

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

June 2015

Station: Westford
 Latitude: 44° 37' 39" N Longitude: 73° 02' 29" W Elevation (Ground): 850 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						Solar Radiation		
	Maximum	Minimum	Average	Mean	Dew Point		Mean	Heating Base 65°F			Cooling Base 65°F	Water Equivalent	Ice Pellets Snow	Maximum	Minimum	Mean	Avg Speed	Res Speed	Res Dir	Peak			2 Minute	
																				Speed	Dir		Speed	Dir	Speed	Dir
1	2	3	4A	4B	5	6	7	8		11	12	13	14	15	16	17	18	19	20	21	22	23		
1	51.6	44.6	48.1	47.7	47	97	16	0	.....	0	0.62	0.0	30.23	30.16	30.198	0.2	0.2	38	9	NNE	5	30	81
2	57.1	38.7	47.9*	48.7	47	92	17	0	.....	0	0.03	0.0	30.19	30.11	30.148	0.2	0.1	279	10	WNW	6	306	115
3	63.7	35.7	49.7	48.7	44	85	15	0	.....	0	0.00	0.0	30.27	30.17	30.214	0.2	0.2	315	10	SW	6	294	273
4	76.1	39.2	57.6	58.7	49	74	7	0	.....	0	0.00	0.0	30.22	30.06	30.152	1.0	1.0	218	15	SW	7	239	313
5	72.5	56.9	64.7	62.8	57	83	0	0	.....	0	0.28	0.0	30.07	29.83	29.943	3.0	3.0	218	21	SW	11	218	213
6	63.5	40.6	52.0	54.4	45	73	12	0	.....	0	0.00	0.0	30.10	29.87	30.017	0.7	0.6	11	23	N	7	23	318
7	72.1	36.9	54.5	56.0	43	67	10	0	.....	0	0.00	0.0	30.15	29.86	30.041	1.4	1.3	217	20	SSW	10	227	272
8	65.1	54.6	59.8	61.2	57	87	5	0	.....	0	0.54	0.0	29.86	29.59	29.678	4.9	4.9	209	31	SSW	13	215	58
9	73.4	56.4	64.9	63.0	61	94	0	0	..3.....	0	1.40	0.0	29.63	29.49	29.563	1.2	0.9	275	21	NNW	10	288	114	
10	75.6	55.0	65.3	65.0	59	82	0	1	..3.....	0	0.11	0.0	29.75	29.59	29.687	1.7	1.7	218	19	SSW	9	210	248	
11	75.5	59.0	67.3	67.1	59	75	0	3	.....	0	0.00	0.0	29.88	29.59	29.732	3.2	2.7	261	22	WNW	12	299	247
12	71.7	58.1	64.9	62.8	59	88	0	0	..3.....	0	1.88	0.0	29.95	29.71	29.854	0.4	0.1	291	16	NNE	7	34	95	
13	77.8	56.0	66.9	65.2	59	81	0	2	.....	0	0.04	0.0	29.97	29.73	29.898	0.6	0.5	311	15	NNW	8	298	298
14	76.4	51.0	63.7	63.2	54	76	1	0	.....	0	0.00	0.0	30.06	29.95	30.004	0.1	0.1	305	11	WNW	6	299	288
15	65.8	56.6	61.2	61.5	58	87	3	0	.....	0	0.08	0.0	29.95	29.88	29.906	1.0	1.0	189	18	SSW	7	180	103
16	73.6	59.7	66.6	64.1	62	92	0	2	.....	0	0.58	0.0	29.96	29.71	29.805	1.3	1.0	228	15	SW	8	296	111
