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PUBLIC SERVICE COMMISSION

In response to the May 4 email regarding your questions on the "diagram and additional information" referred to on page 28 is Figure 13 itself. The "diagram" refers to the chart at the bottom of the page (Figure 13) detailing the comparison of sound pressure level and sound pressure. The "additional information" is the paragraph on the top half of the page (Figure 13) entitled "What is noise?".

The source of this information (Figure 13) is the Canadian Centre for Occupational Health and Safety, as listed at the bottom of Figure 13.

www.ccohs.ca/oshanswers/phys_agents/noise_basic.html.

Our source document for page 28 itself is the original "10 Year Plan" document that was prepared by Just Wind and submitted to the ND Public Service Commission in July of 2008.

The "threshold distance at which the expected noise level is 50 dB" is 229m or 751.312 feet and is detailed in the attached document which is a noise calculation and study of the Logan County Wind Farm using the (Mitsubishi) MWT95/2.4 turbine profile at an average wind speed of 8.2 meters. This study and noise calculation was produced at the request of Just Wind by EAPC, Grand Forks, ND.

*Filed by Just Wind
Don Metzger
July 20, 2009
DM*

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

Description:
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.2 m/s

Ground attenuation:

General, Ground factor: 1.0

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

Pure and Impulse tone penalty are added to WTG source noise

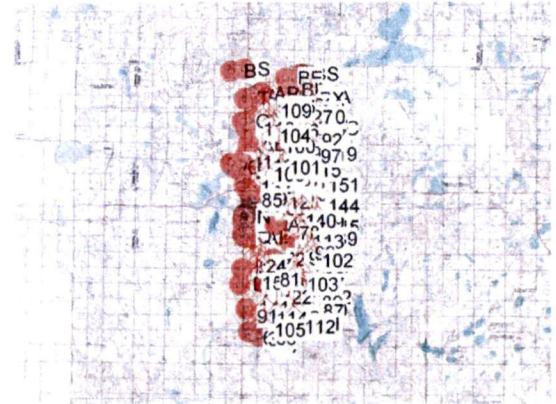
Height above ground level, when no value in NSA object:

1.5 m Don't allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive,

positive is less restrictive.:

0.0 dB(A)



Scale 1:750,000

New WTG

Noise sensitive area

WTGs

UTM WGS84 Zone: 14			WTG type				Noise data									
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data
UTM WGS84 Zone: 14		[m]														
1	448,082	5,162,644	621.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
2	447,242	5,162,626	619.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
3	442,380	5,139,808	628.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
4	443,821	5,138,002	625.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
5	447,214	5,160,248	621.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
6	445,621	5,158,835	624.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
7	447,083	5,160,867	627.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
8	442,938	5,161,290	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
9	443,292	5,152,611	610.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
10	441,793	5,156,746	612.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
11	446,884	5,149,827	624.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
12	446,832	5,144,770	641.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
13	443,228	5,137,718	615.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
14	442,676	5,137,988	624.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
15	442,992	5,160,168	646.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
16	443,130	5,144,150	659.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
17	448,307	5,160,109	626.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
18	448,672	5,160,573	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
19	443,725	5,161,549	637.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
20	448,329	5,161,410	618.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
21	445,273	5,146,698	620.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
22	447,502	5,143,262	658.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
23	441,750	5,142,339	643.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
24	442,130	5,145,998	640.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
25	447,150	5,156,786	640.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
26	446,752	5,145,359	643.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
27	447,020	5,161,440	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
28	443,094	5,152,016	609.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
29	446,154	5,154,204	630.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
30	448,011	5,147,184	646.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
31	447,963	5,161,923	627.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
32	446,847	5,142,807	643.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
33	446,764	5,140,897	641.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
34	447,195	5,146,270	656.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
35	442,346	5,138,450	624.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
36	442,703	5,145,009	655.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
37	445,264	5,155,390	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
38	441,783	5,145,682	637.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
39	443,182	5,160,936	638.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
40	443,312	5,139,999	640.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
41	445,082	5,159,880	637.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
42	447,805	5,143,926	653.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
43	442,097	5,143,493	612.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
44	444,653	5,155,727	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes

Continued on next page...

Project:
Logan County Wind Farm
 Just Wind, LLC
 PO Box 299
 Napoleon, ND 58561

Description:
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
 5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

UTM WGS84 Zone: 14			WGT type			Noise data										
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data
UTM WGS84 Zone: 14			[m]													
45	442,646	5,139,009	627.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
46	445,238	5,147,835	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
47	446,274	5,149,519	618.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
48	444,544	5,162,167	646.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
49	447,731	5,144,499	655.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
50	442,328	5,160,066	634.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
51	445,458	5,141,152	643.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
52	441,318	5,145,907	624.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
53	445,207	5,152,030	616.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
54	445,231	5,157,377	640.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
55	442,791	5,145,557	644.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
56	442,770	5,154,504	627.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
57	444,002	5,154,448	627.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
58	445,267	5,139,911	655.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
59	447,158	5,155,619	650.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
60	443,576	5,160,102	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
61	446,631	5,141,615	645.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
62	448,013	5,158,255	621.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
63	443,231	5,145,085	645.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
64	444,780	5,153,882	636.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
65	447,844	5,145,343	658.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
66	443,265	5,142,486	655.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
67	442,656	5,146,116	637.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
68	441,846	5,138,608	624.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
69	442,548	5,141,330	630.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
70	445,845	5,139,570	655.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
71	445,499	5,147,180	627.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
72	442,285	5,154,529	616.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
73	442,485	5,144,533	644.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
74	446,851	5,147,669	643.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
75	442,738	5,140,232	634.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
76	441,957	5,144,930	640.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
77	448,459	5,159,415	627.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
78	445,628	5,149,487	624.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
79	442,201	5,152,986	618.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
80	444,063	5,158,865	640.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
81	443,610	5,144,606	643.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
82	447,096	5,144,320	639.8 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
83	444,416	5,140,018	661.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
84	445,572	5,155,987	640.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
85	441,698	5,152,890	620.1 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
86	443,190	5,138,567	615.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
87	448,190	5,141,347	659.5 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
88	444,143	5,159,557	641.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
89	448,039	5,142,215	657.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
90	448,544	5,141,461	652.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
91	441,200	5,140,832	630.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
92	448,025	5,158,999	618.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
93	446,664	5,146,828	652.4 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
94	446,932	5,157,672	630.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
95	441,716	5,152,383	607.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
96	446,001	5,156,944	655.0 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
97	447,913	5,157,369	630.9 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
98	448,314	5,145,986	655.3 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
99	447,293	5,147,397	643.6 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
100	444,058	5,158,385	631.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
101	444,642	5,156,193	634.7 MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER	MWT	8.2	80.0	105.1	0 dB	Yes
102	448,059	5,146,593	649.2 MWT 95/2.4 60Hz 2400 95...	Yes	MWT</											

Project: Logan County Wind Farm
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Calculated: 5/12/2009 10:48 AM/2.6.1.252

Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

UTM WGS84 Zone: 14			WTG type		Noise data											
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Hub height [m]	LwA_ref [dB(A)]	Pure tones	Octave data
UTM WGS84 Zone: 14			[m]													
115	446,793	5,155,957	643.5	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
116	448,168	5,150,062	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
117	443,783	5,139,452	644.7	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
118	446,659	5,143,477	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
119	448,440	5,157,570	623.4	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
120	442,330	5,143,985	646.2	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
121	447,096	5,154,478	632.6	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
122	443,711	5,142,792	651.2	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
123	447,137	5,151,149	624.8	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
124	446,462	5,148,900	630.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
125	444,091	5,162,470	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
126	448,293	5,152,966	652.3	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
127	446,143	5,147,187	640.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
128	443,306	5,162,243	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
129	444,540	5,152,657	615.7	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
130	443,447	5,154,330	624.8	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
131	446,448	5,153,504	630.9	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
132	441,589	5,154,241	608.0	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
133	447,250	5,142,459	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
134	442,883	5,142,476	644.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
135	447,820	5,148,949	638.5	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
136	445,670	5,140,653	649.2	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
137	442,860	5,156,338	631.5	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
138	445,726	5,140,086	655.8	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
139	448,458	5,148,861	637.7	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
140	446,278	5,150,723	627.9	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
141	441,333	5,141,693	637.2	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
142	447,856	5,142,723	655.3	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
143	445,052	5,154,721	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
144	448,730	5,152,255	648.2	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
145	448,697	5,150,078	640.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
146	444,424	5,159,977	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
147	448,634	5,149,297	643.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
148	447,097	5,149,392	637.0	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
149	447,104	5,150,610	634.0	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
150	448,444	5,153,525	652.3	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
151	448,715	5,154,430	654.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
152	441,700	5,144,255	640.1	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes
153	444,930	5,140,691	641.6	MWT 95/2.4 60Hz 2400 95...	Yes	MWT	95/2.4-2,400	2,400	95.0	80.0	USER MWT	8.2	80.0	105.1	0 dB	Yes

Calculation Results

Sound Level			UTM WGS84 Zone: 14			Demands		Sound Level		Demands fulfilled ?	
No.	Name	East	North	Z	Imission height [m]	Noise [dB(A)]	Distance [m]	From WTGs [dB(A)]	Noise	Distance	All
A	Occupied Res 1	439,632	5,154,419	596.0	1.5	50.0	229	27.7	Yes	Yes	Yes
B	Occupied Res 2	439,673	5,163,936	630.4	1.5	50.0	229	22.6	Yes	Yes	Yes
C	Occupied Res 3	440,039	5,153,967	591.3	1.5	50.0	229	29.5	Yes	Yes	Yes
D	Occupied Res 4	440,554	5,141,876	643.1	1.5	50.0	229	34.2	Yes	Yes	Yes
E	Occupied Res 5	440,810	5,153,521	594.5	1.5	50.0	229	33.9	Yes	Yes	Yes
F	Occupied Res 6	440,836	5,143,541	618.6	1.5	50.0	229	33.0	Yes	Yes	Yes
G	Occupied Res 7	440,884	5,158,728	621.8	1.5	50.0	229	29.1	Yes	Yes	Yes
H	Occupied Res 8	440,896	5,147,125	612.6	1.5	50.0	229	30.9	Yes	Yes	Yes
I	Occupied Res 9	440,905	5,148,568	606.6	1.5	50.0	229	27.2	Yes	Yes	Yes
J	Occupied Res 10	440,981	5,153,677	597.6	1.5	50.0	229	35.2	Yes	Yes	Yes
K	Occupied Res 11	440,990	5,154,280	598.2	1.5	50.0	229	36.1	Yes	Yes	Yes
L	Occupied Res 12	441,022	5,147,919	606.6	1.5	50.0	229	28.5	Yes	Yes	Yes
M	Occupied Res 13	441,023	5,148,970	600.3	1.5	50.0	229	27.1	Yes	Yes	Yes
N	Occupied Res 14	441,028	5,148,878	602.2	1.5	50.0	229	27.1	Yes	Yes	Yes
O	Occupied Res 15	441,031	5,148,532	606.9	1.5	50.0	229	27.4	Yes	Yes	Yes
P	Occupied Res 16	441,039	5,149,099	598.5	1.5	50.0	229	27.0	Yes	Yes	Yes

Continued on next page...

