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January 7, 2009

Norman L. Jones III  
Direct Dial: (612) 604-6605  
njones@winthrop.com

Mr. Jerry Lein  
Executive Director  
North Dakota Public Service Commission  
600 E. Boulevard, Dept. 408  
Bismarck, ND 58505-0480

PUBLIC SERVICE COMMISSION

RE: Just Wind, LLC / Application for Certificate of Site Compatibility - Late Filed Exhibits

Dear Mr. Lein:

This letter is written on behalf of our client Just Wind, LLC ("Applicant") in satisfaction of its obligation to file certain additional exhibits and information requested at the October 21, 2008 PSC hearing on the above application.

(1) Approval of Cultural Resources Report. Enclosed as Exhibit 1 is a copy of the correspondence from the State Historical Society of North Dakota dated November 10, 2008 approving the findings, conclusions and recommendations in the Class III Cultural Resources Inventory previously submitted to the PSC. We note that the report will be supplemented prior to construction to take into account any siting adjustments that have occurred. Any supplement will be submitted for approval to the State Historical Society for approval, with a copy to the PSC.

(2) List of proposed WAPA upgrades. Enclosed as Exhibit 2 is a presentation dated October 14, 2008 used by WAPA to describe the upgrades being proposed to accommodate this project, along with maps of the transmission lines being referred to. Of course, this is a work in progress and subject to further change.

(3) Map of Staging Areas. Enclosed as Exhibit 3 is a turbine and staging area map that shows proposed staging areas and various additional information asked for by the PSC. These staging areas will be studied and included in the supplement to the Cultural Resources Report mentioned above.

(4) Turbine locations in relation to roads, residences, transmission lines and non-participating landowners. Exhibit 3 also shows the currently proposed turbine locations in relation to farm-to-market roads, residences, transmission lines and non-participating landowners, together with setbacks from each. Some background information as to the information shown: The total turbine and blade height, with the blade in the highest position is approximately 408 feet. A distinction was drawn between farm-to-market roads versus roads that bear no regular traffic,

Mr. Jerry Lein  
January 7, 2009  
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and only the former are shown, with a buffer of 400 feet. Residences are shown with a buffer zone of 750 feet, which is the minimum the Applicant would tolerate from any layout. However, after some adjustments, the Applicant is pleased to report that the current layout would result in a minimum actual distance between a turbine and residence of 825 feet. A transmission line buffer of 250 feet is shown. A greater buffer than this is not believed to necessary by the Applicant's engineers, or believed to be required by Basin Electric, the owner of the transmission line. Finally, a buffer of 800 feet is shown from the property line of all non-participating landowners. The layout map is the most legible way to present this information, however, turbine GPS coordinates can be submitted if the PSC would like to see that.

(5) Response to Fish & Wildlife Service. Enclosed as Exhibit 4 is a letter sent by the Applicant to the U.S. Fish & Wildlife Service dated December 10, 2008 in response to an earlier comment letter received by FWS. The Applicant believes that all concerns have been adequately addressed. As of this date, no further FWS communications have been received.

(6) Sound levels. Enclosed as Exhibit 5 is a Noise Report Summary prepared by EAPC dated December 10, 2008 with regard to the type of turbine proposed. The report presents the expected sound level at 750 feet (minimum tolerable buffer), 825 feet (minimum actual proposed distance to residence per above), and 1000 feet (per PSC inquiry).

Thank you for your consideration of this material and for the PSC's kind consideration of this application. Please let us know if you will require any further information.

Very truly yours,

WINTHROP & WEINSTINE, P.A.



Norman L. Jones III

Enclosures

cc: Allen C. Hoberg  
Annette Bendish  
Jeff Metzger

**EXHIBIT 1**

**SHPO Approval**



**STATE  
HISTORICAL  
SOCIETY  
OF NORTH DAKOTA**

November 10, 2008

John Hoeven  
Governor of North Dakota

**North Dakota  
State Historical Board**

Albert I. Berger  
Grand Forks - President

Chester E. Nelson, Jr.  
Bismarck - Vice President

Gerold Gerntholz  
Valley City - Secretary

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Secretary of State

Douglass Prchal  
Director  
Parks and Recreation  
Department

Francis Ziegler  
Director  
Department of Transportation

Merlan E. Paaverud, Jr.  
Director

Accredited by the  
American Association  
of Museums

Dr. Richard Rothaus  
Trefoil Cultural and Environmental Heritage  
1965 West Highland Drive  
Sauk Rapids, MN 56379

**NDSHPO REF. : 07-0098c PSC Just Wind/Logan County Wind Farm  
Class I CRI and Identification Efforts (Draft Class III CRI Report)**

Dear Richard:

We have received and reviewed project correspondence and draft report for 07-0098c: "(Draft) Class III Cultural Resources Inventory Logan County Wind Farm, North Dakota," (Richard Rothaus, Trefoil, October 2008) and find it acceptable. We concur with the scope and level of identification efforts for the project completed thus far, and those recommended for remaining portions to be completed in the future.

The management recommendations regarding site avoidance strategies for unevaluated-undetermined sites are acceptable as specified in the Executive Summary and p. 33 of the report. We concur that other isolated finds listed are not significant and are not eligible for listing in the National Register of Historic Places as specified in the report (p. 33).

We look forward to reviewing the NDCRS site forms, the final report covering the investigations with NDCRS SITS assignments, and with significance and effect determinations provided. A Management Summary table would be a useful addition to the report. Thank you and we look forward to further consultation and to further review of outstanding documents regarding the project. If you have questions please contact either Paul Picha at (701) 328-3574 or Susan Quinnell at (701) 328-3576.

