

Legend

- Noise Sensitive Receptor (Non-participating)
- ⓘ Noise Sensitive Receptor (Non-participating, Cemetery)
- Ⓜ Noise Sensitive Receptor (Non-participating, Church)
- Ⓜ Noise Sensitive Receptor (Participating, Museum)
- HDD Location
- Project Parcel/Non-participating Property
- Project Parcel/Participating Property
- Facility Site
- Project Site Boundary
- Municipal Boundary
- Utility ROW
- ▲ Kintigh Substation

Received Sound Levels (dBA)

30 - 35	60 - 65
35 - 40	65 - 70
40 - 45	70 - 75
45 - 50	75 - 80
50 - 55	>80
55 - 60	

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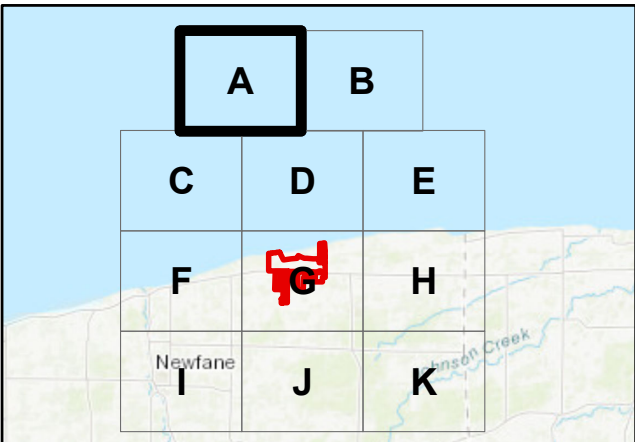
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Figure 23
 HDD Sound Levels, (dBA)

Somerset Solar
 Niagara County, NY
 March 2023














Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

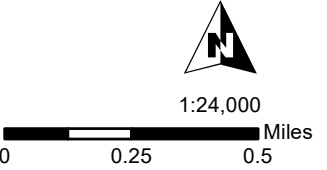


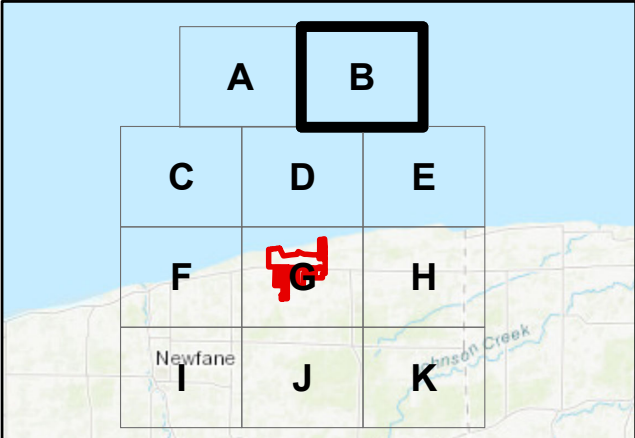
Figure 23A

HDD Sound Levels, (dBA)


Somerset Solar
 Niagara County, NY
 March 2023














Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend

 Project Site Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

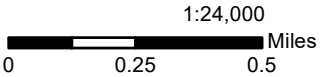


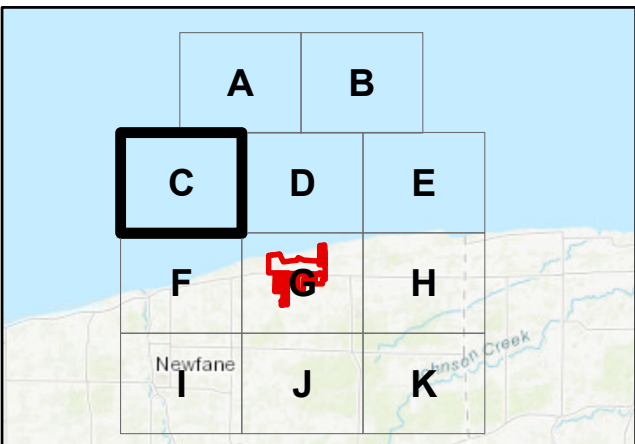
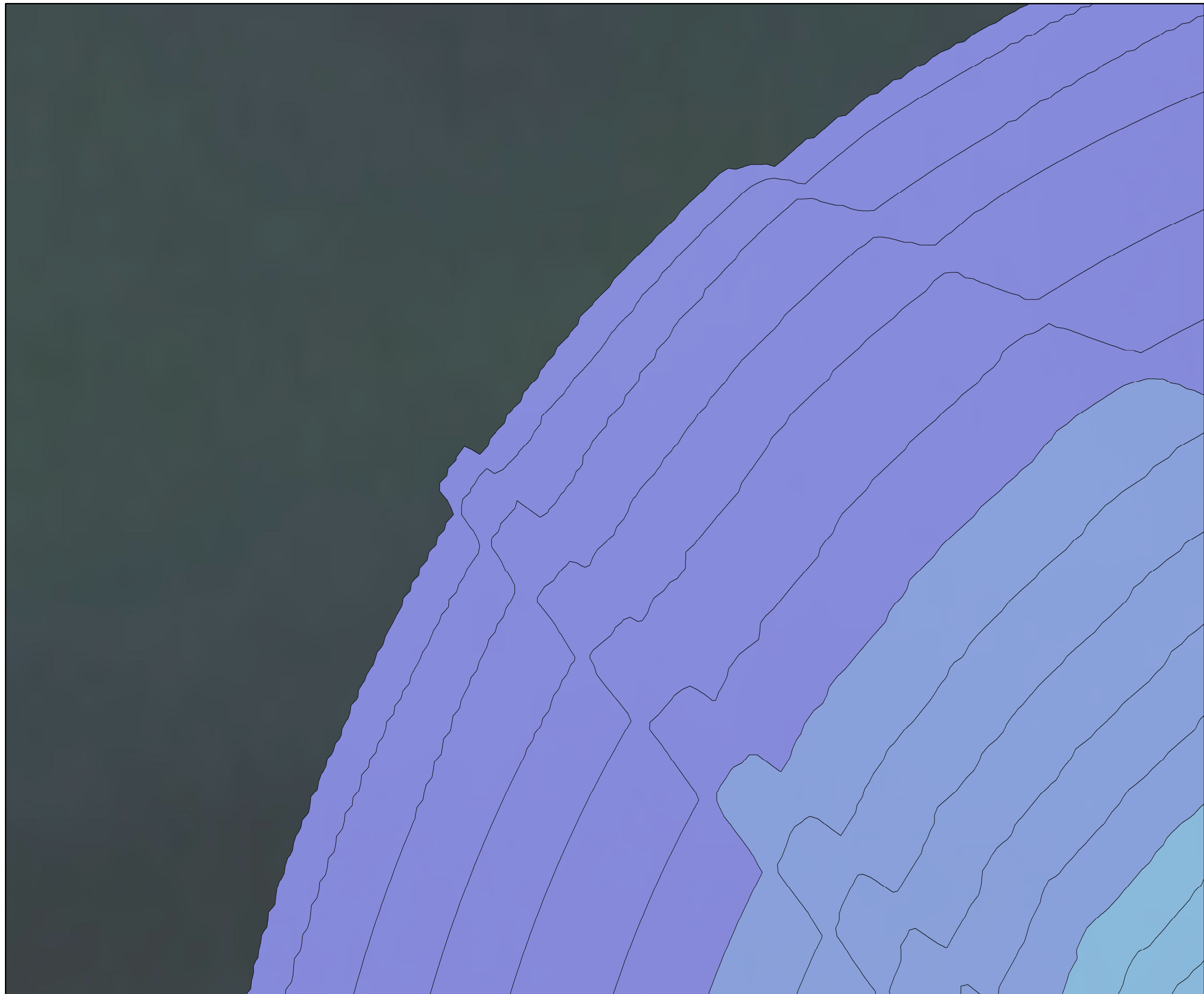
Figure 23B

