

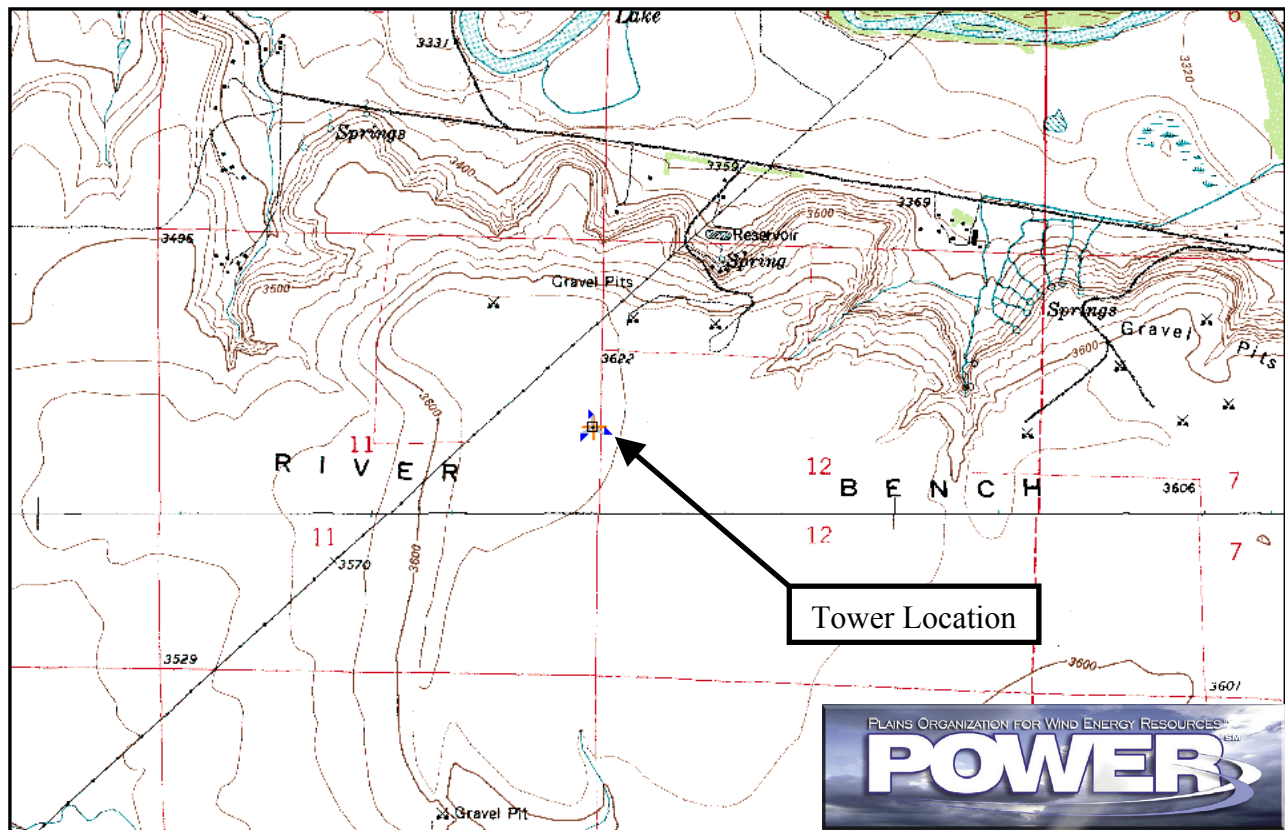
Wind Resource Summary for Great Falls, MT

Annual Summary (Oct. 25, 2002 – Oct. 24, 2003)

Site Description:

Latitude: N 47° 30' 10"	Township: 20 N
Longitude: W 111° 25' 56"	Range: 2 E
Elevation: 3627 feet	Section: 11
Tower Type: NRG Tilt-Up	Tower Height: 131 feet

The tower is approximately 7 miles west of Great Falls, and located on a rim above the Sun River. The site has good exposure to the wind in all directions.

