

Wind Resource Summary for Bejou Site

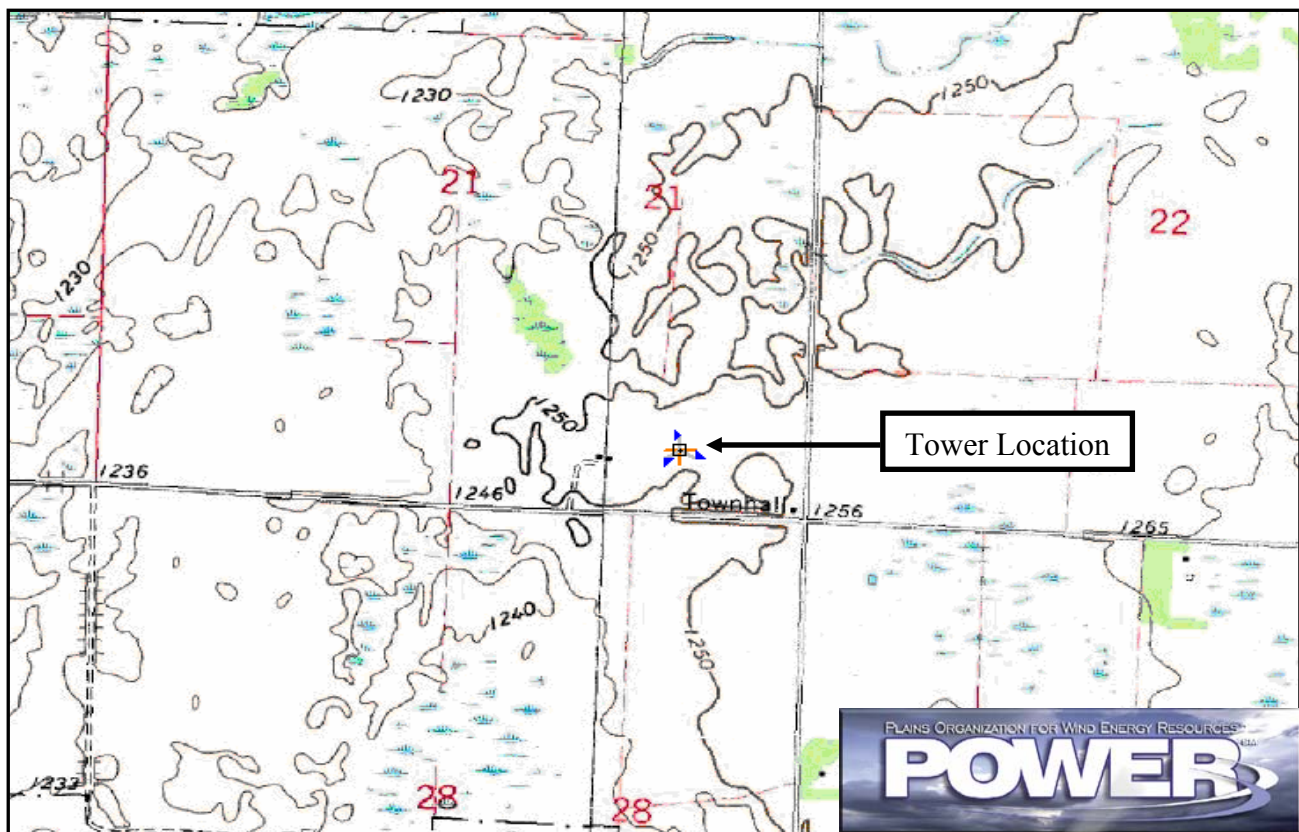
Minnesota Department of Commerce

Monitoring Period:^a 10/10/1996 – 2/27/2001

Site Description:

Latitude: N 47° 26' 33"	Township: 146 N
Longitude: W 95° 52' 22"	Range: 41 W
Elevation: 1,250 feet	Section: 21
Tower Type: NRG tilt-up	Tower Height: 131 feet

The monitoring site was 4.5 miles east of the town of Bejou, Minnesota. The tower was instrumented at 3 levels: 33 feet (10 m), 98 feet (30 m), and 131 feet (40 m). The countryside contains many small lakes and ponds. The majority of land is used for agricultural purposes, primarily for crops.



