

Crowned Ridge Wind Responses to Staff's Second Set for Data Requests

- 1) Please provide a sound model of the proposed LNTE waiver request using a ground attenuation factor of 0.3.

Response: See Attachment 1, which is a sound model of the proposed waiver using a ground attenuation factor of 0.3.

- 2) Please provide a sound model of the proposed LNTE waiver request using a ground attenuation factor of 0.0.

Response: Crowned Ridge Wind objects to providing a sound model using a ground attenuation factor of 0.0. This assumption was recommended by Intervener Mogen who is a lay person with no training or experience in sound modeling. Accordingly, there is no basis to use a ground attenuation factor of 0.0. The Commission cannot rely on the recommendation of a lay person when the recommendation requires scientific, technical, or other specialized knowledge. *See SDCL 19-19-701(c)*. Therefore, Intervener Mogen's recommendation to use a ground attenuation factor of 0.0 should be disregarded. Subject to and without waiving this objection, Crowned Ridge Wind is providing Attachment 2, which is a sound model of the proposed waiver using a ground attenuation factor of 0.0.

- 3) Please provide an updated shadow flicker study that includes the proper hub heights of all turbines since there appears to have been changes to hub heights on certain turbines since the final preconstruction shadow flicker study was filed on July 29, 2019.

Response: See Attachment 3, which is the requested shadow flicker study based on the as-built hub heights of all turbines.

- 4) Please identify each turbine that has a different hub height from what was included in the July 29, 2019, preconstruction filing.

Response: The wind turbines that have a different hub height from what was included in the July 29, 2019 preconstruction filing are the following: CR1-89, CR1-90, CR1-91, and CR1-97. These wind turbines changed from an 80-meter hub height to a 90-meter hub height. As Attachment 3 shows, the shadow flicker produced from the change in hub height does not impact Crowned Ridge Wind's compliance with the 30-hour annual threshold imposed in Condition No. 34 of the Final Order.

- 5) Please identify the number of turbines that had an installed nameplate of 2.72 MW, which will be software controlled to 2.3 MW. Please provide the corresponding turbine numbers.

Response: No Crowned Ridge Wind turbines have a nameplate of 2.72 MW. All wind turbines have an installed nameplate of 2.3 MW. Attachment 4 shows a sample of the 2.3 MW nameplate that is being affixed to the base of each wind turbine.

- 6) Please identify if any other turbine models or nameplate ratings were installed for the project.

Response: No turbine models other than GE 2.3 MW turbines with 80-meter hub height or 90-meter hub height were installed at the Crowned Ridge Wind Project. No turbines with nameplate ratings other than 2.3 MW were installed at the Crowned Ridge Wind Project.

- 7) Please identify all turbines that had turbine adjustments of 250 feet or less.

Response: From the July 29, 2019 preconstruction filing to today, only turbines CR1-62 and CR1-52 were moved, and both turbines were moved 50 feet. Compliance filings, including the associated affidavits and studies, confirming that the moves of turbines CR1-62 and CR1-52 were compliant with the requirements of Condition No. 22 were submitted on September 17, 2019 and September 23, 2019, respectfully. During construction, the locations of some turbines may have been moved a few feet from the July 29, 2019 preconstruction plans and any movement of a few feet will be indicated in the as-built plans provided under Condition No. 44.

- 8) Please identify all turbines that had turbine adjustments of greater than 250 feet.

Response: From the July 29, 2019 preconstruction filing to today no turbines have been moved more than 250 feet from the locations set forth in the July 29, 2019 filing.

- 9) Please identify if Crowned Ridge notified the Commission of the change in hub heights from what was filed in the preconstruction filing on July 29, 2019 and provide the date of the notification. If a notification was not made, please explain why.

Response: The wind turbines that have a different hub height from what was included in the July 29, 2019 preconstruction filing are the following: CR1-89, CR1-90, CR1-91, and CR1-97. As explained at the December 30, 2019 hearing, the change in the hub height for these four wind turbines was due to the deferral of 100 MWs and the need for only 9 safe harbor (*i.e.*, 80-meter hub height turbines) with the 200 MW array. There was not a specific notification of the change in hub height in Crowned Ridge Wind's notification of the 100 MW deferral on September 19, 2019 submittal, because the turbine locations were unchanged, and, therefore, Condition No. 22 was not implicated. However, in Section 6.1 of the January 30, 2019 Application Crowned Ridge Wind explained that it may use as

many as 117 2.3 MW 90-meter hub height turbines as the primary turbine size, with 13 2.3 MW 80-meter hub height as the secondary size. In the end, Crowned Ridge Wind only needed 9 of the 2.3 MW 80-meter hub height turbines. Further, as the studies of Mr. Haley submitted as Attachments 1 and 3 confirm, the change in hub height is fully compliant with the sound and shadow flicker thresholds imposed in the Final Order and related condition Nos. 26 and 34.

Table A-1: Crowned Ridge Wind Farm 200 MW

GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

WTG	Type	Turbine Model	Easting (m)	Northing (m)	Base Elev. AMSL (m)	Sound Profile
CRI-20	Primary	GE2.3 116RD 90HH r2.madE	659,920	4,994,924	594.0	Curtailed
CRI-21	Primary	GE2.3 116RD 90HH r2.madE	657,925	4,994,896	617.1	Curtailed
CRI-22	Primary	GE2.3 116RD 90HH r2.madE	656,543	4,994,796	616.5	LNTE
CRI-24	Primary	GE2.3 116RD 90HH r2.madE	655,852	4,994,652	609.0	LNTE
CRI-25	Primary	GE2.3 116RD 90HH r2.madE	658,251	4,994,286	605.5	LNTE
CRI-26	Primary	GE2.3 116RD 90HH r2.madE	665,405	4,994,191	578.5	Normal
CRI-27	Primary	GE2.3 116RD 90HH r2.madE	657,442	4,994,187	621.0	Normal
CRI-28	Primary	GE2.3 116RD 90HH r2.madE	664,517	4,994,168	579.0	Normal
CRI-29	Primary	GE2.3 116RD 90HH r2.madE	655,940	4,994,069	606.9	Curtailed
CRI-30	Primary	GE2.3 116RD 90HH r2.madE	659,871	4,994,052	593.7	Normal
CRI-31	Primary	GE2.3 116RD 90HH r2.madE	655,030	4,994,051	603.0	LNTE
CRI-32	Primary	GE2.3 116RD 90HH r2.madE	660,704	4,993,998	606.0	LNTE
CRI-33	Primary	GE2.3 116RD 90HH r2.madE	656,566	4,993,941	618.0	Curtailed
CRI-34	Primary	GE2.3 116RD 90HH r2.madE	658,966	4,993,856	599.7	Normal
CRI-35	Primary	GE2.3 116RD 90HH r2.madE	657,602	4,993,347	607.4	Normal
CRI-36	Primary	GE2.3 116RD 90HH r2.madE	659,966	4,993,319	594.0	LNTE
CRI-37	Primary	GE2.3 116RD 90HH r2.madE	664,419	4,993,110	587.3	Curtailed
CRI-38	Primary	GE2.3 116RD 90HH r2.madE	658,338	4,992,981	600.5	Normal
CRI-39	Primary	GE2.3 116RD 90HH r2.madE	656,507	4,992,958	609.0	Curtailed
CRI-41	Primary	GE2.3 116RD 90HH r2.madE	663,782	4,992,883	597.7	Normal
CRI-43	Primary	GE2.3 116RD 90HH r2.madE	666,181	4,992,815	577.9	Normal
CRI-44	Primary	GE2.3 116RD 90HH r2.madE	665,665	4,992,460	576.0	Normal
CRI-46	Primary	GE2.3 116RD 90HH r2.madE	664,387	4,992,505	591.0	Curtailed
CRI-48	Primary	GE2.3 116RD 90HH r2.madE	663,794	4,991,782	587.1	Curtailed
CRI-50	Primary	GE2.3 116RD 90HH r2.madE	662,930	4,991,655	612.0	Curtailed
CRI-51	Primary	GE2.3 116RD 90HH r2.madE	666,299	4,991,723	575.3	Normal
CRI-52	Primary	GE2.3 116RD 90HH r2.madE	665,441	4,991,398	575.5	Curtailed
CRI-53	Primary	GE2.3 116RD 90HH r2.madE	659,750	4,990,981	598.7	LNTE
CRI-54	Primary	GE2.3 116RD 90HH r2.madE	665,979	4,990,946	573.7	Normal
CRI-55	Primary	GE2.3 116RD 90HH r2.madE	659,045	4,990,899	597.1	Normal
CRI-58	Primary	GE2.3 116RD 90HH r2.madE	665,663	4,990,303	585.0	Normal
CRI-59	Primary	GE2.3 116RD 90HH r2.madE	666,523	4,990,291	573.0	Normal
CRI-61	Primary	GE2.3 116RD 90HH r2.madE	662,982	4,990,178	612.0	Normal
CRI-62	Primary	GE2.3 116RD 90HH r2.madE	660,954	4,990,170	600.8	Curtailed
CRI-63	Primary	GE2.3 116RD 90HH r2.madE	664,627	4,989,977	588.6	Normal
CRI-64	Primary	GE2.3 116RD 90HH r2.madE	663,858	4,989,188	604.3	Normal
CRI-65	Primary	GE2.3 116RD 90HH r2.madE	661,732	4,989,898	609.0	Normal
CRI-66	Primary	GE2.3 116RD 90HH r2.madE	663,165	4,989,613	614.7	Normal
CRI-69	Primary	GE2.3 116RD 80HH r2.madE	660,621	4,989,453	605.6	Normal
CRI-70	Primary	GE2.3 116RD 90HH r2.madE	662,171	4,989,319	611.0	Normal
CRI-71	Primary	GE2.3 116RD 80HH r2.madE	659,405	4,989,320	607.3	Normal

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GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

continued

WTG	Type	Turbine Model	Easting (m)	Northing (m)	Base Elev. AMSL (m)	Sound Profile
CRI-72	Primary	GE2.3 116RD 80HH r2.madE	660,087	4,989,309	606.0	Normal
CRI-73	Primary	GE2.3 116RD 90HH r2.madE	661,344	4,989,297	609.8	Curtailed
CRI-74	Primary	GE2.3 116RD 90HH r2.madE	663,041	4,988,744	615.0	Normal
CRI-75	Primary	GE2.3 116RD 90HH r2.madE	664,137	4,988,702	609.0	Curtailed
CRI-76	Primary	GE2.3 116RD 90HH r2.madE	662,399	4,988,667	615.0	Normal
CRI-77	Primary	GE2.3 116RD 80HH r2.madE	659,158	4,988,642	612.0	Normal
CRI-78	Primary	GE2.3 116RD 80HH r2.madE	660,811	4,988,558	604.1	Normal
CRI-80	Primary	GE2.3 116RD 90HH r2.madE	661,552	4,988,481	608.8	Normal
CRI-81	Primary	GE2.3 116RD 90HH r2.madE	659,825	4,988,365	606.8	Normal
CRI-82	Primary	GE2.3 116RD 90HH r2.madE	663,271	4,988,133	613.0	Normal
CRI-83	Primary	GE2.3 116RD 90HH r2.madE	662,227	4,988,103	606.6	Normal
CRI-84	Primary	GE2.3 116RD 80HH r2.madE	660,677	4,987,880	600.6	Normal
CRI-85	Primary	GE2.3 116RD 90HH r2.madE	659,295	4,987,798	612.0	Normal
CRI-86	Primary	GE2.3 116RD 90HH r2.madE	658,534	4,987,759	613.1	Normal
CRI-87	Primary	GE2.3 116RD 90HH r2.madE	661,830	4,987,596	609.0	Normal
CRI-88	Primary	GE2.3 116RD 90HH r2.madE	660,157	4,987,492	603.0	Normal
CRI-89	Primary	GE2.3 116RD 90HH r2.madE	657,758	4,986,926	614.9	Normal
CRI-90	Primary	GE2.3 116RD 90HH r2.madE	658,545	4,986,881	612.0	Normal
CRI-91	Primary	GE2.3 116RD 90HH r2.madE	657,023	4,986,868	612.0	Normal
CRI-92	Primary	GE2.3 116RD 80HH r2.madE	660,039	4,986,804	607.2	Normal
CRI-93	Primary	GE2.3 116RD 80HH r2.madE	659,133	4,986,700	607.9	Normal
CRI-94	Primary	GE2.3 116RD 80HH r2.madE	660,716	4,986,660	600.6	Normal
CRI-95	Primary	GE2.3 116RD 90HH r2.madE	657,488	4,986,184	612.0	Curtailed
CRI-96	Primary	GE2.3 116RD 90HH r2.madE	656,744	4,986,037	609.0	Normal
CRI-97	Primary	GE2.3 116RD 90HH r2.madE	655,899	4,985,715	592.7	Normal
CRI-98	Primary	GE2.3 116RD 90HH r2.madE	657,015	4,985,192	608.9	Normal
CRI-99	Primary	GE2.3 116RD 90HH r2.madE	672,521	4,990,188	556.7	Normal
CRI-100	Primary	GE2.3 116RD 90HH r2.madE	668,885	4,990,286	585.0	Normal
CRI-101	Primary	GE2.3 116RD 90HH r2.madE	672,921	4,990,513	544.6	Normal
CRI-102	Primary	GE2.3 116RD 90HH r2.madE	668,059	4,991,023	581.0	Normal
CRI-103	Primary	GE2.3 116RD 90HH r2.madE	669,279	4,991,115	582.0	Normal
CRI-104	Primary	GE2.3 116RD 90HH r2.madE	672,009	4,991,151	555.0	Normal
CRI-105	Primary	GE2.3 116RD 90HH r2.madE	670,488	4,991,091	571.6	Normal
CRI-106	Primary	GE2.3 116RD 90HH r2.madE	671,278	4,991,335	566.2	Normal
CRI-107	Primary	GE2.3 116RD 90HH r2.madE	667,723	4,991,800	582.0	Normal
CRI-108	Primary	GE2.3 116RD 90HH r2.madE	672,917	4,991,775	541.2	Normal
CRI-109	Primary	GE2.3 116RD 90HH r2.madE	670,897	4,992,616	557.4	Curtailed
CRI-111	Primary	GE2.3 116RD 90HH r2.madE	671,220	4,993,526	550.6	Normal
CRI-112	Primary	GE2.3 116RD 90HH r2.madE	670,419	4,993,665	561.0	Normal
CRI-114	Primary	GE2.3 116RD 90HH r2.madE	669,318	4,994,256	561.0	Curtailed
CRI-117	Primary	GE2.3 116RD 90HH r2.madE	669,488	4,994,930	544.8	Normal

Table A-1: Crowned Ridge Wind Farm 200 MW
GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's
Curtailment with LNTF on only 20, 22, 24, 25, 31, 32, 36, 53
UTM NAD83 Zone 14

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53****Ground Attenuation Factor 0.3****UTM NAD83 Zone 14****Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109****Codington County**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C1-NP	Non-P	Boundary	657,051	4,983,917	590.3	37.7	4,186
CR1-C2-NP	Non-P	Boundary	658,435	4,984,609	601.8	38.4	5,036
CR1-C3-NP	Non-P	Boundary	657,812	4,984,785	603.4	41.1	2,936
CR1-C4-NP	Non-P	Boundary	659,890	4,985,620	605.2	41.9	3,914
CR1-C6-P	Participant	Boundary	663,383	4,994,502	591.0	39.1	3,878
CR1-C7-NP	Non-P	Boundary	660,455	4,985,631	591.0	41.9	3,484
CR1-C8-P	Participant	Boundary	660,476	4,984,821	597.0	38.0	6,086
CR1-C9-NP	Non-P	Boundary	665,264	4,985,116	609.0	33.4	10,840
CR1-C10-P	Participant	Boundary	662,862	4,985,695	601.7	39.2	4,150
CR1-C11-P	Participant	Boundary	663,622	4,985,714	608.8	37.5	5,397
CR1-C12-NP	Non-P	Boundary	662,246	4,986,500	605.1	46.4	1,955
CR1-C13-NP	Non-P	Boundary	663,599	4,986,512	615.0	40.3	3,875
CR1-C14-NP	Non-P	Boundary	657,803	4,986,003	609.0	44.4	1,857
CR1-C15-NP	Non-P	Boundary	662,794	4,986,895	612.9	49.4	1,017
CR1-C16-NP	Non-P	Boundary	661,244	4,986,473	597.0	45.9	1,837
CR1-C17-P	Participant	Boundary	658,819	4,986,842	611.4	52.4	925
CR1-C18-P	Participant	Boundary	663,578	4,987,413	609.4	43.7	2,566
CR1-C19-P	Participant	Boundary	660,393	4,987,529	608.4	52.9	784
CR1-C20-P	Participant	Boundary	662,024	4,987,612	604.2	53.6	640
CR1-C26-P	Participant	Boundary	658,015	4,987,993	606.7	46.1	1,867
CR1-C27-NP	Non-P	Boundary	657,234	4,988,151	587.2	41.7	4,265
CR1-C28-NP	Non-P	Boundary	665,232	4,989,006	583.9	41.6	3,727
CR1-C29-NP	Non-P	Boundary	666,496	4,989,001	574.3	40.0	4,232
CR1-C30-P	Participant	Boundary	661,978	4,989,318	612.8	53.7	1,358
CR1-C31-NP	Non-P	Boundary	665,639	4,989,013	584.7	41.0	4,232
CR1-C32-NP	Non-P	Boundary	657,187	4,989,566	573.2	38.6	7,142
CR1-C33-NP	Non-P	Boundary	657,126	4,990,843	567.0	38.4	6,489
CR1-C34-NP	Non-P	Boundary	658,759	4,990,463	589.4	45.7	2,913
CR1-C35-P	Participant	Boundary	661,955	4,990,153	606.1	49.4	1,112
CR1-C36-P	Participant	Boundary	663,116	4,990,548	610.7	48.4	1,545
CR1-C37-NP	Non-P	Boundary	663,829	4,990,572	594.0	48.4	1,263
CR1-C38-NP	Non-P	Boundary	660,308	4,990,904	591.2	44.5	1,148
CR1-C39-NP	Non-P	Boundary	659,741	4,991,242	583.3	49.4	3,471
CR1-C40-NP	Non-P	Boundary	658,706	4,991,231	579.8	46.0	3,281
CR1-C41-NP	Non-P	Boundary	665,075	4,992,148	578.8	44.5	2,126
CR1-C42-P	Participant	Boundary	658,965	4,993,598	580.1	51.1	846
CR1-C44-NP	Non-P	Boundary	665,447	4,992,972	578.1	46.2	2,162
CR1-C45-NP	Non-P	Boundary	653,821	4,993,552	573.0	35.3	4,291
CR1-C46-NP	Non-P	Boundary	655,723	4,993,574	609.0	41.2	1,772

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Codington County

*continued***Ground Attenuation Factor 0.3**

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 105

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C47-P	Participant	Boundary	663,454	4,992,888	612.0	48.6	1,076
CR1-C48-P	Participant	Boundary	664,571	4,993,741	586.6	47.0	1,407
CR1-C49-P	Participant	Boundary	662,224	4,993,664	609.0	38.4	5,105
CR1-C50-P	Participant	Boundary	657,048	4,994,159	618.0	47.9	1,299
CR1-C51-P	Participant	Boundary	657,600	4,993,586	620.0	51.9	784
CR1-C52-NP	Non-P	Boundary	654,994	4,995,172	603.0	39.2	3,291
CR1-C53-NP	Non-P	Boundary	664,171	4,995,340	580.5	38.3	4,009
CR1-C54-NP	Non-P	Boundary	663,495	4,995,329	582.9	36.8	5,075
CR1-C55-NP	Non-P	Boundary	660,155	4,994,412	607.0	46.8	1,506
CR1-C56-P	Participant	Boundary	656,199	4,995,194	603.0	44.7	1,726
CR1-C57-P	Participant	Boundary	656,526	4,995,198	616.1	45.8	1,319
CR1-C58-NP	Non-P	Boundary	657,670	4,996,842	615.0	34.2	6,437
CR1-C59-P	Participant	Boundary	660,784	5,000,081	591.5	27.7	17,155
CR1-C60-NP	Non-P	Boundary	656,909	4,998,465	609.3	30.1	12,096
CR1-C61-NP	Non-P	Boundary	656,928	4,997,784	612.0	31.6	9,885
CR1-C62-NP	Non-P	Boundary	658,155	4,994,994	614.5	42.9	820
CR1-C63-NP	Non-P	Boundary	658,543	4,995,211	606.8	40.9	2,277
CR1-C64-P	Participant	Boundary	658,623	4,992,794	576.6	48.9	1,119
CR1-C65-NP	Non-P	Boundary	665,516	4,995,045	578.0	41.0	2,825
CR1-C70-NP	Non-P	Boundary	664,950	4,988,325	596.1	40.0	2,940
CR1-C71-NP	Non-P	Boundary	664,421	4,988,988	600.0	43.3	1,322
CR1-C105-NP	Non-P	Boundary	659,131	5,000,043	609.0	27.8	17,001
CR1-C107-NP	Non-P	Boundary	656,548	4,998,450	595.6	30.0	11,988
CR1-C109-NP	Non-P	Boundary	654,552	4,996,783	592.6	31.8	8,189
CR1-C110-NP	Non-P	Boundary	654,553	4,996,633	588.7	32.2	7,772
CR1-C111-NP	Non-P	Boundary	654,596	4,995,168	599.1	37.3	3,930
CR1-C112-NP	Non-P	Boundary	659,955	4,984,990	604.0	38.9	5,958
CR2-C150-P	Participant	Boundary	655,905	4,985,521	600.0	52.7	636
CR1-C1-NP	Non-P	Structure	656,743	4,983,525	596.0	35.6	5,541
CR1-C2-NP	Non-P	Structure	658,791	4,984,483	602.0	37.6	6,273
CR1-C3-NP	Non-P	Structure	657,888	4,984,697	604.2	40.3	3,294
CR1-C4-NP	Non-P	Structure	659,744	4,984,749	606.0	38.0	6,706
CR1-C5-NP	Non-P	Structure	659,958	4,984,794	604.8	38.1	6,601
CR1-C6-P	Participant	Structure	662,989	4,995,228	599.8	36.2	6,102
CR1-C7-NP	Non-P	Structure	660,893	4,984,861	593.2	37.9	5,932
CR1-C8-P	Participant	Structure	660,532	4,984,445	599.4	36.7	7,293
CR1-C9-NP	Non-P	Structure	665,352	4,985,004	609.0	33.1	11,283
CR1-C10-P	Participant	Structure	663,510	4,985,195	609.0	36.2	6,535

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Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Codington County

continued

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 105

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C11-P	Participant	Structure	664,111	4,985,679	609.0	36.3	6,676
CR1-C12-1-NP	Non-P	Structure	662,199	4,986,047	606.0	42.0	2,956
CR1-C12-NP	Non-P	Structure	662,222	4,985,736	603.0	40.2	3,921
CR1-C13-NP	Non-P	Structure	663,792	4,985,785	612.0	37.3	5,643
CR1-C14-NP	Non-P	Structure	657,982	4,985,894	609.0	43.7	1,880
CR1-C15-NP	Non-P	Structure	663,291	4,986,026	615.0	39.6	3,907
CR1-C16-NP	Non-P	Structure	661,960	4,986,288	606.0	43.4	2,648
CR1-C17-P	Participant	Structure	658,031	4,986,373	609.1	46.5	1,886
CR1-C18-P	Participant	Structure	663,651	4,987,157	610.4	42.2	3,435
CR1-C19-P	Participant	Structure	659,243	4,987,276	611.6	49.2	1,722
CR1-C20-P	Participant	Structure	663,054	4,987,455	606.0	45.9	2,336
CR1-C21-P	Participant	Structure	660,756	4,984,086	594.0	35.6	8,445
CR1-C22-P	Participant	Structure	660,755	4,984,082	594.0	35.6	8,458
CR1-C23-P	Participant	Structure	660,619	4,984,078	595.8	35.6	8,478
CR1-C26-P	Participant	Structure	657,767	4,988,493	597.0	42.6	3,484
CR1-C27-NP	Non-P	Structure	656,876	4,988,683	583.0	39.2	5,974
CR1-C28-NP	Non-P	Structure	665,429	4,988,598	590.9	39.8	4,252
CR1-C29-NP	Non-P	Structure	666,572	4,988,867	575.9	39.3	4,675
CR1-C30-P	Participant	Structure	661,699	4,988,957	615.0	49.5	1,614
CR1-C31-NP	Non-P	Structure	665,939	4,988,950	585.4	40.4	4,531
CR1-C32-NP	Non-P	Structure	655,843	4,989,581	568.8	35.7	9,708
CR1-C33-NP	Non-P	Structure	656,839	4,990,404	569.8	37.5	7,418
CR1-C34-NP	Non-P	Structure	658,661	4,990,389	588.2	44.4	2,093
CR1-C35-P	Participant	Structure	662,025	4,990,475	609.0	45.5	2,123
CR1-C36-P	Participant	Structure	663,181	4,990,600	615.0	47.5	1,532
CR1-C37-NP	Non-P	Structure	663,563	4,991,342	605.1	42.2	1,631
CR1-C38-NP	Non-P	Structure	660,639	4,991,557	597.0	41.2	3,474
CR1-C39-NP	Non-P	Structure	660,144	4,991,670	588.0	42.3	2,605
CR1-C40-NP	Non-P	Structure	657,865	4,991,818	583.7	42.8	2,690
CR1-C41-NP	Non-P	Structure	665,053	4,992,084	576.1	44.2	2,356
CR1-C42-P	Participant	Structure	659,458	4,992,229	580.0	42.1	3,947
CR1-C44-NP	Non-P	Structure	665,076	4,993,095	578.2	43.8	2,155
CR1-C45-NP	Non-P	Structure	653,390	4,993,503	573.2	33.3	5,673
CR1-C46-NP	Non-P	Structure	655,802	4,993,540	609.1	41.0	1,795
CR1-C47-P	Participant	Structure	662,825	4,993,508	613.9	39.6	3,750
CR1-C48-P	Participant	Structure	664,247	4,993,646	588.0	45.0	1,847
CR1-C49-P	Participant	Structure	662,250	4,993,731	609.0	38.4	5,148
CR1-C50-P	Participant	Structure	656,806	4,994,388	621.0	46.3	1,591

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTB on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

CODINGTON COUNTY

continuation

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Grant County
continued**Ground Attenuation Factor 0.3**

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 105

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-G12-NP	Non-P	Structure	668,229	4,989,039	575.0	38.6	4,623
CR1-G13-NP	Non-P	Structure	672,216	4,989,142	558.0	39.4	3,576
CR1-G14-NP	Non-P	Structure	668,156	4,989,332	574.1	39.9	3,940
CR1-G15-P	Participant	Structure	668,396	4,989,607	576.0	42.0	2,746
CR1-G16-NP	Non-P	Structure	668,419	4,989,861	576.0	44.1	2,070
CR1-G18-P	Participant	Structure	668,678	4,990,722	585.0	47.7	1,585
CR1-G19-P	Participant	Structure	671,018	4,990,744	570.0	46.1	2,077
CR1-G21-P	Participant	Structure	666,766	4,991,807	577.1	47.3	1,555
CR1-G22-NP	Non-P	Structure	674,670	4,991,955	527.6	35.2	5,781
CR1-G23-NP	Non-P	Structure	670,471	4,992,104	560.0	42.9	2,185
CR1-G24-P	Participant	Structure	673,058	4,992,440	539.4	42.7	2,231
CR1-G25-P	Participant	Structure	671,391	4,992,858	549.0	43.7	1,804
CR1-G26-P	Participant	Structure	672,589	4,993,869	531.0	38.0	3,140
CR1-G27-NP	Non-P	Structure	676,630	4,994,642	480.8	27.7	8,678
CR1-G28-P	Participant	Structure	673,113	4,994,772	513.9	34.9	1,614
CR1-G32-P	Participant	Structure	669,477	4,995,401	546.0	47.6	1,545
CR1-G33-P	Participant	Structure	668,911	4,995,550	548.7	41.7	2,779
CR1-G34-NP	Non-P	Structure	671,320	4,995,798	531.0	42.5	2,238
CR1-G36-NP	Non-P	Structure	673,559	4,996,344	498.0	31.4	6,483
CR1-G37-NP	Non-P	Structure	668,998	4,996,452	549.0	36.9	5,246
CR1-G38-P	Participant	Structure	673,972	4,996,493	494.5	30.4	6,827
CR1-G41-P	Participant	Structure	671,563	4,997,050	497.6	35.0	6,378
CR1-G42-NP	Non-P	Structure	670,566	4,997,097	518.9	34.9	6,476
CR1-G43-NP	Non-P	Structure	661,141	5,001,721	583.6	25.7	6,552
CR1-G44-NP	Non-P	Structure	661,781	5,001,732	583.7	25.7	6,939
CR1-G59-P	Participant	Structure	675,755	4,994,888	487.7	29.0	5,981
CR1-G60-P	Participant	Structure	675,830	4,995,687	477.0	28.1	7,329
CR1-G65-P	Participant	Structure	671,496	4,994,973	537.0	45.2	1,539
CR1-G66-P	Participant	Structure	670,802	4,994,681	539.7	45.8	1,801
CR1-G67-P	Participant	Structure	669,597	4,993,440	556.1	44.9	2,106
CR1-G68-NP	Non-P	Structure	669,159	4,993,632	565.6	43.4	2,113
CR1-G70-NP	Non-P	Structure	677,465	4,991,043	492.0	27.5	15,006
CR1-G77-NP	Non-P	Structure	676,031	4,992,629	502.7	30.3	8,878
CR1-G81-P	Participant	Structure	671,478	4,997,523	508.8	32.5	7,828
CR1-G105-NP	Non-P	Structure	668,696	4,998,325	549.0	30.9	11,263
CR1-G108-P	Participant	Structure	669,516	5,001,186	522.2	25.9	19,908
CR1-G109-NP	Non-P	Structure	667,064	5,000,425	566.2	27.2	19,704
CR1-G110-NP	Non-P	Structure	671,218	5,005,064	456.2	21.3	28,615

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTB on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109

