

# Wind Resource Summary for Dragswolf Site

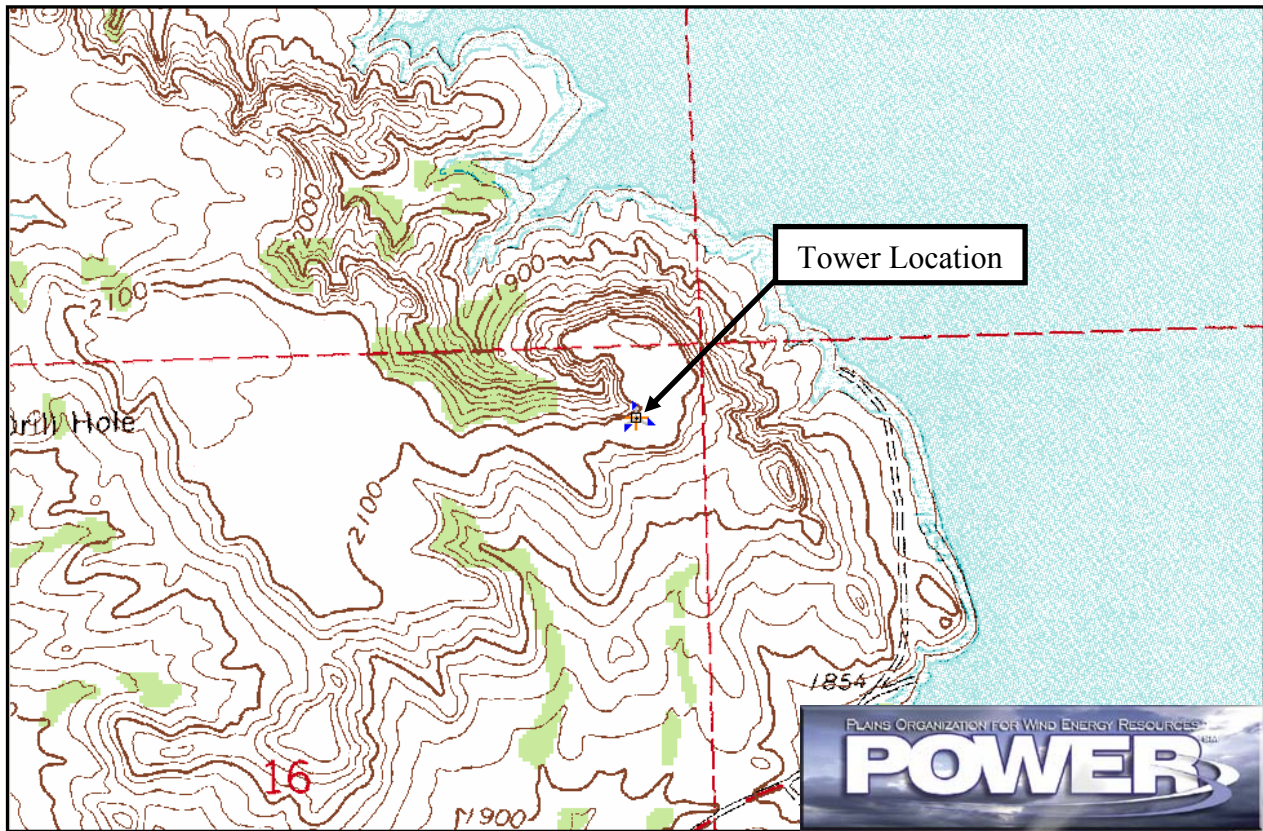
## Three Affiliated Tribes

### Fall<sup>a</sup> 2000

#### Site Description:

Latitude: N 47° 59' 27"	Township: 152 N
Longitude: W 102° 34' 50"	Range: 93 W
Elevation: 2100 feet	Section: 8
Tower Type: NRG Tilt-Up	Tower Height: 131 feet

The monitoring site was installed 4.3 miles west-northwest of New Town, North Dakota. The tower was instrumented at three levels: 33 ft (10 m), 98 ft (30 m), and 131 ft (40 m). The site was situated on a bluff overlooking Lake Sakakawea to the north and west. The vegetation around the site is predominantly grass with trees in the draws.



Summary Wind Data:	33 ft AGL <sup>b</sup>	98 ft AGL	131 ft AGL
Mean Wind Speed	12.7 mph	14.7 mph	15.9 mph
Maximum, 60-min Mean Wind Speed	47.1 mph at 131 ft AGL – 11/1/2000 1:00 p.m.		
Estimated Wind Power Class <sup>c</sup>	Class 4 (411 W/m <sup>2</sup> at 131 ft AGL)		

<sup>a</sup>Fall is defined as the months of September, October and November. Fall 2000 begins with September 2000.

Data recovery rates at 33, 98, and 131 feet were 91%, 90%, and 89%, respectively.

