

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

February 2011

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						Solar Radiation			
	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		
1	2	3	4A	4B	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	14.7	1.3	8.0	8.5	1	72	57	0	.....	12	0.00	3.0	30.50	30.31	30.407	0.1	0.1	35	5	NNE	3	216	31	
2	19.4	9.0	14.2	14.8	11	84	51	0	.....	20	0.88	10.7	30.32	29.68	29.924	1.0	0.6	5	14	NW	8	305	8	
3	20.7	9.0	14.9	13.8	8	77	50	0	.....	20	0.04	3.0	30.29	29.96	30.190	2.3	1.9	213	15	SSW	8	212	119	
4	25.1	13.8	19.5	18.9	9	64	45	0	.....	18	0.00	0.0	30.17	29.95	30.036	4.4	4.4	212	21	SSW	12	208	75	
5	36.4	17.4	26.9	27.9	17	66	38	0	..3.....	23	0.89	7.5	29.96	29.21	29.701	4.1	4.1	205	19	S	11	206	88		
6	31.3	24.6	27.9	28.5	25	87	37	0	.....	23	0.19	2.5	29.93	29.22	29.717	2.5	1.9	304	21	NW	12	330	18	
7	33.5	28.9	31.2	31.2	27	85	33	0	.....	22	0.04	0.5	29.93	29.67	29.851	3.9	3.9	207	19	S	9	210	49	
8	31.5	0.2	15.9	16.3	12	84	49	0	.....	26	0.36	5.0	29.97	29.51	29.673	2.7	1.8	311	16	NNW	9	336	8	
9	21.1	2.0	11.6	13.6	6	70	53	0	.....	25	T	T	30.01	29.86	29.927	5.5	5.3	220	23	SW	13	219	32	
10	17.5	6.4	12.0	13.6	3	64	53	0	.....	23	0.01	0.3	29.98	29.88	29.925	2.9	2.5	271	15	WNW	9	291	119	
11	21.3	5.4	13.3	13.8	3	62	52	0	.....	22	0.00	0.0	30.05	29.91	29.998	3.7	3.7	208	16	SW	9	214	123	
12	30.1	16.7	23.4	23.1	13	64	41	0	.....	21	T	0.2	29.94	29.62	29.754	6.2	4.2	244	22	SSW	14	304	57	
13	35.5	8.7	22.1	22.5	15	71	42	0	.....	21	T	T	29.95	29.56	29.770	7.3	6.9	210	30	S	17	214	59	
14	42.4	18.2	30.3	34.5	26	71	35	0	.....	20	0.11	2.8	29.85	29.21	29.416	7.2	4.4	236	29	WNW	18	308	13	
15	19.1	-1.3	8.9	5.6	-5	62	56	0	.....	18	T	T	30.42	29.85	30.270	4.4	4.3	336	29	NW	17	323	138	
16	34.0	0.7	17.3	21.1	4	48	47	0	.....	17	0.00	0.0	30.39	30.05	30.180	4.6	4.6	209	20	SW	13	230	57	
