

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

November 2014

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			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	39.7	29.0	34.4	34.0	31	89	30	0	.....	T	0.03	0.2	30.02	29.96	29.992	0.5	0.5	14	15	N	5	21	33
2	41.6	29.5	35.5	33.9	24	69	29	0	.....	0	0.02	0.0	30.02	29.88	29.947	1.7	1.6	354	24	NNE	10	313	78
3	46.7	28.0	37.4	35.7	23	61	27	0	.....	0	0.00	0.0	30.01	29.89	29.976	1.9	1.9	316	19	WNW	10	327	95
4	59.0	32.7	45.9	49.0	34	58	19	0	.....	0	0.00	0.0	30.04	29.80	29.943	2.8	2.8	202	23	SSW	13	206	32
5	57.8	45.2	51.5	49.9	38	64	13	0	.....	0	0.09	0.0	30.03	29.80	29.922	4.0	3.7	247	27	W	13	264	62
6	46.5	36.9	41.7	42.4	37	80	23	0	.....	0	0.16	0.0	30.03	29.62	29.850	0.2	0.1	356	11	WSW	4	237	34
7	36.9	30.1	33.5	32.9	31	94	31	0	.....	0	0.22	T	29.82	29.56	29.651	1.1	1.0	338	22	NW	9	315	20
8	39.5	28.4	33.9	33.8	25	69	31	0	.....	0	0.01	0.0	29.92	29.74	29.831	1.9	1.3	252	20	WNW	11	319	73
9	42.3	29.9	36.1	38.5	29	69	29	0	.....	0	0.01	0.0	29.91	29.73	29.837	2.0	1.7	232	20	W	11	305	34
10	48.1	36.9	42.5	42.0	34	72	22	0	.....	0	0.00	0.0	30.10	29.90	30.031	1.5	1.5	212	16	SW	8	212	47
11	60.4	43.6	52.0	52.3	42	68	13	0	.....	0	0.00	0.0	30.02	29.80	29.908	4.5	4.5	202	28	SSW	14	202	85
12	53.5	36.0	44.8	46.0	40	79	20	0	.....	0	0.10	0.0	30.01	29.72	29.846	4.1	3.3	249	29	WNW	14	284	24
13	37.7	29.8	33.8	33.9	25	71	31	0	.....	1	0.00	0.6	30.04	29.92	29.981	1.2	1.1	265	19	W	8	290	31
14	33.9	22.8	28.4	27.9	24	84	36	0	.....	1	0.03	0.9	30.09	29.89	29.958	0.9	0.8	292	23	WNW	7	299	32
15	34.7	23.3	29.0	27.3	18	67	36	0	.....	0	0.01	0.0	30.25	30.08	30.195	1.3	1.2	290	22	WNW	9	284	82
16	34.9	27.8	31.4	32.0	23	69	33	0	.....	0	T	T	30.24	30.01	30.135	3.0	3.0	206	22	SW	10	202	37
17	36.3	30.8	33.5	33.3	31	93	31	0	.....	1	0.42	0.3	30.02	29.39	29.672	0.6	0.6	215	12	SSW	7	236	5
18	35.8	21.0	28.4	26.2	16	64	36	0	.....	T	0.01	T	29.68	29.42	29.562	5.4	5.1	258	29	W	18	284	34
