

LOCAL CLIMATOLOGICAL DATA

Monthly Summary September 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	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	71.7	48.9	60.3	59.1	51	76	4	0	.....	0	0.00	0.0	30.30	30.19	30.246	0.7	0.7	25	12	N	6	344	
2	75.6	45.5	60.5	59.9	52	78	4	0	.....	0	0.00	0.0	30.31	30.20	30.256	0.4	0.3	47	7	ENE	4	92	
3	77.8	50.1	64.0	62.9	56	81	1	0	.....	0	0.00	0.0	30.22	30.04	30.127	0.3	0.3	67	11	NE	4	44	
4	79.9	52.6	66.3	66.4	60	81	0	2	.....	0	0.00	0.0	30.05	29.97	30.008	0.7	0.6	17	13	NNW	6	352	
5	80.5	61.1	70.8*	69.3	62	80	0	6	.....	0	0.00	0.0	30.18	30.04	30.102	0.5	0.4	344	10	W	4	352	
6	73.5	57.7	65.6	64.9	57	76	0	1	.....	0	0.00	0.0	30.34	30.18	30.290	0.8	0.7	75	13	N	5	62	
7	72.0	53.7	62.9	62.5	58	87	2	0	.....	0	0.00	0.0	30.33	30.14	30.233	0.3	0.2	141	7	SSE	4	145	
8	74.4	55.0	64.7	64.2	60	88	0	0	.....	0	0.00	0.0	30.15	30.01	30.074	0.2	0.2	34	7	ENE	3	327	
9	74.5	58.4	66.5	65.2	60	84	0	2	.....	0	0.00	0.0	30.29	30.02	30.124	0.8	0.8	38	14	N	5	15	
10	68.7	53.4	61.0	60.2	52	74	4	0	.....	0	0.01	0.0	30.39	30.28	30.345	1.4	1.3	56	17	ENE	7	62	
11	61.1	54.3	57.7	57.8	56	94	7	0	.....	0	0.74	0.0	30.32	29.99	30.123	2.9	2.9	42	24	NE	10	29	
12	67.4	61.0	64.2	63.7	63	97	1	0	.....	0	0.39	0.0	29.99	29.89	29.935	0.4	0.3	43	10	ENE	4	52	
13	77.8	60.5	69.2	67.8	62	83	0	5	.....	0	0.00	0.0	29.90	29.82	29.870	0.8	0.7	342	14	NW	6	16	
14	75.8	55.6	65.7	64.1	58	83	0	1	.....	0	0.00	0.0	29.95	29.85	29.897	0.8	0.6	302	16	SSW	8	227	
15	76.3	54.8	65.6	64.7	60	85	0	1	.....	0	0.00	0.0	30.01	29.87	29.910	0.9	0.5	317	13	NNW	6	344	
16	67.1	57.7	62.4	61.7	57	85	2	0	.....	0	0.01	0.0	30.27	30.00	30.150	1.0	0.9	48	14	SE	7	39	
17	59.5	47.2	53.4	54.2	52	92	11	0	.....	0	0.14	0.0	30.31	30.13	30.224	0.4	0.4	34	12	ENE	4	50	
