

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### December 2013

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 dustsm, hz 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	35.7	25.4	30.6	30.4	26	84	34	0	.....	3	0.04	0.5	30.27	29.98	30.117	2.1	2.1	208	24	SW	11	210	28	
2	38.7	23.8	31.3	31.9	30	94	33	0	.....	2	T	T	29.99	29.85	29.908	0.2	0.2	204	7	SSW	4	204	41	
3	40.2	27.0	33.6	32.4	30	92	31	0	.....	1	0.00	0.0	29.97	29.86	29.903	0.1	0.1	10	8	NW	3	26	47	
4	36.4	25.3	30.9	30.7	27	85	34	0	.....	1	0.00	0.0	30.12	29.96	29.424	0.1	0.1	311	6	NW	3	321	52	
5	52.1*	25.9	39.0*	42.2	40	90	26	0	.....	0	0.00	0.0	30.07	29.74	29.879	4.6	4.4	210	28	SSE	14	202	9	
6	47.9	30.1	39.0	35.3	31	84	26	0	.....	0	0.38	0.3	30.10	29.82	29.974	1.5	1.5	283	17	WNW	10	281	22	
7	30.2	20.7	25.5	25.2	15	65	39	0	.....	0	0.00	0.0	30.43	30.06	30.250	1.8	1.8	315	19	W	12	297	42	
8	26.6	17.1	21.9	21.0	12	68	43	0	.....	0	0.00	0.0	30.55	30.42	30.482	0.3	0.3	319	15	NNW	6	321	45	
9	33.8	20.4	27.1	27.9	23	83	38	0	.....	1	0.07	0.7	30.42	29.77	29.997	3.6	3.5	203	20	SSW	12	210	16	
10	34.2	18.2	26.2	25.7	17	70	39	0	.....	1	0.01	0.1	29.88	29.74	29.806	3.0	2.9	273	26	W	13	266	21	
11	26.3	10.8	18.5	18.7	8	67	46	0	.....	1	0.02	1.2	30.13	29.97	30.046	3.2	3.0	280	32	WNW	14	284	70	
12	15.6	2.7	9.2	10.6	3	71	55	0	.....	1	T	T	30.26	29.88	30.118	2.3	1.6	243	22	SW	10	208	62	
13	16.3	-3.1	6.6	9.0	2	73	58	0	.....	2	0.01	0.1	30.41	29.84	30.078	3.2	2.3	292	24	WNW	15	287	38	
14	12.3	-8.1	2.1	0.8	-5	77	63	0	.....	3	0.14	1.4	30.61	30.11	30.462	0.1	0.1	61	8	ENE	4	69	42	
15	21.4	8.1	14.8	15.6	13	89	50	0	.....	7	0.24	3.5	30.11	29.51	29.680	0.1	0.0	275	7	W	4	279	4	
16	11.2	-8.7	1.3	3.4	-2	79	64	0	.....	7	T	T	30.23	29.65	29.963	1.3	1.2	290	19	WNW	11	299	51	