Grant Count continued

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53 Ground Attenuation Factor 0.3****UTM NAD83 Zone 14****Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114****Codington County**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C15-NP	Non-P	Boundary	662,794	4,986,895	612.9	49.4	1,017
CR1-C39-NP	Non-P	Boundary	659,741	4,991,242	583.3	49.4	3,471
CR1-C37-NP	Non-P	Boundary	663,829	4,990,572	594.0	48.4	1,263
CR1-C55-NP	Non-P	Boundary	660,155	4,994,412	607.0	46.8	1,506
CR1-C12-NP	Non-P	Boundary	662,246	4,986,500	605.1	46.4	1,955
CR1-C44-NP	Non-P	Boundary	665,447	4,992,972	578.1	46.2	2,162
CR1-C40-NP	Non-P	Boundary	658,706	4,991,231	579.8	46.0	3,281
CR1-C16-NP	Non-P	Boundary	661,244	4,986,473	597.0	45.9	1,837
CR1-C34-NP	Non-P	Boundary	658,759	4,990,463	589.4	45.7	2,913
CR1-C38-NP	Non-P	Boundary	660,308	4,990,904	591.2	44.5	1,148
CR1-C41-NP	Non-P	Boundary	665,075	4,992,148	578.8	44.5	2,126
CR1-C14-NP	Non-P	Boundary	657,803	4,986,003	609.0	44.4	1,857
CR1-C71-NP	Non-P	Boundary	664,421	4,988,988	600.0	43.3	1,322
CR1-C62-NP	Non-P	Boundary	658,155	4,994,994	614.5	42.9	820
CR1-C4-CNP	Non-P	Boundary	659,890	4,985,620	605.2	41.9	3,914
CR1-C7-NP	Non-P	Boundary	660,455	4,985,631	591.0	41.9	3,484
CR1-C27-NP	Non-P	Boundary	657,234	4,988,151	587.2	41.7	4,265
CR1-C28-NP	Non-P	Boundary	665,232	4,989,006	583.9	41.6	3,727
CR1-C46-NP	Non-P	Boundary	655,723	4,993,574	609.0	41.2	1,772
CR1-C3-NP	Non-P	Boundary	657,812	4,984,785	603.4	41.1	2,936
CR1-C31-NP	Non-P	Boundary	665,639	4,989,013	584.7	41.0	4,232
CR1-C65-NP	Non-P	Boundary	665,516	4,995,045	578.0	41.0	2,825
CR1-C63-NP	Non-P	Boundary	658,543	4,995,211	606.8	40.9	2,277
CR1-C13-NP	Non-P	Boundary	663,599	4,986,512	615.0	40.3	3,875
CR1-C70-NP	Non-P	Boundary	664,950	4,988,325	596.1	40.0	2,940
CR1-C29-NP	Non-P	Boundary	666,496	4,989,001	574.3	40.0	4,232
CR1-C52-NP	Non-P	Boundary	654,994	4,995,172	603.0	39.2	3,291
CR1-C112-NP	Non-P	Boundary	659,955	4,984,990	604.0	38.9	5,958
CR1-C32-NP	Non-P	Boundary	657,187	4,989,566	573.2	38.6	7,142
CR1-C2-NP	Non-P	Boundary	658,435	4,984,609	601.8	38.4	5,036
CR1-C33-NP	Non-P	Boundary	657,126	4,990,843	567.0	38.4	6,489
CR1-C53-NP	Non-P	Boundary	664,171	4,995,340	580.5	38.3	4,009
CR1-C1-NP	Non-P	Boundary	657,051	4,983,917	590.3	37.7	4,186
CR1-C111-NP	Non-P	Boundary	654,596	4,995,168	599.1	37.3	3,930
CR1-C54-NP	Non-P	Boundary	663,495	4,995,329	582.9	36.8	5,075
CR1-C45-NP	Non-P	Boundary	653,821	4,993,552	573.0	35.3	4,291
CR1-C58-NP	Non-P	Boundary	657,670	4,996,842	615.0	34.2	6,437
CR1-C9-NP	Non-P	Boundary	665,264	4,985,116	609.0	33.4	10,840
CR1-C110-NP	Non-P	Boundary	654,553	4,996,633	588.7	32.2	7,772

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53****UTM NAD83 Zone 14****Codington County*****continued*****Ground Attenuation Factor 0.3****Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C109-NP	Non-P	Boundary	654,552	4,996,783	592.6	31.8	8,189
CR1-C61-NP	Non-P	Boundary	656,928	4,997,784	612.0	31.6	9,885
CR1-C60-NP	Non-P	Boundary	656,909	4,998,465	609.3	30.1	12,096
CR1-C107-NP	Non-P	Boundary	656,548	4,998,450	595.6	30.0	11,988
CR1-C105-NP	Non-P	Boundary	659,131	5,000,043	609.0	27.8	17,001
CR1-C30-P	Participant	Boundary	661,978	4,989,318	612.8	53.7	1,358
CR1-C20-P	Participant	Boundary	662,024	4,987,612	604.2	53.6	640
CR1-C19-P	Participant	Boundary	660,393	4,987,529	608.4	52.9	784
CR2-C150-P	Participant	Boundary	655,905	4,985,521	600.0	52.7	636
CR1-C17-P	Participant	Boundary	658,819	4,986,842	611.4	52.4	925
CR1-C51-P	Participant	Boundary	657,600	4,993,586	620.0	51.9	784
CR1-C42-P	Participant	Boundary	658,965	4,993,598	580.1	51.1	846
CR1-C35-P	Participant	Boundary	661,955	4,990,153	606.1	49.4	1,112
CR1-C64-P	Participant	Boundary	658,623	4,992,794	576.6	48.9	1,119
CR1-C47-P	Participant	Boundary	663,454	4,992,888	612.0	48.6	1,076
CR1-C36-P	Participant	Boundary	663,116	4,990,548	610.7	48.4	1,545
CR1-C50-P	Participant	Boundary	657,048	4,994,159	618.0	47.9	1,299
CR1-C48-P	Participant	Boundary	664,571	4,993,741	586.6	47.0	1,407
CR1-C26-P	Participant	Boundary	658,015	4,987,993	606.7	46.1	1,867
CR1-C57-P	Participant	Boundary	656,526	4,995,198	616.1	45.8	1,319
CR1-C56-P	Participant	Boundary	656,199	4,995,194	603.0	44.7	1,726
CR1-C18-P	Participant	Boundary	663,578	4,987,413	609.4	43.7	2,566
CR1-C10-P	Participant	Boundary	662,862	4,985,695	601.7	39.2	4,150
CR1-C6-P	Participant	Boundary	663,383	4,994,502	591.0	39.1	3,878
CR1-C49-P	Participant	Boundary	662,224	4,993,664	609.0	38.4	5,105
CR1-C8-P	Participant	Boundary	660,476	4,984,821	597.0	38.0	6,086
CR1-C11-P	Participant	Boundary	663,622	4,985,714	608.8	37.5	5,397
CR1-C59-P	Participant	Boundary	660,784	5,000,081	591.5	27.7	17,155
CR1-C34-NP	Non-P	Structure	658,661	4,990,389	588.2	44.4	2,093
CR1-C41-NP	Non-P	Structure	665,053	4,992,084	576.1	44.2	2,356
CR1-C44-NP	Non-P	Structure	665,076	4,993,095	578.2	43.8	2,155
CR1-C14-NP	Non-P	Structure	657,982	4,985,894	609.0	43.7	1,880
CR1-C16-NP	Non-P	Structure	661,960	4,986,288	606.0	43.4	2,648
CR1-C40-NP	Non-P	Structure	657,865	4,991,818	583.7	42.8	2,690
CR1-C39-NP	Non-P	Structure	660,144	4,991,670	588.0	42.3	2,605
CR1-C37-NP	Non-P	Structure	663,563	4,991,342	605.1	42.2	1,631
CR1-C12-1-NP	Non-P	Structure	662,199	4,986,047	606.0	42.0	2,956
CR1-C62-NP	Non-P	Structure	658,375	4,995,138	615.0	41.6	1,676

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53****UTM NAD83 Zone 14****Codington County*****continued*****Ground Attenuation Factor 0.3****Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C38-NP	Non-P	Structure	660,639	4,991,557	597.0	41.2	3,474
CR1-C46-NP	Non-P	Structure	655,802	4,993,540	609.1	41.0	1,795
CR1-C63-NP	Non-P	Structure	658,566	4,995,254	612.4	40.6	2,408
CR1-C31-NP	Non-P	Structure	665,939	4,988,950	585.4	40.4	4,531
CR1-C3-NP	Non-P	Structure	657,888	4,984,697	604.2	40.3	3,294
CR1-C12-NP	Non-P	Structure	662,222	4,985,736	603.0	40.2	3,921
CR1-C28-NP	Non-P	Structure	665,429	4,988,598	590.9	39.8	4,252
CR1-C71-NP	Non-P	Structure	665,137	4,988,378	595.6	39.7	3,448
CR1-C15-NP	Non-P	Structure	663,291	4,986,026	615.0	39.6	3,907
CR1-C70-NP	Non-P	Structure	665,135	4,988,293	595.9	39.5	3,540
CR1-C29-NP	Non-P	Structure	666,572	4,988,867	575.9	39.3	4,675
CR1-C27-NP	Non-P	Structure	656,876	4,988,683	583.0	39.2	5,974
CR1-C67-NP	Non-P	Structure	659,789	4,985,057	606.0	39.2	5,791
CR1-C72-NP	Non-P	Structure	665,158	4,988,170	594.6	39.2	3,776
CR1-C66-NP	Non-P	Structure	659,718	4,985,032	606.0	39.1	5,800
CR1-C65-NP	Non-P	Structure	665,805	4,995,305	579.0	38.6	3,884
CR1-C112-NP	Non-P	Structure	660,002	4,984,908	604.6	38.6	6,207
CR1-C52-NP	Non-P	Structure	654,924	4,995,231	603.0	38.5	3,589
CR1-C55-NP	Non-P	Structure	660,914	4,995,169	607.5	38.5	3,360
CR1-C5-NP	Non-P	Structure	659,958	4,984,794	604.8	38.1	6,601
CR1-C4-NP	Non-P	Structure	659,744	4,984,749	606.0	38.0	6,706
CR1-C7-NP	Non-P	Structure	660,893	4,984,861	593.2	37.9	5,932
CR1-C2-NP	Non-P	Structure	658,791	4,984,483	602.0	37.6	6,273
CR1-C33-NP	Non-P	Structure	656,839	4,990,404	569.8	37.5	7,418
CR1-C13-NP	Non-P	Structure	663,792	4,985,785	612.0	37.3	5,643
CR1-C54-NP	Non-P	Structure	663,421	4,995,376	583.4	36.5	5,351
CR1-C32-NP	Non-P	Structure	655,843	4,989,581	568.8	35.7	9,708
CR1-C1-C1-NP	Non-P	Structure	656,743	4,983,525	596.0	35.6	5,541
CR1-C53-NP	Non-P	Structure	663,376	4,996,043	578.8	34.6	7,201
CR1-C58-NP	Non-P	Structure	657,781	4,996,906	615.0	34.0	6,611
CR1-C45-NP	Non-P	Structure	653,390	4,993,503	573.2	33.3	5,673
CR1-C111-NP	Non-P	Structure	653,857	4,995,573	591.0	33.2	6,306
CR1-C9-NP	Non-P	Structure	665,352	4,985,004	609.0	33.1	11,283
CR1-C110-NP	Non-P	Structure	654,385	4,996,686	593.9	31.8	8,228
CR1-C61-NP	Non-P	Structure	656,690	4,997,831	612.0	31.4	9,970
CR1-C109-NP	Non-P	Structure	653,780	4,996,828	588.0	30.4	9,859
CR1-C60-NP	Non-P	Structure	656,855	4,998,565	613.5	29.9	12,408
CR1-C107-NP	Non-P	Structure	656,811	4,999,855	598.8	27.6	16,621

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

CODINGTON COUNTY

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114

continued

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53****UTM NAD83 Zone 14****Ground Attenuation Factor 0.3****Grant County****Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114****continued**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-G16-NP	Non-P	Structure	668,419	4,989,861	576.0	44.1	2,070
CR1-G68-NP	Non-P	Structure	669,159	4,993,632	565.6	43.4	2,113
CR1-G23-NP	Non-P	Structure	670,471	4,992,104	560.0	42.9	2,185
CR1-G34-NP	Non-P	Structure	671,320	4,995,798	531.0	42.5	2,238
CR1-G14-NP	Non-P	Structure	668,156	4,989,332	574.1	39.9	3,940
CR1-G13-NP	Non-P	Structure	672,216	4,989,142	558.0	39.4	3,576
CR1-G12-NP	Non-P	Structure	668,229	4,989,039	575.0	38.6	4,623
CR1-G37-NP	Non-P	Structure	668,998	4,996,452	549.0	36.9	5,246
CR1-G22-NP	Non-P	Structure	674,670	4,991,955	527.6	35.2	5,781
CR1-G42-NP	Non-P	Structure	670,566	4,997,097	518.9	34.9	6,476
CR1-G36-NP	Non-P	Structure	673,559	4,996,344	498.0	31.4	6,483
CR1-G105-NP	Non-P	Structure	668,696	4,998,325	549.0	30.9	11,263
CR1-G77-NP	Non-P	Structure	676,031	4,992,629	502.7	30.3	8,878
CR1-G27-NP	Non-P	Structure	676,630	4,994,642	480.8	27.7	8,678
CR1-G70-NP	Non-P	Structure	677,465	4,991,043	492.0	27.5	15,006
CR1-G130-NP	Non-P	Structure	668,147	5,000,233	549.0	27.4	17,756
CR1-G109-NP	Non-P	Structure	667,064	5,000,425	566.2	27.2	19,704
CR1-G125-NP	Non-P	Structure	668,289	5,000,643	543.0	26.8	18,888
CR1-G43-NP	Non-P	Structure	661,141	5,001,721	583.6	25.7	6,552
CR1-G44-NP	Non-P	Structure	661,781	5,001,732	583.7	25.7	6,939
CR1-G117-NP	Non-P	Structure	663,801	5,005,084	581.3	22.3	4,501
CR1-G113-NP	Non-P	Structure	666,228	5,005,549	537.0	21.7	12,575
CR1-G110-NP	Non-P	Structure	671,218	5,005,064	456.2	21.3	28,615
CR1-G114-NP	Non-P	Structure	666,214	5,006,667	521.1	20.8	13,878
CR1-G115-NP	Non-P	Structure	664,933	5,006,731	544.6	20.9	10,531
CR1-G600-NP	Non-P	Structure	674,301	5,005,773	393.0	19.8	36,397
CR1-G18-P	Participant	Structure	668,678	4,990,722	585.0	47.7	1,585
CR1-G32-P	Participant	Structure	669,477	4,995,401	546.0	47.6	1,545
CR1-G21-P	Participant	Structure	666,766	4,991,807	577.1	47.3	1,555
CR1-G19-P	Participant	Structure	671,018	4,990,744	570.0	46.1	2,077
CR1-G66-P	Participant	Structure	670,802	4,994,681	539.7	45.8	1,801
CR1-G65-P	Participant	Structure	671,496	4,994,973	537.0	45.2	1,539
CR1-G67-P	Participant	Structure	669,597	4,993,440	556.1	44.9	2,106
CR1-G25-P	Participant	Structure	671,391	4,992,858	549.0	43.7	1,804
CR1-G24-P	Participant	Structure	673,058	4,992,440	539.4	42.7	2,231
CR1-G15-P	Participant	Structure	668,396	4,989,607	576.0	42.0	2,746
CR1-G33-P	Participant	Structure	668,911	4,995,550	548.7	41.7	2,779
CR1-G26-P	Participant	Structure	672,589	4,993,869	531.0	38.0	3,140

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTB on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Ground Attenuation Factor 0.3

Grant County
continued

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114

Codington County

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	Curtailed	23 LNTE's	All LNTE's	Distance to Nearest Turbine (ft)
					Real Case Sound (dB(A))	Real Case Sound (dB(A))	Real Case Sound (dB(A))	
CR1-C34-NP	Non-P	658,661	4,990,389	588.2	44.6	43.4	41.9	2,093
CR1-C41-NP	Non-P	665,053	4,992,084	576.1	44.3	44.4	43.9	2,356
CR1-C44-NP	Non-P	665,076	4,993,095	578.2	43.9	44.2	43.6	2,155
CR1-C14-NP	Non-P	657,982	4,985,894	609.0	43.7	44.3	43.3	1,880
CR1-C16-NP	Non-P	661,960	4,986,288	606.0	43.5	42.3	40.6	2,648
CR1-C40-NP	Non-P	657,865	4,991,818	583.7	42.9	42.0	40.5	2,690
CR1-C39-NP	Non-P	660,144	4,991,670	588.0	42.4	41.5	40.8	2,605
CR1-C37-NP	Non-P	663,563	4,991,342	605.1	42.2	45.0	44.8	1,631
CR1-C12-1-NP	Non-P	662,199	4,986,047	606.0	42.1	40.9	39.3	2,956
CR1-C62-NP	Non-P	658,375	4,995,138	615.0	41.7	44.0	43.6	1,676
CR1-C38-NP	Non-P	660,639	4,991,557	597.0	41.2	40.8	39.9	3,474
CR1-C46-NP	Non-P	655,802	4,993,540	609.1	41.0	44.5	44.1	1,795
CR1-C63-NP	Non-P	658,566	4,995,254	612.4	40.7	41.8	41.4	2,408
CR1-C31-NP	Non-P	665,939	4,988,950	585.4	40.4	39.4	38.3	4,531
CR1-C3-NP	Non-P	657,888	4,984,697	604.2	40.4	39.5	38.1	3,294
CR1-C12-NP	Non-P	662,222	4,985,736	603.0	40.3	39.1	37.6	3,921
CR1-C28-NP	Non-P	665,429	4,988,598	590.9	39.8	39.4	38.3	4,252
CR1-C71-NP	Non-P	665,137	4,988,378	595.6	39.8	40.0	38.8	3,448
CR1-C15-NP	Non-P	663,291	4,986,026	615.0	39.7	38.5	37.1	3,907
CR1-C70-NP	Non-P	665,135	4,988,293	595.9	39.6	39.8	38.6	3,540
CR1-C29-NP	Non-P	666,572	4,988,867	575.9	39.3	38.3	37.1	4,675
CR1-C27-NP	Non-P	656,876	4,988,683	583.0	39.2	38.1	36.8	5,974
CR1-C67-NP	Non-P	659,789	4,985,057	606.0	39.3	38.1	36.7	5,791
CR1-C72-NP	Non-P	665,158	4,988,170	594.6	39.2	39.3	38.1	3,776
CR1-C66-NP	Non-P	659,718	4,985,032	606.0	39.2	38.0	36.7	5,800
CR1-C65-NP	Non-P	665,805	4,995,305	579.0	38.7	37.7	36.5	3,884
CR1-C112-NP	Non-P	660,002	4,984,908	604.6	38.6	37.4	36.1	6,207
CR1-C52-NP	Non-P	654,924	4,995,231	603.0	38.6	38.3	38.1	3,589
CR1-C55-NP	Non-P	660,914	4,995,169	607.5	39.5	39.5	39.5	3,360
CR1-C5-NP	Non-P	659,958	4,984,794	604.8	38.2	37.0	35.8	6,601
CR1-C4-NP	Non-P	659,744	4,984,749	606.0	38.1	36.9	35.7	6,706
CR1-C7-NP	Non-P	660,893	4,984,861	593.2	38.0	36.7	35.6	5,932
CR1-C2-NP	Non-P	658,791	4,984,483	602.0	37.6	36.6	35.4	6,273
CR1-C33-NP	Non-P	656,839	4,990,404	569.8	37.5	36.7	35.8	7,418
CR1-C13-NP	Non-P	663,792	4,985,785	612.0	37.4	36.3	35.2	5,643
CR1-C54-NP	Non-P	663,421	4,995,376	583.4	36.6	35.9	35.2	5,351
CR1-C32-NP	Non-P	655,843	4,989,581	568.8	35.7	34.8	34.0	9,708
CR1-C1-NP	Non-P	656,743	4,983,525	596.0	35.7	34.6	33.4	5,541
CR1-C53-NP	Non-P	663,376	4,996,043	578.8	34.6	34.0	33.5	7,201

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Codington County

continued

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	Curtailed	23 LNTE's	All LNTE's	Distance to Nearest Turbine (ft)
					Real Case Sound (dB(A))	Real Case Sound (dB(A))	Real Case Sound (dB(A))	
CR1-C58-NP	Non-P	657,781	4,996,906	615.0	34.1	34.3	33.9	6,611
CR1-C45-NP	Non-P	653,390	4,993,503	573.2	33.3	33.2	33.0	5,673
CR1-C111-NP	Non-P	653,857	4,995,573	591.0	33.2	33.0	32.9	6,306
CR1-C9-NP	Non-P	665,352	4,985,004	609.0	33.1	32.1	31.6	11,283
CR1-C110-NP	Non-P	654,385	4,996,686	593.9	31.8	31.7	31.6	8,228
CR1-C61-NP	Non-P	656,690	4,997,831	612.0	31.4	31.4	31.2	9,970
CR1-C109-NP	Non-P	653,780	4,996,828	588.0	30.5	30.4	30.2	9,859
CR1-C60-NP	Non-P	656,855	4,998,565	613.5	29.9	29.9	29.8	12,408
CR1-C107-NP	Non-P	656,811	4,999,855	598.8	27.7	27.6	27.6	16,621
CR1-C105-NP	Non-P	658,372	5,001,257	600.3	26.0	26.0	26.1	20,922
CR1-C30-P	Participant	661,699	4,988,957	615.0	49.6	49.5	47.7	1,614
CR1-C19-P	Participant	659,243	4,987,276	611.6	49.3	48.0	46.2	1,722
CR1-C68-P	Participant	662,652	4,987,606	609.0	47.7	46.5	44.8	2,146
CR1-C69-P	Participant	662,685	4,987,619	609.0	47.6	46.5	44.7	2,185
CR1-C36-P	Participant	663,181	4,990,600	615.0	47.7	45.6	45.3	1,532
CR2-C150-P	Participant	657,178	4,985,788	612.0	47.5	47.4	46.1	1,640
CR1-C17-P	Participant	658,031	4,986,373	609.1	46.7	46.4	45.1	1,886
CR1-C50-P	Participant	656,806	4,994,388	621.0	46.4	47.0	46.6	1,591
CR1-C20-P	Participant	663,054	4,987,455	606.0	46.0	44.9	43.1	2,336
CR1-C35-P	Participant	662,025	4,990,475	609.0	45.7	44.9	43.6	2,123
CR1-C48-P	Participant	664,247	4,993,646	588.0	45.1	45.4	44.6	1,847
CR1-C57-P	Participant	656,628	4,995,266	615.0	44.7	44.1	43.9	1,568
CR1-C56-P	Participant	655,953	4,995,244	606.5	43.6	43.0	42.9	1,972
CR1-C26-P	Participant	657,767	4,988,493	597.0	42.7	41.5	39.9	3,484
CR1-C18-P	Participant	663,651	4,987,157	610.4	42.3	41.3	39.8	3,435
CR1-C42-P	Participant	659,458	4,992,229	580.0	42.1	41.1	40.1	3,947
CR1-C64-P	Participant	659,436	4,992,174	581.0	42.1	41.1	40.1	4,049
CR1-C51-P	Participant	657,455	4,995,160	621.0	42.1	44.0	43.6	1,768
CR1-C47-P	Participant	662,825	4,993,508	613.9	39.7	39.1	38.7	3,750
CR1-C49-P	Participant	662,250	4,993,731	609.0	38.4	37.8	37.4	5,148
CR1-C8-P	Participant	660,532	4,984,445	599.4	36.8	35.5	34.5	7,293
CR1-C11-P	Participant	664,111	4,985,679	609.0	44.9	44.9	44.9	6,676
CR1-C10-P	Participant	663,510	4,985,195	609.0	36.2	35.1	34.1	6,535
CR1-C6-P	Participant	662,989	4,995,228	599.8	36.2	35.6	35.1	6,102
CR1-C21-P	Participant	660,756	4,984,086	594.0	35.6	34.4	33.5	8,445
CR1-C22-P	Participant	660,755	4,984,082	594.0	35.6	34.4	33.5	8,458
CR1-C23-P	Participant	660,619	4,984,078	595.8	35.7	34.4	33.5	8,478
CR1-C59-P	Participant	661,548	5,000,754	584.2	26.8	26.7	26.8	19,859

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Grant County

continued

Ground Attenuation Factor 0.3

Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	Curtailed	23 LNTE's	All LNTE's	Distance to Nearest Turbine (ft)
					Real Case Sound (dB(A))	Real Case Sound (dB(A))	Real Case Sound (dB(A))	
CR1-G16-NP	Non-P	668,419	4,989,861	576.0	44.1	42.9	41.2	2,070
CR1-G68-NP	Non-P	669,159	4,993,632	565.6	43.4	44.4	42.6	2,113
CR1-G23-NP	Non-P	670,471	4,992,104	560.0	42.9	44.0	42.2	2,185
CR1-G34-NP	Non-P	671,320	4,995,798	531.0	42.5	41.3	39.6	2,238
CR1-G14-NP	Non-P	668,156	4,989,332	574.1	39.9	38.7	37.3	3,940
CR1-G13-NP	Non-P	672,216	4,989,142	558.0	39.4	38.2	36.6	3,576
CR1-G12-NP	Non-P	668,229	4,989,039	575.0	38.6	37.4	36.2	4,623
CR1-G37-NP	Non-P	668,998	4,996,452	549.0	36.9	36.2	34.8	5,246
CR1-G22-NP	Non-P	674,670	4,991,955	527.6	35.2	34.0	32.7	5,781
CR1-G42-NP	Non-P	670,566	4,997,097	518.9	34.9	34.0	32.8	6,476
CR1-G36-NP	Non-P	673,559	4,996,344	498.0	31.4	30.5	29.7	6,483
CR1-G105-NP	Non-P	668,696	4,998,325	549.0	30.9	30.2	29.6	11,263
CR1-G77-NP	Non-P	676,031	4,992,629	502.7	30.3	29.2	28.6	8,878
CR1-G27-NP	Non-P	676,630	4,994,642	480.8	27.7	26.8	26.5	8,678
CR1-G70-NP	Non-P	677,465	4,991,043	492.0	27.5	26.5	26.2	15,006
CR1-G130-NP	Non-P	668,147	5,000,233	549.0	27.4	27.0	26.8	17,756
CR1-G109-NP	Non-P	667,064	5,000,425	566.2	27.2	26.8	26.7	19,704
CR1-G125-NP	Non-P	668,289	5,000,643	543.0	26.8	26.4	26.3	18,888
CR1-G43-NP	Non-P	661,141	5,001,721	583.6	25.7	25.6	25.7	6,552
CR1-G44-NP	Non-P	661,781	5,001,732	583.7	25.7	25.6	25.7	6,939
CR1-G117-NP	Non-P	663,801	5,005,084	581.3	22.3	22.4	22.5	4,501
CR1-G113-NP	Non-P	666,228	5,005,549	537.0	21.7	21.8	22.0	12,575
CR1-G110-NP	Non-P	671,218	5,005,064	456.2	21.3	21.3	21.5	28,615
CR1-G115-NP	Non-P	664,933	5,006,731	544.6	20.9	21.0	21.2	10,531
CR1-G114-NP	Non-P	666,214	5,006,667	521.1	20.8	20.9	21.1	13,878
CR1-G600-NP	Non-P	674,301	5,005,773	393.0	19.8	19.8	20.0	36,397
CR1-G18-P	Participant	668,678	4,990,722	585.0	47.7	46.6	44.8	1,585
CR1-G32-P	Participant	669,477	4,995,401	546.0	47.6	46.6	44.9	1,545
CR1-G21-P	Participant	666,766	4,991,807	577.1	47.3	46.1	44.6	1,555
CR1-G19-P	Participant	671,018	4,990,744	570.0	46.1	45.0	43.2	2,077
CR1-G66-P	Participant	670,802	4,994,681	539.7	45.8	44.8	43.0	1,801
CR1-G65-P	Participant	671,496	4,994,973	537.0	45.2	44.1	42.4	1,539
CR1-G67-P	Participant	669,597	4,993,440	556.1	44.9	44.6	42.8	2,106
CR1-G25-P	Participant	671,391	4,992,858	549.0	43.7	45.3	43.5	1,804
CR1-G24-P	Participant	673,058	4,992,440	539.4	42.7	41.6	39.9	2,231
CR1-G15-P	Participant	668,396	4,989,607	576.0	42.0	40.7	39.1	2,746
CR1-G33-P	Participant	668,911	4,995,550	548.7	41.7	41.0	39.3	2,779
CR1-G26-P	Participant	672,589	4,993,869	531.0	38.0	37.2	35.7	3,140

