

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

February 2009

Station: Westford
 Latitude: 44° 37' 39" N Longitude: 73° 02' 29" W Elevation (Ground): 850 feet Time Zone: Eastern

Date	Temperature					Humidity Mean	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 Mean Index	
	Maximum	Minimum	Average	Mean	Dew Point		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	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	33.0	6.8	19.9	23.1	15	71	45	0	.....	14	0.00	0.0	29.90	29.68	29.777	6.7	6.6	206	28	SE	15	200
2	33.6	19.7	26.6	30.2	19	64	38	0	.....	13	0.00	0.0	30.02	29.85	29.929	3.1	2.3	246	21	NW	11	289
3	21.0	7.6	14.3	13.0	6	74	50	0	.....	13	0.00	0.0	30.01	29.86	29.939	1.4	1.3	347	14	NNW	7	325
4	10.9	-0.3	5.3	5.0	-3	70	59	0	.....	13	0.00	0.0	30.19	29.90	30.060	1.7	1.5	354	12	NNW	6	338
5	8.5	-3.6*	2.5*	1.8	-6	70	62	0	.....	13	T	T	30.36	30.18	30.275	1.9	1.8	339	15	WNW	10	301
6	22.6	-2.4	10.1	10.9	2	66	54	0	.....	13	T	T	30.36	30.28	30.323	3.9	3.9	208	15	SW	10	217
7	41.1	12.9	27.0	29.2	18	62	38	0	.....	12	0.00	0.0	30.33	29.69	30.021	9.5	9.5	204	36	SSW	19	201
8	45.0	16.2	30.6	32.2	22	66	34	0	.....	9	0.01	T	30.21	29.65	29.886	7.5	6.1	299	29	NW	17	302
9	22.2	7.4	14.8	14.3	4	64	50	0	.....	0	0.00	0.0	30.43	30.21	30.355	1.3	1.2	6	15	NNW	10	318
10	39.0	9.6	24.3	26.5	16	64	40	0	.....	8	T	0.0	30.40	29.92	30.142	4.5	4.5	200	24	S	14	192
11	50.7	37.9	44.3*	42.7	37	82	20	0	.....	5	0.19	0.0	29.92	29.35	29.746	4.8	4.6	200	18	S	11	201
12	43.8	23.9	33.8	37.3	36	93	31	0	.....	4	1.11	2.2	29.55	29.04	29.207	5.1	3.4	294	25	WNW	16	327
13	23.9	11.4	17.6	15.2	10	80	47	0	.....	4	T	T	29.93	29.55	29.834	4.3	3.9	328	22	NNW	13	323
14	27.5	6.1	16.8	17.9	10	70	48	0	.....	4	0.00	0.0	29.92	29.82	29.874	2.1	1.8	312	14	WNW	9	306
15	27.0	13.5	20.3	19.4	12	72	44	0	.....	3	0.00	0.0	30.13	29.92	30.043	1.1	1.0	360	11	NW	6	337
16	23.8	14.4	19.1	20.0	14	79	46	0	.....	3	T	T	30.25	30.13	30.193	0.7	0.7	346	9	N	5	323