19	29.5	20.5	25.0	23.5	14	67	39	0	.....	T	T	T	30.03	29.68	29.924	2.7	2.4	256	25	W	13	281	51
20	34.8	22.4	28.6	26.1	17	67	36	0	.....	T	T	T	29.86	29.68	29.758	5.3	4.8	229	28	W	14	278	52
21	24.9	18.0	21.4	21.4	12	66	43	0	.....	T	0.01	0.0	30.34	29.81	30.126	3.8	3.5	291	23	WNW	14	302	59
22	37.2	18.1	27.7	27.7	17	65	37	0	.....	T	T	T	30.31	29.89	30.081	5.4	5.3	209	28	S	14	217	42
23	49.5	35.9	42.7	41.6	38	88	22	0	.....	0	0.11	0.0	30.04	29.89	29.985	2.6	2.6	210	22	SW	10	214	20
24	64.7	44.0	54.3*	54.7	50	85	10	0	.....	0	0.53	0.0	29.89	29.32	29.501	4.5	4.3	208	27	W	14	192	34
25	57.1	37.1	47.1	44.3	33	64	18	0	.....	0	0.00	0.0	30.09	29.49	29.790	3.3	3.2	251	25	W	12	262	50
26	37.1	26.3	31.7	30.3	25	80	33	0	.....	6	0.36	6.1	30.22	29.91	30.096	0.8	0.6	301	26	W	15	297	9
27	27.5	20.9	24.2	24.5	22	90	40	0	.....	6	0.08	1.4	30.02	29.89	29.972	0.1	0.1	12	9	N	2	2	4
28	25.1	14.7	19.9	21.3	18	86	45	0	.....	6	0.15	2.6	30.18	30.00	30.081	0.6	0.6	292	13	NW	6	291	5
29	28.9	8.5*	18.7*	20.8	15	77	46	0	.....	4	0.00	0.0	30.27	30.01	30.174	2.7	2.7	200	26	S	12	199	54
30	42.9	28.9	35.9	38.2	32	78	29	0	.....	T	0.01	0.0	30.01	29.83	29.908	6.6	6.6	204	32	SSW	16	199	23
Sum	Sum	-----	-----	---	----		Ttl	Ttl					For the month:										---	
1245	857						888	0	Number of Days	2.36	12.1	30.34	29.32	29.921	2.6	1.9	236	32	SSW	18	284			
Avg	Avg	Avg	Mean	Avg	Avg		----	----	Precip	Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg				
41.5	28.6	35.0	34.8	27	74.4		----	----	≥.01 inch	19	39.63	12.1	21	24	-----	----	----	---	30	18	41			
Number of Days							Season to Date	Snow, Ice ≥1.0 inch	3	Greatest in 24 Hours and Dates					Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date									
Max Temperature			Min Temperature			1628	301	Thunder	0	Precipitation		Snow, Ice Plts												
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----			Heavy Fog	0	0.53	24	6.1	26	6			26+							
0	5	21	0	----	----			Clear	1	Partly Cloudy		11	Cloudy		18									