Sincerely,

Merlan E. Paaverud, Jr.  
State Historic Preservation Officer (North Dakota)

and  
Director, State Historical Society of North Dakota  
c: Susan E. Wefald, President, Commissioner, PSC with attachment

**EXHIBIT 2**

**WAPA Proposed Upgrades**



**System Impact Study - Projects # GI-0616 & GI-0707A**  
**367 MW of Wind Generation in Logan County, ND**

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Project Review Conference Call  
October 14, 2008



# Project Overview

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- Out of queue order system impact study for two projects:
  - GI-0616: 81 MW Wind Farm
  - GI-0707A: 286 MW Wind Farm
- POI: Approx. 100 miles from Leland Olds on Leland Olds-Groton 345 kV line
- Both projects will comprise Siemens 2.3 MW WTGs
- Proposed in-service date: July 2010
- Study will evaluate collective impact of both wind farms on transmission system performance





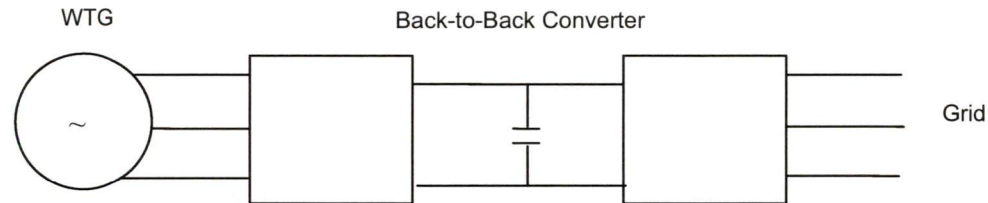
# System Impact Study Scope

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- Steady-State Analysis
- Stability Analysis
- Constrained Interface Analysis
- Short-Circuit Analysis
- Voltage Stability Analysis
- Study timeframe: 2011
- NMORWG Package: May 5, 2008 Package

# Description of Proposed Wind Farms

- Siemens 2.3 MW WTG comprises of induction generator coupled to grid via full-power back-to-back converter



- Power rating: 2.3 MW; Voltage rating: 690 V
- 690V/34.5 kV GSU to step-up voltage to collector system – each wind farm will have its own collector system network
- 34.5/345 kV substation transformers to step-up voltage at POI to 345 kV – each wind farm will have its own substation transformers
- WTG can be operated in reactive current control mode -or- voltage control mode (voltage regulated at 690 V terminals); For study purposes voltage control mode is assumed



## Study Status

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- Ad hoc Kickoff Call – May 15, 2008
- Change in wind turbine generator type from Mitsubishi to Siemens 2.3 MW – July 30, 2008
- Preliminary report issued September 15, 2008
- Stability analysis is in progress



# Steady-State Analysis – Model Development

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- North Dakota Coal Fields generation at Cruise
- B10T is modeled at 165 MW South
- Ft Peck at max - 66410 @ 42 MW, 66414 @ 48 MW & 66415 @ 49 MW
- Oahe #7 at max - 66558 @ 97 MW
- Increased load at Baker 115 to 43.6 MW (67305)
- Western North Dakota Projects:
  - Williston-Watford City-Charlie Creek 230 kV line
  - Belfield-Rhame 230 kV line
  - Williston-Tioga 230 kV line
- 2080 Improvements:
  - 60 MVar capacitor addition at Groton 115
  - 75 MVar capacitor addition at Watertown 230
- NWPS Mitchell Area Improvements
  - Letcher-Mitchell 115 kV line
  - Utica-Menno Jct. 115 kV line
- Keystone Loads and Improvements
- SW MN Wind at 1200 MW
- Series compensation modeled on the LGS-Wilmarth 345 kV line
- Several prior-queued projects (see next slide)
- Both wind farms dispatched against generation in MISO footprint

Table 4.1: Prior Queued Projects Included in 2011 Summer Peak Case

IS Queue #	MISO Queue #	Queue Date	Point of Interconnect / County	ST	Net Plant Max MW Summer/Winter	In Service Date	Type of Gen. (Fuel)	POI Bus No.	Gen. Bus No.	Comment
(GI-0101a) Done	36922-03	31-Jan-01	Rapid City / Pennington	SD	200		N/A	67268-67269		RCDC (200 MW East)
(GI-0208) Done	37427-01	20-Jun-02	Edgeley / LaMoure	ND	40		Wind	67280	67292	
(GI-0209) Done	37427-02	20-Jun-02	Ft Thompson / Buffalo	SD	40		Wind	67281	67293	
(GI-0218) Done	37596-01	06-Dec-02	Clark / Clark	SD	46 7.5		Waste Heat	66291	67278	
(GI-0219) Done	37596-02	06-Dec-02	Watertown / Codington	SD	46 7.5		Waste Heat	66224	67279	
(GI-0314) Done	37774-02	03-Jun-03	Aberdeen / Brown	SD	8		Waste Heat	66290	67277	
(GI-0315) Done	37775-01	13-Jun-03	Solen / Morton	ND	8		Waste Heat	66257	67276	
(GI-0316) Done	37837-03	04-Aug-03	Groton / Brown	SD	120		Gas	66512	67274	Groton 1
(GI-0327) Done	37949-01	24-Nov-03	Flandreau / Moody	SD	20 10		Diesel	66505	66229	
(GI-0508)	38460-01	18-Apr-05	Bism-Garr 230kV #1 / Burleigh	ND	50		Wind	67283	67295	Wilton 1, Out of queue study
(GI-0608)	38912-03	14-Jul-06	Groton / Brown	SD	120		Gas	66512	67274	Groton 2, Out of Queue SIS
(TI-0301)	37721-01	10-Apr-03	White / Brookings	SD	N/A		TI	In-Service	In-Service	Transmission Int.
G132	37151-01	17-Sep-01	Dickey	ND	180		Wind	67396	67399	
G255 & G176	37517-01	18-Sep-02	Brookings	SD	100 each		Wind	60381	G255: 60071,-74 G176: 90176	Ridge Wind
G256	37519-01	20-Sep-02	Dawson	MT	45		Gas	67332	67332	
G291	37657-01	05-Feb-03	LaMoure	ND	19		Wind	63159	63161	
G370	37911-02	17-Oct-03	Minnehaha	SD	205		Gas	60129	60058	Anson #4
G408	38048-01	02-Mar-04	McHenry	ND	12		Wind	63089	63087	Velva Wind
G502	38425-01	14-Mar-05	Oliver	ND	50		Wind	66756	61603	Oliver 1
G767	39161-01	20-Mar-07	Fallon	MT	30		Wind	67394	67393	Diamond Willow Plant
GM0100/200	38971-03	11-Sep-06	Cavalier	ND	100		Wind	66709	66881	Langdon Wind
GS659	38915-01	17-Jul-06	Oliver	ND	50		Wind	66756	61606	Oliver 2
(GI-0404)	38131-03	24-May-04	Killdeer / Dunn	ND	8	Fall 2008	Waste Heat			
(GI-0405)	38131-04	24-May-04	White / Brookings	SD	8	Fall 2009	Waste Heat			
(GI-0503)	38380-03	28-Jan-05	Minot / Ward	ND	100	Fall 2009	wind			
(GI-0614a)	38974-01	14-Sep-06	Culbertson / Roosevelt	MT	10	Fall 2009	waste heat			
(GI-0615)	39008-01	18-Oct-06	Bism-Garr 230kV #1 / Burleigh	ND	50	Fall 2008	wind			
(GI-0619)	39070-02	19-Dec-06	Leland Olds-Groton 345 / Dickey	ND	300	1/10/2010	Wind	67615	90619	
(GI-0704)	39157-01	16-Mar-07	White / Brookings	SD	240	6/1/2012	Gas	66537	67996	Deer Creek Project @ White 345 kV
G531	38534-01	01-Jul-05	Mercer	ND	68	4/1/2009	Coal	63049	63005	NORDAG
G607	38777-01	01-Mar-06	Mercer	ND	25	10/25/2008	Coal	67316	67315	NORDAG
G645	38863-02	26-May-06	Stutsman	ND	50	11/1/2008	Coal	63270	63645	
G710	39059-04	08-Dec-06	McIntosh	ND	10	1/1/2008	Waste Heat	67395	67302	NORDAG 2A