17	32.7	16.6	24.7	23.4	12	65	40	0	.....	3	0.00	0.0	30.25	30.10	30.194	1.0	0.6	271	9	NW	7	309
18	34.7	11.6	23.2	25.4	16	69	41	0	.....	4	0.02	0.3	30.11	29.45	29.812	3.8	3.7	180	24	SSW	14	174
19	36.0	20.0	28.0	31.0	26	81	37	0	.....	4	0.10	T	29.45	29.27	29.330	5.7	3.8	245	30	W	20	293
20	20.0	10.8	15.4	15.5	8	72	49	0	.....	4	0.00	0.0	29.77	29.38	29.525	6.9	6.8	283	23	W	14	281
21	30.2	16.5	23.4	21.1	11	64	41	0	.....	4	0.00	0.0	30.17	29.77	30.042	4.2	4.1	283	21	W	14	289
22	33.2	20.2	26.7	26.9	23	86	38	0	.....	10	0.00	0.0	30.15	29.82	29.946	4.2	1.5	246	24	NW	15	326
23	23.9	12.7	18.3	17.9	15	87	46	0	.....	16	0.82	15.1	30.13	29.77	29.912	7.3	7.2	313	25	WNW	17	296
24	19.7	6.6	13.2	12.3	7	80	51	0	.....	13	0.06	1.4	30.41	30.13	30.287	3.1	3.0	331	20	NW	12	308
25	32.4	7.6	20.0	21.6	10	62	45	0	.....	11	0.00	0.0	30.47	30.19	30.370	3.1	3.0	205	24	SSW	13	198
26	40.3	28.3	34.3	35.2	26	71	31	0	.....	8	T	T	30.21	30.13	30.176	7.6	7.5	205	27	SSW	17	195
27	51.0*	21.9	36.4	42.2	36	78	28	0	.....	4	0.04	T	30.13	29.63	29.802	10.1	8.5	213	44	SW	24	215
28	21.9	1.4	11.6	9.8	2	72	53	0	.....	4	0.04	1.2	30.40	29.98	30.294	3.5	3.3	344	22	NW	13	322
Sum	Sum	-----	-----	---	----	Ttl	Ttl						For the month:										---
850	355					1206	0	Number of Days			2.39	20.2	30.47	29.04	29.975	4.3	2.2	252	44	SW	24	215	
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip			Season Ttl	Date	Date	-----	----	----	---	Date	Date			Avg	
30.3	12.7	21.5	22.2	14	72.7	----	----	≥.01 inch	9		4.57	86.7	25	12	-----	----	----	---	27	27			
Number of Days						Season to Date	Snow, Ice ≥1.0 inch	4	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date								
Max Temperature			Min Temperature			5801	0	Thunder	0	Precipitation			Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	0	0.01	27	15.1	23	16		23									
0	15	27	3	----	----	Clear	5	Partly Cloudy			9	Cloudy			14								

