

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

January 2012

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
1	2	3	4A	4B	5	6	7	8		10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	42.8	29.6	36.2	35.7	33	89	28	0	1	T	0.02	0.0	30.01	29.45	29.799	2.9	2.8	198	25	SSW	14	202	24	
2	42.1	17.0	29.5	31.8	24	73	35	0	1	T	0.17	1.2	29.68	29.42	29.501	5.9	5.3	264	24	W	15	303	27	
3	17.4	-0.4	8.5	6.8	-0	73	56	0	1	T	0.02	0.5	30.17	29.68	29.954	3.5	3.4	324	18	NW	11	298	40	
4	18.2	-4.5	6.9	6.8	-1	71	58	0	1	T	T	T	30.18	29.80	30.026	3.9	3.8	208	20	SSW	11	219	32	
5	24.5	14.5	19.5	20.0	13	73	45	0	2	T	0.07	2.0	29.88	29.74	29.799	4.6	3.4	243	24	SSW	13	315	28	
6	35.2	15.2	25.2	26.5	20	77	40	0	2	T	0.02	0.2	29.86	29.64	29.721	2.4	2.4	203	12	SSW	7	209	8	
7	40.2	31.3	35.8	35.6	30	80	29	0	1	T	0.16	0.5	29.86	29.60	29.686	2.6	2.2	222	17	SSW	9	260	22	
8	34.2	7.9	21.1	21.6	15	76	44	0	1	T	0.1	0.1	30.30	29.85	30.139	2.4	2.2	322	17	WSW	10	261	51	
9	32.4	7.7	20.1	23.4	15	71	45	0	1	T	T	T	30.28	29.82	30.097	4.5	4.5	204	20	SSW	11	197	35	
10	34.4	17.2	25.8	29.2	20	68	39	0	1	T	T	T	29.99	29.69	29.805	5.3	3.4	235	25	WNW	15	311	15	
11	27.4	6.8	17.1	16.5	9	73	48	0	1	0.00	0.0	0.0	30.14	29.97	30.043	0.2	0.2	73	5	ENE	3	66	56	
12	34.0	20.7	27.4	31.0	25	80	37	0	2	0.08	0.7	0.7	29.98	29.42	29.682	2.1	2.0	177	20	ESE	11	164	12	
13	39.5	20.3	29.9	30.5	27	88	35	0	8	0.74	6.0	6.0	29.51	29.01	29.248	4.9	3.7	246	26	W	16	273	16	
14	20.3	-3.6	8.3	4.6	-0	80	57	0	8	0.02	1.1	1.1	30.14	29.51	29.882	3.0	2.5	317	22	WNW	15	281	30	
15	4.0	-7.2*	-1.6*	-2.2	-8	77	67	0	8	0.07	1.2	1.2	30.57	30.13	30.394	0.6	0.6	323	12	NW	7	323	49	
16	26.7	-6.9	9.9	10.0	2	70	55	0	7	0.00	0.0	0.0	30.59	29.97	30.320	5.6	5.6	204	32	S	17	208	70	
17	40.7	26.6	33.7	32.1	28	85	31	0	5	0.18	T	T	29.97	29.21	29.664	6.3	6.3	205	27	S	16	197	18	
18	41.0	2.3	21.6	18.1	9	66	43	0	5	0.00	0.0	0.0	30.19	29.21	29.825	6.7	5.8	281	39	WSW	22	267	48	
19	26.5	-1.6	12.4	13.0	3	66	52	0	5	0.01	0.1	0.1	30.22	29.85	30.049	2.6	2.6	190	20	S	10	195	74	