HDD Sound Levels, (dBA)

Somerset Solar
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









Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

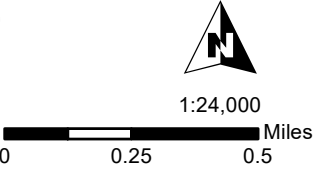


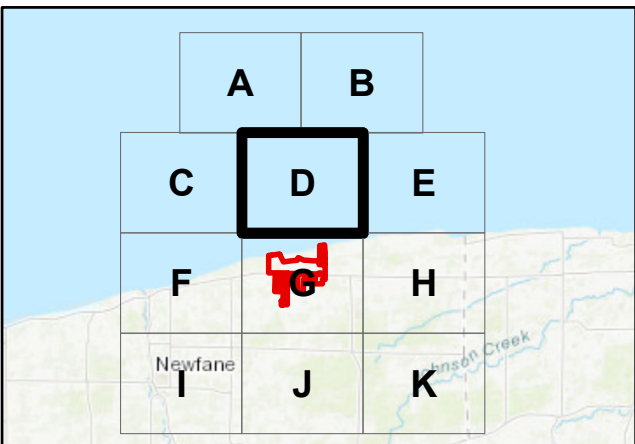
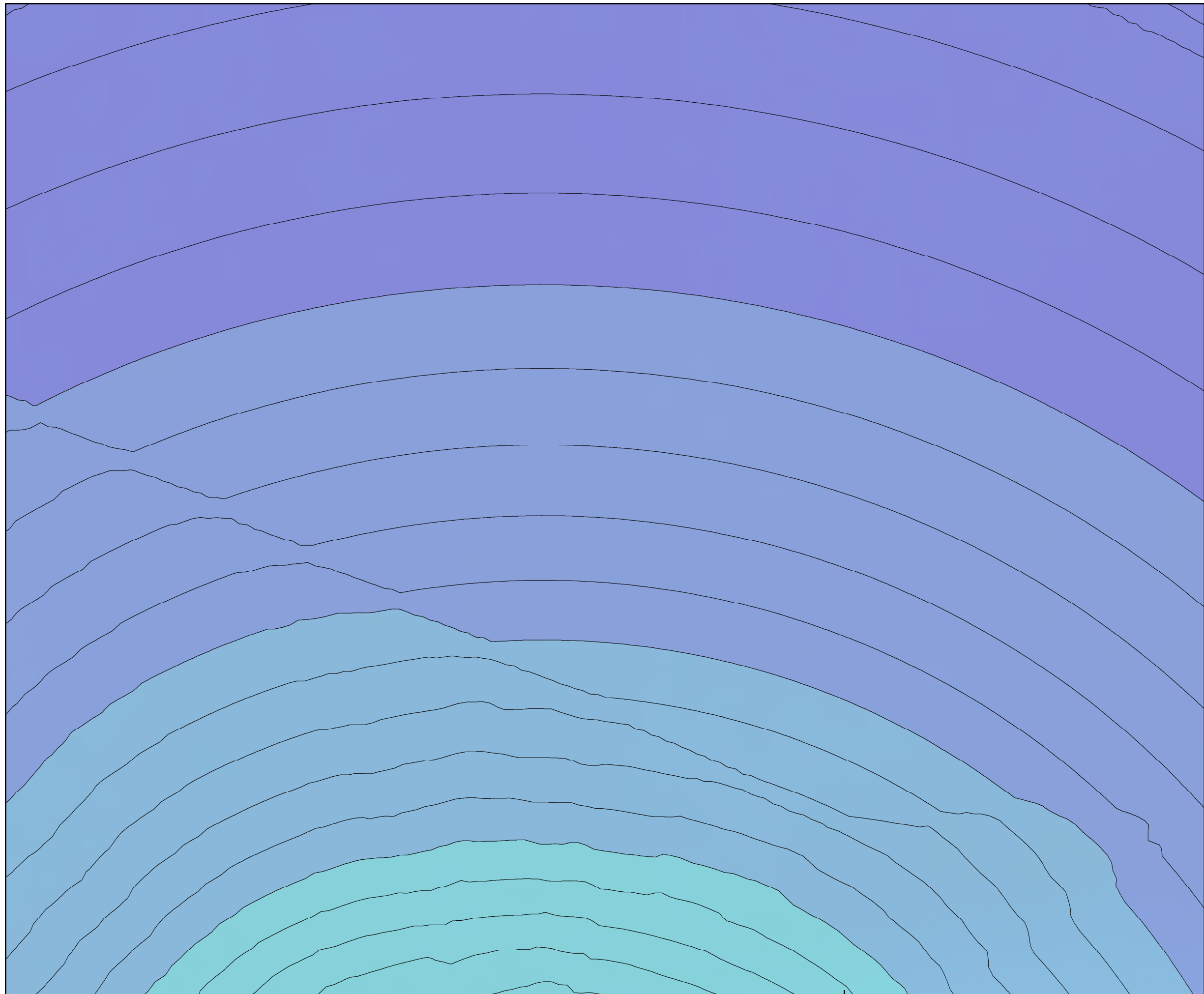
Figure 23C

HDD Sound Levels, (dBA)