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

Noise sensitive area No.	Name	UTM WGS84 Zone: 14			Demands			Sound Level From WTGs [dB(A)]	Demands fulfilled ?		
		East	North	Z [m]	Imission height [m]	Noise [dB(A)]	Distance [m]		Noise	Distance	All
Q Occupied Res 17		441,040	5,146,837	621.8	1.5	50.0	229	33.0	Yes	Yes	Yes
R Occupied Res 18		441,043	5,149,150	598.0	1.5	50.0	229	27.0	Yes	Yes	Yes
S Occupied Res 19		441,066	5,164,151	628.3	1.5	50.0	229	24.4	Yes	Yes	Yes
T Occupied Res 20		441,084	5,161,073	615.7	1.5	50.0	229	31.0	Yes	Yes	Yes
U Occupied Res 21		441,093	5,152,174	602.9	1.5	50.0	229	35.7	Yes	Yes	Yes
V Occupied Res 22		441,131	5,155,156	596.4	1.5	50.0	229	33.1	Yes	Yes	Yes
W Occupied Res 23		441,199	5,158,085	618.7	1.5	50.0	229	29.8	Yes	Yes	Yes
X Occupied Res 24		441,211	5,152,533	606.1	1.5	50.0	229	38.7	Yes	Yes	Yes
Y Occupied Res 25		441,248	5,139,333	604.3	1.5	50.0	229	34.6	Yes	Yes	Yes
Z Occupied Res 26		441,282	5,146,735	623.1	1.5	50.0	229	34.7	Yes	Yes	Yes
AA Occupied Res 27		441,372	5,151,684	603.5	1.5	50.0	229	34.0	Yes	Yes	Yes
AB Occupied Res 28		441,467	5,156,360	608.9	1.5	50.0	229	36.9	Yes	Yes	Yes
AC Occupied Res 29		441,486	5,158,857	618.7	1.5	50.0	229	31.2	Yes	Yes	Yes
AD Occupied Res 30		441,491	5,136,955	590.3	1.5	50.0	229	30.1	Yes	Yes	Yes
AE Occupied Res 31		441,658	5,146,826	627.2	1.5	50.0	229	34.9	Yes	Yes	Yes
AF Occupied Res 32		441,828	5,149,915	603.1	1.5	50.0	229	28.1	Yes	Yes	Yes
AG Occupied Res 33		441,829	5,150,557	598.9	1.5	50.0	229	29.2	Yes	Yes	Yes
AH Occupied Res 34		441,833	5,150,904	600.4	1.5	50.0	229	30.4	Yes	Yes	Yes
AI Occupied Res 35		441,899	5,146,728	634.0	1.5	50.0	229	36.3	Yes	Yes	Yes
AJ Occupied Res 36		442,014	5,161,288	616.5	1.5	50.0	229	35.0	Yes	Yes	Yes
AK Occupied Res 37		442,514	5,137,249	611.2	1.5	50.0	229	35.9	Yes	Yes	Yes
AL Occupied Res 38		442,533	5,136,581	592.3	1.5	50.0	229	30.9	Yes	Yes	Yes
AM Occupied Res 39		442,653	5,149,514	602.2	1.5	50.0	229	28.7	Yes	Yes	Yes
AN Occupied Res 40		442,668	5,159,379	627.9	1.5	50.0	229	37.3	Yes	Yes	Yes
AO Occupied Res 41		442,801	5,161,692	632.2	1.5	50.0	229	40.3	Yes	Yes	Yes
AP Occupied Res 42		442,806	5,161,565	630.8	1.5	50.0	229	42.4	Yes	Yes	Yes
AQ Occupied Res 43		443,017	5,142,071	646.2	1.5	50.0	229	41.3	Yes	Yes	Yes
AR Occupied Res 44		443,133	5,143,612	651.5	1.5	50.0	229	39.2	Yes	Yes	Yes
AS Occupied Res 45		443,495	5,151,662	612.6	1.5	50.0	229	37.3	Yes	Yes	Yes
AT Occupied Res 46		443,861	5,138,440	618.7	1.5	50.0	229	40.2	Yes	Yes	Yes
AU Occupied Res 47		443,993	5,141,334	630.9	1.5	50.0	229	36.1	Yes	Yes	Yes
AV Occupied Res 48		444,080	5,144,487	630.9	1.5	50.0	229	38.6	Yes	Yes	Yes
AW Occupied Res 49		444,127	5,157,811	612.6	1.5	50.0	229	37.3	Yes	Yes	Yes
AX Occupied Res 50		444,196	5,141,247	633.4	1.5	50.0	229	36.4	Yes	Yes	Yes
AY Occupied Res 51		444,250	5,148,076	608.9	1.5	50.0	229	33.2	Yes	Yes	Yes
AZ Occupied Res 52		444,280	5,149,931	615.7	1.5	50.0	229	31.5	Yes	Yes	Yes
BA Occupied Res 53		444,481	5,158,060	612.6	1.5	50.0	229	38.2	Yes	Yes	Yes
BB Occupied Res 54		444,485	5,154,404	635.1	1.5	50.0	229	41.1	Yes	Yes	Yes
BC Occupied Res 55		444,733	5,141,975	643.1	1.5	50.0	229	35.0	Yes	Yes	Yes
BD Occupied Res 56		445,006	5,143,580	636.3	1.5	50.0	229	33.7	Yes	Yes	Yes
BE Occupied Res 57		445,337	5,163,221	621.8	1.5	50.0	229	31.1	Yes	Yes	Yes
BF Occupied Res 58		445,400	5,143,438	624.8	1.5	50.0	229	34.3	Yes	Yes	Yes
BG Occupied Res 59		445,458	5,138,777	616.3	1.5	50.0	229	35.3	Yes	Yes	Yes
BH Occupied Res 60		445,565	5,159,126	621.8	1.5	50.0	229	42.0	Yes	Yes	Yes
BI Occupied Res 61		445,689	5,161,960	624.8	1.5	50.0	229	33.2	Yes	Yes	Yes
BJ Occupied Res 62		445,703	5,148,521	621.8	1.5	50.0	229	37.5	Yes	Yes	Yes
BK Occupied Res 63		445,739	5,146,294	630.9	1.5	50.0	229	38.1	Yes	Yes	Yes
BL Occupied Res 64		445,944	5,151,627	616.6	1.5	50.0	229	35.6	Yes	Yes	Yes
BM Occupied Res 65		446,058	5,151,493	615.7	1.5	50.0	229	35.9	Yes	Yes	Yes
BN Occupied Res 66		446,140	5,157,816	614.3	1.5	50.0	229	36.9	Yes	Yes	Yes
BO Occupied Res 67		446,153	5,142,706	631.0	1.5	50.0	229	37.4	Yes	Yes	Yes
BP Occupied Res 68		446,551	5,148,201	638.1	1.5	50.0	229	40.0	Yes	Yes	Yes
BQ Occupied Res 69		446,885	5,141,591	641.8	1.5	50.0	229	43.6	Yes	Yes	Yes
BR Occupied Res 70		446,908	5,139,584	625.1	1.5	50.0	229	39.9	Yes	Yes	Yes
BS Occupied Res 71		447,021	5,163,621	612.6	1.5	50.0	229	31.4	Yes	Yes	Yes

Continued on next page...

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

Description:
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

Noise sensitive area No.	Name	UTM WGS84 Zone: 14			Demands			Sound Level From WTGs [dB(A)]	Demands fulfilled ?		
		East	North	Z [m]	Imission height [m]	Noise [dB(A)]	Distance [m]		Noise	Distance	All
BT Occupied Res 72		447,184	5,138,005	606.6	1.5	50.0	229	28.8	Yes	Yes	Yes
BU Occupied Res 73		447,237	5,137,224	597.4	1.5	50.0	229	26.6	Yes	Yes	Yes
BV Occupied Res 74		447,271	5,159,979	621.8	1.5	50.0	229	42.7	Yes	Yes	Yes
BW Occupied Res 75		447,538	5,144,995	658.4	1.5	50.0	229	41.7	Yes	Yes	Yes
BX Occupied Res 76		447,632	5,161,015	627.9	1.5	50.0	229	39.4	Yes	Yes	Yes
BY Occupied Res 77		447,691	5,159,475	620.8	1.5	50.0	229	38.7	Yes	Yes	Yes
BZ Occupied Res 78		447,693	5,141,800	652.3	1.5	50.0	229	40.0	Yes	Yes	Yes
CA Occupied Res 79		448,193	5,161,189	619.6	1.5	50.0	229	43.5	Yes	Yes	Yes
CB Occupied Res 80		448,265	5,148,540	635.7	1.5	50.0	229	41.4	Yes	Yes	Yes
CC Occupied Res 81		448,897	5,157,980	627.4	1.5	50.0	229	36.8	Yes	Yes	Yes

Distances (m)

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	11792	8507	11831	22090	11666	20431	8194	17102	15800	11438	10966	16330	15388	15468	15775	15266	17304	15219	7176	7172	12588	10217
2	11192	7681	11263	21801	11148	20132	7458	16750	15420	10922	10428	15968	15006	15087	15402	14882	16964	14834	6361	6351	12127	9651
3	14868	24280	14352	2759	13803	4040	18979	7466	8884	13940	14539	8224	9262	9171	8828	9388	7156	9438	24379	21305	12433	15399
4	16944	26264	16407	5068	15809	6293	20934	9581	10962	15931	16523	10305	11320	11229	10894	11441	9263	11489	26294	23233	14433	17364
5	9564	8395	9536	19542	9288	17883	6510	14565	13275	9057	8623	13797	12866	12944	13247	12745	14764	12698	7283	6186	10132	7933
6	7440	7836	7406	17699	7168	16025	4738	12627	11298	6937	6495	11845	10883	10965	11279	10760	12842	10712	7001	5059	8054	5804
7	9853	8020	9860	20082	9660	18418	6557	15070	13763	9430	8973	14296	13351	13431	13739	13229	15276	13182	6855	6002	10557	8248
8	7625	4203	7876	19559	8055	17873	3283	14311	12883	7860	7275	13507	12467	12558	12899	12338	14577	12287	3420	1867	9300	6394
9	4082	11889	3524	11079	2643	9397	6574	5986	4695	2545	2843	5212	4290	4366	4664	4172	6198	4127	11753	8745	2242	3339
10	3176	7496	3286	14922	3371	13240	2180	9663	8226	3175	2593	8861	7814	7905	8249	7684	9938	7633	7441	4385	4625	1722
11	8583	15845	7999	10163	7109	8723	10734	6569	6110	7047	7387	6165	5923	5932	5994	5890	6564	5880	15460	12653	6248	7842
12	12039	20459	11434	6913	10623	6121	15173	6386	7039	10657	11161	6609	7168	7111	6914	7232	6150	7259	20221	17287	9368	11848
13	17084	26458	16559	4944	15987	6295	21140	9692	11096	16116	16712	10437	11466	11375	11035	11589	9378	11639	26521	23453	14613	17563
14	16711	26121	16195	4429	15645	5850	20817	9309	10727	15780	16379	10068	11106	11014	10672	11231	8999	11281	26213	23140	14274	17237
15	6659	5021	6868	18454	6996	16766	2553	13210	11786	6795	6219	12406	11370	11460	11800	11240	13473	11189	4424	2112	8216	5346
16	10849	20086	10292	3436	9654	2374	14750	3721	4947	9766	10354	4319	5261	5174	4859	5373	3404	5418	20107	17046	8279	11186
17	10375	9444	10300	19813	9980	18175	7550	14950	13711	9749	9355	14201	13309	13384	13674	13193	15131	13148	8293	7287	10724	8719
18	10936	9607	10870	20383	10561	18748	8004	15534	14298	10330	9930	14787	13897	13972	14261	13781	15714	13736	8406	7604	11313	9285
19	8221	4703	8430	19927	8541	18238	4004	14699	13284	8336	7766	13895	12866	12955	13293	12736	14955	12686	3720	2683	9737	6899
20	11158	9017	11141	21024	10898	19376	7913	16103	14833	10667	10232	15343	14427	14504	14802	14308	16294	14262	7763	7253	11733	9535
21	9563	18125	8958	6747	8154	5446	12806	4398	4752	8194	8709	4423	4820	4773	4622	4868	4236	4890	17953	14973	6890	9418
22	13653	22107	13050	7085	12249	6672	16823	7653	8466	12288	12799	7980	8635	8570	8345	8709	7385	8740	21858	18932	10977	13493
23	12264	21697	11753	1283	11221	1510	16412	4862	6286	11364	11965	5627	6671	6579	6235	6797	4554	6848	21823	18746	9857	12832
24	8784	18106	8239	4413	7638	2777	12791	1671	2847	7765	8360	2218	3172	3084	2762	3287	1376	3334	18184	15111	6263	9212
25	7882	10346	7649	16304	7131	14673	6560	11509	10322	6908	6650	10779	9931	10001	10275	9820	11675	9778	9553	7428	7613	6236
26	11523	19880	10916	7110	10096	6189	14600	6116	6670	10124	10620	6276	6772	6719	6542	6828	5900	6853	19633	16705	8858	11295
27	10192	7759	10226	20605	10064	18937	6709	15570	14251	9835	9361	14792	13837	13918	14230	13714	15780	13666	6542	5947	10999	8612
28	4214	12401	3625	10454	2735	8771	7066	5363	4084	2688	3090	4591	3684	3757	4049	3568	5572	3525	12303	9277	2007	3703
29	6526	11693	6120	13540	5387	11916	6946	8818	7702	5200	5165	8114	7330	7392	7643	7227	8968	7188	11173	8537	5453	5112
30	11070	18712	10467	9153	9592	8047	13567	7115	7239	9570	9982	7028	7213	7185	7109	7230	6980	7240	18333	15521	8530	10530
31	11212	8531	11229	21372	11035	19715	7767	16399	15105	10805	10346	15630	14695	14774	15079	14574	16599	14527	7248	6931	11926	9616
32	13671	22314	13073	6362	12298	6056	17001	7353	8276	12352	12882	7750	8480	8409	8161	8563	7068	8598	22113	19154	10993	13608
33	15288	24106	14699	6287	13958	6491	18775	8557	9653	14027	14575	9071	9906	9828	9548	10002	8249	10042	23942	20960	12623	15331
34	11118	19201	10510	7963	9662	6920	13965	6357	6697	9668	10132	6389	6737	6696	6566	6775	6181	6793	18902	16015	8491	10758
35	16198	25626	15688	3866	15149	5310	20331	8795	10220	15288	15888	9561	10603	10511	10167	10729	8488	10779	25733	22658	13781	16750
36	9899	19168	9346	3799	8720	2375	13839	2783	3987	8837	9428	3361	4303	4216	3900	4416	2471	4461	19212	16145	7344	10268
37	5715	10212	5415	14311	4830	12649	5507	9348	8096	4613	4416	8591	7694	7769	8059	7578	9539	7534	9715	7055	5267	4140
38	8998	18376	8467	4000	7899	2341	13077	1694	3017	8035	8634	2363	3375	3284	2947	3497	1373	3546	18483	15407	6529	9496
39	7421	4617	7645	19240	7785	17552	3187	13999	12576	7585	7008	13195	12159	12249	12589	12029	14261	11978	3849	2102	9008	6133
40	14882	24212	14346	3336	13751	4322	18886	7524	8901	13875	14468	8244	9258	9168	8833	9380	7205	9428	24256	21191	12375	15313
41	7715	6761	7771	18565	7661	16882	4353	13424	12059	7436	6936	12631	11641	11725	12049	11514	13655	11465	5863	4172	8677	6158
42	13300	21599	12694	7535	11874	6980	16340	7614	8316	11902	12396	7871	8452	8393	8192	8517	7365	8545	21318	18417	10634	13064
43	2633	10721	2112	11719	1287	10032	5374	6480	5067	1131	1358	5677	4649	4737	5074	4520	6739	4469	10708	7647	1658	1923
44	5189	9601	4938	14445	4431	12770	4818	9387	8081	4206	3938	8611	7670	7749	8055	7549	9596	7503	9156	6648	5030	3568
45	15702	25104	15184	3549	14628	4880	19798	8303	9716	14762	15361	9057	10092	10001	9659	10217	7991	10267	25192	22119	13256	16218
46	8647	17036	8039	7579	7207	6149	11731	4400	4395	7229	7719	4217	4365	4337	4264	4385	4315					