20	24.4	0.3	12.3	14.1	3	62	53	0	5	T	T	T	30.32	29.84	30.111	4.3	3.6	283	26	W	18	296	71	
21	17.1	0.0	8.6	7.3	0	73	56	0	5	0.03	0.5	0.5	30.38	30.19	30.259	0.2	0.2	58	6	NNE	3	40	41	
22	26.5	-0.8	12.8	13.4	4	67	52	0	5	0.00	0.0	0.0	30.54	30.32	30.445	2.4	2.4	199	29	WSW	16	202	68	
23	40.9	26.3	33.6	34.5	29	79	31	0	3	0.06	0.0	0.0	30.32	29.71	30.032	4.7	4.7	199	22	S	12	197	37	
24	44.1*	32.6	38.3*	37.3	31	79	26	0	1	0.07	0.0	0.0	29.99	29.68	29.852	5.7	5.0	261	23	S	14	298	16	
25	32.7	22.2	27.5	26.9	19	72	37	0	1	0.00	0.0	0.0	30.24	29.99	30.161	2.9	2.5	308	21	WNW	13	297	35	
26	32.1	16.4	24.2	25.4	18	75	41	0	1	0.04	0.7	0.7	30.22	29.83	30.099	0.5	0.3	184	14	S	6	176	66	
27	40.1	29.4	34.7	34.9	31	87	30	0	2	0.69	0.8	0.8	29.83	29.21	29.487	3.9	2.5	229	23	W	13	261	21	
28	38.6	29.1	33.8	33.8	26	75	31	0	1	0.03	0.3	0.3	29.92	29.67	29.782	4.1	3.0	238	24	SSW	14	270	71	
29	32.7	26.7	29.7	29.4	20	68	35	0	1	0.01	T	T	29.93	29.73	29.870	4.8	4.7	251	29	W	15	258	38	
30	28.3	11.9	20.1	20.7	11	68	45	0	1	0.04	0.5	0.5	30.22	29.90	30.106	2.9	2.8	308	19	NW	11	314	72	
31	37.1	15.2	26.1	24.2	19	82	39	0	3	0.11	1.3	1.3	30.20	29.84	30.026	0.8	0.6	174	10	S	6	189	23	
Sum	Sum	-----	-----	---	----		Ttl	Ttl	Number of Days				For the month:											---
976	402						1320	0			2.64	17.7	30.59	29.01	29.931	3.5	2.3	241	39	WSW	22	267		
Avg	Avg	Avg	Mean	Avg	Avg	----	----		Precip		Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg			
31.5	13.0	22.2	22.3	15	74.9	----	----		≥.01 inch	21	2.64	43.1	16	13	-----	----	----	---	18	18	39			
Number of Days							Season to Date	Snow, Ice ≥1.0 inch	6	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date								
Max Temperature			Min Temperature			3735	0	Thunder	0	Precipitation			Snow, Ice Plts											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----			Heavy Fog	1	0.00	-	6.0	13				8		13+					
0	14	30	9	----	----			Clear	1	Partly Cloudy		11	Cloudy		19									

