

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### November 2008

Station: Oakland, NJ

Latitude: 41° 02' 28" N Longitude: 74° 13' 52" W Elevation (Ground): 280 feet Time Zone: Eastern

Date	Temperature					Humidity	Deg. Days		Precip Ty 1 fog 2 hvy fog 3 thunder 4 ice plt 5 hail 6 glaze 7 duststm 8 smk, hz 9 blw snw	Snow Cvr	Precip		Pressure Adj. to Sea Level			Wind						Sun		
	Maximum	Minimum	Average	Mean	Dew Point		Mean	Heating Base 65°F			Cooling Base 65°F	Water Equivalent	Ice Pellets Snow	Maximum	Minimum	Mean	Avg	Res	Res	Peak			Minute	
																				Speed	Speed		Dir	Speed
1	2	3	4A	4B	5	6	7	8		10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	63.4	37.3	50.4	49.0	39	70	15	0	.....	0	0.00	0.0	30.25	30.13	30.168	0.5	0.5	323	12	NNW	6	330		
2	49.5	28.8	39.1	38.6	27	67	25	0	.....	0	0.00	0.0	30.57	30.25	30.453	0.5	0.4	55	10	S	4	93		
3	51.8	34.6	43.2	44.6	40	84	21	0	.....	0	0.00	0.0	30.57	30.42	30.482	0.0	0.0	11	2	NNW	1	1		
4	62.1	36.7	49.4	48.9	45	87	15	0	.....	0	0.00	0.0	30.43	30.27	30.357	0.3	0.3	232	7	SW	4	295		
5	65.5	48.3	56.9	56.1	52	87	8	0	.....	0	0.23	0.0	30.27	29.96	30.143	1.2	1.2	46	14	ENE	6	44		
6	63.4	56.9	60.2	59.9	57	90	5	0	.....	0	0.09	0.0	29.97	29.90	29.925	2.4	2.3	33	19	NE	8	51		
7	62.7	57.2	60.0	59.3	56	89	5	0	.....	0	0.00	0.0	29.90	29.78	29.854	0.4	0.4	15	6	NNE	3	347		
8	57.8	51.4	54.6	56.2	54	93	10	0	.....	0	0.08	0.0	29.78	29.58	29.664	0.8	0.5	234	15	WNW	7	286		
9	54.5	35.6	45.0	46.1	37	71	19	0	.....	0	0.04	0.0	29.89	29.61	29.756	2.2	2.1	253	19	WNW	11	269		
10	50.7	36.6	43.6	43.5	29	58	21	0	.....	0	0.00	0.0	30.19	29.88	29.998	2.9	2.7	273	21	NNW	14	253		
11	50.1	29.6	39.8	40.0	27	61	25	0	.....	0	0.00	0.0	30.35	30.18	30.266	1.6	1.3	309	17	NNW	9	353		
12	49.0	30.4	39.7	39.1	30	72	25	0	.....	0	0.00	0.0	30.41	30.33	30.362	0.5	0.4	206	10	SSW	5	210		
13	53.9	37.0	45.5	45.8	44	94	19	0	.....	0	0.77	0.0	30.33	29.97	30.149	0.2	0.2	35	6	S	3	180		
14	61.5	52.6	57.0	56.6	56	96	7	0	.....	0	0.14	0.0	29.97	29.84	29.904	0.4	0.4	219	9	S	5	202		
15	68.2*	55.5	61.8*	60.6	59	94	3	0	.....	0	1.26	0.0	29.85	29.36	29.568	1.9	1.7	193	20	WNW	11	189		
