

# Wind Resource Summary for Walden Site

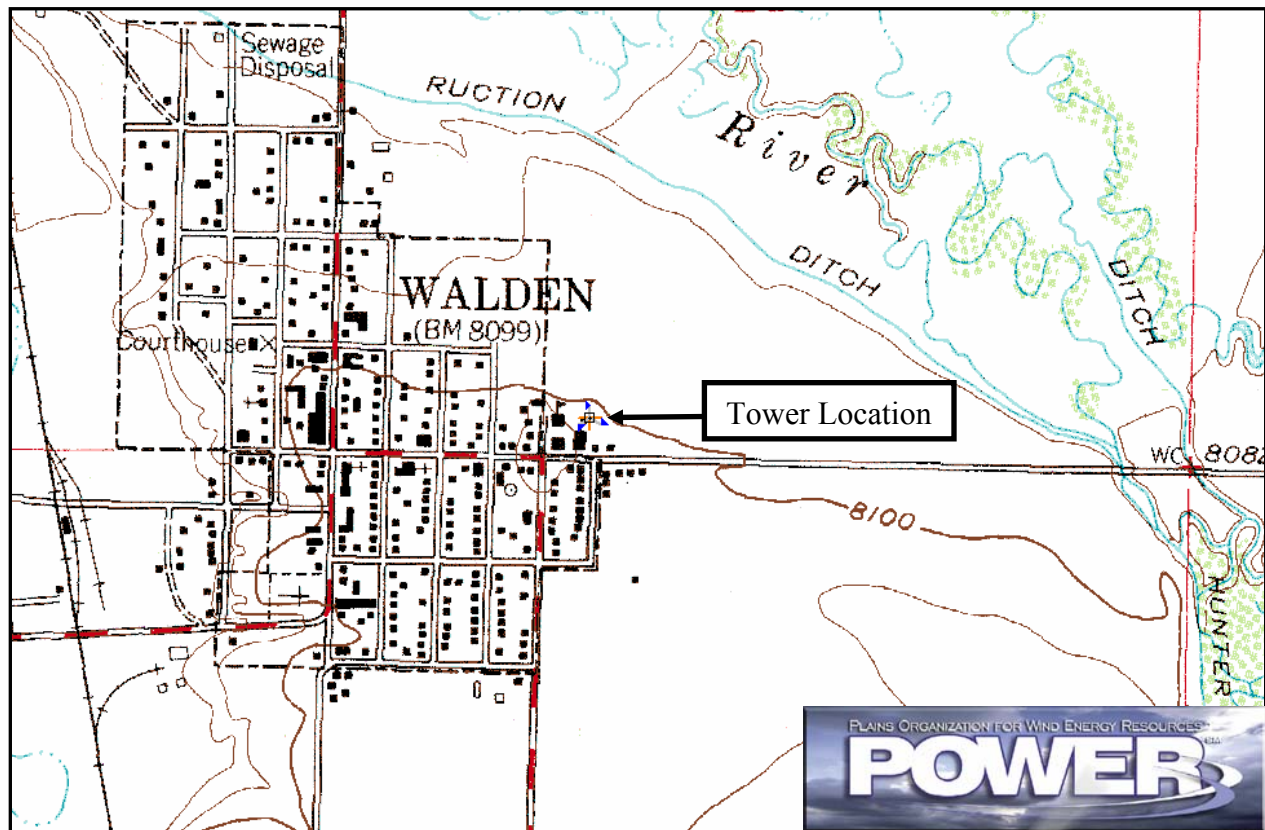
Colorado Anemometer Loan Program

Monitoring Period:<sup>a</sup> 3/29/2004 – 4/20/2005

## Site Description:

Latitude: N 40° 43' 49"	Township: 10 N
Longitude: W 106° 16' 35"	Range: 79 W
Elevation: 8125 feet	Section: 16
Tower Type: NRG Tilt-Up	Tower Height: 66 feet

The site is located on the east side of the town of Walden, Colorado. The town is in a mountain valley oriented north-south with the continental divide to the west. The tower is located on the grounds of the high school. Buildings on the west and south sides of the tower impede the wind.



<b>Summary Wind Data:</b>	<b>66 ft AGL<sup>b</sup></b>
<b>Mean Wind Speed</b>	9.1 mph
<b>Maximum, 10-min Mean Wind Speed</b>	38.0 mph – 5/22/2004 5:00 p.m.
<b>Estimated Wind Power Class<sup>c</sup></b>	Class 1 (68 W/m <sup>2</sup> )

<sup>a</sup> Data recovery rate was 96%.