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

November 2014: Westford

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								
NOV 19										NOV 20										NOV 21									
01	0	29.71	0.00	22	12	65	23	3	10	0	29.83	0.00	23	12	62	20	5	15	0	29.83	0.00	23	13	63	25	4	13		
04	0	29.84	0.00	21	14	74	28	6	17	0	29.77	0.00	24	16	70	20	7	20	0	29.88	0.00	21	15	76	26	4	16		
07	0	29.95	0.00	21	15	76	29	0	11	0	29.75	0.00	25	16	68	21	6	16	0	30.00	0.00	21	14	77	32	7	19		
10	185	30.02	0.00	25	16	68	24	3	10	243	29.71	0.00	30	20	67	21	5	14	139	30.12	0.00	21	15	78	31	8	19		
13	100	30.00	0.00	27	16	63	29	4	10	160	29.68	0.00	32	22	67	22	8	16	364	30.18	0.00	24	11	57	30	7	16		
16	16	29.98	0.00	26	12	56	25	0	4	11	29.74	0.00	27	20	75	25	2	11	14	30.26	0.00	22	6	49	28	2	12		
19	0	29.96	0.00	21	14	72	18	0	3	0	29.78	0.00	26	15	63	23	3	12	0	30.33	0.00	19	7	61	26	0	6		
22	0	29.91	0.00	24	10	54	19	4	11	0	29.80	0.00	24	12	60	25	9	15	0	30.32	0.00	21	12	68	25	1	7		
NOV 22										NOV 23										NOV 24									
01	0	30.30	0.00	19	11	70	25	0	4	0	29.92	0.00	38	30	75	21	8	16	0	29.86	0.00	48	41	77	18	2	9		
04	0	30.28	0.00	18	12	74	19	1	4	0	29.95	0.00	36	35	95	20	4	13	0	29.73	0.00	49	41	72	17	1	9		
07	5	30.22	0.00	21	16	81	20	4	11	0	29.99	0.00	38	37	96	19	4	9	0	29.55	0.11	48	46	92	18	5	19		
10	134	30.14	0.00	26	17	68	19	9	27	33	30.04	0.00	40	38	95	21	5	8	120	29.47	0.00	51	49	95	21	2	12		
13	230	30.02	0.00	30	15	52	20	8	21	51	30.02	0.00	44	41	89	22	3	8	345	29.36	0.00	63	58	84	19	7	21		
16	5	29.91	0.00	32	13	45	20	9	27	11	30.01	0.00	42	39	91	20	0	0	9	29.33	0.00	63	57	81	22	4	14		
19	0	29.93	0.00	33	24	69	21	1	16	0	30.01	0.00	43	41	93	20	1	6	0	29.35	0.18	58	56	93	22	3	10		
22	0	29.92	0.00	36	26	67	21	8	15	0	29.97	0.00	48	42	79	18	0	0	0	29.43	0.00	56	51	85	22	3	17		
NOV 25										NOV 26										NOV 27									
01	0	29.52	0.00	56	42	60	21	2	9	0	30.10	0.00	36	25	63	29	14	25	0	29.89	0.00	26	25	95	01	1	4		
04	0	29.64	0.00	44	38	80	27	1	8	0	30.16	0.00	33	24	68	28	0	7	0	29.90	0.00	25	23	94	03	0	4		
07	0	29.71	0.00	44	35	73	25	1	9	0	30.17	0.00	32	25	75	32	0	0	0	29.94	0.00	22	20	93	34	0	0		
10	83	29.77	0.00	46	32	59	21	2	15	47	30.19	0.00	31	22	70	00	1	5	18	29.99	0.00	26	24	91	30	0	0		
13	107	29.78	0.00	46	29	52	26	6	12	28	30.11	0.00	31	22	70	02	0	0	18	29.99	0.00	27	22	82	01	0	0		
16	9	29.86	0.00	43	27	55	23	2	14	0	30.06	0.00	28	26	93	01	0	2	0	30.00	0.00	25	21	85	01	0	0		
19	0	29.92	0.00	42	28	57	24	1	12	0	30.00	0.00	27	26	95	01	1	5	0	30.00	0.00	23	20	85	02	0	0		
22	0	30.00	0.00	39	31	73	27	4	12	0	29.95	0.00	27	25	95	01	1	6	0	30.02	0.00	22	20	91	02	0	0		
NOV 28										NOV 29										NOV 30									
01	0	30.00	0.00	22	20	93	02	0	0	0	30.18	0.00	15	12	88	28	0	0	0	30.00	0.00	31	22	71	19	10	30		
04	0	30.01	0.00	21	19	95	02	0	0	0	30.20	0.00	9	7	90	28	0	0	0	29.99	0.00	32	27	81	19	5	24		
07	0	30.05	0.00	23	21	94	28	2	6	0	30.24	0.00	14	12	91	19	0	2	0	29.95	0.00	35	29	80	20	9	20		
10	18	30.09	0.00	23	17	78	29	1	8	60	30.27	0.00	22	16	79	20	2	10	67	29.94	0.00	38	31	76	20	7	21		
13	9	30.06	0.00	24	18	76	27	0	13	378	30.20	0.00	28	18	65	21	3	11	76	29.86	0.00	42	34	74	19	7	19		
16	0	30.10	0.00	22	17	83	33	0	0	5	30.17	0.00	26	18	70	20	1	11	0	29.85	0.00	43	36	75	20	5	20		
19	0	30.15	0.00	21	17	84	31	1	4	0	30.11	0.00	26	17	68	20	5	14	0	29.86	0.00	43	37	78	20	5	15		
22	0	30.17	0.00	18	14	82	30	0	0	0	30.05	0.00	27	17	68	18	7	16	0	29.83	0.00	42	38	87	19	5	12		

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	29.912	34	26	74	3.1	24	2.1
04	0	29.920	32	26	79	2.0	24	1.4
07	3	29.936	33	27	81	2.9	23	2.2
10	133	29.947	36	28	74	3.3	24	2.1
13	168	29.909	38	28	66	3.6	24	2.3
16	12	29.908	37	27	69	2.0	24	1.5
19	0	29.919	35	27	74	2.0	23	1.6
22	0	29.914	35	27	76	2.5	22	1.9