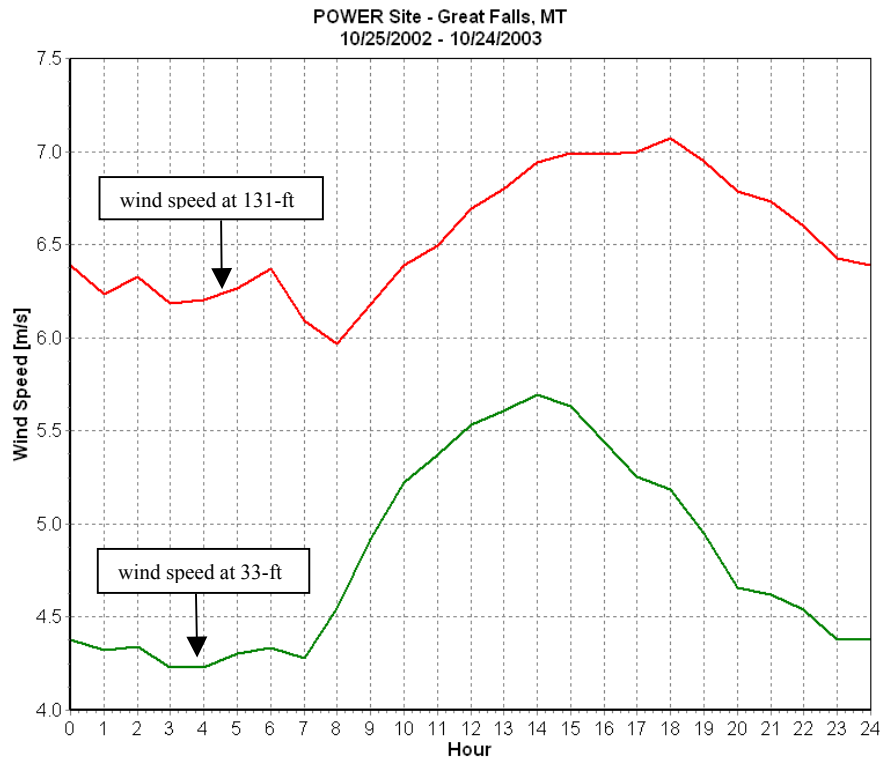


Summary Wind Data:	33 ft AGL ^a	98 ft AGL	131 ft AGL
Mean Wind Speed	10.8 mph	13.2 mph	14.7 mph
Maximum, 10-min Mean Wind Speed	39.3 mph	45.6 mph	49.8 mph
Mean Wind Power Density	141 W/m ²	239 W/m ²	318 W/m ²

^a Above ground level.

Average Hourly Wind Speeds

LST	131-ft AGL	131-ft AGL	33-ft AGL	33-ft AGL
	(m/s)	(mph)	(m/s)	(mph)
0000	6.39	14.3	4.38	9.8
0100	6.23	13.9	4.32	9.7
0200	6.33	14.2	4.34	9.7
0300	6.18	13.8	4.23	9.5
0400	6.20	13.9	4.23	9.5
0500	6.27	14.0	4.31	9.6
0600	6.37	14.3	4.34	9.7
0700	6.09	13.6	4.28	9.6
0800	5.96	13.3	4.55	10.2
0900	6.18	13.8	4.92	11.0
1000	6.39	14.3	5.22	11.7
1100	6.50	14.5	5.37	12.0
1200	6.69	15.0	5.53	12.4
1300	6.80	15.2	5.61	12.5
1400	6.94	15.5	5.69	12.7
1500	6.99	15.6	5.63	12.6
1600	6.99	15.6	5.44	12.2
1700	7.00	15.6	5.25	11.7
1800	7.07	15.8	5.19	11.6
1900	6.94	15.5	4.95	11.1
2000	6.79	15.2	4.66	10.4
2100	6.73	15.1	4.62	10.3
2200	6.60	14.8	4.54	10.2
2300	6.42	14.4	4.38	9.8

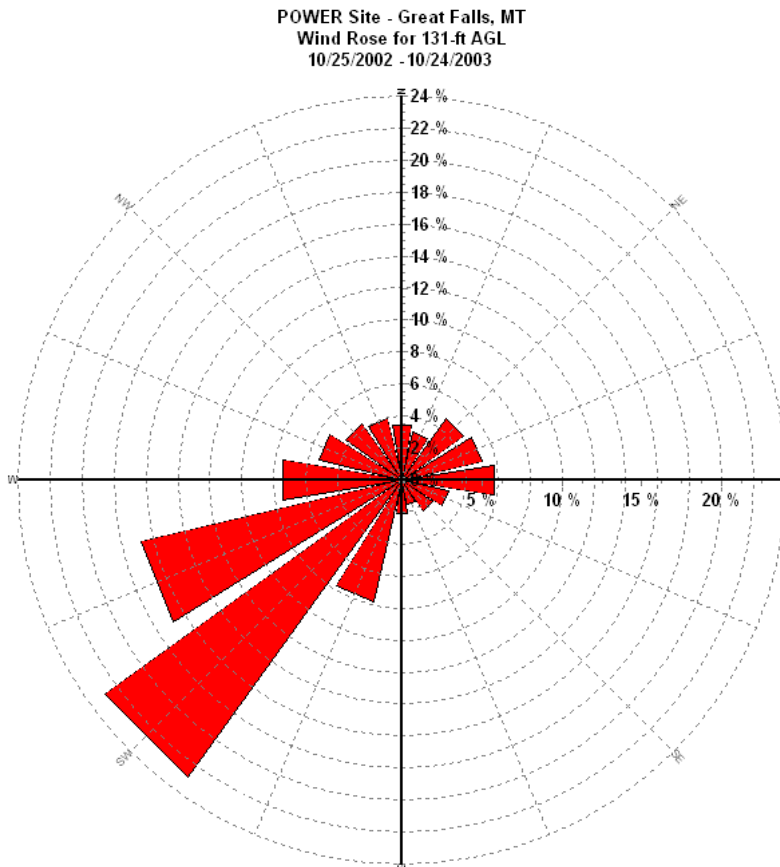


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701-777-5000 or wind@undeerc.org

Wind Directional Frequency

Winds from the... Frequency (%)

NNW	4.0
NW	4.3
WNW	5.4
W	7.6
WSW	16.8
SW	22.9
SSW	7.8
S	2.1
SSE	1.6
SE	2.3
ESE	3.0
E	5.8
ENE	5.1
NE	4.7
NNE	3.1
N	3.5



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