

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### December 2016

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		2 Minute		
																				Speed		Dir	Speed	Dir
1	2	3	4A	4B	5	6	7	8		11	12	13	14	15	16	17	18	19	20	21	22	23		
1	48.4	37.8	43.1*	42.2	38	85	22	0	.....	0	0.41	0.0	29.59	29.34	29.472	4.8	4.0	234	27	S	15	258	41	
2	41.6	33.2	37.4	36.7	34	89	27	0	.....	0	0.07	0.0	29.72	29.59	29.653	3.1	2.6	246	22	W	12	273	20	
3	33.3	28.7	31.0	31.3	28	87	34	0	.....	1	0.09	1.6	30.10	29.72	29.924	4.7	4.6	314	23	NNW	13	317	9	
4	30.7	17.1	23.9	26.9	22	83	41	0	.....	1	T	T	30.23	30.10	30.174	0.2	0.2	324	14	NW	8	325	27	
5	31.8	17.1	24.4	26.4	25	94	40	0	.....	5	0.28	3.5	30.10	29.81	29.935	1.2	1.0	220	15	S	10	218	3	
6	31.2	23.4	27.3	27.2	25	91	38	0	.....	5	0.01	0.0	30.13	29.91	30.044	0.1	0.1	62	5	NNE	3	72	9	
7	36.6	25.1	30.8	31.6	30	93	34	0	.....	2	0.00	1.0	29.93	29.84	29.888	2.8	2.8	209	22	SW	13	201	18	
8	33.1	28.0	30.5	31.2	26	82	34	0	.....	2	0.09	0.9	29.89	29.71	29.777	3.2	3.0	236	23	W	10	266	8	
9	28.0	16.4	22.2	21.5	14	73	43	0	.....	2	0.01	0.1	30.20	29.73	29.990	7.1	7.0	305	31	WNW	17	298	24	
10	19.7	12.3	16.0	16.5	10	75	49	0	.....	2	T	T	30.36	30.19	30.290	0.8	0.8	322	19	WNW	10	311	30	
11	26.1	8.5	17.3	18.9	14	81	47	0	.....	2	0.00	0.0	30.45	30.15	30.355	0.4	0.4	200	9	S	4	182	48	
12	34.1	22.5	28.3	28.6	26	91	36	0	.....	5	0.26	2.8	30.15	29.64	29.778	2.8	2.4	221	16	SSW	9	218	3	
13	32.8	20.4	26.6	28.5	23	80	38	0	.....	5	0.01	0.1	30.08	29.86	29.956	3.1	2.6	216	24	WSW	11	213	40	
14	31.3	17.1	24.2	24.5	15	69	41	0	.....	4	0.02	0.2	29.91	29.64	29.807	4.8	4.0	254	28	WNW	16	283	56	
15	18.0	-4.8	6.6	9.0	0	68	58	0	.....	6	0.15	2.1	30.07	29.58	29.738	6.6	6.4	302	31	NNW	18	301	46	
16	11.7	-10.4*	0.7*	-0.1	-8	68	64	0	.....	6	0.00	0.0	30.38	30.06	30.275	2.8	2.2	294	29	WNW	17	303	56	