17	49.4	29.1	39.3	39.8	27	60	26	0	.....	14	0.00	0.0	30.08	29.82	29.992	3.5	3.5	206	17	S	9	194	120	
18	54.9*	31.6	43.3*	46.4	33	60	21	0	.....	0	0.05	0.5	29.82	29.38	29.536	8.1	7.3	227	41	WNW	22	292	71	
19	32.4	10.1	21.3	18.4	9	67	44	0	.....	0	T	T	30.08	29.41	29.709	8.4	8.0	315	31	WNW	17	307	97	
20	19.3	6.7	13.0	11.7	2	64	52	0	.....	0	0.00	0.0	30.25	30.04	30.150	3.4	3.3	332	24	WNW	13	306	140	
21	11.6	3.0	7.3*	8.7	-0	67	57	0	.....	0	0.18	3.5	30.07	29.92	29.972	2.0	1.9	347	20	NE	10	324	137	
22	17.8	-2.1*	7.8	6.9	-3	63	57	0	.....	0	0.00	0.0	30.32	30.05	30.205	1.0	1.0	358	12	NW	7	304	153	
23	28.5	8.8	18.7	16.4	-4	42	46	0	.....	0	0.00	0.0	30.40	30.27	30.338	0.5	0.5	4	8	NW	4	334	157	
24	34.2	8.3	21.3	24.2	6	47	44	0	.....	0	0.00	0.0	30.28	29.94	30.079	4.1	4.1	209	25	SW	16	203	94	
25	30.5	19.4	24.9	26.2	22	84	40	0	.....	0	0.34	8.5	29.97	29.47	29.726	2.7	2.4	356	24	WNW	14	308	13	
26	19.4	6.8	13.1	13.1	5	70	52	0	.....	0	0.00	0.0	30.15	29.90	30.074	1.3	1.2	328	21	NW	15	317	84	
27	29.5	13.4	21.4	22.1	16	77	43	0	.....	0	0.20	1.9	30.04	29.95	29.993	1.3	0.9	205	15	S	8	193	79	
28	34.1	26.0	30.0	31.2	26	81	35	0	...4.6...	0	0.25	0.5	29.99	29.39	29.691	4.6	2.0	238	26	NW	15	302	28		
Sum	Sum	-----	-----	---	----		Ttl	Ttl					For the month:										---		
	795	322					1256	0	Number of Days				3.54	50.4	30.50	29.21	29.936	3.7	2.1	245	41	WNW	22	292	
Avg	Avg	Avg	Mean	Avg	Avg	----	----		Precip	Season Ttl	Date	Date	-----	----	----	----	Date	Date	Avg						
	28.4	11.5	20.0	20.5	11	68.3	----	----	≥.01 inch	13	5.48	140.2	1	5	-----	----	----	----	18	18	77				
Number of Days							Season to Date		Snow, Ice ≥1.0 inch		Greatest in 24 Hours and Dates			Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date											
Max Temperature				Min Temperature			5755	0	Thunder	1	Precipitation		Snow, Ice Plts												