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 January 2012: 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						
JAN 01																											
01	0	29.96	0.00	31	29	94	02	0	0	0	29.46	0.00	39	35	88	25	7	11	0	29.70	0.00	17	8	66	28	5	16
04	0	29.99	0.00	30	28	94	06	0	0	0	29.47	0.00	37	29	73	27	3	9	0	29.77	0.00	12	6	79	31	7	14
07	0	30.00	0.00	31	29	94	06	0	0	0	29.42	0.00	33	25	72	20	3	8	0	29.84	0.00	9	3	79	33	6	12
10	32	29.98	0.00	32	31	95	20	3	7	65	29.44	0.00	35	25	66	26	10	20	86	29.95	0.00	7	1	76	31	4	11
13	56	29.80	0.00	37	34	91	20	2	8	102	29.44	0.00	34	27	77	23	6	12	211	29.97	0.00	7	-1	71	33	4	13
16	14	29.63	0.00	39	34	81	19	4	13	12	29.49	0.00	33	25	72	24	2	9	23	30.03	0.00	5	-3	69	32	3	16
19	0	29.59	0.00	40	36	85	19	7	16	0	29.59	0.00	25	21	85	29	7	12	0	30.11	0.00	1	-6	73	01	0	4
22	0	29.51	0.00	43	38	82	20	8	21	0	29.67	0.00	20	15	80	29	7	16	0	30.16	0.00	0	-7	73	34	1	6
JAN 02																											
01	0	29.96	0.00	31	29	94	02	0	0	0	29.46	0.00	39	35	88	25	7	11	0	29.70	0.00	17	8	66	28	5	16
JAN 18																											
01	0	30.57	0.00	-5	-10	78	16	0	0	0	29.96	0.00	27	18	70	19	8	21	0	29.26	0.00	40	37	89	22	3	18

MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ended: Date	00	00	00	00	00	00	00	00	00	00	00	00
Ended: Time	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

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

January 2012: Westford

Hour	JAN 19									JAN 20									JAN 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	30.17	0.00	0	-5	79	33	0	0	0	29.84	0.00	22	19	85	18	3	8	0	30.29	0.00	2	-5	71	06	0	0
04	0	30.17	0.00	0	-5	80	33	0	0	0	29.90	0.00	23	18	80	27	7	13	0	30.25	0.00	6	-5	61	06	0	3
07	0	30.20	0.00	2	-4	77	19	1	4	0	30.01	0.00	17	5	60	28	4	11	0	30.22	0.00	5	-1	76	09	0	3
10	276	30.19	0.00	11	3	69	17	0	2	123	30.10	0.00	15	5	63	31	2	10	95	30.22	0.00	8	1	75	09	0	2
13	385	30.03	0.00	23	3	40	20	5	13	362	30.15	0.00	17	3	53	28	12	18	199	30.20	0.00	14	6	70	00	1	4
16	30	29.93	0.00	22	4	44	16	5	11	32	30.21	0.00	13	-3	47	35	0	6	33	30.22	0.00	17	6	63	04	0	0
19	0	29.89	0.00	23	9	54	19	6	12	0	30.27	0.00	5	-7	56	05	0	4	0	30.29	0.00	7	1	77	04	0	0
22	0	29.87	0.00	21	17	82	19	3	10	0	30.31	0.00	3	-7	63	06	0	0	0	30.36	0.00	3	-2	81	04	0	0
JAN 22									JAN 23									JAN 24									
01	0	30.41	0.00	3	-1	81	04	0	0	0	30.30	0.00	27	19	72	19	5	11	0	29.68	0.00	43	41	95	18	4	14
04	0	30.45	0.00	1	-4	80	04	0	0	0	30.24	0.00	27	19	74	18	3	10	0	29.70	0.00	44	42	95	20	5	12
07	0	30.50	0.00	0	-4	80	04	0	0	0	30.17	0.00	30	24	76	23	3	6	0	29.80	0.00	38	34	85	29	5	11
10	234	30.54	0.00	11	7	81	04	0	0	77	30.14	0.00	36	28	74	18	7	17	44	29.85	0.00	38	32	79	28	4	10
13	230	30.49	0.00	23	6	48	24	1	4	104	30.03	0.00	38	31	75	20	9	22	30	29.88	0.00	36	30	76	27	4	19
16	51	30.42	0.00	24	8	51	21	3	5	9	29.93	0.00	37	31	79	20	5	9	16	29.90	0.00	36	27	70	28	6	18
19	0	30.40	0.00	21	8	58	18	3	14	0	29.81	0.00	40	36	85	18	7	11	0	29.95	0.00	34	23	65	24	7	18
22	0	30.35	0.00	25	14	63	19	9	21	0	29.75	0.00	39	36	91	18	1	11	0	29.99	0.00	33	24	70	25	3	9
JAN 25									JAN 26									JAN 27									
01	0	30.00	0.00	33	24	71	27	4	10	0	30.18	0.00	23	16	75	05	0	0	0	29.79	0.00	31	28	86	18	6	12
04	0	30.08	0.00	30	21	68	29	8	16	0	30.19	0.00	17	13	84	05	0	1	0	29.68	0.00	33	30	88	15	1	4
07	0	30.14	0.00	30	21	69	30	3	9	0	30.21	0.00	19	13	79	05	0	0	0	29.53	0.00	36	32	88	17	5	10
10	53	30.21	0.00	27	18	71	30	4	11	174	30.21	0.00	25	18	74	05	0	1	53	29.41	0.00	36	33	88	19	4	6
13	209	30.19	0.00	27	18	67	31	4	11	255	30.11	0.00	31	20	61	16	2	5	51	29.28	0.00	39	35	85	20	4	8
16	46	30.18	0.00	27	18	67	01	1	3	47	30.05	0.00	30	20	66	20	1	5	0	29.24	0.00	38	35	88	20	2	5
19	0	30.23	0.00	24	17	74	04	1	4	0	30.00	0.00	29	21	72	20	0	1	0	29.43	0.00	33	30	88	29	3	8
22	0	30.21	0.00	22	16	77	05	0	3	0	29.89	0.00	30	26	86	20	3	7	0	29.59	0.00	30	26	87	31	4	14
JAN 28									JAN 29									JAN 30									
01	0	29.73	0.00	32	27	83	30	7	19	0	29.75	0.00	31	23	73	22	0	8	0	29.90	0.00	27	24	87	29	4	8
04	0	29.83	0.00	32	26	78	31	4	9	0	29.83	0.00	29	16	58	24	9	21	0	29.96	0.00	26	19	76	32	4	10
07	0	29.90	0.00	31	25	78	28	4	7	0	29.89	0.00	27	16	62	24	7	14	0	30.06	0.00	20	11	67	32	3	8
10	174	29.92	0.00	34	25	70	27	1	5	77	29.92	0.00	29	20	68	22	5	10	156	30.14	0.00	19	11	71	34	5	10
13	413	29.81	0.00	39	27	63	19	4	8	216	29.88	0.00	29	23	77	29	0	3	429	30.14	0.00	24	8	50	26	7	13
16	74	29.68	0.00	37	27	66	20	3	8	23	29.86	0.00	32	20	61	25	4	9	40	30.18	0.00	23	7	50	32	4	17
19	0	29.71	0.00	36	26	69	21	7	16	0	29.90	0.00	31	21	64	25	5	11	0	30.21	0.00	17	6	62	28	0	0
22	0	29.68	0.00	32	29	89	20	5	12	0	29.90	0.00	29	24	81	28	3	5	0	30.22	0.00	13	6	75	28	0	0
JAN 31																											
01	0	30.18	0.00	16	11	79	28	0	1																		
04	0	30.13	0.00	16	11	81	07	1	3																		
07	0	30.09	0.00	18	14	83	08	0	3																		
10	86	30.07	0.00	24	18	77	07	1	3																		
13	95	29.99	0.00	28	23	82	16	1	3																		
16	7	29.97	0.00	27	23	87	15	1	3																		
19	0	29.95	0.00	28	25	88	07	0	0																		
22	0	29.89	0.00	34	27	76	20	1	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