17	15.0	-13.6*	0.7*	1.4	-2	83	64	0	.....	7	0.03	1.7	30.24	30.00	30.114	0.1	0.0	182	7	S	2	184	33	
18	25.1	10.3	17.7	18.5	16	88	47	0	.....	6	0.01	0.2	30.00	29.89	29.944	1.1	1.0	214	11	SSW	7	213	33	
19	33.5	22.6	28.1	28.5	24	82	36	0	.....	6	0.01	0.1	30.03	29.85	29.931	2.9	2.7	224	22	SW	11	208	15	
20	33.8	18.7	26.3	26.8	24	91	38	0	...4.6...	6	0.23	T	30.03	29.84	29.909	0.2	0.2	256	9	WSW	4	301	6	
21	35.5	20.3	27.9	26.2	25	96	37	0	...4.6...	6	0.47	0.0	29.95	29.75	29.840	0.6	0.5	214	12	WNW	8	283	6	
22	31.1	20.8	25.9	26.1	25	97	39	0	.2.4.6...	7	1.18	1.0	29.94	29.69	29.808	0.1	0.1	24	9	NNE	4	24	7	
23	32.2	19.5	25.9	28.2	27	97	39	0	.2...6...	7	0.06	0.2	30.15	29.92	30.008	0.0	0.0	0	0	NNE	0	24	6	
24	19.5	2.3	10.9	10.7	8	90	54	0	.....	7	0.01	0.7	30.32	30.12	30.187	0.0	0.0	0	0	NNE	0	24	36	
25	11.4	-5.0	3.2	3.4	1	87	62	0	.....	7	T	0.1	30.55	30.32	30.450	0.0	0.0	0	0	NNE	0	24	63	
26	24.0	11.4	17.7	19.7	18	93	47	0	.....	13	0.31	6.0	30.35	30.07	30.176	0.0	0.0	0	0	NNE	0	24	5	
27	28.2	16.9	22.6	23.6	22	92	42	0	.....	14	0.04	0.6	30.17	30.08	30.138	0.0	0.0	0	0	NNE	0	24	14	
28	33.5	16.1	24.8	28.8	27	94	40	0	.....	13	0.00	0.0	30.08	29.93	29.970	0.0	0.0	0	0	NNE	0	24	1	
29	36.2	31.6	33.9	33.8	32	93	31	0	.....	9	0.13	0.0	29.95	29.53	29.742	1.1	1.0	202	12	SSE	7	208	22	
30	33.4	-1.9	15.8	12.8	9	85	49	0	.....	9	T	T	30.19	29.52	29.921	2.4	1.8	306	22	NW	13	308	62	
31	13.3	-1.9	5.7	5.7	1	82	59	0	.....	9	0.02	0.3	30.19	29.98	30.072	0.3	0.3	222	10	SSW	5	271	28	
<b>Sum</b>	<b>Sum</b>	-----	-----	---	----	<b>Ttl</b>	<b>Ttl</b>						<b>For the month:</b>						---					
885	404					1363	0	<b>Number of Days</b>		3.41	18.7	30.61	29.51	30.010	1.2	0.8	250	32	WNW	15	287			
<b>Avg</b>	<b>Avg</b>	<b>Avg</b>	<b>Mean</b>	<b>Avg</b>	<b>Avg</b>	----	----	<b>Precip</b>		<b>Season Ttl</b>		<b>Date</b>	<b>Date</b>	-----	----	----	----	<b>Date</b>	<b>Date</b>	<b>Avg</b>				
