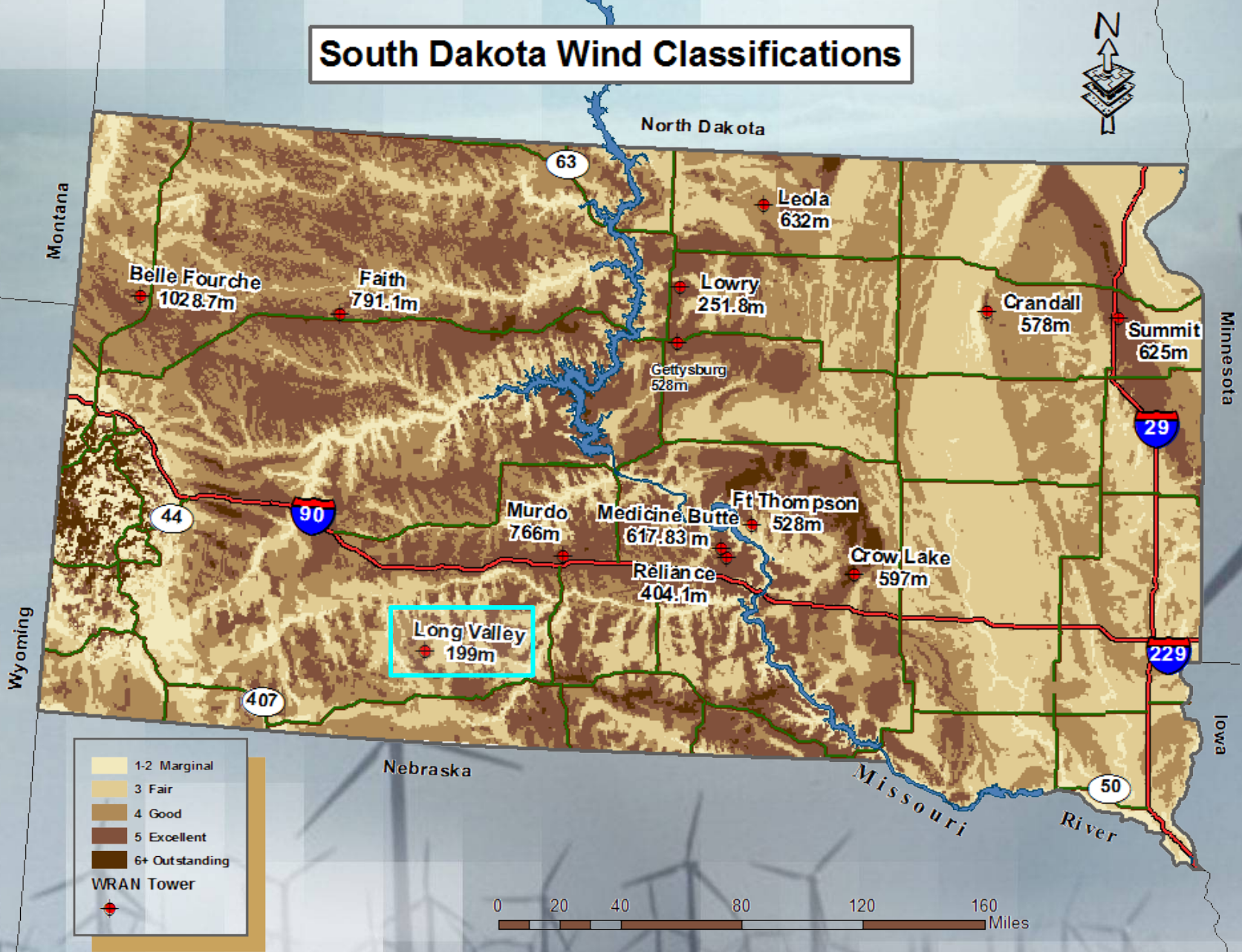
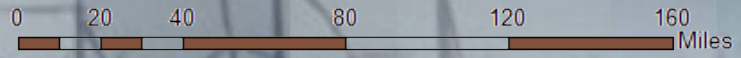


