UTAH WIND SURVEY REPORT

UTAH DIVISION OF ENERGY

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Acknowledgements

Past and present Utah Division of Energy staff made valuable contributions to this project. Kevin Gillars, Glen Hansen, Britt Reed, Oliver Schreiber, Tom Turner and Dana Wilson contributed to the data collection and preparation of this document. Questions or comments about this publication or wind energy production in Utah should be directed to Tom Turner at the Utah Division of Energy.

The Utah Division of Energy extends its appreciation to the Western Area Power Administration for supporting this project and providing the wind monitoring equipment. Special thanks goes to the many government agencies, corporations, municipalities and private landowners for their cooperation in providing land for installation of equipment and access to monitoring sites.

Introduction

Wind energy is gaining acceptance worldwide as an important source of electrical power. Technological advances during the past decade have dramatically increased the wind turbine's efficiency and cost effectiveness. As a result, today's utility-scale electric generation plants powered by wind produce significant amounts of energy. The United States now has 1,600 MW of wind-generated power capacity on line. In 1991, California alone produced 2.7 billion kwh of wind-generated electricity, enough to meet the residential needs of approximately 300,000 people.

Wind energy is a promising renewable energy that offers utilities and independent power producers a pollution-free source of electricity that is cost competitive in areas where electricity rates are above average and winds are good. For years, the wind industry's goal has been to generate power at costs close to those of coal and oil — about six cents per kwh. Ten years ago, the cost of wind-generated power was four times that price. Today, wind turbines produce power at about seven cents per kwh. Current technology could lower that cost to five cents by 1995, and further technological advances could reduce it to three and a half cents by 2005.

Technological advances have perfected the wind turbine's ability to harness the wind. Improvements such as aerodynamically efficient blade design and special wind direction sensors that align the machine toward the wind path have increased power output.

Other improvements, such as those used in U.S. Windpower, Inc.'s variable-speed wind turbine, correct serious problems that have plagued wind turbines for decades. Strong gusts of wind frequently damaged earlier wind turbines, placing enormous stress on the drivetrain transmission and blades causing mechanical failures and increasing operating costs. The variable-speed wind turbine, which increases and decreases speed with wind strength, converts the additional energy produced by gusts into electricity without increasing torque on the drivetrain. The variable-speed wind turbine, currently being field tested, is scheduled to go into production in early 1993.

Advanced technology is not the only factor driving increased use of wind power. The removal of institutional barriers and implementation of tax incentives are also nurturing this growing market. In 1978, Congress passed the Public Utility Regulatory Policies Act, which directs utilities to interconnect with independent power producers and purchase their excess electricity at fair market price.

To promote wind energy development in Utah, the Utah Division of Energy administers a program that offers state income tax credits of up to $1,500 for residences using alternative energy systems and up to $25,000 for commercial installations. The tax credits are scheduled to expire in December 1995.

While California, with its nearly 18,000 wind turbines, is the world leader in wind energy production, other areas of the nation have favorable wind regimes as well — including Utah. Throughout the state are numerous locations where wind resources could generate electricity. The *Utah Wind Survey Report* serves as a prospector's guide to these areas. It provides a starting point for further detailed site-specific wind monitoring in order to develop the full potential of this valuable resource.

Research and development during the past decade has pushed back the frontiers of wind energy technology, making it more efficient and cost effective. Further technological advances will ensure that this reliable, non-polluting energy source will be cost competitive before the end of the century. With most of the institutional, technological and economic barriers removed, the only obstacle remaining to the widespread use of wind power for electricity generation is our nation's commitment to this important energy source. Wind power has come of age.

Wind Source and Measurement

The primary cause of wind is solar energy. Heat from the sun warms the Earth's water and land masses, which in turn warms the air above it. Warm air from the tropics rises, creating a region of low pressure. Colder air from the polar regions flows in to replace the warm air, creating dynamic streams of wind. The Earth's rotation, combined with local weather and landscape conditions shape the wind into a powerful source of energy.

The main instrument used in modern wind measurement is the rotating cup anemometer. In 1930, the three-cup anemometer was adopted as the standard by the National Weather Service. All data in the *Utah Wind Survey Report* was recorded with standard three-cup anemometers. Anyone recording wind velocity data using cup-style anemometers should be aware of the limitations of this method of measuring wind potential. First, four-cup anemometers typically over-measure the actual wind speed by approximately 24 percent at 100 mph, while modern three-cup anemometers over-measure up to 9 percent. Secondly, during brief periods of decreasing wind speed, all anemometers continue to rotate at a higher speed than the actual wind velocity.

Finally, poorly maintained anemometers require higher starting velocities that adversely affect data collection when wind speeds are less than 10 mph. Some of the instruments used in this study could respond to speeds as low as 0.5 mph, others required up to a 4.0-mph starting speed. Some of the data collection sites in this report were in remote locations, making it difficult to ensure the anemometers were maintained in peak operating condition.

Wind Power Units

A Wind Power Unit is a theoretical measure of wind energy potential. A wind power unit is expressed in watts per meter squared (W/m^2) and is a function of air density and wind speed.

Theoretical wind power units are calculated by using the equation:

$$Pu = {}^1/_2\,[dv^3]$$

Where:

Pu= Power per unit area (W/m^2)

d= Air density in kilograms per cubic meter (kg/m^3)

v= Wind speed in meters per second

Values obtained estimating wind power represent theoretical maximums. In practice, the maximum power that can be obtained from harnessing a wind source is approximately 16/27 of the theoretical amount.

Under normal circumstances, measured wind power for a given wind velocity decreases at higher altitudes. For every 2,700-foot increase in elevation, the density and energy potential of air decreases about 10 percent, in turn decreasing the estimated energy potential. The standard sea level density of air is 1.29 kg/m^3.

Estimates of wind power can be calculated from velocities averaged over time periods greater than one hour, but this method tends to underestimate the actual power that could be produced. For example, wind power calculated from a constant daily wind speed of 20 mph would produce a value of 461 W/m^2. However, if the wind speed were 10 mph half the time and 30 mph the other half, the mean would still be 20 mph, but the calculated wind power resulting from this profile of wind velocity would be 807 W/m^2.

Technical Background

During this wind survey project, 35 anemometer sites were monitored throughout the state between November 1984 and June 1991. State-of-the-art wind resource assessment tools and techniques were used to quantify wind rose, wind speed and diurnal distribution characteristics over a wide range of territory and terrain.

Second Wind AL-2000 data loggers, Maximum #40 anemometers and Downeastern TRX-WP wind vanes were used for data collection. At most locations, equipment was installed on a NRG Systems 20-meter Tall-tower. In some locations, existing wooden power poles or other tall-standing structures were used for the anemometer and data logger.

Wind data was recorded and stored on Second Wind Inc. data chips, then loaded into the Utah Division of Energy Data Information System (EDIS).

Data Format

Geographic information, environmental conditions and other descriptive parameters are identified for each site studied. The *Terrain Classifications in Each of the Principal Directions* are eight standard generic classes for categorizing the predominant land characteristics to the north, south, east and west of the wind measurement sites. The standard categories are:

A= Lake
B= Low grass, fallow ground
C= High grass, low row crops
D= Tall row crops, low woods
E= High woods with many trees
F= Buildings and structures
G= Relatively flat terrain
H= Rolling terrain

The AL-2000 data loggers used in this study report wind data in three different formats: *Wind Velocity Distribution Data*, *Wind Diurnal Data* and *Wind Rose Data* for each location.

The AL-2000 data loggers record hourly data from zero to a maximum of 255 hours in any single format. The 255-hour maximum had a minor effect on Wind Velocity Distribution Data and Wind Rose Data compiled in this document. The Wind Rose Data was corrected, but the Wind Velocity Distribution Data was left unchanged because all 255-hour maximum errors occurred at speeds under 10 mph, the realistic minimum wind speed needed for power generation.

Wind Velocity Distribution Data is divided into 18 different wind speed regimes. A wind speed regime is a segment of partitioned wind velocities. Within these wind speed regimes, the cumulative hours per month are listed for the particular wind velocity. This type of data presentation provides detailed information for use in technical analysis using wind velocities.

Diurnal information is averaged wind velocity data divided into 12 daily two-hour time slots, then each time slot is averaged for the month. The Wind Diurnal Data tables incorporate two rows of information for each month. The upper row represents the monthly averaged wind speed for the particular time slot and the lower row contains the standard deviation (σ) for the monthly velocity averages. The Wind Diurnal Data gives peak wind power availability for comparison with local grid demand cycles.

The third type of data presentation, Wind Rose Data tables, provides prevailing wind direction. These tables contain eight major wind directions on one axis and four different wind speed regimes on the other axis. Monthly hours of wind speed in a particular direction are accumulated for use in optimizing the position of a turbine in relation to the predominant wind direction. This data also shows seasonal changes in wind characteristics.

Each site location also contains a graphic illustration based on the recorded value of Wind Velocity Distribution Data titled *Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH*. Each graph illustrates the potential operating time in hours for a wind turbine with a cut-in speed of 10 mph.

Power Law Analysis

Wind speed generally increases with height from the ground and is a function of ground surface roughness and vertical temperature distribution. The change in wind speed is greatest closest to the earth's surface in open flat areas. Urban and forested areas cause near-surface turbulence that mixes air, decreases near-surface wind speeds and increases wind speed a few hundred feet above the ground. Power law analysis is a method of estimating wind velocity at varying heights for a specific location.

For most anemometer sites in this report, wind velocity data was collected at the fixed anemometer height of 20 meters, the hub height of most standard wind-generated electricity systems. Power law analysis is a simple method of predicting wind velocity above or below this 20-meter height.

The power law equation is expressed as:

$$V_h = V_L \left[\frac{H_h}{H_L}\right]^{\alpha}$$

Where:

V_h= Upper anemometer wind velocity
V_L= Lower anemometer wind velocity
H_h= Elevation of the upper anemometer
H_L= Elevation of the lower anemometer

The α exponent in the power law equation is functionally dependent on surface roughness and wind stability. Empirical studies define an α value of 0.14 as appropriate for most sites.

Power law analysis was performed with data collected at the Spanish Fork Canyon C and D locations in Utah County. The C anemometer operated at a height of 29 meters (95 feet) and the D anemometer operated from a height of 19.8 meters (65 feet) on the same tower.

The purpose of this analysis was to determine the validity of the 0.14 power law exponent for conditions at Spanish Fork Canyon, and to calculate a power law exponent specifically for the area. The exponent was

then used to estimate wind velocities at varying heights for the remaining Spanish Fork Canyon sites.

To determine a power law exponent for Spanish Fork Canyon the equation was transformed to:

$$\alpha = \frac{\log\left[\frac{V_h}{V_L}\right]}{\log\left[\frac{H_h}{H_L}\right]}$$

The α exponent value was calculated using the average of the 12 monthly Wind Diurnal Data values for each time period. A power law exponent was then calculated for each month in each individual time period. The mean of the 12 monthly power law exponent averages is the correct adjusted power law exponent for use in other equations.

Results of the computation are shown in Table 1 (page ix). The table indicates an approximate 35 percent change in the α value over a 24-hour period. Appropriately, the monthly average α values vary less than the individual monthly values. The importance of the variation between lowest and highest values of the diurnal averages increases directly with the value of the ratio H_h/H_L. A value of 0.294 can be used as an estimate of α for the Spanish Fork Canyon C and D locations, projecting velocities to turbine hub heights of up to 30 meters above or below where the actual data was recorded.

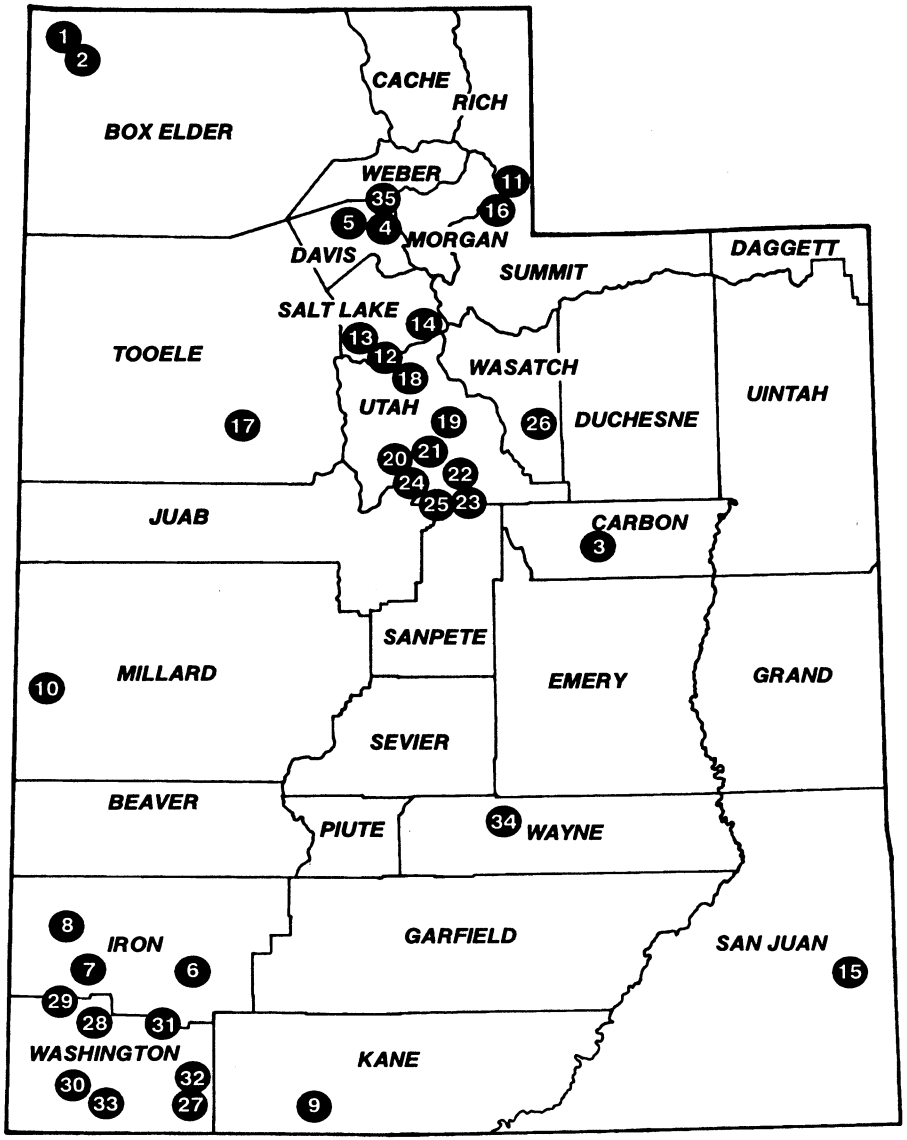
Similar wind patterns, wind stability and surface roughness conditions exist at the other canyon locations. Therefore, assigning α the value of 0.3 should be reasonably valid for the remaining Spanish Fork Canyon locations and other similar canyon wind sites such as Weber and Ogden canyons in Weber County.

However, wind speeds do not always increase with height from the ground as the power law suggests. Frequently, the power law α exponent varies too greatly to be explained by terrain alone. Many poorly understood factors exist that affect the vertical variation of wind speeds. Serious wind energy prospectors should always accurately measure potential wind power sites to determine true conditions, rather than rely on data from other locations or elevations.

Table 1 The Power Law Exponent For Spanish Fork Canyon, Sites C and D

	Time of Day												Monthly Average	σ
	00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00		
JAN	0.337	0.335	0.276	0.289	0.316	0.376	0.375	0.191	0.356	0.299	0.164	0.330	0.304	0.067
FEB	0.404	0.374	0.361	0.351	0.344	0.324	0.027	0.222	0.194	0.117	0.276	0.406	0.283	0.120
MAR	0.357	0.394	0.340	0.311	0.357	0.383	0.252	0.296	0.255	0.064	0.155	0.321	0.290	0.097
APR	0.417	0.366	0.401	0.416	0.425	0.252	0.189	0.012	0.229	0.400	0.344	0.387	0.320	0.126
MAY	0.311	0.316	0.316	0.312	0.332	0.306	0.213	0.184	0.283	0.365	0.346	0.323	0.301	0.052
JUN	0.311	0.317	0.314	0.300	0.337	0.333	0.119	0.169	0.191	0.284	0.279	0.292	0.271	0.071
JUL	0.315	0.309	0.301	0.305	0.328	0.301	0.228	0.172	0.193	0.274	0.273	0.301	0.275	0.051
AUG	0.318	0.315	0.303	0.286	0.332	0.332	0.238	0.201	0.216	0.286	0.303	0.326	0.288	0.045
SEP	0.334	0.339	0.340	0.310	0.274	0.245	0.124	0.133	0.210	0.523	0.443	0.347	0.302	0.116
OCT	0.319	0.289	0.301	0.272	0.295	0.329	0.312	0.381	0.315	0.328	0.322	0.327	0.316	0.027
NOV	0.312	0.314	0.284	0.288	0.278	0.278	0.293	0.305	0.384	0.289	0.315	0.336	0.306	0.030
DEC	0.270	0.291	0.296	0.284	0.274	0.287	0.276	0.293	0.210	0.235	0.280	0.297	0.274	0.026
												The Mean of the Monthly Averages (α) =	0.294	

SITE NUMBER BY COUNTY



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- Price . . . . . #3

DAVIS
- Weber Canyon East . . #4
- Weber Canyon West . . #5

IRON
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- Newcastle . . . . . #7
- Zane . . . . . #8

KANE
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RICH
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- Salt Lake Airport #2 . . . #13
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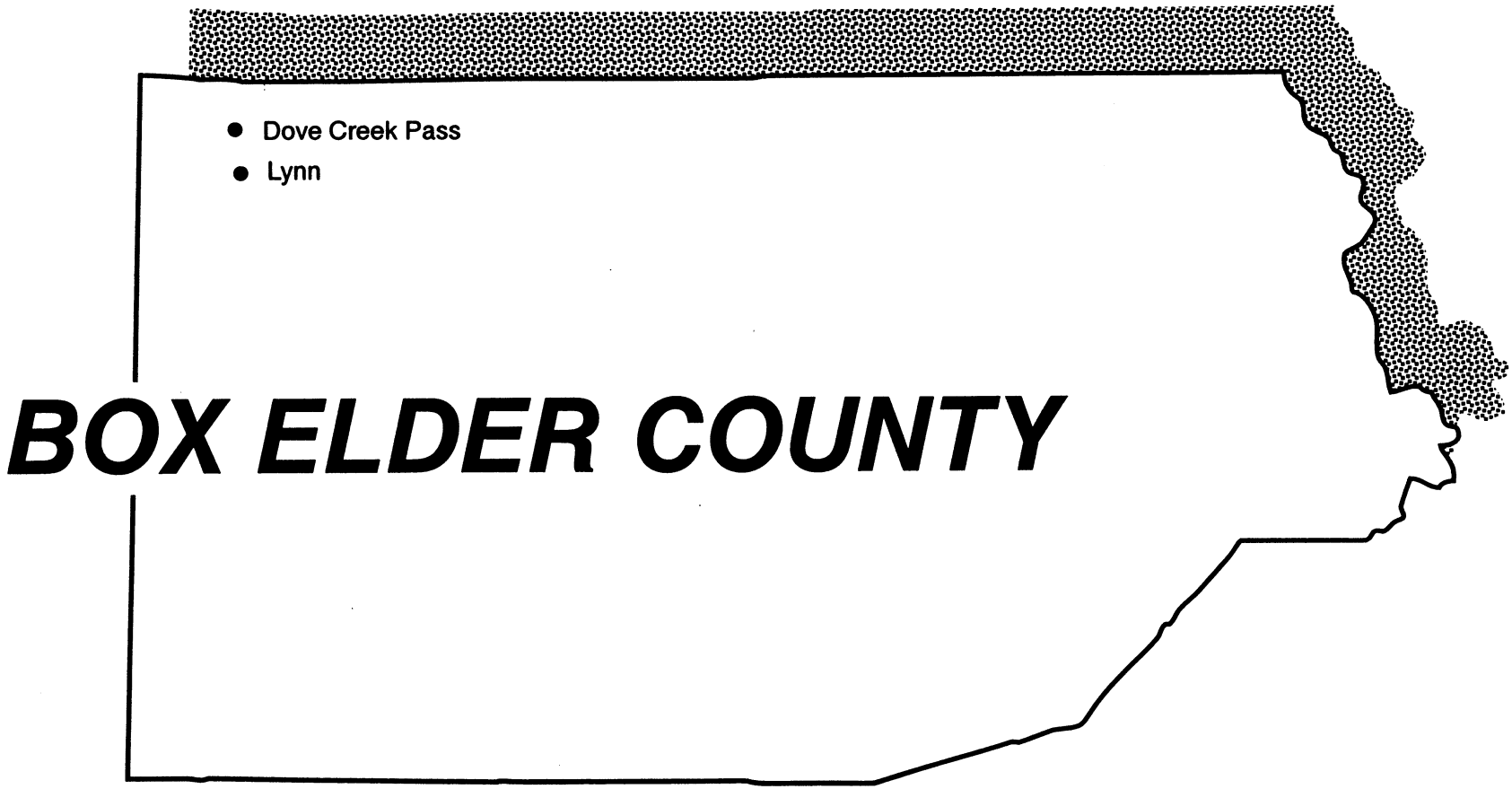
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Lynn

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Site Description

County:	Box Elder	Elevation:	7,300 ft.
Township:	13 North	Range:	16 West
Section:	27	Quarter Section:	Northeast 1/4
Longitude:	113° 45'	Latitude:	41° 53'

Duration of data logging: November 1986 to November 1987
Months of available data: 13
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southwest
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Low grass, low row crops
South: Rolling terrain
West: Low grass, low row crops

Comments

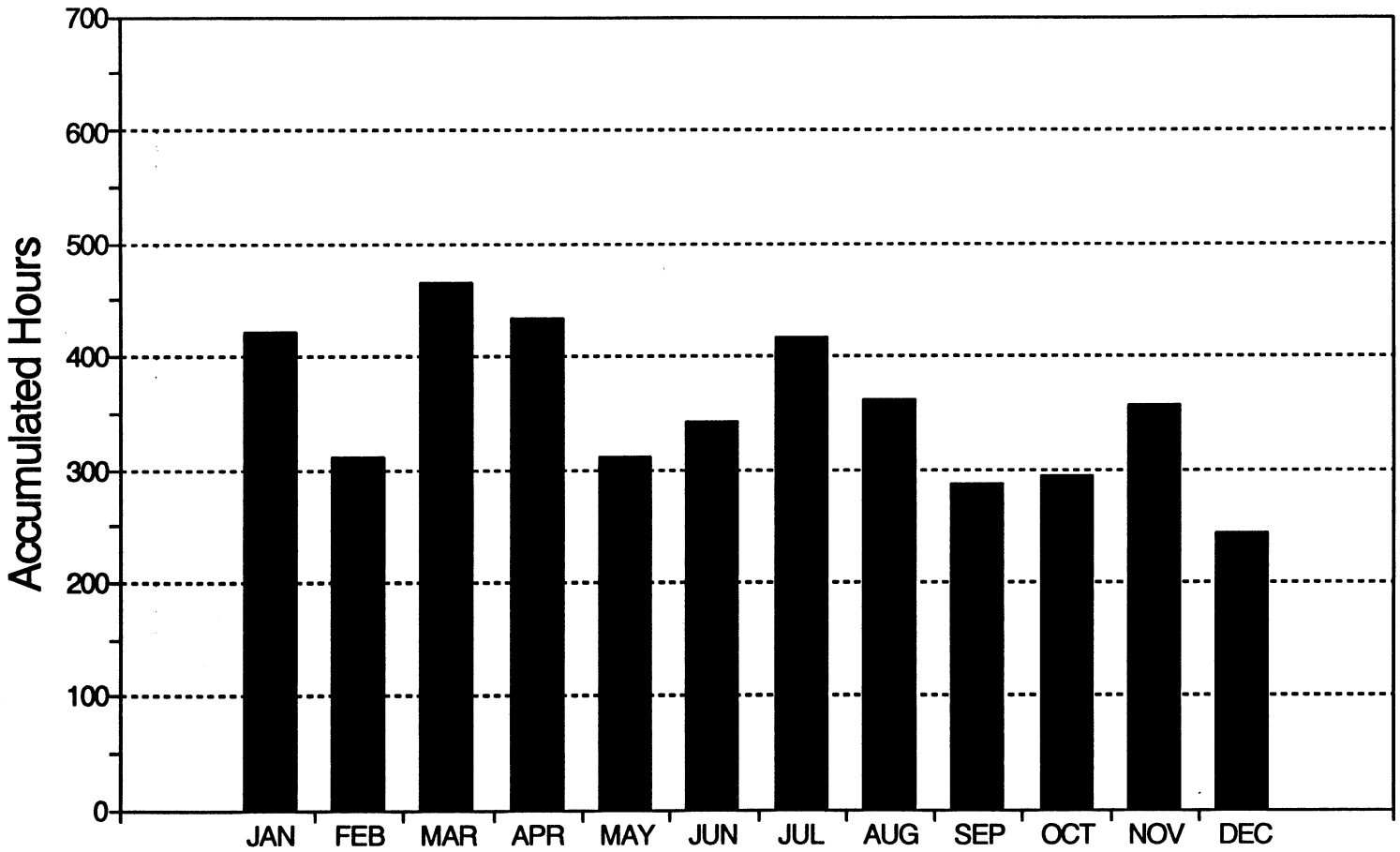
Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
NOV 86	51	44	61	67	56	49	41	38	36	35	31	25	20	15	12	9	7	14
DEC 86	251	132	115	92	60	37	25	15	8	4	2	1	0	0	0	0	0	0
JAN 87	148	82	93	88	75	56	46	32	24	21	16	13	12	9	6	5	4	14
FEB 87	179	98	84	64	58	47	36	27	22	15	11	8	6	5	4	3	2	3
MAR 87	155	63	61	68	73	65	59	47	40	33	22	15	11	9	6	4	3	10
APR 87	121	74	89	89	79	61	48	36	27	21	18	15	13	10	7	5	3	3
MAY 87	208	107	118	98	69	46	31	20	14	10	7	4	3	2	1	1	1	4
JUN 87	178	94	104	93	73	56	39	24	16	11	8	6	5	4	3	2	1	2
JUL 87	152	81	94	102	95	74	50	35	23	15	10	6	3	2	1	1	0	0
AUG 87	162	104	115	108	86	63	41	25	16	10	6	3	2	1	1	0	0	0
SEP 87	228	100	105	86	64	46	32	21	14	9	6	3	2	2	1	1	0	0
OCT 87	210	123	118	97	69	47	28	16	10	7	5	4	3	2	2	1	1	1
NOV 87	201	80	85	83	73	55	42	26	18	15	11	8	6	5	4	3	2	4

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
NOV 86	MPH	16.4	17.5	16.9	15.8	16.0	17.5	17.4	17.3	17.0	16.5	16.0	15.8
	σ	9.0	7.5	8.5	8.5	8.5	9.0	7.0	7.5	8.0	9.5	9.0	7.5
DEC 86	MPH	8.1	8.0	7.9	7.8	7.6	8.5	9.8	9.0	7.9	6.9	7.1	8.0
	σ	4.0	3.5	3.5	4.0	4.5	5.0	4.5	4.5	4.5	4.5	4.0	4.0
JAN 87	MPH	12.3	11.8	12.0	12.0	12.4	12.3	13.1	13.5	12.5	13.0	12.8	13.0
	σ	8.5	9.0	9.0	8.0	8.5	8.0	8.5	8.5	6.5	6.5	6.5	7.0
FEB 87	MPH	10.4	9.8	10.0	10.0	9.3	10.1	11.8	12.5	12.1	10.5	10.5	11.1
		7.0	6.5	6.0	6.0	6.0	7.0	7.0	7.0	6.5	7.0	7.5	7.5
MAR 87	MPH	12.8	11.9	12.6	13.3	13.1	14.1	14.5	15.4	14.9	12.4	11.9	11.8
	σ	6.5	6.5	8.0	8.5	8.0	8.0	8.5	10.0	9.5	8.0	7.5	7.0
APR 87	MPH	12.1	11.4	10.3	9.8	11.4	13.0	14.1	14.8	16.4	14.9	12.3	12.6
	σ	8.0	8.0	6.5	6.0	6.5	5.5	6.0	6.0	8.0	7.0	7.0	7.5
MAY 87	MPH	7.9	8.0	7.6	7.4	8.5	10.5	10.9	11.1	11.5	10.9	9.4	8.4
	σ	4.5	4.5	5.0	4.5	5.5	5.0	4.0	5.5	4.5	6.0	6.5	7.5
JUN 87	MPH	9.9	9.3	8.0	8.4	9.4	10.4	11.3	11.6	13.1	11.9	11.1	9.4
	σ	8.0	5.5	5.0	4.5	4.5	5.0	5.0	5.0	5.0	5.0	7.0	7.0
JUL 87	MPH	11.0	9.6	9.4	9.1	10.0	11.1	11.1	11.9	12.1	13.3	11.8	10.9
	σ	6.0	6.5	5.0	5.0	4.5	4.5	4.5	4.5	4.0	4.5	4.5	6.0
AUG 87	MPH	8.4	8.0	7.5	7.6	7.8	10.8	12.1	13.4	13.6	12.9	9.9	8.3
	σ	4.5	3.0	3.0	4.0	3.5	3.5	4.5	4.0	4.5	4.5	4.5	4.0
SEP 87	MPH	7.4	7.6	7.6	7.1	7.4	9.9	10.9	11.8	11.6	10.9	8.1	6.8
	σ	6.0	5.5	5.5	5.0	4.5	4.5	4.0	4.5	4.5	5.0	4.5	5.5
OCT 87	MPH	7.6	7.9	8.6	8.4	8.4	10.1	11.1	11.8	11.6	9.0	7.8	7.3
	σ	5.0	4.5	4.0	4.5	6.5	6.0	6.0	6.0	5.5	4.5	4.5	4.5
NOV 87	MPH	9.3	8.6	9.4	10.8	11.4	12.9	13.6	12.8	10.6	9.1	9.1	9.0
	σ	7.0	6.5	6.0	6.0	6.5	6.5	8.0	7.5	7.5	7.5	6.5	6.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 86	37	1	0	10	76	12	11	24
	DEC 86	89	7	6	39	114	6	18	61
	JAN 87	71	3	2	23	86	7	15	54
	FEB 87	58	6	5	18	99	8	13	39
	MAR 87	44	12	4	14	49	21	18	29
	APR 87	47	9	8	28	79	27	18	37
12-18 MPH	NOV 86	59	2	0	5	33	1	8	37
	DEC 86	51	2	0	21	26	1	8	15
	JAN 87	63	3	2	11	41	2	10	45
	FEB 87	50	6	4	9	46	1	8	17
	MAR 87	65	13	5	5	52	12	16	30
	APR 87	36	8	6	29	55	24	11	38
18-24 MPH	NOV 86	77	4	0	0	1	0	3	24
	DEC 86	18	0	0	3	3	0	1	2
	JAN 87	30	2	3	4	15	0	3	19
	FEB 87	29	2	2	4	4	0	6	7
	MAR 87	49	7	3	4	4	4	5	13
	APR 87	38	5	1	1	1	4	2	15
24 + MPH	NOV 86	107	2	0	0	0	0	0	23
	DEC 86	2	0	0	0	0	0	0	0
	JAN 87	42	3	13	1	1	0	1	19
	FEB 87	28	1	2	1	2	0	2	5
	MAR 87	47	4	6	2	9	1	1	11
	APR 87	60	3	0	0	2	1	0	6

Site Description

County:	Box Elder	Elevation:	6,900 ft.
Township:	13 North	Range:	17 West
Section:	11	Quarter Section:	—
Longitude:	113° 45'	Latitude:	46° 38'

Duration of data logging: November 1984 to April 1987
Months of available data: 30
Anemometer height: 50 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southwest
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Low grass, low row crops
South: Rolling terrain
West: Low grass, low row crops

Comments

Property ownership: Raft River Electric Cooperative
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

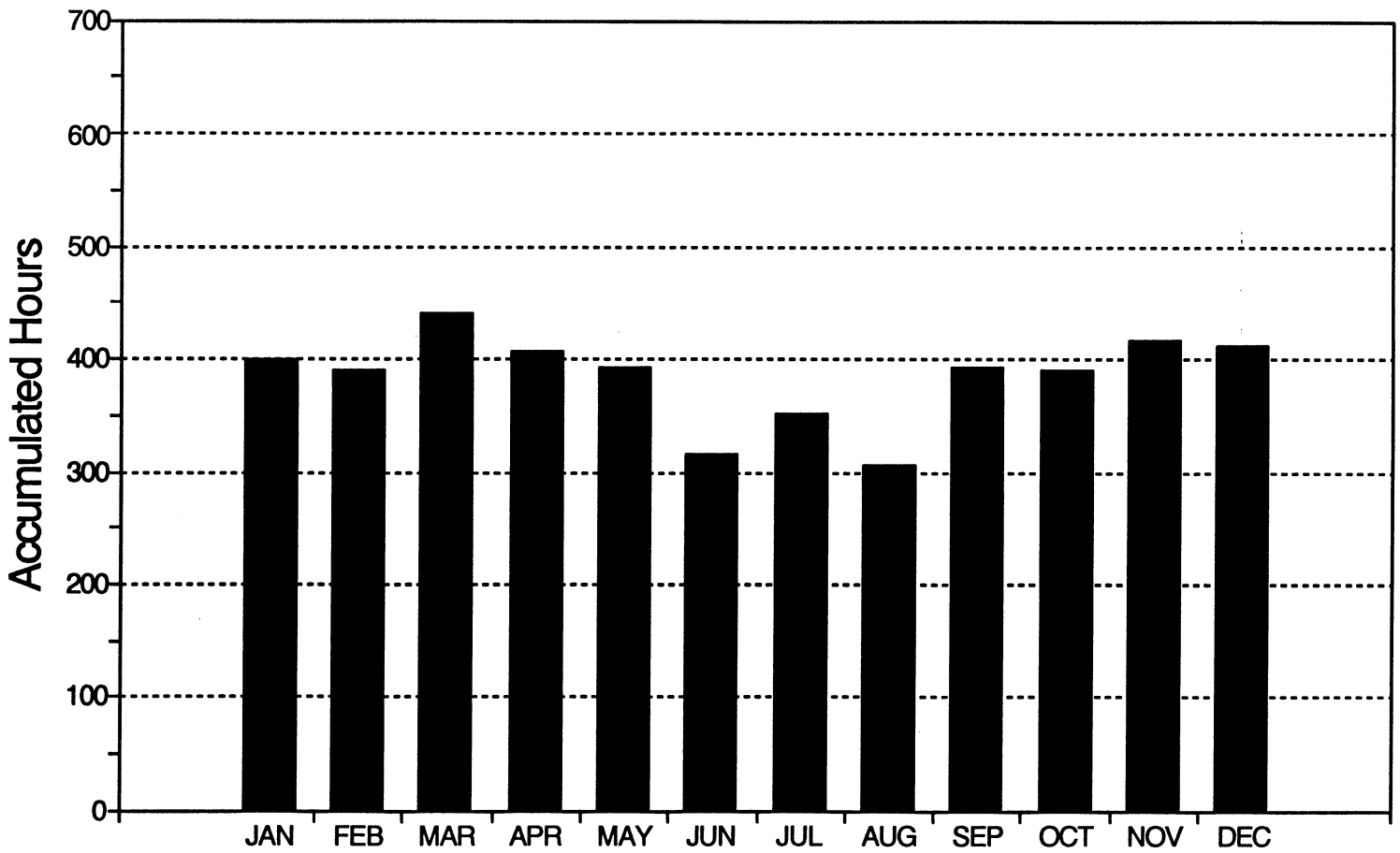
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
NOV 84	175	73	67	55	43	33	29	25	22	21	20	16	13	11	8	6	4	11
DEC 84	102	66	70	79	83	73	62	53	43	36	27	18	11	7	5	4	3	4
JAN 85	255	86	79	71	57	41	35	26	16	13	10	6	4	3	2	1	1	1
FEB 85	119	65	65	69	65	59	53	44	39	29	19	13	11	8	4	3	1	5
MAR 85	154	73	77	75	69	59	48	37	29	25	21	17	14	11	8	7	5	15
APR 85	140	87	88	74	67	58	42	30	25	21	18	14	11	8	7	6	4	19
MAY 85	167	94	88	79	71	62	51	40	30	20	13	9	7	5	3	2	1	2
JUN 85	221	107	96	80	64	48	36	24	14	9	6	4	3	2	1	1	1	2
JUL 85	218	108	101	84	63	48	35	27	20	14	9	7	5	3	2	2	0	2
AUG 85	197	111	89	70	63	55	45	32	22	16	12	9	7	5	4	3	2	3
SEP 85	118	68	82	83	82	75	60	46	33	22	14	9	6	5	4	4	3	7
OCT 85	136	88	93	80	67	60	53	42	31	21	17	15	12	9	6	4	3	6
NOV 85	220	42	47	53	53	51	45	44	38	29	23	17	13	11	9	8	6	11
DEC 85	162	82	92	93	79	71	65	43	21	16	10	4	1	1	1	1	1	1
JAN 86	113	73	108	105	94	53	36	35	28	20	14	11	10	9	8	6	5	16
FEB 86	142	58	50	52	53	40	34	28	25	21	18	19	18	18	16	13	10	57
MAR 86	144	92	96	85	73	62	48	34	25	21	18	14	10	7	4	3	2	5
APR 86	155	71	70	68	64	58	47	37	29	24	21	17	14	11	9	7	6	13
MAY 86	191	97	92	79	72	62	52	40	28	17	11	8	5	4	3	2	1	4
JUN 86	179	110	96	77	66	54	43	31	21	15	10	7	4	3	2	1	1	1
JUL 86	144	101	116	93	71	58	48	36	23	13	8	5	3	3	3	3	3	15
AUG 86	230	137	111	80	59	46	32	21	12	6	4	2	2	1	0	0	0	0
SEP 86	184	106	96	82	67	52	38	28	22	17	12	7	4	2	1	1	0	1
OCT 86	181	99	108	81	60	50	37	26	22	19	14	11	9	8	6	3	2	8
NOV 86	70	49	53	64	68	73	69	55	46	38	28	19	14	11	8	7	5	18
DEC 86	196	109	118	98	78	61	41	25	9	3	2	1	1	1	0	0	0	0

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JAN 87	172	54	61	68	77	63	50	45	33	24	19	15	12	9	9	9	8	18
FEB 87	168	89	87	81	59	45	35	29	24	17	12	8	6	5	4	2	1	2
MAR87	141	65	69	80	81	74	55	43	37	27	20	13	8	5	4	4	4	14
APR 87	159	83	86	76	65	56	46	36	28	23	18	12	8	6	4	3	3	7

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
NOV 84	MPH	11.1	11.1	11.1	11.1	11.0	12.8	15.4	15.0	14.1	12.5	11.9	11.5
	σ	9.0	7.5	8.0	7.5	7.5	7.5	10.0	9.5	9.5	9.0	9.5	10.0
DEC 84	MPH	13.9	14.6	12.8	12.9	12.6	13.3	16.4	15.4	14.1	13.1	13.3	14.0
	σ	6.5	7.5	6.5	6.5	6.5	8.0	8.0	7.0	7.0	7.0	6.5	5.5
JAN 85	MPH	8.5	9.3	9.0	8.4	8.5	9.0	10.4	9.9	8.9	7.9	8.4	8.9
	σ	6.0	7.0	7.0	8.0	5.5	6.0	7.0	6.5	5.5	5.0	6.0	7.0
FEB 85	MPH	13.4	13.3	13.1	12.9	12.9	13.7	15.8	15.0	12.7	12.1	12.4	12.7
	σ	7.0	7.0	8.5	8.0	7.0	8.5	7.5	6.5	5.0	7.0	7.0	9.0
MAR 85	MPH	10.9	11.9	11.6	11.9	11.8	14.3	15.5	16.8	16.3	14.1	13.8	11.3
	σ	9.0	10.0	8.5	7.0	7.5	8.0	8.0	8.5	9.0	7.0	8.5	7.0
APR 85	MPH	10.9	12.8	13.1	12.1	13.1	15.9	15.9	14.9	15.3	13.3	10.3	9.5
	σ	5.5	10.5	12.0	11.5	10.0	9.0	8.5	7.5	7.5	5.5	5.0	6.0
MAY 85	MPH	9.9	9.4	8.1	7.9	8.5	11.5	13.6	15.9	15.5	14.6	11.9	10.4
	σ	4.5	5.5	4.5	4.0	4.5	5.5	5.5	6.5	6.0	6.5	6.0	5.0
JUN 85	MPH	8.5	7.5	7.4	7.4	8.1	9.8	9.6	11.1	12.0	12.3	10.0	9.6
	σ	7.5	5.0	4.0	4.0	4.5	3.5	4.5	5.0	5.0	4.5	5.0	5.5
JUL 85	MPH	9.0	8.4	7.5	7.3	6.8	9.2	10.3	10.9	13.9	12.9	12.1	10.1
	σ	5.5	4.0	4.0	4.0	5.0	4.0	4.0	4.0	6.5	6.0	6.0	5.5
AUG 85	MPH	8.5	7.9	8.5	7.6	6.6	10.0	13.3	14.8	16.1	15.0	12.3	8.6
	σ	4.0	4.0	4.5	5.0	5.0	5.0	5.0	5.5	8.0	6.5	5.0	3.5
SEP 85	MPH	11.8	11.6	11.5	10.6	11.0	12.5	14.0	15.5	15.9	14.9	12.4	11.1
	σ	6.5	7.5	6.5	5.5	4.5	6.0	7.0	7.5	7.0	6.5	5.5	6.0
OCT 85	MPH	10.8	10.0	11.6	11.8	11.3	13.3	15.0	16.8	15.4	14.1	11.1	11.3
	σ	5.5	6.0	6.0	6.5	8.0	7.0	7.0	7.5	8.0	7.5	6.5	6.0
NOV 85	MPH	11.5	12.3	12.9	13.0	13.4	14.0	14.8	14.8	13.8	10.9	9.5	10.0
	σ	9.5	9.5	9.5	9.0	9.0	10.5	9.0	9.0	9.0	9.5	8.0	9.0
DEC 85	MPH	10.3	9.0	8.1	8.8	10.3	11.9	12.9	13.3	12.1	11.4	10.1	10.1
	σ	5.5	5.5	5.0	4.5	5.5	6.0	6.5	6.5	6.0	6.0	5.0	5.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JAN 86	MPH	12.5	12.1	12.4	12.5	13.0	13.9	15.5	15.3	13.6	11.8	11.8	12.3
	σ	5.5	6.5	8.0	9.0	8.5	10.0	9.0	9.0	7.5	6.0	7.5	6.5
FEB 86	MPH	14.1	15.4	16.0	15.9	16.1	16.9	19.8	20.3	17.4	15.9	14.9	14.6
	σ	10.5	11.5	12.5	14.5	14.0	13.0	14.0	15.5	13.5	12.0	11.0	11.0
MAR 86	MPH	11.3	11.4	10.3	10.3	10.6	13.3	14.4	15.9	14.9	11.9	10.4	10.0
	σ	6.5	6.5	6.5	5.0	6.0	6.5	6.5	7.5	8.0	6.0	7.0	5.5
APR 86	MPH	11.1	11.4	11.9	11.8	12.3	14.1	14.6	15.9	16.0	15.1	12.8	11.4
	σ	9.0	10.5	10.0	9.5	10.0	8.0	6.5	6.5	6.0	6.5	5.5	8.5
MAY 86	MPH	10.4	8.8	8.7	8.5	9.0	12.9	14.0	14.6	16.0	14.1	11.5	9.7
	σ	7.0	5.0	5.0	5.5	5.0	6.0	5.5	5.5	7.0	8.0	6.5	5.5
JUN 86	MPH	9.5	7.8	8.1	6.8	7.6	10.4	12.6	13.6	13.1	12.1	12.6	11.1
	σ	5.0	3.0	3.5	3.5	4.0	6.0	6.5	5.5	5.5	5.0	5.5	5.0
JUL 86	MPH	9.6	9.3	9.5	9.4	10.1	12.0	14.1	15.0	14.6	13.3	12.6	10.3
	σ	5.0	4.5	6.0	6.5	7.0	6.0	7.5	9.0	9.0	7.0	5.5	5.0
AUG 86	MPH	7.0	6.8	6.4	6.6	7.1	8.4	10.5	11.5	12.9	11.9	9.6	7.1
	σ	3.5	3.5	4.0	3.0	3.5	4.0	4.0	4.0	4.5	3.5	3.5	2.5
SEP 86	MPH	7.4	8.5	9.3	8.9	8.8	10.4	12.1	13.9	14.5	12.3	9.6	7.9
	σ	4.5	4.5	5.0	5.0	4.0	4.5	6.0	6.5	4.5	4.5	5.0	6.0
OCT 86	MPH	10.6	11.5	11.0	10.5	11.0	13.3	13.6	13.0	12.1	11.8	9.6	8.6
	σ	9.5	9.0	8.5	7.5	7.0	7.0	7.0	6.5	6.5	5.5	6.5	7.5
NOV 86	MPH	15.2	15.7	15.1	15.1	14.5	16.4	17.9	18.5	18.1	14.7	14.5	14.2
	σ	8.5	8.0	8.5	10.5	8.0	6.5	5.5	8.0	9.5	7.5	7.0	7.0
DEC 86	MPH	8.9	9.3	9.1	8.5	8.9	10.1	11.5	11.5	9.6	7.5	7.9	8.3
	σ	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.0	4.5	3.5	4.0	4.5
JAN 87	MPH	11.0	11.9	12.5	11.4	13.4	13.6	15.5	16.6	15.6	13.0	12.5	12.3
	σ	8.0	9.0	9.0	8.5	9.5	9.0	10.0	10.5	10.5	8.5	8.0	7.5
FEB 87	MPH	10.1	10.3	10.6	10.8	10.3	11.9	12.6	12.1	11.8	9.9	9.6	10.9
	σ	7.5	6.0	5.0	5.5	5.5	6.0	6.5	6.5	7.0	6.5	7.0	7.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAR 87	MPH	12.6	12.6	12.5	12.4	12.8	14.8	14.1	15.4	14.4	12.3	12.3	11.6
	σ	7.0	7.5	8.0	7.0	7.0	7.5	8.0	8.0	9.0	9.0	8.5	7.5
APR 87	MPH	10.8	9.4	9.4	8.3	9.9	12.4	14.6	15.0	17.4	15.5	10.1	10.9
	σ	7.0	7.0	6.5	5.0	5.5	5.5	5.5	5.5	7.0	7.5	6.5	8.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 84	7	16	38	88	13	12	18	5
	DEC 84	4	7	73	97	3	1	16	12
	JAN 85	9	16	64	93	6	1	27	21
	FEB 85	8	12	68	80	7	1	8	13
	MAR 85	13	7	48	58	11	23	37	27
	APR 85	25	20	70	66	19	5	20	24
12-18 MPH	NOV 84	1	8	23	56	4	5	6	0
	DEC 84	6	6	63	125	2	0	5	10
	JAN 85	3	12	38	74	3	0	0	2
	FEB 85	3	12	51	102	4	0	0	3
	MAR 85	16	14	37	61	9	8	11	20
	APR 85	18	14	47	64	12	5	3	3
18-24 MPH	NOV 84	0	2	24	37	2	2	1	0
	DEC 84	3	6	31	85	1	0	0	6
	JAN 85	1	9	23	20	0	0	0	1
	FEB 85	3	11	25	70	2	0	0	1
	MAR 85	12	15	23	28	7	1	0	5
	APR 85	7	8	28	25	6	1	0	0
24 + MPH	NOV 84	0	1	56	30	1	1	0	0
	DEC 84	1	7	35	33	1	0	0	2
	JAN 85	0	3	22	4	0	0	0	0
	FEB 85	0	10	25	28	1	0	0	0
	MAR 85	7	12	53	20	5	0	0	0
	APR 85	9	8	56	9	2	0	0	3

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 85	19	21	30	42	29	21	51	49
	JUN 85	60	30	39	29	10	11	45	60
	JUL 85	13	13	67	54	24	23	59	42
	AUG 85	27	50	43	14	22	43	42	29
	SEP 85	16	47	41	7	17	43	45	17
	OCT 85	13	24	36	2	29	90	55	12
12-18 MPH	MAY 85	14	19	20	33	20	24	25	28
	JUN 85	36	17	22	17	5	17	9	26
	JUL 85	13	10	26	28	12	13	29	14
	AUG 85	19	14	10	16	19	41	22	23
	SEP 85	17	34	29	16	17	53	31	19
	OCT 85	4	20	5	3	19	67	43	18
18-24 MPH	MAY 85	9	11	20	15	9	10	7	10
	JUN 85	10	7	14	7	2	4	1	4
	JUL 85	5	4	17	11	4	3	10	5
	AUG 85	4	1	1	3	9	22	19	12
	SEP 85	8	6	5	11	8	32	22	8
	OCT 85	0	17	0	6	7	23	32	10
24 + MPH	MAY 85	1	5	20	12	3	1	0	1
	JUN 85	0	3	12	3	1	0	0	0
	JUL 85	2	3	9	6	2	2	4	1
	AUG 85	0	0	0	0	3	17	19	6
	SEP 85	1	1	2	4	2	11	25	6
	OCT 85	0	3	0	4	2	28	34	3

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	**NOV 85**	1	14	4	1	11	80	27	4
	DEC 85	1	1	10	1	29	171	48	7
	JAN 86	2	6	11	3	12	139	106	6
	FEB 86	8	21	13	1	25	51	34	8
	MAR 86	16	14	9	5	38	79	68	45
	APR 86	13	21	21	12	49	40	25	27
12-18 MPH	**NOV 85**	5	9	2	4	6	87	30	5
	DEC 85	0	0	0	0	22	158	32	3
	JAN 86	0	1	1	4	11	127	36	3
	FEB 86	2	10	1	0	30	51	20	14
	MAR 86	8	11	11	5	47	38	32	32
	APR 86	6	6	22	14	42	24	20	34
18-24 MPH	**NOV 85**	4	4	2	4	3	49	42	4
	DEC 85	0	0	0	0	9	56	14	1
	JAN 86	0	0	0	1	11	54	13	3
	FEB 86	2	9	0	0	12	37	11	3
	MAR 86	1	2	7	2	17	15	22	14
	APR 86	4	5	7	4	16	9	15	29
24 + MPH	**NOV 85**	0	0	0	1	0	24	69	4
	DEC 85	0	0	0	0	2	9	7	1
	JAN 86	0	0	0	0	2	24	39	14
	FEB 86	3	12	0	0	8	102	42	1
	MAR 86	0	0	4	0	4	18	25	12
	APR 86	3	5	1	1	5	5	36	41

Wind Rose Data cont.

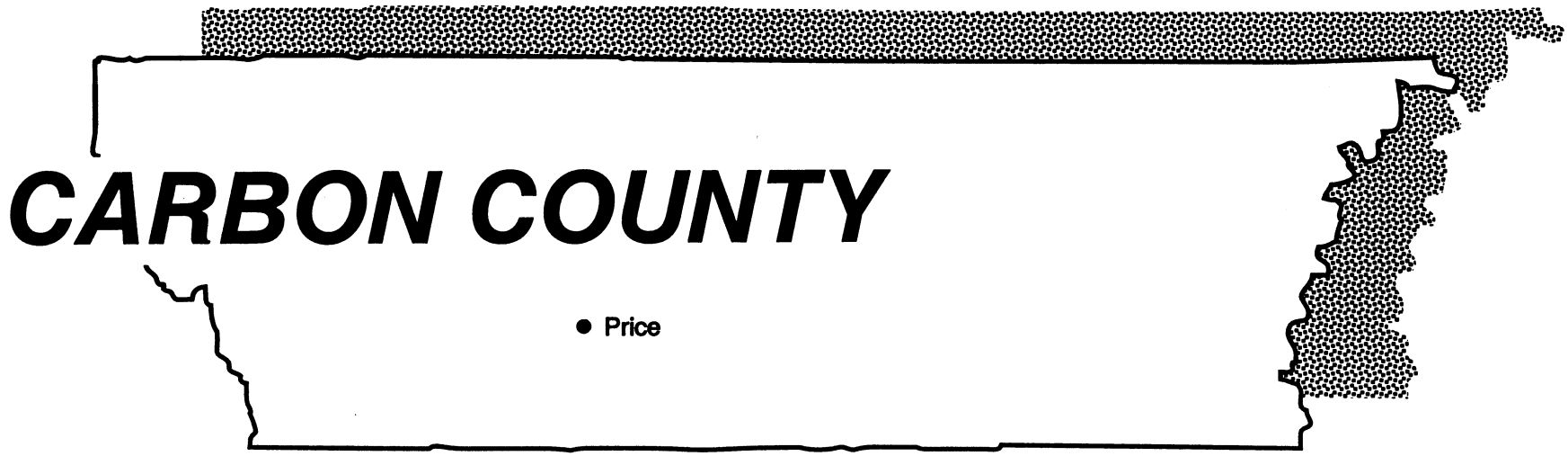
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 86	33	73	24	21	25	30	25	36
	JUN 86	42	94	26	27	25	23	20	25
	JUL 86	60	122	29	24	14	14	27	19
	AUG 86	54	131	38	23	15	13	25	29
	SEP 86	53	88	37	21	14	15	32	24
	OCT 86	48	56	27	17	28	41	53	18
12-18 MPH	MAY 86	16	25	27	13	26	15	21	44
	JUN 86	35	22	35	16	17	8	8	21
	JUL 86	40	29	28	29	14	7	13	15
	AUG 86	25	40	22	14	7	4	9	15
	SEP 86	36	25	22	21	14	9	14	17
	OCT 86	41	42	10	11	15	9	10	9
18-24 MPH	MAY 86	3	7	7	7	11	7	17	26
	JUN 86	11	4	17	8	7	4	4	12
	JUL 86	14	7	9	13	8	5	7	8
	AUG 86	5	11	4	6	2	2	4	5
	SEP 86	14	4	6	9	9	7	9	7
	OCT 86	41	9	1	3	3	2	3	5
24 + MPH	MAY 86	0	0	1	3	4	4	15	10
	JUN 86	3	4	3	3	4	3	2	7
	JUL 86	1	1	1	4	9	11	6	11
	AUG 86	3	2	1	0	0	1	2	2
	SEP 86	4	0	3	4	5	4	5	3
	OCT 86	44	11	0	0	1	0	1	4

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	**NOV 86**	21	35	10	10	24	32	30	14
	DEC 86	56	38	36	20	51	74	44	6
	JAN 87	17	22	14	13	32	45	28	12
	FEB 87	41	43	16	13	31	55	35	23
	MAR 87	46	25	18	13	26	39	29	18
	APR 87	35	43	20	14	26	37	51	20
12-18 MPH	**NOV 86**	21	7	21	32	50	35	29	16
	DEC 86	24	1	16	19	47	53	17	2
	JAN 87	9	8	8	13	47	60	28	16
	FEB 87	41	25	5	7	20	20	12	8
	MAR 87	50	32	13	22	36	19	15	21
	APR 87	29	38	15	14	24	18	13	15
18-24 MPH	**NOV 86**	7	0	18	27	27	17	26	15
	DEC 86	3	0	3	4	8	11	5	2
	JAN 87	9	4	3	9	35	20	10	11
	FEB 87	23	11	0	3	11	8	8	6
	MAR 87	29	14	4	5	15	7	13	20
	APR 87	17	14	5	4	7	9	13	19
24 + MPH	**NOV 86**	4	0	6	9	8	10	37	35
	DEC 86	1	0	1	0	0	0	1	1
	JAN 87	31	14	1	3	14	8	11	16
	FEB 87	9	3	0	1	6	5	6	9
	MAR 87	20	4	2	2	5	4	12	23
	APR 87	14	3	1	1	1	8	14	19


CARBON COUNTY
Price

Price

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Site Description

County:	Carbon	Elevation:	5,500 ft.
Township:	14 South	Range:	10 East
Section:	25	Quarter Section:	—
Longitude:	110° 45'	Latitude:	39° 35'

Duration of data logging: April 1985 to July 1986
Months of available data: 16
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: North-Northwest
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Rolling terrain
West: Low grass, low row crops

Comments

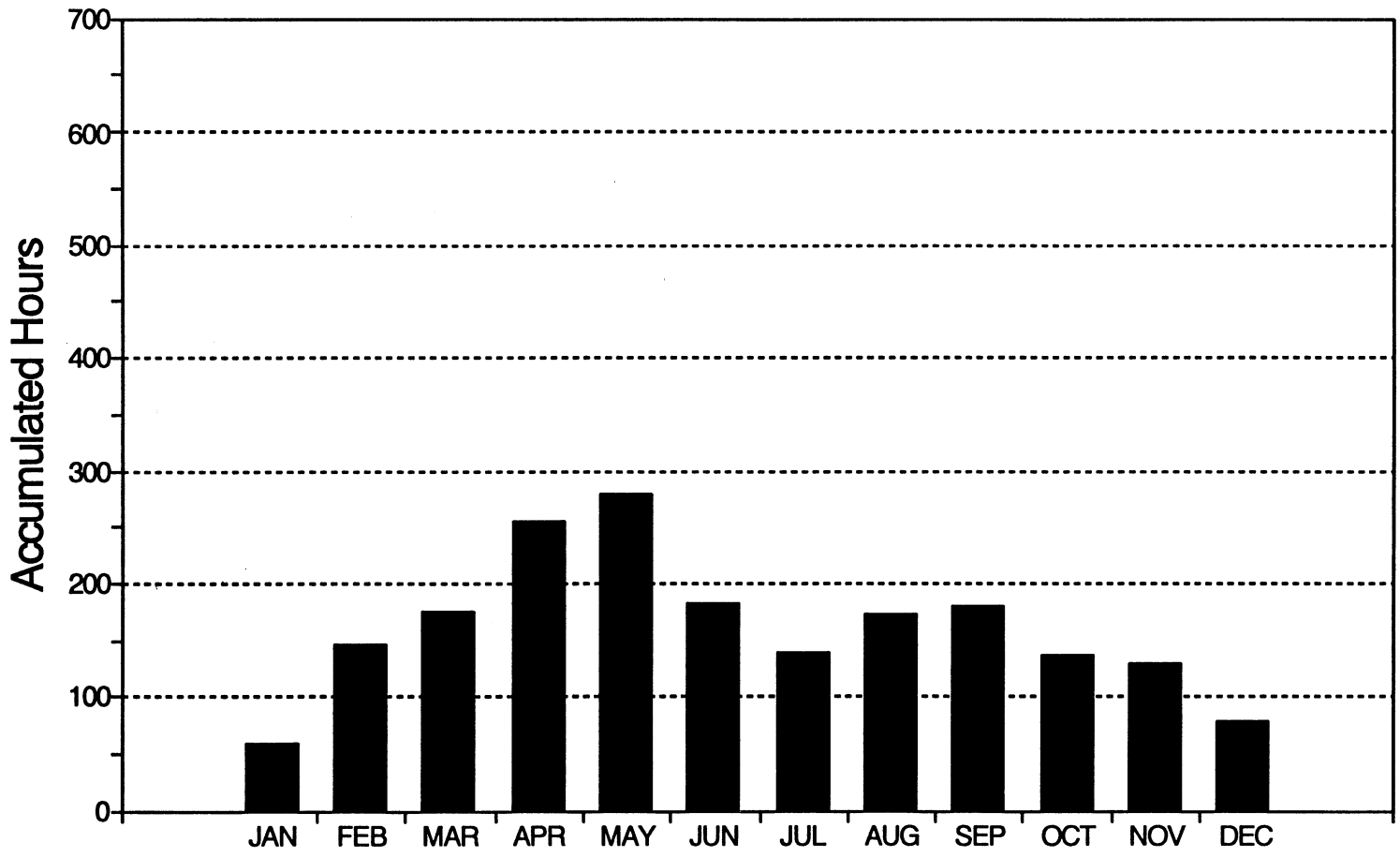
Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
APR 85	255	79	69	60	47	34	24	17	13	10	8	6	4	3	2	2	2	4
MAY 85	255	103	81	57	39	30	23	18	13	9	6	4	2	1	1	0	0	0
JUN 85	255	97	98	70	46	32	25	19	14	9	6	4	2	1	1	0	0	1
JUL 85	255	117	99	71	40	20	13	8	5	4	2	1	1	1	1	0	0	0
AUG 85	255	107	89	61	38	26	18	12	7	4	3	2	1	1	1	0	0	0
SEP 85	255	96	67	48	37	28	21	15	10	7	5	3	2	2	1	1	0	0
OCT 85	255	98	58	36	24	20	16	13	10	7	5	3	1	1	0	0	0	0
NOV 85	255	95	62	34	22	17	14	12	9	7	6	4	2	1	1	1	0	0
DEC 85	255	42	23	18	18	16	11	7	4	2	1	1	1	0	0	0	0	0
JAN 86	255	51	25	16	11	8	7	6	4	3	2	1	1	0	0	0	0	0
FEB 86	255	91	58	38	29	22	18	14	10	6	4	2	1	1	0	0	0	0
MAR 86	255	92	71	50	38	30	22	14	9	6	4	2	1	0	0	0	0	0
APR 86	255	80	68	50	40	37	32	27	22	16	12	8	5	3	2	1	0	1
MAY 86	255	97	82	65	49	40	33	26	19	15	10	7	4	3	2	2	1	3
JUN 86	255	107	85	66	42	25	18	12	8	5	4	2	1	1	0	0	0	0
JUL 86	255	82	66	49	33	21	14	9	6	4	2	1	1	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
APR 85	MPH	6.9	5.3	6.0	5.5	6.8	9.6	11.6	13.4	13.3	11.1	8.0	7.1
	σ	4.0	4.0	4.5	5.0	7.0	9.0	8.5	9.0	6.5	5.0	3.5	4.0
MAY 85	MPH	5.9	4.8	3.0	2.8	3.5	6.3	8.6	11.3	12.4	11.5	8.8	7.3
	σ	3.5	3.5	2.0	2.0	3.0	3.0	4.5	4.5	5.5	5.5	4.0	3.0
JUN 85	MPH	6.9	6.1	4.6	3.9	3.6	6.9	8.6	10.6	12.9	12.9	9.8	8.0
	σ	3.0	2.5	3.0	3.0	4.0	5.5	5.0	5.0	6.5	5.5	3.5	3.5
JUL 85	MPH	6.9	6.1	4.6	3.8	2.3	4.0	5.9	8.5	10.8	9.0	9.3	8.3
	σ	2.5	2.5	3.0	2.0	2.5	2.5	3.5	4.5	4.5	4.0	4.5	3.0
AUG 85	MPH	6.1	5.3	3.8	3.6	2.1	4.9	6.9	9.0	11.6	10.5	8.1	6.6
	σ	2.5	3.0	3.0	3.5	3.0	3.0	3.5	4.5	6.0	5.5	3.5	3.0
SEP 85	MPH	5.5	4.8	4.5	4.0	4.3	6.0	8.5	10.0	10.5	10.0	6.4	6.1
	σ	3.0	3.5	3.5	3.5	5.0	4.5	5.0	6.5	7.0	5.0	3.0	3.0
OCT 85	MPH	6.0	5.4	4.3	4.4	3.4	4.8	7.3	7.5	7.4	7.1	5.3	5.1
	σ	4.0	5.5	4.5	5.0	5.5	5.0	5.5	5.5	6.0	5.0	3.0	3.0
NOV 85	MPH	5.1	3.6	4.3	3.4	3.9	5.8	8.8	9.3	8.8	7.1	6.0	5.0
	σ	5.0	3.5	3.5	3.0	4.5	5.5	7.5	7.0	5.0	5.0	3.5	4.5
DEC 85	MPH	3.8	3.4	3.1	2.4	1.8	2.8	4.0	4.1	4.5	4.9	4.6	4.5
	σ	4.0	4.0	4.0	2.5	2.5	2.5	3.5	5.0	4.5	5.0	5.0	4.5
JAN 86	MPH	3.1	2.8	2.1	2.6	2.0	2.3	3.4	3.6	4.6	5.0	4.5	3.6
	σ	3.5	3.5	3.5	3.5	2.5	2.0	3.5	4.0	4.5	5.5	4.5	4.0
FEB 86	MPH	5.3	5.0	4.9	4.3	4.4	5.6	7.9	8.9	8.6	7.5	6.6	6.5
	σ	2.5	3.5	4.0	3.0	4.5	5.0	5.5	7.0	6.5	5.0	5.0	3.0
MAR 86	MPH	6.0	4.1	3.4	3.3	2.9	6.8	9.4	9.5	9.5	7.8	6.5	6.5
	σ	3.5	4.0	3.5	3.0	3.5	5.0	6.0	5.0	6.0	4.5	3.5	3.0
APR 86	MPH	6.3	6.6	6.4	4.1	6.6	9.8	12.1	13.1	13.0	10.6	7.4	6.1
	σ	4.5	4.0	4.5	5.0	5.5	6.5	7.0	7.0	6.5	6.0	5.5	5.5
MAY 86	MPH	6.8	6.1	5.9	4.8	5.5	8.9	11.1	13.4	14.3	14.0	10.3	7.6
	σ	4.5	3.5	3.5	3.5	4.5	7.0	6.5	7.5	6.0	5.5	4.0	5.0

Wind Diurnal Data Cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUN 86	MPH	6.1	6.0	5.6	3.6	3.4	5.5	7.5	9.3	9.9	11.5	9.4	5.5
	σ	4.0	3.5	3.5	3.5	3.0	3.0	4.0	4.0	5.0	4.5	3.5	3.0
JUL 86	MPH	7.6	6.1	5.0	4.8	3.6	5.1	7.3	8.9	9.5	10.3	7.1	7.1
	σ	4.5	3.5	3.5	4.0	4.0	3.5	4.5	3.5	4.0	4.0	3.5	5.0
OCT 86	MPH	22.1	23.9	26.4	28.8	27.5	19.3	10.0	8.5	8.0	6.9	10.5	18.0
	σ	8.0	8.5	9.5	8.5	7.5	8.5	8.5	7.0	8.5	9.0	11.0	8.5
NOV 86	MPH	12.5	13.5	14.4	15.4	14.6	9.6	5.4	4.1	2.9	3.0	7.6	11.5
	σ	9.0	10.0	11.0	11.5	10.5	7.0	4.0	3.0	3.0	3.5	6.5	8.5
DEC 86	MPH	8.9	12.0	12.8	14.6	17.1	12.5	4.8	3.3	2.8	1.5	3.9	6.3
	σ	7.5	9.5	9.0	10.0	10.5	8.5	3.0	2.5	1.5	2.0	5.5	6.0
JAN 87	MPH	14.6	16.5	17.5	18.9	19.3	17.8	12.1	8.4	7.0	7.9	11.0	13.9
	σ	12.5	12.5	13.0	13.0	13.0	12.0	10.0	8.5	8.5	10.0	11.0	12.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 85	53	19	15	21	14	12	7	67
	MAY 85	38	18	18	26	27	21	14	79
	JUN 85	73	9	9	17	20	14	12	112
	JUL 85	57	24	18	21	21	19	14	114
	AUG 85	45	5	13	20	23	29	22	101
	SEP 85	29	19	211	29	27	24	10	53
12-18 MPH	APR 85	41	9	1	7	4	4	2	36
	MAY 85	14	5	3	7	17	15	6	25
	JUN 85	40	3	1	5	6	5	5	37
	JUL 85	17	10	3	4	5	8	3	24
	AUG 85	11	0	0	2	6	15	8	39
	SEP 85	21	8	4	9	14	15	5	11
18-24 MPH	APR 85	10	6	1	1	2	3	1	17
	MAY 85	5	3	0	2	5	7	4	14
	JUN 85	12	0	0	1	1	2	2	24
	JUL 85	5	2	1	0	0	3	1	5
	AUG 85	2	0	0	0	2	6	2	11
	SEP 85	7	1	0	2	7	6	3	7
24 + MPH	APR 85	5	2	1	0	1	3	0	19
	MAY 85	1	1	0	0	0	3	4	5
	JUN 85	2	0	0	0	0	1	1	10
	JUL 85	2	0	0	0	0	1	0	4
	AUG 85	1	0	0	0	0	1	1	5
	SEP 85	4	0	0	0	2	2	1	6

Wind Rose Data Cont.

