

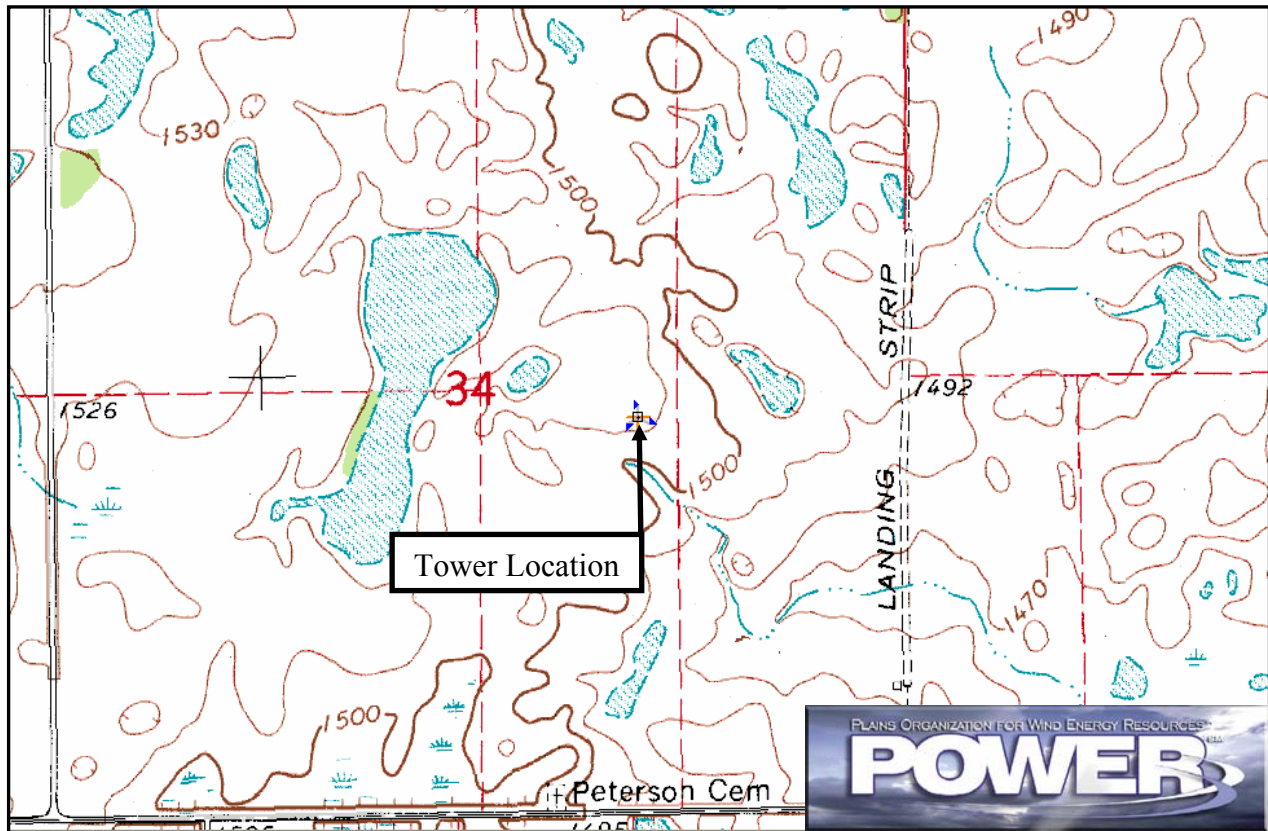
Wind Resource Summary for Luverne Site

Griggs/Steele Wind Development Group, LLC
 Springs^a 2001, 2002, 2003 & 2004

Site Description:

Latitude: N 47° 19' 57"	Township: 145 N
Longitude: W 97° 54' 27"	Range: 57 W
Elevation: 1510 feet	Section: 34
Tower Type: NRG Tilt-up	Tower Height: 131 feet

The monitoring site is 5.7 miles north-northeast of the town of Luverne, North Dakota. The tower is instrumented at three levels: 33 ft (10 m), 98 ft (30 m), and 131 ft (40 m). The site is 3.2 miles east of the Sheyenne River on the Pembina Escarpment. The land around the site is primarily cultivated fields with many small ponds and lakes in the area.