≥ 90°F		≤ 32°F		≤ 32°F		≤ 0°F		----	----	Heavy Fog	0	0.12	1	10.7	2	26		8							
0		19		28		3		----	----	Clear	3	Partly Cloudy		8		Cloudy 17									

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/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 2011: 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	0	30.48	0.00	2	-6	69	05	0	0	0	30.29	0.00	10	5	82	36	0	0	0	29.99	0.00	10	6	84	32	3	7
04	0	30.45	0.00	3	-6	63	05	0	0	0	30.17	0.00	12	8	84	00	0	1	0	30.10	0.00	9	5	83	31	0	4
07	0	30.46	0.00	6	-4	64	03	0	1	0	30.04	0.00	14	10	85	05	1	4	0	30.21	0.00	9	5	84	31	0	1
10	114	30.43	0.00	9	-3	57	04	0	0	30	29.92	0.00	17	13	85	06	0	3	98	30.28	0.00	14	9	80	10	0	1
13	91	30.37	0.00	13	7	77	03	2	5	42	29.75	0.00	18	14	85	05	2	5	250	30.24	0.00	20	12	70	20	2	4
16	23	30.36	0.00	14	9	80	01	1	4	14	29.69	0.00	19	15	86	04	2	7	121	30.23	0.00	20	11	67	21	5	11
19	0	30.38	0.00	10	6	82	36	0	3	0	29.73	0.00	18	15	86	06	0	0	0	30.23	0.00	15	9	75	21	6	11
22	0	30.35	0.00	9	5	82	00	0	2	0	29.86	0.00	10	6	83	30	2	8	0	30.19	0.00	14	8	74	19	5	11
FEB 04									FEB 05									FEB 06									
01	0	30.17	0.00	15	8	73	22	3	13	0	29.94	0.00	18	9	66	20	1	7	0	29.24	0.00	28	26	93	31	0	0
04	0	30.10	0.00	15	7	70	20	2	8	0	29.91	0.00	20	7	56	20	6	12	0	29.47	0.00	25	23	92	32	6	18
07	0	30.08	0.00	14	6	69	21	4	10	0	29.88	0.00	21	8	58	20	6	13	0	29.65	0.00	26	24	91	28	3	11
10	243	30.03	0.00	20	8	60	20	7	16	371	29.84	0.00	28	12	52	20	7	14	35	29.75	0.00	29	25	87	33	1	7
13	265	29.98	0.00	23	9	56	21	4	11	392	29.73	0.00	36	14	39	21	7	13	39	29.81	0.00	31	27	84	32	1	3
16	63	30.00	0.00	24	11	57	21	4	7	25	29.64	0.00	36	26	68	21	6	13	39	29.86	0.00	31	26	82	32	0	0
19	0	30.00	0.00	24	13	64	24	1	7	0	29.51	0.00	31	29	90	06	0	0	0	29.92	0.00	30	26	84	19	2	5
22	0	29.98	0.00	18	9	68	19	1	4	0	29.30	0.00	31	30	93	06	0	0	0	29.93	0.00	30	26	86	19	2	5