18	73.2	46.4	59.8	59.5	53	82	5	0	.....	0	0.01	0.0	30.13	29.94	30.032	1.4	1.2	250	18	SSW	8	235	
19	67.2	45.2	56.2	55.6	46	74	9	0	.....	0	0.00	0.0	30.29	30.07	30.201	0.7	0.7	346	19	NNW	7	3	
20	71.7	40.1*	55.9	54.9	48	80	9	0	.....	0	0.00	0.0	30.35	30.25	30.299	0.5	0.5	229	13	SSW	7	207	
21	73.9	44.1	59.0	58.2	52	83	6	0	.....	0	0.00	0.0	30.32	30.24	30.281	0.6	0.6	224	12	SW	7	195	
22	72.6	53.8	63.2	63.9	61	91	1	0	.....	0	0.00	0.0	30.29	30.20	30.251	0.4	0.4	230	9	SSW	5	197	
23	80.7*	60.0	70.3	69.4	65	88	0	6	.....	0	0.00	0.0	30.20	29.99	30.104	1.1	1.1	223	14	SW	8	225	
24	79.7	57.3	68.5	70.2	64	82	0	4	.....	0	0.01	0.0	30.06	29.95	29.994	1.1	0.9	328	16	N	8	348	
25	65.5	45.3	55.4	56.7	48	74	9	0	.....	0	0.00	0.0	30.35	30.05	30.190	1.2	1.2	20	17	NNW	8	336	
26	64.0	43.2	53.6	52.9	46	80	11	0	.....	0	0.12	0.0	30.34	30.02	30.237	0.9	0.7	177	15	SSE	8	204	
27	65.8	53.4	59.6	60.8	60	97	5	0	.....	0	0.75	0.0	30.02	29.47	29.674	0.4	0.1	252	11	SW	4	232	
28	73.3	52.4	62.9	60.9	57	88	2	0	.....	0	0.08	0.0	29.61	29.41	29.516	1.4	1.3	213	21	S	11	200	
29	64.8	45.8	55.3	55.0	49	83	9	0	.....	0	0.01	0.0	29.68	29.52	29.565	2.3	2.3	233	24	SW	13	221	
30	57.8	42.5	50.1*	52.4	45	77	14	0	.....	0	0.00	0.0	29.95	29.67	29.812	1.6	1.5	293	22	WSW	8	220	
Sum	Sum	-----	-----	---	----	Ttl	Ttl	Number of Days				For the month:										---		
2144	1557					116	28			2.27	0.0	30.39	29.41	30.069	0.9	0.2	338	24	NE	13	221			
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg				
71.5	51.9	61.7	61.3	56	83.5	----	----	≥.01 inch		11	33.03	0.0	10	28	-----	----	----	---	11+	29				
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			128	544	Thunder		0	Precipitation			Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog		0	0.98	11-12	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
September 2009: Oakland, NJ**