17	71.3	45.5	58.4	59.3	50	75	6	0	.....	0	0.00	0.0	30.15	29.96	30.077	0.5	0.4	347	15	WNW	7	300	309
18	77.3	50.1	63.7	65.2	59	80	1	0	..3.....	0	0.22	0.0	30.04	29.75	29.892	2.1	2.1	212	23	SSW	10	226	274	
19	66.6	45.3	55.9	59.3	53	82	9	0	.....	0	0.21	0.0	30.04	29.76	29.916	1.0	0.5	316	16	NE	7	214	276
20	77.1	41.2	59.1	60.9	52	75	6	0	.....	0	0.00	0.0	30.09	29.83	29.979	0.9	0.9	217	20	SW	8	210	306
21	78.1	62.0	70.0*	67.3	65	93	0	5	.....	0	0.75	0.0	29.83	29.60	29.684	0.3	0.2	214	18	SSW	6	212	139
22	78.2	56.8	67.5	66.6	61	84	0	3	.....	0	0.32	0.0	29.91	29.68	29.834	0.4	0.4	301	13	NNW	9	296	252
23	79.7	56.8	68.2	67.2	62	85	0	4	..3.....	0	0.61	0.0	29.86	29.53	29.675	2.7	2.2	239	26	W	12	267	141	
24	75.1	55.1	65.1	63.5	53	72	0	0	.....	0	0.17	0.0	29.97	29.78	29.901	0.8	0.8	300	28	NW	9	300	306
25	71.5	53.9	62.7	61.2	54	80	2	0	.....	0	0.00	0.0	30.01	29.93	29.965	0.2	0.2	323	12	WNW	7	301	297
26	75.2	49.4	62.3	61.1	52	75	3	0	.....	0	0.00	0.0	30.06	29.94	29.992	0.2	0.2	349	16	WNW	6	322	276
27	72.8	46.1	59.5	61.1	54	79	5	0	.....	0	0.00	0.0	30.12	29.97	30.052	0.0	0.0	238	8	SSW	3	265	209
28	61.9	53.1	57.5	55.9	54	93	7	0	.....	0	0.78	0.0	29.97	29.68	29.790	0.1	0.0	173	12	WSW	4	215	74
29	65.8	52.0	58.9	57.9	55	91	6	0	.....	0	0.05	0.0	29.88	29.66	29.767	0.3	0.2	254	10	S	6	297	154
30	77.3	51.5	64.4	61.9	58	88	0	0	.....	0	0.03	0.0	29.94	29.80	29.884	0.4	0.4	216	14	SW	7	252	182
Sum	Sum	-----	-----	---	----		Ttl	Ttl			Total	Total	For the month:						---					
2139	1518						131	20		Number of Days	8.70	0.0	30.27	29.49	29.908	1.0	0.7	237	31	SSW	13	215		
Avg	Avg	Avg	Mean	Avg	Avg	Avg	----	----			Season Ttl	Date	Date	-----	----	----	---	Date	Date	Avg				
71.3	50.6	61.0	60.6	55	82.7	----	----	----	Precip	19	20.06	87.3	3	9	-----	----	----	---	8	8	211			
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			8271	65	Thunder	5	Precipitation		Snow, Ice Plts												
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	0	1.92	12-13	0.0	-	0				-								
0	0	0	0	----	----	Clear	5	Partly Cloudy		13	Cloudy		12											

