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**RECEIVED**

SEP 13 2012

September 12, 2012

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**PUBLIC SERVICE COMMISSION**

**PUBLIC SERVICE COMMISSION**

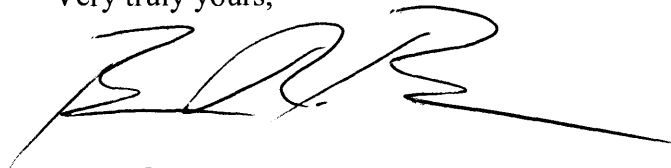
Mr. Darrell Nitschke  
Executive Director  
NORTH DAKOTA PUBLIC  
SERVICE COMMISSION  
600 E. Boulevard Avenue, Dept. 408  
Bismarck, ND 58505-0480

Dear Mr. Nitschke:

In re: Wilton Wind IV, LLC  
Case No. PU-11-646

Enclosed for filing are the original and ten copies of Application for Amendment of Certificate of Site Compatibility.

Very truly yours,



BRIAN R. BJELLA

bw  
Enc.

**40** **PU-11-646** Filed: 9/13/2012 Pages: 10  
**Application for amendment of certificate of site compatibility**

Wilton Wind IV, LLC

Brian Bjella, Crowley Fleck, PLLP

BILLINGS BISMARCK BOZEMAN HELENA KALISPELL MISSOULA WILLISTON

CROWLEY FLECK PLLP

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF NORTH DAKOTA**

Wilton Wind IV, LLC  
99 MW Wind Energy Center – Burleigh County  
Siting Application

Case No. PU-11-646

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**APPLICATION FOR AMENDMENT OF  
CERTIFICATE OF SITE COMPATIBILITY**

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Pursuant to North Dakota Century Code § 49-22-08(4) Wilton Wind IV, LLC (“Wilton Wind”) hereby files this application for an amendment to Certificate of Site Compatibility for Energy Conversion Facility, Certificate No. 26 issued February 15, 2012, (“Certificate”) to Wilton Wind by the Public Service Commission (“Commission”).

The Certificate designated the Wilton IV Wind Energy Center consisting of up to 66 1.6 MW wind turbine generators and associated facilities in Burleigh County, North Dakota.

Pursuant to the Findings of Fact, Conclusions of Law and Order also dated February 15, 2012 (“Order”), Wilton Wind proposed to construct a wind energy facility known as the Wilton IV Wind Energy Center to be located in Burleigh County, North Dakota, near the City of Wilton. The project area consists of approximately 15,752 acres (24.6 square miles) in Croft, Ecklund and Ghylin Townships. However, the wind turbines will be located only in Croft and Ghylin Townships.

In its application and at the hearing Wilton Wind indicated that the project will have a name plate (“gross”) generating capacity of approximately 99 MW, consisting of up to 66 1.6 MW wind turbines and associated facilities.

At the time the Order was issued, Wilton Wind intended to use General Electric 1.6 MW XLE wind turbines. Each turbine was indicated to have a 262 feet (80 meters) hub height and a 271 feet (82.5 meters) rotor diameter.

However, as indicated in the enclosed materials, Wilton Wind desires to use a different turbine model for this project. The new turbines are more efficient and have a larger rotor diameter of 328 feet (100 meters) versus 271 feet (82.5 meters). This requires adjustments to the spacing of the turbines to meet manufacturer's specifications, and also due to Croft and Ghylin Townships setback requirements. Additionally, Wilton Wind is evaluating the use of the GE 1.7 MW xle with 100 meter rotor utilizing 58 of the 66 approved turbine locations.

The setback requirement based upon 1.1 times the turbine height would change from 440 feet to 469 feet; and the setback requirement based upon 1.1 times the turbine height plus 75 feet would change from 515 feet to 544 feet.

Enclosed is a letter detailing these changes which includes Table 1, describing revised setback distances, and Table 2, being the distance to receptor turbine comparison. Also enclosed is an aerial photo showing the turbine array comparison between that as approved in the Order, and as requested by this Amendment. Also enclosed is a map which may be utilized for publication purposes.

In the Certification Relating to Order Provisions – Energy Conversion Facility Siting (“Certification”) in this case filed by Wilton Wind, dated December 15, 2011, paragraph No. 34 provides as follows:

Company understands and agrees that it shall inform the Commission in writing of any plans to modify the energy conversion facility, or of any plans to modify the site plan for the energy conversion facility. Company understands and agrees to obtain written approval from the Commission

prior to any modifications to the site plan or the energy conversion facility, associated facilities, and roadway locations. Approval may be granted after notice and opportunity for hearing.

