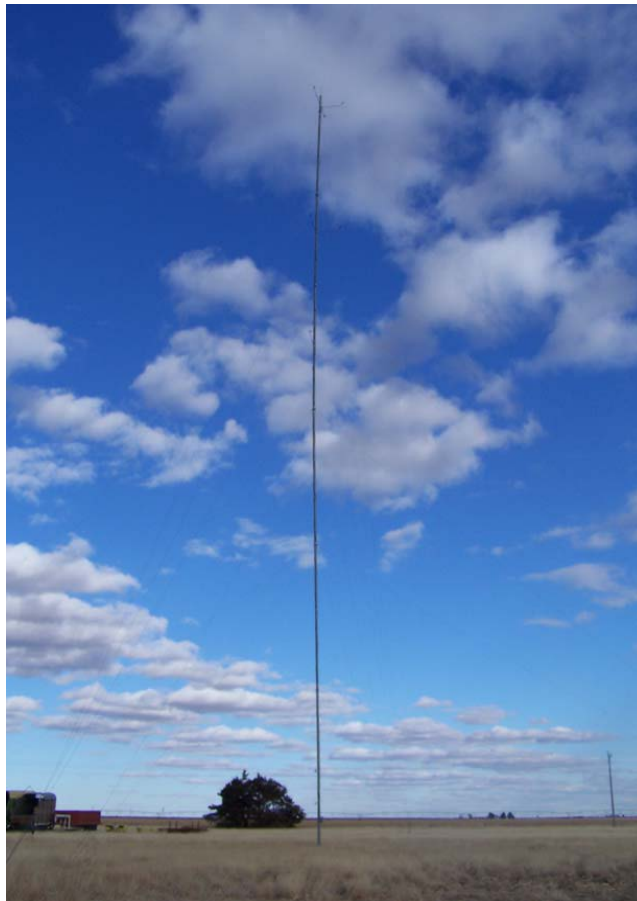




Agricultural Science Center at Clovis  
College of Agricultural, Consumer and Environmental Sciences

**New Mexico State University  
Agricultural Science Center at Clovis, NM  
Wind Monitoring Project**

**MONTHLY WIND PERFORMANCE REPORT  
January 2012**



**Site Location:** Clovis, New Mexico  
**Latitude:** 34.606075 ° N  
**Longitude:** -103.301602 ° W  
**Altitude:** 1363 meters



**New Mexico State University  
Agricultural Science Center at Clovis**

**Wind Monitoring Project  
Monthly Performance Report  
January 2012**

**Prepared for:**

New Mexico State University Agricultural Science Center at Clovis  
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**50 Meter Tower**

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## Executive Summary

This report provides the monthly wind performance summary for **January 2012** of the 50m Wind Met-Tower at the New Mexico State University Agricultural Science Center at Clovis. The site is located right at the Center's facility area which has flat agricultural landscape that includes grasses, crops, and loose soil. The wind met-tower is installed at coordinates 34.606075° N and -103.301602° W altitude of 1363 meters.

Wind speed and direction monitoring are being done at three heights 50m, 40m, and 30m. The **average wind speed** for the month of **January** at the highest level (50m height) was found to be **9.10 m/s** with **average temperatures** around **5.2° C** while the predominant **wind direction** was **West**.

Based on the average wind speed results, an approximation of energy production is done using a GE1.5 MW wind turbine for the sole purpose of getting an idea of how much energy the site would yield if a turbine were to be installed. Any other turbine size and manufacturer could have been selected depending on preference and appropriateness. The **estimated energy production** for the month of **January** was approximately **705,946 kWh**. Power output were approximated based on the manufacturer's turbine power curve at 65m hub height.

Graphs and figures in this report are for the **31** day period from **January 1-31, 2012**.

## Wind Monitoring Method description

The NRG Symphonie data logger is an internet ready, ultra-low power microprocessor-controlled data logging system specifically designed for the wind energy industry. The Symphonie logger has a fixed averaging interval of 10 minutes. Each of the 12 channels' averages, standard deviations, minimum and maximum values are calculated from continuous 2 second data samples. Data intervals are calculated every 10 minutes, time stamped with the beginning time of each interval and written to the MultiMedia Card (MMC) at the top of each hour. Symphonie Data Retriever (SDR) software is then used to process raw data files stored on the computer from an MMC.

**Date of receipt of the raw data:**

January 31, 2012

**Dates of the performance of the monitoring:**

January 1-31, 2012

**Test description page(s):**

Description of wind monitoring items: The 50-m met tower has four "1900 NRG #40C Calibrated Anemometers;" at 50, 40, and 30 meters; two "1904 NRG #200P Wind Direction Vane 10K" at 50 and 40 meters, as well as one "1906-NRG #110S Temperature Sensor with Radiation Shield". Data Symphonie NRG Logger.

|         |   |
|---------|---|
| Mnfg:   | NGR Systems   |
| Models: | Anemometers: 1900-NRG #40<br>Wind Direction Vane: 1904-NRG #200P<br>Temperature Sensor: 1906-NRG #110S<br>Data logger: Symphonie NRG Logger |

Conditions of the wind monitoring items: ***Working as specified***

Monitoring dates: January 1-31, 2012

Location of Monitoring: The location is an open space of about 2 acres approximately 200 yards to the south of the Agricultural Science Center at Clovis's main building complex. There are obstacles (buildings, trees, etc) which can affect both, wind speed or wind direction sampling.

Monitoring Plan Description: The Symphonie logger has a fixed averaging interval of 10 minutes. Each of the 12 channels' averages, standard deviations, minimum and maximum values are calculated from continuous 2 second data samples. Data intervals are calculated every 10 minutes, time stamped with the beginning time of each interval and written to the MultiMedia Card (MMC) at the top of each hour.

Environmental Conditions: **There were no issues affecting sampling during January.**

This wind monitoring report shall not be reproduced except in full, without written approval of New Mexico State University Agricultural Science Center at Clovis

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Sensor Information:**

1 wind speed 1 50m m/s

2 wind speed 2 50m m/s

3 wind speed 3 40m m/s

4 wind speed 4 30m m/s

5 No Sensor

6 No Sensor

7 #200P Wind Vane

8 #200P Wind Vane

9 NRG 110S Temp, C

10 No Sensor

11 No Sensor

12 No Sensor

**January 2012****Summary Report**

SITE 0001

NMSU ASC at Clovis

| Channel                   | 1          | 2          | 3          | 4          |  |  | 7      | 8      | 9          |  |  |  |
|---------------------------|------------|------------|------------|------------|--|--|--------|--------|------------|--|--|--|
| Height                    | 50 m       | 50 m       | 40 m       | 30 m       |  |  | 50 m   | 40 m   | 3 m        |  |  |  |
| Units                     | m/s        | m/s        | m/s        | m/s        |  |  | deg    | deg    | C          |  |  |  |
| Intervals with Valid Data | 4374       | 4374       | 4374       | 4374       |  |  | 4374   | 4374   | 4374       |  |  |  |
| Average Filtered Data     | 9.21       | 8.99       | 8.68       | 8.27       |  |  | 279.05 | 277.16 | 5.23       |  |  |  |
| Average for All Data      | 9.21       | 8.99       | 8.68       | 8.27       |  |  | 279.05 | 277.16 | 5.23       |  |  |  |
| Min Interval Average      | 0.4        | 0.4        | 0.4        | 0.6        |  |  |        |        | -11.1      |  |  |  |
| Date of Min Interval      | 1/1/2012   | 1/1/2012   | 1/4/2012   | 1/1/2012   |  |  |        |        | 1/12/2012  |  |  |  |
| Time of Min Interval      | 9:00:00 AM | 9:10:00 AM | 3:50:00 PM | 9:00:00 AM |  |  |        |        | 5:00:00 AM |  |  |  |
| Max Interval Average      | 24.7       | 23.2       | 24.5       | 23.6       |  |  |        |        | 23.5       |  |  |  |
| Date of Max Interval      | 1/22/2012  | 1/22/2012  | 1/22/2012  | 1/22/2012  |  |  |        |        | 1/19/2012  |  |  |  |
| Time of Max Interval      | 8:10:00 AM | 9:50:00 AM | 8:10:00 AM | 8:10:00 AM |  |  |        |        | 2:00:00 PM |  |  |  |
| Average Interval SD       | 0.65       | 0.69       | 0.68       | 0.69       |  |  | 5.36   | 5.7    | 0.08       |  |  |  |
| Min Sample                | 0.4        | 0.4        | 0.4        | 0.4        |  |  |        |        | -11.3      |  |  |  |
| Date of Min Sample        | 1/1/2012   | 1/1/2012   | 1/1/2012   | 1/1/2012   |  |  |        |        | 1/12/2012  |  |  |  |
| Time of Min Sample        | 8:40:00 AM | 8:40:00 AM | 8:50:00 AM | 8:50:00 AM |  |  |        |        | 5:00:00 AM |  |  |  |
| Max Sample                | 30.3       | 31.5       | 30.6       | 29.1       |  |  |        |        | 24         |  |  |  |
| Date of Max Sample        | 1/22/2012  | 1/22/2012  | 1/22/2012  | 1/22/2012  |  |  |        |        | 1/19/2012  |  |  |  |
| Time of Max Sample        | 8:10:00 AM | 8:10:00 AM | 8:10:00 AM | 8:10:00 AM |  |  |        |        | 2:00:00 PM |  |  |  |
| Average Interval TI       | 0.09       | 0.09       | 0.09       | 0.09       |  |  |        |        |            |  |  |  |
| Wind Speed Direction      |            |            |            |            |  |  | W      | W      |            |  |  |  |