Somerset Solar
 Niagara County, NY
 March 2023














Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

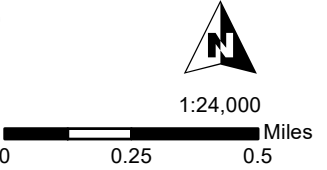


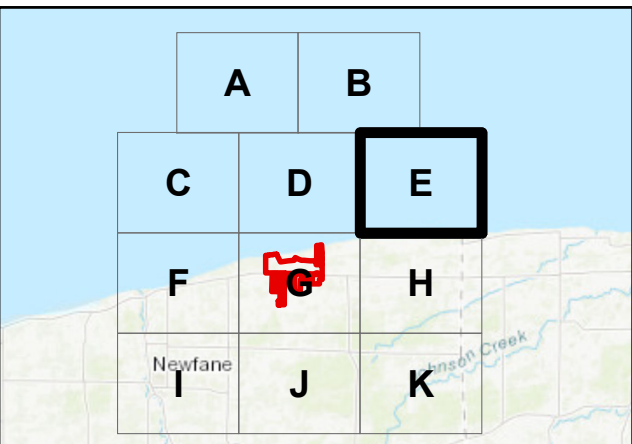
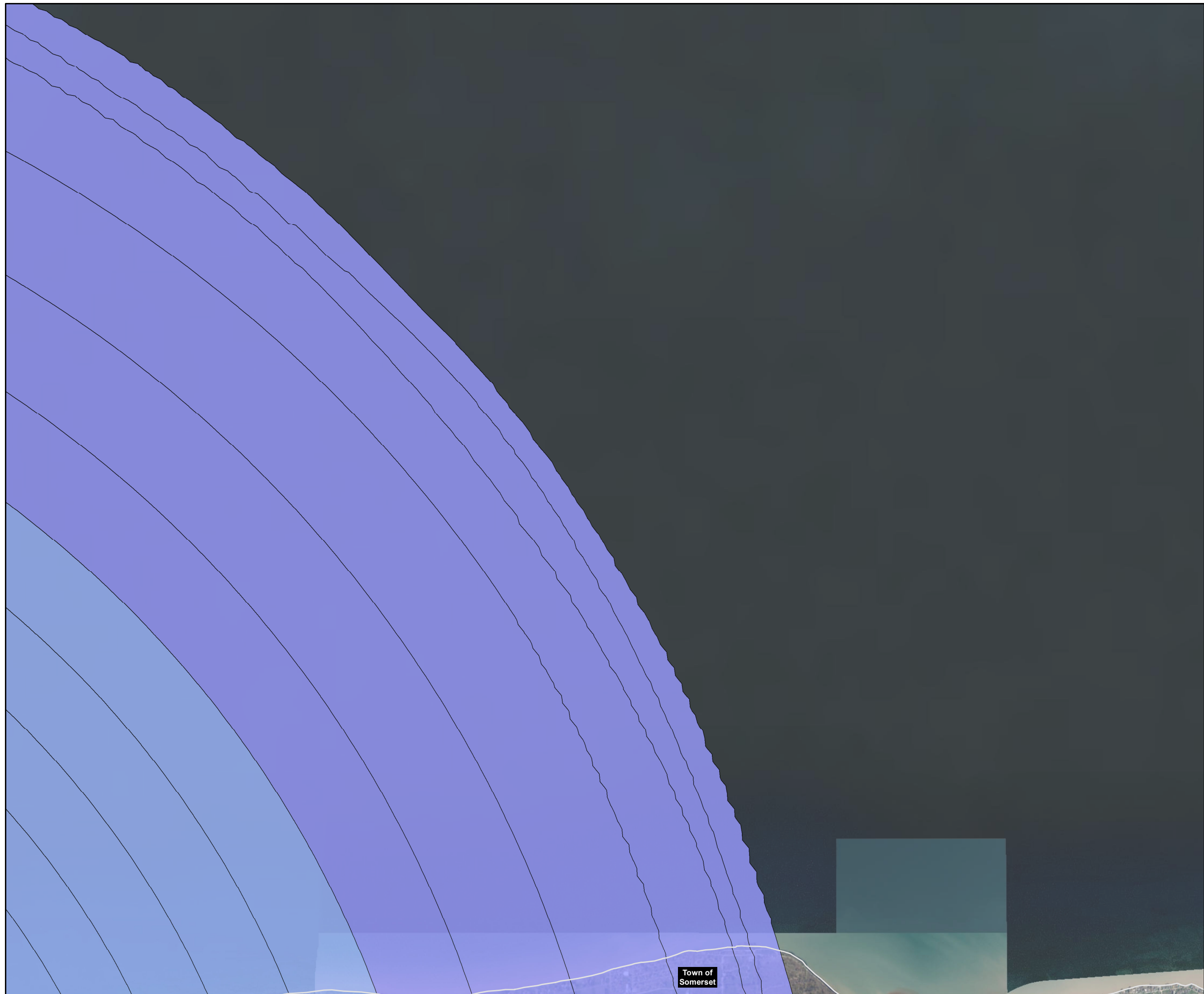
Figure 23D



HDD Sound Levels, (dBA)

Somerset Solar
 Niagara County, NY
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





Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary
 Municipal Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

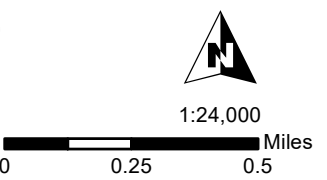


Figure 23E

HDD Sound Levels, (dBA)

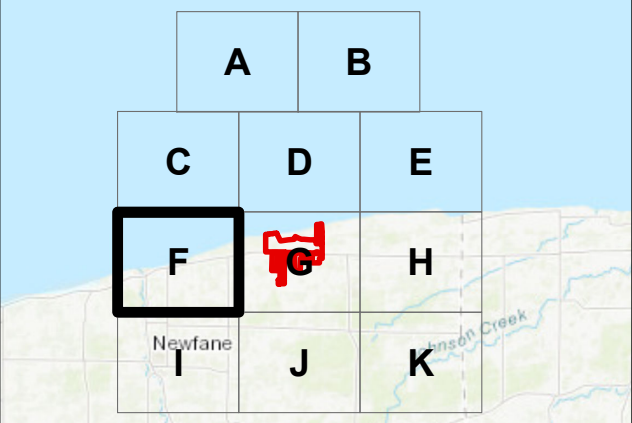
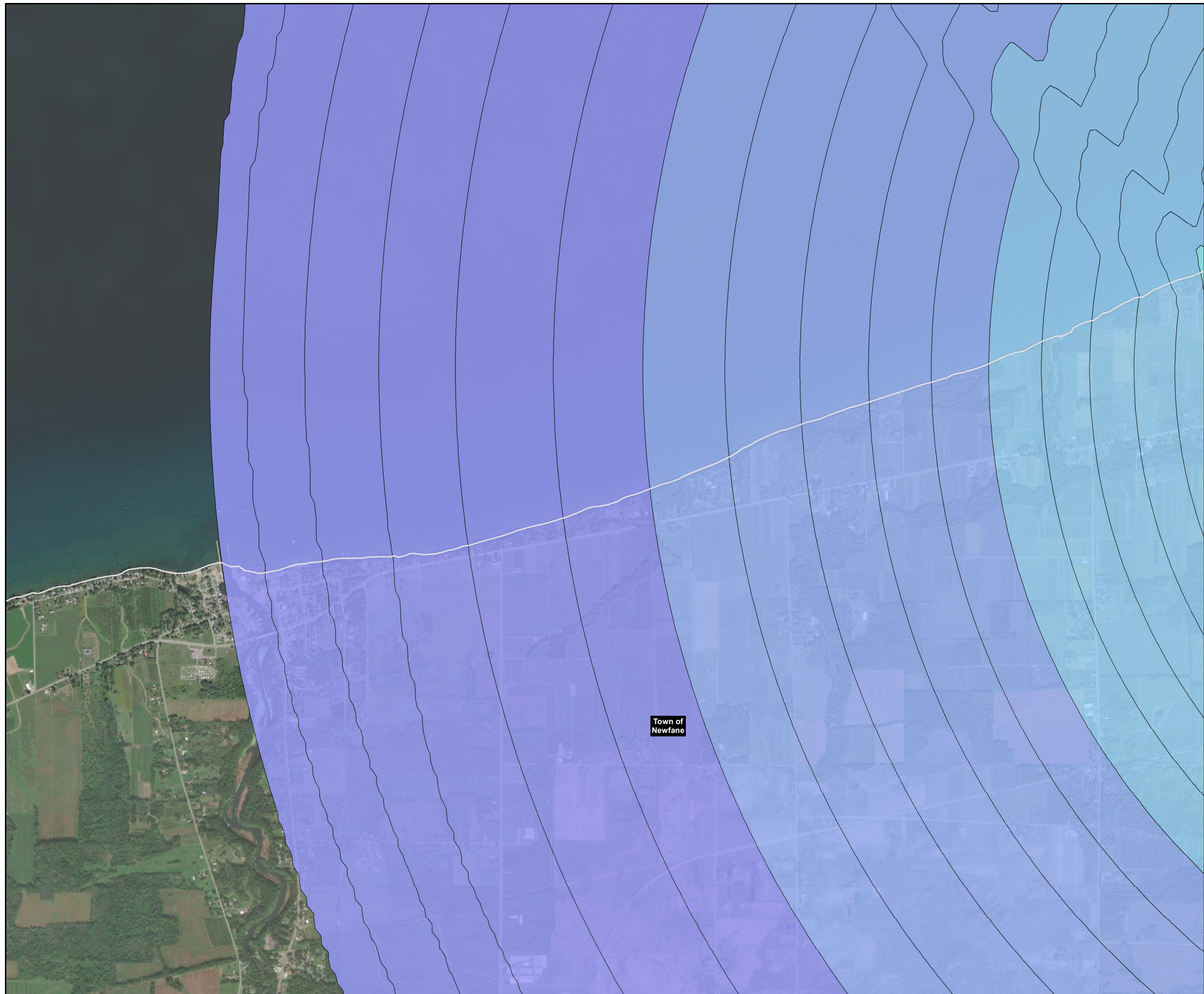
Somerset Solar
 Niagara County, NY
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Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend

- Project Site Boundary
- Municipal Boundary

Received Sound Levels (dBA)

	30 - 35		60 - 65
	35 - 40		65 - 70
	40 - 45		70 - 75
	45 - 50		75 - 80
	50 - 55		>80
	55 - 60		

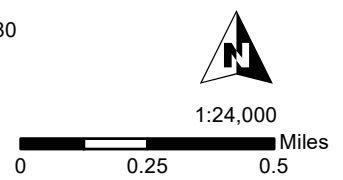


Figure 23F

HDD Sound Levels, (dBA)

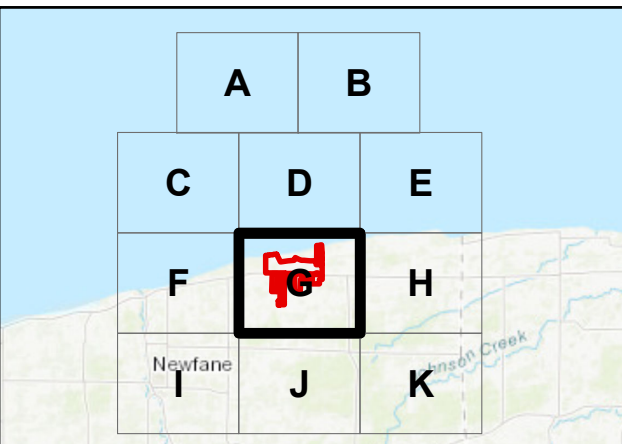
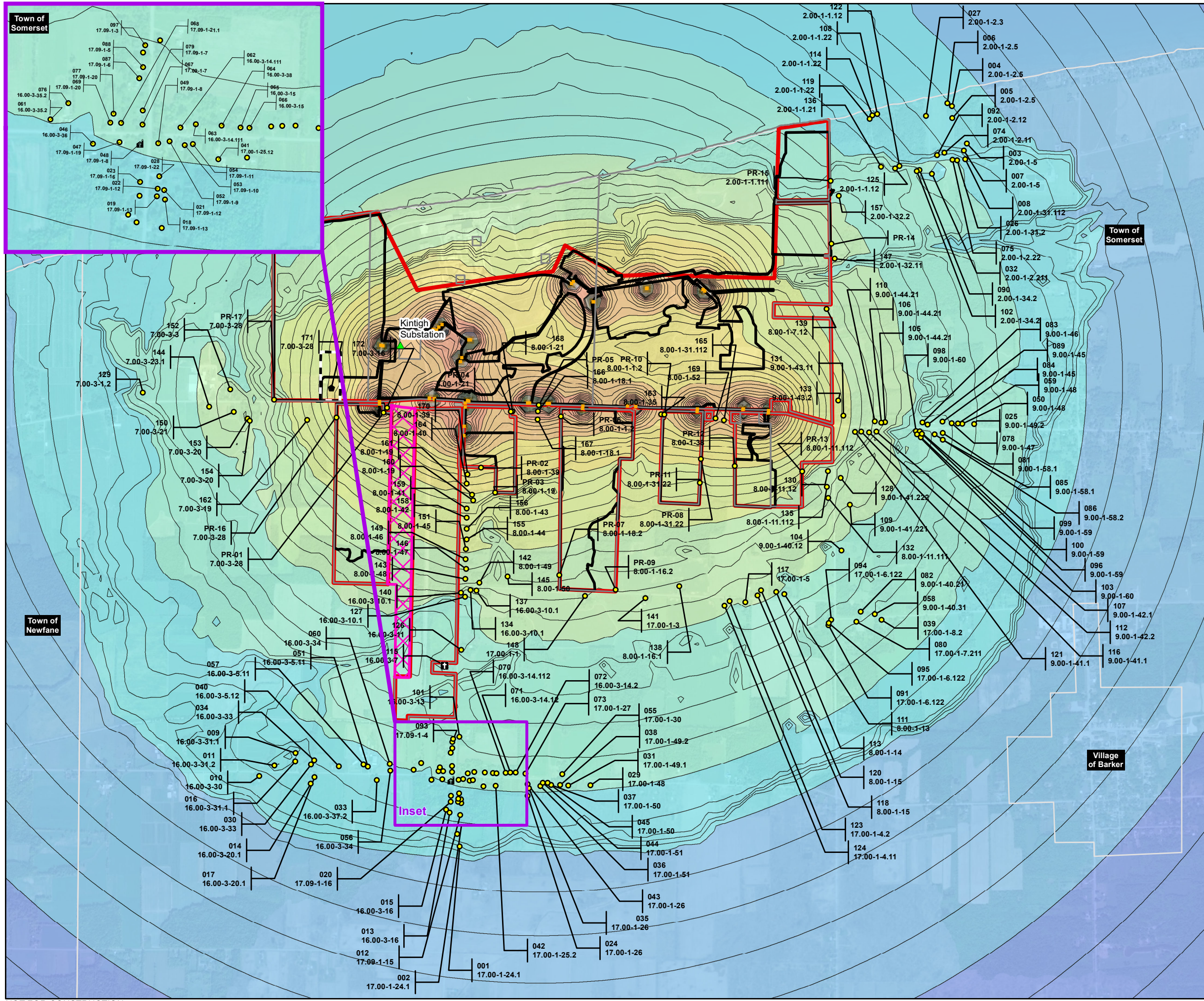
Somerset Solar
Niagara County, NY
March 2023



