Table 9-3 summarizes the sound power level data used in the modeling.

Table 9-3 Collector Substation Transformer Sound Power Levels

Maximum Rating MVA	Broadband Sound Power Level dBA	Sound Power Levels per Octave-Band Center Frequency (Hz)								
		31.5	63	125	250	500	1k	2k	4k	8k
		dB	dB	dB	dB	dB	dB	dB	dB	dB
115	95	91	97	99	94	94	88	83	78	71

9.2.3 Emergency Generator

There may be an emergency generator located at the O&M building in the event utility-supplied power is temporarily unavailable. This piece of equipment will only run in emergencies and for periodic daytime-only testing as directed by the manufacturer. For these reasons, sound levels from the operation of the emergency generator were not included in the site-wide model.

9.3 Modeling Inputs and Scenarios

9.3.1 Common Modeling Inputs

Inputs and significant parameters employed in the model common to all modeling scenarios for this Modified Project are described below:

- *Project Layout:* A wind turbine layout was provided by the Certificate Holder to the Project team on December 21, 2020. The 31 proposed wind turbines were input into the model, conservatively including the 6 alternate wind turbines. The substation location was provided by the Certificate Holder to the Project team on February 8, 2017, and reconfirmed November 11, 2020. For the modeling analysis, it was assumed that the substation transformer would be located at the center of the substation. The proposed wind turbines and substation for the Project are shown in Figure 9-1. In order to meet the Certificate conditions at all receptors, this wind turbine layout requires some type of noise reduction to occur on multiple turbines. This will be discussed in greater detail in Section 9.4. As a result, all point sources included in the model are presented in two tables; Table D-1 (Base Case) and Table D-2 (Mitigated) in Appendix D.

- *Receptor Locations:* A modeling receptor dataset was provided by the Certificate Holder to the Project team on February 23, 2017, and reconfirmed November 11, 2020. The 763 receptors from this dataset were input into the Cadna/A model. These receptors include the closest residences and structures. The 763 receptors are a combination of both participating and non-participating sound sensitive locations within at least 1 mile from the Project boundary. No NYSDEC lands were identified within the project area. These receptors were modeled as discrete points at a height of 1.5 meters AGL to mimic the ears of a typical standing person. These locations are shown in Figure 9-1. The modeling receptors are listed in tabular form in Table D-3 in Appendix D.

- *Terrain Elevation:* Elevation contours for the modeling domain were directly imported into Cadna/A which allowed for consideration of terrain shielding where appropriate. The terrain height contour elevations for the modeling domain were generated from elevation information derived from the National Elevation Dataset (NED) developed by the U.S. Geological Survey.

- *Uncertainty factor:* GE did not provide a K (uncertainty) factor for the sound power levels presented in the technical document for the GE 2.5-116. Typically uncertainty factors for wind turbines are 2 decibels or less. The SG documentation states the K factor for the SG

5.0-145 wind turbine is 2 dBA. Therefore, for this analysis an uncertainty factor of 2.0 dBA was assumed and added to the sound power level for each modeled wind turbine.

- No additional attenuation due to tree shielding, air turbulence, or wind shadow effects was considered in the model. Whereas the Project region primarily consists of gently rolling terrain and lacks significant changes in elevation, no terrain concavity adjustment was implemented in the model.

9.3.2 Short-Term Modeling Scenario - ISO 9613-2

Short-term sound level modeling was conducted using the Cadna/A noise calculation software which incorporates the ISO 9613-2 international standard for sound propagation. For this modeling scenario, the octave band data for the highest wind turbine sound power level was input into Cadna/A to calculate wind turbine generated sound pressure levels during conditions when worst-case sound power levels are expected, i.e. at 10 m/s hub height wind speeds or higher. Modeling assumptions inherent in the ISO 9613-2 calculation methodology, or selected as conditional inputs by Epsilon, were implemented in the Cadna/A software for this modeling scenario to ensure conservative results (i.e., higher sound levels), and are described below. These inputs are consistent with those used in the August 25, 2017 PNIA.

- *Ground Attenuation:* Spectral ground absorption was calculated using a G-factor of 0.5 which corresponds to "mixed ground" consisting of both hard and porous ground cover. There are no significant water bodies in the Project Area.

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

- All modeled sources were assumed to be operating simultaneously and at the design wind speed corresponding to the greatest sound level impacts.

- Meteorological conditions assumed in the model (temperature=10℃ & relative humidity=70%) were selected to minimize atmospheric attenuation in the 500 Hz and 1000 Hz octave bands where the human ear is most sensitive.

Sound pressure levels due to operation of all 31 wind turbines and the substation transformer were modeled at 763 receptors within and surrounding the Project area. The sound levels calculated are 1-hour L_{eq} sound levels. In addition to modeling at discrete points, sound levels were also modeled throughout a large grid of receptor points, each spaced 20 meters apart to allow for the generation of sound level isolines.

9.3.3 Long-Term Modeling Scenarios – ISO 9613-2 Annual Sound Level Metrics

Over the course of a year, sound levels associated with the operation of wind turbines will at times be less than the modeled worst-case / short-term sound levels. In order to quantify this reduction, differences in the wind turbine sound power levels due to changes in hub height wind speeds were addressed in the sound level modeling. Sound power levels related to the hub height wind speeds presented in Table 9-2 were used in the calculations. This approach to modeling long-term sound levels differs from the original Application but the methodology used in this updated PNIA has been reviewed and approved by NY DPS in subsequent applications and Certificates.

A full year of 2016 on-site meteorological data were used to calculate the hub height wind speed and related sound power levels for each hour of the year (8784 hours). Table f-4 summarizes the wind speeds for the year in terms of hours below cut-in speed, above cut-out speed, and missing data. The cut-in and cut-out wind speeds for the GE 2.5-116 wind turbines are 3.0 m/s and 25 m/s respectively. The cut-in and cut-out wind speeds for the SG 5.0-145 wind turbines are 3.0 m/s and 27 m/s respectively. From these data, it can be seen that the wind turbines would be expected to operate at some level approximately <BEGIN CONFIDENTIAL INFORMATION> <END CONFIDENTIAL INFORMATION> with a 110m hub height. The hourly wind speeds drive the resultant sound power level of the wind turbines.

The same full year of on-site wind speed data were used to calculate an equivalent sound level for all nighttime hours in one year ($L_{eq, night, outside}$). This was done using the percent time matched to sound power level at a given wind speed and was calculated on an energy basis for all wind turbines under consideration. These calculations were done for two scenarios: all hours in a year (including hours below cut-in wind speed), and only those hours in a year above cut-in speed. There were zero hours above cut-out speed. The associated sound power levels for each wind turbine under consideration, are shown in Table 9-5. The sound power levels in Table 9-5 do not include any uncertainty factor. Details of data and calculations are in spreadsheet format and will be filed with the Siting Board under trade secret protection regulations. <BEGIN CONFIDENTIAL INFORMATION>

Table 9-4 Summary of Annual On-Site Hub Height Wind Speeds (2016)

	110m Hub Height
2016 Hours	
Hours below 3 m/s (cut-in)	
Hours above 25 m/s (cut-out)	
Missing hours	
Total hours of operation	

Table 9-5 Summary of L_{EQ}, Night, Outside Sound Power Levels (dBA)

Wind Turbine	All Nighttime Hours	Operational Nighttime Hours
SG 5.0-145 (HH-127.5m)		
SG 5.0-145 N5 (HH-127.5m)		
GE 2.5-116 (HH-90.0m)		

Notes: 1. In order to meet the Certificate conditions at all receptors, this wind turbine layout requires mitigation to occur on multiple turbines. This will be discussed in greater detail in Section 9.4. As a result, the annual nighttime LEQ sound power level, included the analysis of the Mitigated Modified layout for both scenarios (with and without non-operational hours). <END CONFIDENTIAL INFORMATION>

9.4 Modeling Results – Wind Turbines

9.4.1 Short-Term (1-hour or 8-hour) Broadband – Base Case

Table E-1 in Appendix E shows the predicted "Modified Project-Only" short-term broadband (dBA) and octave band (dB) sound levels under conditions specified in Section 9.3.2 sorted by modeling receptor ID for the Base Case wind turbine model run. This Base Case run does not include any mitigation on the wind turbines in the design layout. Table E-1.1 presents the same data sorted by sound level from high to low. The tables present modeled 1-hour L_{eq} sound levels at the 763 receptors included in the analysis.

The broadband sound levels range from 14 to 51 dBA. Twelve (12) non-participating receptors would be over the Certificate condition of 42 dBA if no mitigation is applied. All participating receptors meet the Certificate condition of 52 dBA. As discussed previously, the 1-hour L_{eq} may be equivalent to the 8-hour L_{eq} under worst-case conditions. In addition to these discrete modeling points, Base Case sound level contours generated from the modeling grid are presented in an overview figure, Figure 9-2a, accompanied by a series of inset maps that provide a higher level of detail at all modeled receptors. The results in Figure 9-2a do not include the effects of mitigation where applicable (see text below).

In order to meet the Certificate conditions at all non-participating receptors, the SG 5.0-145 wind turbine requires mitigation on multiple turbines. Siemens Gamesa Renewable Energy (SGRE) offers a Noise Reduction System (NRS) operational mode to reduce sound from this wind turbine. The SGRE "N5" mode is the low noise mode compatible with this hub height (127.5 meters). In total, there will be ten (10) wind turbines that need mitigation. Based on the sound data that were provided by SGRE, mode N5 was chosen in order to achieve the necessary mitigation.[4] The

[4] Siemens Gamesa Renewable Energy Developer Package, SG 5.0-145, document ID: GD410616 R7, 2020.08.31, Restricted proprietary information.

low-noise mode N5 results in 101.7 dBA sound power level. For this amendment, the low noise operation mode will be applied to ten wind turbines:

- five primary wind turbines (1, 3, 4, 9, & 10),
- five alternate wind turbines (Alt1, Alt2, Alt3, Alt4 & Alt5).

As only 25 turbines would be installed for the Modified Project, NRS operational modes would not likely be needed on all these 10 turbines.

Turbine-specific mitigation measures will be presented in the compliance filing based on final decisions on which wind turbine pad sites will be constructed. Results for the Base Case wind turbine layout are presented in this section without taking credit for NRS.

Table 9-6 presents the number of sensitive noise receptors that have been modeled to experience a worst-case sound level of 35 dBA or greater. Modeled sound levels have been rounded to the nearest integer and presented in 1 dBA increments by receptor participation status. The highest non-participating receptor is predicted to be receptor #696 at 47 dBA. The highest participating receptor is predicted to be receptor #332 at 51 dBA.

Table 9-6 Participating and Non-Participating Receptors Modeled at 35 dBA or Greater---Base Case

Modeled Leq Sound Level [dBA][1]	Year-Round Residence		Seasonal Residence		Unknown	
	Participating	Non-Participating	Participating	Non-Participating	Participating	Non-Participating
55	0	0	0	0	0	0
54	0	0	0	0	0	0
53	0	0	0	0	0	0
52	0	0	0	0	0	0
51	0	0	1	0	0	0
50	0	0	0	0	0	0
49	0	0	0	0	0	0
48	0	0	0	0	0	0
47	7	1	0	0	0	0
46	6	1	0	0	0	0
45	9	1	1	1	0	0
44	12	5	0	0	1	0
43	4	3	0	0	0	0
42	8	11	1	1	0	0
41	7	19	0	1	0	0
40	5	19	0	1	0	0
39	2	5	0	2	0	0
38	2	5	0	1	0	1
37	2	14	0	0	0	1
36	0	13	0	1	0	0
35	2	8	0	0	0	1

Notes: 1. Rounded to the nearest whole decibel.

9.4.2 Short-Term (1-hour or 8-hour) Broadband – Mitigated

Table E-2 in Appendix E shows the predicted "Project-Only" short-term broadband (dBA) and octave band (dB) sound levels under conditions specified in Section 9.3.2 sorted by modeling receptor ID for the Mitigated wind turbine model run. Table E-2.1 presents the same data sorted by sound level from high to low. The tables present modeled 1-hour L_{eq} sound levels at the 763 receptors included in the analysis. The broadband sound levels range from 13 to 51 dBA. All non-participating receptors meet the Certificate condition of 42 dBA. All participating receptors meet the Certificate condition of 52 dBA. It should be noted that the Siting Board has routinely adopted a 45dBA sound limit for non-participating residences following the certification of the Eight Point Wind Project.

Table 9-7 presents the number of sensitive noise receptors that have been modeled to experience a worst-case sound level of 35 dBA or greater. Modeled sound levels have been rounded to the nearest integer and presented in 1 dBA increments by receptor participation status. The highest non-participating receptors are predicted to be receptors #327, #347, #505, and #696 at 42 dBA. The highest participating receptor is predicted to be receptor #332 at 51 dBA.

Table 9-7 Participating and Non-Participating Receptors Modeled at 35 dBA or Greater---Mitigated

Modeled Leq Sound Level [dBA][1]	Year-Round Residence		Seasonal Residence		Unknown	
	Participating	Non-Participating	Participating	Non-Participating	Participating	Non-Participating
55	0	0	0	0	0	0
54	0	0	0	0	0	0
53	0	0	0	0	0	0
52	0	0	0	0	0	0
51	0	0	1	0	0	0
50	0	0	0	0	0	0
49	0	0	0	0	0	0
48	0	0	0	0	0	0
47	0	0	0	0	0	0
46	3	0	0	0	0	0
45	6	0	1	0	0	0
44	6	0	0	0	1	0
43	4	0	0	0	0	0
42	5	4	0	0	0	0
41	6	13	0	1	0	0
40	14	15	0	1	0	0
39	5	10	0	1	0	0
38	4	17	1	2	0	0
37	8	6	0	0	0	1
36	4	16	0	2	0	0
35	0	12	0	0	0	0

Notes: 1. Rounded to the nearest whole decibel.

9.4.2 Long-Term Broadband – L(night – outside) Annual Equivalent

A full year of 2016 on-site meteorological data was used to determine the equivalent nighttime L_{EQ} sound power levels for each wind turbine type over an entire year as described in Section 9.3.3. The long-term sound levels have been analyzed using two methodologies. The first method, "Method 1" (no zeros), includes only periods when the wind turbines are expected to be operating based on the annual meteorology (i.e., above cut-in wind speed). This is conservative in that there will be periods during the year when the sound level associated with the wind turbines will be zero as they will not be operating. These periods have the potential to reduce the sound levels for the various metrics presented in this analysis. The second method, "Method 2" (with zeros), includes all hours (both operational and non-operational periods) in the calculation. This is more realistic of long-term/annual conditions as there will be periods during a year when the wind turbines are not operating. For each of these long-term scenarios, the Mitigated wind turbine layout with the highest resulting sound power level has been modeled.

For annual nighttime $L_{eq,\ night,\ outside}$ modeling, all three wind turbine types, as shown in Table 9-5 have been modeled as a part of the Mitigated layout.