~green highlight is in-service

~yellow highlight will be in service by 2011 and already studied.

**Table 4.2: List of Excluded Projects - 2011 Summer Peak Case**

IS Queue #	MISO Queue #	Queue Date	Point of Interconnect / County	ST	Net Plant Max MW	In Service Date	Type of Gen. (Fuel)	POI Bus No.	Gen. Bus No.	Comment
(GI-0512)	38593-01	29-Aug-05	Edgeley-Ordway 115kV / Dickey	ND	49.5	10/1/2007	Wind	67280	99015	
G248	37488-01	20-Aug-02	Dickey	ND	19	12/1/2003	Wind	67327	90327	Ellendale Wind
G359	38073-01	27-Mar-04	Dickey	ND	150	12/1/2005	Wind	67389	97390	
G392	38020-01	03-Feb-04	Grant	SD	600	12/1/2013	Coal	63314	63317	Big Stone II with Alternative I Transmission (230 kV)
G622	38827-01	20-Apr-06	Dickey	ND	150	9/1/2007	Wind	67023	67023	NORDAG 2
G624	38832-01	25-Apr-06	McIntosh	ND	150	6/1/2008	Wind	67394	67024 & 68024	NORDAG 2
G690	39006-01	16-Oct-06	Dickey	ND	200	12/1/2008	Wind	90060	90062	NORDAG 2
G713	39062-02	11-Dec-06	Dickey	ND	200	12/1/2008	Wind	67396	90046	NORDAG 2

# Steady-State Analysis – Procedure

- Evaluated impact under system intact and N-1 contingency case conditions
- Transmission facilities rated 110 kV and above monitored in the WAPA, OTP, GRE, MP, XEL and MH control areas
- Significantly Affected Facilities (SAF) identified using following criteria:
  - System intact conditions: 100% Rate A and 5% TDF
  - N-1 contingency conditions: 100% Rate A and 3% TDF
  - Voltage criteria:

System	Base kV	System Intact Conditions		N-1 Contingency Conditions	
		Max (pu)	Min (pu)	Max (pu)	Min (pu)
Northern MAPP	110-500 kV	1.05	0.95	1.10	0.90
MP (Area 608)	110-500 kV	1.05	1.00	1.05	0.95
MP Western Division (Area 610)	115-230 kV	1.05	0.96	1.05	0.92
OTP (Area 626)	230-345 kV	1.05	0.97	1.10	0.92
	115 kV	1.07	0.97	1.10	0.92

- SAFs screened to identify local area injection constraints
- SAF Criteria: Facilities in electrical vicinity of Leland Olds & Groton substations



