

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

June 2009

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

Date	Temperature					Humidity Mean	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 Mean Index	
	Maximum	Minimum	Average	Mean	Dew Point		Heating Base 65°F	Cooling Base 65°F			Water Equivalent	Ice Pellets Snow	Maximum	Minimum	Mean	Avg Speed	Res Speed	Res Dir	Peak		Minute		
																			Speed	Dir	Speed		Dir	Speed	Dir
1	2	3	4A	4B	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	71.2	39.9*	55.5*	58.7	40	51	9	0	.....	0	0.00	0.0	30.14	29.97	30.050	1.9	1.5	214	17	SW	9	207
2	77.6	56.1	66.8	66.4	58	74	0	2	.....	0	0.00	0.0	30.01	29.92	29.952	1.0	0.5	265	12	WNW	6	221
3	69.5	54.7	62.1	59.9	55	85	2	0	.....	0	0.36	0.0	30.04	29.95	30.001	0.5	0.4	351	12	N	5	344
4	70.4	52.5	61.5	59.8	54	82	3	0	.....	0	0.44	0.0	30.01	29.94	29.983	0.5	0.3	185	9	ESE	4	126
5	59.0	54.7	56.9	56.3	55	96	8	0	.....	0	0.48	0.0	29.99	29.85	29.923	0.5	0.5	45	14	NE	5	54
6	77.8	54.2	66.0	64.1	59	85	0	1	.....	0	0.01	0.0	29.96	29.85	29.906	0.7	0.6	232	11	WNW	6	205
7	82.8	53.5	68.2	67.7	58	75	0	4	.....	0	0.00	0.0	30.02	29.89	29.959	0.9	0.8	218	14	SW	8	218
8	77.7	60.6	69.1	68.5	61	77	0	5	.....	0	0.03	0.0	29.98	29.91	29.941	0.9	0.6	153	12	SE	7	216
9	69.8	58.4	64.1	63.1	61	93	1	0	.....	0	1.01	0.0	29.96	29.83	29.895	0.6	0.2	159	18	WNW	6	322
10	68.4	59.4	63.9	63.3	61	93	1	0	.....	0	0.01	0.0	29.96	29.88	29.918	0.3	0.2	67	9	SE	4	141
11	63.0	59.1	61.0	60.8	60	97	4	0	.....	0	0.99	0.0	29.96	29.77	29.891	0.4	0.3	68	8	N	3	38
12	79.9	59.0	69.5	68.2	64	89	0	5	.....	0	0.19	0.0	29.82	29.67	29.721	0.6	0.1	178	11	S	6	201
13	72.3	61.6	67.0	66.1	63	90	0	2	.....	0	0.18	0.0	29.93	29.81	29.887	0.3	0.1	134	11	W	4	211
14	74.0	56.6	65.3	64.9	60	86	0	1	.....	0	0.04	0.0	30.00	29.88	29.935	0.6	0.3	86	13	N	5	48
15	71.4	53.6	62.5	59.5	58	95	2	0	.....	0	1.72	0.0	30.11	29.98	30.032	0.5	0.2	61	13	SSE	5	122
16	67.5	53.2	60.4	59.6	56	88	4	0	.....	0	0.00	0.0	30.26	30.09	30.188	0.6	0.4	167	11	SW	6	223