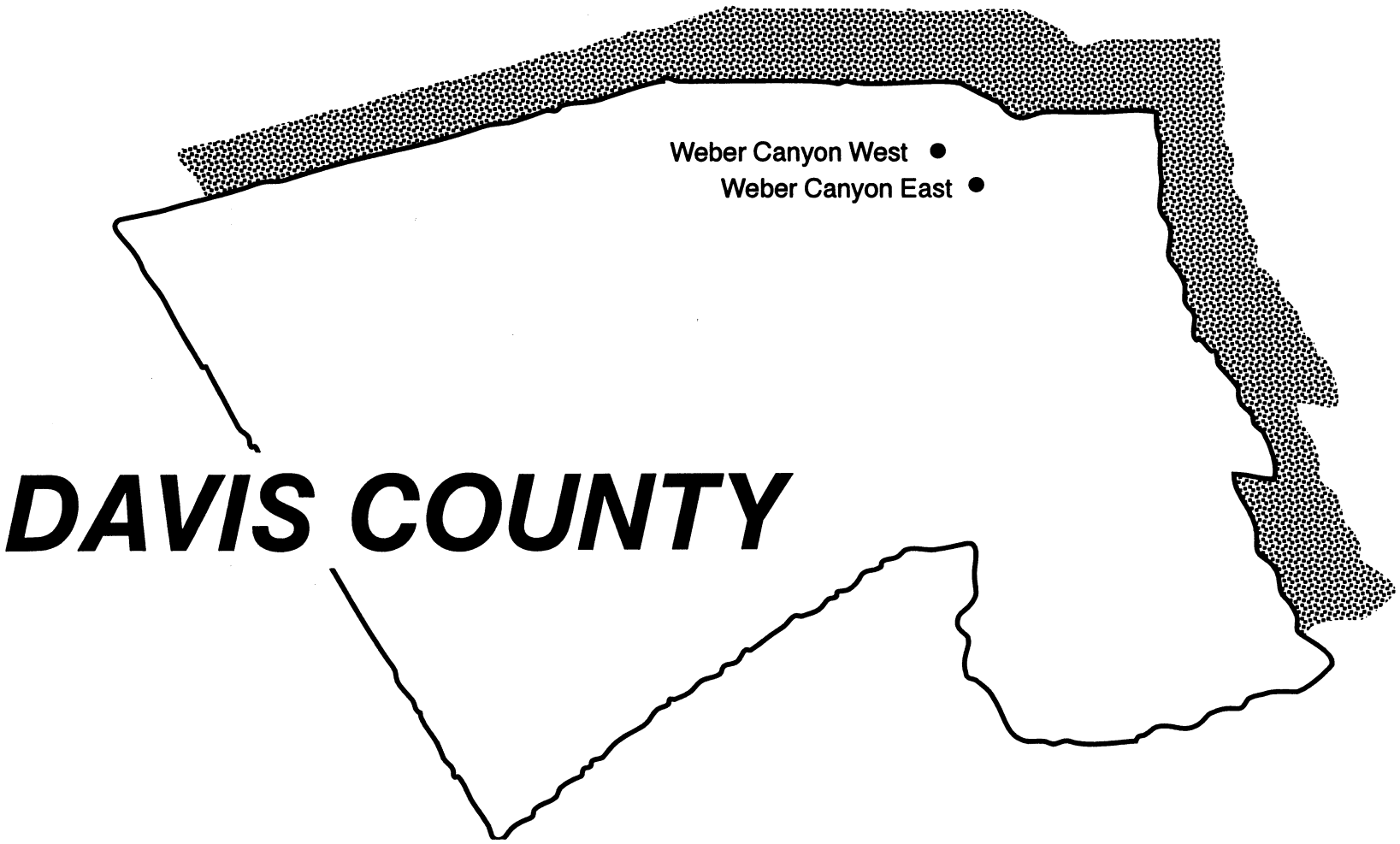
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	OCT 85	46	16	16	28	21	7	4	54
	NOV 85	47	17	22	18	7	5	6	69
	DEC 85	22	16	13	4	2	2	2	23
	JAN 86	17	7	5	4	4	4	5	47
	FEB 86	41	17	28	8	9	7	9	68
	MAR 86	52	18	16	23	14	10	15	66
12-18 MPH	OCT 85	26	5	2	2	4	3	3	15
	NOV 85	24	1	0	3	3	2	2	17
	DEC 85	17	19	1	0	0	0	0	7
	JAN 86	17	3	0	0	0	0	1	5
	FEB 86	28	10	2	0	0	2	3	25
	MAR 86	47	4	1	7	3	2	4	20
18-24 MPH	OCT 85	9	2	1	1	2	1	2	11
	NOV 85	8	0	0	1	4	2	1	13
	DEC 85	8	3	0	0	0	0	0	2
	JAN 86	10	0	0	0	0	0	0	3
	FEB 86	11	7	1	0	0	1	2	9
	MAR 86	14	0	0	1	1	1	1	11
24 + MPH	OCT 85	2	1	1	0	0	1	1	4
	NOV 85	3	0	0	0	3	4	0	5
	DEC 85	3	0	0	0	0	0	0	0
	JAN 86	3	0	0	0	0	0	0	2
	FEB 86	2	4	1	0	0	0	0	2
	MAR 86	3	0	0	0	0	0	0	4

Wind Rose Data Cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	**APR 86**	45	11	18	28	16	10	9	62
	MAY 86	52	34	26	32	21	15	8	57
	JUN 86	42	15	16	34	28	18	15	91
	JUL 86	27	7	24	30	16	12	10	71
12-18 MPH	**APR 86**	38	4	4	8	7	4	6	37
	MAY 86	29	18	15	7	13	11	6	23
	JUN 86	18	4	4	6	7	8	6	32
	JUL 86	10	1	3	7	7	7	5	27
18-24 MPH	**APR 86**	19	4	3	2	5	5	4	23
	MAY 86	10	3	7	2	6	7	4	20
	JUN 86	6	3	2	1	1	3	2	8
	JUL 86	4	0	0	1	1	3	2	8
24 + MPH	**APR 86**	6	2	1	1	3	6	2	10
	MAY 86	3	0	1	0	4	8	3	12
	JUN 86	2	1	1	0	0	0	0	3
	JUL 86	1	0	0	0	0	1	1	3


Weber Canyon West
Weber Canyon East
DAVIS COUNTY

Weber Canyon East

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Weber Canyon West

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Site Description

County:	Davis	Elevation:	4,600 ft.
Township:	5 North	Range:	1 West
Section:	26	Quarter Section:	Southeast
Longitude:	111° 55'	Latitude:	41° 05'

Duration of data logging: May 1985 to June 1991
Months of available data: 40
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Northeast
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

Property ownership: Utah Department of Transportation
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

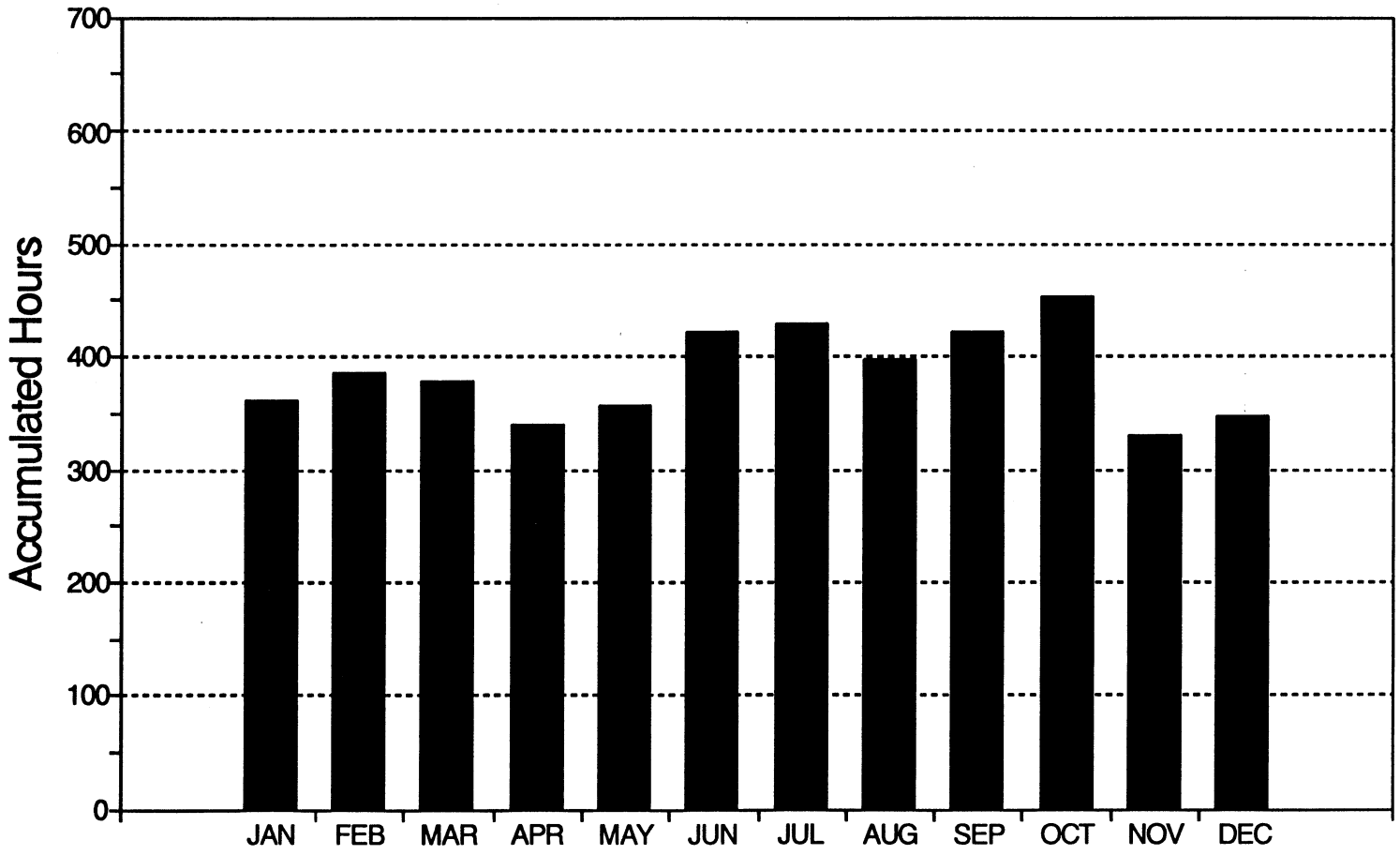
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 85	231	66	58	48	40	34	31	29	28	28	27	26	25	22	18	14	9	10
JUN 85	206	53	43	34	26	24	25	25	26	28	30	32	32	32	30	26	20	28
JUL 85	194	55	44	34	28	28	31	33	33	33	34	33	32	28	24	21	18	40
AUG 85	255	62	53	40	31	26	22	20	19	21	22	23	23	22	21	19	16	28
SEP 85	203	56	49	42	36	36	37	38	37	34	33	30	27	22	17	12	7	7
OCT 85	255	60	45	40	36	32	30	29	29	30	29	28	26	23	19	15	10	8
NOV 85	255	61	48	40	32	27	24	23	21	18	16	12	9	7	6	5	4	7
DEC 85	255	41	37	37	39	41	41	37	30	24	19	17	15	14	13	11	9	18
JAN 86	255	43	27	22	21	23	27	29	29	30	30	30	28	23	19	15	13	21
FEB 86	214	57	48	42	39	35	31	28	27	26	26	26	24	18	12	8	5	5
MAR 86	248	68	55	44	38	29	27	27	30	30	28	26	23	20	17	14	11	12
APR 86	255	58	49	42	37	33	31	29	28	29	26	23	18	14	9	6	3	3
MAY 86	255	47	38	29	23	19	19	18	17	17	16	17	16	13	10	7	4	4
JUN 86	172	59	47	37	30	28	29	29	28	28	30	32	33	32	30	25	19	32
JUL 86	178	64	55	44	38	37	38	39	39	38	34	29	24	20	17	15	13	22
AUG 86	255	48	37	27	22	21	25	29	31	34	33	31	27	24	20	18	14	22
SEP 86	187	56	48	38	32	30	32	33	34	35	35	34	31	27	23	18	12	14
OCT 86	163	41	27	22	23	26	33	40	43	45	46	46	46	41	34	26	18	27
NOV 86	255	52	35	28	25	26	27	30	32	31	30	27	23	16	11	6	3	2
DEC 86	255	32	24	21	21	23	25	29	32	34	32	27	23	19	13	8	4	2
JAN 87	229	43	35	29	26	28	31	35	35	37	37	35	31	26	22	18	14	31
FEB 87	201	38	35	32	30	29	30	33	34	34	33	30	36	22	17	11	6	3
MAR 87	196	56	48	42	40	40	41	42	40	39	36	32	28	24	18	12	7	5
APR 87	202	65	53	41	31	24	25	28	31	33	32	29	27	25	22	18	14	17
MAY 87	224	57	52	45	39	35	31	31	31	34	35	33	28	22	16	12	9	10
JUN 87	164	62	48	35	29	27	29	34	38	38	36	32	29	27	24	22	18	27
JUL 87	255	57	44	34	28	26	28	30	30	31	31	31	29	25	21	16	11	15

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 87	178	60	47	34	28	28	30	30	31	33	35	37	37	33	28	23	19	34
SEP 87	191	63	40	25	18	17	18	22	26	31	34	35	35	33	32	30	27	44
OCT 87	214	47	27	19	19	22	27	31	34	37	41	43	40	36	31	25	20	33
NOV 87	216	44	39	38	36	33	34	36	37	37	35	32	27	22	17	14	10	12
DEC 87	255	55	40	30	27	27	30	32	34	33	30	25	21	17	13	10	9	21
JAN 88	255	45	32	27	25	25	25	26	30	32	30	29	24	17	11	8	5	5
FEB 88	223	54	37	29	27	28	31	33	34	35	33	29	25	21	17	14	11	15
DEC 90	187	30	25	21	19	18	19	21	23	23	22	19	16	14	11	9	6	30
JAN 91	255	38	29	22	21	25	29	32	36	35	30	25	20	17	15	12	8	8
FEB 91	189	33	26	23	23	24	27	31	35	38	38	36	34	31	26	20	15	24
MAR 91	255	88	72	57	47	39	31	25	22	19	16	13	12	10	7	6	4	4
APR 91	255	78	66	54	41	32	28	25	22	18	17	15	13	11	9	6	3	2
MAY 91	244	61	51	46	42	38	33	30	28	28	28	25	23	20	16	12	9	11
JUN 91	197	76	61	46	37	34	31	30	30	29	28	25	25	23	19	14	9	7

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 85	MPH	18.9	19.4	18.9	19.0	16.6	11.3	8.3	8.3	8.3	6.6	8.3	13.8
	σ	9.5	10.5	12.0	13.0	10.5	5.5	4.0	3.0	5.0	6.0	6.5	8.0
JUN 85	MPH	22.5	24.5	26.0	27.4	23.4	13.6	7.4	6.4	6.3	5.1	10.1	18.5
	σ	9.5	11.0	12.0	12.5	11.0	7.5	4.5	2.5	3.5	5.0	5.5	7.0
JUL 85	MPH	19.2	23.2	27.4	28.7	26.8	17.9	8.3	6.1	5.5	6.6	11.1	16.9
	σ	11.0	11.5	10.0	9.0	9.0	8.0	4.5	3.5	2.5	6.0	5.5	9.5
AUG 85	MPH	18.6	20.9	21.5	21.1	18.9	11.5	6.9	6.8	5.9	3.3	6.5	14.6
	σ	11.0	12.5	13.5	15.0	13.5	8.5	4.0	3.5	3.5	2.0	5.0	9.5
SEP 85	MPH	18.5	19.6	21.6	22.3	19.6	10.8	8.5	8.3	8.0	5.3	8.9	16.1
	σ	8.0	9.5	10.0	10.0	11.0	6.5	4.5	4.0	5.0	4.5	6.0	7.0
OCT 85	MPH	17.3	18.9	19.5	21.1	21.0	15.8	7.1	6.3	5.3	3.9	8.6	12.6
	σ	9.0	10.5	11.5	12.0	11.0	7.5	4.0	3.0	3.0	4.0	7.0	7.0
NOV 85	MPH	10.0	10.4	10.8	11.1	11.3	9.4	6.6	5.6	5.5	5.6	8.4	10.0
	σ	9.0	9.5	9.5	10.0	9.0	8.0	6.0	6.0	6.5	7.0	7.5	8.5
DEC 85	MPH	12.6	14.4	15.8	17.5	16.9	13.5	7.8	7.4	7.0	8.0	10.0	11.8
	σ	10.0	10.0	10.5	10.0	10.0	9.5	9.0	8.5	9.0	9.5	10.0	10.0
JAN 86	MPH	13.8	14.9	16.8	18.3	18.8	15.1	11.1	8.1	7.6	8.5	11.4	12.4
	σ	11.5	12.0	11.5	12.0	11.5	12.0	10.0	8.0	8.0	9.5	10.5	11.5
FEB 86	MPH	16.1	16.5	17.3	18.0	17.5	13.8	9.1	7.1	6.8	6.5	11.5	14.6
	σ	9.5	9.5	10.5	11.0	10.5	8.0	6.5	5.0	5.5	6.0	7.5	9.0
MAR 86	MPH	16.8	17.4	19.1	20.5	18.9	11.8	6.5	6.8	5.3	4.7	11.8	16.4
	σ	10.0	11.0	12.5	13.0	11.0	5.5	3.5	4.0	3.0	4.5	7.0	8.0
APR 86	MPH	14.4	14.8	15.6	16.3	13.1	8.6	7.5	7.8	6.5	5.3	9.3	12.9
	σ	9.5	10.5	11.5	11.5	9.5	7.5	5.0	4.5	4.0	5.0	6.5	8.0
MAY 86	MPH	16.2	18.0	19.0	19.4	17.0	10.9	7.4	7.2	6.8	4.8	6.4	13.2
	σ	10.0	11.0	12.5	13.5	10.5	5.5	5.0	3.5	4.0	3.5	5.5	8.5
JUN 86	MPH	23.4	25.5	28.0	29.8	25.8	13.8	7.6	6.1	6.3	5.3	10.1	18.6
	σ	8.5	9.0	9.0	8.0	8.5	8.0	3.0	2.5	2.5	3.0	6.0	8.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUL 86	MPH	20.1	21.9	22.5	24.3	20.8	12.8	9.0	8.4	8.5	6.0	9.6	17.8
	σ	8.5	9.5	10.5	10.5	10.0	7.0	5.0	5.0	4.5	4.0	6.0	7.0
AUG 86	MPH	19.1	20.9	22.5	23.5	20.8	12.1	6.4	5.3	4.9	3.4	8.0	16.4
	σ	11.5	12.5	12.5	12.5	12.5	8.5	4.0	2.5	3.0	3.5	5.0	9.0
SEP 86	MPH	19.6	20.6	21.6	21.9	20.5	15.6	9.5	7.6	7.4	7.3	13.1	19.1
	σ	9.5	9.5	11.0	12.0	11.5	7.5	7.0	5.5	5.5	6.5	6.5	7.5
OCT 86	MPH	23.5	25.0	26.8	29.4	27.6	20.0	10.5	8.8	8.3	7.5	13.0	20.4
	σ	6.5	7.0	7.5	7.0	7.5	8.0	7.5	6.5	7.5	8.0	9.5	7.0
NOV 86	MPH	14.6	15.0	15.9	17.4	16.0	11.3	6.1	4.6	3.5	5.0	10.1	13.6
	σ	10.0	10.0	10.5	11.0	11.0	8.5	4.5	3.5	4.0	5.5	7.5	9.5
DEC 86	MPH	12.4	15.0	16.4	18.5	19.8	14.9	5.4	3.1	2.1	1.8	6.5	10.0
	σ	9.5	10.0	10.0	10.5	11.0	9.5	4.0	2.5	1.5	2.5	7.0	9.0
JAN 87	MPH	16.4	18.5	19.6	20.4	21.3	19.1	13.4	9.4	8.4	10.5	14.0	16.0
	σ	12.5	11.5	13.0	12.0	12.0	11.5	10.0	8.0	8.5	9.5	10.5	11.5
FEB 87	MPH	16.5	17.4	18.7	20.5	19.3	14.4	10.9	7.7	7.3	7.2	11.1	13.9
	σ	11.0	11.0	11.0	10.0	10.0	11.0	9.0	4.5	4.5	6.5	8.0	9.0
MAR 87	MPH	18.3	19.4	20.6	22.0	19.5	13.9	8.4	7.6	6.5	6.9	11.9	16.0
	σ	8.0	9.5	11.0	11.0	10.0	7.5	3.0	3.0	4.0	5.5	7.0	7.5
APR 87	MPH	19.5	20.6	23.1	24.8	20.5	9.9	8.0	8.0	7.3	6.5	11.3	16.6
	σ	10.5	12.0	12.0	11.5	10.0	6.0	3.5	3.5	4.0	5.5	7.5	8.5
MAY 87	MPH	18.4	20.0	20.9	22.8	19.0	11.4	6.9	6.9	7.9	7.1	7.4	14.8
	σ	8.5	10.5	11.5	12.0	11.0	6.0	3.5	3.0	4.0	5.5	6.0	8.0
JUN 87	MPH	21.8	25.3	27.4	29.4	25.1	14.3	6.6	6.9	6.6	6.8	9.8	19.1
	σ	8.0	8.5	9.0	8.0	9.0	6.5	3.5	2.0	3.0	4.5	5.5	6.0
JUL 87	MPH	18.6	19.3	20.3	22.0	19.6	13.4	7.0	6.8	6.8	5.9	8.1	15.4
	σ	11.5	11.0	12.5	14.0	11.5	7.0	3.5	3.5	3.5	4.5	6.5	8.5
AUG 87	MPH	23.8	26.1	27.4	27.9	25.4	15.4	6.6	7.1	7.9	5.4	9.1	19.5
	σ	6.5	7.5	10.5	12.0	10.0	7.0	2.5	3.5	4.5	4.0	5.5	5.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 87	MPH	23.3	25.4	28.6	31.1	30.4	20.0	7.1	6.6	6.1	3.4	7.9	20.1
	σ	7.0	9.0	9.5	10.5	11.0	7.5	3.0	2.0	1.5	3.5	4.5	5.5
OCT 87	MPH	23.5	25.8	28.8	29.4	29.1	20.8	6.8	5.3	5.4	3.0	9.0	19.3
	σ	6.0	7.5	7.5	8.5	9.0	7.5	3.5	2.0	2.5	5.0	5.5	6.0
NOV 87	MPH	18.1	19.4	21.0	22.0	21.3	15.5	8.8	6.9	4.3	5.5	12.9	16.8
	σ	9.5	9.0	10.0	11.0	11.0	9.5	6.0	4.5	3.5	5.5	8.0	8.0
DEC 87	MPH	15.3	15.4	16.8	16.9	16.6	14.8	9.9	7.6	6.8	7.9	10.9	12.8
	σ	11.5	12.0	12.5	12.0	12.0	10.0	8.0	7.0	6.5	8.5	9.5	9.5
JAN 88	MPH	13.4	13.6	14.8	14.0	14.1	11.8	8.4	5.9	5.1	7.0	9.9	13.4
	σ	10.5	10.5	11.0	12.0	12.5	10.5	6.5	5.5	6.0	6.5	8.5	9.5
FEB 88	MPH	17.7	19.5	21.5	22.0	22.9	17.4	10.8	7.3	6.0	5.2	10.4	13.8
	σ	7.0	9.0	9.5	11.0	9.0	8.5	5.5	2.0	1.5	2.0	6.0	7.0
JAN 91	MPH	12.9	14.9	16.3	17.9	17.9	15.4	10.0	6.3	5.6	6.5	9.4	11.1
	σ	11.0	12.0	12.0	12.0	12.0	10.5	8.0	6.5	6.0	7.0	9.0	10.5
FEB 91	MPH	20.5	13.6	24.1	26.5	26.4	19.5	10.8	6.9	4.6	7.4	12.9	16.9
	σ	9.0	9.5	10.5	10.0	10.5	11.0	8.5	4.5	3.5	6.5	8.5	9.0
MAR 91	MPH	10.6	11.6	13.0	14.1	13.3	9.1	8.9	8.8	8.1	6.6	9.3	10.3
	σ	8.5	9.5	10.5	11.5	9.5	6.0	4.0	3.0	4.0	4.5	6.0	7.5
APR 91	MPH	12.5	13.3	13.8	13.6	11.4	8.8	7.9	8.3	6.9	5.4	9.0	11.3
	σ	9.0	10.5	11.5	12.5	9.0	4.0	3.0	3.0	3.0	3.5	5.5	8.0
MAY 91	MPH	17.4	20.8	21.3	20.3	13.1	7.9	7.3	7.5	6.9	6.5	10.8	15.5
	σ	9.5	10.0	11.0	11.5	9.0	5.5	3.5	3.5	4.5	6.5	7.0	8.5
JUN 91	MPH	20.8	21.5	21.4	19.8	13.3	8.1	7.8	7.6	7.5	6.3	12.8	18.4
	σ	9.5	10.5	12.0	11.0	8.0	4.5	2.5	2.5	3.0	4.5	4.5	7.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 85	3	24	15	15	38	28	36	14
	JUN 85	2	21	15	8	20	16	33	17
	JUL 85	2	26	19	9	21	17	25	14
	AUG 85	1	17	13	9	26	32	40	16
	SEP 85	2	25	18	7	23	25	36	12
	OCT 85	1	30	22	6	17	20	37	11
12-18 MPH	MAY 85	0	44	13	9	20	4	9	5
	JUN 85	1	45	11	2	5	1	6	3
	JUL 85	0	51	17	4	8	2	2	2
	AUG 85	0	35	13	4	11	4	9	3
	SEP 85	1	56	19	4	11	5	9	4
	OCT 85	1	58	17	2	6	3	8	3
18-24 MPH	MAY 85	0	61	11	3	6	1	2	2
	JUN 85	0	65	10	0	0	0	2	1
	JUL 85	0	81	14	1	2	0	0	0
	AUG 85	0	49	8	1	2	0	0	0
	SEP 85	2	86	14	1	3	1	1	0
	OCT 85	5	73	7	1	1	0	1	1
24 + MPH	MAY 85	0	137	10	1	1	0	1	1
	JUN 85	0	213	16	0	0	0	0	0
	JUL 85	0	216	13	0	0	0	0	0
	AUG 85	3	164	7	0	0	0	0	0
	SEP 85	11	135	8	0	0	0	0	0
	OCT 85	32	123	3	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 85	3	33	26	4	24	18	29	13
	DEC 85	1	48	48	1	6	5	4	2
	JAN 86	3	24	24	7	6	6	14	8
	FEB 86	1	20	16	5	39	30	25	10
	MAR 86	3	36	29	8	27	20	31	12
	APR 86	3	30	21	6	19	19	35	15
12-18 MPH	NOV 85	1	44	14	3	7	2	6	6
	DEC 85	1	90	26	0	2	0	0	0
	JAN 86	1	46	20	2	0	0	1	1
	FEB 86	0	44	13	4	33	6	3	1
	MAR 86	0	48	17	4	12	3	7	4
	APR 86	1	50	16	3	7	2	14	7
18-24 MPH	NOV 85	2	48	6	2	2	0	1	1
	DEC 85	1	77	12	0	0	0	0	0
	JAN 86	1	73	14	0	0	0	0	0
	FEB 86	1	59	9	2	9	0	0	0
	MAR 86	2	71	7	1	3	1	0	1
	APR 86	2	67	8	2	3	1	3	1
24 + MPH	NOV 85	8	52	2	1	1	0	0	0
	DEC 85	15	94	6	0	0	0	0	0
	JAN 86	20	153	7	0	0	0	0	0
	FEB 86	8	109	7	0	2	0	0	0
	MAR 86	20	125	3	0	0	0	0	0
	APR 86	11	85	3	1	1	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 86	1	10	6	9	20	23	32	12
	JUN 86	2	21	13	13	25	19	32	15
	JUL 86	2	1	2	25	27	19	36	25
	AUG 86	1	20	9	4	20	20	24	11
	SEP 86	2	27	22	13	24	17	23	14
	OCT 86	1	26	16	1	5	12	23	5
12-18 MPH	MAY 86	1	31	6	4	7	3	6	3
	JUN 86	1	55	10	4	8	2	5	2
	JUL 86	1	60	95	142	13	4	9	4
	AUG 86	2	48	7	1	5	1	2	1
	SEP 86	1	52	12	6	10	3	4	5
	OCT 86	2	60	16	1	2	0	2	1
18-24 MPH	MAY 86	4	39	3	1	2	1	1	1
	JUN 86	11	67	5	0	1	0	0	1
	JUL 86	2	95	10	5	3	0	1	1
	AUG 86	12	76	5	0	0	0	0	0
	SEP 86	4	84	6	1	2	1	1	2
	OCT 86	9	105	13	0	0	0	0	0
24 + MPH	MAY 86	24	59	2	0	0	0	0	0
	JUN 86	100	131	2	0	0	0	0	0
	JUL 86	25	142	5	1	1	0	0	0
	AUG 86	58	130	2	0	0	0	0	0
	SEP 86	25	165	3	0	0	0	0	1
	OCT 86	50	223	9	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 86	1	24	16	2	15	16	31	10
	DEC 86	3	28	24	2	4	5	7	4
	JAN 87	2	37	37	3	6	3	13	6
	FEB 87	3	32	19	3	8	8	19	13
	MAR 87	4	30	16	4	24	22	28	19
	APR 87	1	18	16	7	25	33	46	13
12-18 MPH	NOV 86	1	51	14	0	3	2	5	2
	DEC 86	1	48	17	0	1	0	1	1
	JAN 87	1	56	21	3	3	0	1	0
	FEB 87	1	62	17	1	2	0	3	3
	MAR 87	1	75	18	2	6	3	9	7
	APR 87	0	35	12	4	6	5	14	4
18-24 MPH	NOV 86	3	80	8	0	0	1	1	0
	DEC 86	3	82	10	0	0	0	0	0
	JAN 87	5	87	13	1	1	0	0	0
	FEB 87	2	89	10	0	0	0	0	0
	MAR 87	2	103	10	1	1	0	2	2
	APR 87	1	73	11	2	3	0	2	1
24 + MPH	NOV 86	11	103	4	0	0	0	0	0
	DEC 86	10	115	3	0	0	0	0	0
	JAN 87	31	175	8	1	0	0	0	0
	FEB 87	9	137	4	0	0	0	0	0
	MAR 87	11	143	4	0	0	0	0	0
	APR 87	8	168	8	1	1	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 87	3	28	20	7	24	25	33	15
	JUN 87	2	23	14	5	15	23	44	19
	JUL 87	3	20	16	10	18	15	30	24
	AUG 87	2	20	16	8	28	25	33	9
	SEP 87	1	14	12	4	18	21	43	13
	OCT 87	1	17	16	1	9	17	27	5
12-18 MPH	MAY 87	1	59	16	2	7	4	11	5
	JUN 87	1	56	11	1	3	2	8	3
	JUL 87	1	49	12	6	6	1	5	3
	AUG 87	1	51	16	3	6	3	6	1
	SEP 87	0	34	9	1	4	1	4	1
	OCT 87	0	46	18	0	1	1	2	0
18-24 MPH	MAY 87	2	81	9	0	1	1	2	1
	JUN 87	3	97	8	0	1	0	1	1
	JUL 87	2	76	8	3	2	0	0	0
	AUG 87	1	77	12	1	1	0	1	0
	SEP 87	0	68	9	0	1	0	0	0
	OCT 87	0	84	17	0	0	0	0	0
24 + MPH	MAY 87	9	150	5	0	0	0	0	0
	JUN 87	14	197	4	0	0	0	0	0
	JUL 87	7	164	5	1	1	0	0	0
	AUG 87	9	225	9	0	1	0	0	0
	SEP 87	3	253	13	0	0	0	0	0
	OCT 87	1	249	19	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 87	3	31	25	3	12	8	25	13
	DEC 87	5	34	32	2	9	13	19	11
	JAN 88	3	24	28	2	9	14	17	7
	FEB 88	2	24	25	1	7	19	34	10
	JAN 91	2	28	27	2	3	10	13	6
	FEB 91	2	27	22	1	5	10	11	3
12-18 MPH	NOV 87	1	63	23	1	5	0	5	4
	DEC 87	4	51	21	0	3	1	2	2
	JAN 88	1	45	20	0	3	3	2	1
	FEB 88	1	54	21	0	1	1	5	3
	JAN 91	1	51	19	0	1	0	2	1
	FEB 91	1	54	16	0	1	1	1	0
18-24 MPH	NOV 87	0	90	17	0	1	0	0	0
	DEC 87	3	78	17	0	1	0	0	1
	JAN 88	1	69	16	0	1	0	0	0
	FEB 88	1	87	13	0	0	0	1	0
	JAN 91	2	83	18	0	0	0	1	0
	FEB 91	4	87	12	0	0	0	0	0
24 + MPH	NOV 87	1	158	12	0	0	0	0	0
	DEC 87	3	134	9	0	0	0	0	0
	JAN 88	5	116	8	0	0	0	0	0
	FEB 88	5	152	5	0	0	0	0	0
	JAN 91	14	112	9	0	0	0	0	0
	FEB 91	34	181	9	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	**MAR 91**	3	27	21	16	60	40	34	19
	APR 91	4	26	18	11	32	34	51	22
	MAY 91	5	31	19	6	21	25	36	15
	JUN 91	2	26	22	16	36	32	36	13
12-18 MPH	**MAR 91**	1	40	16	9	28	7	9	6
	APR 91	1	44	11	2	9	10	16	8
	MAY 91	3	62	18	3	8	5	9	4
	JUN 91	1	55	14	6	12	5	7	1
18-24 MPH	**MAR 91**	0	42	8	3	7	2	3	2
	APR 91	1	52	6	0	1	2	2	1
	MAY 91	4	64	12	1	2	0	1	1
	JUN 91	4	70	9	2	2	1	1	0
24 + MPH	**MAR 91**	0	62	4	1	1	0	1	0
	APR 91	2	69	4	0	0	0	0	0
	MAY 91	11	121	10	0	1	0	0	0
	JUN 91	15	124	8	0	0	0	0	0

Site Description

County:	Davis	Elevation:	4,600 ft.
Township:	5 North	Range:	1 West
Section:	26	Quarter Section:	Southeast
Longitude:	111° 55'	Latitude:	41° 05'

Duration of data logging: May 1985 to January 1987
Months of available data: 21
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Northeast
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

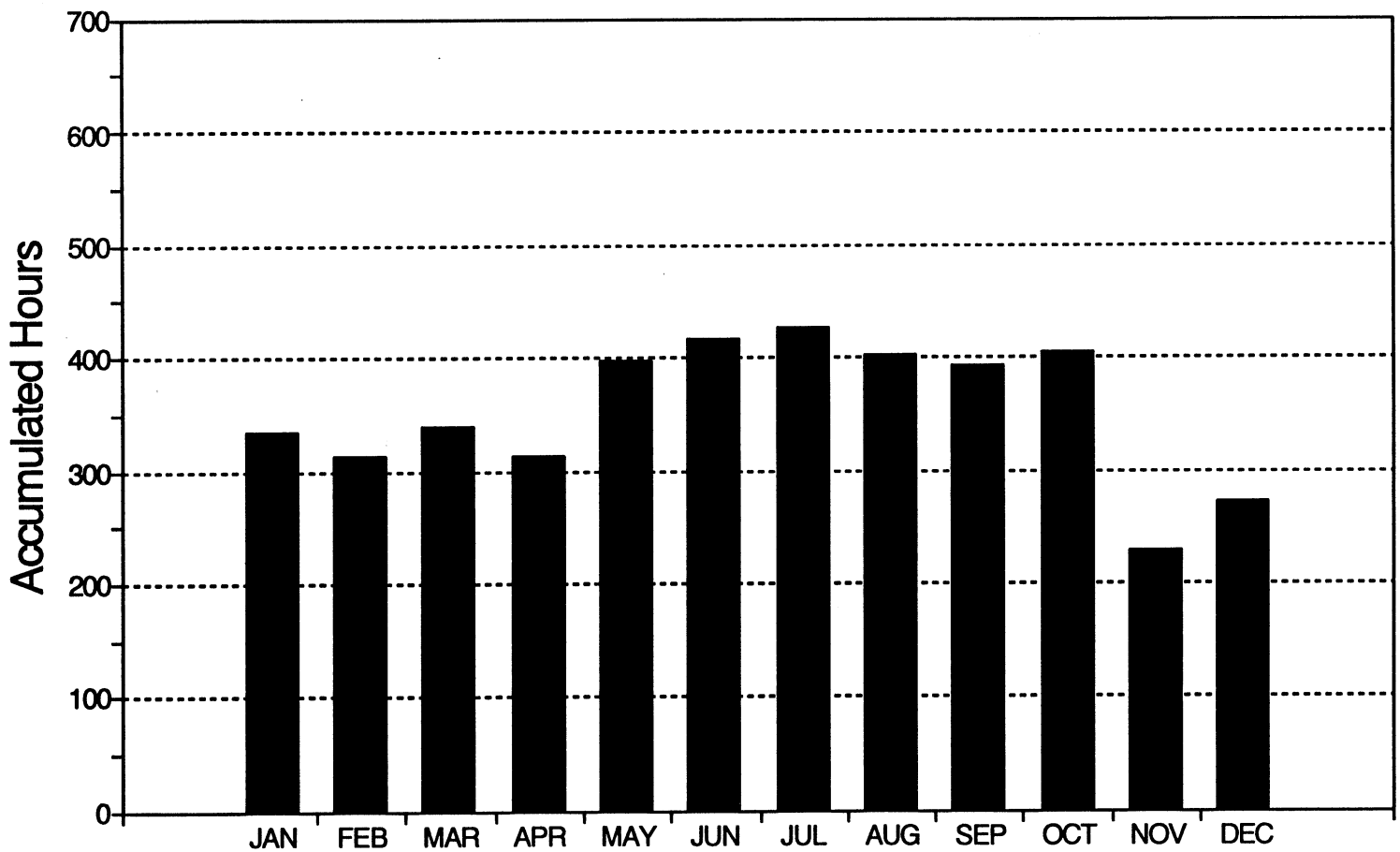
Property ownership: Utah Department of Transportation
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 85	201	72	62	50	40	33	30	28	28	28	29	28	25	22	19	16	13	21
JUN 85	200	57	45	31	24	23	23	24	27	30	32	33	32	30	28	25	20	34
JUL 85	208	57	42	31	27	26	28	29	30	30	30	31	30	28	26	23	19	54
AUG 85	230	73	61	46	32	24	21	20	21	23	26	28	27	25	22	19	16	30
SEP 85	226	64	56	46	40	35	32	30	27	26	26	25	23	19	16	11	8	11
OCT 85	255	63	49	37	30	25	24	25	26	27	27	25	24	21	18	12	7	6
NOV 85	255	63	45	31	24	21	18	16	15	13	11	8	7	6	5	4	3	7
DEC 85	255	48	42	41	38	34	30	24	20	16	14	12	11	10	10	9	9	27
JAN 86	255	47	31	25	23	22	20	20	21	21	23	23	22	18	15	12	10	22
FEB 86	251	57	51	44	37	29	24	21	20	20	20	21	19	17	13	10	7	10
MAR 86	255	66	52	39	31	26	26	26	28	28	27	23	20	17	15	12	9	12
APR 86	255	68	56	45	38	33	30	27	24	23	21	18	15	13	10	7	4	5
MAY 86	255	69	59	46	36	30	27	24	23	24	26	26	24	21	18	16	14	28
JUN 86	197	60	47	36	29	27	26	26	26	26	29	31	30	29	26	22	17	37
JUL 86	214	67	55	44	39	36	34	33	32	30	28	25	21	19	16	14	12	26
AUG 86	220	59	43	30	22	21	24	28	31	33	34	33	31	29	27	24	20	37
SEP 86	196	62	49	38	32	30	29	30	31	31	30	29	28	26	24	20	15	20
OCT 86	203	37	25	21	21	25	32	37	39	39	40	40	39	36	31	25	18	35
NOV 86	255	50	37	29	26	23	23	24	25	26	25	21	17	13	8	5	2	2
DEC 86	255	43	26	20	19	20	23	26	26	24	21	18	15	11	8	4	2	1
JAN 86	255	46	31	26	26	26	27	28	27	27	26	25	24	22	20	16	12	36

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 85	MPH	19.6	20.4	21.4	22.9	19.4	11.9	8.3	8.8	8.8	7.4	8.8	15.0
	σ	9.0	10.5	11.5	12.0	9.5	6.0	4.0	3.5	5.5	6.0	7.0	8.0
JUN 85	MPH	23.5	26.5	27.5	28.8	24.0	13.5	7.6	6.9	6.3	5.1	7.9	18.9
	σ	8.0	9.5	10.5	11.0	9.0	7.0	4.5	2.5	4.0	5.0	5.5	6.5
JUL 85	MPH	20.2	24.7	27.9	30.4	28.0	17.5	8.1	6.4	5.7	6.3	9.8	17.4
	σ	12.0	11.5	11.5	10.5	10.0	8.0	4.0	4.5	2.5	5.5	6.0	10.0
AUG 85	MPH	21.1	22.4	23.5	24.1	21.3	11.6	7.9	7.5	6.3	3.8	5.8	16.9
	σ	9.5	11.5	12.5	13.5	11.5	6.5	3.0	2.5	2.0	2.0	5.0	8.5
SEP 85	MPH	16.6	17.9	19.8	20.9	17.9	11.9	8.8	8.4	8.0	5.3	7.1	13.4
	σ	9.0	10.5	10.5	11.5	11.5	6.5	4.5	4.5	5.0	4.0	6.0	7.5
OCT 85	MPH	15.1	17.4	18.3	19.3	19.3	14.4	6.8	6.6	5.8	4.0	6.4	10.0
	σ	10.0	11.0	12.0	12.5	11.0	7.0	3.5	3.0	3.5	3.5	7.0	7.5
NOV 85	MPH	8.3	8.1	8.9	9.8	10.4	8.3	5.8	5.1	4.5	4.3	6.4	8.6
	σ	8.5	9.0	9.0	9.5	9.0	7.0	6.0	6.5	6.0	6.5	7.0	8.5
DEC 85	MPH	11.4	12.8	13.6	15.3	15.4	12.1	6.9	6.9	6.3	7.1	8.8	10.4
	σ	10.5	10.5	11.0	10.5	10.0	9.5	8.5	8.0	8.0	9.5	10.5	10.5
JAN 86	MPH	11.8	12.8	14.4	16.3	16.1	13.3	9.1	7.0	6.5	6.3	9.9	10.5
	σ	11.5	11.5	12.5	13.0	12.0	11.5	8.5	7.0	7.0	7.5	9.5	10.5
FEB 86	MPH	15.1	15.5	16.5	17.3	16.3	12.3	8.4	7.0	6.1	5.6	9.3	13.4
	σ	10.0	10.0	10.5	11.5	11.5	8.5	7.0	6.5	6.0	6.5	7.0	9.0
MAR 86	MPH	15.0	16.2	18.0	19.7	17.7	11.0	6.6	6.4	5.1	4.0	9.7	14.3
	σ	10.0	11.5	12.5	13.5	11.0	6.5	4.5	5.0	3.0	4.0	6.5	8.0
APR 86	MPH	14.1	14.1	15.5	16.3	13.4	9.1	8.0	8.1	6.6	4.8	7.0	11.5
	σ	8.5	10.5	11.0	11.5	9.5	7.0	4.5	4.0	4.0	5.0	6.5	7.5
MAY 86	MPH	18.4	19.6	20.4	21.2	19.2	12.2	8.3	8.1	8.0	6.0	6.8	14.3
	σ	8.5	10.5	13.0	13.0	9.5	4.5	3.5	2.5	5.0	4.0	6.0	8.0
JUN 86	MPH	22.9	24.6	27.5	29.5	24.5	13.1	7.4	6.1	6.0	5.3	8.0	17.1
	σ	9.5	10.5	10.5	9.0	9.0	8.5	3.5	2.0	2.5	3.5	6.0	8.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUL 86	MPH	19.3	20.8	20.9	22.8	19.4	12.1	9.0	8.3	8.3	5.8	7.6	15.9
	σ	9.5	10.5	11.5	11.5	10.5	7.5	5.5	5.0	4.5	4.0	6.5	8.5
AUG 86	MPH	23.1	24.8	27.4	28.6	25.5	15.6	7.8	5.9	5.4	3.5	5.8	18.9
	σ	9.5	9.0	9.0	9.0	9.5	8.5	3.0	2.5	2.0	3.5	4.5	7.0
SEP 86	MPH	19.4	20.8	22.4	22.5	20.5	15.8	9.6	7.6	7.4	6.9	11.3	18.4
	σ	10.0	9.5	10.5	12.5	11.5	7.0	7.0	5.5	5.5	6.5	7.5	8.0
OCT 86	MPH	22.1	23.9	26.4	28.8	27.5	19.3	10.0	8.5	8.0	6.9	10.5	18.0
	σ	8.0	8.5	9.5	8.5	7.5	8.5	8.5	7.0	8.5	9.0	11.0	8.5
NOV 86	MPH	12.5	13.5	14.4	15.4	14.6	9.6	5.4	4.1	2.9	3.0	7.6	11.5
	σ	9.0	10.0	11.0	11.5	10.5	7.0	4.0	3.0	3.0	3.5	6.5	8.5
DEC 86	MPH	8.9	12.0	12.8	14.6	17.1	12.5	4.8	3.3	2.8	1.5	3.9	6.3
	σ	7.5	9.5	9.0	10.0	10.5	8.5	3.0	2.5	1.5	2.0	5.5	6.0
JAN 87	MPH	14.6	16.5	17.5	18.9	19.3	17.8	12.1	8.4	7.0	7.9	11.0	13.9
	σ	12.5	12.5	13.0	13.0	13.0	12.0	10.0	8.5	8.5	10.0	11.0	12.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 85	7	11	25	11	42	30	29	29
	JUN 85	51	6	7	5	7	9	16	32
	JUL 85	99	3	1	1	1	1	3	22
	AUG 85	68	5	5	6	8	12	17	60
	SEP 85	85	17	11	11	10	8	11	13
	OCT 85	90	20	7	11	5	5	5	7
12-18 MPH	MAY 85	3	13	35	7	23	7	5	11
	JUN 85	26	9	12	5	5	4	4	4
	JUL 85	65	1	0	0	0	0	0	11
	AUG 85	49	1	1	1	2	3	4	16
	SEP 85	80	5	4	4	4	3	3	3
	OCT 85	63	5	3	5	1	1	1	1
18-24 MPH	MAY 85	1	17	51	3	8	1	1	3
	JUN 85	19	14	27	9	6	3	3	1
	JUL 85	83	0	0	0	0	0	0	4
	AUG 85	60	0	0	0	0	1	1	3
	SEP 85	77	1	1	1	1	0	0	0
	OCT 85	76	1	1	1	0	0	0	0
24 + MPH	MAY 85	1	40	127	1	2	0	1	1
	JUN 85	61	36	69	27	18	12	8	3
	JUL 85	234	1	0	1	1	1	0	2
	AUG 85	191	0	0	0	0	0	0	0
	SEP 85	137	0	0	0	0	0	0	0
	OCT 85	140	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 86	103	6	6	7	4	4	4	5
	DEC 85	118	3	3	4	1	1	0	1
	JAN 86	89	2	2	10	0	0	0	0
	FEB 86	135	6	6	3	1	1	0	0
	MAR 86	133	7	6	7	2	1	1	1
	APR 86	140	9	10	3	2	1	1	2
12-18 MPH	NOV 85	49	3	3	3	1	1	1	2
	DEC 85	98	1	1	1	0	0	0	0
	JAN 86	60	1	1	3	0	0	0	0
	FEB 86	80	3	5	2	0	0	0	0
	MAR 86	75	3	3	2	0	0	0	0
	APR 86	90	3	3	1	1	1	0	1
18-24 MPH	NOV 85	39	1	1	1	0	0	0	0
	DEC 85	59	0	0	0	0	0	0	0
	JAN 86	60	0	0	1	0	0	0	0
	FEB 86	57	1	2	1	0	0	0	0
	MAR 86	80	1	1	0	0	0	0	0
	APR 86	71	2	1	0	0	0	0	0
24 + MPH	NOV 85	50	0	1	0	0	0	0	0
	DEC 85	102	0	0	0	0	0	0	0
	JAN 86	143	0	0	0	0	0	0	0
	FEB 86	116	1	1	0	0	0	0	0
	MAR 86	133	0	0	0	0	0	0	0
	APR 86	90	1	1	0	0	0	0	0

Wind Rose Data cont.

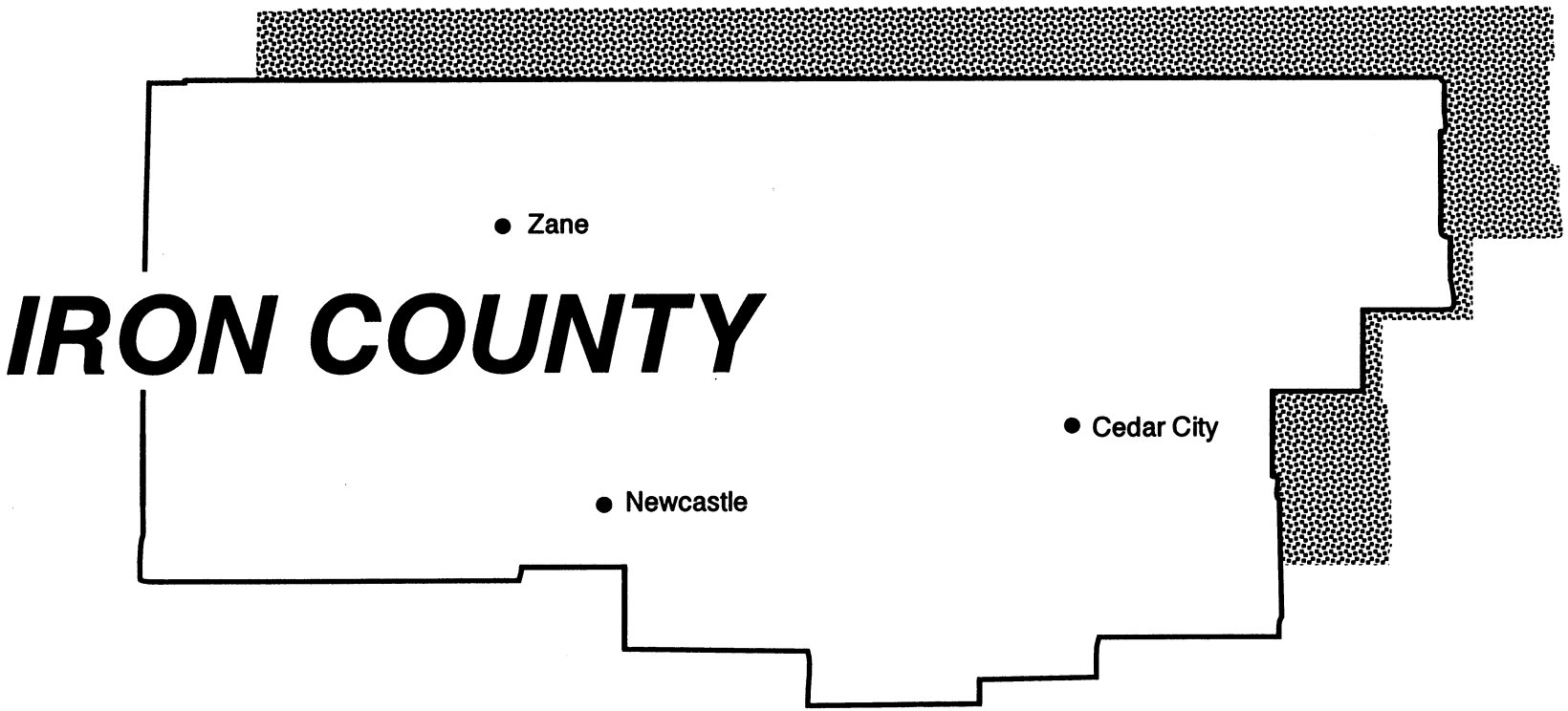
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 86	149	10	5	2	1	1	1	1
	JUN 86	132	6	2	0	0	0	0	1
	JUL 86	155	5	1	1	1	1	1	2
	AUG 86	126	2	1	0	0	0	0	1
	SEP 86	144	2	0	0	0	0	1	1
	OCT 86	82	0	0	0	0	0	0	0
12-18 MPH	MAY 86	85	4	1	1	0	0	0	0
	JUN 86	80	1	0	0	0	0	0	0
	JUL 86	107	1	0	0	0	0	0	0
	AUG 86	67	0	0	0	0	0	0	0
	SEP 86	90	1	0	0	0	0	0	0
	OCT 86	79	0	0	0	0	0	0	0
18-24 MPH	MAY 86	71	1	0	0	0	0	0	0
	JUN 86	77	0	0	0	0	0	0	0
	JUL 86	94	0	0	0	0	0	0	0
	AUG 86	91	0	0	0	0	0	0	0
	SEP 86	91	0	0	0	0	0	0	0
	OCT 86	116	0	0	0	0	0	0	0
24 + MPH	MAY 86	171	0	0	0	0	0	0	0
	JUN 86	220	0	0	0	0	0	0	0
	JUL 86	161	0	0	0	0	0	0	0
	AUG 86	233	0	0	0	0	0	0	0
	SEP 86	191	0	0	0	0	0	0	0
	OCT 86	264	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 86	115	1	0	0	0	0	0	0
	DEC 86	88	1	0	0	0	0	0	0
	JAN 87	98	4	0	0	0	0	0	0
12-18 MPH	NOV 86	71	0	0	0	0	0	0	0
	DEC 86	62	0	0	0	0	0	0	0
	JAN 87	78	1	0	0	0	0	0	0
18-24 MPH	NOV 86	75	0	0	0	0	0	0	0
	DEC 86	76	0	0	0	0	0	0	0
	JAN 87	81	0	0	0	0	0	0	0
24 + MPH	NOV 86	94	0	0	0	0	0	0	0
	DEC 86	80	0	0	0	0	0	0	0
	JAN 87	182	0	0	0	0	0	0	0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Zane
Cedar City
Newcastle

Cedar City

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Newcastle

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Zane

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Site Description

County:	Iron	Elevation:	5,500 ft.
Township:	36 South	Range:	11 West
Section:	18	Quarter Section:	—
Longitude:	113° 05'	Latitude:	37° 40'

Duration of data logging: June 1986 to January 1987
Months of available data: 7
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: South-Southeast
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: High grass, low row crops
South: High grass, low row crops
West: High grass, low row crops

Comments

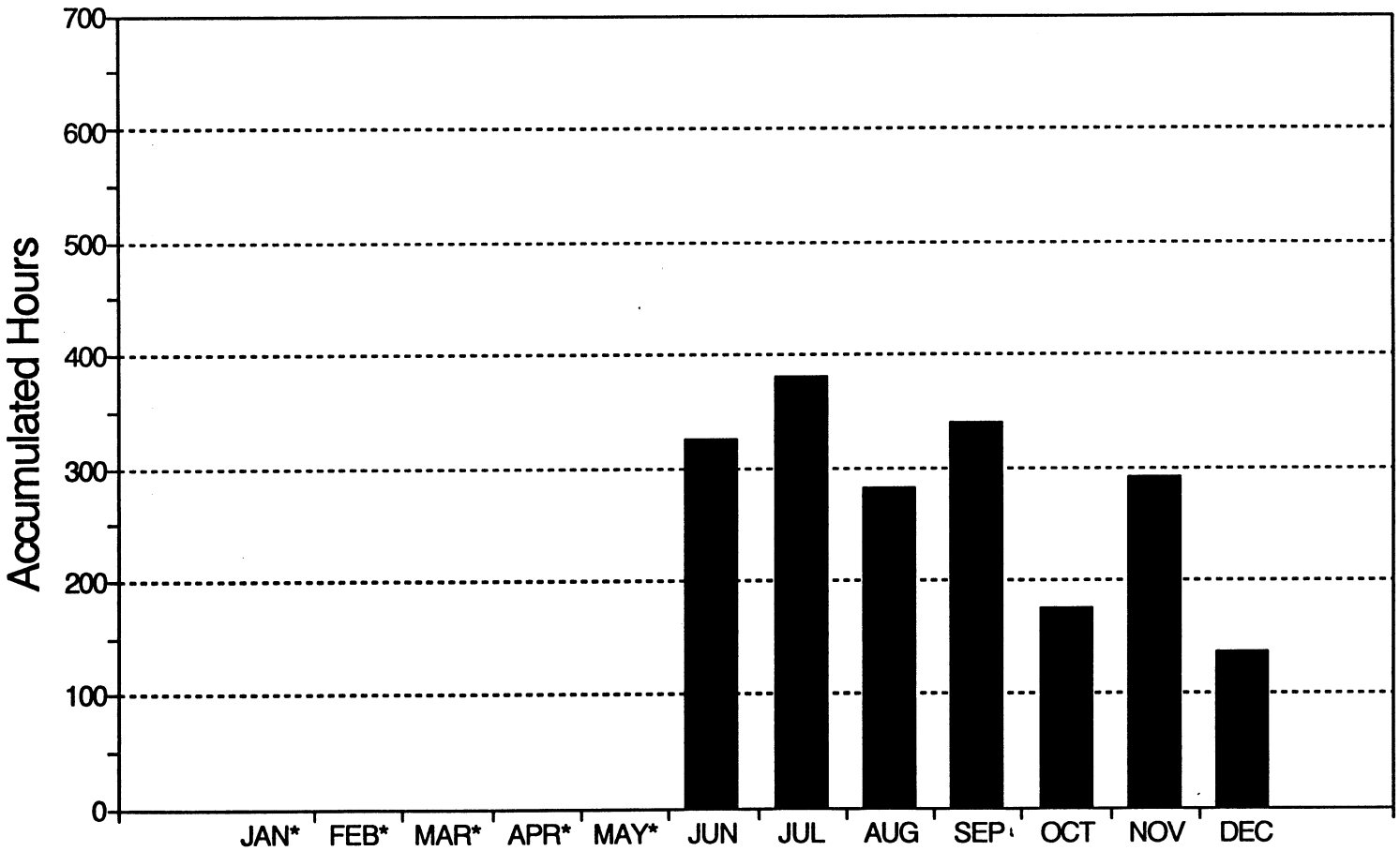
Property ownership: Southern Utah State College
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JUN 86	236	75	85	81	69	50	37	29	21	15	10	6	3	2	1	0	0	0
JUL 86	218	70	74	79	77	58	49	38	28	19	13	8	5	3	2	1	1	0
AUG 86	255	74	74	70	62	48	37	27	17	10	5	2	1	1	0	0	0	0
SEP 86	252	67	63	56	47	40	33	32	29	26	22	17	13	9	6	4	3	3
OCT 86	255	75	61	48	34	27	21	17	12	8	5	2	1	0	0	0	0	0
NOV 86	255	68	64	70	71	56	36	23	15	9	5	3	2	1	1	0	0	0
DEC 86	255	86	68	45	30	21	15	11	7	4	2	1	1	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUN 86	MPH	6.9	5.8	4.5	3.9	6.3	11.6	13.1	14.8	15.5	14.1	10.0	7.8
	σ	3.5	4.0	3.5	3.0	4.5	6.0	6.0	5.5	5.0	4.0	2.5	2.5
JUL 86	MPH	7.6	7.6	6.4	4.3	6.0	11.8	14.4	16.0	16.4	15.6	10.9	9.1
	σ	5.0	5.0	4.0	3.5	4.5	5.5	5.5	5.0	6.0	6.0	3.5	5.0
AUG 86	MPH	5.8	5.4	4.4	3.6	4.5	8.4	11.0	12.3	11.1	10.6	10.8	8.1
	σ	4.0	5.0	3.5	3.5	4.5	6.0	5.0	5.0	5.0	5.0	4.5	4.5
SEP 86	MPH	6.5	5.9	6.0	6.4	8.6	13.5	16.8	17.9	17.3	13.8	8.9	8.3
	σ	5.0	6.0	5.5	6.0	8.0	9.0	9.0	9.0	8.0	6.5	4.0	5.0
OCT 86	MPH	3.6	2.9	3.3	3.1	3.1	6.4	8.6	10.5	10.4	8.3	5.9	4.8
	σ	3.5	3.0	3.5	3.5	4.5	6.0	7.0	5.5	6.0	4.0	3.5	4.0
NOV 86	MPH	6.3	6.6	6.3	6.0	6.6	9.3	11.5	12.4	12.6	9.3	6.1	6.3
	σ	5.0	6.0	4.5	4.5	6.5	7.5	6.0	5.5	5.0	3.5	3.5	5.5
DEC 86	MPH	4.1	3.6	3.4	3.0	3.4	5.4	8.3	8.9	7.9	6.3	5.6	4.8
	σ	3.0	3.5	3.0	3.5	4.5	5.0	6.0	5.0	4.0	4.0	5.0	5.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 86	26	3	45	109	23	8	7	20
	JUL 86	9	3	40	128	28	6	4	6
	AUG 86	14	8	46	101	28	8	4	10
	SEP 86	25	2	21	78	21	2	7	29
	OCT 86	43	2	19	34	9	5	16	55
	NOV 86	42	1	10	63	11	4	12	58
	DEC 86	46	0	16	41	6	1	18	70
12-18 MPH	JUN 86	6	1	12	101	24	3	3	7
	JUL 86	1	1	11	139	28	2	2	0
	AUG 86	3	6	10	101	19	3	2	3
	SEP 86	1	0	4	82	24	1	2	6
	OCT 86	7	1	4	35	10	1	3	22
	NOV 86	9	0	3	75	12	1	6	56
	DEC 86	3	0	1	30	9	0	2	22
18-24 MPH	JUN 86	2	0	2	49	9	0	0	2
	JUL 86	0	0	4	69	12	0	1	0
	AUG 86	2	2	4	39	5	1	0	1
	SEP 86	0	0	1	68	16	0	0	1
	OCT 86	0	1	1	22	6	0	0	6
	NOV 86	1	0	0	26	7	1	1	10
	DEC 86	1	0	0	9	6	0	0	6
24 + MPH	JUN 86	0	0	1	19	2	0	0	0
	JUL 86	0	0	1	30	2	0	0	0
	AUG 86	1	1	1	5	1	0	0	0
	SEP 86	0	0	0	69	7	0	0	0
	OCT 86	0	0	1	5	1	0	0	0
	NOV 86	0	0	0	11	2	0	0	0
	DEC 86	0	0	0	2	2	0	0	0

Site Description

County:	Iron	Elevation:	5,200 ft.
Township:	37 South	Range:	17 West
Section:	13	Quarter Section:	—
Longitude:	113° 35'	Latitude:	37° 40'

Duration of data logging: June 1986 to October 1987
Months of available data: 17
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Not available, faulty wind vane
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

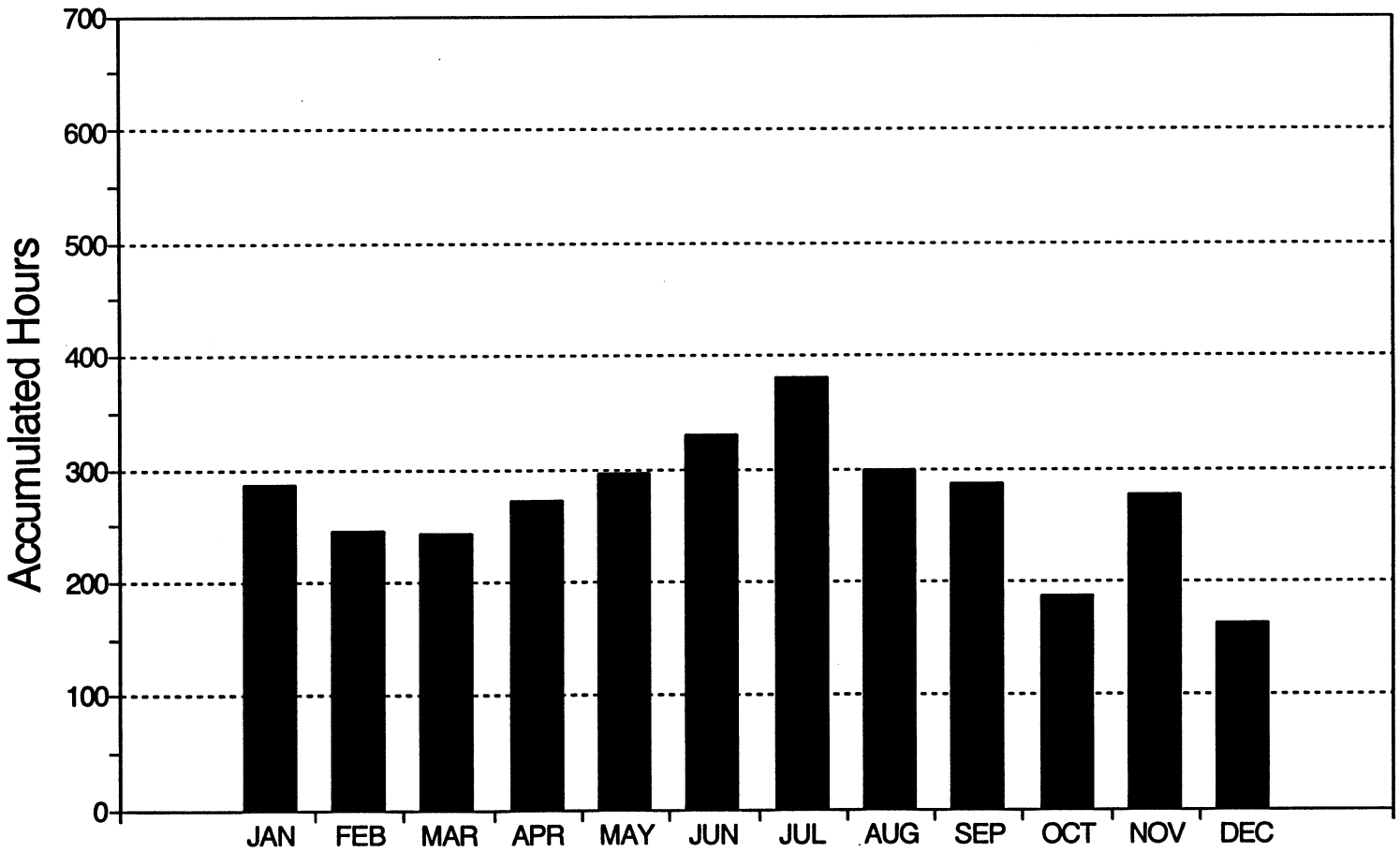
Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JUN 86	184	87	95	94	79	60	41	30	20	13	8	5	2	1	0	0	0	0
JUL 86	174	88	98	90	80	65	48	36	23	14	9	6	4	3	2	1	1	1
AUG 86	244	100	108	97	72	49	31	19	11	6	3	2	1	1	0	0	0	0
SEP 86	213	76	73	63	59	49	43	37	30	24	18	13	9	6	4	2	1	1
OCT 86	255	104	89	57	35	28	24	18	12	7	4	2	1	0	0	0	0	0
NOV 86	255	78	81	68	60	44	33	27	20	12	7	4	2	1	0	0	0	0
DEC 86	255	85	69	48	37	26	19	15	9	5	3	1	0	0	0	0	0	0
JAN 87	255	68	65	60	56	50	42	28	18	13	9	6	3	1	0	0	0	0
FEB 87	255	65	56	52	50	41	31	24	19	13	8	4	2	1	1	0	0	0
MAR 87	255	92	80	63	48	37	28	20	14	10	7	5	4	3	2	1	0	0
APR 87	255	84	90	77	58	37	25	19	15	11	8	6	4	3	2	2	1	3
MAY 87	255	96	89	70	53	42	36	29	22	17	12	7	4	2	1	0	0	0
JUN 87	246	81	84	82	70	50	34	25	18	11	6	4	3	2	1	1	1	1
JUL 87	219	76	72	80	79	61	43	33	25	18	13	9	6	4	3	2	1	2
AUG 87	255	89	90	83	68	50	34	25	17	10	7	4	3	2	1	1	0	0
SEP 87	255	108	102	87	56	32	18	10	5	3	2	1	1	0	0	0	0	0
OCT 87	214	74	65	45	23	11	6	3	1	1	0	0	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUN 86	MPH	8.0	7.6	7.3	6.4	5.0	10.6	12.3	14.4	14.4	13.9	10.6	10.0
	σ	3.0	3.0	3.0	3.0	4.0	5.0	5.0	5.0	5.5	4.5	3.0	3.0
JUL 86	MPH	9.4	9.3	7.6	5.4	6.6	10.3	13.9	15.4	15.4	14.5	11.0	9.4
	σ	4.5	4.0	3.5	3.0	6.0	5.5	5.5	5.0	5.5	5.0	4.0	4.0
AUG 86	MPH	9.3	6.6	5.8	5.6	3.6	7.0	10.9	12.8	12.3	10.8	9.1	9.3
	σ	4.0	3.0	2.5	3.0	3.5	4.5	4.0	4.0	3.5	3.5	4.0	3.5
SEP 86	MPH	8.4	7.5	8.0	7.9	7.3	13.1	16.1	17.3	15.9	13.9	8.5	9.0
	σ	5.5	4.5	4.5	5.0	6.5	8.5	7.0	7.0	7.5	5.5	4.0	5.0
OCT 86	MPH	6.1	5.3	5.5	5.5	3.8	4.8	8.6	10.6	10.1	8.3	7.8	6.0
	σ	3.5	3.0	3.0	3.0	3.5	5.5	7.0	6.5	5.5	4.0	3.5	4.0
NOV 86	MPH	6.0	6.4	5.5	5.9	6.9	10.3	11.1	12.9	12.3	9.5	7.6	6.8
	σ	3.5	4.5	3.5	4.0	7.0	8.0	8.0	6.5	4.5	3.5	3.5	3.0
DEC 86	MPH	4.8	4.8	4.3	4.1	3.5	4.5	7.4	9.1	8.3	6.8	6.0	5.3
	σ	3.5	3.5	3.5	4.5	4.0	6.5	7.0	6.5	5.0	3.5	3.5	3.0
JAN 87	MPH	7.3	7.9	6.3	6.1	6.4	8.3	9.5	11.0	10.9	9.0	7.9	7.4
	σ	5.5	6.0	5.5	5.0	5.5	7.5	7.5	7.0	7.5	6.0	5.5	5.5
FEB 87	MPH	6.5	6.1	5.8	5.5	5.0	9.0	11.0	11.8	11.3	8.8	7.6	8.1
	σ	4.5	5.5	4.5	4.5	5.5	8.5	8.5	7.5	7.0	4.5	5.0	5.0
MAR 87	MPH	7.0	5.5	5.3	5.4	5.8	7.6	10.5	11.8	11.3	8.9	7.5	7.0
	σ	5.0	3.5	3.5	4.5	6.0	8.0	7.5	7.0	6.5	5.0	4.5	5.0
APR 87	MPH	6.0	6.1	5.8	5.6	5.6	9.5	11.4	12.8	13.8	11.8	8.8	7.4
	σ	4.5	4.0	4.0	4.5	7.0	7.5	7.5	6.5	6.5	5.0	4.5	4.0
MAY 87	MPH	6.4	5.3	5.6	5.6	5.1	10.4	12.8	14.6	14.9	13.3	9.0	7.5
	σ	3.0	2.5	2.5	3.5	5.5	7.5	6.0	5.0	5.5	5.0	3.0	3.5
JUN 87	MPH	8.4	7.3	5.8	5.5	4.4	8.5	12.3	13.4	13.0	12.5	10.9	8.9
	σ	3.5	3.5	2.5	4.5	5.5	6.0	5.5	5.5	5.5	5.0	3.5	4.0
JUL 87	MPH	8.9	7.9	6.0	5.9	6.6	12.3	14.1	15.3	15.4	14.5	10.9	9.8
	σ	4.5	5.0	3.0	4.0	6.5	7.0	6.5	6.5	6.5	5.5	4.0	3.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 87	MPH	8.1	7.3	6.0	5.6	3.8	7.6	11.1	13.1	13.5	12.9	10.1	8.9
	σ	3.0	3.0	3.0	3.0	4.0	6.5	6.0	5.5	5.0	4.5	3.5	3.5
SEP 87	MPH	6.6	5.8	5.6	7.1	4.1	5.6	7.9	9.0	9.5	10.9	9.4	7.0
	σ	3.0	2.5	3.0	3.5	3.5	5.0	4.5	4.0	4.0	4.0	3.0	3.0
OCT 87	MPH	5.5	6.3	5.9	6.0	4.1	3.3	6.9	7.8	7.8	7.8	7.9	7.3
	σ	2.5	1.5	3.0	3.0	2.5	2.5	4.0	3.5	4.0	4.0	3.0	3.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 86	275	0	0	0	0	0	0	1
	JUL 86	276	0	0	0	0	0	0	0
	AUG 86	304	0	0	0	0	0	0	1
	SEP 86	211	0	0	0	0	0	0	0
	OCT 86	249	0	0	0	0	0	0	0
	NOV 86	227	0	0	0	0	0	0	0
12-18 MPH	JUN 86	180	0	0	0	0	0	0	0
	JUL 86	193	0	0	0	0	0	0	0
	AUG 86	152	0	0	0	0	0	0	0
	SEP 86	151	0	0	0	0	0	0	0
	OCT 86	87	0	0	0	0	0	0	0
	NOV 86	137	0	0	0	0	0	0	0
18-24 MPH	JUN 86	63	0	0	0	0	0	0	0
	JUL 86	73	0	0	0	0	0	0	0
	AUG 86	36	0	0	0	0	0	0	0
	SEP 86	91	0	0	0	0	0	0	0
	OCT 86	38	0	0	0	0	0	0	0
	NOV 86	60	0	0	0	0	0	0	0
24 + MPH	JUN 86	17	0	0	0	0	0	0	0
	JUL 86	27	0	0	0	0	0	0	0
	AUG 86	7	0	0	0	0	0	0	0
	SEP 86	54	0	0	0	0	0	0	0
	OCT 86	8	0	0	0	0	0	0	0
	NOV 86	13	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 86	202	0	0	0	0	0	0	0
	JAN 87	194	0	0	0	0	0	0	0
	FEB 87	173	0	0	0	0	0	0	0
	MAR 87	234	0	0	0	0	0	0	0
	APR 87	250	0	0	0	0	0	0	0
	MAY 87	254	0	0	0	0	0	0	0
12-18 MPH	DEC 86	82	0	0	0	0	0	0	0
	JAN 87	148	0	0	0	0	0	0	0
	FEB 87	122	0	0	0	0	0	0	0
	MAR 87	114	0	0	0	0	0	0	0
	APR 87	119	0	0	0	0	0	0	0
	MAY 87	131	0	0	0	0	0	0	0
18-24 MPH	DEC 86	29	0	0	0	0	0	0	0
	JAN 87	59	0	0	0	0	0	0	0
	FEB 87	56	0	0	0	0	0	0	0
	MAR 87	43	0	0	0	0	0	0	0
	APR 87	45	0	0	0	0	0	0	0
	MAY 87	68	0	0	0	0	0	0	0
24 + MPH	DEC 86	4	0	0	0	0	0	0	0
	JAN 87	20	0	0	0	0	0	0	0
	FEB 87	17	0	0	0	0	0	0	0
	MAR 87	23	0	0	0	0	0	0	0
	APR 87	29	0	0	0	0	0	0	0
	MAY 87	27	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 87	247	0	0	0	0	0	0	0
	JUL 87	227	0	0	0	0	0	0	0
	AUG 87	262	0	0	0	0	0	0	0
	SEP 87	296	0	0	0	0	0	0	1
	OCT 87	184	0	0	0	0	0	0	0
12-18 MPH	JUN 87	153	0	0	0	0	0	0	0
	JUL 87	182	0	0	0	0	0	0	0
	AUG 87	152	0	0	0	0	0	0	0
	SEP 87	106	0	0	0	0	0	0	0
	OCT 87	40	0	0	0	0	0	0	0
18-24 MPH	JUN 87	54	0	0	0	0	0	0	0
	JUL 87	76	0	0	0	0	0	0	0
	AUG 87	52	0	0	0	0	0	0	0
	SEP 87	18	0	0	0	0	0	0	0
	OCT 87	5	0	0	0	0	0	0	0
24 + MPH	JUN 87	19	0	0	0	0	0	0	0
	JUL 87	39	0	0	0	0	0	0	0
	AUG 87	19	0	0	0	0	0	0	0
	SEP 87	4	0	0	0	0	0	0	0
	OCT 87	1	0	0	0	0	0	0	0

Site Description

County:	Iron	Elevation:	5,200 ft.
Township:	33 South	Range:	16 West
Section:	15	Quarter Section:	Southeast
Longitude:	113° 40'	Latitude:	37° 55'

Duration of data logging: August 1986 to January 1987
Months of available data: 6
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Varies with time of year
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

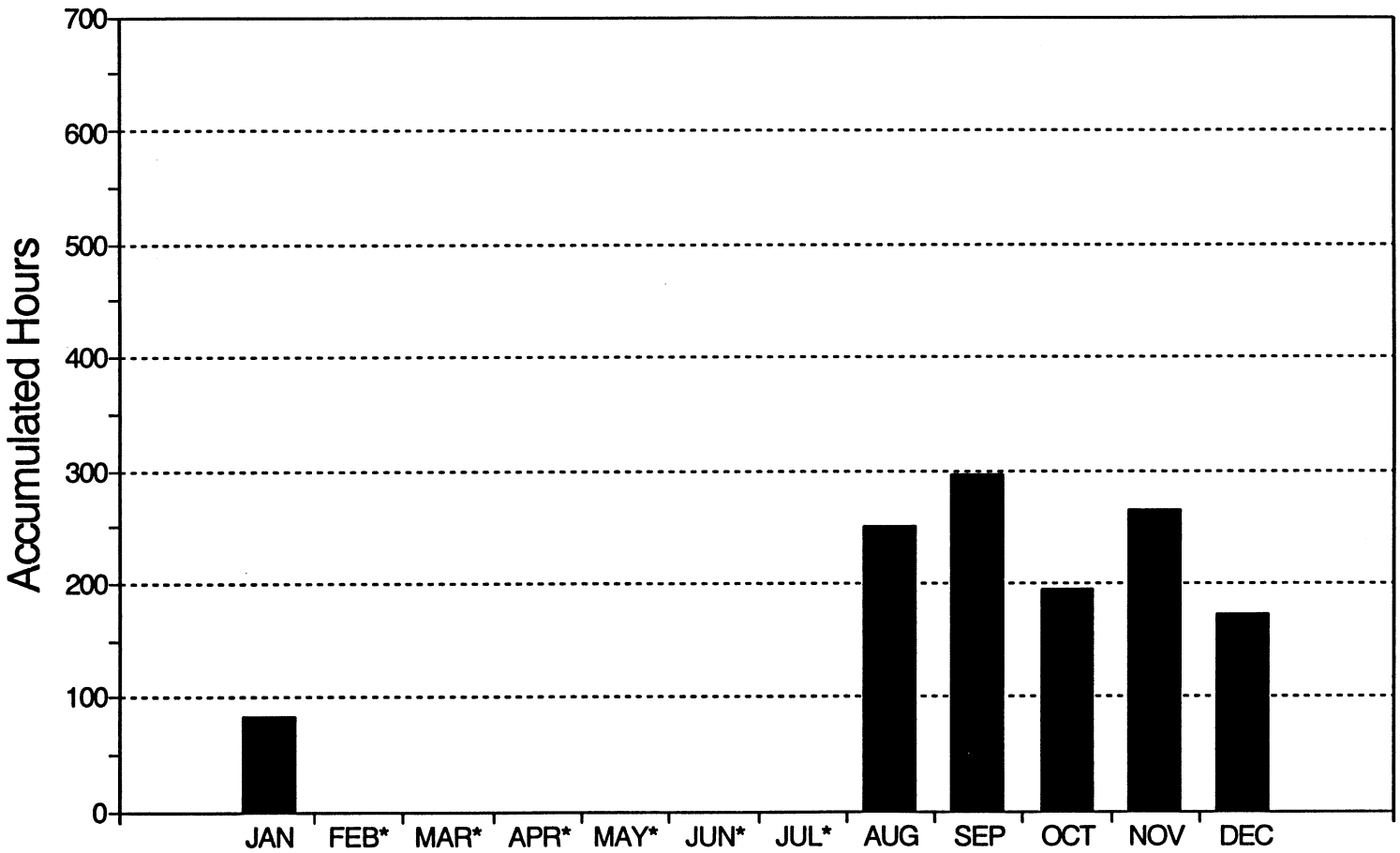
Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 86	255	93	84	70	54	41	31	21	14	8	5	3	1	1	0	0	0	0
SEP 86	255	73	62	55	48	39	34	27	23	19	15	12	9	6	4	3	1	1
OCT 86	255	74	64	49	38	34	28	20	12	7	4	2	1	0	0	0	0	0
NOV 86	255	74	69	64	56	46	35	24	17	11	6	3	2	1	0	0	0	0
DEC 86	255	76	63	54	43	30	21	13	7	3	1	0	0	0	0	0	0	0
JAN 86	58	18	21	23	22	16	10	5	3	2	1	1	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

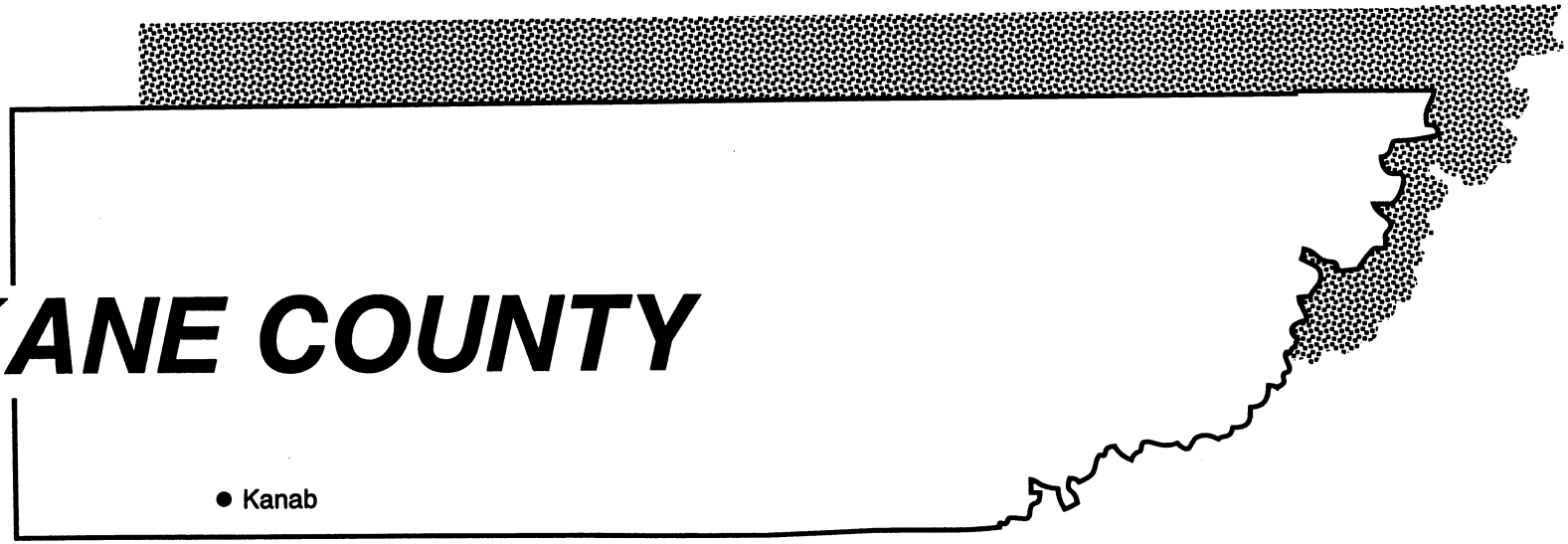
Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 86	MPH	5.9	5.4	3.5	3.5	2.8	6.0	10.1	13.5	13.1	11.6	9.8	7.6
	σ	3.5	3.0	2.0	2.5	2.0	3.5	4.5	4.0	4.5	4.5	4.0	3.5
SEP 86	MPH	5.6	4.9	4.6	3.6	4.8	10.6	14.9	17.5	17.4	14.6	9.5	6.3
	σ	5.5	4.5	4.0	3.5	5.0	7.5	7.5	7.0	7.0	5.5	3.5	4.5
OCT 86	MPH	5.1	4.0	4.1	3.6	2.8	4.8	7.9	9.8	10.4	8.9	8.3	6.9
	σ	4.5	4.0	4.5	3.5	3.5	5.5	6.5	6.5	5.0	3.5	4.5	5.0
NOV 86	MPH	5.5	5.5	5.9	5.1	6.0	9.4	11.5	12.6	12.1	9.5	8.3	5.5
	σ	4.5	4.5	5.0	5.5	6.0	7.0	7.0	6.0	4.0	3.5	3.5	3.5
DEC 86	MPH	5.1	4.5	4.1	3.8	3.8	4.8	6.8	9.0	8.9	7.4	6.6	5.4
	σ	4.0	4.0	4.0	4.0	4.0	4.5	5.5	5.5	5.0	3.5	4.5	4.5
JAN 87	MPH	7.6	7.5	6.6	5.5	6.6	8.6	11.8	12.5	11.6	9.3	10.4	9.8
	σ	4.5	5.5	4.0	4.0	5.5	5.5	7.0	6.5	5.0	3.0	4.5	4.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 86	29	20	9	18	70	66	24	10
	SEP 86	34	36	10	8	38	44	17	4
	OCT 86	64	39	16	5	19	17	18	10
	NOV 86	17	47	45	10	3	28	36	22
	DEC 86	16	61	63	5	5	20	15	6
	JAN 87	8	19	6	0	1	9	16	3
12-18 MPH	AUG 86	11	5	3	9	54	34	7	3
	SEP 86	15	19	2	6	53	19	5	1
	OCT 86	44	18	1	2	18	9	2	4
	NOV 86	20	31	31	4	0	16	27	9
	DEC 86	17	42	22	0	1	10	1	1
	JAN 87	5	15	3	0	1	7	14	4
18-24 MPH	AUG 86	5	1	1	3	21	11	1	1
	SEP 86	4	2	0	5	47	8	1	0
	OCT 86	14	9	0	1	8	4	1	2
	NOV 86	17	14	6	1	0	5	8	2
	DEC 86	5	11	4	0	0	2	0	0
	JAN 87	0	0	0	0	0	6	3	0
24 + MPH	AUG 86	2	1	0	1	5	1	0	1
	SEP 86	1	0	0	2	42	6	0	0
	OCT 86	3	1	0	0	1	0	0	1
	NOV 86	5	4	0	0	0	1	2	1
	DEC 86	0	1	0	0	0	0	0	0
	JAN 87	0	0	0	0	0	2	1	0