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

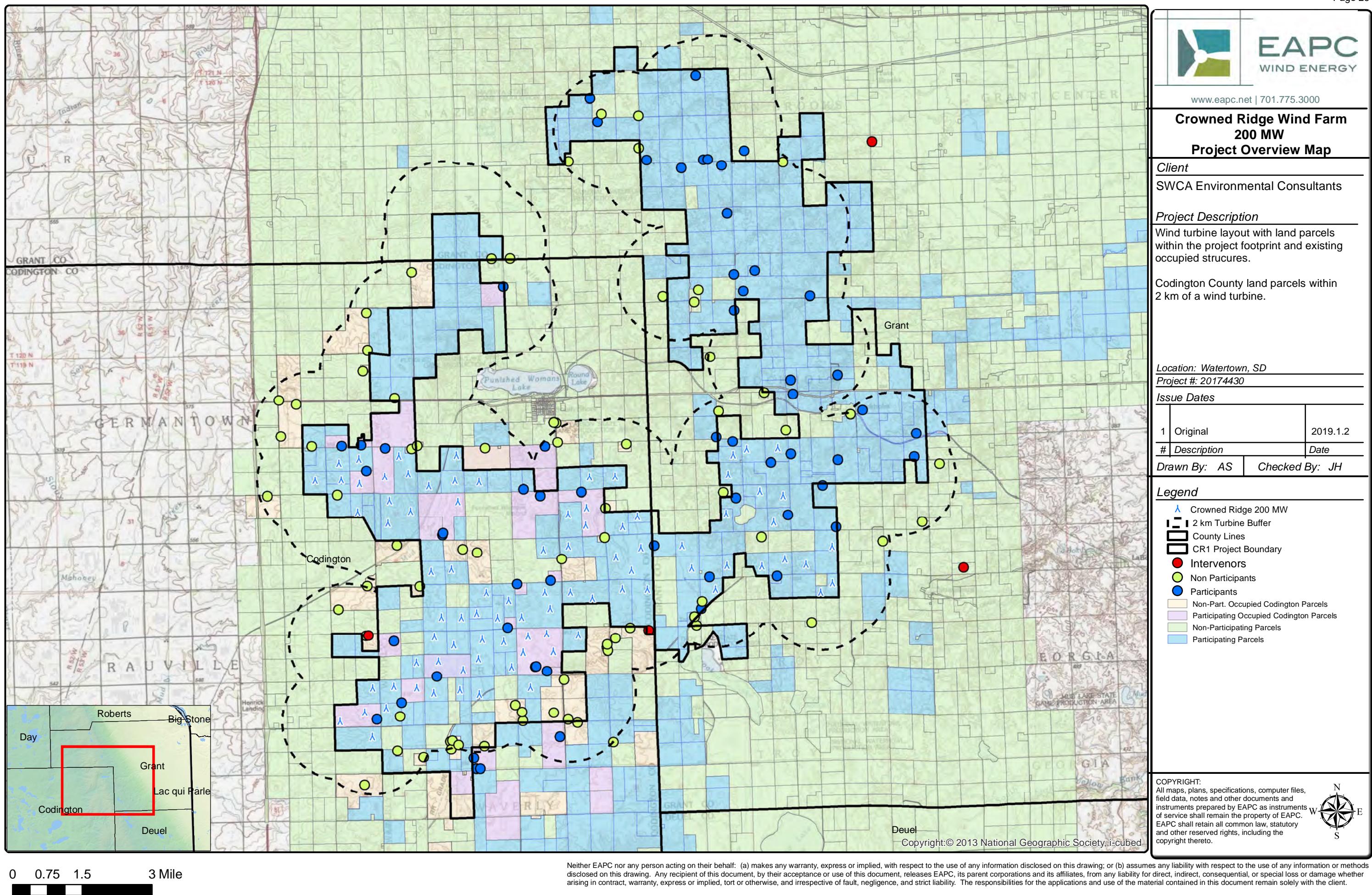
Grant County

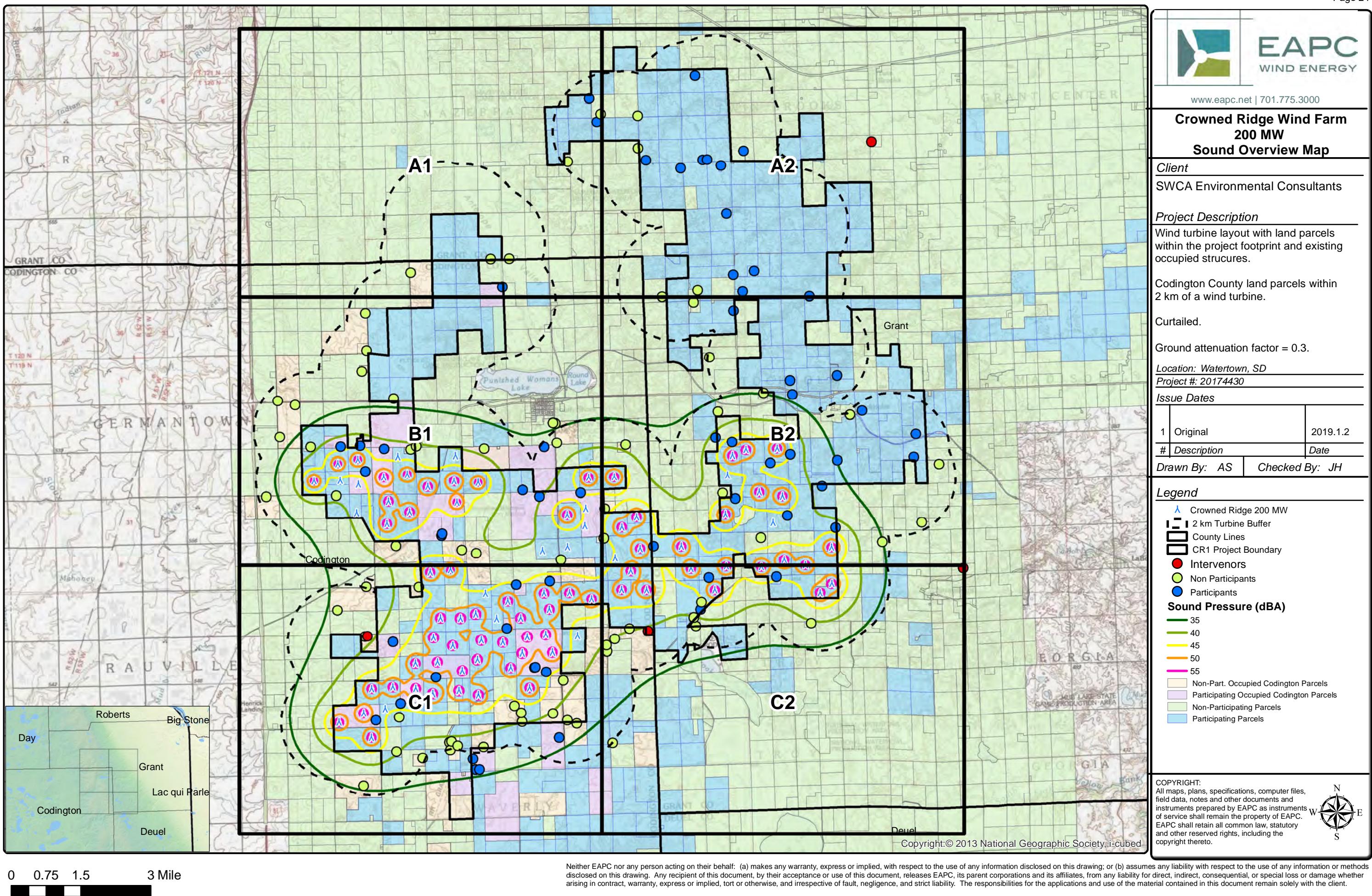
Grant Set

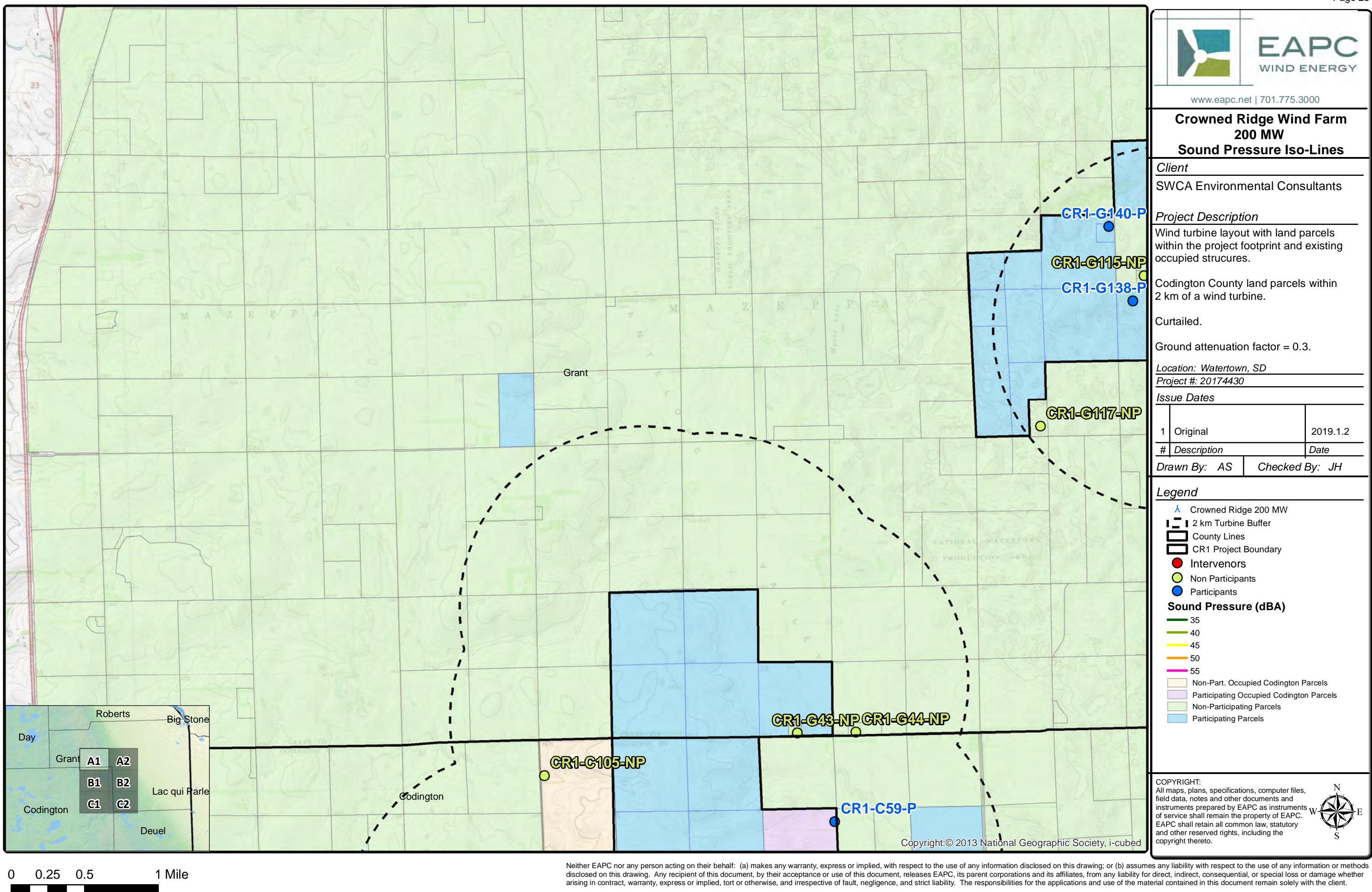
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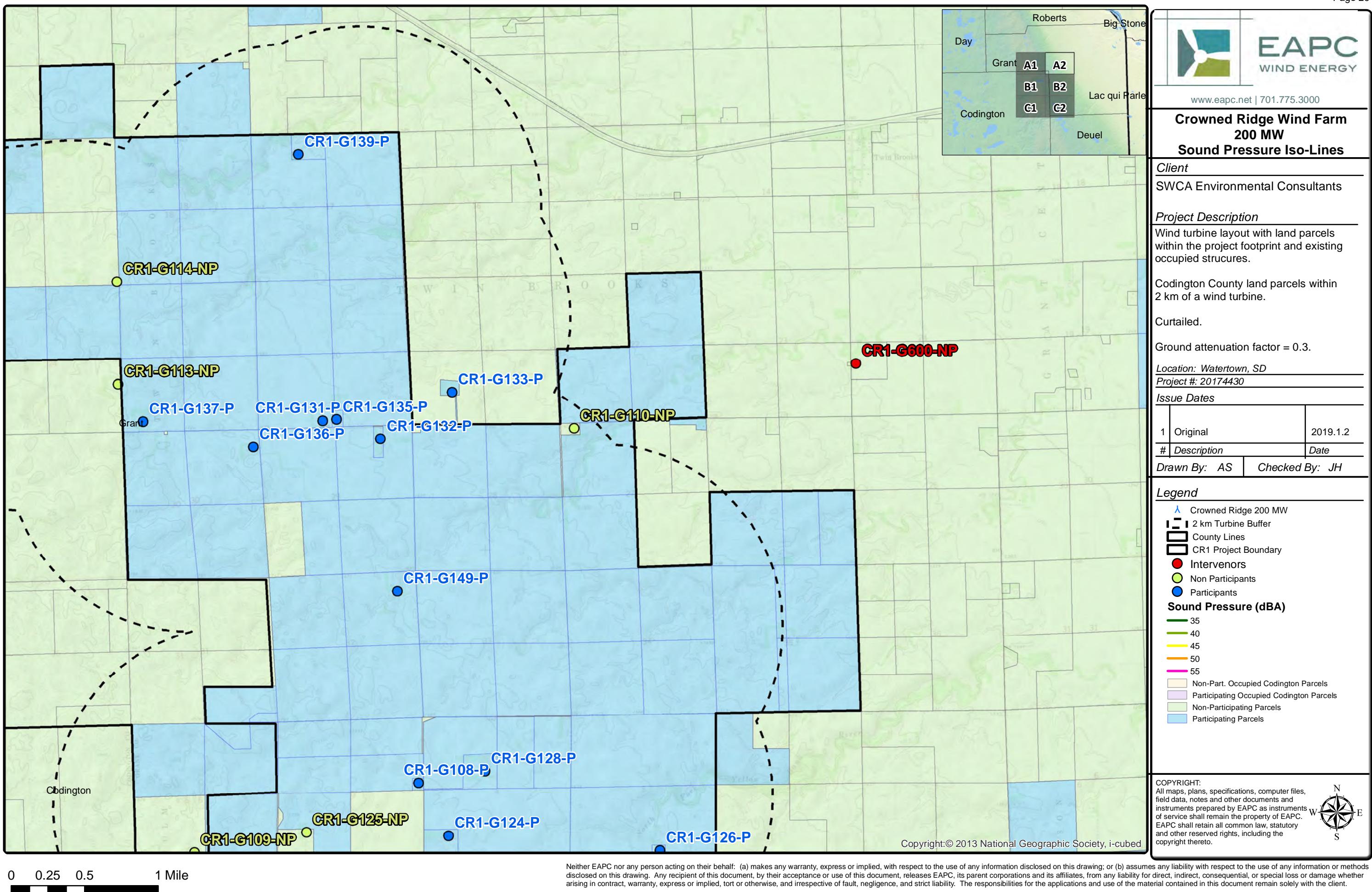
Ground Attenuation Factor 0.3

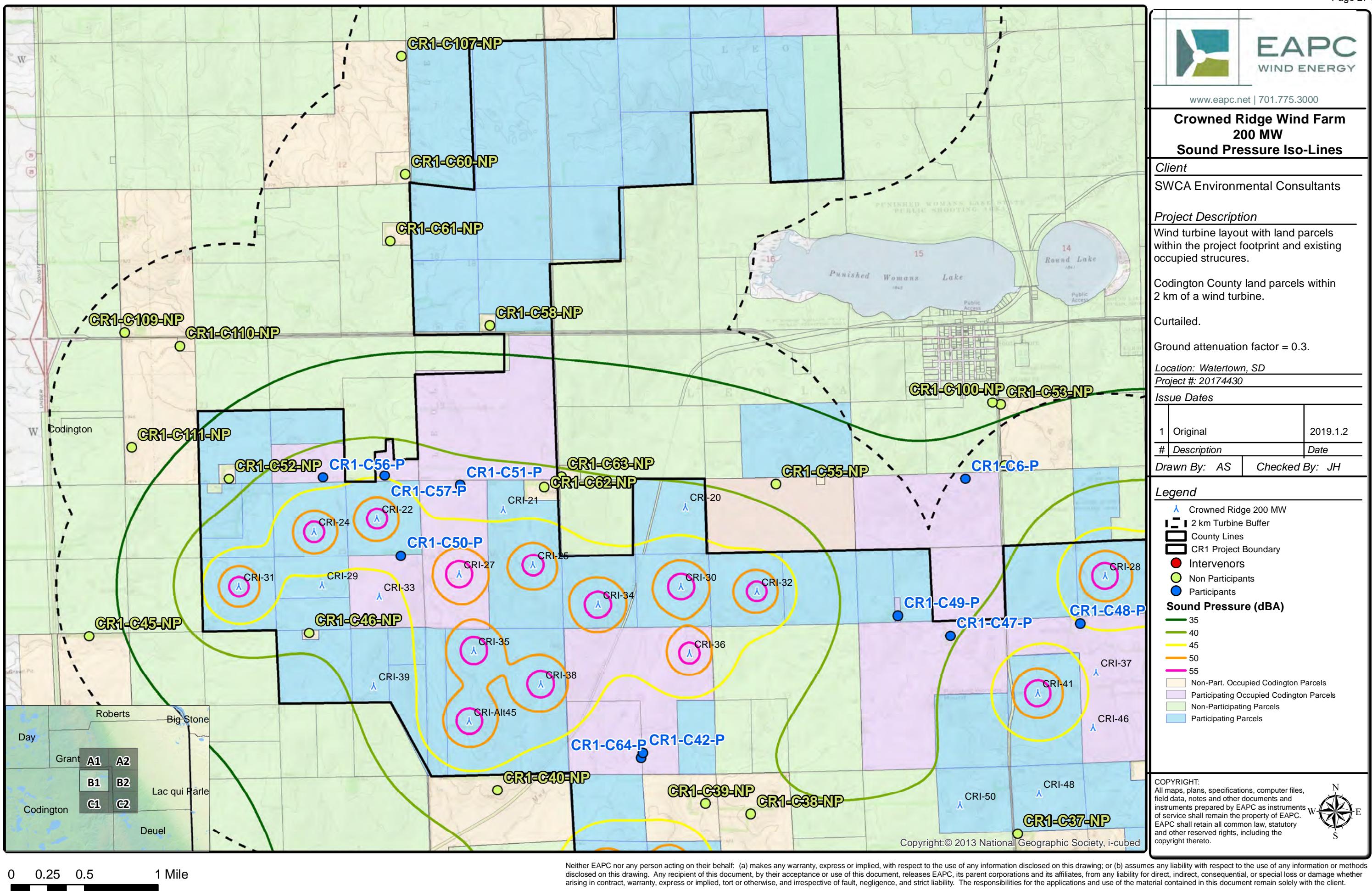
Curtailed Turbines: 20, 21, 29, 33, 37, 39, 46, 48, 50, 52, 62, 73, 75, 95, 109, 114

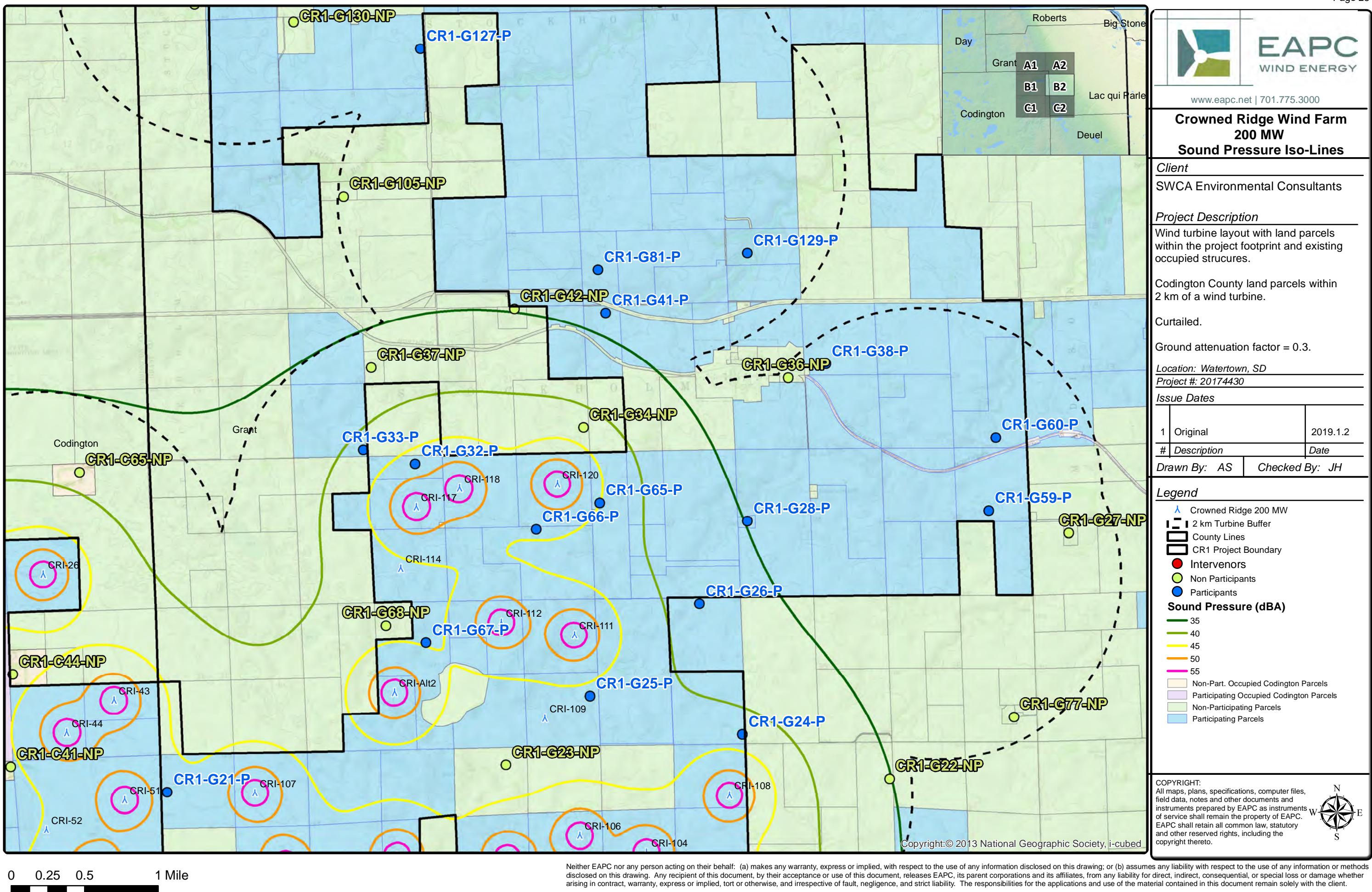


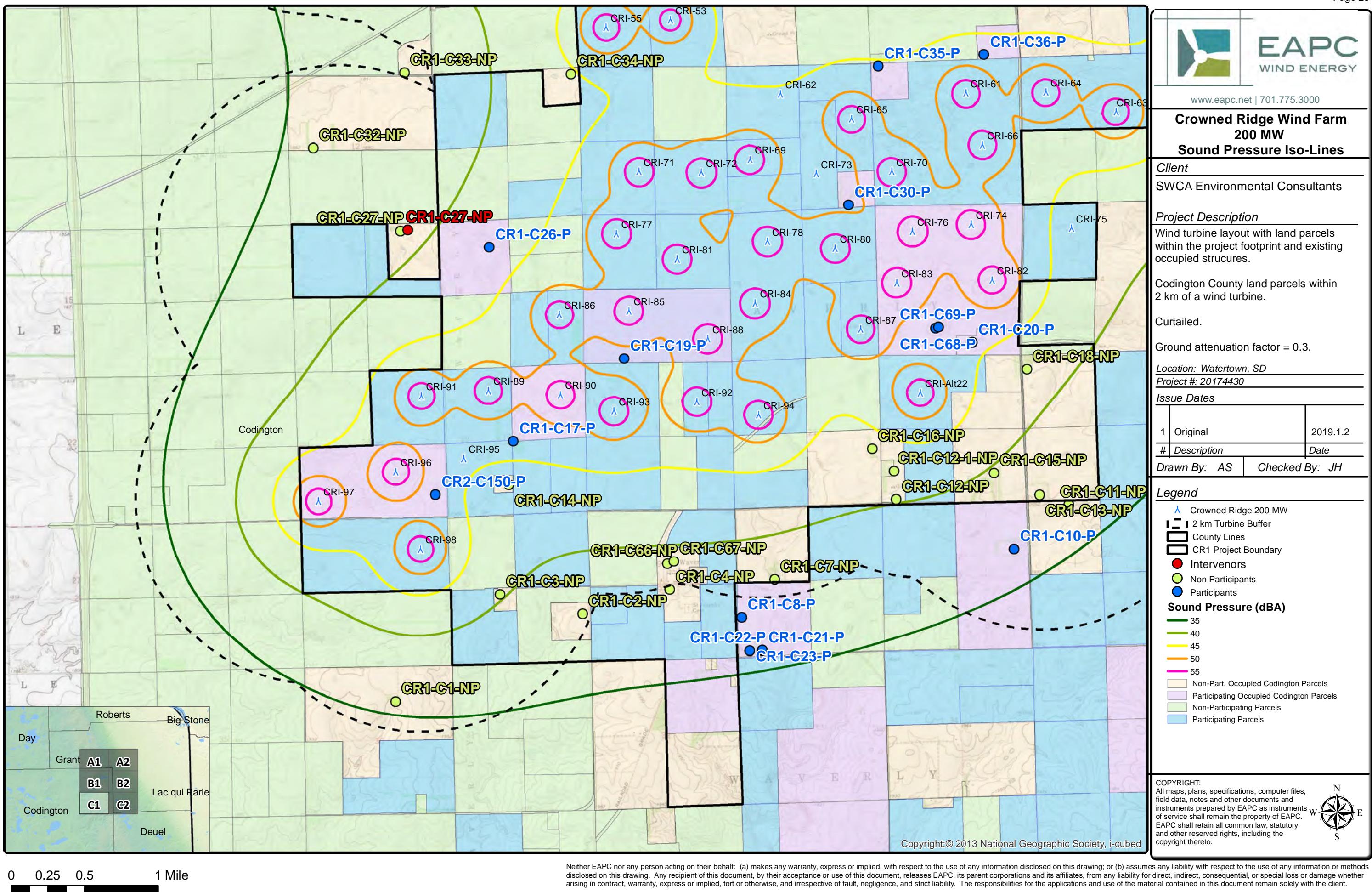












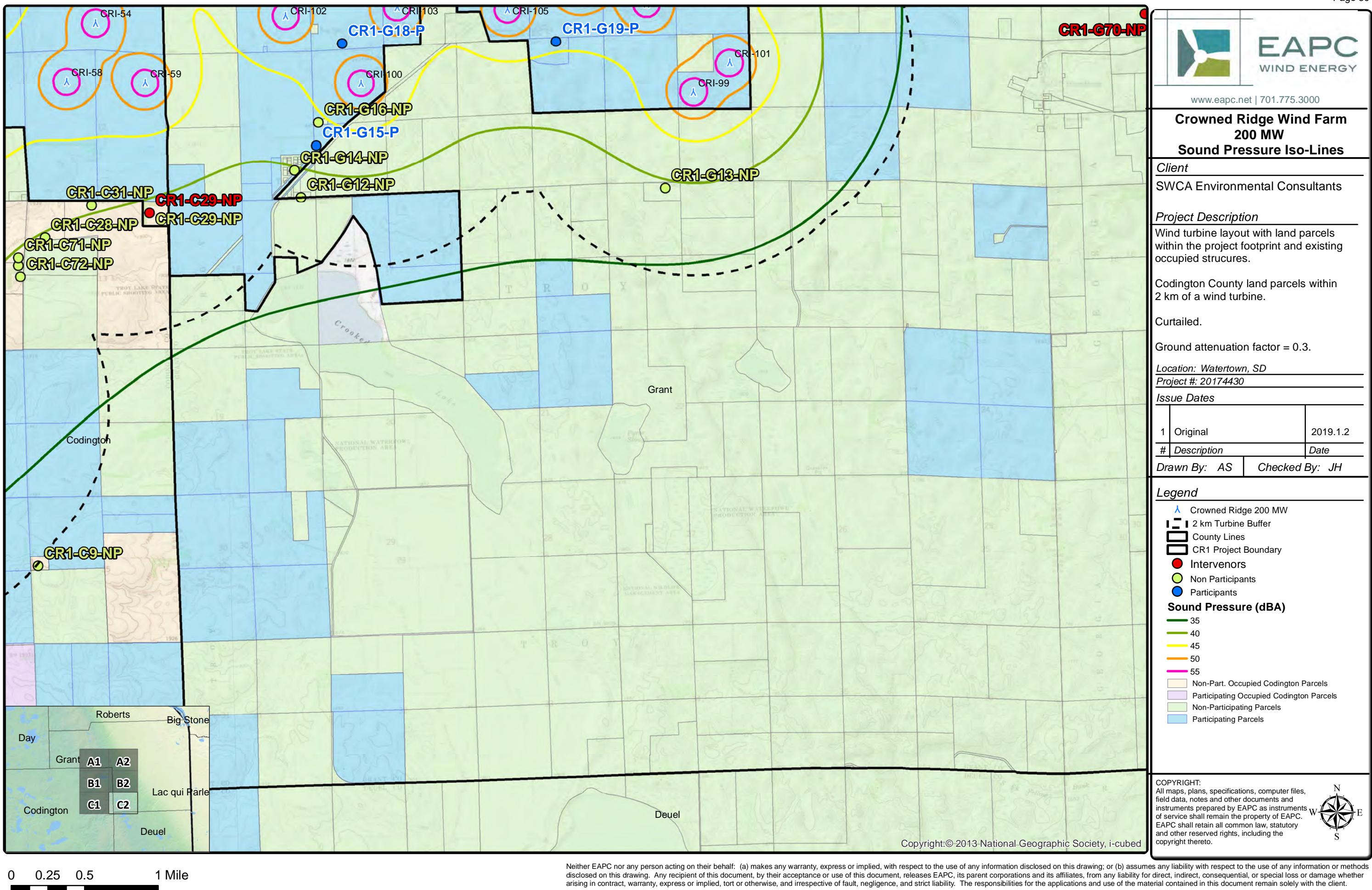


Table A-1: Crowned Ridge Wind Farm 200 MW

GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

WTG	Type	Turbine Model	Easting (m)	Northing (m)	Base Elev. AMSL (m)	Sound Profile
CRI-20	Primary	GE2.3 116RD 90HH r2.madE	659,920	4,994,924	594.0	Curtailed
CRI-21	Primary	GE2.3 116RD 90HH r2.madE	657,925	4,994,896	617.1	Curtailed
CRI-22	Primary	GE2.3 116RD 90HH r2.madE	656,543	4,994,796	616.5	LNTE
CRI-24	Primary	GE2.3 116RD 90HH r2.madE	655,852	4,994,652	609.0	LNTE
CRI-25	Primary	GE2.3 116RD 90HH r2.madE	658,251	4,994,286	605.5	Curtailed
CRI-26	Primary	GE2.3 116RD 90HH r2.madE	665,405	4,994,191	578.5	Normal
CRI-27	Primary	GE2.3 116RD 90HH r2.madE	657,442	4,994,187	621.0	Normal
CRI-28	Primary	GE2.3 116RD 90HH r2.madE	664,517	4,994,168	579.0	Normal
CRI-29	Primary	GE2.3 116RD 90HH r2.madE	655,940	4,994,069	606.9	Curtailed
CRI-30	Primary	GE2.3 116RD 90HH r2.madE	659,871	4,994,052	593.7	Normal
CRI-31	Primary	GE2.3 116RD 90HH r2.madE	655,030	4,994,051	603.0	LNTE
CRI-32	Primary	GE2.3 116RD 90HH r2.madE	660,704	4,993,998	606.0	LNTE
CRI-33	Primary	GE2.3 116RD 90HH r2.madE	656,566	4,993,941	618.0	Curtailed
CRI-34	Primary	GE2.3 116RD 90HH r2.madE	658,966	4,993,856	599.7	Normal
CRI-35	Primary	GE2.3 116RD 90HH r2.madE	657,602	4,993,347	607.4	Normal
CRI-36	Primary	GE2.3 116RD 90HH r2.madE	659,966	4,993,319	594.0	LNTE
CRI-37	Primary	GE2.3 116RD 90HH r2.madE	664,419	4,993,110	587.3	Curtailed
CRI-38	Primary	GE2.3 116RD 90HH r2.madE	658,338	4,992,981	600.5	Normal
CRI-39	Primary	GE2.3 116RD 90HH r2.madE	656,507	4,992,958	609.0	Curtailed
CRI-41	Primary	GE2.3 116RD 90HH r2.madE	663,782	4,992,883	597.7	Normal
CRI-43	Primary	GE2.3 116RD 90HH r2.madE	666,181	4,992,815	577.9	Curtailed
CRI-44	Primary	GE2.3 116RD 90HH r2.madE	665,665	4,992,460	576.0	Curtailed
CRI-46	Primary	GE2.3 116RD 90HH r2.madE	664,387	4,992,505	591.0	Curtailed
CRI-48	Primary	GE2.3 116RD 90HH r2.madE	663,794	4,991,782	587.1	Curtailed
CRI-50	Primary	GE2.3 116RD 90HH r2.madE	662,930	4,991,655	612.0	Curtailed
CRI-51	Primary	GE2.3 116RD 90HH r2.madE	666,299	4,991,723	575.3	Normal
CRI-52	Primary	GE2.3 116RD 90HH r2.madE	665,441	4,991,398	575.5	Curtailed
CRI-53	Primary	GE2.3 116RD 90HH r2.madE	659,750	4,990,981	598.7	Curtailed
CRI-54	Primary	GE2.3 116RD 90HH r2.madE	665,979	4,990,946	573.7	Normal
CRI-55	Primary	GE2.3 116RD 90HH r2.madE	659,045	4,990,899	597.1	Curtailed
CRI-58	Primary	GE2.3 116RD 90HH r2.madE	665,663	4,990,303	585.0	Normal
CRI-59	Primary	GE2.3 116RD 90HH r2.madE	666,523	4,990,291	573.0	Normal
CRI-61	Primary	GE2.3 116RD 90HH r2.madE	662,982	4,990,178	612.0	Curtailed
CRI-62	Primary	GE2.3 116RD 90HH r2.madE	660,954	4,990,170	600.8	Curtailed
CRI-63	Primary	GE2.3 116RD 90HH r2.madE	664,627	4,989,977	588.6	Normal
CRI-64	Primary	GE2.3 116RD 90HH r2.madE	663,858	4,989,188	604.3	Normal
CRI-65	Primary	GE2.3 116RD 90HH r2.madE	661,732	4,989,898	609.0	Normal
CRI-66	Primary	GE2.3 116RD 90HH r2.madE	663,165	4,989,613	614.7	Normal
CRI-69	Primary	GE2.3 116RD 80HH r2.madE	660,621	4,989,453	605.6	Normal
CRI-70	Primary	GE2.3 116RD 90HH r2.madE	662,171	4,989,319	611.0	Curtailed
CRI-71	Primary	GE2.3 116RD 80HH r2.madE	659,405	4,989,320	607.3	Normal