17	30.2	11.7	21.0	20.2	17	87	44	0	.....	8	0.26	2.0	30.26	29.70	29.944	0.5	0.5	190	13	SSW	5	201	5	
18	40.8	5.3	23.0	27.9	25	89	42	0	.....	4	0.28	0.1	30.53	29.44	29.856	4.7	3.3	267	28	NW	16	303	6	
19	16.4	-8.3	4.0	5.1	-2	72	61	0	.....	4	0.00	0.0	30.77	30.52	30.670	0.4	0.3	322	20	NW	8	336	61	
20	24.7	8.6	16.7	17.8	8	65	48	0	.....	4	0.00	0.0	30.60	29.94	30.304	4.5	4.5	205	29	S	15	203	41	
21	36.6	24.3	30.4	29.8	22	72	34	0	.....	4	0.00	0.0	30.06	29.92	29.987	2.7	2.5	220	20	S	11	215	44	
22	31.5	27.3	29.4	30.0	28	91	35	0	.....	6	0.21	1.3	30.10	29.84	29.950	2.2	1.9	215	18	SW	9	213	7	
23	39.2	26.6	32.9	32.6	27	80	32	0	.....	4	0.00	0.0	30.23	30.10	30.189	4.1	4.0	218	16	SSW	11	214	37	
24	38.5	32.3	35.4	35.3	28	76	29	0	.....	4	0.10	T	30.17	29.86	30.014	5.3	4.9	220	31	S	13	209	7	
25	36.1	7.2	21.6	22.6	15	72	43	0	.....	4	T	T	30.78	30.14	30.514	1.9	1.5	311	22	NW	12	296	58	
26	38.3	5.2	21.7	22.2	16	77	43	0	.....	4	0.36	T	30.80	29.74	30.385	6.7	6.7	203	52	SW	26	198	23	
27	43.3	30.9	37.1	36.8	31	81	28	0	.....	1	0.41	T	29.81	29.56	29.703	6.8	6.0	240	34	SW	17	274	25	
28	31.0	12.4	21.7	23.6	20	86	43	0	.....	2	0.08	1.5	30.11	29.81	29.988	0.5	0.5	311	19	W	8	312	17	
29	31.0	17.6	24.3	26.6	23	88	40	0	.....	3	0.14	1.3	30.06	29.32	29.687	1.0	0.9	190	21	S	7	185	10	
30	30.7	13.6	22.2	24.4	19	81	42	0	.....	3	0.02	0.2	29.83	29.25	29.457	4.6	4.5	287	26	W	16	287	11	
31	32.0	4.8	18.4	21.5	15	77	46	0	.....	3	T	T	29.98	29.68	29.846	2.3	2.2	205	23	S	12	208	31	
<b>Sum</b>	<b>Sum</b>	-----	-----	---	----		<b>Ttl</b>	<b>Ttl</b>			<b>Total</b>	<b>Total</b>	<b>For the month:</b>					---						
	989	512					1256	0	<b>Number of Days</b>		3.26	18.7	30.80	29.25	29.985	3.1	2.2	248	52	SW	26	198		
<b>Avg</b>	<b>Avg</b>	<b>Avg</b>	<b>Mean</b>	<b>Avg</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>				