KANE COUNTY



Kanab

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Wind Diurnal Data Table	84
Wind Rose Data Table	85

Site Description

County:	Kane	Elevation:	5,800 ft.
Township:	43 South	Range:	6 West
Section:	16	Quarter Section:	—
Longitude:	112° 32'	Latitude:	37° 04'

Duration of data logging: July 1985 to February 1986
Months of available data: 7
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: South-Southwest
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: High grass, low row crops
South: High grass, low row crops
West: High grass, low row crops

Comments

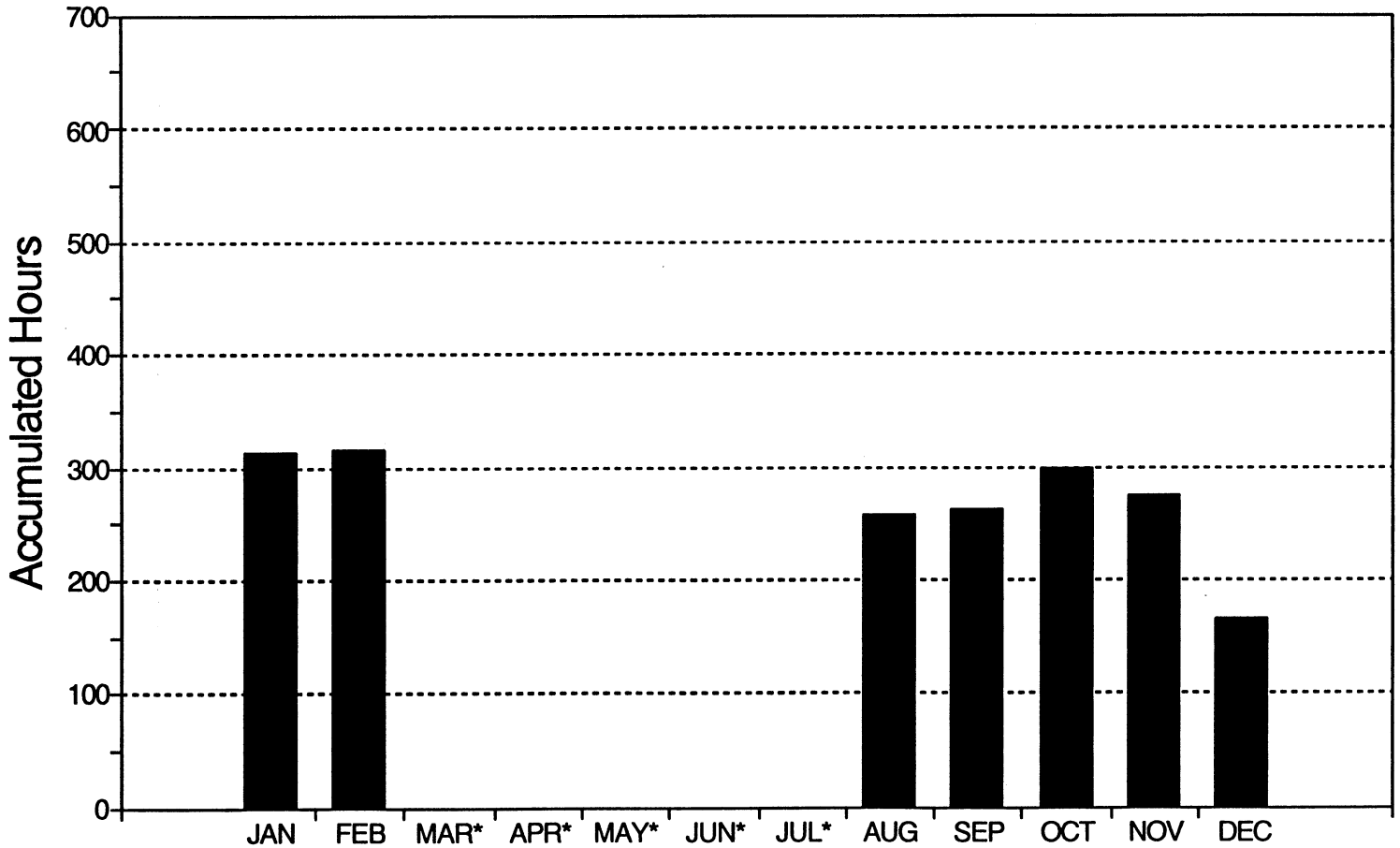
Property ownership: Kane County
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 85	255	87	79	73	63	44	33	20	10	6	4	2	1	1	0	0	0	0
SEP 85	255	86	79	71	56	44	35	22	13	8	5	3	2	1	1	1	0	1
OCT 85	255	88	87	78	73	60	39	21	11	7	4	3	2	1	1	0	0	0
NOV 85	255	78	80	75	61	45	30	19	13	9	7	5	3	2	2	1	1	2
DEC 85	255	69	68	60	48	30	15	7	3	2	1	0	0	0	0	0	0	0
JAN 86	255	83	72	71	73	67	44	27	15	8	4	2	1	1	0	0	0	0
FEB 86	211	72	73	74	78	60	41	25	14	9	6	3	2	1	1	1	0	1

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

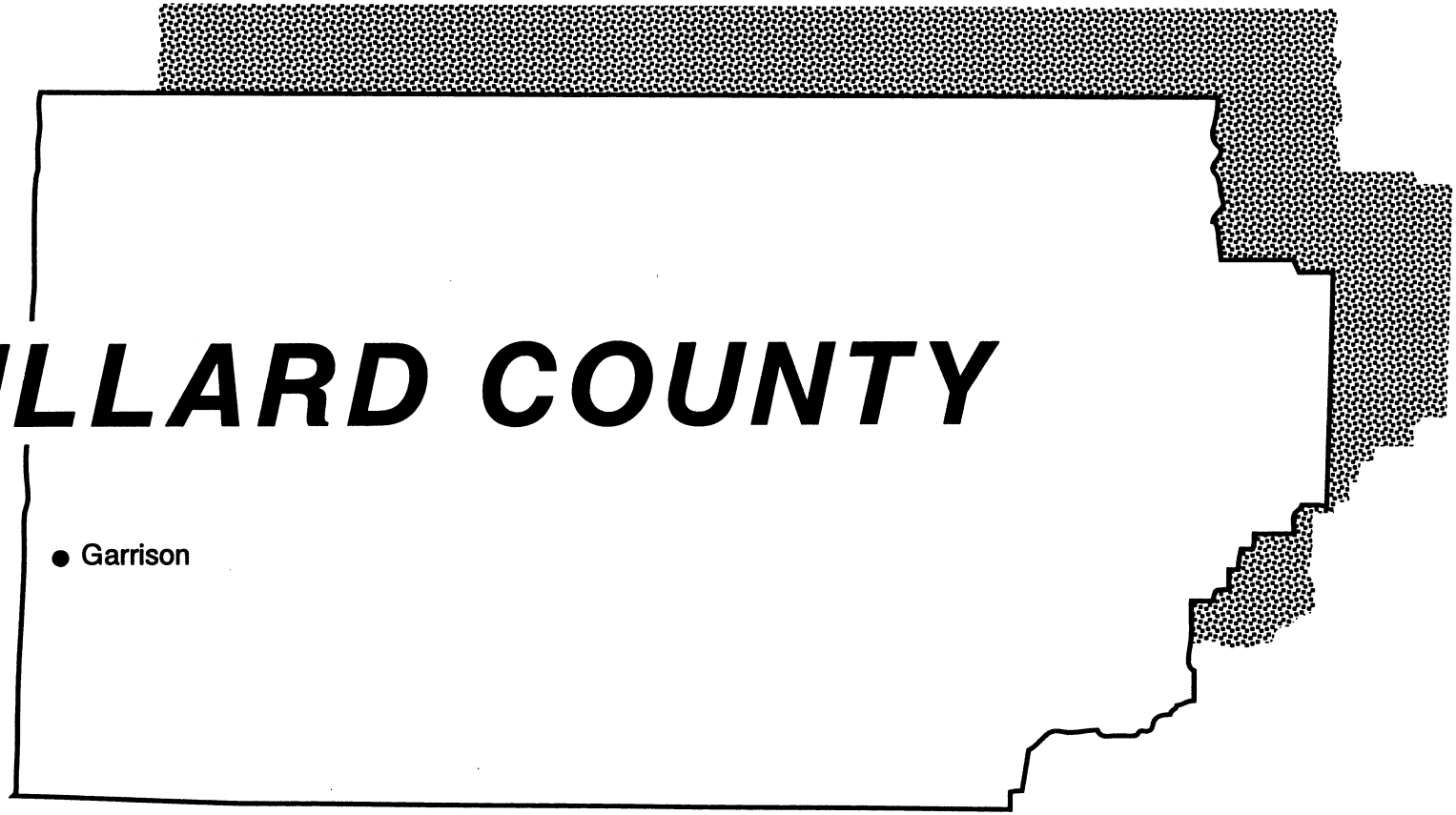
Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 85	MPH	6.5	5.5	5.9	5.0	3.6	5.4	8.0	9.5	10.8	10.9	10.9	9.4
	σ	5.5	5.0	5.0	4.5	4.0	3.0	3.0	3.5	3.5	4.0	3.0	4.0
SEP 85	MPH	7.6	6.4	6.0	6.3	4.8	6.0	9.3	11.0	11.5	11.1	10.8	8.5
	σ	5.0	4.5	4.0	5.0	3.5	4.0	4.0	5.5	5.5	4.0	5.0	5.0
OCT 85	MPH	8.9	8.8	9.3	8.0	6.5	5.6	7.4	8.1	8.8	9.4	10.8	10.4
	σ	5.5	6.0	5.5	4.5	4.0	4.5	4.0	4.0	4.0	5.0	5.0	5.5
NOV 85	MPH	9.6	9.6	8.6	8.5	6.9	6.6	7.9	7.8	7.5	8.3	9.4	9.5
	σ	5.5	5.0	5.5	5.5	5.0	6.5	7.0	6.0	6.5	5.0	5.0	5.5
DEC 85	MPH	6.3	6.1	6.3	5.9	3.9	2.5	2.8	3.1	3.8	5.1	6.6	6.9
	σ	4.5	4.5	5.0	5.0	3.5	3.5	2.5	3.5	4.0	4.5	5.5	5.0
JAN 86	MPH	9.8	10.4	10.4	10.1	8.8	6.6	6.6	6.9	7.3	7.1	9.9	9.9
	σ	5.5	5.5	6.5	6.5	5.0	4.0	4.5	4.0	4.5	5.5	5.0	5.0
FEB 86	MPH	10.0	10.4	10.1	10.5	9.1	8.0	8.5	8.8	8.8	9.1	9.8	10.6
	σ	6.0	5.5	5.5	5.5	6.0	5.5	5.0	4.5	4.5	4.5	3.5	5.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	42	3	3	6	41	58	47	38
	SEP 85	45	18	9	17	55	51	23	17
	OCT 85	82	54	17	22	24	14	17	23
	NOV 85	112	29	15	14	13	11	14	24
	DEC 85	194	10	2	3	3	3	4	7
	JAN 86	183	24	4	4	1	2	2	6
	FEB 86	128	30	7	9	4	5	10	26
12-18 MPH	AUG 85	35	4	2	1	13	32	33	20
	SEP 85	34	18	5	4	22	29	16	8
	OCT 85	68	59	8	4	9	8	6	11
	NOV 85	62	14	8	9	10	9	9	14
	DEC 85	84	1	1	1	1	1	1	2
	JAN 86	171	4	2	2	1	1	1	3
	FEB 86	114	17	7	9	3	5	7	16
18-24 MPH	AUG 85	5	3	1	0	3	12	11	2
	SEP 85	5	6	2	1	8	13	6	2
	OCT 85	9	14	1	2	4	4	2	3
	NOV 85	8	6	4	5	5	5	4	6
	DEC 85	11	0	0	0	0	0	0	0
	JAN 86	47	1	0	0	0	0	0	1
	FEB 86	16	9	5	5	2	3	4	4
24 + MPH	AUG 85	0	0	1	0	1	4	3	0
	SEP 85	0	0	1	0	4	9	2	0
	OCT 85	1	1	0	1	2	2	1	2
	NOV 85	2	4	3	3	3	3	2	3
	DEC 85	1	0	0	0	0	0	0	1
	JAN 86	8	0	0	0	0	0	0	0
	FEB 86	2	2	2	1	3	2	3	1

MILLARD COUNTY



Garrison

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Site Description

County:	Millard	Elevation:	5,800 ft.
Township:	43 South	Range:	6 West
Section:	16	Quarter Section:	—
Longitude:	112° 32'	Latitude:	37° 04'

Duration of data logging: July 1985 to February 1986
Months of available data: 7
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: South-Southwest
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: High grass, low row crops
South: High grass, low row crops
West: High grass, low row crops

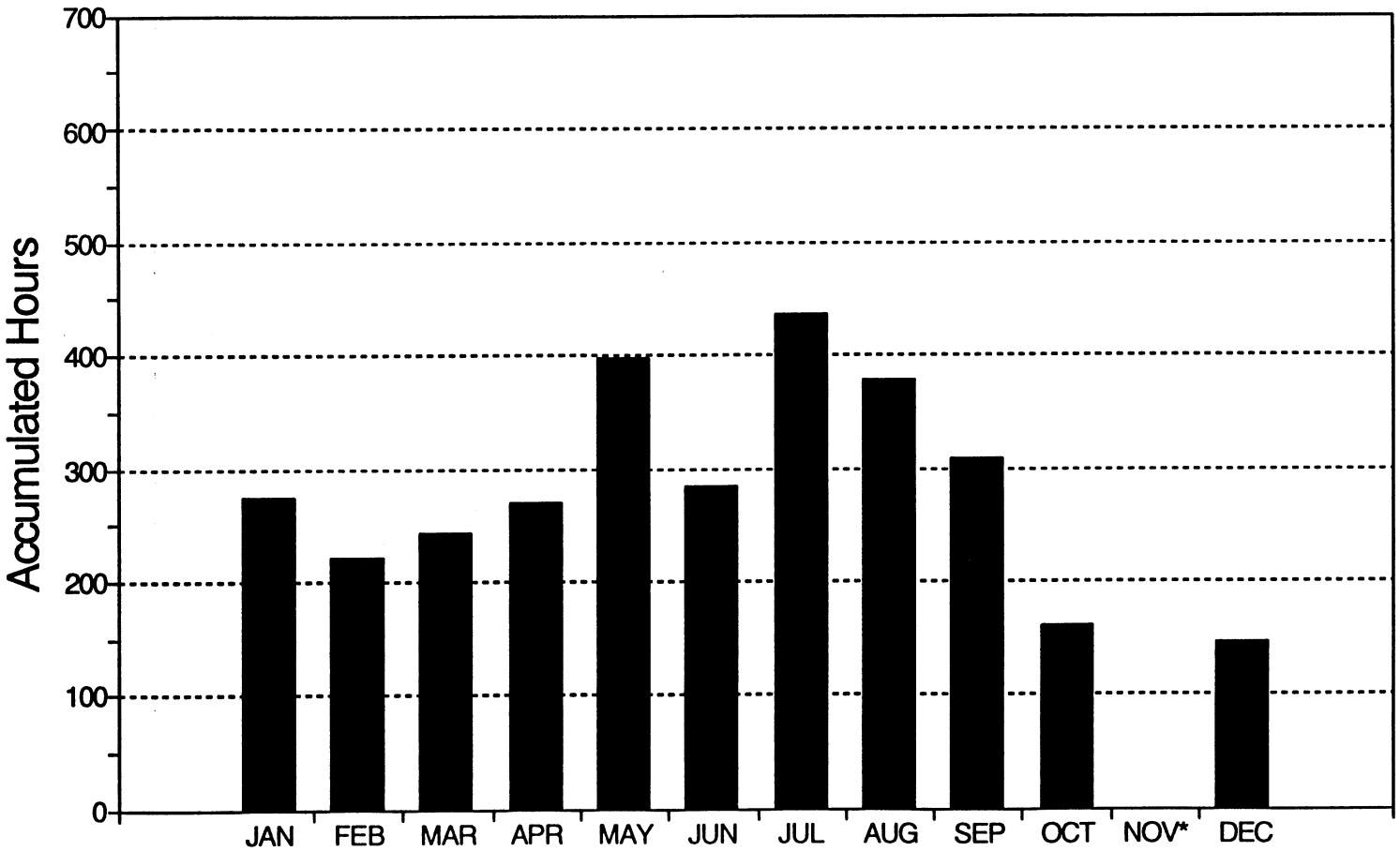
Comments

Property ownership: Kane County
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
DEC 86	255	81	57	41	35	27	17	10	7	6	3	1	0	0	0	0	0	0
JAN 87	255	91	72	58	54	52	44	29	19	10	5	2	1	0	0	0	0	0
FEB 87	255	87	87	74	59	39	22	12	8	4	2	1	0	0	0	0	0	0
MAR 87	255	118	102	82	58	36	22	15	11	8	6	3	2	1	0	0	0	0
APR 87	226	112	112	89	65	48	32	16	7	4	2	2	1	1	1	1	0	0
MAY 87	199	65	82	97	95	71	48	32	21	14	9	5	3	2	1	0	0	0
JUN 87	255	82	85	77	65	51	34	22	13	8	5	3	2	1	1	1	1	1
JUL 87	172	59	75	95	92	75	57	41	29	19	12	7	4	2	2	1	1	1
AUG 87	213	75	79	80	80	72	56	37	23	14	8	4	2	1	0	0	0	0
SEP 87	255	76	78	88	95	68	35	13	5	2	1	1	0	0	0	0	0	0
OCT 87	170	50	44	40	37	37	28	13	4	2	1	0	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
DEC 86	MPH	6.8	6.9	6.8	6.0	5.6	4.1	4.4	4.9	3.8	3.3	4.8	5.8
	σ	5.0	5.5	5.5	5.0	6.0	5.5	4.5	4.5	4.0	3.5	4.5	5.0
JAN 87	MPH	7.0	7.6	9.1	9.3	9.3	8.3	7.6	8.0	7.6	8.0	8.3	8.4
	σ	5.5	6.0	6.0	6.0	6.5	5.5	6.5	6.0	5.5	5.5	5.0	6.0
FEB 87	MPH	7.8	7.8	8.4	8.5	7.8	7.4	6.6	6.3	6.9	7.3	7.4	7.4
	σ	5.0	5.5	5.5	5.5	4.5	4.0	4.0	3.5	4.5	5.0	4.5	4.5
MAR 87	MPH	7.1	7.3	8.4	7.8	7.8	8.0	9.8	9.8	9.4	6.9	6.6	6.9
	σ	5.0	5.0	4.5	4.5	5.5	5.0	4.5	4.5	5.5	5.0	4.5	4.0
APR 87	MPH	7.8	7.9	8.6	9.1	8.6	9.3	9.4	10.1	9.6	8.3	6.6	6.9
	σ	3.5	3.0	4.0	4.5	4.0	4.5	5.0	5.5	4.5	4.5	5.0	4.5
MAY 87	MPH	8.1	8.5	9.6	10.1	10.1	10.1	10.9	11.9	13.4	12.5	9.4	8.4
	σ	5.5	5.0	5.0	5.5	5.5	6.0	6.5	5.0	4.5	4.5	5.0	5.0
JUN 87	MPH	7.4	6.9	7.8	9.0	9.5	8.1	8.5	10.1	10.9	9.8	9.1	6.9
	σ	4.5	5.0	5.5	5.5	5.5	6.5	6.0	6.5	6.0	4.5	4.0	4.5
JUL 87	MPH	9.5	10.1	10.4	11.1	12.0	12.9	12.1	12.3	12.5	12.4	10.6	9.1
	σ	5.5	6.0	5.5	6.0	6.0	7.0	5.5	6.0	6.0	6.0	4.5	5.0
AUG 87	MPH	10.0	11.5	12.1	12.0	12.5	9.8	7.8	8.5	9.6	9.9	8.3	8.1
	σ	5.5	4.5	4.0	4.5	5.5	6.0	5.0	5.5	5.5	5.0	4.0	6.0
SEP 87	MPH	7.6	9.9	11.0	11.8	11.9	9.1	6.4	6.5	7.5	7.4	5.3	5.5
	σ	4.5	4.5	4.0	4.0	4.5	4.0	4.0	4.0	4.5	4.5	3.0	4.5
OCT 87	MPH	6.6	9.0	10.1	11.3	12.3	9.1	7.4	6.8	7.4	6.8	4.0	3.4
	σ	4.0	5.5	6.0	5.0	4.5	5.0	4.5	4.0	4.5	2.5	3.0	3.5

Wind Rose Data
Hours per Month

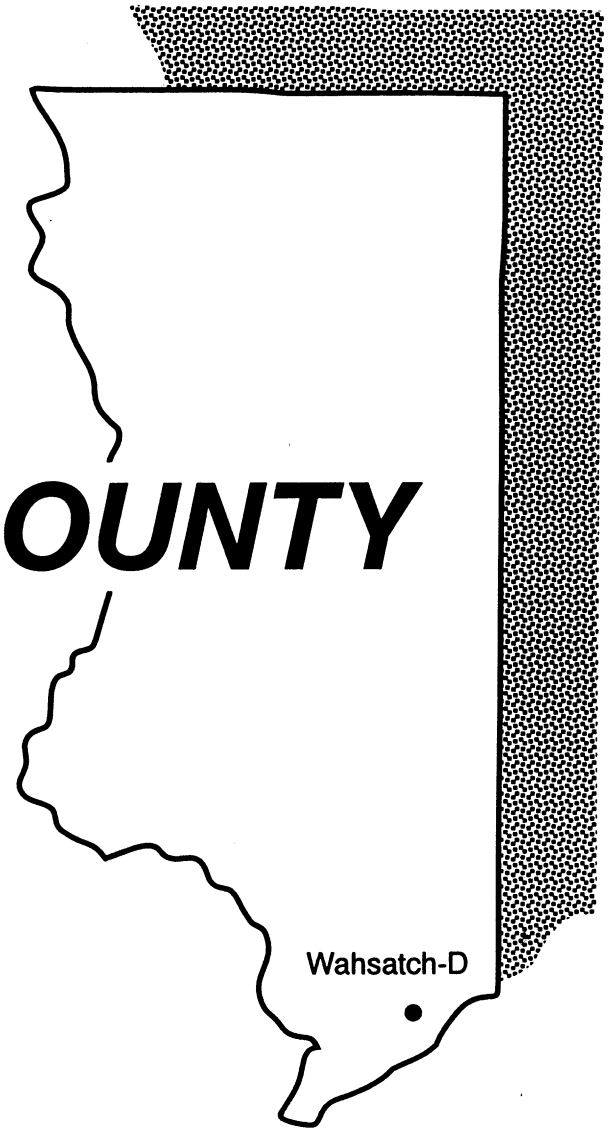
		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 86	122	32	1	1	8	13	1	2
	JAN 87	127	22	1	3	25	37	3	3
	FEB 87	141	39	3	6	28	19	6	7
	MAR 87	141	42	5	7	46	45	7	10
	APR 87	131	38	6	10	69	37	8	15
	MAY 87	172	26	7	1	14	17	3	2
12-18 MPH	DEC 86	62	14	0	0	0	1	0	1
	JAN 87	106	22	1	2	11	6	1	2
	FEB 87	75	20	1	3	11	4	1	5
	MAR 87	60	12	1	1	20	12	2	6
	APR 87	52	6	2	3	55	16	2	9
	MAY 87	156	14	2	0	27	13	2	1
18-24 MPH	DEC 86	21	2	0	0	0	0	0	0
	JAN 87	40	10	1	1	4	0	0	1
	FEB 87	18	3	1	0	1	0	0	1
	MAR 87	23	2	0	0	4	1	1	4
	APR 87	11	0	0	0	10	3	0	2
	MAY 87	56	1	0	0	3	4	1	0
24 + MPH	DEC 86	5	0	0	0	0	0	0	0
	JAN 87	5	3	1	0	0	0	0	0
	FEB 87	2	0	0	0	0	0	0	0
	MAR 87	9	0	0	0	0	0	0	3
	APR 87	3	0	0	0	3	1	0	1
	MAY 87	19	0	0	0	0	1	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 87	244	0	0	0	0	0	0	0
	JUL 87	229	0	0	0	0	0	0	0
	AUG 87	234	0	0	0	0	0	0	0
	SEP 87	241	0	0	0	0	0	0	0
	OCT 87	134	0	0	0	0	0	0	0
12-18 MPH	JUN 87	150	0	0	0	0	0	0	0
	JUL 87	224	0	0	0	0	0	0	0
	AUG 87	208	0	0	0	0	0	0	0
	SEP 87	197	0	0	0	0	0	0	0
	OCT 87	102	0	0	0	0	0	0	0
18-24 MPH	JUN 87	43	0	0	0	0	0	0	0
	JUL 87	88	0	0	0	0	0	0	0
	AUG 87	73	0	0	0	0	0	0	0
	SEP 87	20	0	0	0	0	0	0	0
	OCT 87	19	0	0	0	0	0	0	0
24 + MPH	JUN 87	15	0	0	0	0	0	0	0
	JUL 87	30	0	0	0	0	0	0	0
	AUG 87	15	0	0	0	0	0	0	0
	SEP 87	3	0	0	0	0	0	0	0
	OCT 87	1	0	0	0	0	0	0	0

RICH COUNTY



Wahsatch - D

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Site Description

County:	Rich	Elevation:	7,000 ft.
Township:	5 North	Range:	7 East
Section:	26	Quarter Section:	Southeast
Longitude:	111° 10'	Latitude:	41° 15'

Duration of data logging: August 1985 to March 1986
Months of available data: 7
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: South-Southwest
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Rolling terrain
West: Rolling terrain

Comments

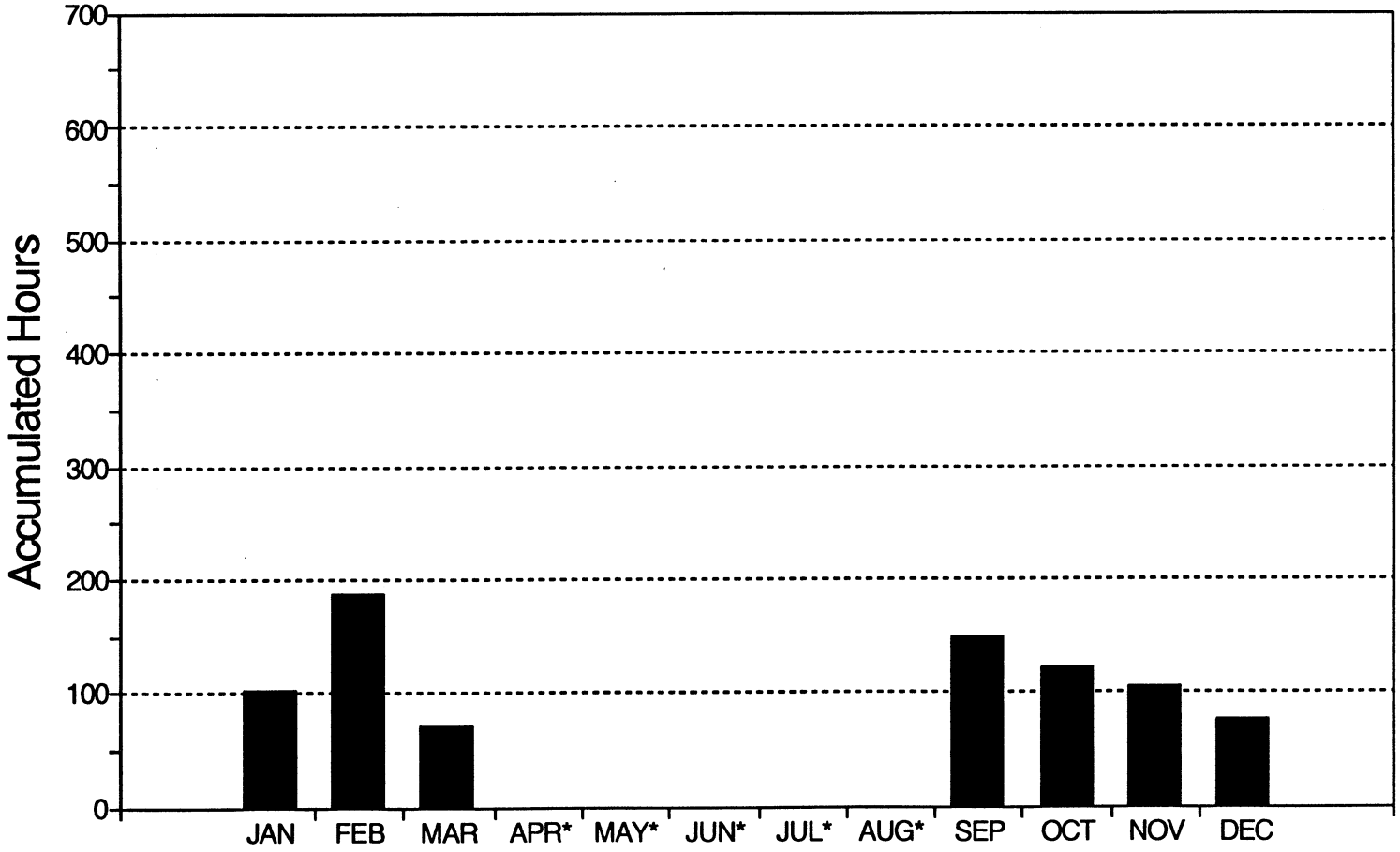
Property ownership: Desert Land & Cattle Corporation
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
SEP 85	255	82	51	28	18	14	13	13	13	13	11	8	6	4	2	2	1	3
OCT 85	255	97	56	38	25	18	13	10	7	5	3	2	1	0	0	0	0	0
NOV 85	255	135	94	44	24	19	9	5	2	1	0	0	0	0	0	0	0	0
DEC 85	255	113	57	26	26	15	7	2	0	0	0	0	0	0	0	0	0	0
JAN 86	255	79	70	48	31	13	6	3	1	0	0	0	0	0	0	0	0	0
FEB 86	255	95	65	57	57	41	23	8	1	0	0	0	0	0	0	0	0	0
MAR 86	255	114	59	26	15	13	9	5	2	0	0	0	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 85	MPH	3.1	3.3	3.4	3.6	3.6	8.0	12.3	14.0	13.3	9.4	5.0	3.8
	σ	2.0	2.5	3.0	3.0	3.0	5.0	8.5	9.0	8.0	5.0	3.5	2.5
OCT 85	MPH	3.5	3.1	3.3	3.3	4.0	6.1	9.6	11.0	9.9	5.9	4.3	3.6
	σ	2.5	2.5	2.5	2.0	3.0	3.5	6.0	6.0	5.0	2.5	2.5	2.5
NOV 85	MPH	4.9	5.0	4.8	4.9	5.1	6.9	7.8	7.8	6.4	5.9	5.0	5.3
	σ	3.5	3.0	3.0	3.0	3.5	4.0	4.0	3.5	3.5	3.5	3.5	3.0
DEC 85	MPH	5.1	4.8	4.5	4.4	4.9	5.1	5.3	5.6	5.5	5.0	4.6	4.9
	σ	2.5	2.5	3.5	3.5	3.5	4.0	3.0	4.0	3.5	2.5	3.5	2.5
JAN 86	MPH	3.6	4.0	4.5	5.1	4.6	5.3	5.8	5.6	5.0	4.5	4.3	4.1
	σ	3.5	3.5	4.0	4.5	3.5	3.5	4.5	4.0	3.5	3.5	3.5	3.5
FEB 86	MPH	6.9	6.5	6.4	6.3	6.4	6.6	7.5	7.5	7.0	6.8	6.4	6.8
	σ	5.0	4.5	4.5	4.5	5.0	5.0	4.5	4.5	4.0	4.5	4.5	4.5
MAR 86	MPH	3.8	3.8	3.6	3.3	3.6	5.6	8.4	8.4	6.3	4.8	3.8	3.4
	σ	2.5	3.0	2.5	2.5	2.5	3.5	4.0	4.0	3.0	2.0	2.0	2.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 85	18	4	2	6	37	51	31	12
	OCT 85	7	13	0	2	49	75	37	7
	NOV 85	2	14	0	4	81	153	19	0
	DEC 85	5	17	0	1	63	102	8	0
	JAN 86	1	0	0	2	81	92	18	2
	FEB 86	17	10	0	1	85	95	8	1
	MAR 86	11	1	0	0	42	90	41	12
12-18 MPH	SEP 85	0	0	0	2	14	22	6	1
	OCT 85	0	0	0	0	16	29	10	0
	NOV 85	0	0	0	1	25	20	6	0
	DEC 85	5	21	0	0	9	11	1	0
	JAN 86	0	0	0	0	11	29	9	0
	FEB 86	0	5	0	1	70	44	3	0
	MAR 86		0	0	0	11	16	9	1
18-24 MPH	SEP 85	0	0	0	1	17	19	3	0
	OCT 85	0	0	0	0	4	14	4	0
	NOV 85	0	0	0	0	4	3	0	0
	DEC 85	0	2	0	0	0	0	0	0
	JAN 86	0	0	0	0	1	3	0	0
	FEB 86	0	0	0	0	5	5	0	0
	MAR 86		0	0	0	2	4	2	0
24 + MPH	SEP 85	0	0	0	1	14	18	3	0
	OCT 85	0	0	0	0	1	4	1	0
	NOV 85	0	0	0	0	0	0	0	0
	DEC 85	0	0	0	0	0	0	0	0
	JAN 86	0	0	0	0	0	0	0	0
	FEB 86	0	0	0	0	0	0	0	0
	MAR 86	0	0	0	0	0	0	0	0

SALT LAKE COUNTY

Point of the Mountain - A

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Wind Rose Data Table 129

Site Description

County:	Salt Lake	Elevation:	5,300 ft.
Township:	4 South	Range:	1 West
Section:	24	Quarter Section:	—
Longitude:	111° 55'	Latitude:	40° 28'

Duration of data logging:	May 1985 to May 1988
Months of available data:	23
Anemometer height:	50 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Varies with time of year
Terrain classification in each of the principal directions:

North:	High grass, low row crops
East:	High grass, low row crops
South:	High grass, low row crops
West:	Rolling terrain

Comments

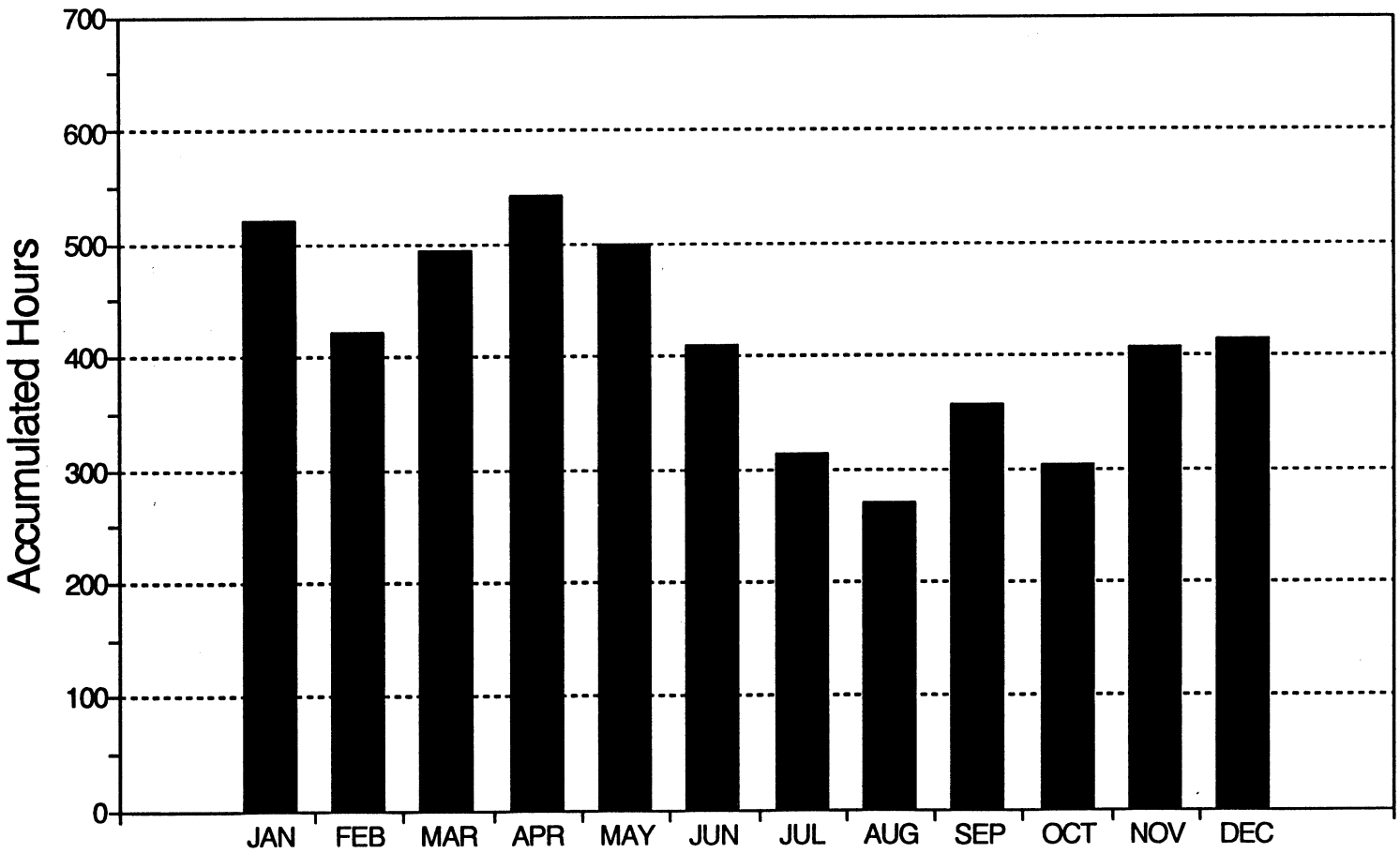
Property ownership:	Private
Site selection:	Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 85	92	57	76	96	100	84	67	51	38	28	19	13	9	6	4	2	1	2
JUN 85	118	85	94	103	98	77	57	38	23	13	7	3	2	1	1	0	0	0
JUL 85	146	87	109	112	99	74	41	22	17	12	9	6	4	2	2	1	1	1
AUG 85	81	56	74	98	112	102	78	54	35	23	14	7	4	3	2	1	0	0
SEP 85	68	54	82	102	101	91	73	52	36	22	14	10	6	4	2	1	1	1
OCT 85	120	71	95	106	98	88	62	33	22	18	13	7	4	3	2	1	1	1
NOV 85	185	65	70	69	73	71	61	43	29	18	10	7	5	4	4	3	2	4
DEC 85	255	46	49	46	46	39	26	19	10	7	6	4	3	2	2	1	1	1
JAN 86	213	56	65	64	59	59	59	58	45	32	18	7	3	2	1	1	0	0
FEB 86	112	67	70	66	69	65	48	39	32	21	15	14	13	12	10	8	5	6
MAR 86	121	69	80	89	96	95	71	45	24	16	12	9	7	5	3	2	1	1
APR 86	137	57	74	82	75	62	54	50	40	27	18	13	10	7	5	3	2	4
JUL 87	73	41	44	52	62	69	71	68	59	48	39	30	22	16	11	8	6	26
AUG 87	90	48	57	66	71	73	66	59	52	42	35	27	19	12	8	6	4	10
SEP 87	111	59	68	70	73	73	64	50	41	34	27	19	12	8	5	3	2	3
OCT 87	160	110	116	93	73	59	50	37	24	13	6	3	1	0	0	0	0	0
NOV 87	255	115	112	93	59	32	17	9	6	3	2	1	0	0	0	0	0	0
DEC 87	229	94	97	92	79	62	45	25	12	6	3	1	0	0	0	0	0	0
JAN 88	217	114	111	104	78	54	32	18	9	4	2	1	0	0	0	0	0	0
FEB 88	255	125	103	73	46	26	16	11	6	3	1	1	0	0	0	0	0	0
MAR 88	202	102	103	84	65	51	39	27	19	15	11	8	6	4	3	2	1	2
APR 88	149	94	100	77	61	54	42	31	23	18	16	14	11	9	6	4	3	7
MAY 88	86	42	47	37	26	22	19	15	13	12	10	9	7	6	4	3	2	10

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 85	MPH	10.9	11.9	12.3	13.1	14.1	14.8	14.8	16.5	15.9	13.6	11.1	11.3
	σ	5.5	6.0	5.5	4.5	4.5	4.5	6.5	6.5	6.5	5.5	5.5	6.5
JUN 85	MPH	10.1	9.9	10.9	10.9	11.9	11.4	12.0	13.0	13.9	13.5	8.4	8.8
	σ	5.0	4.5	5.0	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.0	4.5
JUL 85	MPH	10.0	10.3	10.5	12.0	12.8	12.0	10.5	10.1	10.6	10.6	10.0	8.6
	σ	4.5	4.0	4.5	3.5	3.5	4.0	4.5	5.5	6.0	6.0	7.0	6.0
AUG 85	MPH	12.9	12.9	12.9	13.4	13.0	13.3	14.3	15.3	14.5	13.4	10.3	9.6
	σ	5.0	6.0	5.0	4.5	5.0	5.5	5.5	4.5	4.5	4.5	4.5	4.0
SEP 85	MPH	11.4	12.0	11.9	11.8	13.3	14.4	14.3	15.0	16.0	14.9	12.4	12.1
	σ	5.5	3.5	4.0	4.0	3.5	6.0	6.5	6.0	5.0	5.5	5.0	5.0
OCT 85	MPH	12.5	10.4	10.3	10.6	11.6	13.0	13.3	13.8	13.3	11.5	10.0	11.4
	σ	5.0	5.5	5.5	5.5	5.0	5.0	6.0	6.0	4.5	4.5	5.5	7.0
NOV 85	MPH	12.1	10.4	10.9	11.4	11.9	12.4	11.3	11.3	10.1	10.3	10.8	11.6
	σ	7.5	7.5	7.5	7.0	7.0	6.5	6.0	7.5	6.0	7.0	7.0	8.0
DEC 85	MPH	5.0	5.0	5.9	6.8	6.4	7.3	7.3	6.4	6.3	5.0	4.9	4.6
	σ	5.5	6.0	7.0	7.5	7.5	8.0	8.0	7.5	6.5	6.0	6.0	5.5
JAN 86	MPH	9.8	10.6	10.9	12.4	14.5	12.0	11.9	10.4	10.0	10.5	10.1	10.0
	σ	6.5	7.0	7.0	7.0	7.0	6.5	7.5	7.5	6.0	6.5	7.5	6.5
FEB 86	MPH	13.3	13.6	13.9	14.5	14.8	14.8	14.5	14.5	13.5	12.0	12.0	11.8
	σ	7.0	7.5	8.0	9.0	8.5	7.0	6.5	7.5	7.5	8.0	7.5	8.5
MAR 86	MPH	11.1	11.0	11.8	12.5	13.6	14.4	14.0	13.4	14.0	10.8	9.5	9.6
	σ	5.5	6.0	5.0	5.5	6.5	5.5	7.0	6.5	5.5	4.5	6.0	4.5
APR 86	MPH	11.0	11.6	11.9	11.4	12.8	14.6	15.1	15.3	14.8	11.9	10.4	10.0
	σ	6.5	6.0	7.0	6.5	6.0	6.5	7.5	7.5	7.5	8.0	8.0	6.5
JUL 87	MPH	16.3	17.5	17.3	18.6	18.0	18.6	18.4	17.5	16.9	16.1	15.6	16.0
	σ	7.5	9.0	8.5	9.5	8.5	8.5	9.5	9.5	7.5	7.5	7.0	6.5
AUG 87	MPH	15.4	15.9	17.5	19.0	18.0	15.8	13.5	13.1	16.3	15.3	13.3	13.3
	σ	9.5	8.5	7.0	5.5	5.5	5.5	5.0	6.5	7.0	7.0	7.0	7.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 87	MPH	11.5	12.1	13.6	14.0	14.3	14.5	12.3	12.6	16.1	17.1	14.1	11.9
	σ	7.5	7.0	7.5	6.5	6.0	6.0	6.0	5.5	5.0	5.5	7.0	6.5
OCT 87	MPH	8.9	9.5	9.1	10.1	10.8	11.6	10.9	10.4	12.6	11.4	9.4	7.9
	σ	4.5	5.5	5.5	4.5	4.5	4.5	5.0	3.5	5.0	4.5	5.0	4.0
NOV 87	MPH	6.8	6.9	7.8	8.1	8.1	8.4	8.6	9.6	8.9	6.8	6.5	6.8
	σ	3.0	3.5	4.0	4.0	3.5	4.0	5.0	4.5	4.5	3.0	3.5	3.5
DEC 87	MPH	9.1	9.3	9.3	9.3	9.4	10.1	9.3	8.6	7.8	8.1	8.9	8.8
	σ	5.5	5.5	4.5	4.5	5.5	4.5	4.5	5.5	5.0	5.0	5.0	5.0
JAN 88	MPH	9.1	9.8	9.8	9.3	9.1	9.6	8.0	7.6	8.3	8.3	8.5	8.8
	σ	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5	3.5	4.5	4.5	4.0
FEB 88	MPH	6.9	7.0	7.6	7.9	8.1	7.9	7.4	7.5	7.4	6.5	6.3	6.8
	σ	3.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5	4.0	3.5	3.5	3.0
MAR 88	MPH	8.9	9.9	9.8	9.1	10.0	10.9	12.5	13.0	12.1	10.3	9.1	8.5
	σ	6.0	5.5	5.0	4.5	5.5	6.5	6.5	6.5	6.0	5.0	6.5	6.0
APR 88	MPH	12.1	10.5	10.6	9.9	10.8	13.4	13.8	13.9	13.9	12.9	11.5	11.4
	σ	7.5	7.5	7.5	6.5	6.0	8.5	6.5	6.5	8.0	8.0	6.5	6.0
MAY 88	MPH	8.3	9.0	10.3	10.4	10.8	11.9	15.3	16.3	18.8	16.9	13.1	10.3
	σ	5.5	4.5	6.0	6.5	7.5	8.0	11.5	12.0	11.5	9.0	7.0	5.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 85	15	1	7	53	77	4	12	59
	JUN 85	21	0	4	46	69	2	14	126
	JUL 85	17	1	9	108	104	4	11	54
	AUG 85	10	1	5	62	58	3	9	80
	SEP 85	8	0	5	65	73	1	6	80
	OCT 85	12	0	1	51	82	1	13	111
12-18 MPH	MAY 85	10	1	9	86	93	2	4	46
	JUN 85	15	0	2	67	51	0	5	92
	JUL 85	7	0	3	84	87	2	5	25
	AUG 85	9	0	4	118	97	1	3	60
	SEP 85	8	0	7	79	89	1	8	72
	OCT 85	6	0	0	81	87	0	7	66
18-24 MPH	MAY 85	3	0	7	38	44	1	2	22
	JUN 85	4	0	1	19	15	1	3	32
	JUL 85	2	0	2	19	20	1	3	4
	AUG 85	3	0	3	34	34	0	2	35
	SEP 85	4	0	5	30	36	0	3	31
	OCT 85	2	0	0	14	30	0	3	23
24 + MPH	MAY 85	2	0	4	13	18	0	2	14
	JUN 85	1	0	2	2	4	0	2	4
	JUL 85	1	1	3	7	11	0	1	1
	AUG 85	1	0	2	7	9	0	1	11
	SEP 85	1	0	7	15	9	0	1	5
	OCT 85	0	0	2	6	13	0	3	8

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 85	13	1	3	47	55	1	12	72
	DEC 85	22	1	0	20	34	0	9	54
	JAN 86	5	0	0	29	77	0	6	68
	FEB 86	16	1	2	42	75	2	10	55
	MAR 86	9	1	4	48	78	2	12	84
	APR 86	11	1	6	45	71	2	18	60
12-18 MPH	NOV 85	7	0	1	75	68	0	6	46
	DEC 85	5	0	0	35	48	0	7	16
	JAN 86	1	0	1	82	68	0	4	22
	FEB 86	8	0	3	68	70	1	4	29
	MAR 86	7	1	2	93	86	1	11	62
	APR 86	9	0	3	49	63	1	14	52
18-24 MPH	NOV 85	4	0	1	23	31	0	4	25
	DEC 85	0	0	0	13	20	0	1	2
	JAN 86	1	0	0	87	35	0	3	10
	FEB 86	2	0	5	42	32	0	2	7
	MAR 86	3	0	1	29	25	0	3	22
	APR 86	6	0	2	22	37	0	8	41
24 + MPH	NOV 85	1	0	2	11	15	0	2	7
	DEC 85	0	0	0	4	15	0	0	0
	JAN 86	1	0	0	13	9	0	2	7
	FEB 86	0	0	9	29	43	0	1	0
	MAR 86	6	0	1	11	13	0	2	6
	APR 86	6	0	5	10	13	0	2	26

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 87	30	7	13	48	13	5	6	15
	AUG 87	34	7	15	73	14	5	5	16
	SEP 87	46	7	12	86	14	5	6	19
	OCT 87	46	8	18	203	15	4	6	19
	NOV 87	55	9	18	190	13	4	7	23
	DEC 87	77	7	14	148	9	3	5	21
12-18 MPH	JUL 87	34	6	17	108	14	4	5	15
	AUG 87	31	6	16	126	11	3	4	14
	SEP 87	39	7	13	118	8	3	5	16
	OCT 87	30	5	9	113	8	2	3	11
	NOV 87	20	2	6	63	4	1	2	10
	DEC 87	16	2	13	139	6	1	1	8
18-24 MPH	JUL 87	23	3	14	109	11	2	3	10
	AUG 87	19	3	11	102	6	1	2	8
	SEP 87	25	3	9	71	4	1	2	10
	OCT 87	16	2	2	44	2	0	1	6
	NOV 87	5	0	1	7	1	0	0	3
	DEC 87	2	0	4	35	1	0	0	1
24 + MPH	JUL 87	14	1	9	98	25	1	1	6
	AUG 87	10	1	9	88	7	1	1	4
	SEP 87	12	1	7	49	3	1	1	5
	OCT 87	5	0	0	2	0	0	0	2
	NOV 87	1	0	0	1	0	0	0	1
	DEC 87	0	0	0	3	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 88	50	8	16	221	5	4	5	19
	FEB 88	44	7	13	201	7	3	6	21
	MAR 88	72	11	17	120	10	6	12	42
	APR 88	42	8	21	148	19	4	7	20
	MAY 88	25	4	10	66	5	2	3	11
12-18 MPH	JAN 88	23	3	11	107	2	1	2	14
	FEB 88	14	2	6	54	1	1	2	8
	MAR 88	30	5	10	76	4	2	5	24
	APR 88	24	4	10	91	10	2	3	12
	MAY 88	15	2	5	33	5	1	2	5
18-24 MPH	JAN 88	4	0	2	20	1	0	0	4
	FEB 88	3	0	1	13	1	0	0	2
	MAR 88	12	2	3	26	2	1	2	12
	APR 88	9	1	6	45	5	1	1	4
	MAY 88	8	1	2	21	3	1	1	3
24 + MPH	JAN 88	1	0	0	2	0	0	0	0
	FEB 88	0	0	0	1	0	0	0	0
	MAR 88	6	1	2	20	2	1	1	5
	APR 88	5	1	3	50	8	1	1	3
	MAY 88	5	1	2	31	9	1	1	3

Site Description

County:	Salt Lake	Elevation:	4,250 ft.
Township:	2 South	Range:	1 West
Section:	27	Quarter Section:	—
Longitude:	111° 55'	Latitude:	40° 39'

Duration of data logging: August 1986 to October 1989
Months of available data: 25
Anemometer height: 50 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Varies with time of year
Terrain classification in each of the principal directions:

North: High grass, low row crops, Buildings and structures
East: Buildings and structures
South: High grass, low row crops
West: High grass, low row crops

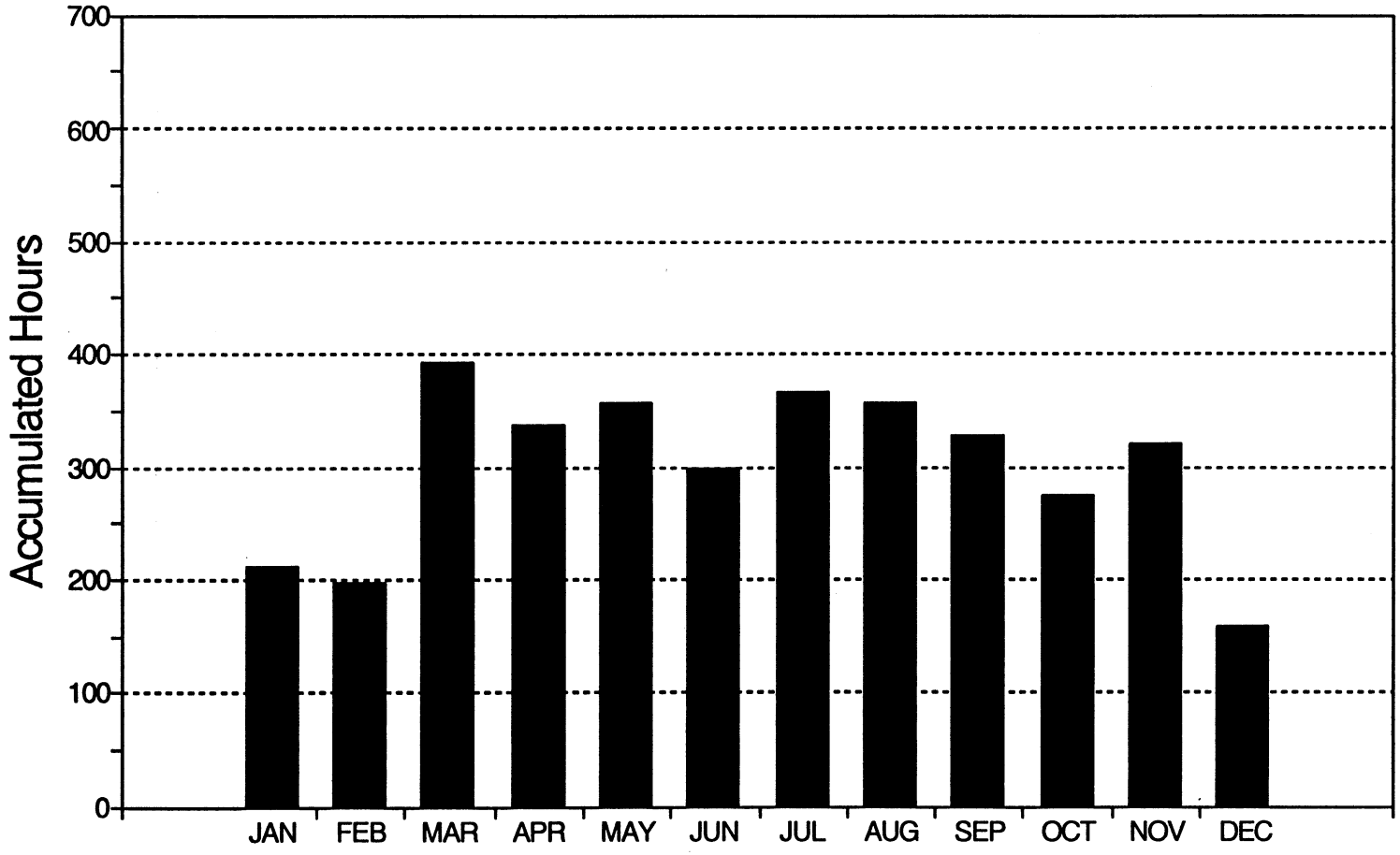
Comments

Property ownership: Salt Lake City Corporation.
Site selection: To serve as reference station for Salt Lake Valley winds.

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 86	213	89	98	91	83	63	45	30	18	9	4	1	0	0	0	0	0	0
SEP 86	200	94	95	80	64	54	44	33	22	14	8	4	2	1	1	1	0	1
OCT 86	255	119	103	73	51	34	23	16	10	6	3	2	1	1	0	0	0	0
NOV 86	230	80	81	76	68	55	42	33	23	15	8	4	2	1	0	0	0	0
DEC 86	255	96	63	35	25	18	11	7	4	2	1	0	0	0	0	0	0	0
JAN 87	247	87	77	56	38	24	17	14	11	8	5	3	2	1	1	0	0	0
FEB 87	236	83	84	76	62	48	34	22	13	7	3	1	1	0	0	0	0	0
MAR 87	188	89	84	78	80	72	57	42	26	14	7	3	2	1	1	0	0	0
APR 87	177	93	100	95	78	55	39	27	20	13	7	4	2	2	2	2	1	2
MAY 87	203	91	89	88	78	66	52	35	20	11	5	3	1	1	0	0	0	0
JUN 87	220	94	107	100	73	47	28	17	11	8	6	4	2	1	1	0	0	0
JUL 87	179	79	86	89	85	76	56	37	21	12	7	5	4	3	2	2	1	1
AUG 87	190	99	109	103	80	59	39	26	15	9	6	3	2	1	1	1	1	1
NOV 88	233	91	80	71	61	49	37	26	18	14	11	9	7	5	3	2	1	1
DEC 88	255	99	73	51	41	33	24	18	14	11	9	6	3	2	1	0	0	0
JAN 89	255	97	71	54	44	36	30	25	21	16	10	5	2	1	0	0	0	0
FEB 89	255	92	62	41	25	18	11	7	4	4	3	3	3	2	2	1	1	1
MAR 89	176	79	85	78	71	61	57	48	34	23	14	8	5	3	1	1	0	0
APR 89	205	90	99	91	67	54	41	30	19	11	5	3	2	1	1	0	0	0
MAY 89	196	102	96	81	64	53	42	34	26	18	11	7	5	3	2	2	1	2
JUN 89	246	94	84	77	63	49	34	24	17	12	8	5	3	2	1	1	1	1
JUL 89	219	94	102	101	86	62	39	22	11	5	2	1	1	0	0	0	0	0
AUG 89	191	87	88	79	71	68	56	42	27	15	8	4	2	1	1	1	1	1
SEP 89	205	93	99	82	67	56	43	28	17	11	6	4	2	2	1	1	1	3
OCT 89	225	103	89	78	60	52	45	36	24	15	9	5	3	1	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 86	MPH	7.9	8.0	8.5	8.6	10.0	12.5	11.8	9.8	10.6	8.8	8.0	6.8
	σ	5.5	5.5	4.5	4.0	5.5	5.0	5.5	4.5	4.0	3.0	3.5	4.5
SEP 86	MPH	8.6	8.4	8.0	7.8	10.0	12.4	12.1	12.3	12.4	8.8	8.5	8.8
	σ	4.5	5.0	5.0	5.0	6.0	7.0	7.0	5.0	5.0	4.0	5.5	5.0
OCT 86	MPH	5.9	5.9	6.5	6.5	7.4	9.1	8.6	10.0	9.8	7.9	5.9	5.6
	σ	5.0	4.5	4.0	4.5	5.5	6.0	5.0	4.0	3.5	4.0	4.0	5.0
NOV 86	MPH	9.3	10.4	10.1	10.1	11.0	11.3	11.9	10.5	7.1	6.8	7.1	8.0
	σ	6.5	6.0	5.5	6.0	6.0	6.0	6.5	5.0	4.0	3.5	5.0	5.5
DEC 86	MPH	4.8	4.5	4.6	4.0	4.6	6.5	6.6	6.1	4.4	3.9	3.4	3.6
	σ	4.0	4.0	3.5	3.5	3.5	5.5	5.0	5.0	3.5	3.0	3.0	3.0
JAN 87	MPH	6.6	6.9	8.1	7.1	8.3	9.8	9.3	8.8	7.5	6.8	7.9	6.5
	σ	5.5	5.5	5.0	5.5	6.5	6.5	5.5	5.0	5.0	5.0	5.0	5.0
FEB 87	MPH	6.6	7.8	9.1	8.1	8.8	10.5	11.0	10.6	9.5	7.3	6.1	6.3
	σ	4.5	5.0	5.0	5.0	5.5	6.5	6.0	5.0	4.5	4.5	4.5	4.0
MAR 87	MPH	8.5	9.4	9.5	9.1	11.5	13.9	14.1	13.8	11.4	8.4	7.3	7.4
	σ	4.5	6.0	5.5	5.0	5.0	6.0	6.0	4.5	3.5	4.5	4.5	5.0
APR 87	MPH	9.3	9.1	9.1	8.9	11.9	12.4	12.1	11.8	11.3	7.8	8.9	8.5
	σ	4.5	4.5	4.5	4.5	5.5	7.0	6.0	6.0	5.5	5.0	5.0	4.5
MAY 87	MPH	8.0	8.5	7.9	7.9	11.4	12.4	12.1	12.0	11.4	9.5	8.5	8.1
	σ	4.5	3.5	4.0	4.5	6.0	6.5	5.5	4.5	5.5	4.5	4.0	5.0
JUN 87	MPH	7.0	7.5	7.4	7.1	9.6	9.4	10.3	11.4	11.9	10.0	7.5	7.5
	σ	5.0	5.0	5.5	5.0	5.5	5.5	4.5	5.0	5.0	4.0	3.0	3.5
JUL 87	MPH	8.3	9.1	8.9	9.1	12.3	13.8	13.6	12.8	12.5	10.9	9.4	8.3
	σ	4.5	5.0	5.0	6.0	5.5	6.5	6.5	6.0	5.5	5.0	4.0	4.0
AUG 87	MPH	9.1	8.0	8.8	9.6	12.4	12.0	10.3	10.4	10.9	8.6	8.0	7.8
	σ	6.0	4.5	4.0	4.0	4.5	5.0	4.5	5.0	5.5	5.5	3.5	4.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
NOV 88	MPH	9.4	9.3	8.8	9.6	9.5	11.1	11.9	9.5	9.5	9.9	10.0	10.0
	σ	6.0	6.0	7.5	7.5	6.5	7.0	7.0	5.5	5.0	6.5	6.5	6.5
DEC 88	MPH	7.1	7.5	7.6	7.8	7.9	8.5	8.0	7.8	7.0	6.6	6.6	7.4
	σ	6.0	6.0	6.5	5.0	5.5	6.0	6.5	5.5	5.5	5.0	5.5	6.0
JAN 89	MPH	7.3	7.5	7.1	8.4	8.3	8.9	8.9	8.6	8.5	7.0	7.3	7.8
	σ	5.5	5.5	5.5	6.5	6.0	6.0	6.5	6.5	6.0	5.5	6.0	5.5
FEB 89	MPH	6.5	6.9	6.3	5.1	6.0	7.3	6.6	5.6	5.0	5.5	5.4	4.9
	σ	6.5	6.0	6.0	6.5	6.5	6.0	5.5	5.5	4.0	4.0	4.5	4.5
MAR 89	MPH	9.6	10.8	11.6	10.4	12.8	13.4	13.5	13.4	10.3	9.1	10.0	9.1
	σ	5.5	5.5	5.5	6.0	6.0	6.5	6.0	7.0	7.0	5.5	4.0	5.0
APR 89	MPH	8.3	7.8	7.5	7.4	10.6	9.6	11.9	12.9	12.0	8.5	8.8	7.3
	σ	5.0	5.5	4.5	5.0	6.0	6.0	6.0	5.0	4.5	3.5	4.0	4.0
MAY 89	MPH	8.5	9.1	8.3	7.6	9.1	10.4	13.0	15.3	14.8	11.3	8.8	8.5
	σ	5.0	5.0	4.5	5.5	6.0	6.0	7.0	6.0	5.0	6.0	5.0	5.0
JUN 89	MPH	6.8	6.6	6.3	6.0	8.8	9.6	12.1	13.3	13.0	10.6	9.0	7.3
	σ	4.5	4.5	4.0	4.5	5.5	6.5	6.5	7.0	5.5	5.5	4.0	3.5
JUL 89	MPH	7.9	8.0	8.1	7.3	9.4	10.0	9.5	10.3	10.8	10.0	8.8	7.6
	σ	5.0	4.0	4.0	4.0	5.5	6.0	4.5	3.0	3.5	3.5	3.0	4.5
AUG 89	MPH	9.5	9.3	9.1	9.4	11.1	12.9	12.6	12.4	10.6	8.9	9.6	9.9
	σ	4.5	5.5	5.5	5.5	5.5	7.0	6.0	5.5	6.0	6.5	5.0	4.5
SEP 89	MPH	7.0	7.1	7.9	7.8	9.8	12.5	13.0	14.3	13.9	8.8	7.3	6.4
	σ	5.0	5.0	5.0	5.0	5.0	6.0	6.5	6.5	6.5	3.5	3.5	4.0
OCT 89	MPH	7.8	8.6	7.9	7.6	8.9	11.6	11.8	12.8	12.8	9.4	8.1	7.6
	σ	4.5	6.0	5.5	5.0	5.5	6.5	8.0	5.5	5.0	4.0	4.5	5.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 86	34	4	18	49	69	31	24	48
	SEP 86	28	4	12	41	69	33	22	61
	OCT 86	33	2	8	28	81	28	19	95
	NOV 86	23	2	3	24	98	26	14	46
	DEC 86	30	0	5	33	50	7	4	64
	JAN 87	17	1	3	22	90	18	12	58
12-18 MPH	AUG 86	12	0	10	79	55	7	2	26
	SEP 86	11	1	6	60	43	8	3	30
	OCT 86	15	4	1	32	21	2	1	31
	NOV 86	16	1	0	47	66	1	7	27
	DEC 86	3	0	0	22	9	1	0	18
	JAN 87	10	2	1	17	32	1	1	14
18-24 MPH	AUG 86	1	0	4	42	7	1	0	3
	SEP 86	2	0	3	45	13	0	1	5
	OCT 86	7	4	0	12	2	0	1	5
	NOV 86	8	0	0	33	12	0	3	14
	DEC 86	0	0	0	8	1	0	0	4
	JAN 87	9	4	0	9	5	0	0	5
24 + MPH	AUG 86	0	0	0	4	0	0	0	0
	SEP 86	0	0	0	10	6	0	0	2
	OCT 86	2	1	0	2	0	0	0	1
	NOV 86	2	0	0	9	1	0	0	3
	DEC 86	0	0	0	1	0	0	0	0
	JAN 87	4	3	0	5	0	0	0	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 87	36	2	4	31	72	13	9	79
	MAR 87	31	3	7	29	71	22	13	75
	APR 87	36	5	13	40	92	32	20	53
	MAY 87	27	4	11	37	82	29	26	53
	JUN 87	49	6	18	44	49	29	33	74
	JUL 87	32	4	18	49	55	19	27	50
12-18 MPH	FEB 87	7	1	1	36	30	2	1	66
	MAR 87	16	1	2	58	58	3	4	66
	APR 87	19	2	5	48	48	8	4	38
	MAY 87	12	2	9	77	38	8	4	46
	JUN 87	22	1	7	43	22	8	3	43
	JUL 87	18	0	11	84	46	8	5	45
18-24 MPH	FEB 87	1	1	0	20	8	0	0	11
	MAR 87	3	0	1	41	11	0	2	24
	APR 87	4	1	2	31	6	0	1	15
	MAY 87	2	0	4	39	7	2	1	12
	JUN 87	1	0	3	18	5	0	1	8
	JUL 87	4	0	2	44	9	1	1	8
24 + MPH	FEB 87	0	0	0	3	2	0	0	1
	MAR 87	0	0	0	6	1	0	0	6
	APR 87	1	0	0	9	6	0	0	5
	MAY 87	0	0	1	6	1	1	1	2
	JUN 87	0	0	0	5	3	0	1	5
	JUL 87	0	0	0	12	10	1	0	1

Wind Rose Data cont.
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 87	38	7	21	52	95	29	21	47
	NOV 88	72	14	2	5	24	68	43	16
	DEC 88	44	12	4	2	31	94	28	8
	JAN 89	45	10	2	3	22	105	24	11
	FEB 89	58	14	2	1	12	69	30	8
	MAR 89	53	20	3	5	31	69	44	16
12-18 MPH	AUG 87	16	1	7	64	51	9	2	28
	NOV 88	35	5	0	1	42	58	2	4
	DEC 88	23	2	2	0	27	41	1	2
	JAN 89	18	3	0	1	28	54	2	3
	FEB 89	14	2	0	0	5	30	3	0
	MAR 89	51	7	1	2	50	65	10	4
18-24 MPH	AUG 87	2	0	2	32	8	0	1	5
	NOV 88	9	0	0	0	23	25	0	1
	DEC 88	8	1	3	0	17	16	0	0
	JAN 89	3	0	0	0	22	36	0	0
	FEB 89	1	0	0	0	3	11	0	0
	MAR 89	21	2	0	1	52	27	1	1
24 + MPH	AUG 87	0	0	0	9	4	0	0	0
	NOV 88	6	0	0	0	19	14	0	0
	DEC 88	2	0	1	0	11	6	0	0
	JAN 89	1	0	0	0	8	9	0	0
	FEB 89	0	0	0	0	11	5	0	0
	MAR 89	5	1	0	0	15	10	0	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 89	82	35	5	6	32	58	38	23
	MAY 89	93	39	3	6	28	60	29	21
	JUN 89	65	33	7	11	38	55	30	16
	JUL 89	65	29	7	18	51	65	30	30
	AUG 89	68	24	5	12	43	51	30	21
	SEP 89	62	21	3	7	41	64	49	26
	OCT 89	71	14	1	6	39	81	42	18
12-18 MPH	APR 89	64	10	1	3	41	37	5	2
	MAY 89	67	18	1	3	37	24	6	4
	JUN 89	37	12	2	4	46	35	8	2
	JUL 89	42	11	1	7	66	47	9	2
	AUG 89	44	8	0	7	84	46	4	2
	SEP 89	44	9	0	3	58	43	5	3
	OCT 89	36	6	0	1	57	47	5	5
18-24 MPH	APR 89	23	2	0	1	21	13	0	1
	MAY 89	27	5	0	1	28	13	3	1
	JUN 89	12	2	0	1	22	13	1	1
	JUL 89	5	1	0	2	21	8	0	1
	AUG 89	11	2	0	2	51	18	1	0
	SEP 89	14	2	0	1	29	9	1	0
	OCT 89	8	1	0	1	44	18	1	1
24 + MPH	APR 89	5	0	0	0	2	5	0	0
	MAY 89	9	1	0	0	8	12	2	0
	JUN 89	6	0	0	0	4	10	1	0
	JUL 89	0	0	0	0	2	1	0	1
	AUG 89	4	0	0	0	8	7	0	0
	SEP 89	4	1	0	0	7	7	0	0
	OCT 89	2	0	0	0	10	5	0	0

Site Description

County:	Salt Lake	Elevation:	11,800 ft.
Township:	3 South	Range:	3 East
Section:	7	Quarter Section:	—
Longitude:	111° 38'	Latitude:	40° 35'

Duration of data logging: July 1985 to February 1986
Months of available data: 7
Anemometer height: 30 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Not available, faulty wind vane
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Rolling terrain
West: Rolling terrain

Comments

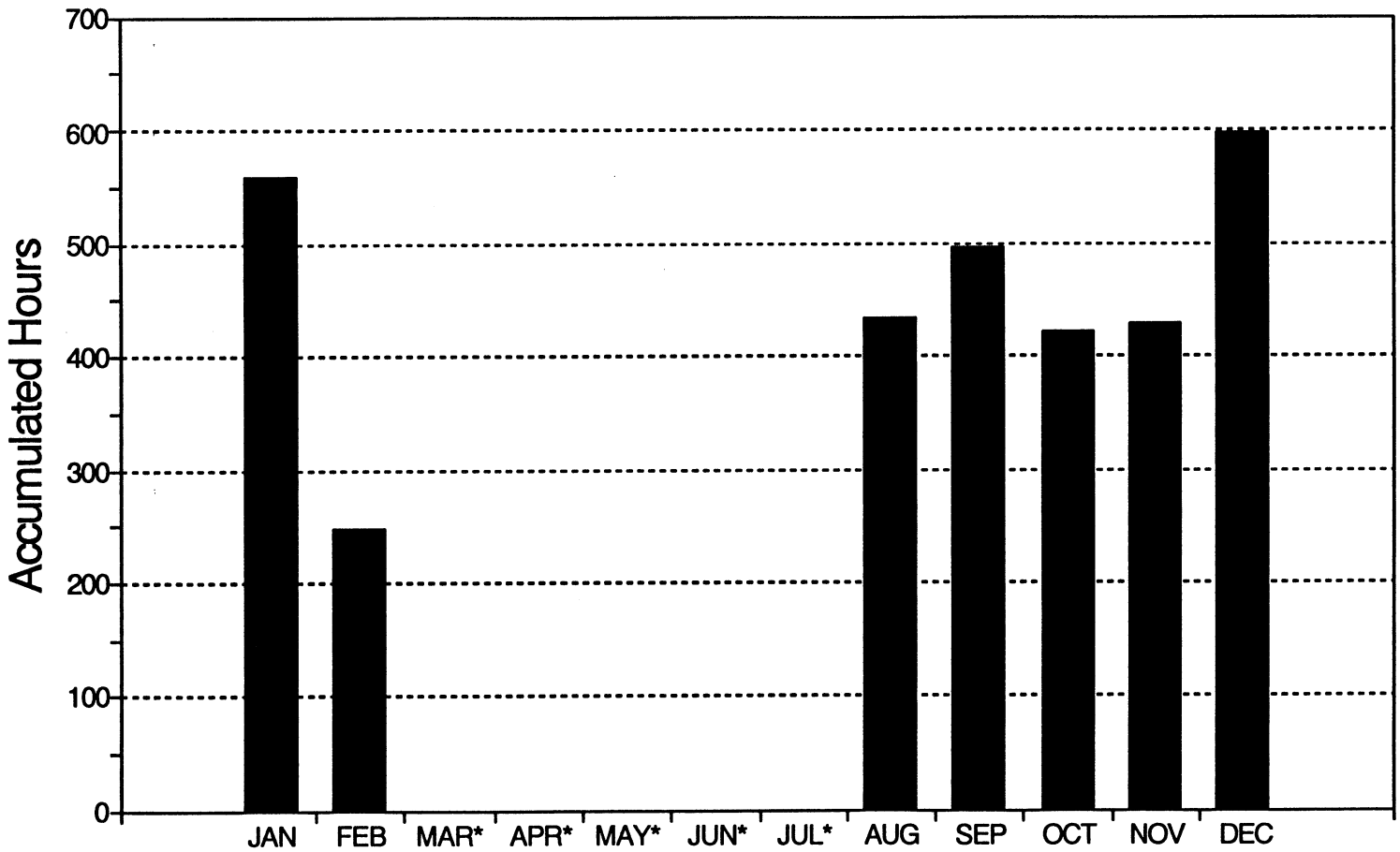
Property ownership: Snowbird Corporation
Site selection: To serve as a reference station for high elevation, mountain winds.