16	58.6	37.5	48.0	45.4	33	63	16	0	.....	0	0.11	0.0	29.91	29.33	29.611	5.7	5.4	265	32	NW	16	277		
17	46.4	28.2	37.3	36.1	25	65	28	0	.....	0	0.00	0.0	30.03	29.90	29.985	1.8	1.5	261	18	W	10	288		
18	37.3	26.0	31.6	31.6	20	64	33	0	.....	0	0.00	T	30.14	30.00	30.053	2.7	2.7	353	21	NNW	12	350		
19	34.1	22.8	28.4	28.2	11	50	36	0	.....	0	0.00	0.0	30.15	29.95	30.067	2.2	2.1	343	21	NNW	11	359		
20	36.2	26.3	31.3	30.2	20	65	34	0	.....	0	0.00	T	29.95	29.82	29.883	1.0	0.9	292	15	NW	8	292		
21	35.9	21.1	28.5	27.8	15	60	36	0	.....	0	0.00	0.0	30.24	29.93	30.066	2.1	2.1	339	21	W	10	343		
22	29.9	20.1*	25.0*	24.5	9	52	40	0	.....	0	0.00	T	30.39	30.23	30.323	3.3	3.2	311	25	W	14	316		
23	35.7	20.6	28.2	26.3	14	60	36	0	.....	0	0.00	0.0	30.45	30.34	30.398	1.9	1.8	281	16	WSW	10	250		
24	48.7	20.6	34.7	35.5	26	71	30	0	.....	0	0.17	0.0	30.40	29.90	30.210	1.4	1.3	181	16	S	10	197		
25	42.6	26.8	34.7	37.7	36	92	30	0	.....	0	0.47	0.0	29.90	29.68	29.742	0.8	0.7	263	12	NW	6	277		
26	43.7	26.0	34.9	34.8	29	79	30	0	.....	0	0.00	0.0	29.99	29.76	29.892	1.8	1.7	241	23	S	12	222		
27	43.3	24.8	34.0	33.2	26	75	31	0	.....	0	0.00	0.0	30.02	29.94	29.987	1.4	1.4	250	25	SW	12	225		
28	47.5	24.5	36.0	36.1	25	68	28	0	.....	0	0.00	0.0	29.95	29.75	29.818	2.1	1.9	267	23	NNW	12	252		
29	42.6	25.0	33.8	33.2	24	71	31	0	.....	0	0.00	0.0	29.98	29.86	29.933	1.1	1.0	247	13	SSW	8	224		
30	36.9	23.8	30.4	31.5	30	92	34	0	.....	0	0.71	T	29.96	29.42	29.767	1.0	1.0	35	11	NE	5	17		
Sum	Sum	-----	-----	---	----	Ttl	Ttl						For the month:										---	
1483	1003					696	0	Number of Days		4.07	T	30.57	29.33	30.026	1.5	0.8	286	32	NW	16	277			
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg				
49.4	33.4	41.4	41.2	33	74.7	----	----	≥.01 inch		11	43.99	T	2	16	-----	----	----	---	16	16				
Number of Days						Season to Date	Snow, Ice ≥1.0 inch	0	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date									
Max Temperature			Min Temperature			1237	710	Thunder	0	Precipitation			Snow, Ice Plts											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	0	1.37	15-16	T	18+	0					-							
0	1	17	0	----	----	Clear	30	Partly Cloudy		0	Cloudy	0												