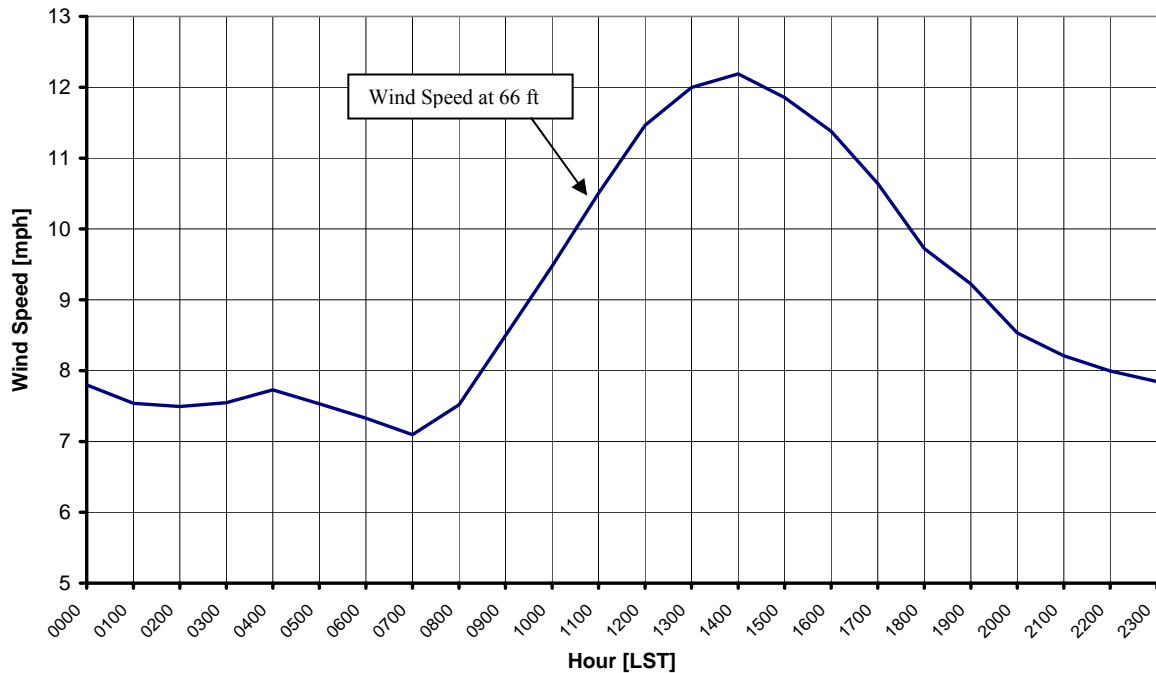
<sup>b</sup> Above ground level.

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

## Average Hourly Wind Speeds

66 ft AGL		
LST <sup>d</sup>	mph	m/s
0000	7.8	3.49
0100	7.5	3.37
0200	7.5	3.35
0300	7.5	3.37
0400	7.7	3.45
0500	7.5	3.37
0600	7.3	3.28
0700	7.1	3.17
0800	7.5	3.36
0900	8.5	3.80
1000	9.5	4.24
1100	10.5	4.70
1200	11.5	5.12
1300	12.0	5.36
1400	12.2	5.45
1500	11.9	5.30
1600	11.4	5.09
1700	10.6	4.76
1800	9.7	4.35
1900	9.2	4.12
2000	8.5	3.81
2100	8.2	3.67
2200	8.0	3.57
2300	7.8	3.51

**Colorado Anemometer Loan Program – Walden Site**  
3/29/2004 – 4/20/2005



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



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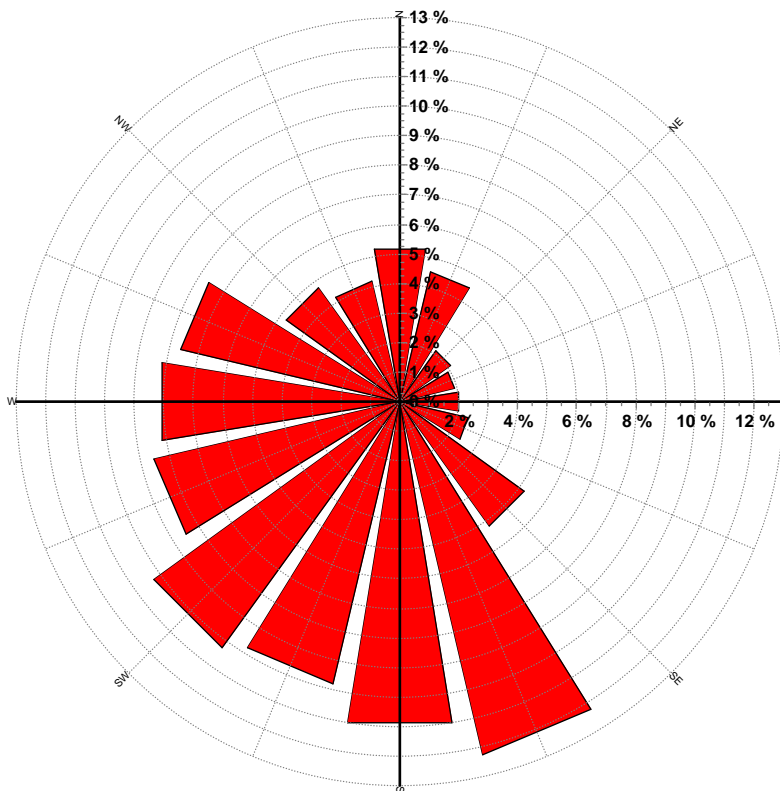
Creation Date: 4/25/2005