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 85	162	70	77	82	81	71	57	42	28	20	15	11	8	6	4	3	2	3
SEP 85	112	50	59	60	60	59	56	52	45	39	31	24	18	13	10	7	5	19
OCT 85	199	55	69	68	67	62	52	39	30	24	19	14	9	6	4	4	4	20
NOV 85	201	44	45	46	53	50	48	44	38	30	24	19	16	14	11	9	8	19
DEC 85	91	23	32	45	55	64	68	62	56	52	48	41	30	21	15	11	8	22
JAN 86	84	42	56	64	71	71	72	64	50	37	29	22	17	14	10	8	6	24
FEB 86	255	27	31	32	33	33	31	27	22	17	13	11	9	6	4	3	2	5

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

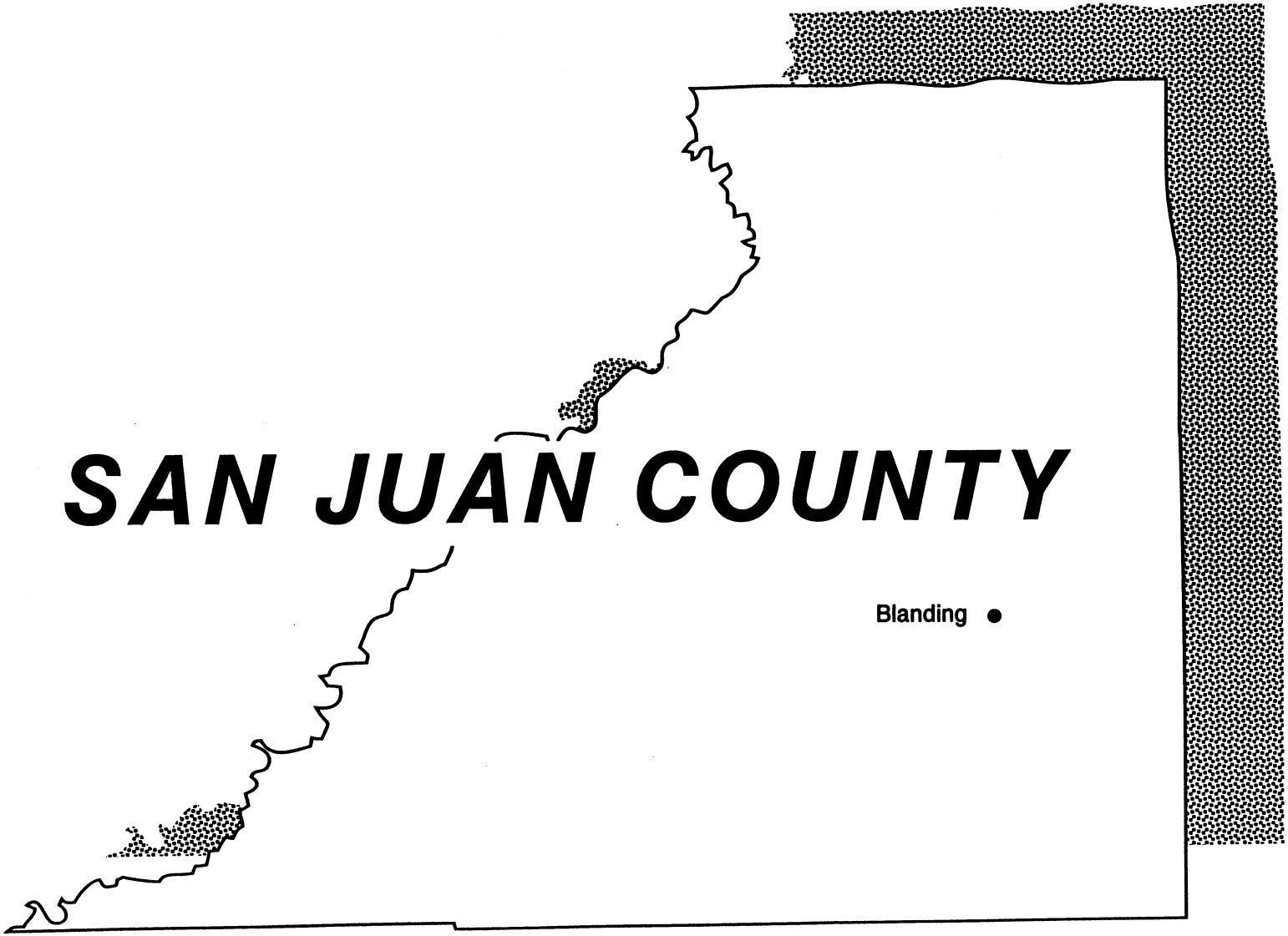
Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 85	MPH	15.5	15.6	15.6	15.6	11.6	8.8	8.8	9.1	8.8	9.5	11.3	12.9
	σ	5.0	6.0	6.5	7.0	6.0	6.0	3.0	4.0	4.0	4.5	6.0	5.5
SEP 85	MPH	15.9	16.4	17.5	17.8	15.3	14.6	14.1	14.3	13.3	14.6	15.3	16.0
	σ	6.5	8.0	7.5	8.5	8.0	9.0	9.5	9.0	9.5	8.5	8.0	6.0
OCT 85	MPH	13.6	13.8	14.4	13.6	11.3	9.9	9.6	9.5	11.3	12.5	13.9	13.4
	σ	8.5	9.0	9.5	9.0	8.0	8.0	8.0	8.5	9.5	9.0	8.5	8.5
NOV 85	MPH	14.4	15.6	15.0	13.9	13.6	12.0	11.5	12.6	13.1	13.6	13.8	13.1
	σ	10.0	10.5	11.0	10.5	9.5	8.5	7.0	9.5	10.0	9.5	9.5	9.5
DEC 85	MPH	17.3	16.8	16.6	17.5	17.0	17.5	17.6	17.9	18.6	18.9	18.9	18.6
	σ	9.0	9.5	9.5	8.5	7.0	7.0	8.0	9.0	11.0	10.5	9.0	8.5
JAN 86	MPH	15.4	16.1	16.4	16.1	15.6	14.8	16.4	17.1	18.1	17.5	17.3	14.6
	σ	6.5	7.0	7.5	8.5	10.0	10.0	10.5	10.0	10.5	8.5	6.5	6.0
FEB 86	MPH	7.1	7.9	8.0	9.1	8.5	8.3	8.9	8.6	9.4	6.9	7.1	7.3
	σ	8.5	9.0	8.5	9.5	9.0	10.0	9.5	9.5	9.0	7.0	8.0	8.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	48	0	2	1	15	23	41	100
	SEP 85	169	0	0	0	0	0	0	0
	OCT 85	192	0	0	0	0	0	0	0
	NOV 85	134	0	0	1	0	0	0	0
	DEC 85	101	0	0	0	0	0	0	0
	JAN 86	163	0	0	0	0	0	0	0
	FEB 86	90	0	0	0	0	0	0	0
12-18 MPH	AUG 85	28	0	0	0	13	24	33	111
	SEP 85	175	0	0	0	0	0	0	0
	OCT 85	181	0	0	0	0	0	0	0
	NOV 85	149	0	0	1	0	0	0	0
	DEC 85	186	0	0	0	0	0	0	0
	JAN 86	213	0	0	0	0	0	0	0
	FEB 86	97	0	0	0	0	0	0	0
18-24 MPH	AUG 85	17	0	0	0	4	9	19	40
	SEP 85	136	0	0	0	0	0	0	0
	OCT 85	93	0	0	0	0	0	0	0
	NOV 85	112	0	0	0	0	0	0	0
	DEC 85	170	0	0	0	0	0	0	0
	JAN 86	151	0	0	0	0	0	0	0
	FEB 86	66	0	0	0	0	0	0	0
24 + MPH	AUG 85	11	0	0	0	2	3	20	18
	SEP 85	129	0	0	0	0	0	0	0
	OCT 85	80	0	0	0	0	0	0	0
	NOV 85	120	0	0	0	0	0	0	0
	DEC 85	195	0	0	0	0	0	0	1
	JAN 86	131	0	0	0	0	0	0	1
	FEB 86	54	0	0	0	0	0	0	0

SAN JUAN COUNTY



Blanding

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Site Description

County:	San Juan	Elevation:	5,600 ft.
Township:	37 South	Range:	22 East
Section:	22	Quarter Section:	—
Longitude:	109° 30'	Latitude:	37° 35'

Duration of data logging: September 1985 to February 1988
Months of available data: 6
Anemometer height: 60 ft.

Surrounding Environmental Conditions

Prevailing wind direction: East-Northeast
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

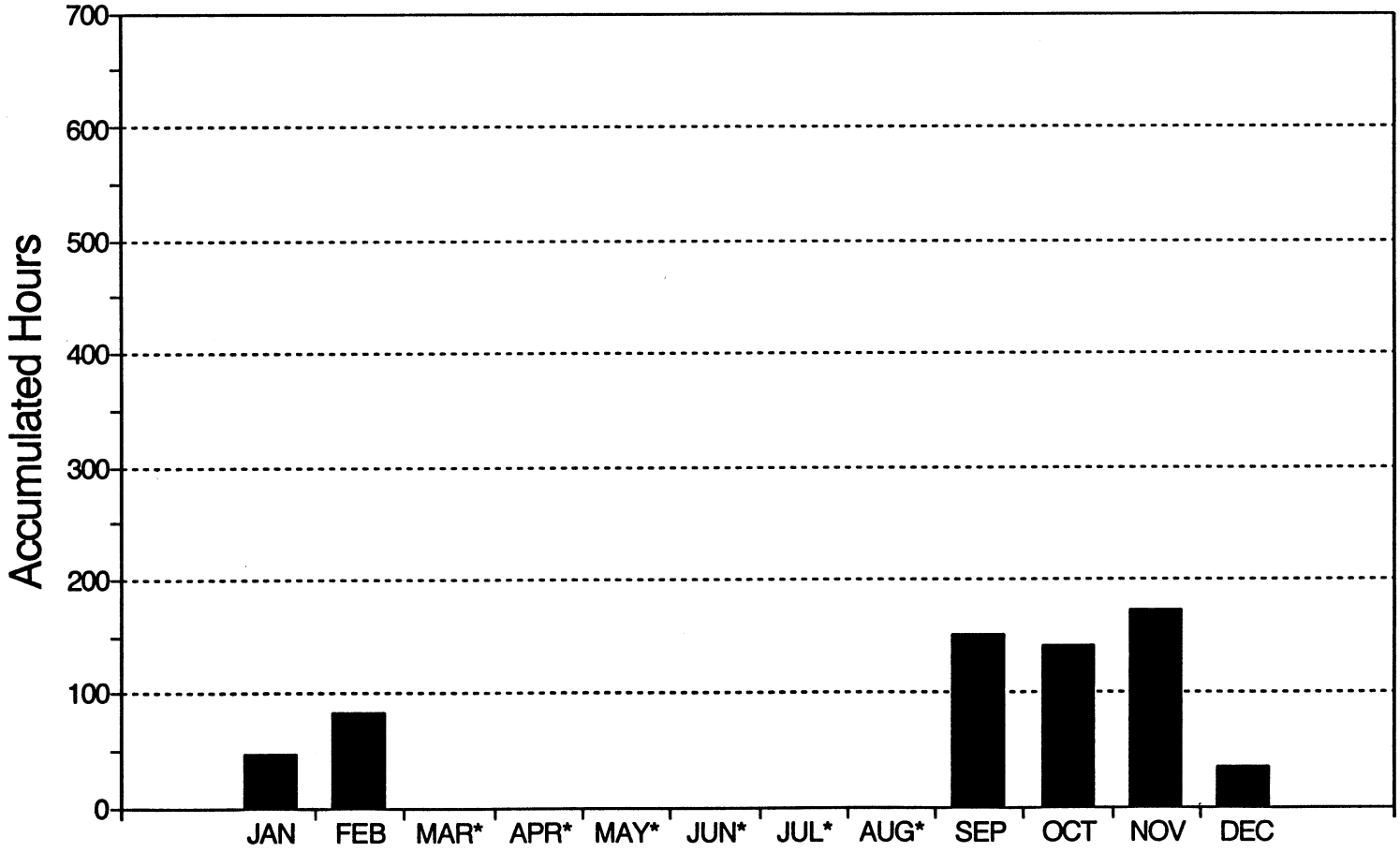
Comments

Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
SEP 85	208	89	84	60	33	21	15	10	6	3	2	1	1	0	0	0	0	0
OCT 85	255	134	95	60	33	21	13	8	4	2	1	0	0	0	0	0	0	0
NOV 85	255	109	63	45	34	25	20	15	11	8	6	4	2	1	1	0	0	0
DEC 85	255	129	63	25	8	2	1	0	0	0	0	0	0	0	0	0	0	0
JAN 86	255	107	51	20	10	4	3	3	2	2	1	1	1	0	0	0	0	0
FEB 86	255	93	61	36	21	13	7	4	2	1	0	0	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

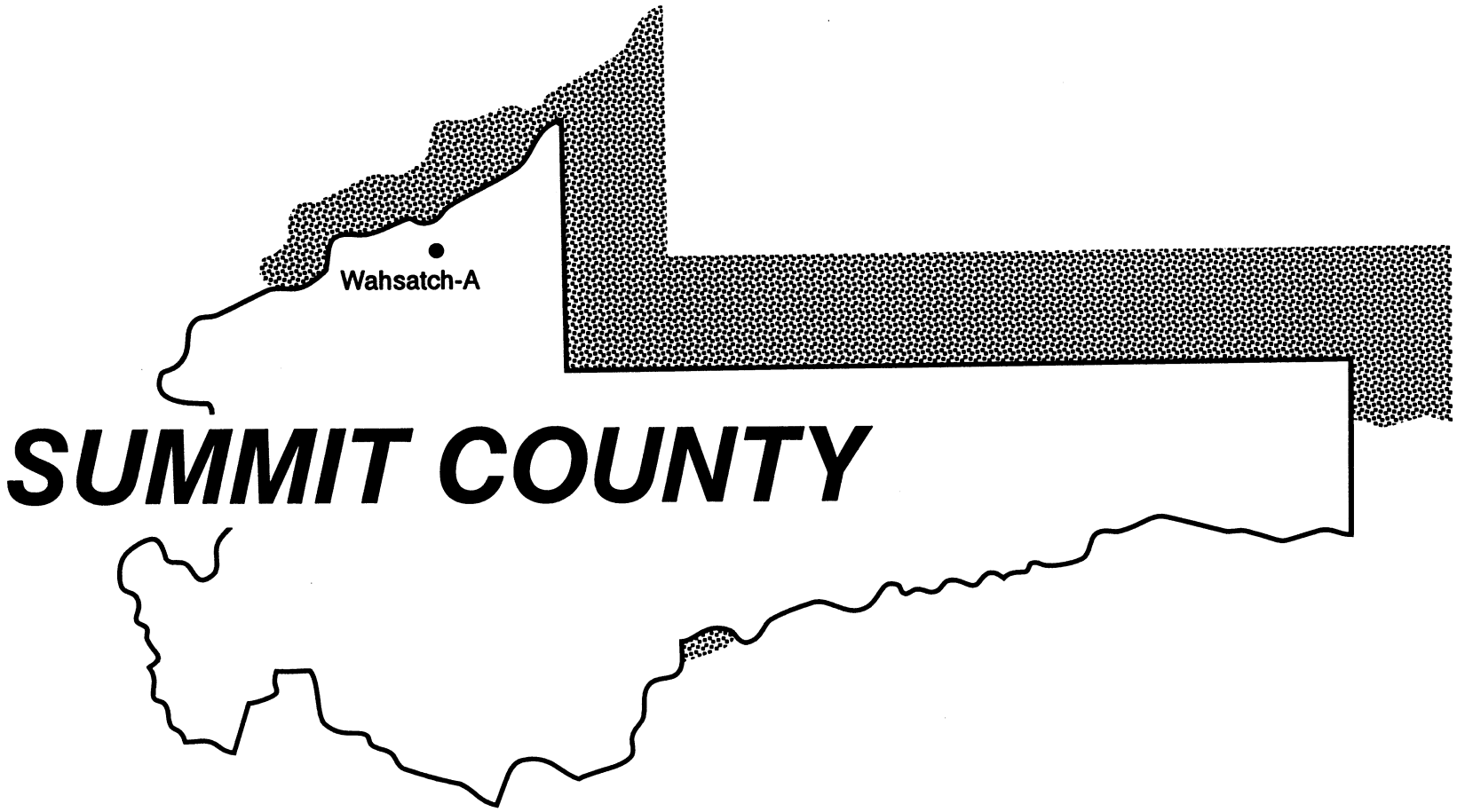
Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 85	MPH	7.4	7.1	5.9	5.9	5.6	6.5	8.4	9.5	9.8	8.5	8.3	8.3
	σ	4.0	3.5	3.5	3.5	3.5	3.0	4.5	5.5	5.5	4.5	3.0	3.5
OCT 85	MPH	8.3	6.1	5.1	4.4	3.6	6.0	7.0	7.5	7.4	5.0	6.9	8.0
	σ	4.0	3.5	3.0	2.0	2.5	4.0	4.0	4.0	4.5	3.0	3.5	3.5
NOV 85	MPH	6.6	6.4	5.1	4.9	5.6	8.3	9.4	9.1	7.5	6.4	6.4	6.8
	σ	4.5	4.0	3.5	4.0	5.0	6.5	7.0	7.5	5.5	4.0	4.0	4.0
DEC 85	MPH	4.4	3.4	3.8	3.3	2.3	3.5	4.8	4.6	3.5	4.8	5.5	5.4
	σ	2.5	2.5	2.5	2.0	1.5	1.5	1.5	3.0	2.5	2.5	2.0	3.0
JAN 86	MPH	3.8	4.0	3.3	3.1	2.4	3.3	4.0	4.5	4.3	5.9	5.8	5.0
	σ	2.5	3.0	2.5	2.0	2.0	1.5	2.5	4.0	4.5	3.5	3.0	2.5
FEB 86	MPH	3.9	4.1	3.8	3.9	3.4	5.3	6.5	6.8	5.0	4.6	3.8	9.8
	σ	2.5	3.5	3.5	2.5	3.5	3.0	5.0	4.0	3.5	3.0	2.0	4.5
SEP 86	MPH	7.4	7.1	5.9	5.9	5.6	6.5	8.4	9.5	9.8	8.5	8.3	8.3
	σ	4.0	3.5	3.5	3.5	3.5	3.0	4.5	5.5	5.5	4.5	3.0	3.5
OCT 86	MPH	8.3	6.1	5.1	4.4	3.6	6.0	7.0	7.5	7.4	5.0	6.9	8.0
	σ	4.0	3.5	3.0	2.0	2.5	4.0	4.0	4.0	4.5	3.0	3.5	3.5
NOV 86	MPH	6.6	6.4	5.1	4.9	5.6	8.3	9.4	9.1	7.5	6.4	6.4	6.8
	σ	4.5	4.0	3.5	4.0	5.0	6.5	7.0	7.5	5.5	4.0	4.0	4.0
DEC 86	MPH	4.4	3.4	3.8	3.3	2.3	3.5	4.8	4.6	3.5	4.8	5.5	5.4
	σ	2.5	2.5	2.5	2.0	1.5	1.5	1.5	3.0	2.5	2.5	2.0	3.0
JAN 86	MPH	3.8	4.0	3.3	3.1	2.4	3.3	4.0	4.5	4.3	5.9	5.8	5.0
	σ	2.5	3.0	2.5	2.0	2.0	1.5	2.5	4.0	4.5	3.5	3.0	2.5
FEB 86	MPH	3.9	4.1	3.8	3.9	3.4	5.3	6.5	6.8	5.0	4.6	3.8	9.8
	σ	2.5	3.5	3.5	2.5	3.5	3.0	5.0	4.0	3.5	3.0	2.0	4.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 85	32	67	18	17	34	46	11	7
	OCT 85	32	70	62	9	21	48	31	15
	NOV 85	23	32	34	8	12	51	35	20
	DEC 85	11	43	84	21	4	13	31	11
	JAN 86	12	39	64	21	2	8	17	15
	FEB 86	13	45	24	15	17	26	28	23
12-18 MPH	SEP 85	20	12	2	3	11	16	4	2
	OCT 85	8	6	9	1	3	19	16	7
	NOV 85	14	8	3	0	4	25	17	8
	DEC 85	2	3	3	1	0	0	1	1
	JAN 86	2	9	5	0	0	0	1	1
	FEB 86	2	17	2	0	4	3	5	7
18-24 MPH	SEP 85	6	0	0	0	4	5	2	1
	OCT 85	2	1	0	0	0	5	5	2
	NOV 85	3	1	2	0	2	14	9	3
	DEC 85	0	0	0	0	0	0	0	0
	JAN 86	0	5	0	0	0	0	0	1
	FEB 86	0	3	0	0	0	0	0	1
24 + MPH	SEP 85	1	0	0	0	1	1	1	1
	OCT 85	0	0	0	0	0	1	1	0
	NOV 85	0	0	1	0	0	7	6	1
	DEC 85	0	0	0	0	0	0	0	0
	JAN 86	0	3	0	0	0	0	0	0
	FEB 86	0	0	0	0	0	0	0	0



SUMMIT COUNTY

Wahsatch - A

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Wind Velocity Distribution Data Table . . 142
Wind Speed Figure 143
Wind Diurnal Data Table 144
Wind Rose Data Table 146

Site Description

County:	Summit	Elevation:	7,000 ft.
Township:	5 North	Range:	7 East
Section:	1	Quarter Section:	Southeast
Longitude:	111° 05'	Latitude:	41° 12'

Duration of data logging: February 1985 to August 1986
Months of available data: 19
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: South-Southeast
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

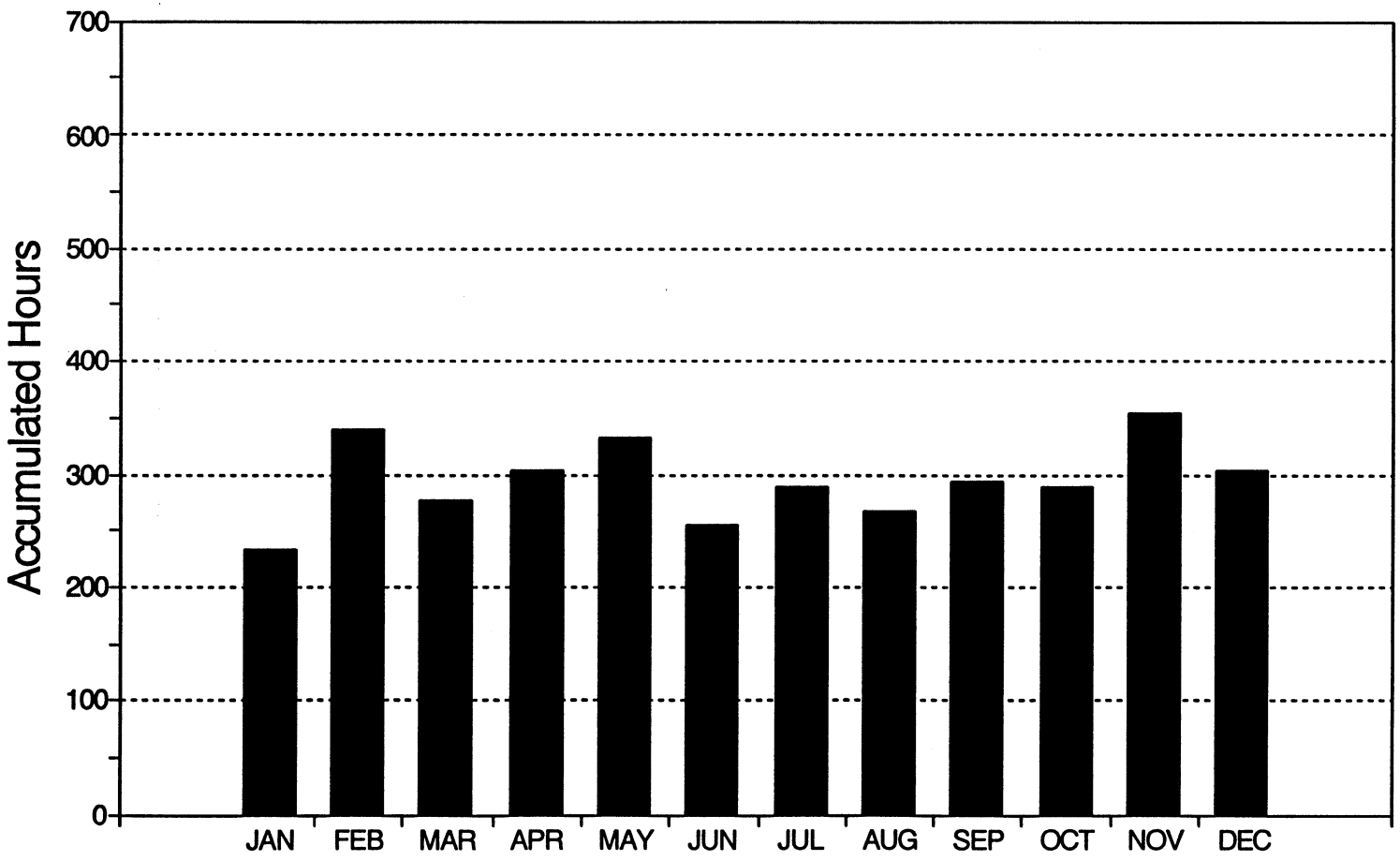
Property ownership: AMOCO Corporation.
Site selection: Field survey of topography.

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
FEB 85	152	67	69	57	41	29	20	11	4	2	1	0	0	0	0	0	0	0
MAR 85	252	109	90	65	48	38	32	27	21	17	14	11	8	5	3	2	1	1
APR 85	207	99	90	81	60	43	32	24	20	17	14	11	8	5	3	2	1	1
MAY 85	210	105	96	77	63	49	38	30	23	18	14	9	6	3	2	1	0	0
JUN 85	242	122	99	73	53	38	30	23	17	10	5	3	2	1	1	0	0	0
JUL 85	255	126	99	68	49	36	26	19	12	8	5	3	2	1	1	0	0	0
AUG 85	107	59	58	46	40	32	30	26	21	17	12	7	5	3	1	1	0	0
SEP 85	226	107	94	70	49	38	30	24	20	17	14	10	7	5	3	2	2	2
OCT 85	250	115	91	70	58	45	34	26	19	14	10	6	4	2	1	1	0	0
NOV 85	187	91	88	71	68	66	49	33	24	15	9	7	5	3	2	1	1	0
DEC 85	187	117	138	105	63	36	25	16	10	8	8	7	6	5	4	4	3	2
JAN 86	255	107	87	65	50	37	26	17	12	8	5	3	3	2	1	1	1	1
FEB 86	216	56	57	57	44	40	38	36	35	30	21	14	10	7	4	3	1	1
MAR 86	255	117	100	75	57	42	32	21	11	7	4	3	2	2	1	1	1	1
APR 86	245	99	91	68	55	48	37	25	17	10	7	5	4	4	2	1	1	1
MAY 86	235	90	90	77	65	56	42	29	19	12	8	5	4	3	2	2	1	5
JUN 86	255	110	88	69	50	41	30	22	15	10	6	4	2	1	1	0	0	0
JUL 86	209	97	88	79	66	54	44	34	25	17	11	7	4	2	1	1	1	2
AUG 86	255	108	85	73	63	49	37	26	17	11	7	4	3	2	1	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
FEB 85	MPH	8.5	10.5	9.1	7.5	7.9	8.0	8.3	8.3	8.4	7.4	7.0	8.0
	σ	5.5	5.5	4.5	3.5	4.0	4.5	4.5	4.5	4.5	4.0	3.5	5.0
MAR 85	MPH	11.4	11.0	10.5	9.4	9.3	9.8	9.1	8.6	8.9	8.6	9.4	11.0
	σ	8.0	7.0	6.5	5.5	5.0	6.0	6.5	6.5	6.5	6.5	7.0	7.5
APR 85	MPH	14.6	14.5	14.8	12.1	8.1	7.0	7.9	7.9	7.5	7.8	9.3	12.4
	σ	7.5	7.5	6.5	3.5	4.5	4.0	5.0	5.0	4.0	4.0	6.5	8.0
MAY 85	MPH	12.5	14.6	16.4	14.8	10.9	8.5	8.0	7.0	7.1	6.5	6.9	10.0
	σ	5.5	6.0	6.0	5.0	4.0	3.5	3.0	3.5	4.5	3.5	4.5	6.5
JUN 85	MPH	10.3	14.0	14.6	13.4	8.8	6.8	7.6	6.0	5.9	5.8	5.5	7.1
	σ	5.0	5.5	5.5	4.0	2.5	4.0	4.0	2.5	2.5	2.5	3.5	4.0
JUL 85	MPH	8.0	12.0	13.1	11.5	9.0	8.0	7.9	6.0	5.8	5.6	4.4	6.0
	σ	4.0	4.5	5.0	3.5	4.0	4.5	3.5	3.0	3.5	2.5	3.0	4.0
AUG 85	MPH	16.5	18.6	19.5	17.4	10.9	7.8	6.8	6.1	7.0	6.8	7.9	12.1
	σ	4.5	4.5	4.5	3.5	3.0	3.5	2.5	3.0	3.0	2.5	4.5	6.0
SEP 85	MPH	7.0	7.1	7.3	7.5	6.5	9.8	13.4	15.1	16.0	13.3	9.8	7.5
	σ	3.0	3.0	3.5	4.5	5.0	6.5	8.5	7.5	7.0	5.5	4.5	4.0
OCT 85	MPH	7.4	6.1	6.8	6.9	6.9	9.4	12.6	14.3	13.6	11.8	8.9	7.3
	σ	4.0	3.5	3.5	3.5	4.5	6.5	7.0	6.5	6.5	3.5	4.5	4.5
NOV 85	MPH	9.3	9.4	9.3	8.5	8.6	11.5	13.8	14.3	11.9	11.1	9.5	9.3
	σ	6.0	6.0	5.5	5.0	5.5	6.0	6.5	6.0	6.0	6.0	6.0	6.0
DEC 85	MPH	9.4	9.1	8.1	8.8	9.4	10.1	10.9	11.4	11.3	10.0	9.4	9.0
	σ	4.0	5.5	6.0	6.5	7.0	7.5	7.0	8.0	6.5	6.0	5.5	4.0
JAN 86	MPH	7.0	7.5	7.5	8.1	8.1	8.6	9.1	9.8	8.3	7.6	7.1	7.0
	σ	4.5	4.5	5.0	6.5	5.5	4.5	6.0	6.5	5.5	6.0	5.5	4.5
FEB 86	MPH	11.3	11.0	11.1	11.1	11.0	12.0	13.3	12.0	11.5	11.1	9.5	11.1
	σ	7.5	7.5	7.5	8.0	8.0	8.5	9.0	8.0	8.0	7.0	6.5	7.5
MAR 86	MPH	6.2	6.0	5.8	5.5	6.8	10.0	12.5	13.5	12.3	8.8	6.6	7.1
	σ	4.0	4.0	3.5	3.0	4.5	5.5	4.5	4.0	4.0	4.0	3.0	2.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
APR 86	MPH	6.6	6.1	5.8	5.0	8.1	11.8	13.9	14.8	13.3	9.6	6.7	7.0
	σ	3.5	4.0	3.5	4.0	6.0	7.0	6.5	6.5	7.0	4.5	4.0	4.0
MAY 86	MPH	6.6	6.4	7.3	6.3	7.5	11.8	14.4	15.1	14.6	12.5	8.6	7.9
	σ	4.0	4.0	4.0	3.5	5.0	7.0	8.0	7.5	6.5	4.5	4.0	4.5
JUN 86	MPH	7.8	6.0	4.6	4.8	4.9	8.4	11.6	13.3	14.0	11.5	7.1	7.8
	σ	4.0	2.5	2.5	2.0	3.0	4.5	5.5	5.0	5.0	4.0	3.5	4.5
JUL 86	MPH	9.1	6.8	6.0	6.1	8.1	11.6	13.9	15.5	16.3	13.4	8.1	8.3
	σ	4.0	2.5	3.5	3.5	5.5	7.0	6.0	6.0	5.0	3.5	4.5	4.0
AUG 86	MPH	8.6	6.3	5.5	6.1	5.5	9.3	11.8	13.5	14.5	12.5	8.1	7.9
	σ	5.5	3.0	2.5	4.0	3.5	4.0	4.5	4.0	4.0	3.5	3.5	5.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 85	15	1	0	3	61	94	16	2
	MAR 85	46	39	10	12	45	91	15	5
	APR 85	16	14	9	25	57	62	49	37
	MAY 85	20	19	14	27	69	81	35	13
	JUN 85	27	32	19	36	45	60	53	20
	JUL 85	16	18	21	44	50	71	47	25
12-18 MPH	FEB 85	10	0	0	0	9	61	9	1
	MAR 85	5	4	1	3	14	60	27	4
	APR 85	6	13	3	2	8	44	41	18
	MAY 85	8	7	6	9	16	64	28	10
	JUN 85	4	8	5	6	8	35	50	7
	JUL 85	6	4	3	11	10	34	34	11
18-24 MPH	FEB 85	1	0	0	0	0	14	1	0
	MAR 85	2	3	4	0	6	35	12	3
	APR 85	2	8	2	0	5	18	21	4
	MAY 85	3	3	3	2	7	30	19	6
	JUN 85	1	0	3	2	4	18	19	2
	JUL 85	4	0	1	7	3	12	9	2
24 + MPH	FEB 85	0	0	0	0	0	1	0	0
	MAR 85	0	6	2	0	9	20	5	0
	APR 85	0	4	1	0	5	13	18	4
	MAY 85	1	0	1	2	5	18	7	2
	JUN 85	0	0	0	2	2	5	4	1
	JUL 85	1	0	1	3	2	4	1	1

Wind Rose Data cont.

Hours per Month

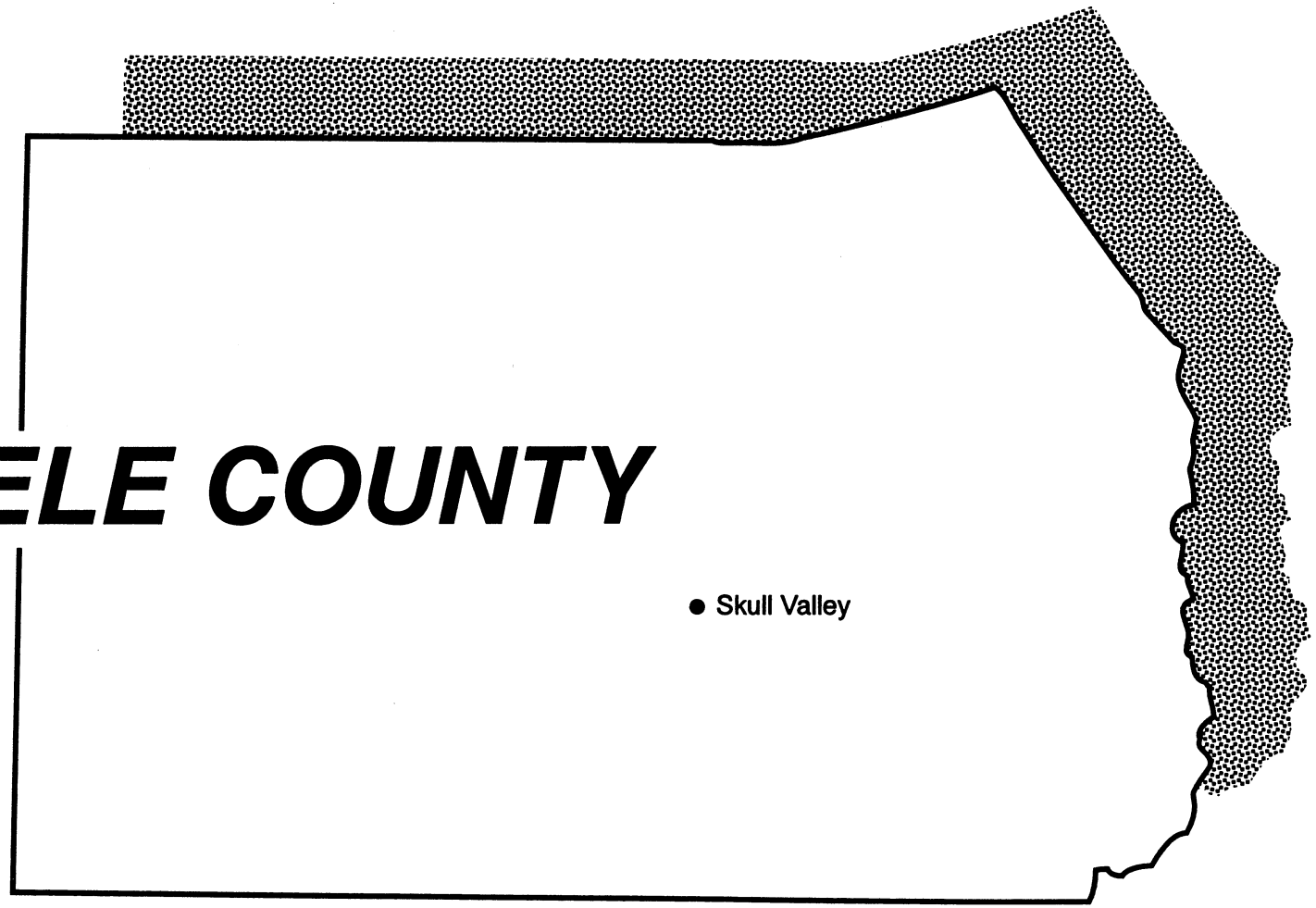
		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	6	6	4	19	56	45	21	7
	SEP 85	34	33	16	20	69	61	24	14
	OCT 85	30	22	11	15	75	81	28	12
	NOV 85	5	8	7	3	58	141	27	1
	DEC 85	7	11	7	9	179	140	7	2
	JAN 86	10	12	6	11	115	94	8	2
12-18 MPH	AUG 85	3	1	0	2	16	39	35	7
	SEP 85	7	3	3	4	17	47	26	10
	OCT 85	3	3	6	3	12	57	44	9
	NOV 85	0	1	11	0	14	125	32	0
	DEC 85	1	5	1	0	22	89	4	1
	JAN 86	0	0	0	1	21	78	12	1
18-24 MPH	AUG 85	1	0	0	0	5	30	26	2
	SEP 85	0	0	0	1	8	31	16	3
	OCT 85	0	0	1	0	5	28	21	2
	NOV 85	0	0	4	0	3	46	19	0
	DEC 85	0	6	3	0	1	21	2	0
	JAN 86	0	0	0	0	3	26	7	1
24 + MPH	AUG 85	0	0	0	1	3	14	11	0
	SEP 85	0	0	0	1	6	24	13	1
	OCT 85	0	0	0	0	4	12	8	0
	NOV 85	0	0	0	0	3	20	5	0
	DEC 85	1	12	21	0	0	5	0	0
	JAN 86	0	0	0	0	1	8	7	2

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 86	12	5	5	4	49	80	15	1
	MAR 86	29	15	8	7	57	96	55	24
	APR 86	13	14	8	17	50	88	50	16
	MAY 86	20	41	25	17	34	71	40	10
	JUN 86	27	15	17	41	50	56	38	22
	JUL 86	10	13	16	34	54	79	45	13
	AUG 86	11	29	26	37	49	65	40	10
12-18 MPH	FEB 86	4	9	0	0	12	91	7	0
	MAR 86	6	1	2	1	6	48	56	12
	APR 86	4	7	2	3	15	53	41	14
	MAY 86	7	28	20	5	12	35	44	11
	JUN 86	9	4	8	9	13	35	33	9
	JUL 86	4	1	2	12	23	63	49	10
	AUG 86	3	11	12	9	10	46	47	10
18-24 MPH	FEB 86	0	9	2	0	3	82	5	0
	MAR 86	2	0	0	0	1	13	21	2
	APR 86	1	1	0	1	6	23	15	4
	MAY 86	0	5	12	2	6	18	15	2
	JUN 86	1	2	4	4	3	18	14	1
	JUL 86	1	0	0	3	9	33	28	2
	AUG 86	1	2	7	4	3	16	19	3
24 + MPH	FEB 86	0	4	4	0	3	48	3	0
	MAR 86	0	0	0	0	2	7	4	0
	APR 86	0	0	0	1	6	10	6	1
	MAY 86	0	0	0	0	8	16	4	0
	JUN 86	0	0	1	1	1	7	4	0
	JUL 86	0	0	0	2	6	12	8	1
	AUG 86	0	0	3	5	1	3	5	0

TOOELE COUNTY



Skull Valley

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Wind Diurnal Data Table 154
Wind Rose Data Table 156

Site Description

County:	Tooele	Elevation:	4,600 ft.
Township:	5 South	Range:	8 West
Section:	26	Quarter Section:	—
Longitude:	112° 43'	Latitude:	40° 22'

Duration of data logging: August 1985 to November 1986
Months of available data: 16
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southeast
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: High grass, low row crops
South: High grass, low row crops
West: High grass, low row crops

Comments

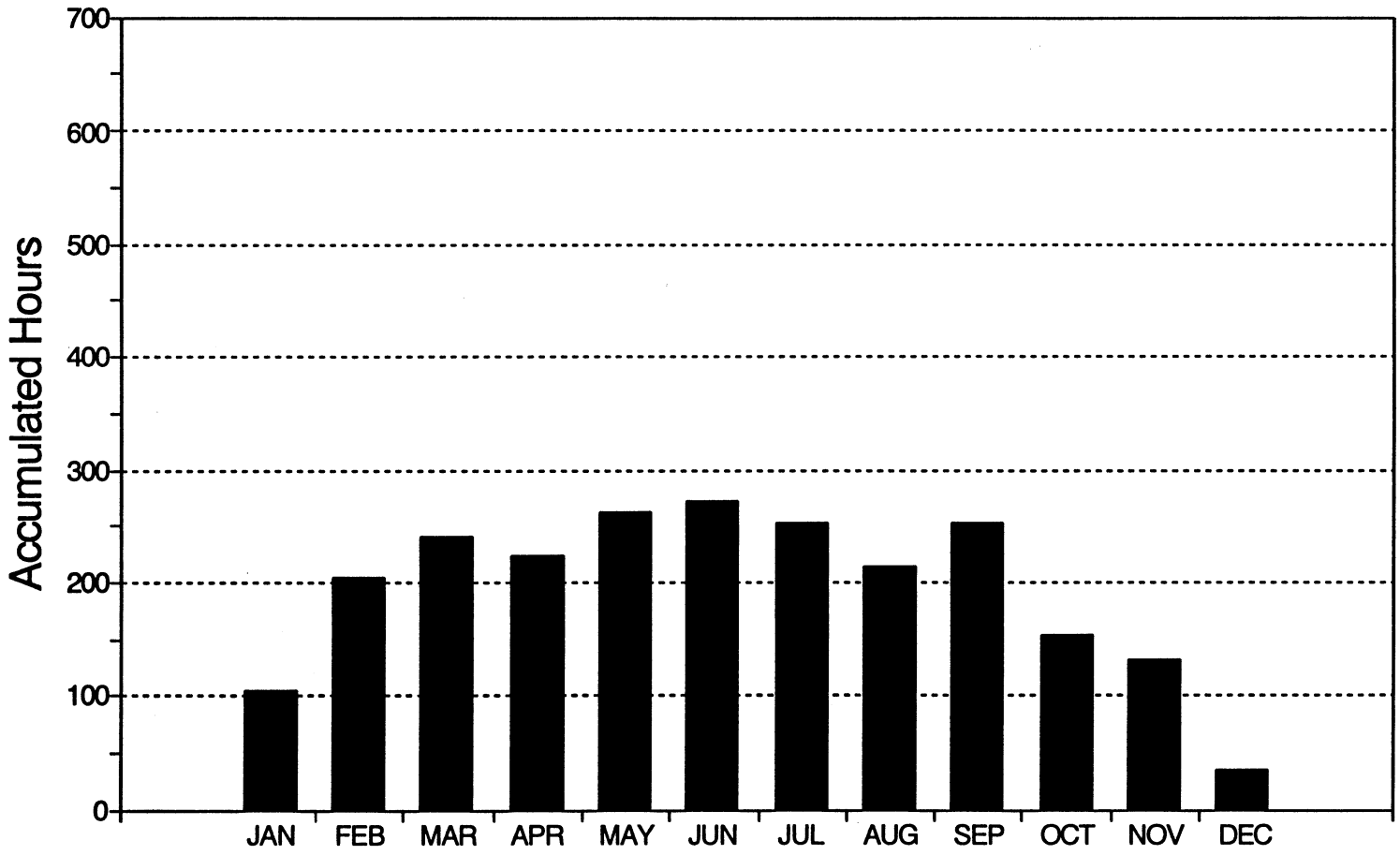
Property ownership: Goshute Tribe.
Site selection: Field survey of topography.

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 85	255	89	88	78	65	40	22	13	9	7	6	4	3	2	1	1	0	0
SEP 85	255	77	81	75	58	42	32	25	19	14	10	8	5	3	2	1	1	1
OCT 85	255	110	85	50	31	23	17	12	9	6	4	3	2	2	1	1	1	1
NOV 85	255	90	72	41	26	20	16	11	8	5	3	1	1	0	0	0	0	0
DEC 85	255	40	25	13	9	6	3	2	1	1	1	0	0	0	0	0	0	0
JAN 86	255	65	48	37	25	17	10	6	4	3	1	1	0	0	0	0	0	0
FEB 86	255	87	74	55	39	32	26	19	13	9	6	3	1	1	0	0	0	0
MAR 86	255	105	105	84	52	32	19	15	12	9	7	5	3	1	1	0	0	0
APR 86	255	105	84	59	47	37	25	19	14	9	6	4	2	1	1	0	0	0
MAY 86	255	90	82	63	50	43	34	22	16	12	8	5	4	2	1	1	1	1
JUN 86	255	87	84	78	62	42	30	20	15	10	6	4	2	1	1	0	0	0
JUL 86	255	103	98	81	60	35	21	14	11	8	6	5	4	3	2	1	1	1
AUG 86	255	111	101	77	47	25	12	6	4	2	1	1	0	0	0	0	0	0
SEP 86	255	92	77	63	52	34	19	13	9	7	4	3	2	1	1	0	0	0
OCT 86	255	112	87	49	24	15	12	10	9	7	5	4	3	2	1	1	0	0
NOV 86	226	74	60	40	21	12	8	6	5	4	4	4	3	2	1	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 85	MPH	8.1	8.4	7.8	7.8	5.8	6.5	6.6	7.6	9.0	9.4	7.9	6.8
	σ	6.0	5.5	4.0	3.5	5.0	5.5	5.0	5.0	5.0	6.0	5.0	7.0
SEP 85	MPH	8.3	7.3	6.9	6.8	6.6	8.1	11.1	12.1	12.4	11.8	8.4	8.3
	σ	5.5	4.0	3.5	4.0	6.0	7.5	7.0	7.5	7.5	7.0	5.0	6.5
OCT 85	MPH	5.9	5.9	6.4	6.1	4.8	6.0	7.3	7.8	8.3	6.9	5.6	5.8
	σ	4.0	3.5	4.0	4.0	4.5	5.5	6.5	7.5	6.5	6.5	6.0	4.5
NOV 85	MPH	5.5	5.0	4.8	6.5	4.8	5.4	6.6	6.3	5.4	4.9	4.5	4.9
	σ	5.0	4.5	4.0	5.0	4.5	5.0	5.0	4.5	5.0	5.5	4.5	5.0
DEC 85	MPH	1.9	2.0	1.9	2.1	1.9	1.5	1.9	2.3	2.1	1.6	1.8	1.5
	σ	2.5	3.0	3.0	3.0	3.0	3.0	3.5	4.0	3.5	3.0	3.5	3.0
JAN 86	MPH	3.9	3.9	3.9	4.8	5.0	3.3	3.0	3.8	4.3	3.5	3.4	3.6
	σ	4.0	4.5	4.0	5.0	5.5	4.0	4.5	4.5	4.5	4.0	4.0	4.0
FEB 86	MPH	7.4	6.9	7.3	7.5	6.1	5.9	8.6	8.3	9.1	7.9	5.8	7.4
	σ	5.0	5.0	5.0	6.0	5.0	6.0	6.0	5.5	6.0	6.0	6.0	5.5
MAR 86	MPH	7.4	7.4	7.3	7.5	7.2	7.1	9.3	10.2	8.9	7.9	5.1	7.0
	σ	4.0	4.0	4.5	5.5	6.0	7.0	8.0	6.5	4.5	4.5	5.0	4.5
APR 86	MPH	6.6	6.9	6.8	5.8	6.5	8.5	9.3	10.1	10.3	9.3	6.1	6.4
	σ	4.0	4.5	3.5	4.0	6.0	6.0	5.5	6.0	6.5	5.0	4.5	4.0
MAY 86	MPH	7.0	7.4	6.3	6.3	6.3	8.3	9.8	10.6	12.0	11.6	7.9	6.0
	σ	5.0	5.0	4.5	4.5	6.0	6.5	6.5	7.0	7.5	6.0	4.0	5.0
JUN 86	MPH	7.6	7.1	6.4	5.4	5.8	7.8	8.5	9.6	11.0	12.6	10.1	7.9
	σ	5.5	4.5	3.5	3.5	5.0	5.5	4.5	4.5	5.0	5.0	4.5	7.0
JUL 86	MPH	8.1	7.9	7.5	6.8	5.4	6.5	7.8	9.4	10.4	10.8	10.1	7.8
	σ	7.0	5.5	3.5	3.5	4.5	5.0	5.0	5.0	5.0	5.0	4.5	6.5
AUG 86	MPH	5.5	7.1	6.5	6.6	4.6	5.6	5.9	6.3	8.5	8.9	6.3	4.9
	σ	4.0	3.5	3.0	3.0	3.0	4.0	3.0	3.0	3.5	4.5	3.0	4.0
SEP 86	MPH	5.3	6.1	6.4	6.5	5.1	6.6	8.3	8.5	9.1	8.6	7.8	5.6
	σ	4.0	5.0	5.5	4.0	4.5	6.5	6.0	5.0	5.0	5.0	4.5	4.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
OCT 86	MPH	5.8	6.3	5.9	6.3	4.4	5.4	7.1	7.9	8.3	5.8	4.9	6.1
	σ	4.0	3.5	3.0	3.0	2.5	6.0	8.0	6.5	5.5	4.0	6.5	5.5
NOV 86	MPH	8.1	8.9	8.3	6.4	5.1	6.3	8.5	8.9	7.0	3.9	4.9	6.3
	σ	4.5	6.5	4.5	4.5	6.0	6.0	6.0	7.5	5.5	3.5	2.5	2.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	49	6	5	108	40	21	12	14
	SEP 85	44	4	3	106	45	10	4	18
	OCT 85	50	3	6	121	36	6	4	19
	NOV 85	36	2	5	107	34	5	2	12
	DEC 85	7	0	1	56	11	1	0	2
	JAN 86	17	1	3	94	27	1	0	8
12-18 MPH	AUG 85	36	1	2	52	16	11	4	5
	SEP 85	47	2	1	34	25	9	2	12
	OCT 85	35	1	1	16	5	1	1	11
	NOV 85	26	1	1	20	6	1	1	6
	DEC 85	2	0	0	12	2	0	0	2
	JAN 86	10	0	1	28	6	0	0	6
18-24 MPH	AUG 85	11	0	1	4	7	4	1	1
	SEP 85	20	1	1	6	20	7	1	3
	OCT 85	14	0	0	4	5	0	0	2
	NOV 85	8	0	0	6	8	0	1	2
	DEC 85	2	0	0	1	1	0	0	0
	JAN 86	7	0	0	2	1	0	0	3
24 + MPH	AUG 85	10	0	0	1	6	2	0	0
	SEP 85	6	0	0	3	15	6	1	0
	OCT 85	3	0	0	1	10	1	0	0
	NOV 85	1	0	0	1	3	0	0	0
	DEC 85	1	0	0	0	0	0	0	0
	JAN 86	2	0	0	0	0	0	0	0

Wind Rose Data cont.

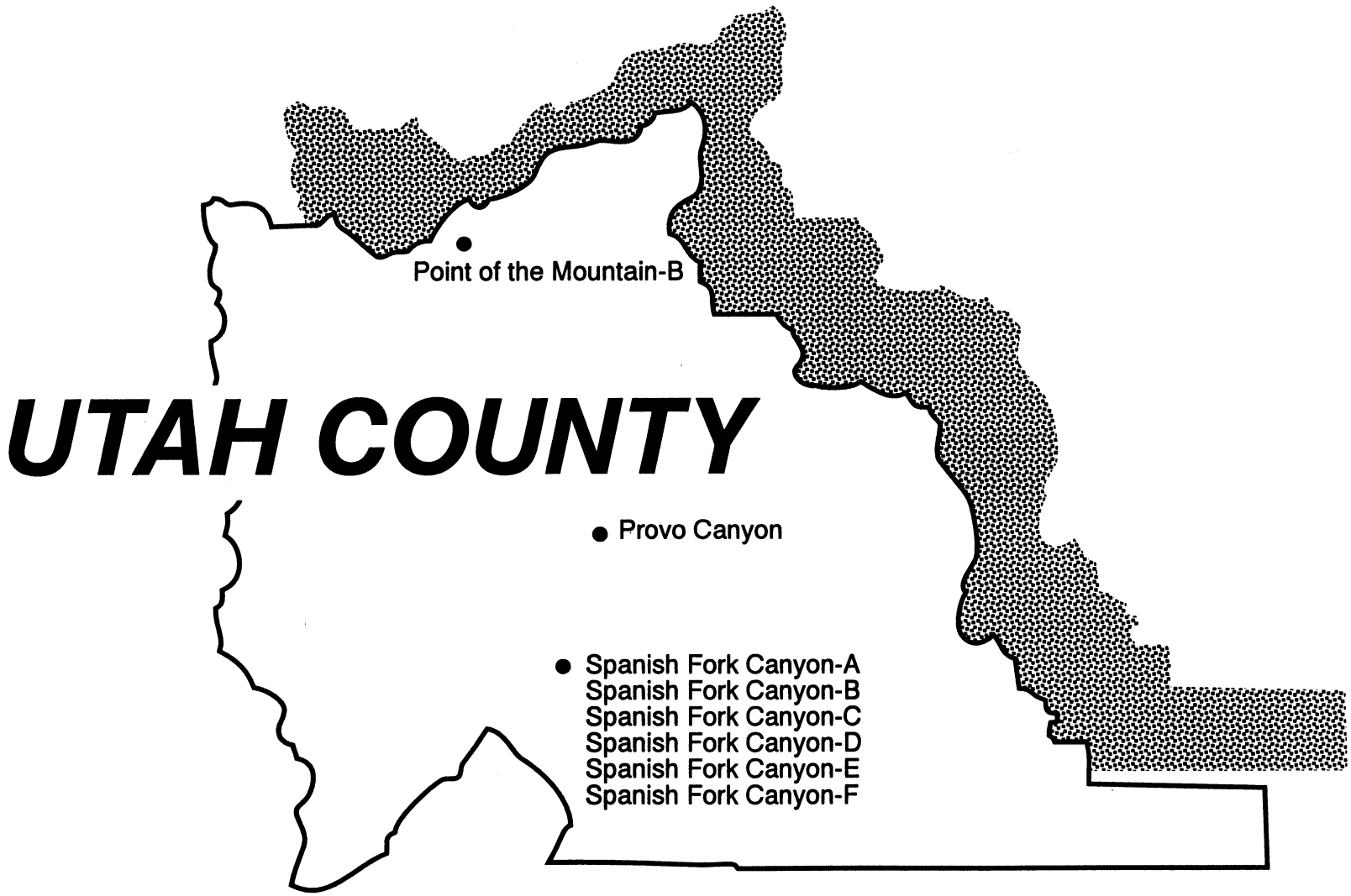
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 86	27	4	4	119	36	7	7	13
	MAR 86	57	7	4	139	53	15	5	13
	APR 86	70	11	9	85	42	9	5	18
	MAY 86	90	12	3	62	41	6	3	17
	JUN 86	60	12	5	57	70	20	12	13
	JUL 86	51	11	6	72	83	24	18	17
12-18 MPH	FEB 86	14	1	1	50	19	3	5	6
	MAR 86	33	2	2	38	15	5	2	5
	APR 86	54	7	4	16	16	3	1	8
	MAY 86	58	6	2	29	23	2	1	7
	JUN 86	40	5	2	26	35	17	4	5
	JUL 86	28	3	1	27	29	14	7	7
18-24 MPH	FEB 86	6	0	1	16	15	2	1	1
	MAR 86	21	1	0	6	6	0	0	1
	APR 86	24	2	1	2	9	1	0	2
	MAY 86	25	2	0	3	14	2	1	3
	JUN 86	17	2	1	4	10	9	1	1
	JUL 86	9	2	0	3	9	7	2	2
24 + MPH	FEB 86	1	0	0	3	6	1	0	0
	MAR 86	10	0	0	1	4	0	0	0
	APR 86	5	0	0	1	7	0	0	1
	MAY 86	6	0	0	0	13	2	1	1
	JUN 86	8	1	1	1	2	3	0	1
	JUL 86	10	1	0	2	3	5	2	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 86	49	10	5	84	86	25	14	16
	SEP 86	45	8	6	67	64	20	8	13
	OCT 86	60	10	2	73	82	7	6	8
	NOV 86	18	3	2	56	70	8	5	12
12-18 MPH	AUG 86	17	3	3	23	22	8	3	4
	SEP 86	19	3	2	28	32	14	3	5
	OCT 86	29	3	1	7	7	2	0	1
	NOV 86	17	1	0	5	8	2	1	6
18-24 MPH	AUG 86	2	0	2	3	2	2	0	0
	SEP 86	7	1	0	1	11	7	1	2
	OCT 86	22	1	1	1	1	1	0	0
	NOV 86	13	1	0	0	0	0	0	1
24 + MPH	AUG 86	0	0	0	1	0	1	1	0
	SEP 86	4	0	0	0	2	3	0	2
	OCT 86	14	1	0	0	0	0	0	0
	NOV 86	13	0	0	0	0	0	0	0


UTAH COUNTY
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Site Description

County:	Utah	Elevation:	5,700 ft.
Township:	4 South	Range:	1 East
Section:	18	Quarter Section:	—
Longitude:	111° 52'	Latitude:	40° 27'

Duration of data logging: May 1988 to April 1991
Months of available data: 10
Anemometer height: 30 ft.

Surrounding Environmental Conditions

Prevailing wind direction: South-Southeast
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Rolling terrain
West: Rolling terrain

Comments

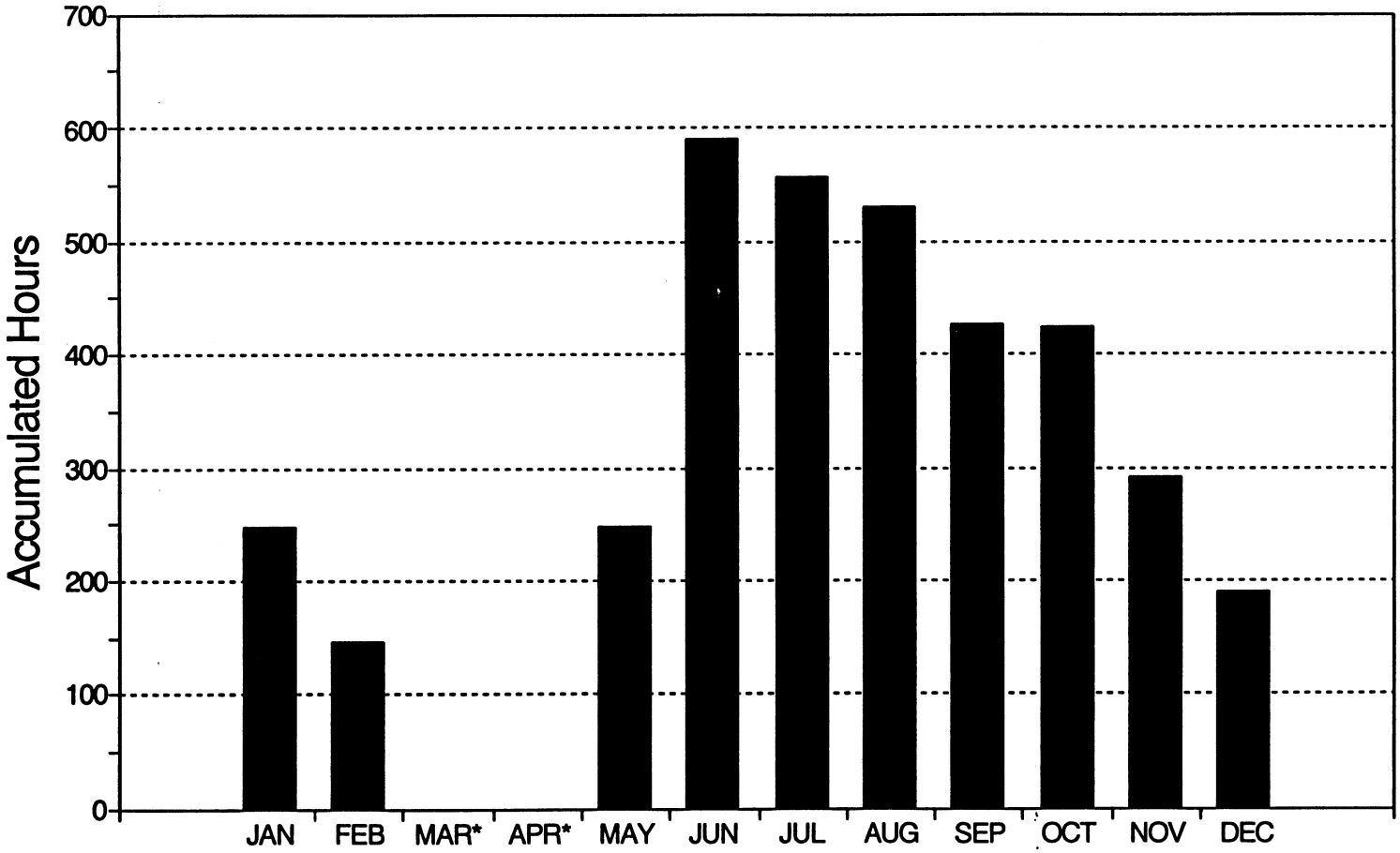
Property ownership: Utah Power
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 88	66	35	27	25	23	22	24	23	22	20	18	15	12	9	7	5	4	18
JUN 88	56	33	43	55	64	72	70	62	50	42	38	31	24	18	14	11	8	31
JUL 88	95	44	49	53	58	62	60	57	53	48	42	33	24	18	14	10	8	17
AUG 88	103	50	58	62	63	66	64	59	53	45	35	26	17	13	9	7	4	9
SEP 88	150	75	68	57	50	46	42	42	42	37	31	26	19	13	8	5	3	6
OCT 88	184	69	68	76	75	61	46	39	34	29	22	16	10	6	4	3	1	2
NOV 88	255	79	77	69	57	41	30	22	18	16	13	10	5	3	1	1	1	4
DEC 88	255	108	83	59	43	31	22	16	10	5	2	1	0	0	0	0	0	0
JAN 89	255	93	71	60	46	37	36	32	22	10	3	1	0	0	0	0	0	0
FEB 89	255	76	56	47	33	23	15	9	6	5	3	2	1	1	1	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 88	MPH	13.4	14.9	15.6	16.0	17.6	18.3	16.6	16.6	16.0	16.0	14.1	11.9
	σ	11.0	11.5	10.5	9.0	12.0	9.0	8.0	8.0	6.0	7.0	7.0	8.0
JUN 88	MPH	18.0	18.9	17.8	16.9	17.6	19.4	19.4	20.8	18.8	17.6	17.0	16.3
	σ	9.0	8.0	7.0	7.5	8.0	10.0	10.5	11.5	10.0	7.0	7.0	7.0
JUL 88	MPH	15.1	16.4	17.8	17.9	16.8	16.8	15.8	15.6	17.3	17.6	17.3	16.5
	σ	8.5	9.0	8.0	8.0	8.5	8.5	8.0	7.0	7.5	7.0	7.5	7.5
AUG 88	MPH	14.0	15.1	14.8	15.9	15.5	14.6	13.8	14.8	17.8	18.4	16.4	13.9
	σ	8.5	8.5	8.0	7.0	6.0	6.0	7.0	6.5	6.0	6.5	7.0	8.0
SEP 88	MPH	11.9	12.9	13.9	12.9	12.5	14.0	15.6	16.9	16.0	14.3	12.1	12.4
	σ	8.5	9.0	9.0	8.0	7.5	7.0	7.5	7.5	6.0	5.5	7.0	10.0
OCT 88	MPH	11.5	12.5	11.8	10.0	12.4	13.4	13.5	12.8	12.5	12.3	11.1	10.3
	σ	7.5	7.0	7.5	7.5	7.0	6.5	6.0	5.0	5.5	7.0	6.0	7.0
NOV 88	MPH	9.8	9.4	9.1	8.5	9.3	9.6	10.1	10.0	9.4	9.8	9.4	9.5
	σ	6.5	6.5	5.5	5.0	6.0	6.5	7.5	7.5	7.5	7.5	7.0	7.0
DEC 88	MPH	7.0	6.4	7.1	7.5	7.6	7.4	7.4	7.3	6.3	6.3	5.5	6.4
	σ	4.5	4.5	5.0	5.0	4.5	4.5	5.0	5.0	5.5	5.0	4.5	5.0
JAN 89	MPH	8.1	7.6	7.1	7.5	7.6	7.9	7.8	7.9	8.4	7.9	7.9	8.9
	σ	5.5	6.0	5.5	5.5	5.5	5.0	5.5	5.5	5.5	5.5	6.0	6.0
FEB 89	MPH	6.6	7.0	6.4	5.8	5.9	6.6	6.1	5.9	5.6	4.6	5.1	6.0
	σ	5.5	4.5	5.5	5.5	5.5	5.5	6.0	6.5	5.0	3.5	3.5	4.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 88	16	3	7	39	7	2	3	9
	JUN 88	21	5	13	62	11	3	4	10
	JUL 88	34	7	15	51	11	5	6	16
	AUG 88	27	7	19	79	15	5	6	14
	SEP 88	40	8	13	86	13	5	7	28
	OCT 88	36	8	13	115	15	4	6	17
12-18 MPH	MAY 88	12	2	6	34	6	1	2	6
	JUN 88	21	4	16	135	14	3	3	10
	JUL 88	34	6	16	90	9	4	5	15
	AUG 88	31	6	17	106	12	3	5	14
	SEP 88	30	5	10	63	8	3	5	14
	OCT 88	23	4	10	121	8	2	3	11
18-24 MPH	MAY 88	7	1	5	38	5	1	1	5
	JUN 88	13	2	14	103	12	2	2	6
	JUL 88	22	4	15	94	8	2	3	11
	AUG 88	23	3	11	96	11	1	2	10
	SEP 88	17	3	8	74	6	1	2	9
	OCT 88	11	1	8	72	4	0	1	5
24 + MPH	MAY 88	5	1	4	62	9	1	1	5
	JUN 88	11	1	12	114	26	2	2	6
	JUL 88	14	2	15	111	14	1	2	7
	AUG 88	11	1	8	81	12	1	1	5
	SEP 88	15	2	7	69	4	1	2	9
	OCT 88	5	1	8	45	2	0	0	3

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 88	46	7	12	155	4	2	4	20
	FEB 89	37	5	7	107	3	2	3	13
12-18 MPH	DEC 88	10	1	6	71	3	0	1	4
	FEB 89	8	1	5	51	3	0	1	3
18-24 MPH	DEC 88	1	0	2	25	2	0	0	1
	FEB 89	1	0	1	14	2	0	0	1
24 + MPH	DEC 88	0	0	0	3	0	0	0	0
	FEB 89	0	0	0	7	1	0	0	0

Site Description

County:	Utah	Elevation:	6,400 ft.
Township:	6 South	Range:	3 East
Section:	7	Quarter Section:	Northwest
Longitude:	111° 39'	Latitude:	40° 19'

Duration of data logging: May 1987 to April 1988
Months of available data: 12
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: North-Northeast
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Rolling terrain
West: Rolling terrain

Comments

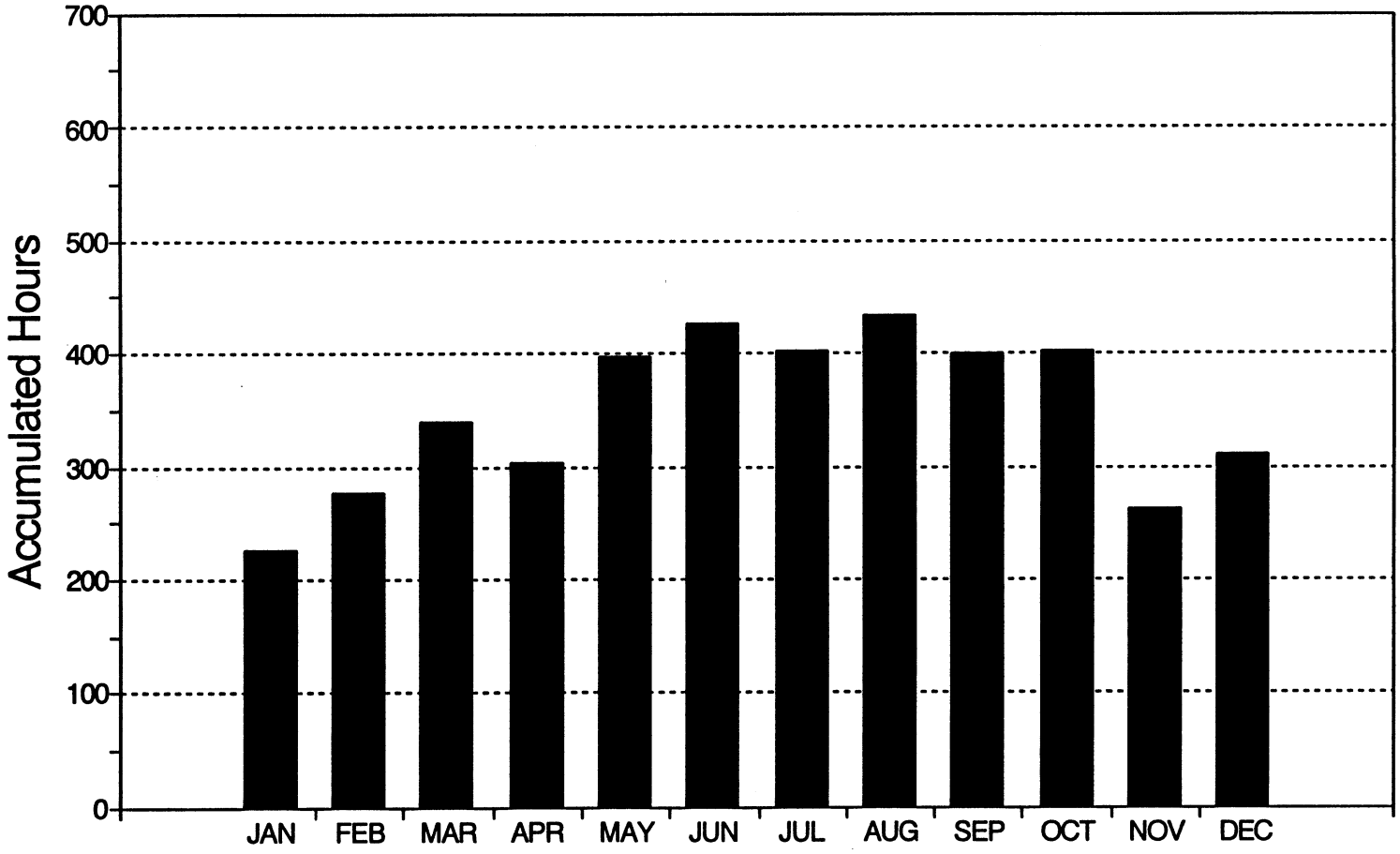
Property ownership: Utah Power
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 87	195	79	76	69	62	52	43	36	30	25	21	17	13	9	7	5	3	4
JUN 87	145	77	70	64	62	59	48	38	34	32	28	21	14	9	6	4	3	5
JUL 87	184	83	75	67	59	51	45	37	29	27	25	21	16	11	7	3	2	3
AUG 87	162	78	68	60	63	65	54	40	34	32	28	23	15	9	5	2	2	3
SEP 87	162	86	72	62	62	60	49	38	31	29	25	19	13	7	3	1	0	0
OCT 87	196	83	63	58	63	72	63	45	31	24	18	13	9	4	2	1	0	0
NOV 87	255	92	66	51	44	36	29	24	21	17	13	10	7	4	3	1	1	1
DEC 87	255	79	60	51	43	32	23	18	17	18	18	17	16	14	12	10	8	14
JAN 88	255	99	71	50	40	38	33	23	14	8	5	3	2	2	1	1	1	6
FEB 88	255	81	62	58	58	48	33	25	19	15	10	6	3	1	0	0	0	0
MAR 88	230	91	84	73	63	51	38	29	21	16	12	9	7	5	4	3	3	7
APR 88	238	95	83	64	56	49	39	29	20	15	12	8	4	3	2	1	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 87	MPH	14.5	15.5	15.4	14.8	12.6	6.8	8.4	9.6	11.6	10.1	10.6	12.9
	σ	6.5	8.5	9.0	8.0	7.5	4.0	4.0	4.5	6.5	6.5	7.5	6.5
JUN 87	MPH	15.6	16.0	17.9	18.6	16.6	8.5	8.0	8.5	11.4	11.1	11.5	14.5
	σ	7.0	5.0	6.5	6.0	7.0	6.5	5.5	4.5	6.5	7.0	6.0	6.5
JUL 87	MPH	13.8	14.9	17.0	17.6	15.1	7.5	8.1	8.8	10.3	10.5	10.6	13.1
	σ	7.5	6.5	7.0	7.5	7.0	4.5	4.5	5.0	6.0	7.5	7.0	6.5
AUG 87	MPH	16.4	17.5	18.6	19.0	16.0	7.6	6.0	7.8	10.1	8.8	11.4	14.4
	σ	5.5	5.5	5.5	6.5	8.0	3.5	1.5	3.0	6.5	6.0	6.5	6.0
SEP 87	MPH	15.1	17.6	17.8	19.8	18.5	8.6	5.8	6.8	8.4	6.4	8.9	12.1
	σ	5.0	4.5	5.5	5.5	7.0	4.0	1.5	2.0	4.0	3.5	4.0	4.5
OCT 87	MPH	13.4	15.3	17.6	18.5	16.9	8.6	6.0	6.4	6.3	6.0	9.8	12.5
	σ	5.0	4.0	4.5	6.0	6.5	4.5	3.0	2.0	3.5	4.5	5.0	4.5
NOV 87	MPH	11.9	11.4	11.8	11.6	11.6	6.9	5.6	6.4	4.3	6.1	9.0	10.9
	σ	7.0	7.0	7.0	8.0	8.0	4.0	3.5	4.0	3.0	5.0	6.5	6.0
DEC 87	MPH	11.6	12.9	13.0	14.0	13.9	11.0	8.5	8.0	7.5	8.4	10.6	11.6
	σ	9.5	10.5	9.5	11.0	10.0	9.0	8.5	7.5	8.0	9.0	9.0	9.5
JAN 88	MPH	9.5	9.9	10.1	10.1	10.0	8.3	5.8	4.8	4.3	5.6	7.4	8.8
	σ	7.0	9.0	8.5	8.0	7.5	6.0	3.0	3.0	3.5	3.5	5.0	6.5
FEB 88	MPH	10.1	10.8	12.4	13.0	12.9	8.5	5.8	6.6	5.3	4.4	7.0	8.8
	σ	5.5	6.0	6.5	7.0	6.0	5.0	4.0	4.5	3.0	3.5	4.5	4.5
MAR 88	MPH	10.9	12.1	13.1	12.6	10.0	8.4	10.0	12.3	10.5	7.4	8.6	9.8
	σ	6.0	8.0	8.5	9.0	6.0	5.5	6.5	7.0	7.0	5.0	5.5	5.0
APR 88	MPH	9.8	10.9	11.9	12.3	8.6	8.1	9.4	10.5	8.5	7.1	7.6	10.3
	σ	6.0	6.5	7.0	6.5	6.0	6.0	4.5	5.5	4.0	4.5	4.5	4.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 87	9	79	9	2	24	60	32	7
	JUN 87	7	57	8	4	30	63	34	10
	JUL 87	12	82	10	3	27	58	29	6
	AUG 87	11	69	7	2	25	58	27	7
	SEP 87	9	81	6	2	20	69	29	5
	OCT 87	10	91	6	1	16	61	17	3
12-18 MPH	MAY 87	3	98	11	0	6	19	14	6
	JUN 87	3	119	12	1	5	13	12	4
	JUL 87	3	109	11	1	7	18	5	2
	AUG 87	4	145	10	1	4	8	7	4
	SEP 87	3	146	9	1	2	3	4	2
	OCT 87	2	181	9	0	2	2	1	1
18-24 MPH	MAY 87	1	66	9	0	1	6	3	3
	JUN 87	1	80	17	0	1	3	1	1
	JUL 87	1	68	12	0	2	8	1	0
	AUG 87	1	87	13	0	1	2	1	1
	SEP 87	1	82	12	0	1	0	0	1
	OCT 87	1	89	8	0	1	0	0	0
24 + MPH	MAY 87	1	64	6	0	0	7	1	1
	JUN 87	1	73	13	0	0	1	0	1
	JUL 87	1	64	10	0	1	9	1	0
	AUG 87	1	73	10	0	1	1	1	0
	SEP 87	1	57	10	0	0	0	0	0
	OCT 87	0	43	4	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 87	8	110	10	2	15	43	18	3
	DEC 87	14	81	6	2	24	44	16	4
	JAN 88	9	111	6	2	18	52	19	4
	FEB 88	8	99	8	1	13	48	19	4
	MAR 88	11	96	5	3	21	54	38	19
	APR 88	9	76	8	4	30	72	36	8
12-18 MPH	NOV 87	2	90	8	0	1	2	4	2
	DEC 87	2	73	6	0	3	8	4	3
	JAN 88	1	95	5	0	2	5	2	1
	FEB 88	3	110	8	0	0	3	8	4
	MAR 88	2	93	4	0	2	12	23	15
	APR 88	2	85	6	1	12	19	12	7
18-24 MPH	NOV 87	1	48	7	0	0	0	2	3
	DEC 87	1	43	6	0	0	1	1	1
	JAN 88	1	39	2	0	1	2	0	0
	FEB 88	1	45	6	0	0	0	4	3
	MAR 88	1	36	3	0	1	5	8	11
	APR 88	1	35	5	0	3	9	6	6
24 + MPH	NOV 87	0	33	5	0	0	0	1	1
	DEC 87	2	95	10	0	0	0	0	0
	JAN 88	1	19	1	0	0	1	0	0
	FEB 88	0	17	3	0	0	0	1	1
	MAR 88	1	32	2	0	0	4	4	6
	APR 88	0	16	2	0	1	7	2	2

