

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

July 2009

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	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	80.9	59.8	70.4	68.3	64	89	0	6	.....	0	0.01	0.0	29.78	29.65	29.698	0.6	0.4	49	10	NNE	5	66		
2	76.9	63.1	70.0	68.3	66	92	0	5	.....	0	0.86	0.0	29.78	29.69	29.730	0.4	0.1	336	11	NW	4	339		
3	77.6	59.6	68.6	67.1	62	86	0	4	.....	0	0.00	0.0	29.85	29.77	29.805	0.8	0.7	268	15	W	8	205		
4	77.6	58.1	67.8	68.6	57	69	0	3	.....	0	0.00	0.0	29.87	29.79	29.827	2.0	1.8	290	19	WNW	10	287		
5	77.2	50.7	63.9	64.7	53	70	1	0	.....	0	0.00	0.0	29.91	29.78	29.847	1.1	0.9	287	16	SSW	7	238		
6	80.9	52.1	66.5	67.0	57	75	0	2	.....	0	0.00	0.0	29.81	29.70	29.751	0.5	0.4	315	11	WNW	5	318		
7	78.7	58.2	68.4	65.4	61	86	0	4	.....	0	0.50	0.0	29.79	29.68	29.725	0.6	0.3	15	21	NNW	9	347		
8	74.9	52.9	63.9	63.4	56	80	1	0	.....	0	0.01	0.0	30.03	29.79	29.871	0.9	0.7	327	13	N	6	221		
9	72.1	53.0	62.5*	61.9	57	84	2	0	.....	0	0.00	0.0	30.27	30.03	30.157	0.5	0.4	81	11	SSE	5	198		
10	77.9	51.5	64.7	64.2	57	78	0	0	.....	0	0.00	0.0	30.31	30.22	30.264	0.7	0.5	174	13	SW	6	196		
11	78.8	53.6	66.2	67.1	60	80	0	2	.....	0	0.20	0.0	30.25	29.94	30.102	1.7	1.6	204	16	SSW	9	205		
12	78.7	56.4	67.5	68.7	57	71	0	3	.....	0	0.11	0.0	29.94	29.86	29.898	1.5	1.1	285	17	WNW	7	334		
13	77.9	49.5*	63.7	63.4	53	73	1	0	.....	0	0.00	0.0	29.96	29.85	29.899	0.9	0.8	247	16	SSW	8	213		
14	77.6	51.8	64.7	65.1	52	66	0	0	.....	0	0.00	0.0	30.10	29.96	30.011	1.2	1.0	292	15	SSW	7	296		
15	81.0	50.0	65.5	67.1	56	71	0	1	.....	0	0.00	0.0	30.14	29.95	30.055	1.1	1.1	249	16	SSW	7	221		
16	84.9	60.2	72.6	71.2	65	83	0	8	.....	0	0.01	0.0	29.95	29.70	29.807	0.7	0.7	229	12	SW	7	202		
17	85.6	61.3	73.4	71.5	67	86	0	9	.....	0	1.20	0.0	29.81	29.70	29.763	0.4	0.3	229	25	W	11	278		
18	80.7	62.0	71.3	70.7	63	78	0	7	.....	0	0.00	0.0	29.93	29.66	29.765	1.3	1.2	258	14	SW	8	218		