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

Description:
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
49	12806	21041	12199	7641	11371	6961	15791	7322	7947	11393	11879	7530	8061	8007	7820	8120	7088	8146	20751	17857	10147	12535
50	6258	4693	6514	18276	6719	16592	1969	13020	11586	6529	5939	12217	11173	11263	11607	11043	13292	10991	4275	1600	7988	5054
51	14490	23507	13914	4957	13214	5203	18161	7516	8702	13301	13868	8091	8988	8906	8606	9093	7200	9136	23415	20396	11855	14657
52	8677	18104	8161	4103	7631	2415	12828	1289	2693	7777	8379	2034	3077	2985	2641	3204	971	3255	18246	15168	6271	9251
53	6066	13129	5519	11170	4643	9549	7972	6531	5522	4536	4780	5867	5184	5235	5448	5096	6659	5063	12809	9938	4117	5137
54	6332	8597	6212	16191	5866	14517	4552	11131	9814	5635	5251	10352	9401	9481	9791	9279	11343	9232	7952	5555	6648	4663
55	9408	18642	8849	4307	8207	2808	13308	2460	3553	8319	8907	2951	3844	3760	3457	3952	2169	3996	18674	15610	6831	9742
56	3139	9927	2783	12821	2193	11132	4626	7613	6222	1971	1794	6813	5803	5889	6220	5675	7860	5626	9796	6782	2871	1764
57	4370	10429	3992	13036	3324	11357	5295	7954	6646	3118	3017	7177	6236	6314	6620	6115	8167	6068	10138	7239	3692	2957
58	15564	24668	14997	5106	14321	5728	19321	8435	9694	14418	14992	9063	10004	9918	9605	10114	8114	10159	24601	21571	12954	15796
59	7621	11189	7308	15247	6686	13632	7002	10553	9424	6475	6312	9846	9047	9111	9368	8942	10703	8902	10484	8163	6975	6045
60	6917	5471	7081	18475	7139	16786	3022	13251	11839	6929	6370	12448	11421	11509	11847	11292	13505	11241	4764	2674	8308	5517
61	14593	23381	14001	6083	13253	6107	18053	7954	9008	13320	13865	8439	9250	9174	8900	9343	7651	9381	23213	20234	11924	14616
62	9217	10091	9054	17997	8619	16371	7145	13211	12015	8391	8070	12478	11622	11693	11970	11509	13379	11467	9112	7480	9212	7548
63	10003	19183	9438	4179	8776	2850	13843	3100	4188	8881	9464	3593	4468	4386	4089	4573	2805	4616	19188	16131	7404	10287
64	5175	11276	4741	12728	3986	11068	6217	7794	6577	3804	3810	7048	6184	6254	6533	6072	7976	6030	10920	8085	4063	3864
65	12240	20309	11631	8072	10787	7236	15086	7173	7652	10796	11263	7292	7725	7678	7522	7773	6966	7794	19992	17121	9604	11889
66	12473	21748	11925	2779	11304	2648	16415	5209	6524	11421	12011	5877	6860	6772	6445	6977	4887	7024	21776	18714	9928	12848
67	8836	18068	8276	4732	7632	3153	12736	2029	3013	7744	8332	2433	3288	3206	2912	3393	1770	3436	18105	15039	6256	9168
68	15965	25421	15465	3514	14949	5035	20143	8570	10004	15094	15695	9347	10395	10303	9957	10522	8268	10573	25555	22478	13587	16564
69	13410	22789	12884	2067	12315	2797	17478	6026	7423	12446	13044	6764	7791	7700	7360	7915	5710	7964	22870	19798	10942	13899
70	16096	25136	15524	5772	14832	6392	19790	9032	10265	14922	15491	9642	10565	10481	10173	10672	8712	10716	25041	22024	13470	16283
71	9318	17740	8711	7251	7887	5914	12436	4603	4799	7914	8411	4537	4821	4783	4668	4855	4472	4872	17541	14578	6660	9094
72	2655	9763	2315	12771	1787	11083	4427	7533	6119	1558	1319	6730	5700	5789	6127	5571	7792	5521	9699	6653	2640	1313
73	10289	19606	9746	3285	9143	1924	14285	3040	4333	9267	9861	3689	4672	4583	4255	4790	2720	4837	19669	16599	7767	10709
74	9883	17780	9277	8556	8411	7295	12566	5980	6014	8400	8835	5834	5971	5947	5884	5985	5870	5994	17468	14592	7311	9422
75	14523	23901	13998	2734	13428	3817	18589	7135	8535	13559	14156	7876	8905	8813	8474	9028	6820	9078	23977	20907	12055	15010
76	9770	19143	9238	3361	8667	1785	13840	2438	3787	8801	9400	3132	4147	4056	3719	4269	2116	4318	19242	16167	7295	10259
77	10143	9881	10029	19238	9656	17610	7606	14431	13218	9426	9064	13692	12822	12894	13176	12707	14603	12664	8780	7559	10329	8476
78	7764	15628	7163	9147	6284	7637	10388	5289	4812	6257	6670	4866	4634	4640	4695	4605	5298	4597	15357	12445	5021	7236
79	2942	11238	2374	11231	1490	9543	5891	6005	4604	1402	1772	5202	4185	4272	4605	4057	6258	4007	11223	8164	1374	2420
80	6277	6707	6339	17348	6256	15660	3182	12160	10770	6034	5520	11361	10351	10438	10769	10223	12402	10174	6076	3708	7321	4728
81	10589	19727	10019	4098	9344	2971	14383	3703	4797	9444	10023	4204	5073	4992	4697	5177	3403	5219	19710	16660	7976	10837
82	12558	20973	11953	6984	11143	6308	15690	6805	7508	11178	11683	7060	7649	7589	7384	7715	6558	7744	20727	17799	9885	12369
83	15175	24384	14620	4286	13976	5023	19040	7931	9243	14084	14668	8599	9573	9486	9162	9689	7609	9735	24364	21317	12602	15490
84	6143	9899	5890	14977	5363	13317	5430	10020	8765	5139	4890	9263	8363	8437	8729	8246	10211	8201	9325	6783	5882	4518
85	2570	11230	1978	11073	1089	9389	5895	5820	4394	1065	1560	5017	3978	4068	4409	3848	6089	3797	11279	8206	937	2336
86	16246	25611	15719	4230	15142	5503	20292	8860	10258	15270	15866	9600	10626	10535	10196	10749	8544	10798	25672	22604	13767	16716
87	15624	24142	15024	7654	14236	7674	18854	9305	10258	14283	14802	9725	10463	10393	10143	10547	9015	10582	23891	20967	12946	15509
88	6837	6258	6935	18041	6895	16354	3363	12849	11456	6676	6147	12049	11037	11124	11456	10909	13093	10859	5529	3414	7988	5333
89	14819	23276	14217	7493	13420	7324	17997	8668	9555	13461	13973	9043	9739	9672	9435	9818	8387	9851	23018	20100	12142	14669
90	15727	24162	15124	8001	14327	7984	18890	9517	10434	14368	14879	9914	10628	10560	10317	10708	9231	10742	23891	20983	13049	15573
91	13678	23155	13187	1228	12695	2734	17899	6301	7742	12847	13450	7090	8140	8048	7702	8269	6007	8320	23320	20242	11343	14325
92	9561	9702	9439	18682	9059	17048	7146	13850	12629	8829	8471	13108	12232	12304	12589	12117	14025	12073	8659	7244	9728	7893
93	10348	18481	9739	7865	8892	6691	13229	5776	6016	8900	9366	5747	6034	5997	5885	6066	5624	6082	18205	15299	7721	9999
94	7992	9588	7826	17035	7397	15390	6139	12152	10918	7168	6842	11404	10519	10592	10879	10450	12333	10389	8740	6765	8020	6323
95	2914	11732	2307	10171	1455	8886	6399	5322	3900	1488	2031	4518	3483	3572	3911	3353	5587	3302	11786	8713	657	2834
96	6851	9430	6664	16022	6218	14364	5419	11067	9804	5989	5675	10307	9400	9476	9770	9282	11259	9237	8735	6421	6844	5188
97	8791	10537	8578	17152	8078	15534	7159	12417	11250	7854	7581	11696	10864	10932	11201	10754	12576	10712	9637	7769	8573	7134
98	12103	19922	11497	8781	10634	7868	14750	7505	7846	10627	11065	7544	7878	7839	7715	7913	7324	7930	19558	16730	9510	11648
99	10392	18210	9787	8712	8918	7521	13018	6403	6494	8904	9333	6293	6464	6438	6364	6481	6278	6491	17874	15019	7827	9908
100	5943	7074	5973	16877	5849	15190	3192	11696	10311	5624	5125	10897	9892	9978	10308	9764	11936	9715	6496	4009	6882	4358
101	5315	9200	5113	14889																		

Project:
Logan County Wind Farm

Just Wind, LLC
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
116	9584	16268	9018	11180	8130	9812	11321	7843	7415	8045	8326	7460	7228	7237	7299	7194	7824	7183	15778	13093	7383	8687
117	15532	24827	14990	4038	14380	5040	19493	8198	9560	14498	15089	8906	9910	9820	9488	10030	7878	10078	24848	21789	13003	15926
118	13004	21619	12404	6312	11623	5823	16308	6821	7683	11674	12200	7177	7870	7803	7565	7949	6547	7983	21417	18458	10326	12921
119	9355	10835	9141	17564	8638	15957	7644	12885	11739	8414	8144	12173	11357	11423	11687	11249	13037	11208	9884	8148	9116	7697
120	10777	20127	10241	2757	9656	1558	14813	3451	4799	9785	10381	4145	5153	5063	4728	5274	3130	5322	20205	17133	8281	11235
121	7464	12023	7076	14199	6358	12602	7527	9618	8559	6167	6109	8940	8199	8257	8494	8101	9750	8064	11399	8924	6430	6003
122	12322	21526	11763	3287	11114	2971	16185	5167	6421	11222	11806	5789	6737	6651	6335	6850	4847	6895	21522	18469	9740	12630
123	8186	14806	7637	11372	6757	9879	9826	7426	6745	6655	6898	6916	6491	6518	6643	6433	7468	6414	14349	11624	6130	7220
124	8781	16498	8181	9178	7301	7770	11301	5842	5567	7271	7674	5528	5439	5434	5443	5427	5801	5425	16177	13308	6288	8219
125	9203	4655	9419	20896	9531	19207	4928	15674	14262	9327	8757	14871	13844	13933	14270	13715	15928	13664	3461	3316	10724	7890
126	8782	13952	8314	13523	7504	12018	9386	9425	8598	7346	7420	8851	8296	8336	8509	8220	9496	8193	13317	10849	7243	7489
127	9731	17955	9123	7710	8280	6439	12683	5247	5417	8293	8767	5173	5422	5387	5286	5450	5115	5465	17708	14779	7097	9414
128	8644	4008	8897	20552	9072	18864	4269	15309	13884	8876	8293	14505	13468	13558	13898	13338	15572	13287	2942	2511	10309	7413
129	5215	12285	4688	11494	3829	9839	7087	6624	5471	3702	3904	5901	5095	5159	5415	4991	6791	4952	12008	9098	3481	4227
130	3816	10321	3427	12786	2758	11100	5090	7643	6298	2551	2458	6854	5883	5965	6281	5759	7870	5711	10106	7145	3192	2459
131	6877	12439	6426	13037	5638	11435	7632	8457	7422	5470	5513	7787	7070	7126	7353	6976	8585	6941	11930	9277	5518	5568
132	1965	9882	1574	12408	1061	10726	4542	7150	5714	829	600	6347	5301	5392	5736	5171	7424	5120	9924	6851	2126	1023
133	14180	22774	13581	6721	12800	6505	17470	7883	8808	12851	13376	8283	9009	8940	8692	9092	7598	9127	22556	19609	11502	14095
134	12378	21699	11838	2405	11238	2308	16375	5056	6405	11361	11955	5752	6755	6665	6333	6875	4735	6923	21751	18684	9862	12801
135	9848	17059	9259	10140	8370	8833	11990	7160	6926	8315	8665	6876	6797	6793	6802	6783	7102	6780	16635	13870	7461	9126
136	15032	24043	14456	5260	13755	5631	18698	8042	9239	13842	14408	8625	9527	9445	9143	9632	7725	9675	23945	20929	12397	15197
137	3755	8239	3685	14645	3484	12956	3101	9420	8012	3258	2781	8617	7594	7682	8017	7465	9674	7414	8016	5057	4523	2094
138	15575	24606	15001	5473	14306	5987	19261	8537	9756	14396	14963	9137	10052	9969	9663	10159	8218	10202	24512	21494	12946	15755
139	10430	17447	9846	10548	8955	9295	12438	7759	7558	8893	9226	7495	7436	7430	7434	7423	7689	7420	16983	14265	8075	9659
140	7605	14772	7032	10537	6142	9011	9653	6474	5789	6065	6373	5557	5540	5565	5686	5485	6522	5466	14404	11580	5384	6793
141	12839	22305	12342	800	11840	1914	17041	5450	6888	11989	12592	6234	7284	7192	6846	7412	5152	7463	22460	19382	10484	13465
142	14298	22737	13694	7351	12894	7067	17458	8235	9082	12933	13443	8585	9258	9193	8962	9334	7961	9366	22478	19560	11622	14135
143	5428	10670	5069	13610	4408	11948	5782	8659	7420	4203	4086	7906	7022	7095	7380	6907	8846	6863	10238	7490	4707	3945
144	9352	14781	8858	13213	8021	11758	10172	9364	8650	7878	8001	8844	8378	8410	8552	8313	9407	8290	14151	11671	7637	8134
145	10051	16537	9492	11558	8606	10224	11656	8342	7937	8514	8778	7973	7754	7763	7821	7721	8315	7710	16009	13373	7888	9112
146	7339	6184	7440	18510	7399	16823	3754	13327	11939	7179	6652	12529	11521	11607	11937	11393	13569	11343	5357	3515	8484	5838
147	10357	17164	9782	10971	8891	9692	12207	8037	7763	8818	9125	7736	7618	7617	7641	7597	7982	7592	16671	13988	8071	9519
148	9000	16330	8412	9965	7522	8570	11215	6603	6247	7468	7823	6251	6089	6091	6127	6066	6574	6059	15944	13138	6618	8296
149	8387	15258	7822	10917	6935	9448	10227	7119	6527	6848	7131	6651	6298	6318	6419	6250	7142	6234	14826	12071	6211	7506
150	8857	13613	8417	14070	7634	12552	9177	9896	9023	7464	7492	9301	8707	8752	8938	8627	9977	8597	12936	10542	7474	7493
151	9083	13120	8688	14873	7957	13441	8933	10700	9765	7711	7726	10078	9433	9482	9687	9346	10796	9313	12370	10117	7949	7619
152	10372	19785	9853	2641	9309	1121	14496	2981	4386	9449	10050	3726	4763	4672	4329	4889	2665	4939	19906	16829	7942	10916
153	14715	23832	14148	4534	13475	4988	18485	7594	8846	13573	14149	8217	9155	9069	8757	9265	7274	9309	23776	20742	12107	14956