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 February 2009: Westford

Hour	FEB 01									FEB 02									FEB 03								
	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		29.88	0.00	11	2	65	18	5	8	29.85	0.00	31	20	66	20	4	8	30.00	0.00	20	14	77	01	0	0		
04		29.81	0.00	13	6	73	19	3	14	29.86	0.00	32	22	66	23	4	11	30.00	0.00	17	12	79	01	0	1		
07		29.77	0.00	16	11	78	19	4	11	29.88	0.00	31	21	66	22	3	5	30.00	0.00	13	9	85	01	0	0		
10		29.72	0.00	23	14	69	20	9	20	29.93	0.00	33	22	64	27	7	14	30.00	0.00	16	8	73	02	1	4		
13		29.68	0.00	28	18	66	20	10	24	29.93	0.00	33	17	51	27	4	6	29.89	0.00	15	4	62	30	5	10		
16		29.73	0.00	31	22	69	22	8	16	29.94	0.00	33	18	54	24	1	6	29.88	0.00	10	2	69	35	4	10		
19		29.79	0.00	30	23	74	20	8	15	30.00	0.00	28	18	66	01	0	5	29.90	0.00	9	2	74	01	2	7		
22		29.82	0.00	31	22	71	20	6	14	30.02	0.00	24	17	72	03	1	3	29.89	0.00	9	2	73	02	3	6		
FEB 04									FEB 05									FEB 06									
01		29.91	0.00	6	-0	74	34	1	4	30.19	0.00	5	-1	78	01	1	6	30.34	0.00	0	-7	70	29	0	0		
04		29.95	0.00	2	-4	77	01	2	7	30.22	0.00	1	-5	76	32	2	11	30.34	0.00	3	-5	71	22	2	5		
07		30.00	0.00	0	-5	79	02	0	3	30.27	0.00	-3	-9	78	32	1	6	30.32	0.00	4	-3	70	19	4	10		
10		30.06	0.00	6	-2	69	00	2	10	30.31	0.00	0	-7	70	32	4	10	30.34	0.00	10	2	70	20	7	14		
13		30.05	0.00	11	-1	58	35	4	9	30.26	0.00	8	-4	58	00	3	7	30.31	0.00	19	7	59	17	4	9		
16		30.10	0.00	7	-3	61	35	1	5	30.27	0.00	7	-5	58	07	2	6	30.30	0.00	21	8	56	21	4	8		
19		30.17	0.00	4	-4	70	03	0	0	30.32	0.00	-1	-8	73	06	0	0	30.31	0.00	15	5	66	21	5	9		
22		30.18	0.00	4	-3	72	29	0	5	30.34	0.00	1	-7	69	00	0	2	30.34	0.00	14	4	66	20	4	8		
FEB 07									FEB 08									FEB 09									
01		30.31	0.00	15	5	65	20	4	8	29.67	0.00	41	33	72	22	6	12	30.23	0.00	15	5	64	35	3	10		
04		30.29	0.00	18	7	62	20	7	15	29.65	0.00	43	37	79	24	6	12	30.26	0.00	10	2	70	01	0	1		
07		30.21	0.00	19	8	62	18	7	14	29.69	0.00	40	32	73	25	6	17	30.32	0.00	8	2	78	02	1	3		
10		30.14	0.00	27	12	54	20	11	24	29.84	0.00	30	27	88	32	11	23	30.38	0.00	18	6	60	02	2	8		
13		29.95	0.00	36	21	55	19	10	24	29.92	0.00	31	20	63	30	12	19	30.40	0.00	21	8	57	32	3	9		
16		29.86	0.00	39	26	60	20	16	32	29.98	0.00	30	15	53	31	10	19	30.39	0.00	21	7	53	04	2	7		
19		29.78	0.00	40	28	61	20	12	24	30.08	0.00	25	10	52	33	7	16	30.42	0.00	13	3	66	04	0	2		