Site Description

County:	Utah	Elevation:	5,200 ft.
Township:	9 South	Range:	3 East
Section:	2	Quarter Section:	Northwest
Longitude:	111° 33'	Latitude:	39° 59'

Duration of data logging: August 1984 to May 1991
Months of available data: 42
Anemometer height: 60 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southeast
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Rolling terrain
West: Rolling terrain

Comments

Property ownership: Strawberry Water Users
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

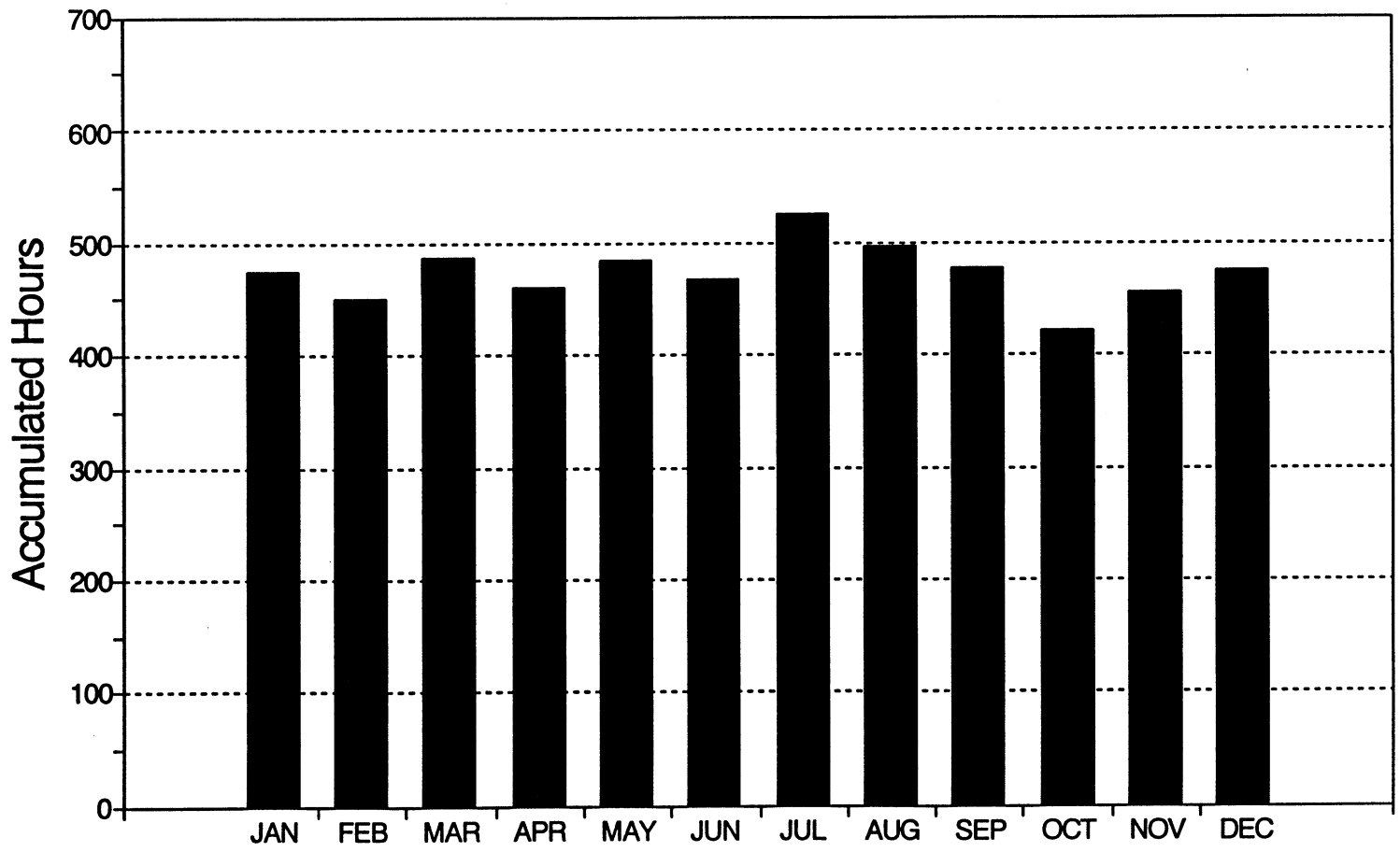
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 84	135	59	51	45	47	54	62	66	65	56	43	29	18	9	3	1	0	0
SEP 84	133	62	53	46	44	45	48	51	57	57	46	34	22	12	6	3	1	0
OCT 84	163	71	66	59	59	59	56	51	46	42	34	21	11	5	2	1	0	0
NOV 84	118	41	38	42	48	51	53	59	61	59	53	43	28	15	7	3	1	0
DEC 84	146	52	48	48	47	46	44	44	45	46	45	38	29	22	16	12	7	7
JAN 85	214	78	57	46	35	31	37	40	42	43	42	33	21	13	7	3	1	0
FEB 85	154	64	48	41	37	36	40	45	48	44	38	30	20	12	7	4	2	1
MAR 85	161	74	66	60	56	55	56	56	53	43	30	19	10	4	1	0	0	0
APR 85	143	86	78	59	46	42	45	47	46	43	35	25	15	7	2	1	0	0
MAY 85	128	79	79	66	56	52	51	52	51	47	38	26	13	5	1	0	0	0
JUN 85	142	86	71	49	34	30	36	45	53	51	44	36	24	13	6	2	0	0
JUL 85	129	57	42	39	44	53	59	63	63	58	47	35	25	16	8	4	1	0
AUG 85	117	76	69	49	34	30	34	43	54	59	55	43	33	24	14	6	2	1
SEP 85	122	67	64	55	50	48	48	49	51	49	43	33	21	12	6	2	0	0
OCT 85	128	70	59	40	28	26	29	35	40	40	35	26	16	8	3	1	0	0
NOV 85	169	69	70	64	61	56	54	47	40	32	23	15	10	6	3	1	0	0
DEC 85	227	67	51	44	40	42	44	45	44	41	34	25	17	12	7	4	1	0
SEP 87	95	64	68	54	40	33	36	43	52	59	61	52	35	19	8	3	1	0
OCT 87	113	72	67	49	39	36	37	41	49	58	62	54	36	19	8	3	1	0
NOV 87	151	62	57	52	46	44	48	55	56	45	33	24	18	12	8	4	2	1
DEC 87	124	39	49	54	51	51	53	56	58	56	49	38	26	16	10	6	4	4
JAN 88	114	58	64	56	52	50	45	43	44	48	47	41	33	23	14	7	4	3
FEB 88	117	60	51	46	41	43	45	48	48	49	49	41	29	16	8	3	1	0
MAR 88	106	54	64	69	71	68	63	57	51	44	35	25	17	10	5	2	1	1
APR 88	114	67	75	72	65	56	54	53	49	42	31	20	12	6	2	1	0	0
MAY 88	98	61	81	81	66	54	51	53	54	50	39	27	15	7	3	1	1	1

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JUN 88	97	53	55	51	50	52	56	63	67	61	49	34	19	9	3	1	0	0
JUL 88	94	55	63	60	54	53	56	60	64	61	51	36	22	11	4	1	0	0
AUG 88	94	66	75	65	49	44	48	58	63	60	51	35	20	10	4	1	0	0
NOV 89	108	67	65	55	45	40	41	45	47	46	40	32	22	15	9	5	2	1
DEC 89	121	76	79	58	41	33	32	37	49	57	55	44	29	17	9	4	2	1
JAN 90	86	45	49	52	53	55	58	61	61	57	50	41	30	21	13	7	3	3
FEB 90	87	54	57	57	55	51	47	45	46	44	38	31	24	16	11	6	3	2
MAR 90	104	58	58	59	64	68	70	60	51	43	33	23	12	5	1	0	0	0
APR 90	96	56	69	74	71	64	58	58	55	46	32	20	11	6	3	1	0	0
MAY 90	99	60	74	76	73	68	62	60	56	46	33	20	10	4	2	1	0	0
DEC 90	124	46	45	38	31	31	29	25	22	22	22	22	19	15	11	6	4	5
JAN 91	193	65	50	37	35	39	38	37	38	41	42	40	33	24	15	9	5	3
FEB 91	135	55	50	40	37	37	40	45	49	53	50	39	28	18	10	5	2	2
MAR 91	133	53	64	68	68	69	67	61	52	38	26	17	11	7	4	3	1	2
APR 91	113	63	77	83	81	76	65	51	41	30	20	12	6	2	1	0	0	0
MAY 91	125	68	83	82	76	67	62	53	42	32	23	15	8	4	2	1	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 84	MPH	19.0	20.5	21.9	22.6	20.4	11.1	7.3	7.1	7.0	8.3	12.5	17.1
	σ	4.0	4.5	5.0	5.0	4.5	5.0	2.5	3.0	3.5	5.5	4.5	4.0
SEP 84	MPH	19.3	19.9	21.0	22.3	21.0	13.3	8.0	8.0	7.3	7.6	12.9	16.9
	σ	5.0	6.5	6.5	7.0	6.5	5.5	3.0	3.0	4.0	5.0	5.5	5.0
OCT 84	MPH	16.6	16.6	17.0	17.0	16.8	12.5	8.4	8.2	6.7	7.0	9.8	14.0
	σ	8.0	5.5	6.0	6.5	7.0	4.0	4.0	3.5	3.5	4.5	6.0	5.5
NOV 84	MPH	19.1	20.0	20.9	21.1	20.3	15.8	11.6	9.9	9.6	11.8	13.9	6.6
	σ	6.5	5.5	6.5	7.0	6.5	6.0	6.0	6.5	7.0	7.5	8.0	6.5
DEC 84	MPH	17.5	18.9	19.6	20.4	21.1	18.1	12.0	8.3	7.8	12.8	15.3	16.5
	σ	9.0	9.0	10.0	9.5	9.0	7.5	6.0	4.5	6.5	7.0	7.5	8.0
JAN 85	MPH	15.9	17.8	18.8	18.8	14.6	9.1	9.4	10.0	9.0	6.9	9.7	14.9
	σ	7.5	8.0	8.0	9.5	8.5	7.5	4.0	3.0	4.0	5.0	6.0	7.0
FEB 85	MPH	19.0	20.5	21.0	20.4	19.5	13.9	9.0	7.9	5.9	5.4	10.3	16.4
	σ	5.0	5.5	6.0	9.0	8.5	7.0	4.5	4.5	3.5	4.0	5.5	5.5
MAR 85	MPH	14.1	15.8	17.3	18.4	16.9	11.5	9.5	9.1	9.0	8.9	10.3	12.1
	σ	6.5	7.0	6.5	7.0	5.5	4.5	4.5	5.0	5.5	5.0	5.5	6.0
APR 85	MPH	16.5	17.8	18.8	18.8	14.6	9.1	9.4	10.0	9.0	6.9	9.7	14.9
	σ	6.0	6.5	8.5	8.5	6.5	4.5	4.0	3.5	4.5	3.5	5.0	5.5
MAY 85	MPH	17.5	19.3	19.9	20.3	16.1	9.3	8.6	8.9	9.0	8.6	9.5	13.6
	σ	4.5	5.5	7.0	6.5	5.5	3.5	3.0	3.5	3.0	4.5	4.5	5.0
JUN 85	MPH	19.9	21.5	22.3	22.8	17.7	10.0	8.0	7.6	7.2	6.1	7.9	16.6
	σ	6.0	5.5	7.0	7.5	6.0	3.5	2.5	2.0	1.5	2.5	3.5	6.0
JUL 85	MPH	20.0	21.4	23.6	23.9	21.3	13.1	6.9	7.1	6.9	9.8	13.3	18.3
	σ	5.0	5.5	5.5	5.0	3.5	3.5	3.0	3.5	4.5	5.0	4.5	5.0
AUG 85	MPH	21.1	23.8	25.0	25.5	22.0	12.3	7.5	8.4	7.6	7.1	10.4	18.4
	σ	4.5	4.0	5.0	5.5	5.5	4.0	2.5	2.5	2.5	5.0	5.0	5.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 85	MPH	17.9	19.4	20.4	21.4	19.8	12.3	9.6	9.4	9.4	9.3	10.3	14.8
	σ	6.0	7.0	7.5	8.0	7.5	5.0	3.5	3.5	4.0	4.5	6.0	6.5
OCT 85	MPH	17.9	18.7	19.8	20.8	18.9	11.7	8.8	8.6	7.4	7.0	10.4	15.3
	σ	8.0	8.0	8.0	8.0	8.0	5.0	4.0	3.5	3.5	4.0	5.5	6.0
NOV 85	MPH	13.9	14.6	14.8	15.5	14.8	11.5	9.0	9.1	7.6	8.8	12.1	13.8
	σ	7.5	7.5	7.5	7.5	6.5	6.0	5.0	4.5	5.0	5.5	6.5	7.5
DEC 85	MPH	15.3	16.3	17.5	18.1	18.1	11.3	7.1	6.8	6.1	7.5	11.9	13.8
	σ	7.5	8.0	8.0	9.0	8.5	6.0	5.0	4.0	5.0	6.5	7.0	7.0
SEP 87	MPH	20.9	22.6	23.9	25.0	24.3	13.5	8.6	9.9	9.0	6.6	9.9	17.9
	σ	5.5	5.0	5.5	4.0	4.0	3.0	2.5	3.5	3.5	4.5	4.5	5.0
OCT 87	MPH	20.6	22.5	23.4	24.1	23.3	15.0	8.8	8.6	7.1	6.4	11.4	18.1
	σ	5.5	5.5	6.5	6.5	5.5	4.5	2.5	3.0	3.0	5.0	5.0	5.0
NOV 87	MPH	16.4	17.3	18.5	19.0	18.3	13.1	9.6	8.5	6.9	10.0	14.3	16.1
	σ	7.0	7.5	7.5	7.5	8.0	6.5	6.0	6.0	6.0	6.5	7.0	6.5
DEC 87	MPH	17.8	18.1	19.0	19.0	19.9	17.1	12.5	10.1	10.1	13.1	15.1	16.5
	σ	8.0	8.5	8.5	8.5	7.5	6.5	6.5	8.0	8.5	7.0	7.5	8.0
JAN 88	MPH	18.8	19.1	19.9	20.3	19.9	18.6	12.0	9.6	8.9	10.6	13.4	17.1
	σ	8.0	9.0	9.0	9.0	9.0	7.5	5.0	5.0	5.5	5.5	7.0	7.5
FEB 88	MPH	18.8	20.8	21.8	22.0	21.0	16.3	9.5	8.9	7.6	7.5	13.0	16.6
	σ	6.0	7.0	7.5	8.0	7.0	6.0	4.0	4.0	4.5	5.0	5.5	6.5
MAR 88	MPH	16.6	17.8	18.8	18.3	17.3	14.0	11.6	13.4	11.4	9.1	11.3	14.4
	σ	6.5	6.0	6.5	7.5	6.5	4.5	5.5	6.0	6.5	5.0	6.0	6.0
APR 88	MPH	17.1	18.1	19.0	19.0	15.3	9.8	10.4	10.6	10.5	8.0	9.0	14.3
	σ	6.0	6.5	6.0	7.0	6.0	3.5	4.0	4.0	3.5	3.5	5.0	5.0
MAY 88	MPH	17.6	18.9	19.9	19.9	17.3	11.9	11.1	11.8	11.8	9.9	8.4	12.9
	σ	4.5	5.5	6.5	7.0	5.5	4.5	5.5	5.0	4.5	6.0	5.0	5.5
JUN 88	MPH	19.4	21.6	23.4	23.9	18.8	11.4	9.5	10.1	10.5	9.6	10.4	16.0
	σ	4.5	4.0	3.5	3.5	4.0	3.5	5.0	4.5	5.0	5.5	5.0	3.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUL 88	MPH	20.0	21.6	23.8	24.5	21.1	11.8	8.6	9.3	10.1	10.0	8.8	15.5
	σ	2.5	4.5	3.0	3.0	4.5	4.0	3.5	2.5	3.0	4.0	4.0	4.0
AUG 88	MPH	18.8	19.9	22.6	24.3	21.5	11.3	8.8	10.1	9.4	8.5	8.9	16.6
	σ	5.0	6.5	4.5	2.5	3.5	3.0	1.5	2.5	2.5	3.5	5.5	5.0
NOV 89	MPH	18.4	19.6	20.5	20.9	20.8	12.5	8.6	9.8	6.9	8.8	14.5	17.1
	σ	7.5	7.0	8.0	8.5	6.5	4.5	4.5	4.0	4.5	4.5	5.5	7.0
DEC 89	MPH	18.5	20.0	21.0	20.9	20.6	15.5	8.6	7.8	6.5	9.8	13.5	17.3
	σ	7.5	7.5	7.0	8.5	8.5	5.5	3.5	3.0	3.5	5.0	7.5	7.5
JAN 90	MPH	19.4	20.1	21.0	21.5	20.3	17.0	12.8	11.6	10.1	12.5	16.5	18.0
	σ	6.5	7.0	7.0	7.5	7.5	6.5	5.5	6.0	6.5	7.5	7.0	6.5
FEB 90	MPH	18.5	19.5	20.4	21.3	21.4	15.8	10.3	10.0	9.4	9.5	14.0	16.8
	σ	6.0	6.5	8.5	7.0	7.0	5.5	5.0	4.5	6.0	6.5	6.5	6.5
MAR 90	MPH	16.8	17.5	18.0	18.5	16.3	13.4	11.3	10.8	9.1	9.1	13.1	15.0
	σ	6.0	6.5	7.0	6.5	6.0	5.0	5.0	5.0	5.5	5.0	5.0	5.5
APR 90	MPH	16.6	18.3	19.4	20.0	16.1	10.9	11.6	12.4	11.1	8.3	9.9	14.9
	σ	5.5	5.5	6.5	6.0	5.0	5.5	4.5	5.5	5.5	4.5	4.5	4.0
MAY 90	MPH	17.5	18.8	19.5	18.0	13.0	10.6	12.0	12.9	11.4	8.6	9.6	14.8
	σ	5.5	5.0	6.5	6.5	4.5	4.0	4.0	4.0	4.5	4.5	4.0	4.5
DEC 90	MPH	15.8	17.3	18.8	18.4	18.6	14.3	10.1	8.5	8.4	9.3	12.8	14.8
	σ	8.5	8.5	9.0	11.0	10.5	8.5	6.5	6.0	7.5	8.0	8.0	9.0
JAN 91	MPH	16.9	19.3	19.4	20.8	20.3	15.8	9.9	7.3	5.5	8.9	13.5	15.4
	σ	9.0	8.5	10.0	10.0	10.0	8.5	5.0	4.5	5.0	6.0	7.5	9.0
FEB 91	MPH	19.3	20.4	22.4	23.0	22.4	15.6	8.9	7.5	6.0	6.9	13.3	17.4
	σ	6.5	7.5	7.0	7.0	8.0	6.0	3.5	4.0	3.5	4.5	7.0	7.0
MAR 91	MPH	15.0	17.1	18.6	17.4	15.0	11.9	11.1	10.9	9.8	9.8	11.6	13.5
	σ	6.5	6.0	6.0	6.5	5.5	6.0	5.5	5.5	6.5	6.5	6.5	7.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
APR 91	MPH	14.9	15.8	16.8	17.1	13.3	10.4	11.4	11.3	10.4	7.4	9.5	13.4
	σ	5.0	5.5	5.5	5.5	5.0	4.5	4.5	4.0	4.5	4.5	4.0	5.0
MAY 91	MPH	16.0	17.4	17.8	15.8	11.6	11.5	11.8	11.4	10.3	7.3	8.9	13.4
	σ	6.0	6.0	6.0	5.5	5.0	5.0	4.5	3.5	3.5	3.5	4.0	6.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 84	92	14	8	7	6	8	7	13
	SEP 84	150	2	1	1	1	1	1	3
	OCT 84	183	6	1	1	1	1	1	2
	NOV 84	116	2	0	0	0	0	0	1
	DEC 84	145	1	0	0	0	0	0	1
	JAN 85	176	1	0	3	0	0	0	1
12-18 MPH	AUG 84	23	31	16	14	13	20	19	28
	SEP 84	113	5	3	2	2	2	3	6
	OCT 84	144	10	3	1	1	2	3	7
	NOV 84	139	6	1	1	1	1	1	3
	DEC 84	129	5	0	0	0	0	0	1
	JAN 85	95	1	1	1	0	0	1	2
18-24 MPH	AUG 84	22	37	23	20	16	23	22	24
	SEP 84	120	8	5	4	4	5	6	12
	OCT 84	112	9	3	1	1	2	3	7
	NOV 84	167	5	1	1	1	1	1	3
	DEC 84	130	2	0	1	0	0	1	1
	JAN 85	117	2	1	0	1	1	1	2
24 + MPH	AUG 84	20	22	18	14	8	9	8	5
	SEP 84	101	6	3	3	2	3	3	4
	OCT 84	63	3	1	0	0	1	1	1
	NOV 84	148	1	0	0	0	0	0	1
	DEC 84	175	0	0	0	0	0	0	1
	JAN 85	116	1	0	0	0	0	1	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 85	151	1	0	0	0	0	0	1
	MAR 85	197	1	0	0	0	0	0	1
	APR 85	220	0	0	0	0	0	0	0
	MAY 85	220	1	0	0	0	0	0	1
	JUN 85	204	1	0	0	0	0	0	0
	JUL 85	135	1	0	0	0	0	0	0
12-18 MPH	FEB 85	106	3	0	0	0	0	1	1
	MAR 85	164	1	0	0	0	0	0	1
	APR 85	131	2	0	0	0	0	0	0
	MAY 85	155	2	0	0	0	0	0	1
	JUN 85	94	3	0	0	0	0	0	0
	JUL 85	153	1	0	0	0	0	0	0
18-24 MPH	FEB 85	131	3	0	0	0	0	1	1
	MAR 85	148	1	0	0	0	0	0	1
	APR 85	132	2	0	0	0	0	0	0
	MAY 85	145	3	0	0	0	0	0	1
	JUN 85	141	6	1	0	0	0	0	0
	JUL 85	180	3	0	0	0	0	0	0
24 + MPH	FEB 85	113	1	0	0	0	0	1	1
	MAR 85	64	0	0	0	0	0	0	0
	APR 85	83	0	0	0	0	0	0	0
	MAY 85	81	1	0	0	0	0	0	0
	JUN 85	120	3	0	0	0	0	0	0
	JUL 85	135	1	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	190	1	1	1	0	0	0	1
	SEP 85	179	1	0	0	0	0	0	3
	OCT 85	166	1	0	0	0	0	0	2
	NOV 85	197	1	0	0	0	0	0	3
	DEC 85	153	7	0	0	0	0	0	1
	SEP 87	186	0	0	0	0	0	0	0
12-18 MPH	AUG 85	95	2	1	0	0	0	0	1
	SEP 85	138	2	0	0	0	0	1	4
	OCT 85	81	1	0	0	0	0	0	1
	NOV 85	164	3	0	0	0	0	0	2
	DEC 85	115	8	0	0	0	0	0	1
	SEP 87	109	0	0	0	0	0	0	0
18-24 MPH	AUG 85	147	7	1	1	0	0	0	0
	SEP 85	142	4	0	0	0	0	0	1
	OCT 85	113	1	0	0	0	0	0	1
	NOV 85	115	2	0	0	0	0	0	1
	DEC 85	121	8	0	0	0	0	0	1
	SEP 87	154	0	0	0	0	0	0	0
24 + MPH	AUG 85	172	4	0	0	0	0	0	10
	SEP 85	115	2	0	0	0	0	0	0
	OCT 85	89	1	0	0	0	0	0	0
	NOV 85	58	1	0	0	0	0	0	0
	DEC 85	96	3	0	0	0	0	0	0
	SEP 87	177	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	OCT 87	188	0	0	0	0	0	0	0
	NOV 87	171	0	0	0	0	0	0	0
	DEC 87	142	0	0	0	0	0	0	0
	JAN 88	178	0	0	0	0	0	0	0
	FEB 88	158	0	0	0	0	0	0	0
	MAR 88	187	0	0	0	0	0	0	0
12-18 MPH	OCT 87	112	0	0	0	0	0	0	0
	NOV 87	138	0	0	0	0	0	0	0
	DEC 87	155	0	0	0	0	0	0	0
	JAN 88	147	0	0	0	0	0	0	0
	FEB 88	129	0	0	0	0	0	0	0
	MAR 88	202	0	0	0	0	0	0	0
18-24 MPH	OCT 87	148	0	0	0	0	0	0	0
	NOV 87	157	0	0	0	0	0	0	0
	DEC 87	169	0	0	0	0	0	0	0
	JAN 88	134	0	0	0	0	0	0	0
	FEB 88	145	0	0	0	0	0	0	0
	MAR 88	152	0	0	0	0	0	0	0
24 + MPH	OCT 87	184	0	0	0	0	0	0	0
	NOV 87	103	0	0	0	0	0	0	0
	DEC 87	153	0	0	0	0	0	0	0
	JAN 88	171	0	0	0	0	0	0	0
	FEB 88	146	0	0	0	0	0	0	0
	MAR 88	96	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 88	214	0	0	0	0	0	0	0
	MAY 88	223	0	0	0	0	0	0	0
	JUN 88	159	0	0	0	0	0	0	0
	JUL 88	177	0	0	0	0	0	0	0
	AUG 88	206	0	0	0	0	0	0	0
	NOV 89	79	7	0	3	44	4	0	50
12-18 MPH	APR 88	176	0	0	0	0	0	0	0
	MAY 88	171	0	0	0	0	0	0	0
	JUN 88	158	0	0	0	0	0	0	0
	JUL 88	163	0	0	0	0	0	0	0
	AUG 88	142	0	0	0	0	0	0	0
	NOV 89	34	6	0	3	66	8	0	9
18-24 MPH	APR 88	144	0	0	0	0	0	0	0
	MAY 88	157	0	0	0	0	0	0	0
	JUN 88	190	0	0	0	0	0	0	0
	JUL 88	184	0	0	0	0	0	0	0
	AUG 88	181	0	0	0	0	0	0	0
	NOV 89	11	2	0	5	101	17	0	2
24 + MPH	APR 88	71	0	0	0	0	0	0	0
	MAY 88	95	0	0	0	0	0	0	0
	JUN 88	115	0	0	0	0	0	0	0
	JUL 88	125	0	0	0	0	0	0	0
	AUG 88	121	0	0	0	0	0	0	0
	NOV 89	9	0	0	3	106	10	0	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 89	104	6	0	2	50	4	0	48
	JAN 90	51	8	1	10	52	6	1	16
	FEB 90	94	4	0	8	39	3	0	20
	MAR 90	92	9	1	8	36	3	1	27
	APR 90	96	9	1	12	51	4	1	25
	MAY 90	104	18	2	11	47	4	1	24
12-18 MPH	DEC 89	33	2	0	3	53	7	0	8
	JAN 90	24	5	1	21	100	13	0	3
	FEB 90	49	5	0	15	38	7	0	9
	MAR 90	57	4	0	25	96	9	0	12
	APR 90	57	4	0	23	90	7	0	10
	MAY 90	75	8	1	18	83	9	0	10
18-24 MPH	DEC 89	6	0	0	6	109	19	0	2
	JAN 90	10	1	0	26	127	13	0	1
	FEB 90	6	1	0	19	95	13	0	2
	MAR 90	23	1	0	33	85	7	0	5
	APR 90	23	2	0	19	104	9	0	3
	MAY 90	21	2	0	20	103	15	0	2
24 + MPH	DEC 89	0	0	0	10	138	12	0	0
	JAN 90	12	1	0	26	119	7	0	2
	FEB 90	1	0	0	16	103	10	0	0
	MAR 90	6	0	0	16	50	2	0	1
	APR 90	11	3	0	5	51	2	0	1
	MAY 90	8	0	0	11	45	5	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 90	51	0	0	13	11	0	2	51
	JAN 91	44	0	0	21	19	0	3	66
	FEB 91	32	2	0	19	13	0	2	76
	MAR 91	54	3	2	48	34	0	2	42
	APR 91	79	2	2	39	29	1	3	68
	MAY 91	84	3	5	38	21	1	4	78
12-18 MPH	DEC 90	34	0	2	21	24	0	0	10
	JAN 91	23	0	0	31	45	0	0	11
	FEB 91	15	2	0	31	49	0	0	17
	MAR 91	33	3	3	75	71	0	0	19
	APR 91	61	0	2	57	54	0	1	49
	MAY 91	49	1	3	58	62	0	0	31
18-24 MPH	DEC 90	6	0	1	25	34	0	0	2
	JAN 91	6	0	0	39	65	0	0	5
	FEB 91	2	0	0	58	83	0	0	4
	MAR 91	12	2	3	70	50	0	0	13
	APR 91	17	0	1	56	29	0	0	18
	MAY 91	8	0	2	59	53	0	0	5
24 + MPH	DEC 90	1	0	0	52	50	0	0	0
	JAN 91	1	0	0	67	101	0	0	3
	FEB 91	0	0	0	87	67	0	0	0
	MAR 91	10	2	2	32	14	0	0	11
	APR 91	2	0	1	27	7	0	0	4
	MAY 91	1	0	2	35	15	0	0	0

Site Description

County:	Utah	Elevation:	5,200 ft.
Township:	8 South	Range:	3 East
Section:	34	Quarter Section:	South Central
Longitude:	111° 33'	Latitude:	40° 04'

Duration of data logging: August 1984 to May 1991
Months of available data: 51
Anemometer height: 60 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southeast
Terrain classification in each of the principal directions:

North: Low grass, fallow ground
East: Low grass, fallow ground
South: Low grass, fallow ground
West: Low grass, fallow ground

Comments

Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

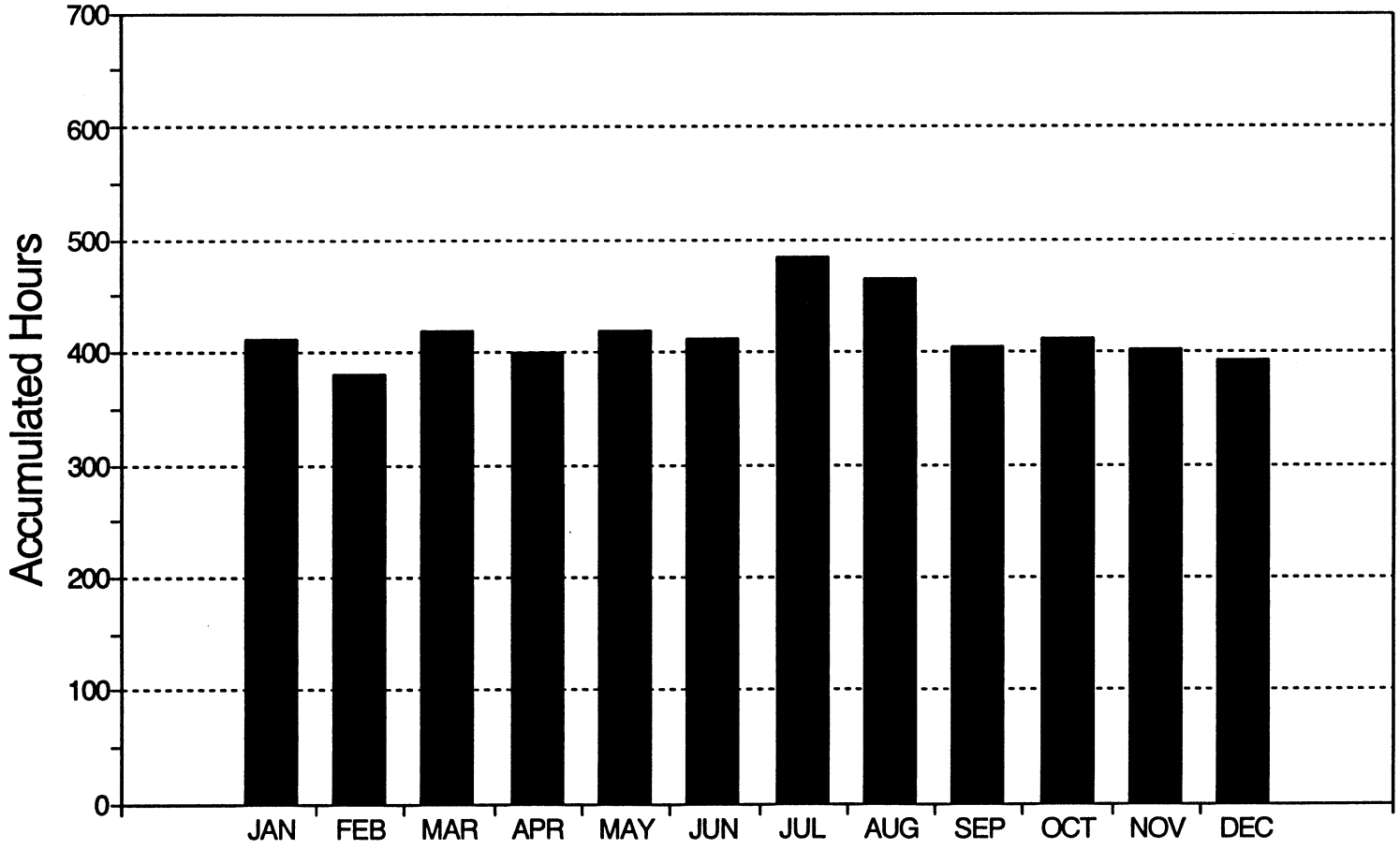
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 84	178	56	40	30	31	38	45	50	52	51	46	39	31	22	15	9	5	5
SEP 84	190	61	43	32	27	28	32	36	39	42	40	37	33	28	22	14	8	7
OCT 84	240	73	50	37	35	36	38	40	39	36	32	26	22	17	12	7	2	1
NOV 84	168	45	37	33	34	34	36	41	46	49	49	46	39	28	17	9	4	3
DEC 84	221	45	39	36	33	33	34	36	35	35	34	34	32	28	23	18	13	15
JAN 85	255	57	41	31	25	24	26	29	31	32	30	27	21	14	8	4	2	1
FEB 85	246	49	33	25	21	23	28	32	35	36	35	30	24	19	13	9	6	8
MAR 85	227	72	58	48	40	37	38	41	41	38	33	26	20	13	8	4	1	0
APR 85	191	82	61	45	38	35	31	32	35	35	33	30	25	20	14	8	3	2
MAY 85	167	80	64	49	42	41	41	40	40	40	38	34	28	20	11	5	2	1
JUN 85	176	78	54	32	24	24	27	30	32	33	33	31	28	23	17	11	7	3
JUL 85	151	52	33	29	34	52	49	51	52	50	47	40	31	24	20	16	12	10
AUG 85	156	75	56	36	27	25	28	32	37	40	40	40	37	32	29	23	17	14
SEP 85	166	72	55	41	36	35	37	40	41	39	37	34	30	23	16	10	5	2
OCT 85	234	80	52	34	27	28	29	31	30	31	33	33	30	27	21	14	7	3
NOV 85	240	64	50	44	42	41	41	41	38	33	27	21	14	10	7	4	2	1
DEC 85	255	53	34	29	26	26	28	30	30	27	22	17	12	10	7	5	3	2
JAN 86	160	33	26	25	28	31	35	39	40	40	41	41	40	36	28	18	11	10
FEB 86	191	59	44	39	41	46	46	43	38	32	26	21	15	11	8	6	3	3
MAR 86	207	77	59	44	36	34	35	35	33	33	33	31	26	22	18	12	5	3
APR 86	180	71	60	50	43	40	42	44	43	39	33	24	16	10	6	3	1	1
SEP 87	131	61	35	19	15	16	19	22	24	25	25	26	27	27	26	21	13	9
OCT 87	193	69	40	24	23	27	31	35	39	41	40	38	36	33	28	22	14	12
NOV 87	222	54	39	36	37	38	38	38	39	39	36	31	24	17	12	8	5	5
DEC 87	185	48	42	38	35	35	38	43	45	44	41	38	33	26	20	14	9	12
JAN 88	229	56	43	33	29	30	33	34	34	32	30	28	27	27	24	19	14	22

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
FEB 88	228	49	35	28	27	26	28	31	34	34	33	32	30	29	23	15	8	5
MAR 88	172	70	65	58	51	45	39	35	35	36	34	29	25	20	13	8	5	5
APR 88	185	76	61	50	43	40	39	37	35	33	29	25	21	17	12	8	5	3
MAY 88	157	85	77	59	44	36	33	34	35	35	34	32	27	22	17	11	5	3
JUN 88	136	63	49	38	33	33	36	41	45	47	45	41	35	28	21	14	8	6
JUL 88	123	70	57	42	37	36	37	40	45	49	48	44	36	29	22	14	8	6
AUG 88	151	82	58	35	26	26	30	36	41	44	45	42	37	31	25	18	11	8
SEP 89	153	64	44	32	29	28	29	30	31	33	34	33	32	33	32	28	20	26
OCT 89	169	76	48	30	26	28	32	36	38	37	37	36	34	31	27	22	17	20
NOV 89	233	73	40	30	27	27	30	32	33	32	31	30	28	25	19	13	8	9
DEC 89	250	70	42	27	22	23	23	27	32	36	38	38	35	30	23	14	8	6
JAN 90	144	48	36	32	34	38	41	43	45	46	45	41	36	30	25	20	15	22
FEB 90	181	52	45	40	33	29	28	29	31	31	29	27	26	26	23	17	11	16
MAR 90	179	59	47	39	40	44	45	41	35	31	29	27	24	21	17	14	9	7
APR 90	147	72	62	52	49	45	42	40	37	35	32	29	24	20	16	10	5	2
MAY 90	158	80	73	61	51	44	38	35	34	33	32	30	25	20	14	9	5	3
JUN 90	163	86	64	42	31	27	26	26	28	30	30	29	29	26	24	20	16	23
JUL 90	155	84	60	38	28	24	26	31	39	45	48	46	41	33	23	13	6	3
AUG 90	147	70	51	37	33	33	36	38	39	40	41	40	36	30	24	19	14	16
DEC 90	198	46	35	24	17	15	14	15	15	15	16	16	16	16	15	13	11	19
JAN 91	255	49	35	27	23	22	23	24	25	25	25	25	24	23	22	21	17	34
FEB 91	215	51	31	25	24	24	25	27	26	27	29	32	34	32	28	22	16	28
MAR 91	169	68	60	52	50	48	47	47	43	38	35	29	22	16	10	6	3	2
APR 91	181	87	74	63	53	45	38	32	28	25	22	20	17	14	10	6	3	2
MAY 91	196	88	71	54	44	39	37	35	33	30	27	24	20	16	11	8	5	3

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 84	MPH	21.3	23.4	24.5	25.4	21.9	11.1	5.8	5.6	6.5	8.3	11.4	18.1
	σ	6.0	6.5	6.0	6.5	5.0	5.5	3.0	3.0	4.0	6.0	6.0	5.5
SEP 84	MPH	21.5	22.5	23.8	24.4	22.3	13.1	6.3	6.1	6.5	6.6	11.6	18.1
	σ	7.5	8.5	9.0	9.5	8.0	6.5	3.0	3.5	4.5	5.0	6.0	7.0
OCT 84	MPH	17.4	17.4	18.2	18.4	17.8	12.1	6.8	5.9	5.7	5.7	8.9	14.0
	σ	7.5	7.5	8.0	9.0	9.0	5.5	4.5	3.5	3.0	4.5	6.0	7.0
NOV 84	MPH	19.5	19.9	21.4	21.9	20.4	15.1	10.6	8.8	8.9	11.4	14.0	17.1
	σ	8.5	8.5	9.5	9.0	8.5	7.0	7.0	7.0	7.5	8.5	10.0	9.0
DEC 84	MPH	17.3	19.1	19.5	20.4	21.3	17.4	10.3	6.3	6.5	10.9	14.5	16.4
	σ	11.0	10.5	11.0	11.5	11.0	8.8	6.5	5.5	7.0	8.5	9.5	11.0
JAN 85	MPH	13.9	16.0	16.9	17.1	16.7	11.0	4.3	3.7	3.7	3.5	7.0	11.9
	σ	8.0	9.0	10.0	11.0	10.0	7.0	3.0	2.5	4.5	4.5	6.0	7.5
FEB 85	MPH	18.6	20.8	21.5	20.6	19.5	12.6	7.4	6.4	4.5	3.6	8.6	12.6
	σ	8.0	8.0	9.0	11.0	10.5	8.5	6.0	4.5	4.0	4.5	7.5	8.5
MAR 85	MPH	14.3	15.6	17.5	19.0	17.3	11.1	8.3	8.6	8.3	7.9	8.9	11.8
	σ	9.0	8.5	9.0	9.0	7.5	5.5	5.5	5.0	5.5	5.5	7.0	7.5
APR 85	MPH	17.3	18.7	20.4	20.6	14.8	8.0	8.5	9.3	9.7	7.0	9.3	15.0
	σ	9.0	9.0	9.5	8.5	6.0	6.0	5.0	5.5	5.0	4.5	6.0	6.5
MAY 85	MPH	18.6	20.8	21.8	22.0	16.9	9.1	8.0	8.4	8.9	9.5	9.8	14.6
	σ	6.5	8.0	8.5	8.5	7.5	4.5	3.0	4.0	4.0	4.5	5.0	6.0
JUN 85	MPH	21.4	23.6	25.1	25.3	19.3	10.0	6.7	6.6	6.6	6.6	6.2	16.3
	σ	7.0	7.0	8.5	9.5	7.0	4.5	2.5	2.5	2.5	2.5	3.5	7.0
JUL 85	MPH	22.8	24.4	26.3	26.8	23.4	13.9	6.4	6.5	7.0	10.1	13.1	19.9
	σ	6.0	8.0	5.5	5.5	4.5	4.5	3.5	3.5	4.0	6.0	5.5	5.5
AUG 85	MPH	23.9	26.3	27.8	28.4	23.8	12.6	6.5	7.5	7.3	7.3	8.9	19.6
	σ	6.0	6.5	7.0	8.0	6.5	5.5	2.5	2.0	2.5	5.0	5.0	6.5
SEP 85	MPH	18.8	20.5	22.0	23.0	21.0	12.1	8.4	8.8	9.0	8.8	9.5	14.4
	σ	6.5	8.0	8.5	9.5	8.0	5.5	4.0	4.0	4.5	4.5	6.5	7.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
OCT 85	MPH	18.7	19.8	21.3	22.3	20.2	11.3	7.2	7.0	6.3	6.3	9.3	15.3
	σ	11.0	10.5	11.0	11.0	10.5	6.0	5.0	3.5	3.0	4.0	7.0	8.5
NOV 85	MPH	13.6	14.1	15.3	15.9	14.9	11.0	7.6	8.0	7.1	7.6	11.6	13.6
	σ	9.0	8.5	9.0	9.5	8.0	6.5	5.5	5.0	6.5	6.5	8.5	8.5
DEC 85	MPH	10.9	11.5	12.3	14.1	13.8	9.1	5.5	4.4	4.1	5.8	8.6	11.3
	σ	8.5	9.5	9.5	10.0	9.5	8.0	5.5	5.0	5.0	7.0	8.0	8.5
JAN 86	MPH	21.0	23.4	25.1	26.4	25.6	18.4	10.4	7.6	6.0	9.6	15.0	18.9
	σ	9.0	9.0	7.5	6.0	7.5	6.5	7.0	7.0	6.0	8.0	8.0	8.5
FEB 86	MPH	16.1	17.6	18.9	19.1	17.4	12.6	8.5	8.1	7.0	6.8	10.3	13.0
	σ	8.0	8.5	8.5	9.0	8.0	7.0	4.5	5.0	4.0	5.5	6.0	7.0
MAR 86	MPH	18.3	19.5	20.5	20.8	18.0	10.5	7.4	7.6	7.8	5.8	10.8	15.9
	σ	9.0	10.0	10.5	11.0	8.5	4.5	3.5	4.5	4.0	3.0	7.0	8.0
APR 86	MPH	16.0	16.9	18.5	18.5	13.6	9.9	9.8	10.8	10.3	8.4	9.3	13.1
	σ	7.5	8.5	8.0	8.5	7.0	6.5	5.5	5.0	4.5	5.0	6.5	7.0
SEP 87	MPH	22.9	26.8	27.9	29.6	27.5	13.0	5.9	6.9	7.3	6.1	7.1	17.6
	σ	7.0	6.5	7.5	7.5	6.5	3.5	2.0	2.5	4.0	3.5	5.0	6.0
OCT 87	MPH	22.3	24.5	26.1	27.8	26.0	14.6	6.0	6.1	5.9	5.8	9.3	18.3
	σ	6.5	7.0	8.0	8.0	7.5	5.5	2.0	3.0	3.0	4.5	6.0	6.5
NOV 87	MPH	16.9	17.9	19.6	20.4	18.5	12.1	7.6	6.9	5.8	8.0	12.8	16.1
	σ	9.0	9.5	9.5	9.5	9.0	7.0	5.5	5.5	5.5	6.5	8.0	8.0
DEC 87	MPH	17.8	18.9	19.6	20.3	20.0	16.0	11.0	8.6	9.1	12.6	15.3	17.5
	σ	10.0	9.5	9.5	9.5	9.0	7.5	7.5	8.5	9.5	9.5	9.0	9.5
JAN 88	MPH	18.5	19.8	20.5	21.1	21.4	17.9	9.8	7.0	6.4	8.4	11.4	16.3
	σ	10.5	11.5	11.5	12.5	12.0	9.5	6.5	4.5	5.5	6.5	8.5	10.0
FEB 88	MPH	19.6	22.0	23.0	22.8	22.3	14.5	6.9	5.6	5.0	4.8	10.0	15.9
	σ	9.0	9.5	10.0	10.0	9.0	6.5	4.0	3.5	4.0	4.5	7.0	8.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAR 88	MPH	17.5	19.0	19.6	19.1	17.0	13.3	9.8	10.6	9.8	7.0	10.4	14.1
	σ	8.5	9.0	9.5	10.5	8.5	5.5	5.0	6.0	6.0	4.0	7.0	8.0
APR 88	MPH	18.4	19.9	21.1	21.4	16.3	8.5	8.6	8.1	8.3	6.9	7.6	14.5
	σ	8.0	8.5	9.0	10.0	7.0	3.5	4.5	3.5	3.5	3.5	5.5	7.5
MAY 88	MPH	18.0	21.5	22.4	22.8	17.1	10.8	9.3	9.6	9.8	8.5	8.0	12.3
	σ	6.5	8.0	9.0	9.5	7.5	4.5	5.0	5.0	5.0	5.0	4.5	6.0
JUN 88	MPH	21.5	25.4	27.3	27.8	21.3	11.3	7.9	9.1	9.9	9.4	9.3	16.1
	σ	6.0	5.5	5.0	4.5	5.5	3.5	5.0	4.5	5.0	5.5	6.5	6.0
JUL 88	MPH	22.3	25.3	27.3	28.6	23.5	12.5	7.1	7.9	8.9	9.8	9.0	15.8
	σ	4.5	5.0	4.5	5.0	4.0	5.0	3.0	2.5	3.5	3.5	5.0	6.0
AUG 88	MPH	21.8	23.5	26.6	29.4	25.4	11.5	6.5	8.3	7.8	8.0	8.4	16.5
	σ	6.5	7.5	6.5	5.0	4.5	4.5	1.5	2.5	3.0	3.5	6.5	5.5
SEP 89	MPH	23.5	25.9	27.4	29.5	26.5	16.1	8.9	7.9	6.9	6.9	10.4	19.8
	σ	7.5	9.0	10.0	8.5	8.0	6.5	5.5	3.5	3.5	4.0	6.5	5.5
OCT 89	MPH	21.4	23.4	25.1	26.4	25.8	15.1	7.6	7.9	8.0	7.9	12.1	17.0
	σ	9.0	9.5	9.5	9.5	9.0	7.0	3.5	3.5	4.5	6.0	7.0	9.0
NOV 89	MPH	18.3	19.5	21.6	22.0	21.3	10.8	5.4	6.8	5.4	5.6	13.1	17.0
	σ	10.0	10.0	10.5	10.0	8.0	5.5	3.0	3.5	3.0	4.5	7.5	8.5
DEC 89	MPH	18.3	20.3	21.9	21.6	21.6	15.0	5.9	5.1	4.3	6.4	12.1	16.8
	σ	9.0	9.0	10.0	10.5	10.5	7.5	3.5	3.0	3.0	4.5	8.5	9.0
JAN 90	MPH	21.1	22.9	24.0	24.0	23.0	17.9	11.8	10.0	9.3	11.1	16.4	19.5
	σ	9.0	10.0	9.5	9.5	10.5	9.0	6.5	6.0	6.5	8.0	8.5	8.0
FEB 90	MPH	19.4	21.1	22.3	22.8	22.3	15.0	8.6	7.6	7.3	7.1	12.6	17.1
	σ	10.0	10.0	10.5	10.0	9.5	7.5	6.0	5.0	6.0	8.0	8.0	9.0
MAR 90	MPH	18.6	20.0	20.1	21.1	17.8	13.3	9.4	9.3	8.1	7.6	12.5	16.3
	σ	10.0	11.0	11.0	11.0	8.5	5.5	5.5	5.5	5.0	5.5	7.0	8.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
APR 90	MPH	19.3	21.0	22.3	22.1	16.6	9.0	10.0	10.5	9.5	7.6	9.6	16.0
	σ	8.0	8.5	9.0	9.5	6.5	4.0	4.5	5.0	5.0	4.5	5.0	6.0
MAY 90	MPH	20.1	21.4	21.5	20.0	12.9	9.0	9.6	10.5	9.9	7.8	8.8	16.1
	σ	8.5	9.0	9.0	8.5	6.0	3.5	4.0	3.5	4.5	4.0	4.0	7.0
JUN 90	MPH	22.8	25.6	27.4	26.3	16.0	7.6	7.5	8.3	7.1	7.1	11.9	20.4
	σ	9.5	9.5	10.0	7.5	6.5	3.5	2.5	3.0	2.5	3.0	6.0	8.5
JUL 90	MPH	23.0	24.3	26.0	24.6	16.4	7.3	8.1	8.5	9.9	9.4	12.8	19.3
	σ	7.0	6.5	7.0	7.0	5.5	2.0	3.0	5.0	6.5	7.5	7.0	8.0
AUG 90	MPH	22.4	26.1	29.8	29.5	19.5	7.9	7.4	8.9	8.8	8.6	11.8	20.3
	σ	8.5	6.5	5.0	5.0	3.5	3.0	3.0	4.0	4.0	4.5	5.0	6.5
DEC 90	MPH	17.1	18.4	18.8	18.9	18.6	13.6	8.4	7.5	6.8	7.8	10.1	14.0
	σ	11.5	12.5	12.5	13.5	12.5	9.5	7.0	6.5	7.5	9.5	9.5	10.5
JAN 91	MPH	18.0	20.4	20.8	22.1	21.6	15.6	7.3	5.0	3.8	6.0	11.4	15.3
	σ	11.5	11.5	12.5	13.0	13.5	11.0	5.0	4.0	4.0	6.0	8.5	10.5
FEB 91	MPH	21.3	23.9	26.4	26.9	25.0	15.1	7.8	5.6	4.5	5.4	12.6	18.0
	σ	9.5	10.5	10.5	10.5	10.0	7.5	4.5	3.5	3.5	5.0	8.5	9.0
MAR 91	MPH	16.5	18.3	20.1	19.8	16.1	11.1	9.9	10.0	9.0	9.4	12.0	14.4
	σ	8.5	7.5	8.0	8.5	7.0	6.5	5.0	4.5	5.0	6.5	7.5	8.5
APR 91	MPH	15.9	17.9	19.4	19.5	13.5	8.0	8.5	9.0	8.4	6.9	8.5	13.6
	σ	8.0	9.5	9.5	8.5	7.0	3.5	3.5	3.5	3.5	3.0	5.5	7.0
MAY 91	MPH	18.1	20.0	20.8	18.6	11.5	9.1	9.1	8.9	8.6	6.5	8.6	14.8
	σ	8.5	8.5	9.0	8.5	5.5	5.0	4.5	4.0	3.5	3.5	5.0	8.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 84	5	1	24	24	1	13	32	27
	SEP 84	7	1	16	18	3	20	42	31
	OCT 84	6	1	25	19	2	18	54	33
	NOV 84	8	1	19	12	1	11	32	31
	DEC 84	6	2	27	16	1	6	35	27
	JAN 85	5	1	31	19	0	4	29	40
12-18 MPH	AUG 84	0	0	41	65	0	1	4	2
	SEP 84	0	0	26	42	1	1	11	6
	OCT 84	0	0	37	51	1	2	10	6
	NOV 84	2	0	32	43	1	2	13	12
	DEC 84	1	0	33	45	1	1	15	4
	JAN 85	0	0	26	42	0	0	3	2
18-24 MPH	AUG 84	0	0	50	103	0	0	0	0
	SEP 84	0	0	36	79	0	0	1	0
	OCT 84	0	0	34	78	0	0	1	1
	NOV 84	0	0	43	88	0	0	3	2
	DEC 84	0	0	29	74	0	0	2	1
	JAN 85	0	0	21	72	0	0	0	0
24 + MPH	AUG 84	0	0	33	138	0	0	0	0
	SEP 84	0	0	33	157	0	0	0	0
	OCT 84	0	0	21	98	0	0	0	0
	NOV 84	0	0	55	140	0	0	1	0
	DEC 84	0	0	30	166	0	0	0	0
	JAN 85	0	0	11	97	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 85	6	2	21	13	1	3	26	35
	MAR 85	13	3	24	27	4	11	53	44
	APR 85	14	3	21	16	2	20	54	57
	MAY 85	15	4	22	29	5	17	46	55
	JUN 85	10	1	17	14	2	21	49	50
	JUL 85	5	2	24	25	4	12	20	21
12-18 MPH	FEB 85	0	0	25	38	0	1	5	2
	MAR 85	1	1	32	48	2	2	20	10
	APR 85	1	1	27	35	1	1	19	19
	MAY 85	1	0	28	59	3	2	18	13
	JUN 85	0	0	23	33	1	2	9	7
	JUL 85	1	1	44	75	2	2	1	1
18-24 MPH	FEB 85	0	0	32	71	0	0	1	0
	MAR 85	0	0	39	67	0	0	6	6
	APR 85	0	0	26	59	0	0	4	11
	MAY 85	0	0	23	85	1	0	5	4
	JUN 85	0	0	24	68	0	0	1	1
	JUL 85	0	0	54	96	0	0	1	0
24 + MPH	FEB 85	0	0	27	116	0	0	0	0
	MAR 85	0	0	24	78	0	0	1	2
	APR 85	0	0	23	105	0	0	1	6
	MAY 85	0	0	20	117	0	0	1	1
	JUN 85	0	0	26	126	0	0	0	0
	JUL 85	0	0	51	147	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	13	2	17	16	2	22	44	49
	SEP 85	13	3	19	19	4	19	47	43
	OCT 85	7	2	27	19	1	19	44	47
	NOV 85	9	1	34	23	2	11	44	35
	DEC 85	8	3	37	23	1	3	15	26
	JAN 86	5	2	19	13	1	5	14	25
12-18 MPH	AUG 85	0	0	22	31	1	3	12	11
	SEP 85	1	0	29	46	2	2	14	16
	OCT 85	0	0	27	35	1	1	4	11
	NOV 85	1	0	43	52	1	2	16	9
	DEC 85	1	1	33	40	0	0	2	2
	JAN 86	1	1	38	43	1	1	6	5
18-24 MPH	AUG 85	0	0	32	73	1	0	2	1
	SEP 85	0	0	31	79	1	0	3	6
	OCT 85	0	0	25	60	0	0	2	4
	NOV 85	0	0	38	68	1	1	2	2
	DEC 85	0	0	28	58	0	0	0	0
	JAN 86	0	0	42	74	0	0	1	1
24 + MPH	AUG 85	1	2	69	159	0	0	0	0
	SEP 85	1	1	43	109	1	0	0	1
	OCT 85	3	2	42	118	0	0	0	0
	NOV 85	0	0	38	68	1	1	2	2
	DEC 85	0	0	28	58	0	0	0	0
	JAN 86	0	0	43	182	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 86	10	3	35	16	2	12	29	35
	MAR 86	12	2	31	17	2	18	49	50
	APR 86	16	3	21	18	3	13	57	49
	SEP 87	3	0	18	7	1	18	37	32
	OCT 87	3	0	31	15	1	18	38	29
	NOV 87	3	2	40	18	2	13	29	22
12-18 MPH	FEB 86	2	1	55	45	2	3	12	13
	MAR 86	1	0	41	39	2	1	13	8
	APR 86	1	1	38	44	2	3	23	14
	SEP 87	0	0	30	14	0	1	2	1
	OCT 87	0	0	49	27	0	0	2	2
	NOV 87	0	1	61	34	1	1	13	4
18-24 MPH	FEB 86	0	0	48	54	1	2	4	4
	MAR 86	0	0	38	55	1	0	3	3
	APR 86	0	0	43	68	1	1	10	4
	SEP 87	0	0	42	29	0	0	0	0
	OCT 87	0	0	64	50	0	0	0	0
	NOV 87	0	1	57	49	1	0	6	2
24 + MPH	FEB 86	0	0	22	66	1	1	2	1
	MAR 86	0	0	41	106	0	0	1	2
	APR 86	0	0	33	54	0	0	4	2
	SEP 87	2	2	82	88	0	0	0	0
	OCT 87	4	4	113	102	0	0	0	0
	NOV 87	2	1	57	76	1	0	1	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 87	4	1	32	11	1	5	50	24
	JAN 88	7	1	28	7	1	3	35	49
	FEB 88	3	1	19	8	1	4	37	40
	MAR 88	6	1	25	8	3	28	83	39
	APR 88	16	2	42	13	3	14	45	52
	MAY 88	18	3	37	22	4	19	57	61
12-18 MPH	DEC 87	0	1	58	27	0	0	16	4
	JAN 88	1	0	53	20	0	1	10	6
	FEB 88	1	1	38	21	0	1	14	6
	MAR 88	1	2	40	15	1	5	48	22
	APR 88	1	0	61	27	1	2	20	11
	MAY 88	2	1	49	24	1	3	20	13
18-24 MPH	DEC 87	0	0	74	55	1	0	1	0
	JAN 88	1	1	67	28	0	0	3	1
	FEB 88	2	1	58	33	0	0	2	2
	MAR 88	1	1	55	23	0	1	16	9
	APR 88	0	0	53	39	0	0	6	6
	MAY 88	0	0	51	36	0	1	10	3
24 + MPH	DEC 87	5	2	79	105	1	0	0	0
	JAN 88	21	6	101	63	0	0	1	0
	FEB 88	27	5	82	61	0	0	0	0
	MAR 88	9	3	65	48	0	0	6	7
	APR 88	2	2	57	55	0	0	1	3
	MAY 88	0	1	62	78	0	1	9	1

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 88	8	2	34	16	3	15	37	34
	JUL 88	12	3	24	11	3	18	47	50
	AUG 88	12	1	20	10	2	20	50	58
	SEP 89	141	0	0	0	0	0	0	0
	OCT 89	154	0	0	0	0	0	0	0
	NOV 89	66	13	2	4	32	1	3	22
12-18 MPH	JUN 88	0	0	54	30	1	1	10	6
	JUL 88	1	1	49	28	2	2	14	13
	AUG 88	1	0	41	25	1	1	6	7
	SEP 89	85	0	0	0	0	0	0	0
	OCT 89	87	0	0	0	0	0	0	0
	NOV 89	19	1	0	2	56	2	0	3
18-24 MPH	JUN 88	0	0	73	57	1	0	1	1
	JUL 88	0	0	71	59	1	0	2	1
	AUG 88	0	0	65	52	0	0	2	0
	SEP 89	93	0	0	0	0	0	0	0
	OCT 89	111	0	0	0	0	0	0	0
	NOV 89	11	0	0	1	82	2	0	0
24 + MPH	JUN 88	0	1	88	109	0	0	0	0
	JUL 88	1	1	95	110	0	0	0	0
	AUG 88	2	2	93	117	0	0	0	0
	SEP 89	238	0	0	0	0	0	0	0
	OCT 89	224	0	0	0	0	0	0	0
	NOV 89	9	0	0	0	148	5	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 89	61	10	1	3	36	1	3	25
	JAN 90	38	14	2	5	38	3	3	14
	FEB 90	56	10	1	7	31	2	3	27
	MAR 90	60	13	2	3	27	3	7	30
	APR 90	72	26	6	5	40	3	9	24
	MAY 90	88	27	7	8	38	7	10	29
12-18 MPH	DEC 89	11	1	0	2	48	1	0	6
	JAN 90	15	2	0	5	83	5	0	3
	FEB 90	15	1	0	6	52	2	1	12
	MAR 90	29	1	0	3	77	5	1	12
	APR 90	40	2	1	5	72	4	1	8
	MAY 90	45	3	1	6	65	6	1	5
18-24 MPH	DEC 89	1	0	0	1	90	2	0	1
	JAN 90	9	0	0	3	114	6	0	1
	FEB 90	1	0	0	7	76	5	0	1
	MAR 90	14	0	0	2	83	5	0	3
	APR 90	16	1	0	3	87	4	0	2
	MAY 90	15	0	0	3	77	5	0	1
24 + MPH	DEC 89	0	0	0	1	186	4	0	0
	JAN 90	5	0	0	2	221	7	0	0
	FEB 90	0	0	0	3	153	17	0	0
	MAR 90	2	0	0	1	137	7	0	0
	APR 90	4	0	0	1	129	5	0	0
	MAY 90	5	0	0	1	122	9	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 90	73	21	7	8	36	7	10	30
	JUL 90	84	15	3	5	30	5	10	31
	AUG 90	68	15	3	7	32	5	8	20
	DEC 90	58	12	2	3	13	1	1	13
	JAN 91	55	10	2	5	23	2	1	14
	FEB 91	52	8	1	6	20	1	3	17
12-18 MPH	JUN 90	20	2	0	4	47	3	1	5
	JUL 90	14	1	0	4	50	4	1	4
	AUG 90	15	1	0	7	70	4	1	3
	DEC 90	13	1	0	2	26	2	0	2
	JAN 91	14	2	0	3	41	2	0	5
	FEB 91	12	1	0	4	49	2	0	5
18-24 MPH	JUN 90	5	0	0	4	71	2	0	1
	JUL 90	3	0	0	3	100	8	0	1
	AUG 90	2	0	0	4	105	6	0	0
	DEC 90	1	0	0	2	38	3	0	0
	JAN 91	3	0	0	2	65	2	0	1
	FEB 91	2	0	0	2	73	2	0	1
24 + MPH	JUN 90	1	0	0	2	184	10	0	0
	JUL 90	0	0	0	3	192	16	0	0
	AUG 90	0	0	0	2	207	12	0	0
	DEC 90	0	0	0	4	112	7	0	0
	JAN 91	1	0	0	2	187	3	0	0
	FEB 91	0	0	0	4	211	6	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 91	61	28	7	10	46	5	5	19
	APR 91	91	25	6	6	40	6	10	40
	MAY 91	89	29	5	9	39	5	8	30
12-18 MPH	MAR 91	26	5	1	10	87	6	1	8
	APR 91	46	3	1	3	63	3	2	13
	MAY 91	26	3	1	8	71	4	1	7
18-24 MPH	MAR 91	13	0	0	7	98	7	0	3
	APR 91	10	0	0	2	67	3	0	2
	MAY 91	5	0	0	5	82	4	0	1
24 + MPH	MAR 91	7	0	0	9	96	9	0	1
	APR 91	1	0	0	2	87	4	0	0
	MAY 91	1	0	0	4	102	8	0	0

Site Description

County:	Utah	Elevation:	5,200 ft.
Township:	8 South	Range:	3 East
Section:	34	Quarter Section:	Northwest
Longitude:	111° 33'	Latitude:	39° 59'

Duration of data logging: July 1987 to May 1991
Months of available data: 33
Anemometer height: 95 ft.