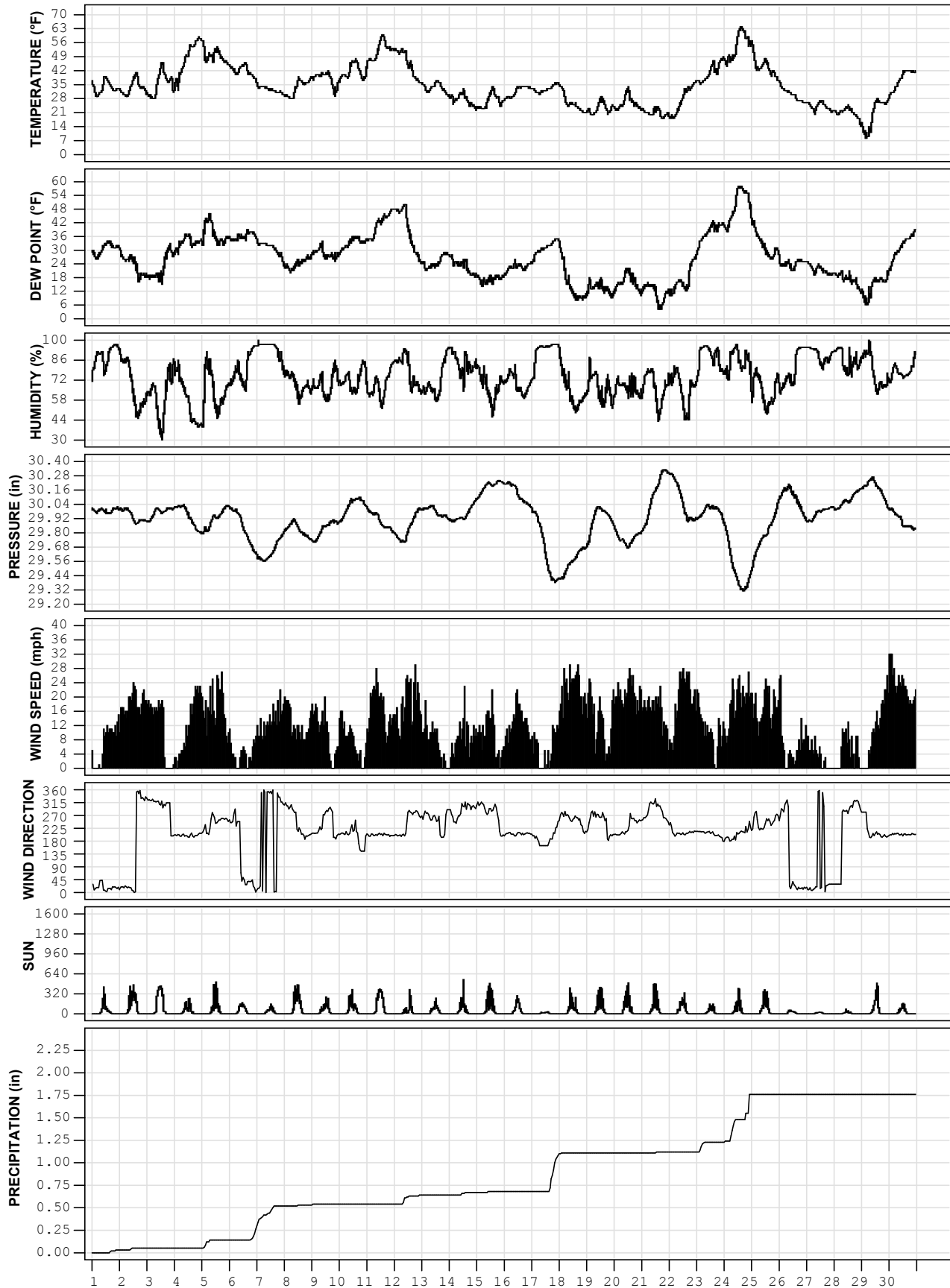
HOURLY PRECIPITATION (Water Equivalent) November 2014: Westford

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																								01	
02										0.01	0.01										0.01			02	
03																								03	
04																								04	
05		0.01	0.02	0.04			0.02																	05	
06																			0.01	0.01	0.02	0.03	0.05	0.04	06
07	0.04	0.03	0.01	0.01	0.01	0.02			0.01	0.01		0.02	0.02	0.02										07	
08												0.02												08	
09	0.01											0.01												09	
10																								10	
11																								11	
12								0.02	0.05		0.01		0.01								0.01			12	
13																								13	
14											0.02			0.01										14	
15										0.01														15	
16																								16	
17																								17	
18		0.01														0.04	0.10	0.04	0.06	0.08	0.04	0.02	0.02	0.02	18
19																									19
20																									20
21															0.01										21
22																									22
23			0.02	0.04	0.03	0.01	0.01																		23
24	0.01					0.06	0.06	0.06	0.04	0.02									0.07			0.21			24
25																									25
26																									26
27																									27
28																									28
29																									29
30																									30
Sum	0.06	0.05	0.05	0.09	0.04	0.09	0.09	0.08	0.10	0.05	0.04	0.03	0.04	0.03	0.02	0.05	0.11	0.04	0.14	0.09	0.07	0.27	0.07	0.06	Sum