Hour	Wind									Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Wind			Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Wind		
	Direction	Speed	Gust	Direction	Speed	Gust	Direction	Speed	Gust																		
SEP 01																											
01		30.21	0.00	51	50	95	32	0	0		30.27	0.00	49	47	95	35	0	0		30.20	0.00	52	51	96	13	0	0
04		30.20	0.00	50	49	96	32	0	0		30.27	0.00	46	45	96	35	0	0		30.19	0.00	51	50	97	13	0	0
07		30.25	0.00	53	50	89	07	1	5		30.28	0.00	46	45	97	35	0	0		30.19	0.00	51	50	97	13	0	0
10		30.28	0.00	65	55	70	35	3	5		30.30	0.00	67	57	72	33	0	4		30.18	0.00	64	59	85	35	0	1
13		30.26	0.00	70	54	57	05	1	6		30.28	0.00	74	54	50	09	1	6		30.13	0.00	76	58	54	04	2	11
16		30.24	0.00	70	50	49	33	0	7		30.22	0.00	75	51	44	04	1	5		30.07	0.00	76	58	54	00	0	6
19		30.23	0.00	62	54	75	32	0	0		30.21	0.00	66	58	75	13	0	0		30.05	0.00	69	62	78	08	0	1
22		30.27	0.00	52	50	93	35	0	0		30.23	0.00	56	54	94	13	0	0		30.06	0.00	62	59	93	08	0	0
SEP 02																											
SEP 03																											
SEP 04																											
SEP 05																											
SEP 06																											
SEP 07																											
SEP 08																											
SEP 09																											
SEP 10																											
SEP 11																											
SEP 12																											
SEP 13																											
SEP 14																											
SEP 15																											
SEP 16																											
SEP 17																											
SEP 18																											

MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.09	0.10	0.11	0.14	0.15	0.18	0.21	0.22	0.24	0.26	0.28	0.34
Ended: Date	11	11	11	11	11	11	11	11	11	11	27	27
Ended: Time	1606	1609	1605	1609	1613	1635	1646	1657	1642	1657	0409	0412

The precipitation amounts may occur at any time during the month. The time indicated is the ending time of the interval. Date and time are not entered for trace amounts.