Table A-1: Crowned Ridge Wind Farm 200 MW

GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

continued

WTG	Type	Turbine Model	Easting (m)	Northing (m)	Base Elev. AMSL (m)	Sound Profile
CRI-72	Primary	GE2.3 116RD 80HH r2.madE	660,087	4,989,309	606.0	Normal
CRI-73	Primary	GE2.3 116RD 90HH r2.madE	661,344	4,989,297	609.8	Curtailed
CRI-74	Primary	GE2.3 116RD 90HH r2.madE	663,041	4,988,744	615.0	Normal
CRI-75	Primary	GE2.3 116RD 90HH r2.madE	664,137	4,988,702	609.0	Curtailed
CRI-76	Primary	GE2.3 116RD 90HH r2.madE	662,399	4,988,667	615.0	Normal
CRI-77	Primary	GE2.3 116RD 80HH r2.madE	659,158	4,988,642	612.0	Normal
CRI-78	Primary	GE2.3 116RD 80HH r2.madE	660,811	4,988,558	604.1	Normal
CRI-80	Primary	GE2.3 116RD 90HH r2.madE	661,552	4,988,481	608.8	Curtailed
CRI-81	Primary	GE2.3 116RD 90HH r2.madE	659,825	4,988,365	606.8	Normal
CRI-82	Primary	GE2.3 116RD 90HH r2.madE	663,271	4,988,133	613.0	Normal
CRI-83	Primary	GE2.3 116RD 90HH r2.madE	662,227	4,988,103	606.6	Normal
CRI-84	Primary	GE2.3 116RD 80HH r2.madE	660,677	4,987,880	600.6	Normal
CRI-85	Primary	GE2.3 116RD 90HH r2.madE	659,295	4,987,798	612.0	Curtailed
CRI-86	Primary	GE2.3 116RD 90HH r2.madE	658,534	4,987,759	613.1	Normal
CRI-87	Primary	GE2.3 116RD 90HH r2.madE	661,830	4,987,596	609.0	Normal
CRI-88	Primary	GE2.3 116RD 90HH r2.madE	660,157	4,987,492	603.0	Normal
CRI-89	Primary	GE2.3 116RD 90HH r2.madE	657,758	4,986,926	614.9	Curtailed
CRI-90	Primary	GE2.3 116RD 90HH r2.madE	658,545	4,986,881	612.0	Normal
CRI-91	Primary	GE2.3 116RD 90HH r2.madE	657,023	4,986,868	612.0	Normal
CRI-92	Primary	GE2.3 116RD 80HH r2.madE	660,039	4,986,804	607.2	Normal
CRI-93	Primary	GE2.3 116RD 80HH r2.madE	659,133	4,986,700	607.9	Normal
CRI-94	Primary	GE2.3 116RD 80HH r2.madE	660,716	4,986,660	600.6	Normal
CRI-95	Primary	GE2.3 116RD 90HH r2.madE	657,488	4,986,184	612.0	Curtailed
CRI-96	Primary	GE2.3 116RD 90HH r2.madE	656,744	4,986,037	609.0	Curtailed
CRI-97	Primary	GE2.3 116RD 90HH r2.madE	655,899	4,985,715	592.7	Normal
CRI-98	Primary	GE2.3 116RD 90HH r2.madE	657,015	4,985,192	608.9	Normal
CRI-99	Primary	GE2.3 116RD 90HH r2.madE	672,521	4,990,188	556.7	Normal
CRI-100	Primary	GE2.3 116RD 90HH r2.madE	668,885	4,990,286	585.0	Curtailed
CRI-101	Primary	GE2.3 116RD 90HH r2.madE	672,921	4,990,513	544.6	Normal
CRI-102	Primary	GE2.3 116RD 90HH r2.madE	668,059	4,991,023	581.0	Normal
CRI-103	Primary	GE2.3 116RD 90HH r2.madE	669,279	4,991,115	582.0	Normal
CRI-104	Primary	GE2.3 116RD 90HH r2.madE	672,009	4,991,151	555.0	Normal
CRI-105	Primary	GE2.3 116RD 90HH r2.madE	670,488	4,991,091	571.6	Normal
CRI-106	Primary	GE2.3 116RD 90HH r2.madE	671,278	4,991,335	566.2	Normal
CRI-107	Primary	GE2.3 116RD 90HH r2.madE	667,723	4,991,800	582.0	Normal
CRI-108	Primary	GE2.3 116RD 90HH r2.madE	672,917	4,991,775	541.2	Normal
CRI-109	Primary	GE2.3 116RD 90HH r2.madE	670,897	4,992,616	557.4	Curtailed
CRI-111	Primary	GE2.3 116RD 90HH r2.madE	671,220	4,993,526	550.6	Normal
CRI-112	Primary	GE2.3 116RD 90HH r2.madE	670,419	4,993,665	561.0	Normal
CRI-114	Primary	GE2.3 116RD 90HH r2.madE	669,318	4,994,256	561.0	Curtailed
CRI-117	Primary	GE2.3 116RD 90HH r2.madE	669,488	4,994,930	544.8	Normal

Table A-1: Crowned Ridge Wind Farm 200 MW
GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's
Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53
UTM NAD83 Zone 14
continued

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's Ground Attenuation Factor 0.0****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53 Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61
UTM NAD83 Zone 14 70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Al****Codington County**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C1-NP	Non-P	Boundary	657,051	4,983,917	590.3	39.1	4,186
CR1-C2-NP	Non-P	Boundary	658,435	4,984,609	601.8	39.7	5,036
CR1-C3-NP	Non-P	Boundary	657,812	4,984,785	603.4	42.4	2,936
CR1-C4-NP	Non-P	Boundary	659,890	4,985,620	605.2	43.6	3,914
CR1-C6-P	Participant	Boundary	663,383	4,994,502	591.0	40.9	3,878
CR1-C7-NP	Non-P	Boundary	660,455	4,985,631	591.0	43.6	3,484
CR1-C8-P	Participant	Boundary	660,476	4,984,821	597.0	39.6	6,086
CR1-C9-NP	Non-P	Boundary	665,264	4,985,116	609.0	34.8	10,840
CR1-C10-P	Participant	Boundary	662,862	4,985,695	601.7	39.3	4,150
CR1-C11-P	Participant	Boundary	663,622	4,985,714	608.8	38.1	5,397
CR1-C12-NP	Non-P	Boundary	662,049	4,986,495	605.1	43.8	1,955
CR1-C13-NP	Non-P	Boundary	663,599	4,986,512	615.0	40.5	3,875
CR1-C14-NP	Non-P	Boundary	658,025	4,986,005	609.0	44.4	1,857
CR1-C15-NP	Non-P	Boundary	662,794	4,986,895	612.9	43.9	1,017
CR1-C16-NP	Non-P	Boundary	661,244	4,986,473	597.0	47.5	1,837
CR1-C17-P	Participant	Boundary	658,820	4,986,817	611.4	54.1	925
CR1-C18-P	Participant	Boundary	663,578	4,987,413	609.4	44.9	2,566
CR1-C19-P	Participant	Boundary	660,393	4,987,529	608.4	54.6	784
CR1-C20-P	Participant	Boundary	662,024	4,987,612	604.2	55.2	640
CR1-C26-P	Participant	Boundary	658,015	4,987,993	606.7	47.3	1,867
CR1-C27-NP	Non-P	Boundary	657,234	4,988,151	587.2	42.5	4,265
CR1-C28-NP	Non-P	Boundary	665,232	4,989,006	583.9	43.3	3,727
CR1-C29-NP	Non-P	Boundary	666,496	4,989,001	574.3	41.7	4,232
CR1-C30-P	Participant	Boundary	661,989	4,988,947	612.8	49.8	1,358
CR1-C31-NP	Non-P	Boundary	665,639	4,989,013	584.7	42.8	4,232
CR1-C32-NP	Non-P	Boundary	657,187	4,989,566	573.2	39.6	7,142
CR1-C33-NP	Non-P	Boundary	657,137	4,990,377	567.0	38.7	6,489
CR1-C34-NP	Non-P	Boundary	658,766	4,990,056	589.4	44.0	2,913
CR1-C35-P	Participant	Boundary	661,955	4,990,153	606.1	50.6	1,112
CR1-C36-P	Participant	Boundary	663,575	4,990,565	610.7	48.5	1,545
CR1-C37-NP	Non-P	Boundary	663,854	4,990,573	594.0	49.8	1,263
CR1-C38-NP	Non-P	Boundary	661,130	4,990,472	591.2	45.3	1,148
CR1-C39-NP	Non-P	Boundary	659,453	4,991,996	583.3	41.9	3,471
CR1-C40-NP	Non-P	Boundary	658,373	4,991,982	579.8	42.8	3,281
CR1-C41-NP	Non-P	Boundary	665,090	4,991,943	578.8	43.5	2,126
CR1-C42-P	Participant	Boundary	658,965	4,993,598	580.1	52.8	846
CR1-C44-NP	Non-P	Boundary	665,029	4,993,359	578.1	44.6	2,162
CR1-C45-NP	Non-P	Boundary	653,821	4,993,552	573.0	37.1	4,291
CR1-C46-NP	Non-P	Boundary	655,723	4,993,574	609.0	42.9	1,772

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61

Codington County

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Al

continued

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C47-P	Participant	Boundary	663,454	4,992,888	612.0	50.4	1,076
CR1-C48-P	Participant	Boundary	664,546	4,993,740	586.6	48.7	1,407
CR1-C49-P	Participant	Boundary	662,224	4,993,664	609.0	40.1	5,105
CR1-C50-P	Participant	Boundary	657,046	4,994,184	618.0	49.6	1,299
CR1-C51-P	Participant	Boundary	657,600	4,993,586	620.0	53.6	784
CR1-C52-NP	Non-P	Boundary	654,994	4,995,172	603.0	41.1	3,291
CR1-C53-NP	Non-P	Boundary	664,171	4,995,340	580.5	40.1	4,009
CR1-C54-NP	Non-P	Boundary	663,495	4,995,329	582.9	38.5	5,075
CR1-C55-NP	Non-P	Boundary	660,155	4,994,412	607.0	48.6	1,506
CR1-C56-P	Participant	Boundary	656,199	4,995,194	603.0	46.5	1,726
CR1-C57-P	Participant	Boundary	656,526	4,995,198	616.1	47.6	1,319
CR1-C58-NP	Non-P	Boundary	657,670	4,996,842	615.0	35.7	6,437
CR1-C59-P	Participant	Boundary	660,784	5,000,081	591.5	29.2	17,155
CR1-C60-NP	Non-P	Boundary	656,909	4,998,465	609.3	31.8	12,096
CR1-C61-NP	Non-P	Boundary	656,928	4,997,784	612.0	33.2	9,885
CR1-C62-NP	Non-P	Boundary	658,155	4,994,994	614.5	42.8	820
CR1-C63-NP	Non-P	Boundary	658,543	4,995,211	606.8	41.3	2,277
CR1-C64-P	Participant	Boundary	658,623	4,992,794	576.6	50.4	1,119
CR1-C65-NP	Non-P	Boundary	665,516	4,995,045	578.0	42.7	2,825
CR1-C70-NP	Non-P	Boundary	664,950	4,988,325	596.1	41.7	2,940
CR1-C71-NP	Non-P	Boundary	664,421	4,988,988	600.0	44.9	1,322
CR1-C105-NP	Non-P	Boundary	659,106	5,000,042	609.0	29.3	17,001
CR1-C107-NP	Non-P	Boundary	656,548	4,998,450	595.6	31.7	11,988
CR1-C109-NP	Non-P	Boundary	654,552	4,996,783	592.6	33.6	8,189
CR1-C110-NP	Non-P	Boundary	654,553	4,996,633	588.7	34.0	7,772
CR1-C111-NP	Non-P	Boundary	654,596	4,995,168	599.1	39.2	3,930
CR1-C112-NP	Non-P	Boundary	659,955	4,984,990	604.0	40.5	5,958
CR2-C150-P	Participant	Boundary	655,905	4,985,521	600.0	54.4	636
CR1-C1-NP	Non-P	Structure	656,743	4,983,525	596.0	37.0	5,541
CR1-C2-NP	Non-P	Structure	658,791	4,984,483	602.0	38.9	6,273
CR1-C3-NP	Non-P	Structure	657,888	4,984,697	604.2	41.6	3,294
CR1-C4-NP	Non-P	Structure	659,744	4,984,749	606.0	39.5	6,706
CR1-C5-NP	Non-P	Structure	659,958	4,984,794	604.8	39.7	6,601
CR1-C6-P	Participant	Structure	662,989	4,995,228	599.8	37.9	6,102
CR1-C7-NP	Non-P	Structure	660,893	4,984,861	593.2	39.4	5,932
CR1-C8-P	Participant	Structure	660,532	4,984,445	599.4	38.2	7,293
CR1-C9-NP	Non-P	Structure	665,352	4,985,004	609.0	34.5	11,283
CR1-C10-P	Participant	Structure	663,510	4,985,195	609.0	37.1	6,535

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61

Codington County

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Al

continued

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C11-P	Participant	Structure	664,111	4,985,679	609.0	37.3	6,676
CR1-C12-1-NP	Non-P	Structure	662,199	4,986,047	606.0	41.6	2,956
CR1-C12-NP	Non-P	Structure	662,222	4,985,736	603.0	40.5	3,921
CR1-C13-NP	Non-P	Structure	663,792	4,985,785	612.0	38.0	5,643
CR1-C14-NP	Non-P	Structure	657,982	4,985,894	609.0	44.0	1,880
CR1-C15-NP	Non-P	Structure	663,291	4,986,026	615.0	39.5	3,907
CR1-C16-NP	Non-P	Structure	661,960	4,986,288	606.0	43.1	2,648
CR1-C17-P	Participant	Structure	658,031	4,986,373	609.1	46.2	1,886
CR1-C18-P	Participant	Structure	663,651	4,987,157	610.4	43.1	3,435
CR1-C19-P	Participant	Structure	659,243	4,987,276	611.6	49.7	1,722
CR1-C20-P	Participant	Structure	663,054	4,987,455	606.0	46.6	2,336
CR1-C21-P	Participant	Structure	660,756	4,984,086	594.0	37.1	8,445
CR1-C22-P	Participant	Structure	660,755	4,984,082	594.0	37.1	8,458
CR1-C23-P	Participant	Structure	660,619	4,984,078	595.8	37.2	8,478
CR1-C26-P	Participant	Structure	657,767	4,988,493	597.0	43.7	3,484
CR1-C27-NP	Non-P	Structure	656,876	4,988,683	583.0	40.2	5,974
CR1-C28-NP	Non-P	Structure	665,429	4,988,598	590.9	41.5	4,252
CR1-C29-NP	Non-P	Structure	666,572	4,988,867	575.9	41.0	4,675
CR1-C30-P	Participant	Structure	661,699	4,988,957	615.0	48.5	1,614
CR1-C31-NP	Non-P	Structure	665,939	4,988,950	585.4	42.1	4,531
CR1-C32-NP	Non-P	Structure	655,843	4,989,581	568.8	36.8	9,708
CR1-C33-NP	Non-P	Structure	656,839	4,990,404	569.8	38.2	7,418
CR1-C34-NP	Non-P	Structure	658,661	4,990,389	588.2	42.3	2,093
CR1-C35-P	Participant	Structure	662,025	4,990,475	609.0	46.2	2,123
CR1-C36-P	Participant	Structure	663,181	4,990,600	615.0	45.8	1,532
CR1-C37-NP	Non-P	Structure	663,563	4,991,342	605.1	43.1	1,631
CR1-C38-NP	Non-P	Structure	660,639	4,991,557	597.0	41.2	3,474
CR1-C39-NP	Non-P	Structure	660,144	4,991,670	588.0	41.2	2,605
CR1-C40-NP	Non-P	Structure	657,865	4,991,818	583.7	41.5	2,690
CR1-C41-NP	Non-P	Structure	665,053	4,992,084	576.1	43.1	2,356
CR1-C42-P	Participant	Structure	659,458	4,992,229	580.0	42.6	3,947
CR1-C44-NP	Non-P	Structure	665,076	4,993,095	578.2	43.4	2,155
CR1-C45-NP	Non-P	Structure	653,390	4,993,503	573.2	35.0	5,673
CR1-C46-NP	Non-P	Structure	655,802	4,993,540	609.1	42.6	1,795
CR1-C47-P	Participant	Structure	662,825	4,993,508	613.9	41.3	3,750
CR1-C48-P	Participant	Structure	664,247	4,993,646	588.0	46.7	1,847
CR1-C49-P	Participant	Structure	662,250	4,993,731	609.0	40.0	5,148
CR1-C50-P	Participant	Structure	656,806	4,994,388	621.0	48.0	1,591

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTB on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61

CODINGTON COUNTY

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Al

Couington **continued**

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61

Grant County
continued

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Al

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-G12-NP	Non-P	Structure	668,229	4,989,039	575.0	39.1	4,623
CR1-G13-NP	Non-P	Structure	672,216	4,989,142	558.0	41.5	3,576
CR1-G14-NP	Non-P	Structure	668,156	4,989,332	574.1	40.1	3,940
CR1-G15-P	Participant	Structure	668,396	4,989,607	576.0	40.9	2,746
CR1-G16-NP	Non-P	Structure	668,419	4,989,861	576.0	42.0	2,070
CR1-G18-P	Participant	Structure	668,678	4,990,722	585.0	46.9	1,585
CR1-G19-P	Participant	Structure	671,018	4,990,744	570.0	48.0	2,077
CR1-G21-P	Participant	Structure	666,766	4,991,807	577.1	48.7	1,555
CR1-G22-NP	Non-P	Structure	674,670	4,991,955	527.6	37.3	5,781
CR1-G23-NP	Non-P	Structure	670,471	4,992,104	560.0	44.5	2,185
CR1-G24-P	Participant	Structure	673,058	4,992,440	539.4	44.7	2,231
CR1-G25-P	Participant	Structure	671,391	4,992,858	549.0	45.6	1,804
CR1-G26-P	Participant	Structure	672,589	4,993,869	531.0	40.1	3,140
CR1-G27-NP	Non-P	Structure	676,630	4,994,642	480.8	29.8	8,678
CR1-G28-P	Participant	Structure	673,113	4,994,772	513.9	37.0	1,614
CR1-G32-P	Participant	Structure	669,477	4,995,401	546.0	49.5	1,545
CR1-G33-P	Participant	Structure	668,911	4,995,550	548.7	43.6	2,779
CR1-G34-NP	Non-P	Structure	671,320	4,995,798	531.0	44.5	2,238
CR1-G36-NP	Non-P	Structure	673,559	4,996,344	498.0	33.5	6,483
CR1-G37-NP	Non-P	Structure	668,998	4,996,452	549.0	38.9	5,246
CR1-G38-P	Participant	Structure	673,972	4,996,493	494.5	32.5	6,827
CR1-G41-P	Participant	Structure	671,563	4,997,050	497.6	35.0	6,378
CR1-G42-NP	Non-P	Structure	670,566	4,997,097	518.9	36.9	6,476
CR1-G43-NP	Non-P	Structure	661,141	5,001,721	583.6	27.0	6,552
CR1-G44-NP	Non-P	Structure	661,781	5,001,732	583.7	27.0	6,939
CR1-G59-P	Participant	Structure	675,755	4,994,888	487.7	31.1	5,981
CR1-G60-P	Participant	Structure	675,830	4,995,687	477.0	30.2	7,329
CR1-G65-P	Participant	Structure	671,496	4,994,973	537.0	47.2	1,539
CR1-G66-P	Participant	Structure	670,802	4,994,681	539.7	47.8	1,801
CR1-G67-P	Participant	Structure	669,597	4,993,440	556.1	44.1	2,106
CR1-G68-NP	Non-P	Structure	669,159	4,993,632	565.6	42.5	2,113
CR1-G70-NP	Non-P	Structure	677,465	4,991,043	492.0	29.6	15,006
CR1-G77-NP	Non-P	Structure	676,031	4,992,629	502.7	32.5	8,878
CR1-G81-P	Participant	Structure	671,478	4,997,523	508.8	34.5	7,828
CR1-G105-NP	Non-P	Structure	668,696	4,998,325	549.0	32.7	11,263
CR1-G108-P	Participant	Structure	669,516	5,001,186	522.2	27.6	19,908
CR1-G109-NP	Non-P	Structure	667,064	5,000,425	566.2	28.8	19,704
CR1-G110-NP	Non-P	Structure	671,218	5,005,064	456.2	22.5	28,615

Table A-2: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Receptor ID

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTB on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61

GRANT COUNTY

70 73 75 80 85 89 95 96 100 109 114 Alt2 Alt22 Alt

Grant Code continued

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level**Realistic case sound results at land parcel boundaries and occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's Ground Attenuation Factor 0.0****Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53 Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 62, 70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45****UTM NAD83 Zone 14****Codington County**

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C37-NP	Non-P	Boundary	663,854	4,990,573	594.0	49.8	1,263
CR1-C55-NP	Non-P	Boundary	660,155	4,994,412	607.0	48.6	1,506
CR1-C16-NP	Non-P	Boundary	661,244	4,986,473	597.0	47.5	1,837
CR1-C38-NP	Non-P	Boundary	661,130	4,990,472	591.2	45.3	1,148
CR1-C71-NP	Non-P	Boundary	664,421	4,988,988	600.0	44.9	1,322
CR1-C44-NP	Non-P	Boundary	665,029	4,993,359	578.1	44.6	2,162
CR1-C14-NP	Non-P	Boundary	658,025	4,986,005	609.0	44.4	1,857
CR1-C34-NP	Non-P	Boundary	658,766	4,990,056	589.4	44.0	2,913
CR1-C15-NP	Non-P	Boundary	662,794	4,986,895	612.9	43.9	1,017
CR1-C12-NP	Non-P	Boundary	662,049	4,986,495	605.1	43.8	1,955
CR1-C4-C-NP	Non-P	Boundary	659,890	4,985,620	605.2	43.6	3,914
CR1-C7-C-NP	Non-P	Boundary	660,455	4,985,631	591.0	43.6	3,484
CR1-C41-NP	Non-P	Boundary	665,090	4,991,943	578.8	43.5	2,126
CR1-C28-NP	Non-P	Boundary	665,232	4,989,006	583.9	43.3	3,727
CR1-C46-NP	Non-P	Boundary	655,723	4,993,574	609.0	42.9	1,772
CR1-C40-NP	Non-P	Boundary	658,373	4,991,982	579.8	42.8	3,281
CR1-C62-NP	Non-P	Boundary	658,155	4,994,994	614.5	42.8	820
CR1-C31-NP	Non-P	Boundary	665,639	4,989,013	584.7	42.8	4,232
CR1-C65-NP	Non-P	Boundary	665,516	4,995,045	578.0	42.7	2,825
CR1-C27-NP	Non-P	Boundary	657,234	4,988,151	587.2	42.5	4,265
CR1-C3-C-NP	Non-P	Boundary	657,812	4,984,785	603.4	42.4	2,936
CR1-C39-NP	Non-P	Boundary	659,453	4,991,996	583.3	41.9	3,471
CR1-C70-NP	Non-P	Boundary	664,950	4,988,325	596.1	41.7	2,940
CR1-C29-NP	Non-P	Boundary	666,496	4,989,001	574.3	41.7	4,232
CR1-C63-NP	Non-P	Boundary	658,543	4,995,211	606.8	41.3	2,277
CR1-C52-NP	Non-P	Boundary	654,994	4,995,172	603.0	41.1	3,291
CR1-C13-NP	Non-P	Boundary	663,599	4,986,512	615.0	40.5	3,875
CR1-C112-NP	Non-P	Boundary	659,955	4,984,990	604.0	40.5	5,958
CR1-C53-NP	Non-P	Boundary	664,171	4,995,340	580.5	40.1	4,009
CR1-C2-C-NP	Non-P	Boundary	658,435	4,984,609	601.8	39.7	5,036
CR1-C32-NP	Non-P	Boundary	657,187	4,989,566	573.2	39.6	7,142
CR1-C111-NP	Non-P	Boundary	654,596	4,995,168	599.1	39.2	3,930
CR1-C1-C-NP	Non-P	Boundary	657,051	4,983,917	590.3	39.1	4,186
CR1-C33-NP	Non-P	Boundary	657,137	4,990,377	567.0	38.7	6,489
CR1-C54-NP	Non-P	Boundary	663,495	4,995,329	582.9	38.5	5,075
CR1-C45-NP	Non-P	Boundary	653,821	4,993,552	573.0	37.1	4,291
CR1-C58-NP	Non-P	Boundary	657,670	4,996,842	615.0	35.7	6,437
CR1-C9-NP	Non-P	Boundary	665,264	4,985,116	609.0	34.8	10,840
CR1-C110-NP	Non-P	Boundary	654,553	4,996,633	588.7	34.0	7,772

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 6:

Codington County

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

continued

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C109-NP	Non-P	Boundary	654,552	4,996,783	592.6	33.6	8,189
CR1-C61-NP	Non-P	Boundary	656,928	4,997,784	612.0	33.2	9,885
CR1-C60-NP	Non-P	Boundary	656,909	4,998,465	609.3	31.8	12,096
CR1-C107-NP	Non-P	Boundary	656,548	4,998,450	595.6	31.7	11,988
CR1-C105-NP	Non-P	Boundary	659,106	5,000,042	609.0	29.3	17,001
CR1-C20-P	Participant	Boundary	662,024	4,987,612	604.2	55.2	640
CR1-C19-P	Participant	Boundary	660,393	4,987,529	608.4	54.6	784
CR2-C150-P	Participant	Boundary	655,905	4,985,521	600.0	54.4	636
CR1-C17-P	Participant	Boundary	658,820	4,986,817	611.4	54.1	925
CR1-C51-P	Participant	Boundary	657,600	4,993,586	620.0	53.6	784
CR1-C42-P	Participant	Boundary	658,965	4,993,598	580.1	52.8	846
CR1-C35-P	Participant	Boundary	661,955	4,990,153	606.1	50.6	1,112
CR1-C47-P	Participant	Boundary	663,454	4,992,888	612.0	50.4	1,076
CR1-C64-P	Participant	Boundary	658,623	4,992,794	576.6	50.4	1,119
CR1-C30-P	Participant	Boundary	661,989	4,988,947	612.8	49.8	1,358
CR1-C50-P	Participant	Boundary	657,046	4,994,184	618.0	49.6	1,299
CR1-C48-P	Participant	Boundary	664,546	4,993,740	586.6	48.7	1,407
CR1-C36-P	Participant	Boundary	663,575	4,990,565	610.7	48.5	1,545
CR1-C57-P	Participant	Boundary	656,526	4,995,198	616.1	47.6	1,319
CR1-C26-P	Participant	Boundary	658,015	4,987,993	606.7	47.3	1,867
CR1-C56-P	Participant	Boundary	656,199	4,995,194	603.0	46.5	1,726
CR1-C18-P	Participant	Boundary	663,578	4,987,413	609.4	44.9	2,566
CR1-C6-P	Participant	Boundary	663,383	4,994,502	591.0	40.9	3,878
CR1-C49-P	Participant	Boundary	662,224	4,993,664	609.0	40.1	5,105
CR1-C8-P	Participant	Boundary	660,476	4,984,821	597.0	39.6	6,086
CR1-C10-P	Participant	Boundary	662,862	4,985,695	601.7	39.3	4,150
CR1-C11-P	Participant	Boundary	663,622	4,985,714	608.8	38.1	5,397
CR1-C59-P	Participant	Boundary	660,784	5,000,081	591.5	29.2	17,155
CR1-C14-NP	Non-P	Structure	657,982	4,985,894	609.0	44.0	1,880
CR1-C44-NP	Non-P	Structure	665,076	4,993,095	578.2	43.4	2,155
CR1-C16-NP	Non-P	Structure	661,960	4,986,288	606.0	43.1	2,648
CR1-C37-NP	Non-P	Structure	663,563	4,991,342	605.1	43.1	1,631
CR1-C41-NP	Non-P	Structure	665,053	4,992,084	576.1	43.1	2,356
CR1-C46-NP	Non-P	Structure	655,802	4,993,540	609.1	42.6	1,795
CR1-C34-NP	Non-P	Structure	658,661	4,990,389	588.2	42.3	2,093
CR1-C31-NP	Non-P	Structure	665,939	4,988,950	585.4	42.1	4,531
CR1-C62-NP	Non-P	Structure	658,375	4,995,138	615.0	41.8	1,676
CR1-C12-1-NP	Non-P	Structure	662,199	4,986,047	606.0	41.6	2,956

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 6:

Codington County

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

continued

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-C3-NP	Non-P	Structure	657,888	4,984,697	604.2	41.6	3,294
CR1-C28-NP	Non-P	Structure	665,429	4,988,598	590.9	41.5	4,252
CR1-C40-NP	Non-P	Structure	657,865	4,991,818	583.7	41.5	2,690
CR1-C71-NP	Non-P	Structure	665,137	4,988,378	595.6	41.4	3,448
CR1-C38-NP	Non-P	Structure	660,639	4,991,557	597.0	41.2	3,474
CR1-C39-NP	Non-P	Structure	660,144	4,991,670	588.0	41.2	2,605
CR1-C63-NP	Non-P	Structure	658,566	4,995,254	612.4	41.1	2,408
CR1-C70-NP	Non-P	Structure	665,135	4,988,293	595.9	41.1	3,540
CR1-C29-NP	Non-P	Structure	666,572	4,988,867	575.9	41.0	4,675
CR1-C67-NP	Non-P	Structure	659,789	4,985,057	606.0	40.8	5,791
CR1-C72-NP	Non-P	Structure	665,158	4,988,170	594.6	40.8	3,776
CR1-C66-NP	Non-P	Structure	659,718	4,985,032	606.0	40.7	5,800
CR1-C12-NP	Non-P	Structure	662,222	4,985,736	603.0	40.5	3,921
CR1-C52-NP	Non-P	Structure	654,924	4,995,231	603.0	40.4	3,589
CR1-C55-NP	Non-P	Structure	660,914	4,995,169	607.5	40.4	3,360
CR1-C27-NP	Non-P	Structure	656,876	4,988,683	583.0	40.2	5,974
CR1-C65-NP	Non-P	Structure	665,805	4,995,305	579.0	40.2	3,884
CR1-C112-NP	Non-P	Structure	660,002	4,984,908	604.6	40.1	6,207
CR1-C5-NP	Non-P	Structure	659,958	4,984,794	604.8	39.7	6,601
CR1-C15-NP	Non-P	Structure	663,291	4,986,026	615.0	39.5	3,907
CR1-C4-NP	Non-P	Structure	659,744	4,984,749	606.0	39.5	6,706
CR1-C7-NP	Non-P	Structure	660,893	4,984,861	593.2	39.4	5,932
CR1-C2-NP	Non-P	Structure	658,791	4,984,483	602.0	38.9	6,273
CR1-C33-NP	Non-P	Structure	656,839	4,990,404	569.8	38.2	7,418
CR1-C54-NP	Non-P	Structure	663,421	4,995,376	583.4	38.2	5,351
CR1-C13-NP	Non-P	Structure	663,792	4,985,785	612.0	38.0	5,643
CR1-C1-NP	Non-P	Structure	656,743	4,983,525	596.0	37.0	5,541
CR1-C32-NP	Non-P	Structure	655,843	4,989,581	568.8	36.8	9,708
CR1-C53-NP	Non-P	Structure	663,376	4,996,043	578.8	36.3	7,201
CR1-C58-NP	Non-P	Structure	657,781	4,996,906	615.0	35.5	6,611
CR1-C45-NP	Non-P	Structure	653,390	4,993,503	573.2	35.0	5,673
CR1-C111-NP	Non-P	Structure	653,857	4,995,573	591.0	35.0	6,306
CR1-C9-NP	Non-P	Structure	665,352	4,985,004	609.0	34.5	11,283
CR1-C110-NP	Non-P	Structure	654,385	4,996,686	593.9	33.5	8,228
CR1-C61-NP	Non-P	Structure	656,690	4,997,831	612.0	33.0	9,970
CR1-C109-NP	Non-P	Structure	653,780	4,996,828	588.0	32.2	9,859
CR1-C60-NP	Non-P	Structure	656,855	4,998,565	613.5	31.5	12,408
CR1-C107-NP	Non-P	Structure	656,811	4,999,855	598.8	29.2	16,621

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 62

Codington County

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

continued

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 6:

Grant County

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

continued

Receptor ID	Participation Status	Type	Easting (m)	Northing (m)	Elevation AMSL (m)	Real Case Sound (dB(A))	Distance to Nearest Turbine (ft)
CR1-G23-NP	Non-P	Structure	670,471	4,992,104	560.0	44.5	2,185
CR1-G34-NP	Non-P	Structure	671,320	4,995,798	531.0	44.5	2,238
CR1-G68-NP	Non-P	Structure	669,159	4,993,632	565.6	42.5	2,113
CR1-G16-NP	Non-P	Structure	668,419	4,989,861	576.0	42.0	2,070
CR1-G13-NP	Non-P	Structure	672,216	4,989,142	558.0	41.5	3,576
CR1-G14-NP	Non-P	Structure	668,156	4,989,332	574.1	40.1	3,940
CR1-G12-NP	Non-P	Structure	668,229	4,989,039	575.0	39.1	4,623
CR1-G37-NP	Non-P	Structure	668,998	4,996,452	549.0	38.9	5,246
CR1-G22-NP	Non-P	Structure	674,670	4,991,955	527.6	37.3	5,781
CR1-G42-NP	Non-P	Structure	670,566	4,997,097	518.9	36.9	6,476
CR1-G36-NP	Non-P	Structure	673,559	4,996,344	498.0	33.5	6,483
CR1-G105-NP	Non-P	Structure	668,696	4,998,325	549.0	32.7	11,263
CR1-G77-NP	Non-P	Structure	676,031	4,992,629	502.7	32.5	8,878
CR1-G27-NP	Non-P	Structure	676,630	4,994,642	480.8	29.8	8,678
CR1-G70-NP	Non-P	Structure	677,465	4,991,043	492.0	29.6	15,006
CR1-G130-NP	Non-P	Structure	668,147	5,000,233	549.0	29.2	17,756
CR1-G109-NP	Non-P	Structure	667,064	5,000,425	566.2	28.8	19,704
CR1-G125-NP	Non-P	Structure	668,289	5,000,643	543.0	28.5	18,888
CR1-G43-NP	Non-P	Structure	661,141	5,001,721	583.6	27.0	6,552
CR1-G44-NP	Non-P	Structure	661,781	5,001,732	583.7	27.0	6,939
CR1-G117-NP	Non-P	Structure	663,801	5,005,084	581.3	23.4	4,501
CR1-G113-NP	Non-P	Structure	666,228	5,005,549	537.0	22.8	12,575
CR1-G110-NP	Non-P	Structure	671,218	5,005,064	456.2	22.5	28,615
CR1-G114-NP	Non-P	Structure	666,214	5,006,667	521.1	21.8	13,878
CR1-G115-NP	Non-P	Structure	664,933	5,006,731	544.6	21.8	10,531
CR1-G600-NP	Non-P	Structure	674,301	5,005,773	393.0	20.8	36,397
CR1-G32-P	Participant	Structure	669,477	4,995,401	546.0	49.5	1,545
CR1-G21-P	Participant	Structure	666,766	4,991,807	577.1	48.7	1,555
CR1-G19-P	Participant	Structure	671,018	4,990,744	570.0	48.0	2,077
CR1-G66-P	Participant	Structure	670,802	4,994,681	539.7	47.8	1,801
CR1-G65-P	Participant	Structure	671,496	4,994,973	537.0	47.2	1,539
CR1-G18-P	Participant	Structure	668,678	4,990,722	585.0	46.9	1,585
CR1-G25-P	Participant	Structure	671,391	4,992,858	549.0	45.6	1,804
CR1-G24-P	Participant	Structure	673,058	4,992,440	539.4	44.7	2,231
CR1-G67-P	Participant	Structure	669,597	4,993,440	556.1	44.1	2,106
CR1-G33-P	Participant	Structure	668,911	4,995,550	548.7	43.6	2,779
CR1-G15-P	Participant	Structure	668,396	4,989,607	576.0	40.9	2,746
CR1-G26-P	Participant	Structure	672,589	4,993,869	531.0	40.1	3,140

Table A-3: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results at land parcel boundaries and occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTs on only 20, 22, 24, 25, 31, 32, 36, 53

Ground Attenuation Factor 0.0

UTM NAD83 Zone 14

Curtailed Turbines: 20 21 25 29 33 37 39 43 44 46 48 50 52 53 55 61 62

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Grant County

70 73 75 80 85 89 95 96 100 109 114 Alt2 Alt22 Alt45

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continued

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Ground Attenuation Factor 0.0

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 62

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

UTM NAD83 Zone 14

Codington County

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	Curtailed	23 LNTE's	All LNTE's	Distance to Nearest Turbine (ft)
					Real Case Sound (dB(A))	Real Case Sound (dB(A))	Real Case Sound (dB(A))	
CR1-C14-NP	Non-P	657,982	4,985,894	609.0	44.1	44.3	43.3	1,880
CR1-C44-NP	Non-P	665,076	4,993,095	578.2	43.5	44.2	43.6	2,155
CR1-C37-NP	Non-P	663,563	4,991,342	605.1	43.2	45.0	44.8	1,631
CR1-C41-NP	Non-P	665,053	4,992,084	576.1	43.2	44.4	43.9	2,356
CR1-C16-NP	Non-P	661,960	4,986,288	606.0	43.2	42.3	40.6	2,648
CR1-C46-NP	Non-P	655,802	4,993,540	609.1	42.7	44.5	44.1	1,795
CR1-C34-NP	Non-P	658,661	4,990,389	588.2	42.3	43.4	41.9	2,093
CR1-C31-NP	Non-P	665,939	4,988,950	585.4	42.2	39.4	38.3	4,531
CR1-C62-NP	Non-P	658,375	4,995,138	615.0	41.8	44.0	43.6	1,676
CR1-C12-1-NP	Non-P	662,199	4,986,047	606.0	41.7	40.9	39.3	2,956
CR1-C3-NP	Non-P	657,888	4,984,697	604.2	41.7	39.5	38.1	3,294
CR1-C40-NP	Non-P	657,865	4,991,818	583.7	41.6	42.0	40.5	2,690
CR1-C28-NP	Non-P	665,429	4,988,598	590.9	41.5	39.4	38.3	4,252
CR1-C71-NP	Non-P	665,137	4,988,378	595.6	41.4	40.0	38.8	3,448
CR1-C38-NP	Non-P	660,639	4,991,557	597.0	41.3	40.8	39.9	3,474
CR1-C63-NP	Non-P	658,566	4,995,254	612.4	41.2	41.8	41.4	2,408
CR1-C70-NP	Non-P	665,135	4,988,293	595.9	41.2	39.8	38.6	3,540
CR1-C39-NP	Non-P	660,144	4,991,670	588.0	41.2	41.5	40.8	2,605
CR1-C29-NP	Non-P	666,572	4,988,867	575.9	41.1	38.3	37.1	4,675
CR1-C72-NP	Non-P	665,158	4,988,170	594.6	40.8	39.3	38.1	3,776
CR1-C67-NP	Non-P	659,789	4,985,057	606.0	40.8	38.1	36.7	5,791
CR1-C66-NP	Non-P	659,718	4,985,032	606.0	40.7	38.0	36.7	5,800
CR1-C52-NP	Non-P	654,924	4,995,231	603.0	40.5	38.3	38.1	3,589
CR1-C12-NP	Non-P	662,222	4,985,736	603.0	40.5	39.1	37.6	3,921
CR1-C65-NP	Non-P	665,805	4,995,305	579.0	40.3	37.7	36.5	3,884
CR1-C27-NP	Non-P	656,876	4,988,683	583.0	40.2	38.1	36.8	5,974
CR1-C112-NP	Non-P	660,002	4,984,908	604.6	40.2	37.4	36.1	6,207
CR1-C5-NP	Non-P	659,958	4,984,794	604.8	39.7	37.0	35.8	6,601
CR1-C15-NP	Non-P	663,291	4,986,026	615.0	39.6	38.5	37.1	3,907
CR1-C4-NP	Non-P	659,744	4,984,749	606.0	39.6	36.9	35.7	6,706
CR1-C7-NP	Non-P	660,893	4,984,861	593.2	39.5	36.7	35.6	5,932
CR1-C55-NP	Non-P	660,914	4,995,169	607.5	39.5	39.5	39.5	3,360
CR1-C2-NP	Non-P	658,791	4,984,483	602.0	39.0	36.6	35.4	6,273
CR1-C54-NP	Non-P	663,421	4,995,376	583.4	38.3	35.9	35.2	5,351
CR1-C33-NP	Non-P	656,839	4,990,404	569.8	38.2	36.7	35.8	7,418
CR1-C13-NP	Non-P	663,792	4,985,785	612.0	38.1	36.3	35.2	5,643
CR1-C1-NP	Non-P	656,743	4,983,525	596.0	37.1	34.6	33.4	5,541
CR1-C32-NP	Non-P	655,843	4,989,581	568.8	36.8	34.8	34.0	9,708
CR1-C53-NP	Non-P	663,376	4,996,043	578.8	36.3	34.0	33.5	7,201

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Codington County

*continued***Ground Attenuation Factor 0.0**

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 62

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	Curtailed	23 LNTE's	All LNTE's	Distance to Nearest Turbine (ft)
					Real Case Sound (dB(A))	Real Case Sound (dB(A))	Real Case Sound (dB(A))	
CR1-C58-NP	Non-P	657,781	4,996,906	615.0	35.6	34.3	33.9	6,611
CR1-C45-NP	Non-P	653,390	4,993,503	573.2	35.1	33.2	33.0	5,673
CR1-C111-NP	Non-P	653,857	4,995,573	591.0	35.1	33.0	32.9	6,306
CR1-C9-NP	Non-P	665,352	4,985,004	609.0	34.5	32.1	31.6	11,283
CR1-C110-NP	Non-P	654,385	4,996,686	593.9	33.6	31.7	31.6	8,228
CR1-C61-NP	Non-P	656,690	4,997,831	612.0	33.1	31.4	31.2	9,970
CR1-C109-NP	Non-P	653,780	4,996,828	588.0	32.2	30.4	30.2	9,859
CR1-C60-NP	Non-P	656,855	4,998,565	613.5	31.6	29.9	29.8	12,408
CR1-C107-NP	Non-P	656,811	4,999,855	598.8	29.2	27.6	27.6	16,621
CR1-C105-NP	Non-P	658,372	5,001,257	600.3	27.4	26.0	26.1	20,922
CR1-C19-P	Participant	659,243	4,987,276	611.6	49.8	48.0	46.2	1,722
CR1-C30-P	Participant	661,699	4,988,957	615.0	48.6	49.5	47.7	1,614
CR1-C68-P	Participant	662,652	4,987,606	609.0	48.6	46.5	44.8	2,146
CR1-C69-P	Participant	662,685	4,987,619	609.0	48.5	46.5	44.7	2,185
CR1-C50-P	Participant	656,806	4,994,388	621.0	48.1	47.0	46.6	1,591
CR1-C48-P	Participant	664,247	4,993,646	588.0	46.9	45.4	44.6	1,847
CR1-C20-P	Participant	663,054	4,987,455	606.0	46.7	44.9	43.1	2,336
CR1-C57-P	Participant	656,628	4,995,266	615.0	46.5	44.1	43.9	1,568
CR2-C150-P	Participant	657,178	4,985,788	612.0	46.4	47.4	46.1	1,640
CR1-C35-P	Participant	662,025	4,990,475	609.0	46.3	44.9	43.6	2,123
CR1-C17-P	Participant	658,031	4,986,373	609.1	46.3	46.4	45.1	1,886
CR1-C36-P	Participant	663,181	4,990,600	615.0	45.9	45.6	45.3	1,532
CR1-C56-P	Participant	655,953	4,995,244	606.5	45.5	43.0	42.9	1,972
CR1-C11-P	Participant	664,111	4,985,679	609.0	44.9	44.9	44.9	6,676
CR1-C26-P	Participant	657,767	4,988,493	597.0	43.8	41.5	39.9	3,484
CR1-C51-P	Participant	657,455	4,995,160	621.0	43.4	44.0	43.6	1,768
CR1-C18-P	Participant	663,651	4,987,157	610.4	43.2	41.3	39.8	3,435
CR1-C42-P	Participant	659,458	4,992,229	580.0	42.6	41.1	40.1	3,947
CR1-C64-P	Participant	659,436	4,992,174	581.0	42.5	41.1	40.1	4,049
CR1-C47-P	Participant	662,825	4,993,508	613.9	41.4	39.1	38.7	3,750
CR1-C49-P	Participant	662,250	4,993,731	609.0	40.1	37.8	37.4	5,148
CR1-C8-P	Participant	660,532	4,984,445	599.4	38.3	35.5	34.5	7,293
CR1-C6-P	Participant	662,989	4,995,228	599.8	37.9	35.6	35.1	6,102
CR1-C23-P	Participant	660,619	4,984,078	595.8	37.2	34.4	33.5	8,478
CR1-C10-P	Participant	663,510	4,985,195	609.0	37.1	35.1	34.1	6,535
CR1-C21-P	Participant	660,756	4,984,086	594.0	37.1	34.4	33.5	8,445
CR1-C22-P	Participant	660,755	4,984,082	594.0	37.1	34.4	33.5	8,458
CR1-C59-P	Participant	661,548	5,000,754	584.2	28.3	26.7	26.8	19,859

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

Grant County

continued

Ground Attenuation Factor 0.0

Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 62

70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	Curtailed	23 LNTE's	All LNTE's	Distance to Nearest Turbine (ft)
					Real Case Sound (dB(A))	Real Case Sound (dB(A))	Real Case Sound (dB(A))	
CR1-G23-NP	Non-P	670,471	4,992,104	560.0	44.5	44.0	42.2	2,185
CR1-G34-NP	Non-P	671,320	4,995,798	531.0	44.5	41.3	39.6	2,238
CR1-G68-NP	Non-P	669,159	4,993,632	565.6	42.5	44.4	42.6	2,113
CR1-G16-NP	Non-P	668,419	4,989,861	576.0	42.0	42.9	41.2	2,070
CR1-G13-NP	Non-P	672,216	4,989,142	558.0	41.5	38.2	36.6	3,576
CR1-G14-NP	Non-P	668,156	4,989,332	574.1	40.1	38.7	37.3	3,940
CR1-G12-NP	Non-P	668,229	4,989,039	575.0	39.1	37.4	36.2	4,623
CR1-G37-NP	Non-P	668,998	4,996,452	549.0	38.9	36.2	34.8	5,246
CR1-G22-NP	Non-P	674,670	4,991,955	527.6	37.3	34.0	32.7	5,781
CR1-G42-NP	Non-P	670,566	4,997,097	518.9	36.9	34.0	32.8	6,476
CR1-G36-NP	Non-P	673,559	4,996,344	498.0	33.5	30.5	29.7	6,483
CR1-G105-NP	Non-P	668,696	4,998,325	549.0	32.7	30.2	29.6	11,263
CR1-G77-NP	Non-P	676,031	4,992,629	502.7	32.5	29.2	28.6	8,878
CR1-G27-NP	Non-P	676,630	4,994,642	480.8	29.8	26.8	26.5	8,678
CR1-G70-NP	Non-P	677,465	4,991,043	492.0	29.6	26.5	26.2	15,006
CR1-G130-NP	Non-P	668,147	5,000,233	549.0	29.2	27.0	26.8	17,756
CR1-G109-NP	Non-P	667,064	5,000,425	566.2	28.8	26.8	26.7	19,704
CR1-G125-NP	Non-P	668,289	5,000,643	543.0	28.5	26.4	26.3	18,888
CR1-G43-NP	Non-P	661,141	5,001,721	583.6	27.0	25.6	25.7	6,552
CR1-G44-NP	Non-P	661,781	5,001,732	583.7	27.0	25.6	25.7	6,939
CR1-G117-NP	Non-P	663,801	5,005,084	581.3	23.4	22.4	22.5	4,501
CR1-G113-NP	Non-P	666,228	5,005,549	537.0	22.8	21.8	22.0	12,575
CR1-G110-NP	Non-P	671,218	5,005,064	456.2	22.5	21.3	21.5	28,615
CR1-G115-NP	Non-P	664,933	5,006,731	544.6	21.8	21.0	21.2	10,531
CR1-G114-NP	Non-P	666,214	5,006,667	521.1	21.8	20.9	21.1	13,878
CR1-G600-NP	Non-P	674,301	5,005,773	393.0	20.8	19.8	20.0	36,397
CR1-G32-P	Participant	669,477	4,995,401	546.0	49.5	46.6	44.9	1,545
CR1-G21-P	Participant	666,766	4,991,807	577.1	48.7	46.1	44.6	1,555
CR1-G19-P	Participant	671,018	4,990,744	570.0	48.0	45.0	43.2	2,077
CR1-G66-P	Participant	670,802	4,994,681	539.7	47.8	44.8	43.0	1,801
CR1-G65-P	Participant	671,496	4,994,973	537.0	47.2	44.1	42.4	1,539
CR1-G18-P	Participant	668,678	4,990,722	585.0	46.9	46.6	44.8	1,585
CR1-G25-P	Participant	671,391	4,992,858	549.0	45.6	45.3	43.5	1,804
CR1-G24-P	Participant	673,058	4,992,440	539.4	44.7	41.6	39.9	2,231
CR1-G67-P	Participant	669,597	4,993,440	556.1	44.1	44.6	42.8	2,106
CR1-G33-P	Participant	668,911	4,995,550	548.7	43.6	41.0	39.3	2,779
CR1-G15-P	Participant	668,396	4,989,607	576.0	40.9	40.7	39.1	2,746
CR1-G26-P	Participant	672,589	4,993,869	531.0	40.1	37.2	35.7	3,140

Table A-4: Crowned Ridge 200 MW Sound Level Tabular Results Sorted by Sound Level