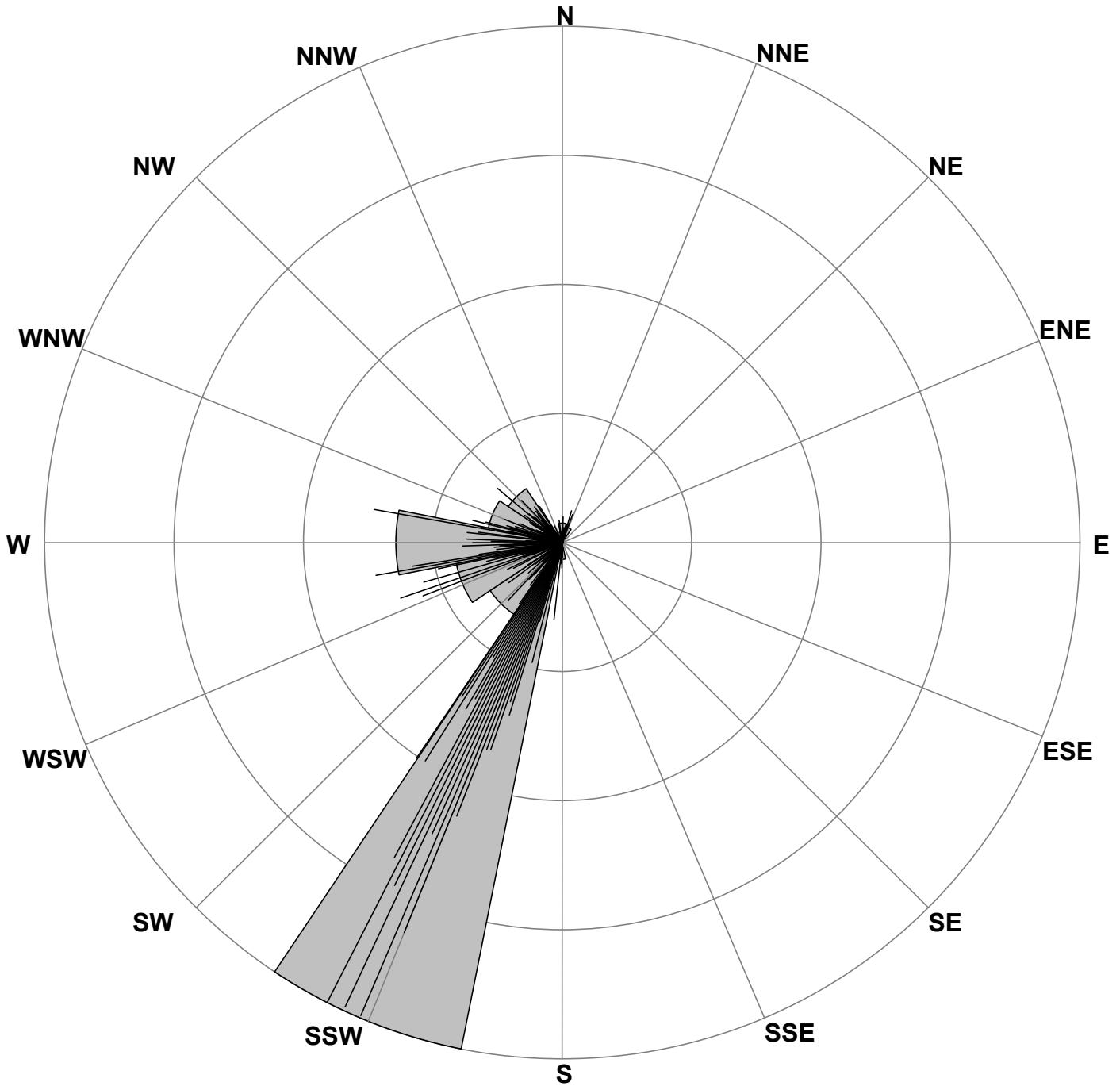
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA

November 2014: Westford



**Wind Rose: November 2014
Westford**



**Maximum direction of wind: 86.4 miles from 207°
Maximum sector of wind: 884.5 miles from SSW
1848.7 total miles of wind**