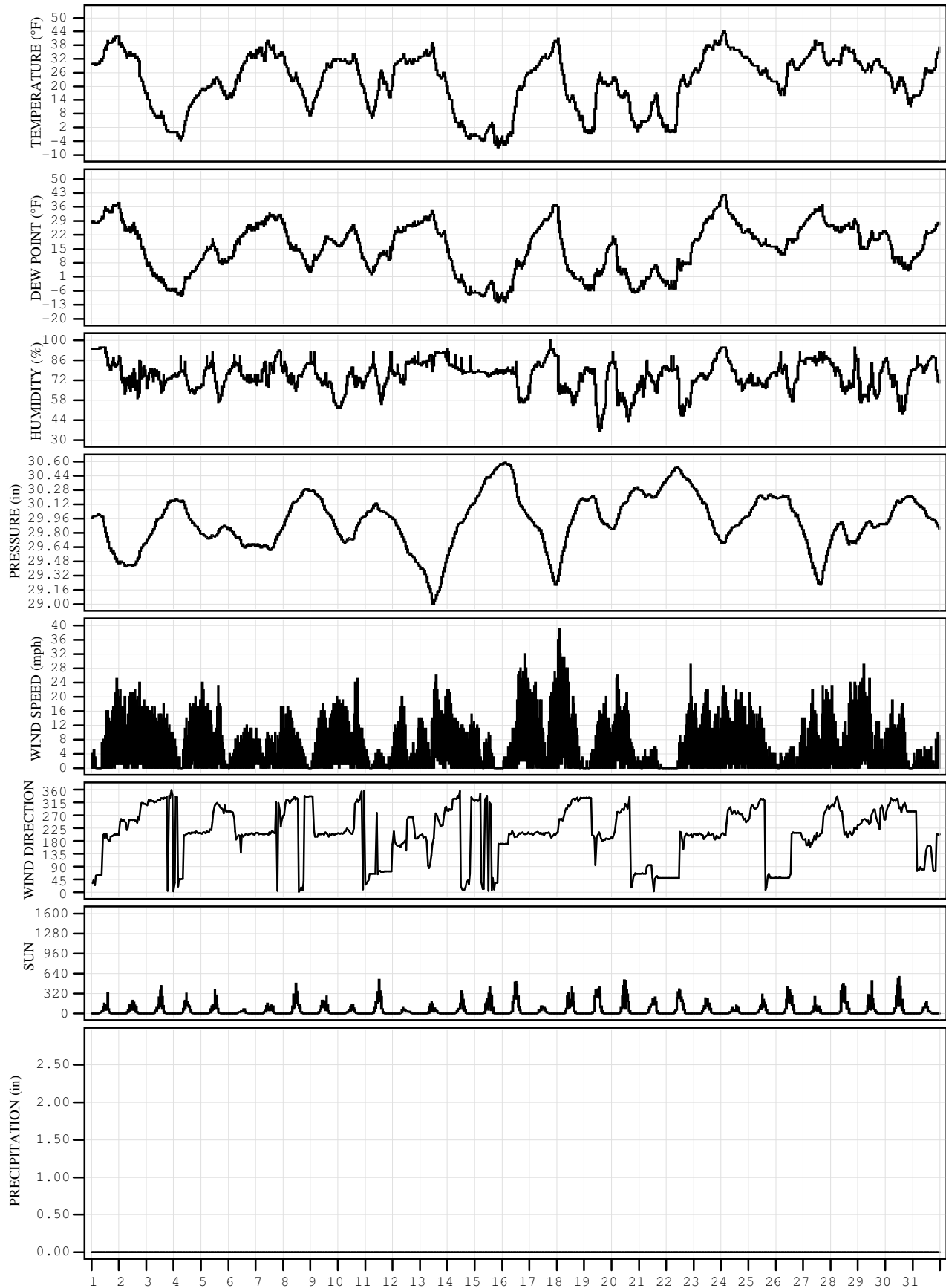
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01	0	29.921	22	16	78	3.3	23	2.3
04	0	29.939	21	15	77	3.4	25	2.3
07	0	29.954	20	14	77	3.6	26	2.2
10	113	29.971	22	16	75	3.8	25	2.4
13	181	29.912	25	17	72	4.0	24	2.6
16	25	29.900	25	16	69	3.2	24	1.9
19	0	29.923	22	15	74	3.3	22	2.6
22	0	29.925	22	16	78	3.2	22	2.4