Realistic case sound results 25 ft from occupied structures perimeter

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

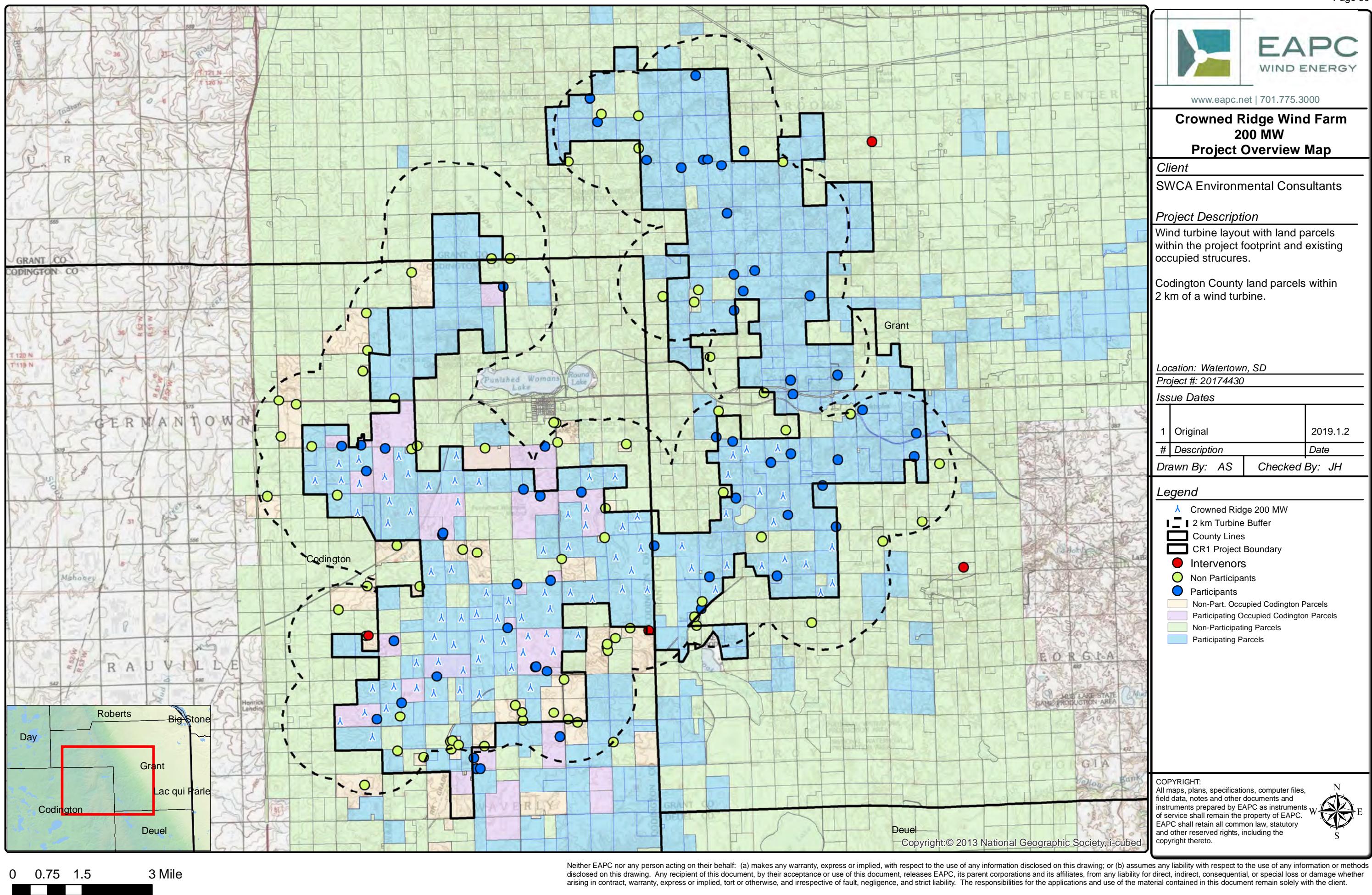
Grant County

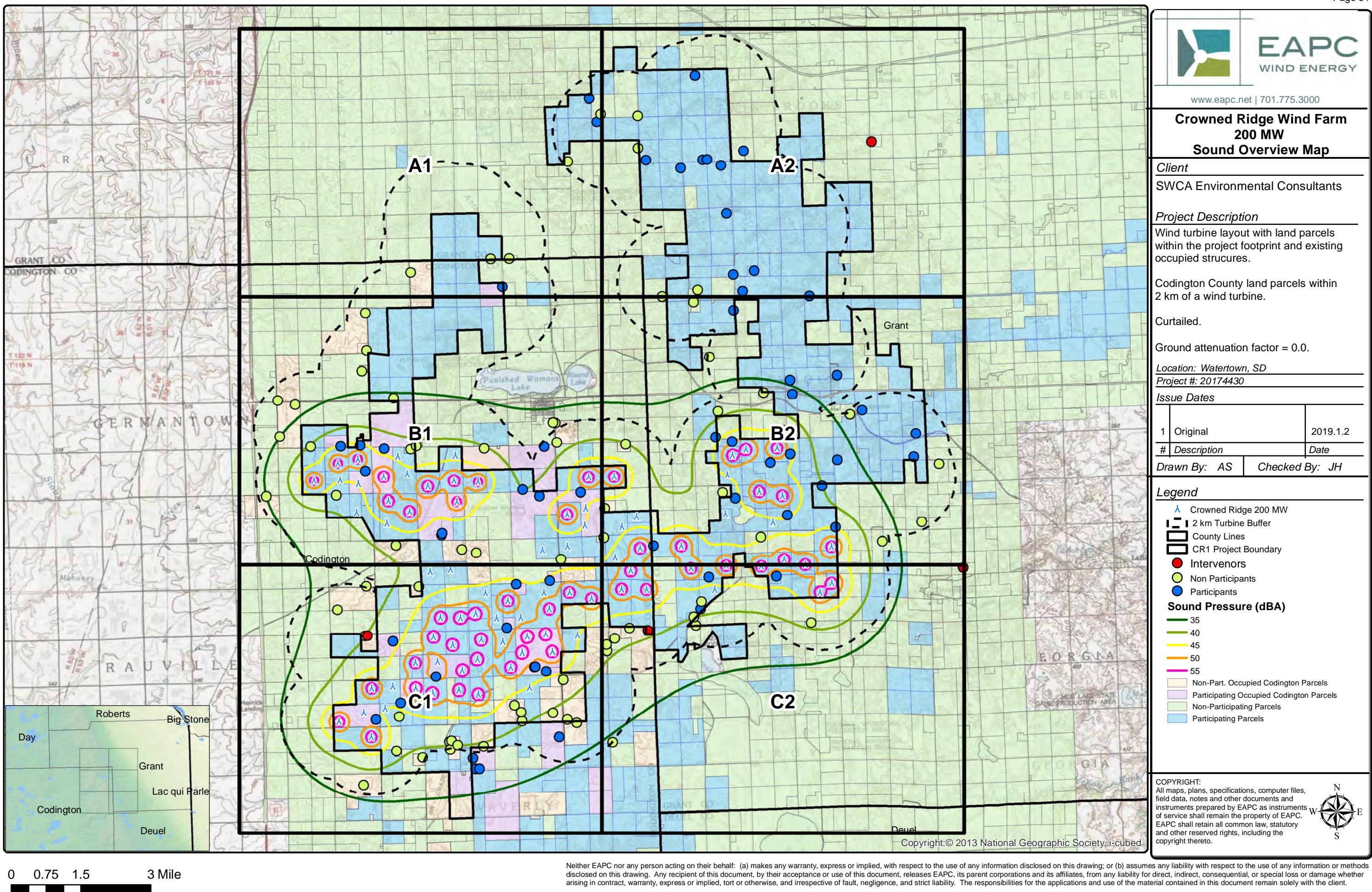
continued

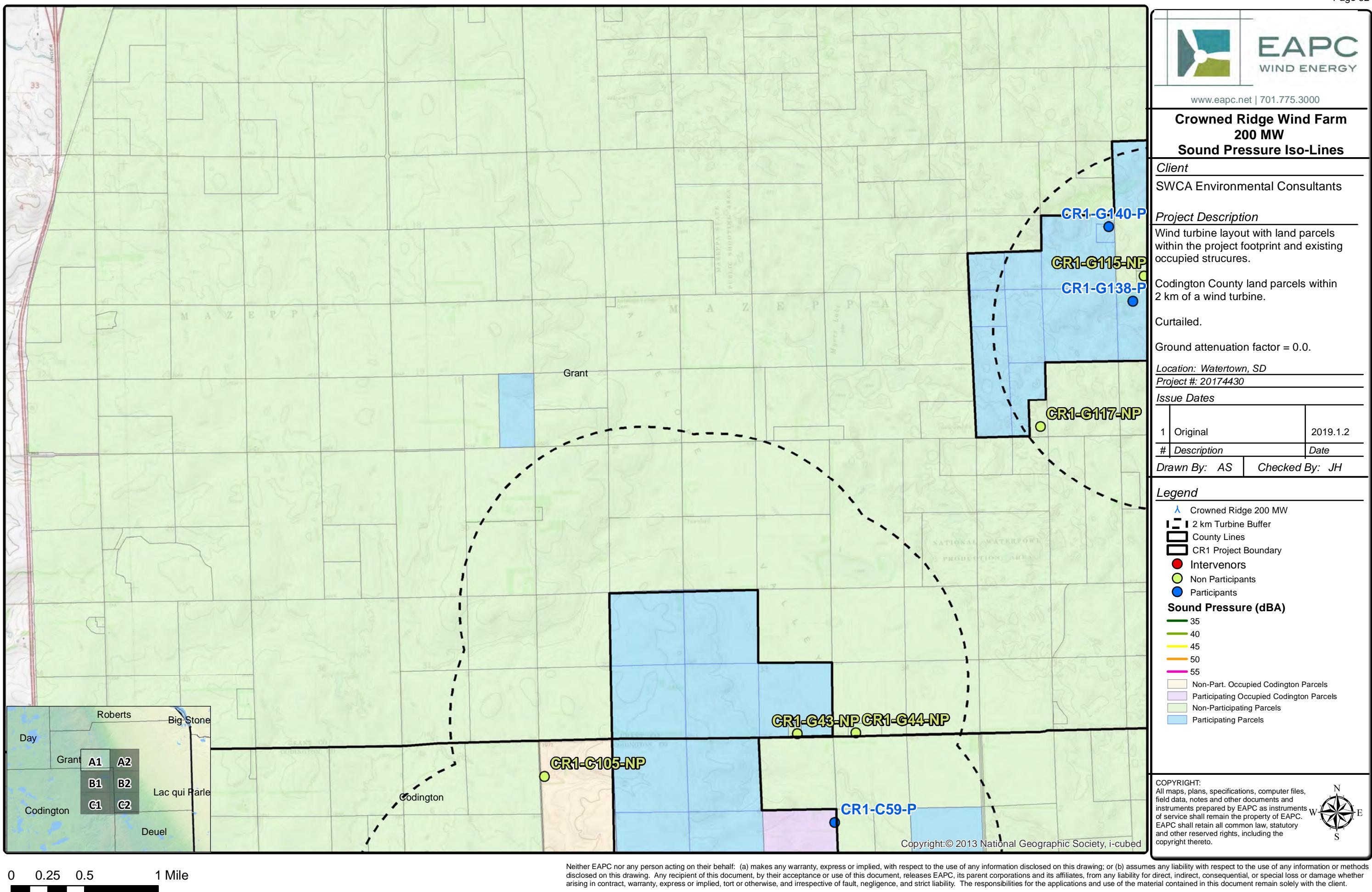
Ground Attenuation Factor 0.0

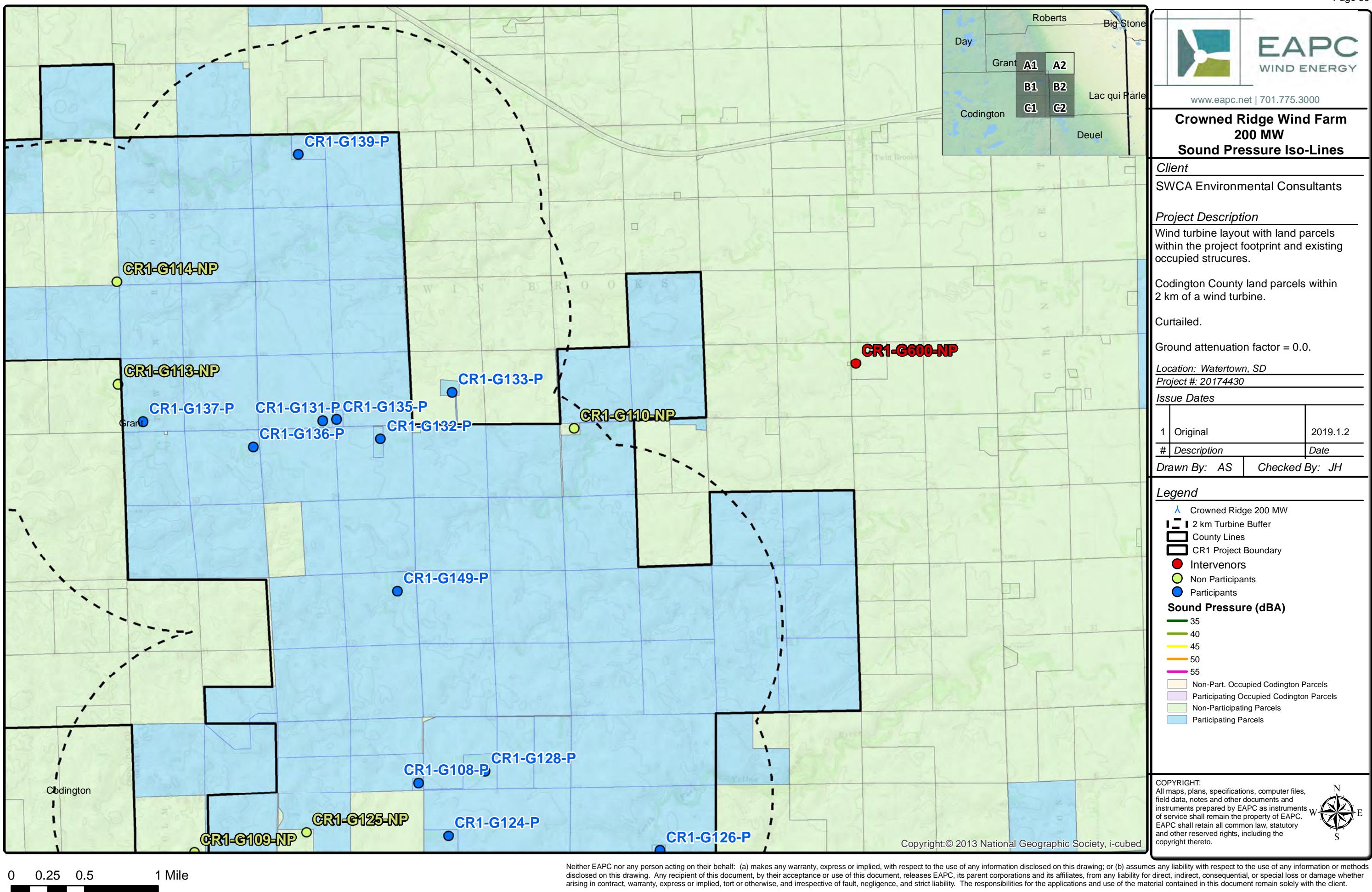
Curtailed Turbines: 20, 21, 25, 29, 33, 37, 39, 43, 44, 46, 48, 50, 52, 53, 55, 61, 62

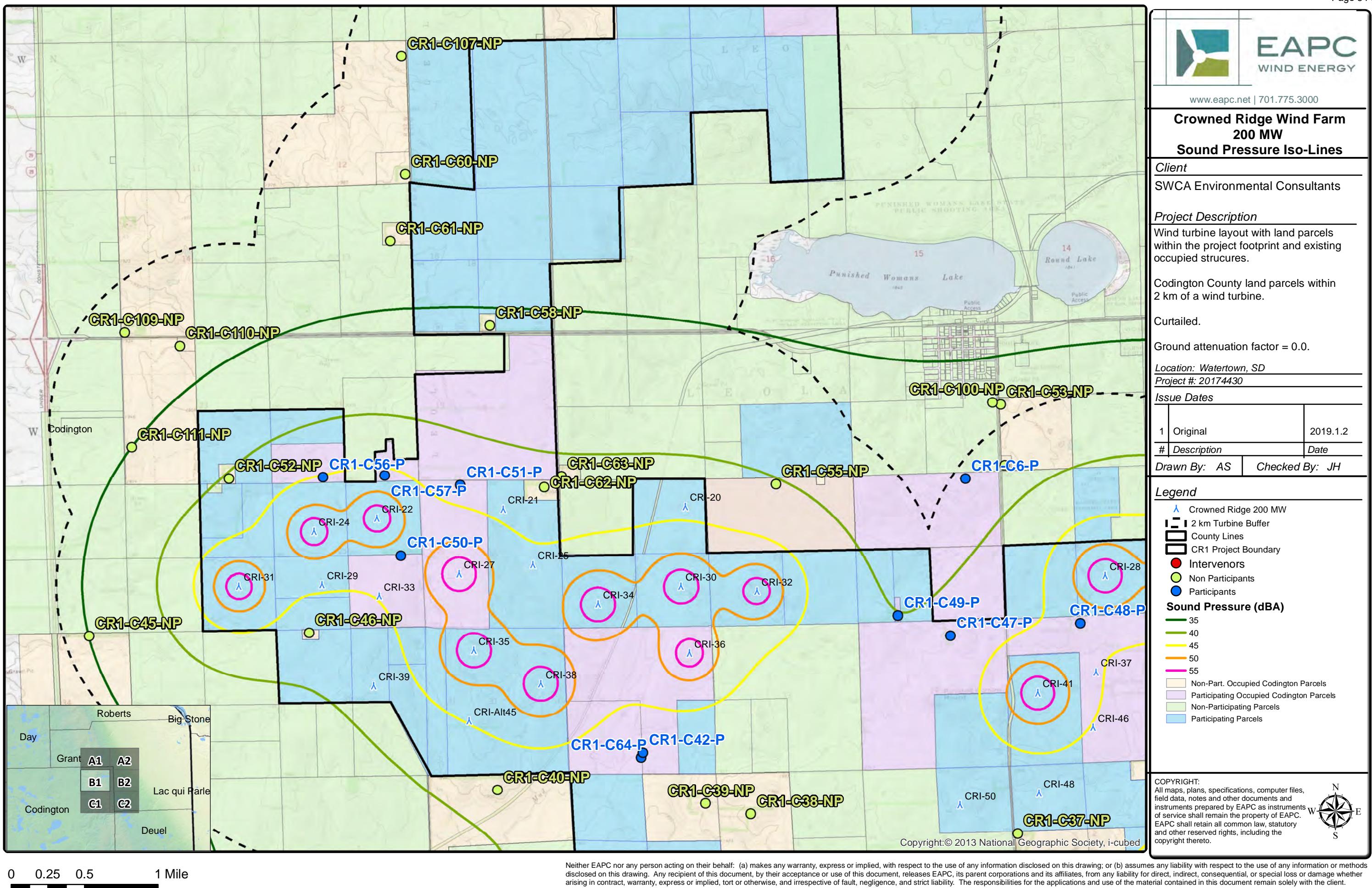
70, 73, 75, 80, 85, 89, 95, 96, 100, 109, 114, Alt2, Alt22, Alt45

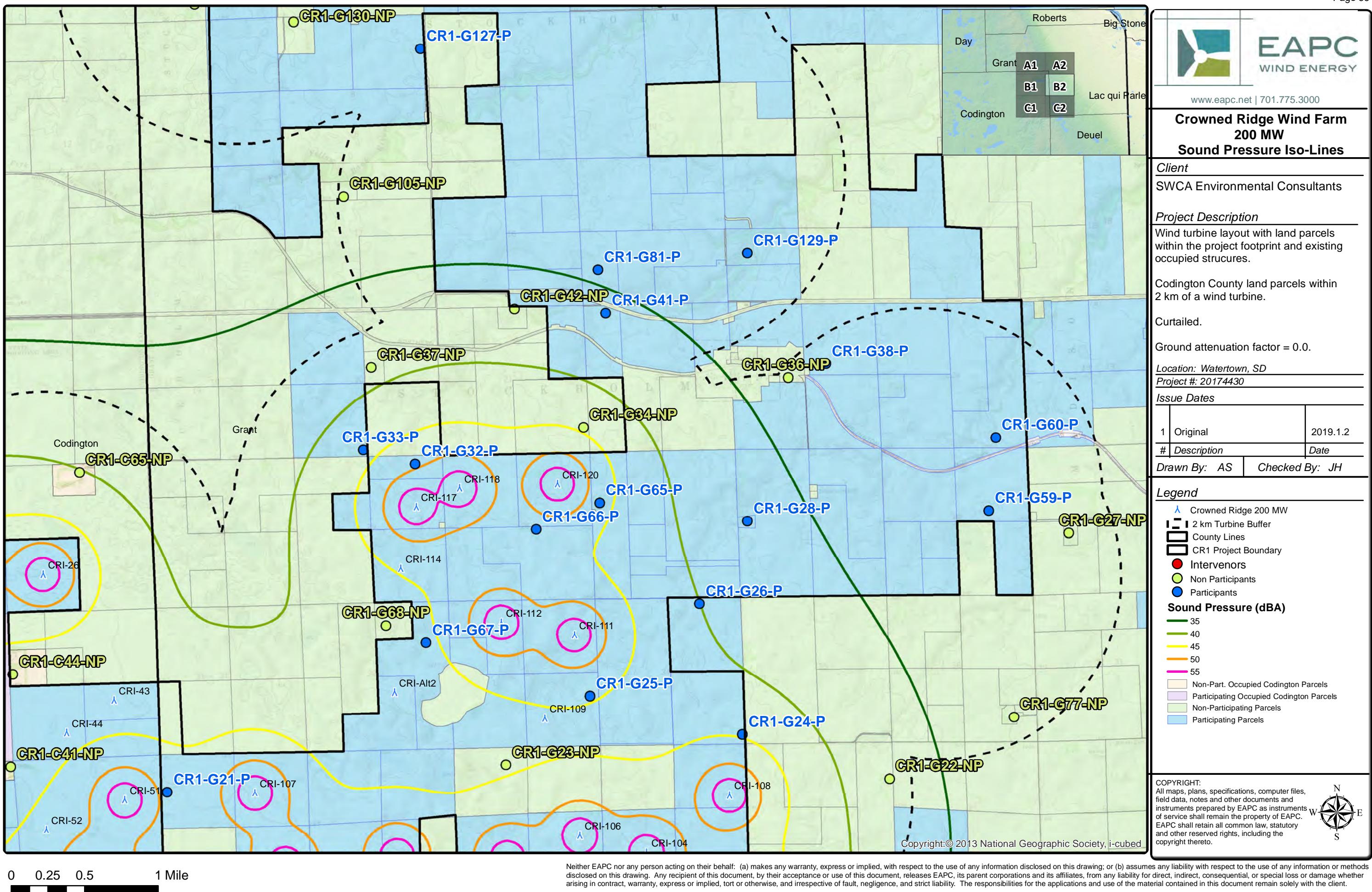


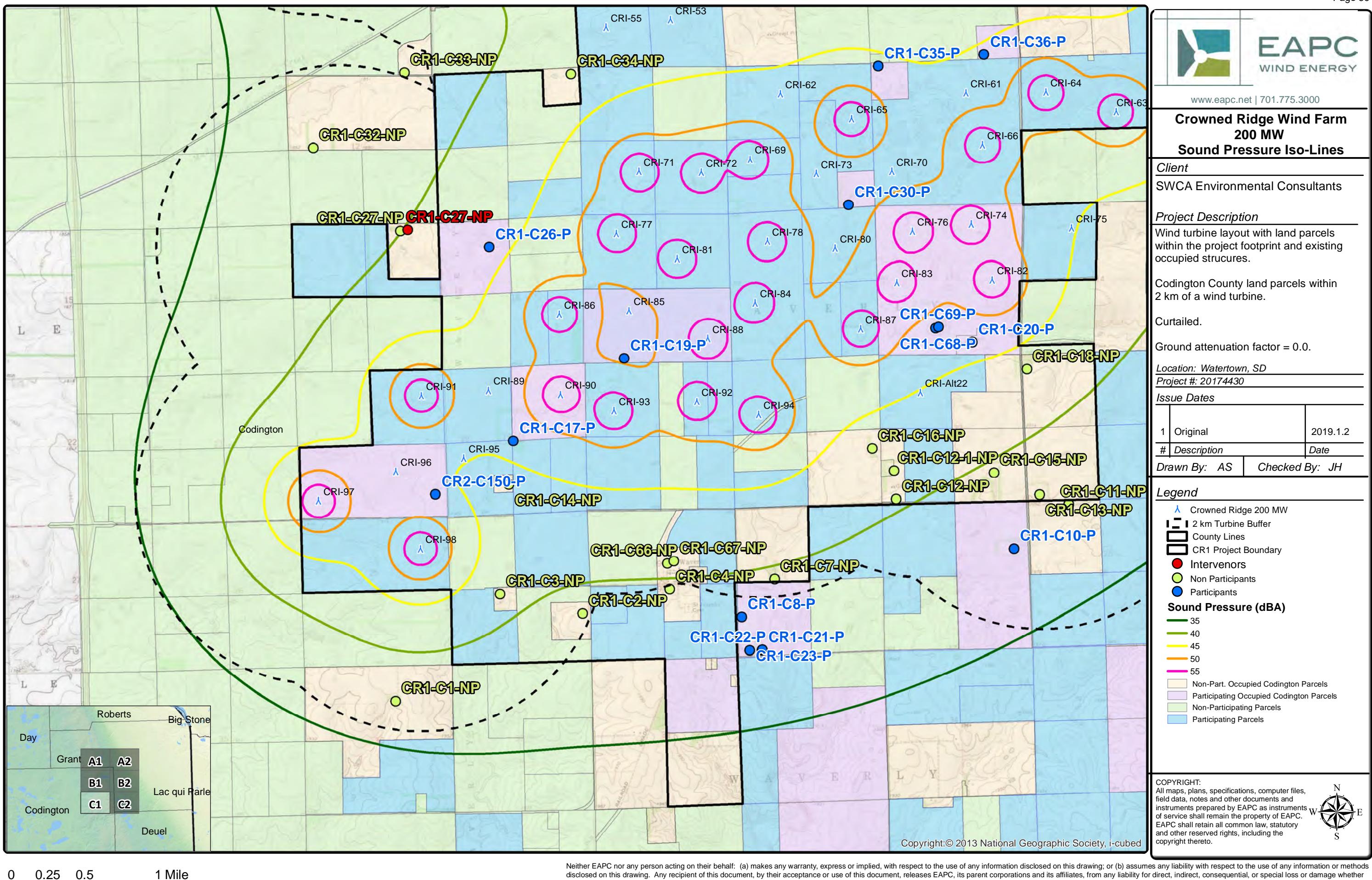












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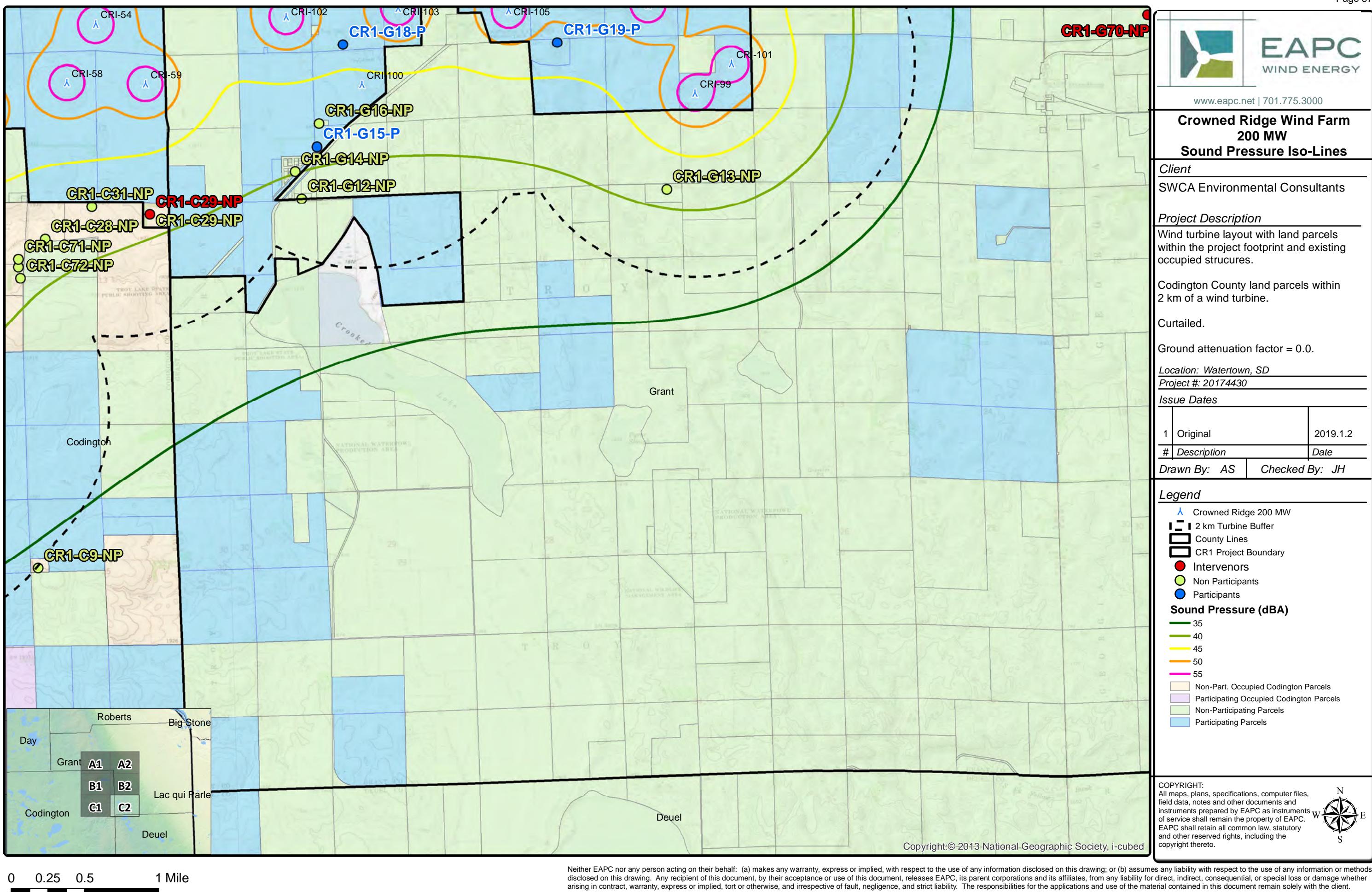


Table C-1: Crowned Ridge Shadow Flicker Tabular Results Sorted by Receptor ID**Realistic case shadow results at occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****UTM NAD83 Zone 14****Codington County**

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	200 MW	300 MW	Distance to Nearest Turbine (ft)
					As Built	As Filed July 29	
CR1-C1-NP	Non-P	656,743.00	4,983,525.00	596.0	0:00	0:00	1,689
CR1-C2-NP	Non-P	658,791.00	4,984,483.00	602.0	0:00	0:00	1,912
CR1-C3-NP	Non-P	657,888.00	4,984,697.00	604.2	4:10	4:12	1,004
CR1-C4-NP	Non-P	659,744.00	4,984,749.00	606.0	0:00	0:00	2,044
CR1-C5-NP	Non-P	659,958.00	4,984,794.00	604.8	0:00	0:00	2,012
CR1-C6-P	Participant	662,989.00	4,995,228.00	599.8	0:00	0:00	1,860
CR1-C7-NP	Non-P	660,893.00	4,984,861.00	593.2	0:00	0:00	1,808
CR1-C9-NP	Non-P	665,352.00	4,985,004.00	609.0	0:00	15:07	3,439
CR1-C10-P	Participant	663,510.00	4,985,195.00	609.0	0:00	29:29	1,992
CR1-C11-P	Participant	664,111.00	4,985,679.00	609.0	0:00	10:30	2,035
CR1-C12-1-NP	Non-P	662,199.00	4,986,047.00	606.0	1:28	17:13	901
CR1-C12-NP	Non-P	662,222.00	4,985,736.00	603.0	0:00	10:38	1,195
CR1-C13-NP	Non-P	663,792.00	4,985,785.00	612.0	0:00	19:04	1,720
CR1-C14-NP	Non-P	657,982.00	4,985,894.00	609.0	9:59	10:02	573
CR1-C15-NP	Non-P	663,291.00	4,986,026.00	615.0	0:00	2:17	1,191
CR1-C16-NP	Non-P	661,960.00	4,986,288.00	606.0	2:19	6:18	807
CR1-C17-P	Participant	658,031.00	4,986,373.00	609.1	27:13	26:48	575
CR1-C18-P	Participant	663,651.00	4,987,157.00	610.4	2:19	6:00	1,047
CR1-C19-P	Participant	659,243.00	4,987,276.00	611.6	22:03	21:25	525
CR1-C20-P	Participant	663,054.00	4,987,455.00	606.0	13:46	14:42	712
CR1-C26-P	Participant	657,767.00	4,988,493.00	597.0	6:37	6:39	1,062
CR1-C27-NP	Non-P	656,876.00	4,988,683.00	583.0	0:00	0:00	1,821
CR1-C28-NP	Non-P	665,429.00	4,988,598.00	590.9	2:43	2:44	1,296
CR1-C29-NP	Non-P	666,572.00	4,988,867.00	575.9	0:00	6:56	1,425
CR1-C30-P	Participant	661,699.00	4,988,957.00	615.0	23:26	23:33	492
CR1-C31-NP	Non-P	665,939.00	4,988,950.00	585.4	0:00	0:00	1,381
CR1-C32-NP	Non-P	655,843.00	4,989,581.00	568.8	0:00	0:00	2,959
CR1-C33-NP	Non-P	656,839.00	4,990,404.00	569.8	0:00	0:00	2,261
CR1-C34-NP	Non-P	658,661.00	4,990,389.00	588.2	8:35	26:12	638
CR1-C35-P	Participant	662,025.00	4,990,475.00	609.0	11:48	11:49	647
CR1-C36-P	Participant	663,181.00	4,990,600.00	615.0	14:31	14:36	467
CR1-C37-NP	Non-P	663,563.00	4,991,342.00	605.1	15:51	15:55	497
CR1-C38-NP	Non-P	660,639.00	4,991,557.00	597.0	5:09	6:06	1,059
CR1-C39-NP	Non-P	660,144.00	4,991,670.00	588.0	2:59	6:57	794
CR1-C40-NP	Non-P	657,865.00	4,991,818.00	583.7	4:38	6:46	820
CR1-C41-NP	Non-P	665,053.00	4,992,084.00	576.1	12:27	12:30	718
CR1-C42-P	Participant	659,458.00	4,992,229.00	580.0	0:00	11:58	1,203
CR1-C44-NP	Non-P	665,076.00	4,993,095.00	578.2	28:16	28:25	657
CR1-C45-NP	Non-P	653,390.00	4,993,503.00	573.2	1:41	1:42	1,729

Table C-1: Crowned Ridge Shadow Flicker Tabular Results Sorted by Receptor ID**Realistic case shadow results at occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****UTM NAD83 Zone 14****Grant County
*continued***