As noted in the attached materials, Wilton Wind will be conducting studies pursuant to the Commission's facility siting criteria for exclusion areas, avoidance areas, selection criteria and policy criteria as set forth in North Dakota Administrative Code § 69-06-08-01. Wilton Wind will supplement this request for an amended certificate with this data when the studies have been completed. In addition, Wilton Wind will also revise the acoustic and shadow flicker assessments conducted for this project and file them with the Commission.

Pursuant to North Dakota Century Code § 49-22-08(4) and paragraph No. 34 of the Certification, Wilton Wind hereby requests an amendment to the Certificate designating the turbine changes as set forth in the attached materials. Pursuant to paragraph No. 34 of the Certification, Wilton Wind understands that approval may be granted after notice and opportunity for hearing.

Dated this 12<sup>th</sup> day of September, 2012.

Respectfully submitted,

WILTON WIND IV, LLC

CROWLEY FLECK PLLP

Attorneys for Applicant

400 East Broadway, Suite 600

Post Office Box 2798

Bismarck, North Dakota 58502-2798

Phone: 701-223-6585

By: 

BRIAN R. BJELLA, ND Bar ID #03549





September 11, 2012

Darrell Nitschke  
Executive Secretary  
North Dakota Public Service Commission  
600 E. Blvd. Dept. 408  
Bismarck, ND 58505-0480

**SUBJECT: Wilton IV Wind Energy Center, Case No. PU-11-646, Certificate Number 26**

Dear Mr. Nitschke,

On behalf of Wilton Wind IV, LLC, Tetra Tech is providing the following information regarding the Wilton IV Wind Energy Center, which was issued as Certificate Number 26 on February 15, 2012.

Since the order was issued, Wilton Wind IV, LLC has elected to use a different turbine model for the project. There are two turbine types that are now being considered in lieu of the 1.6 MW 82.5 meter rotor diameter option. Both of these turbine models are more efficient and have a larger rotor diameters (100 meters [328 feet], versus 82.5 meters [271 feet]), requiring slight adjustments in the spacing of the turbines to meet manufacturer specifications and Crofte and Ghylin township setback requirements (see changed setback distances italicized in Table 1). The first option is the 1.6 MW turbine with the larger rotor diameter and the second option is a 1.7 MW turbine, also with a 100 meter rotor diameter, both of which increases output slightly. The setback requirements based on turbine height changed: 1.1 times the turbine height changed from 440 feet to 469 feet, and 1.1 times turbine height plus 75 feet changed from 515 feet to 544 feet.

**Table 1. Revised Setback Distances for Wilton IV Wind Turbines**

Setback Type	Distance
<b>Ghylin Township</b>	
Property Lines	<i>469 feet</i> (1.1 times turbine height)
Occupied Residence	1,400 feet
Roads and Overhead Transmission Lines	440 feet <u>a/</u>
<b>Crofte Township</b>	
Occupied Residence (participating)	1,400 feet <u>b/</u>
Occupied Residence (non-participating)	1,750 feet
Public Recreational Area (park, boat ramp, swimming beach, etc.)	2,640 feet
Property Lines (Non-Participating)	<i>469 feet</i> (1.1 times turbine height)
Public Roadways (federal or state), Railroads, and Overhead Utility	<i>469 feet</i> (1.1 times turbine height)
Public Roadways (county or township)	<i>544 feet</i> (1.1 times turbine height plus 75 feet)
Missouri River and Lake Oahe (Not applicable to Project)	1 mile from OHW
<u>a/</u> Wilton IV has used a larger setback from roads than the Ghylin Township permit requirement of 400 feet.	
<u>b/</u> Wilton IV has used a larger setback from occupied residences on participating properties than what is required by Crofte Township zoning regulations, which establish a setback of 1.1 times the height of the turbine from participating residences.	

Comparing the new turbine layout to what was permitted by the PSC, all but five turbines moved less than 250 feet. Of the 64 originally proposed turbines, 21 turbines did not move and the rest have shifted between 26 and 382 feet. One planned turbine was completely removed, and a new turbine location was added. One former alternate turbine location is now a planned turbine, and one former planned turbine is now an alternate.