Summary Wind Data:	33 ft AGL ^b	98 ft AGL	131 ft AGL
Mean Wind Speed	14.6 mph	17.1 mph	18.8 mph
Maximum, 60-min Mean Wind Speed	50.3 mph at 131 ft AGL – 5/11/2004 6:00 p.m.		
Estimated Wind Power Class ^c	Class 6 (584 W/m ² at 131 ft AGL)		

^a Spring is defined as the months of March, April and May. Spring 2001 begins with March 2001.

Data recovery rates at 33, 98, and 131 feet were 98%, 96%, and 64%, respectively.

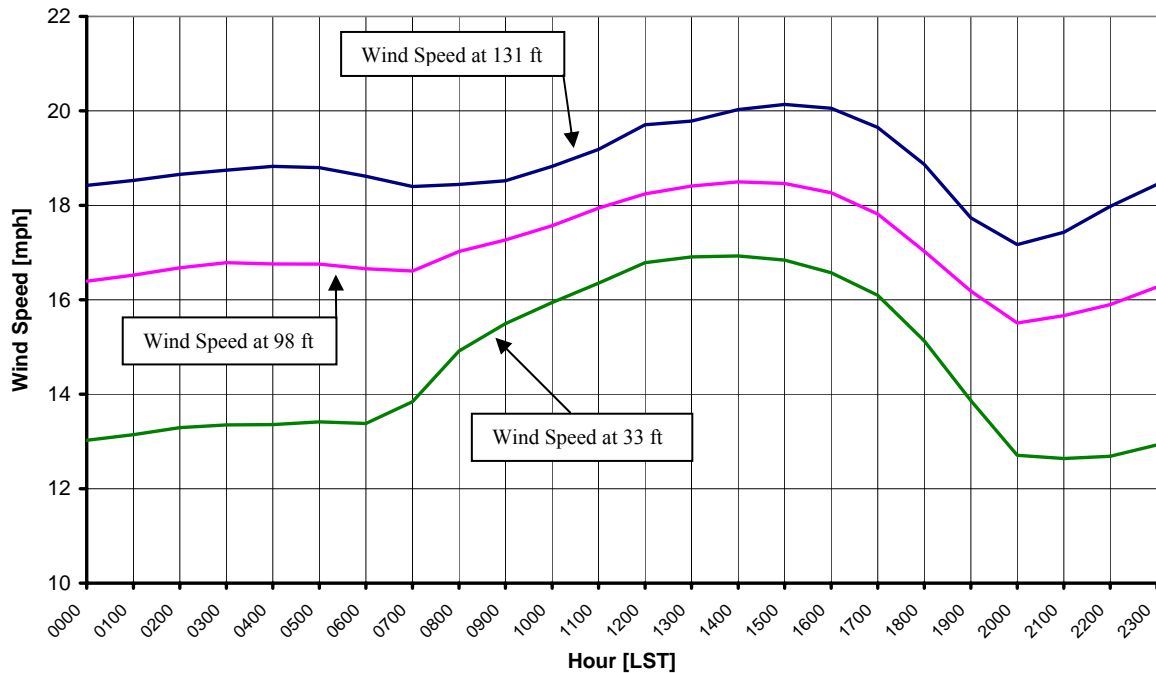
^b Above ground level.

^c Air temperature was not factored into calculations.