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
1	8255	12224	24292	17301	12850	9124	7605	26521	17072	14182	13608	13299	17074	6217	25998	26647	14208	6322	5366	5385	21187	19665
2	7559	11758	24052	16972	12417	8521	6880	26307	16758	13816	13227	12910	16772	5396	25814	26467	13892	5609	4538	4561	20985	19453
3	18316	12779	1228	7014	11919	16578	19070	2988	7055	10122	10763	11110	6937	21483	2562	3230	9710	19573	21888	21762	2351	3878
4	20254	14764	2897	9095	13900	18509	20986	2555	9086	12079	12713	13055	8936	23356	1509	1918	11572	21409	23712	23585	4148	5652
5	6392	9775	21749	14758	10367	6939	5895	23986	14526	11652	11087	10783	14527	5303	23474	24125	11663	4629	4644	4601	18655	17129
6	4485	7691	19986	12854	8317	4835	4135	22266	12645	9692	9105	8789	12666	4362	21808	22467	9782	3002	4014	3921	16965	15424
7	6508	10195	22310	15276	10814	7201	5947	24557	15052	12147	11571	11261	15059	5086	24056	24708	12186	4659	4361	4333	19231	17701
8	3646	8925	22021	14648	9732	5144	2833	24377	14520	11429	10790	10444	14599	924	24044	24712	11779	1929	425	306	19219	17679
9	5860	2082	13434	6210	2132	4169	6502	15759	6011	3068	2522	2245	6046	8771	15382	16048	3162	6797	9094	8967	10544	9000
10	1465	4253	17422	10024	5079	505	2133	19793	9921	6831	6189	5842	10019	4547	19510	20179	7283	2775	5048	4924	14726	13202
11	10025	6285	11912	6399	5816	8486	10520	13956	6026	5057	5107	5164	5870	12453	13316	13942	4242	10441	12548	12426	8667	7259
12	14458	9584	7794	5888	8810	12772	15067	9466	5568	7177	7650	7913	5307	17206	8672	9249	6322	15191	17396	17271	4673	3876
13	20468	14951	2555	9224	14089	18725	21210	1898	9242	12277	12915	13259	9107	23601	855	1333	11810	21668	23978	23851	4358	5895
14	20151	14619	1962	8857																		

Project:
Logan County Wind Farm

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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
28	6358	1953	12817	5584	1754	4638	7027	15146	5385	2453	1931	1682	5422	9334	14779	15446	2541	7375	9680	9553	9946	8404
29	6294	5218	15659	8918	5405	5159	6591	17868	8640	6092	5657	5437	8602	8205	17341	17991	5853	6240	8204	8087	12532	11014
30	12854	8652	10362	6744	8020	11270	13373	12130	6363	6759	7042	7211	6129	15326	11354	11934	5843	13314	15415	15294	7147	6046
31	7777	11566	23567	16593	12177	8553	7166	25793	16361	13485	12916	12609	16360	5983	25269	25917	13497	5874	5167	5169	20459	18937
32	16289	11241	6589	6812	10430	14582	16922	7933	6563	8701	9233	9524	6313	19103	7047	7575	7910	17091	19314	19148	3900	3800
33	18066	12893	5733	8008	12060	16345	18719	6584	7825	10280	10848	11156	7594	20937	5601	6044	9547	18930	21619	21044	3927	4534
34	13249	8662	9137	5931	7951	11602	13821	10923	5565	6488	6868	7087	5316	15887	10163	10752	5581	13869	16036	15912	5923	4854
35	19669	14129	1409	8353	13270	17932	20425	1722	8404	11477	12118	12465	8920	22840	1213	1878	11068	20932	23246	23120	3683	5222
36	13162	7671	5860	2236	6806	11418	13901	8145	2096	4983	5616	5599	1898	16294	7762	8430	4505	14370	16683	16556	2955	1462
37	4877	4959	16552	9527	5374	3919	5128	18817	9292	6464	5929	5648	9293	6734	18348	19006	6430	4759	6766	6646	13507	11969
38	12417	6875	6372	1166	6016	10683	13178	8732	1151	4233	4875	5222	1052	15608	8465	9132	3930	13726	16042	15916	3816	2471
39	3473	8631	21689	14328	9427	4887	2683	24041	14192	11104	10467	10122	14266	1220	23696	24364	11434	1640	847	733	18866	17324
40	18209	12709	2169	7035	11845	16465	18946	3547	7024	10026	10662	11005	6876	21328	2864	3506	9538	19391	21699	21572	2093	3617
41	4278	8304	20902	13683	8997	5046	3739	23204	13496	10483	9874	9546	13532	3376	22776	23438	10647	2465	2913	2832	17928	16384
42	15624	10843	8006	7102	10078	13956	16213	9405	6797	8461	8927	9185	6537	18302	8519	9041	7601	16285	18457	18334	5135	4683
43	4679	1306	14185	6807	1949	2935	5399	16549	6681	3588	2948	2602	6768	7795	16249	16918	4018	5914	8229	8103	11459	9935
44	4182	4696	16744	9603	5207	3248	4453	19037	9391	6462	5891	5587	9411	6155	18601	19263	6527	4157	6246	6123	13754	12210
45	19131	13880	1435	7846	12739	17391	19882	2356	7879	10937	11577	11923	7755	22288	1765	2431	10505	20370	22684	22557	3084	4629
46	11017	6188	9392	4106	5455	9322	11643	11507	3719	3994	4362	4584	3518	13834	10931	11574	3082	11827	14070	13944	6177	4718
47	9956	5892	11358	5716	5359	8361	10494	13444	5344	4463	4564	4652	5189	12516	12833	13468	3621	10499	12659	12535	8129	6690
48	5278	10194	23071	15773	10952	6572	4506	25396	15610	12549	11923	11585	15664	2678	25001	25665	12794	3360	1807	1839	20154	18609
49	15075	10347	8290	6826	9595	13413	15657	9790	6504	8011	8458	8707	6243	17736	8932	9472	7137	15718	17886	17762	5303	4683
50	2280	7615	20761	13372	8436	3805	1473	23126	13257	10163	9522	9175	13345	1262	22818	23486	10557	767	1693	1573	18008	16474
51	17460	12148	4586	6972	11297	15723	18145	5775	6829	9485	10081	10404	6615	20428	4889	5427	8820	18439	20711	20585	2608	3385
52	12179	6627	6574	829	5777	10454	12951	8954	980	4040	4678	5038	1006	15397	8740	9405	3846	13539	15854	15729	4195	2926
53	7261	4028	13300	6592	3851	5722	7775	15527	6299	3987	3686	3557	6250	9793	15025	15679	3586	7775	9957	9832	10197	8670
54	4094	6295	18478	11351	6878	3899	4027	20762	11139	8201	7621	7311	11158	5064	20310	20970	8275	3252	4952	4839	15465	13924
55	12629	7153	6412	1914	6289	10884	13364	8700	1701	4463	5092	5432	1472	15750	8313	8980	3959	13823	16135	16008	3493	1975
56	3910	2513	15247	7910	3147	2268	4538	17595	7758	4685	4058	3720	7825	6826	17257	17925	4991	4876	7188	7061	12435	10898
57	4592	3385	15364	8178	3815	3175	5076	17672	7974	5027	4457	4155	8001	7123	17263	17927	5115	5108	7343	7217	12416	10871
58	18624	13258	4060	7902	12401	16882	19320	4795	7800	10579	11187	11517	7604	21623	3830	4309	9952	19641	21920	21793	3119	4272
59	6449	6700	17325	10651	6997	5739	6531	19505	10371	7807	7350	7112	10330	7655	18948	19592	7587	5856	7474	7369	14167	12664
60	3117	7930	20899	13562	8702	4295	2433	23241	13414	10336	9703	9362	13479	1961	22878	23544	10628	1161	1769	1653	18040	16496
61	17343	12190	5847	7405	11360	15624	17994	6938	7204	9590	10150	10456	6967	20208	6001	6491	8845	18201	20440	20314	3643	4028
62	6816	8889	20095	13342	9342	6815	6555	22276	13077	10383	9874	9604	13048	6722	21714	22356	10253	5462	6243	6170	16938	15435
63	13158	7717	6084	2553	6856	11412	13882	8314	2346	5029	5648	5984	2115	16248	7869	8533	4466	14305	16612	16485	3022	1477
64	5521	3815	14972	7957	4055	4137	5966	17244	7716	4945	4445	4189	7712	7905	16787	17446	4858	5888	8057	7932	11942	10401
65	14371	9782	8923	6708	9061	12729	14935	10522	6361	7556	7960	8189	6104	16977	9691	10246	6659	14960	17109	16986	5832	5019
66	15735	10255	3743	4689	9390	13990	16467	5809	4628	7566	8197	8539	4456	18843	5291	5950	7054	16093	19211	19084	484	1133
67	12057	6578	6928	1507	5714	10313	12795	9235	1225	3888	4517	4858	973	15186	8868	9536	3398	13263	15577	15450	4061	2549
68	19488	13940	940	8147	13085	17756	20252	1691	8220	11307	11949	12296	8120	22681	1514	2140	10936	20787	23104	22977	3656	5167
69	16810	11283	2382	5552	10421	15069	17560	4500	5568	8616	9255	9601	5437	19966	4081	4749	8185	18050	20364	20237	877	2356
70	19089	13766	4603	8495	12913	17351	19773	5079	8377	11098	11698	12023	8174	22053	4060	4461	10444	20062	22330	22204	3775	4868
71	11723	6859	8924	4240	6109	10027	12348	10982	3857	4578	4987	5226	3628	14532	10369	11006	3681	12524	14761	14635	5679	4281
72	3718	2267	15231	7858	2988	2005	4401	17592	7729	4637	3998	3653	7811	6764	17282	17950	5029	4865	7182	7055	12480	10950
73	13613	8101	5345	2509	7237	11871	14359	7643	2438	5422	6060	6404	2272	16762	7284	7952	4984	14847	17162	17035	2519	1126
74	11851	7448	10044	5647	6793	10223	12408	11980	5261	5502	5793	5970	5041	14452	11287	11899	4586	12435	14596	14473	6785	5503
75	17919	12395	1740	6664	11533	16178	18667	3506	6682	9726	10365	10710	6550	21068	2991	3657	9282	19147	21460	21333	1860	3403
76	13177	7640	5642	1927	6779	11441	13935	7989	1919	4987	5629	5975	1799	16358	7701	8369	4637	14467	16783	16657	3049	1766
77	7381	9995	21337	14570	10488	7630	6995	23516	14309	11585	11064	10786	14283	6712	22949	23590	11478	5791	6099	6048	18178	16676
78	9672	5365	11058	5144	4790	8034	10245	13197	4779	3824	3947	4051	4639	12342	12628	13272	2975	10325	12528	12403	7862	6383
79	5197	1089	13686	6318	1544	3453	5914	16047	6184	3094	2457	2114	6265	8304	15740	16408	3501	6410	8727	8600	10945	9420
80	2968																					