FEB 07									FEB 08									FEB 09									
01	0	29.93	0.00	30	27	87	22	2	6	0	29.63	0.00	31	30	94	20	3	8	0	29.99	0.00	3	-4	71	28	4	14
04	0	29.92	0.00	29	26	88	21	2	5	0	29.53	0.00	31	29	94	26	0	2	0	29.98	0.00	6	-1	74	21	5	9
07	0	29.92	0.00	29	26	88	19	3	7	0	29.53	0.00	24	22	91	32	5	11	0	29.95	0.00	8	3	78	20	7	12
10	197	29.91	0.00	32	28	85	21	6	11	25	29.58	0.00	19	15	85	02	3	7	42	29.96	0.00	14	7	74	21	8	14
13	167	29.83	0.00	33	28	80	20	7	11	30	29.61	0.00	13	8	81	34	4	11	153	29.89	0.00	18	10	68	19	6	15
16	44	29.82	0.00	33	27	79	20	3	9	7	29.68	0.00	9	4	80	34	3	11	65	29.87	0.00	20	9	62	21	7	12
19	0	29.80	0.00	32	28	83	21	3	9	0	29.83	0.00	5	-0	77	30	4	8	0	29.89	0.00	19	8	62	21	5	8
22	0	29.73	0.00	31	29	90	20	3	7	0	29.94	0.00	3	-4	72	28	6	11	0	29.89	0.00	18	8	65	24	2	5
FEB 10									FEB 11									FEB 12									
01	0	29.90	0.00	17	9	70	26	5	11	0	29.98	0.00	13	4	66	22	3	7	0	29.88	0.00	19	7	60	19	4	10
04	0	29.88	0.00	12	6	74	25	3	7	0	29.98	0.00	10	1	64	22	5	10	0	29.78	0.00	21	7	55	21	7	16
07	0	29.91	0.00	7	2	79	23	3	6	5	30.01	0.00	6	-2	69	20	4	8	0	29.69	0.00	21	9	59	20	7	18
10	401	29.93	0.00	14	4	65	26	5	11	397	30.05	0.00	14	3	61	21	5	12	130	29.65	0.00	24	16	70	19	8	18
13	608	29.93	0.00	17	3	54	34	2	10	522	30.02	0.00	19	6	56	22	6	12	455	29.63	0.00	30	19	65	24	6	15
16	76	29.93	0.00	15	-1	48	29	0	9	141	30.00	0.00	21	5	50	19	1	6	54	29.67	0.00	28	18	65	29	5	8
19	0	29.95	0.00	14	2	57	25	4	9	0	29.99	0.00	12	2	66	20	0	2	0	29.81	0.00	23	14	68	29	9	19
22	0	29.96	0.00	14	4	63	22	1	6	0	29.97	0.00	16	5	62	19	3	7	0	29.92	0.00	20	9	64	33	4	9
FEB 13									FEB 14									FEB 15									
01	0	29.95	0.00	17	8	69	31	4	7	0	29.54	0.00	36	27	70	21	11	18	0	29.89	0.00	17	11	77	34	9	22
04	0	29.95	0.00	11	5	77	24	3	6	0	29.43	0.00	37	28	71	20	7	15	0	30.06	0.00	7	-0	71	31	13	22