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Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



- Legend**
- Noise Sensitive Receptor (with NSR ID and Tax ID)
 - Noise Sensitive Receptor (Non-participating)
 - Ⓜ Noise Sensitive Receptor (Non-participating, Cemetery)
 - Ⓜ Noise Sensitive Receptor (Non-participating, Church)
 - Ⓜ Noise Sensitive Receptor (Participating, Museum)
 - HDD Location
 - ▭ Project Parcel/Non-participating Property
 - ▭ Project Parcel/Participating Property
 - ▭ Facility Site
 - ▭ Project Site Boundary
 - ▭ Municipal Boundary
 - ▭ Utility ROW
 - ▲ Kintigh Substation

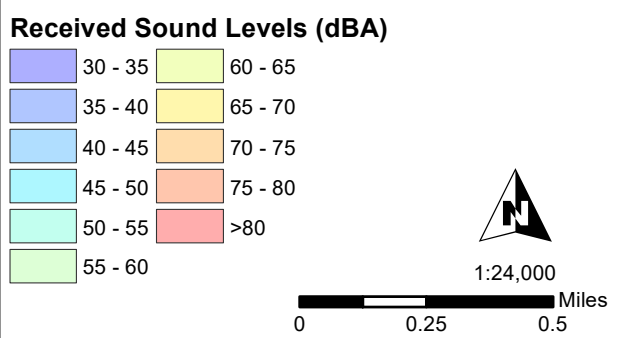
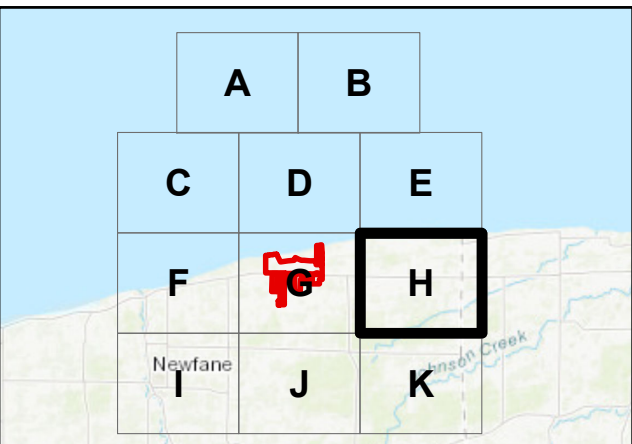
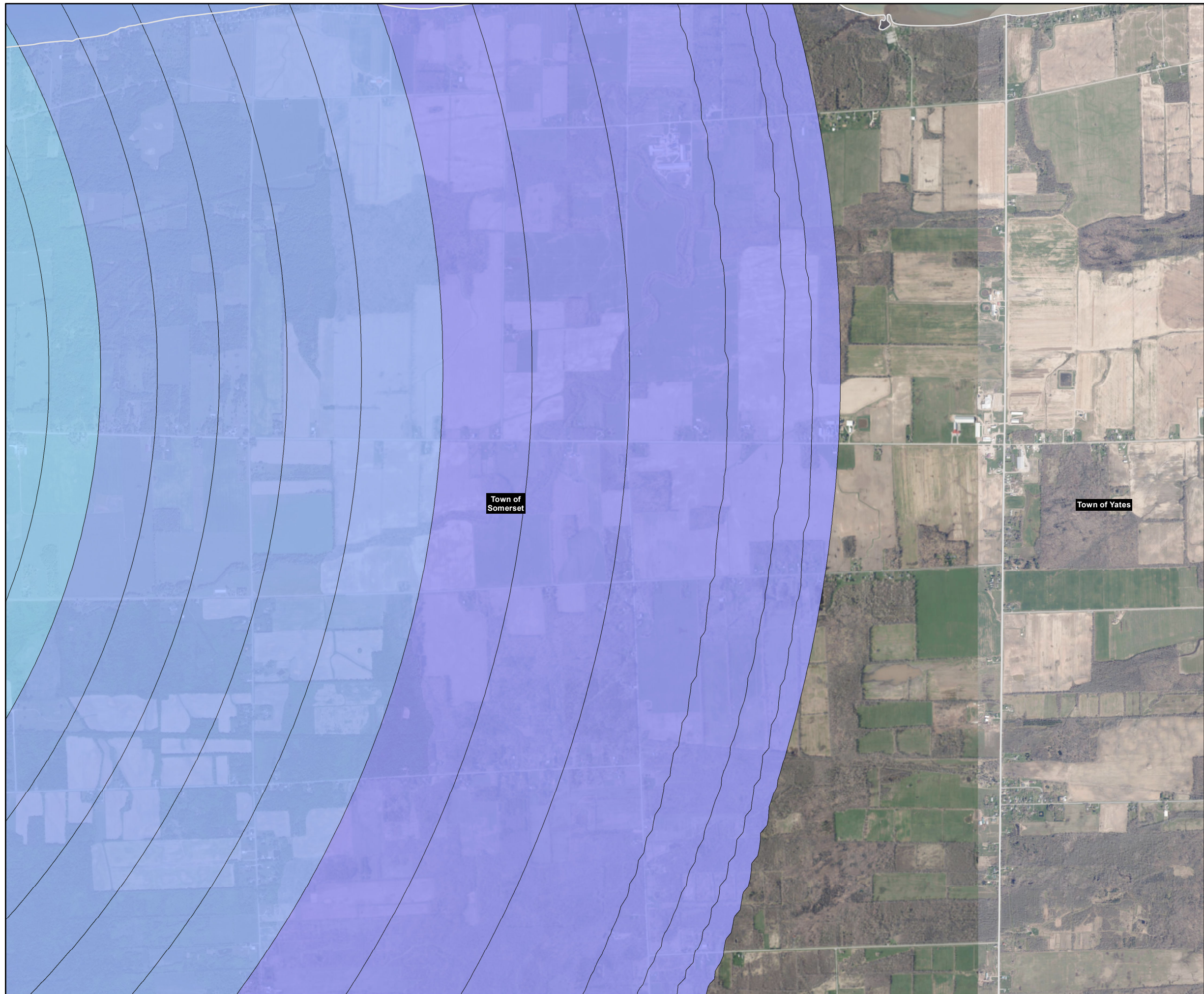




Figure 23G
HDD Sound Levels, (dBA)

Somerset Solar
Niagara County, NY
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





Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary
 Municipal Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

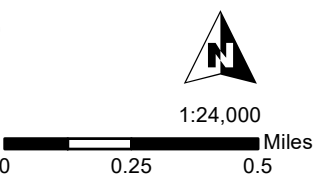


Figure 23H
 HDD Sound Levels, (dBA)