**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 1:**

wind speed 1 50m m/s  
Height: 50 m  
Serial #: 51179

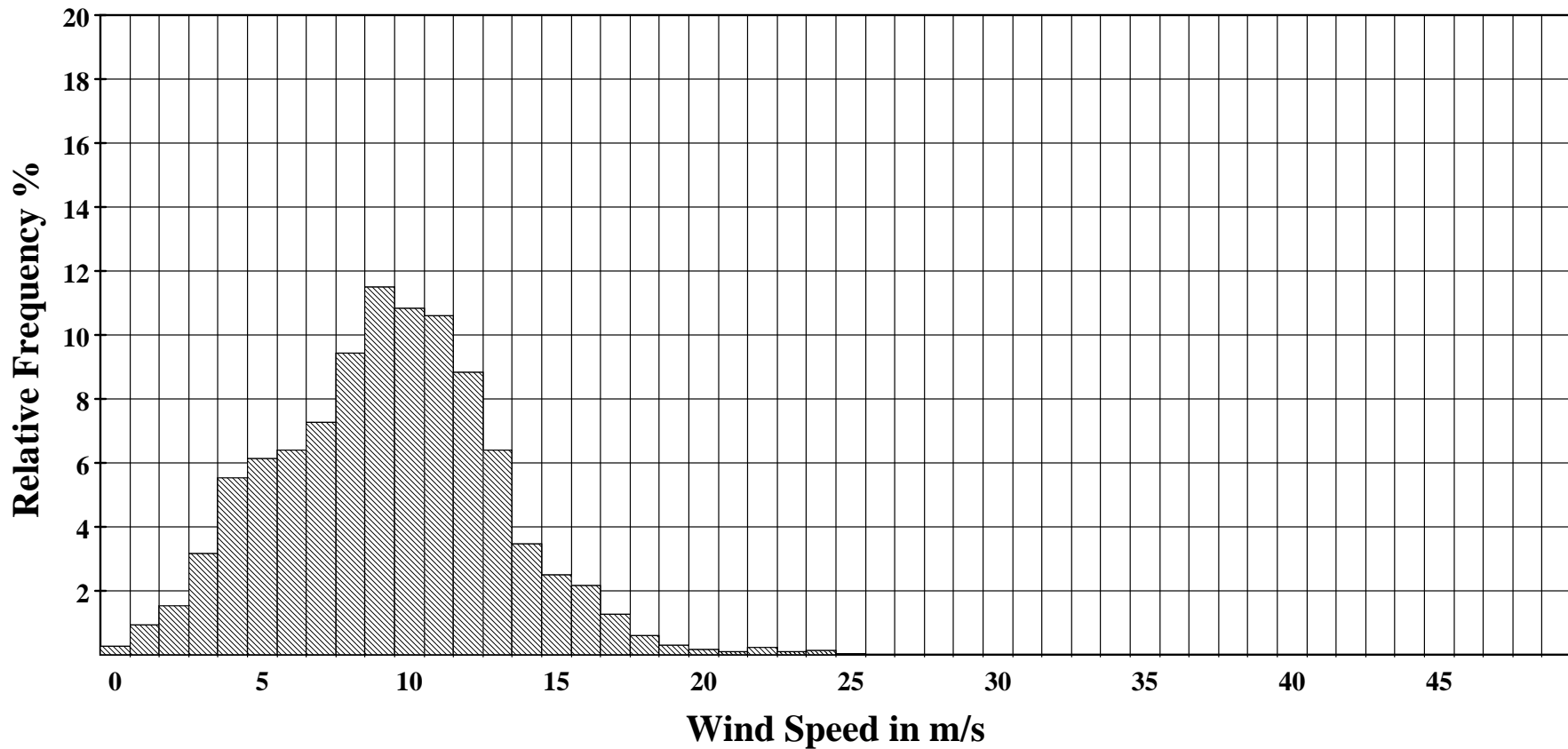
**January 2012**

**Frequency Distribution Ch 1**

SITE 0001

NMSU ASC at Clovis

**Frequency Distribution**



**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 1:**

wind speed 1 50m m/s  
Height: 50 m  
Serial #: 51179

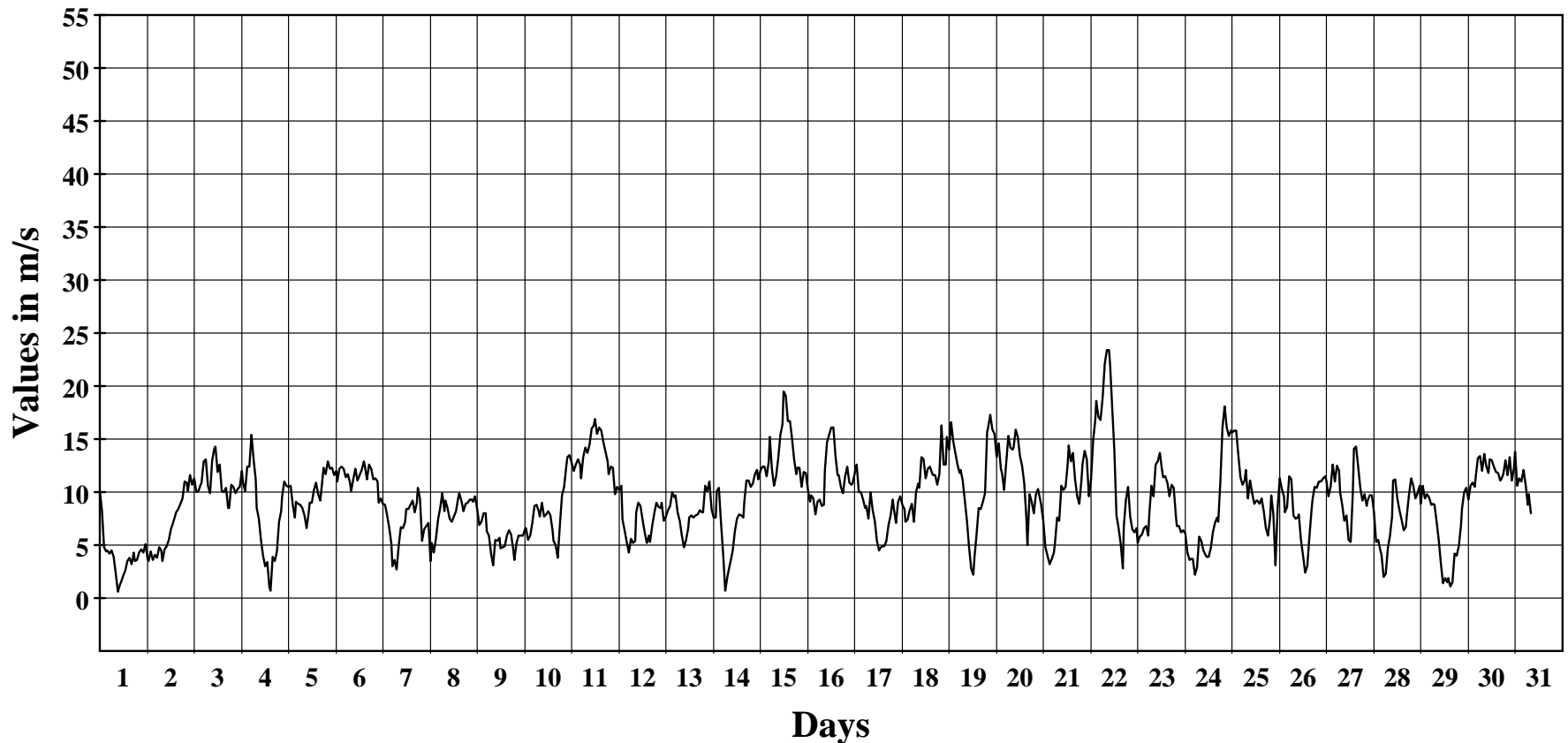
**January 2012**

**Hourly Averages Graph Ch 1**

SITE 0001

NMSU ASC at Clovis

**Average Hourly Values**



**Average Value: 9.2**



**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Sensor on channel 1:**

wind speed 1 50m m/s

Height: 50 m Units: m/s

Serial #: 51179

**January 2012****Hourly Averages Table Ch 1**

SITE 0001

NMSU ASC at Clovis

| Day | Hour |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | AVG  |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|     | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   |      |
| 1   | 10.1 | 8.3  | 4.8  | 4.4  | 4.5  | 4.2  | 4.5  | 3.9  | 2.3  | 0.6  | 1.3  | 1.5  | 2.1  | 2.6  | 3.5  | 3.8  | 3.2  | 4.3  | 3.5  | 3.6  | 4.3  | 4.6  | 4.3  | 5.1  | 4.0  |
| 2   | 3.7  | 3.5  | 4.4  | 3.6  | 4.1  | 3.8  | 4.8  | 4.5  | 3.5  | 4.6  | 4.9  | 5.5  | 6.5  | 7.1  | 7.4  | 8.1  | 8.4  | 8.9  | 9.4  | 11.0 | 10.9 | 10.1 | 11.6 | 10.7 | 6.7  |
| 3   | 11.3 | 10.0 | 10.1 | 10.7 | 10.9 | 12.9 | 13.1 | 10.6 | 9.9  | 13.0 | 14.1 | 14.3 | 11.9 | 12.6 | 10.1 | 10.0 | 10.4 | 8.5  | 8.5  | 10.7 | 10.5 | 9.9  | 10.3 | 10.5 | 11.0 |
| 4   | 12.0 | 10.9 | 10.1 | 12.4 | 12.4 | 15.4 | 13.1 | 11.2 | 8.5  | 7.5  | 5.5  | 4.0  | 3.0  | 3.4  | 1.0  | 0.7  | 3.9  | 3.5  | 4.4  | 7.2  | 8.2  | 9.6  | 11.0 | 10.6 | 7.9  |
| 5   | 10.5 | 10.6 | 8.8  | 7.6  | 9.1  | 8.9  | 8.8  | 8.5  | 7.8  | 6.6  | 8.1  | 9.0  | 9.0  | 10.2 | 10.9 | 9.8  | 9.2  | 11.2 | 12.3 | 11.7 | 12.9 | 12.2 | 12.3 | 11.6 | 9.9  |
| 6   | 12.0 | 11.0 | 12.2 | 12.4 | 12.2 | 11.4 | 11.7 | 10.9 | 10.1 | 11.2 | 12.2 | 11.1 | 11.6 | 12.1 | 12.9 | 12.5 | 11.2 | 12.6 | 12.3 | 11.2 | 11.3 | 11.0 | 9.0  | 9.4  | 11.5 |
| 7   | 8.9  | 8.8  | 7.8  | 6.6  | 5.1  | 3.0  | 3.6  | 2.7  | 5.0  | 6.7  | 6.6  | 7.3  | 8.4  | 8.4  | 8.8  | 9.2  | 8.1  | 9.0  | 10.4 | 9.4  | 5.4  | 6.5  | 6.8  | 7.1  | 7.1  |
| 8   | 3.5  | 5.2  | 4.3  | 5.6  | 7.4  | 8.5  | 9.9  | 8.2  | 9.2  | 8.5  | 7.5  | 7.2  | 7.7  | 8.2  | 9.4  | 9.9  | 9.2  | 8.2  | 8.9  | 9.0  | 9.3  | 9.3  | 9.1  | 9.6  | 8.0  |
| 9   | 8.4  | 6.9  | 7.2  | 8.0  | 8.0  | 6.3  | 5.9  | 4.2  | 3.1  | 5.5  | 5.4  | 5.7  | 4.7  | 4.8  | 4.9  | 5.9  | 6.4  | 6.0  | 4.6  | 3.6  | 5.2  | 5.9  | 5.9  | 5.9  | 5.8  |
| 10  | 6.5  | 6.6  | 5.5  | 5.9  | 7.1  | 8.7  | 8.8  | 8.2  | 7.7  | 9.0  | 7.7  | 7.9  | 8.2  | 7.8  | 6.4  | 5.4  | 5.0  | 3.8  | 6.9  | 9.7  | 10.5 | 12.4 | 13.3 | 13.5 | 8.0  |
| 11  | 12.8 | 12.0 | 12.6 | 13.1 | 12.6 | 11.3 | 13.3 | 14.2 | 13.7 | 14.5 | 16.0 | 16.3 | 16.9 | 15.5 | 16.1 | 15.8 | 14.7 | 13.8 | 12.9 | 11.7 | 12.4 | 12.3 | 9.8  | 10.5 | 13.5 |
| 12  | 10.2 | 10.6 | 7.4  | 6.4  | 5.3  | 4.3  | 5.6  | 5.2  | 5.4  | 8.1  | 9.0  | 8.7  | 7.4  | 6.2  | 5.2  | 5.9  | 5.3  | 6.8  | 8.0  | 9.0  | 8.6  | 8.5  | 9.0  | 7.3  | 7.2  |
| 13  | 7.7  | 8.3  | 8.7  | 10.0 | 9.5  | 9.7  | 8.1  | 7.3  | 5.9  | 4.8  | 5.5  | 6.6  | 7.6  | 7.8  | 7.6  | 7.8  | 7.9  | 8.3  | 8.1  | 8.1  | 10.6 | 10.1 | 11.0 | 8.4  | 8.2  |
| 14  | 7.6  | 7.6  | 10.1 | 10.4 | 7.1  | 4.2  | 0.7  | 2.0  | 3.0  | 3.5  | 4.5  | 6.3  | 7.5  | 7.9  | 7.8  | 7.6  | 9.1  | 11.1 | 11.1 | 10.5 | 10.8 | 11.7 | 12.1 | 11.2 | 7.7  |
| 15  | 12.0 | 12.4 | 12.4 | 11.5 | 12.9 | 15.2 | 12.2 | 10.6 | 11.5 | 13.2 | 15.4 | 16.4 | 19.5 | 19.1 | 16.7 | 16.7 | 15.0 | 13.0 | 11.7 | 12.3 | 12.3 | 10.5 | 11.9 | 11.8 | 13.6 |
| 16  | 10.3 | 9.1  | 9.7  | 9.4  | 7.9  | 9.1  | 9.3  | 8.7  | 8.8  | 12.1 | 14.7 | 15.4 | 16.1 | 16.1 | 13.4 | 11.6 | 11.6 | 10.5 | 9.9  | 11.5 | 12.4 | 10.9 | 10.7 | 10.8 | 11.2 |
| 17  | 11.7 | 12.6 | 10.0 | 10.0 | 9.3  | 8.5  | 8.7  | 7.5  | 10.0 | 8.3  | 7.3  | 5.4  | 4.5  | 4.7  | 4.9  | 4.9  | 5.4  | 6.9  | 7.8  | 9.3  | 8.4  | 7.1  | 9.1  | 9.6  | 8.0  |
| 18  | 8.8  | 8.4  | 7.2  | 7.4  | 8.3  | 8.9  | 7.2  | 10.0 | 10.8 | 10.4 | 13.3 | 13.1 | 11.3 | 12.2 | 12.4 | 11.8 | 11.6 | 11.6 | 10.7 | 11.7 | 16.3 | 12.6 | 12.6 | 15.2 | 11.0 |
| 19  | 14.0 | 16.6 | 14.8 | 13.7 | 12.6 | 11.8 | 12.1 | 11.1 | 9.3  | 7.3  | 4.8  | 2.8  | 2.2  | 3.8  | 6.0  | 8.5  | 8.4  | 9.1  | 9.9  | 15.7 | 16.1 | 17.3 | 15.9 | 15.5 | 10.8 |
| 20  | 13.3 | 14.6 | 12.3 | 11.8 | 10.2 | 12.8 | 15.3 | 14.2 | 14.0 | 14.2 | 15.9 | 15.2 | 13.4 | 12.5 | 10.9 | 7.7  | 5.0  | 9.8  | 9.1  | 8.0  | 9.8  | 10.3 | 9.3  | 8.8  | 11.6 |
| 21  | 7.3  | 4.8  | 4.0  | 3.2  | 3.7  | 4.3  | 5.2  | 7.6  | 7.3  | 10.6 | 10.2 | 10.5 | 12.7 | 14.4 | 12.9 | 13.7 | 11.2 | 9.6  | 8.9  | 11.1 | 12.7 | 13.9 | 13.1 | 9.6  | 9.3  |
| 22  | 11.2 | 14.9 | 16.8 | 18.6 | 17.1 | 16.8 | 18.9 | 22.1 | 23.4 | 23.4 | 22.0 | 17.9 | 13.9 | 7.8  | 6.6  | 5.1  | 2.8  | 6.8  | 9.3  | 10.5 | 7.7  | 6.5  | 6.2  | 6.6  | 13.0 |
| 23  | 5.2  | 5.8  | 6.0  | 6.6  | 6.8  | 5.9  | 7.9  | 10.6 | 9.6  | 12.6 | 12.9 | 13.7 | 12.1 | 11.4 | 11.5 | 10.9 | 9.6  | 10.7 | 10.4 | 7.8  | 6.8  | 6.8  | 6.2  | 6.4  | 8.9  |
| 24  | 6.1  | 4.3  | 3.6  | 3.7  | 3.7  | 2.2  | 2.9  | 5.8  | 5.4  | 4.5  | 4.3  | 3.9  | 3.9  | 4.7  | 6.2  | 7.1  | 7.6  | 7.2  | 11.0 | 16.1 | 18.1 | 16.1 | 15.3 | 15.8 | 7.5  |
| 25  | 15.6 | 15.8 | 15.8 | 13.5 | 11.4 | 10.7 | 11.1 | 12.1 | 9.4  | 11.1 | 9.9  | 8.9  | 9.2  | 9.2  | 8.9  | 9.4  | 8.2  | 6.6  | 5.9  | 7.6  | 9.7  | 7.9  | 3.1  | 8.5  | 10.0 |
| 26  | 11.3 | 10.3 | 9.6  | 8.1  | 8.6  | 11.5 | 11.2 | 7.8  | 7.5  | 7.6  | 7.9  | 5.5  | 4.0  | 2.4  | 3.0  | 5.8  | 8.3  | 9.3  | 10.5 | 10.4 | 11.0 | 11.0 | 11.3 | 11.5 | 8.6  |
| 27  | 11.1 | 9.6  | 10.5 | 12.6 | 11.0 | 12.5 | 12.0 | 10.0 | 8.8  | 7.3  | 7.8  | 5.5  | 5.3  | 9.9  | 14.1 | 14.3 | 12.4 | 10.4 | 9.3  | 9.8  | 8.7  | 9.2  | 9.7  | 9.7  | 10.1 |
| 28  | 8.1  | 5.3  | 5.5  | 4.5  | 4.1  | 2.0  | 2.3  | 4.7  | 5.9  | 7.7  | 11.1 | 11.2 | 9.4  | 8.3  | 7.4  | 6.4  | 6.7  | 7.9  | 9.8  | 11.3 | 10.6 | 9.4  | 9.9  | 10.6 | 7.5  |
| 29  | 8.9  | 10.6 | 9.4  | 9.8  | 9.5  | 8.8  | 8.9  | 8.8  | 7.2  | 5.5  | 3.3  | 1.4  | 1.9  | 1.5  | 1.9  | 1.1  | 1.5  | 4.2  | 4.0  | 4.9  | 6.8  | 8.5  | 10.0 | 10.4 | 6.2  |
| 30  | 9.3  | 10.6 | 10.9 | 10.5 | 11.5 | 13.2 | 13.4 | 12.0 | 13.6 | 12.4 | 11.8 | 13.1 | 13.0 | 12.4 | 11.9 | 11.8 | 11.1 | 11.2 | 11.7 | 13.0 | 11.6 | 13.3 | 11.1 | 12.2 | 11.9 |
| 31  | 13.8 | 10.6 | 11.3 | 11.0 | 12.1 | 10.7 | 8.8  | 9.8  | 8.0  | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | 10.7 |
| AVG | 9.8  | 9.6  | 9.2  | 9.1  | 8.9  | 9.0  | 9.0  | 8.9  | 8.6  | 9.1  | 9.4  | 9.0  | 8.8  | 8.8  | 8.7  | 8.6  | 8.3  | 8.7  | 9.0  | 9.9  | 10.3 | 10.2 | 10.0 | 10.1 | 9.2  |