# Steady-State Analysis – Main Findings

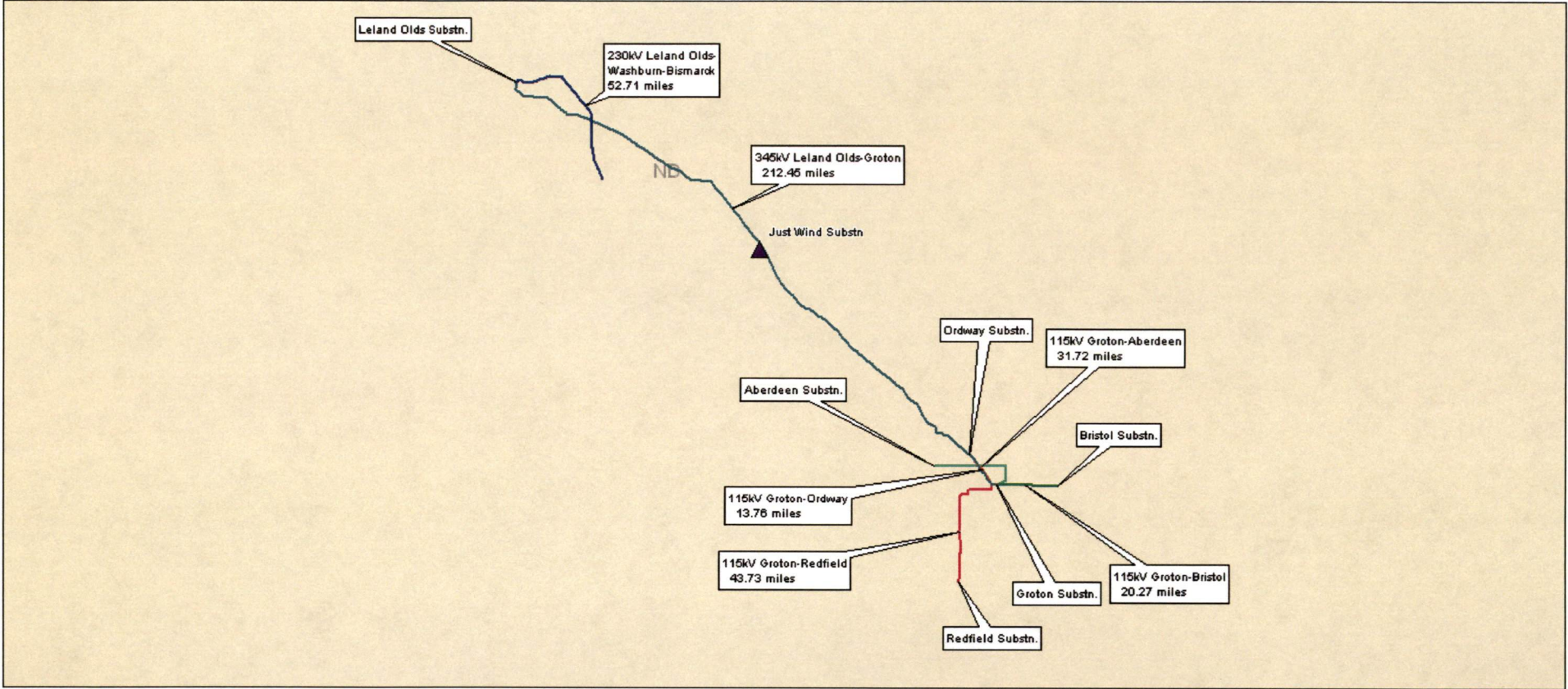
- Addition of proposed wind farms adversely impacts transmission system performance, both under system intact and contingency conditions
- Significantly Affected Facilities shown in Tables 4.3 to 4.5 of report
- Injection Constraints:
  - Leland Olds 345/230 kV transformer #1 (Rate A=250 MVA; Rate C=300 MVA): Loss of transformer #2 overloaded this transformer above Rate C rating in post-project case. Post-contingency loadings are 280 MVA (pre-project) and 368 MVA (post-project)
  - Leland Olds – Washburn – Bismark 230 kV line (Rate A=319 MVA; Rate C=351 MVA): Most limiting contingency is the loss of the 345 kV segment between Groton and the GI-0619 wind farm. Corresponding post-contingency loadings are 312 MVA (pre-project) and 364 MVA (post-project). The conductor rating on the Leland Olds – Washburn - Bismark 230 kV line however, is 398 MVA (Rate B in the power flow case), thus suggesting that this loading should be of no major concern (i.e., probably the result of terminal equipment such as a wavetrap or a current transformer).
  - Groton-Bristol 115 kV line: This transmission line (Rate A =120 MVA, Rate C=122 MVA) became overloaded following the loss of the Groton-Watertown 345 kV line. Post-contingency loadings are 134 MVA (pre-project) vs. 153 MVA (post-project). The overload may be addressed by upgrading or reconductoring the transmission line.
  - Groton-Ordway 115 kV line: This transmission line (Rate A =80 MVA, Rate C=88 MVA) is overloaded following the loss of the Groton-Watertown 345 kV line. Post-contingency loadings are 79 MVA (pre-project) and 90 MVA (post-project). The Rate B conductor rating on this line is 125 MVA. Mitigation of the post-project overload may require terminal equipment replacement/adjustment.
  - Groton-Redfield 115 kV line: As above, this transmission line (Rate A =80 MVA, Rate C=88 MVA) is overloaded following the loss of the Groton-Watertown 345 kV line. Post-contingency loadings are 91 MVA (pre-project) and 118 MVA (post-project). The Rate B conductor rating on this line is 128 MVA. Mitigation of this overload may require terminal equipment replacement/adjustment.
  - Groton-Aberdeen 115 kV line: This transmission line (Rate A=120 MVA, Rate C=132 MVA) is overloaded following the loss of the Groton-Watertown 345 kV line. Corresponding post-contingency loadings are 145 MVA (pre-project) and 176 MVA (post-project). The Rate B conductor rating on this line is 178 MVA. Mitigation of this overload may require terminal equipment replacement/adjustment.



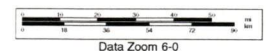
# Mitigation of Injection Constraints

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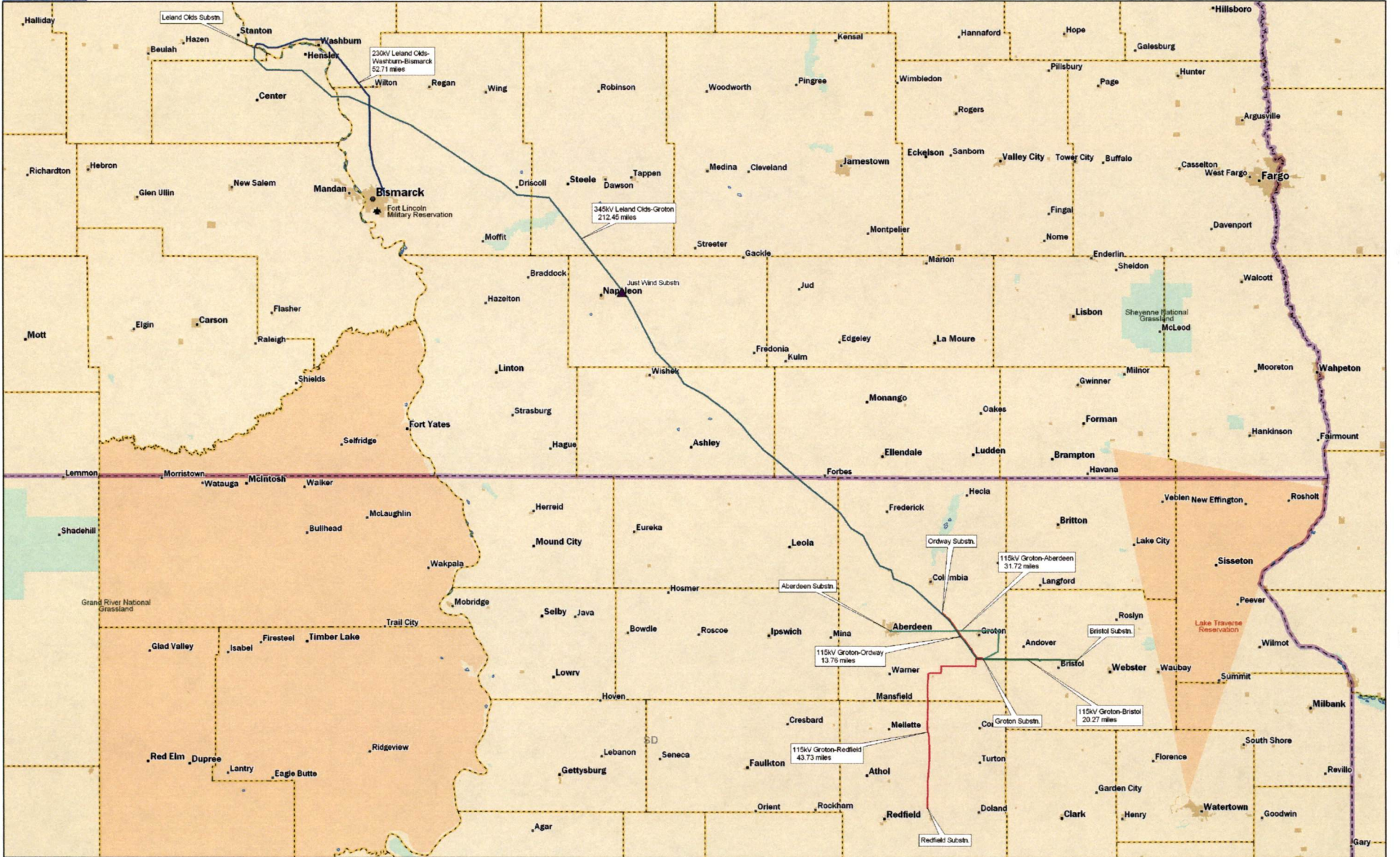
- Replace Leland Olds 345/230 kV transformer #1 with larger transformer (say 400 MVA)
- Upgrade / reconductor Groton – Bristol 115 kV line to allow a post-contingency loading of at least 155 MVA
- Terminal equipment replacements / adjustments are required on the following facilities to allow increase to corresponding conductor loading limit (Rate B):
  - Leland Olds – Washburn – Bismark 230 kV line
  - Groton – Ordway 115 kV line
  - Groton – Redfield 115 kV line
  - Groton – Aberdeen 115 kV line