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	200 MW	300 MW	Distance to Nearest Turbine (ft)
					As Built	As Filed July 29	
CR1-G12-NP	Non-P	668,229.00	4,989,039.00	575.0	0:00	0:00	1,409
CR1-G13-NP	Non-P	672,216.00	4,989,142.00	558.0	0:00	0:00	1,090
CR1-G14-NP	Non-P	668,156.00	4,989,332.00	574.1	0:00	0:00	1,201
CR1-G15-P	Participant	668,396.00	4,989,607.00	576.0	0:00	0:00	837
CR1-G16-NP	Non-P	668,419.00	4,989,861.00	576.0	0:00	0:00	631
CR1-G18-P	Participant	668,678.00	4,990,722.00	585.0	22:28	22:34	483
CR1-G19-P	Participant	671,018.00	4,990,744.00	570.0	5:42	5:44	633
CR1-G21-P	Participant	666,766.00	4,991,807.00	577.1	29:08	29:12	474
CR1-G22-NP	Non-P	674,670.00	4,991,955.00	527.6	0:00	0:00	1,762
CR1-G23-NP	Non-P	670,471.00	4,992,104.00	560.0	5:10	5:11	666
CR1-G24-P	Participant	673,058.00	4,992,440.00	539.4	0:00	0:00	680
CR1-G25-P	Participant	671,391.00	4,992,858.00	549.0	14:37	14:41	550
CR1-G26-P	Participant	672,589.00	4,993,869.00	531.0	1:45	8:17	1,411
CR1-G27-NP	Non-P	676,630.00	4,994,642.00	480.8	0:00	2:55	4,691
CR1-G28-P	Participant	673,113.00	4,994,772.00	513.9	0:00	23:01	2,118
CR1-G32-P	Participant	669,477.00	4,995,401.00	546.0	19:55	20:01	471
CR1-G33-P	Participant	668,911.00	4,995,550.00	548.7	3:51	3:53	847
CR1-G34-NP	Non-P	671,320.00	4,995,798.00	531.0	1:28	1:28	682
CR1-G36-NP	Non-P	673,559.00	4,996,344.00	498.0	0:00	0:00	2,781
CR1-G37-NP	Non-P	668,998.00	4,996,452.00	549.0	0:00	0:00	1,599
CR1-G38-P	Participant	673,972.00	4,996,493.00	494.5	0:00	0:00	3,218
CR1-G41-P	Participant	671,563.00	4,997,050.00	497.6	0:00	0:00	1,944
CR1-G42-NP	Non-P	670,566.00	4,997,097.00	518.9	0:00	0:00	1,974
CR1-G43-NP	Non-P	661,141.00	5,001,721.00	583.6	0:00	18:26	6,906
CR1-G44-NP	Non-P	661,781.00	5,001,732.00	583.7	0:00	2:50	7,058
CR1-G59-P	Participant	675,755.00	4,994,888.00	487.7	0:00	12:50	4,212
CR1-G60-P	Participant	675,830.00	4,995,687.00	477.0	0:00	5:44	4,823
CR1-G65-P	Participant	671,496.00	4,994,973.00	537.0	29:50	29:59	506
CR1-G66-P	Participant	670,802.00	4,994,681.00	539.7	11:08	16:44	549
CR1-G67-P	Participant	669,597.00	4,993,440.00	556.1	11:55	11:58	642
CR1-G68-NP	Non-P	669,159.00	4,993,632.00	565.6	2:07	2:07	644
CR1-G70-NP	Non-P	677,464.53	4,991,043.11	492.0	0:00	0:00	4,574
CR1-G77-NP	Non-P	676,031.00	4,992,629.00	502.7	0:00	0:00	3,229
CR1-G81-P	Participant	671,478.00	4,997,523.00	508.8	0:00	0:00	2,386
CR1-G105-NP	Non-P	668,696.00	4,998,325.00	549.0	0:00	0:00	3,433
CR1-G108-P	Participant	669,516.00	5,001,186.00	522.2	0:00	11:40	6,068
CR1-G109-NP	Non-P	667,064.00	5,000,425.00	566.2	0:00	0:59	6,006
CR1-G110-NP	Non-P	671,218.00	5,005,064.00	456.2	0:00	0:00	9,887

Table C-1: Crowned Ridge Shadow Flicker Tabular Results Sorted by Receptor ID

Realistic case shadow results at occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

UTM NAD83 Zone 14

Grant County

Table C-2: Crowned Ridge Shadow Flicker Tabular Results Sorted by Real Case Shadow Flicker Hours/Year**Realistic case shadow results at occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****UTM NAD83 Zone 14****Codington County**

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	200 MW	300 MW	Distance to Nearest Turbine (ft)
					As Built	As Filed July 29	
CR1-C44-NP	Non-P	665,076.00	4,993,095.00	578.2	28:16	28:25	2,155
CR1-C50-P	Participant	656,806.00	4,994,388.00	621.0	28:08	28:38	1,591
CR1-C17-P	Participant	658,031.00	4,986,373.00	609.1	27:13	26:48	1,886
CR1-C46-NP	Non-P	655,802.00	4,993,540.00	609.1	25:37	25:44	1,795
CR1-C51-P	Participant	657,455.00	4,995,160.00	621.0	24:39	24:47	1,768
CR1-C30-P	Participant	661,699.00	4,988,957.00	615.0	23:26	23:33	1,614
CR1-C19-P	Participant	659,243.00	4,987,276.00	611.6	22:03	21:25	1,722
CR1-C56-P	Participant	655,953.00	4,995,244.00	606.5	18:13	28:54	1,972
CR1-C62-NP	Non-P	658,375.00	4,995,138.00	615.0	18:05	18:10	1,676
CR1-C37-NP	Non-P	663,563.00	4,991,342.00	605.1	15:51	15:55	1,631
CR1-C36-P	Participant	663,181.00	4,990,600.00	615.0	14:31	14:36	1,532
CR1-C20-P	Participant	663,054.00	4,987,455.00	606.0	13:46	14:42	2,336
CR1-C41-NP	Non-P	665,053.00	4,992,084.00	576.1	12:27	12:30	2,356
CR1-C70-NP	Non-P	665,135.00	4,988,293.00	595.9	12:01	12:05	3,540
CR1-C35-P	Participant	662,025.00	4,990,475.00	609.0	11:48	11:49	2,123
CR1-C63-NP	Non-P	658,566.00	4,995,254.00	612.4	10:43	10:46	2,408
CR2-C150-P	Participant	657,178.00	4,985,788.00	612.0	10:18	10:01	1,640
CR1-C14-NP	Non-P	657,982.00	4,985,894.00	609.0	9:59	10:02	1,880
CR1-C57-P	Participant	656,628.00	4,995,266.00	615.0	9:40	10:38	1,568
CR1-C34-NP	Non-P	658,661.00	4,990,389.00	588.2	8:35	26:12	2,093
CR1-C72-NP	Non-P	665,158.00	4,988,170.00	594.6	7:39	7:41	3,776
CR1-C71-NP	Non-P	665,137.00	4,988,378.00	595.6	7:23	7:25	3,448
CR1-C52-NP	Non-P	654,924.00	4,995,231.00	603.0	6:46	11:16	3,589
CR1-C68-P	Participant	662,652.00	4,987,606.00	609.0	6:44	6:46	2,146
CR1-C26-P	Participant	657,767.00	4,988,493.00	597.0	6:37	6:39	3,484
CR1-C69-P	Participant	662,685.00	4,987,619.00	609.0	6:05	6:07	2,185
CR1-C38-NP	Non-P	660,639.00	4,991,557.00	597.0	5:09	6:06	3,474
CR1-C47-P	Participant	662,825.00	4,993,508.00	613.9	5:01	5:03	3,750
CR1-C40-NP	Non-P	657,865.00	4,991,818.00	583.7	4:38	6:46	2,690
CR1-C3-NP	Non-P	657,888.00	4,984,697.00	604.2	4:10	4:12	3,294
CR1-C48-P	Participant	664,247.00	4,993,646.00	588.0	3:47	3:48	1,847
CR1-C39-NP	Non-P	660,144.00	4,991,670.00	588.0	2:59	6:57	2,605
CR1-C55-NP	Non-P	660,914.00	4,995,169.00	607.5	2:51	2:52	3,360
CR1-C28-NP	Non-P	665,429.00	4,988,598.00	590.9	2:43	2:44	4,252
CR1-C16-NP	Non-P	661,960.00	4,986,288.00	606.0	2:19	6:18	2,648
CR1-C18-P	Participant	663,651.00	4,987,157.00	610.4	2:19	6:00	3,435
CR1-C45-NP	Non-P	653,390.00	4,993,503.00	573.2	1:41	1:42	5,673
CR1-C65-NP	Non-P	665,805.00	4,995,305.00	579.0	1:29	1:30	3,884
CR1-C12-1-NP	Non-P	662,199.00	4,986,047.00	606.0	1:28	17:13	2,956

Table C-2: Crowned Ridge Shadow Flicker Tabular Results Sorted by Real Case Shadow Flicker Hours/Year**Realistic case shadow results at occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****UTM NAD83 Zone 14****Codington County
*continued***

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	200 MW	300 MW	Distance to Nearest Turbine (ft)
					As Built	As Filed July 29	
CR1-C49-P	Participant	662,250.00	4,993,731.00	609.0	1:12	1:12	5,148
CR1-C10-P	Participant	663,510.00	4,985,195.00	609.0	0:00	29:29	6,535
CR1-C11-P	Participant	664,111.00	4,985,679.00	609.0	0:00	10:30	6,676
CR1-C12-NP	Non-P	662,222.00	4,985,736.00	603.0	0:00	10:38	3,921
CR1-C13-NP	Non-P	663,792.00	4,985,785.00	612.0	0:00	19:04	5,643
CR1-C15-NP	Non-P	663,291.00	4,986,026.00	615.0	0:00	2:17	3,907
CR1-C1-NP	Non-P	656,743.00	4,983,525.00	596.0	0:00	0:00	5,541
CR1-C27-NP	Non-P	656,876.00	4,988,683.00	583.0	0:00	0:00	5,974
CR1-C29-NP	Non-P	666,572.00	4,988,867.00	575.9	0:00	6:56	4,675
CR1-C2-NP	Non-P	658,791.00	4,984,483.00	602.0	0:00	0:00	6,273
CR1-C31-NP	Non-P	665,939.00	4,988,950.00	585.4	0:00	0:00	4,531
CR1-C32-NP	Non-P	655,843.00	4,989,581.00	568.8	0:00	0:00	9,708
CR1-C33-NP	Non-P	656,839.00	4,990,404.00	569.8	0:00	0:00	7,418
CR1-C42-P	Participant	659,458.00	4,992,229.00	580.0	0:00	11:58	3,947
CR1-C4-NP	Non-P	659,744.00	4,984,749.00	606.0	0:00	0:00	6,706
CR1-C54-NP	Non-P	663,421.00	4,995,376.00	583.4	0:00	0:00	5,351
CR1-C58-NP	Non-P	657,781.00	4,996,906.00	615.0	0:00	17:05	6,611
CR1-C59-P	Participant	661,548.00	5,000,754.00	584.2	0:00	7:39	19,859
CR1-C5-NP	Non-P	659,958.00	4,984,794.00	604.8	0:00	0:00	6,601
CR1-C60-NP	Non-P	656,855.00	4,998,565.00	613.5	0:00	14:18	12,408
CR1-C61-NP	Non-P	656,690.00	4,997,831.00	612.0	0:00	42:10	9,970
CR1-C64-P	Participant	659,436.00	4,992,174.00	581.0	0:00	19:54	4,049
CR1-C66-NP	Non-P	659,718.00	4,985,032.00	606.0	0:00	0:00	5,800
CR1-C67-NP	Non-P	659,789.00	4,985,057.00	606.0	0:00	0:00	5,791
CR1-C6-P	Participant	662,989.00	4,995,228.00	599.8	0:00	0:00	6,102
CR1-C7-NP	Non-P	660,893.00	4,984,861.00	593.2	0:00	0:00	5,932
CR1-C9-NP	Non-P	665,352.00	4,985,004.00	609.0	0:00	15:07	11,283
CR1-C53-NP	Non-P	663,376.00	4,996,043.00	578.8	0:00	0:00	7,201
CR1-C105-NP	Non-P	658,372.48	5,001,256.80	600.3	0:00	20:05	20,922
CR1-C107-NP	Non-P	656,810.99	4,999,855.15	598.8	0:00	9:58	16,621
CR1-C109-NP	Non-P	653,780.18	4,996,828.35	588.0	0:00	7:03	9,859
CR1-C110-NP	Non-P	654,384.54	4,996,685.57	593.9	0:00	20:47	8,228
CR1-C111-NP	Non-P	653,857.19	4,995,573.17	591.0	0:00	11:42	6,306
CR1-C112-NP	Non-P	660,001.53	4,984,907.81	604.6	0:00	0:44	6,207

Table C-2: Crowned Ridge Shadow Flicker Tabular Results Sorted by Real Case Shadow Flicker Hours/Year**Realistic case shadow results at occupied structures****Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's****UTM NAD83 Zone 14****Grant County*****continued***

Receptor ID	Participation Status	Easting (m)	Northing (m)	Elevation AMSL (m)	200 MW	300 MW	Distance to Nearest Turbine (ft)
					As Built	As Filed July 29	
CR1-G65-P	Participant	671,496.00	4,994,973.00	537.0	29:50	29:59	1,660
CR1-G21-P	Participant	666,766.00	4,991,807.00	577.1	29:08	29:12	1,555
CR1-G18-P	Participant	668,678.00	4,990,722.00	585.0	22:28	22:34	1,585
CR1-G32-P	Participant	669,477.00	4,995,401.00	546.0	19:55	20:01	1,545
CR1-G25-P	Participant	671,391.00	4,992,858.00	549.0	14:37	14:41	1,804
CR1-G67-P	Participant	669,597.00	4,993,440.00	556.1	11:55	11:58	2,106
CR1-G66-P	Participant	670,802.00	4,994,681.00	539.7	11:08	16:44	1,801
CR1-G19-P	Participant	671,018.00	4,990,744.00	570.0	5:42	5:44	2,077
CR1-G23-NP	Non-P	670,471.00	4,992,104.00	560.0	5:10	5:11	2,185
CR1-G33-P	Participant	668,911.00	4,995,550.00	548.7	3:51	3:53	2,779
CR1-G68-NP	Non-P	669,159.00	4,993,632.00	565.6	2:07	2:07	2,113
CR1-G26-P	Participant	672,589.00	4,993,869.00	531.0	1:45	8:17	4,629
CR1-G34-NP	Non-P	671,320.00	4,995,798.00	531.0	1:28	1:28	2,238
CR1-G43-NP	Non-P	661,141.00	5,001,721.00	583.6	0:00	18:26	22,657
CR1-G44-NP	Non-P	661,781.00	5,001,732.00	583.7	0:00	2:50	23,156
CR1-G12-NP	Non-P	668,229.00	4,989,039.00	575.0	0:00	0:00	4,623
CR1-G15-P	Participant	668,396.00	4,989,607.00	576.0	0:00	0:00	2,746
CR1-G16-NP	Non-P	668,419.00	4,989,861.00	576.0	0:00	0:00	2,070
CR1-G14-NP	Non-P	668,156.00	4,989,332.00	574.1	0:00	0:00	3,940
CR1-G22-NP	Non-P	674,670.00	4,991,955.00	527.6	0:00	0:00	5,781
CR1-G13-NP	Non-P	672,216.00	4,989,142.00	558.0	0:00	0:00	3,576
CR1-G24-P	Participant	673,058.00	4,992,440.00	539.4	0:00	0:00	2,231
CR1-G77-NP	Non-P	676,031.00	4,992,629.00	502.7	0:00	0:00	10,594
CR1-G27-NP	Non-P	676,630.00	4,994,642.00	480.8	0:00	2:55	15,390
CR1-G28-P	Participant	673,113.00	4,994,772.00	513.9	0:00	23:01	6,949
CR1-G38-P	Participant	673,972.00	4,996,493.00	494.5	0:00	0:00	10,558
CR1-G37-NP	Non-P	668,998.00	4,996,452.00	549.0	0:00	0:00	5,246
CR1-G42-NP	Non-P	670,566.00	4,997,097.00	518.9	0:00	0:00	6,476
CR1-G81-P	Participant	671,478.00	4,997,523.00	508.8	0:00	0:00	7,828
CR1-G41-P	Participant	671,563.00	4,997,050.00	497.6	0:00	0:00	6,378
CR1-G36-NP	Non-P	673,559.00	4,996,344.00	498.0	0:00	0:00	9,124
CR1-G59-P	Participant	675,755.00	4,994,888.00	487.7	0:00	12:50	13,819
CR1-G60-P	Participant	675,830.00	4,995,687.00	477.0	0:00	5:44	15,823
CR1-G105-NP	Non-P	668,696.00	4,998,325.00	549.0	0:00	0:00	11,263
CR1-G108-P	Participant	669,516.00	5,001,186.00	522.2	0:00	11:40	19,908
CR1-G109-NP	Non-P	667,064.00	5,000,425.00	566.2	0:00	0:59	19,704
CR1-G110-NP	Non-P	671,218.00	5,005,064.00	456.2	0:00	0:00	32,437
CR1-G113-NP	Non-P	666,228.00	5,005,549.00	537.0	0:00	7:09	36,299

Table C-2: Crowned Ridge Shadow Flicker Tabular Results Sorted by Real Case Shadow Flicker Hours/Year

Realistic case shadow results at occupied structures

Results using GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

UTM NAD83 Zone 14

GRANT COUNTIES

**Grant County
continued**

Table A-1: Crowned Ridge Wind Farm 200 MW

GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

UTM NAD83 Zone 14

WTG	Type	Turbine Model	Easting (m)	Northing (m)	Base Elev. AMSL (m)	Sound Profile
CRI-20	Primary	GE2.3 116RD 90HH r2.madE	659,920	4,994,924	594.0	Curtailed
CRI-21	Primary	GE2.3 116RD 90HH r2.madE	657,925	4,994,896	617.1	Curtailed
CRI-22	Primary	GE2.3 116RD 90HH r2.madE	656,543	4,994,796	616.5	LNTE
CRI-24	Primary	GE2.3 116RD 90HH r2.madE	655,852	4,994,652	609.0	LNTE
CRI-25	Primary	GE2.3 116RD 90HH r2.madE	658,251	4,994,286	605.5	LNTE
CRI-26	Primary	GE2.3 116RD 90HH r2.madE	665,405	4,994,191	578.5	Normal
CRI-27	Primary	GE2.3 116RD 90HH r2.madE	657,442	4,994,187	621.0	Normal
CRI-28	Primary	GE2.3 116RD 90HH r2.madE	664,517	4,994,168	579.0	Normal
CRI-29	Primary	GE2.3 116RD 90HH r2.madE	655,940	4,994,069	606.9	Curtailed
CRI-30	Primary	GE2.3 116RD 90HH r2.madE	659,871	4,994,052	593.7	Normal
CRI-31	Primary	GE2.3 116RD 90HH r2.madE	655,030	4,994,051	603.0	LNTE
CRI-32	Primary	GE2.3 116RD 90HH r2.madE	660,704	4,993,998	606.0	LNTE
CRI-33	Primary	GE2.3 116RD 90HH r2.madE	656,566	4,993,941	618.0	Curtailed
CRI-34	Primary	GE2.3 116RD 90HH r2.madE	658,966	4,993,856	599.7	Normal
CRI-35	Primary	GE2.3 116RD 90HH r2.madE	657,602	4,993,347	607.4	Normal
CRI-36	Primary	GE2.3 116RD 90HH r2.madE	659,966	4,993,319	594.0	LNTE
CRI-37	Primary	GE2.3 116RD 90HH r2.madE	664,419	4,993,110	587.3	Curtailed
CRI-38	Primary	GE2.3 116RD 90HH r2.madE	658,338	4,992,981	600.5	Normal
CRI-39	Primary	GE2.3 116RD 90HH r2.madE	656,507	4,992,958	609.0	Curtailed
CRI-41	Primary	GE2.3 116RD 90HH r2.madE	663,782	4,992,883	597.7	Normal
CRI-43	Primary	GE2.3 116RD 90HH r2.madE	666,181	4,992,815	577.9	Normal
CRI-44	Primary	GE2.3 116RD 90HH r2.madE	665,665	4,992,460	576.0	Normal
CRI-46	Primary	GE2.3 116RD 90HH r2.madE	664,387	4,992,505	591.0	Curtailed
CRI-48	Primary	GE2.3 116RD 90HH r2.madE	663,794	4,991,782	587.1	Curtailed
CRI-50	Primary	GE2.3 116RD 90HH r2.madE	662,930	4,991,655	612.0	Curtailed
CRI-51	Primary	GE2.3 116RD 90HH r2.madE	666,299	4,991,723	575.3	Normal
CRI-52	Primary	GE2.3 116RD 90HH r2.madE	665,441	4,991,398	575.5	Curtailed
CRI-53	Primary	GE2.3 116RD 90HH r2.madE	659,750	4,990,981	598.7	LNTE
CRI-54	Primary	GE2.3 116RD 90HH r2.madE	665,979	4,990,946	573.7	Normal
CRI-55	Primary	GE2.3 116RD 90HH r2.madE	659,045	4,990,899	597.1	Normal
CRI-58	Primary	GE2.3 116RD 90HH r2.madE	665,663	4,990,303	585.0	Normal
CRI-59	Primary	GE2.3 116RD 90HH r2.madE	666,523	4,990,291	573.0	Normal
CRI-61	Primary	GE2.3 116RD 90HH r2.madE	662,982	4,990,178	612.0	Normal
CRI-62	Primary	GE2.3 116RD 90HH r2.madE	660,954	4,990,170	600.8	Curtailed
CRI-63	Primary	GE2.3 116RD 90HH r2.madE	664,627	4,989,977	588.6	Normal
CRI-64	Primary	GE2.3 116RD 90HH r2.madE	663,858	4,989,188	604.3	Normal
CRI-65	Primary	GE2.3 116RD 90HH r2.madE	661,732	4,989,898	609.0	Normal
CRI-66	Primary	GE2.3 116RD 90HH r2.madE	663,165	4,989,613	614.7	Normal
CRI-69	Primary	GE2.3 116RD 80HH r2.madE	660,621	4,989,453	605.6	Normal
CRI-70	Primary	GE2.3 116RD 90HH r2.madE	662,171	4,989,319	611.0	Normal
CRI-71	Primary	GE2.3 116RD 80HH r2.madE	659,405	4,989,320	607.3	Normal

Table A-1: Crowned Ridge Wind Farm 200 MW

GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's

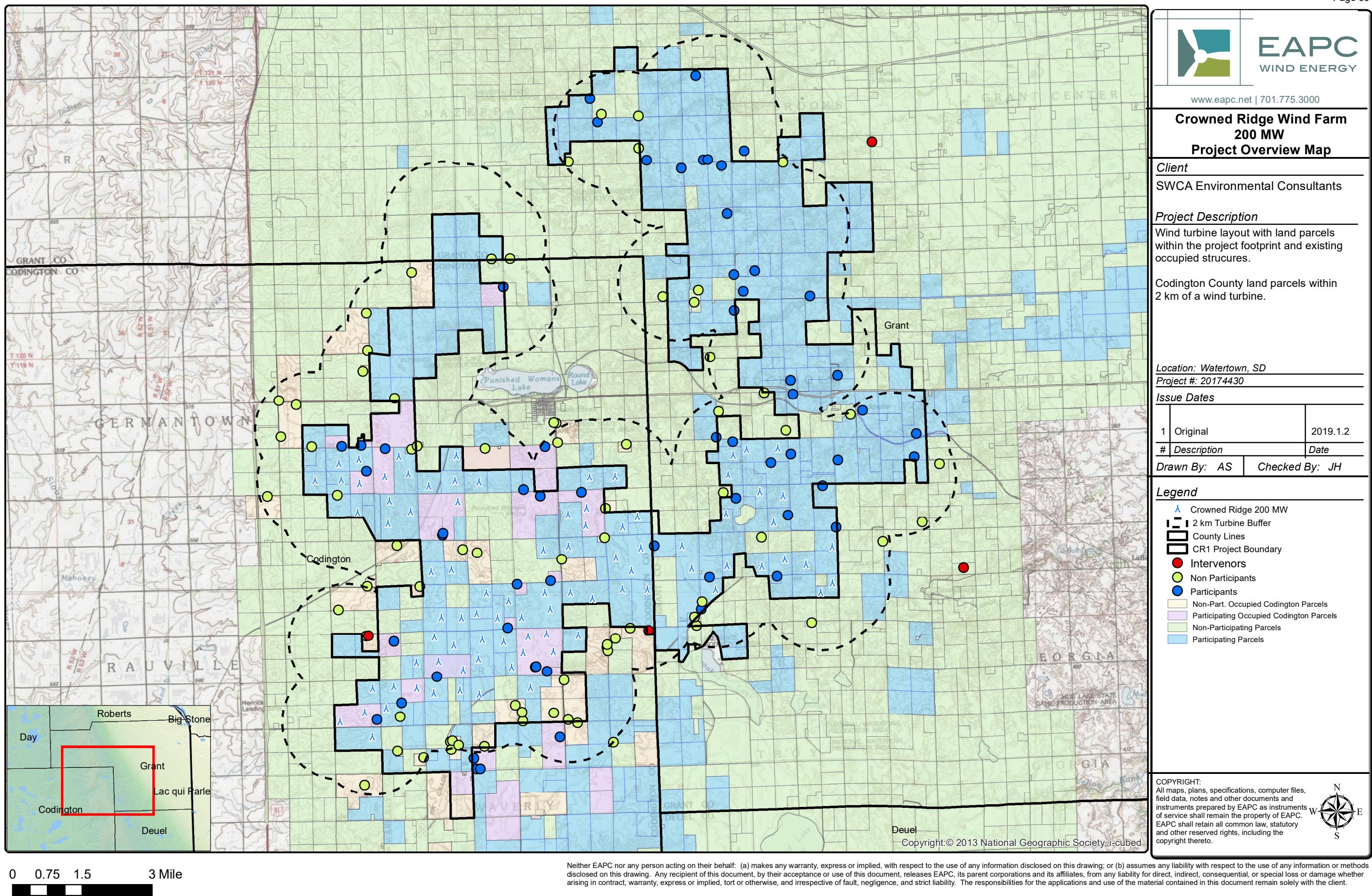
Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53