Attached is a figure showing the revised locations compared to the permitted locations. Also attached is a black and white figure for publication.

Table 2 summarizes the turbine shifts and the distance to the nearest occupied residences. In the column titled "change in distance to nearest receptor," the black numbers indicate the turbine is currently further from the receptor, while a negative red number indicates the turbine is closer to the receptor than originally proposed. Please note that no turbine moved closer than 35 feet to a receptor.

In addition, Wilton Wind IV is reviewing the need for additional space for the substation location. They may require an additional 5 acres.

Tetra Tech will be conducting surveys for cultural resources and wetlands/waters of the U.S. of previously unsurveyed areas within the anticipated project construction footprint including any new area for the substation location in upcoming weeks. We will also complete our Class II survey for historic structures for the project. After the surveys are complete, we will submit to the PSC tables summarizing any changes in the impacts to exclusion and avoidance areas, as well as selection and policy criteria since the application was submitted. Tetra Tech will also revise the acoustic and shadow flicker assessments conducted for the project, if necessary.

Please feel free to contact me at (617) 443-7552 or [Tracey.Dubuque@tetratech.com](mailto:Tracey.Dubuque@tetratech.com) if you have any questions.

Sincerely,

**TETRA TECH EC, INCORPORATED**

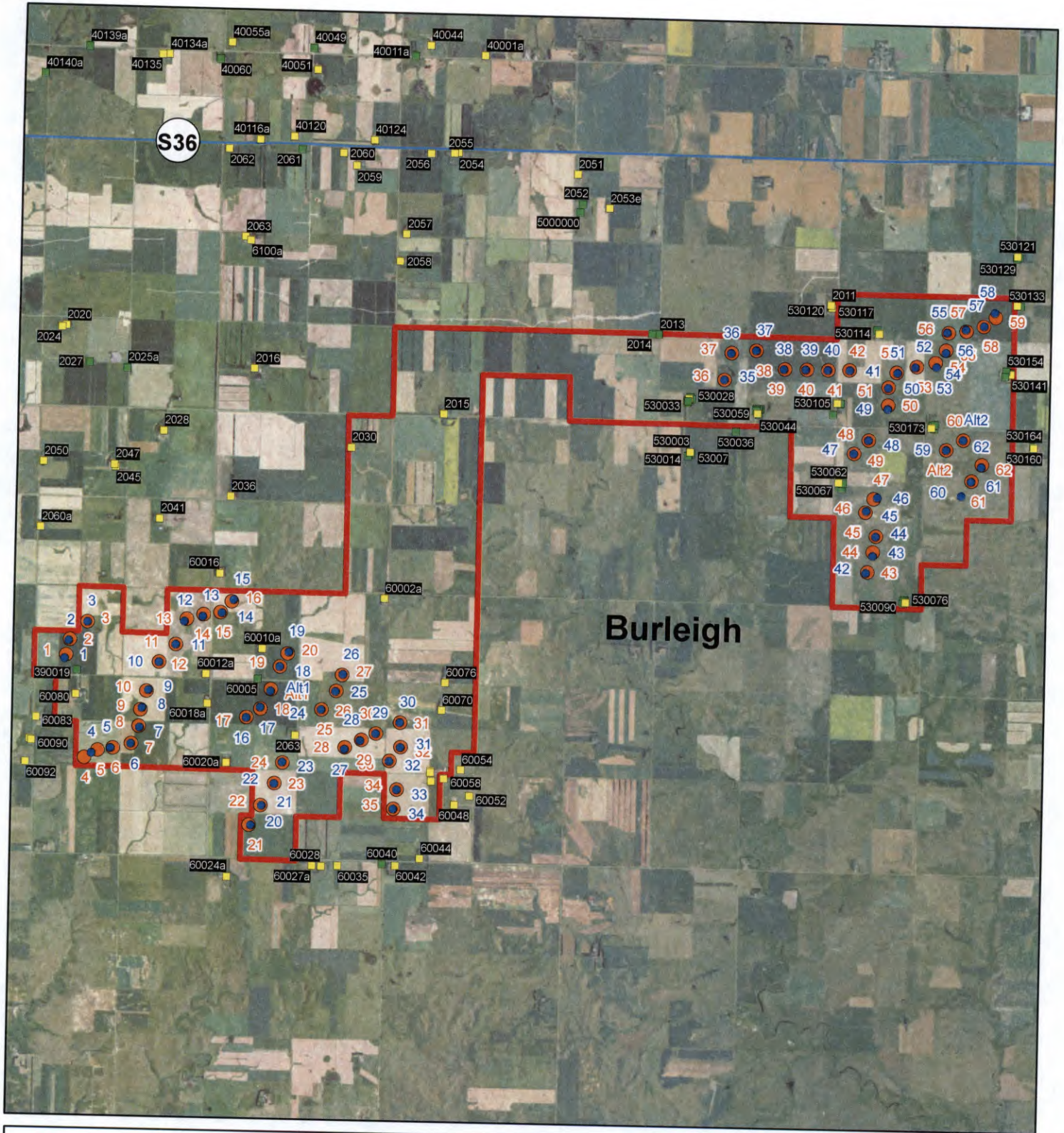
A handwritten signature in black ink, appearing to read 'TMD', with a long horizontal flourish extending to the right.