Summary Wind Data:	33 ft AGL ^b	98 ft AGL	131 ft AGL
Mean Wind Speed	10.0 mph	11.8 mph	12.7 mph
Maximum, 10-min Mean Wind Speed	66.9 mph at 131 ft AGL – 9/1/1997 12:50 a.m.		
Estimated Wind Power Class ^c	Class 2 (194 W/m ² at 131 ft AGL)		

^a Data recovery rates at 33, 98, and 131 feet were 86%, 86%, and 79%, respectively.

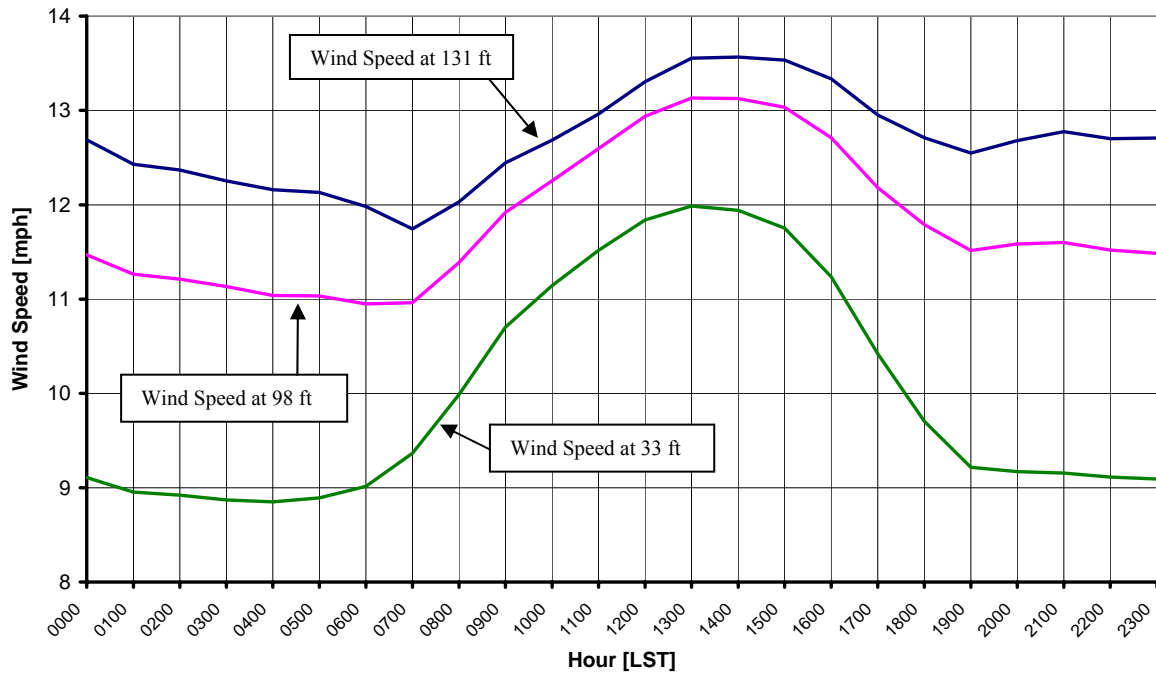
^b Above ground level.

^c Air temperature was not factored into calculation.