28.5	13.0	20.8	21.1	17	84.6	----	----	≥.01 inch	20	46.52	23.8	14	15	-----	----	----	----	11	13	29				
<b>Number of Days</b>						<b>Season to Date</b>	<b>Snow, Ice ≥1.0 inch</b>	6	<b>Greatest in 24 Hours and Dates</b>						<b>Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date</b>									
<b>Max Temperature</b>			<b>Min Temperature</b>			3128	386	<b>Thunder</b>	0	<b>Precipitation</b>			<b>Snow, Ice Plts</b>											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	----	----	<b>Heavy Fog</b>	2	0.00	-	6.0	26	14			27							
0	17	31	7	----	----	<b>Clear</b>	1	<b>Partly Cloudy</b>	5	<b>Cloudy</b>	25													

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<sup>2</sup> 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 December 2013: 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								
DEC 01										DEC 02										DEC 03									
01	0	30.26	0.00	27	18	68	21	6	18	0	29.98	0.00	25	25	97	06	0	0	0	29.87	0.00	34	32	93	20	0	0		
04	0	30.20	0.00	28	22	78	20	4	16	0	29.95	0.00	28	28	97	11	0	0	0	29.87	0.00	31	30	97	20	0	0		
07	0	30.17	0.00	29	24	81	21	1	7	0	29.94	0.00	29	28	97	09	0	1	0	29.89	0.00	31	30	97	20	0	0		
10	90	30.15	0.00	33	27	80	21	2	8	185	29.93	0.00	33	32	96	20	0	3	169	29.89	0.00	35	33	91	20	0	0		
13	81	30.07	0.00	35	28	75	22	3	9	141	29.88	0.00	37	33	84	21	2	5	160	29.88	0.00	38	34	84	00	1	3		
16	0	30.06	0.00	33	30	91	19	0	0	5	29.86	0.00	34	32	93	17	0	0	0	29.92	0.00	33	29	86	00	0	7		
19	0	30.05	0.00	30	29	96	06	0	0	0	29.87	0.00	34	32	93	17	0	0	0	29.95	0.00	31	29	94	02	0	0		
22	0	30.01	0.00	27	26	96	07	0	2	0	29.87	0.00	33	32	94	20	0	0	0	29.95	0.00	30	28	92	01	0	0		
DEC 04										DEC 05										DEC 06									