**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 2:**

wind speed 2 50m m/s  
Height: 50 m  
Serial #: 51163

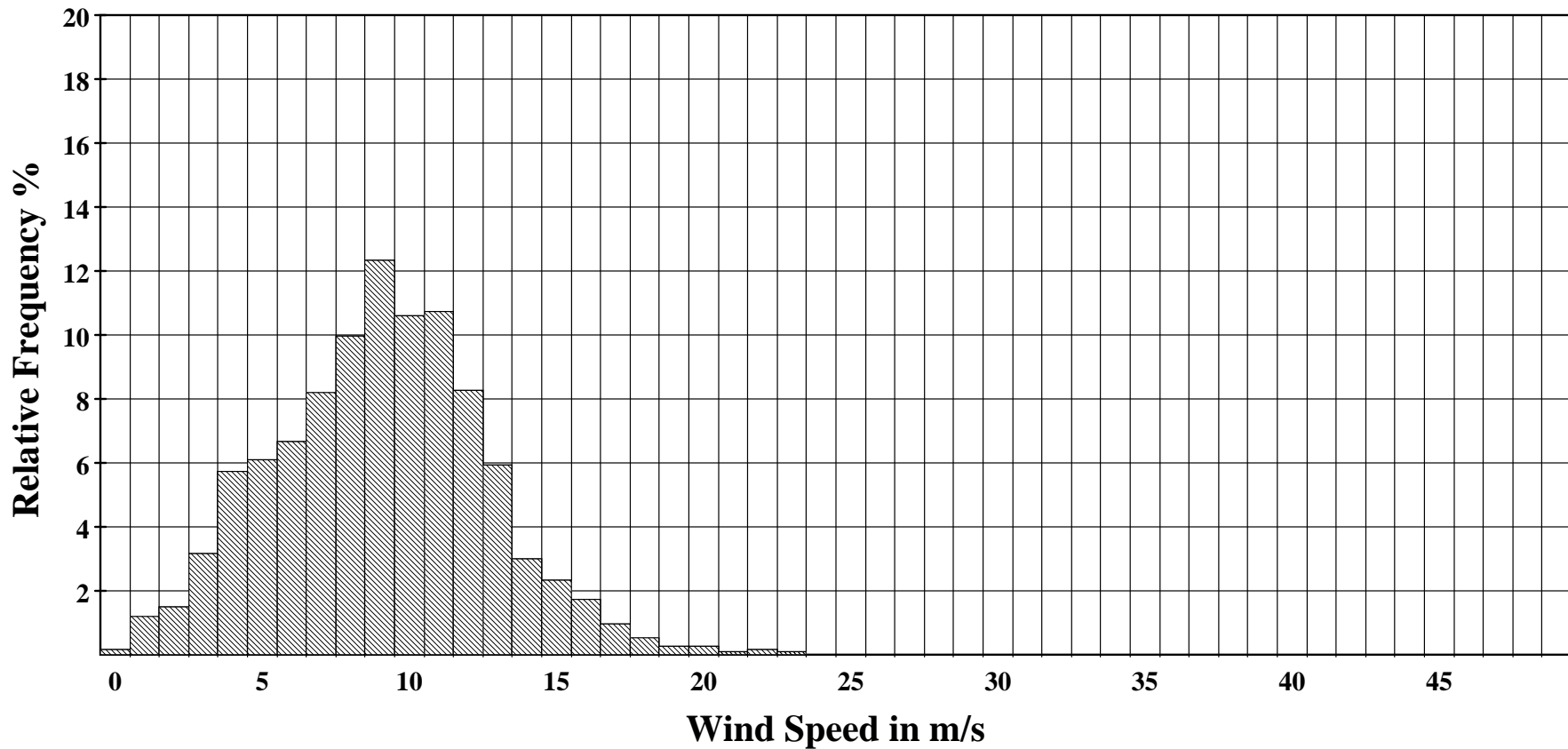
**January 2012**

**Frequency Distribution Ch 2**

SITE 0001

NMSU ASC at Clovis

**Frequency Distribution**



**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 2:**

wind speed 2 50m m/s  
Height: 50 m  
Serial #: 51163

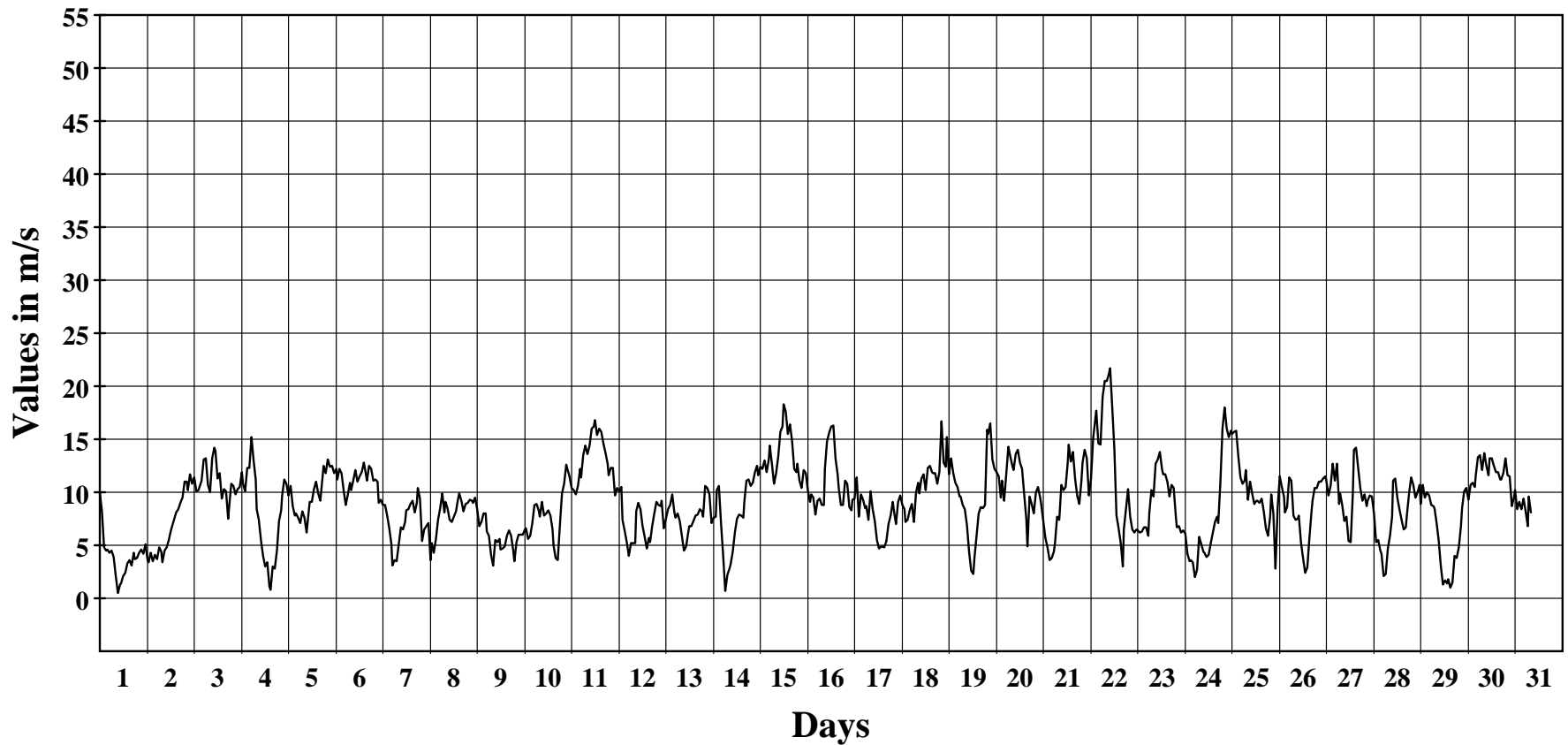
**January 2012**

**Hourly Averages Graph Ch 2**

SITE 0001

NMSU ASC at Clovis

**Average Hourly Values**



**Average Value: 9.0**

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Sensor on channel 2:**

wind speed 2 50m m/s

Height: 50 m Units: m/s

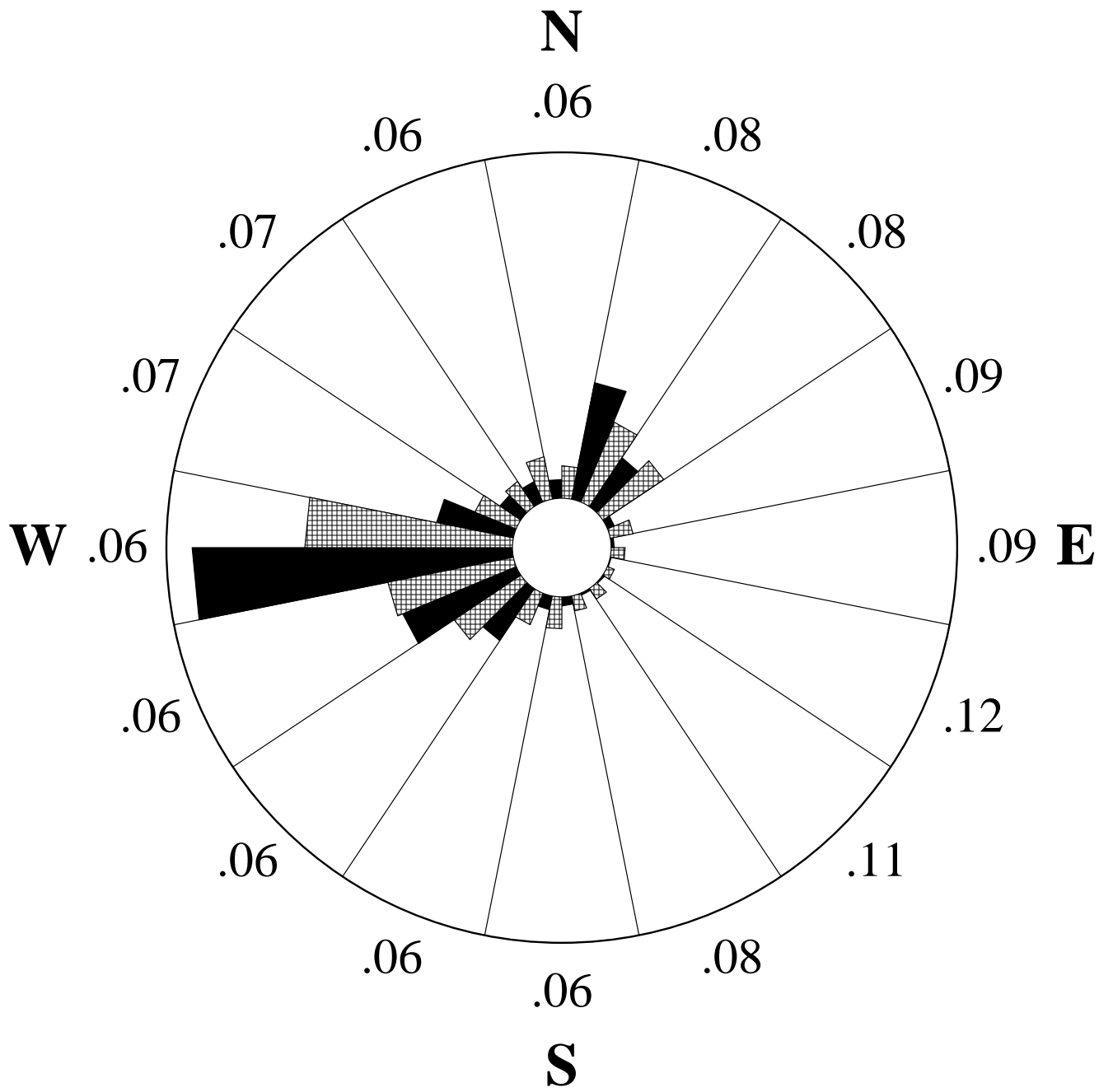
Serial #: 51163

**January 2012****Hourly Averages Table Ch 2**

SITE 0001

NMSU ASC at Clovis

| Day | Hour |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | AVG  |      |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|     | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   |      | 23   |
| 1   | 10.0 | 8.2  | 4.8  | 4.5  | 4.6  | 4.3  | 4.5  | 3.9  | 2.1  | 0.5  | 1.3  | 1.4  | 2.1  | 2.4  | 3.3  | 3.6  | 3.1  | 4.3  | 3.7  | 3.8  | 4.3  | 4.6  | 4.2  | 5.1  | 3.9  |
| 2   | 3.6  | 3.4  | 4.3  | 3.5  | 4.1  | 3.7  | 4.8  | 4.4  | 3.4  | 4.5  | 4.8  | 5.5  | 6.4  | 7.1  | 7.4  | 8.1  | 8.4  | 9.0  | 9.5  | 11.0 | 11.0 | 10.2 | 11.7 | 10.8 | 6.7  |
| 3   | 11.4 | 10.1 | 10.2 | 10.8 | 11.1 | 13.1 | 13.2 | 10.7 | 10.0 | 13.2 | 14.2 | 13.9 | 11.3 | 11.8 | 9.4  | 10.3 | 10.1 | 7.5  | 8.6  | 10.8 | 10.6 | 9.8  | 10.3 | 10.5 | 10.9 |
| 4   | 11.9 | 10.8 | 10.1 | 12.3 | 12.3 | 15.2 | 13.0 | 11.2 | 8.4  | 7.4  | 5.5  | 4.0  | 3.0  | 3.4  | 1.1  | 0.8  | 3.0  | 2.8  | 4.5  | 7.3  | 8.3  | 9.7  | 11.2 | 10.8 | 7.8  |
| 5   | 9.7  | 10.6 | 8.7  | 7.8  | 8.0  | 7.6  | 7.1  | 8.3  | 7.6  | 6.2  | 8.2  | 9.1  | 9.1  | 10.3 | 11.0 | 9.9  | 9.3  | 11.3 | 12.5 | 11.8 | 13.1 | 12.4 | 12.5 | 11.8 | 9.7  |
| 6   | 12.2 | 11.2 | 12.2 | 11.8 | 10.2 | 8.8  | 9.8  | 10.9 | 10.3 | 11.1 | 12.1 | 11.0 | 11.5 | 11.9 | 12.8 | 12.3 | 11.1 | 12.5 | 12.2 | 11.1 | 11.2 | 11.0 | 9.0  | 9.3  | 11.1 |
| 7   | 8.8  | 8.8  | 7.8  | 6.6  | 5.1  | 3.1  | 3.6  | 3.5  | 5.1  | 6.7  | 6.5  | 7.3  | 8.3  | 8.4  | 8.9  | 9.2  | 8.1  | 9.0  | 10.4 | 9.4  | 5.4  | 6.5  | 6.8  | 7.1  | 7.1  |
| 8   | 3.6  | 5.2  | 4.3  | 5.6  | 7.4  | 8.5  | 9.9  | 8.1  | 9.1  | 8.5  | 7.4  | 7.2  | 7.7  | 8.2  | 9.4  | 9.9  | 9.2  | 8.2  | 8.9  | 9.0  | 9.3  | 9.2  | 9.0  | 9.5  | 8.0  |
| 9   | 8.4  | 6.8  | 7.2  | 8.0  | 8.0  | 6.3  | 5.9  | 4.1  | 3.1  | 5.5  | 5.3  | 5.6  | 4.6  | 4.7  | 4.9  | 5.9  | 6.4  | 5.9  | 4.5  | 3.5  | 5.3  | 6.0  | 6.0  | 6.0  | 5.7  |
| 10  | 6.5  | 6.6  | 5.6  | 5.9  | 7.1  | 8.8  | 8.9  | 8.3  | 7.7  | 9.1  | 7.8  | 8.0  | 8.3  | 7.8  | 6.5  | 5.0  | 3.8  | 3.6  | 6.9  | 9.9  | 10.8 | 12.6 | 12.2 | 11.5 | 7.9  |
| 11  | 10.4 | 10.2 | 9.8  | 10.6 | 12.2 | 11.4 | 13.5 | 14.4 | 13.6 | 14.4 | 16.0 | 16.2 | 16.8 | 15.4 | 16.0 | 15.7 | 14.6 | 13.7 | 12.7 | 11.6 | 12.3 | 12.3 | 9.7  | 10.4 | 13.1 |
| 12  | 10.1 | 10.5 | 7.4  | 6.4  | 5.3  | 4.0  | 5.3  | 5.2  | 5.2  | 8.2  | 9.0  | 8.4  | 6.8  | 5.8  | 4.7  | 5.7  | 5.3  | 6.8  | 8.0  | 9.1  | 8.8  | 8.7  | 9.2  | 6.6  | 7.1  |
| 13  | 7.5  | 8.4  | 8.8  | 9.8  | 8.1  | 7.6  | 8.0  | 7.3  | 5.9  | 4.5  | 4.9  | 6.2  | 6.8  | 6.8  | 7.3  | 7.8  | 7.9  | 8.4  | 8.2  | 7.7  | 10.6 | 10.4 | 9.8  | 7.1  | 7.7  |