07	0	29.92	0.00	9	3	75	20	2	6	0	29.29	0.00	41	28	59	20	11	20	7	30.21	0.00	1	-7	69	34	9	18
10	192	29.85	0.00	22	12	64	20	7	16	32	29.23	0.00	42	27	57	21	13	23	415	30.33	0.00	4	-8	58	33	7	14
13	127	29.72	0.00	25	16	69	20	11	20	12	29.23	0.00	41	31	68	26	7	16	541	30.36	0.00	7	-7	52	34	3	11
16	33	29.64	0.00	28	21	74	20	6	23	5	29.28	0.00	38	31	74	26	7	18	174	30.39	0.00	10	-6	46	00	2	10
19	0	29.62	0.00	31	24	75	19	11	20	0	29.52	0.00	25	22	87	00	3	14	0	30.41	0.00	1	-9	63	05	0	0
22	0	29.58	0.00	34	24	66	20	7	21	0	29.77	0.00	18	14	82	35	8	18	0	30.41	0.00	0	-8	69	05	0	0
FEB 16									FEB 17									FEB 18									
01	0	30.38	0.00	4	-4	69	05	0	1	0	30.06	0.00	33	18	54	21	5	7	0	29.78	0.00	47	35	64	19	6	13
04	0	30.33	0.00	5	-6	60	21	1	4	0	30.07	0.00	33	21	61	19	1	4	0	29.67	0.00	45	38	75	19	8	14
07	5	30.26	0.00	14	-4	45	19	3	9	9	30.06	0.00	30	20	66	20	2	4	0	29.59	0.00	47	36	66	20	9	16
10	223	30.20	0.00	20	-0	41	21	7	14	387	30.05	0.00	40	25	55	21	3	10	60	29.52	0.00	46	37	71	21	8	14
13	142	30.12	0.00	28	4	36	21	10	17	557	29.99	0.00	47	29	50	21	4	11	529	29.43	0.00	50	41	71	21	9	20
16	49	30.09	0.00	30	10	42	21	7	12	76	29.95	0.00	45	31	56	21	5	8	218	29.47	0.00	54	27	35	24	9	17
19	0	30.08	0.00	31	13	47	19	5	10	0	29.93	0.00	40	33	76	22	0	3	0	29.47	0.00	44	25	47	24	9	20
22	0	30.06	0.00	32	16	51	21	4	8	0	29.89	0.00	45	36	70	19	7	12	0	29.41	0.00	41	24	50	26	10	23

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

February 2011: 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	0	29.42	0.00	31	25	77	25	6	11	0	30.10	0.00	10	0	64	33	6	23	0	29.99	0.00	12	7	80	04	0	1
04	0	29.44	0.00	27	23	85	31	9	19	0	30.17	0.00	9	2	71	31	7	14	0	29.94	0.00	11	7	81	34	1	3
07	19	29.56	0.00	21	11	66	29	5	17	9	30.23	0.00	8	-1	68	33	2	16	0	29.93	0.00	10	5	81	35	0	4
10	318	29.64	0.00	21	6	52	34	6	21	471	30.22	0.00	9	-1	63	32	4	13	311	29.94	0.00	10	1	68	34	2	6