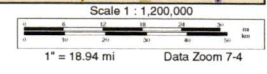
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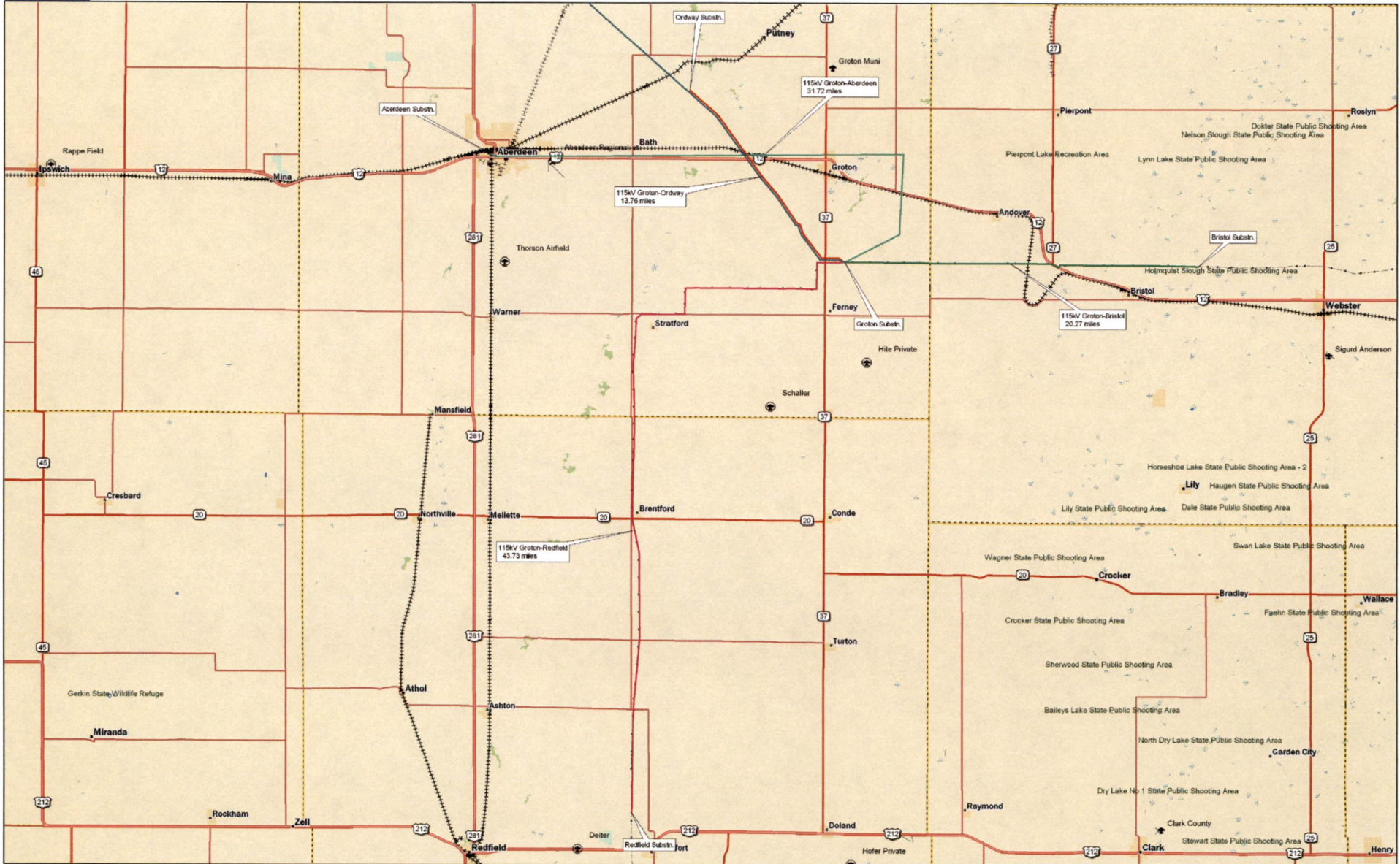