| 14  | 7.6  | 7.7  | 10.2 | 10.6 | 7.1  | 4.1  | 0.7  | 2.2  | 2.8  | 3.2  | 4.4  | 6.2  | 7.5  | 7.9  | 7.8  | 7.6  | 9.1  | 11.1 | 11.2 | 10.6 | 10.9 | 11.9 | 12.5 | 11.6 | 7.8  |
| 15  | 12.4 | 12.2 | 13.0 | 11.9 | 13.1 | 14.4 | 12.7 | 10.8 | 11.8 | 13.4 | 15.7 | 16.2 | 18.3 | 17.6 | 15.5 | 16.4 | 14.8 | 12.2 | 11.9 | 12.7 | 11.1 | 10.4 | 12.1 | 11.8 | 13.4 |
| 16  | 10.1 | 9.1  | 9.8  | 9.5  | 7.9  | 9.2  | 9.4  | 8.8  | 8.8  | 12.2 | 14.8 | 15.6 | 16.2 | 16.3 | 13.2 | 11.7 | 10.4 | 8.8  | 8.8  | 11.1 | 10.8 | 8.6  | 8.3  | 9.3  | 10.8 |
| 17  | 9.4  | 11.4 | 7.7  | 9.8  | 9.3  | 8.5  | 8.7  | 7.4  | 10.1 | 8.4  | 7.3  | 5.5  | 4.7  | 4.8  | 4.9  | 4.8  | 5.4  | 7.0  | 7.8  | 9.1  | 8.3  | 7.0  | 9.1  | 9.7  | 7.8  |
| 18  | 8.8  | 8.4  | 7.2  | 7.4  | 8.3  | 8.9  | 7.2  | 10.0 | 10.9 | 9.9  | 11.3 | 11.7 | 10.2 | 12.3 | 12.5 | 11.9 | 11.8 | 11.8 | 10.8 | 11.9 | 16.7 | 12.8 | 12.4 | 15.2 | 10.8 |
| 19  | 11.7 | 13.3 | 11.8 | 10.9 | 10.5 | 9.6  | 9.6  | 8.8  | 8.4  | 6.9  | 4.4  | 2.6  | 2.3  | 3.8  | 5.9  | 8.0  | 8.6  | 8.5  | 8.8  | 15.9 | 15.5 | 16.5 | 13.1 | 12.2 | 9.5  |
| 20  | 11.9 | 11.5 | 9.5  | 11.1 | 9.2  | 11.7 | 14.3 | 13.3 | 12.4 | 12.1 | 13.6 | 14.0 | 12.8 | 12.2 | 9.8  | 7.5  | 4.9  | 9.6  | 8.9  | 8.0  | 10.0 | 10.5 | 9.5  | 8.9  | 10.7 |
| 21  | 7.3  | 5.7  | 4.8  | 3.6  | 3.8  | 4.4  | 5.2  | 7.7  | 7.4  | 10.7 | 10.2 | 10.5 | 12.8 | 14.5 | 12.9 | 13.8 | 11.3 | 9.7  | 8.9  | 11.1 | 12.8 | 14.0 | 13.2 | 9.7  | 9.4  |
| 22  | 11.3 | 15.1 | 16.9 | 17.7 | 14.6 | 14.5 | 19.0 | 20.5 | 20.5 | 21.3 | 21.7 | 18.0 | 14.1 | 7.8  | 6.6  | 5.2  | 3.0  | 6.5  | 8.4  | 10.3 | 7.7  | 6.5  | 6.2  | 6.5  | 12.5 |
| 23  | 6.4  | 6.2  | 6.3  | 6.7  | 6.7  | 5.9  | 8.0  | 10.2 | 9.6  | 12.7 | 13.1 | 13.8 | 12.2 | 11.7 | 11.7 | 11.0 | 9.6  | 10.7 | 10.4 | 7.7  | 6.7  | 6.8  | 6.2  | 6.4  | 9.0  |
| 24  | 6.1  | 4.2  | 3.5  | 3.6  | 3.4  | 2.0  | 2.7  | 5.8  | 5.1  | 4.4  | 4.3  | 3.9  | 4.1  | 5.2  | 6.2  | 7.2  | 7.7  | 7.1  | 10.9 | 16.0 | 18.0 | 16.0 | 15.2 | 15.8 | 7.4  |
| 25  | 15.5 | 15.7 | 15.8 | 13.4 | 11.4 | 10.8 | 11.1 | 12.1 | 9.3  | 11.0 | 9.9  | 8.9  | 9.2  | 9.3  | 9.0  | 9.4  | 8.3  | 6.6  | 5.9  | 7.7  | 9.8  | 8.0  | 2.8  | 8.5  | 10.0 |
| 26  | 11.5 | 10.5 | 9.6  | 8.1  | 8.6  | 11.4 | 11.1 | 7.8  | 7.4  | 7.5  | 7.8  | 5.3  | 3.8  | 2.4  | 2.9  | 5.7  | 8.2  | 9.2  | 10.4 | 10.4 | 11.0 | 11.0 | 11.3 | 11.5 | 8.5  |
| 27  | 11.1 | 9.7  | 10.6 | 12.7 | 11.1 | 12.7 | 8.9  | 9.9  | 8.8  | 7.3  | 7.7  | 5.4  | 5.3  | 9.8  | 14.0 | 14.2 | 12.3 | 10.4 | 9.2  | 9.8  | 8.7  | 9.2  | 9.7  | 9.6  | 9.9  |
| 28  | 8.0  | 5.3  | 5.5  | 4.5  | 4.2  | 2.1  | 2.3  | 4.7  | 5.9  | 7.7  | 11.1 | 11.3 | 9.5  | 8.4  | 7.4  | 6.5  | 6.7  | 7.9  | 9.9  | 11.4 | 10.7 | 9.5  | 10.0 | 10.7 | 7.5  |
| 29  | 8.9  | 10.7 | 9.5  | 10.0 | 9.7  | 8.8  | 8.7  | 8.5  | 7.1  | 5.4  | 3.0  | 1.3  | 1.7  | 1.4  | 1.8  | 1.0  | 1.5  | 4.0  | 3.8  | 4.8  | 6.8  | 8.5  | 10.1 | 10.4 | 6.2  |
| 30  | 9.3  | 10.7 | 10.9 | 10.5 | 11.6 | 13.3 | 13.5 | 12.1 | 13.7 | 12.5 | 11.6 | 13.3 | 13.2 | 12.5 | 11.9 | 11.9 | 11.2 | 11.2 | 11.8 | 13.2 | 11.6 | 11.5 | 8.7  | 9.5  | 11.7 |
| 31  | 10.2 | 8.4  | 9.1  | 8.4  | 9.4  | 8.2  | 6.8  | 9.6  | 8.1  | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | 8.7  |
| AVG | 9.4  | 9.2  | 8.8  | 8.8  | 8.5  | 8.5  | 8.6  | 8.7  | 8.4  | 8.9  | 9.2  | 8.9  | 8.7  | 8.7  | 8.6  | 8.6  | 8.2  | 8.5  | 9.0  | 9.9  | 10.3 | 10.1 | 9.7  | 9.8  | 9.0  |