	31.9	16.5	24.2	25.1	20	80.6	----	----	≥.01 inch	20	37.89	29.0	26	30	-----	----	----	26	26	26				
<b>Number of Days</b>							<b>Season to Date</b>	<b>Snow, Ice ≥1.0 inch</b>	<b>9</b>	<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>			2738	448	<b>Thunder</b>	0	<b>Precipitation</b>		<b>Snow, Ice Plts</b>												
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----			<b>Heavy Fog</b>	1	0.41	1	3.5	5	8		17								
0	17	29	3	----	----			<b>Clear</b>	3	<b>Partly Cloudy</b>		5	<b>Cloudy</b>		23									

**NOTES:**  
 Units: 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

## December 2016: 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	29.48	0.00	43	39	86	15	6	19	0	29.60	0.00	38	35	88	24	3	9	0	29.73	0.00	33	30	88	27	2	13		
04	0	29.47	0.26	43	41	93	25	9	26	0	29.63	0.00	39	34	84	24	2	8	0	29.78	0.00	32	30	93	31	7	13		
07	0	29.42	0.00	43	41	93	20	4	9	0	29.64	0.00	37	34	90	21	3	8	0	29.85	0.00	32	30	91	34	6	19		
10	264	29.43	0.00	48	43	84	26	6	13	54	29.65	0.00	38	36	93	21	6	11	33	29.91	0.00	31	30	94	29	0	15		
13	46	29.45	0.00	44	37	75	26	4	11	60	29.62	0.00	40	37	92	22	0	9	37	29.93	0.00	32	29	90	29	7	16		
16	0	29.48	0.00	42	35	74	24	5	10	0	29.66	0.00	34	32	93	30	5	8	0	29.98	0.00	32	27	82	32	9	16		
19	0	29.54	0.00	39	34	83	26	6	15	0	29.70	0.00	33	31	90	28	0	4	0	30.06	0.00	30	25	80	34	6	15		
22	0	29.57	0.00	38	35	87	26	5	12	0	29.71	0.00	34	30	86	32	6	16	0	30.09	0.00	29	24	83	02	0	8		
DEC 04										DEC 05										DEC 06									
01	0	30.11	0.00	28	23	80	00	0	0	0	30.06	0.00	18	16	93	08	0	0	0	30.03	0.00	28	26	92	03	0	0		
04	0	30.16	0.00	28	23	81	32	0	10	0	30.00	0.00	20	19	94	09	0	0	0	30.09	0.00	28	26	92	03	0	0		
07	0	30.18	0.00	28	23	83	00	0	0	0	29.95	0.00	23	22	93	19	0	0	0	30.11	0.00	27	24	92	03	0	0		
10	53	30.23	0.00	28	24	84	31	0	0	12	29.87	0.00	27	26	94	20	0	0	16	30.12	0.00	29	26	89	07	0	0		