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR
95	5725	527	13058	5665	779	3985	6478	15430	5557	2471	1829	1484	5658	8910	15155	15823	3018	7061	9372	9247	10394	8885
96	4936	6512	18241	11247	7007	4571	4904	20491	11011	8174	7629	7338	11009	5896	20001	20656	8149	4128	5726	5618	15169	13637
97	6752	8265	19228	12532	8666	6525	6597	21400	12259	9622	9133	8875	12223	7082	20832	21473	9454	5617	6695	6610	16062	14564
98	14036	9660	9705	7072	8981	12430	14570	11319	6709	7583	7934	8136	6458	16548	10487	11040	6670	14534	16646	16524	6587	5699
99	12303	7960	10078	6047	7310	10690	12847	11946	5664	6017	6312	6489	5435	14860	11217	11817	5100	12844	14984	14862	6830	5624
100	2875	6508	19258	11976	7219	3288	2615	21583	11806	8759	8139	7805	11855	3550	21192	21857	8982	1709	3538	3418	16347	14802
101	3929	5017	17198	10037	5570	3179	4130	19494	9831	6880	6299	5989	9854	5733	19063	19725	6969	3748	5799	5677	14215	12671
102	13384	9065	9955	6779	8404	11783	13914	11663	6405	7061	7384	7573	6161	15890	10865	11436	6145	13876	15988	15867	6773	5758
103	14964	9961	7086	5849	9162	13261	15594	8718	5560	7466	7976	8258	5302	17772	7918	8493	6648	15761	17985	17860	4026	3400
104	2780	7345	20281	12952	8107	3780	2208	22621	12800	9726	9095	8754	12863	2411	22255	22921	10008	942	2356	2236	17416	15872
105	18783	13266	1763	7546	12404	17041	19527	2869	7559	10592	11230	11575	7423	21922	2197	2848	10131	19993	22304	22177	2682	4225
106	13728	9202	9239	6431	8498	12094	14287	10934	6070	7044	7421	7637	5818	16322	10136	10708	6137	14304	16451	16329	6074	5115
107	4662	4356	16121	9027	4784	3531	5003	18404	8804	5925	5376	5086	8815	6796	17959	18620	5938	4789	6906	6783	13112	11570
108	3100	3471	16289	8955	4162	1705	3636	18635	8802	5729	5101	4763	8867	5833	18288	18956	6026	3858	6162	6035	13461	11921
109	4701	9857	22871	15526	10644	6130	3897	25215	15382	12300	11666	11323	15450	1848	24853	25519	12602	2881	964	1017	20014	18470
110	2222	7694	20874	13476	8529	3860	1400	23245	13373	10282	9640	9293	13469	1098	22956	23625	10710	1129	1751	1646	18161	16632
111	18955	13751	5644	8746	12912	17230	19613	6163	8584	11122	11698	12010	8361	21838	5134	5505	10406	19833	22074	21948	4363	5190
112	19033	13751	4977	8770	12902	17300	19708	5471	8436	11094	11686	12007	8225	21969	4447	4836	10417	19972	22232	22106	3963	4959
113	11198	7090	10912	6077	6509	9613	11722	12877	5691	5425	5619	5748	5494	13703	12194	12809	4529	11688	13815	13693	7653	6326
114	17604	12106	2378	6444	11242	15860	18341	4053	6427	9422	10057	10400	6275	20723	3435	4086	8933	18786	21095	20968	1489	3013
115	5985	6548	17524	10743	6903	5341	6048	19728	10476	7820	7335	7081	10446	7160	19191	19839	7658	5360	6988	6881	14390	12876
116	10627	7383	12767	7648	6987	9196	11045	14710	7270	6342	6358	6391	7100	12802	14005	14611	5542	10819	12809	12291	9507	8183
117	18811	13331	2538	7701	12467	17066	19541	3389	7674	10644	11276	11617	7516	21908	2542	3131	10125	19958	22262	22135	2729	4211
118	15595	10569	6816	6287	9763	13890	16227	8321	6019	8049	8571	8857	5764	18407	7481	8036	7245	16395	18619	18494	3904	3529
119	7259	8811	19604	12986	9198	7077	7072	21755	12706	10115	9638	9386	12662	7424	21167	21804	9919	6049	6985	6907	16420	14933
120	14145	8620	4777	2942	7758	12405	14895	7080	2919	5951	6591	6936	2776	17305	6739	7407	5538	15397	17713	17586	2034	886
121	6913	6198	16235	9683	6370	5935	7117	18398	9388	6969	6566	6362	9331	8497	17828	18470	6662	6605	8396	8284	13060	11566
122	15498	10057	4246	4631	9194	13752	16218	6245	4526	7368	7990	8326	4333	18574	5671	6322	6805	16620	18922	18795	1001	1003
123	9131	6085	13202	7332	5790	7701	9558	15276	6979	5451	5341	5310	6854	11360	14649	15278	4773	9365	11400	11281	9969	8535
124	10586	6385	10895	5614	5802	8978	11131	12938	5232	4744	4920	5044	5053	13162	12302	12930	3858	11145	13306	13182	7649	6249
125	5253	10346	23311	15984	11123	6650	4454	25647	15832	12757	12126	11784	15894	2390	25270	25936	13036	3403	1506	1572	20427	18882
126	8748	7095	15346	9380	7039	7623	9002	17396	9040	7149	6898	6781	8933	10425	16746	17368	6613	8530	10310	10201	12105	10683
127	11967	7274	9254	4882	6556	10296	12565	11240	4500	5105	5474	5692	4269	14693	10580	11203	4195	12678	14885	14760	5995	4673
128	4661	9933	23002	15640	10735	6164	3844	25353	15505	12416	11779	11434	15579	1607	25007	25674	12746	2934	747	842	20174	18632
129	6374	3331	13724	6759	3314	4812	6912	15995	6504	3856	3429	3225	6490	8993	15540	16200	3666	6978	9201	9076	10695	9153
130	4377	2869	15157	7898	3363	2836	4934	17485	7714	4702	4105	3777	7758	7104	17106	17772	4881	5109	7390	7263	12266	10723
131	6967	5326	15095	8515	5392	5742	7299	17276	8218	5850	5479	5297	8161	8958	16724	17370	5507	6986	8963	8846	11937	10433
132	3864	1749	14912	7512	2566	2122	4617	17286	7415	4333	3692	3346	7519	7060	17017	17685	4845	5250	7549	7424	12254	10741
133	16757	11745	6767	7342	10939	15056	17382	7966	7095	9219	9745	10033	6845	19543	7041	7537	8421	17529	19741	19616	4251	4275
134	15700	10195	3543	4550	9331	13956	16441	5694	4519	7513	8150	8493	4364	18832	5240	5905	7042	16904	19216	19089	427	1163
135	11284	7519	11647	6903	7005	9762	11760	13561	6518	6070	6204	6299	6324	13637	12847	13450	5198	11634	13696	13576	8389	7103
136	17996	12689	4615	7500	11839	16260	18679	5580	7362	10027	10203	10946	7150	20956	4642	5140	9361	18965	21234	21107	3008	3898
137	2411	4147	17081	9732	4886	1393	2869	19431	9588	6505	5872	5530	9658	5022	19092	19760	6827	3047	5354	5227	14268	12729
138	18560	13241	4541	7997	12388	16822	19244	5267	7873	10574	11173	11497	7666	21525	4285	4741	9916	19534	21803	21677	3358	4377
139	11737	8124	11949	7484	7627	10252	12187	13795	7098	6713	6842	6932	6897	13998	13045	13635	5841	12006	14022	13904	8701	7477
140	8944	5381	12451	6392	4999	7411	9441	14576	6044	4523	4452	4449	5927	11393	13990	14629	3821	9379	11507	11384	9246	7775
141	16393	10841	2361	5042	9991	14668	17165	4741	5143	8237	8878	9225	5067	19607	4598	5251	7932	17736	20053	19927	1726	2631
142	16742	11849	7427	7702	11061	15059	17346	8590	7433	9384	9884	10159	7178	19462	7649	8128	8555	17445	19631	19507	4883	4806
143	5115	4420	15851	8831	4771	3942	5461	18119	8594	5787	5266	4993	8592	7236	17655	18314	5733	5233	7325	7203	12813	11273
144	9524	7524	14932	9271	7380	8343	9801	16926	8916	7288	7107	7028	8787	11256	16243	16855	6667	9354	11145	11035	11677	10297
145	10970	7879	13075	8134	7499	9578	11361	14972	7754	6871	6885	6914	7579	13051	14242	14838	6071	11084	13025	12909	9818	8531
146	3739	8108	20887	13610	8837	4672	3144	23208	13439	10392	9771	9436	13488	2743	22808	23472	10612	1855	2361</			

Project:
Logan County Wind Farm

Just Wind, LLC
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN
7	9879	22657	19776	16653	4251	19831	13101	11289	3827	6965	19037	17411	2931	17510	22149	22423	14635	9310	9430	3193		
8	9644	22868	19983	16841	3676	20082	13278	11437	3579	7057	19398	17830	3080	18020	22653	3403	2831	13064	15255	10119	10281	4724
9	971	14183	11299	8162	5267	11400	4635	2856	5577	2154	10733	9192	10805	9412	14003	6900	9651	4748	6775	2829	2984	5933
10	5361	18422	15568	12471	2566	15684	9011	7255	2992	3568	15061	13552	7381	13788	18339	4460	6509	9107	11172	6591	6766	4477
11	3854	11782	8972	6031	8446	8991	3163	2606	8576	5167	8141	6523	13483	6559	11142	9392	12192	1761	3714	2030	1859	8023
12	7657	6992	4457	2766	13319	4400	4195	5758	13496	9916	3495	2179	18512	1956	6148	14412	17228	3917	1875	6914	6767	13064
13	13946	960	3696	6822	20113	3659	10408	12258	20380	16733	4515	6125	25590	6118	2468	21535	24366	11083	8936	14171	14062	20308
14	13699	1268	3596	6649	19876	3596	10210	12050	20153	16515	4486	6058	25373	6093	2892	21335	24161	10959	8853	14025	13922	20128
15	8521	21745	18861	15719	12616	18959	12157	10318	2581	5954	18276	16710	3850	16902	21533	2776	3238	11958	14143	9037	9201	3930
16	7521	5756	2945	1008	13697	3092	4083	5894	13976	10343	2702	1961	19198	2379	5856	15173	17993	5072	3377	7989	7905	13994
17	9721	22120	19264	16184	4770	19305	12699	10946	4340	6867	18483	16855	4302	16923	21521	2913	3206	11877	14052	8805	8905	3155
18	10306	22650	19800	16729	5318	19838	13256	11513	4887	7456	19011	17384	4258	17445	22032	3427	3290	12412	14577	9353	9449	3743
19	9890	23109	20217	17066	3760	20307	13483	11631	3570	7185	19600	18015	2323	18188	22838	3042	2007	13177	15387	10167	10323	4446
20	10881	23401	20539	17448	5533	20582	13944	12172	5102	7991	19765	18137	3497	18209	22814	3586	2697	13154	15336	10070	10174	4208
21	5273	8378	5514	2512	11172	5556	1717	3383	11390	7747	4753	3129	16524	3262	7923	12432	15268	1873	616	4975	4859	11152
22	9307	6042	4004	3635	14935	3872	5810	7407	15103	11543	3053	2516	20076	2109	4929	15982	18786	5558	3507	8509	8357	14618
23	9485	4434	2458	3169	15654	2679	6258	8002	15956	12371	3005	3484	21188	3812	5142	17215	20012	7338	5617	10191	10117	16088
24	5826	7754	5022	2467	11981	5181	2969	4482	12289	8730	4927	3757	17519	4153	7951	13570	16354	4374	3621	6799	6755	12480
25	6294	18638	15771	12676	3192	15817	9180	7432	2958	3574	15007	13379	6686	13462	18088	2826	5376	8391	10586	5298	5404	1443
26	7095	7499	4880	2811	12726	4842	3693	5197	12902	9325	3941	2493	17918	2349	6708	13818	16635	3331	1379	6320	6173	12472
27	10394	23216	20333	17206	4641	20389	13648	11831	4227	7479	19599	17973	2450	18075	22717	2733	1429	12986	15200	9872	9993	3729
28	535	13598	10720	7594	5886	10826	4106	2399	6201	2763	10174	8650	11427	8883	13449	7527	10277	4362	6304	2876	3010	6551
29	3679	15930	13050	9936	4138	13104	6417	4666	4203	1681	12311	10686	9054	10792	15443	4957	7770	5701	7921	2586	2713	3612
30	6360	9679	7097	4767	11315	7057	3865	4633	11434	8035	6155	4692	16258	4566	8786	12190	14957	2667	2440	4900	4731	10795
31	11192	23839	20968	17863	5624	21016	14336	12545	5201	8284	20208	18580	2929	18662	23281	3684	2274	13591	15786	10492	10603	4493
32	9468	5290	3212	3237	15249	3076	5874	7572	15435	11835	2272	1997	20470	1579	4263	16369	19188	5827	3659	8866	8722	15026
33	11250	3803	2805	4482	17118	2592	7606	9369	17314	13698	2299	3208	22370	2884	2490	18268	21090	7697	5493	10761	10619	16930
34	6539	8510	5884	3589	11942	5850	3455	4680	12098	8574	4951	3468	17053	3353	7692	12959	15762	2701	1456	5501	5345	11594
35	13262	1515	3321	6281	19443	3353	9813	11643	19726	16097	4257	5779	24951	5849	3129	20925	23747	10616	8546	13659	13561	19734
36	6700	6670	3895	1472	12881	4047	3435	5168	13172	9562	3650	2710	18401	3121	6814	14404	17212	4619	9297	7369	7300	13260
37	4126	17008	14113	10967	2675	14183	7384	5547	2782	1257	13426	11813	7831	11953	16614	3748	6584	6883	9108	3824	3977	2579
38	6220	7534	4877	2589	12353	5049	3438	4928	12669	9131	4738	3848	17895	4257	7822	13966	16740	4840	4003	7257	7214	12893
39	9279	22506	19619	16473	3265	19715	12904	11060	3156	6661	19024	17452	3141	17638	22276	2992	2708	12668	14864	9710	9871	4299
40	11664	1653	1499	4553	17831	1529	8131	9979	18099	14453	2434	3961	23310	4023	2470	19259	22089	8851	6747	11922	11817	18040
41	8370	21475	18578	15426	2279	18654	11833	9981	1917	5508	17908	16300	3351	16445	21106	895	2167	11376	13602	8298	8444	2319
42	8856	6757	4610	3767	14364	4495	5465	6963	14520	10991	3639	2820	19452	2454	5659	15364	18158	5053	3143	7923	7766	13989
43	2304	15156	12306	9222	4771	12425	5829	4178	5152	2556	11816	10331	10253	10584	15095	6615	9197	6142	8068	4276	4437	5919
44	4227	17305	14408	11255	2149	14487	7662	5808	2339	1334	13752	12152	7525	12312	16969	3519	6318	7282	9495	4299	4461	2564
45	12682	1342	2687	5663	18860	2722	9208	11044	19139	15505	3627	5144	24361	5215	2822	20328	23152	9991	7914	13042	12942	19129
46	4205	9495	6619	3543	10038	6670	1017	2305	10253	6612	5882	4261	15386	4400	9061	11296	14132	829	1620	3857	3749	10022
47	3509	11339	8497	5489	8565	8529	2486	2036	8727	5202	7700	6073	13734	6143	10773	9633	12455	1150	3269	2134	1986	8298
48	10557	23737	20840	17866	4376	20923	14094	12239	4108	7763	20193	18593	1319	18749	23408	3208	1164	13695	15918	10633	10781	4634
49	8322	7189	4898	3651	13791	4803	4991	6435	13945	10423	3919	2876	18874	2561	6157	14786	17580	4504	2681	7349	7191	13412
50	8485	21680	18806	15677	2885	18912	12143	10321	2943	6059	18250	16702	4360	16909	21518	3371	3858	12028	14188	9181	9349	4426
51	10692	3147	1476	3608	16712	1266	7029	8858	16936	13288	1097	2470	22069	2287	2375	17974	20809	7373	5150	10486	10358	16678
52	6153	7888	5298	3106	12231	5477	3647	4997	12558	9068	5208	4361	17774	4771	8245	13884	16637	5105	4438	7357	7326	12848
53	1751	13657	10765	7627	5881	10831	4069	2295	6073	2481	10066	8453	11191	8594	13256	7105	9941	3544	5761	840	1006	5860
54	5973	18986	16091	12941	1186	16163	9353	7506	1014	3065	15410	13799	5845	13940	18601	1781	4606	8868	11095	5794	5942	1009
55	6145	7197	4391	1675	12327	4533	2911	4621	12617	9008	4075	2969	17847	3361	7286	13850	16657	4155	3039	6840	6776	12708
56	2933	16101	13227	10102	3575	13333	6596	4816	3946	1718	12682	11150	9087	11374	15955	5401	8007	6663	8730	4284	4458	4725
57	2832	16009	13114	9961	3365	13202	6377	4525	3644	485	12494	10914	8874	11098	15738	4932	7699	6166	8337	3425	3600	3989
58	11884	2035	1910	4727	17936	1712	8228	10068	18166	14514	2132	3678	23310	3529	1150	19217	22053	8621	6400	11736	11609	17926
59	5392	17492	14631	11550	3741	14674																