17	68.9	50.5	59.7	59.3	51	77	5	0	.....	0	0.00	0.0	30.25	30.10	30.199	1.2	1.1	178	15	SE	9	194
18	63.6	56.4	60.0	60.6	60	97	5	0	.....	0	1.55	0.0	30.10	29.78	29.917	0.5	0.3	152	18	S	7	167
19	77.3	61.6	69.5	68.0	63	86	0	5	.....	0	0.01	0.0	29.78	29.70	29.750	0.8	0.8	319	13	WNW	5	316
20	67.7	57.1	62.4	63.3	62	95	2	0	.....	0	0.35	0.0	29.75	29.47	29.611	0.2	0.1	188	7	S	4	197
21	75.2	61.4	68.3	67.1	64	91	0	3	.....	0	0.46	0.0	29.63	29.47	29.550	1.3	1.2	7	18	NE	7	48
22	74.4	62.7	68.6	67.6	62	84	0	4	.....	0	0.00	0.0	29.71	29.60	29.633	2.1	2.1	19	22	NNW	9	348
23	80.1	63.9	72.0	70.0	62	78	0	7	.....	0	0.05	0.0	29.76	29.67	29.708	1.7	1.7	3	17	NW	8	356
24	77.7	64.4	71.0	69.3	66	89	0	6	.....	0	0.02	0.0	29.80	29.72	29.747	0.7	0.7	12	12	NW	7	334
25	83.2	64.2	73.7*	72.1	66	83	0	9	.....	0	0.00	0.0	29.82	29.69	29.766	0.6	0.2	192	12	S	7	204
26	81.0	61.2	71.1	68.5	66	91	0	6	.....	0	0.28	0.0	29.74	29.62	29.687	0.5	0.3	263	23	N	12	1
27	76.5	58.6	67.5	67.0	62	86	0	3	.....	0	0.02	0.0	29.74	29.66	29.703	1.2	1.1	346	16	WNW	8	345
28	80.7	59.5	70.1	69.9	63	80	0	6	.....	0	0.00	0.0	29.70	29.51	29.623	0.7	0.5	356	10	N	5	347
29	80.7	59.9	70.3	69.1	62	79	0	6	.....	0	0.03	0.0	29.52	29.43	29.472	0.9	0.7	264	13	WNW	7	256
30	84.3*	55.8	70.1	66.2	61	86	0	5	.....	0	0.84	0.0	29.66	29.47	29.547	0.9	0.6	210	20	SW	10	198
Sum	Sum	-----	-----	---	----	Ttl	Ttl	Number of Days		For the month:													---
2224	1724					46	80			9.07	0.0	30.26	29.43	29.836	0.8	0.1	276	23	N	12	1		
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg			
74.1	57.5	65.8	64.8	60	85.2	----	----	≥.01 inch		22	19.23	35.0	16	29	-----	----	----	---	26	26			
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			5861	128	Thunder		0	Precipitation		Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog		0	1.66	15	0.0		-			0		-					
0	0	0	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/m² 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