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: Solar Radiation is measured in Watts/m^2 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 2015: Westford

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	0	29.77	0.08	63	62	96	22	2	14	0	30.03	0.00	45	44	96	05	0	0	0	29.81	0.00	63	61	92	22	1	10
04	0	29.78	0.00	62	62	97	26	0	8	0	30.05	0.00	42	41	97	05	0	0	0	29.75	0.00	62	61	97	20	0	7
07	23	29.85	0.00	56	55	97	03	2	10	32	30.08	0.00	46	45	98	05	0	0	49	29.72	0.00	63	63	98	22	0	0
10	338	29.94	0.00	55	53	91	29	0	5	707	30.05	0.00	66	52	61	18	0	8	160	29.68	0.04	65	65	98	22	0	0
13	919	29.96	0.00	64	54	71	33	1	15	868	29.99	0.00	71	52	52	23	5	13	230	29.64	0.00	70	67	91	04	0	0
16	696	29.98	0.00	66	48	52	28	0	7	642	29.93	0.00	75	54	48	24	1	14	137	29.62	0.00	75	68	79	31	0	0
19	176	29.99	0.00	63	47	56	05	0	1	104	29.86	0.00	73	60	63	22	2	10	81	29.62	0.00	73	70	89	30	0	0
22	0	30.03	0.00	47	45	93	05	0	0	0	29.85	0.00	66	61	82	20	1	11	0	29.66	0.00	66	65	97	27	0	0
JUN 22									JUN 23									JUN 24									
01	0	29.71	0.07	62	60	96	04	0	0	0	29.83	0.00	57	56	97	04	0	0	0	29.80	0.00	64	57	77	27	0	6
04	0	29.74	0.00	60	60	98	04	0	0	0	29.80	0.00	62	59	90	22	0	1	0	29.83	0.00	58	54	89	31	0	9
07	69	29.80	0.00	62	62	98	04	0	1	9	29.67	0.17	63	61	96	17	6	18	63	29.90	0.00	56	52	86	31	1	8
10	313	29.87	0.00	67	64	92	31	2	9	104	29.63	0.14	65	64	97	20	5	14	710	29.93	0.00	64	53	68	27	0	10
13	937	29.87	0.00	74	60	61	29	5	13	647	29.57	0.00	75	70	87	21	5	24	891	29.93	0.00	70	52	52	28	0	5
16	671	29.91	0.00	77	62	61	30	0	4	130	29.55	0.00	78	71	80	24	0	12	682	29.90	0.00	75	53	46	31	0	6
19	199	29.87	0.00	74	62	66	04	0	0	204	29.63	0.00	75	62	64	28	4	16	195	29.91	0.00	71	56	59	30	0	7
22	0	29.90	0.00	59	57	92	04	0	0	0	29.73	0.00	65	57	76	28	3	10	0	29.96	0.00	57	55	95	28	0	0
JUN 25									JUN 26									JUN 27									
01	0	29.95	0.00	55	54	97	28	0	0	0	29.95	0.00	53	51	91	06	0	0	0	30.06	0.00	49	48	95	05	0	0
04	0	29.97	0.00	56	55	98	28	0	0	0	29.94	0.00	52	50	94	06	0	0	0	30.08	0.00	47	46	97	05	0	0
07	127	29.99	0.00	57	56	98	28	0	0	40	29.98	0.00	51	50	97	13	0	0	42	30.09	0.00	50	49	98	05	0	0
10	540	30.01	0.00	64	56	75	31	0	9	708	30.00	0.00	68	56	65	28	1	7	591	30.12	0.00	69	57	64	19	0	5
13	860	29.97	0.00	68	54	62	29	2	11	195	30.00	0.00	69	54	58	01	0	6	399	30.07	0.00	71	60	69	29	0	0
16	691	29.94	0.00	71	57	62	33	0	6	638	29.98	0.00	74	49	42	31	2	7	283	30.04	0.00	72	55	55	19	0	1
19	91	29.93	0.00	65	53	65	34	0	1	155	30.02	0.00	68	54	61	05	0	0	60	30.00	0.00	65	58	77	10	0	0
22	0	29.96	0.00	55	51	89	06	0	0	0	30.05	0.00	52	50	92	05	0	0	0	29.99	0.00	61	55	79	12	0	0
JUN 28									JUN 29									JUN 30									
01	0	29.95	0.00	62	55	78	16	0	5	0	29.67	0.00	53	52	97	12	0	0	0	29.88	0.00	54	53	97	25	0	0
04	0	29.91	0.24	54	52	93	14	0	0	0	29.67	0.00	52	52	98	21	0	3	0	29.90	0.00	53	52	98	25	0	0
07	37	29.84	0.05	53	52	96	20	0	0	67	29.72	0.00	53	53	98	21	1	9	42	29.92	0.00	56	56	98	20	0	8
10	100	29.83	0.08	55	55	99	33	0	1	123	29.77	0.00	56	55	96	30	2	10	431	29.92	0.00	68	61	76	22	0	8
13	304	29.74	0.00	60	57	90	04	0	0	243	29.80	0.00	61	56	85	30	4	9	870	29.89	0.00	76	62	63	23	0	8
16	171	29.70	0.00	57	55	94	00	0	0	381	29.80	0.00	65	57	76	30	0	4	97	29.89	0.00	64	61	89	21	0	11
19	26	29.69	0.00	55	54	95	01	0	0	67	29.82	0.00	64	58	81	25	0	4	25	29.84	0.00	62	60	94	20	0	0
22	0	29.69	0.00	54	53	97	12	0	1	0	29.85	0.00	58	56	94	25	0	0	0	29.83	0.00	60	58	94	17	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	0	29.911	55	53	91	0.6	22	0.5
04	0	29.909	54	52	93	0.5	22	0.4
07	60	29.928	55	53	94	1.3	22	0.9
10	438	29.936	62	56	80	1.8	25	1.0
13	600	29.915	67	57	71	1.8	24	1.4
16	453	29.889	69	57	68	1.2	23	0.8
19	93	29.880	66	57	74	0.5	24	0.4
22	0	29.899	57	54	90	0.7	23	0.4