**NOTES:**

Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.  
 Data in column 4A are (MAX+MIN) ÷ 2, whereas columns 4B, 5, 6, 15, 16, 23 are means via continuous observations for 24 hours.  
 Column 5: Dew point is calculated from temperature and humidity and is continuously averaged for 24 hours.  
 Data in columns 9, 10, 12 are entered manually by the station observer.  
 Columns 17-18: Resultant wind is calculated by the vector sum of continuous wind observations.  
 Column 23: Sunshine index is measured in Watts/m<sup>2</sup> and is continuously averaged for 24 hours.  
 Data in columns 4B, 5, 6, 15, 16, 23 are updated continuously, there by achieving a "true" mean.



# OBSERVATIONS AT 3-HOUR INTERVALS

## November 2008: Oakland, NJ

Hour	NOV 19									NOV 20									NOV 21								
	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust
01	30.13	0.00	25	11	54	04	1	5	29.93	0.00	28	15	57	28	0	2	29.94	0.00	26	19	72	14	0	1			
04	30.14	0.00	24	10	54	07	0	4	29.89	0.00	27	17	65	26	0	2	29.96	0.00	22	18	86	12	0	0			
07	30.13	0.00	23	13	63	33	1	6	29.88	0.00	27	20	75	23	1	2	30.00	0.00	23	19	88	20	0	1			
10	30.13	0.00	29	10	44	00	4	13	29.87	0.00	31	22	68	28	2	9	30.06	0.00	30	17	57	34	3	12			
13	30.05	0.00	34	10	37	29	6	16	29.82	0.00	35	20	54	34	1	5	30.04	0.00	34	14	43	35	5	13			
16	30.03	0.00	32	11	41	35	4	11	29.85	0.00	35	19	52	27	4	10	30.08	0.00	33	10	37	34	3	11			
19	30.01	0.00	30	13	49	28	3	7	29.90	0.00	29	20	71	21	0	1	30.19	0.00	29	13	52	33	1	5			
22	29.96	0.00	29	14	54	35	1	5	29.92	0.00	30	21	69	28	2	7	30.23	0.00	25	10	52	33	3	9			
NOV 22									NOV 23									NOV 24									
01	30.24	0.00	22	8	55	35	0	12	30.38	0.00	23	11	60	26	3	9	30.38	0.00	21	17	84	24	0	0			
04	30.27	0.00	21	10	63	19	0	4	30.41	0.00	22	11	64	30	4	9	30.36	0.00	21	18	86	24	0	0			
07	30.32	0.00	21	11	67	33	1	11	30.43	0.00	21	12	67	33	0	5	30.34	0.00	22	18	86	24	0	0			