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

Description:
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN
74	5216	9701	6950	4219	10501	6949	2633	3424	10658	7138	6075	4486	15625	4473	9001	11529	14338	1430	1768	4061	3905	10172
75	11455	2115	1670	4462	17634	1776	7988	9821	17913	14279	2649	4044	23135	4167	3085	19104	21927	8803	6764	11837	11740	17910
76	6906	6763	4132	2169	13063	4310	3893	5514	13370	9806	4054	3334	18601	3752	7079	14647	17434	5189	4020	7794	7739	13548
77	9206	21473	18624	15557	4619	18661	12095	10364	4202	6396	17834	16207	4923	16267	20855	2908	3762	11237	13400	8184	8278	2817
78	3046	11187	8315	5234	8458	8363	1972	1419	8649	5048	7565	5940	13737	6053	10711	9639	12473	969	3195	2163	2052	8345
79	1851	14640	11789	8704	5195	11907	5320	3695	5563	2688	11298	9815	10705	10070	14577	7001	9628	5674	7570	3982	4136	6233
80	7225	20426	17531	14378	1056	17619	10791	8937	907	4481	16903	15314	4538	15485	20136	1525	3496	10473	12682	7478	7637	2327
81	7057	6171	3294	485	13215	3410	3529	5367	13482	9837	2861	1732	18695	2137	6115	14651	17478	4439	2717	7399	7309	13450
82	8178	6711	4306	3021	13814	4225	4712	6278	13987	10417	3329	2217	18983	1912	5780	14885	17696	4426	2395	7397	7248	13530
83	11680	1673	1382	4482	17795	1249	8060	9914	18042	14386	1982	3610	23221	3559	1620	19142	21979	8600	6414	11709	11592	17881
84	4798	17630	14738	11596	2327	14804	8021	6192	2342	1920	14037	12420	7238	12550	17210	3139	5974	7467	9695	4376	4520	1915
85	2177	14611	11782	8734	5488	11908	5449	3927	5871	3172	11329	9880	10953	10151	14605	7338	9909	5927	7735	4430	4578	6633
86	13098	683	2881	5986	19266	2862	9567	11416	19535	15889	3741	5331	24747	5348	2278	20695	23526	10266	8136	13347	13240	19473
87	11333	5214	4197	5172	16958	3995	7798	9433	17120	13573	3514	3889	22060	3487	3751	17972	20764	7593	5521	10523	10368	16596
88	7921	21119	18224	15070	1746	18310	11481	9627	1535	5164	17592	16000	3854	16168	20821	1486	2857	11146	13359	8132	8288	2649
89	10483	5631	4141	4565	16079	3963	6979	8583	16240	12697	3315	3326	21179	2909	4299	17091	19884	6725	4683	9642	9487	15716
90	11382	5573	4553	5393	16936	4353	7887	9483	17089	13565	3846	4124	21995	3714	4090	17914	20697	7610	5588	10493	10335	16531
91	11071	3578	2837	4693	17230	3024	7860	9606	17538	13964	3713	4694	22768	4943	4727	18808	21600	8911	7102	11792	11716	17688
92	8623	20976	18119	15039	4075	18160	11557	9811	3666	5801	17339	15712	5005	15781	20384	2463	3772	10732	12909	7660	7759	2226
93	5780	8844	6109	3487	11272	6102	2718	3913	11442	7883	5223	3647	16447	3618	8141	12347	15163	1947	1068	4853	4704	11000
94	6923	19476	16600	13490	2808	16651	9964	8183	2482	4083	15850	14223	5774	14316	18952	1996	4465	9233	11440	6125	6241	805
95	1920	14107	11281	8242	5939	11409	4997	3548	6315	3428	10836	9398	11427	9674	14111	7764	10368	5551	7298	4295	4432	7006
96	5846	18627	15738	12604	2065	15800	9039	7221	1886	2958	15022	13401	6312	13519	18175	2225	5026	8428	10653	5317	5451	883
97	7217	19358	16507	13440	3812	16545	9989	8278	3501	4532	15719	14092	6394	14156	18753	2933	5101	9120	11286	6070	6162	1828
98	7446	8762	6349	4491	12544	6278	4570	5642	12668	9248	5377	4090	17490	3871	7754	13425	16188	3639	2593	6119	5951	12028
99	5711	9592	6903	4335	10885	6886	3118	3937	11028	7549	5996	4450	15944	4388	8813	11856	14651	1947	1906	4440	4278	10483
100	6747	19946	17051	13898	578	17139	10311	8457	533	4004	16424	14835	5002	15007	19658	1679	3929	10000	12207	7016	7176	2158
101	4674	17770	14873	11179	1698	14953	8126	6272	1874	1796	14218	12618	7062	12777	17435	3075	5861	7745	9960	4748	4909	2209
102	6821	9170	6648	4502	11887	6596	4088	5042	12012	8590	5691	4289	16849	4126	8237	12779	15549	3044	2339	5460	5293	11386
103	8145	6236	3726	2451	13923	3660	4576	6247	14114	10508	2756	1578	19165	1278	5415	15064	17887	4501	2330	7566	7415	13730
104	7816	21038	18147	14997	1746	18240	11419	9570	1666	5149	17538	15959	4125	16139	20783	1991	3242	11155	13355	8191	8352	3031
105	12283	1275	2179	5209	18456	2204	8775	10618	18729	15087	3107	4642	23945	4702	2523	19902	22729	9521	7425	12585	12482	18691
106	7052	8444	5921	3885	12352	5868	4011	5207	12496	9008	4963	3582	17401	3404	7532	13316	16105	3214	1955	5907	5746	11937
107	3631	16652	13755	10602	2814	13832	7010	5159	3004	716	13093	11491	8174	11648	16306	4139	6955	6615	8829	3641	3806	3078
108	3907	17116	14236	11102	2561	14338	7567	5755	2951	1898	13673	12126	8049	12338	16940	4440	6984	7529	9647	4916	5091	3917
109	10414	23635	20742	17591	4286	20833	14009	12157	4092	7711	20126	18541	2010	18715	23364	3496	2006	13702	15913	10688	10844	4914
110	8685	21846	18980	15862	3271	19090	12349	10541	3359	6348	18442	16907	4585	17123	21715	3828	4188	12283	14426	9480	9650	4872
111	12142	3371	3159	5281	18025	2938	8492	10266	18222	14604	2902	4035	23277	3739	1851	19176	21998	8605	6399	11669	11527	17837
112	12244	2676	2740	5218	18207	2525	8580	10389	18418	14782	2693	4040	23514	3802	1208	19414	22243	8813	6588	11907	11771	18093
113	4743	10616	7854	5055	9715	7857	2870	3119	9853	6398	6987	5391	14768	5387	9913	10678	13476	1377	2630	3274	3110	9308
114	11063	2244	1037	3971	17231	1138	7539	9385	17501	13856	2014	3453	22714	3553	2858	18667	21496	8288	6209	11347	11245	17453
115	5415	17761	14889	11786	3247	14937	8281	6529	3125	2782	14133	12505	7408	12596	17232	3399	6104	7515	9720	4412	4524	1970
116	4939	12394	9675	6913	8739	9669	4393	3890	8807	5694	8786	7212	13460	7179	11606	9430	12153	2907	4483	2719	2549	8015
117	12213	1015	1894	5044	18362	1842	8637	10491	18621	14968	2696	4305	23820	4301	1806	19755	22589	9270	7116	12365	12254	18515
118	8775	5762	3421	2770	14556	3323	5192	6879	14745	11141	2442	1656	19788	1260	4851	15687	18508	5134	2963	8181	8039	14348
119	7704	19670	16834	13790	4320	16866	10378	8698	3989	5066	16030	14405	6447	14455	19028	3269	5181	9454	11595	6446	6527	2313
120	7765	5753	3130	1821	13942	3314	4519	6257	14238	10639	3133	2707	19469	3119	6076	15482	18286	5653	4117	8453	8382	14346
121	4571	16361	13505	10436	4464	13545	7006	5348	4435	2612	12724	11097	8918	11170	15786	4894	7613	6118	8296	3075	3160	3472
122	8873	4355	1485	1735	15025	1619	5311	7162	15287	11638	1308	1516	20494	1808	4379	16439	19270	6065	4047	9113	9012	15219
123	3678	13124	10306	7330	7310	10330	4216	3106	7404	4199	9484	7863	12205	7904	12485	8130	10907	2994	5052	1285	1133	6741
124	4054	10778	7959	5015	9212	7981	2360	2413	9372	5848	7138	5516	14365	5564	10173	10265	13083	848	2704	2776	2624	8922
125	10824	24031	21136	17983	4659	21223	14395	12540	4427	8076	20505	18912	1455	19077	23732	3654	1677	14042	16260	11000	11152	5085
126	4972	151																				

Project:
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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
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DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN
141	10201	4120	2684	3918	16358	2897	7018	8749	16667	13096	3412	4129	21897	4426	5052	17939	20730	8107	6370	10952	10880	16824
142	9946	5857	4105	4168	15542	3946	6454	8046	15704	12158	3211	2976	20652	2558	4617	16562	19359	6185	4151	9107	8952	15190
143	3432	16324	13429	10280	3226	13501	6693	4852	3388	650	12750	11141	8505	11288	15949	4435	7267	6234	8455	3220	3381	3281
144	5269	14648	11904	9053	7215	11905	6127	5020	7194	4758	11030	9441	11479	9425	13869	7565	10170	4807	6669	2856	2779	6135
145	5438	12603	9929	7251	8982	9912	4877	4420	9027	6038	9021	7474	13565	7414	11756	9575	12257	3375	4803	3159	2995	8149
146	8367	21544	18648	15494	2186	18731	11902	10047	1918	5573	18005	16407	13370	16568	21225	1423	2352	11527	13746	8487	8640	2760
147	5657	11860	9217	6624	9633	9192	4551	4400	9697	6580	8296	6771	14309	6692	10989	10297	13001	3032	4171	3559	3385	8876
148	4258	11420	8635	5759	8928	8646	3137	2869	9055	5652	7784	6177	13941	6191	10741	9854	12647	1644	3382	2515	2344	8479
149	3759	12595	9784	6829	7792	9804	3817	2904	7898	4610	8955	7336	12734	7372	11947	8654	11438	2515	4527	1543	1369	7270
150	5288	15766	12978	10036	6083	12992	6876	5500	6023	4055	12132	10522	10182	10536	15047	6298	8873	5706	7720	3139	3134	4870
151	5908	16710	13921	10970	5699	13936	7766	6317	5577	4230	13076	11466	9418	11481	15988	5655	8115	6632	8663	3941	3960	4254
152	7621	6204	3713	2391	13772	3909	4594	6235	14082	10524	3794	3374	19312	3789	6643	15365	18149	5850	4525	8506	8449	14269
153	11065	2492	1136	3890	17139	921	7416	9263	17375	13720	1299	2890	22534	2787	1985	18446	21283	7868	5661	10983	10861	17168

WTG	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
1	20031	14524	21087	23089	1442	24655	25434	2785	17657	1690	3193	20847	1459	14105	4734
2	19950	14442	21038	23045	1019	24621	25402	2647	17634	1658	3183	20831	1723	14123	4932
3	4757	9372	4845	4533	24261	5131	5501	20756	7315	21848	20372	5674	22157	10530	19305
4	5251	10558	4719	3469	25818	3363	3503	22246	7920	23327	21819	5424	23596	11437	20613
5	17574	12065	18660	20666	3379	22243	23024	275	15256	873	908	18454	1358	11755	2824
6	16137	10674	17290	19294	4987	20888	21671	2008	13972	2967	2167	17160	3487	10629	3386
7	18185	12677	19277	21284	2755	22862	23643	908	15878	569	1519	19077	1156	12383	3410
8	18860	13578	20090	22066	4702	23668	24446	4527	16931	4702	5087	20061	5256	13818	6816
9	10310	5484	11591	13520	11624	15116	15885	8374	8720	9459	8153	11673	9879	6427	7762
10	14701	9780	15988	17908	8637	19501	20267	6361	13080	7233	6499	16068	7791	10451	7210
11	7159	1660	8236	10243	13795	11826	12608	10159	4876	11213	9682	8068	11437	1888	8398
12	2173	3443	3179	5186	18852	6774	7557	15215	741	16265	14730	3092	16475	4033	13370
13	5782	10997	5326	4126	26179	3966	4039	22625	8457	23709	22210	6049	23990	11936	21040
14	5861	10923	5541	4523	25999	4508	4625	22466	8529	23554	22065	6301	23848	11941	20938
15	17746	12485	18981	20953	5306	22556	23333	4283	15839	4717	4750	18960	5300	12768	6297
16	3350	5302	4544	5926	19856	7362	8052	16362	4488	17456	15989	5132	17775	6756	14984
17	17536	12037	18573	20573	3740	22133	22910	1044	15134	1130	884	18319	1086	11569	2209
18	18044	12552	19066	21063	3466	22617	23393	1522	15619	1130	1472	18798	780	12040	2603
19	18999	13644	20207	22194	3893	23797	24577	3878	16987	3943	4476	20144	4483	13778	6284
20	18830	13328	19872	21872	2569	23433	24211	1780	16434	801	2037	19620	259	12870	3477
21	4087	1973	5355	7299	17013	8900	9675	13431	2833	14510	13004	5463	14783	3513	11850
22	1459	5030	1781	3726	20365	5267	6044	16719	1733	17754	16214	1474	17940	5333	14784
23	4418	7577	5189	5848	21925	6951	7501	18484	6368	19580	18137	5967	19921	8994	17197
24	5198	4939	6483	7998	18289	9457	10152	14896	5500	15993	14579	6969	16356	6641	13761
25	14115	8606	15197	17204	6836	18781	19562	3195	11797	4256	2743	14996	4525	8321	2116
26	2720	2849	3770	5777	18264	7367	8150	14629	866	15681	14147	3681	15895	3522	12802
27	18754	13247	19849	21856	2181	23436	24217	1482	16453	745	2076	19652	1200	12960	3936
28	9800	5149	11093	13004	12251	14596	15362	8992	8310	10078	8761	11204	10495	6231	8321
29	11498	6016	12634	14639	9457	16232	17014	5882	9312	6970	5491	12499	7277	6045	4667
30	4848	1779	5705	7680	16467	9216	9990	12816	2240	13836	12295	5393	14006	1380	10832
31	19302	13794	20361	22364	1942	23931	24710	2064	16933	966	2463	20125	769	13386	4052
32	701	5402	1217	3224	20815	4814	5597	17177	2295	18225	16689	1315	18431	5906	15311
33	1909	7307	704	1321	22725	2922	3703	19089	4170	20137	18601	1296	20342	7789	17216
34	3713	2036	4689	6692	17352	8265	9046	13709	1320	14752	13214	4498	14952	2510	11833
35	5710	10619	5520	4701	25602	4858	5042	22085	8354	23176	21694	6310	23479	11698	20599
36	4148	4999	5401	6864	19106	8315	9009	15651	4835	16748	15302	5933	17086	6588	14374
37	12715	7303	13894	15891	8416	17491	18273	5009	10641	6103	4752	13805	6497	7479	4462
38	5287	5393	6540	7966	18688	9387	10064	15314	5796	16411	15005	7071	16780	7084	14207
39	18470	13173	19696	21675	4685	23278	24056	4200	16525	4451	4740	19660	5017	13398	6434
40	3924	8818	3912	3620	23911	4355	4807	20368	6544	21455	19962	4737	21745	9873	18828
41	17207	11771	18378	20378	4214	21976	22758	2191	15086	2791	2640	18268	3375	11778	4262
42	2054	4455	2510	4434	19711	5953	6726	16062	1102	17090	15549	2129	17267	4637	14096
43	11524	6917	12829	14718	11262	16302	17062	8297	10091	9339	8190	12963	9818	7911	8147
44	13107	7762	14311	16300	8241	17902	18683	4993	11113	6069	4825	14255	6509	8044	4805