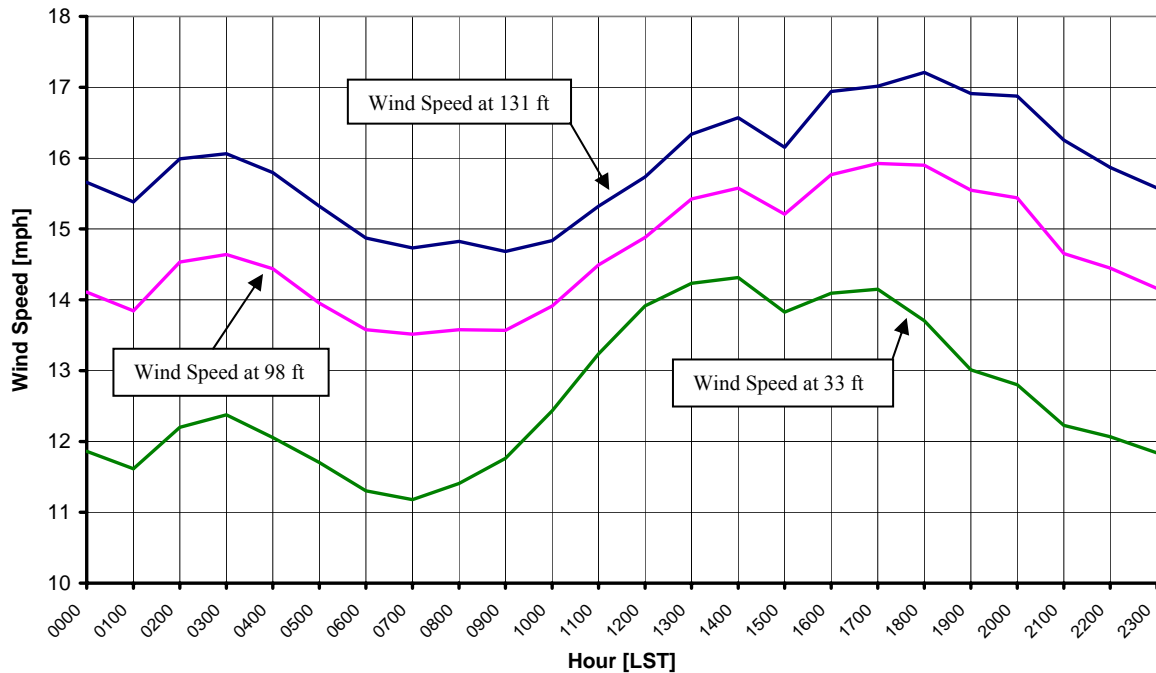
<sup>b</sup> Above ground level.

<sup>c</sup> Air temperature was not factored into calculations.

## Average Hourly Wind Speeds

LST <sup>d</sup>	131 ft AGL		98 ft AGL		33 ft AGL	
	mph	m/s	mph	m/s	mph	m/s
0000	15.7	7.00	14.1	6.31	11.9	5.30
0100	15.4	6.88	13.8	6.19	11.6	5.19
0200	16.0	7.15	14.5	6.50	12.2	5.45
0300	16.1	7.18	14.6	6.54	12.4	5.53
0400	15.8	7.06	14.4	6.45	12.1	5.39
0500	15.3	6.85	14.0	6.24	11.7	5.23
0600	14.9	6.65	13.6	6.07	11.3	5.05
0700	14.7	6.59	13.5	6.04	11.2	5.00
0800	14.8	6.63	13.6	6.07	11.4	5.10
0900	14.7	6.56	13.6	6.06	11.8	5.26
1000	14.8	6.63	13.9	6.22	12.4	5.56
1100	15.3	6.85	14.5	6.48	13.2	5.92
1200	15.7	7.03	14.9	6.65	13.9	6.22
1300	16.3	7.30	15.4	6.89	14.2	6.36
1400	16.6	7.41	15.6	6.96	14.3	6.40
1500	16.2	7.22	15.2	6.80	13.8	6.18
1600	16.9	7.57	15.8	7.05	14.1	6.30
1700	17.0	7.61	15.9	7.12	14.1	6.33
1800	17.2	7.69	15.9	7.11	13.7	6.13
1900	16.9	7.56	15.5	6.95	13.0	5.82
2000	16.9	7.54	15.4	6.90	12.8	5.72
2100	16.3	7.27	14.7	6.55	12.2	5.47
2200	15.9	7.09	14.4	6.46	12.1	5.39
2300	15.6	6.96	14.2	6.33	11.8	5.29

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<sup>d</sup> Local standard time.