Surrounding Environmental Conditions

Prevailing wind direction: East
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

Property ownership: Spanish Fork City
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

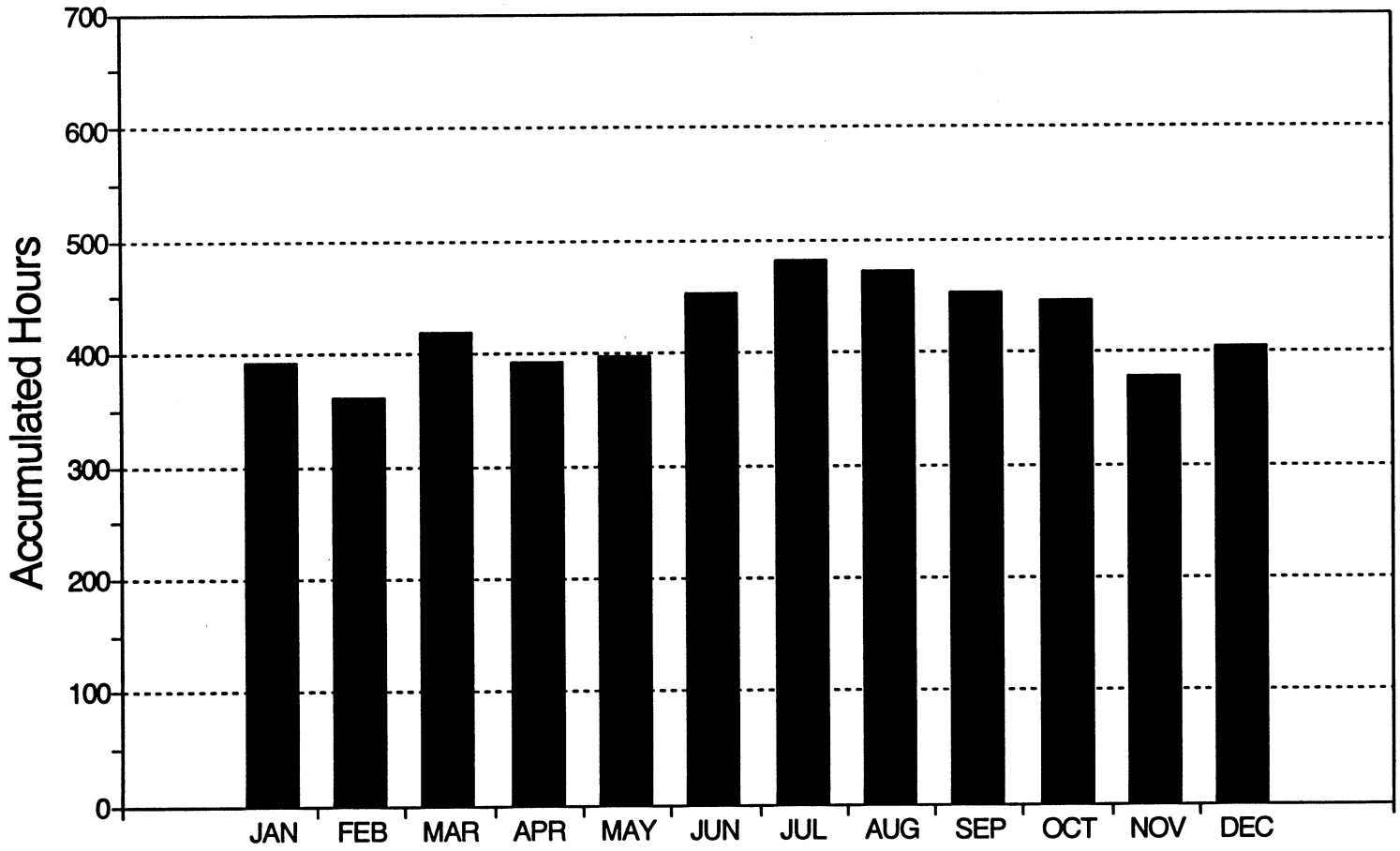
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JUL 87	156	53	37	28	26	26	28	31	36	41	47	49	48	43	35	24	17	20
AUG 87	169	53	34	24	20	20	21	22	27	33	38	44	49	51	48	38	26	26
SEP 87	210	48	25	16	15	15	17	22	25	30	34	38	40	43	46	43	30	24
OCT 87	234	43	21	18	19	20	24	26	29	32	34	37	42	43	39	31	25	26
NOV 87	250	42	34	31	32	34	35	31	30	33	37	37	32	23	15	10	6	8
DEC 87	224	35	32	28	26	25	26	30	33	37	38	40	39	34	29	23	18	26
JAN 88	255	43	31	26	23	22	21	22	25	24	25	26	28	27	28	25	20	40
FEB 88	255	34	23	20	19	19	20	21	25	28	30	33	35	34	30	22	13	12
MAR 88	190	63	62	55	45	37	31	26	24	24	27	31	33	27	20	15	12	22
APR 88	207	65	47	38	36	37	35	31	29	29	29	30	28	25	19	13	10	11
MAY 88	185	66	47	35	32	31	28	24	23	26	29	33	33	31	28	23	15	13
JUN 88	147	52	36	30	29	28	26	27	31	38	44	48	49	42	34	27	19	14
JUL 88	143	58	43	35	29	26	27	28	29	32	37	42	47	48	43	35	23	21
AUG 88	202	57	34	24	20	18	18	21	26	33	40	45	47	44	40	34	23	17
SEP 89	184	55	34	25	21	21	24	24	26	29	32	36	39	42	41	35	26	25
OCT 89	217	52	32	24	21	20	22	23	27	31	36	39	40	40	39	32	21	29
NOV 89	255	47	31	26	24	24	26	28	29	31	33	32	30	26	19	12	8	12
DEC 89	255	40	30	24	19	18	19	21	26	31	32	34	34	32	27	18	10	11
JAN 90	183	37	30	29	30	32	32	33	35	36	38	39	39	38	33	26	20	34
FEB 90	234	42	37	34	30	24	21	21	23	27	29	28	28	27	23	16	11	17
MAR 90	209	57	39	31	31	31	31	34	35	32	30	30	32	29	23	16	9	7
APR 90	191	69	50	41	38	34	31	30	30	32	33	35	35	31	23	12	4	1
MAY 90	198	73	60	50	41	35	33	32	32	34	35	32	28	23	18	12	6	3
JUN 90	185	69	48	38	31	27	23	22	23	26	28	30	32	32	31	27	21	28
JUL 90	170	76	51	31	24	22	21	23	27	35	42	45	47	45	37	25	13	11
AUG 90	149	66	46	33	29	27	28	31	34	38	41	43	42	42	38	26	15	14

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
SEP 90	160	52	30	20	19	21	26	32	38	45	47	49	47	38	30	24	18	23
DEC 90	255	37	22	16	13	11	10	10	13	15	15	15	14	13	11	10	10	24
JAN 91	255	37	26	20	18	16	16	18	20	20	21	24	25	24	22	19	15	25
FEB 91	255	38	27	22	20	21	23	25	24	25	29	36	39	36	27	18	11	8
MAR 91	203	62	48	42	40	37	36	37	38	40	40	32	27	23	16	10	6	6
APR 91	218	73	61	54	46	39	34	30	28	25	22	20	19	18	14	10	5	4
MAY 91	234	81	56	42	35	31	30	29	29	30	29	29	26	21	16	11	7	9

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUL 87	MPH	25.0	27.8	28.9	28.4	23.1	11.8	7.1	9.0	11.0	11.1	12.6	19.9
	σ	7.0	5.5	7.5	8.5	7.5	5.5	6.0	5.5	8.0	9.0	9.0	7.5
AUG 87	MPH	27.1	30.0	31.0	31.9	27.9	12.6	4.9	7.5	8.5	8.4	13.5	22.4
	σ	6.5	5.5	5.5	4.5	5.0	5.5	2.0	4.5	5.5	7.0	6.5	7.0
SEP 87	MPH	26.4	29.1	31.0	31.9	28.5	12.3	4.3	6.1	7.0	6.1	12.0	21.3
	σ	7.0	6.5	7.0	6.5	6.5	5.0	2.5	3.5	5.0	6.0	6.5	6.0
OCT 87	MPH	25.1	27.4	29.5	30.3	27.5	13.4	4.8	4.9	4.9	5.1	11.6	21.3
	σ	8.0	8.5	8.5	8.5	7.5	6.5	3.0	3.5	4.0	5.0	6.5	7.0
NOV 87	MPH	18.4	18.8	19.8	20.9	18.8	11.0	6.5	6.1	4.9	8.4	13.5	17.5
	σ	10.0	10.0	10.0	10.0	9.5	7.5	5.5	5.5	5.5	7.5	8.5	8.5
DEC 87	MPH	19.1	21.0	21.3	21.5	21.8	15.9	9.6	7.4	8.9	14.1	17.1	18.3
	σ	12.0	11.0	12.0	11.0	11.0	10.0	8.5	8.0	10.0	11.0	11.5	11.5
JAN 88	MPH	19.8	21.6	21.9	22.0	21.6	16.0	7.9	5.5	5.6	8.3	11.4	17.1
	σ	12.5	13.5	13.0	13.5	12.5	11.0	7.5	5.5	6.5	7.5	9.5	12.0
FEB 88	MPH	21.0	23.1	24.4	24.3	22.4	12.1	4.8	4.0	3.9	5.3	11.3	17.1
	σ	9.5	11.0	11.5	11.5	10.5	7.5	3.0	3.0	4.0	5.5	8.0	9.5
MAR 88	MPH	19.4	21.0	22.0	21.0	18.6	12.8	8.9	9.9	9.0	7.5	11.3	16.3
	σ	10.5	11.0	12.0	12.5	11.5	7.0	5.0	5.5	6.0	4.5	8.0	9.5
APR 88	MPH	20.4	21.8	23.5	23.6	16.4	7.6	8.5	7.9	8.3	7.1	9.8	16.6
	σ	9.5	9.5	10.5	11.0	8.5	4.5	5.5	4.5	4.0	4.5	6.5	8.5
MAY 88	MPH	22.6	25.4	26.1	25.8	19.8	10.0	8.4	9.4	8.9	8.1	8.3	15.3
	σ	8.5	9.0	10.0	10.0	10.0	5.0	4.5	6.0	4.5	5.5	6.5	8.0
JUN 88	MPH	25.0	28.9	30.6	30.4	22.8	10.1	7.5	9.6	10.4	10.3	12.1	20.0
	σ	7.0	5.5	5.0	5.5	6.5	5.0	5.5	5.5	6.5	7.0	7.5	6.5
JUL 88	MPH	26.6	29.3	31.3	31.8	26.9	12.8	6.4	7.8	9.1	10.8	10.8	19.8
	σ	6.0	5.5	4.5	4.5	6.5	6.0	3.5	3.0	4.0	5.5	6.5	7.0
AUG 88	MPH	25.4	26.9	29.6	31.9	26.5	10.8	5.1	7.3	7.6	8.0	10.0	20.5
	σ	8.0	9.0	6.5	4.0	5.5	5.5	2.0	3.0	4.0	5.5	8.0	6.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 89	MPH	24.9	26.6	27.9	29.6	26.9	15.3	8.1	7.3	6.4	6.3	12.0	21.9
	σ	8.5	8.5	9.5	9.0	9.5	7.5	7.0	4.5	4.0	4.5	7.0	7.5
OCT 89	MPH	22.9	24.1	27.0	28.1	27.6	15.3	6.4	7.1	7.3	7.6	13.3	19.3
	σ	10.0	10.5	9.5	11.0	10.0	8.5	4.5	4.0	5.5	7.0	8.5	10.0
NOV 89	MPH	18.4	20.0	21.6	22.4	21.0	8.9	4.1	5.3	3.4	6.0	13.0	16.8
	σ	10.5	11.0	10.5	11.0	9.0	5.5	3.0	4.0	3.0	5.5	7.5	9.0
DEC 89	MPH	17.9	20.6	22.0	22.4	21.1	13.0	4.1	3.3	2.5	6.3	11.3	15.6
	σ	10.0	10.5	11.0	11.5	12.0	8.5	3.5	2.5	3.0	5.5	8.5	9.5
JAN 90	MPH	22.3	23.5	24.9	25.0	23.1	17.8	10.4	9.1	8.4	11.1	16.4	20.1
	σ	9.5	10.5	11.5	11.5	12.0	10.5	7.5	7.0	8.0	9.5	9.5	9.5
FEB 90	MPH	18.6	20.1	22.0	22.0	20.9	12.8	7.3	5.5	5.5	7.5	12.4	16.5
	σ	10.0	11.0	11.0	11.5	10.5	8.5	6.5	6.0	7.0	9.0	8.5	9.5
MAR 90	MPH	18.9	20.1	21.0	21.4	18.1	12.3	8.8	8.8	8.0	8.3	13.5	17.3
	σ	11.0	11.5	11.5	11.5	10.0	7.5	6.0	5.5	5.5	6.5	8.5	10.5
APR 90	MPH	20.3	21.9	23.1	22.4	16.1	7.5	9.1	9.9	8.9	6.4	10.4	17.4
	σ	9.0	9.5	10.0	10.0	7.0	4.5	5.5	5.5	5.5	5.0	6.0	7.0
MAY 90	MPH	20.6	21.4	22.3	20.6	11.6	7.9	8.8	9.9	9.6	7.6	9.3	17.3
	σ	9.0	9.0	10.5	10.0	7.0	4.5	4.0	4.0	5.0	5.0	5.5	7.0
JUN 90	MPH	24.1	27.0	28.1	27.4	16.6	6.6	6.6	8.4	7.4	8.0	13.9	21.5
	σ	10.5	9.5	10.5	9.0	8.5	3.5	3.5	3.5	3.0	3.5	8.0	9.0
JUL 90	MPH	24.5	26.1	27.4	26.3	17.0	6.6	7.5	8.9	9.9	10.9	15.8	21.4
	σ	8.0	7.5	8.0	8.0	6.5	3.5	4.0	7.0	8.5	9.0	8.5	9.5
AUG 90	MPH	24.0	28.0	30.9	30.5	20.3	7.1	7.3	9.0	9.1	9.0	14.3	21.3
	σ	9.0	6.0	5.5	4.0	4.0	3.0	3.5	4.5	5.0	5.5	5.0	7.5
SEP 90	MPH	25.6	28.1	29.5	29.3	21.8	9.3	6.5	8.1	9.4	10.8	17.8	23.1
	σ	6.5	6.5	6.0	5.5	6.5	5.0	4.5	6.0	8.0	8.5	8.0	7.0
DEC 90	MPH	15.0	15.8	16.1	17.0	16.4	11.3	7.8	6.4	5.6	7.4	9.1	11.6
	σ	13.0	12.5	13.5	13.5	13.5	10.5	8.0	7.5	8.0	10.5	11.0	12.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JAN 91	MPH	16.0	18.4	18.9	20.0	19.1	12.1	4.3	3.1	2.8	5.0	9.4	14.0
	σ	12.0	12.5	13.0	13.5	14.0	11.0	4.5	4.0	4.5	5.5	8.5	11.0
FEB 91	MPH	19.0	22.5	24.0	24.5	22.4	12.3	6.0	4.4	3.8	5.9	11.4	15.6
	σ	9.5	10.0	10.0	9.5	9.5	9.0	5.0	3.5	4.0	6.0	8.5	10.0
MAR 91	MPH	17.6	19.3	20.6	20.1	16.8	10.4	9.0	8.9	9.3	10.0	13.3	15.3
	σ	9.5	9.5	10.5	10.0	9.0	7.0	5.5	5.0	5.5	7.5	8.5	9.0
APR 91	MPH	16.8	18.3	19.4	19.5	13.4	7.4	8.4	9.0	8.3	6.4	9.4	14.3
	σ	9.0	10.0	10.5	9.5	8.5	4.0	4.5	4.0	3.5	3.5	7.0	8.5
MAY 91	MPH	19.3	21.5	22.0	19.3	10.6	8.3	8.5	8.4	8.4	6.4	9.8	16.0
	σ	9.5	10.0	10.0	10.0	7.0	5.0	5.0	4.5	4.5	5.5	6.5	9.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 87	10	3	34	5	5	19	22	21
	AUG 87	12	4	26	3	3	13	26	25
	SEP 87	5	2	22	2	3	15	24	16
	OCT 87	5	2	34	2	2	13	14	11
	NOV 87	7	7	43	3	6	20	12	8
	DEC 87	5	5	36	2	2	25	14	7
12-18 MPH	JUL 87	1	3	61	2	2	6	2	2
	AUG 87	2	3	44	1	1	2	5	3
	SEP 87	0	2	40	1	0	1	1	1
	OCT 87	0	2	58	0	0	1	1	0
	NOV 87	0	7	76	1	2	5	9	2
	DEC 87	2	5	60	1	0	4	4	2
18-24 MPH	JUL 87	0	6	96	1	1	3	0	0
	AUG 87	0	3	76	1	1	0	1	1
	SEP 87	0	3	73	0	0	0	0	0
	OCT 87	0	3	84	0	0	0	0	0
	NOV 87	0	9	78	1	0	1	5	1
	DEC 87	0	2	96	1	0	0	0	0
24 + MPH	JUL 87	0	6	275	1	0	1	0	0
	AUG 87	0	2	318	0	0	0	0	0
	SEP 87	0	3	293	1	0	0	0	0
	OCT 87	0	2	275	0	0	0	0	0
	NOV 87	0	19	148	0	0	0	1	0
	DEC 87	0	4	241	2	0	0	0	0

Wind Rose Data cont.
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 88	11	6	32	2	3	21	12	14
	FEB 88	5	2	25	2	1	16	15	10
	MAR 88	6	2	30	4	15	58	46	19
	APR 88	12	6	38	5	7	24	26	32
	MAY 88	14	3	34	7	7	28	28	27
	JUN 88	9	3	30	5	4	21	26	20
12-18 MPH	JAN 88	2	5	48	1	2	5	2	2
	FEB 88	0	2	45	1	1	3	3	3
	MAR 88	2	1	42	2	6	20	32	8
	APR 88	2	5	66	3	4	10	12	5
	MAY 88	2	2	59	3	4	8	9	3
	JUN 88	1	3	61	2	1	4	8	3
18-24 MPH	JAN 88	0	6	63	0	0	0	0	1
	FEB 88	0	1	69	0	0	0	1	2
	MAR 88	2	0	50	0	2	4	13	3
	APR 88	0	3	73	1	2	3	5	2
	MAY 88	1	2	61	1	2	3	4	1
	JUN 88	0	3	89	1	0	1	1	0
24 + MPH	JAN 88	0	7	210	0	0	0	0	1
	FEB 88	0	1	207	0	0	0	0	1
	MAR 88	1	1	175	0	0	1	7	3
	APR 88	0	2	160	0	0	0	1	2
	MAY 88	0	3	196	0	1	3	1	0
	JUN 88	0	3	273	1	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 88	9	3	21	5	10	27	32	29
	AUG 88	7	2	21	3	6	22	27	27
	SEP 89	5	3	27	4	6	27	23	19
	OCT 89	12	2	21	2	4	25	23	19
	NOV 89	25	4	20	2	2	14	14	23
	DEC 89	19	4	23	1	3	22	14	7
12-18 MPH	JUL 88	1	3	46	3	5	9	9	4
	AUG 88	1	2	39	2	3	5	3	2
	SEP 89	1	3	45	2	4	9	2	1
	OCT 89	16	2	32	1	1	6	4	1
	NOV 89	34	2	24	1	1	6	3	3
	DEC 89	25	3	23	0	0	3	2	0
18-24 MPH	JUL 88	1	3	79	1	1	2	0	1
	AUG 88	1	6	71	1	1	1	0	0
	SEP 89	0	4	69	1	1	3	0	0
	OCT 89	39	3	37	1	0	1	0	0
	NOV 89	51	3	27	0	0	1	2	2
	DEC 89	41	4	32	0	0	0	0	0
24 + MPH	JUL 88	1	9	285	1	0	0	0	0
	AUG 88	1	10	279	0	0	0	0	0
	SEP 89	0	4	270	1	0	1	0	0
	OCT 89	84	8	183	0	0	0	0	0
	NOV 89	116	6	51	1	0	0	0	0
	DEC 89	116	9	73	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 90	18	6	27	3	2	16	13	12
	FEB 90	14	7	23	2	4	37	13	14
	MAR 90	11	3	21	3	7	35	27	18
	APR 90	33	6	17	4	5	28	35	33
	MAY 90	28	7	20	8	9	31	48	32
	JUN 90	19	7	17	8	14	32	33	25
12-18 MPH	JAN 90	28	6	41	2	1	5	7	4
	FEB 90	15	8	31	1	3	8	5	3
	MAR 90	20	5	30	1	1	10	20	4
	APR 90	41	5	15	1	2	8	20	11
	MAY 90	32	6	21	4	4	13	22	7
	JUN 90	25	5	19	2	6	12	9	3
18-24 MPH	JAN 90	39	5	53	1	0	1	3	1
	FEB 90	18	12	37	1	0	1	0	2
	MAR 90	38	8	44	1	0	1	8	2
	APR 90	55	5	16	1	1	2	7	6
	MAY 90	48	6	24	1	2	4	9	4
	JUN 90	33	7	23	1	1	4	2	0
24 + MPH	JAN 90	124	16	122	0	0	1	1	2
	FEB 90	54	16	101	1	0	0	0	6
	MAR 90	53	14	108	1	0	0	1	0
	APR 90	132	5	32	0	1	1	1	2
	MAY 90	96	10	43	0	1	1	3	1
	JUN 90	130	18	80	0	0	1	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 90	20	5	15	6	9	38	38	26
	AUG 90	22	6	13	8	7	30	32	28
	SEP 90	17	8	15	3	2	19	17	21
	DEC 90	10	3	17	1	2	19	14	9
	JAN 91	8	5	28	1	1	12	10	16
	FEB 91	6	5	28	2	2	26	11	6
12-18 MPH	JUL 90	27	4	18	3	4	6	5	3
	AUG 90	39	5	17	3	3	6	6	4
	SEP 90	27	7	27	2	0	1	2	1
	DEC 90	2	2	20	0	1	2	5	1
	JAN 91	1	4	31	1	1	4	4	4
	FEB 91	1	4	49	1	0	5	4	0
18-24 MPH	JUL 90	43	5	30	1	1	1	1	1
	AUG 90	61	6	30	1	1	1	1	0
	SEP 90	43	12	58	2	0	0	0	0
	DEC 90	2	3	31	0	0	0	1	0
	JAN 91	1	6	48	0	0	0	1	1
	FEB 91	2	3	66	1	0	0	1	0
24 + MPH	JUL 90	137	17	108	1	1	0	0	0
	AUG 90	139	15	108	1	0	0	0	0
	SEP 90	125	18	132	1	0	0	0	0
	DEC 91	10	14	89	0	0	0	0	0
	JAN 91	10	13	152	0	0	0	0	1
	FEB 91	9	8	186	1	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 91	14	8	39	7	7	23	28	26
	APR 91	11	5	33	9	13	49	44	24
	MAY 91	26	7	20	7	9	40	42	30
12-18 MPH	MAR 91	3	5	67	4	5	11	12	5
	APR 91	9	3	46	3	7	24	19	9
	MAY 91	30	8	25	3	5	13	9	3
18-24 MPH	MAR 91	3	4	91	2	3	4	6	2
	APR 91	9	3	57	1	2	5	5	2
	MAY 91	38	8	33	1	2	4	1	0
24 + MPH	MAR 91	5	6	139	2	3	2	3	2
	APR 91	14	5	91	0	0	1	1	0
	MAY 91	90	10	46	1	0	1	0	0

Site Description

County:	Utah	Elevation:	5,200 ft.
Township:	8 South	Range:	3 East
Section:	34	Quarter Section:	Northwest
Longitude:	111° 33'	Latitude:	39° 59'

Duration of data logging: July 1987 to May 1991
Months of available data: 33
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Northeast-East
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

Property ownership: Spanish Fork City
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

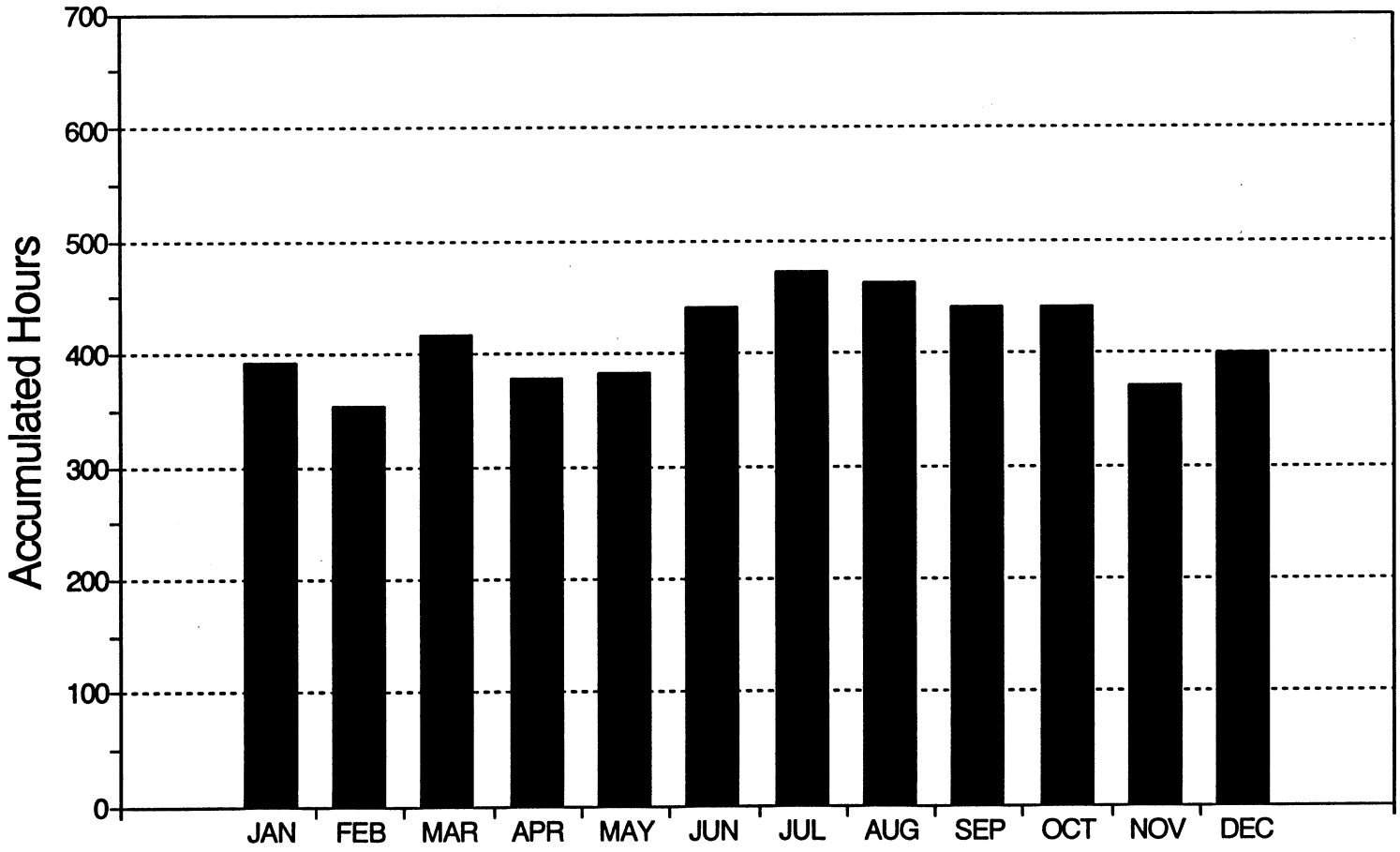
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JUL 87	170	49	36	31	31	33	37	43	48	53	55	51	40	28	19	12	6	3
AUG 87	183	49	34	25	24	25	28	33	39	47	53	56	52	43	28	16	7	3
SEP 87	226	40	24	19	18	21	26	29	34	38	43	48	48	44	33	19	8	2
OCT 87	247	37	23	22	25	28	30	33	36	37	41	45	42	35	27	20	11	6
NOV 87	255	43	36	37	38	38	35	34	37	40	39	31	20	12	8	4	3	3
DEC 87	234	35	33	30	29	30	33	38	43	44	44	42	34	26	20	14	8	7
MAY 88	201	66	48	39	35	31	28	27	30	34	37	37	32	25	17	9	3	2
JUN 88	152	56	40	34	32	31	32	37	45	50	53	51	39	30	22	11	4	1
JUL 88	149	64	47	37	31	31	32	34	38	43	51	54	48	38	25	13	6	4
AUG 88	204	64	38	26	22	22	25	30	38	45	50	51	44	37	26	14	5	2
SEP 88	197	62	42	34	31	28	26	24	25	29	36	42	43	39	31	18	8	3
SEP 89	187	53	35	29	27	27	30	31	34	37	41	46	46	40	28	18	8	2
OCT 89	218	49	34	32	31	30	31	34	35	39	39	40	40	35	26	16	9	7
NOV 89	255	43	34	34	33	34	37	36	36	34	31	27	22	14	9	6	4	3
DEC 89	255	41	33	28	27	26	30	35	37	37	35	32	28	20	12	6	3	3
JAN 90	183	38	34	34	40	43	45	45	44	43	39	37	36	28	22	16	11	7
FEB 90	248	38	36	35	35	31	28	29	32	32	29	27	25	16	12	8	5	5
MAR 90	223	60	45	42	45	46	46	42	36	34	35	33	28	15	9	4	2	1
APR 90	198	63	54	51	49	42	39	39	37	36	34	30	24	15	7	2	0	0
MAY 90	209	69	62	56	49	42	42	41	41	37	29	25	19	12	7	2	1	0
JUN 90	194	68	49	42	37	31	29	31	33	33	32	34	32	28	22	15	8	4
JUL 90	178	73	51	35	30	28	33	37	44	46	47	47	39	27	15	7	3	2
AUG 90	160	65	46	37	35	37	42	45	45	44	41	42	40	31	19	9	4	3
SEP 90	168	49	31	24	24	29	37	44	50	53	53	48	36	28	20	13	8	4
DEC 90	255	33	21	17	15	14	15	18	20	21	22	21	18	16	14	12	8	10

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JAN 91	255	34	25	21	19	19	21	22	23	24	26	27	25	21	18	13	9	7
FEB 91	255	35	28	25	25	26	29	28	29	34	40	41	34	23	14	7	2	1
MAR 91	219	59	50	47	44	41	42	43	45	42	33	27	21	14	8	4	3	2
APR 91	235	71	63	55	49	43	36	32	29	25	23	20	16	12	6	3	1	1
MAY 91	255	73	56	45	39	36	34	34	34	32	32	26	19	13	8	5	3	2

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUL 87	MPH	22.1	24.8	25.8	25.3	20.6	10.6	6.3	7.9	9.9	9.9	11.4	17.6
	σ	6.5	5.0	6.0	6.5	6.5	5.5	5.5	5.0	7.5	8.0	8.0	6.5
AUG 87	MPH	24.1	26.4	27.5	28.6	24.6	11.4	4.4	6.6	7.6	7.5	12.0	19.6
	σ	6.0	5.0	4.5	4.5	4.5	5.0	2.0	4.5	5.5	6.5	6.0	6.5
SEP 87	MPH	23.5	25.9	27.5	29.1	25.6	10.5	3.4	5.1	6.1	5.0	10.6	18.5
	σ	6.0	6.5	6.5	6.5	6.5	4.5	2.5	3.5	4.5	5.5	6.0	5.5
OCT 87	MPH	22.4	24.8	26.5	27.5	24.8	11.6	3.9	3.9	4.1	4.4	10.4	18.8
	σ	7.0	7.5	8.0	7.5	7.0	5.5	3.0	3.5	4.0	5.0	6.0	6.0
NOV 87	MPH	16.3	16.8	17.9	18.6	16.9	9.9	5.9	5.3	4.1	7.3	11.9	15.5
	σ	9.0	9.0	9.5	9.0	9.0	7.0	5.5	5.5	5.5	7.0	8.0	8.0
DEC 87	MPH	17.1	18.9	19.1	19.4	19.8	14.1	8.6	6.6	8.1	12.8	15.3	16.3
	σ	11.0	10.0	10.5	10.0	10.0	9.5	7.5	7.5	9.5	9.5	10.0	11.0
MAY 89	MPH	20.4	22.6	23.3	22.9	17.1	8.8	7.6	8.8	7.9	7.0	7.5	13.9
	σ	7.5	8.0	8.5	9.5	9.0	4.5	4.5	5.5	4.5	5.0	6.0	7.5
JUN 89	MPH	22.4	25.9	27.3	27.1	19.9	8.6	7.0	9.0	9.5	9.1	11.3	18.3
	σ	6.5	4.5	4.0	4.5	6.0	4.5	5.0	4.5	5.5	6.5	6.5	6.0
JUL 89	MPH	23.8	26.1	27.9	28.4	23.4	11.0	5.9	7.5	8.6	9.8	9.8	18.1
	σ	4.5	5.5	5.0	5.0	6.0	5.0	3.5	2.5	4.0	4.5	6.0	6.5
AUG 89	MPH	22.6	24.1	26.6	28.6	23.1	8.9	4.9	6.8	7.1	7.3	9.4	18.6
	σ	7.0	7.5	5.5	4.5	6.0	4.5	1.5	3.0	3.5	4.5	7.0	6.5
SEP 89	MPH	21.8	23.4	24.4	25.4	23.3	12.0	7.1	7.5	7.4	4.6	9.5	18.5
	σ	8.0	9.0	9.5	10.0	9.0	6.0	4.5	4.0	4.5	3.0	6.5	8.5
SEP 89	MPH	22.3	23.9	25.1	26.6	24.1	13.6	7.5	7.0	6.0	5.9	11.0	19.8
	σ	7.0	7.0	8.5	8.0	8.5	7.0	6.0	4.0	3.5	4.5	6.0	6.0
OCT 89	MPH	20.1	21.4	23.9	25.1	24.5	13.6	6.0	6.5	6.6	6.9	11.6	17.0
	σ	9.5	9.5	9.0	9.5	8.5	7.5	4.0	3.5	5.5	6.0	7.5	9.0
NOV 89	MPH	16.4	17.6	19.3	20.1	18.9	8.0	3.6	4.9	3.0	5.6	11.6	14.6
	σ	9.0	10.0	9.0	9.5	8.0	4.5	3.0	4.0	2.5	5.0	6.5	7.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
DEC 89	MPH	16.3	18.4	19.5	20.0	18.9	11.8	3.8	2.9	2.4	5.9	10.3	14.0
	σ	8.5	9.0	9.5	10.0	10.5	7.5	3.0	2.5	3.0	5.5	7.5	8.0
JAN 90	MPH	19.5	20.6	22.3	22.1	20.6	15.6	9.5	8.5	7.5	10.1	15.0	17.8
	σ	8.0	9.0	9.5	10.5	10.5	9.0	6.5	6.0	6.5	8.0	8.0	8.0
FEB 90	MPH	16.4	17.9	19.4	19.3	18.3	11.0	6.5	4.9	4.9	6.8	11.0	14.4
	σ	9.0	10.0	10.0	10.0	9.5	7.5	5.5	5.0	6.5	8.0	7.5	9.0
MAR 90	MPH	16.6	17.6	18.6	19.0	16.0	10.9	8.0	8.1	7.5	7.6	12.1	15.0
	σ	9.5	9.5	10.0	9.5	8.0	6.0	5.0	5.0	5.0	5.5	7.0	8.5
APR 90	MPH	17.6	19.5	20.5	19.9	14.0	6.9	8.3	9.4	7.9	5.8	8.9	15.1
	σ	7.5	7.5	8.5	9.0	5.5	4.5	5.0	5.0	5.0	4.0	5.0	6.0
MAY 90	MPH	18.0	18.8	19.4	18.1	10.3	7.3	8.3	9.4	8.8	6.8	8.1	14.9
	σ	7.5	7.5	9.0	8.5	6.0	4.0	4.0	3.5	4.5	4.0	5.0	6.0
JUN 90	MPH	21.3	23.6	24.9	24.4	14.8	6.1	6.5	7.9	7.0	7.3	12.1	18.9
	σ	8.5	8.5	9.5	7.5	7.5	3.5	3.5	3.5	2.5	3.0	6.5	8.0
JUL 90	MPH	21.6	23.0	24.4	23.3	15.1	6.1	7.1	8.6	9.4	9.9	14.1	18.6
	σ	7.0	6.5	7.5	7.0	5.5	3.0	3.5	6.0	7.5	7.5	7.0	8.0
AUG 90	MPH	21.0	24.8	27.4	27.3	18.0	6.6	6.5	8.6	8.5	8.0	12.3	18.4
	σ	7.5	5.5	5.0	4.0	3.5	3.0	3.5	4.0	4.0	5.0	4.5	7.0
SEP 90	MPH	22.8	25.1	26.5	26.4	19.6	8.5	6.0	7.6	8.5	9.8	15.9	20.6
	σ	5.0	5.5	5.5	5.5	6.5	4.5	4.0	5.0	7.5	8.0	7.5	6.0
DEC 90	MPH	14.9	15.8	16.1	16.6	15.9	10.6	6.3	5.0	4.8	7.1	9.5	12.3
	σ	12.5	12.0	12.0	12.5	12.5	9.5	7.0	6.5	7.0	9.5	10.0	11.5
JAN 91	MPH	14.5	16.6	17.1	17.9	17.1	10.9	3.5	2.5	2.3	4.4	8.3	12.4
	σ	11.0	11.0	12.0	13.0	13.0	10.0	4.5	4.0	4.0	5.0	7.5	10.0
FEB 91	MPH	17.1	20.1	21.5	22.0	20.1	10.9	5.4	3.6	3.3	5.1	10.0	13.8
	σ	8.5	9.5	9.0	8.5	8.5	8.0	4.5	3.5	4.0	5.5	7.5	9.0
MAR 91	MPH	15.9	17.0	18.6	18.0	15.1	9.5	8.1	8.3	8.4	9.1	11.8	13.8
	σ	9.0	8.5	9.5	9.0	8.5	6.5	5.5	4.5	5.5	7.0	7.5	8.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
APR 91	MPH	15.0	16.4	17.3	17.4	12.0	6.8	7.9	8.4	7.6	5.6	8.4	12.6
	σ	8.0	9.0	9.5	9.0	7.5	3.5	4.0	4.0	3.5	3.5	6.5	8.0
MAY 91	MPH	17.1	19.1	19.8	17.3	9.6	7.3	7.8	7.6	7.5	5.5	8.3	14.1
	σ	9.0	9.0	9.0	9.0	6.5	5.0	4.5	4.5	4.5	4.5	6.0	8.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 87	31	49	4	2	4	9	9	8
	AUG 87	39	38	3	1	2	6	9	9
	SEP 87	22	31	3	1	3	5	9	9
	OCT 87	16	45	4	1	2	5	5	5
	NOV 87	15	61	8	4	5	9	10	4
	DEC 87	16	47	7	1	3	7	12	5
12-18 MPH	JUL 87	3	88	2	1	2	3	1	0
	AUG 87	6	65	2	1	1	1	1	2
	SEP 87	1	60	1	0	0	0	0	0
	OCT 87	1	77	3	0	0	0	0	0
	NOV 87	6	89	6	1	1	2	3	3
	DEC 87	6	73	10	0	0	1	1	1
18-24 MPH	JUL 87	0	139	1	0	1	1	0	0
	AUG 87	1	117	1	0	0	0	0	0
	SEP 87	0	99	2	0	0	0	0	0
	OCT 87	1	101	4	0	0	0	0	0
	NOV 87	3	98	7	0	0	0	1	2
	DEC 87	1	107	16	0	0	0	0	0
24 + MPH	JUL 87	0	212	0	0	0	0	0	0
	AUG 87	0	258	0	0	0	0	0	0
	SEP 87	1	241	3	0	0	0	0	0
	OCT 87	2	219	6	0	0	0	0	0
	NOV 87	0	112	6	0	0	0	0	0
	DEC 87	0	160	35	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 88	46	31	20	10	4	9	20	11
	JUN 88	38	26	21	7	3	8	15	12
	JUL 88	52	19	15	12	7	13	16	14
	AUG 88	46	20	14	8	4	9	16	12
	SEP 88	41	27	15	5	4	11	20	17
	SEP 89	30	19	14	10	5	10	19	10
12-18 MPH	MAY 88	9	45	23	5	2	4	3	3
	JUN 88	6	49	29	3	1	1	2	3
	JUL 88	11	40	25	6	3	4	3	2
	AUG 88	3	33	23	4	1	2	2	1
	SEP 88	9	35	20	3	2	5	5	6
	SEP 89	4	36	24	8	10	4	10	1
18-24 MPH	MAY 88	3	49	33	2	1	1	1	1
	JUN 88	1	77	52	1	0	0	0	0
	JUL 88	1	62	48	2	1	1	0	0
	AUG 88	1	60	49	2	0	1	0	0
	SEP 88	3	41	29	1	1	1	1	2
	SEP 89	1	53	39	7	4	1	1	0
24 + MPH	MAY 88	1	81	79	1	1	1	0	0
	JUN 88	0	114	97	1	0	0	0	0
	JUL 88	0	125	112	1	0	0	0	0
	AUG 88	0	105	123	1	0	0	0	0
	SEP 88	2	103	113	2	0	0	0	0
	SEP 89	1	92	122	14	1	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	OCT 89	32	25	12	5	5	9	16	11
	NOV 89	28	39	13	4	2	6	11	7
	DEC 89	15	39	11	5	3	9	15	6
	JAN 90	25	34	13	7	2	6	11	7
	FEB 90	16	34	9	10	7	12	16	6
	MAR 90	30	25	15	13	9	17	27	14
12-18 MPH	OCT 89	4	49	27	4	1	2	3	2
	NOV 89	6	62	26	3	2	2	2	1
	DEC 89	2	51	22	3	0	1	2	1
	JAN 90	10	68	31	8	1	2	4	4
	FEB 90	13	51	14	6	3	3	2	2
	MAR 90	14	62	28	5	2	4	11	9
18-24 MPH	OCT 89	1	60	43	4	0	0	0	0
	NOV 89	3	59	39	4	0	0	0	1
	DEC 89	1	67	37	3	0	0	0	0
	JAN 90	5	73	45	6	0	1	1	2
	FEB 90	16	49	22	5	0	0	0	0
	MAR 90	9	58	33	5	0	1	2	3
24 + MPH	OCT 89	1	104	100	5	0	0	0	0
	NOV 89	0	46	65	6	0	0	0	0
	DEC 89	1	79	54	3	0	0	0	0
	JAN 90	5	111	74	5	0	0	0	1
	FEB 90	14	69	37	8	0	0	0	0
	MAR 90	7	72	40	6	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 90	51	34	18	10	5	12	21	17
	MAY 90	59	32	16	19	6	12	25	18
	JUN 90	48	22	14	22	9	13	18	13
	JUL 90	47	19	15	18	8	15	23	14
	AUG 90	43	24	13	18	5	13	20	13
	SEP 90	35	23	12	7	3	8	11	6
12-18 MPH	APR 90	24	51	28	6	2	4	6	10
	MAY 90	22	49	24	12	3	6	9	9
	JUN 90	11	40	20	10	4	5	4	3
	JUL 90	9	41	24	10	2	2	2	1
	AUG 90	15	61	20	10	2	3	2	2
	SEP 90	16	48	19	7	0	0	0	1
18-24 MPH	APR 90	11	54	37	5	1	1	1	3
	MAY 90	11	56	36	8	1	2	2	3
	JUN 90	9	54	24	6	1	1	1	0
	JUL 90	6	70	42	9	0	0	0	0
	AUG 90	15	83	27	7	0	0	0	0
	SEP 90	25	81	31	11	0	0	0	0
24 + MPH	APR 90	3	48	53	5	0	0	0	1
	MAY 90	5	51	32	5	0	0	1	1
	JUN 90	6	97	64	8	0	0	0	0
	JUL 90	6	118	56	8	0	0	0	0
	AUG 90	12	105	58	12	0	0	0	0
	SEP 90	19	133	48	9	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 90	19	17	6	4	3	6	12	4
	JAN 91	24	25	6	4	2	5	9	5
	FEB 91	15	25	9	6	4	9	16	5
	MAR 91	47	34	15	16	4	8	18	14
	APR 91	42	30	15	21	11	20	31	20
	MAY 91	48	32	12	16	6	12	28	19
12-18 MPH	DEC 90	7	22	8	2	1	1	1	1
	JAN 91	9	30	11	4	1	1	2	2
	FEB 91	5	45	19	4	1	1	3	2
	MAR 91	14	55	28	12	3	4	6	5
	APR 91	16	39	27	11	7	9	9	8
	MAY 91	11	47	22	10	3	4	6	4
18-24 MPH	DEC 90	14	28	13	2	0	0	0	0
	JAN 91	11	39	17	2	0	0	0	1
	FEB 91	3	45	33	8	0	0	1	1
	MAR 91	8	62	44	9	1	2	2	2
	APR 91	4	36	31	8	1	2	1	2
	MAY 91	5	56	28	6	1	1	1	0
24 + MPH	DEC 90	31	54	29	6	0	0	0	0
	JAN 91	12	73	58	3	0	0	0	0
	FEB 91	3	63	80	15	0	0	0	0
	MAR 91	6	58	34	9	1	1	1	1
	APR 91	2	44	31	4	0	0	0	0
	MAY 91	3	65	32	5	0	0	0	0

Site Description

County:	Utah	Elevation:	5,200 ft.
Township:	8 South	Range:	3 East
Section:	34	Quarter Section:	Northwest
Longitude:	111° 33'	Latitude:	40° 04'

Duration of data logging: August 1984 to May 1991
Months of available data: 33
Anemometer height: 60 ft.

Surrounding Environmental Conditions

Prevailing wind direction: East to South, varies with seasons
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

Property ownership: Spanish Fork City
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

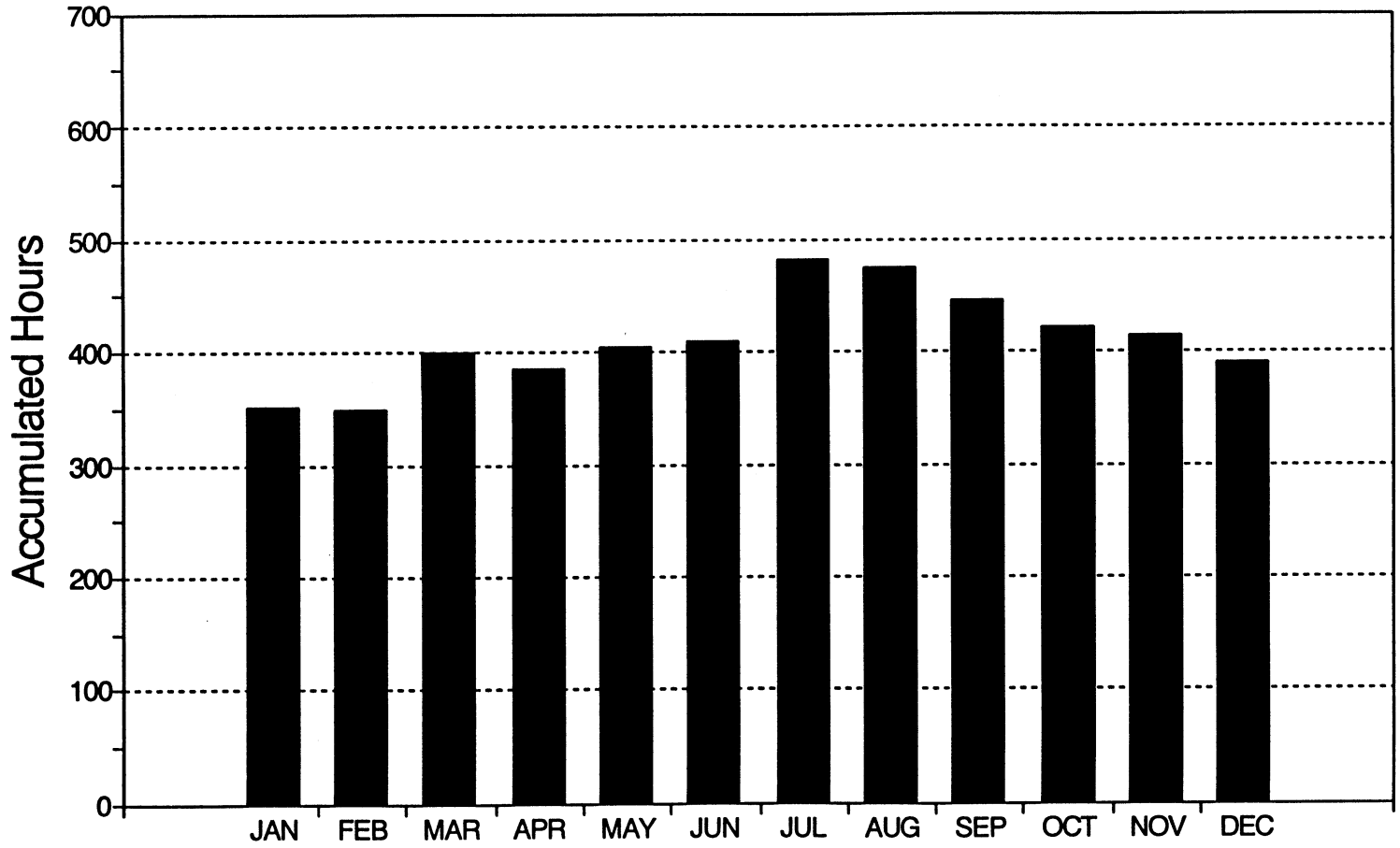
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
AUG 84	192	44	28	22	24	26	30	34	38	44	45	44	42	38	32	25	17	18
SEP 84	208	51	34	24	21	19	22	25	28	33	37	40	41	38	33	26	19	24
OCT 84	255	53	40	34	30	26	27	28	29	30	31	30	29	27	25	20	13	13
NOV 84	191	35	31	28	27	26	25	25	28	34	40	44	44	40	33	24	17	28
DEC 84	254	41	33	32	30	30	28	27	28	29	30	32	32	31	25	19	14	29
JAN 85	255	30	23	22	23	22	21	23	24	25	23	22	19	15	11	7	3	1
FEB 85	255	32	24	20	18	17	20	22	23	24	27	28	27	24	23	19	14	22
MAR 85	255	58	43	32	30	30	29	30	31	31	30	28	25	22	17	12	8	9
APR 85	230	66	49	36	30	27	25	24	24	24	23	25	29	30	27	22	15	13
MAY 85	199	63	47	37	34	34	33	32	31	32	34	34	34	33	27	19	12	9
JUN 85	217	63	41	28	23	21	21	23	25	25	27	29	31	34	32	29	23	29
JUL 85	170	39	25	23	24	28	34	40	42	42	42	41	42	41	37	30	21	25
AUG 85	181	55	41	31	25	22	21	21	22	24	27	31	34	35	36	36	35	67
SEP 85	201	54	41	31	28	29	30	31	31	32	33	33	32	32	29	23	16	16
SEP 89	185	51	32	25	23	24	26	27	28	29	31	34	38	41	40	33	24	28
OCT 89	211	50	33	25	23	23	24	25	29	32	35	38	39	39	36	30	21	32
NOV 89	255	41	30	26	26	27	29	31	30	30	31	30	28	26	19	12	8	14
DEC 89	255	37	31	25	22	21	21	23	28	32	33	33	32	30	24	17	10	11
JAN 90	185	35	29	28	31	33	34	35	36	36	38	40	38	35	31	26	20	34
FEB 90	234	39	37	35	31	27	23	22	23	26	28	27	26	25	23	18	12	13
MAR 90	214	51	38	32	32	33	33	34	34	31	29	30	30	28	23	17	10	8
APR 90	187	63	54	44	40	36	33	31	31	31	31	32	32	30	23	14	7	3
MAY 90	201	68	60	50	43	37	33	34	34	34	35	32	27	22	16	10	5	3
JUN 90	189	64	48	37	32	29	25	24	25	27	29	30	31	31	29	25	18	27
JUL 90	174	69	49	33	26	24	23	25	28	34	41	46	46	43	35	24	14	12
AUG 90	158	62	43	33	29	29	30	32	34	36	39	40	39	38	36	28	18	19

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
SEP 90	162	49	30	21	20	22	26	33	39	43	46	48	46	39	30	23	17	24
DEC 90	255	37	22	16	12	11	10	10	12	14	15	14	14	13	12	10	9	24
JAN 91	255	38	28	22	18	17	17	19	20	20	20	22	22	22	20	18	15	31
FEB 91	255	36	27	24	22	23	24	24	23	23	26	32	35	35	28	20	13	12
MAR 91	200	63	52	45	40	37	35	36	38	39	39	32	27	22	16	11	7	6
APR 91	224	70	60	51	46	40	34	30	27	25	22	20	19	17	14	10	5	5
MAY 91	247	73	54	42	36	32	30	29	29	29	28	27	25	20	15	11	7	8

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
AUG 84	MPH	24.8	26.6	28.3	28.8	24.5	11.6	4.9	5.0	7.0	9.1	14.8	21.3
	σ	6.5	7.5	6.5	6.5	6.5	6.5	4.5	3.0	5.5	7.5	7.5	6.5
SEP 84	MPH	24.1	23.9	25.9	27.5	24.6	13.3	5.9	5.6	6.0	7.5	14.5	20.8
	σ	9.5	10.0	10.5	11.0	9.5	8.0	5.0	4.0	6.0	6.5	8.0	8.5
OCT 84	MPH	19.8	19.8	20.7	20.6	19.9	12.8	6.2	5.0	4.8	6.2	10.2	16.4
	σ	8.5	10.0	11.0	12.0	11.5	7.0	5.5	4.0	4.0	4.5	9.5	8.5
NOV 84	MPH	22.3	22.5	23.4	24.4	22.8	16.0	10.6	8.4	8.6	12.3	15.9	19.9
	σ	10.5	10.5	11.0	11.0	10.5	9.0	8.5	8.5	9.5	10.5	12.0	11.0
DEC 84	MPH	17.6	19.4	19.8	20.8	21.4	16.5	8.6	5.9	5.3	10.9	15.0	16.4
	σ	12.0	12.0	12.5	12.0	11.5	10.0	8.0	7.0	7.0	9.0	10.5	11.5
JAN 85	MPH	11.6	14.4	15.1	14.8	14.3	8.2	2.3	1.7	2.3	3.1	6.7	10.6
	σ	9.0	10.5	10.5	11.5	11.0	6.5	2.0	1.5	4.5	4.5	6.0	8.0
FEB 85	MPH	19.8	22.3	23.8	23.3	21.1	11.5	5.4	4.1	2.9	3.6	9.4	15.9
	σ	8.5	9.0	10.0	12.5	13.0	10.5	7.0	5.5	5.0	5.0	8.5	9.5
MAR 85	MPH	14.9	17.3	18.9	20.1	17.8	10.5	7.3	8.1	8.0	8.0	9.3	12.1
	σ	11.0	11.0	12.0	11.5	10.0	6.5	5.5	6.0	7.0	6.5	8.5	9.5
APR 85	MPH	19.3	21.2	22.5	21.7	14.6	6.2	6.4	7.8	9.1	6.7	10.6	16.6
	σ	10.5	11.0	11.0	11.0	8.5	5.5	5.0	5.0	5.0	5.5	8.5	9.5
MAY 85	MPH	21.3	22.8	23.9	24.6	18.3	8.6	6.8	8.1	8.6	9.9	11.6	17.3
	σ	8.5	10.0	10.5	10.5	9.5	6.5	4.0	5.0	4.5	6.0	6.5	6.5
JUN 85	MPH	24.1	25.7	27.2	27.5	20.4	8.6	5.0	5.4	6.2	5.9	8.4	19.1
	σ	9.0	8.0	10.5	11.0	8.0	5.5	1.5	3.0	3.5	3.0	5.5	8.0
JUL 85	MPH	24.9	26.4	29.4	29.9	25.8	13.4	5.3	5.8	6.8	12.3	16.6	22.8
	σ	7.5	8.5	7.5	7.0	6.0	6.0	4.0	4.5	5.0	6.5	7.0	6.5
AUG 85	MPH	27.9	30.0	31.9	31.9	27.8	12.9	5.0	6.6	7.0	7.0	11.9	23.4
	σ	7.5	8.0	9.0	9.5	9.0	7.0	2.0	3.0	3.0	6.5	7.0	8.0
SEP 85	MPH	21.0	22.6	24.5	25.1	22.9	12.0	7.1	7.8	8.4	8.4	10.8	16.9
	σ	8.5	10.5	10.5	11.0	10.5	7.0	4.5	4.5	5.0	6.5	9.0	9.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 89	MPH	24.8	27.0	27.9	29.8	26.9	14.9	7.8	7.1	6.3	6.1	11.8	21.8
	σ	8.0	8.0	10.0	8.0	9.5	7.5	6.5	5.0	4.0	5.0	7.0	6.5
OCT 89	MPH	22.8	24.1	26.9	28.1	27.6	15.5	6.1	6.9	7.0	7.4	12.9	19.0
	σ	10.5	11.0	10.0	11.0	10.0	8.5	4.5	4.5	5.5	7.0	8.5	10.0
NOV 89	MPH	18.3	19.6	21.9	22.5	21.5	8.8	3.6	4.9	2.8	5.8	12.8	16.4
	σ	10.5	11.0	11.0	11.0	9.0	5.5	3.0	4.5	2.5	5.5	7.5	9.0
DEC 89	MPH	17.8	20.3	21.6	22.1	21.0	13.0	3.8	2.6	2.1	5.9	10.8	15.1
	σ	10.0	10.0	11.0	12.0	12.0	8.5	3.5	3.0	3.0	6.0	8.5	9.5
JAN 90	MPH	21.8	23.3	24.6	24.6	23.3	17.8	10.4	9.0	8.3	10.5	16.1	19.9
	σ	9.5	10.0	11.5	11.5	12.0	10.5	7.5	7.5	7.5	9.5	9.5	9.5
FEB 90	MPH	18.5	20.1	22.0	22.0	21.5	13.0	6.9	5.0	5.4	7.1	11.9	16.3
	σ	10.0	11.0	11.0	11.0	10.5	9.0	7.5	6.0	7.0	9.0	8.5	9.5
MAR 90	MPH	18.8	19.8	20.9	21.5	18.4	12.1	8.5	8.4	7.5	7.9	13.1	16.9
	σ	11.0	11.5	12.0	11.0	10.0	8.0	6.0	6.0	5.5	6.5	8.5	10.5
APR 90	MPH	20.3	22.1	23.5	22.8	16.1	7.1	9.0	9.9	8.8	6.0	10.1	17.4
	σ	9.0	9.0	10.0	10.0	7.0	4.5	5.0	5.5	5.5	5.0	6.0	7.0
MAY 90	MPH	20.3	21.1	22.1	20.3	11.5	7.6	8.6	9.9	9.5	7.1	9.0	16.8
	σ	8.5	9.0	10.5	9.5	7.0	4.5	4.5	4.0	5.0	5.0	5.5	7.0
JUN 90	MPH	23.8	26.6	27.9	26.9	16.0	6.4	6.5	8.3	7.3	7.6	13.4	21.0
	σ	10.0	9.5	10.5	9.0	8.5	4.0	3.5	3.5	2.5	4.0	7.5	9.5
JUL 90	MPH	24.5	25.9	27.4	26.3	16.9	6.3	7.4	8.9	9.9	10.6	15.9	21.0
	σ	8.0	8.0	8.5	8.0	6.5	3.5	4.0	7.0	8.5	9.0	8.5	9.5
AUG 90	MPH	23.9	28.0	30.8	30.8	20.4	6.9	6.5	8.9	9.0	8.6	13.8	21.1
	σ	9.0	6.5	5.0	4.5	5.0	3.5	3.5	4.5	4.5	5.5	5.0	8.0
SEP 90	MPH	25.5	28.0	29.5	29.6	22.0	9.1	6.1	7.9	9.0	10.4	17.4	23.0
	σ	6.0	5.5	6.0	6.0	6.5	5.0	4.5	6.0	8.5	8.5	8.0	6.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
DEC 90	MPH	14.4	15.8	16.0	17.0	16.1	11.4	7.9	6.0	5.5	7.0	8.8	11.4
	σ	13.0	12.5	13.0	14.0	14.0	11.0	8.0	7.5	8.0	10.0	10.5	12.0
JAN 91	MPH	15.9	18.5	19.0	20.0	19.4	12.3	3.8	2.6	2.4	4.5	8.6	13.5
	σ	12.0	12.5	13.0	14.0	14.5	11.0	4.5	4.0	4.5	5.0	8.5	10.5
FEB 91	MPH	18.8	22.3	24.1	24.6	22.6	12.1	5.8	3.9	3.4	5.4	10.8	15.3
	σ	10.0	10.5	11.0	10.0	10.0	9.0	5.5	4.0	4.5	6.5	8.5	10.0
MAR 91	MPH	17.4	18.9	20.6	20.1	17.0	10.6	9.0	8.9	9.0	9.9	12.9	15.3
	σ	9.5	9.5	10.5	10.0	8.5	7.0	5.5	5.0	5.5	8.0	9.0	9.0
APR 91	MPH	16.5	18.1	19.3	19.4	13.6	7.1	8.4	8.6	8.1	6.1	8.9	13.9
	σ	9.0	10.5	10.5	10.0	9.0	4.5	4.5	4.5	3.5	3.5	6.5	8.5
MAY 91	MPH	18.8	20.9	21.6	19.1	10.5	7.6	7.9	8.0	8.1	5.9	8.5	15.3
	σ	9.5	10.0	10.5	10.5	7.0	5.5	5.5	4.5	5.0	5.0	6.5	9.0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 84	83	2	0	1	5	0	1	1
	SEP 84	107	0	0	0	0	0	0	1
	OCT 84	126	0	0	0	0	0	0	0
	NOV 84	93	0	0	0	0	0	0	0
	DEC 84	105	0	0	0	0	0	0	0
	JAN 85	76	0	0	0	0	0	0	0
12-18 MPH	AUG 84	65	1	0	2	12	0	0	0
	SEP 84	61	0	0	0	0	0	0	0
	OCT 84	82	0	0	0	0	0	0	0
	NOV 84	78	0	0	0	0	0	0	0
	DEC 84	89	0	0	0	0	0	0	0
	JAN 85	66	0	0	0	0	0	0	0
18-24 MPH	AUG 84	96	0	0	2	18	0	0	0
	SEP 84	85	0	0	0	0	0	0	0
	OCT 84	88	0	0	0	0	0	0	0
	NOV 84	86	0	0	0	0	0	0	0
	DEC 84	84	0	0	0	0	0	0	0
	JAN 85	73	0	0	0	0	0	0	0
24 + MPH	AUG 84	219	0	0	2	38	0	0	3
	SEP 84	243	0	16	0	0	0	1	13
	OCT 84	178	0	0	0	0	0	1	8
	NOV 84	255	0	0	0	0	0	1	11
	DEC 84	202	0	0	0	0	0	1	8
	JAN 85	100	0	0	0	0	0	0	3

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 85	77	0	0	0	0	0	0	0
	MAR 85	133	0	0	0	0	0	0	0
	APR 85	148	0	0	0	0	0	0	1
	MAY 85	146	0	0	0	0	0	0	1
	JUN 85	129	0	0	0	0	0	0	1
	JUL 85	86	0	0	0	0	0	0	0
12-18 MPH	FEB 85	55	0	0	0	0	0	0	0
	MAR 85	88	0	0	0	0	0	0	0
	APR 85	82	0	0	0	0	0	0	0
	MAY 85	101	0	0	0	0	0	0	0
	JUN 85	64	0	0	0	0	0	0	0
	JUL 85	86	0	0	0	0	0	0	0
18-24 MPH	FEB 85	69	0	0	0	0	0	0	0
	MAR 85	91	0	0	0	0	0	0	0
	APR 85	70	0	0	0	0	0	0	0
	MAY 85	94	0	0	0	0	0	0	0
	JUN 85	73	0	0	0	0	0	0	0
	JUL 85	123	0	0	0	0	0	0	0
24 + MPH	FEB 85	177	0	0	0	0	0	1	6
	MAR 85	148	0	0	0	0	0	0	3
	APR 85	182	0	0	0	0	0	0	2
	MAY 85	198	0	0	0	0	0	0	3
	JUN 85	225	0	0	0	0	0	0	8
	JUL 85	269	0	0	0	0	0	0	10

Wind Rose Data cont.
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	126	0	0	0	0	0	0	1
	SEP 85	124	0	0	0	0	0	0	1
	SEP 89	18	15	5	9	21	6	16	19
	OCT 89	21	16	5	8	20	4	16	19
	NOV 89	19	14	6	13	24	3	7	11
	DEC 89	8	10	6	12	26	3	12	15
12-18 MPH	AUG 85	68	0	0	0	0	0	0	0
	SEP 85	87	0	0	0	0	0	0	0
	SEP 89	3	7	10	16	22	4	7	3
	OCT 89	4	9	13	15	19	2	4	3
	NOV 89	6	11	16	20	21	2	4	2
	DEC 89	5	9	12	16	17	1	2	2
18-24 MPH	AUG 85	66	0	0	0	0	0	0	0
	SEP 85	94	0	0	0	0	0	0	0
	SEP 89	1	14	24	23	17	2	2	0
	OCT 89	4	24	28	18	11	0	1	0
	NOV 89	8	18	26	22	13	1	1	1
	DEC 89	15	16	21	19	10	0	0	0
24 + MPH	AUG 85	291	0	0	0	0	0	0	10
	SEP 85	206	0	0	0	0	0	0	6
	SEP 89	7	84	100	55	23	1	1	0
	OCT 89	41	107	81	32	8	0	0	0
	NOV 89	48	47	45	21	77	0	0	0
	DEC 89	120	26	26	14	4	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 90	11	12	7	14	25	3	8	12
	FEB 90	9	8	6	15	23	5	22	23
	MAR 90	20	11	3	7	24	4	23	29
	APR 90	33	26	8	16	27	6	19	26
	MAY 90	39	20	8	17	28	9	23	33
	JUN 90	32	18	5	10	26	9	26	22
12-18 MPH	JAN 90	7	15	16	22	26	3	4	4
	FEB 90	5	7	10	21	21	3	9	4
	MAR 90	12	5	8	16	32	2	9	14
	APR 90	17	10	14	23	23	4	10	9
	MAY 90	14	7	12	21	25	7	15	11
	JUN 90	7	3	5	14	35	5	13	5
18-24 MPH	JAN 90	9	21	28	26	19	1	1	1
	FEB 90	5	11	16	23	13	1	1	0
	MAR 90	6	10	21	26	29	1	2	4
	APR 90	8	15	27	23	12	2	3	2
	MAY 90	7	13	25	27	17	3	6	4
	JUN 90	1	5	13	23	27	2	4	1
24 + MPH	JAN 90	120	54	51	27	8	0	0	1
	FEB 90	87	29	31	22	8	0	0	0
	MAR 90	33	37	49	37	19	0	0	0
	APR 90	21	59	61	21	6	1	1	0
	MAY 90	13	43	56	26	8	1	2	1
	JUN 90	7	42	82	61	26	0	1	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 90	38	13	3	8	28	5	24	31
	AUG 90	33	14	2	9	30	6	19	25
	SEP 90	20	13	2	9	28	2	12	14
	DEC 90	8	14	3	7	14	2	13	14
	JAN 91	12	16	5	11	23	2	8	12
	FEB 91	5	9	5	11	23	2	13	18
12-18 MPH	JUL 90	6	1	2	11	40	3	7	3
	AUG 90	8	1	3	17	48	2	6	3
	SEP 90	2	1	3	17	43	1	1	0
	DEC 90	2	4	3	8	12	1	3	1
	JAN 91	3	3	6	14	19	1	3	3
	FEB 91	2	3	6	16	33	1	4	4
18-24 MPH	JUL 90	2	1	7	27	46	1	2	0
	AUG 90	1	1	7	34	57	1	2	0
	SEP 90	0	3	10	38	63	0	0	0
	DEC 90	3	3	6	13	11	0	1	0
	JAN 91	4	6	11	19	17	0	0	0
	FEB 91	1	5	12	22	29	0	1	1
24 + MPH	JUL 90	1	16	67	111	63	1	1	0
	AUG 90	1	12	59	106	79	0	0	0
	SEP 90	1	18	59	112	84	0	1	0
	DEC 90	25	20	30	29	9	0	0	0
	JAN 91	51	33	44	32	9	0	0	0
	FEB 91	9	38	66	57	30	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 91	27	26	8	14	37	7	17	25
	APR 91	35	12	4	9	37	9	33	42
	MAY 91	36	18	4	10	37	7	22	36
12-18 MPH	MAR 91	8	3	4	17	55	4	12	8
	APR 91	17	2	1	6	54	4	22	16
	MAY 91	6	2	1	13	53	3	11	8
18-24 MPH	MAR 91	4	4	10	25	60	2	6	3
	APR 91	4	0	1	7	58	1	6	3
	MAY 91	1	1	3	18	59	1	4	2
24 + MPH	MAR 91	6	22	43	50	31	2	4	2
	APR 91	1	5	16	35	54	0	1	0
	MAY 91	0	5	20	50	64	0	1	0

Site Description

County:	Utah	Elevation:	5,200 ft.
Township:	8 South	Range:	3 East
Section:	34	Quarter Section:	—
Longitude:	111° 33'	Latitude:	40° 04'

Duration of data logging: May 1986 to May 1991
Months of available data: 20
Anemometer height: 60 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southeast
Terrain classification in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

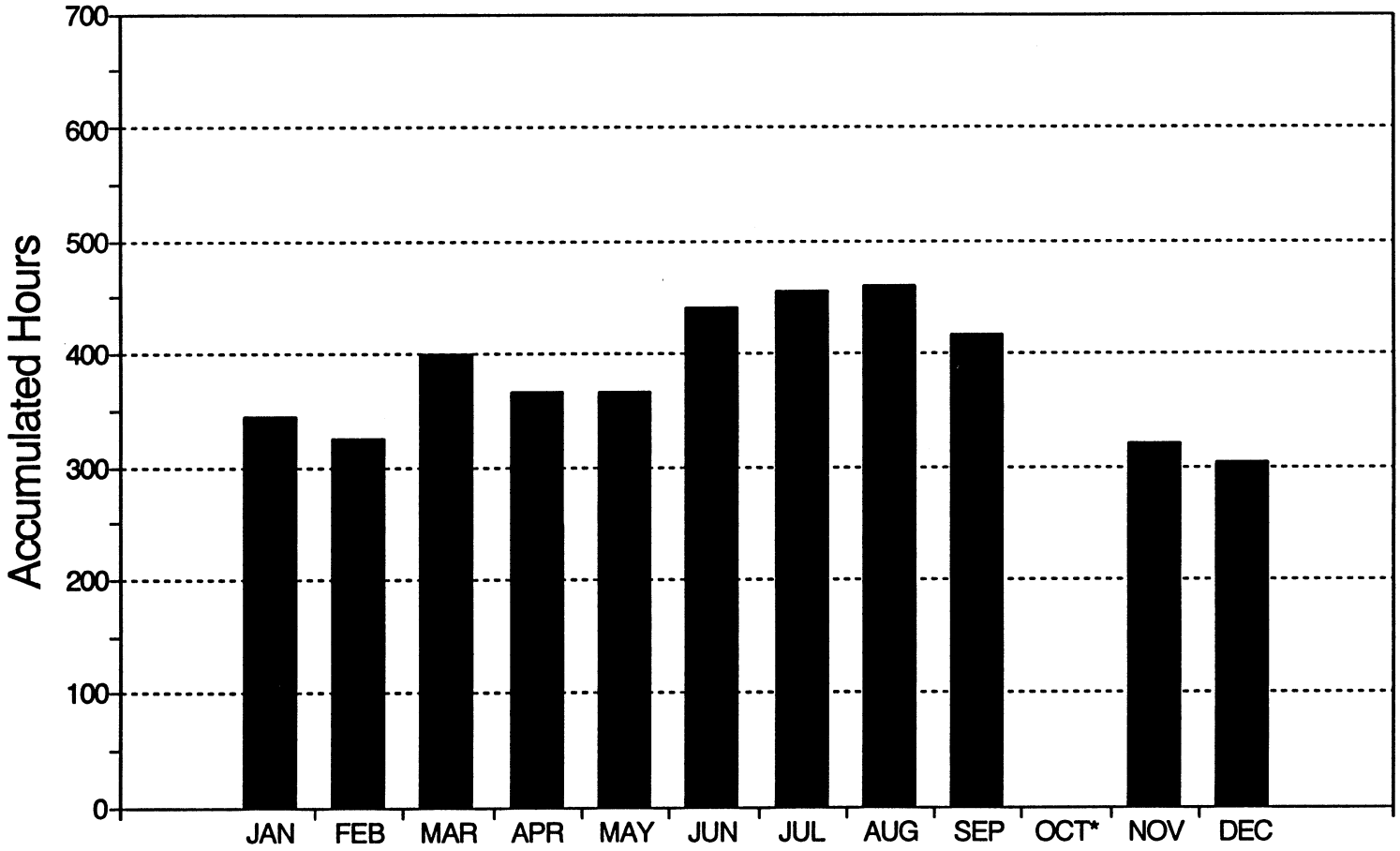
Property ownership: Spanish Fork City
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 86	255	79	58	42	33	27	24	23	24	26	28	27	26	23	18	12	7	5
JUN 86	191	58	49	38	32	27	26	26	27	30	33	36	35	33	27	21	14	19
JUL 86	200	66	50	40	36	35	34	34	36	36	36	34	30	25	19	14	9	10
AUG 86	188	48	31	25	25	28	31	35	41	45	47	45	40	34	28	21	15	17
MAY 88	199	67	53	42	35	31	28	27	26	26	27	28	28	26	21	16	10	12
JUN 88	170	53	39	33	30	27	29	30	34	38	41	43	41	36	29	20	13	14
JUL 88	170	52	40	33	32	31	31	32	35	38	41	43	43	39	32	24	15	15
AUG 88	212	53	37	25	21	21	24	28	32	36	39	41	41	38	33	26	18	19
SEP 88	197	62	42	34	31	28	26	24	25	29	36	42	43	39	31	18	8	3
NOV 89	255	50	37	31	29	29	30	29	28	26	24	23	20	17	13	9	5	7
DEC 89	255	53	41	31	25	24	26	28	29	28	26	24	20	15	11	7	4	5
JAN 90	207	48	39	34	33	33	33	34	34	34	33	33	32	29	25	21	15	25
FEB 90	255	49	43	37	33	29	25	22	21	22	23	23	22	20	17	13	10	21
MAR 90	202	58	49	40	35	35	33	31	27	25	25	25	24	23	19	14	9	9
DEC 90	255	49	31	19	14	13	14	14	15	16	16	17	17	16	15	13	11	22
JAN 91	255	42	31	25	19	16	15	16	16	16	16	16	17	16	15	12	10	16
FEB 91	255	45	37	29	23	21	20	20	21	22	25	27	26	23	19	15	10	13
MAR 91	199	64	53	44	40	40	39	39	40	38	33	28	25	21	16	11	6	6
APR 91	211	75	67	57	50	43	36	31	28	25	22	18	15	13	10	8	5	5
MAY 91	237	76	63	51	41	35	31	30	28	26	24	23	21	18	15	11	7	7

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 86	MPH	16.6	20.1	21.3	21.3	15.9	8.9	7.1	6.4	7.6	6.9	6.6	10.8
	σ	8.5	10.0	10.0	10.5	9.5	6.0	5.5	6.0	5.0	5.0	4.5	6.5
JUN 86	MPH	23.4	24.5	26.6	27.3	22.0	10.4	5.9	6.1	7.4	9.1	9.9	17.0
	σ	8.5	8.0	10.0	9.0	7.5	6.0	3.5	4.0	4.5	7.5	6.5	7.0
JUL 86	MPH	20.0	23.0	23.5	24.4	19.9	9.8	5.8	7.1	7.9	9.1	9.5	15.6
	σ	7.5	8.0	9.0	9.5	8.0	5.5	4.5	4.0	4.0	5.5	5.5	7.0
AUG 86	MPH	23.6	26.6	27.3	29.6	25.8	12.9	5.1	5.8	6.8	9.0	11.0	19.8
	σ	6.0	5.5	6.0	6.0	5.0	5.5	4.0	3.5	4.0	6.0	6.5	7.0
MAY 88	MPH	19.9	22.8	24.1	24.3	18.4	8.8	7.8	9.1	8.4	7.5	7.5	13.1
	σ	8.0	8.5	9.5	11.0	9.5	4.5	5.0	7.0	5.5	5.0	6.0	7.5
JUN 88	MPH	22.8	26.4	29.0	29.4	22.3	9.1	6.6	9.1	10.3	10.1	9.5	16.8
	σ	6.5	6.5	5.0	6.0	7.0	4.5	5.5	5.5	6.5	6.5	7.5	6.5
JUL 88	MPH	23.8	26.5	28.9	30.3	24.8	11.9	5.6	7.0	8.9	10.6	9.5	16.9
	σ	5.5	5.0	6.0	5.5	6.5	6.5	4.5	3.5	5.0	5.5	6.5	7.0
AUG 88	MPH	24.3	25.0	26.5	26.3	20.4	7.4	5.8	8.6	9.8	11.1	13.6	19.9
	σ	7.5	9.0	8.0	9.0	9.5	5.5	5.0	6.5	7.5	8.5	10.5	8.0
SEP 88	MPH	21.8	23.4	24.4	25.4	23.3	12.0	7.1	7.5	7.4	4.6	9.5	18.5
	σ	8.0	9.0	9.5	10.0	9.0	6.0	4.5	4.0	4.5	3.0	6.5	8.5
NOV 89	MPH	16.0	17.4	19.1	19.5	18.3	7.1	3.5	5.4	3.5	4.6	10.3	14.5
	σ	9.0	10.5	10.0	10.0	9.0	5.0	4.0	5.5	3.5	4.0	7.0	8.5
DEC 89	MPH	14.9	16.6	18.0	17.9	17.6	8.5	3.3	2.6	2.4	4.1	8.4	12.4
	σ	8.0	9.0	9.0	10.5	10.5	6.5	3.5	3.0	2.5	4.0	7.0	8.0
JAN 90	MPH	18.6	20.6	22.9	23.3	21.6	15.3	9.4	8.9	7.9	9.8	13.9	18.0
	σ	10.0	10.5	11.0	11.0	11.5	9.0	8.0	7.0	6.5	8.5	9.5	9.5
FEB 90	MPH	17.0	19.1	19.6	20.4	19.0	11.1	6.4	5.8	5.0	6.9	10.0	14.1
	σ	11.0	11.0	10.5	11.5	10.5	8.5	6.0	6.0	6.5	8.0	9.0	9.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAR 90	MPH	17.1	18.4	19.0	19.5	16.5	11.4	8.8	9.3	8.5	8.3	12.5	16.5
	σ	11.0	11.5	12.0	12.0	9.5	7.0	5.5	5.5	6.0	6.0	8.0	9.5
DEC 90	MPH	16.1	17.5	17.4	18.1	16.8	10.1	6.4	4.6	5.3	7.8	10.3	12.3
	σ	12.5	11.5	12.5	13.5	13.5	9.5	6.5	6.0	7.0	10.0	11.0	11.5
JAN 91	MPH	13.5	14.8	14.9	15.9	14.6	8.8	3.6	2.6	2.6	3.5	6.3	10.3
	σ	10.0	11.0	12.5	13.5	14.0	9.0	5.0	4.5	4.5	5.0	6.5	9.0
FEB 91	MPH	16.9	20.3	21.4	22.1	19.4	9.8	5.4	4.5	3.9	4.5	8.5	12.9
	σ	10.0	10.5	11.5	11.5	11.0	7.5	5.0	4.0	4.0	4.5	7.5	8.5
MAR 91	MPH	16.5	18.6	19.4	19.5	16.0	10.5	9.9	10.6	10.4	10.1	12.3	14.5
	σ	9.5	9.5	10.0	10.0	8.5	7.0	6.0	6.0	6.0	8.5	9.0	8.5
APR 91	MPH	15.6	17.3	17.8	18.0	12.4	8.1	9.6	10.5	9.1	6.9	7.6	12.4
	σ	8.5	10.0	10.0	9.5	8.0	5.0	5.0	4.5	4.5	4.0	6.0	8.0
MAY 91	MPH	17.9	19.1	20.6	17.6	10.0	8.0	8.6	8.6	9.3	6.6	9.0	14.8
	σ	10.0	9.5	10.5	10.0	6.5	5.0	6.0	6.0	5.5	5.0	5.5	8.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 86	10	4	31	11	12	51	33	29
	JUN 86	8	4	33	14	15	34	20	17
	JUL 86	14	6	39	14	10	27	20	24
	AUG 86	18	3	29	14	5	12	10	13
	MAY 88	13	5	33	18	10	35	27	21
	JUN 88	13	3	31	17	6	16	18	20
12-18 MPH	MAY 86	1	0	31	16	7	15	8	7
	JUN 86	1	1	35	19	5	13	6	5
	JUL 86	1	1	54	22	8	13	5	3
	AUG 86	1	1	47	27	2	3	2	2
	MAY 88	1	1	28	27	7	16	8	6
	JUN 88	1	0	33	31	2	7	7	5
18-24 MPH	MAY 86	0	0	36	27	3	4	2	2
	JUN 86	0	0	45	31	1	3	1	1
	JUL 86	0	0	65	32	4	4	1	1
	AUG 86	0	0	75	45	0	1	0	0
	MAY 88	0	0	30	36	3	5	3	2
	JUN 88	0	0	45	51	1	2	1	1
24 + MPH	MAY 86	0	0	78	58	2	5	1	1
	JUN 86	0	0	117	99	0	1	0	0
	JUL 86	0	0	102	72	1	1	0	0
	AUG 86	0	0	143	103	0	0	0	0
	MAY 88	1	6	75	77	2	5	1	1
	JUN 88	1	6	107	123	0	1	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 88	15	4	20	12	6	23	20	25
	AUG 88	12	3	20	11	5	28	16	20
	SEP 88	41	27	15	5	4	11	20	17
	NOV 89	6	2	37	25	3	23	13	9
	DEC 89	2	1	28	28	8	39	16	5
	JAN 90	6	5	32	24	4	24	16	9
12-18 MPH	JUL 88	1	2	29	26	4	18	5	8
	AUG 88	1	2	26	19	2	10	2	2
	SEP 88	9	35	20	3	2	5	5	6
	NOV 89	0	0	24	43	1	10	4	5
	DEC 89	0	0	21	44	2	4	3	1
	JAN 90	3	1	29	46	1	9	8	4
18-24 MPH	JUL 88	0	1	44	51	2	5	1	1
	AUG 88	3	9	48	32	1	3	1	0
	SEP 88	3	41	29	1	1	1	1	2
	NOV 89	0	0	13	61	0	3	1	4
	DEC 89	0	0	17	67	0	0	0	0
	JAN 90	2	1	23	68	0	3	3	2
24 + MPH	JUL 88	2	8	119	120	1	1	0	0
	AUG 88	20	48	121	66	0	1	0	0
	SEP 88	2	103	113	2	0	0	0	0
	NOV 89	0	0	6	110	0	2	0	1
	DEC 89	0	0	7	106	0	0	0	0
	JAN 90	0	0	29	179	0	2	2	2

Wind Rose Data cont.