22		29.72	0.00	41	30	66	20	11	21	30.18	0.00	20	7	59	34	4	13	30.40	0.00	12	3	66	07	0	3		
FEB 10									FEB 11									FEB 12									
01		30.39	0.00	11	2	68	10	0	1	29.91	0.00	39	32	76	20	6	12	29.33	0.00	39	37	95	09	0	0		
04		30.35	0.00	14	4	65	19	0	2	29.88	0.00	40	34	79	20	8	13	29.07	0.00	43	41	95	20	6	12		
07		30.28	0.00	14	5	68	18	0	1	29.86	0.00	41	36	83	19	7	13	29.04	0.00	43	41	95	21	4	8		
10		30.19	0.00	25	12	56	22	3	6	29.86	0.00	43	37	80	20	7	12	29.06	0.00	41	37	87	27	7	15		
13		30.06	0.00	35	21	56	20	7	18	29.76	0.00	51	39	65	20	6	8	29.16	0.00	37	35	93	30	7	12		
16		30.03	0.00	35	23	60	20	9	16	29.68	0.00	45	40	85	19	4	7	29.30	0.00	34	32	94	33	5	19		
19		29.98	0.00	36	26	67	21	12	20	29.63	0.00	44	42	94	20	4	8	29.45	0.00	29	28	94	34	6	16		
22		29.94	0.00	39	30	70	19	10	20	29.47	0.00	40	39	94	09	0	5										
FEB 13									FEB 14									FEB 15									
01		29.59	0.00	21	18	88	33	4	10	29.89	0.00	15	8	73	29	2	7	29.93	0.00	16	9	74	32	1	5		
04		29.69	0.00	18	14	84	00	4	11	29.88	0.00	10	6	83	27	0	1	29.96	0.00	16	10	76	00	0	2		
07		29.80	0.00	12	8	82	32	7	19	29.90	0.00	10	5	78	24	0	2	30.01	0.00	14	8	78	01	0	4		
10		29.87	0.00	12	7	79	33	8	16	29.88	0.00	20	9	64	28	2	6	30.06	0.00	19	10	69	01	3	8		
13		29.90	0.00	13	6	73	30	6	15	29.83	0.00	24	12	59	31	7	14	30.05	0.00	25	13	60	32	3	7		
16		29.91	0.00	18	10	72	32	3	11	29.82	0.00	27	15	58	32	2	5	30.06	0.00	26	15	62	02	3	7		
19		29.93	0.00	12	8	84	29	0	2	29.88	0.00	20	12	69	35	1	5	30.11	0.00	18	13	81	03	1	3		
22		29.93	0.00	15	9	75	28	3	10	29.90	0.00	19	11	70	28	1	2	30.13	0.00	20	14	79	07	0	1		
FEB 16									FEB 17									FEB 18									
01		30.13	0.00	18	13	80	07	0	1	30.23	0.00	20	16	82	21	2	3	30.09	0.00	16	9	72	07	0	1		
04		30.15	0.00	19	12	76	07	1	2	30.25	0.00	20	16	83	20	1	3	30.02	0.00	13	8	79	05	0	1		
07		30.17	0.00	15	11	83	07	0	1	30.24	0.00	21	15	79	20	0	3	29.98	0.00	12	7	80	23	0	0		
10		30.19	0.00	21	15	76	31	1	2	30.25	0.00	26	12	57	27	1	3	29.90	0.00	31	14	48	19	5	10		
13		30.19	0.00	24	16	73	32	1	7	30.19	0.00	31	11	43	28	0	4	29.79	0.00	34	14	43	19	6	10		
16		30.21	0.00	23	16	75	33	1	5	30.15	0.00	31	9	39	09	2	5	29.71	0.00	33	22	64	19	13	21		
19		30.25	0.00	21	16	82	01	1	4	30.14	0.00	21	9	59	07	0	0	29.60	0.00	31	24	75	19	2	8		
22		30.24	0.00	20	16	83	32	0	0	30.12	0.00	19	10	69	07	0	0	29.53	0.00	32	27	79	18	4	19		

MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ended: Date	27	27	27	27	27	27	27	27	27	27	27	27
Ended: Time	1643	1643	1643	1643	1643	1643	1643	1643	1643	1643	1643	1643

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

February 2009: Westford

Hour	FEB 19									FEB 20									FEB 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		29.42	0.00	32	28	85	16	8	16		29.38	0.00	20	12	73	27	11	21		29.80	0.00	17	10	71	29	4	15
04		29.33	0.00	34	28	78	17	6	14		29.40	0.00	16	7	69	28	9	16		29.88	0.00	17	9	71	28	4	13
07		29.30	0.00	33	29	86	18	5	9		29.43	0.00	11	2	66	29	7	11		29.99	0.00	17	10	71	28	5	7
10		29.28	0.00	35	31	85	18	4	8		29.48	0.00	13	3	65	29	11	17		30.06	0.00	21	10	62	29	8	16
13		29.27	0.00	35	32	90	23	2	6		29.49	0.00	16	5	62	27	9	14		30.12	0.00	26	13	59	27	9	18
16		29.28	0.00	35	28	76	28	4	8		29.56	0.00	16	12	84	24	4	9		30.12	0.00	30	12	48	31	3	9
19		29.36	0.00	26	18	72	29	18	29		29.66	0.00	16	10	79	26	6	11		30.17	0.00	20	10	64	03	0	1
22		29.40	0.00	21	16	81	26	4	15		29.73	0.00	17	12	79	26	6	9		30.14	0.00	19	11	68	05	0	0
FEB 22									FEB 23									FEB 24									
01		30.15	0.00	21	16	82	05	0	0		29.80	0.00	23	21	91	30	4	12		30.14	0.00	13	9	85	30	7	14
04		30.06	0.00	24	21	88	18	3	8		29.78	0.00	23	20	90	30	8	13		30.19	0.00	11	7	84	32	6	15
07		30.01	0.00	26	22	85	18	5	12		29.80	0.00	22	19	89	30	9	16		30.24	0.00	10	6	84	33	3	12
10		29.97	0.00	29	25	85	18	4	9		29.85	0.00	20	17	86	29	11	21		30.31	0.00	11	7	82	33	3	13
13		29.89	0.00	32	27	80	21	4	11		29.89	0.00	17	12	82	32	10	23		30.30	0.00	17	10	71	33	4	7
16		29.84	0.00	32	29	87	21	0	1		29.97	0.00	14	11	86	30	6	15		30.32	0.00	19	10	69	01	2	6
19		29.86	0.00	27	24	91	33	7	18		30.05	0.00	13	10	87	30	6	16		30.36	0.00	10	6	82	05	0	1
22		29.85	0.00	24	22	91	32	6	10		30.10	0.00	14	10	86	31	5	16		30.39	0.00	8	5	85	05	0	0
FEB 25									FEB 26									FEB 27									
01		30.42	0.00	8	4	84	06	0	0		30.20	0.00	32	12	43	19	11	23		30.09	0.00	39	31	74	18	7	14
04		30.43	0.00	11	7	82	06	0	0		30.19	0.00	32	18	55	19	10	25		29.97	0.00	36	30	79	19	3	11
07		30.45	0.00	13	8	80	20	3	6		30.16	0.00	29	26	86	19	12	21		29.87	0.00	43	31	62	20	13	25
10		30.46	0.00	21	12	67	19	5	8		30.17	0.00	33	28	81	19	11	20		29.75	0.00	49	39	67	21	18	39
13		30.39	0.00	28	13	52	21	3	6		30.17	0.00	38	30	73	21	9	19		29.67	0.00	47	40	76	22	12	26
16		30.34	0.00	32	16	51	23	3	6		30.17	0.00	40	31	70	21	5	8		29.64	0.00	46	42	86	21	13	28
19		30.29	0.00	27	13	55	20	4	8		30.20	0.00	39	31	73	20	2	7		29.66	0.00	46	43	90	20	10	21
22		30.23	0.00	30	6	36	19	10	16		30.15	0.00	39	31	75	18	3	7		29.81	0.00	31	28	90	34	10	25
FEB 28																											
01		30.04	0.00	19	14	80	35	3	15																		
04		30.14	0.00	13	8	82	33	6	16																		
07		30.27	0.00	7	1	79	32	7	13																		
10		30.36	0.00	6	-0	74	01	4	13																		
13		30.39	0.00	13	2	63	35	4	8																		
16		30.35	0.00	14	-0	53	05	3	7																		
19		30.37	0.00	6	-1	71	36	0	1																		
22		30.35	0.00	3	-3	78	00	0	1																		