OBSERVATIONS AT 3-HOUR INTERVALS

September 2009: Oakland, NJ

Hour	SEP 19									SEP 20									SEP 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	30.08	0.00	60	51	70	35	2	11	30.30	0.00	45	44	96	28	0	1	30.28	0.00	47	46	96	24	0	0			
04	30.13	0.00	51	46	81	00	2	6	30.31	0.00	42	41	96	28	0	0	30.27	0.00	46	45	97	24	0	0			
07	30.20	0.00	46	43	87	00	0	4	30.33	0.00	40	39	97	28	0	0	30.31	0.00	44	43	97	24	0	0			
10	30.22	0.00	56	47	70	29	0	4	30.35	0.00	61	53	75	28	0	1	30.31	0.00	61	58	88	24	0	1			
13	30.23	0.00	63	45	51	00	2	7	30.32	0.00	70	49	47	22	1	4	30.28	0.00	71	59	65	15	2	6			
16	30.20	0.00	67	45	46	00	1	4	30.27	0.00	71	51	49	18	2	5	30.25	0.00	74	54	51	15	1	6			
19	30.23	0.00	56	52	86	28	0	0	30.25	0.00	59	55	88	24	0	0	30.26	0.00	65	61	87	26	0	2			
22	30.27	0.00	48	47	95	28	0	0	30.28	0.00	51	50	95	24	0	0	30.29	0.00	57	56	96	27	0	0			
SEP 22									SEP 23									SEP 24									
01	30.27	0.00	55	54	97	27	0	0	30.20	0.00	63	62	96	20	0	0	29.98	0.00	72	70	92	23	0	6			
04	30.27	0.00	57	56	97	27	0	0	30.18	0.00	61	60	97	20	0	0	29.97	0.00	69	68	97	19	0	5			
07	30.28	0.00	59	58	97	27	0	0	30.17	0.00	60	60	98	20	0	0	29.99	0.00	67	66	96	31	1	6			
10	30.29	0.00	65	64	97	27	0	2	30.18	0.00	69	66	89	23	0	3	30.01	0.00	73	65	76	02	2	14			
13	30.27	0.00	71	65	83	24	1	6	30.11	0.00	78	70	76	22	3	7	29.98	0.00	79	65	61	00	5	14			
16	30.22	0.00	71	63	76	23	3	5	30.02	0.00	80	69	71	22	3	12	29.96	0.00	76	62	61	34	3	6			
19	30.20	0.00	68	64	87	20	0	0	30.01	0.00	73	68	85	22	0	3	29.99	0.00	68	61	77	34	0	0			
22	30.21	0.00	64	63	96	20	0	0	30.00	0.00	70	68	94	24	0	1	30.05	0.00	61	57	87	33	0	3			
SEP 25									SEP 26									SEP 27									
01	30.06	0.00	59	52	79	33	1	4	30.34	0.00	44	43	94	06	0	0	29.99	0.10	54	52	96	16	0	1			
04	30.07	0.00	54	51	91	03	0	1	30.32	0.00	44	42	94	06	0	0	29.88	0.11	56	55	97	16	0	1			
07	30.14	0.00	51	49	95	04	0	0	30.33	0.00	43	42	96	06	0	0	29.81	0.00	58	58	98	07	0	0			
10	30.19	0.00	62	52	68	05	4	10	30.33	0.00	57	48	73	07	1	7	29.73	0.00	61	60	98	05	0	4			
13	30.22	0.00	65	49	55	03	5	15	30.26	0.00	62	45	54	15	2	10	29.60	0.06	64	64	97	10	1	3			
16	30.22	0.00	64	41	43	05	4	11	30.18	0.00	61	47	59	20	6	11	29.49	0.00	66	65	97	04	0	2			
19	30.26	0.00	54	44	70	04	0	0	30.12	0.00	57	49	76	19	0	3	29.48	0.00	66	65	97	28	0	2			
22	30.33	0.00	47	44	88	06	0	0	30.07	0.00	53	51	93	19	0	0	29.50	0.00	61	61	97	23	1	11			
SEP 28									SEP 29									SEP 30									
01	29.55	0.00	59	58	95	23	0	4	29.53	0.00	53	52	97	25	0	2	29.68	0.00	53	51	92	32	0	1			
04	29.56	0.00	55	54	97	21	0	3	29.53	0.00	48	47	97	25	0	1	29.69	0.00	53	49	86	20	1	5			
07	29.60	0.00	53	52	98	18	0	1	29.55	0.00	46	46	98	21	0	2	29.75	0.00	51	45	78	26	2	12			
10	29.59	0.00	63	59	88	18	2	6	29.56	0.00	58	52	80	18	3	9	29.81	0.00	53	45	74	22	3	8			
13	29.48	0.00	73	57	59	21	9	18	29.54	0.00	63	48	59	23	8	17	29.82	0.00	56	45	65	29	3	14			
16	29.42	0.00	69	59	70	21	0	9	29.54	0.00	63	51	66	25	4	21	29.85	0.00	56	43	62	30	2	11			
19	29.43	0.15	62	60	95	14	0	3	29.60	0.00	57	50	78	22	1	5	29.89	0.00	52	42	69	35	2	12			
22	29.50	0.00	57	56	97	26	0	1	29.65	0.00	51	49	94	21	0	2	29.95	0.00	47	42	81	30	0	4			