10	30.34	0.00	25	11	55	31	6	22	30.44	0.00	30	13	48	24	2	7	30.31	0.00	33	22	64	33	0	2			
13	30.30	0.00	29	8	40	30	10	21	30.38	0.00	34	14	43	26	3	10	30.21	0.00	46	26	45	15	5	14			
16	30.33	0.00	28	7	40	32	7	22	30.36	0.00	34	15	46	33	3	9	30.13	0.00	46	29	52	21	1	4			
19	30.39	0.00	25	8	48	30	1	13	30.39	0.00	26	16	66	24	0	0	30.05	0.00	46	35	65	17	2	8			
22	30.38	0.00	24	9	52	28	1	7	30.39	0.00	22	16	77	24	0	0	29.97	0.07	45	39	82	21	1	15			
NOV 25									NOV 26									NOV 27									
01	29.86	0.13	40	39	95	22	0	1	29.77	0.00	26	25	95	24	0	0	29.98	0.00	30	27	87	22	1	2			
04	29.77	0.00	42	41	96	26	0	2	29.80	0.00	29	28	95	21	0	2	29.98	0.00	29	27	91	20	0	1			
07	29.74	0.00	42	41	97	21	0	2	29.86	0.00	29	27	94	25	0	1	30.00	0.00	32	28	88	22	1	3			
10	29.71	0.00	41	39	93	23	1	2	29.90	0.00	36	33	88	20	3	6	30.01	0.00	40	28	61	26	4	12			
13	29.69	0.05	38	35	92	29	1	8	29.90	0.00	42	31	63	25	8	14	29.97	0.00	42	24	50	31	4	14			
16	29.70	0.00	40	35	82	22	3	7	29.93	0.00	42	29	60	24	3	9	29.98	0.00	40	25	54	22	3	6			
19	29.74	0.00	32	31	94	21	0	1	29.96	0.00	39	28	65	23	4	9	30.00	0.00	29	24	81	24	0	0			
22	29.77	0.00	29	27	95	24	0	0	29.98	0.00	35	28	76	24	1	3	29.97	0.00	26	24	90	24	0	0			
NOV 28									NOV 29									NOV 30									
01	29.92	0.00	25	23	93	24	0	0	29.87	0.00	36	25	66	22	1	5	29.94	0.00	24	22	89	26	0	1			
04	29.84	0.00	26	24	93	31	0	1	29.91	0.00	28	24	85	02	0	1	29.93	0.00	26	23	89	26	0	0			
07	29.79	0.00	28	26	91	16	0	0	29.93	0.00	25	22	90	22	0	0	29.91	0.00	31	25	78	05	1	3			
10	29.78	0.00	41	31	66	22	2	6	29.97	0.00	37	27	66	22	1	4	29.88	0.00	32	30	94	03	0	2			
13	29.76	0.00	47	23	39	25	8	20	29.92	0.00	42	26	52	30	5	11	29.78	0.00	33	32	95	03	1	4			
16	29.79	0.00	44	25	47	26	2	7	29.94	0.00	41	24	50	25	7	11	29.67	0.04	34	33	96	02	1	6			
19	29.81	0.00	41	23	49	21	3	9	29.95	0.00	32	23	71	26	0	1	29.59	0.08	34	33	96	03	1	7			
22	29.85	0.00	37	25	61	19	1	4	29.96	0.00	27	22	82	26	0	0	29.50	0.00	36	35	96	04	3	10			