# South Dakota Wind Classifications



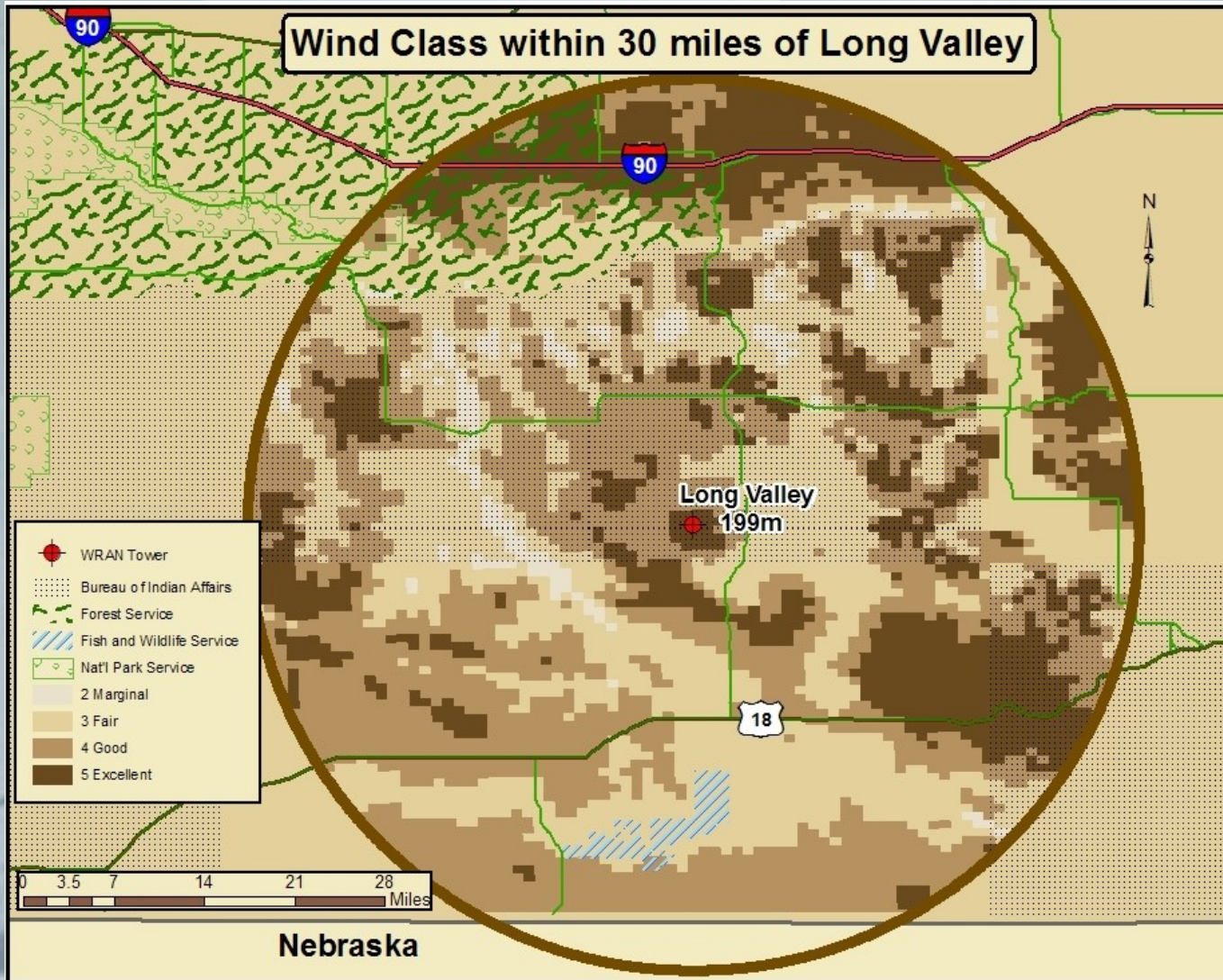
Light Yellow	1-2 Marginal
Yellow	3 Fair
Light Brown	4 Good
Dark Brown	5 Excellent
Very Dark Brown	6+ Outstanding
Red Diamond	WRAN Tower



Credit to NREL for their Wind Classification Data  
Credit to Microsoft Office Online for the Wind Turbine Template.  
Cartographic Designs by Shanon Conley

**South Dakota State University  
Electrical Engineering Department  
Wind Resource Assessment Network Project  
Site: Long Valley**

**Data collection period:  
May 30, 2007**



## Site description:

Site elevation: 199m (ft)