Continued on next page...

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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
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DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
45	5096	9987	4963	4301	24998	4648	4926	21474	7731	22564	21079	5767	22863	11064	19974
46	5210	1363	6457	8418	15886	10021	10798	12313	3654	13396	11896	6515	13677	3108	10785
47	6814	1347	7952	9955	14122	11550	12333	10507	4697	11576	10056	7848	11827	2219	8858
48	19527	14109	20709	22706	2872	24306	25088	3496	17431	3296	4141	20609	3778	14126	6040
49	2388	3885	3029	4983	19135	6517	7292	15487	532	16516	14976	2699	16696	4076	13531
50	17776	12594	19029	20988	5887	22589	23364	4944	15946	5388	5395	19038	5972	12965	6892
51	1702	7133	1493	2136	22523	3589	4312	18914	4370	19982	18459	2327	20223	7903	17176
52	5799	5714	7044	8440	18609	9841	10509	15279	6287	16374	14990	7583	16757	7429	14255
53	9372	4058	10573	12562	11732	14164	14945	8212	7411	9306	7848	10528	9633	4640	7001
54	14700	9270	15872	17872	6496	19470	20253	3306	12595	4359	3233	15770	4828	9343	3715
55	4408	4597	5700	7254	18553	8737	9445	15102	4780	16198	14755	6176	16539	6234	13842
56	12273	7350	13553	15483	10059	17079	17848	7088	10637	8126	6995	13624	8608	8110	7044
57	11937	6747	13176	15145	9657	16748	17525	6425	10093	7504	6235	13175	7938	7285	6036
58	2932	8389	2332	1673	23775	2703	3332	20168	5568	21236	19714	3075	21478	9135	18430
59	12952	7443	14031	16037	8003	17614	18395	4362	10631	5417	3893	13829	5665	7165	2932
60	17586	12267	18804	20787	4925	22390	23169	3697	15618	4158	4163	18759	4743	12477	5729
61	1192	6587	255	2049	22010	3652	4432	18376	3500	19426	17892	1078	19637	7116	16522
62	15660	10160	16702	18704	5457	20267	21045	1877	13268	2786	1262	16458	2940	9718	926
63	3768	4553	5056	6617	18919	8109	8823	15432	4308	16526	15065	5541	16851	6106	14085
64	11260	5951	12470	14456	9993	16058	16838	6586	9305	7682	6305	12428	8065	6379	5809
65	3133	3137	3873	5835	18296	7368	8142	14647	463	15673	14133	3546	15850	3225	12681
66	2897	6592	3729	4658	21466	5953	6593	17946	4955	19036	17556	4481	19341	7852	16486
67	4884	4418	6194	7794	18041	9289	10003	14611	5009	15708	14276	6633	16058	6110	13405
68	5945	10685	5856	5155	25543	5372	5566	22049	8555	23142	21670	6662	23456	11826	20615
69	3859	7953	4345	4697	22736	5705	6233	19238	6192	20331	18860	5167	20646	9202	17820
70	3151	8660	2273	1063	24080	2060	2728	20459	5683	21519	19990	2896	21746	9291	18661
71	4521	1466	5758	7725	16512	9328	10106	12922	2988	13999	12489	5810	14266	3083	11322
72	12440	7632	13731	15644	10251	17235	18000	7387	10885	8406	7327	13830	8903	8463	7458
73	4098	5476	5293	6637	19620	8043	8718	16171	5074	17267	15823	5882	17607	7033	14898
74	5012	611	6078	8085	15953	9670	10452	12317	2761	13369	11836	5929	13586	1661	10512
75	4217	8834	4364	4220	23778	4972	5412	20261	6762	21351	19870	5197	21655	9978	18786
76	4749	5640	5953	7286	19365	8676	9341	15960	5581	17057	15635	6534	17414	7268	14781
77	16867	11375	17893	19892	4445	21448	22225	1315	14449	1801	770	17632	1794	10877	1500
78	6801	1583	7995	9985	14203	11587	12368	10620	4881	11701	10199	7960	11980	2802	9100
79	11013	6467	12320	14204	11676	15788	16547	8638	9609	9693	8500	12461	10158	7519	8353
80	16294	10950	17503	19490	5601	21092	21873	3396	14299	4167	3679	17447	4739	11147	4914
81	3174	4645	4451	6008	19319	7506	8225	15803	3947	16895	15419	4954	17205	6095	14381
82	1869	3919	2737	4740	19301	6316	7097	15660	807	16704	15167	2590	16905	4379	13778
83	3200	8457	2927	2529	23746	3423	3970	20164	5875	21242	19731	3730	21505	9351	18512
84	13294	7847	14456	16457	7770	18054	18837	4338	11167	5434	4081	14345	5825	7919	3877
85	11116	6748	12433	14290	11979	15864	16616	9017	9820	10061	8904	12607	10538	7877	8817
86	5090	10203	4774	3854	25345	4033	4264	21797	7760	22883	21387	5543	23168	11190	20234
87	2449	7047	1328	2180	22305	3490	4231	18655	3706	19676	18135	673	19842	7194	16648
88	16970	11608	18174	20163	4980	21765	22546	3156	14952	3781	3549	18108	4367	11763	5009
89	1949	6168	1312	2864	21430	4296	5055	17781	2825	18804	17264	540	18975	6329	15788
90	2696	7029	1664	2490	22212	3714	4434	18562	3674	19575	18034	916	19731	7085	16523
91	5295	9107	5735	5842	23521	6618	7032	20087	7583	21183	19741	6564	21525	10456	18796
92	16400	10898	17445	19447	4730	21011	21789	1237	14012	2054	582	17202	2196	10462	1341
93	4154	1378	5242	7248	16797	8838	9621	13165	2031	14220	12689	5132	14442	2344	11373
94	14986	9479	16081	18088	5950	19669	20450	2332	12691	3415	1956	15890	3736	9229	1989
95	10646	6393	11966	13812	12427	15383	16133	9411	9406	10465	9273	12154	10931	7593	9105
96	14239	8760	15378	17384	6755	18976	19759	3290	12047	4386	3043	15238	4778	8703	3076
97	14768	9269	15812	17813	6315	19378	20156	2688	12380	3657	2118	15571	3830	8836	1158
98	3928	2831	4621	6555	17682	8061	8828	14032	1259	15045	13503	4232	15204	2555	12008
99	4828	1094	5820	7822	16226	9393	10173	12582	2414	13622	12085	5611	13821	1500	10704
100	15818	10485	17030	19016	6016	20618	21398	3587	13835	4437	3793	16979	4996	10706	4856
101	13571	8217	14773	16763	7800	18365	19146	4609	11566	5674	4480	14713	6129	8467	4615

Continued on next page.

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

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Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - Main Result

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

...continued from previous page

WTG	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC
102	4329	2205	5138	7103	17060	8632	9405	13409	1681	14428	12887	4807	14597	1958	11418
103	1428	4110	2530	4526	19537	6125	6907	15907	1377	16962	15430	2584	17182	4787	14094
104	16963	11654	18184	20165	5371	21768	22547	3700	15007	4311	4086	18143	4897	11888	5500
105	4570	9497	4457	3903	24562	4398	4749	21026	7206	22114	20624	5267	22408	10552	19501
106	3605	2489	4455	6438	17656	7987	8764	14008	991	15038	13498	4177	15221	2632	12066
107	12441	7098	13645	15633	8849	17235	18016	5519	10451	6607	5297	13590	7021	7413	5065
108	13218	8164	14483	16430	9052	18029	18801	6195	11489	7205	6160	14525	7708	8778	6424
109	19524	14166	20731	22720	3676	24322	25102	4152	17508	4086	4774	20666	4593	14288	6627
110	18003	12870	19265	21215	6169	22815	23587	5385	16217	5800	5846	19291	6381	13286	7349
111	2802	8213	1598	413	23629	2015	2796	19990	5049	21036	19500	1993	21238	8663	18103
112	2983	8485	1986	712	23912	1975	2702	20284	5437	21339	19807	2552	21557	9053	18454
113	5923	637	6968	8974	15065	10552	11333	11425	3590	12471	10936	6784	12682	1185	9598
114	3578	8281	3759	3788	23324	4706	5219	19788	6133	20876	19386	4593	21170	9385	18270
115	13266	7760	14366	16373	7667	17956	18738	4050	10987	5127	3631	14186	5416	7562	2919
116	7627	2465	8568	10554	13607	12097	12872	9957	5106	10966	9425	8276	11127	1525	7951
117	4026	9176	3768	3128	24385	3696	4110	20821	6695	21904	20401	4561	22180	10133	19221
118	922	4725	1899	3901	20147	5497	6280	16513	1754	17565	16031	1970	17778	5312	14675
119	15039	9558	16055	18051	6215	19605	20382	2678	12607	3538	2047	15788	3627	9032	614
120	4032	5966	5146	6351	20188	7703	8355	16740	5305	17836	16391	5792	18175	7481	15459
121	11810	6301	12889	14895	9143	16473	17255	5504	9493	6559	5032	12692	6800	6052	3938
122	2443	6109	3394	4529	21090	5914	6591	17552	4416	18640	17151	4104	18935	7333	16049
123	8500	3006	9561	11567	12472	13144	13925	8831	6167	9878	8344	9366	10095	2842	7054
124	6202	705	7321	9327	14732	10919	11702	11109	4051	12171	10646	7206	12410	1839	9401
125	19871	14479	21065	23059	3148	24660	25441	4039	17812	3828	4683	20981	4297	14542	6577
126	10481	5073	11462	13453	10731	15002	15777	7087	8007	8076	6537	11182	8224	4426	5050
127	4481	1093	5645	7641	16458	9241	10023	12842	2598	13908	12385	5605	14151	2517	11139
128	19743	14412	20960	22944	3962	24546	25326	4566	17760	4497	5186	20908	4999	14573	7031
129	10080	4888	11311	13285	11242	14888	15666	7815	8227	8912	7511	11305	9281	5552	6879
130	11935	6870	13195	15147	9955	16747	17521	6822	10192	7887	6670	13230	8341	7532	6559
131	10802	5304	11921	13928	10133	15517	16299	6527	8579	7604	6099	11770	7881	5286	5102
132	12405	7817	13714	15592	10839	17173	17930	8075	10995	9078	8039	13858	9586	8779	8209
133	1125	5784	942	2895	21163	4455	5235	17520	2552	18560	17022	794	18754	6165	15608
134	3278	6799	4099	4956	21546	6204	6822	18045	5293	19138	17666	4857	19452	8108	16630
135	6461	1473	7417	9409	14694	10962	11739	11044	3964	12068	10527	7150	12246	604	9095
136	2109	7599	1535	1636	23008	3050	3770	19392	4727	20456	18930	2326	20690	8303	17625
137	14024	8935	15286	17236	8388	18836	19609	5720	12270	6682	5760	15320	7209	9488	6256
138	2655	8157	1900	1284	23571	2541	3236	19953	5233	21016	19488	2609	21247	8827	18173
139	6573	2018	7439	9406	14829	10931	11701	11181	3974	12182	10641	7103	12330	375	9129
140	8018	2537	9152	11157	12920	12750	13533	9309	5865	10381	8865	9034	10640	2952	7715
141	4925	8342	5553	5961	22654	6916	7405	19226	7029	20323	18885	6361	20668	9743	17958
142	1703	5631	1491	3279	20915	4766	5534	17266	2294	18293	16753	937	18469	5831	15292
143	12065	6690	13257	15250	9115	16851	17633	5707	10039	6802	5437	13188	7190	6966	5040
144	9891	4603	10822	12801	11494	14334	15105	7861	7357	8829	7294	10506	8950	3744	5727
145	7799	2852	8679	10646	13646	12168	12937	10003	5214	10988	9450	8339	11122	1598	7904
146	17357	11967	18550	20544	4475	22145	22926	2847	15302	3372	3305	18469	3959	12065	4899
147	7042	2354	7902	9865	14414	11385	12154	10769	4439	11761	10222	7556	11900	842	8687
148	6752	1310	7804	9809	14230	11387	12168	10589	4419	11636	10101	7615	11848	1445	8775
149	7961	2472	9022	11028	13011	12605	13387	9370	5632	10418	8884	8830	10635	2373	7585
150	11059	5651	12035	14025	10196	15571	16346	6560	8578	7534	5997	11749	7668	4988	4478
151	12001	6594	12969	14956	9346	16496	17269	5734	9508	6673	5148	12671	6779	5907	3555
152	4715	6253	5829	6996	20084	8315	8949	16682	5885	17779	16357	6476	18136	7840	15498
153	2357	7683	2152	2267	23025	3506	4164	19430	5033	20503	18986	2977	20756	8528	17738

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

Noise calculation model:

ISO 9613-2 General

Wind speed:

8.2 m/s

Ground attenuation:

General, Ground factor: 1.0

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

Pure and Impulse tone penalty are added to WTG source noise

Height above ground level, when no value in NSA object:

1.5 m Don't allow override of model height with height from NSA object

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0.0 dB(A)

Octave data required

Air absorption

63	125	250	500	1,000	2,000	4,000	8,000
[db/km]	[db/km]	[db/km]	[db/km]	[db/km]	[db/km]	[db/km]	[db/km]
0.1	0.4	1.0	1.9	3.7	9.7	32.8	117.0

WTG: MWT 95/2.4 60Hz 2400 95.0 !O!