13	109	30.21	0.00	30	24	77	02	0	0	7	29.81	0.00	30	28	93	19	3	12	51	30.06	0.00	30	26	85	09	0	5		
16	7	30.20	0.00	30	23	78	32	0	0	0	29.86	0.00	31	30	94	22	3	10	0	30.01	0.00	26	23	89	02	0	0		
19	0	30.19	0.00	25	21	86	06	0	0	0	29.94	0.00	31	29	93	31	4	6	0	29.98	0.00	25	23	93	02	0	0		
22	109	30.21	0.00	30	24	77	02	0	0	0	30.00	0.00	28	26	94	34	0	6	0	29.96	0.00	26	24	92	08	0	4		
DEC 07										DEC 08										DEC 09									
01	0	29.89	0.00	25	24	94	08	0	0	0	29.89	0.00	31	28	89	23	0	0	0	29.76	0.00	25	22	86	33	7	19		
04	0	29.88	0.00	28	27	95	19	0	0	0	29.84	0.00	32	28	87	20	4	7	0	29.83	0.00	24	18	77	28	10	18		
07	0	29.87	0.00	31	30	96	19	0	0	0	29.80	0.00	32	28	85	20	5	9	0	29.91	0.00	21	15	76	30	10	22		
10	30	29.88	0.00	33	32	95	19	9	13	7	29.79	0.00	32	28	86	18	1	9	81	29.98	0.00	22	15	74	32	5	18		
13	91	29.85	0.00	35	32	91	21	6	18	58	29.72	0.00	33	27	77	24	0	7	93	29.99	0.00	22	14	70	28	9	18		
16	0	29.89	0.00	33	32	94	20	0	10	0	29.73	0.00	32	25	75	26	7	13	0	30.07	0.00	21	14	74	30	6	22		
19	0	29.91	0.00	33	32	95	20	4	7	0	29.74	0.00	30	23	73	24	1	12	0	30.14	0.00	20	10	65	31	10	23		
22	0	29.92	0.00	32	30	92	20	0	0	0	29.74	0.00	29	22	74	25	5	21	0	30.19	0.00	17	9	71	02	0	0		
DEC 10										DEC 11										DEC 12									
01	0	30.19	0.00	18	7	63	31	9	18	0	30.37	0.00	12	10	89	19	0	0	0	30.10	0.00	23	20	88	12	0	6		
04	0	30.23	0.00	16	10	75	01	0	7	0	30.40	0.00	9	7	91	19	0	0	0	29.92	0.00	23	22	93	18	0	6		
07	0	30.28	0.00	15	8	72	03	2	11	0	30.42	0.00	9	6	90	19	0	0	0	29.78	0.00	26	24	93	19	4	9		
10	109	30.32	0.00	18	8	65	31	0	10	95	30.44	0.00	19	13	80	20	2	7	9	29.72	0.00	28	26	91	22	2	9		
13	86	30.28	0.00	19	8	62	30	0	0	327	30.38	0.00	26	18	71	21	1	4	11	29.66	0.00	31	30	93	21	5	11		
16	5	30.31	0.00	18	12	78	03	0	0	0	30.35	0.00	24	18	77	20	0	0	0	29.65	0.00	33	30	91	21	5	11		