**Tracey M. Dubuque, P.E.**  
Senior Project Manager

Table 2. Wilton IV Distance to Receptor Turbine Comparison

7/11/2012 Array Turbine #	11/17/2011 Array Turbine #	Distance Moved	Direction Moved	Property Owner	Change in Distance to Nearest Receptor (feet)	Nearest Receptor (11/17/2011)	Distance to Nearest Receptor (11/17/2011)	Nearest Receptor (7/11/2012)	Distance to Nearest Receptor (7/11/2012)
1	1	228.51	SSW	Meyer Dennis F	59.02	2060a	2356.64	2060a	2415.66
2	2	92.81	SW	Meyer Dennis F	14.29	2060a	2101.12	2060a	2115.41
3	3	26.25	E	Meyer Dennis F	3.61	2060a	1918.90	2060a	1922.51
4	5	382.12	WSW	Meyer Wilhelm & Ella	111.92	2063	3620.37	2063	3732.29
5	6	136.48	WNW	Meyer Wilhelm & Ella	40.43	2063	3338.07	2063	3378.50
6	7	0.00		Meyer Mary Ann	N/A	2063	2995.74	2063	2995.74
7	8	94.65	SE	Meyer Mary Ann	-17.26	2063	2862.84	2063	2845.58
8	9	167.31	NE	Meyer Wilhelm & Ella	-27.08	2063	2864.86	2063	2837.78
9	10	160.38	NE	Meyer Wilhelm & Ella	-32.97	2063	2829.99	2063	2797.02
10	11	0.00		Meyer Dennis F	N/A	2041	2591.44	2041	2591.44
11	12	0.00		Aichele Thomas	N/A	2041	2293.16	2041	2293.16
12	13	185.85	SW	Aichele Thomas	26.15	2041	1878.95	2041	1905.10
13	14	114.14	SSW	Aichele Thomas	25.42	2041	1907.68	2041	1933.10
14	15	115.03	E	Fricke Donald, Audrey & Cheryl LE	21.05	2041	2025.74	2041	2046.78
15	16	164.07	NE	Fricke Donald, Audrey & Cheryl LE	-29.07	2036	1893.55	2036	1864.47
16	17	0.00		Rupp Gerald etal	N/A	2063	947.28	2063	947.28
17	18	98.44	NE	Rupp Gerald etal	18.53	2063	801.03	2063	819.57
18	19	0.00		Fricke Donald, Audrey & Cheryl LE	N/A	2063	1279.36	2063	1279.36
19	20	121.05	NNE	Fricke Donald, Audrey & Cheryl LE	29.23	2063	1490.68	2063	1519.91
20	21	131.25	E	Meyer Dennis F	-34.68	60028	1515.21	60028	1480.53
21	22	78.75	E	Waltos Gerald & Arlis	-10.57	2063	1415.89	2063	1405.32
22	23	0.00		Waltos Gerald & Arlis	N/A	2063	945.76	2063	945.76
23	24	32.81	N	Schumacher Louis & Virginia	-9.04	2063	542.66	2063	533.62
24	25	0.00		Sheldon Toby	N/A	2063	670.00	2063	670.00
25	26	46.40	SW	Sheldon Toby	-14.13	2063	1098.47	2063	1084.34
26	27	64.47	ENE	Opp Warren & Marjorie	15.66	2063	1388.57	2063	1404.23
27	28	99.31	SSE	Goets Dean & Mary Ann	11.34	2063	924.59	2063	935.93
28	29	76.32	WSW	Goets Dean & Mary Ann	-20.24	2063	1203.52	2063	1183.28
29	30	0.00		Goets Dean & Mary Ann	N/A	60066	1220.46	60066	1220.46
30	31	0.00		Klein Donald & Beatrice	N/A	60066	1060.92	60066	1060.92
31	32	0.00		Opp Warren & Marjorie	N/A	60066	712.61	60066	712.61