Using all three sound power levels from Table 9-5, the annual L_{eq} nighttime noise level ($L_{eq,\ night,\ outside}$) has been calculated at each of the modeled noise sensitive locations. $L_{eq,\ night,\ outside}$ is the equivalent continuous sound level determined over all nighttime periods during the year with the Article 10 regulations defining nighttime as the period from 10 p.m. to 7 a.m. (1001.19(f)(2)). The definition, as presented in the 2009 WHO document, refers to ISO 1996-2: 1987 and identifies night as an eight-hour period. The more recent ISO 1996-1:2016 (Acoustics – description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures) defines $L_{eq,\ night,\ outside}$ and provides various time frames for a nighttime period.

$L_{eq,\ night,\ outside}$ Project sound levels range from 9 to 47 dBA for "Method 1" (no zeros) and 8 to 45 dBA for "Method 2" (with zeros) calculations. The highest $L_{eq,\ night,\ outside}$ level at a participating receptor is 47 dBA (Receptor ID 332). The highest $L_{eq,\ night,\ outside}$ level at a non-participating receptor is 39 dBA (Receptor ID 327). In addition to these discrete modeling points, sound level contours generated from the modeling grid are presented in an overview figure, Figure 9-3, accompanied by a series of inset maps that provide a higher level of detail at all modeled receptors. This sound contour figure set for $L_{eq,\ night,\ outside}$ Project sound levels were generated only for the "Method 1" model run, because it has higher A-weighted sound power levels for this metric, in comparison to its counterpart "Method 2". Table 9-8 summarizes the number of receptors equal to or greater than 40 dBA for the $L_{eq,\ night,\ outside}$ modeling for all of the wind turbines under consideration in the Mitigated layout design.

The annual nighttime L_{EQ} ($L_{eq,\ night,\ outside}$) values for all receptors are presented in Table F-1 (Method 1 – No Zeros) and Table F-2 (Method 2 – With Zeros) in Appendix F.

Table 9-8 Number of Receptors Modeled at 40 dBA or Greater for L_{EQ}-night-outside

Modeled Leq Sound Level (dBA)[1]	Method 1 – Without Zeros		Method 2 – With Zeros	
	# of Receptors		# of Receptors	
	Participating	Non-Participating	Participating	Non-Participating
50	0	0	0	0
49	0	0	0	0
48	0	0	0	0
47	1	0	1	0
46	0	0	0	0
45	0	0	0	0
44	0	0	0	0
43	1	0	0	0
42	6	0	5	0
41	3	0	5	0
40	9	0	9	0

Notes: 1. Rounded to the nearest whole decibel.

9.4.3 16 Hz, 31.5 Hz, and 63 Hz Results

Since the ISO 9613-2 standard does not include the 16 Hz frequency, results at the 16 Hz octave band for each receptor were extrapolated from the 31.5 Hz results. The extrapolation is the difference between the specific manufacturer's sound power data at 16 Hz and the sound power data at 31.5 Hz used for modeling. For example, the SG 5.0-145 sound power level difference between 16 Hz and 31.5 Hz is 2.7 dB (Base Case) and 3.5 dB (Mitigated Case). Thus the 31.5 Hz modeled results for this wind turbine were scaled up by 2.7 dB to calculate the expected sound levels at 16 Hz for the Base Case. For the GE 2.5-116 LNTE the sound power level difference between 16 Hz and 31.5 Hz is 2.0 dB. Therefore, to be conservative, the SG 5.0-145 sound power level differences were applied to all receptors at 16 Hz.

All non-participating receptors were 65 dB or less at the 16 Hz, 31.5 Hz, and 63 Hz in both the Base Case and Mitigated Case. The number of non-participating residences at or above 60 dB L_{eq} (1-hour) for each of the three low frequency or infrasound octave bands are presented below in Table 9-9a for the Base Case and Table 9-9b for the Mitigated wind turbine layout run. Complete octave band sound pressure level results at each receptor for the Project are presented in Table E-1 (Base Case) and Table E-2 (Mitigated Case) of Appendix E.

Table 9-9a Non-Participating Receptors Modeled at 60 dB or Greater for Low Frequency Criteria – Base Case

Modeled Leq Sound Level (dB)[1]	16 Hz	31.5 Hz	63 Hz
	# of Receptors	# of Receptors	# of Receptors
	Non-Participating	Non-Participating	Non-Participating
65	2	0	0
64	3	0	0
63	7	2	0
62	13	1	0
61	21	4	2
60	19	6	2

Notes: 1. Rounded to the nearest whole decibel.

Table 9-9b Non-Participating Receptors Modeled at 60 dB or Greater for Low Frequency Criteria – Mitigated

Modeled Leq Sound Level (dB)[1]	16 Hz	31.5 Hz	63 Hz
	# of Receptors	# of Receptors	# of Receptors
	Non-Participating	Non-Participating	Non-Participating
65	0	0	0
64	2	0	0
63	5	0	0
62	13	0	0
61	24	2	0
60	22	1	0

Notes: 1. Rounded to the nearest whole decibel.

9.4.4 Audible Prominent Tone Results

ANSI S12.9 Part 3, Annex B, section B.1 (informative) presents a procedure for testing for the presence of a prominent discrete tone. According to the standard, a prominent discrete tone is identified as present if the time-average sound pressure level (L_{eq}) in the one-third octave band of interest exceeds the arithmetic average of the time-average sound pressure level (L_{eq}) for the two adjacent one-third octave bands by any of the following constant level differences (K_T): 15 dB in low-frequency one-third octave bands (from 25 up to 125 Hz); 8 dB in middle-frequency one-third octave bands (from 160 up to 400 Hz); or, 5 dB in high-frequency one-third octave bands (from 500 up to 10,000 Hz).

Sound pressure level calculations using the Cadna/A modeling software which incorporates the ISO 9613-2 standard is limited to octave band sound levels; therefore a quantitative evaluation of one-third octave band sound levels using the modeling software was not possible. Instead, one-third octave band sound pressure levels due to the closest wind turbines were calculated at the nearest ten (10) potentially impacted and representative receptor locations using equations accounting for hemispherical radiation and atmospheric absorption. The results presented in

Table 9-10 show that received sound pressure levels due to the closest wind turbines at each of these locations are not predicted to result in any prominent discrete tones.

Table 9-10 Tonal Analysis & Compliance Evaluation: Modeled Sound Pressure Levels from wind turbines

Rec. ID	One-Third Octave Band Center Frequency (Hz)	25	**31.5**	40	50	**63**	80	100	**125**	160	200	**250**	315	400	**500**	630	800	**1000**	1250	1600	**2000**	2500	3150	**4000**	5000	6300	**8000**	10000
	Tonal Limit	**-**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**8**	**8**	**8**	**8**	**8**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**-**
281	Received Sound Pressure Level (dB)	54	53	53	53	53	51	49	48	46	45	44	42	40	38	38	36	36	36	34	31	28	22	14	2	0	0	0
	Average Sound Pressure Level of Contiguous Bands	-	53	53	53	52	51	49	48	46	45	43	42	40	39	37	37	36	35	33	31	27	21	12	7	1	0	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	1	0	1	1	2	-5	-1	0	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
323	Received Sound Pressure Level (dB)	55	54	53	54	54	52	51	49	47	46	45	43	41	39	39	38	37	37	35	32	29	24	18	13	8	4	0
	Average Sound Pressure Level of Contiguous Bands	-	54	54	54	53	52	51	49	47	46	44	43	41	40	38	38	37	36	34	32	28	23	18	13	8	4	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	1	0	1	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
332	Received Sound Pressure Level (dB)	58	58	57	57	58	56	55	53	52	50	50	48	46	44	45	43	44	44	43	42	40	38	35	32	27	22	19
	Average Sound Pressure Level of Contiguous Bands	-	58	58	57	57	56	55	53	52	51	49	48	46	45	44	44	44	43	43	42	40	38	35	31	27	23	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	0	0	0	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
334	Received Sound Pressure Level (dB)	55	54	54	54	54	53	51	50	48	46	45	44	41	40	40	38	38	37	36	33	29	24	18	13	8	3	0
	Average Sound Pressure Level of Contiguous Bands	-	54	54	54	53	53	51	49	48	47	45	43	42	41	39	39	38	37	35	32	29	24	19	13	8	4	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	1	0	1	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
421	Received Sound Pressure Level (dB)	54	53	53	53	53	51	50	48	46	45	44	42	40	38	38	37	36	36	34	32	28	22	14	2	0	0	0
	Average Sound Pressure Level of Contiguous Bands	-	53	53	53	52	51	50	48	47	45	44	42	40	39	37	37	36	35	34	31	27	21	12	7	1	0	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	1	0	1	1	2	-5	-1	0	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
693	Received Sound Pressure Level (dB)	55	54	54	54	54	53	51	50	48	47	46	44	42	41	41	40	40	40	40	38	37	35	32	28	23	19	15
	Average Sound Pressure Level of Contiguous Bands	-	54	54	54	53	53	51	50	48	47	46	44	43	42	40	41	40	40	39	38	36	34	31	28	23	19	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	0	0	0	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-

Table 9-10 Tonal Analysis & Compliance Evaluation: Modeled Sound Pressure Levels from wind turbines (Continued)

Rec. ID	One-Third Octave Band Center Frequency (Hz)	25	**31.5**	40	50	**63**	80	100	**125**	160	200	**250**	315	400	**500**	630	800	**1000**	1250	1600	**2000**	2500	3150	**4000**	5000	6300	**8000**	10000
	Tonal Limit	**-**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**8**	**8**	**8**	**8**	**8**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**-**
767	Received Sound Pressure Level (dB)	54	54	53	53	54	52	50	49	47	46	45	43	41	40	40	39	39	39	38	37	36	34	31	27	22	17	14
	Average Sound Pressure Level of Contiguous Bands	-	54	53	53	52	52	50	49	47	46	45	43	42	41	39	39	39	39	38	37	35	33	30	26	22	18	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	0	0	0	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
771	Received Sound Pressure Level (dB)	55	54	53	54	54	52	51	49	48	46	45	44	42	40	40	39	39	39	38	37	35	33	30	27	22	17	14
	Average Sound Pressure Level of Contiguous Bands	-	54	54	54	53	52	51	49	48	46	45	44	42	41	39	40	39	39	38	37	35	33	30	26	22	18	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	0	0	0	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
1972	Received Sound Pressure Level (dB)	55	55	54	54	54	53	51	50	48	46	46	44	41	40	40	38	38	37	36	33	29	23	15	3	0	0	0
	Average Sound Pressure Level of Contiguous Bands	-	55	54	54	54	53	51	50	48	47	45	44	42	41	39	39	38	37	35	32	28	22	13	7	1	0	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	1	1	1	1	2	-5	-1	0	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-
1973	Received Sound Pressure Level (dB)	54	54	53	53	53	52	50	49	47	46	45	43	41	40	40	39	39	39	39	37	36	34	31	27	22	18	14
	Average Sound Pressure Level of Contiguous Bands	-	54	53	53	52	52	50	49	47	46	45	43	42	41	39	39	39	39	38	37	35	33	30	27	22	18	-
	Difference between Sound Pressure Level and Contiguous Average	-	0	0	0	1	0	0	0	0	0	0	0	0	-1	1	-1	0	0	0	0	0	0	0	0	0	-1	-
	Below Tonal Limit?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-

9.5 Modeling Results – Collector Substation

Table 9-11 summarizes the L_{eq} (1-hour) at all non-participating residences 30 dBA and above due to the collector substation alone. No mitigation has been assumed in the substation modeling results. Appendix E presents the results for all receptors sorted by receptor ID (Table E-3) and sorted by A-weighted sound level from high to low (Table E-3.1). These results show that the highest sound level at a non-participating residence is 19 dBA (receptor ID #340). No tonal penalty is included in the model results shown in Table 9-11.

Table 9-11 Non-Participating Receptors Modeled at 30 dBA or Greater – Collector Substation

Modeled Leq Sound Level (dBA)[1]	# of Receptors
	Non-Participating
40	0
39	0
38	0
37	0
36	0
35	0
34	0
33	0
32	0
31	0
30	0

Notes: 1. Rounded to the nearest whole decibel.
2: No tonal penalty applied to these sound levels.

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Locs_20210129.mxd

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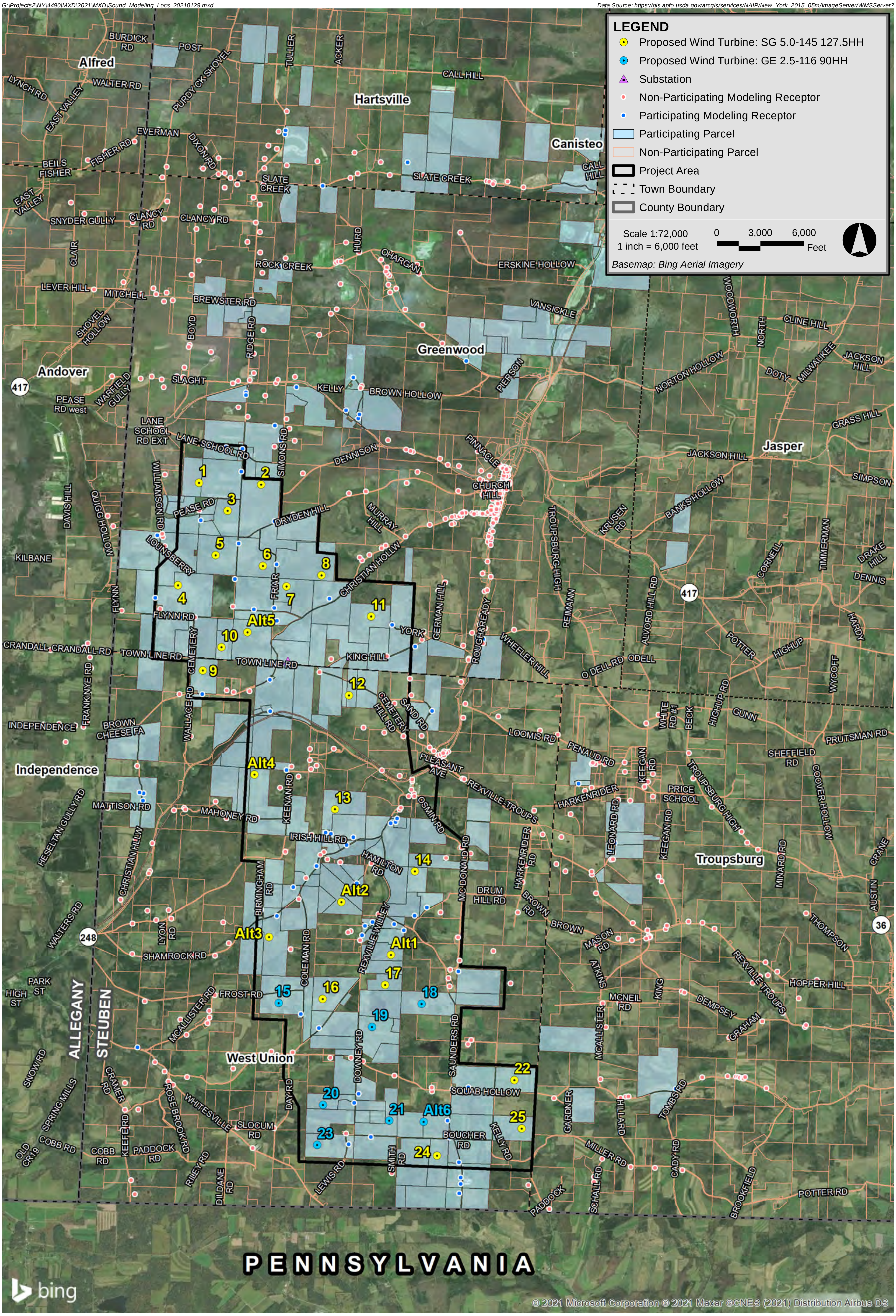