19	79.4	55.4	67.4	67.2	59	77	0	2	.....	0	0.00	0.0	30.12	29.93	30.038	0.8	0.8	246	11	NW	6	231		
20	81.6	56.4	69.0	69.0	60	77	0	4	.....	0	0.00	0.0	30.16	30.11	30.135	0.3	0.3	76	7	SE	3	65		
21	66.3	62.6	64.5	64.5	63	95	0	0	.....	0	1.00	0.0	30.16	30.05	30.109	0.5	0.5	42	13	NE	5	42		
22	81.9	62.5	72.2	70.7	66	86	0	8	.....	0	0.00	0.0	30.16	30.06	30.107	0.6	0.5	227	11	SSW	5	197		
23	77.1	65.0	71.0	69.3	66	90	0	6	.....	0	0.01	0.0	30.09	29.85	29.977	0.9	0.9	68	15	ENE	6	123		
24	78.4	61.6	70.0	69.4	64	84	0	5	.....	0	0.01	0.0	29.89	29.79	29.843	0.6	0.4	233	11	SW	6	210		
25	85.0	57.8	71.4	71.2	65	83	0	7	.....	0	0.15	0.0	29.94	29.84	29.893	1.3	1.2	201	14	WSW	8	236		
26	81.7	67.4	74.5	72.9	70	91	0	10	.....	0	0.36	0.0	29.91	29.82	29.867	0.6	0.5	222	10	S	5	206		
27	84.2	64.9	74.5	74.0	69	85	0	10	.....	0	0.00	0.0	29.93	29.85	29.895	1.2	1.2	211	18	SSW	9	232		
28	86.8*	65.6	76.2*	73.2	68	86	0	12	.....	0	0.94	0.0	29.95	29.87	29.911	0.6	0.3	211	16	W	7	179		
29	77.6	67.0	72.3	71.6	71	98	0	8	.....	0	0.32	0.0	29.90	29.73	29.821	0.2	0.2	199	11	SW	6	164		
30	83.7	65.9	74.8	74.6	69	84	0	10	.....	0	0.00	0.0	29.91	29.69	29.813	0.9	0.7	313	14	WNW	6	355		
31	82.7	64.7	73.7	69.1	68	96	0	9	.....	0	1.22	0.0	29.96	29.75	29.853	0.7	0.5	246	21	S	12	212		
Sum	Sum	-----	-----	---	----	Ttl	Ttl	Number of Days		For the month:															---
2466	1821					5	145			6.91	0.0	30.31	29.65	29.911	0.8	0.4	258	25	W	12	212				
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg					
79.6	58.7	69.1	68.4	62	82.2	----	----	≥.01 inch		16	26.14	0.0	10	1	-----	----	----	---	17	31					
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			5	273	Thunder		0	Precipitation			Snow, Ice Plts											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog		0	1.22	31	0.0		-			0									
0	0	0	0	----	----	Clear		31	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