Site latitude: 43° 25' 59" N

Site longitude: 101° 43' 18" W

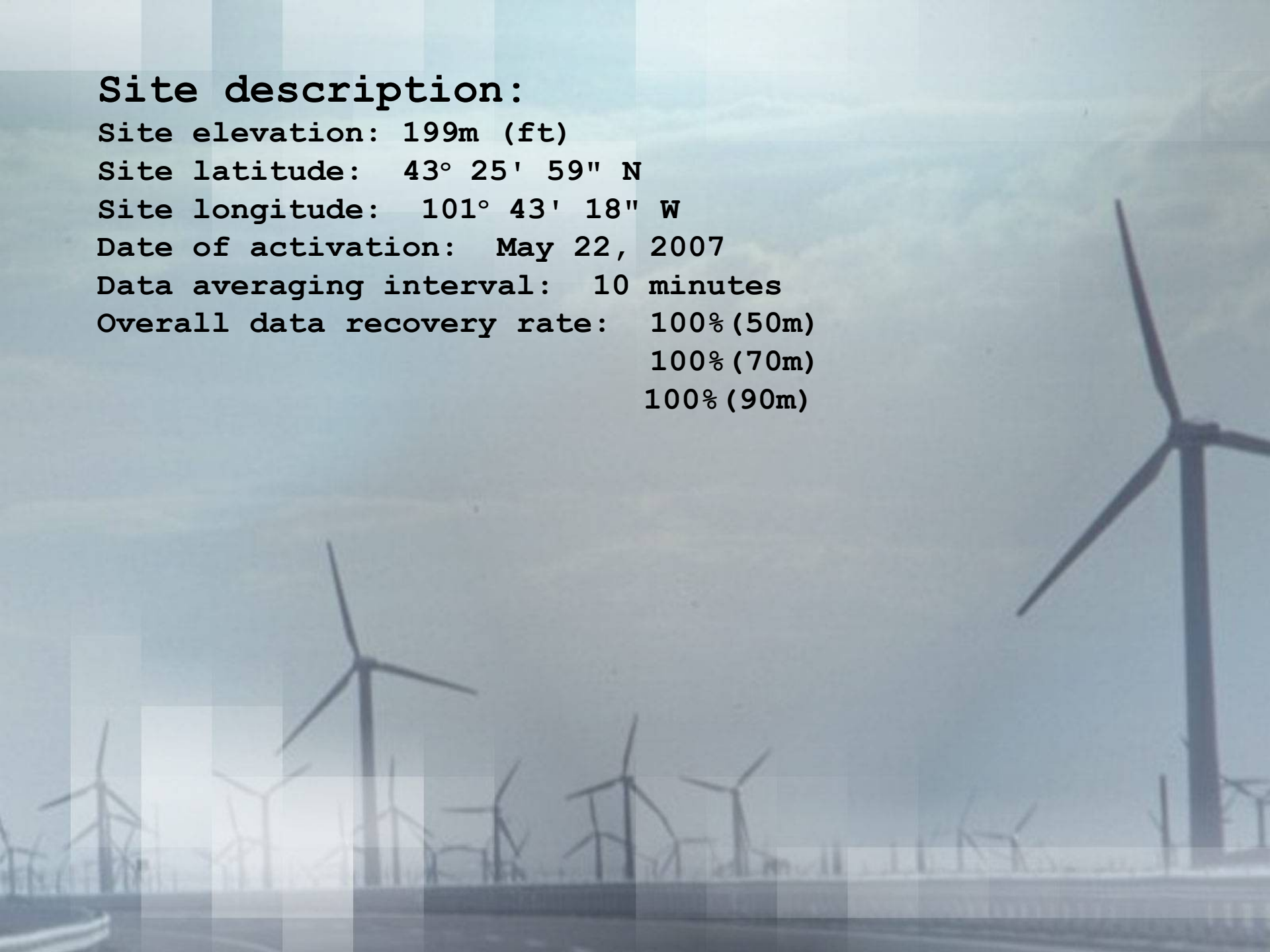
Date of activation: May 22, 2007

Data averaging interval: 10 minutes

Overall data recovery rate: 100% (50m)

100% (70m)

100% (90m)