Eight Point Wind Energy Center **Steuben County, New York**

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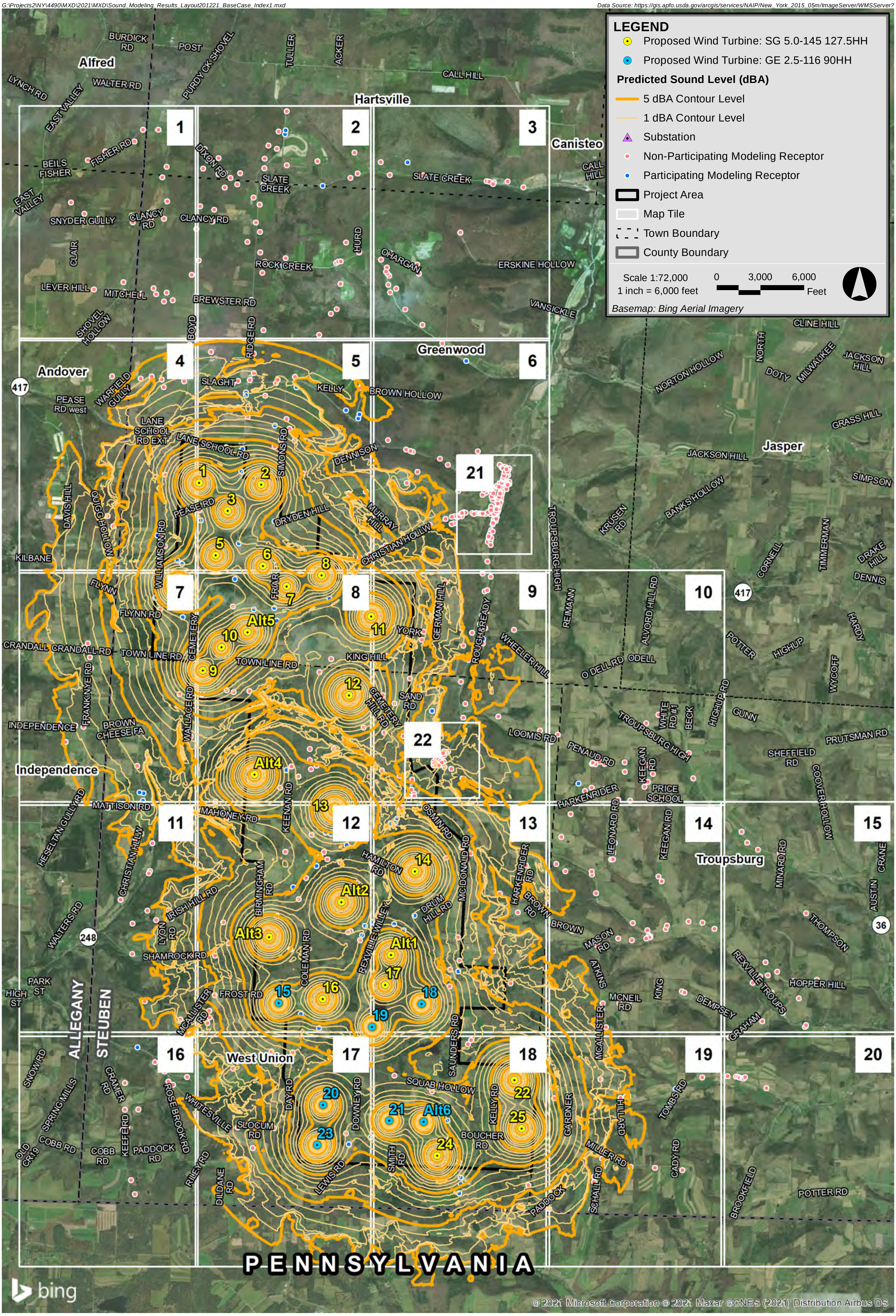
Figure 9-1

Sound Level Modeling Locations

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_Index1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



Eight Point Wind Energy Center   Steuben County, New York

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Figure 9-2a, Index

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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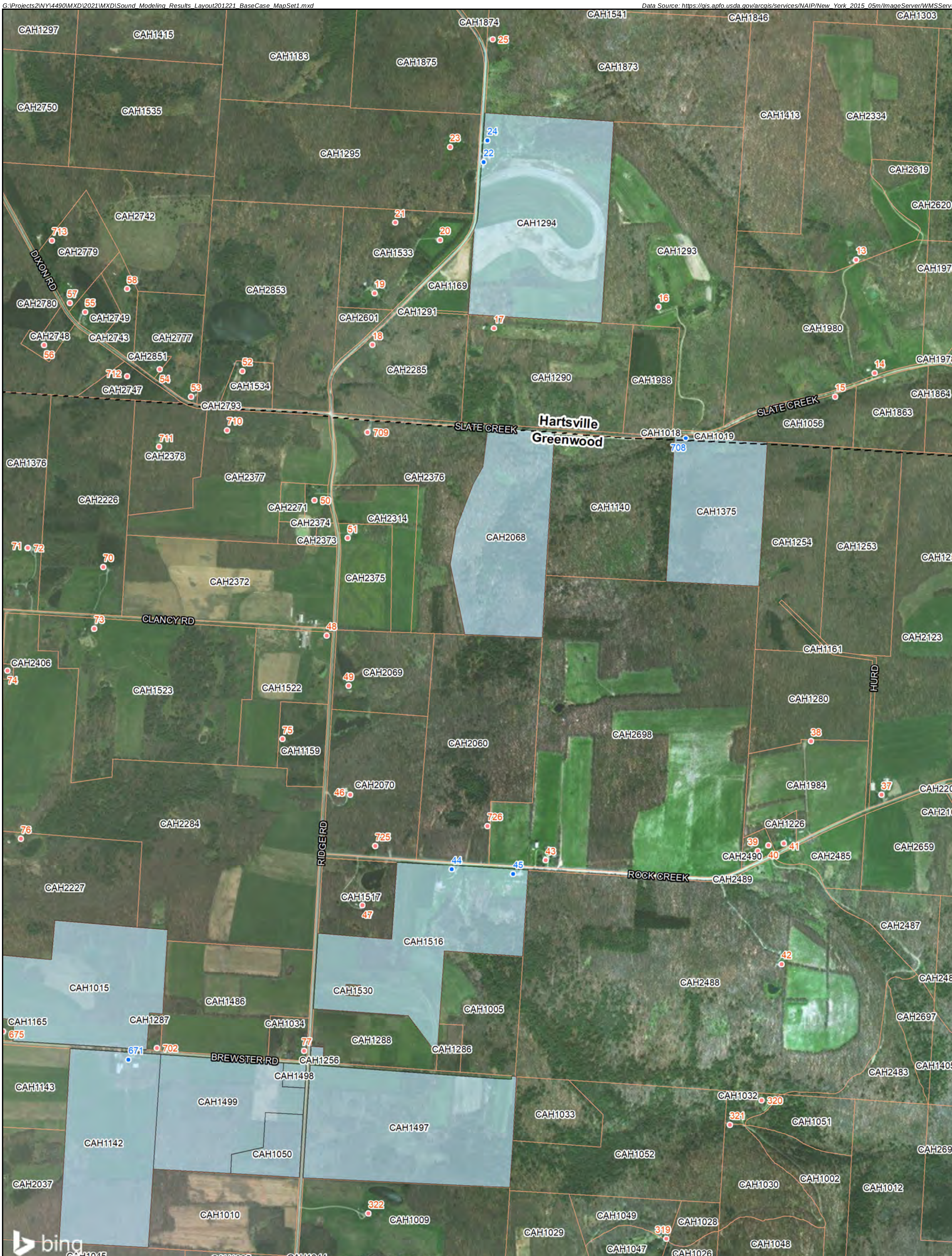
Figure 9-2a, Map 1 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 2 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

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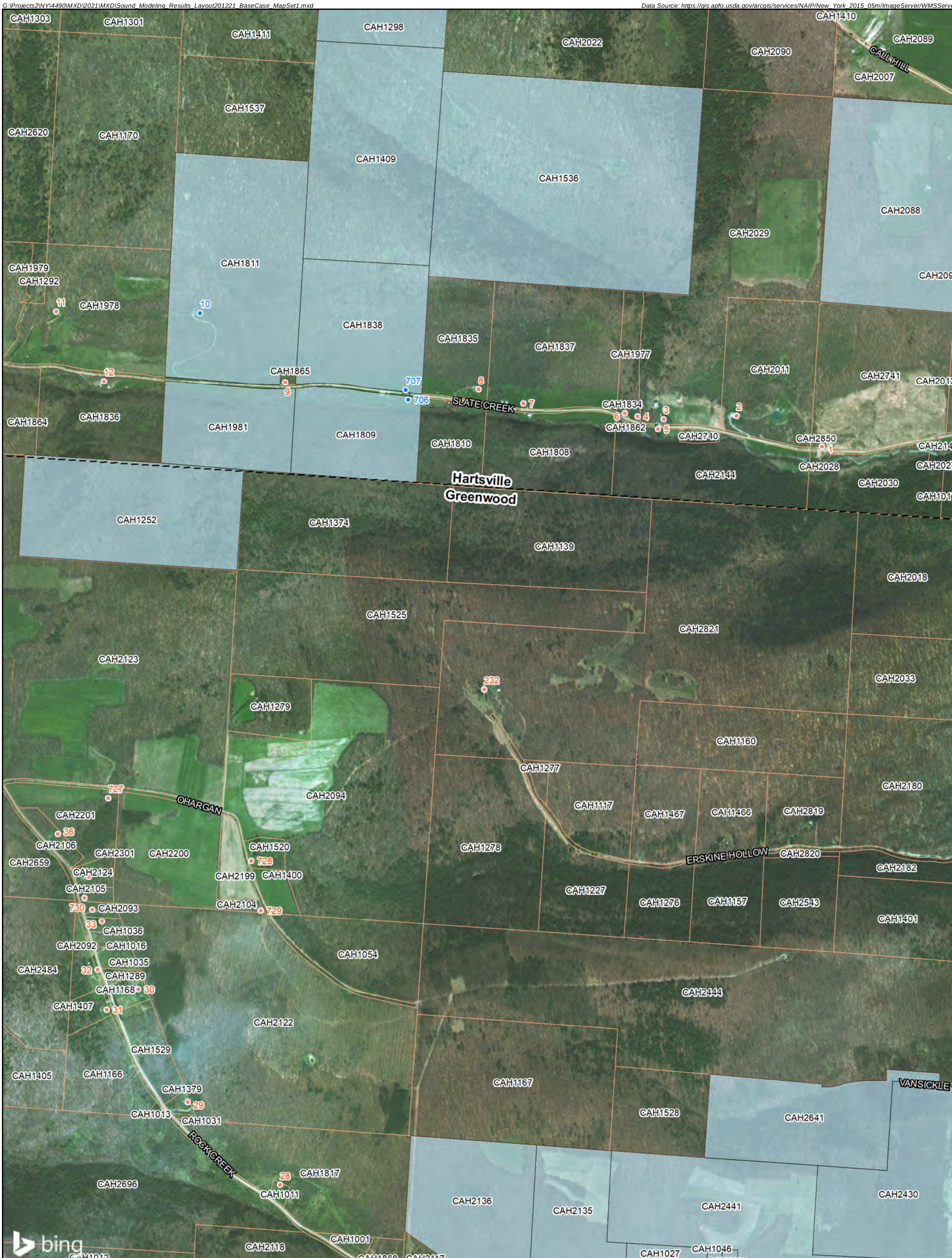

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 3 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

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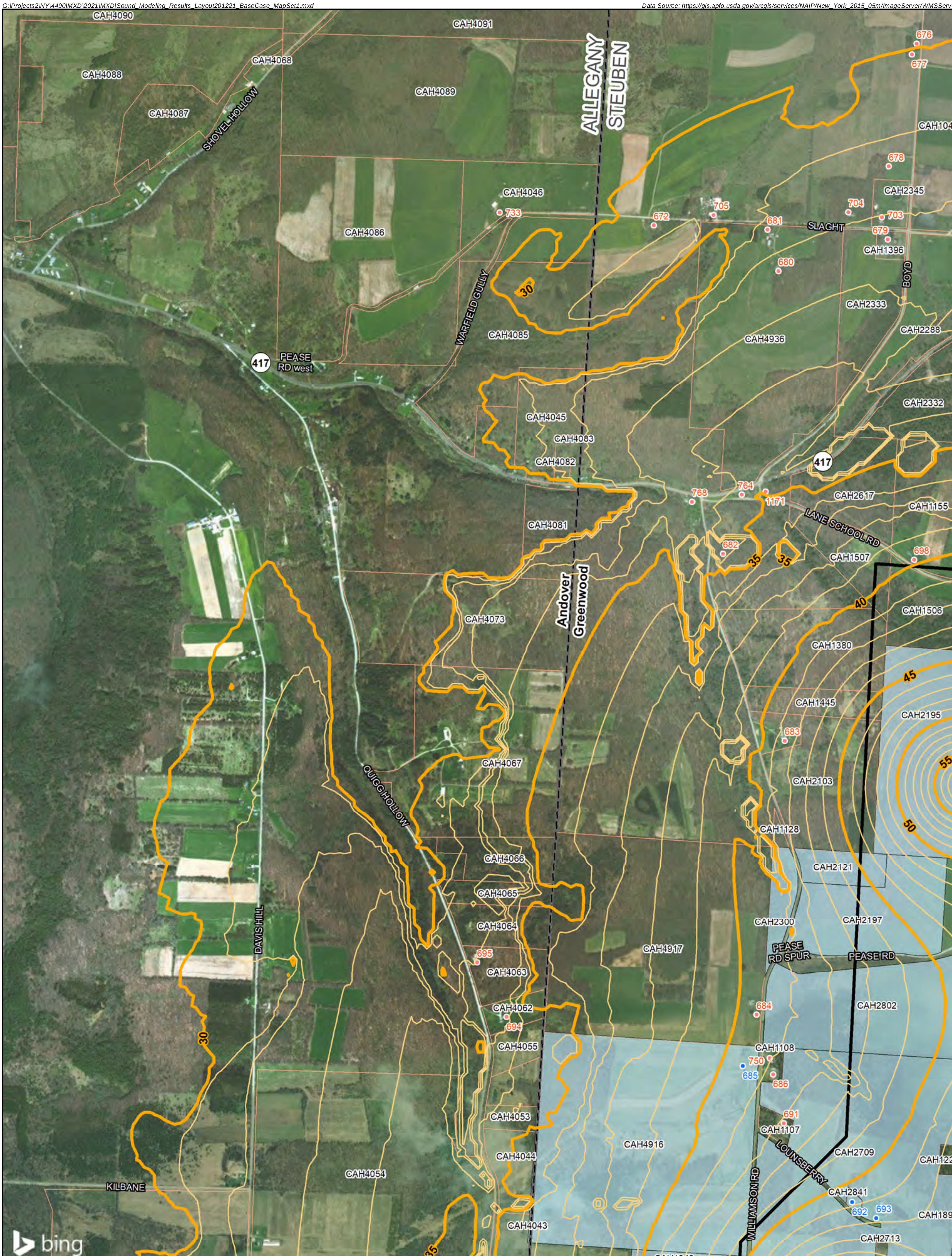