**January 2012**

**Wind Rose Ch 1, 7**

SITE 0001

NMSU ASC at Clovis

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Anemometer on channel 1:**

wind speed 1 50m m/s

Height: 50 m

Serial #: 51179

**Vane on channel 7:**

#200P Wind Vane

Height: 50 m


Serial #: n/a

Outer Numbers are Average TIs for speeds greater than 4.5 m/s

Inner Circle = 0%

Outer Circle = 40%

 Percent of Total Wind Energy

 Percent of Total Time

**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 3:**

wind speed 3 40m m/s  
Height: 40 m  
Serial #: 51187

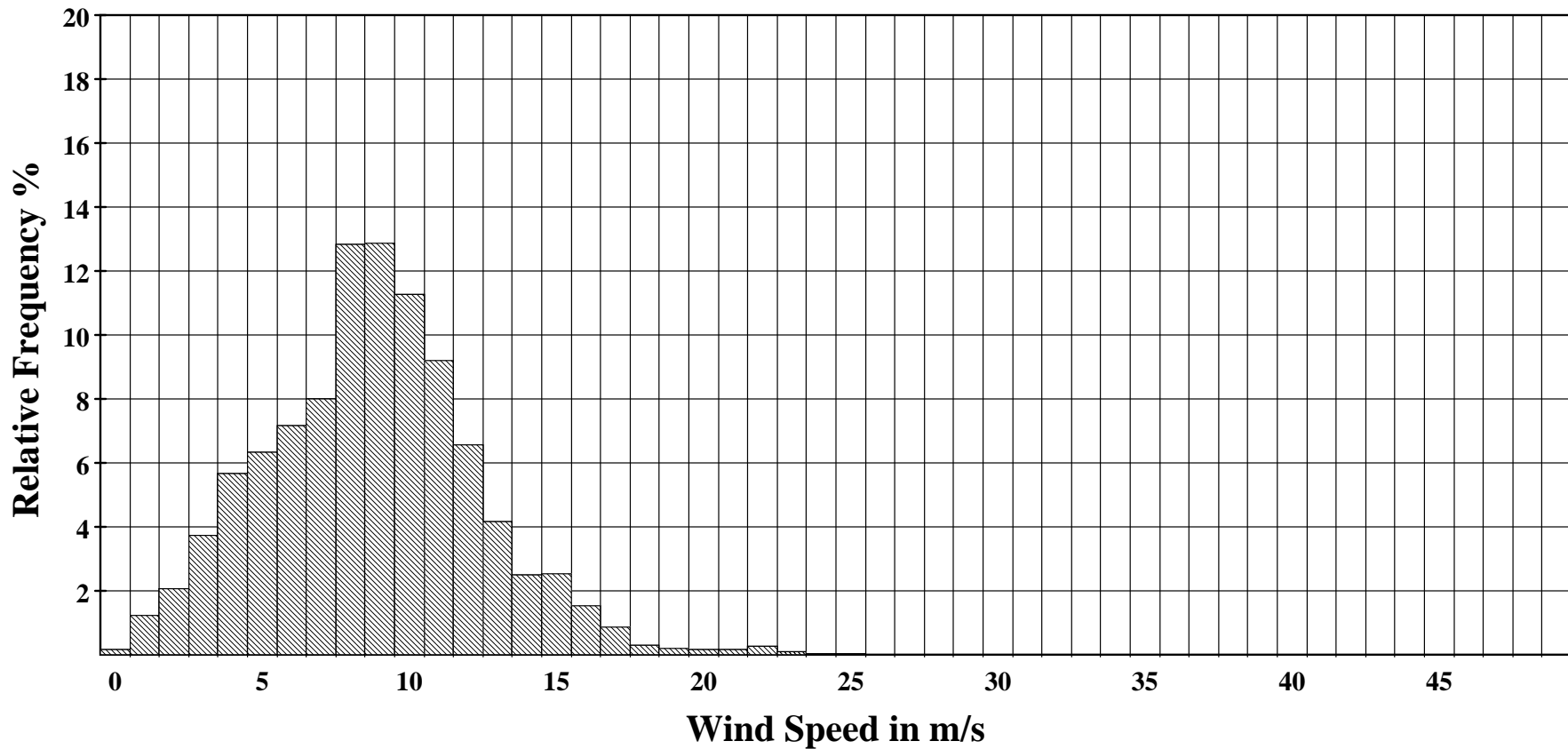
**January 2012**

**Frequency Distribution Ch 3**

SITE 0001

NMSU ASC at Clovis

**Frequency Distribution**



**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 3:**

wind speed 3 40m m/s  
Height: 40 m  
Serial #: 51187

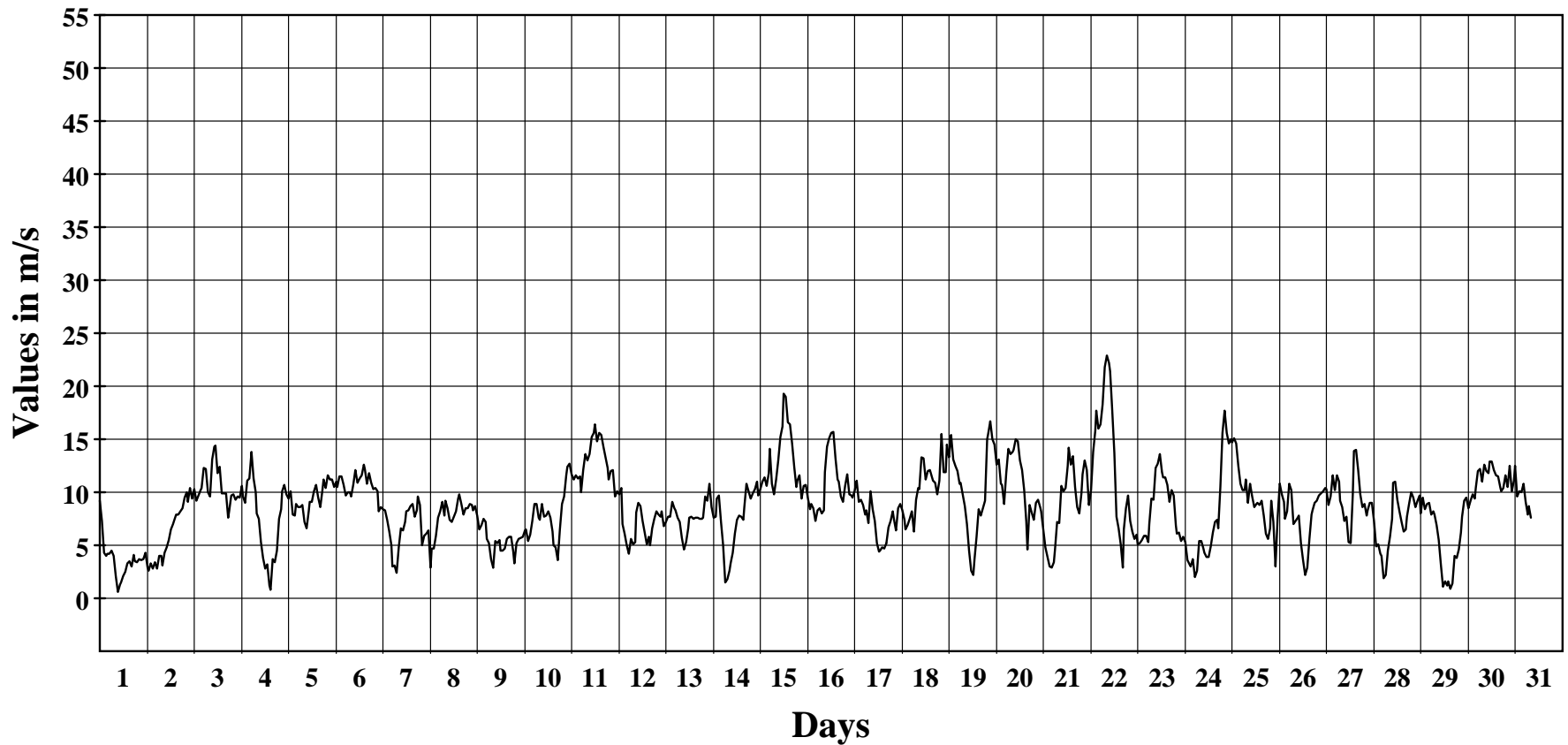
**January 2012**

**Hourly Averages Graph Ch 3**

SITE 0001

NMSU ASC at Clovis

**Average Hourly Values**



**Average Value: 8.7**

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Sensor on channel 3:**

wind speed 3 40m m/s

Height: 40 m Units: m/s

Serial #: 51187

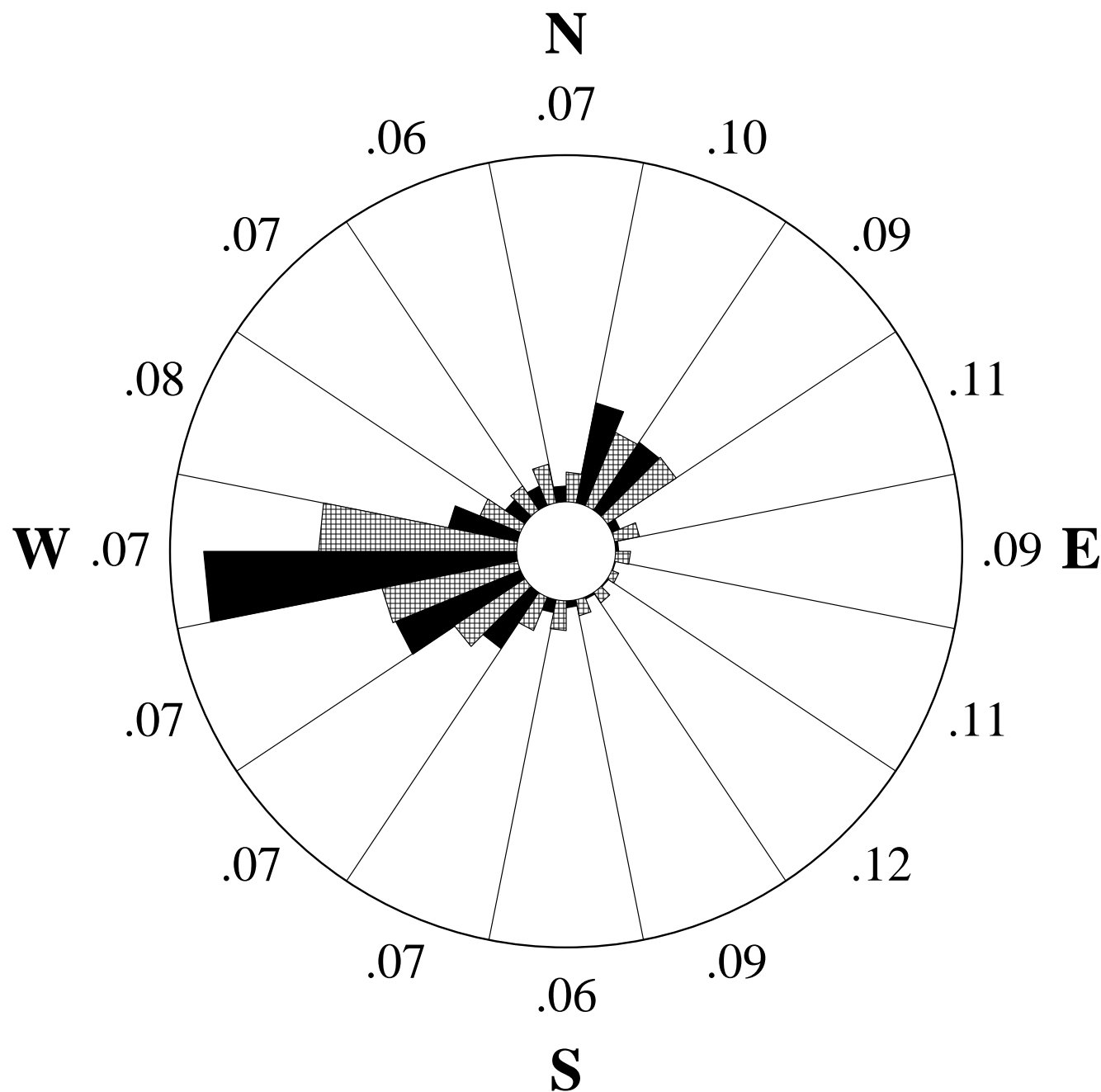
**January 2012****Hourly Averages Table Ch 3**

SITE 0001

NMSU ASC at Clovis

| Day | Hour |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | AVG  |      |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|     | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   |      | 23   |
| 1   | 9.2  | 7.3  | 4.3  | 4.0  | 4.2  | 4.2  | 4.5  | 4.0  | 2.1  | 0.6  | 1.3  | 1.5  | 2.1  | 2.5  | 3.3  | 3.5  | 3.0  | 4.1  | 3.5  | 3.4  | 3.7  | 3.6  | 3.7  | 4.3  | 3.7  |
| 2   | 2.9  | 2.6  | 3.3  | 2.8  | 3.4  | 2.8  | 4.0  | 4.0  | 3.1  | 4.3  | 4.8  | 5.5  | 6.5  | 7.0  | 7.3  | 7.9  | 7.9  | 8.2  | 8.5  | 9.5  | 10.0 | 9.1  | 10.4 | 9.4  | 6.1  |
| 3   | 10.3 | 9.2  | 9.7  | 10.2 | 10.4 | 12.3 | 12.2 | 10.0 | 9.6  | 13.1 | 14.3 | 14.4 | 11.8 | 12.4 | 9.9  | 9.9  | 9.9  | 7.6  | 8.2  | 9.7  | 9.8  | 9.3  | 9.6  | 9.5  | 10.6 |
| 4   | 10.6 | 9.6  | 9.0  | 11.1 | 11.3 | 13.8 | 11.3 | 10.0 | 8.0  | 7.5  | 5.3  | 3.8  | 2.8  | 3.2  | 1.2  | 0.8  | 3.7  | 3.4  | 4.5  | 7.5  | 8.4  | 10.1 | 10.7 | 9.8  | 7.4  |
| 5   | 9.4  | 10.1 | 7.9  | 7.8  | 8.9  | 8.6  | 8.6  | 8.8  | 7.2  | 6.6  | 8.2  | 9.1  | 9.1  | 10.1 | 10.7 | 9.5  | 8.6  | 10.3 | 11.2 | 10.4 | 11.6 | 11.2 | 11.2 | 10.5 | 9.4  |
| 6   | 11.0 | 10.5 | 11.5 | 11.5 | 10.7 | 9.7  | 10.0 | 10.0 | 9.6  | 10.7 | 12.1 | 10.9 | 11.3 | 11.6 | 12.6 | 12.2 | 10.8 | 11.8 | 10.9 | 10.3 | 10.4 | 10.1 | 8.2  | 8.6  | 10.7 |
| 7   | 8.4  | 8.3  | 7.4  | 6.3  | 5.0  | 3.0  | 3.1  | 2.4  | 4.8  | 6.6  | 6.4  | 7.2  | 8.3  | 8.3  | 8.7  | 8.9  | 7.7  | 8.3  | 9.6  | 8.8  | 5.0  | 5.9  | 6.1  | 6.4  | 6.7  |
| 8   | 2.9  | 4.7  | 4.7  | 5.9  | 7.6  | 8.2  | 9.1  | 7.8  | 9.2  | 8.5  | 7.4  | 7.2  | 7.7  | 8.2  | 9.4  | 9.8  | 8.9  | 7.9  | 8.5  | 8.5  | 8.9  | 8.8  | 8.3  | 8.7  | 7.8  |
| 9   | 7.8  | 6.5  | 6.9  | 7.5  | 7.2  | 5.6  | 5.2  | 3.7  | 2.9  | 5.4  | 5.2  | 5.5  | 4.5  | 4.5  | 4.7  | 5.6  | 5.8  | 5.8  | 4.4  | 3.3  | 5.2  | 5.6  | 5.7  | 5.8  | 5.4  |
| 10  | 6.4  | 6.5  | 5.4  | 6.0  | 7.3  | 8.9  | 8.9  | 7.6  | 7.4  | 8.9  | 7.7  | 7.8  | 8.2  | 7.6  | 6.3  | 5.0  | 4.8  | 3.6  | 6.5  | 8.9  | 9.6  | 11.6 | 12.4 | 12.7 | 7.7  |
| 11  | 11.7 | 11.2 | 11.6 | 11.3 | 11.5 | 10.0 | 12.1 | 13.6 | 13.0 | 13.6 | 15.2 | 15.6 | 16.4 | 14.8 | 15.6 | 15.4 | 14.3 | 13.3 | 12.3 | 11.2 | 12.0 | 12.1 | 9.6  | 10.1 | 12.8 |
| 12  | 9.8  | 10.4 | 7.0  | 6.1  | 5.0  | 4.2  | 5.6  | 5.1  | 5.3  | 8.1  | 9.0  | 8.7  | 7.3  | 6.2  | 5.1  | 5.8  | 5.0  | 6.6  | 7.5  | 8.2  | 7.9  | 7.7  | 8.2  | 6.8  | 6.9  |