01	0	29.97	0.00	26	23	88	29	0	0	0	30.07	0.00	26	25	94	24	0	0	0	29.83	0.00	46	43	88	26	3	14		
04	0	30.00	0.00	29	25	85	28	0	3	0	30.01	0.00	33	32	95	21	3	6	0	29.91	0.00	38	37	95	31	3	7		
07	0	30.04	0.00	29	26	88	28	0	0	0	29.96	0.00	39	35	86	21	0	6	0	29.87	0.00	33	32	97	19	0	3		
10	132	30.08	0.00	32	28	85	28	0	1	32	29.91	0.00	42	38	87	21	4	10	28	29.98	0.00	34	31	87	28	1	8		
13	153	30.07	0.00	35	28	76	26	0	0	16	29.82	0.00	48	44	87	22	10	18	97	29.97	0.00	36	30	78	27	7	13		
16	18	30.08	0.00	34	28	79	24	0	0	0	29.78	0.00	49	45	88	19	11	22	0	30.00	0.00	34	26	72	30	1	5		
19	0	30.11	0.00	32	28	85	24	0	0	0	29.76	0.00	50	48	92	20	10	20	0	30.05	0.00	32	26	77	32	0	0		
22	0	30.09	0.00	28	25	91	24	0	0	0	29.77	0.00	52	50	94	21	6	17	0	30.07	0.00	32	25	77	27	1	9		
DEC 07										DEC 08										DEC 09									
01	0	30.08	0.00	29	22	76	34	0	5	0	30.44	0.00	21	10	62	33	2	12	0	30.38	0.00	21	14	73	08	0	1		
04	0	30.13	0.00	27	19	71	33	4	9	0	30.46	0.00	20	9	61	32	2	4	0	30.27	0.00	24	15	69	15	1	6		
07	0	30.19	0.00	25	15	66	32	2	13	0	30.51	0.00	19	11	69	31	0	0	0	30.14	0.00	25	18	74	18	5	19		
10	86	30.26	0.00	25	14	62	31	5	13	142	30.54	0.00	23	13	64	32	1	5	70	29.99	0.00	28	21	74	20	6	14		
13	95	30.25	0.00	27	13	56	29	3	14	149	30.50	0.00	25	13	59	33	1	4	44	29.88	0.00	29	27	93	24	2	12		
16	7	30.29	0.00	25	11	57	32	3	15	11	30.50	0.00	22	12	64	06	0	0	5	29.81	0.00	30	28	94	19	3	14		
19	0	30.35	0.00	21	14	74	34	0	0	0	30.47	0.00	19	14	81	08	0	0	0	29.79	0.00	33	31	93	21	7	14		
22	0	30.39	0.00	22	12	66	30	0	8	0	30.46	0.00	20	14	77	08	0	0	0	29.83	0.00	33	31	94	22	3	9		
DEC 10										DEC 11										DEC 12									
01	0	29.80	0.00	34	27	76	26	7	15	0	29.91	0.00	20	9	63	26	1	1	0	30.14	0.00	12	4	71	32	4	12		