Data Zoom 6-0

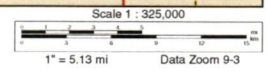


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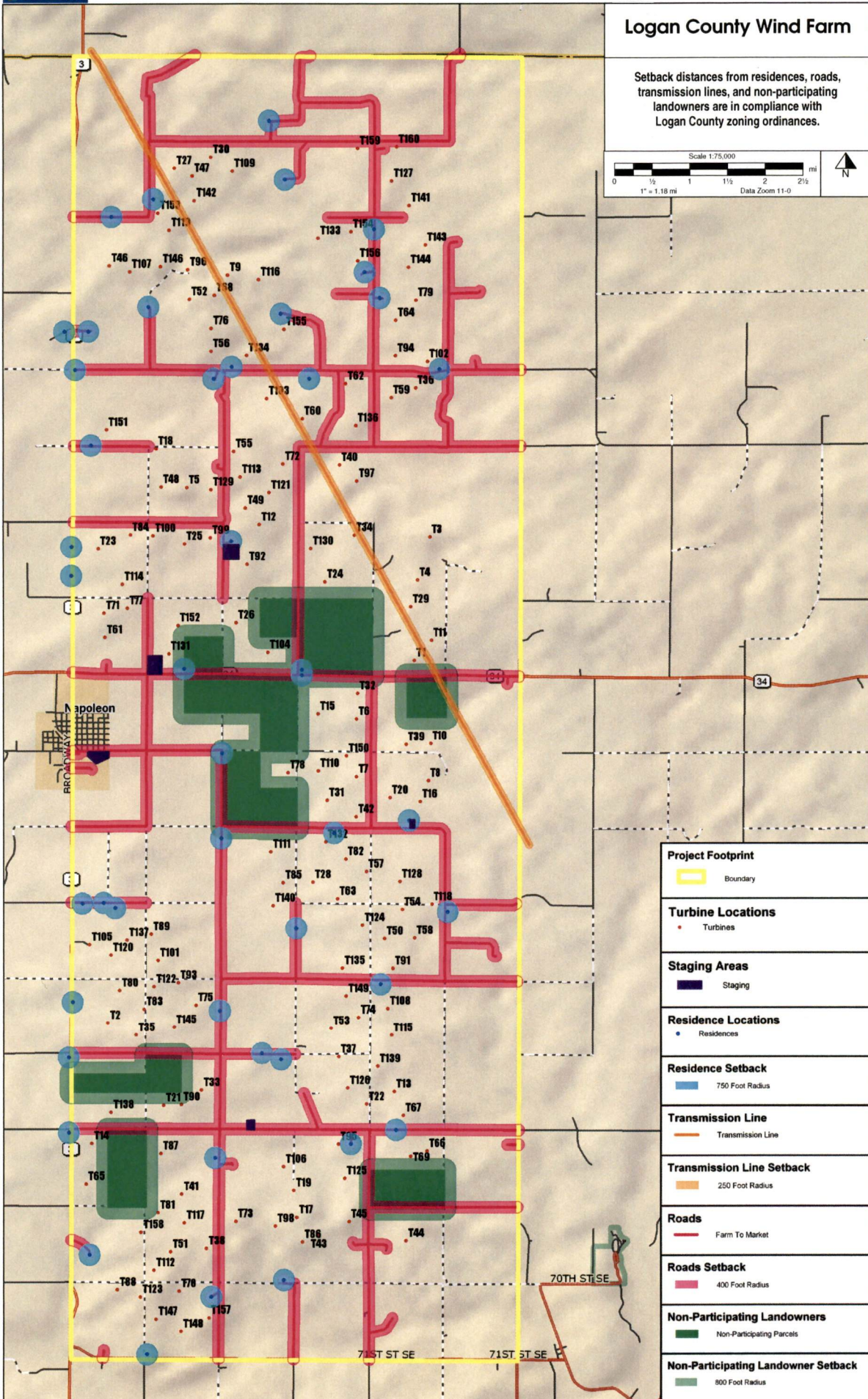
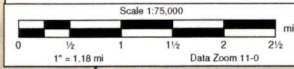


**EXHIBIT 3**

**Map of Turbines, Staging Areas and Buffer Zones**

# Logan County Wind Farm

Setback distances from residences, roads, transmission lines, and non-participating landowners are in compliance with Logan County zoning ordinances.



<b>Project Footprint</b>	Boundary
<b>Turbine Locations</b>	Turbines
<b>Staging Areas</b>	Staging
<b>Residence Locations</b>	Residences
<b>Residence Setback</b>	750 Foot Radius
<b>Transmission Line</b>	Transmission Line
<b>Transmission Line Setback</b>	250 Foot Radius
<b>Roads</b>	Farm To Market
<b>Roads Setback</b>	400 Foot Radius
<b>Non-Participating Landowners</b>	Non-Participating Parcels
<b>Non-Participating Landowner Setback</b>	800 Foot Radius

**EXHIBIT 4**

**Letter to U.S. Fish & Wildlife Service**

## Just Wind - Wind Farm Development Minnesota Division

500 Lake Street • Excelsior, Minnesota 55331 Phone (952) 401-7685 Fax (952) 401-7684

December 10, 2008

Jeff Towner  
Field Supervisor  
North Dakota Field Office  
U. S. Fish and Wildlife Service

Re: Logan County Wind Farm

Dear Mr. Towner,

This letter is in response to your April 4<sup>th</sup> 2008 correspondence regarding the Logan County Wind Farm project being developed by Just Wind, LLC and affiliates (the "Developer").

The Developer is in general agreement with most of your letter, as further explained below. The delay in responding has been due mostly to the need to fully think through the endangered species recommendations made in the letter.

After much consideration, the Developer is planning to prepare a Habitat Conservation Plan regarding the Whooping Crane. However, after consultation with our various experts, we understand that this would be the very first HCP prepared by a wind project with regard to the Whooping Crane and we have come to the conclusion that we have no examples and very little data to go on at this time concerning (1) the actual presence and numbers of Whooping Cranes in and through our project footprint, (2) the probable interaction of Whooping Cranes and turbines (based on observed Crane behavior in the footprint) and (3) if there is an impact, whether there is any mitigation reasonable or even possible. In an effort to gain some insight into the first two questions, and produce an HCP that is informed, we have commissioned a Sandhill Crane study which is underway and will be completed next year. The HCP will take that study as a basis. In the meantime, we would welcome any data you have on all three of these issues. In particular, the mitigation strategy, if necessary, has us puzzled and we would welcome good practical ideas for mitigation as you hear about them. We would like to point out that this project contains the construction of no aerial power lines, nor will the Developer have control or ownership of any aerial power lines, so we believe the mitigation strategy will have to be limited to what the Developer actually has legal authority to do.

One further thought on this issue in an effort to understand each other. The letter contains a statement that "Endangered whooping cranes have been documented using roosting habitat in the vicinity of the proposed project area." This was a surprise to us and our consultants whose research indicated that there were no sightings of any Endangered Species in and or around our project site for close to 31 years. At this point, we've been given to understand by FWS that it will not give us the data on that documentation. We understand that the reason not to disclose this data to the general public is out of fear of disturbing the cranes. Where FWS is essentially asking for developers' help to gain data on and protect the cranes, that seems entirely inconsistent with at the same time taking an official position that developers can't be trusted with data on cranes because developers may then intentionally disturb the

cranes. So you'll understand why then the Developer has no choice on the HCP issue but to act only on its own data or data it can actually access.

On other topics raised in your letter, we are proud to be able to say that in our efforts to produce an environmentally friendly project, we did our best to stay out of native prairie grasslands, any Federal Grass Land Easement areas, and any Wetland Basins.