Noise: MWT

Source	Source/Date	Creator	Edited
	4/28/2009	USER	5/11/2009 3:35 PM

Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones	Octave data							
					63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
From Windcat	80.0	8.2	105.1	No	85.9	92.8	96.5	98.6	100.2	98.3	89.5	78.1

NSA: Occupied Res 1-A

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 2-B

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 3-C

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 4-D

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 5-E

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 6-F

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 7-G

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 8-H

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 9-I

Predefined calculation standard:

Immission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 10-J

Predefined calculation standard:

Immission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 11-K

Predefined calculation standard:

Immission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 12-L

Predefined calculation standard:

Immission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 13-M

Predefined calculation standard:

Immission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 14-N

Predefined calculation standard:

Immission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 15-O

Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 16-P

Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 17-Q

Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 18-R

Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 19-S

Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 20-T

Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 21-U
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 22-V
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 23-W
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 24-X
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 25-Y
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 26-Z
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 27-AA

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 28-AB

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 29-AC

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 30-AD

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 31-AE

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 32-AF

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 33-AG
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 34-AH
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 35-AI
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 36-AJ
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 37-AK
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 38-AL
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 39-AM

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 40-AN

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 41-AO

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 42-AP

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 43-AQ

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 44-AR

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure0.0 dB(A)

Sound level always accepted0.0 dB(A)

Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 45-AS

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 46-AT

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 47-AU

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 48-AV

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 49-AW

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 50-AX

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 51-AY
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 52-AZ
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 53-BA
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 54-BB
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 55-BC
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 56-BD
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 57-BE

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 58-BF

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 59-BG

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 60-BH

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 61-BI

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 62-BJ

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 63-BK
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 64-BL
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 65-BM
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 66-BN
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 67-BO
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 68-BP
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure0.0 dB(A)
Sound level always accepted0.0 dB(A)
Distance demand:229.0 m

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 69-BQ
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 70-BR
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 71-BS
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 72-BT
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 73-BU
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Ambient noise:0.0 dB(A)
Margin or Allowed additional exposure:0.0 dB(A)
Sound level always accepted:0.0 dB(A)
Distance demand:229.0 m

NSA: Occupied Res 74-BV
Predefined calculation standard:
Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)
Distance demand:229.0 m

Project: Logan County Wind Farm Just Wind, LLC PO Box 299 Napoleon, ND 58561	Description: EAPC does not warrant, guarantee, or make any such representations regarding the contents of this report. EAPC cannot be held liable for erroneous results caused by errors or omissions in the delivered data, or inaccuracy, limitations, or malfunctioning of models or software used. For any claim whatsoever related to the subject matter of this report, the liability of EAPC for actual damages, regardless of the form of action, shall be limited to the total amount paid to EAPC for the services provided as part of this consultancy service. Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4	Printed/Page 5/13/2009 10:24 AM / 28 Licensed user: EAPC Architects Engineers 3100 DeMers Avenue US-GRAND FORKS, ND 58201 +1 701 775 5507 Calculated: 5/12/2009 10:48 AM/2.6.1.252
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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 75-BW

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 76-BX

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 77-BY

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 78-BZ

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 79-CA

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

NSA: Occupied Res 80-CB

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

Project:

Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

Description:

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Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

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DECIBEL - Assumptions for noise calculation

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

NSA: Occupied Res 81-CC

Predefined calculation standard:

Imission height(a.g.l.):1.5 m

Noise demand:50.0 dB(A)

Ambient noise:0.0 dB(A)

Margin or Allowed additional exposure:0.0 dB(A)

Sound level always accepted:0.0 dB(A)

Distance demand:229.0 m

Project:
Logan County Wind Farm

Just Wind, LLC
PO Box 299
Napoleon, ND 58561

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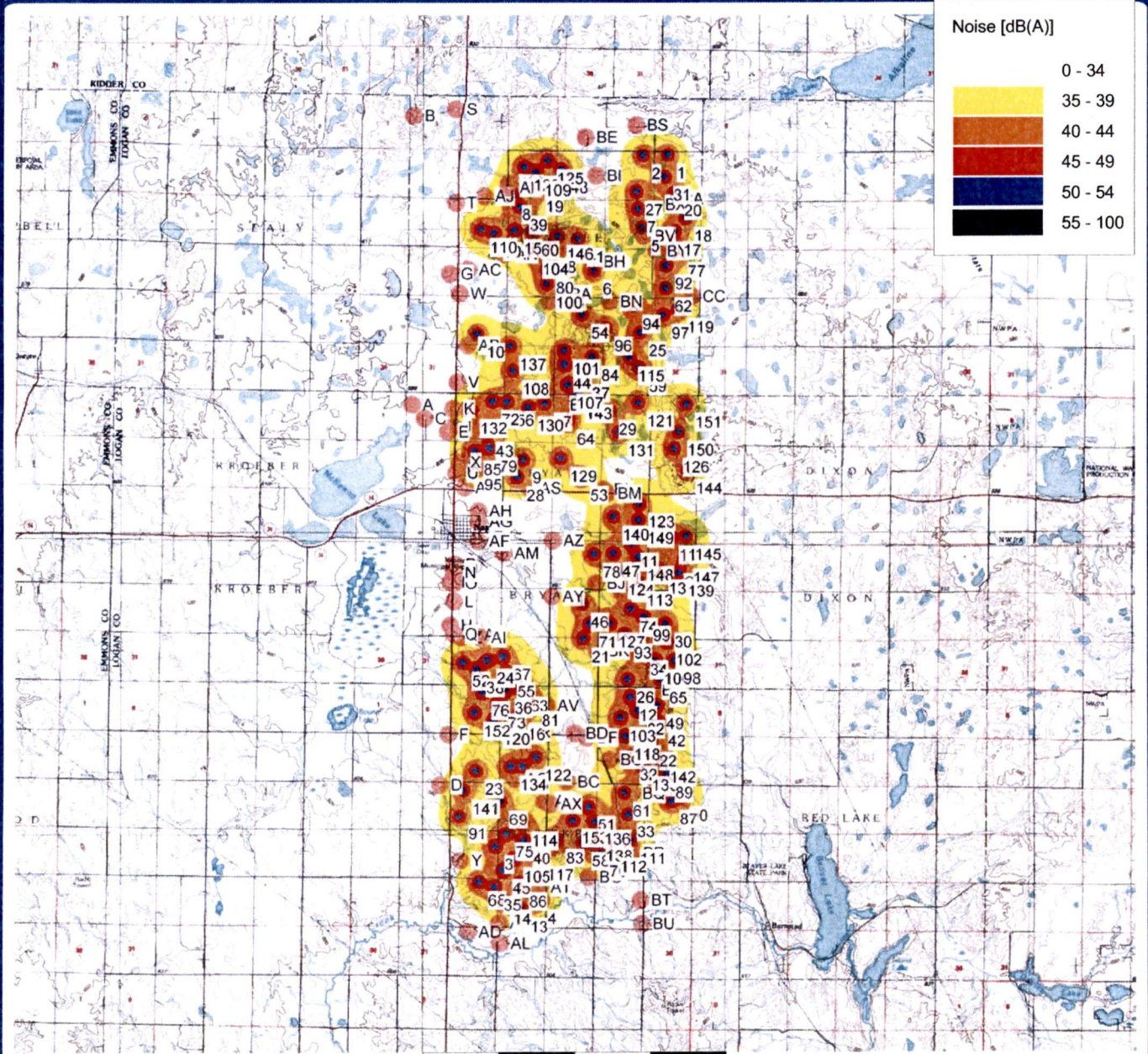
Noise calculations based off of MWT 92/2.4 and not MWT 95/2.4

Calculated:
5/12/2009 10:48 AM/2.6.1.252

DECIBEL - 100K Topo

Calculation: MWT2.4-95 Noise 5/11/2009 8.2 m/s (MWT 92/2.4 Noise Information)

File: 100KTOPO.jpg



0 2.5 5 7.5 10km

Map: , Print scale 1:200,000, Map center UTM WGS 84 Zone: 14 East: 444,965 North: 5,150,181
Noise calculation model: ISO 9613-2 General. Wind speed: 8.2 m/s

New WTG

Noise sensitive area

Height above sea level from active line object

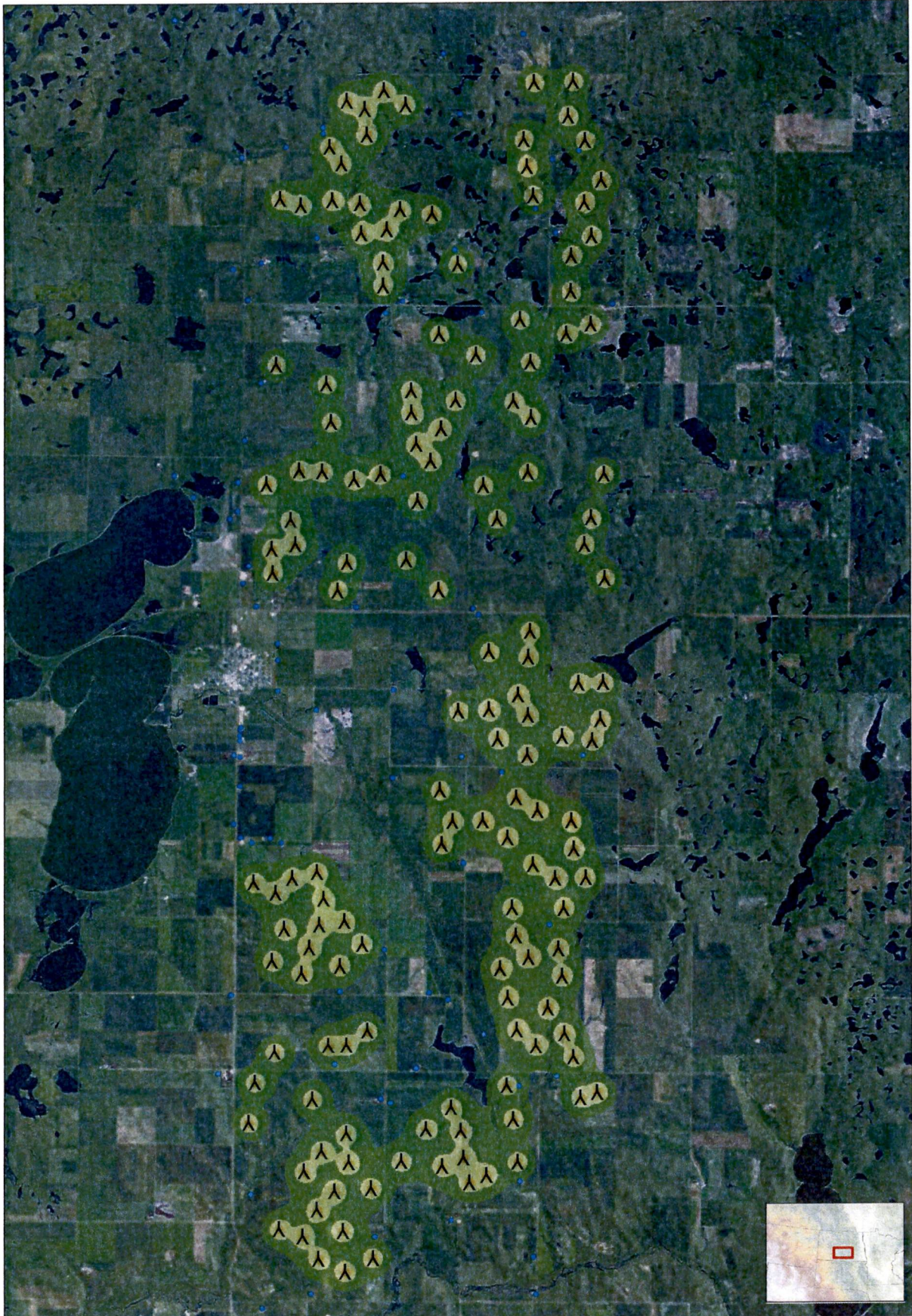
35.0 dB(A)

40.0 dB(A)

45.0 dB(A)

50.0 dB(A)

55.0 dB(A)



**Logan County
Wind Farm
MWT 95-2.4MW Noise**



Client
Just Wind, LLC
Project #: 20064001
Location: Napoleon, ND
Issue Dates
B Storm - 05-11-2009

Project Description
Noise Calculations for 8.2 m/s
MWT 95-2.4MW WTGs
(MWT 92-2.4 Noise Data)
Layout as of 05-11-2009

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Legend
▲ WTG
● Potential Occupied Residence
Noise from WTGs
— 40 dB
— 45 dB
— 50 dB
— 55 dB



0 0.25 0.5 1 1.5 2 Miles

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