# WRAN Site Elevation and Topo's Aspect

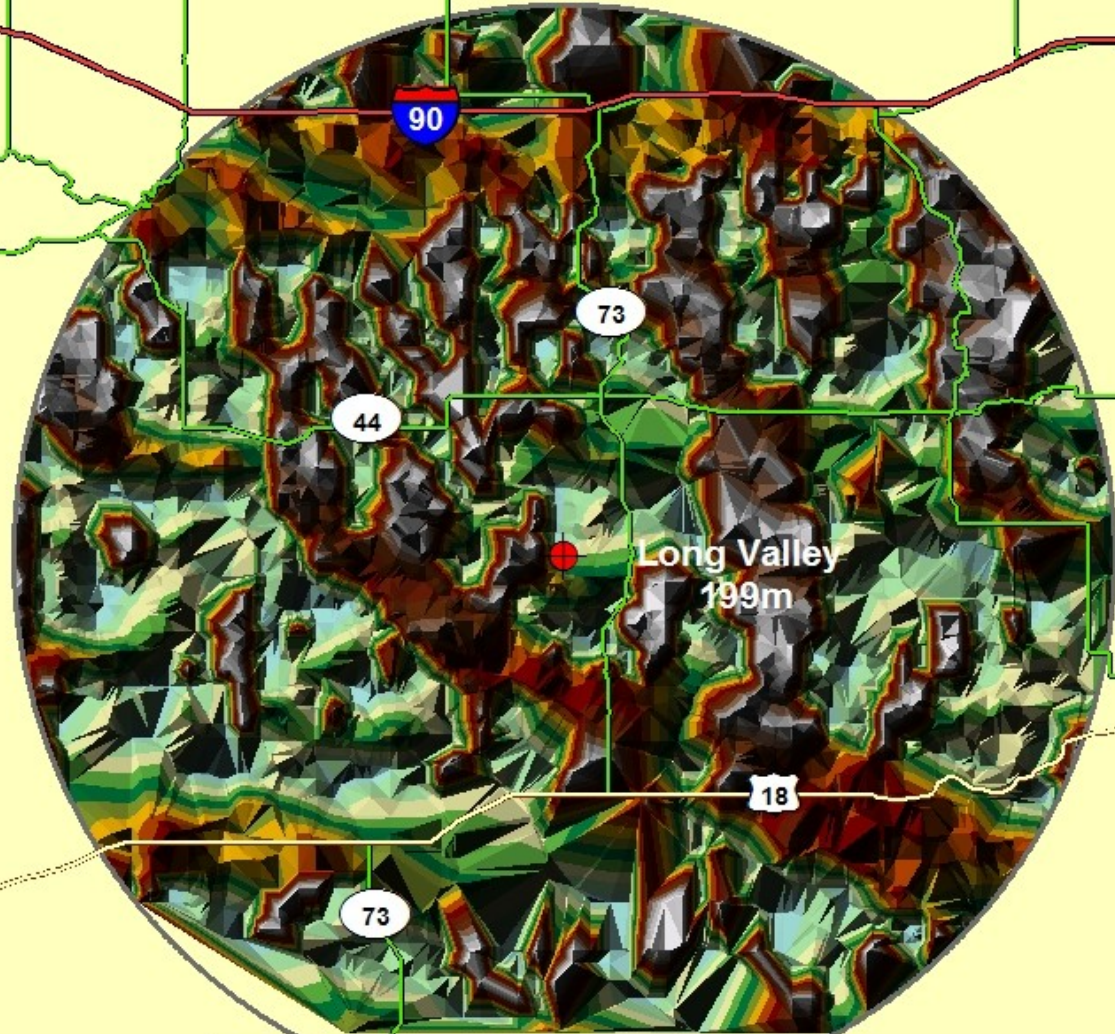


WRAN Tower

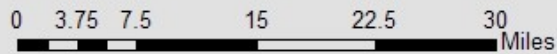


## Elevation and Aspect

White	335.425 - 359.455
Light Gray	311.394 - 335.425
Medium Gray	287.364 - 311.394
Brown	263.334 - 287.364
Dark Brown	239.303 - 263.334
Dark Red	215.273 - 239.303
Red	191.243 - 215.273
Orange	167.212 - 191.243
Yellow	143.182 - 167.212
Light Green	119.152 - 143.182
Green	95.121 - 119.152
Dark Green	71.091 - 95.121
Lightest Green	47.061 - 71.091
Very Light Green	23.030 - 47.061
Cyan	-1.000 - 23.030