### WEATHER NOTES

NOTES:  
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.  
 Wind Direction: Directions are those from which the wind is blowing, indicated in tens of degrees from true north: i.e., 09 for East, 18 for South, 27 for West, and 00 or 36 for North.  
 Wind Speed: The observed one-minute average speed in miles-per-hour.  
 Wind Gust: The maximum instantaneous wind speed for the 10-minute period preceding the observation.  
 Rainfall Rate: The instantaneous rainfall rate at the time of observation, calculated by timing consecutive 0.01" pulses from the electronic rain gauge and interpolating this rate for one hour.

### SUMMARY BY HOUR

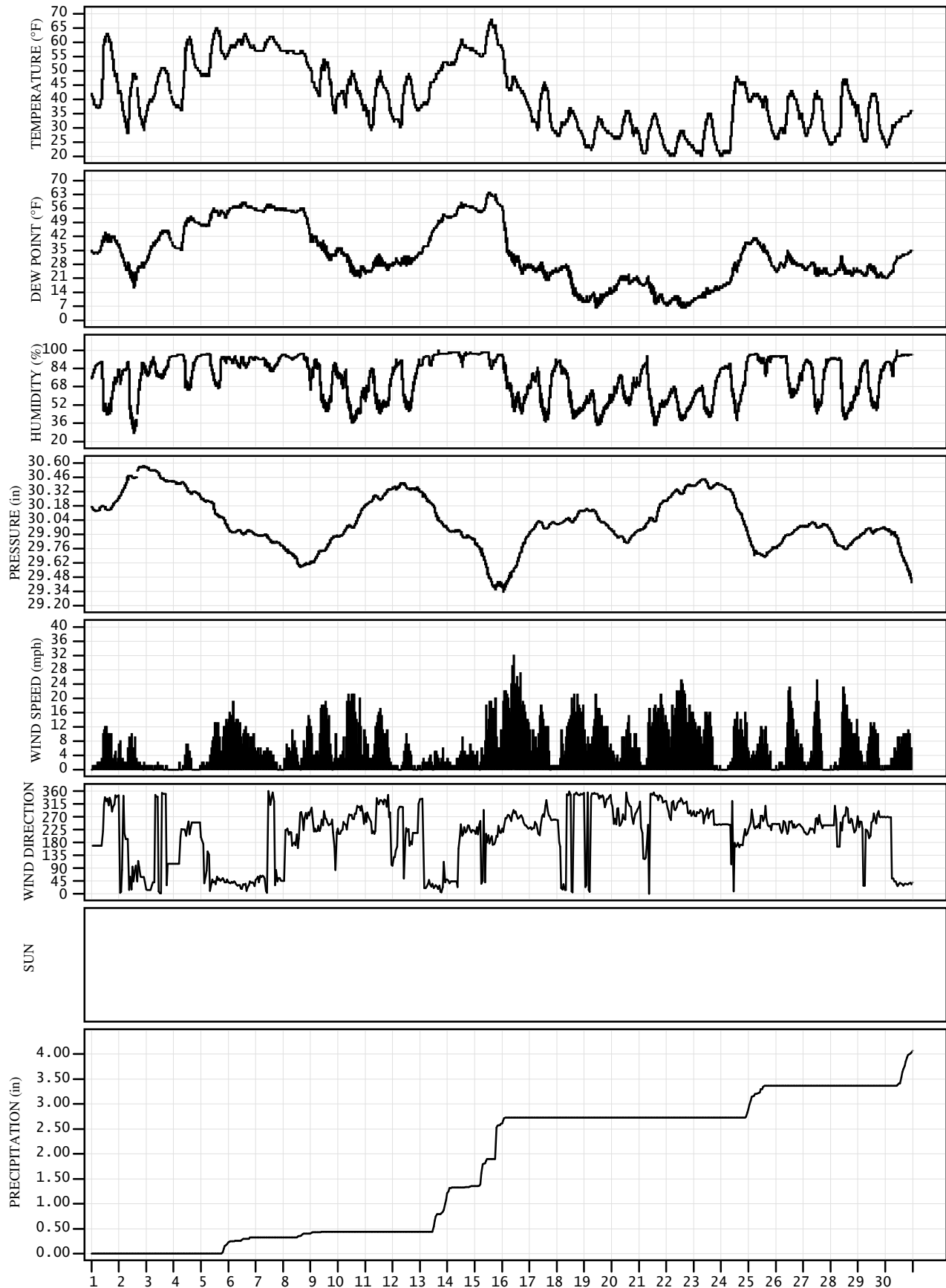
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		30.035	38	33	81	0.7	29	0.2
04		30.030	37	32	84	0.8	30	0.6
07		30.043	36	32	86	0.5	32	0.1
10		30.049	43	34	71	2.5	28	1.4
13		30.005	47	34	61	3.2	29	2.1
16		29.985	47	33	62	2.4	29	1.4
19		30.026	42	33	73	1.3	29	0.7
22		30.010	39	33	79	1.0	31	0.4