04	0	29.80	0.00	32	22	68	26	5	26	0	29.93	0.00	20	9	63	26	1	1	0	30.19	0.00	7	2	79	34	5	10		
07	0	29.82	0.00	30	20	67	28	6	15	0	30.00	0.00	0	-79	0	00	0	0	0	30.23	0.00	4	-2	78	30	0	3		
10	58	29.84	0.00	27	15	62	28	5	19	113	30.03	0.00	22	12	65	23	6	13	251	30.25	0.00	7	0	73	28	1	6		
13	74	29.76	0.00	25	16	68	30	0	8	190	29.99	0.00	25	11	56	25	10	16	135	30.16	0.00	12	-0	56	31	0	3		
16	0	29.76	0.00	22	18	85	30	1	4	18	30.01	0.00	23	12	64	28	0	0	7	30.07	0.00	13	2	62	21	1	9		
19	0	29.81	0.00	18	15	88	00	0	0	0	30.08	0.00	16	11	80	28	1	15	0	30.01	0.00	15	7	71	20	4	15		
22	0	29.84	0.00	20	9	63	26	1	1	0	30.11	0.00	12	4	69	31	1	7	0	29.94	0.00	15	8	73	21	5	17		
DEC 13										DEC 14										DEC 15									
01	0	29.85	0.00	14	10	82	20	5	16	0	30.45	0.00	-6	-10	83	02	0	0	0	30.03	0.00	13	10	88	19	0	0		
04	0	29.85	0.00	15	12	87	20	3	10	0	30.50	0.00	-8	-11	85	02	0	0	0	29.82	0.00	17	14	87	18	0	0		
07	0	29.92	0.00	14	6	70	28	5	19	0	30.57	0.00	-7	-10	84	09	0	1	0	29.67	0.00	17	15	90	08	0	0		
10	206	30.01	0.00	14	5	67	31	4	19	174	30.60	0.00	-2	-7	77	04	0	7	18	29.61	0.00	19	16	89	04	0	0		
13	114	30.05	0.00	10	2	70	02	3	16	151	30.55	0.00	5	-6	62	07	0	0	12	29.52	0.00	21	18	86	30	0	0		
16	9	30.17	0.00	6	-4	63	33	3	13	5	30.49	0.00	5	-5	62	03	0	0	0	29.57	0.00	16	14	92	30	0	0		
19	0	30.29	0.00	2	-5	74	35	0	8	0	30.37	0.00	6	-0	75	06	0	0	0	29.63	0.00	12	9	89	02	0	0		
22	0	30.38	0.00	0	-6	75	00	0	0	0	30.24	0.00	9	6	87	23	0	0	0	29.65	0.00	10	7	90	07	0	0		
DEC 16										DEC 17										DEC 18									
01	0	29.66	0.00	7	4	90	08	0	0	0	30.22	0.00	-6	-10	84	11	0	0	0	29.98	0.00	12	10	89	19	0	0		
04	0	29.75	0.00	10	8	91	02	0	0	0	30.21	0.00	-11	-15	83	11	0	0	0	29.96	0.00	15	12	88	19	0	0		
07	0	29.86	0.00	-1	-4	86	32	0	0	0	30.23	0.00	-14	-17	83	11	0	0	0	29.96	0.00	12	9	90	19	0	0		