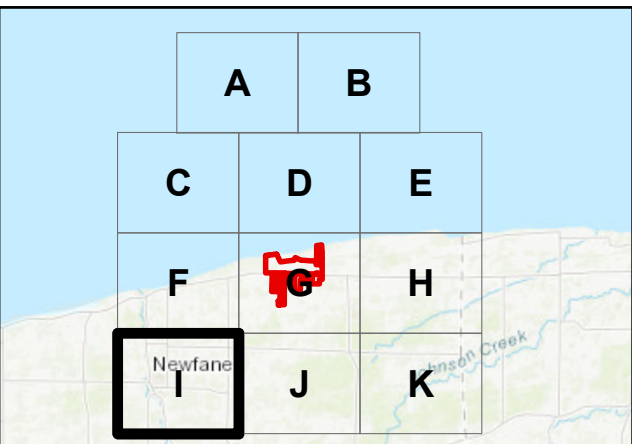
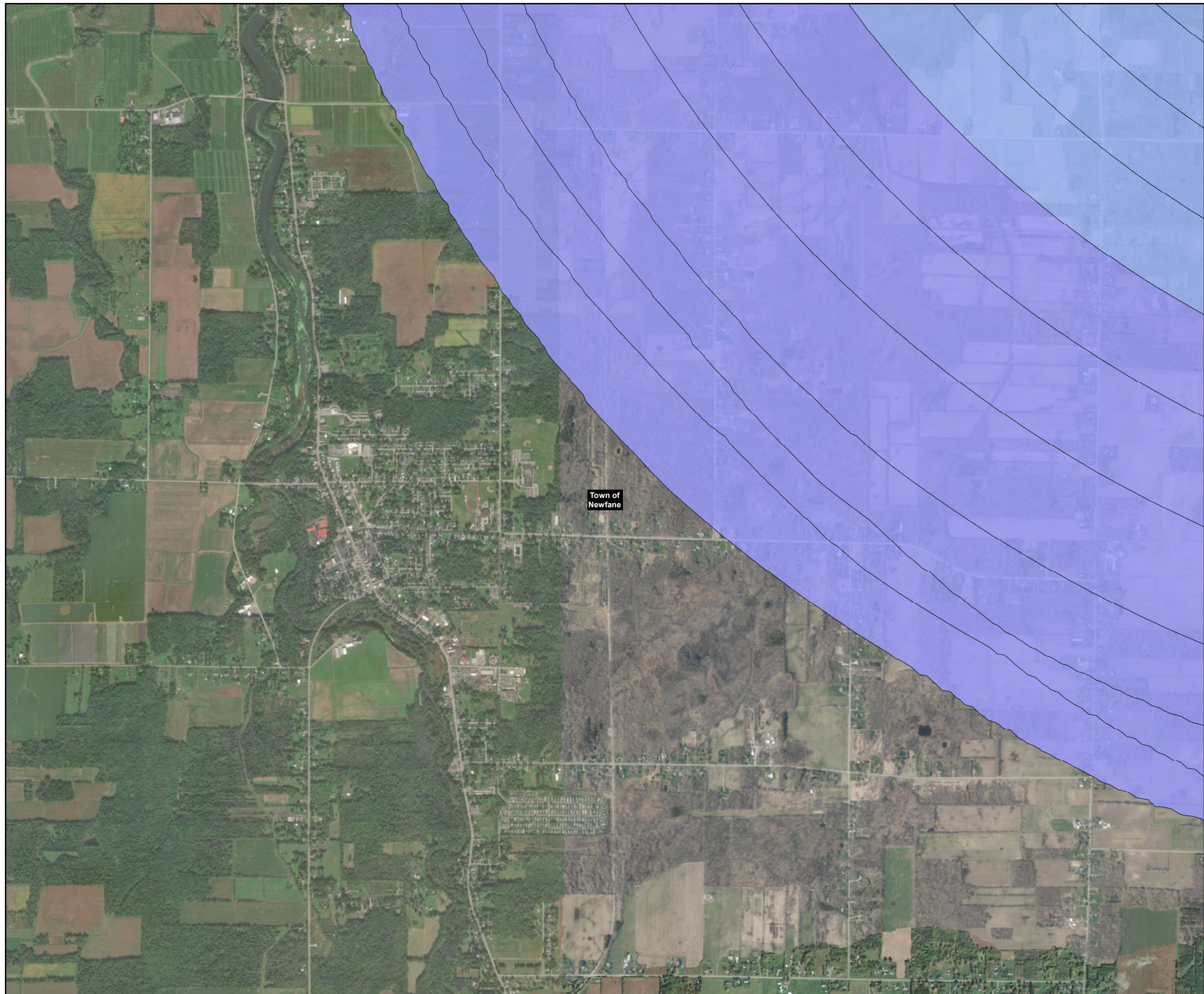
Somerset Solar
 Niagara County, NY
 March 2023





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





Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary
 Municipal Boundary

Received Sound Levels (dBA)

 30 - 35	 60 - 65
 35 - 40	 65 - 70
 40 - 45	 70 - 75
 45 - 50	 75 - 80
 50 - 55	 >80
 55 - 60	

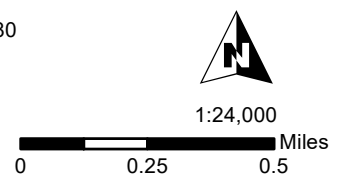


Figure 23I

HDD Sound Levels, (dBA)