13	369	29.70	0.00	18	5	56	33	10	27	501	30.22	0.00	16	2	54	33	2	11	645	29.94	0.00	11	-2	55	00	6	12
16	83	29.83	0.00	12	2	64	33	9	17	144	30.13	0.00	17	3	54	04	2	5	209	29.95	0.00	10	-3	53	01	3	10
19	0	29.94	0.00	11	5	75	34	7	17	0	30.10	0.00	14	3	63	01	0	2	0	30.02	0.00	4	-6	62	35	1	4
22	0	30.03	0.00	11	1	64	32	11	21	0	30.06	0.00	11	3	69	04	0	3	0	30.04	0.00	5	-7	57	32	2	8
FEB 22									FEB 23									FEB 24									
01	0	30.05	0.00	2	-7	66	01	0	4	0	30.32	0.00	12	-1	55	02	0	1	0	30.27	0.00	10	-4	52	19	0	0
04	0	30.09	0.00	-0	-7	73	00	0	3	0	30.34	0.00	9	-4	55	01	0	1	0	30.21	0.00	10	-6	49	19	0	0
07	12	30.16	0.00	-1	-7	75	01	0	1	12	30.38	0.00	9	-5	51	01	0	0	16	30.18	0.00	10	-6	47	21	0	0
10	459	30.22	0.00	10	-3	57	03	3	9	469	30.39	0.00	20	-2	38	00	0	5	466	30.10	0.00	29	2	31	20	4	9
13	582	30.22	0.00	15	-1	50	34	2	7	594	30.35	0.00	26	-4	26	35	1	6	234	30.01	0.00	33	8	35	20	9	21
16	214	30.25	0.00	18	0	46	32	1	6	227	30.33	0.00	28	-4	25	00	1	6	60	29.94	0.00	32	14	46	20	9	20
19	0	30.29	0.00	7	-2	64	02	0	0	0	30.32	0.00	17	-1	44	09	0	1	0	29.99	0.00	33	15	49	21	7	14
22	0	30.31	0.00	6	-3	68	02	0	0	0	30.28	0.00	12	-10	36	09	0	0	0	29.99	0.00	31	20	63	22	3	7
FEB 25									FEB 26									FEB 27									
01	0	29.95	0.00	30	23	77	33	0	2	0	29.94	0.00	17	10	73	30	6	14	0	30.01	0.00	14	9	82	04	0	4
04	0	29.88	0.00	29	25	84	33	0	5	0	30.03	0.00	11	1	64	32	2	8	0	29.95	0.00	15	12	85	01	0	3
07	11	29.78	0.00	29	24	83	03	1	6	11	30.09	0.00	8	-1	65	33	0	3	5	29.96	0.00	16	12	84	01	0	2
10	30	29.69	0.00	28	25	87	02	1	8	167	30.13	0.00	13	0	56	08	0	3	223	30.00	0.00	23	16	73	07	0	2
13	40	29.49	0.00	27	24	87	02	3	14	383	30.13	0.00	15	7	68	33	0	2	288	29.99	0.00	27	18	68	21	2	6
16	16	29.52	0.00	25	21	87	00	5	15	113	30.10	0.00	17	9	72	05	0	2	76	30.01	0.00	28	19	70	21	4	7