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	12.7	5.67	11.5	5.13	9.1	4.07
0100	12.4	5.56	11.3	5.04	9.0	4.00
0200	12.4	5.53	11.2	5.01	8.9	3.99
0300	12.3	5.48	11.1	4.98	8.9	3.97
0400	12.2	5.44	11.0	4.93	8.9	3.96
0500	12.1	5.42	11.0	4.93	8.9	3.98
0600	12.0	5.36	10.9	4.89	9.0	4.03
0700	11.7	5.25	11.0	4.90	9.4	4.19
0800	12.0	5.38	11.4	5.09	10.0	4.46
0900	12.4	5.56	11.9	5.33	10.7	4.78
1000	12.7	5.67	12.3	5.48	11.1	4.98
1100	13.0	5.80	12.6	5.63	11.5	5.15
1200	13.3	5.95	12.9	5.78	11.8	5.29
1300	13.6	6.06	13.1	5.87	12.0	5.36
1400	13.6	6.06	13.1	5.87	11.9	5.34
1500	13.5	6.05	13.0	5.83	11.8	5.25
1600	13.3	5.96	12.7	5.68	11.2	5.02
1700	13.0	5.79	12.2	5.45	10.4	4.66
1800	12.7	5.68	11.8	5.27	9.7	4.34
1900	12.5	5.61	11.5	5.15	9.2	4.12
2000	12.7	5.67	11.6	5.18	9.2	4.10
2100	12.8	5.71	11.6	5.19	9.2	4.09
2200	12.7	5.68	11.5	5.15	9.1	4.07
2300	12.7	5.68	11.5	5.13	9.1	4.06

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10/10/1996 – 2/27/2001



^d Local standard time.



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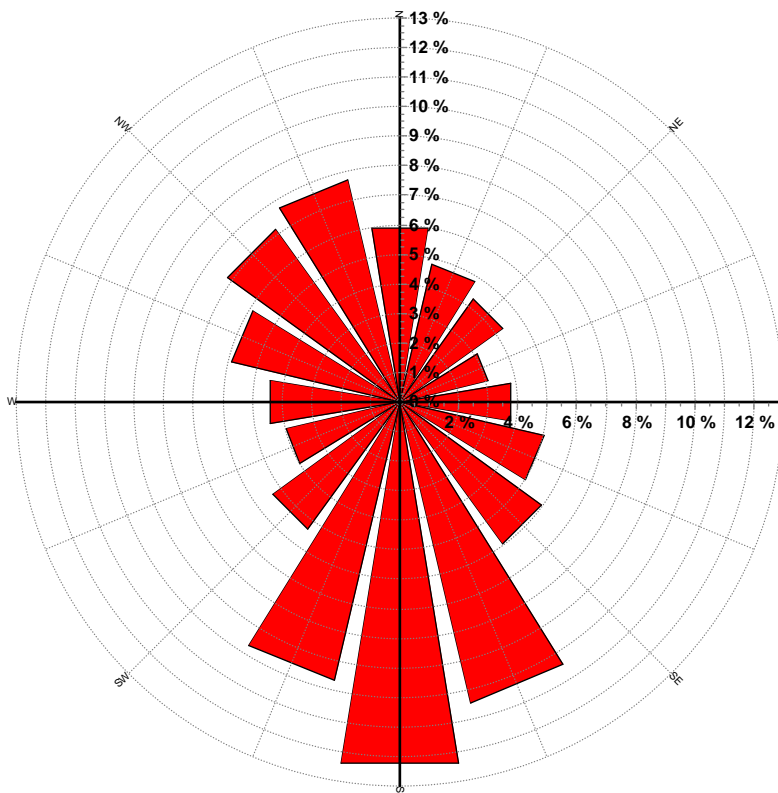
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Wind Directional Frequency

Winds from the... Frequency (%)

NNW	7.7
NW	7.2
WNW	5.8
W	4.4
WSW	4.0
SW	5.3
SSW	9.7
S	12.4
SSE	10.5
SE	5.9
ESE	5.0
E	3.8
ENE	3.1
NE	4.3
NNE	4.8
N	5.9

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Wind Rose for 33 ft AGL
10/10/1996 – 2/27/2001