Nebraska



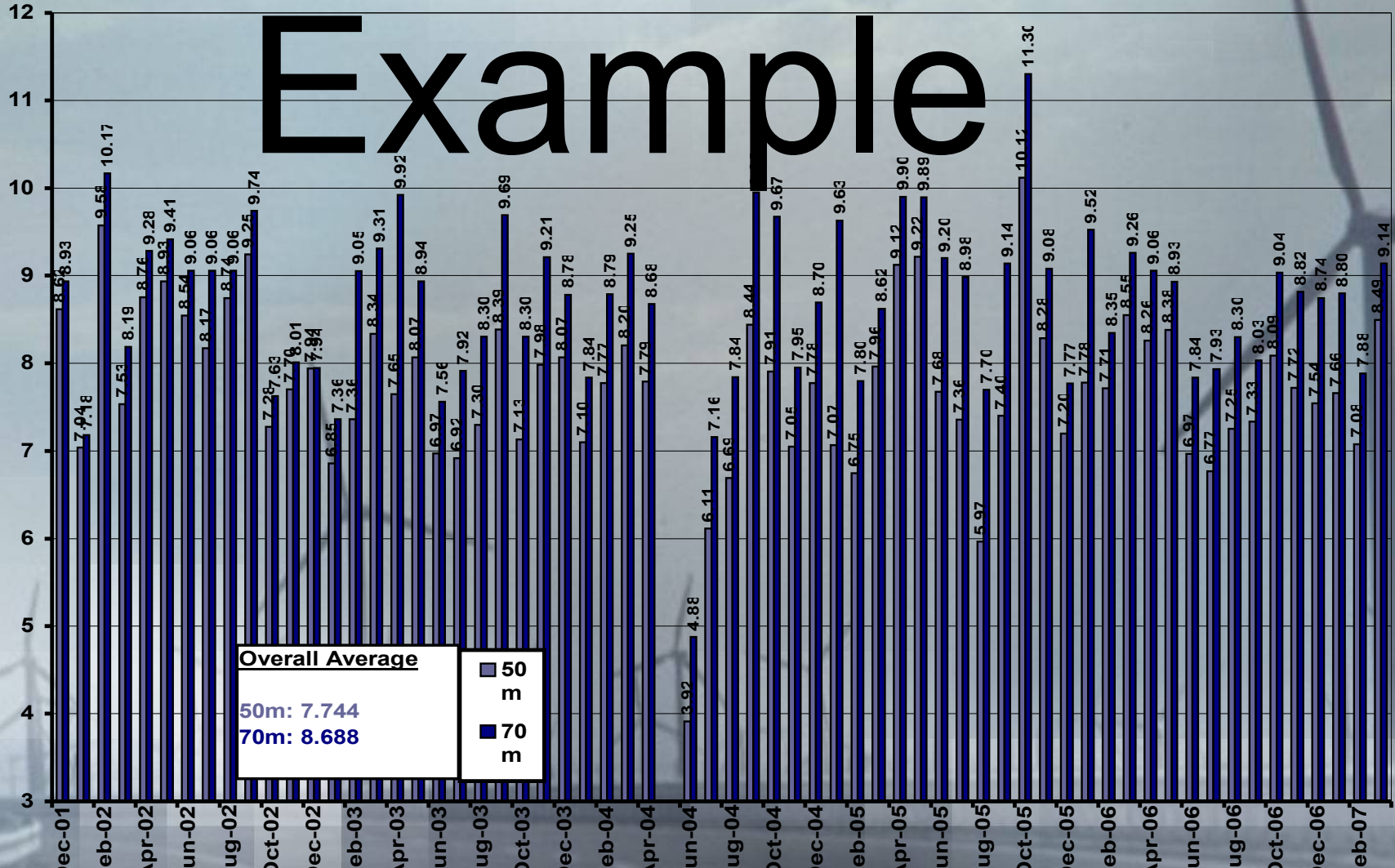
Note: Elevation measured in meters

South Dakota State University  
 Electrical Engineering Department  
 Wind Resource Assessment Network Project  
 Site: Long Valley

This slide shows the monthly average wind speed in meters per second at this site, and also the overall average wind speed (in the inset box), at each measurement height. This is taken over the entire period of data collection. Last updated 05/30/2007.