June 2009: Oakland, NJ

Hour	JUN 19									JUN 20									JUN 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		29.78	0.00	62	62	98	03	0	0		29.73	0.00	63	59	88	12	0	2		29.48	0.00	63	63	98	05	0	4
04		29.76	0.00	62	61	98	03	0	0		29.70	0.00	59	57	96	04	0	1		29.49	0.00	62	61	98	06	1	4
07		29.75	0.00	63	63	99	19	0	0		29.71	0.00	59	58	98	04	0	0		29.53	0.07	62	62	99	05	1	3
10		29.77	0.00	69	66	90	28	1	2		29.67	0.00	68	64	88	00	0	1		29.56	0.00	66	64	95	10	0	5
13		29.77	0.00	72	66	81	32	1	5		29.61	0.00	67	65	93	18	2	7		29.57	0.00	72	67	83	01	1	8
16		29.71	0.00	77	65	67	00	1	13		29.53	0.00	65	64	96	15	0	2		29.56	0.00	73	65	76	00	1	12
19		29.73	0.00	73	64	74	34	2	5		29.49	0.00	64	63	97	05	0	1		29.57	0.00	72	66	82	01	1	4
22		29.75	0.00	68	61	80	30	2	5		29.48	0.04	64	63	98	05	0	1		29.62	0.00	66	65	96	03	0	0
JUN 22									JUN 23									JUN 24									
01		29.62	0.00	64	63	97	01	0	3		29.70	0.00	67	59	76	35	2	10		29.74	0.00	65	65	98	05	0	0
04		29.60	0.00	64	63	98	02	0	2		29.69	0.00	64	59	83	33	0	2		29.73	0.00	65	65	98	05	0	1
07		29.63	0.00	64	64	98	00	0	2		29.71	0.00	66	58	77	09	0	6		29.75	0.00	65	65	98	05	0	1
10		29.63	0.00	69	64	84	01	3	11		29.72	0.00	72	62	71	35	4	15		29.73	0.00	74	66	77	03	4	10
13		29.63	0.00	70	62	74	01	4	17		29.72	0.00	74	63	68	33	2	7		29.74	0.00	75	66	74	35	3	11
16		29.63	0.00	72	62	72	35	3	11		29.70	0.00	78	66	67	05	1	9		29.72	0.00	77	67	72	03	2	6
19		29.65	0.00	69	61	75	04	2	14		29.70	0.00	72	70	93	11	0	0		29.76	0.00	71	67	87	06	1	4
22		29.70	0.00	68	60	77	00	1	11		29.75	0.00	66	65	97	05	0	0		29.79	0.00	67	65	95	09	0	1
JUN 25									JUN 26									JUN 27									
01		29.80	0.00	66	65	97	08	1	2		29.72	0.00	66	64	96	05	0	0		29.68	0.00	61	60	98	28	0	1
04		29.80	0.00	64	63	97	09	0	0		29.69	0.00	64	63	97	09	0	0		29.67	0.00	59	58	98	15	0	1
07		29.81	0.00	66	65	97	13	0	1		29.69	0.00	65	64	98	00	0	1		29.72	0.00	63	62	98	18	0	2
10		29.80	0.00	73	65	77	33	1	3		29.71	0.00	70	67	92	21	0	2		29.72	0.00	70	65	83	02	2	5
13		29.77	0.00	78	68	72	16	1	3		29.70	0.00	76	71	84	26	0	3		29.71	0.00	72	65	77	35	2	14
16		29.73	0.00	82	68	62	21	3	7		29.63	0.00	80	72	76	23	0	3		29.69	0.00	76	63	65	35	3	12
19		29.71	0.00	79	69	71	20	1	7		29.65	0.00	65	63	96	27	0	1		29.71	0.00	69	63	81	34	3	9
22		29.73	0.00	72	66	82	06	1	4		29.70	0.00	63	62	97	16	1	1		29.72	0.00	66	63	90	32	0	3
JUN 28									JUN 29									JUN 30									
01		29.68	0.00	61	60	96	04	0	0		29.51	0.00	69	59	70	21	2	6		29.52	0.00	59	58	97	00	0	0
04		29.69	0.00	60	59	97	14	0	2		29.48	0.00	65	60	85	22	0	5		29.51	0.00	57	56	97	00	0	0
07		29.69	0.00	63	61	95	09	0	1		29.48	0.00	64	60	87	30	2	12		29.53	0.00	60	59	97	03	0	0
10		29.66	0.00	73	65	75	35	1	6		29.46	0.00	70	63	78	32	2	7		29.53	0.00	75	66	74	32	0	3
13		29.64	0.00	76	65	70	33	1	6		29.45	0.00	76	62	62	25	2	10		29.51	0.00	81	61	52	20	4	14
16		29.57	0.00	80	62	54	29	1	8		29.43	0.00	76	64	66	18	0	4		29.54	0.21	66	63	88	31	2	11
19		29.54	0.00	76	66	71	27	0	1		29.46	0.00	71	63	75	26	0	6		29.60	0.00	64	63	97	08	0	4
22		29.54	0.00	70	66	88	01	0	1		29.51	0.00	63	62	94	26	0	0		29.64	0.00	62	61	98	32	0	0