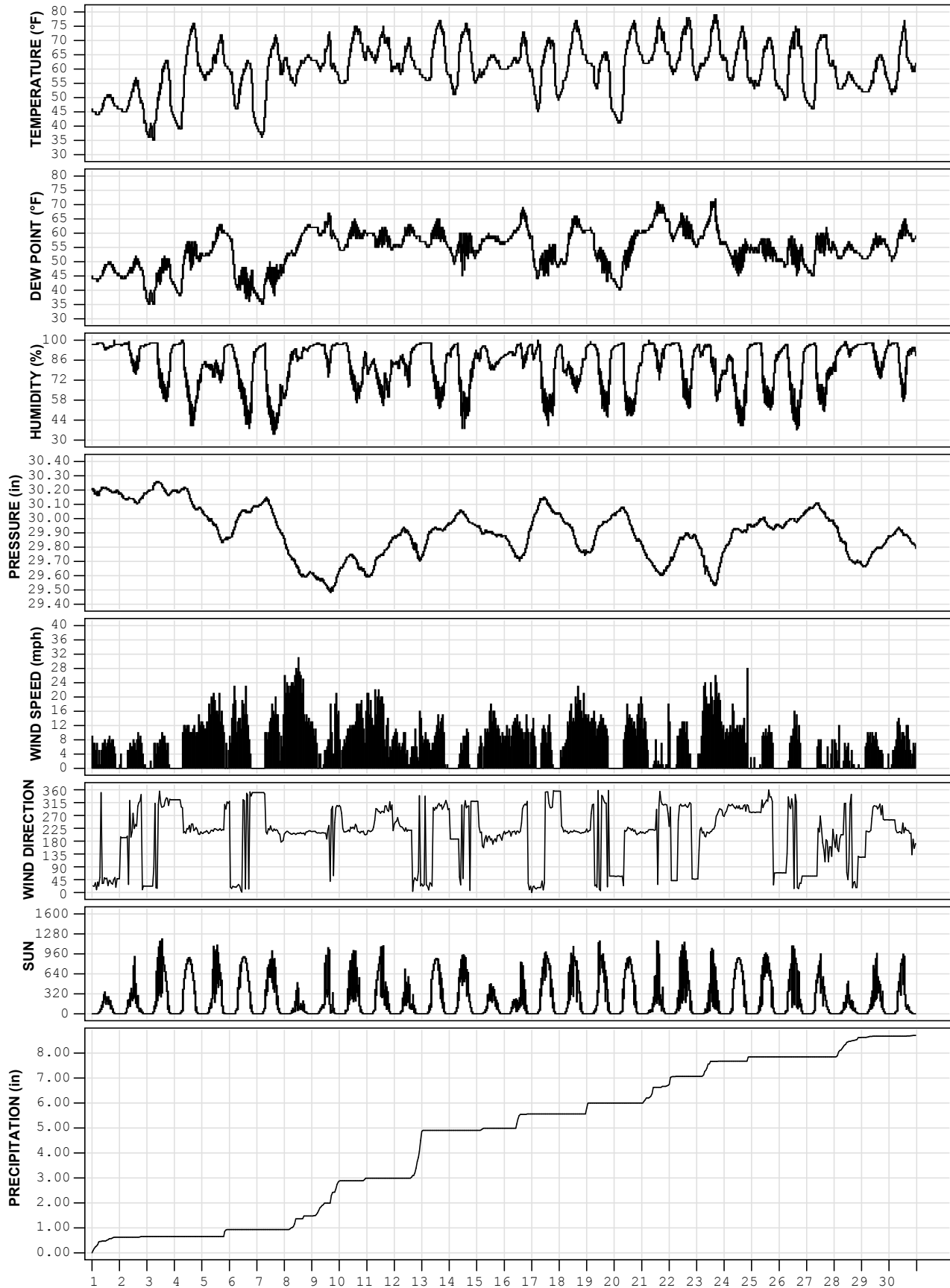
HOURLY PRECIPITATION (Water Equivalent) June 2015: Westford