Average Hourly Wind Speeds

LST ^d	131 ft AGL		98 ft AGL		33 ft AGL	
	mph	m/s	mph	m/s	mph	m/s
0000	18.4	8.24	16.4	7.33	13.0	5.82
0100	18.5	8.28	16.5	7.38	13.1	5.88
0200	18.7	8.34	16.7	7.45	13.3	5.94
0300	18.7	8.38	16.8	7.51	13.3	5.97
0400	18.8	8.41	16.8	7.49	13.4	5.97
0500	18.8	8.40	16.8	7.49	13.4	6.00
0600	18.6	8.32	16.7	7.45	13.4	5.98
0700	18.4	8.23	16.6	7.42	13.8	6.19
0800	18.4	8.25	17.0	7.61	14.9	6.67
0900	18.5	8.28	17.3	7.72	15.5	6.93
1000	18.8	8.42	17.6	7.85	15.9	7.13
1100	19.2	8.58	17.9	8.02	16.4	7.31
1200	19.7	8.81	18.2	8.16	16.8	7.50
1300	19.8	8.85	18.4	8.23	16.9	7.56
1400	20.0	8.95	18.5	8.27	16.9	7.57
1500	20.1	9.00	18.5	8.25	16.8	7.53
1600	20.1	8.96	18.3	8.17	16.6	7.41
1700	19.6	8.78	17.8	7.96	16.1	7.20
1800	18.9	8.43	17.0	7.61	15.1	6.76
1900	17.7	7.93	16.2	7.24	13.9	6.20
2000	17.2	7.68	15.5	6.93	12.7	5.68
2100	17.4	7.79	15.7	7.00	12.6	5.65
2200	18.0	8.04	15.9	7.11	12.7	5.67
2300	18.4	8.25	16.3	7.27	12.9	5.78

**Griggs/Steele Wind Development Group LLC – Luverne Site
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^d Local standard time.



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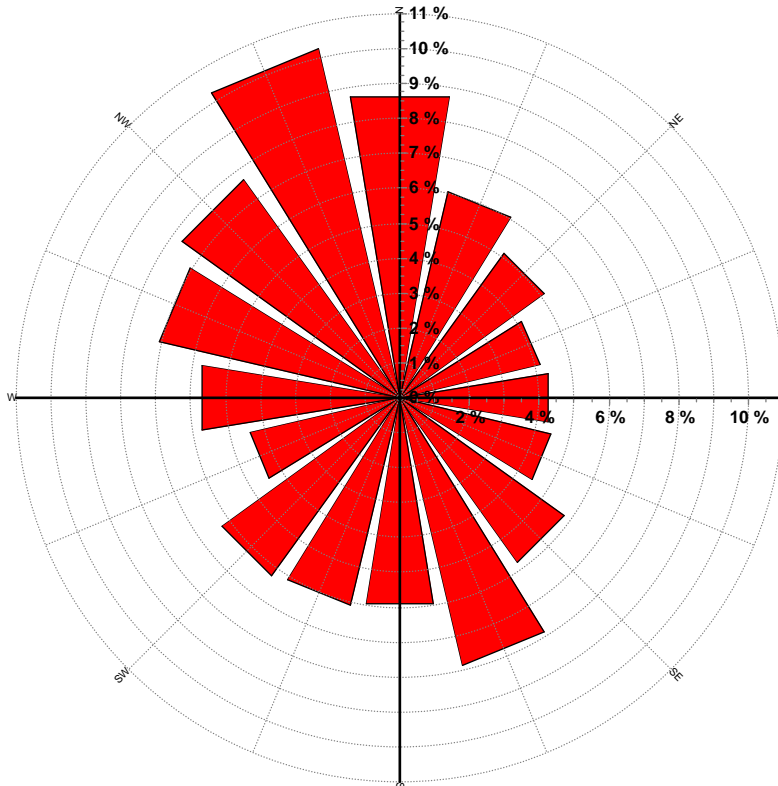
Wind Directional Frequency*

Winds from the... Frequency (%)

NNW	10.3
NW	7.7
WNW	7.1
W	5.7
WSW	4.4
SW	6.3
SSW	6.1
S	6.0
SSE	7.9
SE	5.8
ESE	4.4
E	4.3
ENE	4.1
NE	5.1
NNE	6.1
N	8.8

* Wind direction vane inoperative during Springs 2002, 2003, and 2004.