10	84	29.95	0.00	6	0	76	25	5	14	144	30.17	0.00	-2	-7	78	04	0	1	39	29.95	0.00	18	15	89	21	0	6		
13	359	29.96	0.00	10	-1	62	27	6	15	123	30.08	0.00	8	2	76	19	0	2	401	29.90	0.00	23	20	89	21	4	8		
16	11	30.06	0.00	3	-4	71	35	0	0	0	30.02	0.00	10	7	87	08	0	0	7	29.91	0.00	20	17	88	21	0	0		
19	0	30.15	0.00	-2	-7	78	02	0	0	0	30.01	0.00	11	8	87	20	0	0	0	29.94	0.00	21	19	92	21	4	8		
22	0	30.21	0.00	-4	-9	81	04	0	0	0	30.02	0.00	12	9	87	19	0	0	0	29.96	0.00	23	21	90	19	0	0		

### 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

## December 2013: 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								
DEC 19										DEC 20										DEC 21									
01	0	29.95	0.00	26	21	81	22	3	12	0	30.01	0.00	33	27	78	31	2	6	0	29.83	0.00	22	20	95	23	0	0		
04	0	29.95	0.00	24	22	93	20	0	0	0	30.00	0.00	31	27	87	30	0	0	0	29.77	0.00	26	25	96	21	4	9		
07	0	29.90	0.00	25	23	93	20	5	9	0	29.94	0.00	30	28	93	10	0	0	0	29.77	0.00	35	34	97	18	2	6		
10	76	29.87	0.00	28	23	81	21	10	22	12	29.88	0.00	33	30	89	19	3	7	12	29.82	0.00	27	26	95	02	0	0		
13	44	29.85	0.00	29	22	75	21	4	8	23	29.85	0.00	28	26	94	31	0	0	11	29.83	0.00	26	25	96	30	1	10		
16	0	29.92	0.00	31	24	75	23	1	7	0	29.86	0.00	20	19	94	30	0	0	0	29.86	0.00	28	27	97	02	2	4		
19	0	29.98	0.00	33	28	80	24	4	9	0	29.90	0.00	20	18	94	32	0	0	0	29.93	0.00	23	22	96	02	0	0		
22	0	30.02	0.00	33	27	79	25	4	9	0	29.86	0.00	19	18	94	30	0	0	0	29.92	0.00	21	20	95	02	0	0		
DEC 22										DEC 23										DEC 24									
01	0	29.91	0.00	23	21	95	02	0	0	0	29.92	0.00	29	29	98	02	0	0	0	30.14	0.00	18	16	92	02	0	0		
04	0	29.86	0.00	23	21	95	02	2	8	0	29.95	0.00	31	30	98	02	0	0	0	30.17	0.00	15	13	92	02	0	0		
07	0	29.73	0.00	30	30	98	02	0	0	0	29.95	0.00	31	31	98	02	0	0	0	30.17	0.00	13	11	92	02	0	0		