July 2009: Oakland, NJ

Hour	JUL 19									JUL 20									JUL 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	29.94	0.00	60	57	92	27	0	1	30.12	0.00	60	59	96	32	0	0	30.15	0.00	65	62	90	15	0	0			
04	29.97	0.00	57	56	96	27	0	1	30.13	0.00	58	57	97	32	0	0	30.14	0.00	65	62	90	05	0	0			
07	30.03	0.00	57	56	97	27	0	1	30.14	0.00	58	57	97	32	0	0	30.14	0.00	63	62	95	08	2	7			
10	30.06	0.00	72	59	64	26	1	6	30.16	0.00	75	65	71	03	1	3	30.14	0.19	63	62	97	01	3	7			
13	30.06	0.00	77	58	52	01	2	6	30.13	0.00	77	62	60	05	0	1	30.11	0.00	64	63	97	04	1	5			
16	30.05	0.00	78	60	54	30	2	9	30.11	0.00	79	62	57	01	1	3	30.08	0.00	66	65	97	04	1	3			
19	30.06	0.00	75	63	68	32	0	1	30.13	0.00	75	63	65	14	0	1	30.06	0.00	66	65	97	08	0	2			
22	30.10	0.00	64	62	93	32	0	0	30.15	0.00	67	62	84	21	0	0	30.09	0.00	65	65	98	05	0	1			
JUL 22									JUL 23									JUL 24									
01	30.10	0.00	65	64	98	13	0	2	30.07	0.00	67	66	97	15	0	1	29.85	0.00	64	62	94	03	0	0			
04	30.10	0.00	65	64	98	14	0	1	30.05	0.00	67	66	97	15	0	0	29.81	0.00	63	61	96	12	0	1			
07	30.12	0.00	63	62	98	14	0	0	30.04	0.00	68	67	98	15	0	0	29.84	0.00	64	63	96	10	0	1			
10	30.16	0.00	68	65	90	09	1	3	30.00	0.00	74	69	84	01	1	6	29.86	0.00	70	64	83	01	0	1			
13	30.14	0.00	77	67	71	13	1	6	29.98	0.00	75	69	80	13	2	6	29.86	0.00	74	66	78	22	1	6			
16	30.09	0.00	82	68	63	18	2	6	29.94	0.00	72	67	83	05	1	13	29.83	0.00	78	67	69	22	2	6			
19	30.07	0.00	79	69	71	15	3	10	29.91	0.00	66	64	92	04	0	5	29.83	0.00	76	66	70	17	0	3			
22	30.08	0.00	69	67	94	15	0	0	29.87	0.00	66	63	90	04	1	4	29.87	0.00	69	66	93	23	0	0			
JUL 25									JUL 26									JUL 27									
01	29.89	0.00	64	63	96	02	0	0	29.87	0.00	71	70	98	05	0	0	29.87	0.00	68	67	97	23	0	0			
04	29.88	0.00	60	59	97	34	0	0	29.86	0.00	69	69	98	05	0	0	29.87	0.00	67	66	98	21	0	0			
07	29.93	0.00	60	59	98	34	0	0	29.87	0.00	68	67	98	23	0	0	29.91	0.00	65	65	98	21	0	0			
10	29.94	0.00	74	64	72	23	2	5	29.89	0.00	72	71	97	24	1	5	29.92	0.00	76	71	85	16	0	5			
13	29.91	0.00	81	67	61	21	2	11	29.90	0.00	76	71	85	22	1	3	29.91	0.00	80	71	76	21	3	8			
16	29.86	0.00	84	65	53	21	5	13	29.85	0.00	81	72	75	27	3	7	29.88	0.00	82	69	65	20	3	8			
19	29.85	0.00	78	71	79	28	1	5	29.83	0.00	76	69	79	14	2	6	29.88	0.00	81	70	71	21	1	6			
22	29.87	0.00	70	68	96	05	0	1	29.90	0.00	71	69	95	14	0	1	29.92	0.00	71	69	94	24	0	0			
JUL 28									JUL 29									JUL 30									
01	29.93	0.00	68	67	97	24	0	0	29.88	0.00	68	67	98	06	0	0	29.72	0.00	71	70	97	20	1	5			
04	29.92	0.00	66	65	97	24	0	0	29.87	0.00	67	67	98	06	0	1	29.71	0.00	71	71	98	25	0	1			
07	29.95	0.00	67	66	98	24	0	0	29.88	0.00	69	69	99	06	0	0	29.78	0.00	70	69	99	22	0	1			
10	29.94	0.00	79	71	75	02	1	2	29.86	0.00	73	72	99	03	0	1	29.82	0.00	77	70	79	33	4	10			
13	29.91	0.00	85	69	60	21	1	9	29.81	0.00	78	76	95	01	1	7	29.85	0.00	81	69	66	27	3	11			
16	29.88	0.00	80	69	68	19	2	4	29.77	0.00	73	72	95	21	0	4	29.85	0.00	83	65	56	23	3	13			
19	29.88	0.00	72	71	97	06	0	2	29.76	0.08	74	73	97	26	0	2	29.86	0.00	77	71	81	32	0	1			
22	29.90	0.00	70	69	98	06	0	0	29.74	0.00	72	71	98	19	0	1	29.90	0.00	68	66	94	32	0	0			
JUL 31																											
01	29.91	0.00	65	64	97	32	0	0																			
04	29.88	0.00	65	64	98	32	0	0																			
07	29.86	0.00	67	66	98	32	0	0																			
10	29.83	0.00	71	70	98	29	0	1																			
13	29.78	0.00	81	76	87	23	4	12																			
16	29.81	0.14	70	68	95	34	1	6																			
19	29.83	0.00	69	69	98	07	1	2																			
22	29.92	0.00	66	66	98	13	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