## HOURLY PRECIPITATION (Water Equivalent) November 2008: Oakland, NJ

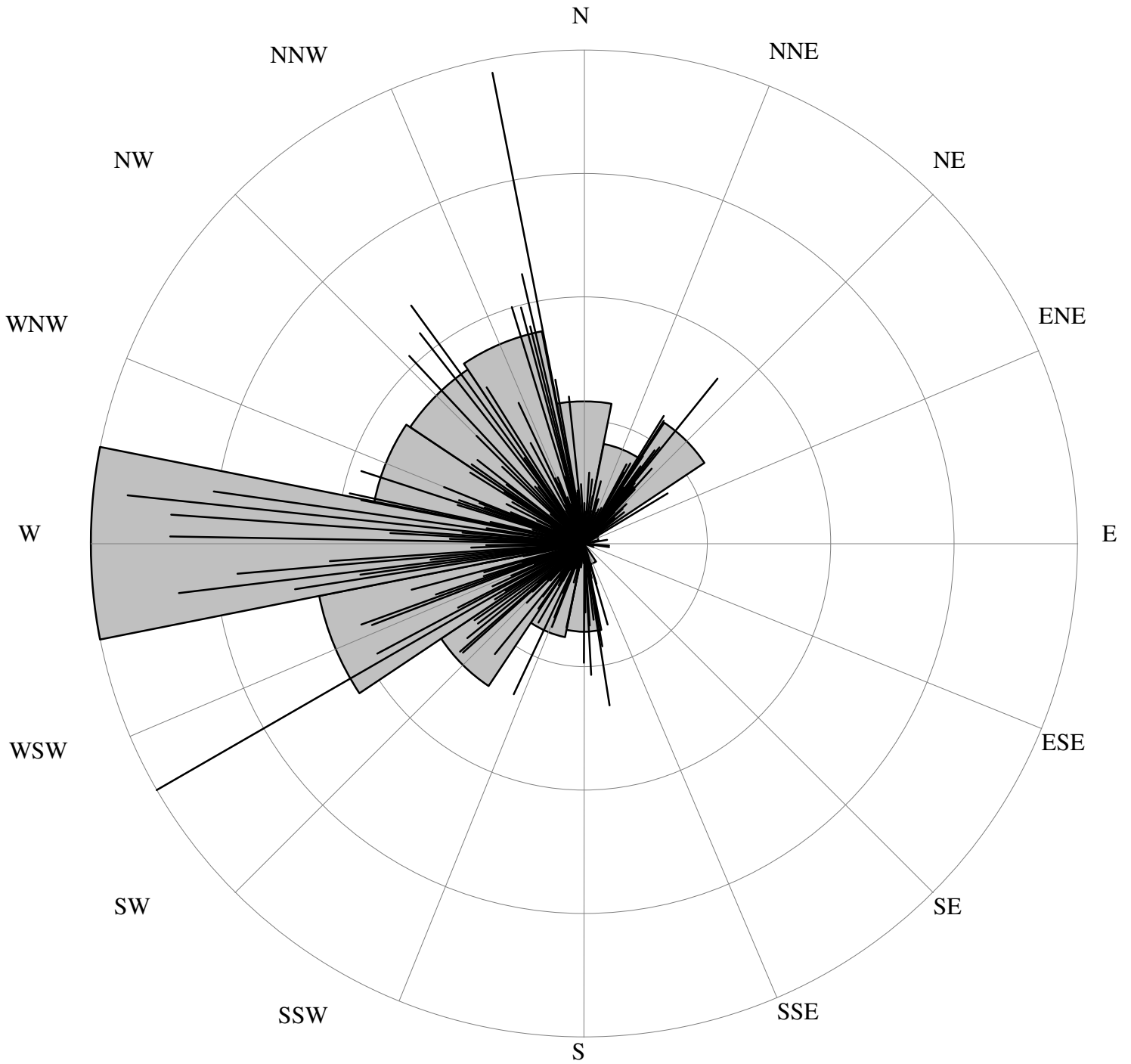
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date	
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12		
01																								01		
02																									02	
03																									03	
04																									04	
05																			0.03	0.06	0.06	0.02	0.02	0.04	05	
06	0.01	0.01				0.01						0.02	0.02						0.02						06	
07																									07	
08													0.02	0.01		0.01	0.03	0.01							08	
09	0.02	0.01								0.01															09	
10																									10	
11																									11	
12																									12	
13												0.10	0.12	0.08	0.05					0.02	0.03	0.04	0.12	0.08	0.13	13
14	0.04	0.06		0.01																0.02	0.01	0.01				14
15				0.01	0.03	0.22	0.18	0.01	0.01	0.05	0.03	0.01							0.62	0.04	0.01		0.03	0.01	15	
16	0.06	0.04	0.01																						16	
17																									17	
18																									18	
19																									19	
20																									20	
21																									21	
22																									22	
23																									23	
24																						0.02	0.09	0.06	24	
25	0.09	0.09	0.07	0.01	0.01	0.04		0.01	0.01	0.01	0.06	0.01	0.04	0.02										25		
26																									26	
27																									27	
28																									28	
29												0.02	0.03		0.12	0.11	0.05	0.07	0.09	0.08	0.05	0.01	0.02	0.02	0.04	29
30																										30
Sum	0.22	0.21	0.08	0.03	0.04	0.27	0.18	0.02	0.02	0.07	0.11	0.17	0.20	0.23	0.16	0.07	0.10	0.10	0.77	0.19	0.13	0.18	0.24	0.28	Sum	

During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA  
November 2008: Oakland, NJ



Wind Rose: November 2008  
Oakland, NJ



Maximum direction of wind: 27.0 miles from 240°  
Maximum sector of wind: 250.3 miles from W  
1112.5 total miles of wind