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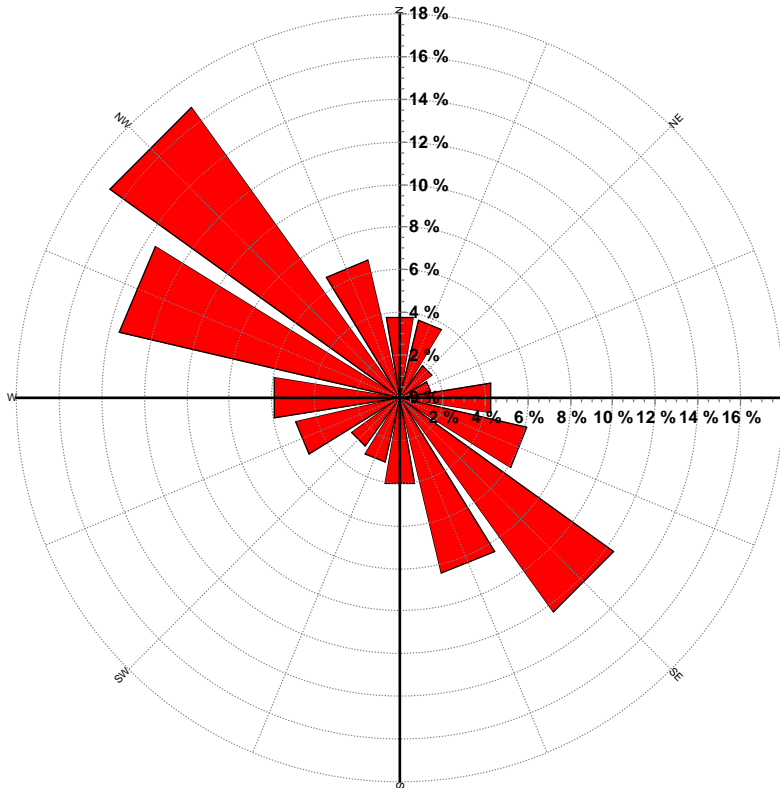
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## Wind Directional Frequency

**Winds from the... Frequency (%)**

NNW	6.6
NW	16.8
WNW	13.5
W	6.0
WSW	5.0
SW	2.8
SSW	3.1
S	4.1
SSE	8.5
SE	12.3
ESE	6.1
E	4.3
ENE	1.5
NE	1.8
NNE	3.7
N	3.8

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Wind Rose for 131 ft AGL  
Fall 2000



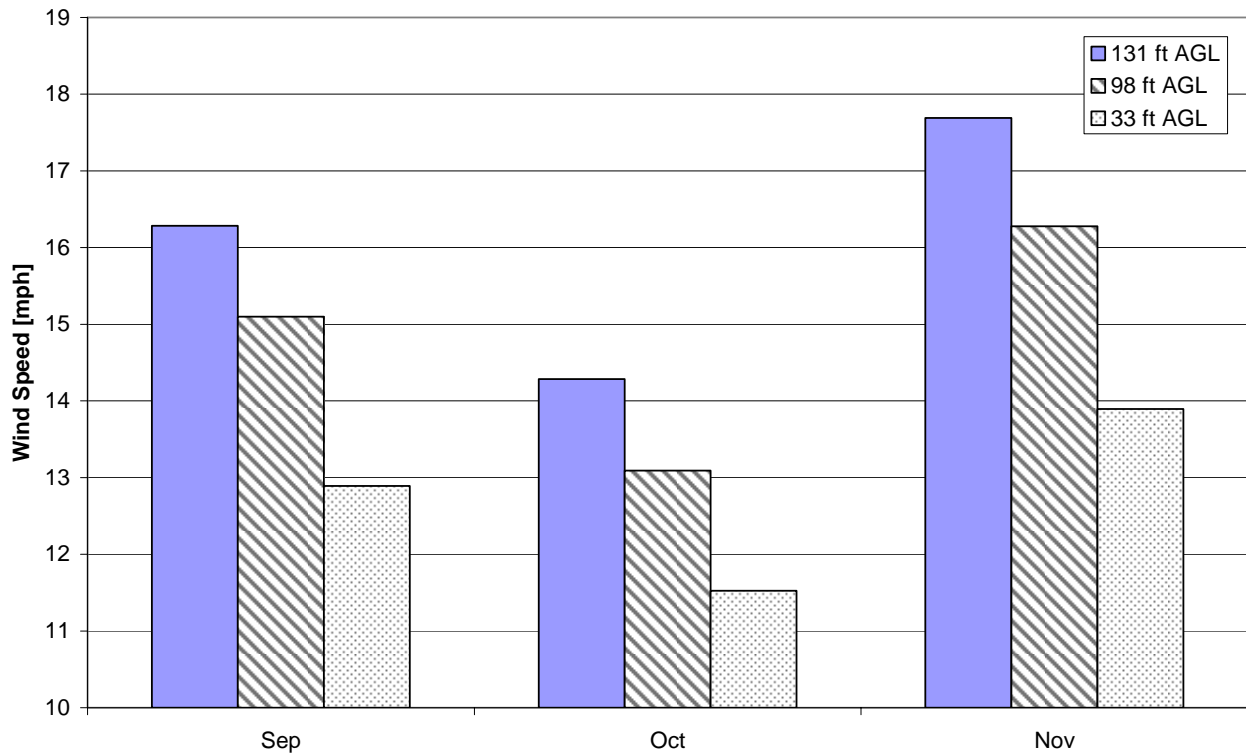
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## Monthly Wind Speed Averages

Month	131 ft AGL		98 ft AGL		33 ft AGL	
	mph	m/s	mph	m/s	mph	m/s
Sep	16.3	7.28	15.1	6.75	12.9	5.76
Oct	14.3	6.39	13.1	5.85	11.5	5.15
Nov	17.7	7.91	16.3	7.28	13.9	6.21

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