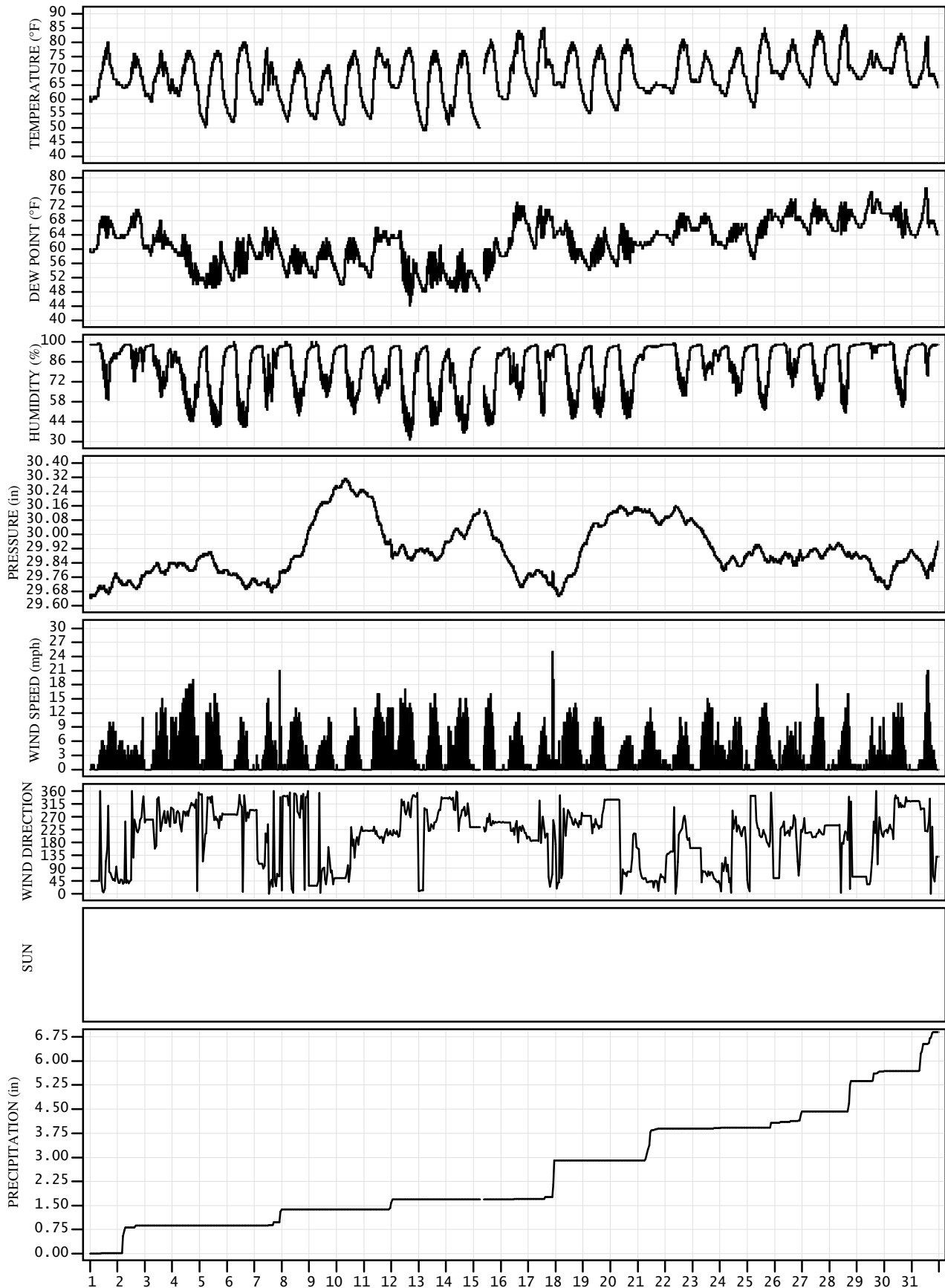
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		29.914	62	61	95	0.2	19	0.2
04		29.908	61	60	96	0.1	27	0.1
07		29.920	62	60	96	0.3	22	0.1
10		29.932	71	63	77	1.1	32	0.6
13		29.913	76	64	67	2.2	26	0.8
16		29.887	77	63	64	1.9	24	1.1
19		29.886	73	64	74	1.1	24	0.4
22		29.922	66	62	90	0.4	26	0.3