Griggs/Steele Wind Development Group LLC – Luverne Site
Wind Rose for 131 ft AGL
Spring 2001



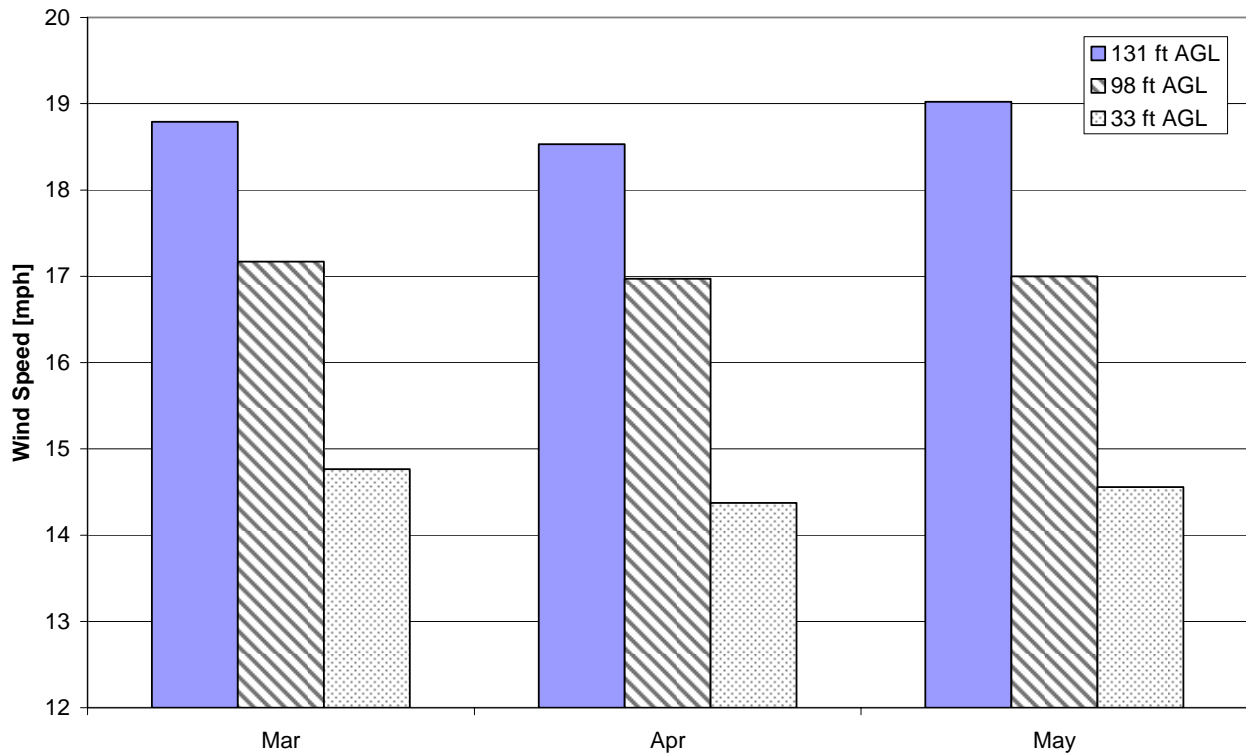
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Monthly Wind Speed Averages

Month	131 ft AGL		98 ft AGL		33 ft AGL	
	mph	m/s	mph	m/s	mph	m/s
Mar	18.8	8.40	17.2	7.68	14.8	6.60
Apr	18.5	8.28	17.0	7.59	14.4	6.43
May	19.0	8.50	17.0	7.60	14.6	6.51

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