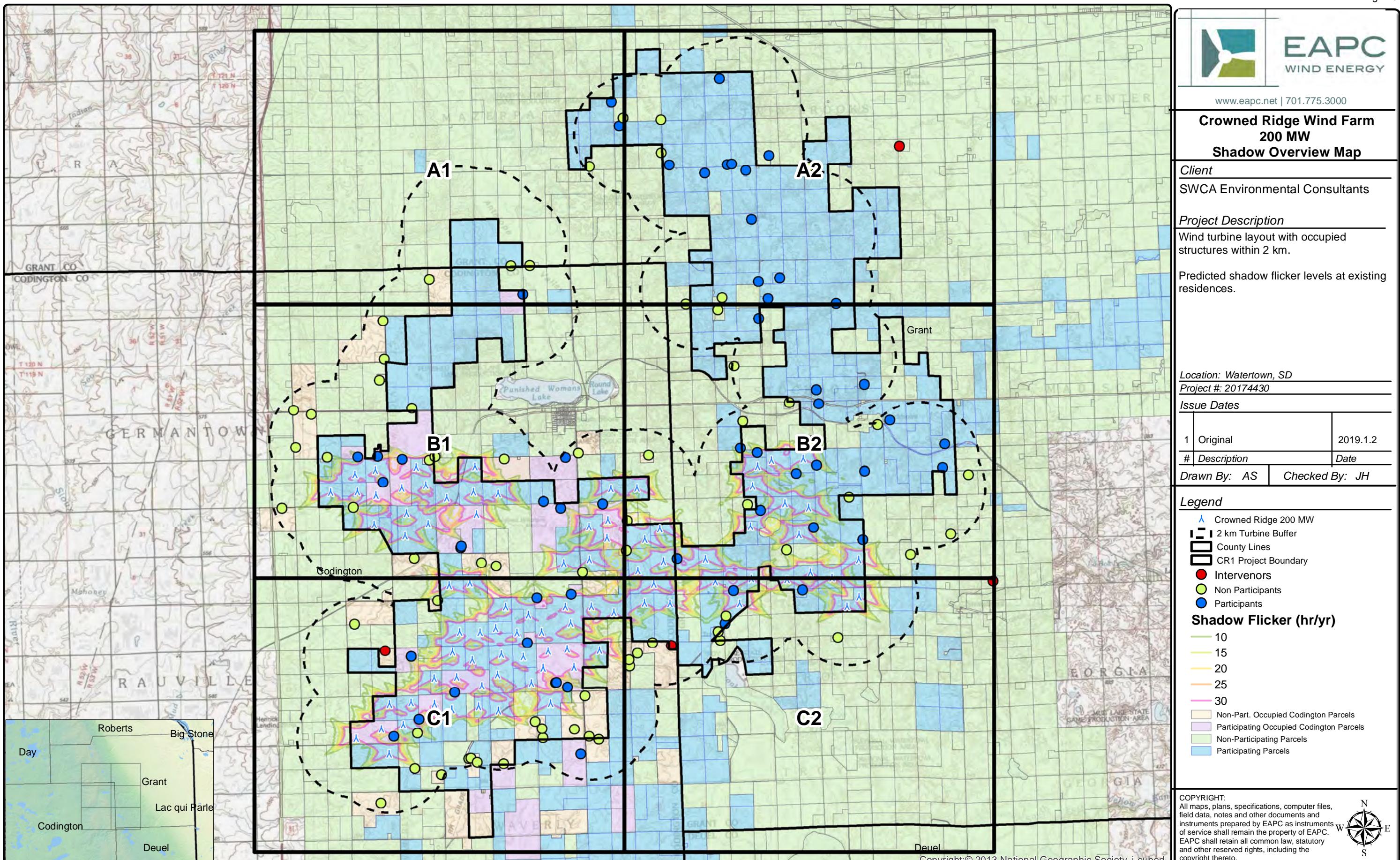
UTM NAD83 Zone 14

continued

WTG	Type	Turbine Model	Easting (m)	Northing (m)	Base Elev. AMSL (m)	Sound Profile
CRI-72	Primary	GE2.3 116RD 80HH r2.madE	660,087	4,989,309	606.0	Normal
CRI-73	Primary	GE2.3 116RD 90HH r2.madE	661,344	4,989,297	609.8	Curtailed
CRI-74	Primary	GE2.3 116RD 90HH r2.madE	663,041	4,988,744	615.0	Normal
CRI-75	Primary	GE2.3 116RD 90HH r2.madE	664,137	4,988,702	609.0	Curtailed
CRI-76	Primary	GE2.3 116RD 90HH r2.madE	662,399	4,988,667	615.0	Normal
CRI-77	Primary	GE2.3 116RD 80HH r2.madE	659,158	4,988,642	612.0	Normal
CRI-78	Primary	GE2.3 116RD 80HH r2.madE	660,811	4,988,558	604.1	Normal
CRI-80	Primary	GE2.3 116RD 90HH r2.madE	661,552	4,988,481	608.8	Normal
CRI-81	Primary	GE2.3 116RD 90HH r2.madE	659,825	4,988,365	606.8	Normal
CRI-82	Primary	GE2.3 116RD 90HH r2.madE	663,271	4,988,133	613.0	Normal
CRI-83	Primary	GE2.3 116RD 90HH r2.madE	662,227	4,988,103	606.6	Normal
CRI-84	Primary	GE2.3 116RD 80HH r2.madE	660,677	4,987,880	600.6	Normal
CRI-85	Primary	GE2.3 116RD 90HH r2.madE	659,295	4,987,798	612.0	Normal
CRI-86	Primary	GE2.3 116RD 90HH r2.madE	658,534	4,987,759	613.1	Normal
CRI-87	Primary	GE2.3 116RD 90HH r2.madE	661,830	4,987,596	609.0	Normal
CRI-88	Primary	GE2.3 116RD 90HH r2.madE	660,157	4,987,492	603.0	Normal
CRI-89	Primary	GE2.3 116RD 90HH r2.madE	657,758	4,986,926	614.9	Normal
CRI-90	Primary	GE2.3 116RD 90HH r2.madE	658,545	4,986,881	612.0	Normal
CRI-91	Primary	GE2.3 116RD 90HH r2.madE	657,023	4,986,868	612.0	Normal
CRI-92	Primary	GE2.3 116RD 80HH r2.madE	660,039	4,986,804	607.2	Normal
CRI-93	Primary	GE2.3 116RD 80HH r2.madE	659,133	4,986,700	607.9	Normal
CRI-94	Primary	GE2.3 116RD 80HH r2.madE	660,716	4,986,660	600.6	Normal
CRI-95	Primary	GE2.3 116RD 90HH r2.madE	657,488	4,986,184	612.0	Curtailed
CRI-96	Primary	GE2.3 116RD 90HH r2.madE	656,744	4,986,037	609.0	Normal
CRI-97	Primary	GE2.3 116RD 90HH r2.madE	655,899	4,985,715	592.7	Normal
CRI-98	Primary	GE2.3 116RD 90HH r2.madE	657,015	4,985,192	608.9	Normal
CRI-99	Primary	GE2.3 116RD 90HH r2.madE	672,521	4,990,188	556.7	Normal
CRI-100	Primary	GE2.3 116RD 90HH r2.madE	668,885	4,990,286	585.0	Normal
CRI-101	Primary	GE2.3 116RD 90HH r2.madE	672,921	4,990,513	544.6	Normal
CRI-102	Primary	GE2.3 116RD 90HH r2.madE	668,059	4,991,023	581.0	Normal
CRI-103	Primary	GE2.3 116RD 90HH r2.madE	669,279	4,991,115	582.0	Normal
CRI-104	Primary	GE2.3 116RD 90HH r2.madE	672,009	4,991,151	555.0	Normal
CRI-105	Primary	GE2.3 116RD 90HH r2.madE	670,488	4,991,091	571.6	Normal
CRI-106	Primary	GE2.3 116RD 90HH r2.madE	671,278	4,991,335	566.2	Normal
CRI-107	Primary	GE2.3 116RD 90HH r2.madE	667,723	4,991,800	582.0	Normal
CRI-108	Primary	GE2.3 116RD 90HH r2.madE	672,917	4,991,775	541.2	Normal
CRI-109	Primary	GE2.3 116RD 90HH r2.madE	670,897	4,992,616	557.4	Curtailed
CRI-111	Primary	GE2.3 116RD 90HH r2.madE	671,220	4,993,526	550.6	Normal
CRI-112	Primary	GE2.3 116RD 90HH r2.madE	670,419	4,993,665	561.0	Normal
CRI-114	Primary	GE2.3 116RD 90HH r2.madE	669,318	4,994,256	561.0	Curtailed
CRI-117	Primary	GE2.3 116RD 90HH r2.madE	669,488	4,994,930	544.8	Normal

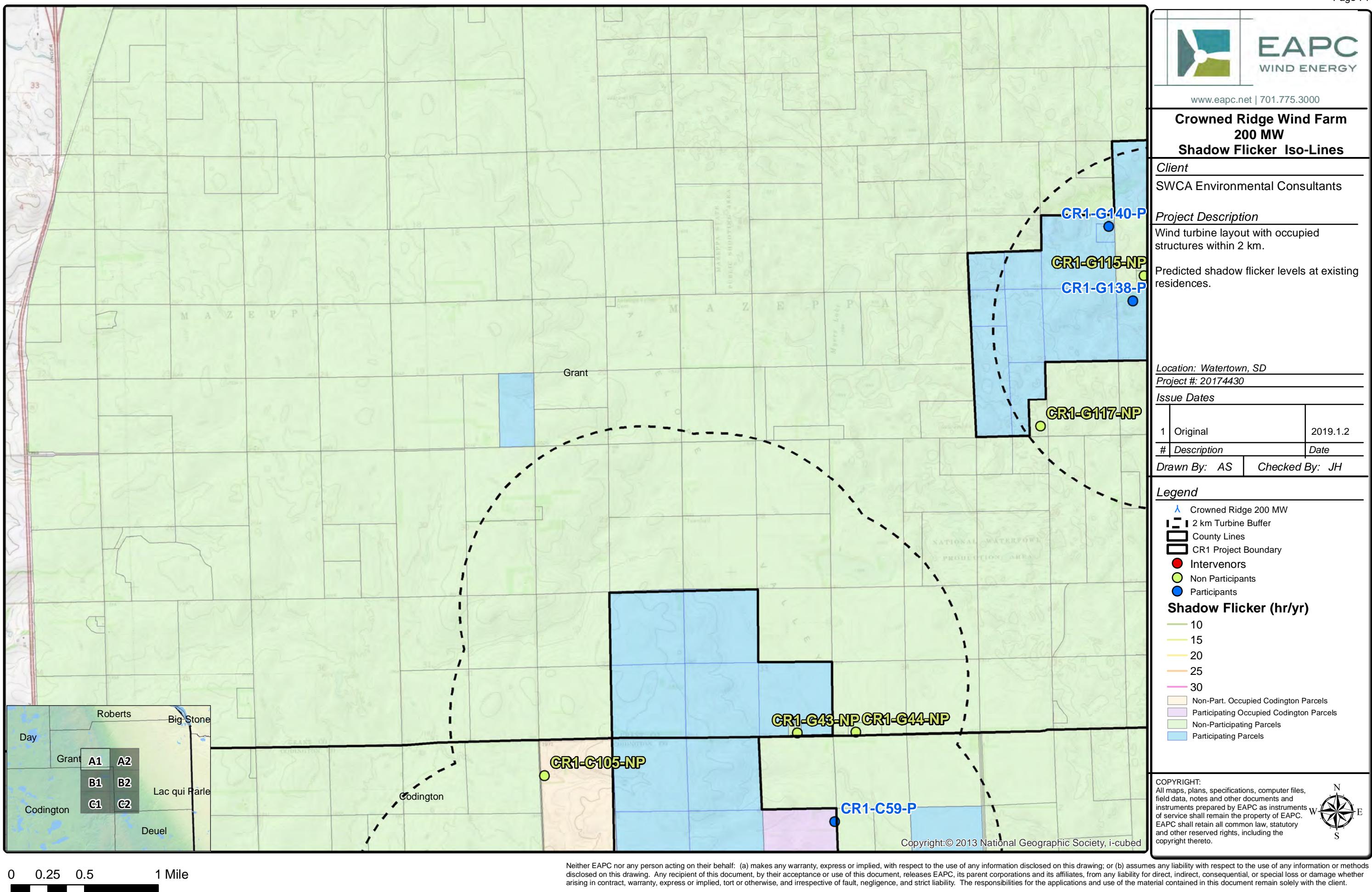
Table A-1: Crowned Ridge Wind Farm 200 MW
GE 2.3-116-90 m HH, GE 2.3-116-80 m HH WTG's
Curtailment with LNTE on only 20, 22, 24, 25, 31, 32, 36, 53
UTM NAD83 Zone 14

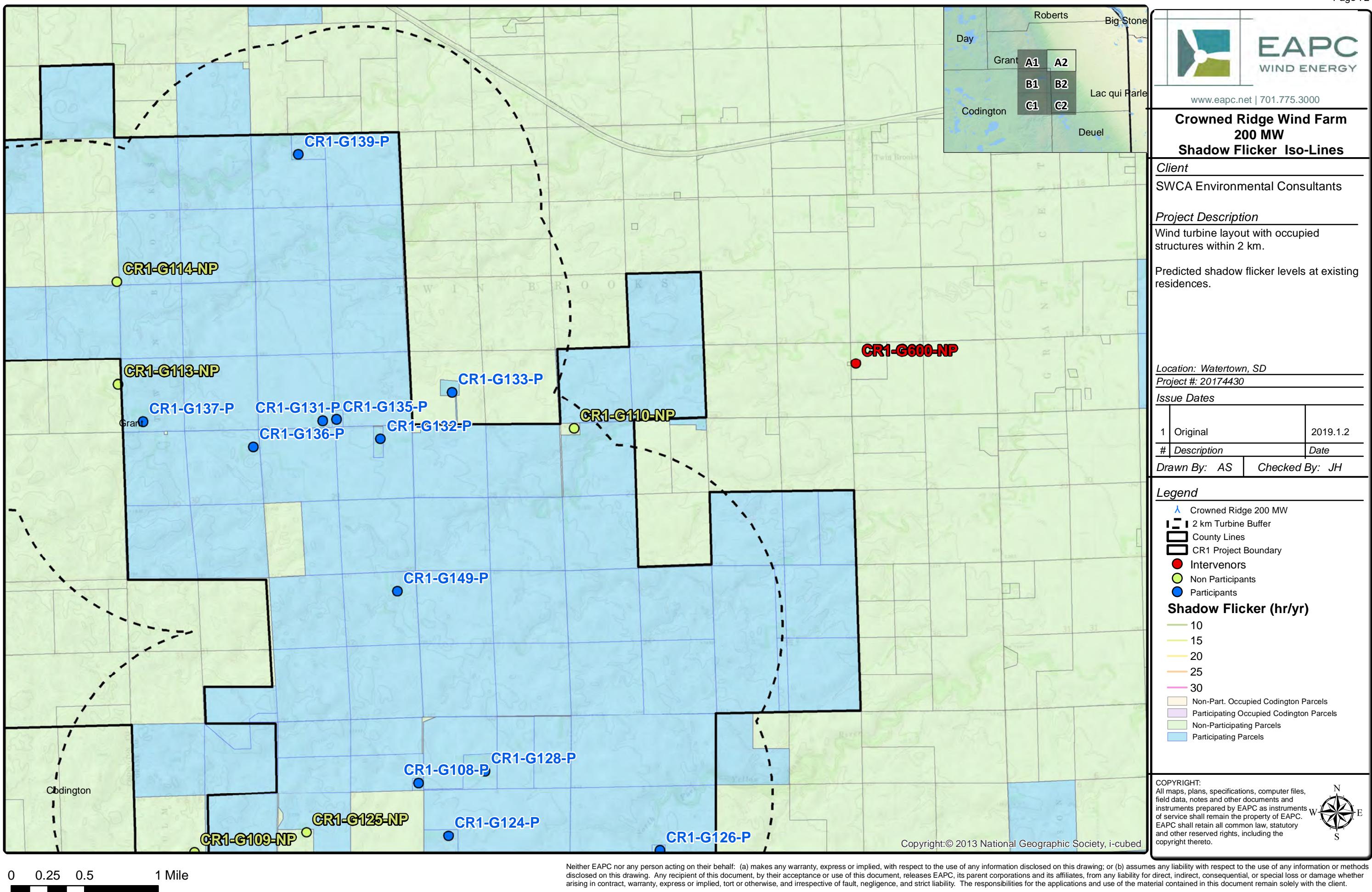


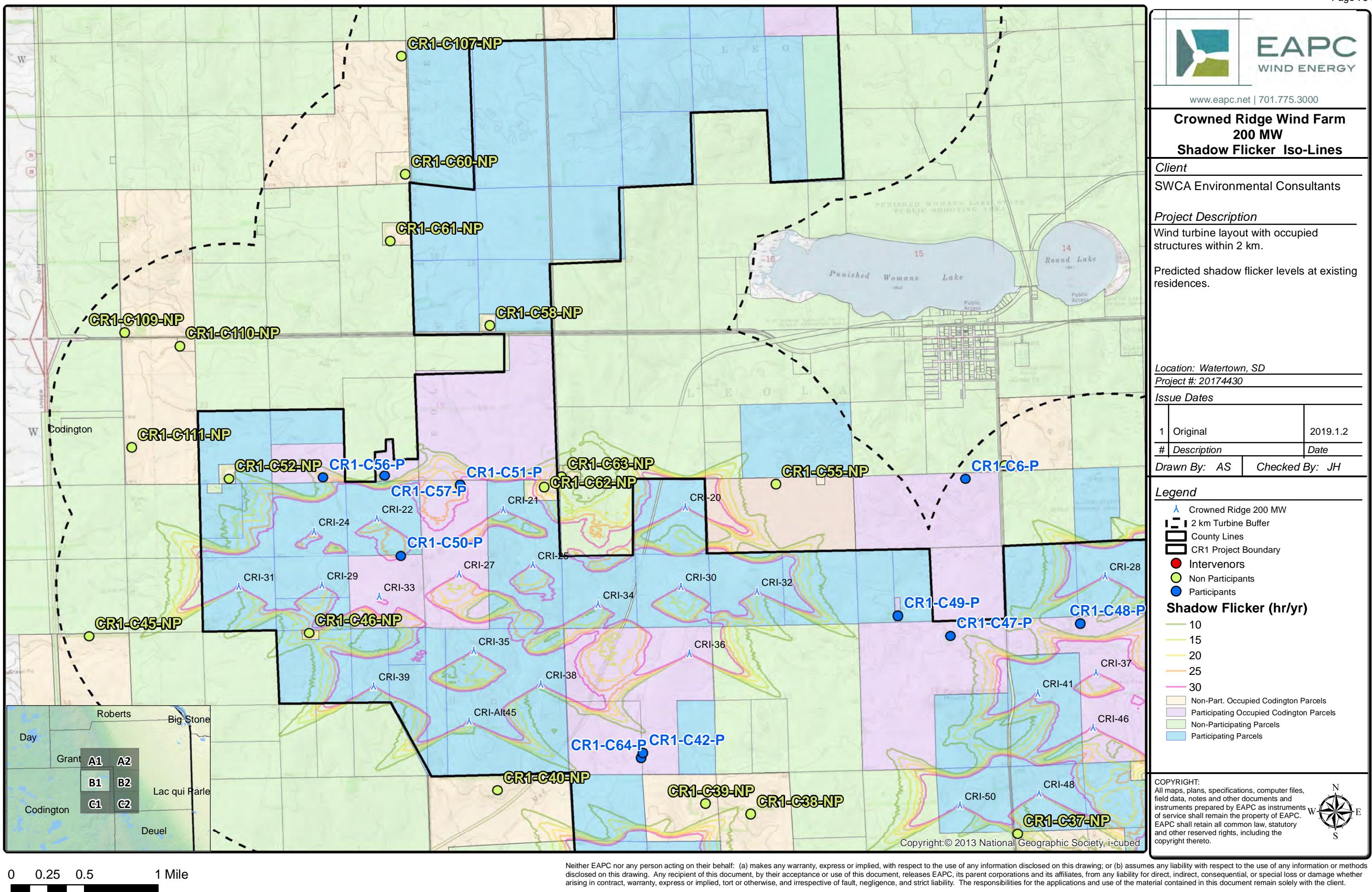


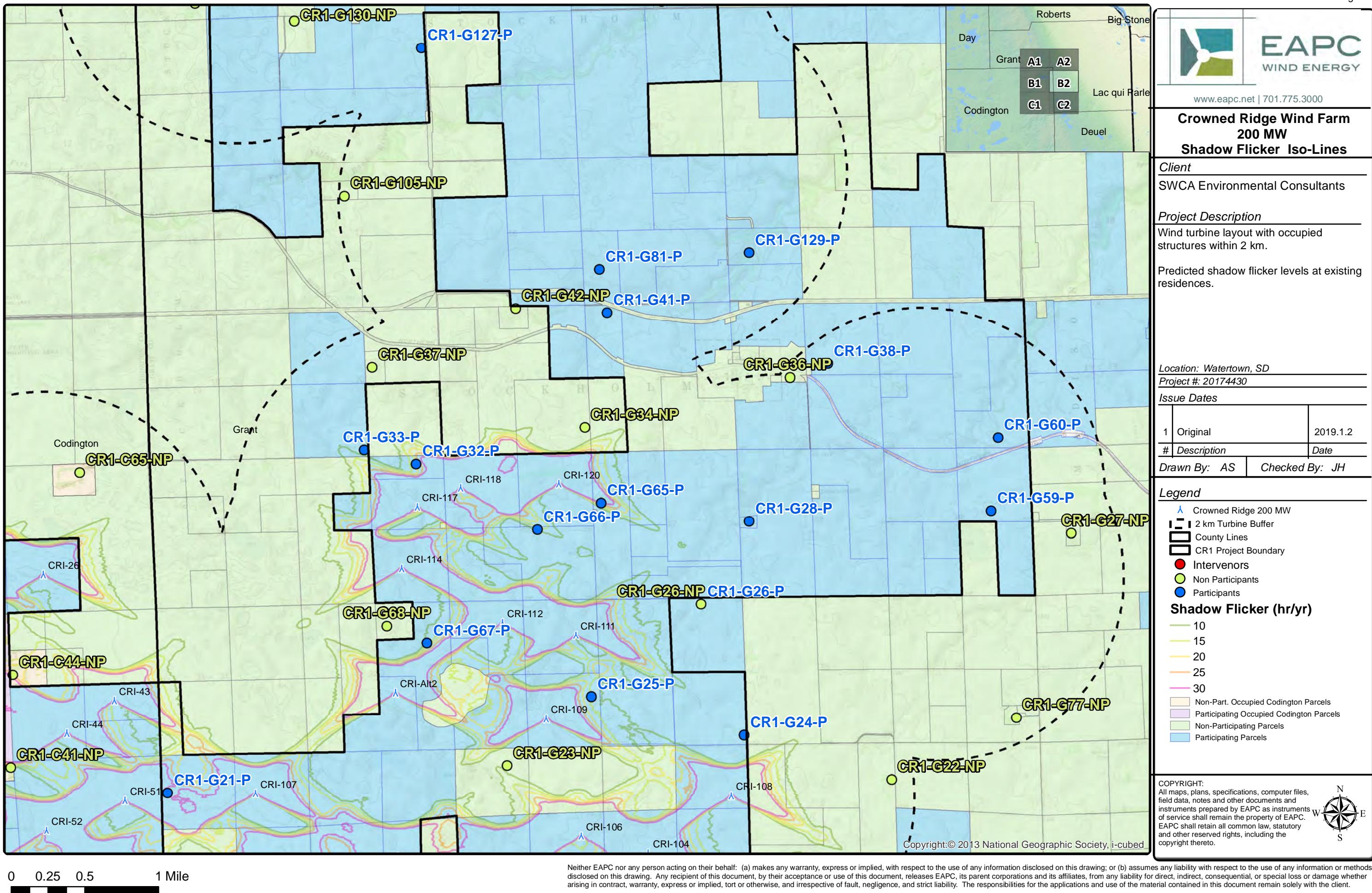
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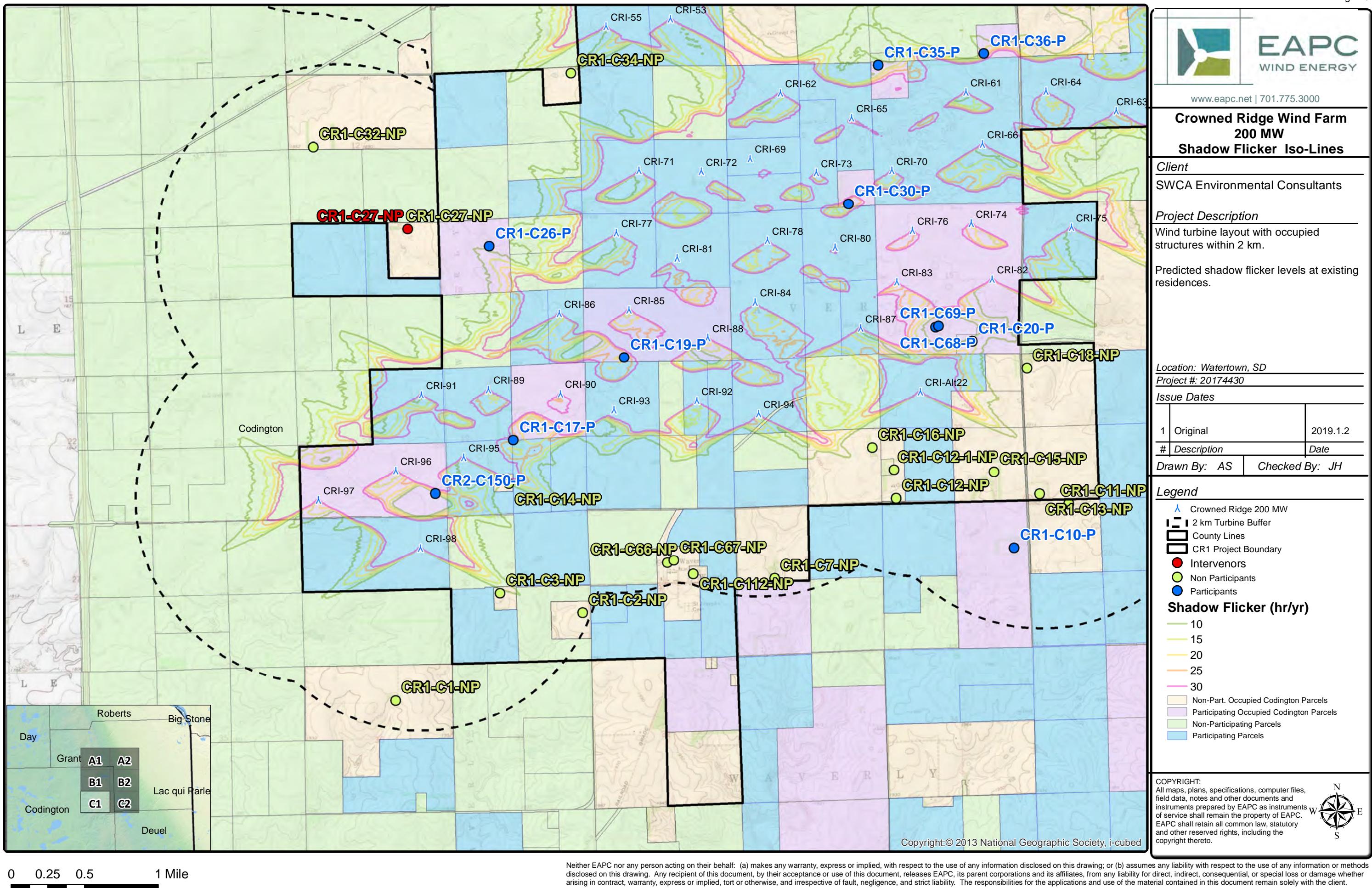
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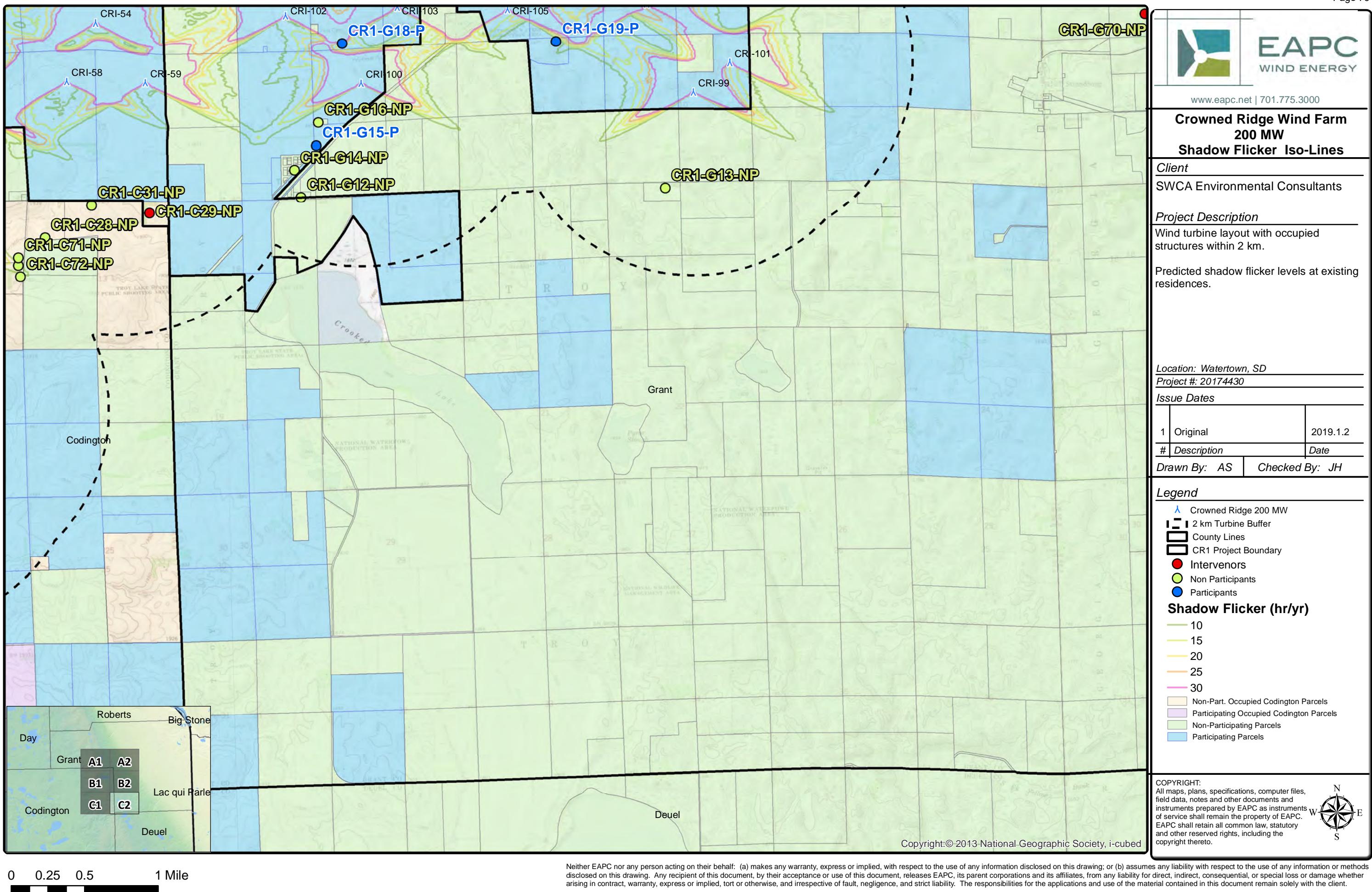














GE Generators LLC
8301 Scenic Highway
Pensacola, Florida 32514-7810
USA

Project name

Crowned Ridge I

Year of construction	2019
Power (MW)	2.3MW
Reference Wind Speed (m/s)	38 m/s
Max Survival Wind Speed (m/s)	56m/s
Cut-In Wind Speed (m/s)	3 m/s
Cut-Out Wind Speed (m/s)	22 m/s
Operating temperature range	-30 ... 40 °C
Wind zone	IEC S
Hub Height (m)	90m
Rotor Diameter (m)	116m
Low Speed Shaft RPM	8-15.7
High Speed Shaft RPM	800-1631
Over Current Protection: Stator	1900
Over Current Protection: Rotor	750
Short Circuit Interrupting Capacity: Stator	38kA
Short Circuit Interrupting Capacity: Rotor	38kA
Rated voltage	690V
Frequency	60Hz

System: Doubly Fed Asynchronous Generator
with Power Converter on Rotor Side

Unit: Variable Speed, Pitch Controlled

Curtailment Testimony Intervenors for Crowned Ridge UTM NAD83 Z14				As Built - 87 Turbines						29-Jul Filing Shadow hr/yr	Dist. To Nearest Turbine (feet)		
				0.0		0.3		0.5					
				Curtailed Noise (dBA)	Curtailed Noise (dBA)	Curtailed Noise (dBA)	Curtailed Noise (dBA)	Shadow hr/yr	All LNTE's				
CR1-G70-NP	Robish Allen E & Shirley	677464.5	4991043.1	29.6	27.5	26.5	26.5	26.2	0:00	0:00	15,006		
CR1-C29-NP	Christianson Amber Kaye	666571.9	4988867.1	41.1	39.3	38.4	38.3	37.1	0:00	6:56	4,675		
CR1-G600-NP	Mogen Peter & Kristi	674300.7	5005772.8	20.8	19.8	19.6	19.8	20.0	0:00	0:00	36,397		
CR1-C27-NP	Mr. Patrick Lynch	656876.0	4988683.0	40.2	39.2	38.0	38.1	36.8	0:00	0:00	5,974		
CR1-C16-NP	Mr. Paul Johnson	661960.0	4986288.0	43.2	43.5	42.3	42.3	40.6	2:19	6:18	2,648		
CR1-C112-NP	Waverly School	660001.5	4984907.8	40.2	38.6	37.3	37.4	36.1	0:00	0:44	6,207		