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

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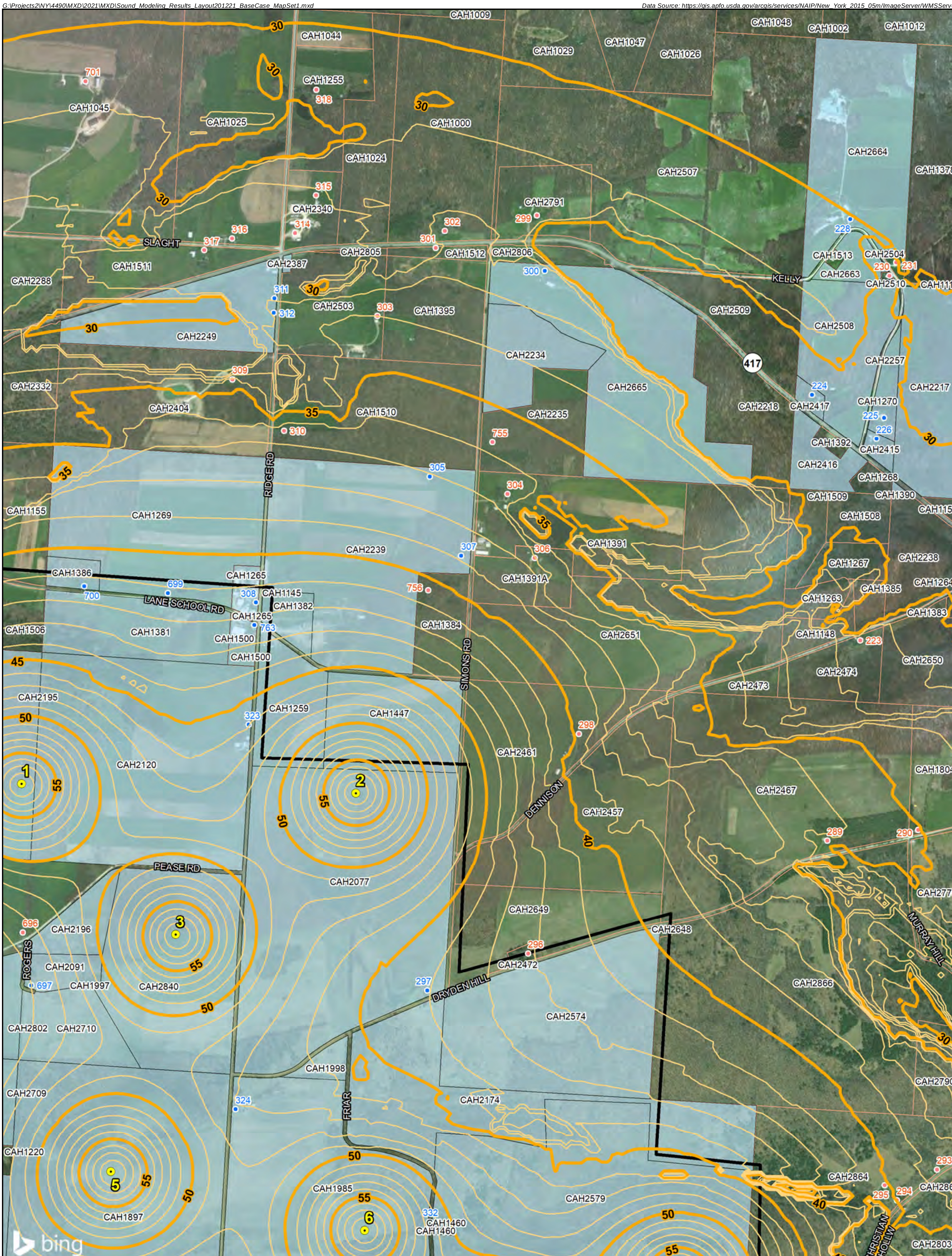
Figure 9-2a, Map 4 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 5 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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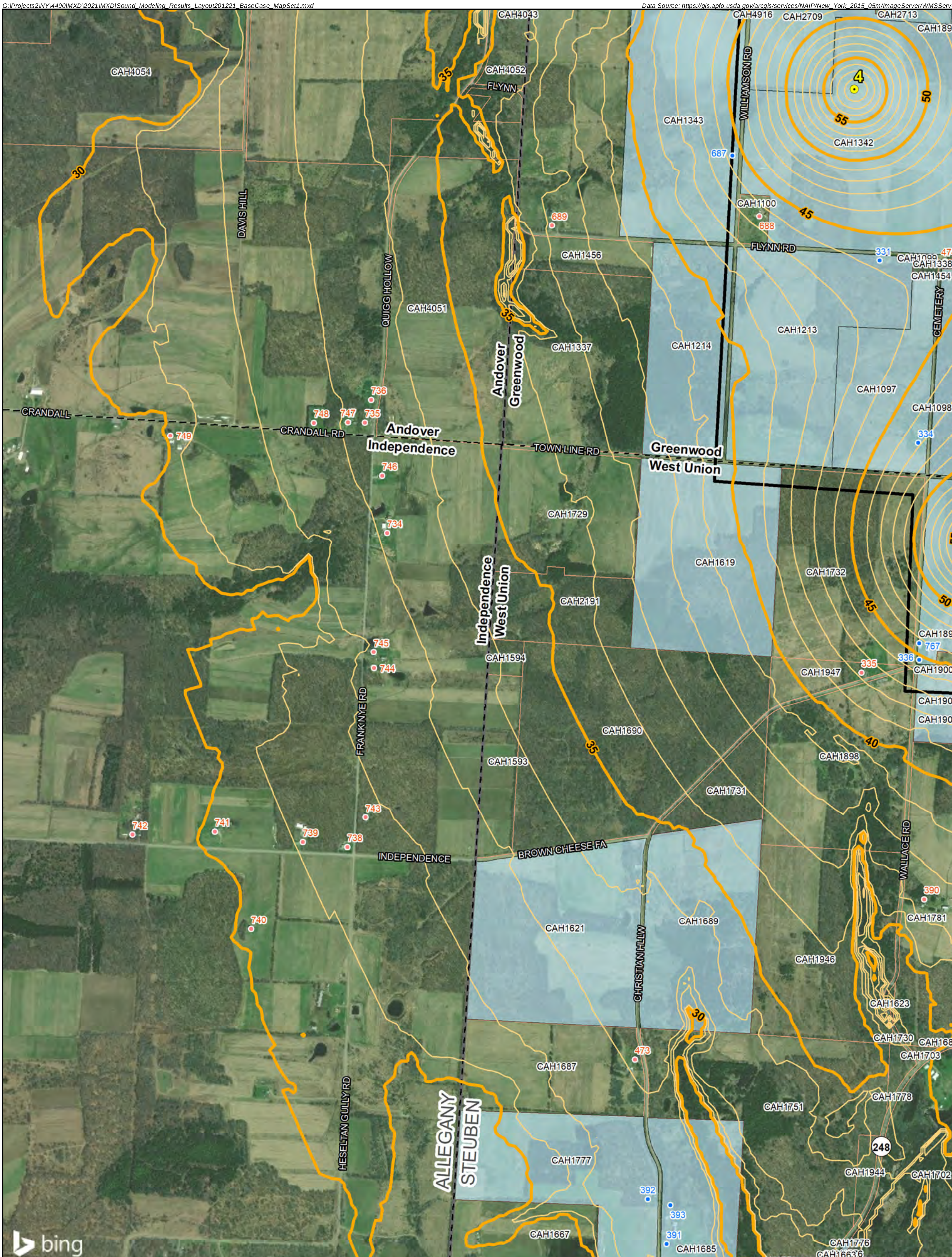
Figure 9-2a, Map 6 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 7 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

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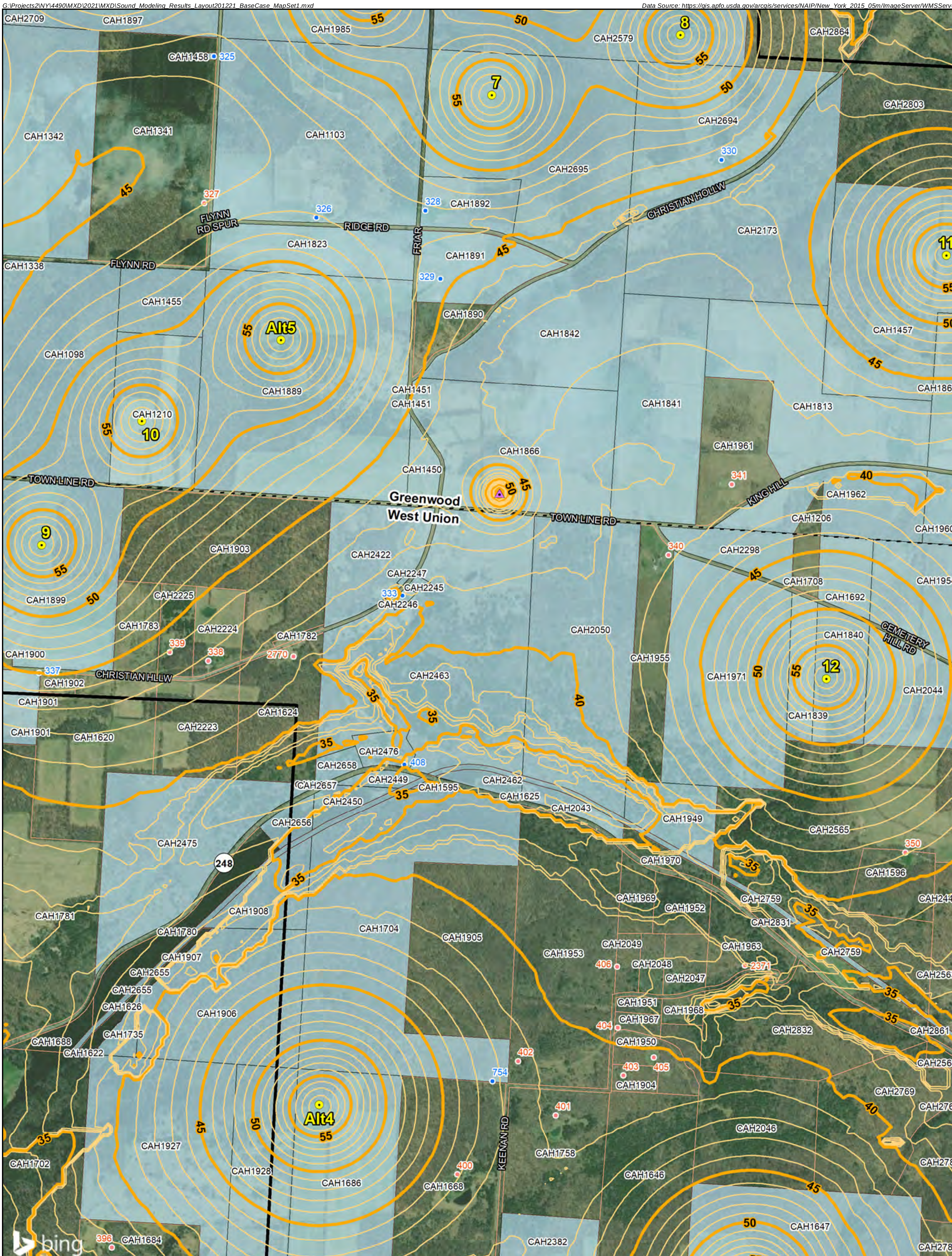

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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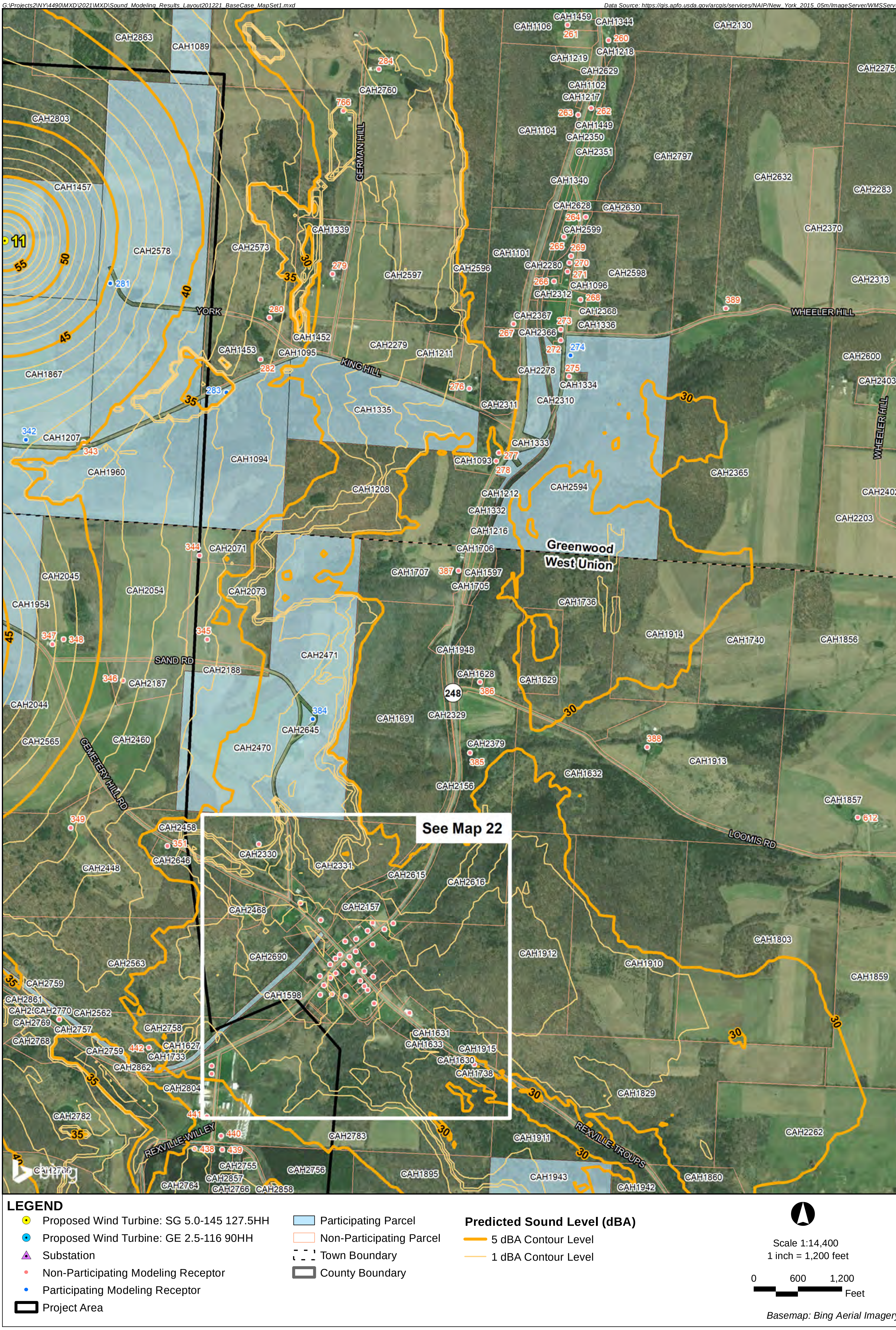
Figure 9-2a, Map 8 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case