| 13  | 7.2  | 7.7  | 7.7  | 9.1  | 8.5  | 8.3  | 7.6  | 7.2  | 5.7  | 4.6  | 5.3  | 6.6  | 7.6  | 7.7  | 7.5  | 7.6  | 7.6  | 7.5  | 7.5  | 7.6  | 9.6  | 9.2  | 10.8 | 8.6  | 7.7  |
| 14  | 7.6  | 7.7  | 9.4  | 9.7  | 7.2  | 5.0  | 1.5  | 1.8  | 2.6  | 3.3  | 4.3  | 6.1  | 7.4  | 7.8  | 7.7  | 7.4  | 8.6  | 10.8 | 10.1 | 9.4  | 9.9  | 10.3 | 11.0 | 9.7  | 7.3  |
| 15  | 10.3 | 11.0 | 11.4 | 10.6 | 11.8 | 14.1 | 10.8 | 9.8  | 11.2 | 13.0 | 15.2 | 16.2 | 19.3 | 19.0 | 16.6 | 16.4 | 14.6 | 12.4 | 10.5 | 11.1 | 11.6 | 9.4  | 10.6 | 10.7 | 12.8 |
| 16  | 9.4  | 8.4  | 8.9  | 8.5  | 7.3  | 8.3  | 8.5  | 8.0  | 8.3  | 11.9 | 14.3 | 15.1 | 15.6 | 15.7 | 13.2 | 11.2 | 11.0 | 9.6  | 9.1  | 10.6 | 11.7 | 9.8  | 9.7  | 9.5  | 10.6 |
| 17  | 10.1 | 11.1 | 9.1  | 9.3  | 8.8  | 7.9  | 8.3  | 7.1  | 10.1 | 8.4  | 7.3  | 5.2  | 4.4  | 4.5  | 4.8  | 4.7  | 5.2  | 6.7  | 7.3  | 8.2  | 7.5  | 6.4  | 8.5  | 8.9  | 7.5  |
| 18  | 8.3  | 7.4  | 6.5  | 6.9  | 7.5  | 8.2  | 6.3  | 9.3  | 10.4 | 10.3 | 13.3 | 13.2 | 11.2 | 12.0 | 12.1 | 11.4 | 11.1 | 10.9 | 9.8  | 11.1 | 15.5 | 11.9 | 11.9 | 14.5 | 10.5 |
| 19  | 13.3 | 15.4 | 13.1 | 12.5 | 12.0 | 10.8 | 10.9 | 9.8  | 8.7  | 7.0  | 4.5  | 2.6  | 2.2  | 3.6  | 5.8  | 8.4  | 7.8  | 8.5  | 9.2  | 15.0 | 15.5 | 16.7 | 15.0 | 14.5 | 10.1 |
| 20  | 12.6 | 13.1 | 10.8 | 10.7 | 8.9  | 11.8 | 14.1 | 13.6 | 13.8 | 14.0 | 15.0 | 14.8 | 13.0 | 12.1 | 10.2 | 7.2  | 4.6  | 8.8  | 8.1  | 7.4  | 9.0  | 9.3  | 8.6  | 8.2  | 10.8 |
| 21  | 6.5  | 4.8  | 3.9  | 3.0  | 2.9  | 3.4  | 4.6  | 7.2  | 7.1  | 10.6 | 10.1 | 10.4 | 12.5 | 14.2 | 12.6 | 13.4 | 10.5 | 8.6  | 8.0  | 9.9  | 11.7 | 13.0 | 12.1 | 8.8  | 8.7  |
| 22  | 10.2 | 13.8 | 15.8 | 17.7 | 16.0 | 16.4 | 18.3 | 21.8 | 22.9 | 22.2 | 21.4 | 17.7 | 13.7 | 7.7  | 6.6  | 5.1  | 2.9  | 6.5  | 8.5  | 9.7  | 7.3  | 6.3  | 5.6  | 6.0  | 12.5 |
| 23  | 5.1  | 5.3  | 5.5  | 5.9  | 5.9  | 5.3  | 7.0  | 9.4  | 9.3  | 12.3 | 12.7 | 13.6 | 11.9 | 11.4 | 11.4 | 10.7 | 9.1  | 10.3 | 9.7  | 6.9  | 6.1  | 6.3  | 5.4  | 5.8  | 8.4  |
| 24  | 5.3  | 3.6  | 3.3  | 3.0  | 3.7  | 2.0  | 2.6  | 5.4  | 5.4  | 4.7  | 4.3  | 3.9  | 3.9  | 4.9  | 6.2  | 7.2  | 7.4  | 6.6  | 10.5 | 15.6 | 17.7 | 15.6 | 14.6 | 15.0 | 7.2  |
| 25  | 14.7 | 15.1 | 14.6 | 12.5 | 10.8 | 10.2 | 10.2 | 11.2 | 9.0  | 10.8 | 9.6  | 8.6  | 8.9  | 9.0  | 8.8  | 9.2  | 7.8  | 6.1  | 5.6  | 6.6  | 9.2  | 7.2  | 3.0  | 7.6  | 9.4  |
| 26  | 10.8 | 9.8  | 9.1  | 7.5  | 8.2  | 10.8 | 10.2 | 7.0  | 7.3  | 7.6  | 7.8  | 5.3  | 3.6  | 2.2  | 2.9  | 5.6  | 7.9  | 8.3  | 9.0  | 9.3  | 9.7  | 9.9  | 10.1 | 10.4 | 7.9  |
| 27  | 10.3 | 8.8  | 9.6  | 11.6 | 10.2 | 11.6 | 11.0 | 9.2  | 8.6  | 7.3  | 7.7  | 5.3  | 5.2  | 9.8  | 13.9 | 14.0 | 12.1 | 9.8  | 8.6  | 8.9  | 7.8  | 8.3  | 9.0  | 9.0  | 9.5  |
| 28  | 7.3  | 4.9  | 5.1  | 4.2  | 4.0  | 1.9  | 2.2  | 4.5  | 5.8  | 7.5  | 10.9 | 11.0 | 9.3  | 8.2  | 7.2  | 6.3  | 6.5  | 7.7  | 8.9  | 10.0 | 9.5  | 8.6  | 9.2  | 9.7  | 7.1  |
| 29  | 8.0  | 9.5  | 8.4  | 8.9  | 9.0  | 7.9  | 8.2  | 7.9  | 6.9  | 5.5  | 3.2  | 1.1  | 1.6  | 1.2  | 1.6  | 0.9  | 1.4  | 4.0  | 3.8  | 4.6  | 6.2  | 7.7  | 9.2  | 9.5  | 5.7  |
| 30  | 8.5  | 9.2  | 9.8  | 9.4  | 10.4 | 12.0 | 12.2 | 11.0 | 12.6 | 12.0 | 11.8 | 12.9 | 12.9 | 12.1 | 11.6 | 11.5 | 10.5 | 10.1 | 10.4 | 11.6 | 10.5 | 12.5 | 10.1 | 11.1 | 11.1 |
| 31  | 12.5 | 9.6  | 10.1 | 10.0 | 10.8 | 9.1  | 7.9  | 8.7  | 7.6  | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | 9.6  |
| AVG | 9.0  | 8.8  | 8.4  | 8.4  | 8.3  | 8.3  | 8.3  | 8.3  | 8.2  | 8.9  | 9.2  | 8.9  | 8.7  | 8.6  | 8.5  | 8.4  | 7.9  | 8.1  | 8.3  | 9.1  | 9.6  | 9.4  | 9.3  | 9.3  | 8.7  |