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

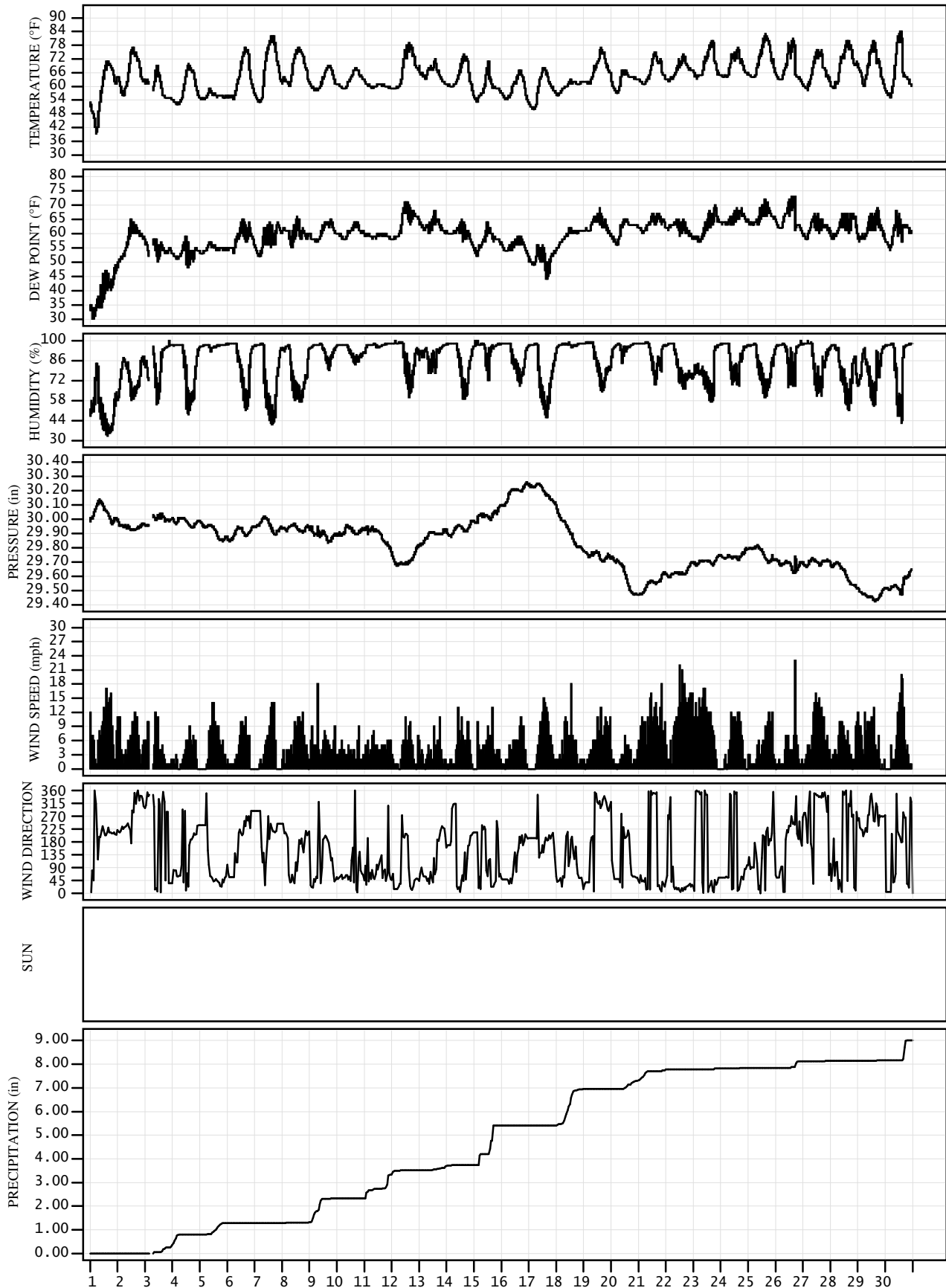
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		29.843	61	58	91	0.4	31	0.1
04		29.832	59	57	93	0.2	7	0.1
07		29.847	60	58	95	0.2	0	0.1
10		29.856	66	61	83	1.2	1	0.3
13		29.844	70	62	75	1.6	18	0.3
16		29.814	71	61	73	1.6	31	0.3
19		29.814	68	61	80	1.0	17	0.3
22		29.841	63	60	90	0.3	1	0.1