Hours per Month

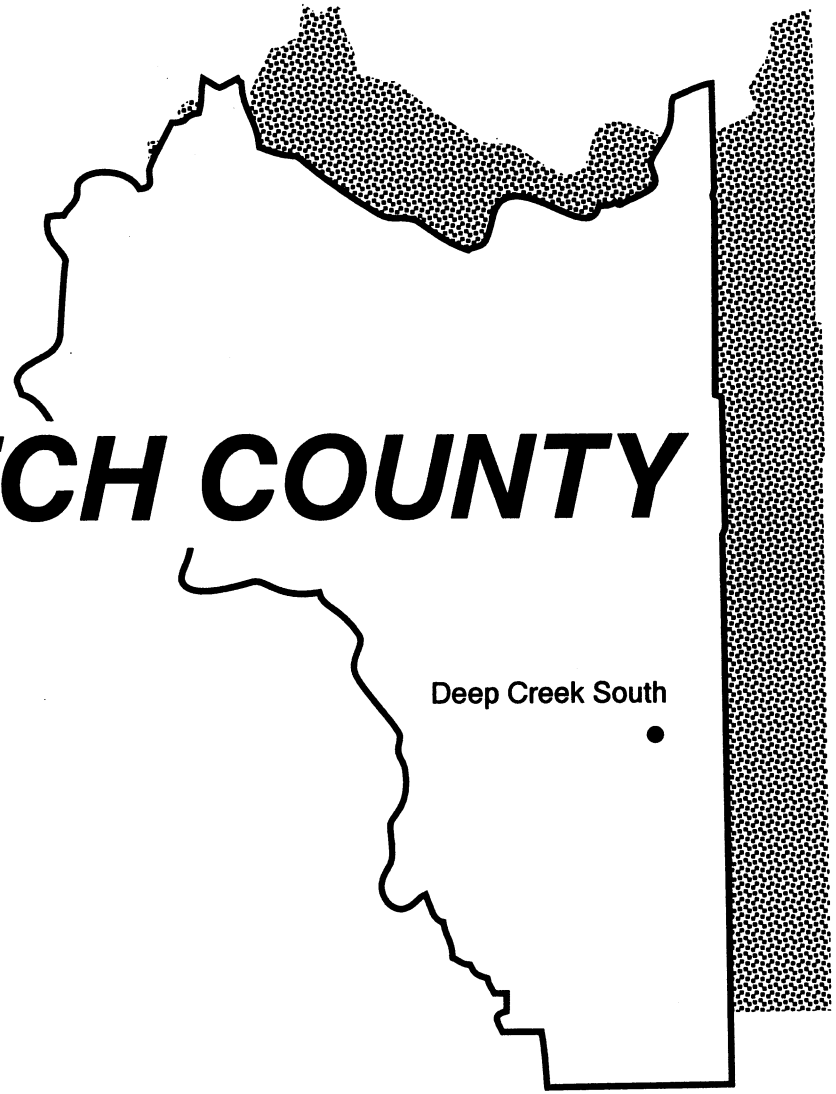
		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 90	3	5	25	19	8	43	18	8
	MAR 90	5	2	22	22	8	44	26	19
	DEC 90	6	7	12	13	5	35	15	6
	JAN 91	5	2	21	24	8	24	9	4
	FEB 91	2	6	25	21	7	36	13	3
	MAR 91	12	12	29	26	7	27	26	18
12-18 MPH	FEB 90	1	1	19	29	3	20	5	10
	MAR 90	1	0	19	44	2	8	18	11
	DEC 90	1	0	9	20	2	4	4	2
	JAN 91	0	0	12	23	2	7	3	2
	FEB 91	0	1	18	31	3	6	4	2
	MAR 91	1	1	24	47	3	19	13	10
18-24 MPH	FEB 90	0	0	17	43	1	2	1	2
	MAR 90	0	0	15	53	0	1	6	7
	DEC 90	0	0	10	31	1	2	1	1
	JAN 91	0	0	9	36	1	0	0	1
	FEB 91	0	0	11	48	1	0	1	1
	MAR 91	0	0	18	74	2	12	4	7
24 + MPH	FEB 90	0	0	20	127	0	2	1	0
	MAR 90	0	0	18	125	0	1	2	2
	DEC 90	0	0	24	100	0	1	0	0
	JAN 91	0	0	11	105	0	0	0	1
	FEB 91	0	0	12	146	0	0	0	0
	MAR 91	0	0	16	108	2	15	2	5

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 91	9	4	23	28	12	59	37	27
	MAY 91	13	7	31	25	9	45	36	24
12-18 MPH	APR 91	2	0	13	39	6	33	16	19
	MAY 91	1	1	19	40	5	21	10	8
18-24 MPH	APR 91	0	0	8	51	3	9	5	8
	MAY 91	0	0	14	54	2	8	3	2
24 + MPH	APR 91	0	0	12	78	1	3	1	1
	MAY 91	0	0	18	102	1	4	1	0

WASATCH COUNTY



Deep Creek South

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Site Description

County:	Wasatch	Elevation:	8,000 ft.
Township:	3 South	Range:	9 West
Section:	31	Quarter Section:	—
Longitude:	110° 50'	Latitude:	40° 10'

Duration of data logging: May 1985 to August 1986
Months of available data: 15
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: West-Northwest
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: High grass, low row crops
South: High grass, low row crops
West: High grass, low row crops

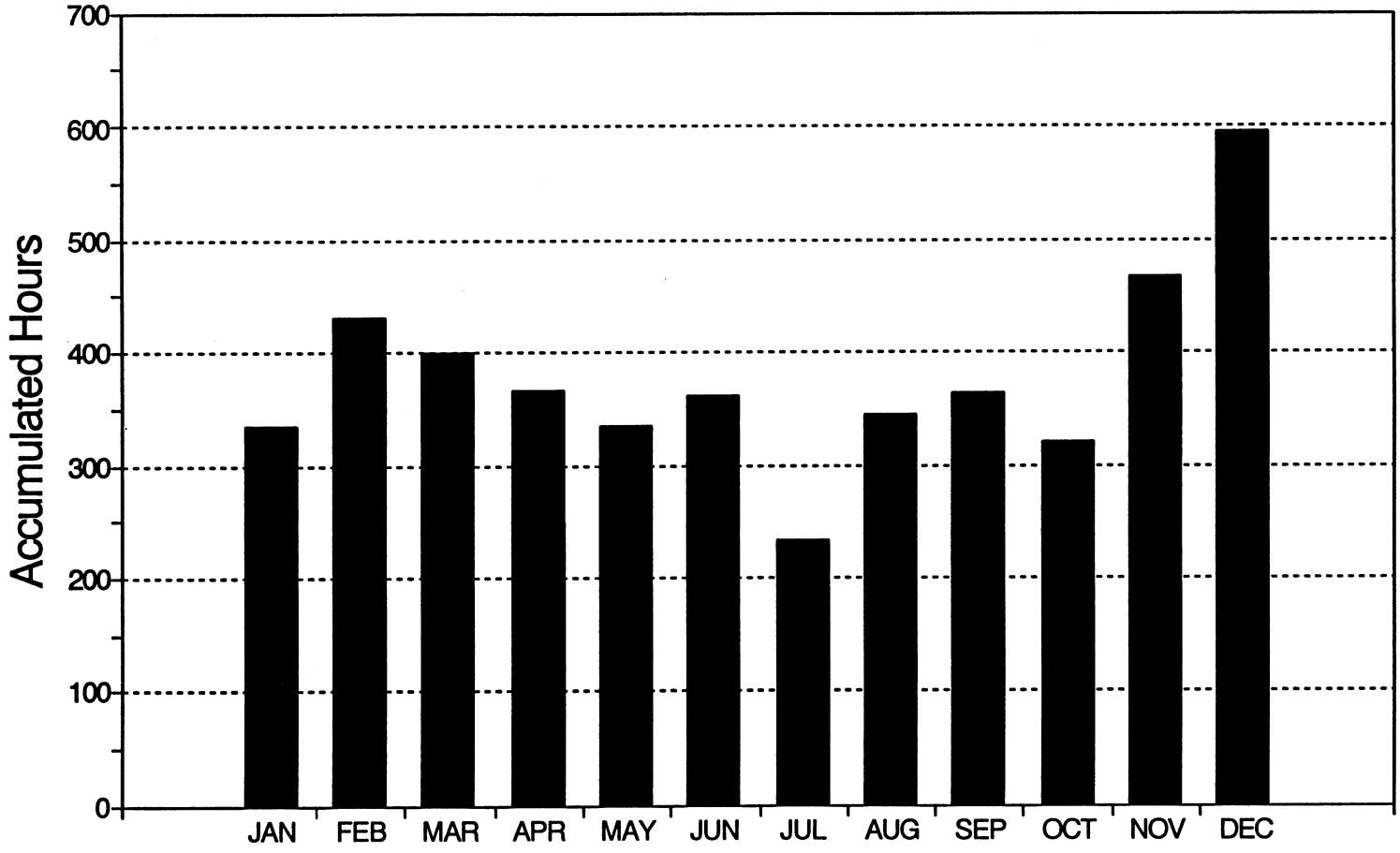
Comments

Property ownership: Bureau of Reclamation
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 85	156	83	83	81	63	48	38	28	19	12	8	4	2	1	1	0	0	0
JUN 85	172	86	101	100	83	66	47	31	18	9	4	2	1	0	0	0	0	0
JUL 85	255	120	106	76	51	31	17	9	5	3	2	1	1	0	0	0	0	0
AUG 85	111	90	101	108	97	75	55	40	27	18	11	6	3	1	1	0	0	0
SEP 85	196	75	86	79	73	57	41	31	25	19	13	8	6	4	3	2	1	1
OCT 85	255	83	72	71	63	49	38	30	22	15	10	7	5	4	3	2	1	1
NOV 85	163	41	46	47	58	71	74	62	49	39	28	18	11	6	3	1	0	0
DEC 85	113	18	18	32	54	77	103	111	88	59	35	20	10	4	2	1	0	0
JAN 86	255	44	57	66	57	53	50	39	26	16	12	7	4	2	1	0	0	0
FEB 86	143	44	55	60	63	58	53	43	34	29	26	21	16	11	8	5	3	2
MAR 86	169	73	102	111	88	66	54	38	22	12	6	2	1	0	0	0	0	0
APR 86	211	67	71	68	67	60	51	42	31	23	14	7	3	1	0	0	0	0
MAY 86	204	85	91	86	68	53	44	36	26	17	12	7	5	3	2	1	1	3
JUL 86	255	105	103	81	58	41	30	21	14	9	5	3	2	1	1	1	0	1
AUG 86	255	103	105	96	64	37	23	13	7	3	2	1	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 85	MPH	8.6	8.0	7.4	7.0	8.1	11.5	13.1	14.0	14.0	12.5	9.9	8.5
	σ	5.5	4.5	4.0	3.5	5.0	4.5	4.5	4.5	5.0	5.0	4.5	4.0
JUN 85	MPH	7.8	8.4	8.0	7.0	7.3	10.4	13.0	14.8	15.3	12.9	7.6	7.3
	σ	3.5	4.0	4.0	4.0	4.0	5.0	4.5	4.0	2.5	3.0	3.0	3.0
JUL 85	MPH	5.8	6.8	5.6	5.0	4.5	5.9	8.6	10.6	9.8	8.3	6.5	6.4
	σ	3.5	3.0	3.5	3.5	3.5	3.5	4.0	5.0	3.0	3.5	4.0	3.5
AUG 85	MPH	9.0	10.4	9.8	8.9	9.6	13.6	16.3	16.0	15.9	13.0	8.3	7.6
	σ	4.5	4.0	4.0	4.5	5.0	4.5	3.0	3.5	4.5	4.0	3.0	4.0
SEP 85	MPH	7.8	8.1	8.6	8.4	9.4	13.0	14.5	15.5	14.8	11.9	7.8	7.5
	σ	4.5	5.0	6.5	6.5	7.0	6.5	6.5	7.0	6.0	4.5	4.5	4.0
OCT 85	MPH	7.3	7.1	8.3	7.9	8.0	10.6	11.8	13.4	12.8	10.3	7.8	7.8
	σ	5.0	5.5	6.5	7.0	7.0	8.0	7.0	6.0	6.5	6.5	5.5	5.5
NOV 85	MPH	12.0	11.8	11.5	11.0	12.1	13.5	15.8	17.1	15.5	12.9	11.9	12.9
	σ	7.0	7.0	7.5	6.5	7.5	7.0	7.0	6.5	6.5	7.5	7.0	8.0
DEC 85	MPH	15.4	14.9	15.1	15.4	14.4	15.5	16.4	17.6	15.8	14.6	15.3	16.0
	σ	7.0	7.0	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.5	6.5	6.5
JAN 86	MPH	8.8	7.9	7.9	7.6	7.3	7.9	10.6	12.6	11.0	8.5	8.5	8.3
	σ	6.5	6.5	6.5	6.5	6.0	6.5	7.5	8.5	8.0	7.5	7.0	6.5
FEB 86	MPH	12.8	12.4	12.3	11.9	12.4	15.0	15.6	16.1	15.0	12.6	12.1	13.0
	σ	7.5	8.5	8.0	8.0	8.5	9.0	9.0	8.5	7.0	7.0	7.0	7.5
MAR 86	MPH	9.0	9.4	9.4	8.9	9.4	10.9	12.8	13.1	12.3	10.4	8.8	8.3
	σ	5.5	5.5	5.0	5.0	6.0	6.0	5.0	5.0	5.0	5.0	4.0	5.0
APR 86	MPH	7.6	7.4	7.1	6.5	10.0	12.1	15.0	15.1	14.3	11.5	9.8	8.4
	σ	5.5	5.5	6.0	5.5	6.0	6.5	5.5	5.5	5.5	5.5	5.0	6.0
MAY 86	MPH	7.8	6.8	6.3	6.1	8.4	11.0	14.5	14.9	14.9	13.6	10.6	9.5
	σ	5.0	4.5	5.0	5.5	6.0	5.5	6.0	7.0	7.0	5.0	5.5	6.0
JUL 86	MPH	7.0	6.5	5.9	5.3	6.4	10.4	12.4	12.1	12.3	10.3	6.8	6.5
	σ	5.5	4.0	4.0	4.0	4.5	5.5	5.0	6.0	6.0	4.5	3.0	3.0
AUG 86	MPH	5.4	6.1	6.1	5.6	5.1	7.9	10.3	12.0	11.3	8.8	6.5	5.5
	σ	4.0	4.0	4.5	4.0	3.5	3.5	4.0	3.5	4.0	2.5	3.0	3.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 85	21	5	12	23	14	15	91	66
	JUN 85	17	2	7	9	2	4	143	104
	JUL 85	25	6	15	29	13	13	111	90
	AUG 85	19	1	4	2	2	6	164	99
	SEP 85	10	3	18	32	25	21	71	61
	OCT 85	7	2	26	37	5	4	68	77
12-18 MPH	MAY 85	14	3	2	3	4	13	45	65
	JUN 85	19	0	1	1	0	2	56	116
	JUL 85	8	1	1	2	2	7	30	48
	AUG 85	19	0	0	0	1	2	88	115
	SEP 85	9	0	4	5	6	16	51	79
	OCT 85	6	0	2	2	0	6	35	99
18-24 MPH	MAY 85	3	0	0	0	1	3	16	37
	JUN 85	6	0	0	0	0	1	7	44
	JUL 85	1	0	0	0	0	2	2	12
	AUG 85	6	0	0	0	0	1	21	58
	SEP 85	5	0	0	1	1	5	16	47
	OCT 85	2	0	0	0	0	3	9	53
24 + MPH	MAY 85	0	0	0	0	0	1	6	10
	JUN 85	0	0	0	0	0	0	1	5
	JUL 85	0	0	0	0	0	0	0	3
	AUG 85	1	0	0	0	0	0	5	16
	SEP 85	2	0	0	0	0	1	10	25
	OCT 85	1	0	0	0	0	2	3	27

Wind Rose Data cont.

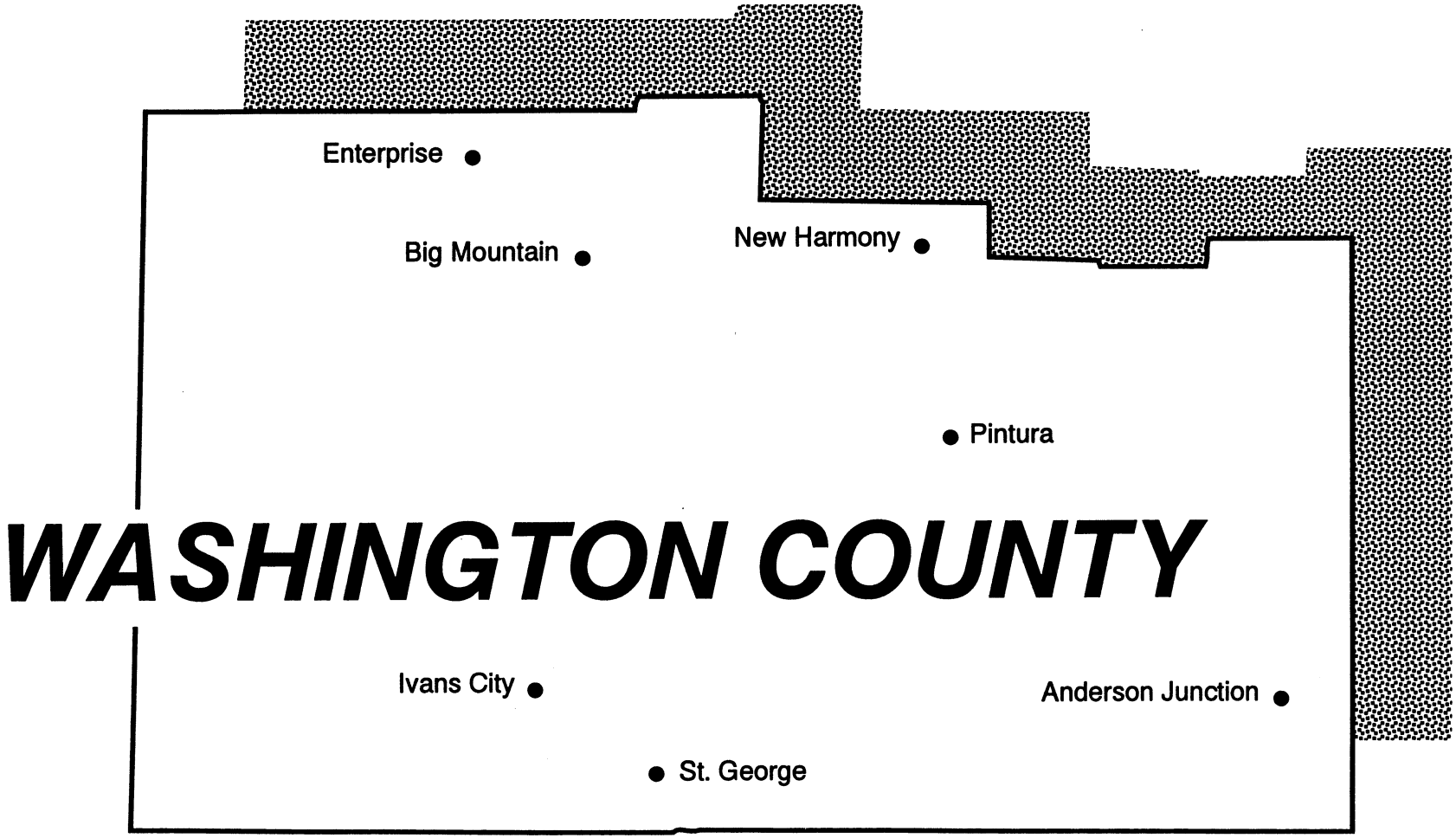
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	NOV 85	4	0	6	9	2	3	51	60
	DEC 85	1	0	8	7	0	0	24	27
	JAN 86	2	0	1	2	1	1	74	86
	FEB 86	3	0	2	12	0	1	67	73
	MAR 86	6	0	2	14	3	6	129	125
	APR 86	7	1	9	17	12	14	70	75
12-18 MPH	NOV 85	3	0	0	1	1	3	43	152
	DEC 85	0	0	0	0	0	0	104	129
	JAN 86	3	0	0	0	0	0	57	100
	FEB 86	2	0	0	6	0	0	46	119
	MAR 86	6	0	0	2	0	2	46	152
	APR 86	8	0	2	2	2	10	41	112
18-24 MPH	NOV 85	1	0	0	0	0	1	31	116
	DEC 85	0	0	0	0	0	0	97	160
	JAN 86	2	0	0	0	0	0	14	65
	FEB 86	1	0	0	1	0	0	35	70
	MAR 86	2	0	0	0	0	0	6	64
	APR 86	4	0	0	0	0	3	14	75
24 + MPH	NOV 85	0	0	0	0	0	1	11	56
	DEC 85	0	0	0	0	0	0	16	56
	JAN 86	1	0	0	0	0	0	20	24
	FEB 86	0	0	0	0	0	0	49	41
	MAR 86	0	0	0	0	0	0	1	7
	APR 86	1	0	0	0	0	1	2	24

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 86	9	3	27	44	8	21	80	70
	JUL 86	28	4	20	25	6	11	117	77
	AUG 86	26	9	18	25	10	10	132	75
12-18 MPH	MAY 86	9	2	6	10	3	20	32	82
	JUL 86	15	0	1	2	1	5	34	71
	AUG 86	15	1	2	4	1	4	39	56
18-24 MPH	MAY 86	4	0	1	0	0	10	17	48
	JUL 86	3	0	0	0	0	1	10	29
	AUG 86	2	0	0	1	0	2	4	15
24 + MPH	MAY 86	0	0	0	0	0	3	10	20
	JUL 86	0	0	0	0	0	1	6	6
	AUG 86	0	0	0	0	0	0	1	2


Enterprise
Big Mountain
New Harmony
Pintura
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Site Description

County:	Washington	Elevation:	3,800 ft.
Township:	40 South	Range:	16 West
Section:	34	Quarter Section:	Northeast
Longitude:	113° 38'	Latitude:	37° 18'

Duration of data logging: January 1985 to July 1989
Months of available data: 41
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Northwest-north
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Low grass, low row crops
West: Rolling terrain

Comments

Property ownership: Bureau of Land Management
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

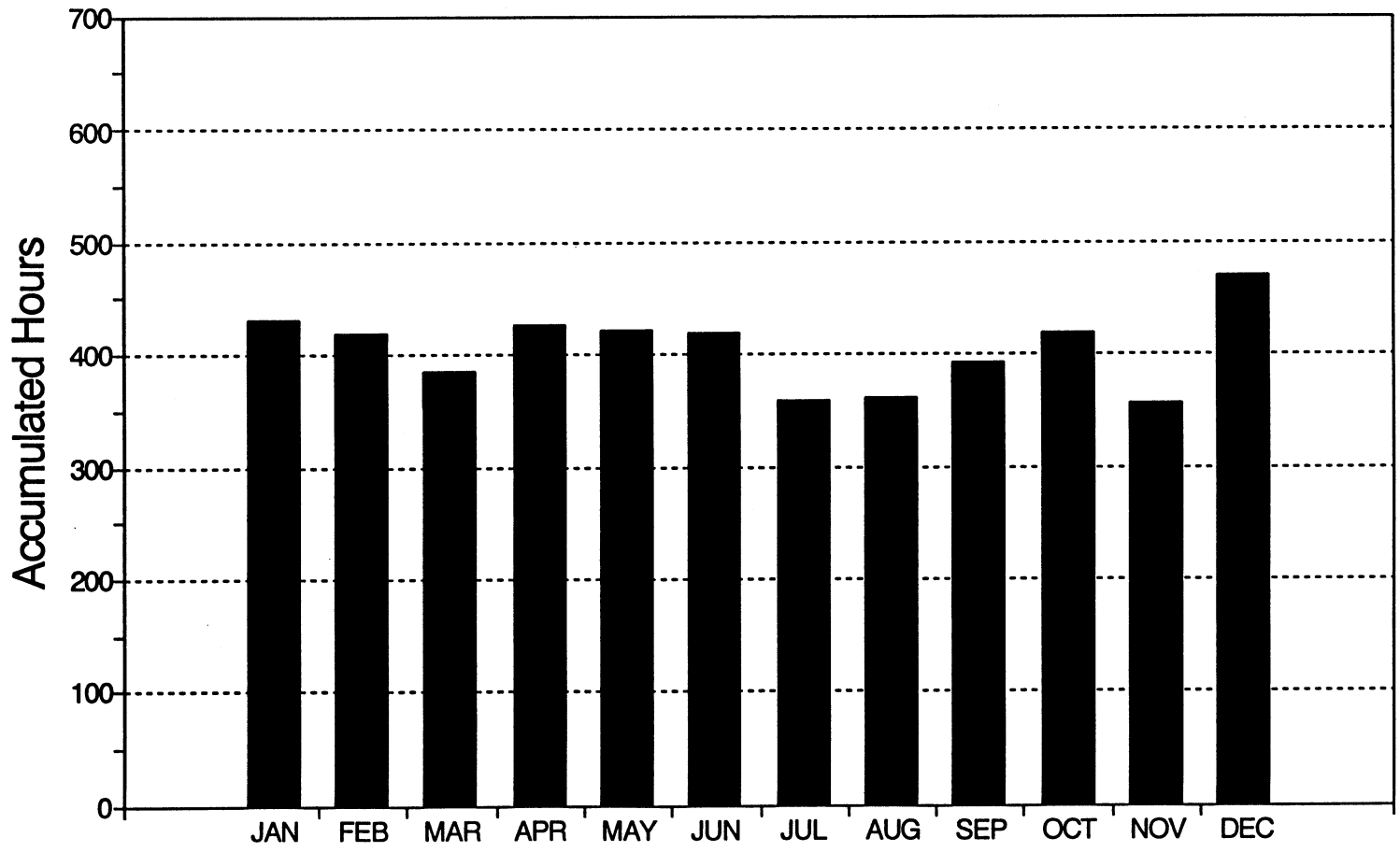
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JAN 85	160	27	20	17	20	22	26	31	34	34	33	30	28	25	22	19	16	44
FEB 85	199	32	24	23	26	27	28	31	35	37	36	32	28	24	20	17	14	40
MAR 85	212	55	50	47	50	55	55	51	44	37	29	20	13	9	6	4	3	5
APR 85	172	54	49	48	48	52	52	51	43	37	27	19	15	12	9	7	6	17
MAY 85	229	68	63	65	67	59	40	34	27	19	13	9	6	6	4	3	3	5
JUN 85	174	62	62	65	71	71	60	50	36	25	16	10	7	4	2	1	1	2
JUL 85	192	73	69	69	69	67	62	49	32	21	14	9	7	5	3	2	1	1
AUG 85	194	72	75	76	79	76	59	42	25	16	9	5	4	3	2	2	2	3
SEP 85	216	60	61	59	53	49	46	40	32	27	21	15	12	10	8	5	3	3
OCT 85	172	50	47	51	56	59	51	44	41	38	32	26	20	16	12	10	7	12
NOV 85	255	59	48	40	34	33	30	28	25	19	15	11	9	7	5	3	2	2
DEC 85	180	25	20	21	23	27	29	32	35	39	43	45	44	41	34	27	22	59
JAN 86	255	50	34	32	30	28	28	29	32	33	32	28	22	17	13	10	6	10
APR 86	170	63	63	60	55	52	53	47	38	31	23	19	15	11	8	5	3	4
MAY 86	157	63	58	60	61	58	55	47	41	37	32	24	18	12	8	5	3	5
JUN 86	191	75	72	72	78	71	55	38	25	15	10	7	5	3	2	1	1	1
JUL 86	226	82	82	79	74	68	52	36	19	10	6	4	2	2	1	0	0	0
AUG 86	239	85	83	79	73	60	43	32	18	10	5	4	3	3	2	2	1	2
SEP 86	225	63	58	54	52	55	52	45	37	26	16	10	8	6	4	3	2	4
OCT 86	216	57	46	47	49	50	52	51	45	36	26	19	13	9	6	4	3	15
NOV 86	221	47	38	35	30	29	29	31	32	32	33	32	29	26	22	17	13	23
DEC 86	235	37	28	33	36	40	43	43	42	40	36	30	25	21	17	13	10	15
JAN 87	205	41	31	32	32	31	30	35	34	33	30	28	29	28	26	24	20	59
FEB 87	190	37	32	30	33	36	38	41	40	39	34	27	21	17	14	13	10	19
MAR 87	250	62	52	49	48	48	49	47	39	31	22	15	10	7	5	3	2	4
APR 87	186	71	58	49	48	51	55	55	46	34	22	14	10	7	5	3	2	3
MAY 87	205	61	61	61	58	61	59	51	38	28	21	13	9	7	5	3	2	2

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JUN 87	174	66	59	59	61	64	60	46	37	29	22	15	10	6	4	2	2	2
JUL 87	234	86	82	76	73	68	46	31	18	11	7	4	3	2	1	1	1	1
AUG 87	235	85	79	70	66	60	47	35	23	16	10	6	4	3	2	1	1	2
SEP 87	171	68	62	58	63	64	57	47	37	28	23	17	12	8	4	2	0	0
OCT 87	255	76	53	42	40	46	56	55	42	29	19	11	6	4	3	1	1	0
NOV 87	243	48	38	37	38	44	47	50	43	33	25	20	17	14	10	7	4	4
DEC 88	220	37	27	25	28	29	27	28	30	33	35	32	26	23	21	20	18	70
JAN 89	216	30	28	25	24	30	31	29	31	32	33	33	30	26	22	20	18	86
FEB 89	171	36	38	38	35	37	40	37	35	33	28	25	23	21	17	13	11	34
MAR 89	255	65	56	53	50	44	36	30	27	22	17	12	11	10	9	8	6	13
APR 89	178	52	53	54	52	51	48	45	43	36	27	21	16	12	8	5	4	13
MAY 89	191	55	52	57	59	60	61	53	44	32	23	17	11	8	5	4	3	7
JUN 89	166	53	55	59	61	64	59	51	40	30	21	16	12	9	6	5	4	11
JUL 89	255	79	72	64	56	50	45	38	28	18	13	8	5	3	2	1	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JAN 85	MPH	19.6	19.6	19.4	18.9	16.9	14.9	16.0	17.1	17.0	18.6	19.4	19.9
	σ	11.5	11.5	11.5	12.0	11.5	12.5	12.5	14.0	13.0	13.0	12.0	12.0
FEB 85	MPH	19.5	18.3	17.8	18.1	14.9	11.4	13.0	15.0	15.8	16.4	18.8	19.4
	σ	11.5	11.5	10.5	11.0	11.0	11.5	11.5	12.5	14.0	13.0	12.5	12.0
MAR 85	MPH	13.6	13.8	13.4	11.9	9.9	12.0	12.6	14.1	13.6	11.6	11.6	12.3
	σ	8.5	8.0	8.5	8.0	9.0	8.5	8.0	7.0	7.0	7.5	8.5	8.0
APR 85	MPH	16.6	17.0	16.9	15.1	9.9	11.6	12.5	13.9	15.4	12.4	13.1	15.3
	σ	8.5	9.5	10.0	9.0	9.0	10.5	8.5	8.0	7.5	8.0	8.5	8.5
MAY 85	MPH	10.3	12.2	14.0	14.0	8.7	8.8	10.0	11.0	12.5	12.1	9.8	9.4
	σ	7.0	7.0	9.0	10.5	10.0	7.0	6.5	6.0	7.0	6.0	3.5	5.5
JUN 85	MPH	13.1	15.1	16.4	15.9	7.4	8.1	10.1	11.8	12.3	12.4	8.9	10.6
	σ	7.5	6.0	5.5	5.5	7.5	8.0	5.5	5.5	4.5	5.0	5.5	6.5
JUL 85	MPH	13.6	14.5	14.3	14.3	6.3	6.0	8.9	10.5	11.9	12.8	10.6	12.3
	σ	6.5	6.0	6.5	5.5	5.0	4.5	4.5	4.0	4.5	5.5	5.5	8.0
AUG 85	MPH	12.1	12.4	13.9	14.0	6.8	6.8	9.6	12.3	12.4	11.8	8.1	10.3
	σ	7.5	8.0	7.0	7.5	6.0	4.5	3.5	2.5	3.5	3.0	4.5	6.0
SEP 85	MPH	11.5	12.3	12.9	12.0	9.9	9.0	10.9	13.4	14.0	13.6	10.8	11.8
	σ	9.0	8.5	9.0	9.0	8.5	7.0	7.0	7.0	5.5	6.0	7.0	8.5
OCT 85	MPH	18.0	18.3	18.4	17.4	12.9	9.0	9.9	11.6	12.8	12.0	15.0	17.9
	σ	8.0	8.0	8.5	8.0	8.5	10.5	9.5	8.0	8.5	9.0	8.5	7.5
NOV 85	MPH	8.9	9.4	9.4	7.9	6.1	7.4	8.9	9.4	8.5	8.9	10.0	8.9
	σ	7.5	8.0	7.5	7.0	7.0	8.5	9.0	8.0	7.5	8.5	8.5	7.5
DEC 85	MPH	21.0	21.1	20.3	20.9	19.5	15.6	15.0	17.5	18.5	20.9	20.6	21.3
	σ	11.5	11.5	12.0	12.0	13.0	12.5	12.0	12.5	12.5	13.0	12.5	11.5
JAN 86	MPH	16.1	15.8	15.1	13.4	11.4	6.6	6.6	7.8	7.6	11.8	15.6	15.9
	σ	11.0	10.5	10.5	9.0	9.5	8.0	8.0	8.0	9.5	10.0	10.0	10.5
APR 86	MPH	14.1	12.6	13.4	11.1	8.6	11.3	14.4	14.8	14.9	13.0	12.8	14.1
	σ	8.0	7.0	7.5	8.0	8.0	7.5	8.0	7.5	7.5	7.5	7.5	7.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 86	MPH	15.5	15.5	16.3	17.5	12.3	10.4	11.5	13.3	14.4	14.0	11.8	12.5
	σ	6.5	8.0	8.0	8.0	9.5	8.0	7.5	7.0	6.0	6.0	6.0	6.5
JUN 86	MPH	10.9	12.5	14.0	13.9	5.9	6.4	8.6	11.4	14.3	13.3	9.4	8.0
	σ	6.0	5.5	5.0	5.5	5.5	4.5	4.0	4.0	4.0	5.5	5.0	5.5
JUL 86	MPH	7.5	9.3	11.6	11.3	4.8	6.8	10.0	11.6	13.5	12.8	9.0	7.6
	σ	5.5	5.5	6.0	6.5	5.0	3.5	3.0	3.5	3.5	4.0	3.5	5.5
AUG 86	MPH	11.4	11.9	12.6	12.8	6.4	4.6	7.8	9.8	10.6	10.0	7.6	9.0
	σ	7.0	7.0	5.5	5.5	4.0	4.0	3.5	3.5	5.0	5.5	4.5	4.5
SEP 86	MPH	11.0	11.4	12.8	12.5	9.8	9.5	11.1	12.5	12.9	12.5	9.6	9.6
	σ	8.0	9.5	9.5	9.5	6.5	7.5	6.5	6.0	6.0	5.5	5.5	7.5
OCT 86	MPH	16.9	15.8	16.0	16.0	12.6	8.3	9.4	10.5	10.6	8.9	14.4	16.6
	σ	8.5	7.5	7.5	8.0	9.0	9.0	8.5	8.5	9.0	8.0	7.5	8.0
NOV 86	MPH	13.8	15.4	15.6	15.4	15.4	14.1	14.4	15.1	13.5	14.4	17.4	16.5
	σ	9.5	9.5	10.0	9.5	12.0	13.0	12.5	12.0	11.0	10.5	11.0	10.0
DEC 86	MPH	17.1	18.0	17.1	17.6	15.0	10.4	10.1	10.0	9.6	13.6	16.0	17.8
	σ	8.0	8.5	9.5	9.5	10.0	11.5	11.0	10.5	11.0	10.5	8.5	8.5
JAN 87	MPH	18.0	18.0	17.7	16.5	16.7	15.8	15.0	15.1	15.8	18.5	20.6	19.9
	σ	12.5	12.0	13.0	12.0	12.5	13.5	14.0	14.0	13.5	14.0	12.5	13.0
FEB 87	MPH	16.3	16.3	16.3	17.0	14.8	13.4	14.3	13.9	13.5	12.8	14.9	16.3
	σ	9.5	9.5	10.0	10.0	10.5	12.0	12.0	11.5	10.5	8.5	9.5	9.5
MAR 87	MPH	14.4	13.3	12.6	12.1	9.1	8.9	10.3	11.0	11.4	9.5	11.1	12.6
	σ	9.5	8.0	7.5	7.0	7.5	9.0	8.5	8.0	7.5	7.0	8.0	8.0
APR 87	MPH	16.6	16.5	16.3	13.8	7.5	8.3	9.1	12.0	12.1	11.0	11.1	14.3
	σ	8.0	7.0	7.5	5.5	8.0	7.0	6.5	6.0	7.0	6.5	6.0	5.5
MAY 87	MPH	13.5	14.1	13.4	13.3	8.1	8.0	9.4	11.9	13.0	12.9	12.4	12.6
	σ	7.5	7.0	7.5	7.5	8.0	8.0	5.5	6.0	5.5	6.5	7.0	7.0
JUN 87	MPH	13.9	15.3	16.3	17.8	9.8	6.9	9.0	10.4	12.4	12.5	10.4	12.9
	σ	7.0	6.5	6.0	6.5	8.5	7.0	5.0	4.5	5.5	6.0	5.0	7.5

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUL 87	MPH	10.0	10.1	11.6	11.6	5.3	5.6	8.4	11.1	12.4	11.9	8.5	8.6
	σ	6.5	6.0	5.5	6.0	4.0	3.5	4.0	4.5	5.5	4.5	4.0	6.0
AUG 87	MPH	11.8	12.4	12.9	11.1	5.5	5.0	7.0	9.8	11.6	10.9	11.0	11.3
	σ	6.0	7.0	7.0	5.5	3.0	3.5	3.0	3.5	5.5	6.5	7.0	5.0
SEP 87	MPH	17.1	17.3	17.3	16.3	12.1	7.1	7.5	8.6	9.4	10.5	10.5	14.3
	σ	5.0	5.0	6.0	6.5	6.5	7.5	4.5	4.0	4.0	4.0	7.0	7.5
OCT 87	MPH	15.8	15.8	15.4	15.4	10.6	4.4	5.6	6.9	7.4	6.8	11.0	14.0
	σ	7.0	7.5	6.5	6.5	6.0	3.5	3.5	4.0	5.0	5.0	7.5	7.5
NOV 87	MPH	15.3	15.1	14.8	14.0	12.6	8.5	8.0	7.8	9.9	12.3	15.8	15.8
	σ	8.5	8.0	9.0	9.0	9.0	8.5	8.0	7.5	8.5	8.5	9.0	9.0
DEC 88	MPH	20.5	20.0	20.0	19.4	17.1	12.9	12.6	12.9	14.5	17.0	19.3	20.3
	σ	12.5	12.5	12.5	12.0	12.5	12.5	12.5	13.0	14.5	13.0	13.5	13.0
JAN 89	MPH	20.8	20.1	20.5	18.6	17.4	13.9	14.0	16.0	16.3	19.0	20.1	21.0
	σ	12.0	12.0	12.0	12.5	13.5	14.5	14.5	15.5	15.5	15.0	12.5	12.5
FEB 89	MPH	17.8	17.3	16.8	16.0	15.1	12.3	12.8	13.9	15.0	16.8	18.6	19.4
	σ	10.0	10.0	10.5	10.5	12.5	12.0	12.5	13.0	13.0	11.0	9.5	9.0
MAR 89	MPH	12.8	13.8	12.8	11.4	8.9	9.8	10.1	11.4	12.1	9.3	9.5	11.8
	σ	9.0	8.5	8.0	8.5	10.5	10.0	9.0	8.5	8.0	7.5	9.5	9.5
APR 89	MPH	15.3	16.6	16.4	16.1	9.8	10.6	11.9	13.9	13.8	11.9	12.4	14.0
	σ	11.0	9.5	9.5	9.0	9.5	8.0	7.0	6.0	5.0	6.0	9.0	10.0
MAY 89	MPH	13.5	14.4	15.3	15.1	10.1	9.3	11.0	13.4	14.3	13.1	10.8	12.8
	σ	7.5	9.0	9.0	9.0	8.0	8.0	7.0	6.5	6.0	7.0	6.0	7.0
JUN 89	MPH	15.6	16.1	17.4	16.3	8.5	7.3	10.0	12.8	13.5	14.5	13.3	13.6
	σ	9.5	7.5	8.0	7.5	8.0	5.0	4.5	5.0	5.0	6.0	8.0	10.5
JUL 89	MPH	11.1	12.0	13.0	12.5	4.6	4.8	7.8	10.5	11.4	11.0	8.1	8.8
	σ	7.0	8.0	8.0	7.5	3.0	2.0	3.0	4.0	4.5	4.5	4.5	6.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 85	19	1	1	9	5	1	1	26
	FEB 85	28	1	2	16	7	2	1	23
	MAR 85	31	3	3	35	40	11	3	25
	APR 85	32	3	4	30	42	12	2	26
	MAY 85	34	4	7	42	60	19	3	27
	JUN 85	37	3	6	34	54	19	3	32
12-18 MPH	JAN 85	26	0	0	1	1	0	1	38
	FEB 85	33	1	0	2	1	1	2	42
	MAR 85	58	1	1	14	27	4	2	51
	APR 85	59	1	1	10	22	4	1	54
	MAY 85	55	1	1	15	49	11	0	40
	JUN 85	83	1	1	11	38	10	1	57
18-24 MPH	JAN 85	27	0	0	0	1	4	12	55
	FEB 85	24	0	0	0	2	5	15	57
	MAR 85	43	1	0	10	20	3	5	50
	APR 85	49	1	0	4	10	1	2	65
	MAY 85	33	1	0	3	21	3	0	31
	JUN 85	42	1	0	2	10	2	2	53
24 + MPH	JAN 85	40	1	0	1	9	23	48	96
	FEB 85	35	1	0	1	10	24	51	88
	MAR 85	23	0	1	6	13	3	7	35
	APR 85	48	0	0	3	5	1	5	49
	MAY 85	26	1	0	0	4	0	1	18
	JUN 85	20	0	0	0	1	0	2	22

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUL 85	45	5	8	45	50	18	5	36
	AUG 85	37	3	8	51	74	25	2	24
	SEP 85	39	3	6	39	50	12	2	30
	OCT 85	38	2	3	28	32	7	1	37
	NOV 85	29	1	4	45	18	4	3	41
	DEC 85	20	1	3	9	2	1	1	30
12-18 MPH	JUL 85	72	2	2	18	33	7	1	64
	AUG 85	73	1	1	17	60	14	0	47
	SEP 85	48	1	2	19	40	4	0	34
	OCT 85	72	1	0	4	10	1	0	76
	NOV 85	29	0	0	15	11	1	1	38
	DEC 85	41	1	0	0	0	0	0	36
18-24 MPH	JUL 85	41	1	0	7	11	1	0	39
	AUG 85	29	0	0	2	19	3	0	29
	SEP 85	33	0	1	11	21	2	0	31
	OCT 85	53	0	0	4	7	1	0	58
	NOV 85	30	0	0	3	7	1	1	30
	DEC 85	63	0	0	0	0	0	1	41
24 + MPH	JUL 85	24	0	0	3	3	0	0	11
	AUG 85	15	0	0	0	3	0	0	11
	SEP 85	40	0	0	5	8	1	0	23
	OCT 85	81	0	0	4	6	0	0	44
	NOV 85	30	0	0	1	3	0	0	17
	DEC 85	167	0	0	0	2	4	14	127

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 86	35	1	2	19	8	3	1	47
	APR 86	33	6	8	40	48	15	4	32
	MAY 86	31	4	6	36	47	18	4	35
	JUN 86	43	5	7	38	56	24	4	43
	JUL 86	38	5	11	58	72	19	3	38
	AUG 86	55	4	8	43	59	19	4	56
12-18 MPH	JAN 86	36	0	0	1	3	0	0	45
	APR 86	46	1	1	21	41	7	3	40
	MAY 86	55	1	1	19	38	6	2	53
	JUN 86	62	2	1	12	45	13	1	69
	JUL 86	41	2	3	29	57	9	1	52
	AUG 86	52	1	1	14	35	6	1	66
18-24 MPH	JAN 86	36	0	0	0	0	1	2	54
	APR 86	48	0	0	7	21	3	1	35
	MAY 86	45	0	0	8	22	2	1	47
	JUN 86	22	1	0	2	16	3	1	33
	JUL 86	10	0	1	10	19	2	1	23
	AUG 86	16	0	0	3	6	0	1	32
24 + MPH	JAN 86	55	0	0	0	1	3	9	70
	APR 86	46	0	0	5	12	1	1	23
	MAY 86	45	0	0	6	15	1	2	37
	JUN 86	12	1	0	0	4	0	0	10
	JUL 86	5	0	0	2	4	0	0	4
	AUG 86	9	0	0	0	0	0	1	10

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 86	22	2	6	48	60	12	2	22
	OCT 86	30	3	5	33	32	7	2	40
	NOV 86	32	1	2	24	15	5	2	38
	DEC 86	28	2	2	14	6	1	1	43
	JAN 87	25	1	2	13	11	10	2	40
	FEB 87	27	1	2	14	8	3	1	42
12-18 MPH	SEP 86	44	1	2	24	41	6	0	43
	OCT 86	64	1	1	3	7	1	1	74
	NOV 86	38	0	1	5	5	1	2	38
	DEC 86	55	1	0	1	0	0	1	62
	JAN 87	34	0	0	4	2	0	2	52
	FEB 87	47	0	0	2	1	1	2	55
18-24 MPH	SEP 86	41	0	0	10	17	2	1	37
	OCT 86	56	0	0	0	1	1	5	68
	NOV 86	38	0	0	0	2	2	6	46
	DEC 86	56	0	0	0	1	2	5	61
	JAN 87	30	0	0	1	2	5	11	52
	FEB 87	47	0	0	1	3	4	12	54
24 + MPH	SEP 86	28	0	0	3	8	1	0	14
	OCT 86	45	0	0	0	1	1	5	43
	NOV 86	69	1	0	0	4	7	21	92
	DEC 86	76	0	0	0	3	6	14	67
	JAN 87	82	1	1	1	9	18	36	82
	FEB 87	53	0	1	4	6	9	21	62

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 87	35	7	7	34	31	8	3	38
	APR 87	36	7	7	34	46	12	3	34
	MAY 87	38	60	41	28	38	14	3	39
	JUN 87	31	5	6	36	49	23	4	30
	JUL 87	37	4	9	46	68	27	5	47
	AUG 87	42	5	11	56	45	15	5	53
12-18 MPH	MAR 87	54	2	2	12	16	3	2	55
	APR 87	59	2	1	7	15	3	1	65
	MAY 87	60	3	1	0	26	5	1	68
	JUN 87	61	2	1	10	30	7	1	73
	JUL 87	50	2	3	19	42	10	2	61
	AUG 87	55	2	1	14	27	5	1	67
18-24 MPH	MAR 87	41	0	0	3	7	4	9	52
	APR 87	52	0	0	5	7	1	4	66
	MAY 87	41	1	1	0	12	2	2	55
	JUN 87	32	1	0	2	10	2	6	59
	JUL 87	11	0	1	5	14	2	3	24
	AUG 87	25	1	0	2	11	1	1	33
24 + MPH	MAR 87	25	0	0	1	3	3	8	30
	APR 87	27	0	0	3	7	1	3	25
	MAY 87	28	0	0	2	3	1	2	25
	JUN 87	22	0	0	1	5	1	3	30
	JUL 87	3	0	0	1	6	0	2	7
	AUG 87	12	1	0	0	5	0	0	10

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 87	35	2	6	43	48	13	2	39
	OCT 87	36	3	5	36	38	10	3	40
	NOV 87	32	3	4	20	15	8	3	38
	DEC 88	32	2	2	18	19	10	2	4
	JAN 89	53	2	1	7	11	1	0	6
	FEB 89	50	3	1	9	28	7	2	10
12-18 MPH	SEP 87	69	1	1	11	20	2	0	80
	OCT 87	63	0	0	2	4	1	0	71
	NOV 87	54	2	1	1	1	2	2	66
	DEC 88	62	1	0	3	8	4	1	5
	JAN 89	75	1	0	0	2	0	0	6
	FEB 89	76	2	0	2	19	5	1	7
18-24 MPH	SEP 87	45	0	1	3	5	1	1	58
	OCT 87	47	0	0	0	0	0	2	76
	NOV 87	42	1	0	0	1	3	10	68
	DEC 88	74	1	0	0	3	2	2	10
	JAN 89	83	1	0	0	0	0	1	7
	FEB 89	85	1	0	1	8	2	0	8
24 + MPH	SEP 87	25	0	0	1	1	1	3	35
	OCT 87	16	0	0	0	0	0	3	27
	NOV 87	39	0	0	0	1	3	10	47
	DEC 88	220	2	1	1	2	2	3	14
	JAN 89	247	2	0	0	1	1	1	15
	FEB 89	142	1	0	1	5	2	2	19

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 89	58	1	2	16	58	25	4	9
	APR 89	46	2	2	15	46	34	6	8
	MAY 89	42	3	2	17	54	32	6	8
	JUN 89	49	2	1	14	44	41	7	7
	JUL 89	84	4	4	19	53	35	7	10
12-18 MPH	MAR 89	76	1	0	3	29	13	2	5
	APR 89	83	2	0	2	27	25	2	10
	MAY 89	94	3	1	5	39	25	3	11
	JUN 89	101	4	1	4	28	30	4	12
	JUL 89	91	4	1	3	22	18	2	10
18-24 MPH	MAR 89	52	0	0	1	13	7	1	5
	APR 89	87	3	0	1	10	12	1	10
	MAY 89	76	2	1	5	21	13	2	10
	JUN 89	72	5	0	2	13	15	2	11
	JUL 89	59	2	0	1	5	6	2	9
24 + MPH	MAR 89	65	2	0	0	6	3	1	9
	APR 89	87	4	0	1	3	4	1	5
	MAY 89	47	2	0	3	13	6	1	6
	JUN 89	51	10	0	1	5	5	2	10
	JUL 89	23	1	0	0	2	1	1	3

Site Description

County:	Washington	Elevation:	7,000 ft.
Township:	38 South	Range:	16 West
Section:	4	Quarter Section:	Northeast
Longitude:	113° 39'	Latitude:	37° 31'

Duration of data logging: October 1986 to November 1987
Months of available data: 13
Anemometer height: 40 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southeast
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: Rolling terrain
South: High grass, low row crops
West: Rolling terrain

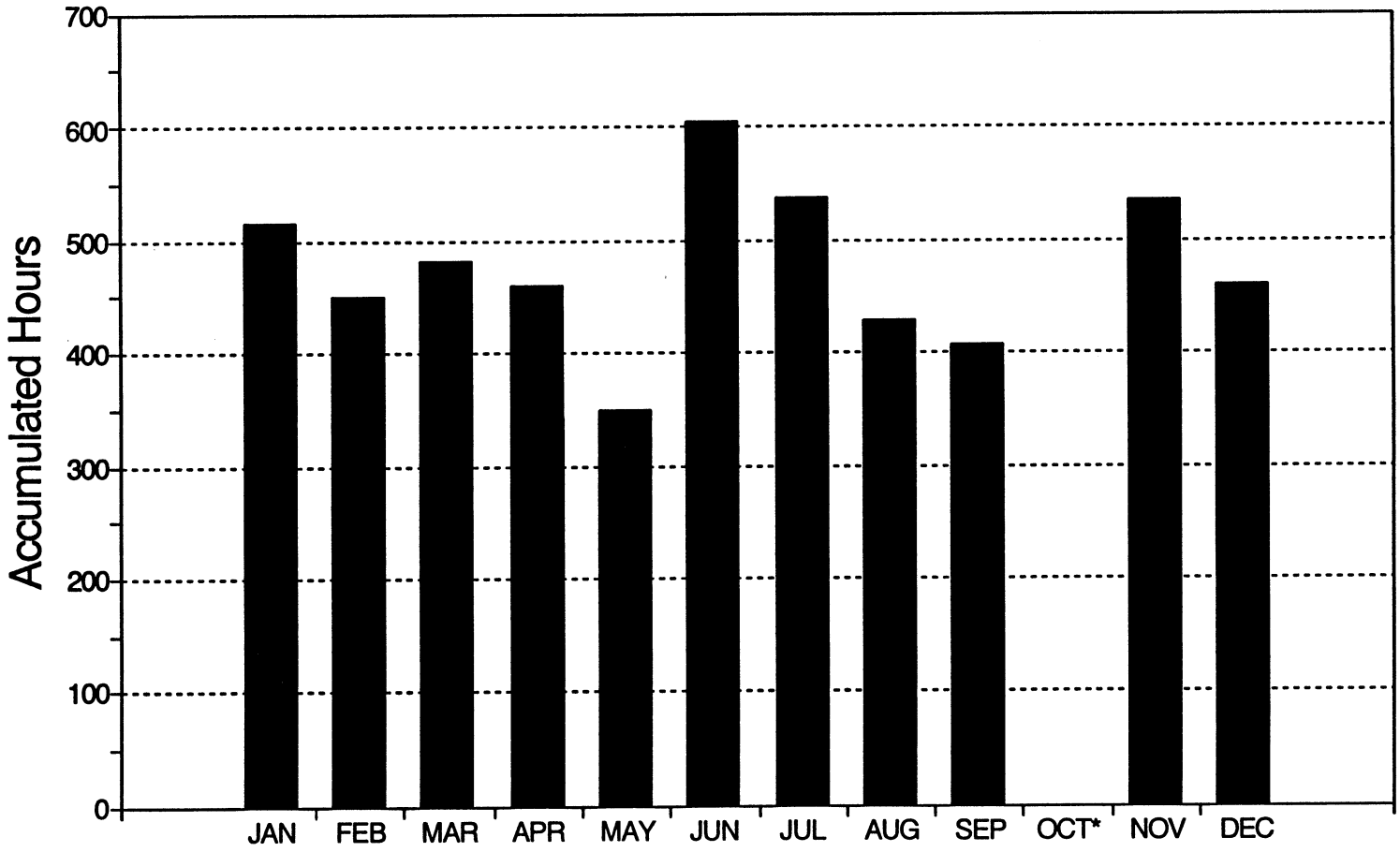
Comments

Property ownership: Utah Power
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
OCT 86	90	44	47	46	40	33	30	22	17	15	12	11	9	8	6	5	3	4
NOV 86	38	26	46	57	59	64	70	67	63	60	49	36	27	19	13	8	6	13
DEC 86	186	48	49	47	56	61	61	59	52	41	29	19	12	8	5	4	3	3
JAN 87	167	28	31	35	35	38	40	42	43	43	42	39	35	29	23	17	12	44
FEB 87	147	37	39	42	49	52	51	48	39	30	25	22	20	17	14	11	9	22
MAR 87	169	48	46	48	60	60	51	43	39	33	29	25	21	17	14	11	8	22
APR 87	100	73	87	90	75	65	54	42	30	22	17	12	9	7	5	4	3	25
JUN 87	69	50	50	62	61	51	37	30	25	20	15	11	9	7	5	4	3	8
JUL 87	50	33	56	68	70	68	66	59	50	41	34	30	25	20	15	12	9	39
AUG 87	81	55	72	85	81	72	60	53	44	35	26	20	16	12	8	6	5	15
SEP 87	122	80	89	95	104	87	60	35	17	9	6	4	3	2	2	2	1	2
OCT 87	161	83	92	97	90	75	56	35	19	11	7	4	3	3	2	2	1	2
NOV 87	136	59	70	81	74	60	46	36	29	26	22	19	15	11	8	6	5	18

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
OCT 86	MPH	12.9	13.1	12.6	12.0	11.3	11.8	15.6	16.5	14.9	12.4	11.9	12.5
	σ	7.5	9.5	9.0	9.0	8.5	9.0	10.0	8.5	8.5	6.5	5.0	6.0
NOV 86	MPH	19.1	19.1	18.8	18.8	18.5	17.4	17.3	17.8	16.9	18.1	17.6	19.0
	σ	7.5	8.5	8.5	9.0	9.5	8.0	7.0	6.5	6.5	6.5	6.5	6.5
DEC 86	MPH	14.6	13.8	12.9	11.9	11.3	10.8	13.5	14.3	13.5	13.9	13.1	13.4
	σ	8.5	9.0	8.5	9.0	8.0	8.0	9.0	8.5	7.5	8.5	8.0	8.0
JAN 87	MPH	18.1	17.6	17.9	17.5	17.6	18.0	18.4	17.6	17.0	17.8	17.9	16.8
	σ	12.5	13.0	12.5	13.0	12.0	11.0	12.5	11.5	10.5	11.0	12.5	11.5
FEB 87	MPH	14.4	15.1	15.4	14.9	14.4	15.0	16.3	16.4	16.0	15.9	14.9	14.5
	σ	10.5	10.0	11.0	11.0	11.5	12.5	11.0	10.0	10.0	10.0	10.0	9.0
MAR 87	MPH	15.4	13.8	13.3	12.5	12.8	15.4	17.1	17.4	15.9	15.0	14.4	15.8
	σ	10.5	8.0	8.5	8.5	11.0	11.5	11.5	11.0	11.0	10.0	8.5	10.0
APR 87	MPH	11.8	11.9	12.9	12.4	12.6	14.5	16.8	17.3	16.8	14.9	13.6	11.8
	σ	7.5	8.5	8.5	9.5	10.0	9.0	10.5	8.5	8.5	8.0	8.0	6.0
JUN 87	MPH	13.8	12.8	12.3	10.9	9.9	13.6	17.1	18.3	16.8	14.9	15.0	13.6
	σ	5.5	5.0	4.0	6.0	7.5	9.5	9.5	9.5	7.5	6.5	5.5	6.0
JUL 87	MPH	15.5	16.9	17.1	16.8	17.9	21.5	22.4	22.9	21.3	18.5	14.8	15.3
	σ	7.5	8.0	8.5	9.0	11.0	11.0	10.0	9.5	8.5	8.5	7.0	7.0
AUG 87	MPH	14.3	13.8	13.9	13.9	13.6	16.4	18.0	18.5	16.6	15.4	14.0	13.8
	σ	7.0	6.5	7.0	7.0	9.0	9.5	8.0	7.5	7.0	8.0	5.5	6.5
SEP 87	MPH	10.5	10.9	12.1	11.8	10.3	10.5	13.3	14.1	12.3	10.9	10.8	10.3
	σ	4.5	4.5	5.0	6.0	6.5	5.5	5.0	5.5	4.0	3.5	3.0	4.0
OCT 87	MPH	10.0	10.6	10.9	10.9	10.5	10.5	12.1	12.5	12.3	10.6	10.0	10.3
	σ	5.5	6.0	5.5	6.5	6.0	6.0	6.5	5.5	4.0	4.5	5.0	6.0
NOV 87	MPH	14.8	15.4	13.0	12.5	11.9	12.6	14.3	13.9	14.1	14.1	14.1	14.4
	σ	9.5	8.5	7.0	6.5	9.0	8.5	9.0	8.0	8.5	9.0	10.0	10.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	OCT 86	43	4	7	37	5	1	11	29
	NOV 86	30	4	2	33	12	4	8	35
	DEC 86	27	7	4	65	9	3	5	24
	JAN 87	16	1	2	33	10	7	6	18
	FEB 87	10	4	22	58	5	3	3	12
	MAR 87	19	3	10	46	11	4	17	32
12-18 MPH	OCT 86	34	1	4	42	2	0	1	19
	NOV 86	53	1	2	48	8	3	13	66
	DEC 86	61	1	2	72	1	0	1	40
	JAN 87	40	0	1	38	2	2	6	24
	FEB 87	31	2	7	54	3	0	3	52
	MAR 87	37	1	7	52	6	5	9	55
18-24 MPH	OCT 86	12	0	2	30	1	0	0	9
	NOV 86	44	0	1	62	2	1	10	69
	DEC 86	51	0	1	52	0	0	0	48
	JAN 87	41	0	2	47	1	0	3	33
	FEB 87	22	0	3	32	1	0	4	54
	MAR 87	18	0	4	44	1	2	5	40
24 + MPH	OCT 86	5	0	1	44	1	0	0	7
	NOV 86	19	0	1	99	1	0	4	47
	DEC 86	19	0	0	37	0	0	0	27
	JAN 87	48	0	3	107	1	0	3	79
	FEB 87	21	0	1	72	0	0	7	36
	MAR 87	9	0	6	92	1	1	3	36

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 87	53	10	15	57	45	13	18	40
	JUN 87	15	3	6	53	43	12	16	14
	JUL 87	11	3	9	73	37	7	9	9
	AUG 87	22	9	21	91	30	9	10	20
	SEP 87	41	5	11	85	52	13	23	33
	OCT 87	45	4	16	88	34	14	28	44
	NOV 87	39	6	7	41	15	3	23	75
12-18 MPH	APR 87	41	5	17	59	16	5	9	41
	JUN 87	20	3	9	65	32	6	5	10
	JUL 87	8	2	15	138	34	3	1	2
	AUG 87	16	6	13	133	22	4	4	15
	SEP 87	49	3	13	112	25	3	11	36
	OCT 87	68	0	10	88	9	5	11	30
	NOV 87	50	3	10	49	12	3	8	44
18-24 MPH	APR 87	20	1	8	37	2	1	5	20
	JUN 87	2	0	6	51	7	1	3	3
	JUL 87	1	0	12	122	12	1	1	0
	AUG 87	3	2	4	104	7	0	4	8
	SEP 87	7	0	4	38	4	0	2	6
	OCT 87	12	0	5	37	1	0	1	9
	NOV 87	22	0	7	40	2	0	1	17
24 + MPH	APR 87	8	0	8	47	2	0	4	12
	JUN 87	0	0	4	51	4	1	2	1
	JUL 87	0	0	14	161	7	0	1	0
	AUG 87	0	0	3	95	3	0	4	3
	OCT 87	0	0	4	20	0	0	0	1
	NOV 87	7	0	6	68	1	0	4	18

Site Description

County:	Washington	Elevation:	5,300 ft.
Township:	37 South	Range:	17 West
Section:	13	Quarter Section:	—
Longitude:	113° 42'	Latitude:	37° 34'

Duration of data logging: October 1985 to September 1986
Months of available data: 12
Anemometer height: 100 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Southeast-Southwest
Terrain classifcation in each of the principal directions:

North: Low grass, low row crops
East: Low grass, low row crops
South: Low grass, low row crops
West: Low grass, low row crops

Comments

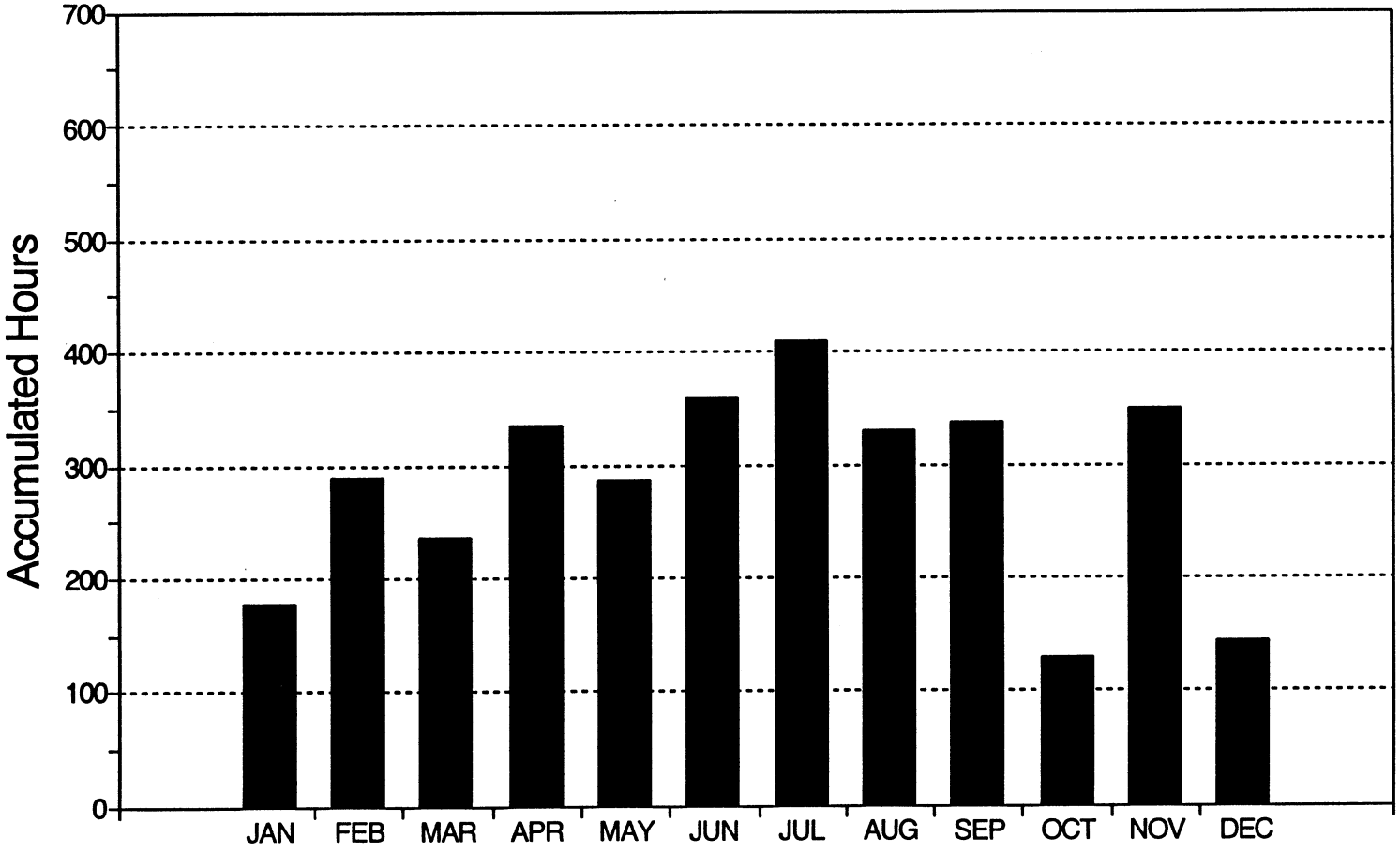
Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
OCT 85	255	77	43	27	21	18	15	12	9	6	4	3	2	2	2	2	1	6
NOV 85	255	54	38	37	40	41	39	38	34	28	22	17	13	10	7	5	4	13
DEC 85	255	61	33	28	26	23	19	16	12	8	5	3	2	1	1	0	0	0
JAN 86	255	75	44	36	31	25	22	20	15	10	7	5	3	2	1	1	0	0
FEB 86	255	73	42	26	27	28	30	30	26	21	19	16	14	12	10	8	7	16
MAR 86	255	94	61	43	35	31	28	23	18	13	10	8	6	5	4	3	2	6
APR 86	255	65	50	44	42	38	35	33	30	25	20	16	13	10	7	5	4	11
MAY 86	255	97	66	45	36	29	27	26	23	20	17	14	11	9	7	6	4	12
JUN 86	214	80	69	68	58	53	46	39	30	22	16	11	7	4	2	1	1	1
JUL 86	189	75	72	73	61	56	51	45	36	26	18	12	8	6	4	3	3	6
AUG 86	255	75	68	70	61	56	46	34	24	15	9	6	4	2	1	1	0	1
SEP 86	255	74	46	40	35	33	32	31	29	27	24	21	18	15	11	8	5	9

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
OCT 85	MPH	6.3	5.9	5.0	5.5	4.0	6.1	10.9	12.8	11.4	9.9	8.3	6.6
	σ	3.5	3.5	3.5	3.5	5.5	9.0	9.5	9.0	7.5	6.5	7.0	4.0
NOV 85	MPH	9.1	10.0	9.6	8.6	9.0	12.6	15.6	16.1	14.1	11.9	10.9	9.9
	σ	7.5	8.0	8.5	9.5	10.5	11.5	10.5	9.0	8.5	8.5	8.5	9.0
DEC 85	MPH	4.6	4.3	3.9	4.0	2.8	3.8	6.1	8.0	7.6	6.3	6.3	5.4
	σ	5.5	5.0	5.0	4.0	3.5	5.0	5.5	7.0	7.0	5.5	6.5	6.0
JAN 86	MPH	5.3	5.0	5.3	5.4	5.1	6.5	8.6	10.3	9.3	6.5	5.4	5.1
	σ	4.5	5.0	4.5	5.0	6.5	7.5	7.0	8.0	6.0	3.0	3.5	4.0
FEB 86	MPH	10.5	10.1	9.8	9.6	9.9	10.8	13.5	14.4	15.1	13.5	11.4	10.8
	σ	9.0	10.5	10.5	10.5	11.0	10.5	9.5	9.0	9.5	8.0	8.5	9.0
MAR 86	MPH	7.1	5.4	4.9	5.0	5.1	9.3	13.1	14.3	13.0	9.3	6.8	7.3
	σ	6.0	4.5	4.0	4.0	7.5	7.0	7.5	7.5	7.5	5.5	5.0	6.5
APR 86	MPH	7.0	7.1	6.6	6.4	11.4	15.5	16.5	16.8	16.9	13.6	10.1	8.6
	σ	6.0	6.5	5.5	6.5	40.0	9.0	9.0	8.0	8.5	8.5	8.0	7.5
MAY 86	MPH	8.6	8.4	7.8	6.5	6.6	11.1	12.9	14.6	14.3	13.3	10.8	8.6
	σ	7.5	7.0	7.5	6.5	7.5	8.5	10.0	10.0	9.5	8.5	6.5	6.5
JUN 86	MPH	8.6	8.6	7.5	5.6	5.1	12.1	13.8	15.9	15.4	14.8	11.4	10.3
	σ	5.0	5.0	4.0	3.5	4.5	6.5	7.0	6.5	6.5	5.5	3.5	3.5
JUL 86	MPH	10.6	9.8	7.4	5.4	6.8	12.1	15.9	17.6	17.1	16.4	12.9	10.9
	σ	6.5	6.5	4.5	3.0	6.0	7.5	7.0	7.0	6.5	6.0	5.5	6.0
AUG 86	MPH	8.9	6.8	5.6	5.3	4.4	9.0	12.6	13.9	13.6	12.5	10.8	9.5
	σ	6.5	4.5	4.0	2.5	4.5	6.5	6.0	5.5	5.0	4.0	4.5	4.5
SEP 86	MPH	8.4	7.4	7.5	7.5	8.0	14.8	18.8	19.6	17.9	14.9	10.0	8.9
	σ	7.5	6.5	6.0	5.5	8.0	10.5	9.0	9.5	9.5	8.0	6.5	7.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	OCT 85	25	3	1	36	45	20	10	8
	NOV 85	19	2	1	35	42	17	7	5
	DEC 85	24	3	1	31	35	10	6	11
	JAN 86	17	3	2	37	55	20	12	8
	FEB 86	23	4	2	31	44	17	9	10
	MAR 86	23	4	2	41	66	38	13	12
12-18 MPH	OCT 85	14	1	0	21	9	2	3	3
	NOV 85	10	1	0	58	35	6	7	4
	DEC 85	18	2	0	29	13	1	3	3
	JAN 86	9	1	1	39	21	2	3	3
	FEB 86	12	2	1	32	29	3	4	3
	MAR 86	13	2	1	31	31	7	6	3
18-24 MPH	OCT 85	10	1	0	13	2	0	1	1
	NOV 85	4	0	0	64	24	1	2	3
	DEC 85	12	1	0	20	2	0	1	0
	JAN 86	7	0	0	29	6	0	1	1
	FEB 86	8	1	0	44	22	1	1	1
	MAR 86	7	1	0	27	15	1	1	1
24 + MPH	OCT 85	4	0	0	14	2	0	0	0
	NOV 85	1	0	0	70	19	0	0	0
	DEC 85	4	0	0	9	0	0	0	0
	JAN 86	3	0	0	11	1	0	1	3
	FEB 86	1	0	1	82	17	0	0	0
	MAR 86	5	0	0	28	10	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	APR 86	24	4	4	34	41	22	16	13
	MAY 86	35	7	3	44	63	21	16	18
	JUN 86	17	3	4	61	85	28	11	7
	JUL 86	6	1	3	67	100	31	8	4
	AUG 86	10	2	3	64	84	34	11	5
	SEP 86	20	4	3	43	57	23	6	5
12-18 MPH	APR 86	13	2	1	34	34	12	12	9
	MAY 86	15	2	1	26	28	9	7	5
	JUN 86	8	1	2	71	58	14	2	1
	JUL 86	2	0	2	56	82	24	1	1
	AUG 86	2	1	3	58	71	23	4	2
	SEP 86	11	1	1	37	41	7	1	1
18-24 MPH	APR 86	8	1	1	34	33	4	4	3
	MAY 86	8	1	0	29	24	4	3	1
	JUN 86	3	0	1	40	37	7	1	0
	JUL 86	1	0	1	42	52	11	0	0
	AUG 86	0	0	2	32	31	6	1	1
	SEP 86	5	0	1	40	38	3	0	0
24 + MPH	APR 86	3	0	1	47	31	2	1	0
	MAY 86	3	0	0	40	33	2	1	0
	JUN 86	1	0	0	23	15	2	0	1
	JUL 86	0	0	1	32	25	2	0	0
	AUG 86	0	0	2	14	7	1	0	0
	SEP 86	0	0	1	66	42	2	0	0

Site Description

County:	Washington	Elevation:	3,200 ft.
Township:	41 South	Range:	16 West
Section:	31	Quarter Section:	—
Longitude:	113° 38'	Latitude:	37° 12'

Duration of data logging: January 1985 to July 1985
Months of available data: 7
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Not available, faulty wind vane
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Low grass, low row crops
South: Low grass, low row crops
West: Rolling terrain

Comments

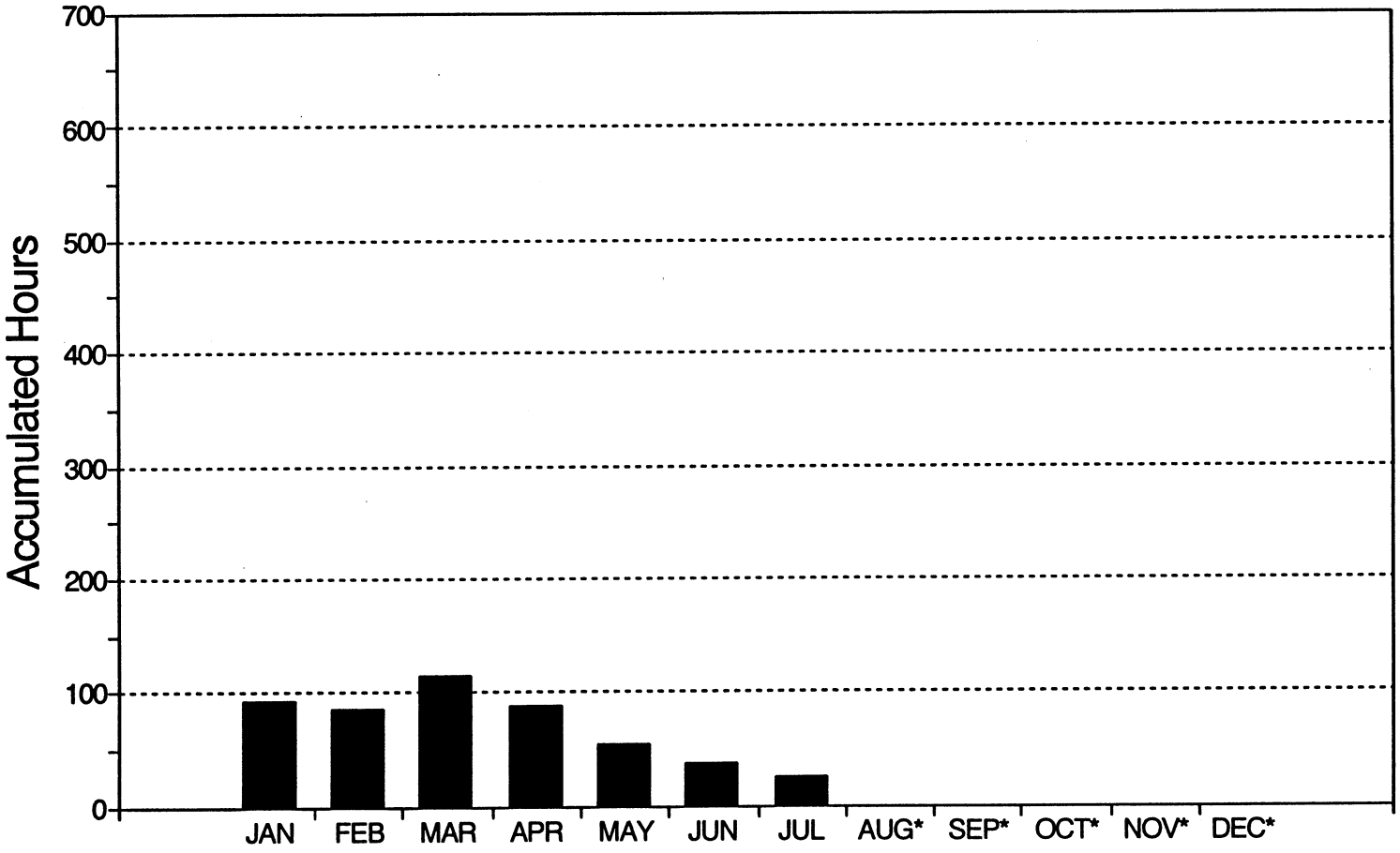
Property ownership: Ivins City
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
JAN 85	255	64	42	28	19	13	9	7	5	4	3	2	1	1	1	0	0	0
FEB 85	255	51	20	11	10	10	9	8	8	7	7	5	4	3	2	1	1	1
MAR 85	255	34	32	28	23	17	13	10	7	5	4	3	2	1	1	0	0	0
APR 85	255	27	23	19	15	12	9	6	5	3	3	3	2	2	2	2	2	4
MAY 85	255	29	22	17	13	9	6	4	3	1	1	0	0	0	0	0	0	0
JUN 85	255	31	23	15	9	5	3	2	1	1	1	1	0	0	0	0	0	0
JUL 85	255	16	12	9	6	4	2	2	1	1	1	1	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JAN 85	MPH	4.3	3.8	3.6	3.8	3.6	4.0	5.9	7.6	7.6	6.3	5.4	4.4
	σ	2.5	3.5	4.0	3.5	3.5	3.5	5.0	5.5	5.5	5.5	5.0	4.0
FEB 85	MPH	3.5	4.0	3.5	3.4	3.0	3.9	6.1	6.9	7.5	5.9	4.8	3.6
	σ	3.5	6.0	5.0	4.5	4.0	4.0	7.0	8.0	7.5	6.5	4.5	4.5
MAR 85	MPH	2.1	2.4	2.6	2.3	2.1	3.4	4.8	5.9	5.9	3.5	3.3	2.6
	σ	4.0	5.0	5.5	4.0	4.5	5.0	5.0	5.5	6.0	4.5	5.0	4.0
APR 85	MPH	1.6	2.4	1.8	1.9	2.4	3.3	4.0	5.5	6.4	3.9	2.5	1.8
	σ	5.0	5.5	5.0	5.5	6.5	7.5	7.0	6.0	5.5	4.5	3.5	5.0
MAY 85	MPH	0.8	1.1	0.9	0.9	1.0	1.3	2.1	3.8	4.4	3.5	1.8	0.9
	σ	2.5	3.0	1.5	2.5	2.5	2.0	2.5	3.0	3.0	4.0	3.5	1.0
JUN 85	MPH	0.6	0.8	0.4	0.1	0.1	0.4	1.3	3.9	4.4	4.3	2.9	1.1
	σ	1.0	0.0	0.0	0.0	0.0	1.0	1.5	3.5	3.5	2.5	4.0	1.0
JUL 85	MPH	1.5	0.3	0.3	0.3	0.3	1.0	1.1	2.5	3.1	4.6	4.1	1.3
	σ	3.0	0.0	1.0	0.0	0.0	2.5	2.0	2.5	3.0	4.0	4.5	1.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JAN 85	134	0	0	0	0	0	0	0
	FEB 85	82	0	0	0	0	0	0	0
	MAR 85	94	0	0	0	0	0	0	0
	APR 85	69	0	0	0	0	0	0	0
	MAY 85	68	0	0	0	0	0	0	0
	JUN 85	69	0	0	0	0	0	0	0
	JUL 85	36	0	0	0	0	0	0	0
12-18 MPH	JAN 85	42	0	0	0	0	0	0	0
	FEB 85	29	0	0	0	0	0	0	0
	MAR 85	53	0	0	0	0	0	0	0
	APR 85	36	0	0	0	0	0	0	0
	MAY 85	28	0	0	0	0	0	0	0
	JUN 85	17	0	0	0	0	0	0	0
	JUL 85	12	0	0	0	0	0	0	0
18-24 MPH	JAN 85	15	0	0	0	0	0	0	0
	FEB 85	24	0	0	0	0	0	0	0
	MAR 85	22	0	0	0	0	0	0	0
	APR 85	14	0	0	0	0	0	0	0
	MAY 85	8	0	0	0	0	0	0	0
	JUN 85	4	0	0	0	0	0	0	0
	JUL 85	5	0	0	0	0	0	0	0
24 + MPH	JAN 85	8	0	0	0	0	0	0	0
	FEB 85	24	0	0	0	0	0	0	0
	MAR 85	10	0	0	0	0	0	0	0
	APR 85	19	0	0	0	0	0	0	0
	MAY 85	2	0	0	0	0	0	0	0
	JUN 85	2	0	0	0	0	0	0	0
	JUL 85	3	0	0	0	0	0	0	0