HOURLY PRECIPITATION (Water Equivalent) January 2012: Westford

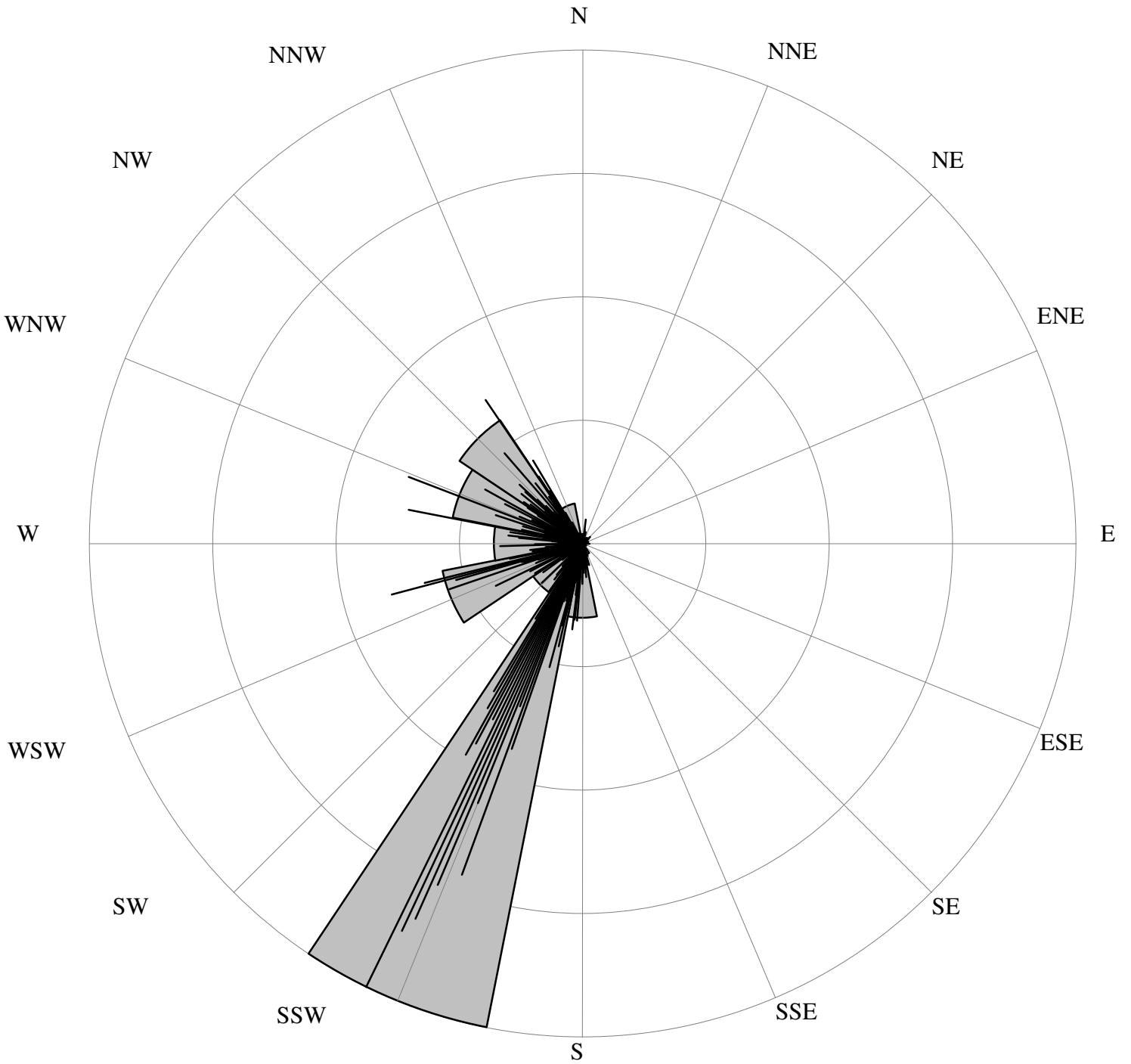
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02																									02
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30																									30
31																									31
Sum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
January 2012: Westford



Wind Rose: January 2012
Westford



Maximum direction of wind: 118.0 miles from 206°
Maximum sector of wind: 1042.8 miles from SSW
2571.7 total miles of wind