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

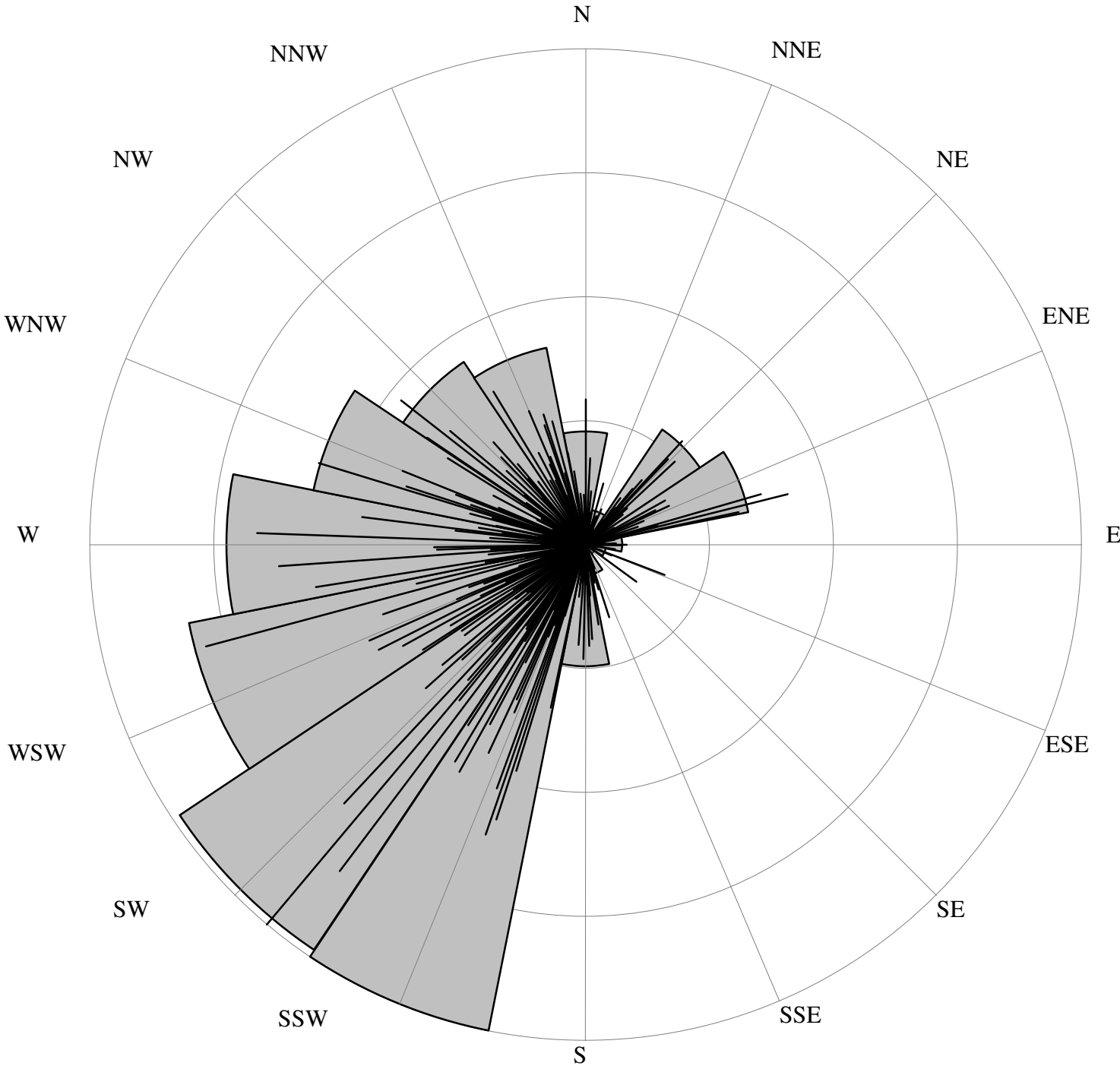
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02					0.54	0.17	0.09		0.01	0.01						0.05								02	
03																								03	
04																								04	
05																								05	
06																								06	
07													0.02			0.09						0.32	0.07	07	
08										0.01														08	
09																								09	
10																								10	
11																								11	
12	0.11																					0.04	0.16	12	
13																								13	
14																								14	
15																								15	
16												0.01												16	
17											0.01				0.05							0.39	0.75	17	
18																								18	
19																								19	
20																								20	
21						0.01	0.03	0.18	0.12	0.14	0.40	0.05	0.02		0.01	0.02		0.02						21	
22																								22	
23																			0.01					23	
24	0.01																							24	
25					0.01																	0.14		25	
26					0.04										0.02						0.01	0.01	0.20	0.08	26
27																								27	
28															0.03	0.22		0.25	0.58	0.11				28	
29																	0.01	0.03	0.03	0.02				29	
30																							0.01	30	
31							0.01	0.53	0.06	0.24					0.03	0.15	0.01	0.15	0.04					31	
Sum	0.12	0.00	0.00	0.00	0.59	0.18	0.13	0.71	0.19	0.40	0.40	0.07	0.04	0.05	0.31	0.22	0.35	0.76	0.19	0.02	0.15	0.40	1.31	0.32	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
July 2009: Oakland, NJ



Wind Rose: July 2009
Oakland, NJ



Maximum direction of wind: 14.6 miles from 220°
Maximum sector of wind: 99.3 miles from SSW
624.4 total miles of wind