## Wind Directional Frequency

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

NNW	4.2
NW	4.8
WNW	7.6
W	8.2
WSW	8.5
SW	10.3
SSW	9.8
S	11.0
SSE	12.3
SE	5.2
ESE	2.4
E	2.0
ENE	1.9
NE	2.1
NNE	4.5
N	5.2

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Wind Rose for 66 ft AGL  
3/29/2004 – 4/20/2005



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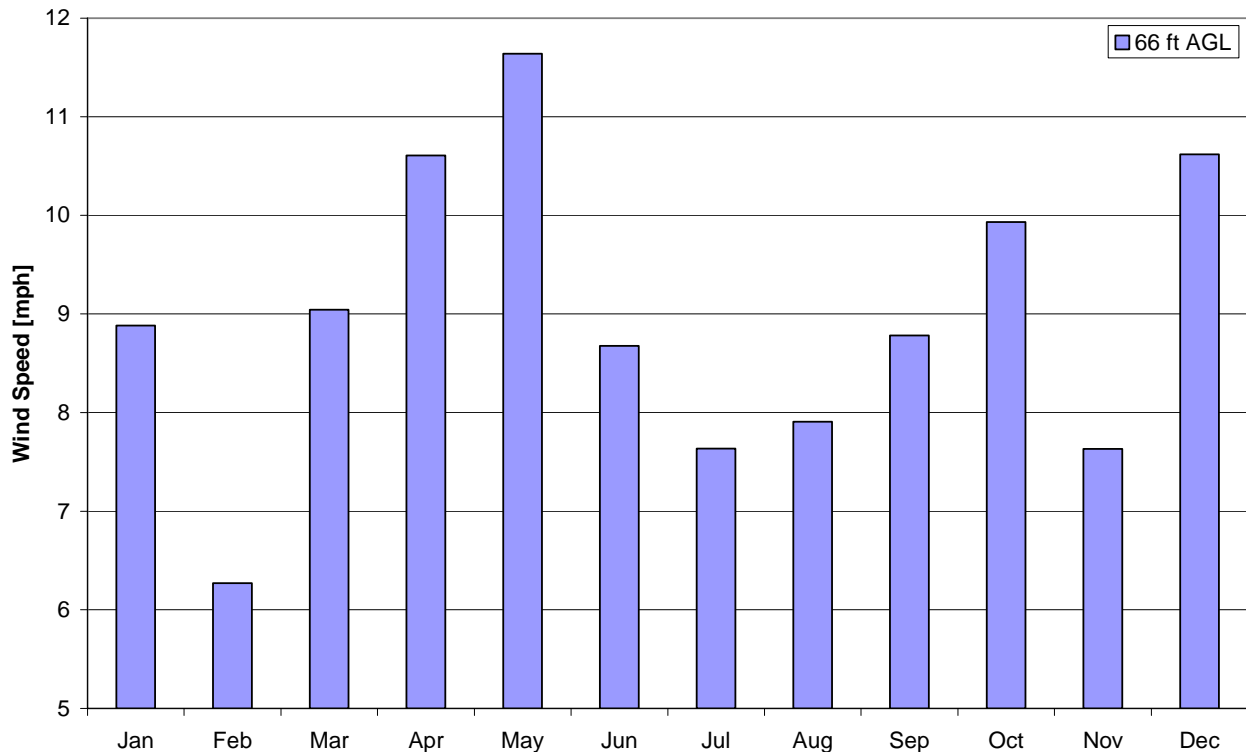
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## Monthly Wind Speed Averages

**66 ft AGL**

Month	mph	m/s
Jan	8.9	3.97
Feb	6.3	2.80
Mar	9.0	4.04
Apr	10.6	4.74
May	11.6	5.20
Jun	8.7	3.88
Jul	7.6	3.41
Aug	7.9	3.54
Sep	8.8	3.93
Oct	9.9	4.44
Nov	7.6	3.41
Dec	10.6	4.75

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