10	16	29.82	0.00	26	25	96	02	0	0	21	29.99	0.00	32	31	98	02	0	0	155	30.19	0.00	11	8	89	02	0	0		
13	42	29.74	0.00	24	23	97	02	0	0	23	29.97	0.00	30	30	98	02	0	0	88	30.12	0.00	12	9	89	02	0	0		
16	0	29.75	0.00	25	24	96	02	0	0	0	30.01	0.00	29	28	97	02	0	0	7	30.17	0.00	7	4	87	02	0	0		
19	0	29.83	0.00	29	28	98	02	0	0	0	30.09	0.00	27	26	96	02	0	0	0	30.23	0.00	6	3	87	02	0	0		
22	0	29.89	0.00	30	30	98	02	0	0	0	30.12	0.00	22	21	95	02	0	0	0	30.28	0.00	4	1	88	02	0	0		
DEC 25										DEC 26										DEC 27									
01	0	30.34	0.00	2	-1	87	02	0	0	0	30.32	0.00	13	11	89	02	0	0	0	30.14	0.00	24	22	93	02	0	0		
04	0	30.41	0.00	-1	-4	85	02	0	0	0	30.28	0.00	16	13	88	02	0	0	0	30.14	0.00	22	20	93	02	0	0		
07	0	30.50	0.00	-5	-8	86	02	0	0	0	30.24	0.00	17	16	93	02	0	0	0	30.14	0.00	22	20	94	02	0	0		
10	209	30.54	0.00	2	-2	83	02	0	0	23	30.19	0.00	20	18	93	02	0	0	30	30.17	0.00	25	23	95	02	0	0		
13	137	30.49	0.00	8	4	86	02	0	0	26	30.08	0.00	23	21	94	02	0	0	46	30.11	0.00	26	23	86	02	0	0		
16	12	30.48	0.00	7	4	89	02	0	0	0	30.09	0.00	24	22	95	02	0	0	0	30.12	0.00	25	23	94	02	0	0		
19	0	30.45	0.00	4	2	90	02	0	0	0	30.12	0.00	21	19	94	02	0	0	0	30.16	0.00	24	23	95	02	0	0		
22	0	30.39	0.00	6	4	91	02	0	0	0	30.13	0.00	23	22	95	02	0	0	0	30.14	0.00	23	21	92	02	0	0		
DEC 28										DEC 29										DEC 30									
01	0	30.04	0.00	17	16	95	02	0	0	0	29.93	0.00	33	32	96	22	0	0	0	29.52	0.00	33	32	98	20	5	8		
04	0	29.96	0.00	25	23	92	02	0	0	0	29.90	0.00	33	31	95	20	0	0	0	29.59	0.00	25	24	97	31	2	11		
07	0	29.94	0.00	28	26	93	02	0	0	0	29.87	0.00	32	30	93	20	0	0	0	29.76	0.00	20	18	91	32	3	18		
10	7	29.97	0.00	29	27	93	02	0	0	40	29.83	0.00	35	32	90	20	0	4	213	29.94	0.00	11	7	86	30	7	19		
13	11	29.94	0.00	30	29	94	02	0	0	39	29.70	0.00	35	32	90	18	3	4	309	30.00	0.00	13	6	74	34	1	10		