Site Description

County:	Washington	Elevation:	3250 ft.
Township:	38 South	Range:	12 West
Section:	4	Quarter Section:	--
Longitude:	113° 10'	Latitude:	37° 30'

Duration of data logging: September 1986 to October 1987
Months of available data: 14
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Not available, faulty wind vane
Terrain classification in each of the principal directions:

North: Tall row crops, low woods
East: Tall row crops, low woods
South: Tall row crops, low woods
West: Tall row crops, low woods

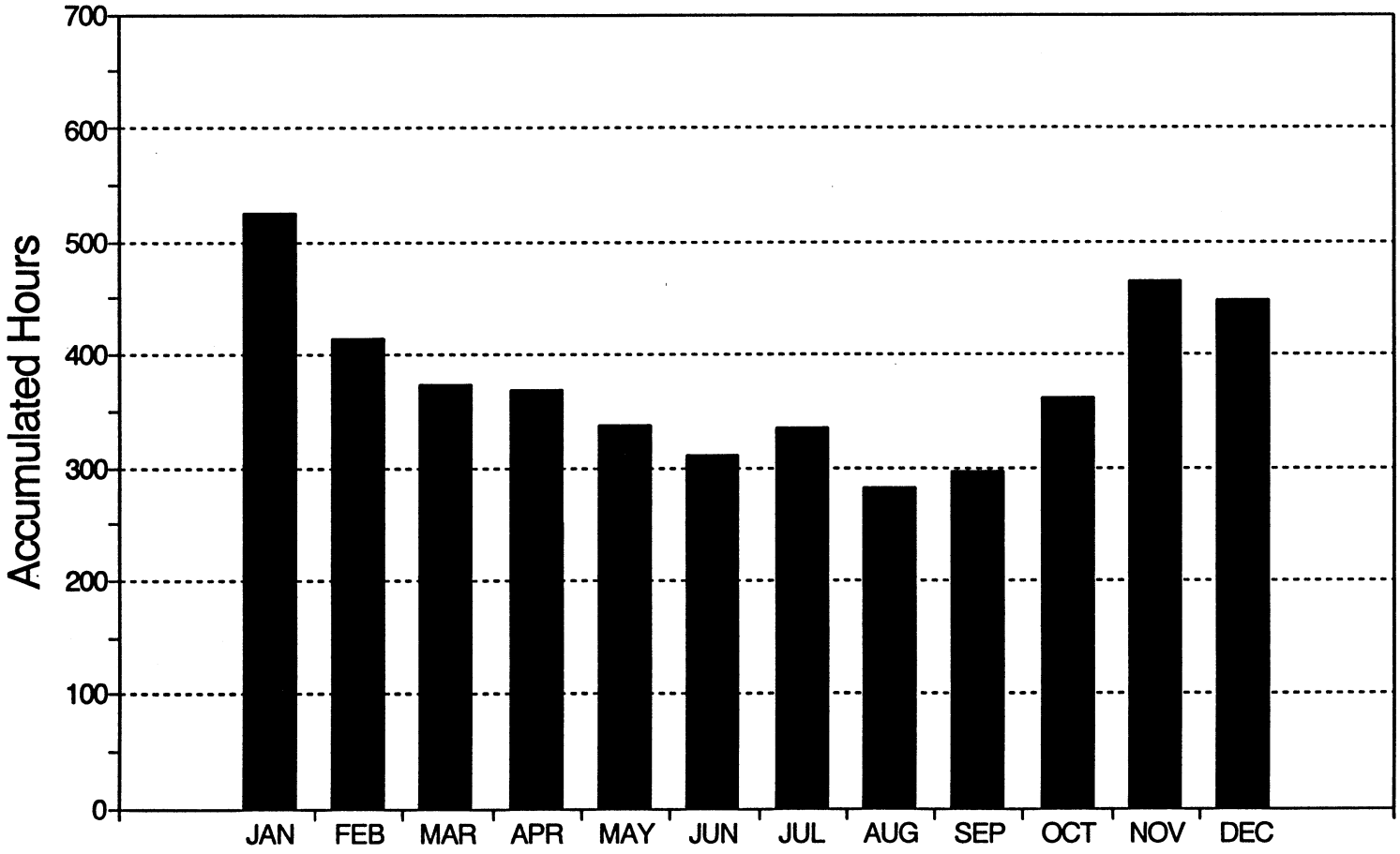
Comments

Property ownership: Utah Department of Transportation
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
SEP 86	124	53	68	69	58	50	43	40	36	29	22	16	11	7	4	3	1	2
OCT 86	182	88	113	124	89	52	35	25	16	10	5	3	1	1	0	0	0	0
NOV 86	121	59	75	97	101	80	61	44	31	20	13	8	5	3	1	1	0	0
DEC 86	126	63	107	141	117	75	45	28	17	11	7	4	2	1	0	0	0	0
JAN 87	131	37	53	74	90	88	76	62	44	30	21	14	10	7	5	2	1	1
FEB 87	124	57	76	87	75	60	49	41	32	23	17	12	8	5	3	2	1	1
MAR 87	198	78	95	94	75	54	40	32	24	17	12	8	6	4	3	2	1	2
APR 87	190	72	91	97	88	61	36	24	15	11	8	6	5	4	3	2	2	6
MAY 87	234	82	91	86	69	50	39	31	22	16	10	6	4	2	1	0	0	0
JUN 87	236	79	93	88	73	54	36	23	15	9	5	3	2	1	1	1	0	0
JUL 87	255	65	72	72	62	50	41	31	23	17	12	8	6	4	3	2	1	3
AUG 87	255	86	91	81	66	47	30	20	13	8	5	3	2	2	1	1	1	1
SEP 87	249	82	93	104	92	53	26	12	5	2	1	1	0	0	0	0	0	0
OCT 87	123	51	70	77	62	37	16	7	3	1	0	0	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 86	MPH	9.3	10.3	10.9	10.8	11.4	16.1	18.9	18.6	17.5	13.9	8.8	9.1
	σ	6.0	5.0	6.0	6.0	6.0	7.0	6.5	7.5	7.0	5.5	6.5	6.5
OCT 86	MPH	8.3	9.0	10.3	10.0	9.6	11.0	12.3	12.4	10.8	6.8	6.5	7.8
	σ	3.5	3.5	3.5	3.0	3.5	4.5	5.5	5.5	5.5	4.5	5.5	4.0
NOV 86	MPH	10.4	11.5	12.0	11.9	11.6	14.3	15.0	15.1	12.3	10.6	9.8	9.6
	σ	5.5	5.0	5.5	6.0	5.5	6.0	4.5	4.5	5.0	6.0	5.5	5.0
DEC 86	MPH	10.5	10.3	11.5	11.3	10.9	12.3	12.8	12.5	9.8	8.4	9.4	10.0
	σ	4.5	5.0	4.0	4.5	4.5	5.5	4.5	5.0	4.0	5.0	5.0	4.5
JAN 87	MPH	12.3	13.1	13.2	12.9	13.9	14.4	16.3	15.1	13.0	11.3	11.1	11.4
	σ	7.5	6.5	6.5	6.5	6.0	7.5	7.5	7.5	8.0	8.5	8.0	8.0
FEB 87	MPH	10.5	11.4	12.0	12.0	12.0	14.6	15.4	14.6	13.0	10.5	9.8	10.5
	σ	6.0	5.5	5.5	6.5	6.0	6.5	7.5	6.0	5.5	6.5	6.5	7.0
MAR 87	MPH	8.9	8.6	9.5	9.9	10.8	13.0	14.0	14.4	13.0	8.6	7.5	7.6
	σ	5.5	4.5	4.5	5.0	6.5	7.0	8.0	6.5	6.0	6.0	5.5	6.0
APR 87	MPH	7.9	9.4	10.8	10.1	10.6	12.6	13.3	14.0	13.6	8.9	6.1	6.3
	σ	4.5	5.5	5.0	6.0	6.5	6.5	6.0	6.5	6.5	6.5	6.5	5.0
MAY 87	MPH	5.5	6.8	7.8	7.5	9.5	12.9	13.9	13.9	13.4	11.3	7.1	5.6
	σ	3.5	3.0	4.0	4.0	4.5	5.5	5.5	6.5	7.0	5.5	4.5	4.5
JUN 87	MPH	5.0	5.6	7.6	8.8	8.4	10.9	12.6	12.3	11.4	11.6	6.6	5.4
	σ	3.5	4.5	4.5	4.5	5.0	4.5	5.5	5.5	5.5	5.0	4.0	4.5
JUL 87	MPH	4.6	5.3	5.1	5.8	9.1	13.4	14.9	15.3	15.0	14.0	6.8	4.8
	σ	5.0	5.0	4.5	5.0	5.5	5.5	5.5	6.5	6.5	5.5	5.0	5.5
AUG 87	MPH	5.4	5.3	5.9	6.0	7.0	10.6	12.1	12.9	12.4	10.1	6.0	4.4
	σ	4.0	4.0	4.5	4.5	4.0	5.5	5.5	5.0	6.0	5.5	4.5	4.0
SEP 87	MPH	5.4	6.6	8.4	8.4	7.3	8.1	10.5	11.8	10.0	9.3	5.4	4.6
	σ	4.0	4.5	4.5	4.5	4.5	4.0	3.5	4.0	3.5	2.5	4.0	4.0
OCT 87	MPH	7.4	8.9	10.0	10.8	9.9	9.6	10.1	10.6	8.9	5.8	4.3	5.5
	σ	3.5	3.5	3.0	2.0	3.5	3.5	4.5	4.5	4.0	3.0	3.5	3.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 86	190	0	0	0	0	0	0	0
	OCT 86	325	0	0	0	0	0	0	0
	NOV 86	231	0	0	0	0	0	0	0
	DEC 86	311	0	0	0	0	0	0	0
	JAN 87	164	0	0	0	0	0	0	0
	FEB 87	220	0	0	0	0	0	0	0
12-18 MPH	SEP 86	151	0	0	0	0	0	0	0
	OCT 86	176	0	0	0	0	0	0	0
	NOV 86	241	0	0	0	0	0	0	0
	DEC 86	237	0	0	0	0	0	0	0
	JAN 87	252	0	0	0	0	0	0	0
	FEB 87	184	0	0	0	0	0	0	0
18-24 MPH	SEP 86	105	0	0	0	0	0	0	0
	OCT 86	50	0	0	0	0	0	0	0
	NOV 86	94	1	0	0	0	0	0	0
	DEC 86	57	0	0	0	0	0	0	0
	JAN 87	135	0	0	0	0	0	0	0
	FEB 87	96	0	0	0	0	0	0	0
24 + MPH	SEP 86	66	0	0	0	0	0	0	0
	OCT 86	10	0	0	0	0	0	0	0
	NOV 86	31	0	0	0	0	0	0	0
	DEC 86	14	0	0	0	0	0	0	0
	JAN 87	61	0	0	0	0	0	0	0
	FEB 87	47	0	0	0	0	0	0	0

Wind Rose Data cont.
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 87	267	0	0	0	0	0	0	0
	APR 87	260	0	0	0	0	0	0	0
	MAY 87	259	0	0	0	0	0	0	0
	JUN 87	260	0	0	0	0	0	0	0
	JUL 87	209	0	0	0	0	0	0	0
	AUG 87	258	0	0	0	0	0	0	0
12-18 MPH	MAR 87	169	0	0	0	0	0	0	0
	APR 87	184	0	0	0	0	0	0	0
	MAY 87	158	0	0	0	0	0	0	0
	JUN 87	162	0	0	0	0	0	0	0
	JUL 87	153	0	0	0	0	0	0	0
	AUG 87	143	0	0	0	0	0	0	0
18-24 MPH	MAR 87	73	0	0	0	0	0	0	0
	APR 87	50	0	0	0	0	0	0	0
	MAY 87	69	0	0	0	0	0	0	0
	JUN 87	47	0	0	0	0	0	0	0
	JUL 87	70	0	0	0	0	0	0	0
	AUG 87	41	0	0	0	0	0	0	0
24 + MPH	MAR 87	38	0	0	0	0	0	0	0
	APR 87	35	0	0	0	0	0	0	0
	MAY 87	24	0	0	0	0	0	0	0
	JUN 87	15	0	0	0	0	0	0	0
	JUL 87	39	0	0	0	0	0	0	0
	AUG 87	16	0	0	0	0	0	0	0

Site Description

County:	Washington	Elevation:	4,300 ft.
Township:	40 South	Range:	13 West
Section:	1	Quarter Section:	Northwest
Longitude:	113° 16'	Latitude:	37° 20'

Duration of data logging: September 1986 to October 1987
Months of available data: 14
Anemometer height: 45 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Northeast
Terrain classification in each of the principal directions:

North: Tall row crops, low woods
East: Tall row crops, low woods
South: Tall row crops, low woods
West: Tall row crops, low woods

Comments

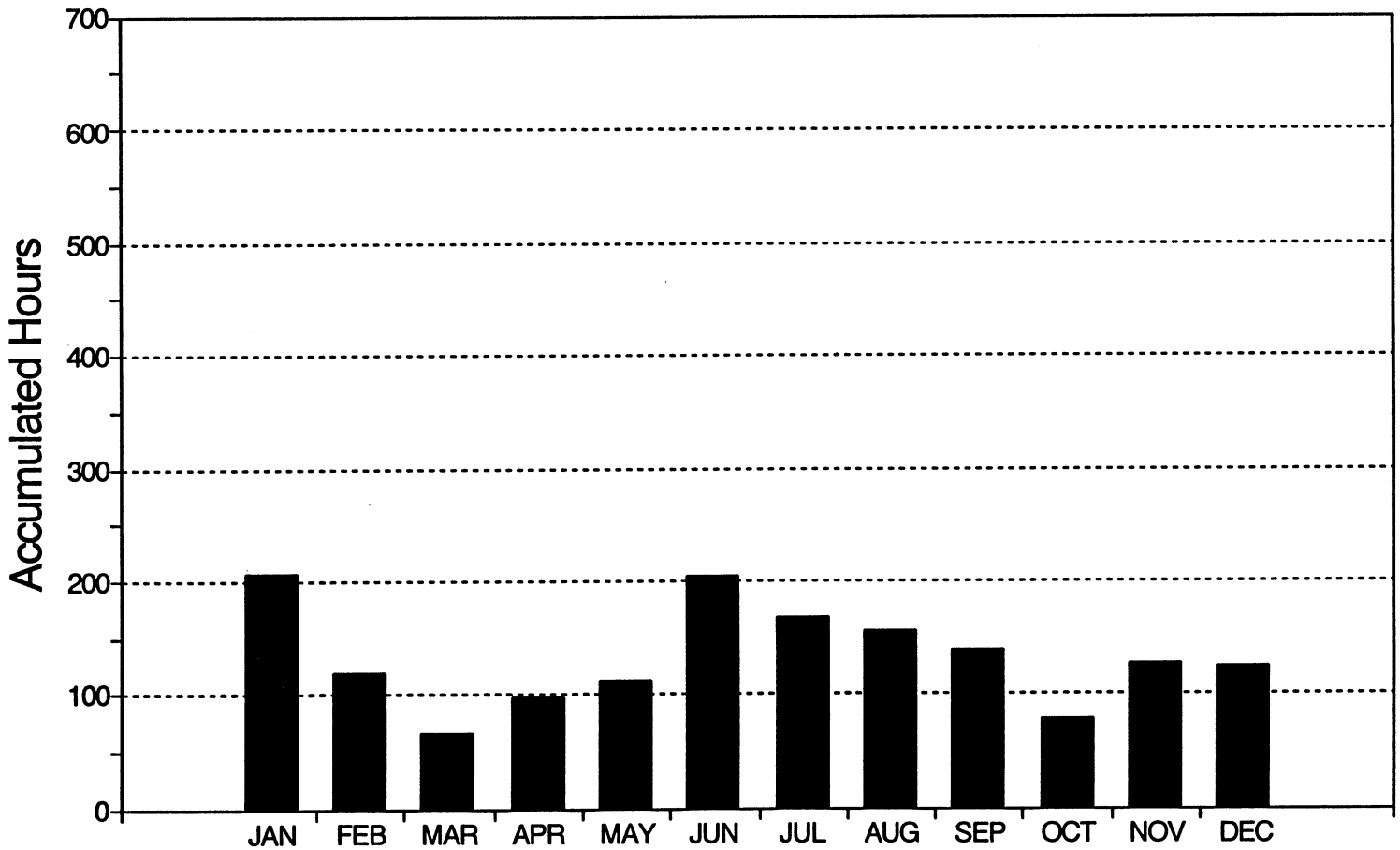
Property ownership: Pintura Water Users Association
Site selection: Field survey of topography

Wind Velocity Distribution Data

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
SEP 86	255	90	60	42	30	21	14	9	6	4	2	1	1	0	0	0	0	0
OCT 86	255	156	78	36	19	11	6	3	2	1	0	0	0	0	0	0	0	0
NOV 86	255	114	103	71	37	14	4	1	0	0	0	0	0	0	0	0	0	0
DEC 86	255	134	105	70	35	14	4	1	0	0	0	0	0	0	0	0	0	0
JAN 87	255	97	81	71	58	39	22	10	4	2	1	0	0	0	0	0	0	0
FEB 87	255	99	80	58	35	18	7	2	1	0	0	0	0	0	0	0	0	0
MAR 87	255	123	71	35	17	8	4	2	1	1	0	0	0	0	0	0	0	0
APR 87	255	154	81	40	21	12	8	5	4	3	2	1	1	1	0	0	0	0
MAY 87	255	119	64	38	26	18	12	8	5	3	2	1	0	0	0	0	0	0
JUN 87	255	123	93	68	48	32	22	14	9	6	3	2	1	0	0	0	0	0
JUL 87	255	101	77	58	41	27	17	10	6	4	2	1	1	0	0	0	0	0
AUG 87	255	117	89	59	38	23	13	8	6	4	2	1	1	0	0	0	0	0
SEP 87	255	135	94	58	34	21	13	7	3	1	1	0	0	0	0	0	0	0
OCT 87	238	112	63	25	12	7	5	4	2	1	0	0	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
SEP 86	MPH	3.5	3.4	3.3	3.5	4.0	7.1	10.0	10.5	10.8	8.0	4.4	3.1
	σ	3.5	3.5	2.5	3.0	3.0	4.0	4.5	5.0	5.0	4.0	2.5	2.5
OCT 86	MPH	5.1	5.4	5.5	5.5	5.0	4.6	6.5	7.6	7.3	3.8	4.0	5.0
	σ	2.5	2.5	2.5	3.0	2.5	2.5	3.0	3.5	3.5	3.0	2.5	2.5
NOV 86	MPH	5.0	5.1	5.4	5.9	5.9	6.1	7.0	7.0	5.1	4.5	5.4	5.1
	σ	3.5	3.5	3.5	3.5	3.5	4.0	3.5	3.5	3.5	3.5	3.5	3.5
DEC 86	MPH	6.4	6.5	6.4	6.3	6.4	5.3	5.1	4.8	4.1	4.9	5.8	6.1
	σ	3.5	3.0	3.5	3.0	3.5	4.0	4.0	4.0	3.5	3.5	3.0	3.5
JAN 87	MPH	6.7	6.1	6.3	6.4	6.7	6.9	7.2	6.5	5.8	6.0	6.2	6.3
	σ	4.5	4.0	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0	4.5	4.0
FEB 87	MPH	5.4	5.5	5.6	6.0	6.1	6.0	6.3	6.0	4.9	4.1	5.1	5.5
	σ	3.5	3.5	4.0	4.0	4.5	4.5	4.5	4.0	4.0	3.5	3.5	3.5
MAR 87	MPH	4.5	4.3	4.6	4.8	4.6	4.8	5.1	6.3	6.0	2.9	3.3	4.0
	σ	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5	3.0	2.5	2.5	3.0
APR 87	MPH	5.3	5.3	5.5	5.3	4.8	6.1	7.4	9.1	8.6	6.0	3.6	4.3
	σ	2.0	2.5	2.5	2.0	3.0	4.0	4.5	4.5	5.5	4.0	2.5	2.0
MAY 87	MPH	3.8	4.0	4.0	4.1	3.9	6.0	6.9	8.8	9.4	7.8	4.8	4.0
	σ	2.5	2.0	2.5	2.5	2.5	3.0	3.5	4.0	5.0	5.0	2.5	2.0
JUN 87	MPH	6.8	6.0	6.3	6.6	7.4	8.0	8.8	9.4	9.6	8.9	5.8	7.0
	σ	3.5	3.0	3.5	3.5	5.0	4.5	4.0	4.5	4.5	4.0	3.5	4.5
JUL 87	MPH	4.8	4.3	3.8	4.0	4.5	7.0	8.4	9.9	10.3	8.9	4.8	4.8
	σ	3.5	3.5	3.0	2.5	3.0	3.0	3.5	4.0	4.5	3.5	3.0	4.0
AUG 87	MPH	5.9	4.9	4.9	4.1	3.9	6.4	7.5	8.4	9.6	8.3	6.1	5.9
	σ	4.0	3.5	3.5	3.0	2.5	3.0	3.0	4.0	4.0	4.5	5.0	3.5
SEP 87	MPH	5.8	5.5	5.5	5.5	4.9	6.5	8.0	8.5	8.1	7.6	5.6	5.8
	σ	3.0	2.0	2.0	2.5	2.5	4.5	3.0	3.0	3.5	3.5	4.0	4.0
OCT 87	MPH	4.9	5.5	5.6	6.1	5.8	5.3	7.4	7.9	7.5	4.6	4.4	5.4
	σ	2.0	2.0	2.5	2.0	2.0	4.0	4.0	3.0	4.0	3.0	3.5	3.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 86	4	78	4	1	36	61	6	0
	OCT 86	18	181	5	0	21	38	6	1
	NOV 86	32	225	11	0	8	11	1	0
	DEC 86	40	260	9	0	0	0	0	0
	JAN 87	29	199	11	0	3	7	0	0
	FEB 87	25	194	7	0	3	7	0	0
12-18 MPH	SEP 86	1	11	1	0	14	34	3	0
	OCT 86	3	24	2	0	2	5	1	0
	NOV 86	5	45	2	0	1	1	0	0
	DEC 86	6	46	2	0	0	0	0	0
	JAN 87	17	96	4	0	0	0	0	0
	FEB 87	5	51	2	0	1	1	0	0
18-24 MPH	SEP 86	0	2	0	0	4	13	1	0
	OCT 86	1	5	0	0	0	0	0	0
	NOV 86	0	1	0	0	0	0	0	0
	DEC 86	0	1	0	0	0	0	0	0
	JAN 87	2	13	1	0	0	0	0	0
	FEB 87	0	3	0	0	0	0	0	0
24 + MPH	SEP 86	0	0	0	0	1	4	0	0
	OCT 86	0	0	0	0	0	0	0	0
	NOV 86	0	0	0	0	0	0	0	0
	DEC 86	0	0	0	0	0	0	0	0
	JAN 87	0	1	0	0	0	0	0	0
	FEB 87	0	0	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAR 87	23	157	5	1	14	25	4	0
	APR 87	19	168	6	2	30	42	6	2
	MAY 87	14	116	8	3	26	46	7	2
	JUN 87	13	135	8	5	37	69	15	3
	JUL 87	5	61	3	4	41	97	18	6
	AUG 87	10	108	5	6	50	72	10	4
12-18 MPH	MAR 87	4	16	1	0	2	5	1	0
	APR 87	5	16	1	0	5	12	2	0
	MAY 87	5	20	2	0	6	20	2	0
	JUN 87	6	55	3	0	9	24	3	0
	JUL 87	2	18	1	1	15	43	5	1
	AUG 87	3	29	2	1	13	24	2	0
18-24 MPH	MAR 87	0	2	0	0	0	1	0	0
	APR 87	1	3	0	0	2	5	0	0
	MAY 87	1	6	0	0	1	6	1	0
	JUN 87	1	17	1	0	1	7	1	0
	JUL 87	0	3	0	0	3	12	1	0
	AUG 87	1	6	1	0	2	7	0	0
24 + MPH	MAR 87	0	0	0	0	0	0	0	0
	APR 87	0	1	0	0	1	3	0	0
	MAY 87	0	2	0	0	0	1	0	0
	JUN 87	0	4	0	0	0	2	0	0
	JUL 87	0	1	0	0	0	4	0	0
	AUG 87	0	2	0	0	0	2	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	SEP 87	11	154	6	2	47	60	6	2
	OCT 87	7	131	3	0	22	32	3	1
12-18 MPH	SEP 87	4	38	2	0	8	13	1	0
	OCT 87	3	18	1	0	1	2	0	0
18-24 MPH	SEP 87	1	8	0	0	1	2	0	0
	OCT 87	1	6	0	0	0	0	0	0
24 + MPH	SEP 87	0	0	0	0	0	0	0	0
	OCT 87	0	1	0	0	0	0	0	0

Site Description

County:	Washington	Elevation:	3,000 ft.
Township:	42 South	Range:	15 West
Section:	19	Quarter Section:	-
Longitude:	113° 35'	Latitude:	37° 07'

Duration of data logging: December 1986 to December 1988
Months of available data: 14
Anemometer height: 30 ft.

Surrounding Environmental Conditions

Prevailing wind direction: West
Terrain classification in each of the principal directions:

North: Rolling terrain
East: Rolling terrain
South: Rolling terrain
West: Rolling terrain

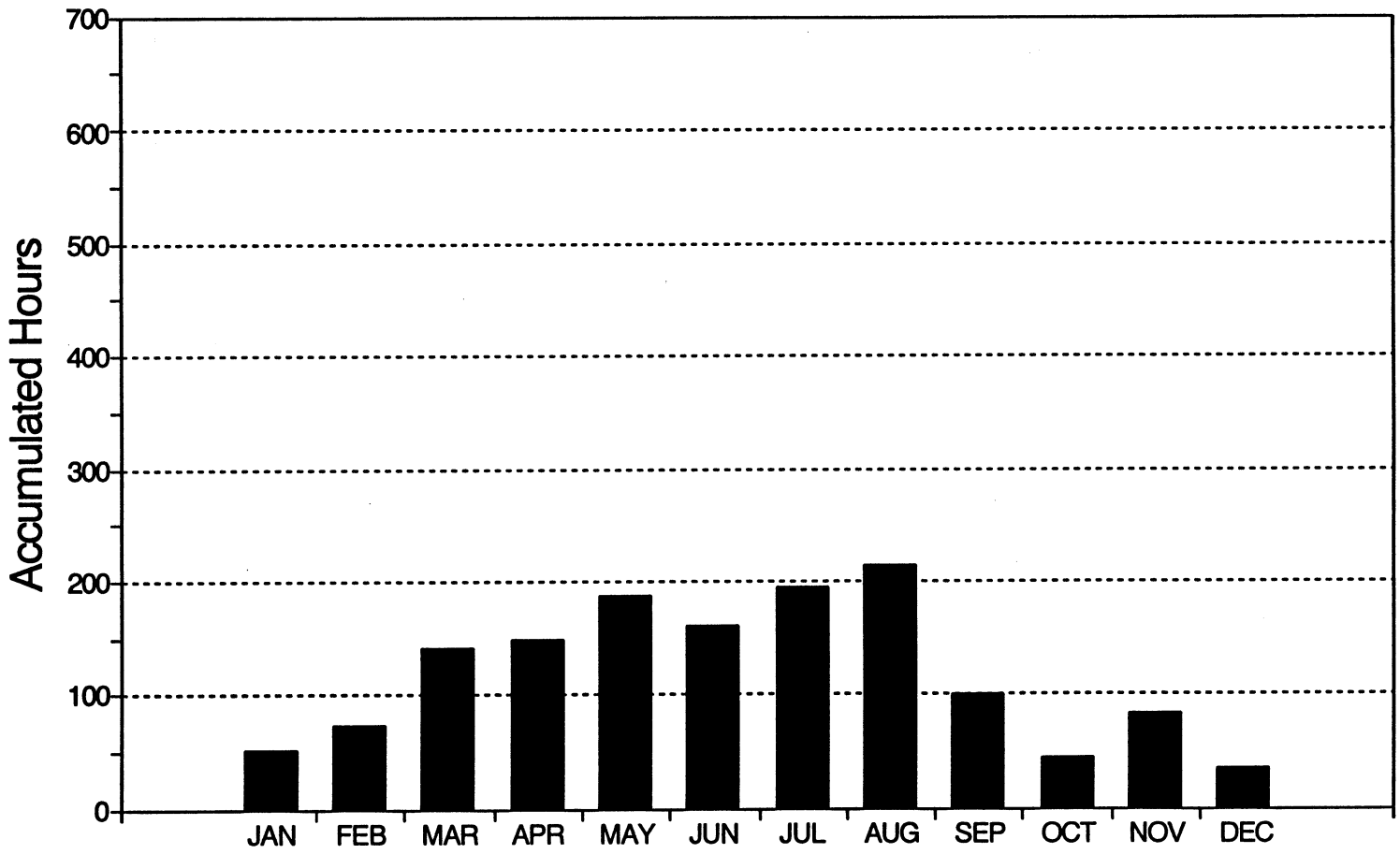
Comments

Property ownership: Mobile Telephone of Southern Utah Incorporated
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
DEC 86	255	17	10	8	6	4	1	0	0	0	0	0	0	0	0	0	0	0
JAN 86	255	45	24	12	6	5	3	1	1	1	0	0	0	0	0	0	0	0
FEB 86	255	81	57	31	17	9	5	3	2	2	1	1	1	1	0	0	0	1
MAR 86	255	80	60	45	32	22	16	11	7	4	2	1	1	0	0	0	0	0
APR 86	255	83	65	48	30	19	13	10	8	6	4	3	2	2	1	1	1	1
MAY 86	255	114	91	64	43	25	17	11	8	6	5	3	2	1	1	1	0	0
JUN 86	255	107	82	55	34	22	15	11	8	6	4	2	1	1	1	0	0	0
JUL 86	255	115	83	57	38	27	20	15	12	9	7	4	3	2	1	0	0	0
AUG 86	255	103	92	73	48	31	20	13	9	6	4	3	2	2	1	1	1	1
SEP 86	255	93	65	39	24	15	9	6	3	2	1	1	0	0	0	0	0	0
OCT 86	255	78	49	24	10	5	3	2	1	1	0	0	0	0	0	0	0	0
NOV 86	255	65	41	28	19	10	7	5	5	3	2	2	1	1	0	0	0	0
DEC 86	255	70	39	20	11	8	5	3	2	2	1	0	0	0	0	0	0	0
JAN 88	255	77	42	18	11	6	5	4	3	2	1	1	0	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
DEC 86	MPH	0.9	1.0	0.6	0.4	0.5	0.4	0.8	1.3	1.0	0.9	1.0	0.9
	σ	2.0	2.5	2.5	1.5	1.5	0.0	1.0	2.5	2.5	2.0	2.5	2.5
JAN 87	MPH	2.5	1.9	1.8	1.8	1.6	2.4	4.1	4.4	3.1	2.5	2.9	3.3
	σ	2.5	2.5	3.0	3.0	2.5	2.0	5.0	3.5	2.5	3.5	2.5	3.0
FEB 87	MPH	3.8	3.8	3.4	3.0	3.0	4.3	5.0	5.9	5.9	5.3	4.6	3.9
	σ	4.0	3.5	3.0	3.5	3.5	4.5	4.5	6.0	4.5	3.5	3.5	3.0
MAR 87	MPH	4.8	3.9	3.5	3.4	3.5	4.1	6.1	7.8	8.3	7.5	6.6	5.6
	σ	4.0	4.0	3.0	3.0	3.5	3.5	5.5	4.5	4.0	4.0	4.0	4.5
APR 87	MPH	5.0	4.4	4.8	3.8	3.4	3.4	5.0	9.9	10.6	9.5	6.9	6.1
	σ	4.5	4.0	4.0	3.5	4.5	3.0	3.5	6.5	5.5	5.0	4.5	4.5
MAY 87	MPH	6.6	5.0	5.1	4.4	4.4	4.8	6.6	9.8	11.6	10.3	9.1	7.5
	σ	3.5	2.5	2.5	2.5	3.0	3.5	4.5	5.5	5.5	5.0	3.5	3.0
JUN 87	MPH	5.9	5.3	5.8	4.6	3.8	3.0	4.1	7.8	10.4	11.4	9.4	7.0
	σ	3.0	2.5	3.5	3.0	2.0	1.5	2.5	4.0	4.5	4.5	3.5	3.0
JUL 87	MPH	5.8	6.3	6.0	5.6	4.9	4.0	5.6	9.5	10.4	12.6	10.5	6.6
	σ	4.0	3.0	2.5	3.0	3.0	3.5	4.5	5.0	4.5	5.5	3.5	4.5
AUG 87	MPH	7.6	7.6	6.6	5.6	4.9	4.5	5.4	7.6	9.9	11.8	10.3	7.8
	σ	4.0	4.5	3.5	3.0	3.5	3.5	4.5	5.0	5.0	6.0	5.5	4.0
SEP 87	MPH	4.1	3.5	3.8	4.1	3.1	2.8	3.4	5.5	8.3	9.1	6.6	5.3
	σ	2.5	3.0	2.5	3.0	3.0	2.5	3.0	3.5	3.5	4.0	3.0	2.5
OCT 87	MPH	2.9	4.0	3.5	2.8	2.3	2.3	2.5	3.5	5.0	4.9	5.0	3.4
	σ	2.5	3.0	2.5	2.5	2.0	1.5	1.5	2.0	3.0	3.0	2.5	2.0
NOV 87	MPH	4.1	4.3	3.5	2.8	2.3	3.1	4.5	5.4	5.3	5.5	4.6	4.5
	σ	4.5	4.5	2.5	2.5	3.0	3.0	3.5	5.0	5.5	5.0	4.5	4.0
DEC 87	MPH	3.3	3.0	2.8	2.9	2.5	3.4	4.1	4.5	4.4	3.6	4.0	3.5
	σ	3.0	2.5	2.5	2.5	2.0	3.5	3.5	3.5	4.5	4.0	3.0	2.0
JAN 88	MPH	4.1	3.8	2.9	2.3	2.9	2.9	3.5	4.4	5.1	4.5	4.3	4.0
	σ	2.5	3.0	2.0	2.0	3.0	3.5	3.0	4.5	6.0	4.5	2.5	2.5

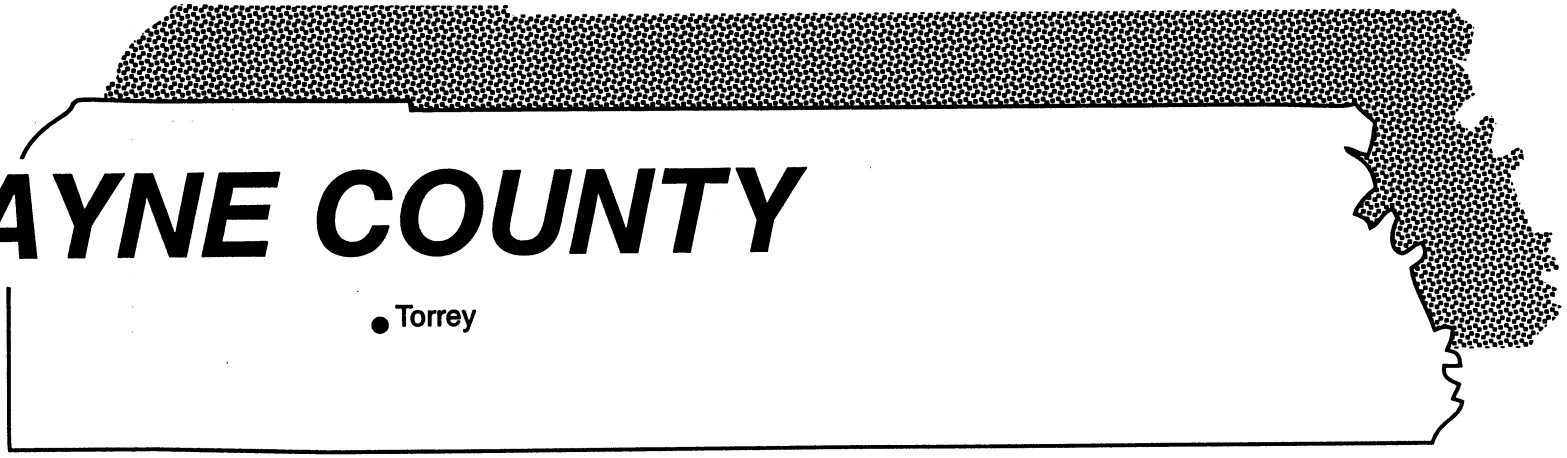
Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	DEC 86	4	2	2	3	3	6	14	3
	JAN 87	4	3	4	8	13	15	29	4
	FEB 87	10	22	13	10	12	15	70	18
	MAR 87	17	39	21	14	12	18	41	22
	APR 87	12	25	20	18	15	17	42	47
	MAY 87	17	27	26	21	19	26	53	81
12-18 MPH	DEC 86	0	0	0	0	0	4	6	0
	JAN 87	2	1	1	1	1	2	6	0
	FEB 87	3	10	3	1	2	2	7	2
	MAR 87	11	19	8	4	6	8	11	4
	APR 87	5	9	11	7	6	5	9	12
	MAY 87	6	7	18	8	8	8	8	21
18-24 MPH	DEC 86	0	0	0	0	0	0	0	0
	JAN 87	1	0	0	0	0	0	0	0
	FEB 87	1	3	1	1	1	0	0	0
	MAR 87	4	5	3	1	2	2	2	1
	APR 87	2	5	5	3	3	1	1	3
	MAY 87	2	1	9	2	4	2	2	4
24 + MPH	DEC 86	0	0	0	0	0	0	0	0
	JAN 87	1	0	1	0	0	0	0	0
	FEB 87	1	1	0	1	2	0	0	0
	MAR 87	1	1	1	0	1	0	1	0
	APR 87	1	3	3	2	5	1	0	1
	MAY 87	1	0	4	0	2	1	0	4

Wind Rose Data cont.
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	JUN 87	19	29	33	13	12	19	29	91
	JUL 87	20	29	29	11	8	10	23	123
	AUG 87	32	22	13	6	6	8	36	145
	SEP 87	49	32	14	7	5	7	21	62
	OCT 87	44	17	5	2	2	3	11	67
	NOV 87	44	9	2	1	1	3	13	62
12-18 MPH	JUN 87	5	4	28	5	3	3	5	17
	JUL 87	5	11	25	4	3	5	5	26
	AUG 87	12	13	7	2	2	6	9	49
	SEP 87	7	17	6	1	1	2	2	10
	OCT 87	5	3	1	0	0	0	1	7
	NOV 87	13	2	0	0	0	1	3	15
18-24 MPH	JUN 87	4	1	12	1	1	1	1	4
	JUL 87	2	5	11	1	1	3	3	12
	AUG 87	4	5	2	0	1	3	4	9
	SEP 87	1	5	1	0	0	1	1	2
	OCT 87	1	1	0	0	0	0	0	1
	NOV 87	8	0	0	0	0	0	1	4
24 + MPH	JUN 87	1	1	4	0	0	1	0	1
	JUL 87	1	2	3	0	1	3	2	5
	AUG 87	3	1	0	0	1	3	3	3
	SEP 87	1	1	0	0	0	0	0	0
	OCT 87	0	0	0	0	0	0	0	0
	NOV 87	6	0	0	0	0	0	0	0

WAYNE COUNTY



Torrey

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Site Description

County:	Wayne	Elevation:	6,600 ft.
Township:	29 South	Range:	4 East
Section:	11	Quarter Section:	Southwest
Longitude:	111° 25'	Latitude:	38° 20'

Duration of data logging: May 1985 to July 1985
Months of available data: 3
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Not available, faulty wind vane
Terrain classification in each of the principal directions:

North: High grass, low row crops
East: High grass, low row crops
South: High grass, low row crops
West: High grass, low row crops

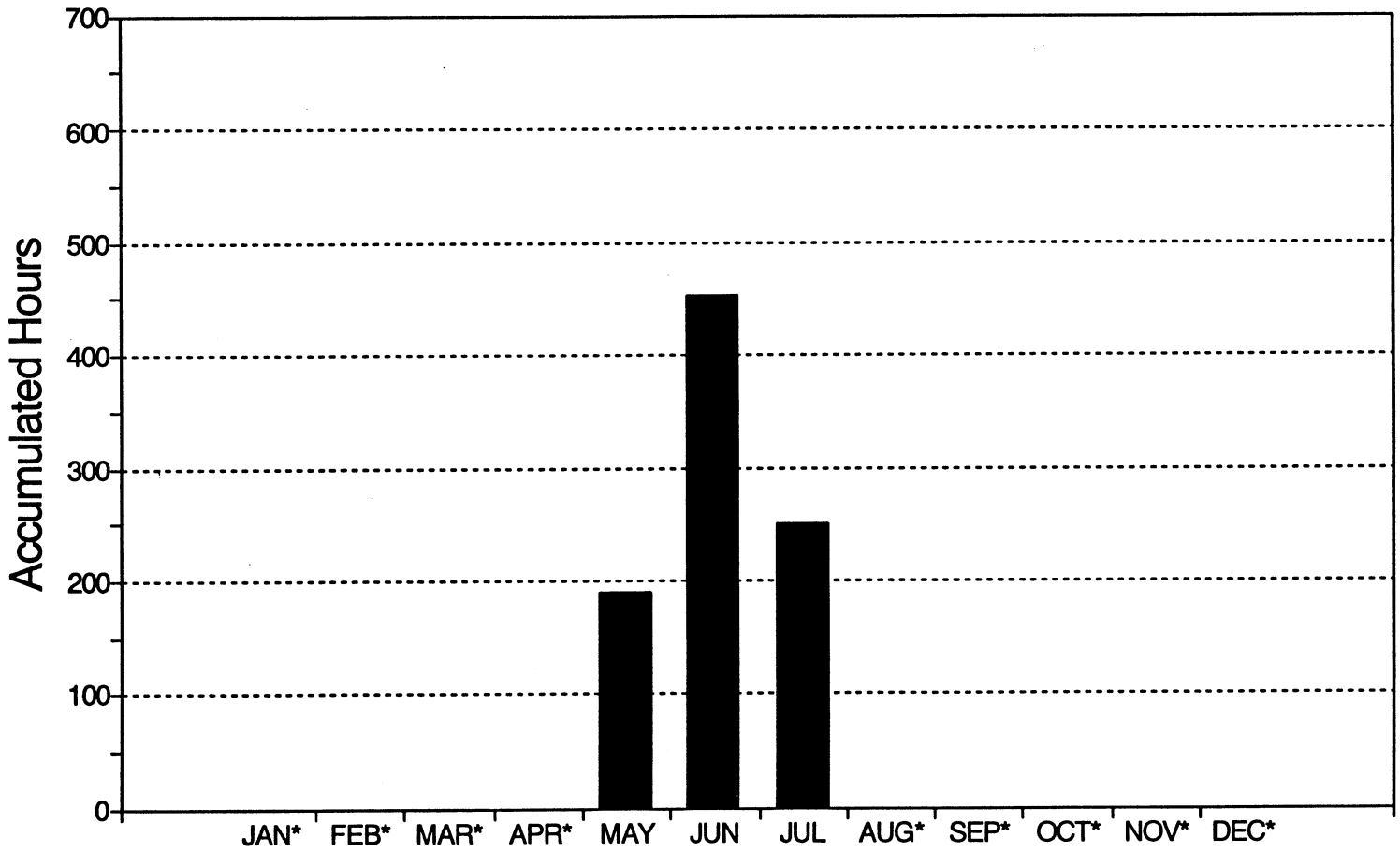
Comments

Property ownership: Private
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 85	91	52	59	41	32	29	24	19	13	9	6	5	3	3	2	1	1	1
JUN 85	116	70	81	86	85	83	74	57	35	18	7	3	2	1	1	1	0	0
JUL 85	138	43	44	48	52	49	41	29	17	8	4	2	1	0	0	0	0	0

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



* Monthly Averaged Data Not Available

Wind Diurnal Data

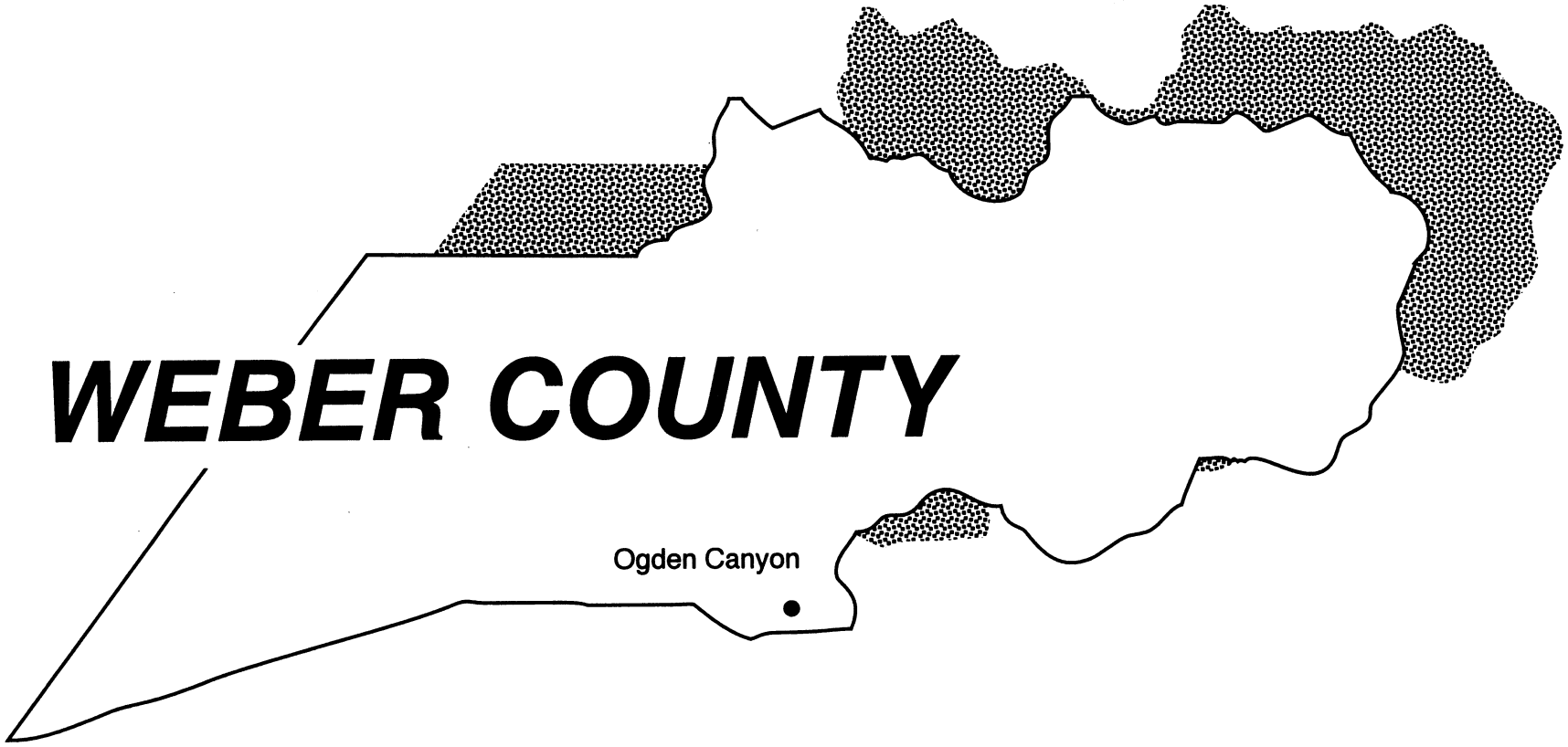
Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
MAY 85	MPH	10.6	9.8	9.8	9.6	12.3	9.4	12.1	13.8	14.3	13.5	8.3	7.6
	σ	6.0	4.5	4.0	4.5	4.5	5.0	6.0	7.0	6.0	6.5	6.0	5.5
JUN 85	MPH	12.6	14.4	14.8	14.5	14.1	9.4	9.6	10.9	13.0	11.5	8.6	9.4
	σ	4.5	4.5	5.0	4.5	3.5	5.0	4.5	4.5	5.0	5.0	4.0	5.0
JUL 85	MPH	10.6	14.0	15.3	16.1	13.5	5.9	6.0	7.5	10.1	9.4	7.7	9.8
	σ	4.0	3.0	4.0	5.0	4.0	3.0	1.5	3.0	5.0	4.5	4.0	5.0

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	MAY 85	0	0	0	0	76	0	76	0
	JUN 85	0	0	0	0	117	0	120	0
	JUL 85	0	0	0	0	66	0	68	0
12-18 MPH	MAY 85	0	0	0	0	42	0	43	0
	JUN 85	0	0	0	0	119	0	123	0
	JUL 85	0	0	0	0	71	0	72	0
18-24 MPH	MAY 85	0	0	0	0	20	0	21	0
	JUN 85	0	0	0	0	54	0	56	0
	JUL 85	0	0	0	0	27	0	27	0
24 + MPH	MAY 85	0	0	0	0	10	0	11	0
	JUN 85	0	0	0	0	8	0	8	0
	JUL 85	0	0	0	0	3	0	3	0

WEBER COUNTY



Ogden Canyon

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Wind Speed Figure	334
Wind Diurnal Data Table	335
Wind Rose Data Table	338

Site Description

County:	Weber	Elevation:	4,400 ft.
Township:	6 North	Range:	1 West
Section:	22	Quarter Section:	—
Longitude:	111° 55'	Latitude:	41° 14'

Duration of data logging: Febrary 1985 to August 1987
Months of available data: 31
Anemometer height: 65 ft.

Surrounding Environmental Conditions

Prevailing wind direction: Northeast
Terrain description in each of the cardinal directions, as classified below:

North: Low grass, low row crops
East: Low grass, low row crops
South: Rolling terrain
West: Rolling terrain

Comments

Property ownership: Ogden City Corporation
Site selection: Field survey of topography

Wind Velocity Distribution Data
Hours per Month

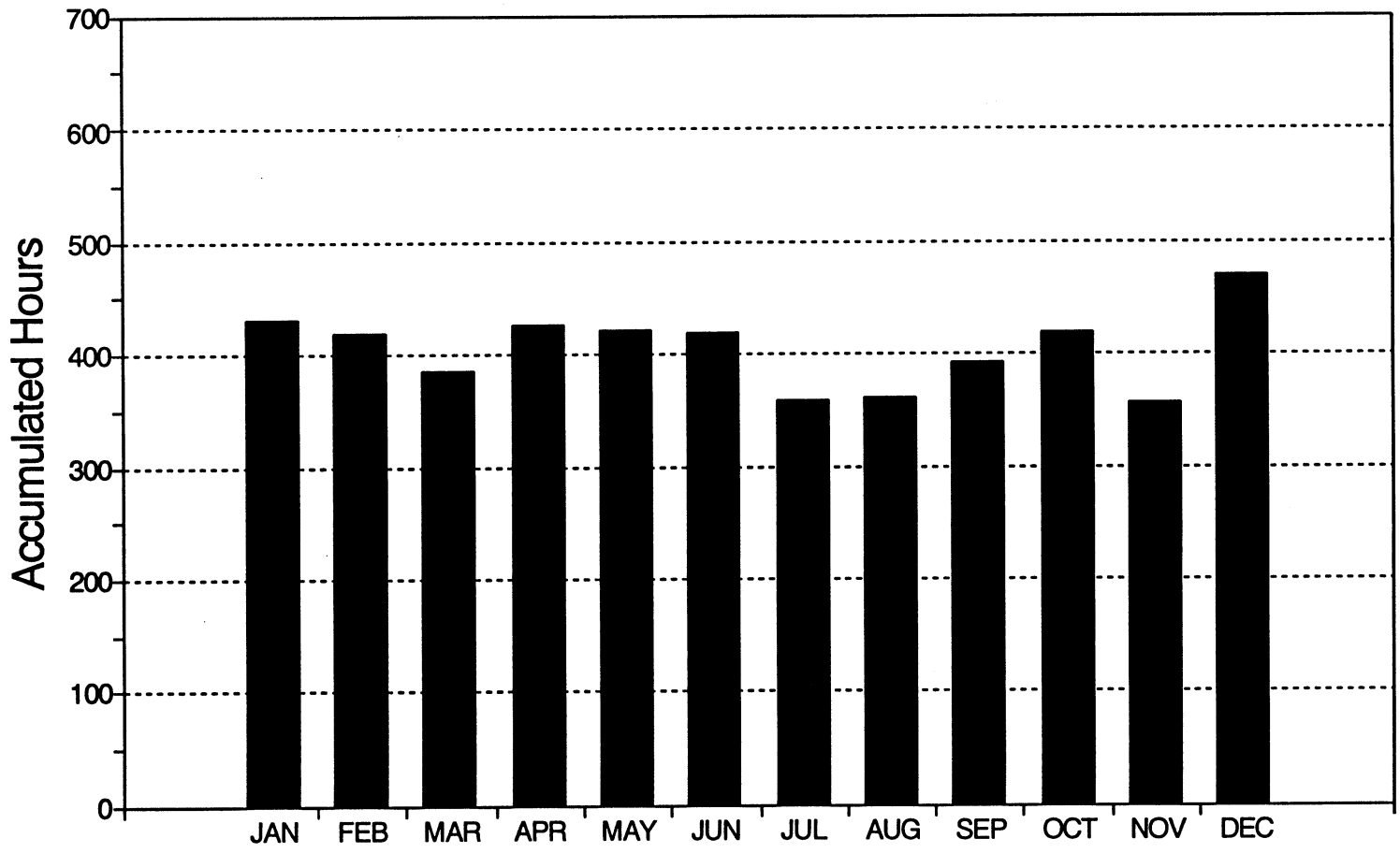
	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
FEB 85	255	34	24	21	21	21	20	17	14	12	10	9	7	5	2	1	0	0
MAR 85	255	62	49	43	41	40	37	32	28	24	20	15	11	8	5	3	1	0
APR 85	248	83	65	49	39	33	30	29	28	27	25	21	16	11	7	4	2	1
MAY 85	247	85	64	49	40	37	35	33	31	29	26	22	17	12	7	4	2	1
JUN 85	225	61	46	37	35	34	34	34	35	35	34	31	26	21	15	9	5	4
JUL 85	255	57	52	36	35	36	39	40	40	36	31	27	23	18	14	10	6	6
AUG 85	255	73	52	38	31	27	27	28	31	32	31	28	23	17	11	7	4	4
SEP 85	255	74	59	51	46	42	39	35	30	25	20	16	11	7	4	2	1	1
OCT 85	255	69	53	44	37	32	29	28	28	26	23	19	15	9	5	2	0	0
NOV 85	255	52	36	29	24	20	17	14	11	10	9	8	6	5	3	2	1	0
DEC 85	255	70	68	50	35	27	22	18	17	15	13	11	9	7	6	5	4	6
JAN 86	255	33	30	31	31	31	29	26	24	23	21	19	15	11	7	4	2	1
FEB 86	253	72	58	45	36	29	26	26	26	26	23	19	13	8	5	3	2	2
MAR 86	255	85	62	47	37	32	31	31	31	29	25	21	17	12	8	4	2	0
APR 86	255	76	61	49	40	36	32	30	26	22	18	13	8	5	3	1	0	0
MAY 86	250	75	54	38	27	23	21	21	20	18	15	11	8	5	3	1	1	0
JUN 86	214	72	52	40	35	33	33	35	37	36	33	28	23	18	13	9	6	4
JUL 86	255	79	57	45	43	43	42	38	32	26	22	18	15	11	7	5	3	2
AUG 86	244	60	42	35	34	34	37	40	40	38	34	30	25	21	15	9	4	2
SEP 86	247	64	49	42	40	38	39	39	37	34	29	22	16	11	7	3	2	1
OCT 86	199	47	39	42	46	50	51	48	45	42	37	30	23	16	10	6	4	8
NOV 86	255	54	40	34	31	30	32	31	28	24	18	12	8	5	2	1	0	0
DEC 86	255	35	25	24	23	23	22	19	17	14	10	6	3	1	0	0	0	0
JAN 87	255	49	49	46	42	38	38	36	36	33	30	25	19	13	9	5	3	7
FEB 87	242	54	45	39	35	33	34	33	32	28	23	17	11	7	3	1	0	0
MAR 87	239	71	60	50	45	41	40	40	37	32	28	22	17	12	7	3	1	0
APR 87	255	66	51	39	33	32	33	33	32	30	28	24	20	16	11	6	3	2

Wind Velocity Distribution Data cont.

Hours per Month

	Wind Speed In Miles per Hour																	
	0-6	6-8	8-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24	24-26	26-28	28-30	30-32	32-34	34-36	36-38	38+
MAY 87	237	82	64	49	42	39	38	39	39	35	28	20	14	9	5	3	1	0
JUN 87	221	72	48	37	36	38	41	41	39	34	29	24	20	16	11	7	4	2
JUL 87	241	66	48	40	37	38	39	40	40	38	33	27	21	15	10	6	3	1
AUG 87	188	58	40	32	31	34	36	36	35	32	29	25	20	15	10	6	3	2

Accumulated Hours of Wind Speed Equal To or Higher Than 10 MPH



Wind Diurnal Data

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
FEB 85	MPH	8.0	9.5	10.1	11.3	10.9	8.0	4.3	3.3	2.4	2.1	4.6	6.9
	σ	7.5	9.0	10.0	9.5	9.0	6.5	3.5	2.0	3.0	3.0	5.0	7.0
MAR 85	MPH	10.3	12.1	13.9	14.5	14.1	9.6	7.1	6.0	4.3	5.3	7.8	9.1
	σ	7.5	8.5	9.5	10.5	9.5	6.5	4.0	2.5	3.5	4.0	6.0	7.0
APR 85	MPH	13.5	15.5	17.8	17.6	14.0	7.9	6.8	7.1	6.1	4.8	9.1	12.4
	σ	8.5	9.0	10.0	10.5	7.5	4.0	2.5	3.0	3.0	2.5	5.5	7.5
MAY 85	MPH	16.1	16.1	16.9	18.9	15.1	8.6	6.4	7.0	6.5	4.9	7.9	12.4
	σ	7.0	8.0	9.0	9.5	8.0	4.5	2.5	2.5	3.5	4.0	5.0	7.0
JUN 85	MPH	19.1	20.9	22.8	23.5	19.1	9.6	5.8	4.9	4.8	3.3	9.9	15.9
	σ	7.0	7.5	8.5	9.0	8.0	5.5	3.0	2.0	3.0	3.5	4.5	5.5
JUL 85	MPH	15.0	19.6	21.8	23.8	21.1	11.8	5.3	4.6	4.4	4.2	9.7	13.9
	σ	8.5	8.5	8.5	8.0	7.5	6.0	2.5	2.5	2.5	4.0	5.0	7.5
AUG 85	MPH	16.6	19.0	19.4	19.9	17.1	8.5	5.5	5.4	4.3	1.8	7.8	15.1
	σ	8.0	9.0	10.5	11.0	9.0	5.0	2.0	2.0	2.0	1.5	4.0	6.5
SEP 85	MPH	14.0	14.8	15.6	17.0	14.6	8.0	6.4	6.5	5.4	3.9	8.6	12.1
	σ	6.0	7.5	8.5	8.5	9.0	4.5	3.5	3.0	3.5	3.0	4.5	5.5
OCT 85	MPH	12.9	13.9	14.5	16.1	14.9	11.3	4.6	4.4	3.6	3.1	7.3	10.1
	σ	7.5	8.5	9.5	10.0	9.5	6.0	2.5	2.5	2.5	3.0	4.5	5.5
NOV 85	MPH	6.8	6.6	6.9	6.8	7.3	6.0	4.4	3.6	3.3	4.1	6.0	7.5
	σ	7.5	8.0	8.0	8.0	8.5	6.0	4.0	4.5	5.0	5.5	6.0	7.5
DEC 85	MPH	9.5	9.9	10.5	12.0	12.3	9.9	6.4	5.4	5.5	6.0	7.3	8.0
	σ	8.5	8.5	8.5	9.0	9.0	8.0	7.5	6.0	7.5	8.0	8.0	7.5
JAN 86	MPH	9.1	9.8	11.1	11.0	10.9	9.9	7.1	5.8	5.4	5.9	7.3	8.9
	σ	9.0	9.5	10.0	10.5	10.5	10.0	7.5	6.0	5.0	7.0	7.5	9.0
FEB 86	MPH	13.1	13.4	14.5	14.5	13.6	10.9	7.4	6.1	5.0	6.5	8.6	12.5
	σ	8.0	8.5	9.0	9.5	9.5	7.5	6.0	5.0	4.5	5.5	7.0	7.5
MAR 86	MPH	14.3	14.8	16.0	17.2	14.7	8.9	5.4	5.9	4.4	5.5	10.9	13.1
	σ	8.5	9.5	10.5	11.5	8.5	5.0	2.0	3.0	2.0	3.5	6.0	7.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
APR 86	MPH	13.0	12.6	13.4	13.8	10.1	6.6	6.1	6.3	5.5	4.9	9.1	11.5
	σ	7.5	9.0	9.5	9.0	7.0	4.5	3.5	3.0	3.5	4.0	5.5	7.0
MAY 86	MPH	12.6	12.5	13.5	12.6	10.0	5.9	6.0	6.5	6.1	4.3	7.3	11.3
	σ	7.0	9.0	9.5	10.0	6.5	3.0	2.0	1.5	3.5	2.5	5.5	6.0
JUN 86	MPH	18.8	20.3	22.3	23.4	19.5	10.0	5.8	5.6	5.1	4.1	9.1	15.4
	σ	6.0	8.0	7.5	8.0	8.0	6.0	2.0	2.0	2.0	2.5	5.0	6.5
JUL 86	MPH	15.3	16.0	16.8	18.5	15.0	8.4	6.8	6.6	5.9	4.4	8.5	13.5
	σ	7.0	8.0	9.0	9.0	7.5	5.0	3.5	3.5	3.0	3.0	4.5	5.5
AUG 86	MPH	18.8	20.5	22.8	23.4	20.5	11.6	5.1	4.8	3.9	1.8	8.6	15.1
	σ	7.0	7.5	6.5	7.5	7.5	6.0	2.0	1.0	2.0	2.0	4.0	5.5
SEP 86	MPH	15.0	16.0	17.3	17.4	16.3	10.6	6.4	6.0	5.1	4.9	10.6	14.6
	σ	7.5	7.5	8.5	10.0	8.5	6.0	4.5	3.5	4.0	5.5	5.0	6.5
OCT 86	MPH	17.6	18.8	20.4	22.6	21.6	15.1	7.8	6.6	5.6	5.6	11.1	15.6
	σ	7.0	5.5	7.5	7.5	7.5	6.0	6.5	5.5	5.5	5.5	6.5	5.5
NOV 86	MPH	10.6	11.4	12.1	12.9	12.1	8.1	4.6	3.1	3.1	4.0	7.8	9.3
	σ	8.5	8.5	9.0	9.5	9.5	6.5	3.5	2.5	3.0	4.5	5.5	7.0
DEC 86	MPH	6.0	7.9	8.5	9.4	10.0	6.5	3.0	2.3	1.4	1.3	3.0	3.8
	σ	6.5	7.5	7.5	8.5	9.0	6.0	2.5	1.5	1.0	2.0	4.0	4.5
JAN 87	MPH	12.1	12.9	14.8	15.6	16.1	13.6	9.6	7.8	6.9	8.9	11.4	12.8
	σ	9.5	9.5	9.5	10.0	10.0	10.0	7.5	6.5	6.0	7.5	9.0	9.0
FEB 87	MPH	12.8	13.1	14.1	15.9	15.0	11.1	7.9	6.6	6.1	6.3	8.0	11.1
	σ	9.0	9.0	9.0	8.5	8.5	8.0	5.0	3.0	4.0	6.0	5.5	7.5
MAR 87	MPH	13.8	15.9	17.4	17.6	15.1	10.6	6.9	6.5	5.8	6.8	10.6	12.8
	σ	8.0	9.0	9.0	9.0	9.0	6.5	3.0	2.0	3.0	5.0	6.5	7.5
APR 87	MPH	15.8	16.9	18.9	19.5	15.1	7.3	6.5	6.0	5.1	5.3	1.5	13.6
	σ	8.5	10.0	11.0	10.5	8.0	4.0	2.0	2.0	2.5	4.5	6.0	7.0
MAY 87	MPH	15.8	16.5	17.8	18.8	14.8	7.1	5.8	6.4	7.0	5.8	8.3	13.8
	σ	6.0	8.0	8.5	8.5	7.5	3.5	2.5	2.5	3.0	4.0	5.0	5.0

Wind Diurnal Data cont.

Average Monthly Wind Speed (MPH)
Standard Diviation (σ)

		Time of Day											
		00:00-02:00	02:00-04:00	04:00-06:00	06:00-08:00	08:00-10:00	10:00-12:00	12:00-14:00	14:00-16:00	16:00-18:00	18:00-20:00	20:00-22:00	22:00-24:00
JUN 87	MPH	17.5	19.6	21.4	21.6	17.9	9.4	4.9	5.4	5.0	4.8	9.3	16.5
	σ	6.5	8.0	8.5	7.5	7.5	5.0	1.5	1.5	2.5	3.5	4.5	5.0
JUL 87	MPH	17.8	19.1	20.6	21.9	18.1	8.3	5.4	5.5	5.1	4.5	9.0	15.1
	σ	7.0	7.5	8.0	7.0	6.5	4.0	3.0	3.0	3.5	4.5	5.0	6.0
AUG 87	MPH	18.9	19.5	22.0	23.4	19.4	8.8	5.4	5.3	5.5	3.9	9.5	15.5
	σ	5.5	7.0	6.5	7.0	7.0	4.5	3.0	2.5	3.0	4.0	3.5	5.5

Wind Rose Data
Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 85	5	42	4	9	4	4	9	2
	MAR 85	11	56	10	22	10	19	20	7
	APR 85	7	62	12	21	13	32	38	12
	MAY 85	5	55	24	38	15	25	29	8
	JUN 85	9	54	10	13	6	21	25	6
	JUL 85	28	35	12	16	6	15	18	3
12-18 MPH	FEB 85	2	51	2	5	0	0	1	0
	MAR 85	7	90	4	9	2	2	2	2
	APR 85	2	71	4	7	2	2	9	3
	MAY 85	5	78	8	11	2	2	5	1
	JUN 85	16	75	4	2	0	1	3	0
	JUL 85	49	49	5	5	1	0	1	0
18-24 MPH	FEB 85	1	41	1	1	0	0	0	0
	MAR 85	3	77	1	2	0	0	0	0
	APR 85	1	78	1	1	0	0	2	1
	MAY 85	4	84	2	2	0	0	1	0
	JUN 85	27	74	2	0	0	0	0	0
	JUL 85	64	49	2	0	0	0	0	0
24 + MPH	FEB 85	0	34	0	0	0	0	0	0
	MAR 85	1	62	0	0	0	0	0	0
	APR 85	0	86	0	0	0	0	0	0
	MAY 85	3	88	1	0	0	0	0	0
	JUN 85	50	94	1	0	0	0	0	0
	JUL 85	75	59	1	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 85	16	39	15	25	13	27	25	4
	SEP 85	7	79	17	18	12	24	23	4
	OCT 85	5	89	11	15	7	15	22	3
	NOV 85	3	55	7	19	7	11	13	3
	DEC 85	4	160	7	7	3	2	3	1
	JAN 86	8	66	5	2	2	3	6	1
12-18 MPH	AUG 85	29	40	5	5	1	2	1	0
	SEP 85	7	98	8	5	2	2	3	0
	OCT 85	4	81	5	3	1	2	3	0
	NOV 85	1	48	3	4	0	1	3	0
	DEC 85	4	74	2	2	0	0	0	0
	JAN 86	5	82	3	0	0	0	1	0
18-24 MPH	AUG 85	47	41	3	1	0	0	0	0
	SEP 85	4	81	3	1	0	0	0	0
	OCT 85	2	77	2	0	0	0	0	0
	NOV 85	0	32	1	1	0	0	1	0
	DEC 85	4	45	1	0	0	0	0	0
	JAN 86	2	69	2	0	0	0	0	0
24 + MPH	AUG 85	67	56	1	0	0	0	0	0
	SEP 85	1	60	1	0	0	0	0	0
	OCT 85	1	72	1	0	0	0	0	0
	NOV 85	0	33	1	0	0	0	0	0
	DEC 85	6	56	0	0	0	0	0	0
	JAN 86	1	78	1	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 86	2	72	10	39	17	19	15	2
	MAR 86	5	80	14	26	11	23	30	7
	APR 86	5	70	14	19	12	23	33	9
	MAY 86	5	47	14	23	12	26	34	7
	JUN 86	21	45	18	19	7	19	28	7
	JUL 86	67	17	12	15	9	26	29	8
12-18 MPH	FEB 86	2	65	4	14	3	2	1	0
	MAR 86	3	80	6	7	2	2	1	1
	APR 86	2	83	7	5	2	2	6	2
	MAY 86	3	54	4	4	1	2	3	1
	JUN 86	30	56	7	4	1	1	3	0
	JUL 86	93	19	5	4	1	2	3	1
18-24 MPH	FEB 86	3	71	2	3	0	0	0	0
	MAR 86	2	86	2	1	0	0	0	0
	APR 86	1	73	2	1	0	0	1	0
	MAY 86	1	55	2	0	0	0	0	0
	JUN 86	43	60	3	0	0	0	0	0
	JUL 86	81	12	1	1	0	0	1	0
24 + MPH	FEB 86	3	70	1	0	0	0	0	0
	MAR 86	0	86	1	0	0	0	0	0
	APR 86	1	47	1	0	0	0	0	0
	MAY 86	1	41	1	0	0	0	0	0
	JUN 86	69	63	1	0	0	0	0	0
	JUL 86	75	7	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 86	76	2	5	7	6	18	20	3
	SEP 86	93	6	6	7	6	13	19	5
	OCT 86	98	2	2	2	1	7	13	3
	NOV 86	78	3	3	8	6	10	15	3
	DEC 86	57	8	2	2	1	3	9	3
	JAN 87	68	51	6	6	2	4	6	1
12-18 MPH	AUG 86	101	1	1	1	0	0	0	0
	SEP 86	103	6	2	1	1	1	2	1
	OCT 86	142	1	1	0	0	0	1	1
	NOV 86	88	1	0	1	0	1	1	0
	DEC 86	64	3	0	0	0	0	0	0
	JAN 87	68	43	4	3	0	0	0	0
18-24 MPH	AUG 86	115	2	0	0	0	0	0	0
	SEP 86	101	7	0	0	0	0	1	0
	OCT 86	133	1	0	0	0	0	0	0
	NOV 86	81	1	0	0	0	0	0	0
	DEC 86	50	1	0	0	0	0	0	0
	JAN 87	59	43	2	1	0	0	0	0
24 + MPH	AUG 86	136	4	0	0	0	0	0	0
	SEP 86	84	7	0	0	0	0	0	0
	OCT 86	134	2	0	0	0	0	0	0
	NOV 86	44	2	0	0	0	0	0	0
	DEC 86	21	0	0	0	0	0	0	0
	JAN 87	58	52	1	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 87	57	28	7	8	3	8	21	5
	MAR 87	77	15	8	10	10	21	29	13
	APR 87	48	4	5	11	11	30	39	8
	MAY 87	45	44	14	14	9	24	36	8
	JUN 87	44	25	9	7	6	23	35	7
	JUL 87	37	28	16	16	6	18	28	6
12-18 MPH	FEB 87	69	25	2	0	0	0	0	0
	MAR 87	102	8	2	2	1	2	6	3
	APR 87	74	6	2	3	1	3	7	1
	MAY 87	79	24	4	2	1	2	7	1
	JUN 87	90	17	3	1	1	1	3	1
	JUL 87	78	21	6	5	1	1	1	0
18-24 MPH	FEB 87	61	31	1	0	0	0	0	0
	MAR 87	102	5	0	0	0	0	1	1
	APR 87	87	5	1	1	0	0	1	0
	MAY 87	98	13	1	0	0	0	1	0
	JUN 87	101	10	1	0	0	0	1	0
	JUL 87	98	16	2	1	0	0	0	0
24 + MPH	FEB 87	38	24	0	0	0	0	0	0
	MAR 87	84	4	0	0	0	0	0	0
	APR 87	104	4	0	0	0	0	0	0
	MAY 87	77	4	0	0	0	0	0	0
	JUN 87	107	4	0	0	0	0	0	0
	JUL 87	108	8	0	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	AUG 86	76	2	5	7	6	18	20	3
	SEP 86	93	6	6	7	6	13	19	5
	OCT 86	98	2	2	2	1	7	13	3
	NOV 86	78	3	3	8	6	10	15	3
	DEC 86	57	8	2	2	1	3	9	3
	JAN 87	68	51	6	6	2	4	6	1
12-18 MPH	AUG 86	101	1	1	1	0	0	0	0
	SEP 86	103	6	2	1	1	1	2	1
	OCT 86	142	1	1	0	0	0	1	1
	NOV 86	88	1	0	1	0	1	1	0
	DEC 86	64	3	0	0	0	0	0	0
	JAN 87	68	43	4	3	0	0	0	0
18-24 MPH	AUG 86	115	2	0	0	0	0	0	0
	SEP 86	101	7	0	0	0	0	1	0
	OCT 86	133	1	0	0	0	0	0	0
	NOV 86	81	1	0	0	0	0	0	0
	DEC 86	50	1	0	0	0	0	0	0
	JAN 87	59	43	2	1	0	0	0	0
24 + MPH	AUG 86	136	4	0	0	0	0	0	0
	SEP 86	84	7	0	0	0	0	0	0
	OCT 86	134	2	0	0	0	0	0	0
	NOV 86	44	2	0	0	0	0	0	0
	DEC 86	21	0	0	0	0	0	0	0
	JAN 87	58	52	1	0	0	0	0	0

Wind Rose Data cont.

Hours per Month

		Wind Direction							
		North	Northeast	East	Southeast	South	Southwest	West	Northwest
06-12 MPH	FEB 87	57	28	7	8	3	8	21	5
	MAR 87	77	15	8	10	10	21	29	13
	APR 87	48	4	5	11	11	30	39	8
	MAY 87	45	44	14	14	9	24	36	8
	JUN 87	44	25	9	7	6	23	35	7
	JUL 87	37	28	16	16	6	18	28	6
12-18 MPH	FEB 87	69	25	2	0	0	0	0	0
	MAR 87	102	8	2	2	1	2	6	3
	APR 87	74	6	2	3	1	3	7	1
	MAY 87	79	24	4	2	1	2	7	1
	JUN 87	90	17	3	1	1	1	3	1
	JUL 87	78	21	6	5	1	1	1	0
18-24 MPH	FEB 87	61	31	1	0	0	0	0	0
	MAR 87	102	5	0	0	0	0	1	1
	APR 87	87	5	1	1	0	0	1	0
	MAY 87	98	13	1	0	0	0	1	0
	JUN 87	101	10	1	0	0	0	1	0
	JUL 87	98	16	2	1	0	0	0	0
24 + MPH	FEB 87	38	24	0	0	0	0	0	0
	MAR 87	84	4	0	0	0	0	0	0
	APR 87	104	4	0	0	0	0	0	0
	MAY 87	77	4	0	0	0	0	0	0
	JUN 87	107	4	0	0	0	0	0	0
	JUL 87	108	8	0	0	0	0	0	0

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