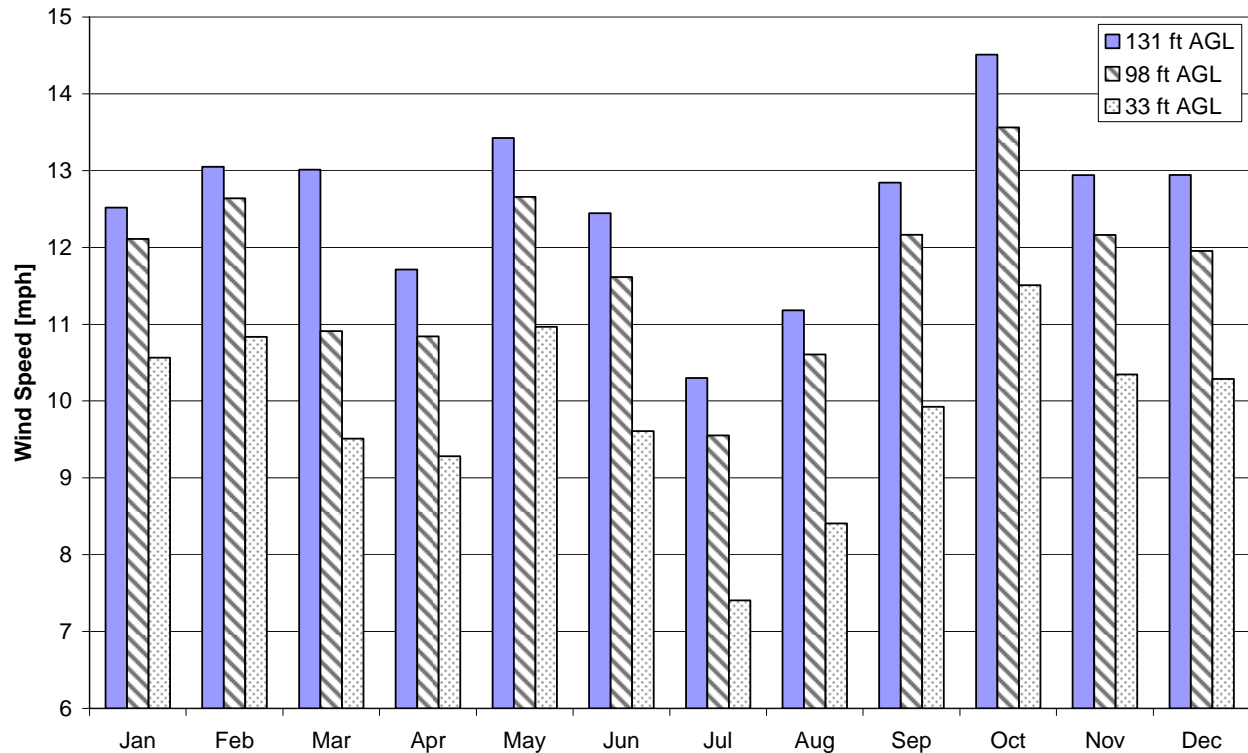
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Monthly Wind Speed Averages

Month	131 ft AGL		98 ft AGL		33 ft AGL	
	mph	m/s	mph	m/s	mph	m/s
Jan	12.5	5.60	12.1	5.41	10.6	4.72
Feb	13.0	5.83	12.6	5.65	10.8	4.84
Mar	13.0	5.82	10.9	4.88	9.5	4.25
Apr	11.7	5.24	10.8	4.85	9.3	4.15
May	13.4	6.00	12.7	5.66	11.0	4.90
Jun	12.4	5.56	11.6	5.19	9.6	4.30
Jul	10.3	4.60	9.6	4.27	7.4	3.31
Aug	11.2	5.00	10.6	4.74	8.4	3.76
Sep	12.8	5.74	12.2	5.44	9.9	4.44
Oct	14.5	6.49	13.6	6.06	11.5	5.14
Nov	12.9	5.78	12.2	5.44	10.3	4.63
Dec	12.9	5.79	12.0	5.34	10.3	4.60

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