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		30.079	56	54	93	0.2	33	0.1
04		30.070	55	53	94	0.2	7	0.1
07		30.089	54	52	95	0.4	1	0.2
10		30.101	63	57	81	1.4	2	0.4
13		30.073	70	57	66	2.6	30	0.2
16		30.036	70	57	64	1.8	30	0.2
19		30.040	64	59	83	0.3	0	0.2
22		30.067	58	56	92	0.3	2	0.2

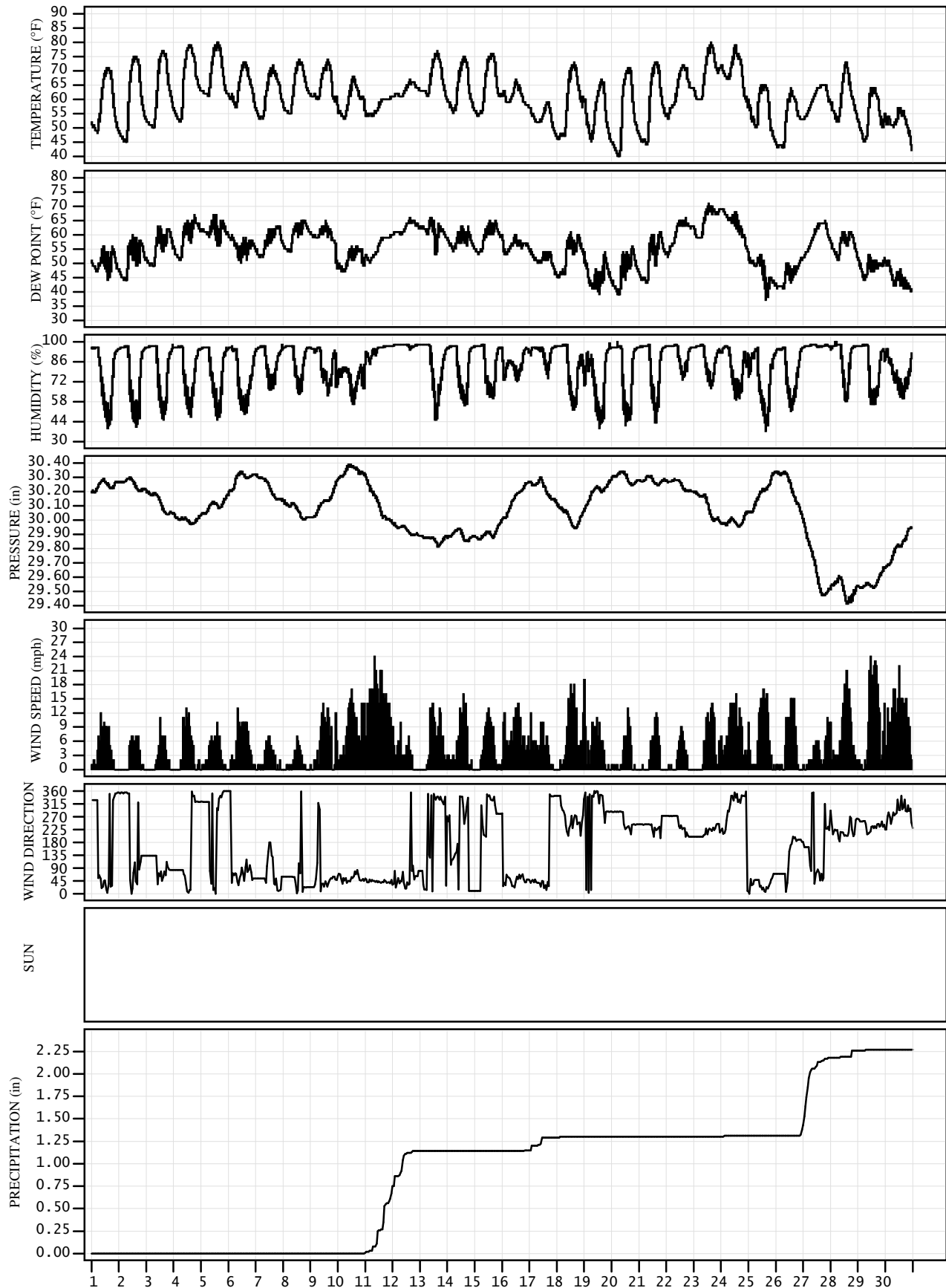
HOURLY PRECIPITATION (Water Equivalent) September 2009: Oakland, NJ

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																									03
04																									04
05																									05
06																									06
07																									07
08																									08
09																									09
10																							0.01		10
11	0.01			0.01			0.05			0.03	0.14	0.01		0.01		0.08	0.18	0.02	0.01		0.02	0.03	0.06	0.08	11
12		0.11				0.01	0.03	0.02	0.12	0.05	0.02		0.01				0.01	0.01							12
13																									13
14																									14
15																									15
16																									16
17		0.05						0.01		0.01	0.07									0.01					17
18			0.01																						18
19																									19
20																									20
21																									21
22																									22
23																									23
24			0.01																						24
25																									25
26																									26
27	0.10	0.11	0.10	0.11	0.10	0.07	0.02	0.02			0.02	0.01	0.04		0.01	0.01			0.02		0.01	0.06	0.05	27	
28																									28
29							0.01		0.01										0.07						29
30																									30
Sum	0.11	0.27	0.12	0.12	0.10	0.08	0.11	0.05	0.13	0.09	0.25	0.02	0.05	0.01	0.00	0.09	0.20	0.03	0.10	0.01	0.02	0.05	0.12	0.14	Sum