HOURLY PRECIPITATION (Water Equivalent) June 2009: Oakland, NJ

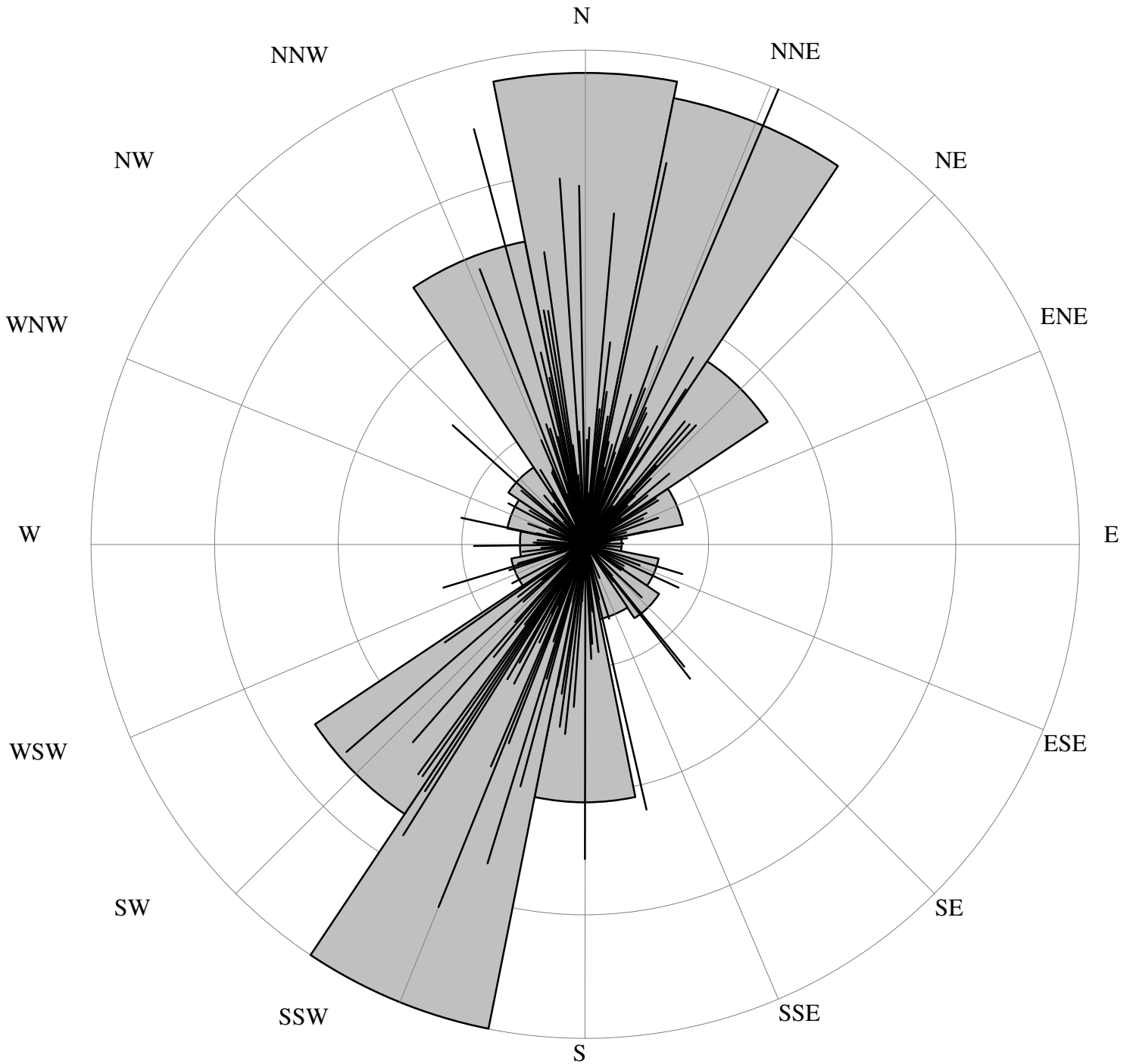
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date			
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12				
01																								01				
02																									02			
03								0.05								0.05	0.07	0.04	0.03	0.01	0.01			0.01	0.02	0.07	03	
04	0.08	0.10	0.11	0.11	0.03	0.01																					04	
05						0.01	0.01			0.01	0.05	0.05	0.04	0.04	0.06	0.06	0.06	0.04	0.03	0.02							05	
06	0.01																											06
07																												07
08				0.01																								08
09	0.01	0.02	0.15	0.14	0.09	0.05		0.06	0.23	0.15	0.09	0.01							0.01						0.01	0.01	09	
10									0.01																			10
11		0.23	0.04	0.06		0.01		0.04	0.02							0.01			0.05	0.12	0.38	0.01	0.02				11	
12	0.13	0.02	0.01					0.01	0.02																			12
13												0.01	0.02					0.01	0.01	0.01				0.06	0.03		13	
14	0.02				0.02																							14
15					0.40	0.06									0.21	0.36		0.63										15
16																												16
17																												17
18	0.03	0.03	0.01		0.02	0.02	0.12	0.14	0.12	0.15	0.17	0.11	0.25	0.15	0.14	0.02	0.01	0.01	0.02	0.01	0.01				0.01		18	
19											0.01																	19
20											0.03	0.03	0.05	0.06				0.07	0.03	0.03	0.01	0.02			0.02		20	
21	0.03	0.04	0.06	0.02	0.07	0.08	0.05	0.04														0.04	0.01			0.02		21
22																												22
23																		0.01		0.05								23
24																				0.01								24
25																												25
26																												26
27														0.04				0.16	0.07	0.01	0.01						27	
28																		0.01	0.01									28
29																		0.03										29
30																		0.06	0.48	0.27	0.03							30
Sum	0.31	0.44	0.38	0.34	0.63	0.24	0.19	0.35	0.38	0.31	0.32	0.21	0.34	0.49	0.67	0.25	1.26	0.60	0.31	0.23	0.44	0.05	0.11	0.16			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
June 2009: Oakland, NJ



Wind Rose: June 2009
Oakland, NJ



Maximum direction of wind: 13.4 miles from 23°
Maximum sector of wind: 88.8 miles from SSW
578.1 total miles of wind