As to **Fish and Wildlife Service Property Interests**, we have been in constant contact with Mr. Mick Erickson of the Service regarding our project. There are no Waterfowl Production Areas in our project footprint, we have avoided all Federal Grassland Easement areas, and have been working with Mr. Mick Erickson to avoid wetland Basins, and have tried to have minimal impact to Native Prairie Grassland areas. This section of your letter states that the comments and suggestions are made in an attempt to accomplish three goals: 1) Avoid impacts to Service grassland and wetland easements in the project area as much as possible. We believe we can satisfy FWS that we have done this. 2) If unavoidable, ensure that any proposed turbine and associated infrastructure impacts (roads, buried collection lines, transmission lines, sub-station, etc.) on any Service easement areas are kept to an absolute minimum. We have worked in cooperation with Mr. Erickson to ensure this. 3) Investigate all potential alternatives to eliminate or reduce impacts to easement areas to protect the integrity of the easements. We have had both Mr. Mick Erickson and Mr. Terry Ellsworth, both of FWS, out to view our project site, and have explained to them our process for avoiding and or plan to have minimal impact on the known issues presented by the Service. We will of course have FWS inspect and be satisfied with the final layout and diagrams are available to assist in that review.

To summarize this development's history with the FWS prior to your letter, I don't want you to get the impression that we haven't been involving FWS. You should recall that about 2 years ago, early on in our process of developing this project, I made a point to visit with Mr. Terry Ellsworth of the Bismarck office of the Fish and Wildlife Service at his office. At that time Mr. Ellsworth noted how pleased he was because that represented a much earlier consultation with FWS than other projects had done. That line of communication has always been open for FWS to express any concerns. No concerns were expressed until well after a year later with your April 4, 2008.

On at least 2 occasions, we had Mr. Mick Erickson out to review our project as well as Mr. Ellsworth. On all occasions, they commented on how we are doing the right thing and we have a model project, and they thanked us for our effort to work with them. We plan to have ongoing communication with both Mr. Erickson and Mr. Ellsworth regarding our project. So we thought we had involved FWS early and kept it informed. I apologize for the delayed response on your letter.

I hope our approach on these issues is satisfactory to you. If you have any further questions and or comments, please contact me.

Sincerely,  
*Jeffrey L. Metzger*  
President  
Just Wind, LLC  
Cell (612) 245-6608  
jmetzger@just-wind.com

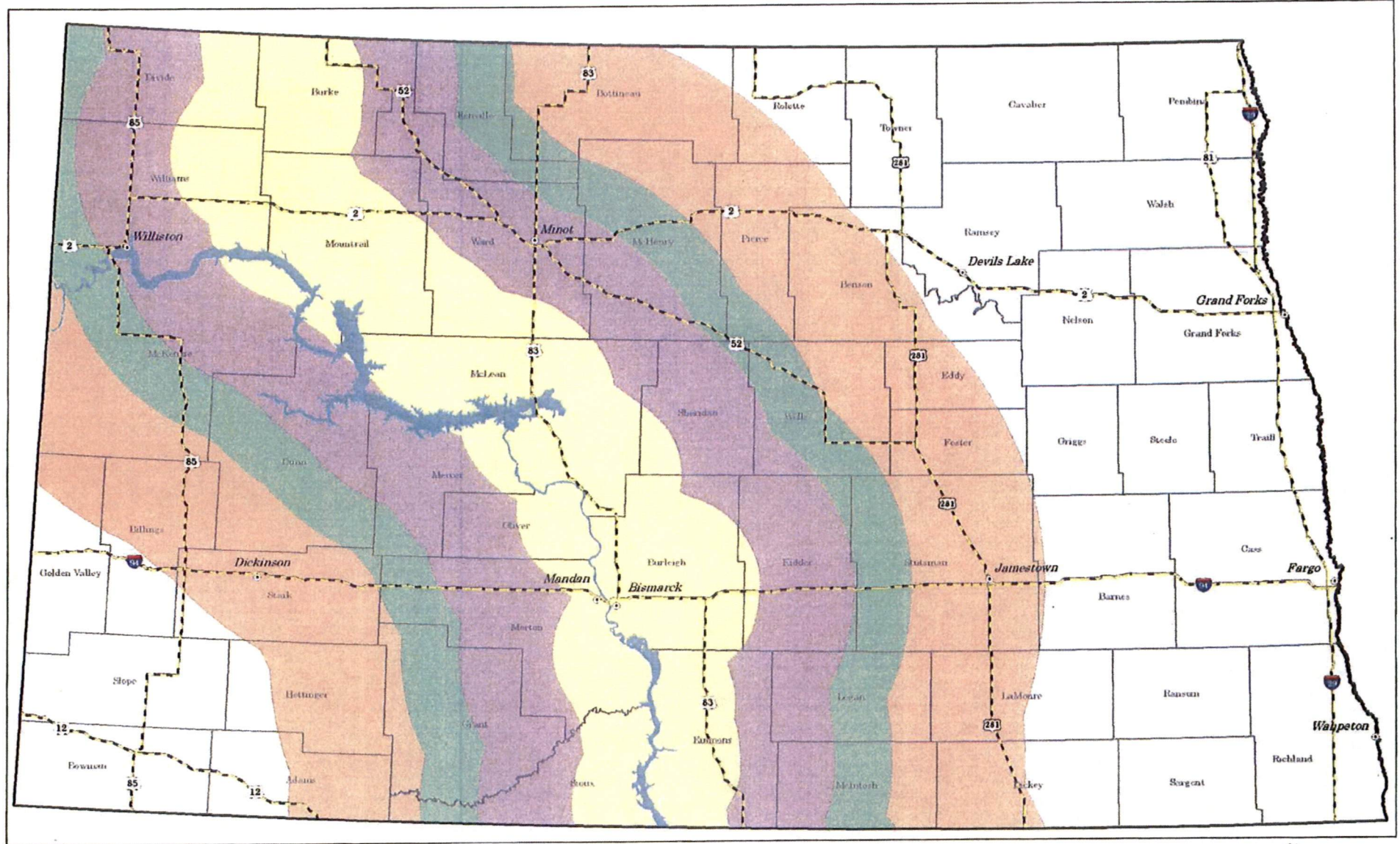




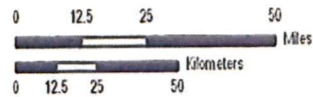
U.S. Fish & Wildlife Service

# Selected Percentages Of Whooping Crane Sightings

North Dakota



PRODUCED BY ECOLOGICAL SERVICES  
 BISMARCK, NORTH DAKOTA  
 MAP DATE: 03/18/08  
 SIGHTINGS THROUGH SPRING 2007  
 FILE: TOWERS\_NOLOCATIONS.MXD



### Map Features

Major Roads	Approx. 50% (40 mile corridor)
County Boundaries	Approx. 75% (80 mile corridor)
Missouri/Yellowstone River System	Approx. 85% (120 mile corridor)
	Approx. 95% (180 mile corridor)



**EXHIBIT 5**

**Noise Report Summary**

4246232v1



# Siemens-2.3-93 Noise Report Summary

## Napoleon, North Dakota

**Distribution:  
Client's Discretion**

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December 10,  
**2008**

**Submitted By:**

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### **Report Update**

EAPC bears no responsibility to update this report for any changes occurring subsequent to the final issuance of this report.