Eight Point Wind Energy Center Steuben County, New York

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Figure 9-2a, Map 9 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

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Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 10 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

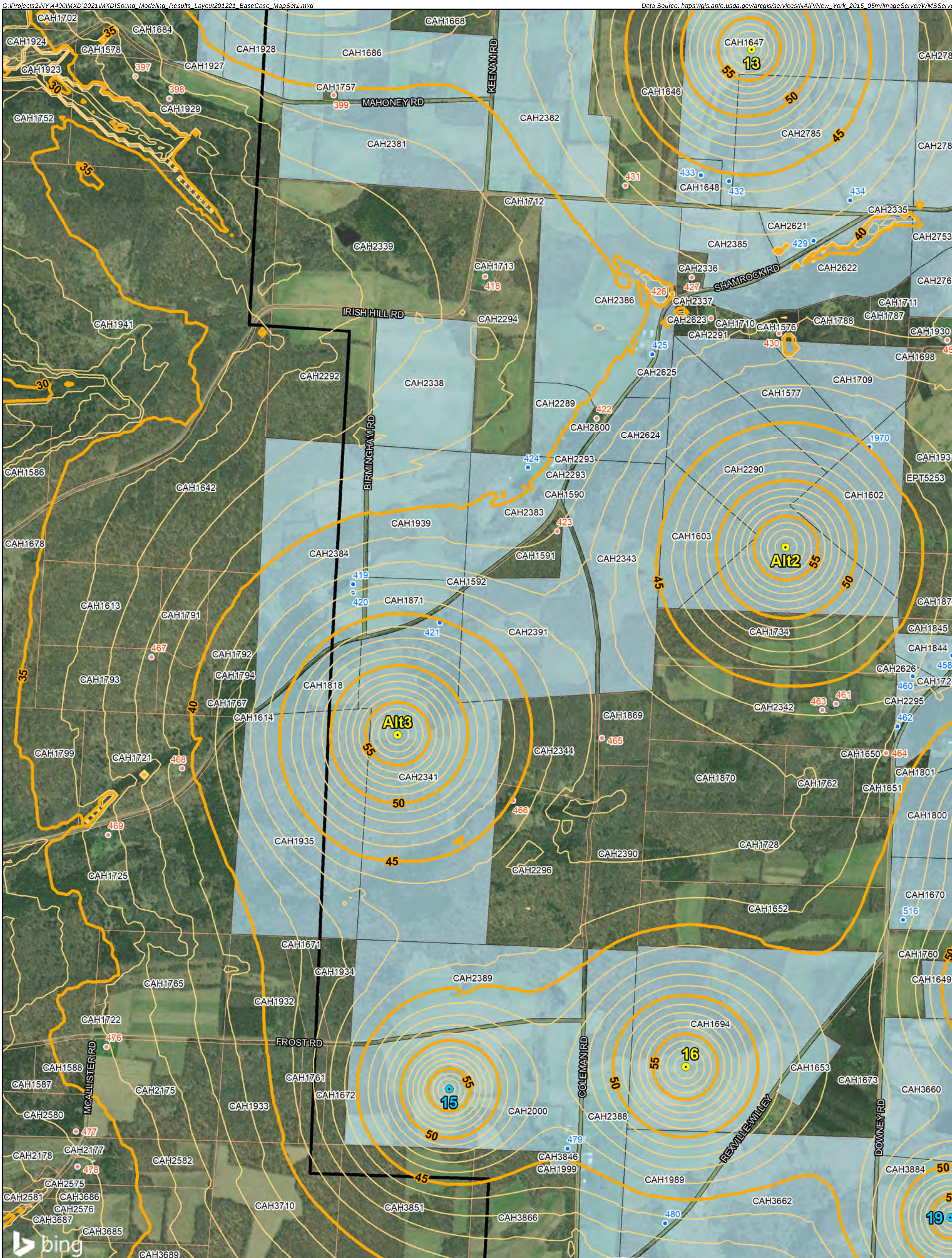
Epsilon ASSOCIATES INC.

Figure 9-2a, Map 11 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 12 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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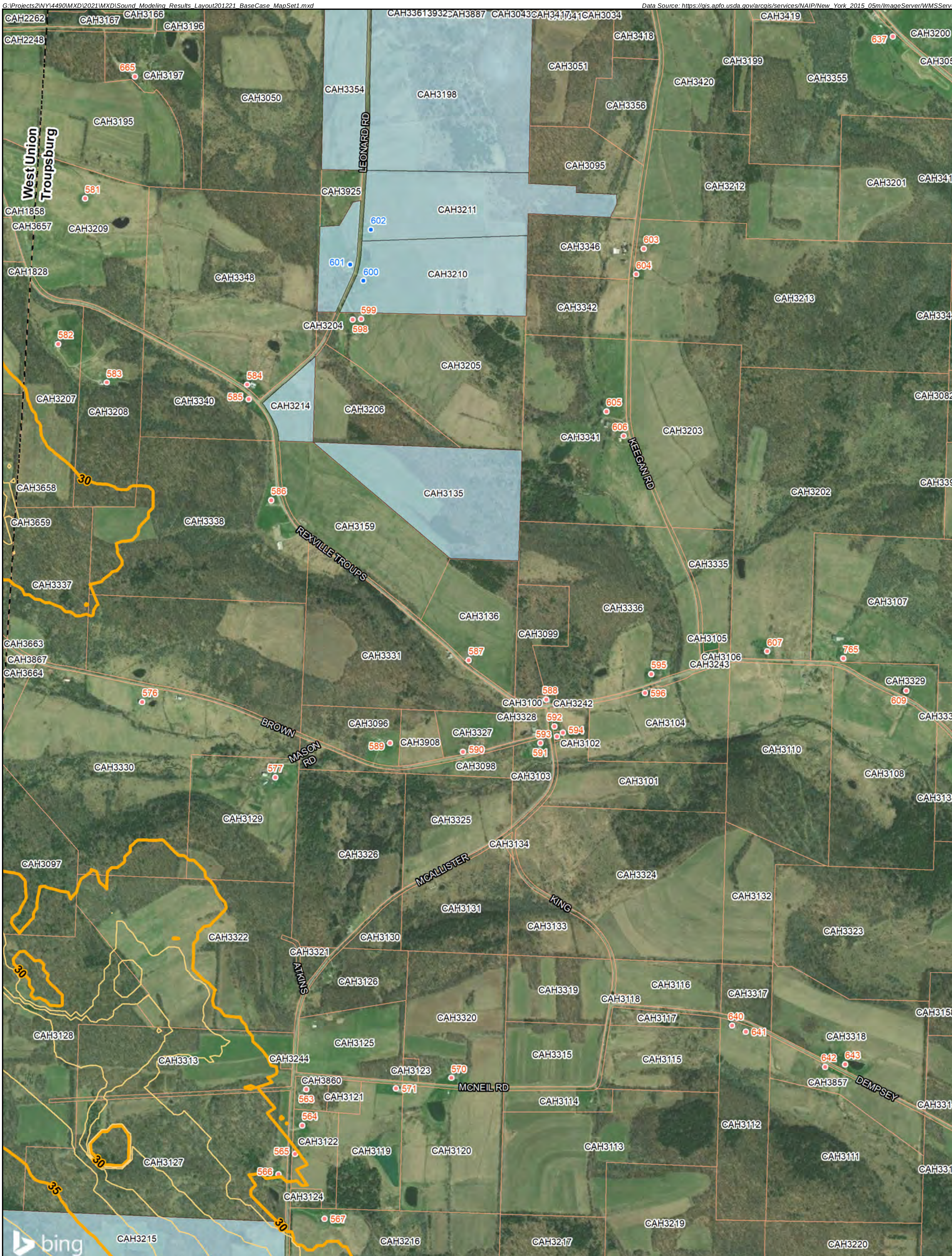
Figure 9-2a, Map 13 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 14 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 15 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 16 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

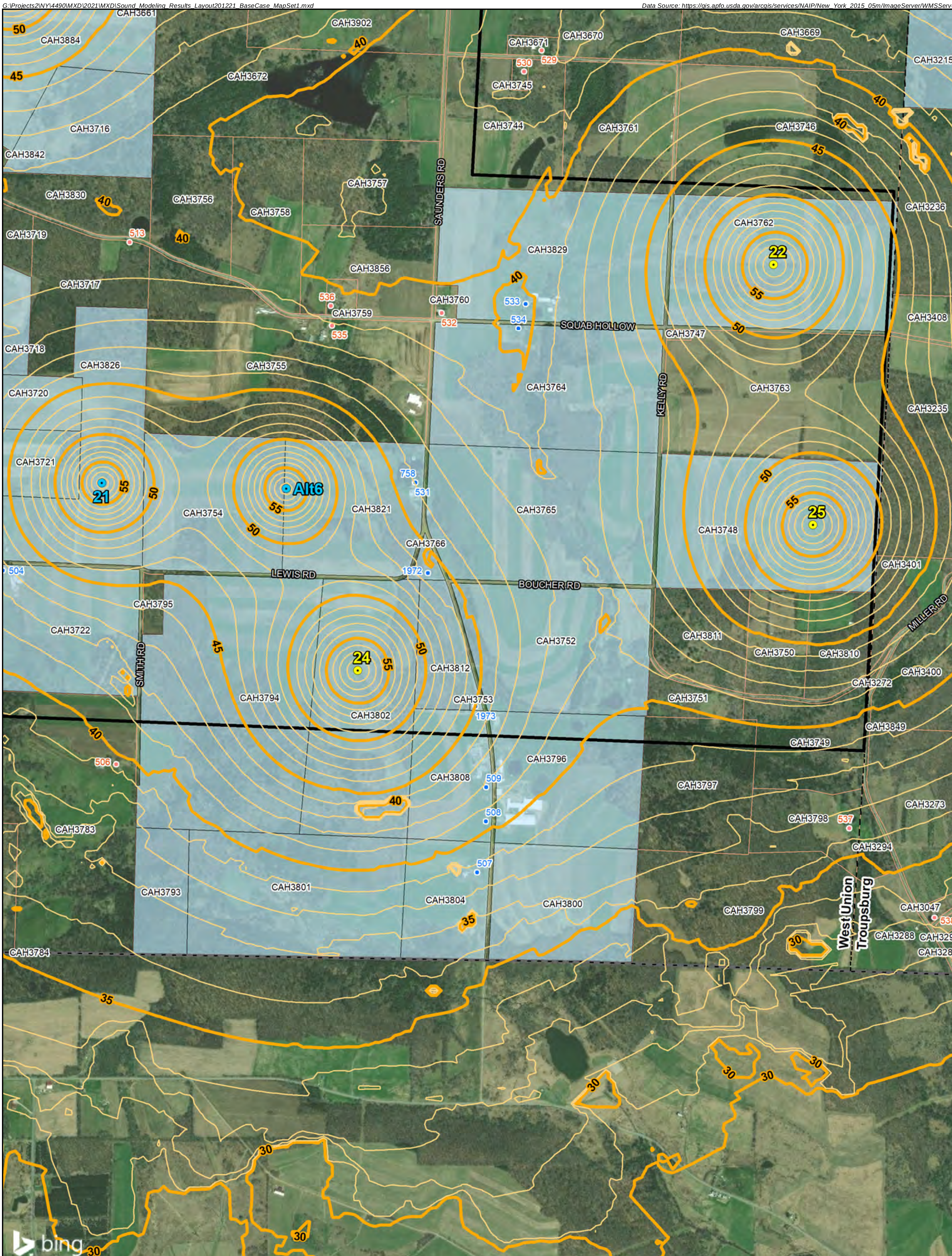
Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 17 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

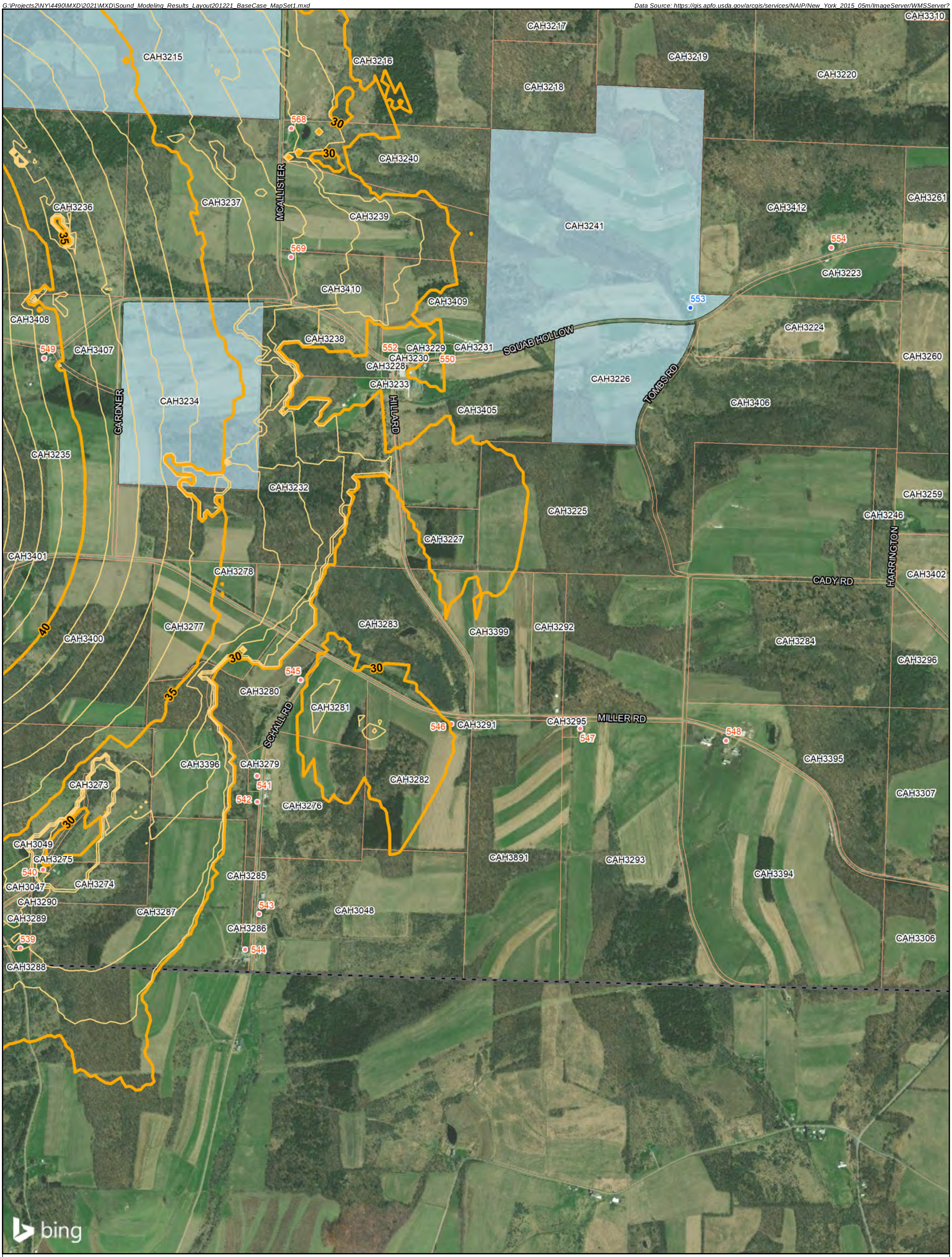
Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 18 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

