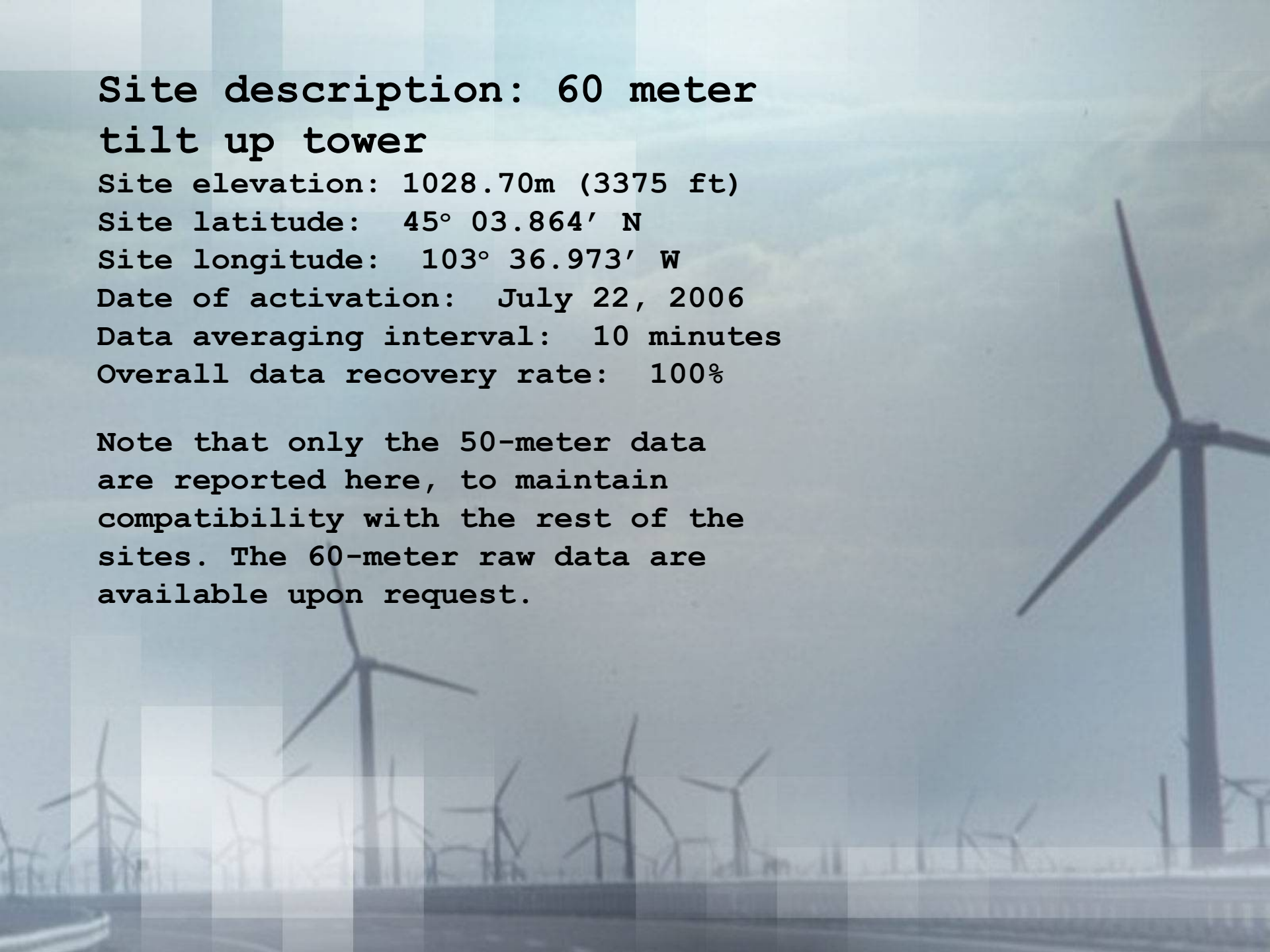


South Dakota's Wind Classifications



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

A large field of wind turbines under a cloudy sky. The turbines are arranged in rows, and the sky is filled with soft, white clouds. The overall scene is a typical wind farm landscape.

