

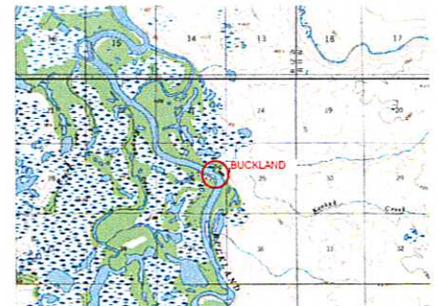
Wind Resource Assessment for BUCKLAND, ALASKA

Date last modified: 5/11/2006
 Compiled by: Cliff Dolchok

SITE SUMMARY

Site #: 5062
 Latitude (NAD27): 65° 58' 24.2" N
 Longitude (NAD27): 161° 7' 50.6" W
 Magnetic Declination: 16° 15' East
 Tower Type: 30-meter NRG Tall Tower
 Sensor Heights: 30m, 29m, 20m
 Elevation: 1.8 meters (6 ft)
 Monitor Start: 9/1/2005 13:00
 Monitor End: 10/25/2005 17:50

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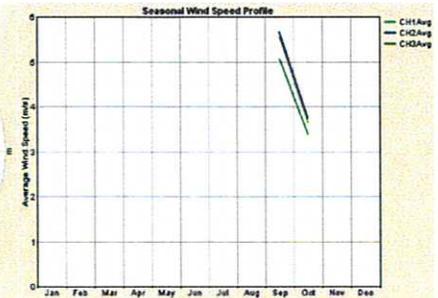
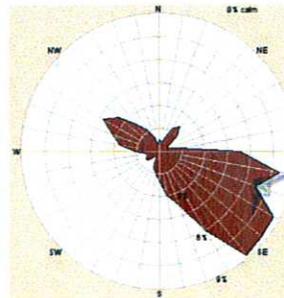
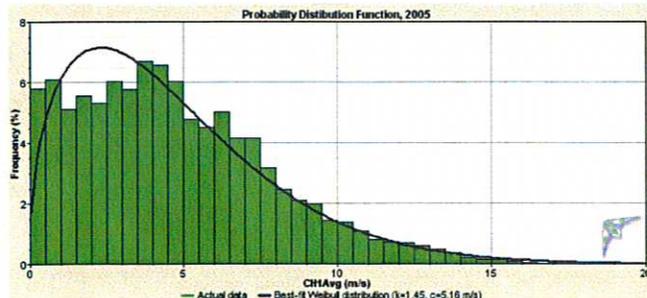
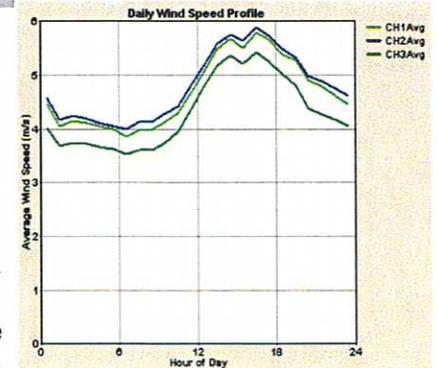


Buckland is located on the west bank of the Buckland River, about 75 miles southeast of Kotzebue. Buckland is located in the Cape Nome Recording District. (source: Department of Community & Economic Development)

WIND RESOURCE SUMMARY

Annual Average Wind Speed (30m height): **To be determined**
 Average Wind Power Density (30m height): **To be determined**
 Wind Power Class (range = 1 to 7): **To be determined**
 Rating (Poor, Marginal, Fair, Good, Excellent, Outstanding, Superb): **To be determined**
 Prevailing Wind Direction: **To be determined**

In September 2005, a 30-meter meteorological tower was installed in Buckland. The purpose of this monitoring effort is to evaluate the feasibility of utilizing utility-scale wind energy in the community. The measured wind speed and direction data at the site was compared to long-term trends in the area and estimates were calculated for the potential energy production from various types of wind turbines.



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SITE DESCRIPTION

The photos below document the meteorological tower equipment that was installed in Buckland.