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Figure 9-2a, Map 19 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 20 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet_P21.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:6,000
1 inch = 500 feet

0 300 600 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2a, Map 21 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_BaseCase_MapSet_P22.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:3,600
1 inch = 300 feet

0 150 300
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2a, Map 22 of 22

Short-Term Sound Level Modeling Results- Wind Generating Facility- Base Case

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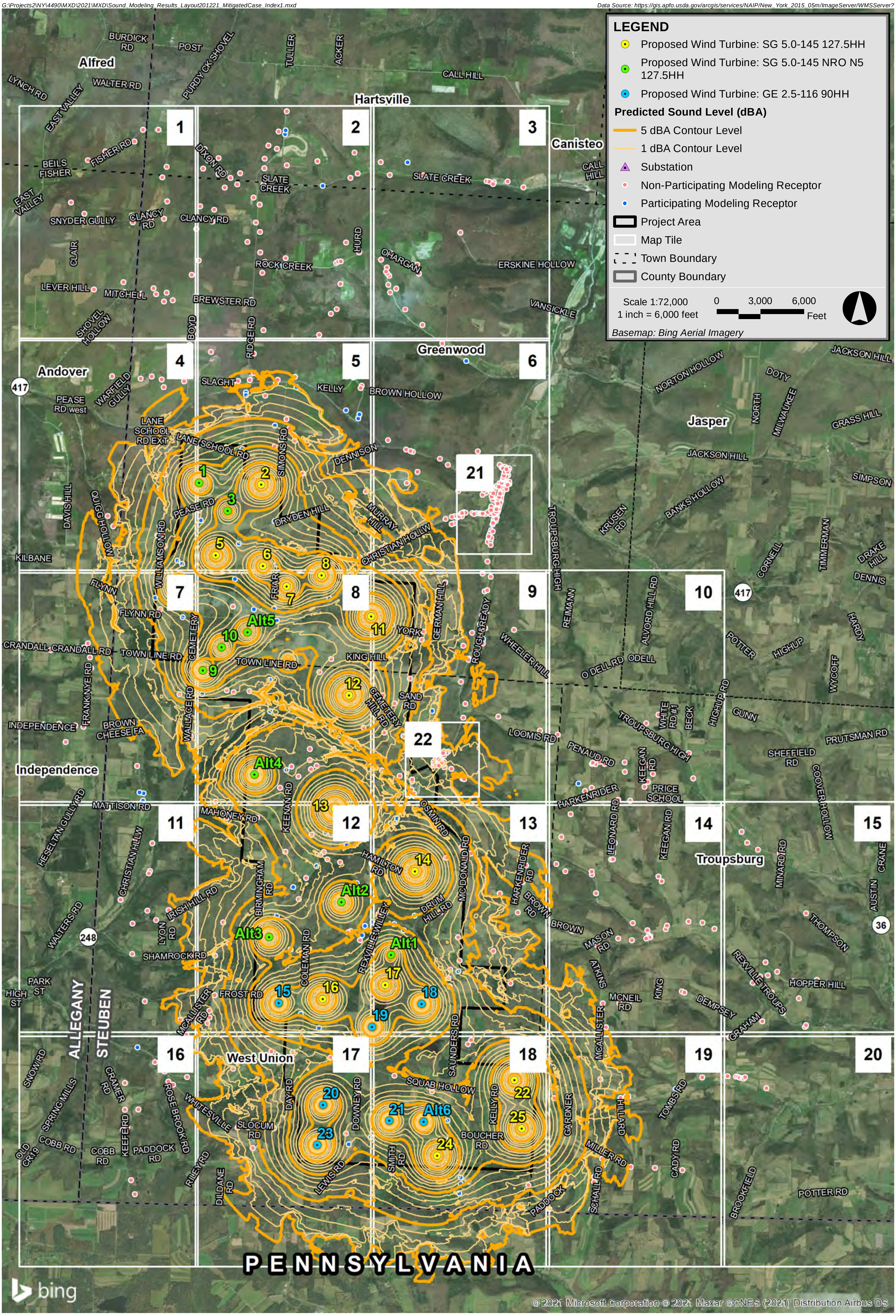

Eight Point Wind Energy Center Steuben County, New York

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Figure 9-2b, Index

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Figure 9-2b, Map 1 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

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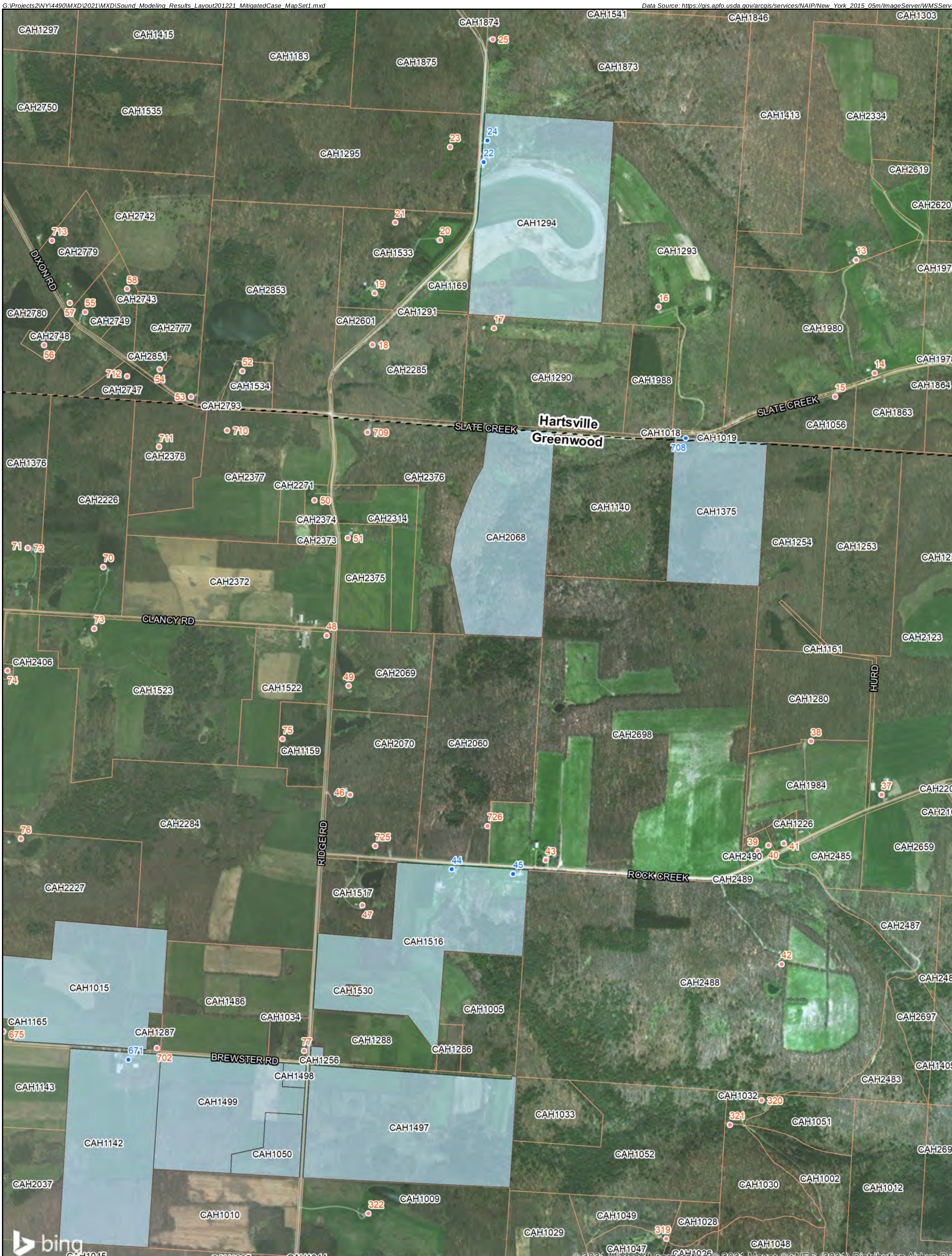


LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

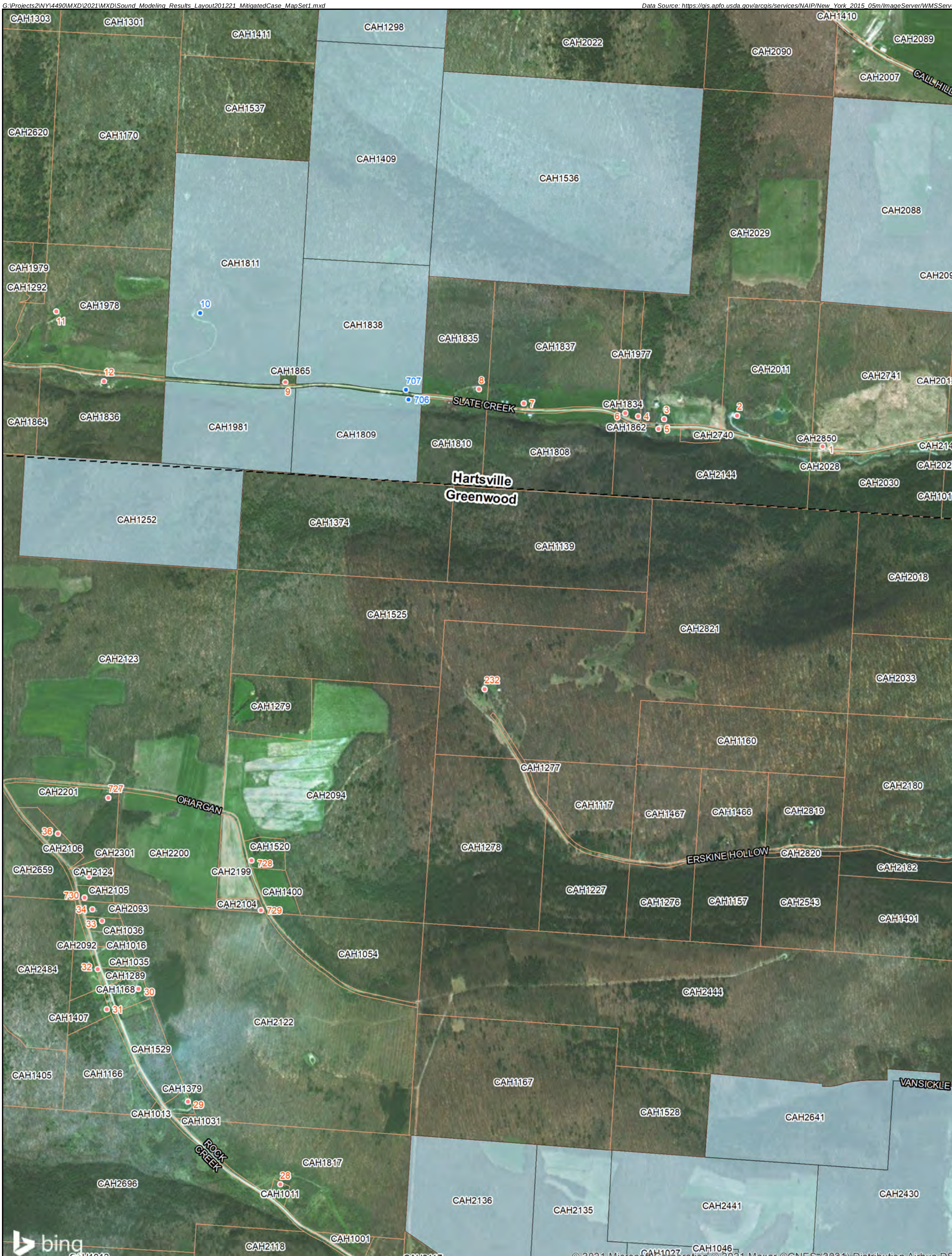
Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 2 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon Associates Inc.