16	0	29.94	0.00	31	30	94	02	0	0	0	29.64	0.00	36	32	88	20	2	6	25	30.10	0.00	6	-1	74	34	0	2		
19	0	29.99	0.00	33	32	95	02	0	0	0	29.59	0.00	32	31	95	21	0	0	0	30.16	0.00	1	-4	80	02	0	5		
22	0	29.97	0.00	33	32	96	23	0	0	0	29.54	0.00	34	33	97	20	0	5	0	30.18	0.00	-1	-5	82	05	0	0		
DEC 31																													
01	0	30.17	0.00	-2	-5	83	03	0	0																				
04	0	30.14	0.00	-2	-5	84	06	0	0																				
07	0	30.11	0.00	0	-5	76	07	0	0																				
10	109	30.09	0.00	5	-3	67	18	0	0																				
13	111	30.00	0.00	9	4	78	21	0	2																				
16	7	29.99	0.00	10	7	87	19	0	2																				
19	0	30.01	0.00	12	9	91	21	4	8																				
22	0	30.07	0.00	13	10	86	25	2	9																				

### 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	30.037	20	16	85	1.2	25	0.8
04	0	30.031	20	16	86	1.2	27	0.7
07	0	30.031	19	13	84	1.0	25	0.6
10	95	30.046	22	17	82	1.9	25	1.4
13	110	29.999	24	18	80	1.9	25	1.4
16	5	30.009	22	18	83	0.9	22	0.4
19	0	30.036	21	18	87	1.1	21	1.0
22	0	30.043	20	17	87	0.8	23	0.7

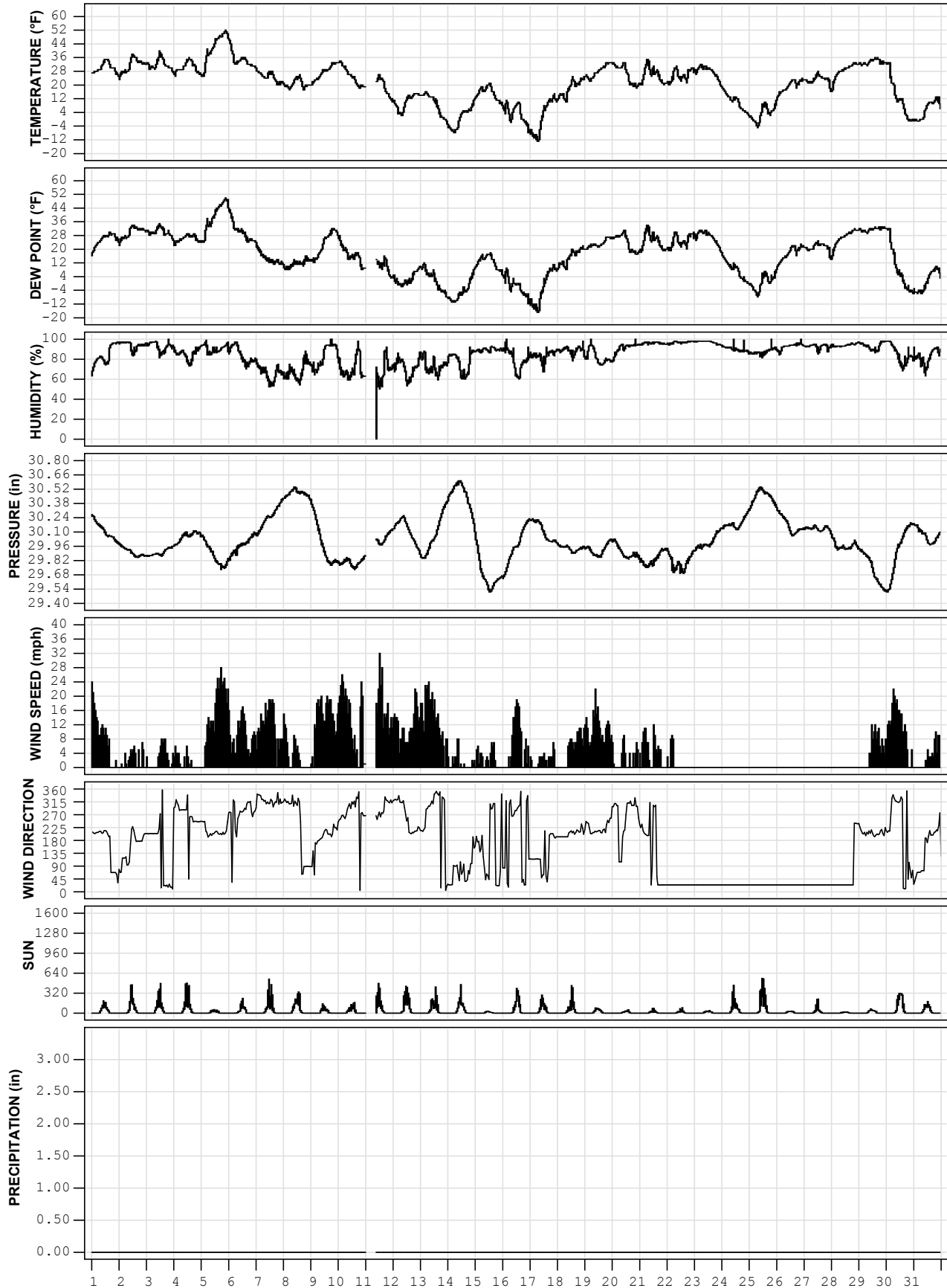
## HOURLY PRECIPITATION (Water Equivalent) December 2013: Westford

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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27																									27
28																									28
29																									29
30																									30
31																									31
<b>Sum</b>	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	<b>Sum</b>

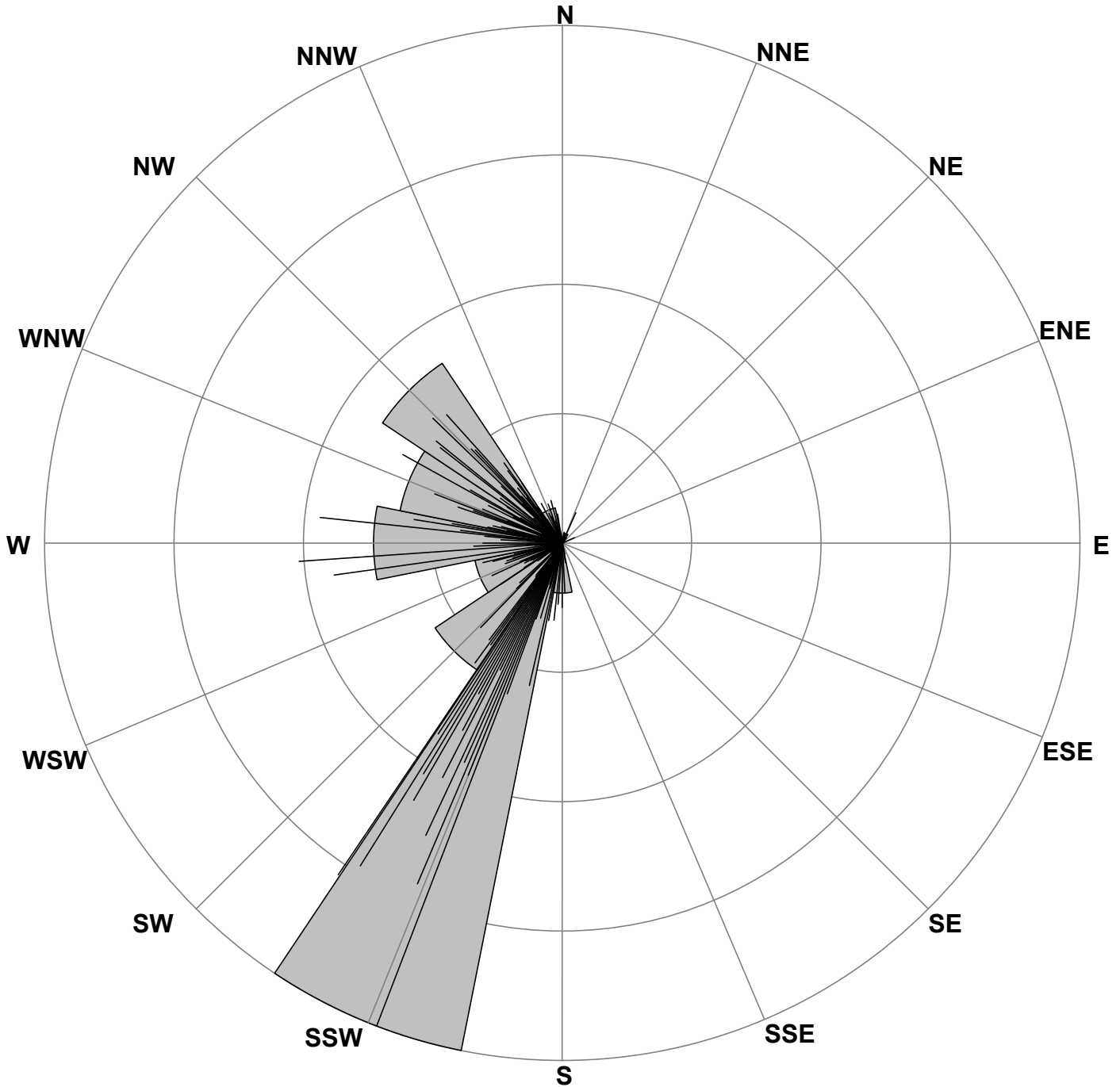
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA

## December 2013: Westford



**Wind Rose: December 2013  
Westford**



**Maximum direction of wind: 36.8 miles from 201°  
Maximum sector of wind: 301.2 miles from SSW  
837.7 total miles of wind**