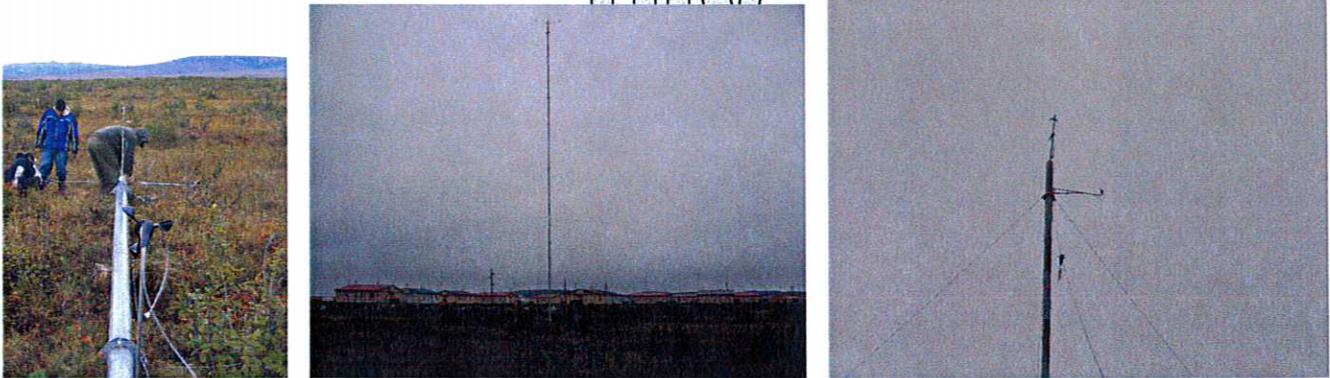


Figure 2. Photos of the Met Tower Installation in Buckland, AK

The photos in Figure 3 illustrate the surrounding ground cover and any major obstructions, which could affect how the wind flows over the terrain from a particular direction. As shown, the landscape surrounding the met tower site is free of obstructions and relatively flat, except for Clem Mountain with an elevation of about 1560 feet.

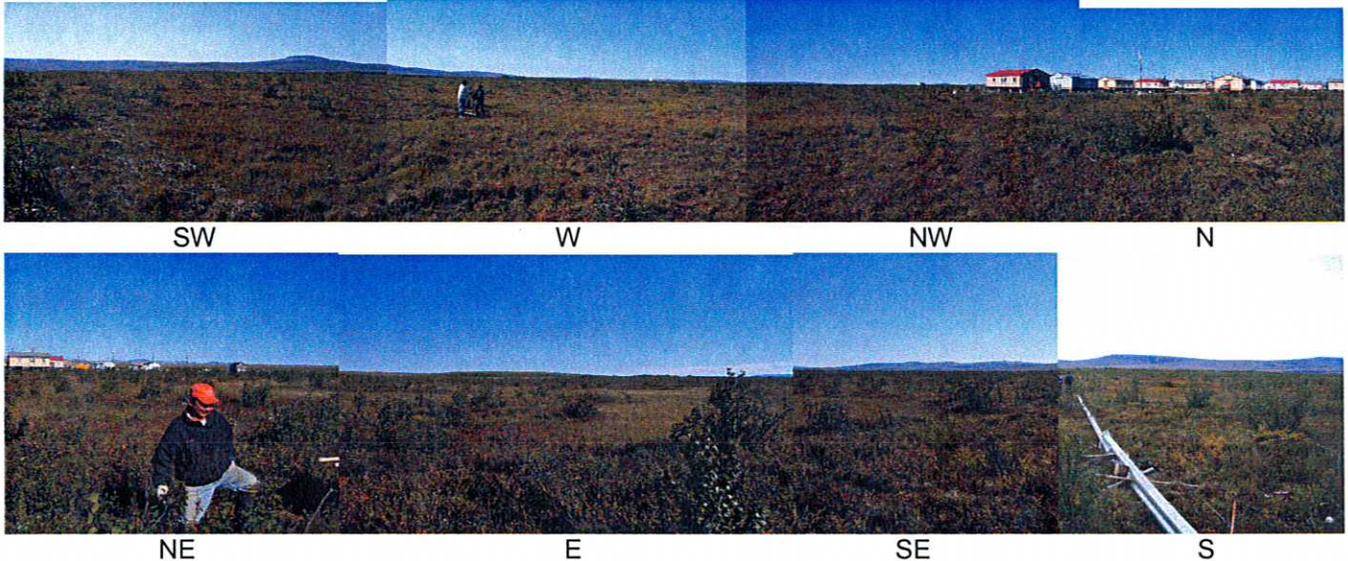


Figure 3. Views Taken from Met Tower Base

Table 1 lists the types of sensors that were used, the channel of the data logger that each sensor was wired into, and where each sensor was mounted on the tower.

Table 1. Summary of Sensors Installed on the Met Tower

Ch #	Sensor Type	Height	Offset	Boom Orientation
1	#40 Anemometer	30 m	NRG Standard	270° True
2	#40 Anemometer	30 m	NRG Standard	90° True
3	#40 Anemometer	20 m	NRG Standard	360° True
7	#200P Wind Vane	29 m	180° True	360° True
9	#110S Temperature		42°C	W