Figure 9-2b, Map 3 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 4 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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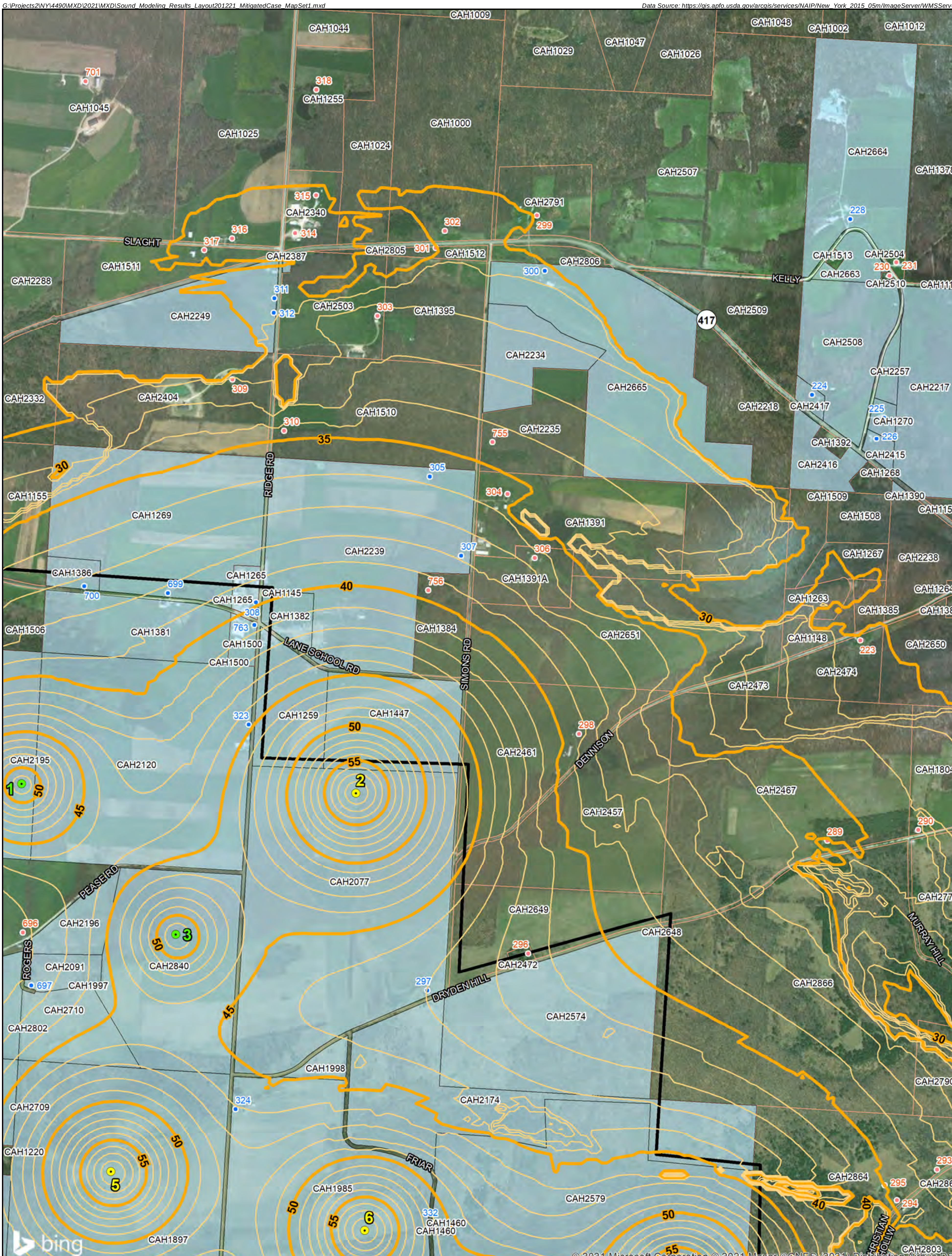

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor

- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 5 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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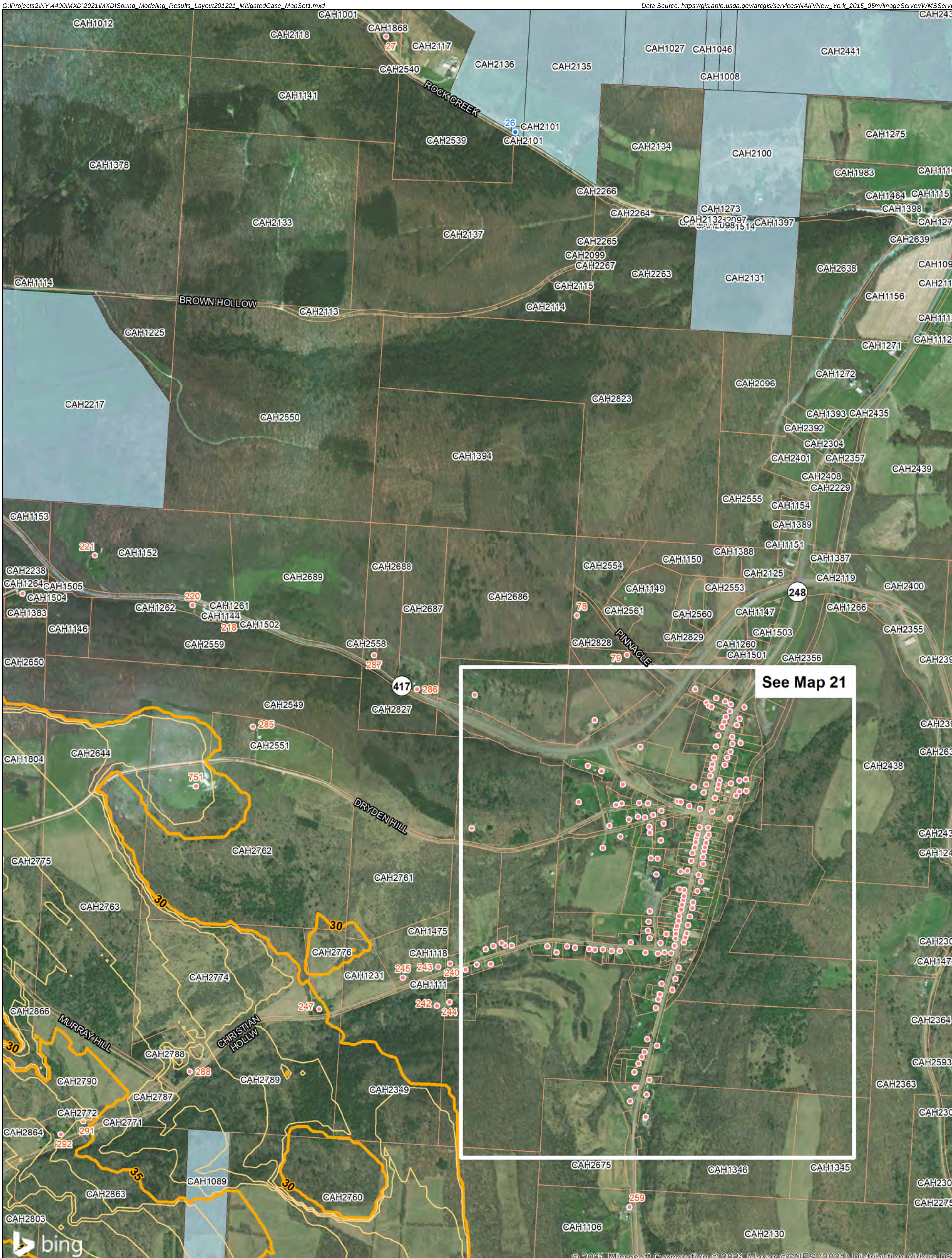

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon Associates Inc.

Figure 9-2b, Map 6 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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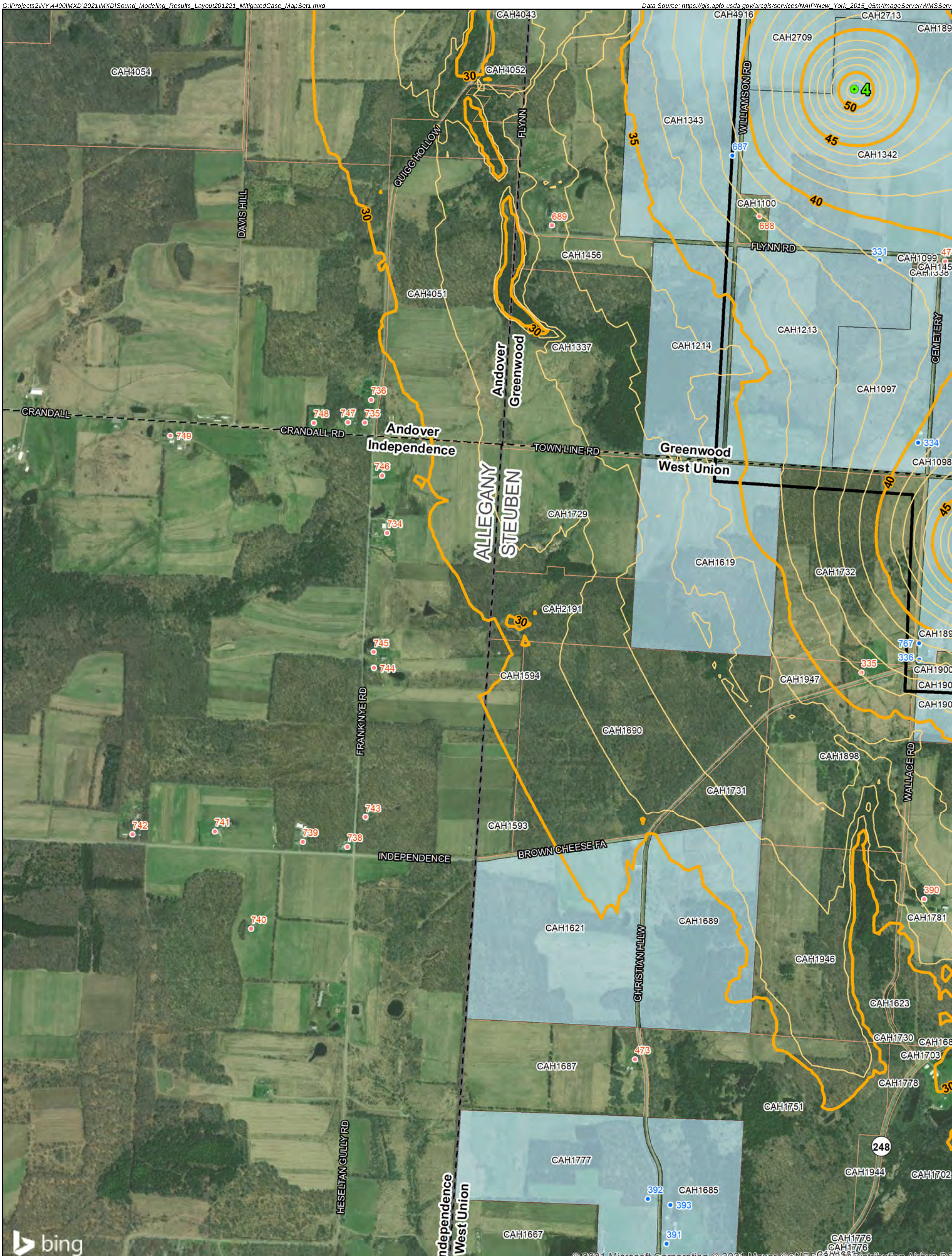
Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 7 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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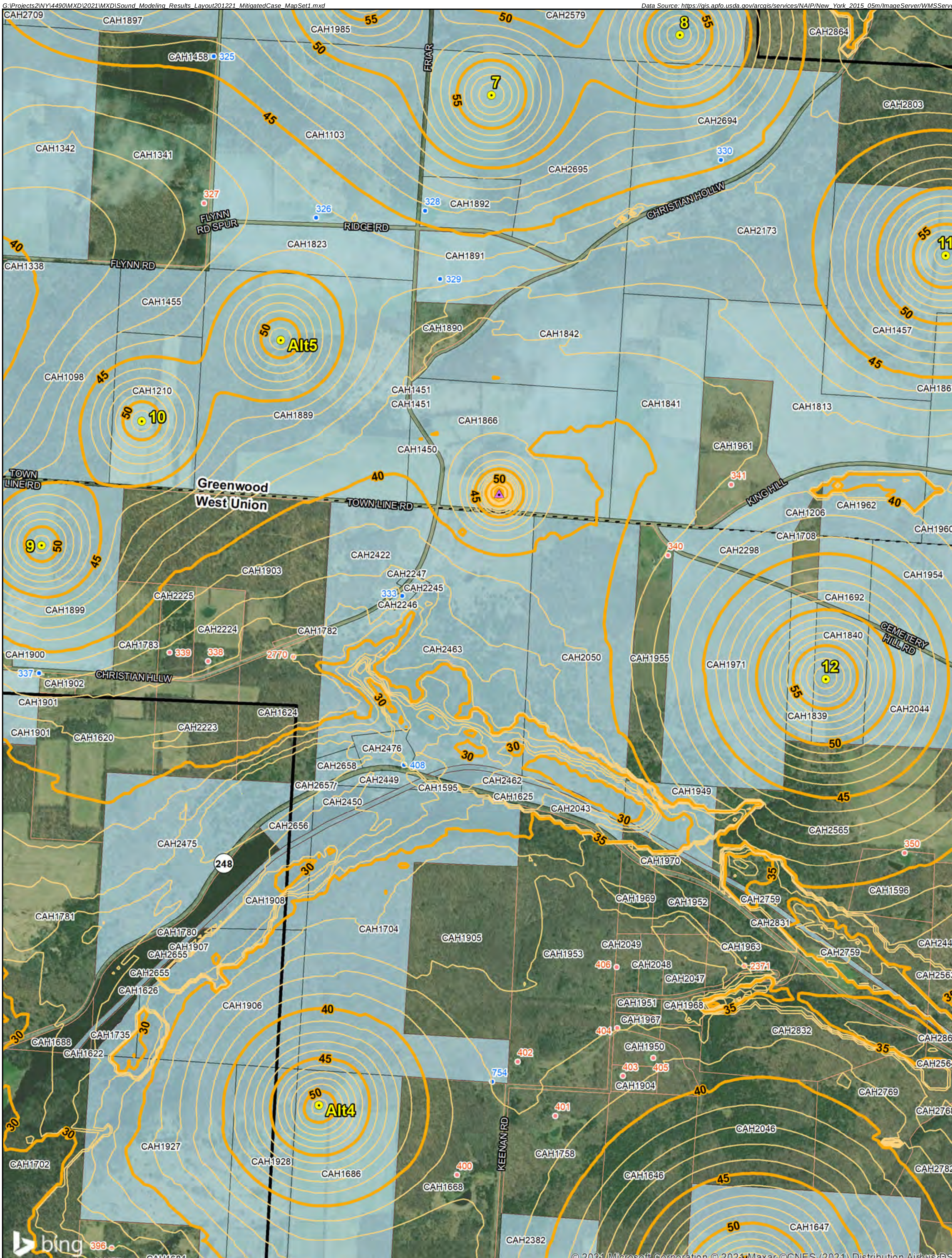
Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 8 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 9 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

Epsilon ASSOCIATES INC.