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

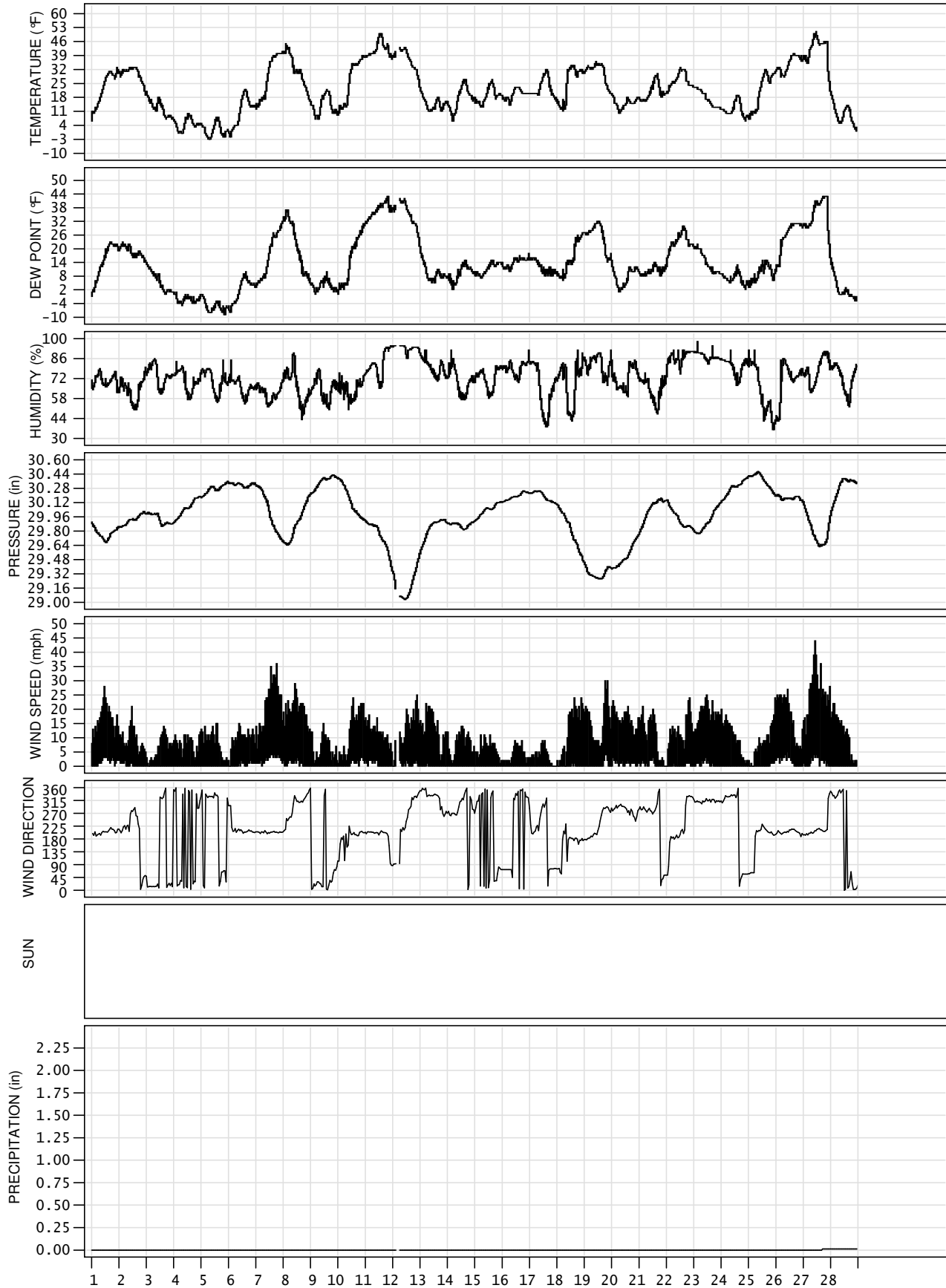
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		29.975	20	13	75	3.2	24	1.7
04		29.998	19	12	76	3.6	25	1.9
07		29.975	19	13	78	4.0	23	2.4
10		29.987	23	15	71	6.0	25	3.2
13		29.957	27	16	64	5.8	26	3.5
16		29.956	27	17	66	4.8	24	2.4
19		29.984	22	15	74	4.0	25	2.2
22		29.991	21	14	75	3.5	25	1.5