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	0.08	0.09	0.06	0.04	0.06	0.10	0.02		0.02				0.03	0.02	0.03	0.02		0.02	0.02	0.01				01		
02																		0.01	0.02					02		
03																								03		
04																								04		
05																			0.20	0.06	0.02			05		
06																								06		
07																								07		
08					0.02	0.05	0.01	0.04	0.10	0.20					0.02	0.10								08		
09		0.02		0.04	0.06	0.10	0.10	0.05	0.05	0.03	0.06									0.14	0.18	0.09	0.04	09		
10	0.01															0.31	0.12	0.01		0.01	0.14	0.18	0.09	10		
11																					0.01	0.04	0.05		11	
12																									12	
13	0.04															0.04	0.07		0.11	0.18	0.27	0.17	0.24	0.43	13	
14																									14	
15				0.03	0.02	0.03																			15	
16											0.17	0.21	0.13	0.05						0.02					16	
17																									17	
18																								0.22	18	
19	0.20	0.01																							19	
20																									20	
21	0.01	0.06	0.06	0.08			0.02	0.05	0.10	0.24	0.01						0.04					0.02	0.02	0.04	21	
22	0.27	0.03	0.01			0.01																			22	
23					0.01	0.05	0.14	0.04	0.10	0.16		0.10							0.01						23	
24																					0.16	0.01			24	
25																									25	
26																									26	
27																									27	
28		0.01	0.05	0.14	0.06	0.02	0.06	0.06	0.07	0.03	0.08	0.02	0.02		0.02	0.01	0.01	0.01	0.01	0.02	0.07			0.01	28	
29					0.01	0.01	0.02					0.01														29
30																0.01			0.01		0.01					30
Sum	0.61	0.22	0.18	0.33	0.24	0.37	0.37	0.24	0.44	0.67	0.32	0.33	0.18	0.07	0.09	0.13	0.42	0.31	0.26	0.52	0.62	0.51	0.59	0.68	Sum	