19	0	30.34	0.00	13	10	90	02	0	0	0	30.32	0.00	23	17	76	20	0	0	0	29.69	0.00	33	30	86	25	4	7		
22	0	30.34	0.00	15	12	89	15	0	0	0	30.22	0.00	24	17	76	16	0	0	0	29.75	0.00	32	30	94	24	5	16		
DEC 13										DEC 14										DEC 15									
01	0	29.89	0.00	26	23	91	31	4	8	0	29.85	0.00	31	26	82	19	4	15	0	29.62	0.00	17	15	91	20	0	0		
04	0	29.98	0.00	24	21	89	33	0	0	0	29.83	0.00	30	27	87	25	1	10	0	29.59	0.00	17	11	76	26	2	9		
07	0	30.03	0.00	23	20	89	31	0	0	0	29.88	0.00	26	18	72	30	3	7	0	29.59	0.00	14	6	70	22	1	6		
10	121	30.07	0.00	29	24	80	18	3	8	178	29.90	0.00	25	13	60	27	9	19	148	29.70	0.00	12	3	66	29	9	24		
13	148	29.98	0.00	32	24	73	19	4	10	151	29.83	0.00	25	13	59	26	9	23	139	29.72	0.00	9	-9	42	28	6	23		
16	0	29.97	0.00	31	24	76	19	1	8	7	29.80	0.00	23	11	61	25	7	13	0	29.70	0.00	9	0	66	27	5	14		
19	0	29.89	0.00	32	23	70	18	5	22	0	29.74	0.00	19	8	62	21	3	11	0	29.89	0.00	-0	-9	66	31	10	29		
22	0	29.87	0.00	32	23	70	21	6	14	0	29.66	0.00	20	10	66	21	3	10	0	30.00	0.00	-4	-10	73	31	10	22		
DEC 16										DEC 17										DEC 18									
01	0	30.09	0.00	-5	-15	59	30	11	22	0	30.26	0.00	13	6	73	19	1	6	0	29.68	0.00	31	29	93	19	1	8		
04	0	30.19	0.00	-6	-13	70	31	9	15	0	30.17	0.00	16	10	75	22	1	10	0	29.60	0.00	37	36	96	26	1	8		
07	0	30.30	0.00	-8	-14	74	30	6	11	0	30.06	0.00	15	12	88	16	1	7	0	29.45	0.00	40	39	97	18	8	19		
10	220	30.37	0.00	-4	-11	73	29	0	0	16	29.94	0.00	19	16	91	17	0	5	16	29.52	0.00	39	38	97	25	4	11		
13	290	30.32	0.00	3	-8	60	19	3	9	16	29.84	0.00	21	18	90	21	0	0	28	29.78	0.00	31	29	92	27	0	12		
16	5	30.32	0.00	3	-9	57	19	1	7	0	29.82	0.00	23	20	90	19	2	6	0	30.02	0.00	25	20	81	32	6	16		
19	0	30.29	0.00	5	-4	65	21	0	8	0	29.81	0.00	24	22	92	19	0	0	0	30.21	0.00	21	18	86	32	0	0		
22	0	30.28	0.00	9	3	77	20	0	4	0	29.74	0.00	27	25	90	19	0	0	0	30.44	0.00	9	2	72	30	3	21		

### MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.05	0.08	0.10	0.12	0.16	0.18	0.23	0.26	0.26	0.29	0.30	0.31
Ended: Date	01	01	01	01	01	01	01	01	01	01	01	01
Ended: Time	0402	0404	0408	0413	0424	0433	0454	0507	0507	0502	0507	0502

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 2016: 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	30.55	0.00	4	-3	73	33	6	15	0	30.59	0.00	11	2	68	19	0	4	0	29.93	0.00	25	13	61	21	9	15		
04	0	30.62	0.00	-2	-7	80	35	0	0	0	30.56	0.00	11	3	68	19	1	8	0	29.92	0.00	25	16	66	20	1	11		
07	0	30.71	0.00	-7	-10	86	09	0	0	0	30.52	0.00	12	4	70	21	2	7	0	29.96	0.00	26	18	71	21	2	9		
10	211	30.77	0.00	5	-3	70	19	0	0	200	30.46	0.00	17	7	64	20	4	15	179	29.98	0.00	31	22	69	22	1	10		
13	315	30.70	0.00	13	1	56	16	0	0	134	30.30	0.00	22	11	61	20	6	14	107	29.98	0.00	34	25	70	20	2	11		
16	9	30.68	0.00	12	1	60	23	0	0	9	30.16	0.00	22	12	65	21	9	22	5	30.02	0.00	35	27	73	24	5	13		
19	0	30.67	0.00	7	1	75	18	0	0	0	30.04	0.00	23	11	59	20	13	25	0	30.05	0.00	31	25	78	21	0	6		
22	0	30.65	0.00	10	2	70	18	0	0	0	29.98	0.00	23	11	59	19	7	24	0	30.06	0.00	29	25	82	21	2	5		
DEC 22										DEC 23										DEC 24									
01	0	30.01	0.00	30	25	82	20	2	7	0	30.13	0.00	30	27	89	27	0	0	0	30.15	0.00	34	24	66	21	8	15		
04	0	29.97	0.00	30	24	78	20	2	7	0	30.16	0.00	31	28	88	25	6	11	0	30.09	0.00	35	23	60	22	5	16		
07	0	29.91	0.00	27	26	94	20	3	9	0	30.19	0.00	30	27	86	19	0	6	0	29.99	0.00	36	23	58	19	5	14		
10	26	29.88	0.00	30	28	95	21	2	8	39	30.23	0.00	32	27	83	21	4	10	21	29.91	0.00	36	29	78	20	8	14		
13	23	29.84	0.00	31	29	94	22	3	10	158	30.20	0.00	36	29	76	24	5	14	16	29.87	0.00	33	31	94	22	7	15		
16	0	29.91	0.00	30	29	95	21	3	7	12	30.20	0.00	35	28	76	20	3	10	0	29.97	0.00	35	33	93	29	5	15		
19	0	29.99	0.00	31	30	96	33	0	7	0	30.21	0.00	32	26	80	21	5	10	0	30.06	0.00	36	31	82	27	0	7		
22	0	30.06	0.00	31	29	93	28	3	11	0	30.20	0.00	33	25	72	21	7	14	0	30.12	0.00	36	31	82	22	2	7		
