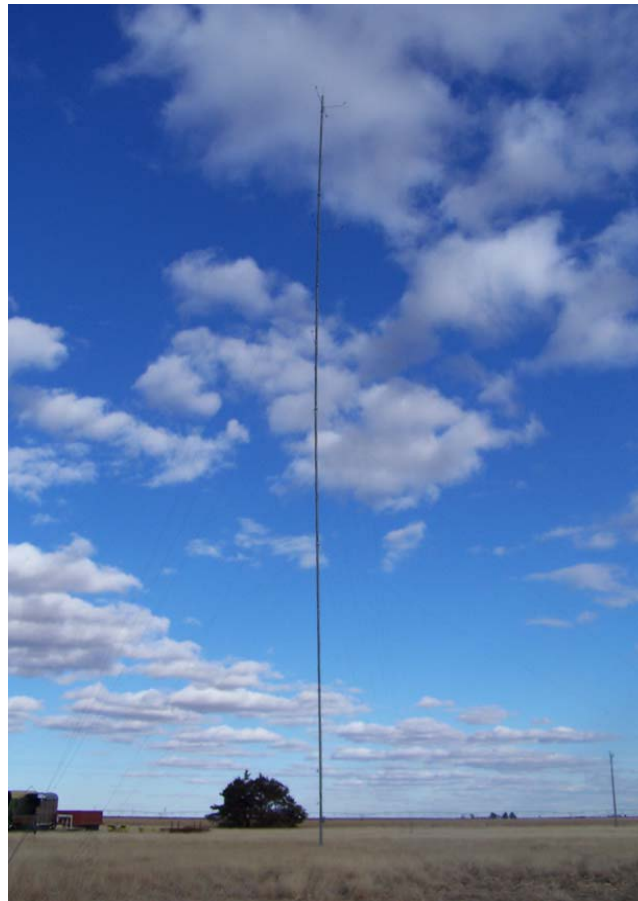




Agricultural Science Center at Clovis
College of Agricultural, Consumer and Environmental Sciences

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

**MONTHLY WIND PERFORMANCE REPORT
September 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
September 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 **September 2012** of the 50m Wind Met-Tower at the New Mexico State University Agricultural Science Center at Clovis. The site is located at the Center's facility area which has flat agricultural landscape that includes grass, crops, and bare soil. The wind met-tower is installed at coordinates 34.606075° N and -103.301602° W at an altitude of 1363 meters.

Wind speed and direction monitoring are conducted at three heights: 50 m, 40 m, and 30 m. The **average wind speed** for the month of **September** at the highest level (50m height) was found to be **6.35 m/s** with **average temperatures** around **21.1° C**, while the predominant **wind direction** was from the **Northeast**.

Based on the average wind speed results, an approximation of energy production is conducted using a GE1.5 MW wind turbine for the sole purpose of estimating 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 **September** was approximately **393,517 kWh**. Power output was approximated based on the manufacturer's turbine power curve at 65 m hub height.

Graphs and figures in this report are for **30-day** periods from **September 1-30, 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:

September 30, 2012

Dates of the performance of the monitoring:

September 1-30, 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.

Mfg:	NRG Systems
Models:	Anemometers: 1900-NRG #40 Wind Direction Vane: 1904-NRG #200P Temperature Sensor: 1906-NRG #110S Data logger: Symphonie NRG Logger

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

Monitoring dates: September 1-30, 2012

Location of Monitoring: The place is an open space of about 2 acres located approximately 200 yards to the south from 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.

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: 50

Sensor Information:

1 wind spd1 50m m/s
 2 wind spd2 50m m/s
 3 wind spd3 40m m/s
 4 wind spd4 30m m/s
 5 No SCM Installed
 6 No SCM Installed

7 Wind Dir 1 50m
 8 Wind Dir 2 40m
 9 amb temp C°
 10 No SCM Installed
 11 No SCM Installed
 12 No SCM Installed

September 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	m	-----	-----	-----
Units	m/s	m/s	m/s	m/s	-----	-----	deg	deg	C°	-----	-----	-----
Intervals with Valid Data	4320	4320	4320	4320			4320	4320	4320			
Average Filtered Data	6.41	6.31	6.05	5.75			203.35	199.26	21.06			
Average for All Data	6.41	6.31	6.05	5.75			203.35	199.26	21.06			
Min Interval Average	0.4	0.4	0.4	0.4					7			
Date of Min Interval	9/3/2012	9/3/2012	9/3/2012	9/3/2012					9/15/2012			
Time of Min Interval	3:40:00 PM	3:40:00 PM	3:40:00 PM	3:40:00 PM					5:10:00 AM			
Max Interval Average	19.1	18.5	18.3	18.2					37.1			
Date of Max Interval	9/5/2012	9/30/2012	9/5/2012	9/5/2012					9/4/2012			
Time of Max Interval	1:10:00 PM	3:20:00 PM	1:10:00 PM	1:10:00 PM					1:50:00 PM			
Average Interval SD	0.69	0.69	0.7	0.71			8.59	8.94	0.06			
Min Sample	0.4	0.4	0.4	0.4					6.9			
Date of Min Sample	9/9/2012	9/9/2012	9/9/2012	9/9/2012					9/15/2012			
Time of Min Sample	10:00:00 AM	10:00:00 AM	10:00:00 AM	10:00:00 AM					5:00:00 AM			
Max Sample	23.9	23.1	23.1	22.7					37.6			
Date of Max Sample	9/5/2012	9/30/2012	9/30/2012	9/5/2012					9/4/2012			
Time of Max Sample	1:10:00 PM	3:10:00 PM	3:20:00 PM	1:10:00 PM					1:50:00 PM			
Average Interval TI	0.14	0.14	0.15	0.15								
Wind Speed Direction							SW	SW				

Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 1:

wind spd1 50m m/s
Height: 50 m
Serial #: SN:

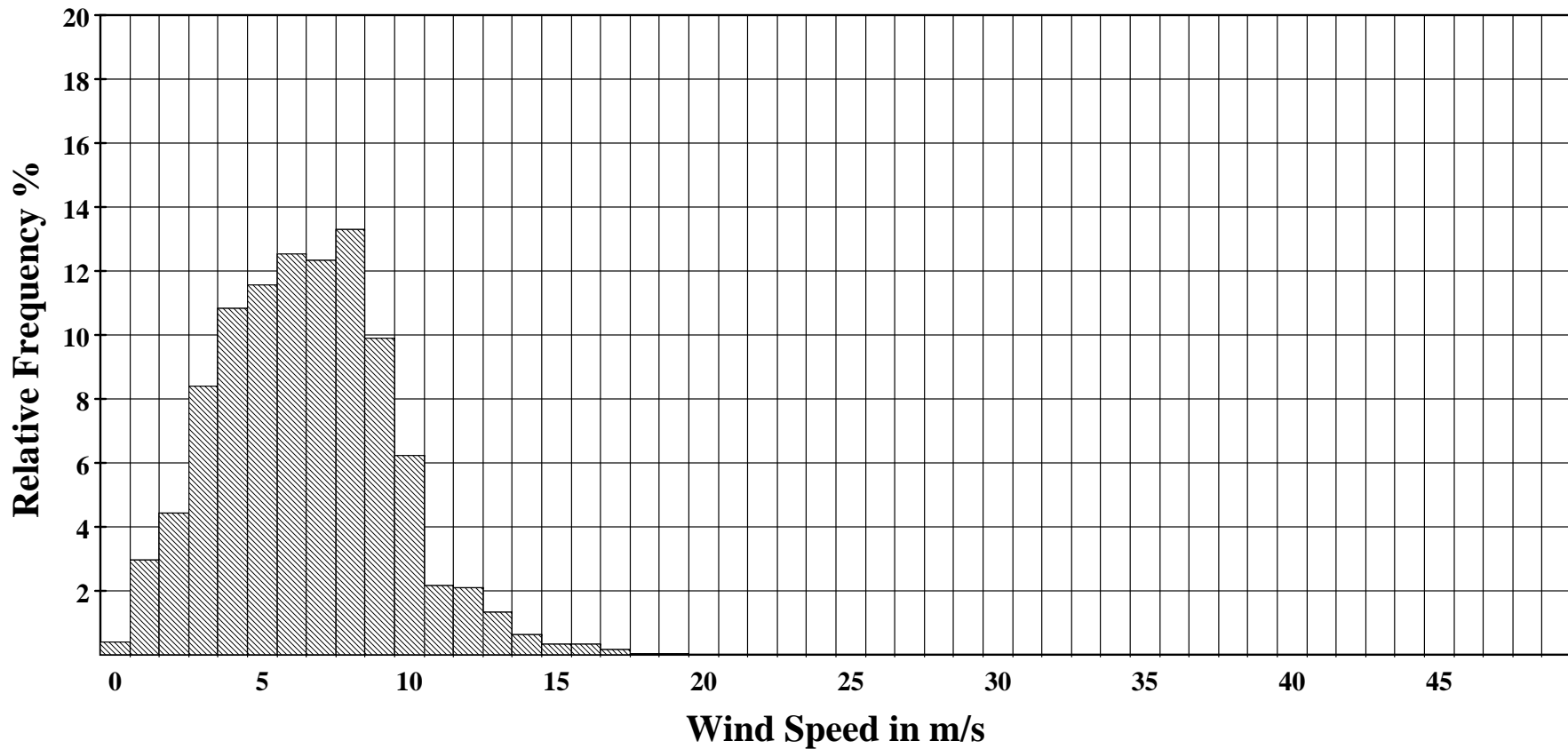
September 2012

Frequency Distribution Ch 1

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 1:

wind spd1 50m m/s
Height: 50 m
Serial #: SN:

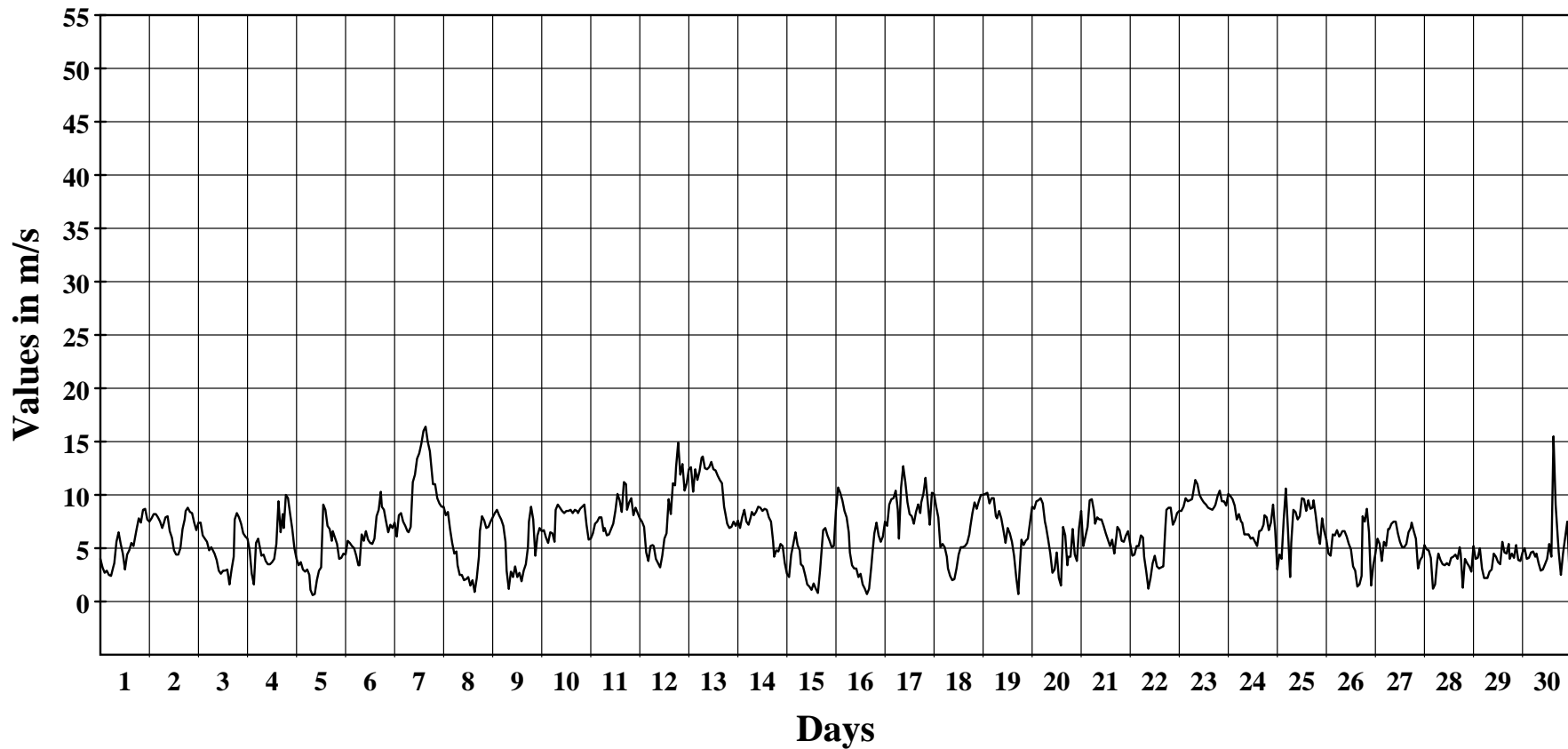
September 2012

Hourly Averages Graph Ch 1

SITE 0001

NMSU ASC at Clovis

Average Hourly Values



Average Value: 6.4

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 50

Sensor on channel 1:

wind spd1 50m m/s

Height: 50 m Units: m/s

Serial #: SN:

September 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	4.0	3.2	2.7	2.9	2.5	2.4	3.2	3.6	5.6	6.5	5.4	4.5	3.0	4.4	4.8	5.5	5.2	6.3	6.8	7.8	7.4	8.6	8.7	7.7	5.1
2	7.5	7.8	8.2	8.2	7.9	7.5	6.9	7.3	7.9	8.0	6.6	6.0	4.8	4.4	4.4	5.0	6.8	7.7	8.5	8.8	8.4	8.3	7.4	6.7	7.1
3	7.4	7.4	6.2	5.9	5.6	4.8	5.1	4.9	4.5	3.9	2.9	2.6	2.9	2.9	3.0	1.6	3.0	4.2	7.7	8.3	7.9	7.3	6.4	6.1	5.1
4	5.9	4.8	2.6	1.6	5.5	5.9	4.9	4.3	4.4	3.8	3.5	3.5	3.7	4.0	5.4	9.4	6.5	8.3	6.9	10.0	9.7	8.3	6.8	5.0	5.6
5	4.0	3.4	3.7	3.0	2.8	3.0	2.5	1.1	0.6	0.7	2.0	2.9	3.2	9.1	8.6	7.1	6.8	5.7	6.6	6.0	5.4	4.0	4.1	4.5	4.2
6	4.4	5.7	5.5	5.2	5.0	4.3	3.4	3.4	6.3	5.7	6.6	5.8	5.5	5.4	5.9	8.0	8.6	10.3	8.9	8.6	7.5	6.5	7.2	6.9	6.3
7	7.4	6.1	8.1	8.3	7.5	7.1	6.6	6.5	7.0	11.2	11.9	13.4	13.9	14.8	16.0	16.4	15.0	14.1	13.1	11.0	11.0	9.7	9.2	8.9	10.6
8	8.9	8.1	8.4	6.8	5.5	4.5	4.7	3.4	2.5	2.5	2.0	2.1	2.3	1.5	2.0	0.9	2.2	4.2	6.6	8.0	7.6	6.9	7.0	7.5	4.8
9	7.9	8.3	8.6	8.1	7.7	7.1	5.6	2.9	1.2	2.8	2.3	3.3	2.3	2.7	1.9	2.9	3.5	5.1	7.5	8.9	7.7	4.3	6.2	6.9	5.2
10	6.6	6.7	6.0	5.5	6.5	6.4	5.6	8.6	9.1	8.8	8.5	8.3	8.5	8.5	8.6	8.3	8.6	8.5	8.3	8.7	8.9	9.1	7.3	5.8	7.7
11	5.9	6.4	7.3	7.5	7.9	7.9	6.6	6.9	6.2	6.3	6.8	7.3	8.5	10.1	9.5	8.4	11.2	11.0	8.6	9.3	9.7	8.1	8.8	8.3	8.1
12	7.8	7.5	7.0	4.6	3.8	5.3	5.3	5.2	4.0	3.6	3.2	4.3	5.9	6.4	9.6	8.3	11.1	10.9	12.6	14.9	11.9	12.9	10.4	11.1	7.8
13	12.4	12.6	10.3	12.4	11.4	12.2	13.5	13.6	12.5	12.4	12.6	13.1	12.4	12.3	11.8	11.4	11.1	8.9	8.4	7.3	6.9	7.0	7.5	7.1	10.9
14	7.6	6.9	7.9	8.6	7.5	7.2	7.9	8.4	8.1	8.4	8.9	8.8	8.5	8.7	8.6	7.9	7.5	5.6	4.2	4.8	4.7	5.4	5.2	3.6	7.1
15	2.6	2.3	4.4	5.4	6.5	5.3	4.8	3.5	3.3	2.5	1.6	1.4	1.1	1.7	1.2	0.8	2.9	5.5	6.7	6.9	6.3	5.7	5.1	5.2	3.9
16	8.6	10.7	10.3	9.5	8.5	7.9	6.5	4.6	3.4	3.1	3.1	2.3	2.6	1.6	1.2	0.7	1.2	3.2	4.3	6.4	7.4	6.2	5.6	6.1	5.2
17	7.5	7.1	9.1	9.6	9.7	10.4	8.6	5.9	10.7	12.7	11.2	9.3	8.2	8.0	7.3	8.4	9.1	8.3	9.3	10.1	11.6	9.4	7.2	10.3	9.1
18	10.1	8.9	7.9	5.1	5.4	5.1	4.2	3.1	2.4	2.0	2.1	3.1	4.4	5.1	5.1	5.2	5.5	6.3	7.0	8.3	9.3	8.7	9.4	10.0	6.0
19	10.0	10.1	10.2	9.2	9.7	9.7	8.0	7.8	8.5	7.8	6.7	5.5	6.9	6.4	5.6	4.3	2.3	0.7	2.5	5.8	5.3	5.7	5.9	7.4	6.7
20	8.9	8.7	9.4	9.5	9.7	9.2	7.5	7.0	5.8	4.5	2.7	3.0	4.6	2.2	1.5	7.0	6.2	3.4	4.2	4.2	6.8	4.4	3.8	6.9	5.9
21	8.5	5.2	6.1	7.0	9.5	9.6	8.5	7.3	7.9	7.7	7.7	7.1	6.4	5.8	5.2	5.8	4.5	6.1	7.0	6.7	5.7	5.6	6.2	6.6	6.8
22	5.4	4.3	4.4	5.2	5.2	6.2	6.0	4.2	2.8	1.2	2.2	3.6	4.3	3.3	3.1	3.2	3.3	7.1	8.6	8.8	8.8	7.2	7.6	8.3	5.2
23	8.5	8.5	8.9	9.7	9.4	9.5	9.6	10.2	11.4	11.0	10.0	9.6	9.3	9.1	8.8	8.7	8.6	8.9	9.1	9.9	10.4	9.4	9.4	9.0	9.5
24	10.1	9.9	9.6	9.0	7.7	8.2	7.5	7.4	6.3	6.3	6.3	5.9	6.0	5.6	5.2	6.6	6.7	7.2	8.1	7.9	6.7	7.4	9.1	6.7	7.4
25	3.0	4.4	4.0	7.7	10.6	6.7	2.3	5.5	8.6	8.4	7.7	8.0	9.7	9.6	8.5	9.5	8.7	8.8	9.5	8.1	6.4	5.4	7.8	6.6	7.3
26	5.8	4.5	4.3	6.3	6.2	6.7	6.1	6.2	6.6	6.6	6.1	5.4	4.9	3.3	2.9	1.4	1.6	2.4	8.0	7.5	8.7	6.5	1.5	3.4	5.1
27	4.5	5.9	5.4	3.8	5.6	5.2	6.8	6.8	7.3	7.5	7.5	6.4	5.6	5.1	5.1	5.4	6.5	6.9	7.4	6.6	5.9	3.1	3.9	4.2	5.8
28	5.3	4.9	4.8	4.1	1.2	1.6	3.8	4.5	3.9	3.5	3.4	3.6	3.4	4.1	4.2	4.4	4.0	5.1	4.5	1.3	4.0	3.6	3.3	2.8	3.7
29	5.2	4.0	4.1	5.0	3.1	2.2	2.2	2.2	2.8	3.0	4.5	4.2	3.7	3.5	5.6	4.6	4.5	5.4	4.0	4.5	4.1	5.3	3.9	3.8	4.0
30	4.6	5.0	4.0	4.1	4.6	4.7	4.2	4.5	3.6	2.9	3.0	3.5	4.0	5.4	4.2	15.5	9.1	6.0	4.6	2.5	4.5	6.0	7.5	2.8	5.0
AVG	6.9	6.6	6.6	6.6	6.7	6.5	5.9	5.7	5.8	5.8	5.6	5.6	5.7	5.8	5.8	6.4	6.4	6.7	7.3	7.6	7.6	6.9	6.7	6.5	6.4

Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 2:

wind spd2 50m m/s
Height: 50 m
Serial #: SN:

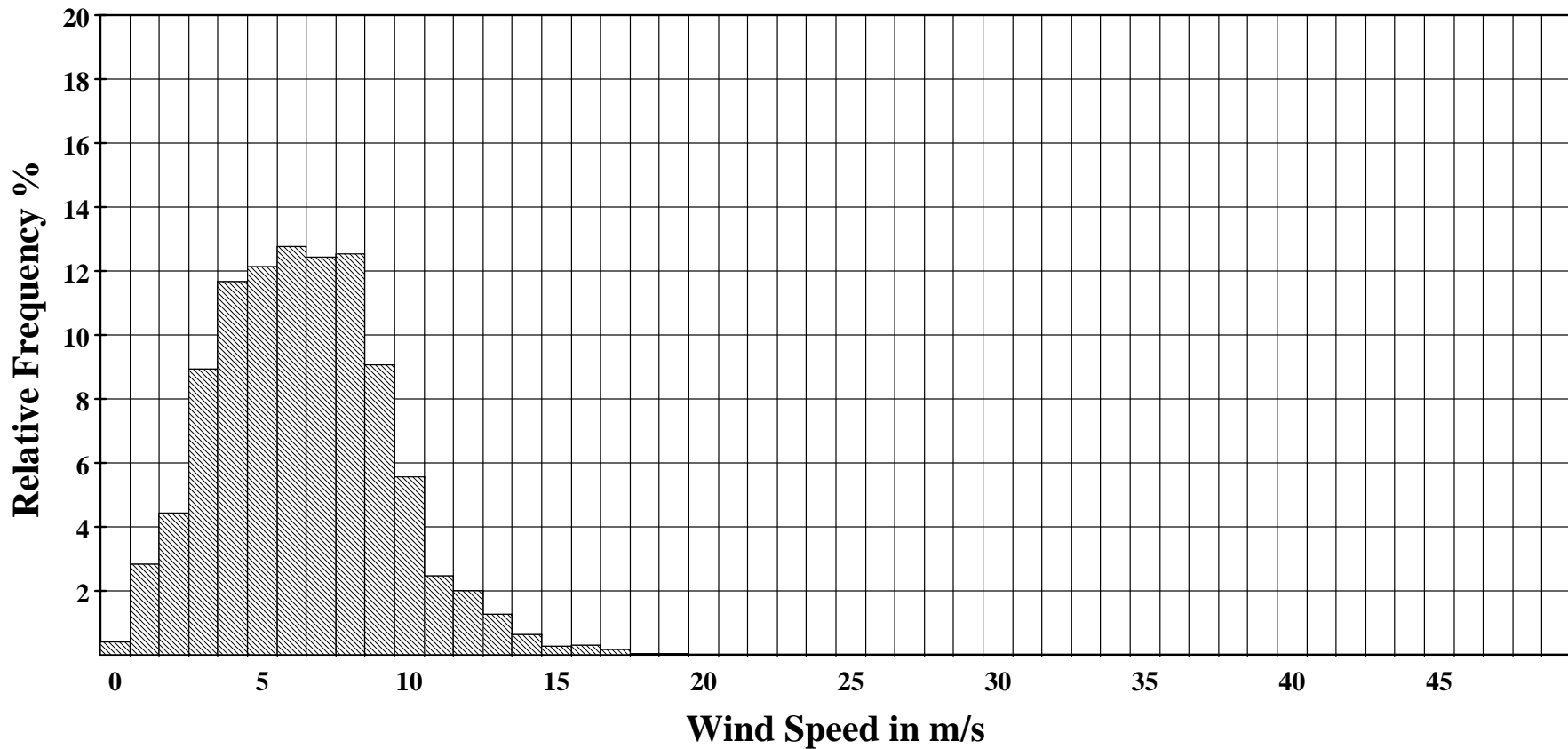
September 2012

Frequency Distribution Ch 2

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 2:

wind spd2 50m m/s
Height: 50 m
Serial #: SN:

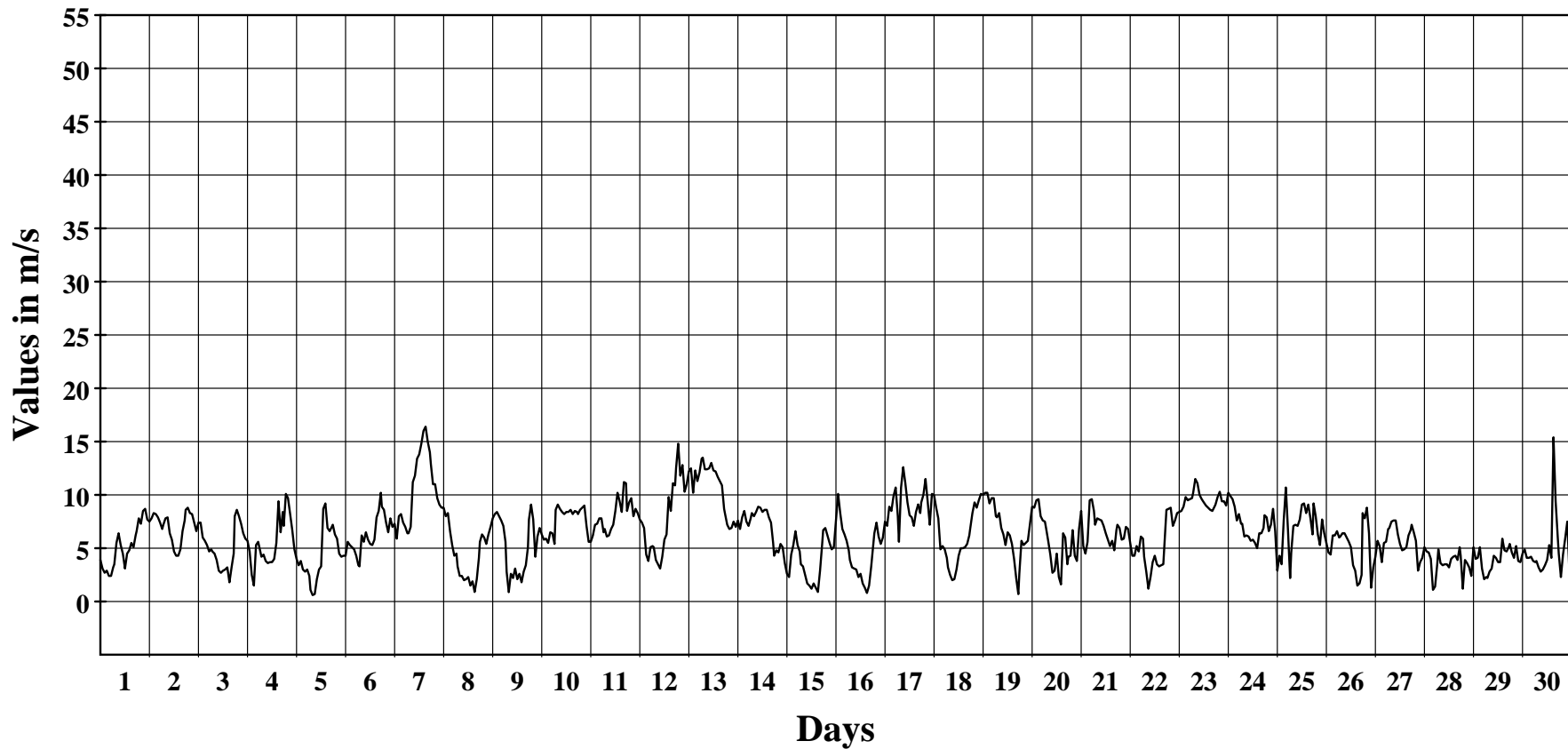
September 2012

Hourly Averages Graph Ch 2

SITE 0001

NMSU ASC at Clovis

Average Hourly Values



Average Value: 6.3

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 50

Sensor on channel 2:

wind spd2 50m m/s

Height: 50 m Units: m/s

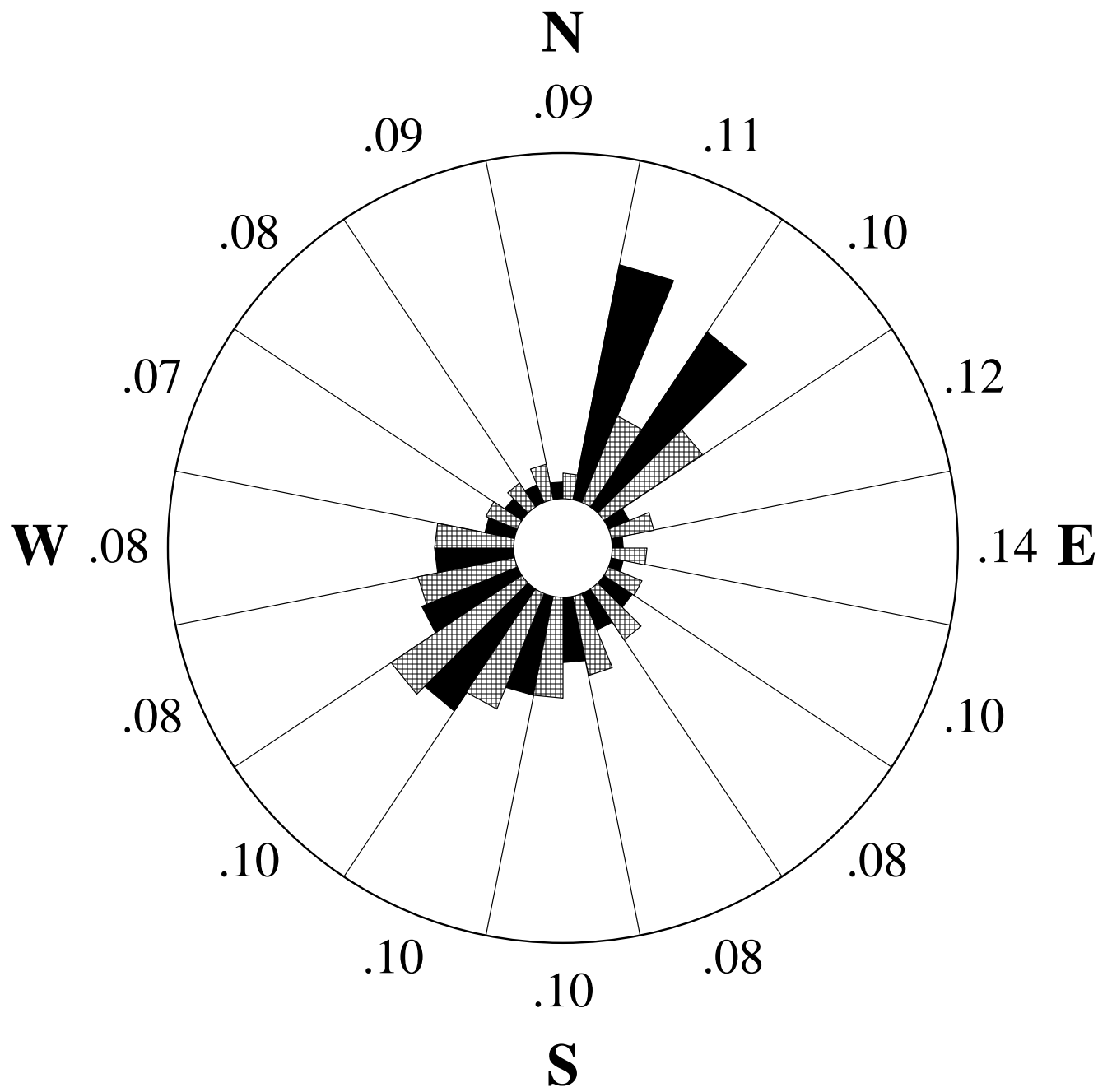
Serial #: SN:

September 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	3.9	3.1	2.7	2.9	2.4	2.4	3.2	3.5	5.5	6.4	5.3	4.5	3.1	4.5	4.8	5.5	5.1	6.2	6.6	7.8	7.3	8.5	8.7	7.7	5.1
2	7.5	7.8	8.3	8.2	7.9	7.4	6.8	7.2	7.8	7.9	6.4	5.8	4.7	4.3	4.3	4.9	6.6	7.6	8.6	8.8	8.3	8.2	7.4	6.6	7.0
3	7.4	7.4	6.0	5.7	5.3	4.7	4.9	4.7	4.5	3.9	2.9	2.7	2.9	3.0	3.2	1.8	3.2	4.5	8.0	8.6	8.0	7.3	6.4	5.9	5.1
4	5.7	4.7	2.5	1.5	5.3	5.6	4.7	4.2	4.4	3.8	3.6	3.7	3.7	4.0	5.5	9.4	6.5	8.4	7.1	10.1	9.7	8.2	6.7	4.9	5.6
5	4.0	3.4	3.8	3.0	2.8	3.0	2.4	1.1	0.6	0.7	2.1	3.0	3.3	8.7	9.2	6.9	6.6	7.0	7.2	6.3	5.9	4.5	4.2	4.3	4.3
6	4.3	5.6	5.3	5.1	4.9	4.3	3.4	3.3	6.2	5.6	6.5	5.8	5.4	5.3	5.8	7.9	8.5	10.2	8.9	8.6	7.4	6.5	7.8	7.0	6.2
7	7.3	5.9	8.0	8.2	7.4	7.0	6.4	6.4	7.0	11.2	11.8	13.4	13.8	14.8	16.0	16.4	15.0	14.0	12.9	11.0	11.0	9.7	9.1	8.8	10.5
8	8.8	8.0	8.3	6.6	5.3	4.3	4.5	3.3	2.4	2.4	2.0	2.1	2.3	1.5	1.9	0.9	2.1	4.1	5.6	6.3	6.0	5.4	6.3	7.0	4.5
9	7.8	8.2	8.4	8.0	7.6	7.1	5.6	2.8	0.9	2.6	2.2	3.1	2.1	2.6	1.8	2.8	3.4	5.1	7.7	9.1	7.7	4.2	6.1	6.9	5.2
10	6.3	5.8	5.9	5.5	6.5	6.4	5.4	8.6	9.1	8.7	8.4	8.2	8.4	8.4	8.6	8.2	8.5	8.4	8.2	8.6	8.8	9.0	7.1	5.6	7.6
11	5.6	6.2	7.2	7.3	7.8	7.8	6.5	6.8	6.1	6.2	6.8	7.2	8.5	10.2	9.4	8.4	11.3	11.1	8.5	9.3	9.7	8.0	8.7	8.3	8.0
12	7.7	7.4	6.9	4.4	3.8	5.1	5.2	5.1	3.9	3.5	3.1	4.2	5.8	6.3	9.8	8.5	11.1	10.9	12.5	14.8	11.8	12.8	10.3	11.0	7.7
13	12.2	12.5	10.3	12.3	11.3	12.1	13.4	13.5	12.4	12.4	12.5	13.0	12.3	12.2	11.7	11.3	10.9	8.7	8.2	7.2	6.8	6.9	7.5	7.0	10.8
14	7.6	6.8	7.9	8.5	7.5	7.1	7.8	8.3	8.0	8.4	8.9	8.8	8.4	8.6	8.6	7.9	7.4	5.5	4.3	4.8	4.6	5.4	5.1	3.6	7.1
15	2.6	2.3	4.4	5.3	6.6	5.3	4.7	3.5	3.3	2.5	1.7	1.5	1.2	1.7	1.3	0.9	2.9	5.4	6.7	6.9	6.2	5.5	4.9	5.1	3.9
16	7.6	10.1	8.3	6.8	6.3	5.7	4.8	3.9	3.2	3.1	3.0	2.3	2.6	1.7	1.3	0.8	1.5	3.3	4.3	6.4	7.4	6.1	5.4	6.0	4.7
17	7.5	7.1	8.9	8.5	9.9	10.7	8.0	5.6	10.7	12.6	11.1	9.3	8.1	7.9	7.1	8.4	9.1	8.3	9.3	10.0	11.5	9.4	7.2	10.1	9.0
18	10.0	8.8	7.8	4.9	5.2	4.9	4.1	3.2	2.5	2.0	2.1	3.0	4.3	5.0	5.0	5.1	5.4	6.3	6.9	8.3	9.3	8.8	9.5	10.1	5.9
19	10.0	10.2	10.2	9.2	9.7	9.7	8.0	7.9	8.3	6.9	6.3	5.3	6.5	6.2	5.4	4.0	2.2	0.7	2.6	5.7	5.3	5.5	5.7	7.3	6.6
20	8.9	8.8	9.5	9.6	8.0	7.6	7.5	6.9	5.7	4.4	2.7	2.9	4.5	2.3	1.6	6.4	6.0	3.5	4.2	4.3	6.7	4.3	3.8	6.8	5.7
21	8.5	5.2	4.5	5.6	9.5	9.6	8.5	7.3	7.8	7.7	7.6	7.1	6.4	5.8	5.3	5.7	4.8	6.7	7.2	6.9	5.8	5.9	7.0	6.8	6.8
22	5.5	4.3	4.3	5.2	4.7	6.1	5.9	4.2	2.8	1.2	2.3	3.7	4.3	3.5	3.3	3.4	3.5	7.0	8.6	8.7	8.8	7.1	7.6	8.3	5.2
23	8.4	8.5	8.9	9.8	9.5	9.6	9.7	10.2	11.5	11.1	10.0	9.6	9.3	9.0	8.8	8.6	8.5	8.9	9.1	9.8	10.3	9.4	9.4	9.0	9.5
24	10.2	9.9	9.6	8.9	7.6	8.2	7.3	7.3	6.1	6.2	6.1	5.7	5.8	5.5	5.0	6.4	6.4	6.9	8.1	7.9	6.6	7.2	8.7	6.6	7.3
25	2.9	4.3	3.5	7.6	10.7	6.7	2.2	4.6	7.1	7.2	7.1	7.7	9.1	9.2	8.3	9.1	7.8	6.3	9.2	8.0	6.3	5.3	7.7	6.4	6.9
26	5.5	4.6	4.4	6.2	6.2	6.6	6.0	6.1	6.4	6.4	6.0	5.6	5.1	3.4	2.9	1.5	1.7	2.5	8.3	7.8	8.8	6.4	1.3	3.2	5.1
27	4.2	5.7	5.2	3.7	5.5	5.6	6.8	6.9	7.5	7.6	7.6	6.3	5.4	4.8	4.9	5.1	6.2	6.7	7.2	6.5	5.7	2.9	3.7	4.1	5.7
28	5.1	4.7	4.6	4.0	1.1	1.4	3.5	4.9	3.6	3.4	3.5	3.5	3.3	4.0	4.2	4.3	3.9	5.1	4.3	1.2	3.9	3.6	3.3	2.4	3.6
29	5.1	4.0	4.1	5.1	3.1	2.1	2.3	2.2	2.8	3.1	4.3	4.1	3.7	3.7	5.9	4.8	4.7	5.1	5.4	4.6	4.1	5.2	3.8	3.7	4.0
30	4.5	4.9	4.1	4.1	4.2	3.8	3.7	3.8	3.2	2.8	3.0	3.4	3.9	5.3	4.1	15.4	9.4	6.0	4.5	2.3	4.4	5.9	7.5	2.7	4.9
AVG	6.7	6.5	6.5	6.4	6.4	6.3	5.8	5.6	5.7	5.7	5.6	5.5	5.6	5.8	5.8	6.3	6.3	6.7	7.3	7.5	7.5	6.8	6.6	6.4	6.3



September 2012

Wind Rose Ch 1, 7
SITE 0001
NMSU ASC at Clovis

Site Information:
 Project: wind monitoring
 Location: clovis nm
 Elevation: 50

Anemometer on channel 1:
 wind spd1 50m m/s
 Height: 50 m
 Serial #: SN:

Vane on channel 7:
 Wind Dir 1 50m
 Height: 50 m
 Serial #: SN:

Outer Numbers are Average TIs for speeds greater than 4.5 m/s
 Inner Circle = 0%
 Outer Circle = 30%

Percent of Total Wind Energy
 Percent of Total Time

Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 3:

wind spd3 40m m/s
Height: 40 m
Serial #: SN:

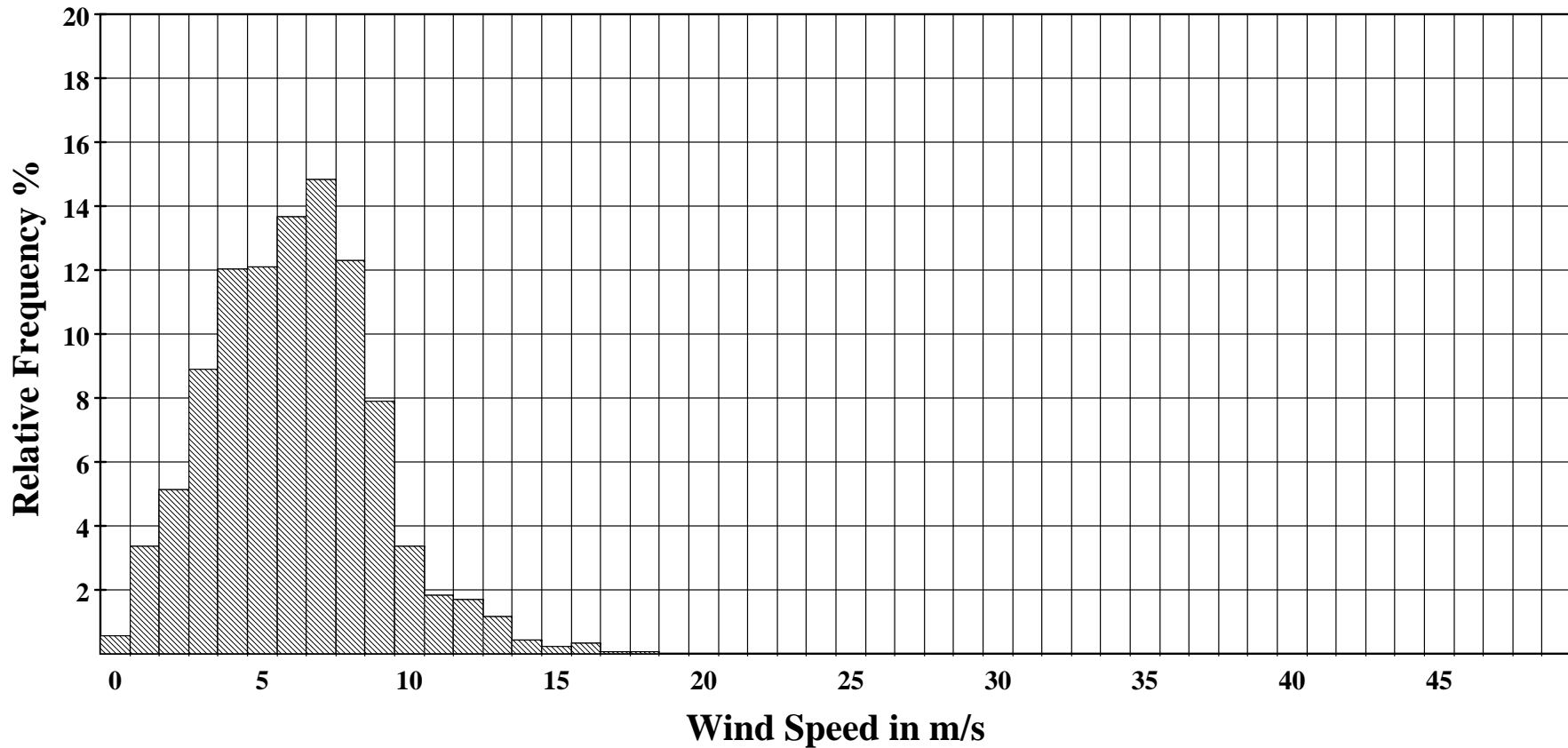
September 2012

Frequency Distribution Ch 3

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 3:

wind spd3 40m m/s
Height: 40 m
Serial #: SN:

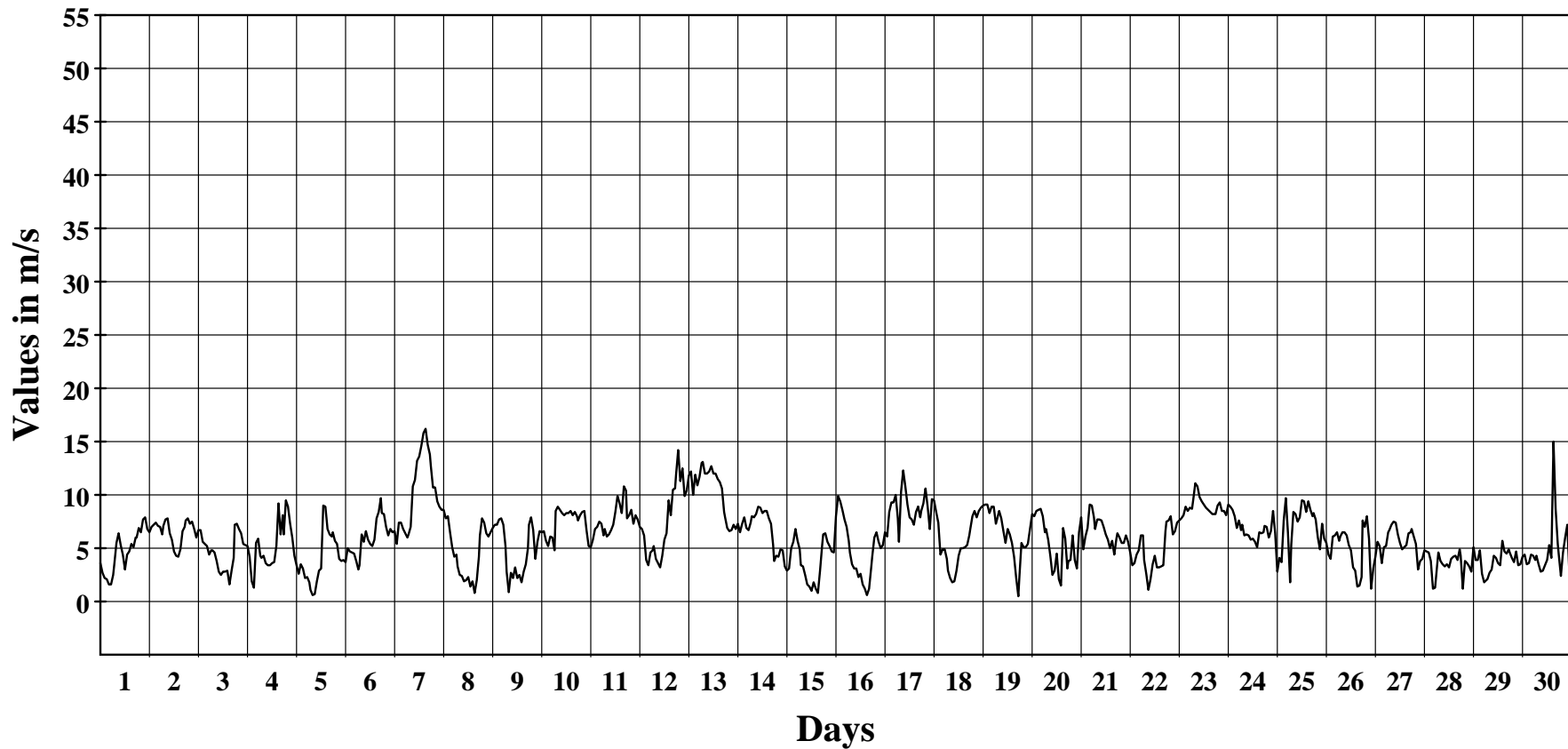
September 2012

Hourly Averages Graph Ch 3

SITE 0001

NMSU ASC at Clovis

Average Hourly Values



Average Value: 6.1

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 50

Sensor on channel 3:

wind spd3 40m m/s

Height: 40 m Units: m/s

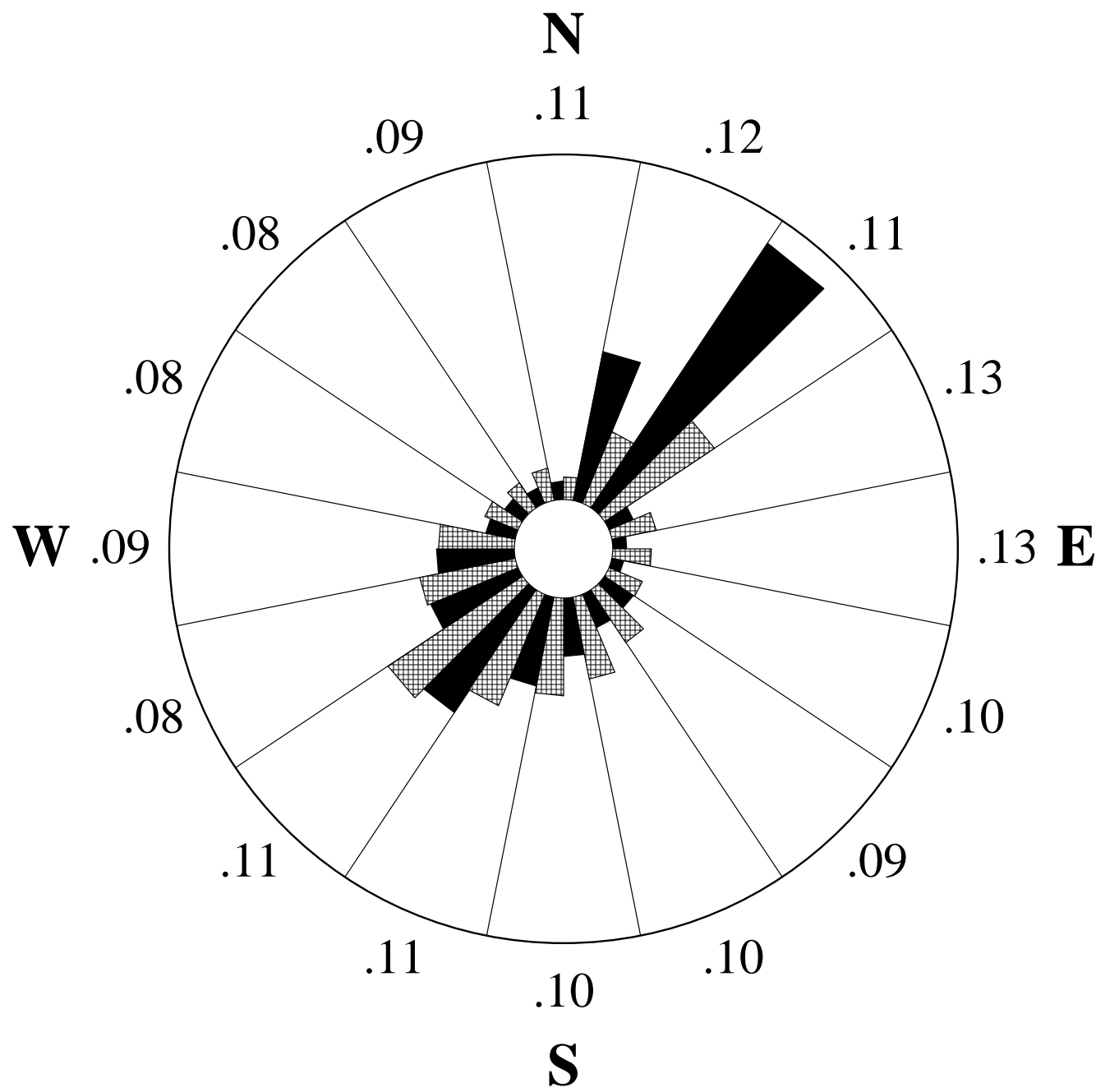
Serial #: SN:

September 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	3.6	2.7	2.2	2.1	1.6	1.6	2.5	3.5	5.5	6.4	5.3	4.4	3.0	4.4	4.7	5.4	5.1	6.0	6.0	6.9	6.5	7.7	7.9	6.8	4.7
2	6.5	7.0	7.3	7.4	7.1	7.0	6.3	7.1	7.7	7.8	6.4	5.8	4.7	4.3	4.2	4.9	6.6	7.0	7.6	7.8	7.3	7.5	6.8	6.0	6.6
3	6.7	6.7	5.6	5.4	5.2	4.4	4.8	4.8	4.6	3.8	2.8	2.5	2.8	2.8	2.9	1.6	2.9	4.1	7.2	7.3	6.8	6.4	5.4	5.3	4.7
4	5.2	4.2	1.9	1.3	5.5	5.9	4.3	4.1	4.3	3.6	3.4	3.4	3.6	3.7	5.2	9.3	6.3	8.1	6.3	9.5	8.9	7.3	6.0	4.3	5.2
5	3.4	2.6	3.5	3.1	2.2	2.3	1.8	1.1	0.6	0.7	1.9	2.9	3.1	9.0	8.9	6.8	6.3	6.1	6.5	5.7	5.4	4.0	3.8	3.9	4.0
6	3.7	5.0	4.7	4.6	4.5	3.8	3.0	3.4	6.3	5.6	6.6	5.8	5.4	5.2	5.8	7.8	8.4	9.7	8.3	8.2	7.0	6.2	6.8	6.5	5.9
7	6.6	5.4	7.4	7.4	6.8	6.4	6.0	6.3	7.0	10.8	11.4	13.2	13.6	14.6	15.8	16.2	14.7	13.8	12.7	10.7	10.7	9.4	8.9	8.6	10.2
8	8.6	7.8	8.0	6.5	5.1	4.2	4.4	3.3	2.5	2.4	1.9	2.0	2.3	1.4	1.9	0.8	2.0	4.2	6.2	7.8	7.4	6.4	6.1	6.5	4.6
9	6.9	7.2	7.2	7.7	7.8	7.2	5.2	2.8	0.9	2.7	2.2	3.2	2.2	2.5	1.8	2.8	3.5	5.0	7.2	7.9	6.7	4.0	5.6	6.6	4.9
10	6.5	6.6	5.7	5.2	6.1	6.0	4.8	8.5	8.9	8.6	8.3	8.1	8.3	8.3	8.5	8.1	8.4	8.0	7.6	8.1	8.4	8.5	6.7	5.2	7.4
11	5.1	5.8	6.8	7.0	7.5	7.3	6.2	6.8	6.1	6.3	6.7	7.2	8.4	9.9	9.3	8.3	10.8	10.4	7.8	8.1	8.6	7.3	8.1	7.7	7.6
12	7.0	6.8	6.2	3.9	3.4	4.6	4.8	5.2	4.0	3.6	3.2	4.3	5.8	6.4	9.5	8.1	10.5	10.6	11.9	14.3	11.3	12.5	9.9	10.4	7.4
13	11.8	12.2	10.0	11.9	10.9	11.7	13.0	13.1	12.0	12.0	12.2	12.7	12.0	12.0	11.5	11.2	10.6	8.4	7.9	6.9	6.6	6.7	7.2	6.8	10.5
14	7.3	6.5	7.3	7.9	6.9	6.7	7.4	8.0	7.9	8.2	8.9	8.8	8.3	8.5	8.5	7.8	7.3	5.3	3.8	4.3	4.2	4.9	4.8	3.3	6.8
15	2.9	3.1	5.0	5.6	6.8	5.7	4.9	3.4	3.3	2.5	1.6	1.4	1.0	1.8	1.2	0.8	2.9	5.3	6.3	6.4	5.6	5.2	4.7	4.6	3.8
16	8.0	9.9	9.4	8.6	7.7	7.0	5.7	4.6	3.5	3.1	3.1	2.3	2.6	1.6	1.2	0.6	1.2	3.2	4.2	6.0	6.5	5.6	5.0	5.3	4.8
17	6.5	6.1	8.4	9.3	9.3	10.0	7.8	5.6	10.3	12.3	10.8	9.1	7.9	7.7	7.2	8.4	8.9	7.9	8.5	9.2	10.6	8.9	6.8	9.6	8.6
18	9.5	8.4	7.4	4.4	4.9	4.9	4.0	2.9	2.2	1.8	1.9	2.9	4.3	5.0	5.0	5.1	5.3	6.2	6.8	8.0	8.5	7.9	8.5	8.8	5.6
19	9.0	9.1	9.1	8.3	8.9	8.9	7.3	7.7	8.5	7.8	6.6	5.5	6.8	6.3	5.5	4.2	2.2	0.5	2.2	5.5	5.1	5.1	5.4	6.8	6.4
20	8.2	8.0	8.5	8.6	8.7	8.0	6.5	6.8	5.8	4.3	2.5	2.9	4.5	2.1	1.5	6.9	5.9	3.1	3.8	3.9	6.2	3.9	3.1	6.5	5.4
21	7.9	4.9	6.1	6.9	9.1	9.0	7.9	6.8	7.7	7.7	7.6	7.0	6.3	5.8	5.0	5.7	4.4	5.9	6.4	6.0	5.5	5.5	6.3	5.6	6.6
22	4.6	3.4	3.6	4.4	4.8	6.2	6.2	3.9	2.6	1.1	2.1	3.5	4.3	3.3	3.2	3.3	3.4	6.6	7.5	7.6	8.0	6.3	6.6	7.4	4.7
23	7.6	7.8	8.1	8.9	8.5	8.8	8.7	9.5	11.1	10.8	9.8	9.4	9.1	8.8	8.6	8.4	8.2	8.2	8.2	9.0	9.3	8.5	8.5	8.1	8.8
24	9.1	8.9	8.6	8.0	6.9	7.6	6.7	7.3	6.2	6.3	6.2	5.8	5.9	5.6	5.1	6.5	6.4	6.5	7.1	7.0	6.0	6.6	8.5	6.4	6.9
25	2.8	4.1	3.7	7.6	9.7	6.4	1.8	5.3	8.4	8.2	7.5	7.9	9.5	9.4	8.4	9.4	8.6	8.0	8.3	7.7	6.0	4.9	7.3	5.9	6.9
26	5.5	4.4	4.0	6.1	6.2	6.5	5.7	6.1	6.5	6.5	6.2	5.3	4.8	3.3	2.9	1.4	1.5	2.3	7.6	7.0	8.0	5.9	1.2	3.1	4.9
27	4.2	5.6	5.2	3.6	5.1	5.2	6.5	6.7	7.2	7.5	7.4	6.3	5.5	4.9	5.1	5.3	6.4	6.5	6.8	6.1	5.4	3.0	3.8	4.0	5.5
28	4.8	4.7	4.6	3.8	1.2	1.3	3.5	4.6	3.8	3.5	3.3	3.5	3.2	4.0	4.2	4.3	3.9	4.9	4.3	1.2	3.8	3.6	3.3	2.8	3.6
29	5.1	3.9	3.9	4.8	2.6	1.8	2.0	2.1	2.7	3.0	4.3	4.1	3.6	3.4	5.7	4.7	4.5	4.9	4.6	4.1	3.7	4.7	3.4	3.5	3.8
30	4.2	4.4	3.5	3.6	4.4	4.3	3.9	4.3	3.5	2.8	2.9	3.4	3.9	5.3	4.1	15.0	8.7	5.4	4.4	2.4	4.6	6.0	7.2	2.5	4.8
AVG	6.3	6.1	6.1	6.1	6.2	6.0	5.5	5.5	5.7	5.7	5.5	5.5	5.6	5.7	5.7	6.3	6.2	6.4	6.8	7.0	7.0	6.4	6.1	6.0	6.1



September 2012

Wind Rose Ch 3, 8

SITE 0001

NMSU ASC at Clovis

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 50

Anemometer on channel 3:

wind spd3 40m m/s

Height: 40 m

Serial #: SN:

Vane on channel 8:

Wind Dir 2 40m

Height: 40 m


Serial #: SN:

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

Inner Circle = 0%

Outer Circle = 30%

 Percent of Total Wind Energy

 Percent of Total Time

Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 4:

wind spd4 30m m/s
Height: 30 m
Serial #: SN:

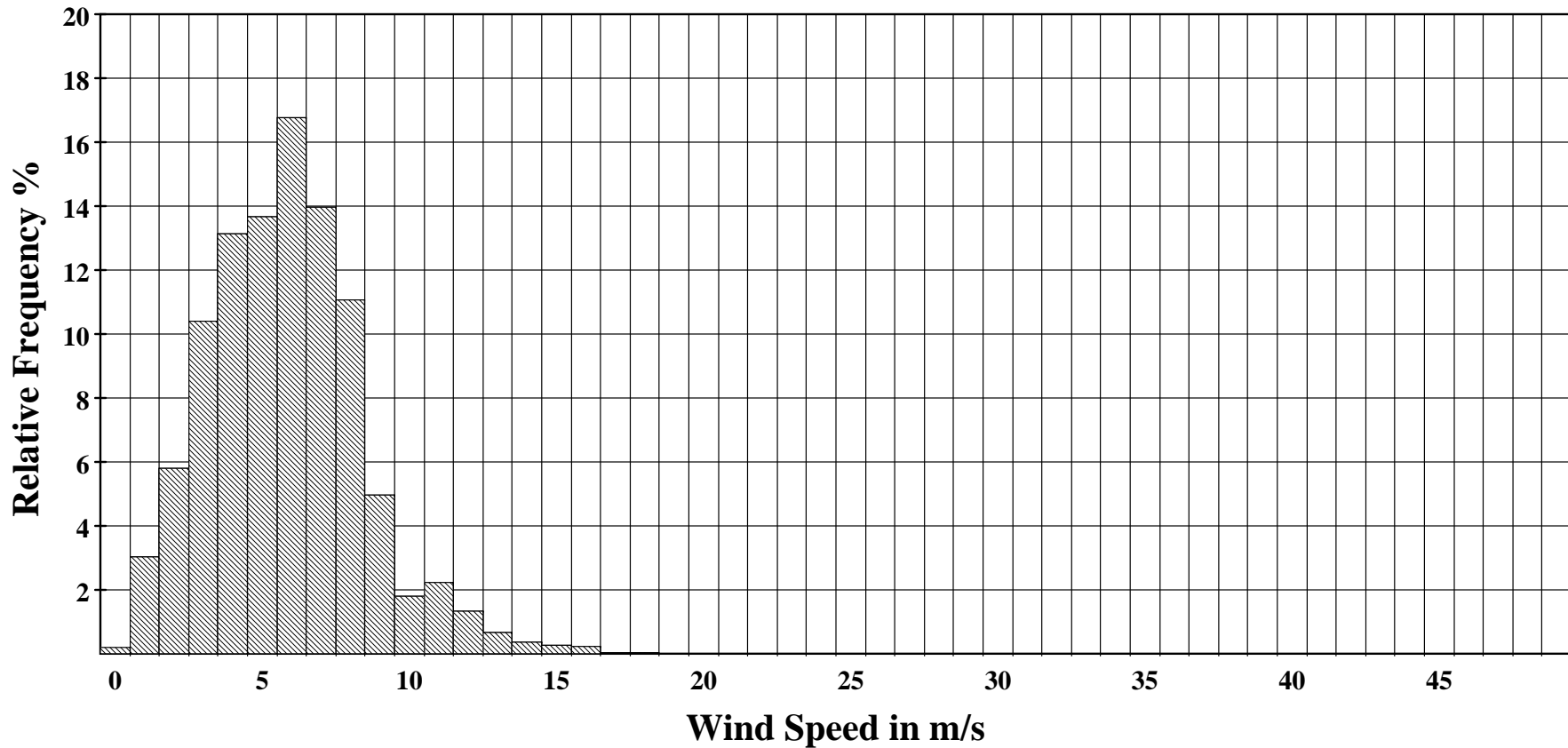
September 2012

Frequency Distribution Ch 4

SITE 0001

NMSU ASC at Clovis

Frequency Distribution



Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 4:

wind spd4 30m m/s
Height: 30 m
Serial #: SN:

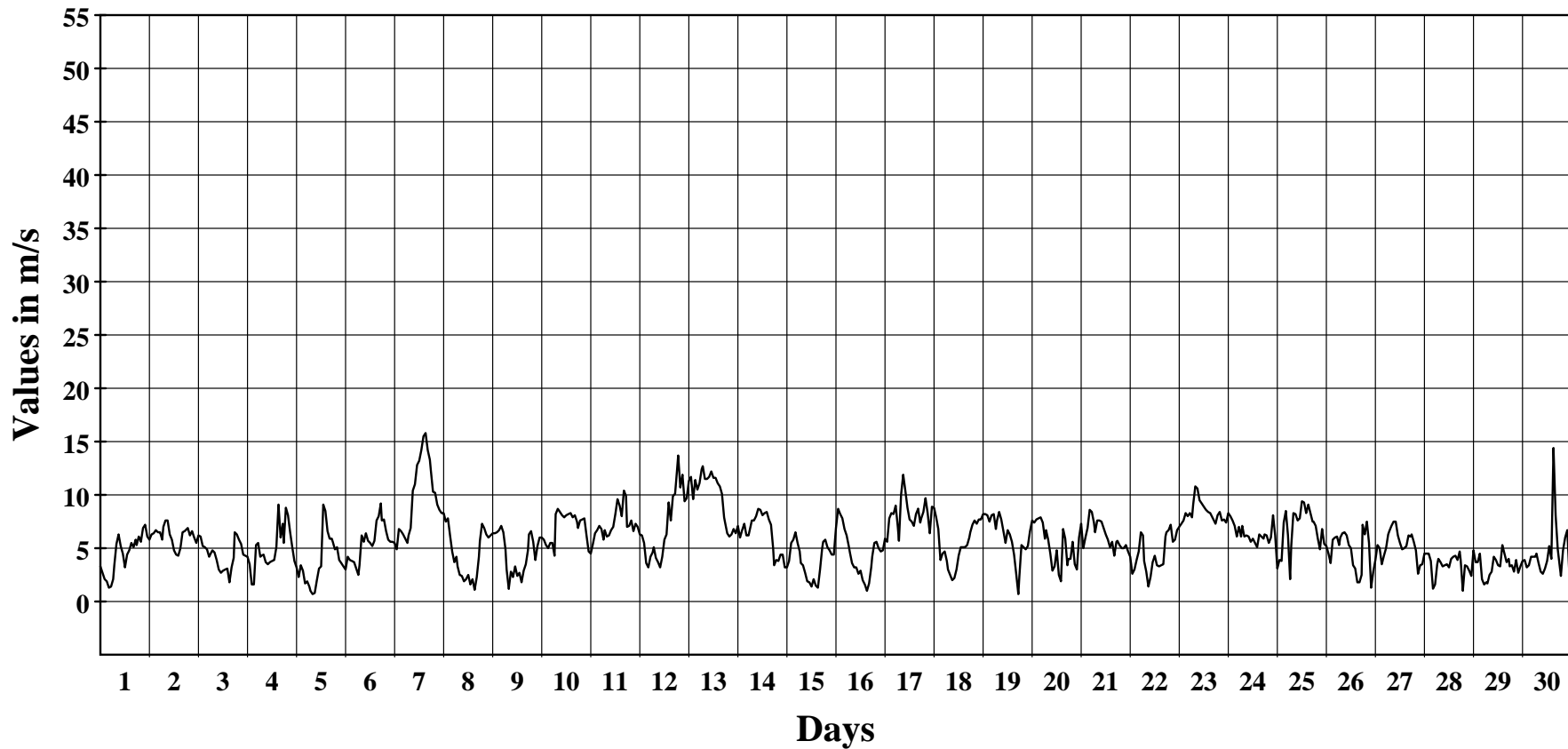
September 2012

Hourly Averages Graph Ch 4

SITE 0001

NMSU ASC at Clovis

Average Hourly Values



Average Value: 5.8

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 50

Sensor on channel 4:

wind spd4 30m m/s

Height: 30 m Units: m/s

Serial #: SN:

September 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	3.3	2.7	2.1	1.9	1.3	1.4	2.1	3.4	5.4	6.3	5.2	4.5	3.2	4.4	4.8	5.5	5.1	5.8	5.3	6.1	5.6	6.9	7.2	6.1	4.4
2	5.8	6.3	6.4	6.7	6.5	6.5	5.8	7.0	7.6	7.6	6.3	5.8	4.8	4.4	4.3	5.0	6.5	6.6	6.7	6.9	6.2	6.6	6.0	5.5	6.2
3	6.2	6.1	5.2	5.1	4.9	4.2	4.6	4.8	4.6	3.9	3.0	2.7	2.9	3.0	3.1	1.8	3.2	4.1	6.5	6.3	5.8	5.4	4.4	4.3	4.4
4	4.3	3.5	1.6	1.6	5.3	5.5	4.2	4.3	4.4	3.7	3.5	3.7	3.8	3.9	5.1	9.1	6.0	7.3	5.5	8.8	8.1	6.5	5.1	3.8	4.9
5	3.2	2.3	3.4	2.9	1.7	1.9	1.4	1.0	0.7	0.8	2.0	3.1	3.3	9.1	8.5	6.6	5.9	5.9	5.6	4.9	5.1	3.9	3.6	3.3	3.8
6	3.0	4.2	3.9	3.8	3.7	3.1	2.5	3.4	6.2	5.6	6.4	5.7	5.5	5.2	5.7	7.6	8.0	9.2	7.6	7.7	6.6	5.8	5.6	5.6	5.5
7	5.5	4.9	6.8	6.6	6.3	5.9	5.5	6.3	6.9	10.4	11.0	12.8	13.2	14.2	15.5	15.8	14.2	13.3	12.3	10.3	10.2	9.1	8.6	8.3	9.7
8	8.3	7.5	7.8	6.2	4.7	3.7	4.2	3.3	2.5	2.4	1.9	2.1	2.5	1.6	2.1	1.1	2.3	4.2	5.7	7.3	6.9	6.3	6.0	6.2	4.4
9	6.4	6.4	6.5	6.7	7.1	6.5	4.9	3.0	1.2	2.8	2.3	3.3	2.4	2.7	1.8	2.9	3.5	4.8	6.3	6.6	5.6	3.9	5.2	6.0	4.5
10	6.0	5.8	5.3	5.0	5.5	5.5	4.3	8.2	8.7	8.4	8.1	7.9	8.1	8.2	8.3	7.9	8.1	7.5	6.9	7.6	7.7	7.8	6.2	4.7	7.0
11	4.5	5.4	6.4	6.7	7.1	6.8	5.8	6.7	6.1	6.2	6.7	7.0	8.2	9.6	9.0	8.0	10.4	9.9	7.0	7.1	7.6	6.6	7.3	7.0	7.2
12	6.3	6.2	5.5	3.6	3.2	4.2	4.6	5.1	4.1	3.7	3.2	4.3	5.8	6.3	9.3	7.6	9.9	10.1	11.2	13.7	10.7	11.9	9.4	9.7	7.1
13	11.3	11.7	9.6	11.4	10.5	11.1	12.4	12.7	11.5	11.5	11.7	12.2	11.6	11.6	11.1	10.8	10.1	7.9	7.4	6.4	6.1	6.3	6.8	6.4	10.0
14	7.1	6.0	6.7	7.3	6.3	6.2	7.1	7.6	7.6	8.0	8.7	8.6	8.1	8.3	8.4	7.7	7.2	5.0	3.4	3.9	3.8	4.4	4.4	3.2	6.5
15	3.2	3.8	5.5	5.8	6.5	5.5	4.7	3.6	3.4	2.7	1.9	1.8	1.4	2.1	1.5	1.3	3.0	5.0	5.6	5.8	5.1	4.8	4.4	4.4	3.9
16	6.9	8.7	8.2	7.8	6.8	6.2	5.2	4.6	3.6	3.3	3.2	2.6	2.9	2.0	1.6	1.0	1.7	3.2	4.2	5.5	5.6	5.0	4.7	4.8	4.5
17	5.9	5.6	7.8	8.3	8.2	9.0	7.0	5.7	10.0	11.9	10.4	8.8	7.7	7.5	7.1	8.2	8.7	7.4	7.8	8.4	9.7	8.3	6.4	8.9	8.1
18	8.8	7.9	6.8	3.9	4.5	4.7	3.8	3.0	2.5	2.0	2.2	3.0	4.3	5.1	5.1	5.1	5.3	6.0	6.5	7.2	7.6	7.3	7.7	7.7	5.3
19	8.2	8.2	8.1	7.5	8.1	8.2	6.8	7.6	8.4	7.7	6.6	5.5	6.7	6.3	5.6	4.4	2.6	0.7	2.3	5.3	5.1	4.9	5.2	6.6	6.1
20	7.6	7.4	7.7	7.8	7.9	7.4	5.9	6.7	5.8	4.5	2.9	3.3	4.8	2.5	1.9	6.8	5.9	3.4	4.0	4.0	5.6	3.5	3.0	6.0	5.3
21	7.3	5.0	6.0	6.9	8.6	8.4	7.4	6.5	7.6	7.6	7.5	6.9	6.3	5.8	5.1	5.6	4.3	5.6	5.7	5.3	5.0	5.0	5.3	4.7	6.2
22	4.2	2.6	3.0	3.9	4.7	6.5	6.2	3.8	2.8	1.4	2.3	3.7	4.3	3.4	3.3	3.4	3.5	6.1	6.5	6.7	7.2	5.6	5.8	6.7	4.5
23	7.0	7.3	7.6	8.3	8.0	8.3	7.9	9.1	10.8	10.6	9.5	9.2	8.9	8.6	8.4	8.3	7.9	7.5	7.3	8.1	8.4	7.6	7.7	7.4	8.3
24	8.3	8.0	7.6	7.1	6.1	7.0	6.1	7.1	6.1	6.2	6.1	5.6	5.9	5.5	5.1	6.3	6.1	5.9	6.3	6.2	5.5	6.0	8.1	6.2	6.4
25	3.1	3.9	3.8	7.4	8.5	6.2	2.1	5.2	8.3	8.3	7.6	7.8	9.4	9.3	8.3	9.1	8.3	7.5	7.5	7.1	5.9	4.9	6.8	5.4	6.7
26	5.2	4.5	3.6	5.8	6.0	6.1	5.3	6.0	6.4	6.5	6.2	5.3	5.0	3.4	3.1	1.8	1.8	2.5	7.2	6.3	7.5	5.5	1.3	2.8	4.8
27	3.9	5.3	5.0	3.5	4.3	5.0	6.3	6.6	7.1	7.5	7.5	6.2	5.5	4.9	5.0	5.2	6.2	6.1	6.3	5.6	4.8	2.6	3.4	3.5	5.3
28	4.5	4.5	4.5	3.8	1.2	1.6	3.5	4.0	3.7	3.3	3.4	3.5	3.2	4.0	4.2	4.3	3.9	4.7	3.9	1.0	3.4	3.3	2.9	2.4	3.4
29	4.8	3.7	3.7	4.5	2.1	1.6	1.8	1.7	2.5	2.8	4.2	3.9	3.4	3.3	5.3	4.5	3.7	4.0	3.3	3.4	2.8	3.9	2.7	3.3	3.4
30	3.8	3.9	3.2	3.4	4.2	4.2	4.2	4.5	3.6	2.8	2.6	3.1	3.8	5.2	4.0	14.4	8.1	4.9	4.1	2.4	4.8	6.0	6.7	2.4	4.6
AVG	5.8	5.6	5.6	5.7	5.7	5.6	5.1	5.4	5.7	5.7	5.5	5.5	5.6	5.7	5.7	6.2	6.0	6.1	6.2	6.4	6.3	5.9	5.6	5.4	5.8

Site Information:

Project: wind monitoring
Location: clovis nm
Elevation: 50

Sensor on channel 9:

amb temp C°
Height: m
Serial #: SN:

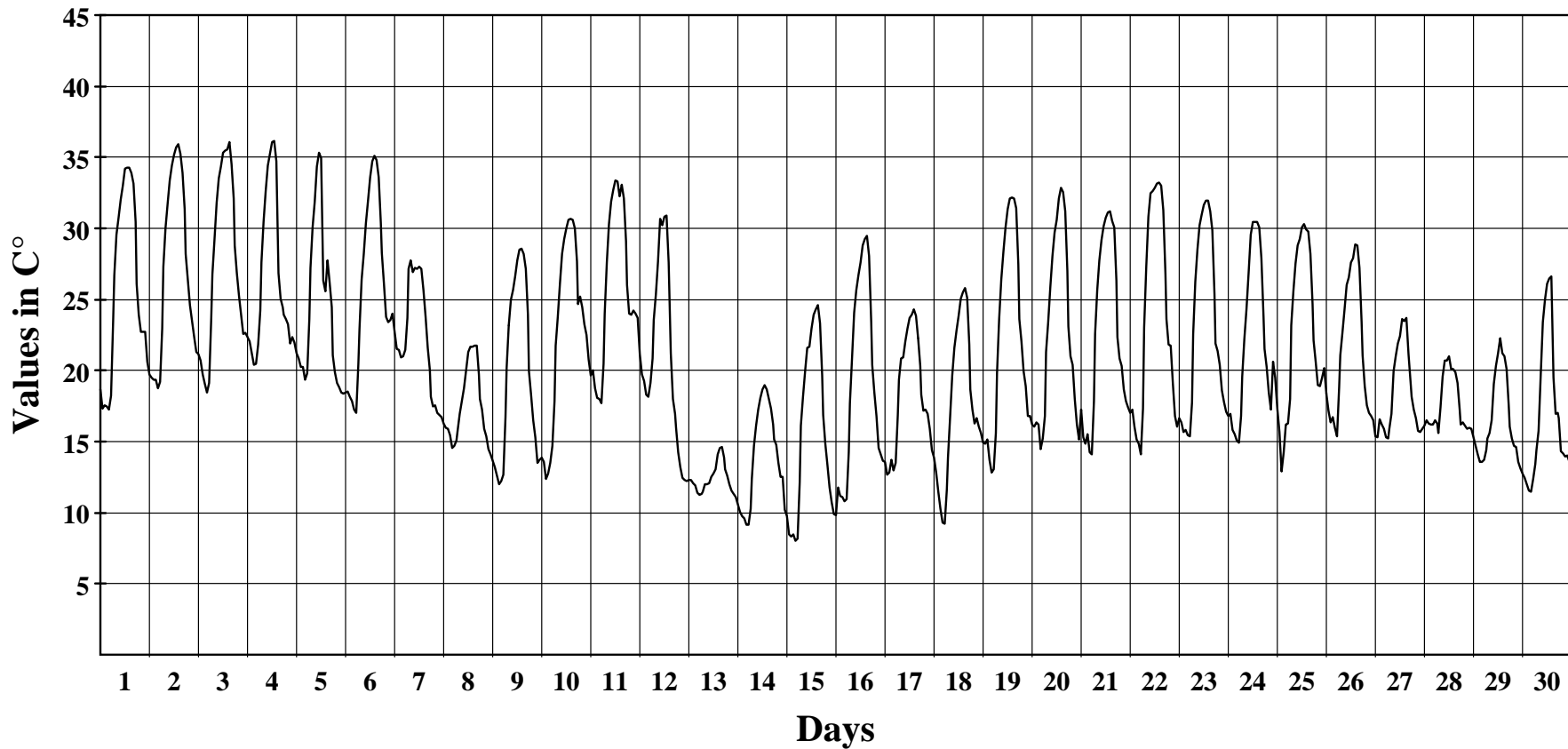
September 2012

Hourly Averages Graph Ch 9

SITE 0001

NMSU ASC at Clovis

Average Hourly Values



Average Value: 21.1

Site Information:

Project: wind monitoring

Location: clovis nm

Elevation: 50

Sensor on channel 9:

amb temp C°

Height: m Units: C°

Serial #: SN:

September 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	18.7	17.3	17.6	17.5	17.3	18.2	23.6	26.7	29.6	30.8	32.0	33.0	34.2	34.3	34.3	33.9	33.1	30.5	26.1	23.9	22.7	22.7	22.8	20.6	25.9
2	19.7	19.5	19.4	19.3	18.8	19.2	22.9	27.3	30.0	31.7	33.4	34.4	35.2	35.7	36.0	35.3	33.9	31.4	28.2	26.4	24.6	23.5	22.3	21.3	27.1
3	21.1	20.7	19.7	19.0	18.5	19.1	23.7	26.7	29.2	31.8	33.6	34.4	35.3	35.5	35.5	36.1	34.5	32.1	28.8	26.8	25.3	23.9	22.6	22.7	27.4
4	22.4	22.0	21.2	20.4	20.5	21.8	24.3	27.6	30.4	32.6	34.4	35.2	36.1	36.2	34.8	26.8	25.1	24.5	23.9	23.6	23.2	21.9	22.4	22.0	26.4
5	21.2	20.8	20.3	20.3	19.4	19.8	23.6	27.3	30.1	31.9	34.4	35.3	35.0	26.3	25.5	27.8	26.2	24.4	21.1	19.9	19.1	18.8	18.5	18.4	24.4
6	18.4	18.5	18.1	17.8	17.3	17.0	20.5	23.0	26.4	28.2	30.4	32.0	33.6	34.7	35.1	34.8	33.6	30.4	28.3	26.1	23.8	23.4	23.5	24.0	25.8
7	22.7	21.5	21.4	20.9	21.0	21.4	23.7	27.1	27.8	26.9	27.2	27.1	27.3	27.2	25.6	23.8	21.6	20.0	18.1	17.5	17.6	17.0	16.9	16.7	22.4
8	16.3	16.0	15.9	15.5	14.6	14.7	15.1	15.8	17.0	17.8	18.8	20.1	21.3	21.7	21.7	21.7	21.7	19.7	18.0	17.3	15.9	15.4	14.5	14.1	17.5
9	13.6	13.2	12.6	12.0	12.2	12.7	16.8	20.2	23.2	25.0	25.7	26.6	27.8	28.5	28.6	28.2	27.2	24.0	19.9	18.3	16.5	15.3	13.5	13.7	19.8
10	13.9	13.6	12.4	12.7	13.5	14.7	17.9	21.8	23.8	26.1	28.2	29.2	30.0	30.6	30.7	30.6	30.0	27.7	24.7	25.2	24.4	23.3	22.5	20.8	22.8
11	19.6	20.0	18.8	18.1	18.0	17.7	20.5	24.0	27.6	30.3	31.9	32.7	33.4	33.3	32.2	33.0	32.1	29.1	26.0	24.0	23.9	24.2	24.0	23.7	25.8
12	21.1	19.8	19.3	18.3	18.1	19.1	20.8	23.6	25.3	27.6	30.6	30.2	30.8	30.9	27.6	21.3	18.0	17.0	15.9	14.3	13.2	12.4	12.3	12.2	20.8
13	12.3	12.3	12.1	11.9	11.4	11.3	11.3	11.4	12.0	12.0	12.1	12.5	12.7	13.0	14.1	14.6	14.6	13.9	13.0	12.6	12.0	11.5	11.3	11.1	12.4
14	10.6	10.1	9.7	9.6	9.2	9.1	10.3	12.4	14.7	16.2	17.2	18.1	18.7	19.0	18.7	18.0	17.3	16.2	15.2	14.8	13.5	12.6	12.5	10.2	13.9
15	9.8	8.5	8.3	8.5	8.0	8.2	12.1	16.1	18.1	20.0	21.6	21.7	22.9	23.9	24.3	24.6	23.3	19.6	16.9	14.9	13.3	11.8	10.8	9.9	15.7
16	9.9	11.8	11.1	11.1	10.8	11.0	14.2	17.7	20.8	24.1	25.7	26.7	27.6	28.8	29.3	29.5	28.1	23.4	20.4	18.4	16.8	14.6	14.1	13.6	19.1
17	13.6	12.7	12.8	13.7	13.0	13.5	16.9	19.4	20.8	20.9	22.0	23.0	23.7	23.9	24.3	23.8	22.3	20.3	18.3	17.2	17.3	17.0	15.9	14.4	18.4
18	13.9	12.8	11.5	10.3	9.3	9.2	11.6	13.9	16.7	19.6	21.6	22.8	23.8	25.0	25.5	25.8	25.1	21.8	18.6	17.2	16.3	16.6	16.1	15.6	17.5
19	14.9	14.8	15.1	13.7	12.8	13.1	15.6	19.8	23.6	26.4	28.3	30.1	31.3	32.1	32.2	32.1	31.5	27.4	23.6	22.1	20.0	18.9	16.8	16.8	22.2
20	16.2	16.0	16.4	16.2	14.5	15.2	16.8	21.3	23.4	25.9	28.1	29.7	30.6	32.1	32.8	32.6	31.2	27.0	23.1	21.0	20.4	18.0	16.2	15.2	22.5
21	17.2	15.3	14.8	15.5	14.2	14.1	17.9	22.6	25.7	27.8	29.1	30.2	30.8	31.1	31.2	30.5	30.0	26.3	22.4	20.8	20.3	18.6	17.8	17.4	22.6
22	17.1	17.2	16.1	15.2	14.8	14.1	17.3	23.0	27.3	30.8	32.5	32.6	32.8	33.1	33.2	33.0	31.3	26.8	23.6	21.8	21.7	19.1	16.8	16.1	23.6
23	16.7	16.3	15.6	15.8	15.4	15.4	17.8	22.5	26.3	28.5	30.2	31.0	31.7	32.0	31.9	31.2	29.8	25.3	21.9	21.4	20.4	18.6	17.8	17.1	22.9
24	16.8	17.0	15.9	15.5	15.0	14.9	16.8	19.5	22.2	24.3	26.9	29.6	30.5	30.5	30.4	30.0	27.9	23.8	21.5	20.3	18.4	17.2	20.6	19.5	21.9
25	17.3	15.7	12.9	14.3	16.2	16.3	18.0	23.2	25.6	27.5	28.8	29.3	30.1	30.3	29.9	29.8	28.2	24.7	22.1	20.6	19.0	18.9	19.5	20.2	22.4
26	18.4	17.2	16.4	16.8	16.0	15.4	18.8	21.1	22.6	24.3	26.0	26.6	27.6	27.9	28.9	28.8	27.2	23.4	21.1	18.9	17.6	17.0	16.8	16.5	21.3
27	15.4	15.3	16.6	16.2	15.9	15.3	15.2	15.9	17.0	20.0	21.0	21.9	22.4	23.7	23.5	23.7	21.1	19.2	18.1	17.3	16.7	15.8	15.7	15.9	18.3
28	16.2	16.5	16.3	16.2	16.2	16.5	16.3	15.6	17.4	19.6	20.7	20.7	21.0	20.1	20.1	19.9	19.1	17.3	16.2	16.3	16.1	15.9	16.0	15.9	17.6
29	15.3	14.7	14.1	13.6	13.6	13.7	14.4	15.3	15.6	16.5	19.1	20.4	21.3	22.3	21.2	21.0	20.1	17.6	16.1	15.2	14.7	14.6	13.6	13.1	16.5
30	12.8	12.4	12.0	11.5	11.5	12.4	13.4	14.4	15.8	19.7	23.4	24.9	26.1	26.5	26.6	19.5	16.9	17.0	16.7	14.3	14.2	13.9	14.0	13.6	16.8
AVG	16.4	16.0	15.5	15.2	14.9	15.1	17.6	20.5	22.9	24.8	26.5	27.4	28.2	28.3	28.2	27.4	26.1	23.4	20.9	19.6	18.6	17.8	17.3	16.7	21.1

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

Wind Speed (m/s)	# of hours at given wind speed	Power Curve ¹ (kW)	Energy Production (kWh)
0	0	0	0
1	15.7	0	0
2	25.7	0	0
3	49	12	602
4	71.2	77	5,476
5	83.3	150	13
6	86	288	24,735
7	92.5	457	42,247
8	94.8	682	64,630
9	84	971	81,539
10	52.8	1,234	65,162
11	24.3	1,470	35,714
12	14.5	1,500	21,750
13	11.8	1,500	17,700
14	7	1,500	10,500
15	2.5	1,500	3,750
16	2.3	1,500	3,450
17	1.8	1,500	2,700
18	0.2	1,500	300
19	0.3	1,500	450
20	0.2	1,500	300
Total	720		393,517
		September 2012 Monthly Capacity Factor	36.40%

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

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