32	33	0.00		Opp Warren & Marjorie	N/A	60066	777.85	60066	777.85
33	34	0.00		Waltos Gerald & Arlis	N/A	60066	695.61	60066	695.61
34	35	0.00		Waltos Gerald & Arlis	N/A	60066	949.31	60066	949.31
35	36	0.00		Backman Matthew	N/A	2011	2367.56	2011	2367.56
36	37	0.00		Backman Matthew	N/A	2011	2011.86	2011	2011.86
37	38	0.00		Pearson Karry & Debra	N/A	2011	1586.33	2011	1586.33
38	39	65.63	W	Pearson Karry & Debra	11.85	2011	1429.33	2011	1441.18
39	40	65.63	W	Pearson Karry & Debra	7.22	2011	1246.87	2011	1254.09
40	41	0.00		Pearson Karry & Debra	N/A	2011	1176.59	2011	1176.59
41	42	32.81	E	Anderson (Tamela) le 2	2.75	2011	1219.71	2011	1222.46
42	43	101.09	SW	Coleman David	14.52	2011	4866.12	2011	4880.63
43	44	229.70	S	Coleman Mildred	69.02	2011	4525.44	2011	4594.46
44	45	32.81	S	Coleman Mildred	9.82	2011	4252.42	2011	4262.24
45	46	92.81	NE	Coleman Mildred	-16.36	2011	3789.89	2011	3773.53
46	47	254.71	ENE	Coleman Mildred	-2.55	2011	3580.95	2011	3578.40
47	48	0.00		Coleman Mildred	N/A	2011	2714.76	2011	2714.76
48	49	0.00		Coleman Mildred	N/A	2011	2534.16	2011	2534.16
49	50	255.95	S	Backman Karen	68.00	2011	2075.67	2011	2143.66
50	51	32.81	S	Backman Karen	8.19	2011	1810.04	2011	1818.23
51	52	70.68	ESE	Anderson (Sean) le 1	19.77	2011	1697.50	2011	1717.26
52	53	72.86	WSW	Anderson (Sean) le 1	-16.11	2011	1912.61	2011	1896.49
53	54	287.31	SSE	Hilken E Gene & Vivian	59.92	2011	2163.05	2011	2222.97
54	55	164.07	S	Hilken E Gene & Vivian	18.53	2011	2241.60	2011	2260.13
55	56	80.45	WNW	Bauer Steven & Kelly	-24.51	2011	2192.65	2011	2168.14
56	57	119.45	NNW	Bauer Steven & Kelly	-16.12	2011	2509.16	2011	2493.05
57	58	52.91	NE	Steinert Richard & Patricia	12.83	2011	2807.39	2011	2820.22
58	59	285.92	NNW	Steinert Richard & Patricia	-18.82	2011	3009.97	2011	2991.15
59	Alt2	0.00		Schafer Darrell & Kolleen (Koppinger)	N/A	2011	3350.79	2011	3350.79
60		New	New	Backman Karen	N/A	N/A	N/A	2011	4189.11
61	61	54.61	SW	Backman Karen	-1.78	2011	4080.17	2011	4078.39
62	62	123.57	SSW	Schafer Darrell & Kolleen (Koppinger)	22.01	2011	3984.51	2011	4006.53
Alt1	Alt1	98.44	S	Rupp Gerald etal	-26.41	2063	945.30	2063	918.89
Alt2	60	0.00		Schafer Darrell & Kolleen (Koppinger)	N/A	2011	3424.96	2011	3424.96
	4	Deleted			N/A	2063	3875.95	N/A	N/A

Moved 1-50'  
 Moved 51-100'  
 Moved over 100'



- Turbine Array (7/11/2012)
- Turbine Array (11/17/2011)

**Receptor**

**ID**

- Receptor - Occupied
- Receptor - Unoccupied
- ND DOT Roads
- ▭ Wilton IV Project Boundary 9/28/2011
- ▭ County Boundary