DEC 25										DEC 26										DEC 27									
01	0	30.15	0.00	36	31	82	24	5	11	0	30.78	0.00	7	3	81	03	0	0	0	29.69	0.00	39	38	95	19	12	27		
04	0	30.23	0.00	36	31	82	29	6	15	0	30.73	0.00	5	2	85	03	0	0	0	29.58	0.00	41	40	94	21	11	23		
07	0	30.39	0.00	26	19	73	35	0	10	0	30.69	0.00	8	4	83	07	0	0	0	29.61	0.00	43	37	78	24	6	20		
10	220	30.54	0.00	25	16	70	34	3	13	146	30.62	0.00	18	9	68	13	0	0	297	29.67	0.00	41	30	65	25	14	27		
13	320	30.58	0.00	24	14	65	32	0	11	67	30.38	0.00	26	11	51	22	1	12	51	29.70	0.00	36	29	76	26	7	16		
16	11	30.65	0.00	19	8	60	00	2	8	5	30.17	0.00	33	26	76	20	17	34	0	29.76	0.00	34	28	79	25	5	14		
19	0	30.71	0.00	15	5	65	03	0	0	0	30.05	0.00	34	30	84	20	12	40	0	29.80	0.00	33	25	74	25	8	15		
22	0	30.76	0.00	10	4	74	03	0	0	0	29.86	0.00	36	34	93	19	12	29	0	29.80	0.00	31	25	78	24	7	14		
DEC 28										DEC 29										DEC 30									
01	0	29.81	0.00	31	25	81	30	1	8	0	30.03	0.00	19	15	86	05	0	0	0	29.29	0.00	30	28	94	29	0	0		
04	0	29.85	0.00	29	26	87	27	0	7	0	29.96	0.00	21	17	86	05	0	0	0	29.26	0.00	30	27	87	29	4	10		
07	0	29.91	0.00	28	25	89	26	0	3	0	29.87	0.00	26	20	78	19	2	9	0	29.28	0.00	28	25	88	25	4	10		
10	32	30.00	0.00	26	24	91	30	0	8	37	29.78	0.00	28	23	82	17	3	20	16	29.35	0.00	28	22	80	28	10	21		
13	118	30.02	0.00	25	17	74	30	0	10	25	29.60	0.00	28	26	91	14	1	10	44	29.40	0.00	27	20	77	32	7	19		
16	9	30.07	0.00	21	17	84	02	0	0	0	29.52	0.00	28	27	93	15	0	6	9	29.53	0.00	22	14	71	27	12	22		
19	0	30.11	0.00	16	12	86	02	0	0	0	29.47	0.00	29	28	95	20	0	0	0	29.68	0.00	18	11	73	29	2	15		
22	0	30.10	0.00	14	12	92	03	0	0	0	29.39	0.00	30	28	93	20	0	0	0	29.78	0.00	15	8	75	30	6	10		
DEC 31																													
01	0	29.87	0.00	15	7	71	27	7	13																				
04	0	29.95	0.00	11	6	81	26	0	0																				