**January 2012**

**Wind Rose Ch 3, 8**

SITE 0001

NMSU ASC at Clovis

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Anemometer on channel 3:**

wind speed 3 40m m/s

Height: 40 m

Serial #: 51187

**Vane on channel 8:**

#200P Wind Vane

Height: 40 m

Serial #: n/a

Outer Numbers are Average TIs for speeds greater than 4.5 m/s

Inner Circle = 0%

Outer Circle = 40%

■ Percent of Total Wind Energy

▒ Percent of Total Time

**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 4:**

wind speed 4 30m m/s  
Height: 30 m  
Serial #: 51180

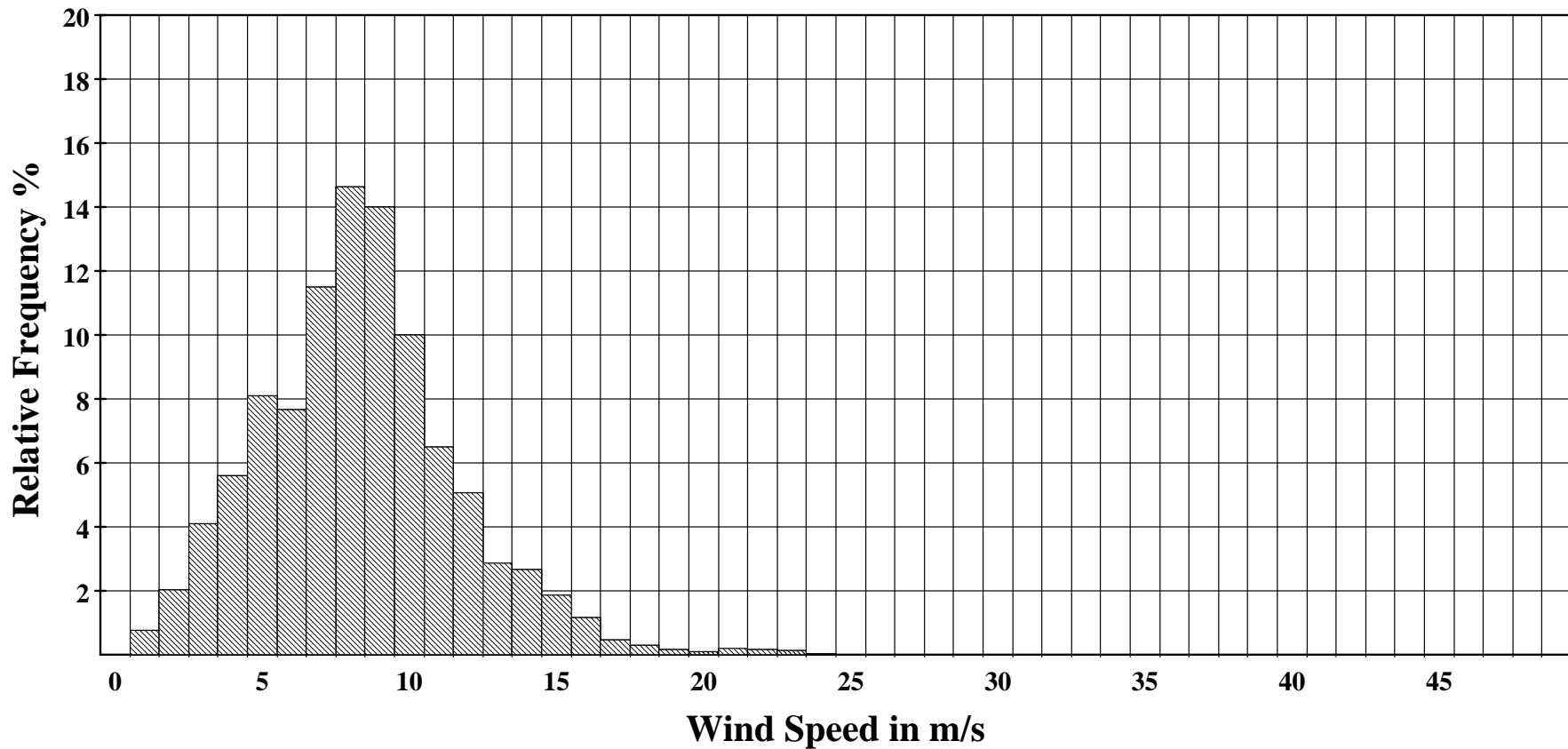
**January 2012**

**Frequency Distribution Ch 4**

SITE 0001

NMSU ASC at Clovis

**Frequency Distribution**



**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 4:**

wind speed 4 30m m/s  
Height: 30 m  
Serial #: 51180

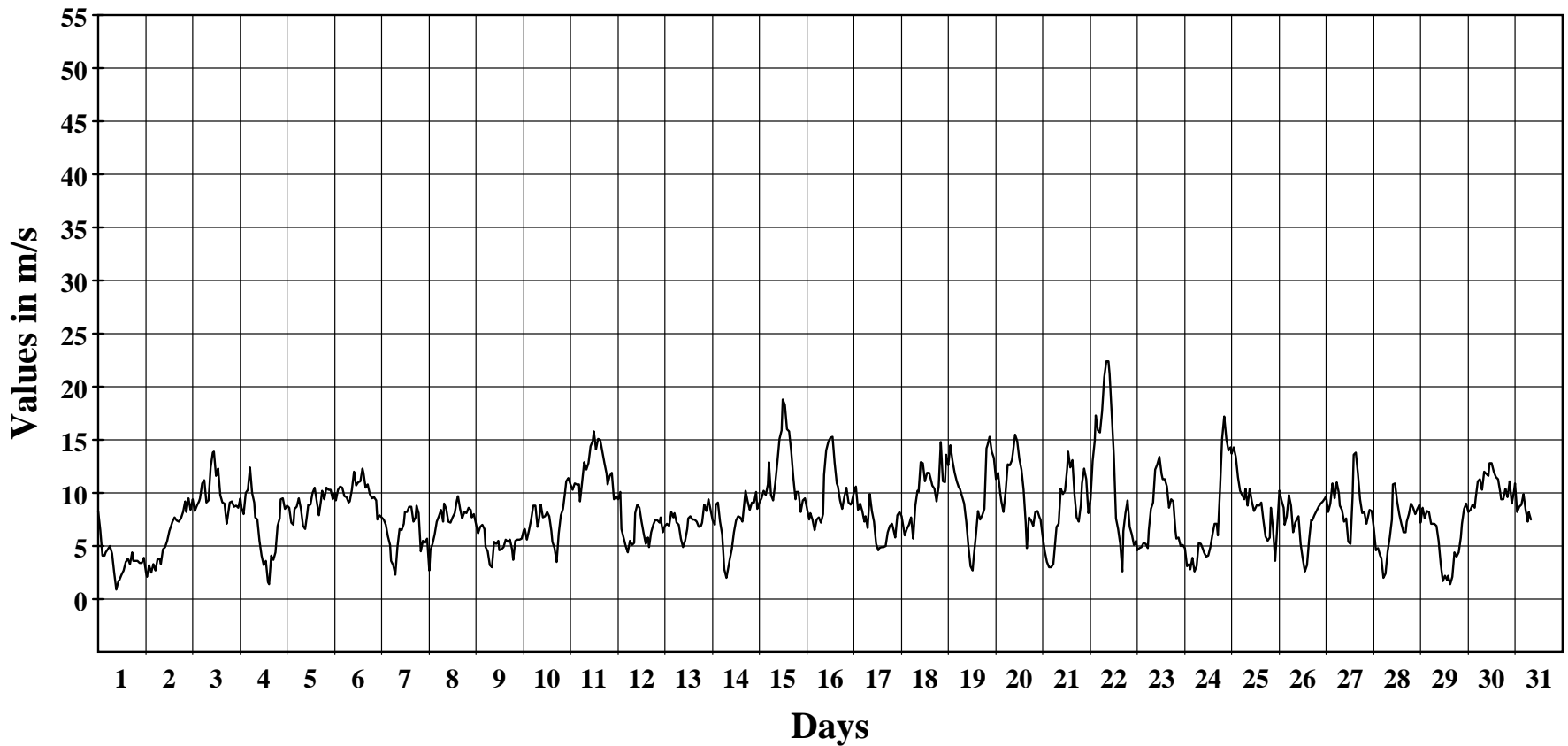
**January 2012**

**Hourly Averages Graph Ch 4**

SITE 0001

NMSU ASC at Clovis

**Average Hourly Values**



**Average Value: 8.3**

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Sensor on channel 4:**

wind speed 4 30m m/s

Height: 30 m Units: m/s

Serial #: 51180

**January 2012****Hourly Averages Table Ch 4**

SITE 0001

NMSU ASC at Clovis

| Day | Hour |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | AVG  |      |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|     | 0    | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   |      | 23   |
| 1   | 8.3  | 6.5  | 4.1  | 4.1  | 4.4  | 4.7  | 5.0  | 4.3  | 2.5  | 0.9  | 1.7  | 1.8  | 2.3  | 2.7  | 3.5  | 3.8  | 3.3  | 4.4  | 3.6  | 3.6  | 3.6  | 3.4  | 3.4  | 3.9  | 3.7  |
| 2   | 2.5  | 2.1  | 3.2  | 2.5  | 3.3  | 2.7  | 3.8  | 3.8  | 3.3  | 4.7  | 4.9  | 5.5  | 6.4  | 7.0  | 7.3  | 7.7  | 7.4  | 7.3  | 7.6  | 8.2  | 9.2  | 8.2  | 9.5  | 8.4  | 5.7  |
| 3   | 9.4  | 8.3  | 8.8  | 9.2  | 9.5  | 10.9 | 11.2 | 9.1  | 9.3  | 12.4 | 13.8 | 13.9 | 11.6 | 12.3 | 9.8  | 9.1  | 9.0  | 7.1  | 7.7  | 9.1  | 9.2  | 8.7  | 8.8  | 8.6  | 9.9  |
| 4   | 9.5  | 8.6  | 8.0  | 10.0 | 10.3 | 12.4 | 10.0 | 9.1  | 7.7  | 7.5  | 5.5  | 4.1  | 3.2  | 3.6  | 1.6  | 1.4  | 4.1  | 3.7  | 4.4  | 6.9  | 7.6  | 9.4  | 9.5  | 8.5  | 6.9  |
| 5   | 8.8  | 8.6  | 7.2  | 7.0  | 8.5  | 8.7  | 9.5  | 8.5  | 6.9  | 6.6  | 8.1  | 8.9  | 8.9  | 10.0 | 10.5 | 9.2  | 7.9  | 9.3  | 10.2 | 9.4  | 10.5 | 10.3 | 10.3 | 9.4  | 8.9  |
| 6   | 10.0 | 9.3  | 10.3 | 10.6 | 10.5 | 9.7  | 9.6  | 9.1  | 9.2  | 10.3 | 12.0 | 10.7 | 11.0 | 11.1 | 12.3 | 11.9 | 10.5 | 10.8 | 9.9  | 9.5  | 9.6  | 9.3  | 7.5  | 7.9  | 10.1 |
| 7   | 7.7  | 7.5  | 7.0  | 5.9  | 5.1  | 3.6  | 3.2  | 2.3  | 4.9  | 6.6  | 6.5  | 7.1  | 8.2  | 8.2  | 8.7  | 8.7  | 7.3  | 7.7  | 8.8  | 8.1  | 4.5  | 5.5  | 5.3  | 5.7  | 6.4  |
| 8   | 2.7  | 4.6  | 5.2  | 6.1  | 7.3  | 7.8  | 8.4  | 7.3  | 9.0  | 8.5  | 7.3  | 7.2  | 7.7  | 8.1  | 9.3  | 9.7  | 8.5  | 7.6  | 8.2  | 8.1  | 8.6  | 8.4  | 7.7  | 8.0  | 7.5  |
| 9   | 7.1  | 6.2  | 6.8  | 7.0  | 6.6  | 4.9  | 4.5  | 3.2  | 3.0  | 5.4  | 5.2  | 5.5  | 4.6  | 4.7  | 4.9  | 5.6  | 5.4  | 5.6  | 4.7  | 3.7  | 5.5  | 5.6  | 5.6  | 5.7  | 5.3  |
| 10  | 6.5  | 6.6  | 5.6  | 6.5  | 7.5  | 8.8  | 8.8  | 6.8  | 7.2  | 8.9  | 7.7  | 7.8  | 8.2  | 7.8  | 6.4  | 5.4  | 4.8  | 3.5  | 6.2  | 7.9  | 8.5  | 10.1 | 11.1 | 11.4 | 7.5  |
| 11  | 10.8 | 10.3 | 10.9 | 10.8 | 10.8 | 9.2  | 11.0 | 12.9 | 12.3 | 12.8 | 14.4 | 14.9 | 15.8 | 14.1 | 15.1 | 15.0 | 13.9 | 12.8 | 11.8 | 10.8 | 11.6 | 11.9 | 9.4  | 9.7  | 12.2 |
| 12  | 9.4  | 10.1 | 6.6  | 5.8  | 5.0  | 4.4  | 5.5  | 5.1  | 5.3  | 8.1  | 8.9  | 8.6  | 7.3  | 6.2  | 5.2  | 5.8  | 4.9  | 6.3  | 7.0  | 7.5  | 7.4  | 7.2  | 7.7  | 6.3  | 6.7  |
| 13  | 6.9  | 7.1  | 6.9  | 8.2  | 7.7  | 8.1  | 7.3  | 7.0  | 5.7  | 4.9  | 5.5  | 6.6  | 7.6  | 7.8  | 7.5  | 7.5  | 7.3  | 6.8  | 6.9  | 7.2  | 8.9  | 8.3  | 9.4  | 8.4  | 7.3  |
| 14  | 7.4  | 7.0  | 8.9  | 9.1  | 7.3  | 6.1  | 2.8  | 2.0  | 3.1  | 3.7  | 4.7  | 6.3  | 7.4  | 7.8  | 7.7  | 7.3  | 8.2  | 10.2 | 9.3  | 8.4  | 9.1  | 9.1  | 10.1 | 8.5  | 7.2  |
| 15  | 9.1  | 9.5  | 10.3 | 9.8  | 10.8 | 12.9 | 9.8  | 9.3  | 10.9 | 12.9 | 15.1 | 15.9 | 18.8 | 18.3 | 16.0 | 15.8 | 13.9 | 11.4 | 9.4  | 10.1 | 10.1 | 8.2  | 9.3  | 9.5  | 12.0 |
| 16  | 8.5  | 7.5  | 8.1  | 7.5  | 6.5  | 7.5  | 7.7  | 7.3  | 8.0  | 11.7 | 14.0 | 14.8 | 15.2 | 15.3 | 12.8 | 10.9 | 10.6 | 9.3  | 8.5  | 9.6  | 10.5 | 9.1  | 8.9  | 9.1  | 10.0 |
| 17  | 10.0 | 10.6 | 8.4  | 9.0  | 8.3  | 7.3  | 7.8  | 6.7  | 9.9  | 8.3  | 7.3  | 5.2  | 4.6  | 4.8  | 4.9  | 4.9  | 5.0  | 6.3  | 6.9  | 7.1  | 6.7  | 5.8  | 7.9  | 8.2  | 7.2  |
| 18  | 7.8  | 6.6  | 6.0  | 6.6  | 7.0  | 7.7  | 5.7  | 8.8  | 10.2 | 10.1 | 12.9 | 12.8 | 11.1 | 11.9 | 11.9 | 11.1 | 10.7 | 10.4 | 9.2  | 10.6 | 14.8 | 11.1 | 11.0 | 13.6 | 10.0 |
| 19  | 12.6 | 14.5 | 13.0 | 11.9 | 11.1 | 10.5 | 10.4 | 9.7  | 9.0  | 7.3  | 5.0  | 3.1  | 2.7  | 4.0  | 6.0  | 8.3  | 7.5  | 7.9  | 8.5  | 14.2 | 14.5 | 15.3 | 13.9 | 13.3 | 9.8  |
| 20  | 11.3 | 11.9 | 10.0 | 9.2  | 8.2  | 10.1 | 12.7 | 12.6 | 13.1 | 13.8 | 15.5 | 14.9 | 13.2 | 12.2 | 10.3 | 7.2  | 4.8  | 7.7  | 7.4  | 6.9  | 8.2  | 8.3  | 7.7  | 7.5  | 10.2 |
| 21  | 5.9  | 4.5  | 3.5  | 3.0  | 3.0  | 3.3  | 4.5  | 6.8  | 7.1  | 10.4 | 9.9  | 10.2 | 12.3 | 13.9 | 12.4 | 13.1 | 9.8  | 7.7  | 7.3  | 8.9  | 10.9 | 12.3 | 11.3 | 8.1  | 8.3  |
| 22  | 9.4  | 13.0 | 14.9 | 17.3 | 15.9 | 15.7 | 17.7 | 20.9 | 22.4 | 22.4 | 21.2 | 17.4 | 13.5 | 7.6  | 6.6  | 5.2  | 2.6  | 6.4  | 8.1  | 9.3  | 6.8  | 6.1  | 5.1  | 5.5  | 12.1 |
| 23  | 4.6  | 4.8  | 4.9  | 5.3  | 5.2  | 4.8  | 6.5  | 8.5  | 9.1  | 12.2 | 12.7 | 13.4 | 11.8 | 11.3 | 11.3 | 10.6 | 8.6  | 9.4  | 9.2  | 6.5  | 5.7  | 5.8  | 5.0  | 5.1  | 8.0  |
| 24  | 4.8  | 3.1  | 3.3  | 2.8  | 3.9  | 2.6  | 3.1  | 5.3  | 5.2  | 4.7  | 4.4  | 4.0  | 4.1  | 4.9  | 6.1  | 7.1  | 7.1  | 6.0  | 10.2 | 15.1 | 17.2 | 15.1 | 14.0 | 14.3 | 7.0  |
| 25  | 13.7 | 14.3 | 13.4 | 11.5 | 10.2 | 9.8  | 9.4  | 10.4 | 8.8  | 10.4 | 9.2  | 8.3  | 8.7  | 8.9  | 8.8  | 9.1  | 7.4  | 5.9  | 5.5  | 5.8  | 8.6  | 6.6  | 3.6  | 6.9  | 9.0  |
| 26  | 10.2 | 9.3  | 8.6  | 7.0  | 7.8  | 9.8  | 8.8  | 6.3  | 7.2  | 7.6  | 7.8  | 5.3  | 3.8  | 2.6  | 3.2  | 5.6  | 7.5  | 7.4  | 7.9  | 8.3  | 8.7  | 9.0  | 9.2  | 9.5  | 7.4  |
| 27  | 9.7  | 8.2  | 9.0  | 10.9 | 9.5  | 11.0 | 10.0 | 8.8  | 8.4  | 7.3  | 7.6  | 5.4  | 5.2  | 9.6  | 13.6 | 13.8 | 11.8 | 9.4  | 8.1  | 8.2  | 7.1  | 7.5  | 8.4  | 8.3  | 9.0  |
| 28  | 6.7  | 4.6  | 4.8  | 4.1  | 3.9  | 2.0  | 2.4  | 4.5  | 5.8  | 7.5  | 10.8 | 10.9 | 9.2  | 8.0  | 7.1  | 6.3  | 6.3  | 7.3  | 8.0  | 9.0  | 8.6  | 8.0  | 8.5  | 8.9  | 6.8  |
| 29  | 7.2  | 8.6  | 7.6  | 8.3  | 8.2  | 7.1  | 7.1  | 7.1  | 6.9  | 5.5  | 3.3  | 1.7  | 2.2  | 1.8  | 2.2  | 1.4  | 2.1  | 4.4  | 4.0  | 4.4  | 5.8  | 7.1  | 8.5  | 9.0  | 5.5  |
| 30  | 8.2  | 8.4  | 8.9  | 8.6  | 9.5  | 11.1 | 11.3 | 10.3 | 12.0 | 11.8 | 11.6 | 12.8 | 12.8 | 12.0 | 11.5 | 11.3 | 10.1 | 9.4  | 9.4  | 10.4 | 9.6  | 11.1 | 9.0  | 10.1 | 10.5 |
| 31  | 10.9 | 8.2  | 8.7  | 8.9  | 9.9  | 8.4  | 7.3  | 8.2  | 7.5  | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | 8.7  |
| AVG | 8.3  | 8.1  | 7.8  | 7.9  | 7.8  | 7.9  | 7.8  | 7.8  | 8.1  | 8.8  | 9.1  | 8.8  | 8.6  | 8.6  | 8.5  | 8.3  | 7.6  | 7.6  | 7.8  | 8.4  | 8.9  | 8.7  | 8.5  | 8.6  | 8.3  |