Figure 9-2b, Map 10 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200
Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

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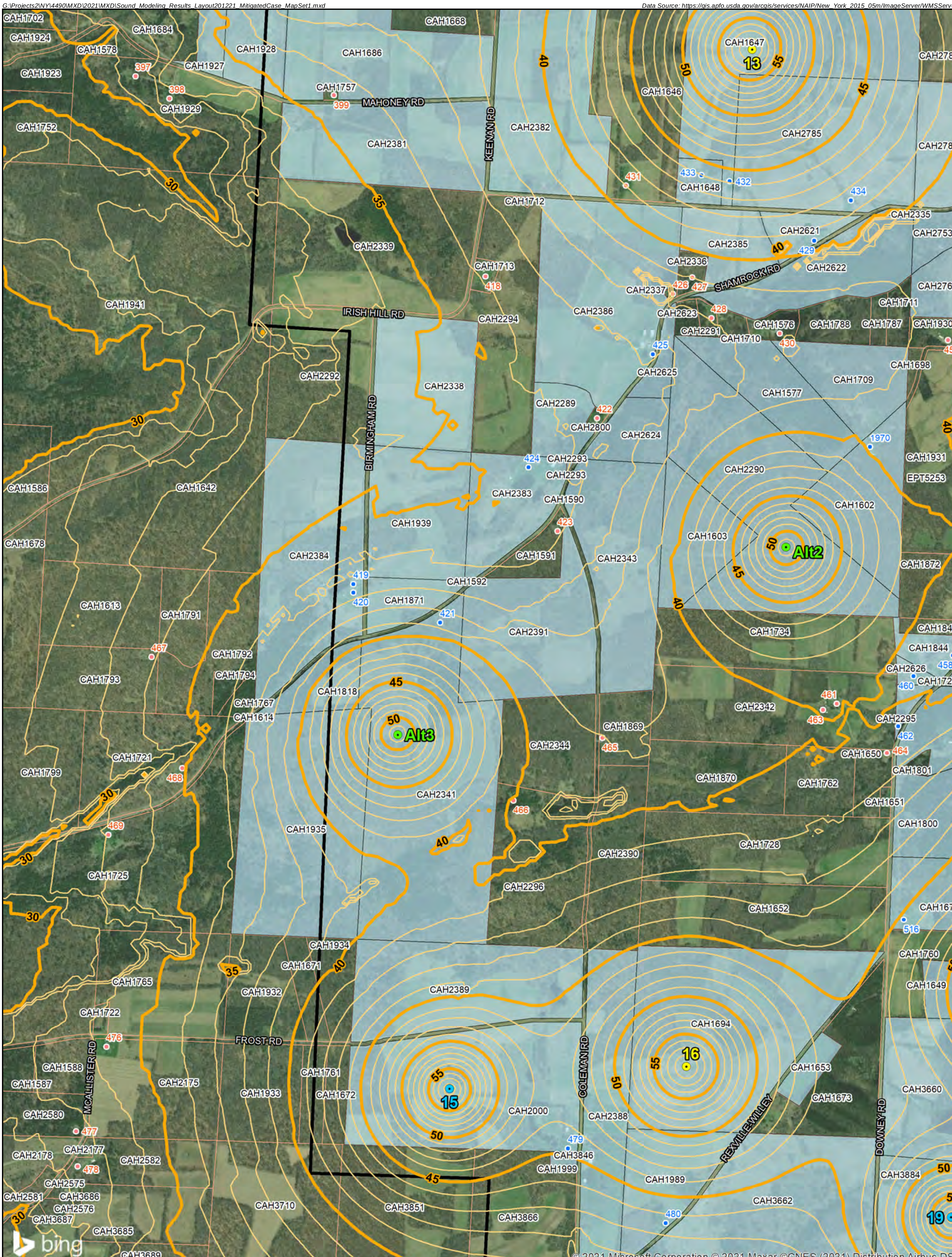
Figure 9-2b, Map 11 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2b, Map 12 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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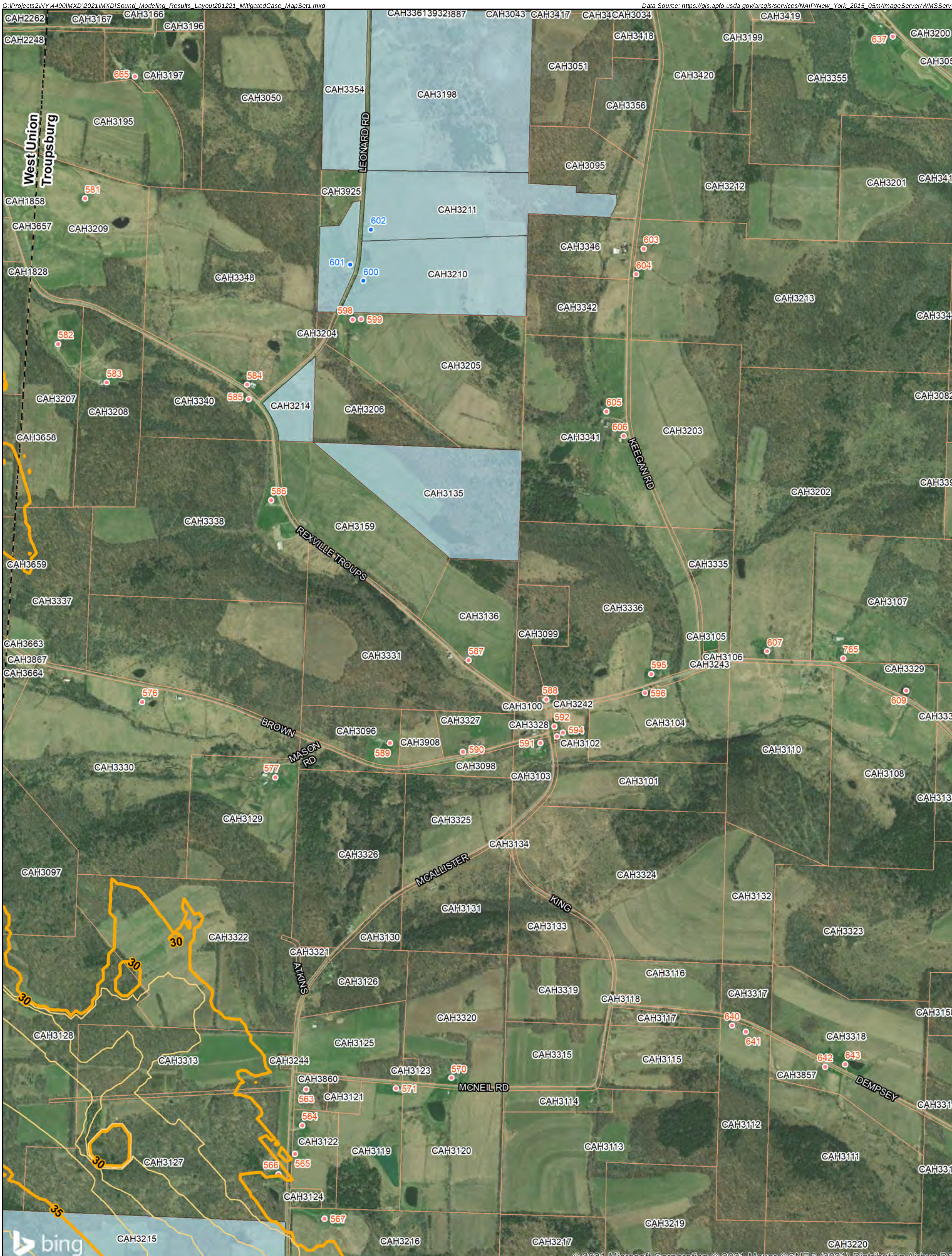
Figure 9-2b, Map 13 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center Steuben County, New York

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Figure 9-2b, Map 14 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

G:\Projects2\NY\4490\MXD\2021\MXD\Sound_Modeling_Results_Layout201221_MitigatedCase_MapSet1.mxd

Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
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- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor
- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

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Figure 9-2b, Map 15 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
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- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor

- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

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Figure 9-2b, Map 16 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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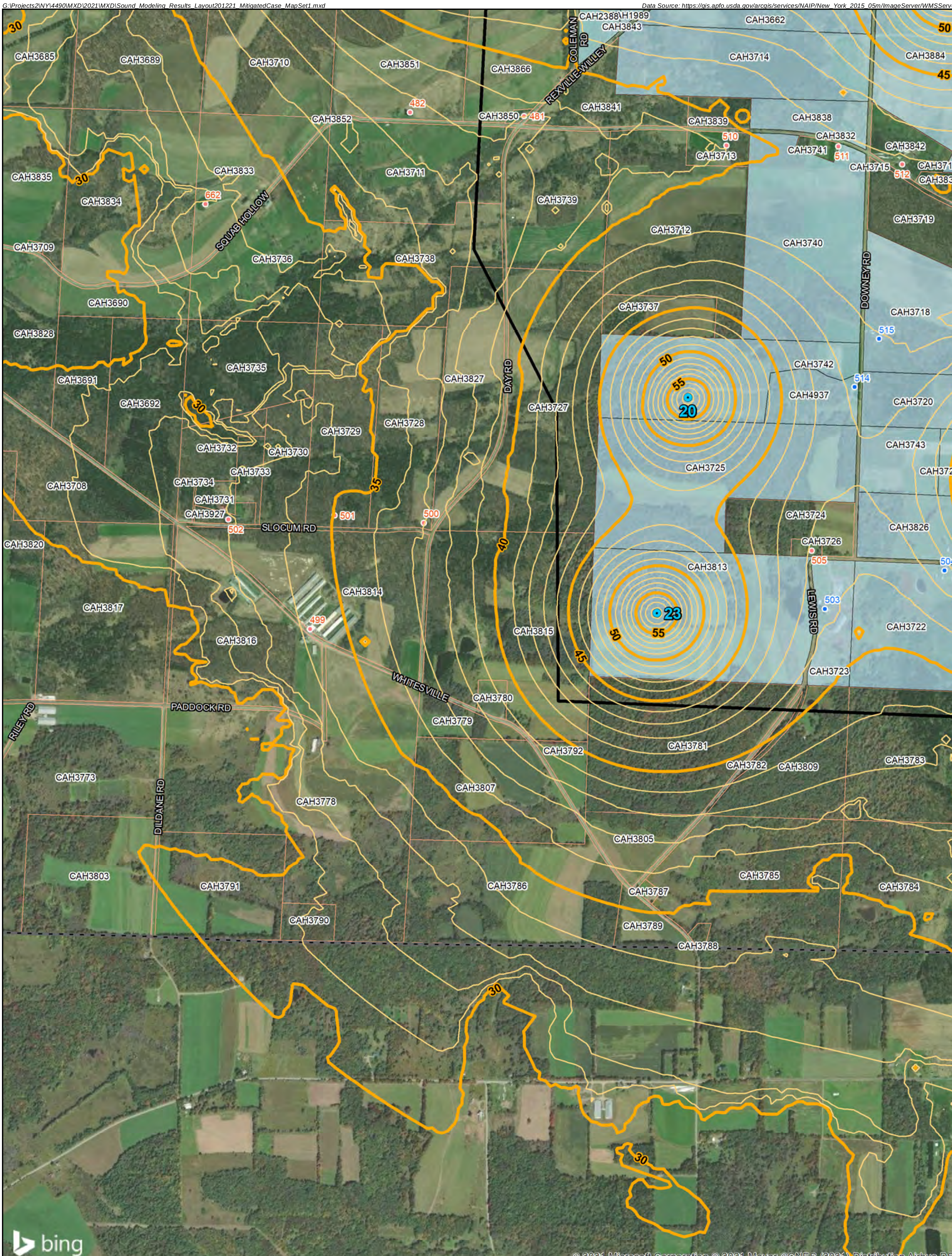
Data Source: https://gis.apfo.usda.gov/arcgis/services/NAIP/New_York_2015_05m/ImageServer/WMSServer?



LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
- Substation
- Non-Participating Modeling Receptor
- Participating Modeling Receptor

- Project Area
- Participating Parcel
- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2b, Map 17 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case

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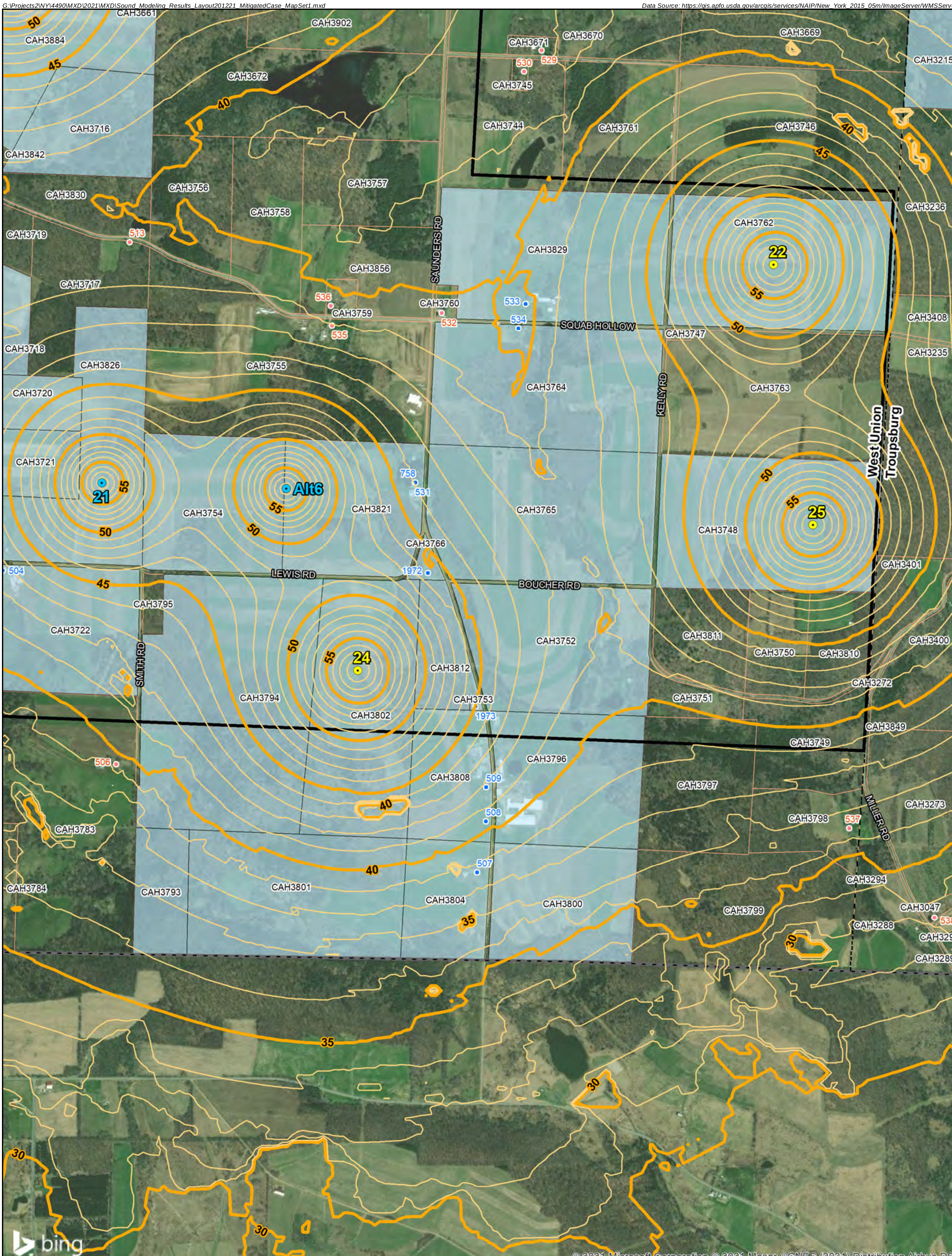

LEGEND

- Proposed Wind Turbine: SG 5.0-145 127.5HH
- Proposed Wind Turbine: SG 5.0-145 NRO N5 127.5HH
- Proposed Wind Turbine: GE 2.5-116 90HH
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- Non-Participating Parcel
- Town Boundary
- County Boundary

Predicted Sound Level (dBA)

- 5 dBA Contour Level
- 1 dBA Contour Level

Scale 1:14,400
1 inch = 1,200 feet

0 600 1,200 Feet

Basemap: Bing Aerial Imagery

Eight Point Wind Energy Center **Steuben County, New York**

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Figure 9-2b, Map 18 of 21

Short-Term Sound Level Modeling Results- Wind Generating Facility- Mitigated Case