Sources: ND DOT Roads, NAIP Imagery

## Wilton IV Turbine Array Comparison

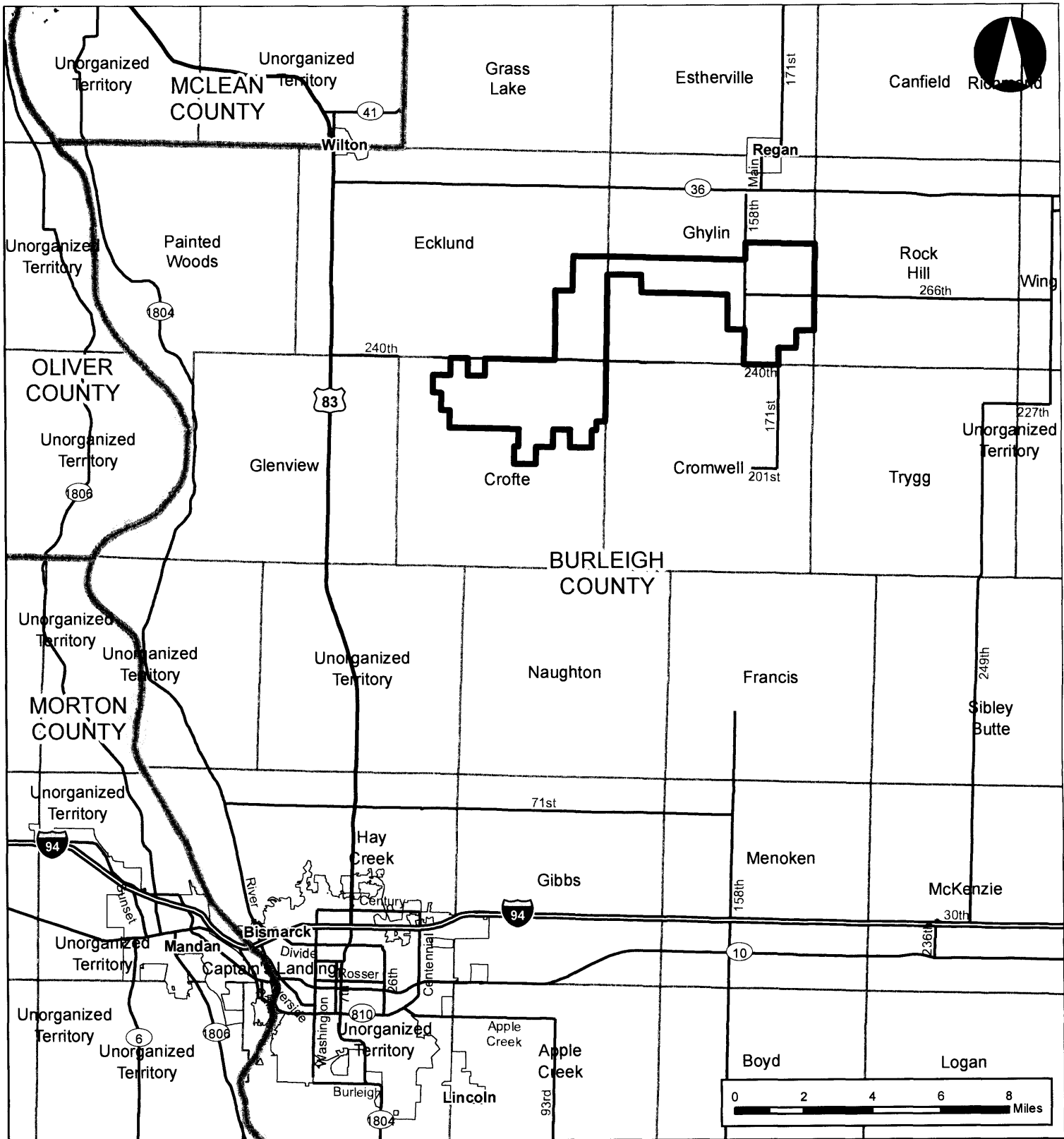
August 2012

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Miles

Tetra Tech

### MAP OVERVIEW



**Wilton IV Wind Energy Center**

BURLEIGH COUNTY, ND

**General Location Map**

AUGUST 2012



TETRA TECH EC INC.

Scale 1:250,000

- Project Area
- Limited Access Highway
- Highway
- Major Road
- Waterbody
- Populated Place
- North Dakota Civil Townships
- County Boundary

Source: ESRI Data

**OVERVIEW MAP**