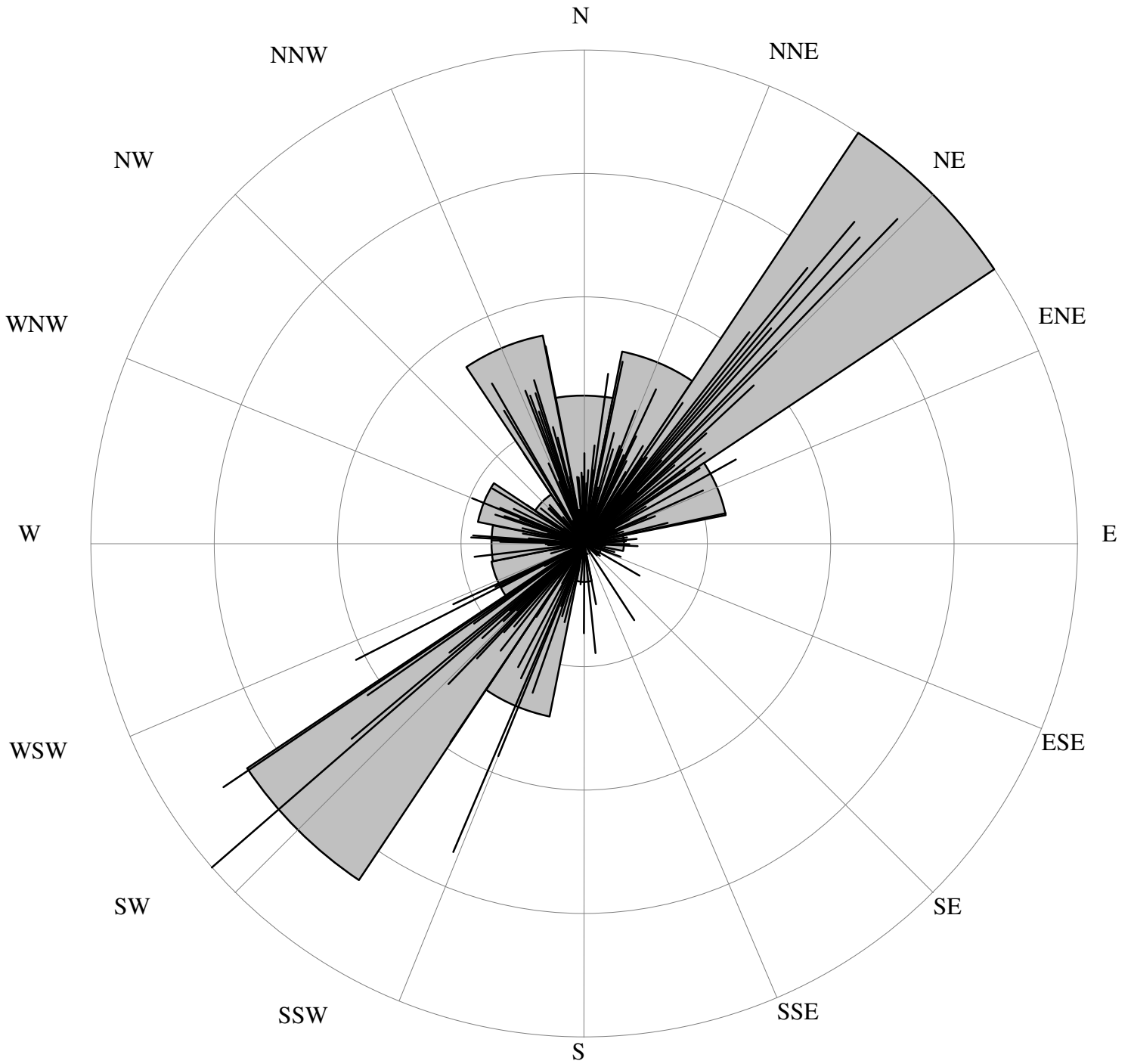
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA

September 2009: Oakland, NJ



Wind Rose: September 2009
Oakland, NJ



Maximum direction of wind: 17.0 miles from 229°
Maximum sector of wind: 140.7 miles from NE
638.9 total miles of wind