Average Wind Speed |

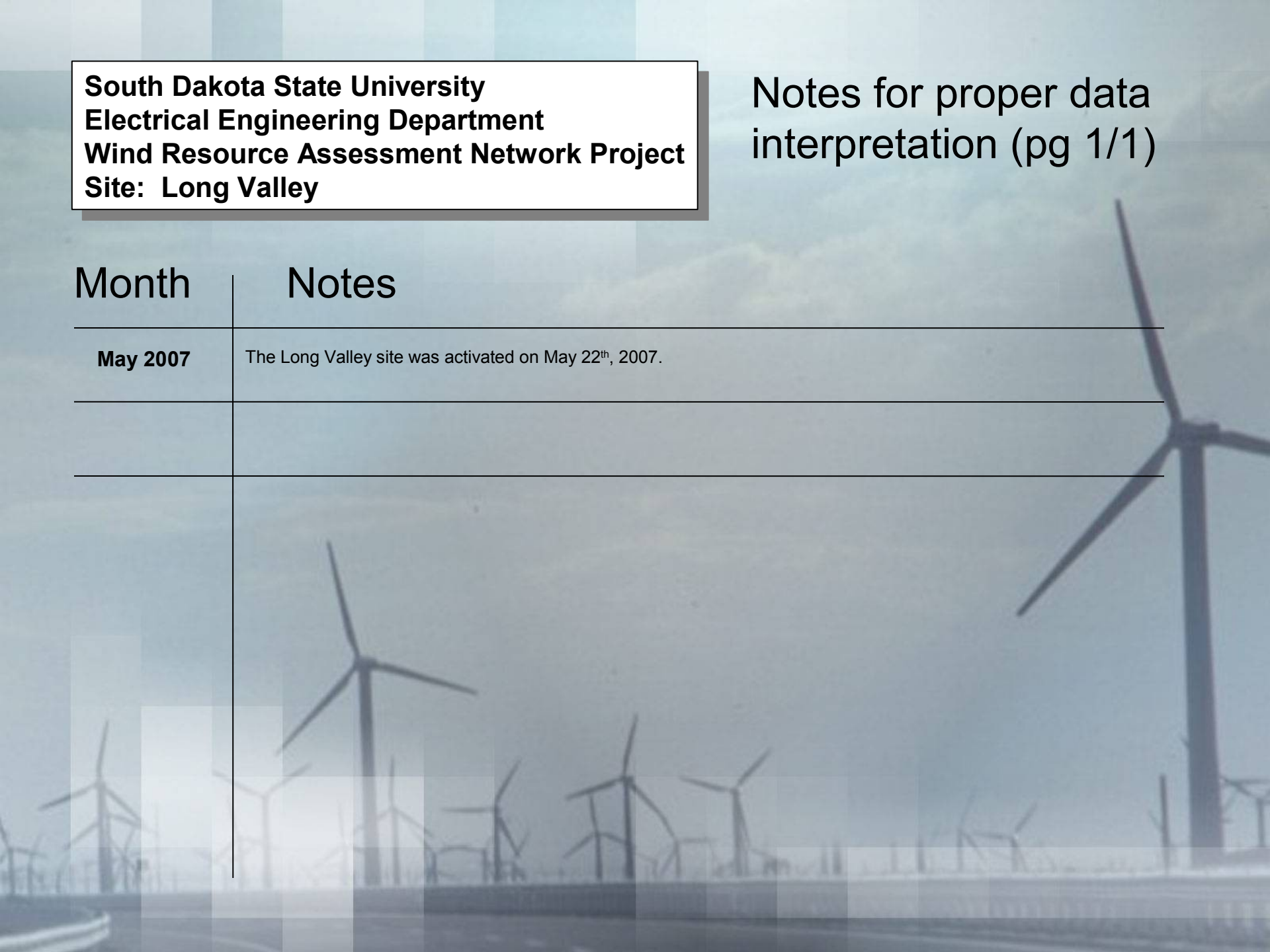
# Example



**South Dakota State University  
Electrical Engineering Department  
Wind Resource Assessment Network Project  
Site: Long Valley**

Notes for proper data  
interpretation (pg 1/1)

Month	Notes
<b>May 2007</b>	The Long Valley site was activated on May 22 <sup>th</sup> , 2007.



**South Dakota State University  
Electrical Engineering Department  
Wind Resource Assessment Network Project  
Site: Long Valley**

This slide shows the expected maximum capacity factor that could be expected from a wind turbine on this site. The capacity factor can be thought of as the percentage of maximum possible energy that the turbine would actually produce, given the variability of the wind resource at the site. Updated 05/30/2007