19	0	29.69	0.00	22	19	87	33	3	11	0	30.07	0.00	11	6	82	06	0	0	0	30.03	0.00	24	17	77	21	1	5
22	0	29.82	0.00	23	17	80	32	5	13	0	30.08	0.00	13	8	81	06	0	1	0	30.01	0.00	27	21	78	20	5	8
FEB 28																											
01	0	29.96	0.00	30	22	71	18	4	11																		
04	0	29.85	0.00	32	24	71	19	3	11																		
07	5	29.76	0.00	30	26	84	19	8	15																		
10	72	29.57	0.00	31	27	84	20	3	10																		
13	67	29.41	0.00	33	29	86	26	0	0																		
16	40	29.46	0.00	34	31	92	25	0	0																		
19	0	29.68	0.00	31	28	86	29	8	17																		
22	0	29.81	0.00	28	20	72	32	7	18																		

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

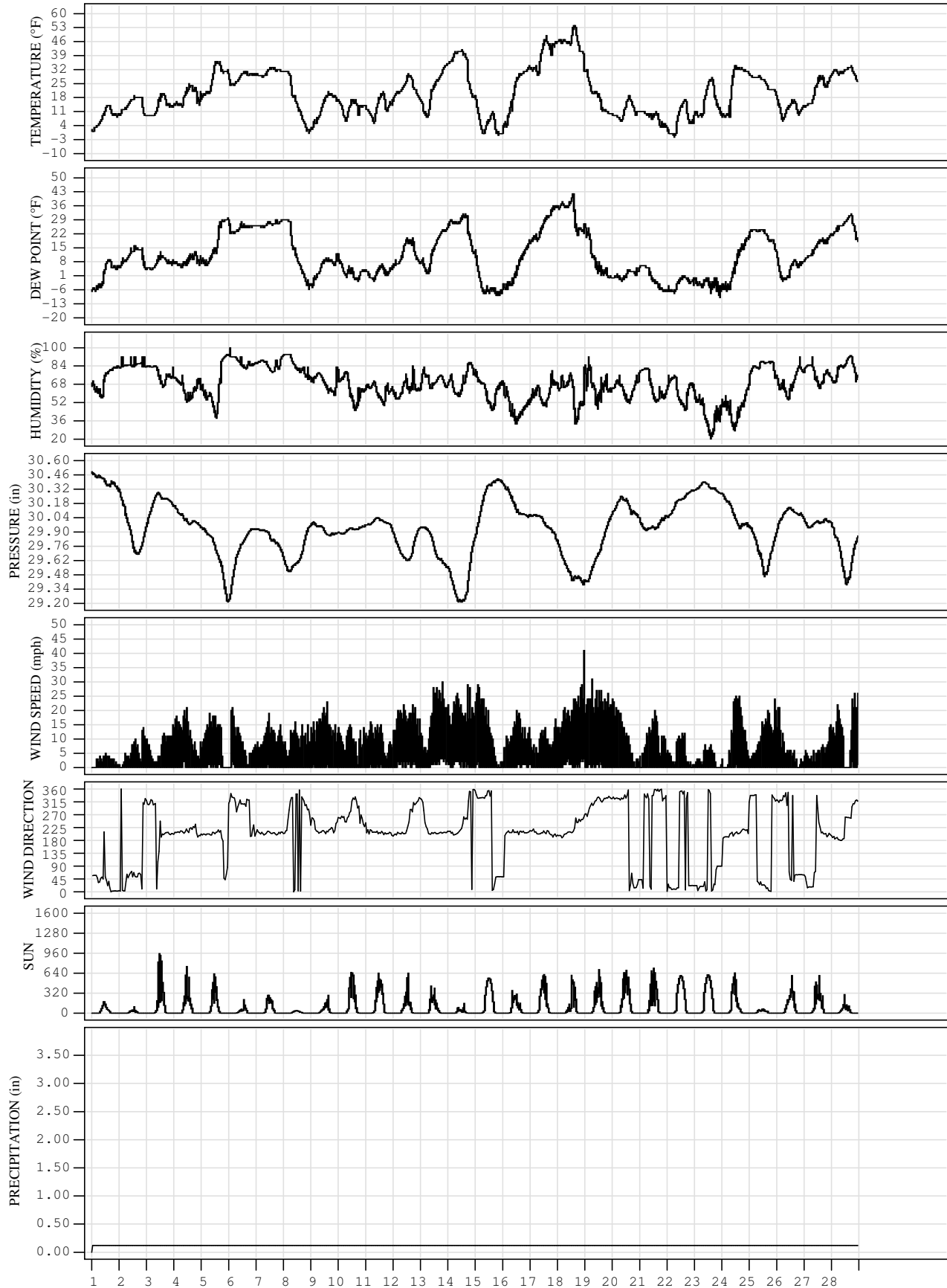
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01	0	29.965	18	11	72	3.1	25	1.8
04	0	29.953	17	10	73	3.4	25	2.0
07	5	29.953	17	9	71	3.4	23	2.1
10	228	29.943	21	11	65	4.2	22	2.5
13	308	29.896	25	13	62	4.5	24	2.3
16	86	29.895	25	13	63	3.8	24	2.0
19	0	29.935	21	12	71	3.2	25	2.0
22	0	29.948	20	11	70	3.4	26	1.9

HOURLY PRECIPITATION (Water Equivalent) February 2011: Westford

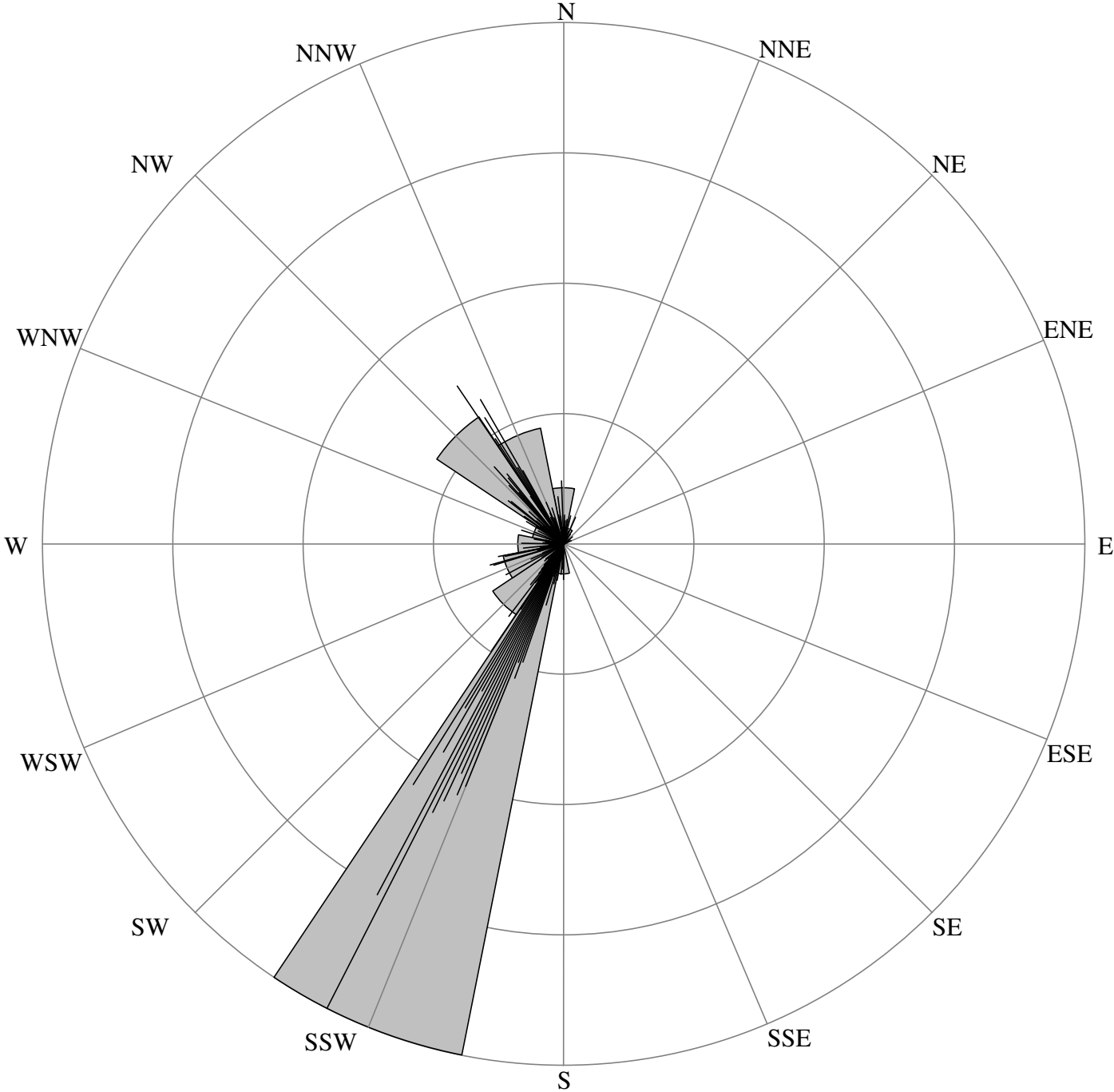
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01	0.12																							01	
02																									02
03																									03
04																									04
05																									05
06																									06
07																									07
08																									08
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25																									25
26																									26
27																									27
28																									28
Sum	0.12	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 2011: Westford



Wind Rose: February 2011
Westford



Maximum direction of wind: 155.4 miles from 207°
Maximum sector of wind: 1148.4 miles from SSW
2486.9 total miles of wind