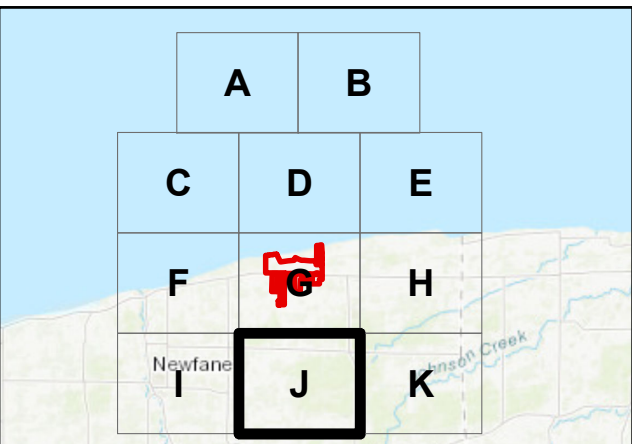
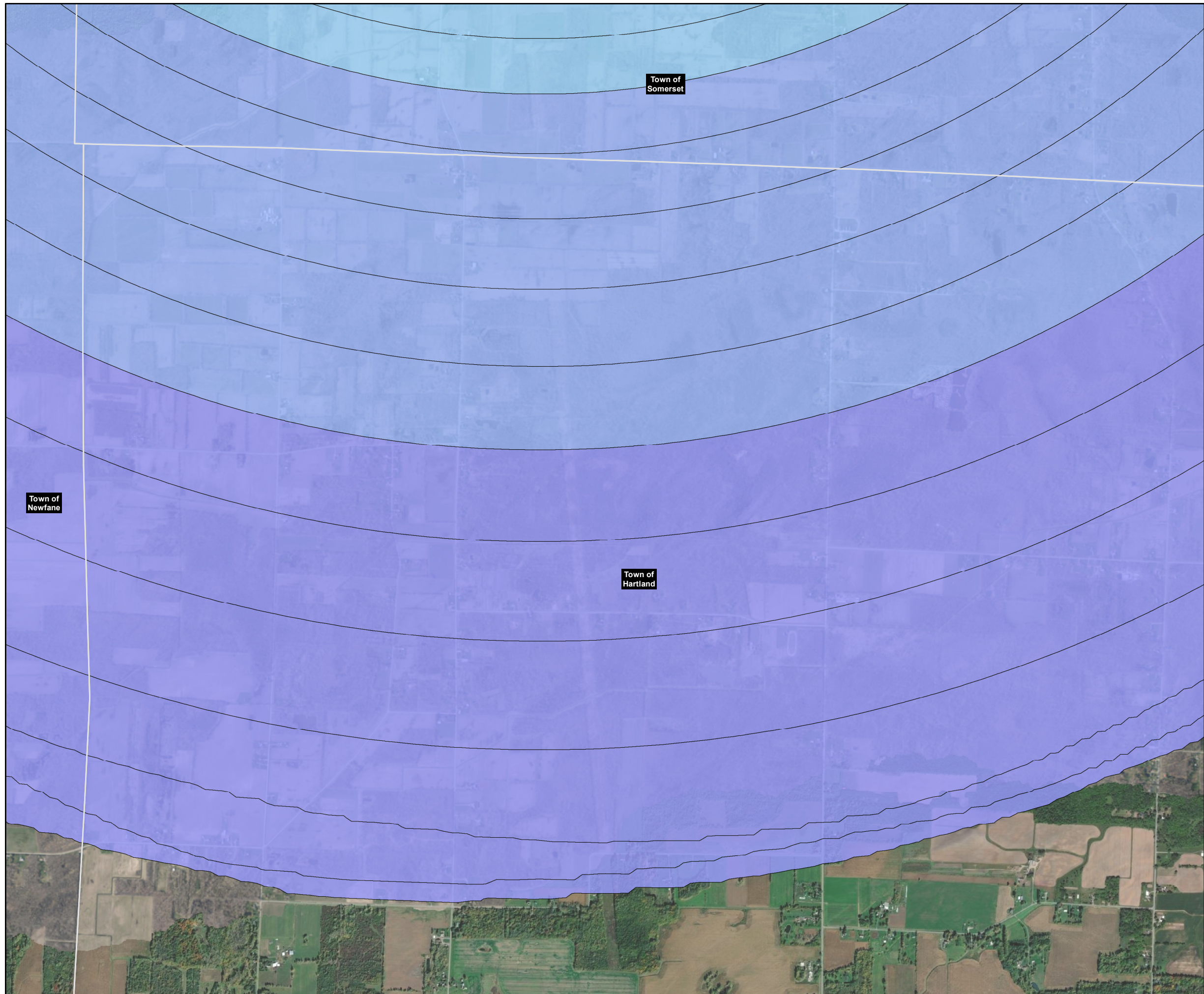
Somerset Solar
 Niagara County, NY
 March 2023





TETRA TECH



Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary
 Municipal Boundary

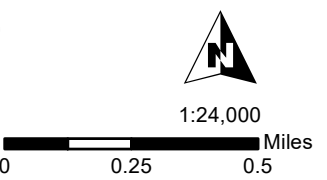
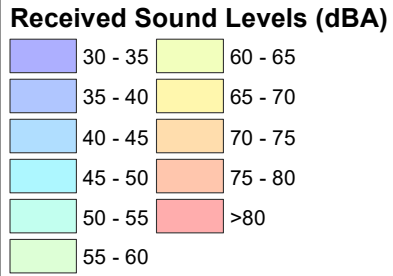
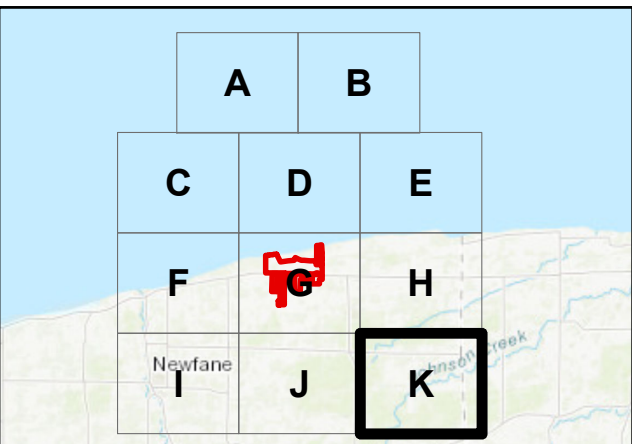
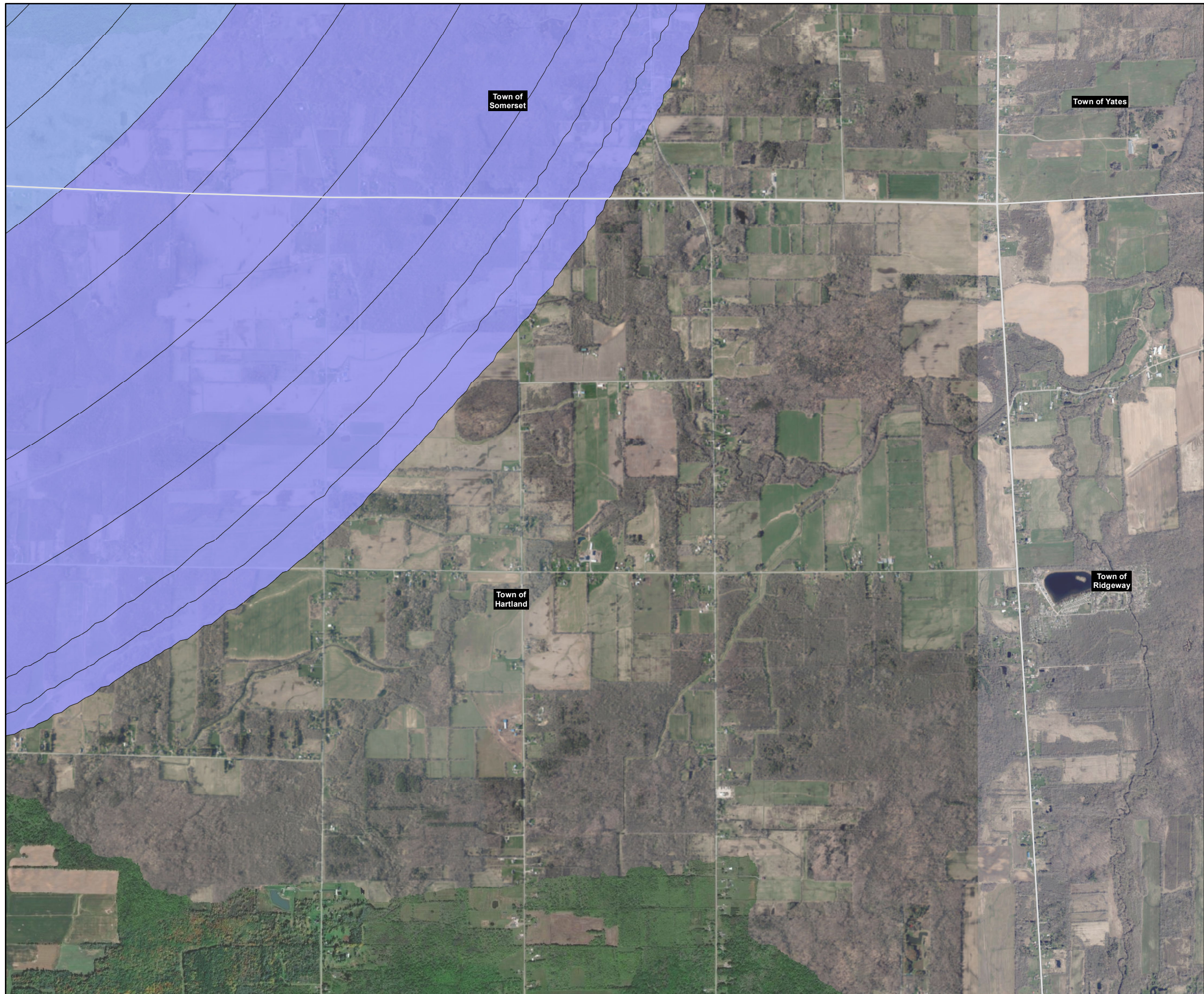