HOURLY PRECIPITATION (Water Equivalent) February 2009: Westford

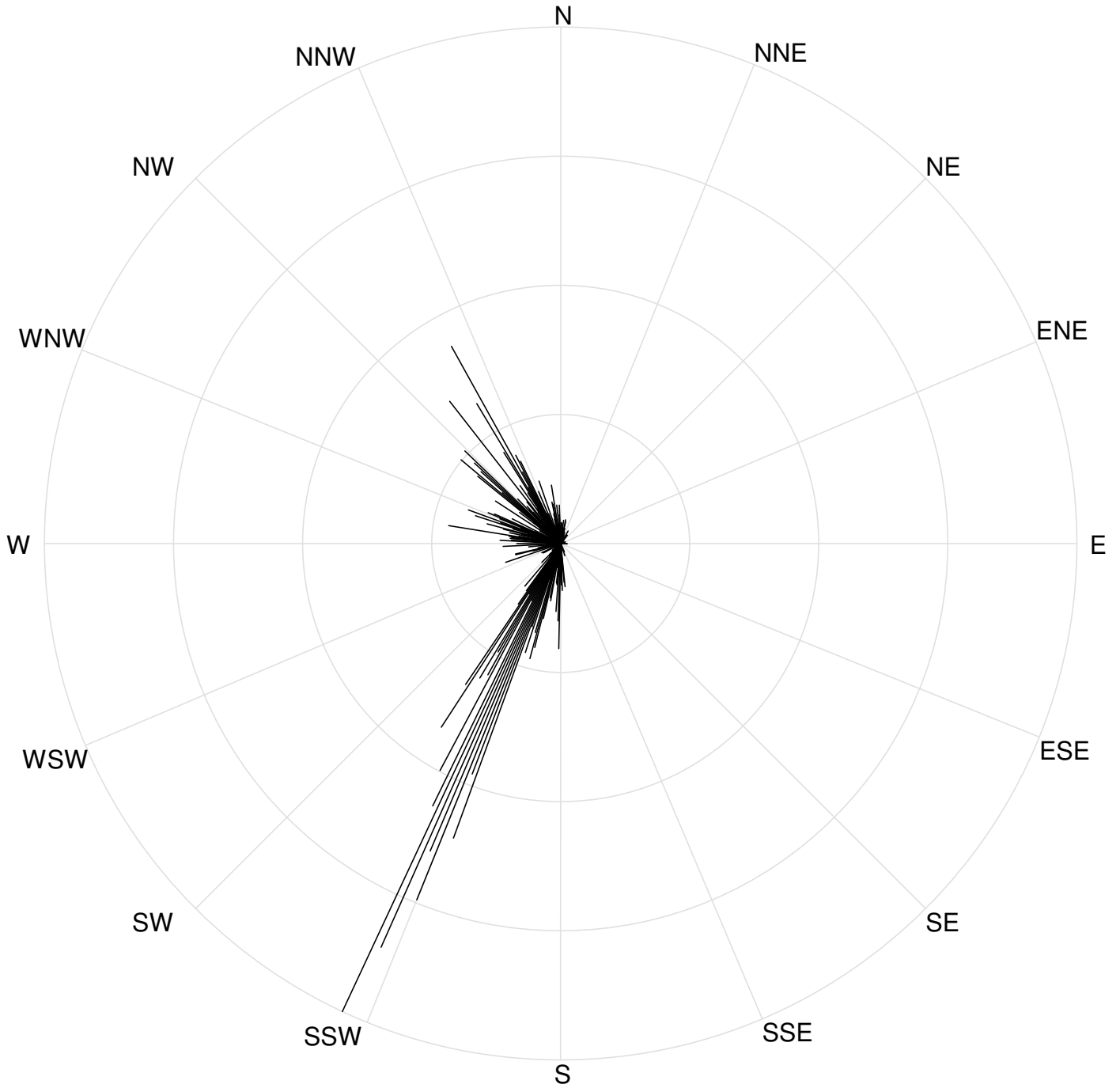
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02																									02
03																									03
04																									04
05																									05
06																									06
07																									07
08																									08
09																									09
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22																									22
23																									23
24																									24
25																									25
26																									26
27															0.01										27
28																									28
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 February 2009: Westford



Wind Rose: February 2009
Westford



Maximum direction of wind: 139.3 miles from 205°.
2866.4 total miles of wind.