**Site description: 60 meter
tilt up tower**

Site elevation: 1028.70m (3375 ft)

Site latitude: 45° 03.864' N

Site longitude: 103° 36.973' W

Date of activation: July 22, 2006

Data averaging interval: 10 minutes

Overall data recovery rate: 100%

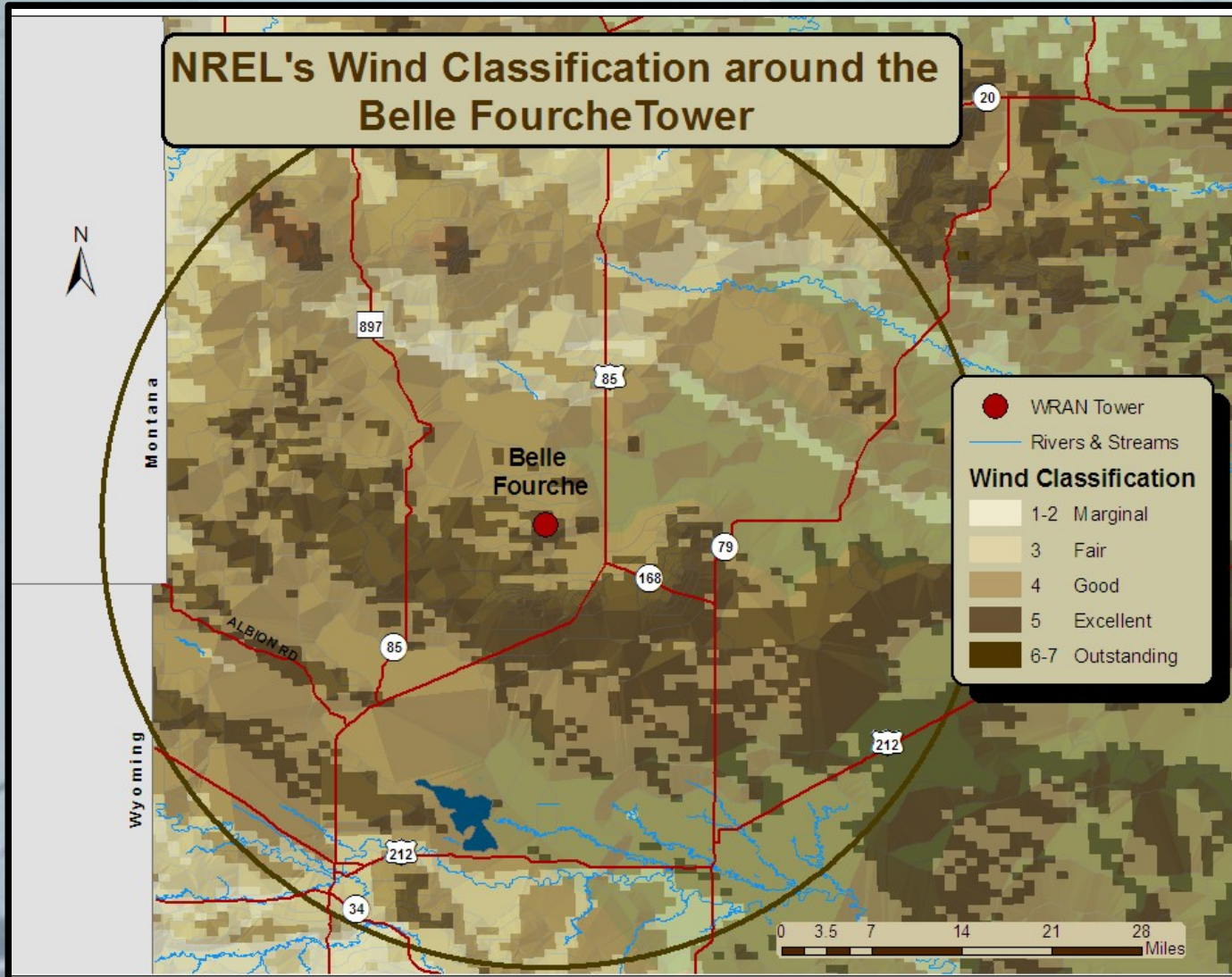
Note that only the 50-meter data are reported here, to maintain compatibility with the rest of the sites. The 60-meter raw data are available upon request.