Figure 23J
 HDD Sound Levels, (dBA)

Somerset Solar
 Niagara County, NY
 March 2023



Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021



Legend
 Project Site Boundary
 Municipal Boundary

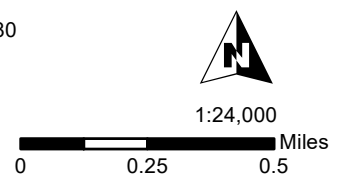
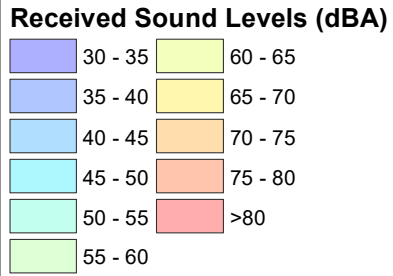


Figure 23K

HDD Sound Levels, (dBA)

Somerset Solar
 Niagara County, NY
 March 2023



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Source: Aerial Imagery- ESRI 2017/2018; NYS GIS Civil Boundaries, Sept 2021

In addition, two barriers that are 16 feet high and 100 feet in length will be constructed approximately 10 feet to the east of the two inverter skids in Area 5. The Facility Substation transformer noise barrier will be constructed of materials that have a minimum surface weight of 4 pounds per square foot (lb/ft² or psf). Examples of materials that would meet these requirements include poured concrete, concrete panels, concrete masonry blocks, including “acoustical” block, or metal panels, including “acoustical” panels. The two noise barriers in Area 5 will be constructed of a product similar to Acustifence from Acustiblok and has a sound transmission class (STC) rating of 28. An Example of this noise barrier can be found in Attachment 5. The locations of the noise barriers are shown in Figures 25 and 27. Results in Attachment 1, Table A-2 and Table A-4, show mitigated sound levels are at or below 45 dBA (including the tonal penalty) at all receptors, meeting the §94-c limit for participating and nonparticipating residential receptors. In addition, the Facility Substation transformer is at or below 40 dBA (including the tonal penalty) at the closest home. All property line sound levels are at or below 43 dBA, well below the ORES limit of 55 dBA and the Town of Somerset’s limit of 50 dBA. Results also show compliance with the Town of Somerset’s Solar Law of 45 dBA at a residential structure.

In addition to the comprehensive acoustic modeling results tables presented in Attachment 1, summarized results are given in Table 25 through Table 28. Table 25 and Table 26 present the lowest and highest sound levels received during full operations and Facility Substation-only operations without and with the implementation of noise mitigation measures, respectively. Results are given for three receptor types in Table 25 and Table 26; at the property line, at the one receptor participating in the Facility, which is a non-residential use (i.e., museum), and at non-participating receptors. Table 27 and Table 28 show the number of non-participating NSAs that are expected to experience received sound levels of 35 dBA or more during full operations and Facility Substation-only operations without and with the implementation of noise mitigation measures, respectively. The location of all operating equipment included in the noise model can be found in Attachment 3.

Table 25: Summary of Modeled Unmitigated Operational Results, dBA

Receptor Type	Full Operations				Substation-Only			
	Min		Max		Min		Max	
	W/o Penalty	With Penalty	W/o Penalty	With Penalty	W/o Penalty	With Penalty	W/o Penalty	With Penalty
Property Line	27	27 ¹	59	59 ¹	19	19 ¹	41	41 ¹
Participating (Non-resident/museum)	43	48	43	48	40	45	40	45
Non-participating (Residential)	12	17	43	48	11	16	42	47

¹Tonal penalty does not apply to property line sound levels

dBA – A-weighted decibels

Table 26: Summary of Modeled Mitigated Operational Results, dBA

Receptor Type	Full Operations				Substation-Only			
	Min		Max		Min		Max	
	Without Penalty	With Penalty	Without Penalty	With Penalty	Without Penalty	With Penalty	Without Penalty	With Penalty
Property Line	26	26 ¹	43	43 ¹	19	19 ¹	35	35 ¹
Participating (Non-residential/museum)	42	46	42	46	39	44	39	44
Non-participating (Residential)	7	12	40	45	0	5	35	40

¹Tonal penalty does not apply to property line sound levels

dBA – A-weighted decibels

Table 27: Summary of Unmitigated Sound Pressure Levels (L_P) above 35 dBA

L _P – Maximum L _{8H} (dBA)	Number of Non-participating Sensitive Receptors			
	Full Operations		Substation-Only	
	Without Tonal Penalty	With Tonal Penalty	Without Tonal Penalty	With Tonal Penalty
35	1	3	0	3
36	0	4	1	5
37	0	5	0	5
38	1	8	0	2

L _P – Maximum L _{8H} (dBA)	Number of Non-participating Sensitive Receptors			
	Full Operations		Substation-Only	
	Without Tonal Penalty	With Tonal Penalty	Without Tonal Penalty	With Tonal Penalty
39	0	2	0	0
40	0	1	0	0
41	0	0	0	1
42	0	0	1	0
43	1	1	0	0
44	0	0	0	0
45	0	0	0	0
46	0	0	0	0
47	0	0	0	1
48	0	1	0	0
49	0	0	0	0

dBA – A-weighted decibels; L_{8H} – 8-hour average

Table 28: Summary of Mitigated Sound Pressure Levels (L_P) above 35 dBA

L _P – Maximum L _{8H} (dBA)	Number of Non-participating Sensitive Receptors			
	Full Operations		Substation-Only	
	Without Tonal Penalty	With Tonal Penalty	Without Tonal Penalty	With Tonal Penalty
35	0	2	1	3
36	1	10	0	4
37	0	2	0	1
38	0	5	0	0
39	0	1	0	1
40	1	0	0	1
41	0	1	0	0
42	0	0	0	0
43	0	0	0	0
44	0	0	0	0
45	0	1	0	0

dBA – A-weighted decibels; L_{8H} – 8-hour average