### **Revision History**

Revision No.	Revision Purpose	Date	Revised By
0	Original	12-10-2008	B. Storm

## ***EXECUTIVE SUMMARY***

EAPC was hired by Just Wind to calculate noise values from a single Siemens-2.3-93 turbine at set distances (750, 825, and 1,000 ft). To do so, the WindPRO DECIBEL module<sup>1</sup> was utilized. A representative turbine on fairly flat ground from the proposed Napoleon wind farm was selected (Turbine 16) for the noise calculations.

Within WindPRO, twelve noise sensors were placed around Turbine 16, four at each of the distances desired. The noise calculations were based on ISO Standard 9613-2 (General) using an assumed average wind speed of 8 m/s. All assumptions used in the calculations can be found within the WindPRO DECIBEL report in Appendix A. All four noise sensors were averaged together to determine the average noise at the three desired distances (Table 1). Figure 1 depicts the decibel levels from the Siemens-2.3-93 turbine from the above described technique. The full WindPRO DECIBEL report can be found in Appendix A.

Table 1: Decibel levels for sensors used within WindPRO to determine decibel levels of Siemens-2.3-93 Turbine.

Sensor	Distance (ft/m)	Sound Level (dB(A))	Average (dB(A))
A	750 /228.6	50.7	50.7
B	750 /228.6	50.7	
C	750 /228.6	50.7	
D	750 /228.6	50.7	
E	825/251.46	49.9	49.9
F	825/251.46	49.9	
G	825/251.46	49.9	
H	825/251.46	49.9	
I	1,000/304.8	48.2	48.2
J	1,000/304.8	48.3	
K	1,000/304.8	48.2	
L	1,000/304.8	48.2	

<sup>1</sup> WindPRO is the world's leading software tool used for wind farm design.

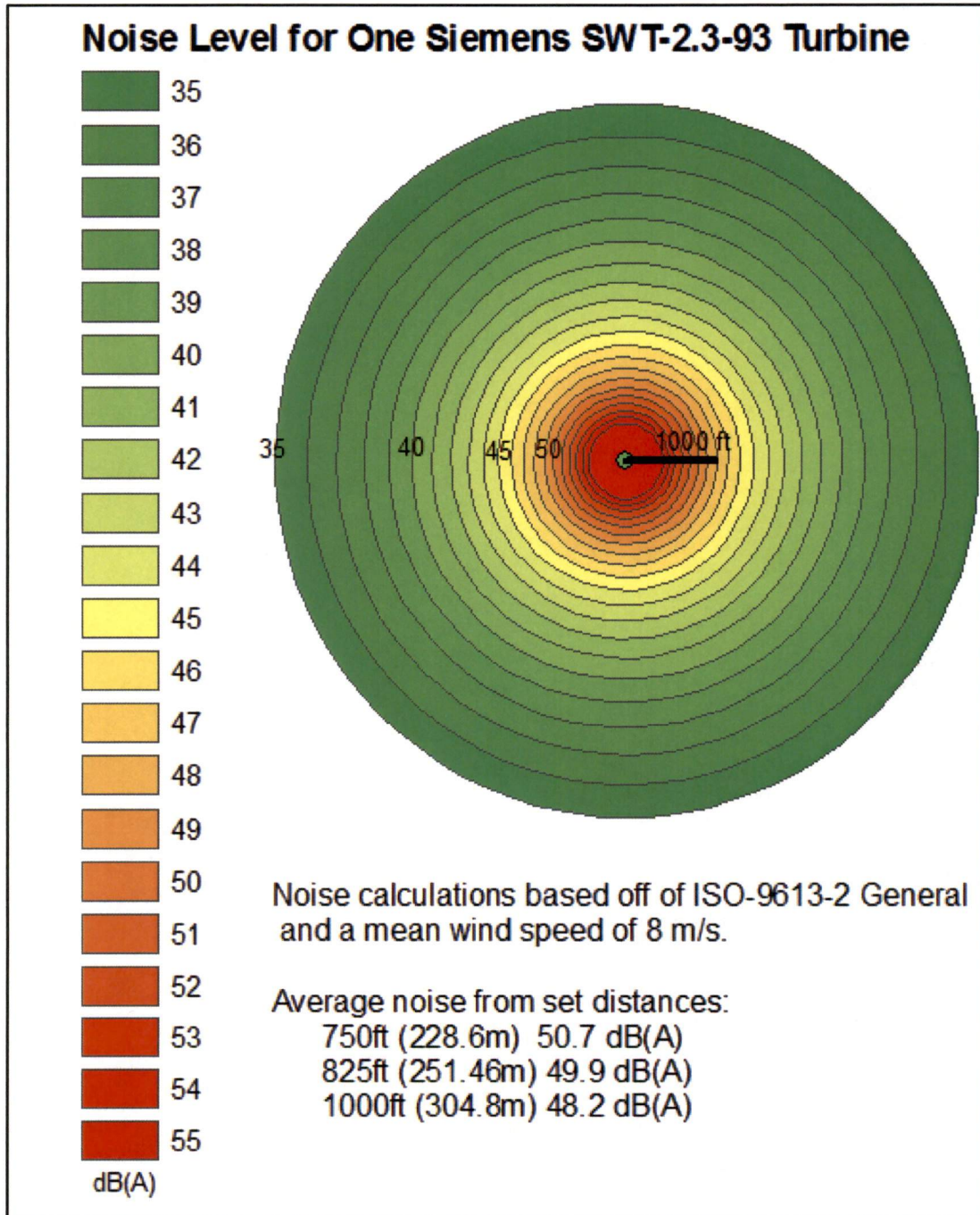


Figure 1: Noise levels versus distance from a Siemens SWT-2.3-93 turbine representative of the Napoleon, ND wind farm. Decibel levels at 750, 825, and 1,000 ft are included as well as general assumptions.