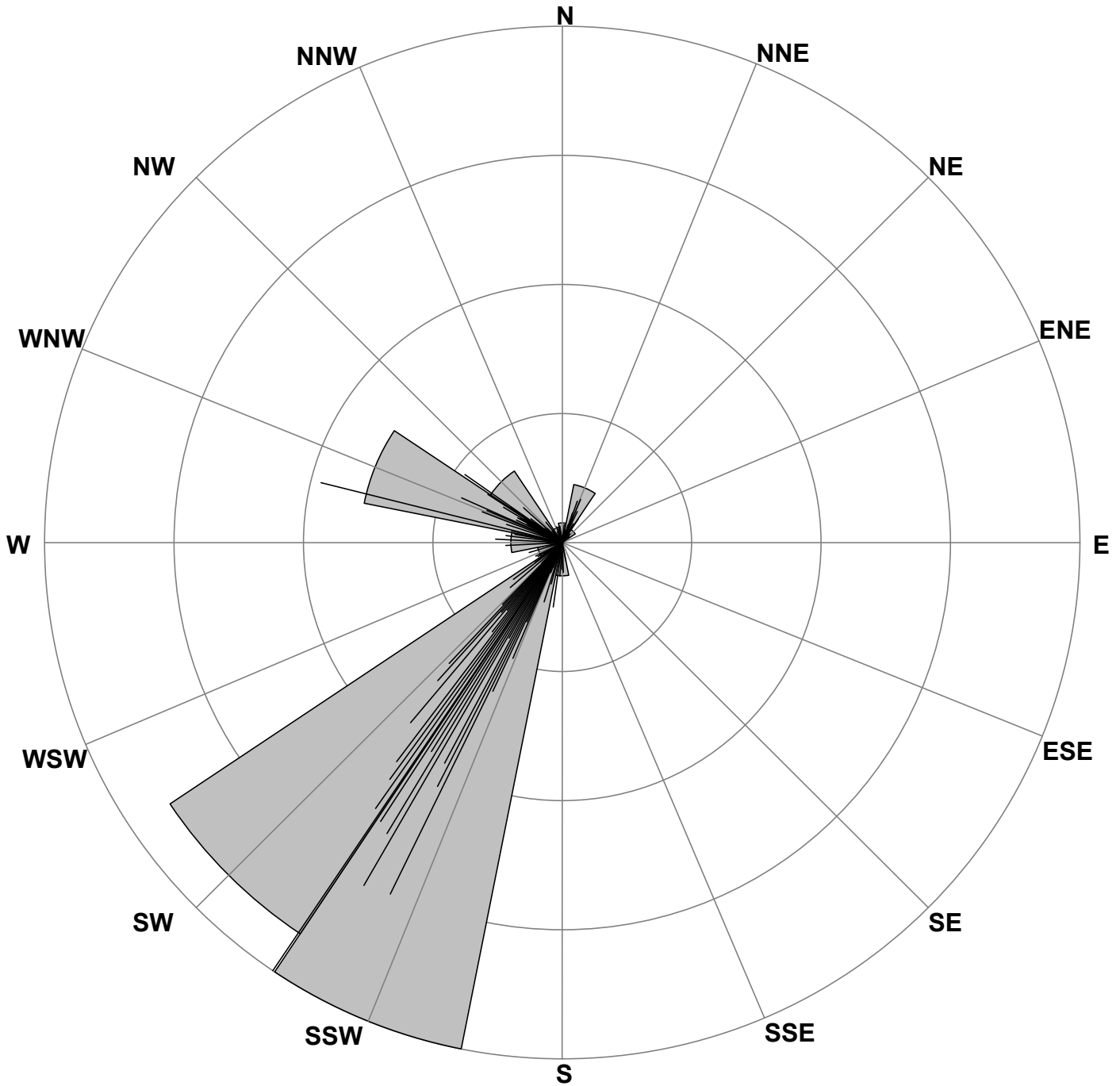
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA

June 2015: Westford



**Wind Rose: June 2015
Westford**



**Maximum direction of wind: 45.8 miles from 214°
Maximum sector of wind: 257.9 miles from SSW
746.7 total miles of wind**