**Site Information:**

Project: wind monitoring  
Location: clovis nm  
Elevation: 1365 m

**Sensor on channel 9:**

NRG 110S Temp, C  
Height: 3 m  
Serial #: n/a

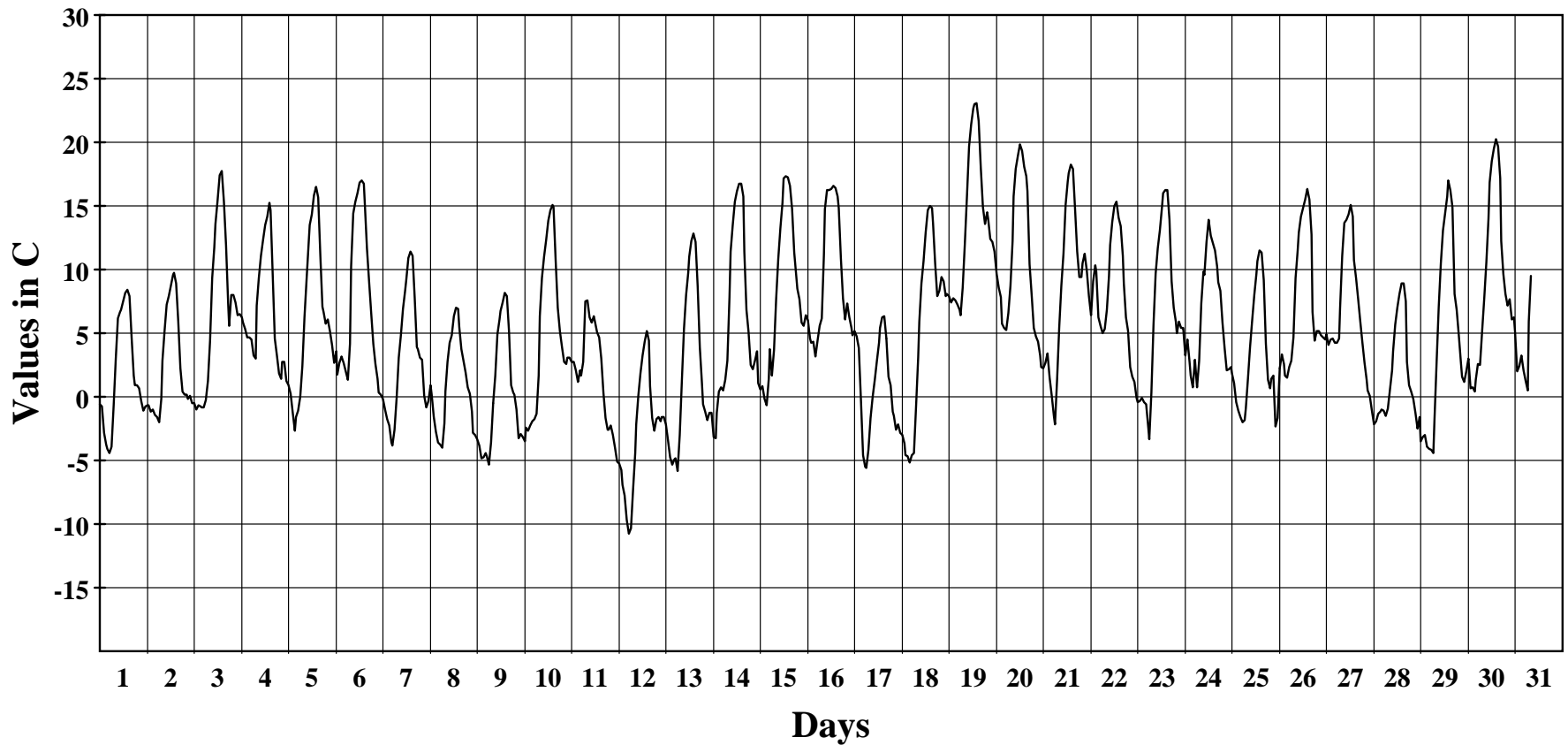
**January 2012**

**Hourly Averages Graph Ch 9**

SITE 0001

NMSU ASC at Clovis

**Average Hourly Values**



**Average Value: 5.2**

**Site Information:**

Project: wind monitoring

Location: clovis nm

Elevation: 1365 m

**Sensor on channel 9:**

NRG 110S Temp, C

Height: 3 m Units: C

Serial #: n/a

**January 2012****Hourly Averages Table Ch 9**

SITE 0001

NMSU ASC at Clovis

| Day | Hour |      |      |      |      |       |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | AVG  |      |
|-----|------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|     | 0    | 1    | 2    | 3    | 4    | 5     | 6     | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   |      | 23   |
| 1   | -0.6 | -0.8 | -2.9 | -3.8 | -4.1 | -4.5  | -3.9  | -0.7 | 3.0  | 6.1  | 6.7  | 6.9  | 7.5  | 8.1  | 8.4  | 7.9  | 4.7  | 1.7  | 0.9  | 0.9  | 0.6  | -0.3 | -1.1 | -0.7 | 1.7  |
| 2   | -0.7 | -0.7 | -1.2 | -1.0 | -1.4 | -1.5  | -2.0  | -0.2 | 2.8  | 5.2  | 7.2  | 7.9  | 8.8  | 9.6  | 9.8  | 8.9  | 5.9  | 2.3  | 0.4  | 0.2  | 0.2  | -0.2 | 0.1  | -0.5 | 2.5  |
| 3   | -0.5 | -1.0 | -0.7 | -0.7 | -0.9 | -0.8  | -0.2  | 1.3  | 4.4  | 9.4  | 11.7 | 13.6 | 15.4 | 17.4 | 17.8 | 15.4 | 11.9 | 7.3  | 5.6  | 8.0  | 8.0  | 7.4  | 6.4  | 6.5  | 6.8  |
| 4   | 6.3  | 5.8  | 5.3  | 4.7  | 4.7  | 4.5   | 3.2   | 3.0  | 7.2  | 9.3  | 11.1 | 12.4 | 13.5 | 14.2 | 15.3 | 14.7 | 9.7  | 4.6  | 3.3  | 1.9  | 1.4  | 2.8  | 2.8  | 1.3  | 6.8  |
| 5   | 0.9  | 0.3  | -1.3 | -2.7 | -1.6 | -1.1  | 0.0   | 2.4  | 6.2  | 9.2  | 12.2 | 13.5 | 14.4 | 15.8 | 16.5 | 15.6 | 11.2 | 7.1  | 6.7  | 5.7  | 6.1  | 5.2  | 4.1  | 2.7  | 6.2  |
| 6   | 3.6  | 1.7  | 2.6  | 3.1  | 2.7  | 2.0   | 1.4   | 4.2  | 10.3 | 14.4 | 15.3 | 16.0 | 16.8 | 17.0 | 16.8 | 15.2 | 11.7 | 9.1  | 6.6  | 4.2  | 2.5  | 1.4  | 0.3  | 0.2  | 7.5  |
| 7   | -0.1 | -1.0 | -1.8 | -2.3 | -3.6 | -3.8  | -2.6  | 0.0  | 3.1  | 4.9  | 6.9  | 8.3  | 9.2  | 10.9 | 11.5 | 11.1 | 7.7  | 3.9  | 3.7  | 3.1  | 2.9  | 0.1  | -0.8 | -0.4 | 3.0  |
| 8   | 0.9  | 0.2  | -1.6 | -2.7 | -3.6 | -3.7  | -4.0  | -2.1 | 0.4  | 2.8  | 4.3  | 4.8  | 6.4  | 7.0  | 6.9  | 5.5  | 3.7  | 2.8  | 1.9  | 0.7  | 0.2  | -1.2 | -2.8 | -3.0 | 1.0  |
| 9   | -3.3 | -3.8 | -4.8 | -4.7 | -4.4 | -4.7  | -5.3  | -3.6 | -0.5 | 1.6  | 5.0  | 6.1  | 6.8  | 7.4  | 8.1  | 7.9  | 5.2  | 0.9  | 0.4  | 0.1  | -1.0 | -3.2 | -2.9 | -3.2 | 0.2  |
| 10  | -3.5 | -2.4 | -2.7 | -2.2 | -1.9 | -1.7  | -1.4  | 1.7  | 6.4  | 9.3  | 11.0 | 12.3 | 13.8 | 14.6 | 15.1 | 14.9 | 10.8 | 7.0  | 5.2  | 3.9  | 2.8  | 2.6  | 3.1  | 3.1  | 5.1  |
| 11  | 2.8  | 2.8  | 2.1  | 1.1  | 2.1  | 1.6   | 2.7   | 7.5  | 7.6  | 6.3  | 5.8  | 6.3  | 5.9  | 5.1  | 4.6  | 3.0  | 0.3  | -1.7 | -2.5 | -2.6 | -2.3 | -3.0 | -4.0 | -5.1 | 1.9  |
| 12  | -5.3 | -5.8 | -6.9 | -7.7 | -9.7 | -10.8 | -10.3 | -7.2 | -4.4 | -2.1 | 0.1  | 1.8  | 3.3  | 4.4  | 5.2  | 4.5  | 0.9  | -1.7 | -2.7 | -1.7 | -1.6 | -1.9 | -1.6 | -1.6 | -2.6 |
| 13  | -2.2 | -3.4 | -4.8 | -5.3 | -4.9 | -4.9  | -5.8  | -3.0 | 1.2  | 5.3  | 8.0  | 9.8  | 11.0 | 12.2 | 12.8 | 12.2 | 8.7  | 3.9  | 1.1  | -0.6 | -1.1 | -1.8 | -1.2 | -1.2 | 1.9  |
| 14  | -3.2 | -3.3 | -1.2 | 0.4  | 0.8  | 0.5   | 1.3   | 2.9  | 7.8  | 11.4 | 13.5 | 15.4 | 16.2 | 16.7 | 16.8 | 15.8 | 11.4 | 6.8  | 5.1  | 2.5  | 2.1  | 2.8  | 3.6  | 1.1  | 6.1  |
| 15  | 0.6  | 0.8  | -0.1 | -0.6 | 1.4  | 3.7   | 1.6   | 3.7  | 7.7  | 10.9 | 13.2 | 15.3 | 17.1 | 17.4 | 17.3 | 16.6 | 14.8 | 11.3 | 9.4  | 8.5  | 7.7  | 5.8  | 5.6  | 6.4  | 8.2  |
| 16  | 6.0  | 4.6  | 4.2  | 4.3  | 3.1  | 4.5   | 5.6   | 6.2  | 11.2 | 14.8 | 16.2 | 16.2 | 16.3 | 16.6 | 16.4 | 15.8 | 14.8 | 10.9 | 7.8  | 6.0  | 7.3  | 6.3  | 5.5  | 4.8  | 9.4  |
| 17  | 5.2  | 4.7  | 3.8  | -0.2 | -4.6 | -5.5  | -5.6  | -4.2 | -1.7 | 0.0  | 1.3  | 2.8  | 4.3  | 5.4  | 6.3  | 6.3  | 4.6  | 1.5  | 0.9  | -1.2 | -1.5 | -2.6 | -2.1 | -2.8 | 0.6  |
| 18  | -3.0 | -3.7 | -4.6 | -4.6 | -5.1 | -4.5  | -4.4  | -0.7 | 3.1  | 5.9  | 8.9  | 10.7 | 12.9 | 14.7 | 15.0 | 14.8 | 13.7 | 10.5 | 7.9  | 8.3  | 9.4  | 9.1  | 7.9  | 8.1  | 5.4  |
| 19  | 8.0  | 7.4  | 7.8  | 7.6  | 7.3  | 6.8   | 6.4   | 8.6  | 12.0 | 15.7 | 19.6 | 21.4 | 22.7 | 23.0 | 23.1 | 21.6 | 18.0 | 14.9 | 13.6 | 14.5 | 14.0 | 12.4 | 12.2 | 11.4 | 13.8 |
| 20  | 9.7  | 8.6  | 7.8  | 5.7  | 5.4  | 5.3   | 6.6   | 8.7  | 12.2 | 15.7 | 17.9 | 18.9 | 19.9 | 19.4 | 18.1 | 17.3 | 16.2 | 10.4 | 8.0  | 5.4  | 4.7  | 4.3  | 3.3  | 2.3  | 10.5 |
| 21  | 2.2  | 2.7  | 3.4  | 1.5  | 0.1  | -1.5  | -2.2  | 1.4  | 5.5  | 8.8  | 11.3 | 15.1 | 16.9 | 17.6 | 18.3 | 17.9 | 14.8 | 11.4 | 9.4  | 9.4  | 10.5 | 11.3 | 9.9  | 7.9  | 8.5  |
| 22  | 6.4  | 9.1  | 10.3 | 9.8  | 6.3  | 5.6   | 5.0   | 5.4  | 6.8  | 9.5  | 11.9 | 13.8 | 15.0 | 15.3 | 14.1 | 13.4 | 11.1 | 8.9  | 6.2  | 5.2  | 2.3  | 1.6  | 1.2  | -0.1 | 8.1  |
| 23  | -0.4 | -0.4 | -0.1 | -0.4 | -0.6 | -2.5  | -3.4  | 0.3  | 5.7  | 9.6  | 11.7 | 13.1 | 14.9 | 16.0 | 16.3 | 16.2 | 13.9 | 9.1  | 7.0  | 5.9  | 5.0  | 5.9  | 5.5  | 5.4  | 6.4  |
| 24  | 3.2  | 4.5  | 2.8  | 1.6  | 0.8  | 2.9   | 0.8   | 2.8  | 7.3  | 9.9  | 9.6  | 12.2 | 13.9 | 12.7 | 12.0 | 11.5 | 10.3 | 9.0  | 8.3  | 5.8  | 3.9  | 2.1  | 2.2  | 2.3  | 6.3  |
| 25  | 1.8  | 1.1  | -0.4 | -1.1 | -1.6 | -2.0  | -1.8  | -0.9 | 1.4  | 3.9  | 6.0  | 8.0  | 9.7  | 10.6 | 11.5 | 11.4 | 9.2  | 4.1  | 1.3  | 0.7  | 1.4  | 1.7  | -2.3 | -1.7 | 3.0  |
| 26  | 2.3  | 3.3  | 2.6  | 1.7  | 1.5  | 2.3   | 2.8   | 4.7  | 9.4  | 11.5 | 12.9 | 14.2 | 14.8 | 15.5 | 16.4 | 15.5 | 12.8 | 6.7  | 4.4  | 5.2  | 5.2  | 4.8  | 4.7  | 4.5  | 7.5  |
| 27  | 4.9  | 4.1  | 4.5  | 4.6  | 4.2  | 4.2   | 4.6   | 7.0  | 11.1 | 13.7 | 13.9 | 14.3 | 15.1 | 14.2 | 10.7 | 9.4  | 7.7  | 5.9  | 4.2  | 2.7  | 1.4  | 0.5  | 0.1  | -1.1 | 6.7  |
| 28  | -2.2 | -1.9 | -1.3 | -1.2 | -1.0 | -1.1  | -1.5  | -0.9 | 0.6  | 2.1  | 3.6  | 5.7  | 7.0  | 8.1  | 8.9  | 8.9  | 7.5  | 2.8  | 0.9  | 0.4  | -0.2 | -1.2 | -2.5 | -1.6 | 1.7  |
| 29  | -3.5 | -3.2 | -3.0 | -3.9 | -4.1 | -4.2  | -4.4  | -1.7 | 2.7  | 7.1  | 10.5 | 13.1 | 14.4 | 15.8 | 17.0 | 16.2 | 14.9 | 8.1  | 6.9  | 4.8  | 2.6  | 1.6  | 1.2  | 2.0  | 4.6  |
| 30  | 3.0  | 0.7  | 0.7  | 0.4  | 1.4  | 2.5   | 2.5   | 5.2  | 7.7  | 10.6 | 14.0 | 16.9 | 18.5 | 19.5 | 20.3 | 19.6 | 17.2 | 12.2 | 9.6  | 8.1  | 7.2  | 7.7  | 6.1  | 6.2  | 9.1  |
| 31  | 5.1  | 2.0  | 2.4  | 3.3  | 2.1  | 1.3   | 0.5   | 5.9  | 9.5  | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | *    | 3.5  |
| AVG | 1.4  | 1.1  | 0.7  | 0.2  | -0.3 | -0.4  | -0.4  | 1.9  | 5.4  | 8.1  | 10.0 | 11.5 | 12.7 | 13.4 | 13.6 | 12.8 | 10.2 | 6.4  | 4.7  | 3.9  | 3.4  | 2.7  | 2.1  | 1.8  | 5.2  |

**Energy production estimated for January 2012 at  
the Agricultural Science Center at Clovis**

| Wind Speed<br>(m/s) | # of hours at given<br>wind speed | Power Curve <sup>1</sup><br>(kW)                    | Energy Production<br>(kWh) |
|---------------------|-----------------------------------|---|----------------------------|
| 0                   | 0                                 | 0   | 0                          |
| 1                   | 6                                 | 0   | 0                          |
| 2                   | 9                                 | 0   | 0                          |
| 3                   | 16                                | 12  | 200                        |
| 4                   | 33                                | 77  | 2,522                      |
| 5                   | 45                                | 150   | 6,804                      |
| 6                   | 48                                | 288   | 13,719                     |
| 7                   | 49                                | 457   | 22,471                     |
| 8                   | 62                                | 682   | 41,928                     |
| 9                   | 82                                | 971   | 79,598                     |
| 10                  | 79                                | 1,234   | 97,126                     |
| 11                  | 75                                | 1,470   | 110,228                    |
| 12                  | 71                                | 1,500   | 106,950                    |
| 13                  | 59                                | 1,500   | 88,500                     |
| 14                  | 30                                | 1,500   | 44,250                     |
| 15                  | 21                                | 1,500   | 31,950                     |
| 16                  | 16                                | 1,500   | 24,300                     |
| 17                  | 14                                | 1,500   | 20,550                     |
| 18                  | 6                                 | 1,500   | 8,550                      |
| 19                  | 2                                 | 1,500   | 2,250                      |
| 20                  | 3                                 | 1,500   | 4,050                      |
| <b>Total</b>        | <b>728</b>                        |   | <b>705,946</b>             |
|                     |                                   | <b>January 2012<br/>Monthly Capacity<br/>Factor</b> | <b>64.60%</b>              |

*These results are only estimates, therefore should not be considered as a feasibility analysis nor be intended as a wind farm development analysis.*

<sup>1</sup> Power Curve approximated for a GE 1.5 MW Wind Turbine @ 65 m hub height.