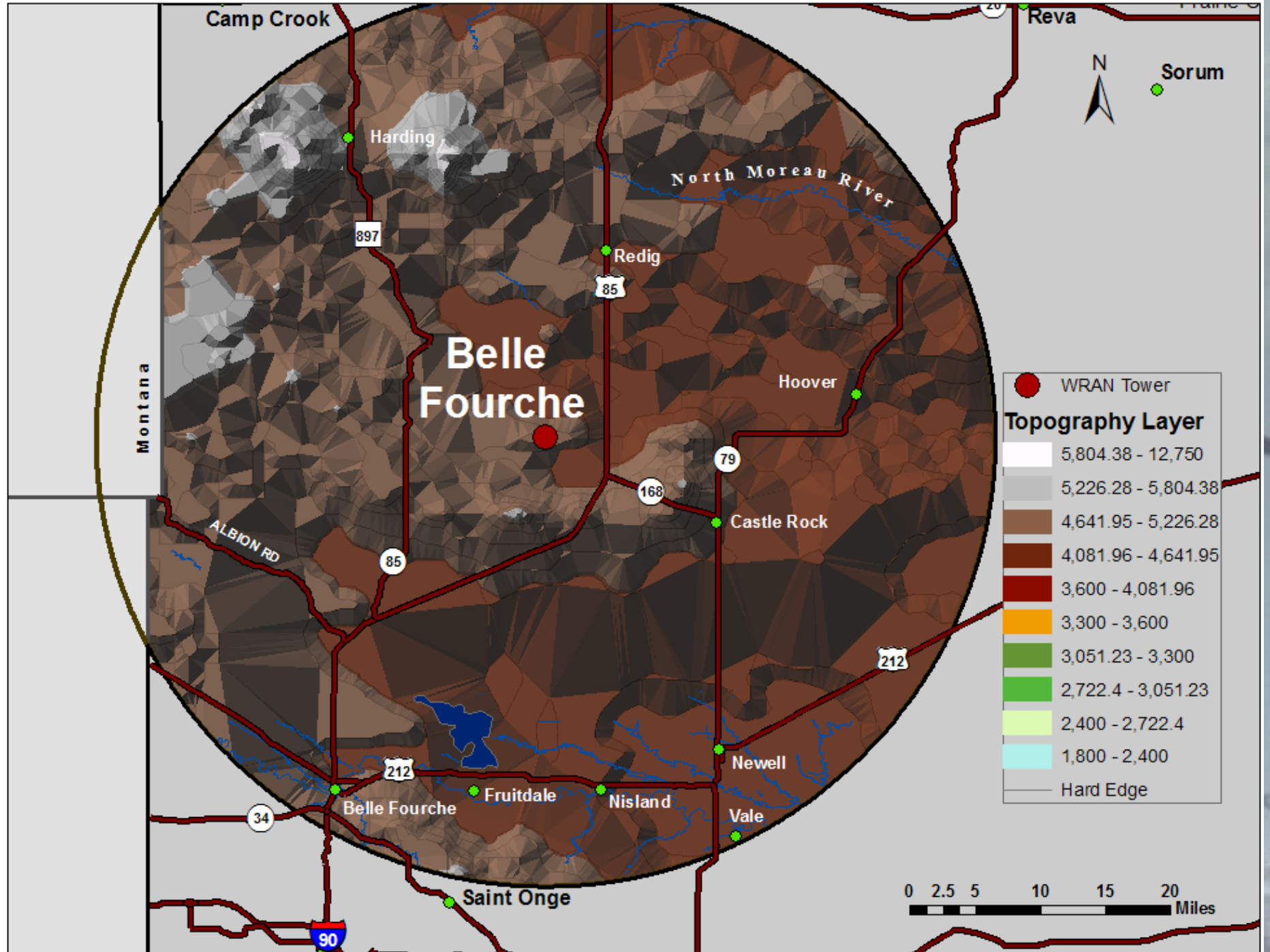
Overlooking Belle Fourche's Tower and Ground Level Instrumentation



**South Dakota State University
Electrical Engineering Department
Wind Resource Assessment Network Project
Site: Belle Fourche**

**Data collection
period:
June 22, 2006 –
July 31, 2007**





Camp Crook

Reva



Sorum

Harding

897

North Moreau River

Redig

85

Belle Fourche

Hoover

Montana

● WRAN Tower

Topography Layer

- 5,804.38 - 12,750
- 5,226.28 - 5,804.38
- 4,641.95 - 5,226.28
- 4,081.96 - 4,641.95
- 3,600 - 4,081.96
- 3,300 - 3,600
- 3,051.23 - 3,300
- 2,722.4 - 3,051.23
- 2,400 - 2,722.4
- 1,800 - 2,400
- Hard Edge

79

168

Castle Rock

ALBION RD

85

212

212

Belle Fourche

Fruitdale

Nisland

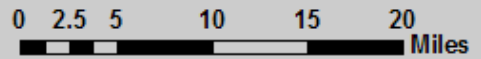
Newell

Vale

34

Saint Onge

90



**South Dakota State University
Electrical Engineering Department
Wind Resource Assessment Network Project
Site: Belle Fourche**

**Notes for data
interpretation
(page 1 of 1)**

Month	Notes
January 2006	There were a number of icing events during this month. Data values caused from icing defaulted to .35 m/sec. These values were removed, and because of strong winds, the average wind speed was slightly above normal for January.
February 2006	There were icing events again in February, but the wind speed was normal after the defaulted values were removed. The wind speed averaged slightly lower unlike January because of more stable winds.

**South Dakota State University
Electrical Engineering Department
Wind Resource Assessment Network Project
Site: Belle Fourche**

This slide shows the monthly average wind speed at this site. In the inset box is the overall average wind speed of the site and the capacity factor anticipated from a wind turbine at this site. The data from this chart was taken over the entire period of data collection. Last updated 8/6/2007.