07	0	29.98	0.00	9	7	91	26	0	0																				
10	128	29.97	0.00	19	13	75	20	0	6																				
13	49	29.85	0.00	25	20	79	20	3	15																				
16	5	29.76	0.00	28	20	71	19	2	9																				
19	0	29.74	0.00	31	21	68	20	3	15																				
22	0	29.70	0.00	31	27	86	20	2	13																				

### WEATHER NOTES

NOTES:  
 Units: 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	29.986	24	19	82	3.2	25	1.8
04	0	29.982	24	20	84	2.6	27	2.1
07	0	29.985	23	19	84	2.5	24	1.4
10	97	29.999	26	21	80	3.4	25	2.6
13	102	29.963	28	21	76	3.2	25	2.5
16	3	29.975	27	21	78	4.0	26	2.9
19	0	29.998	25	19	80	3.1	25	2.0
22	4	30.005	24	19	81	2.9	25	2.1

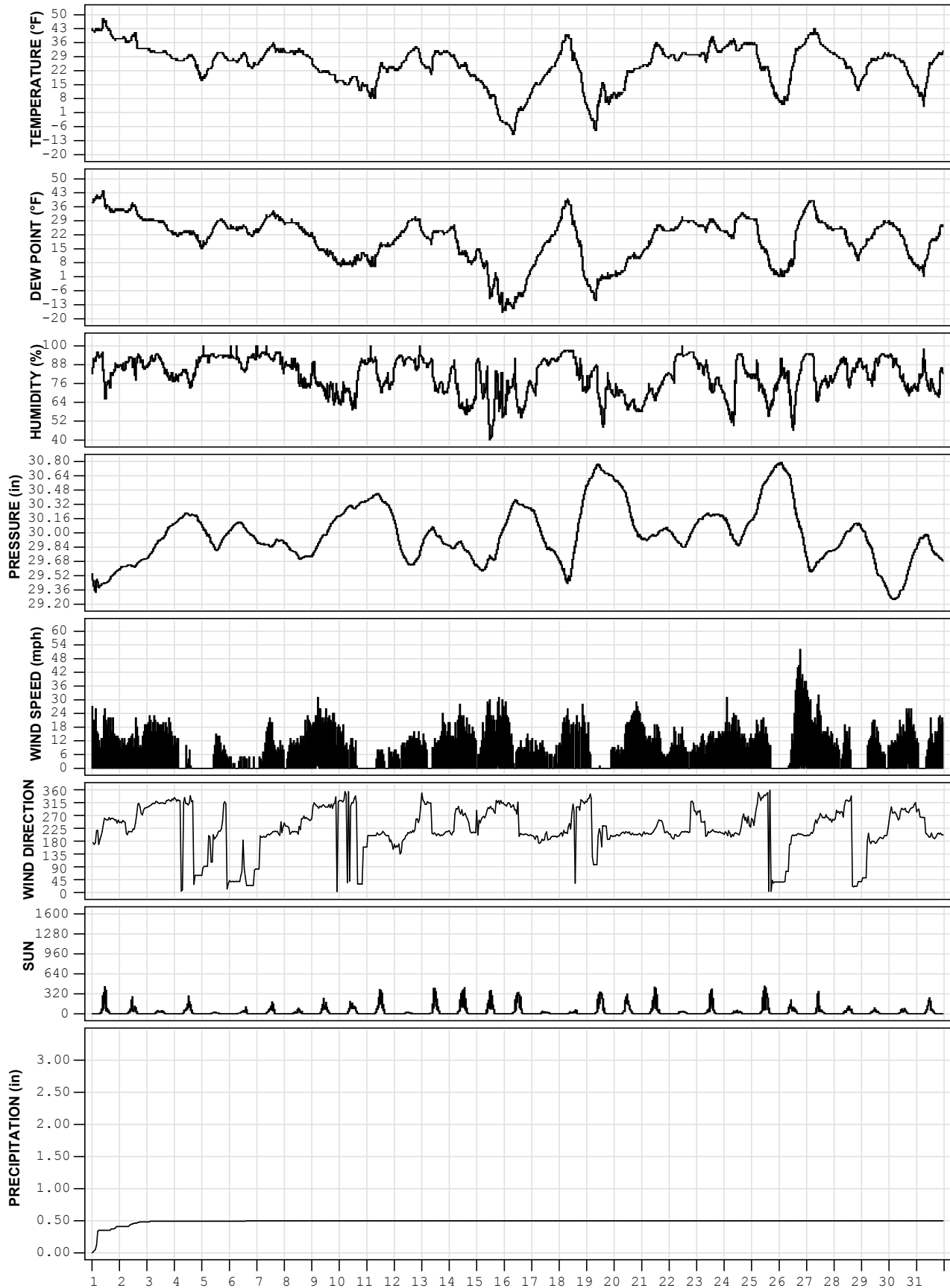
## HOURLY PRECIPITATION (Water Equivalent) December 2016: Westford

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	0.01	0.02	0.02	0.07	0.21	0.02							0.01			0.01	0.02			0.01	0.02	0.01			01	
02									0.02	0.01	0.01		0.01													02
03			0.01																							03
04																										04
05																										05
06																0.01										06
07																										07
08																										08
09																										09
10																										10
11																										11
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27																										27
28																										28
29																										29
30																										30
31																										31
<b>Sum</b>	0.01	0.02	0.03	0.07	0.21	0.02	0.00	0.00	0.02	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.02	0.01	0.00	0.01	0.02	0.01	0.00	0.00	<b>Sum</b>	

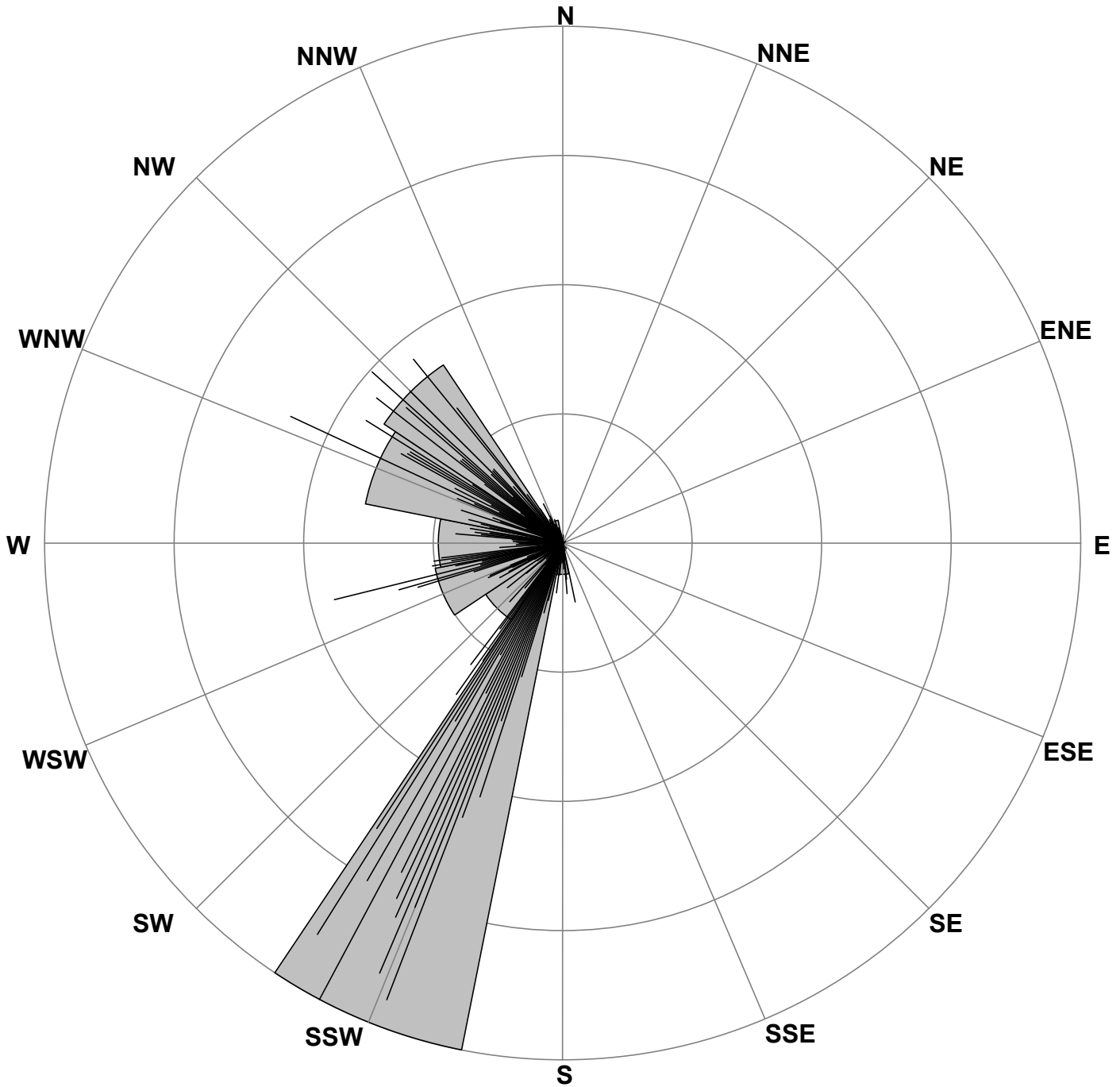
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA

## December 2016: Westford



**Wind Rose: December 2016  
Westford**



**Maximum direction of wind: 79.9 miles from 208°  
Maximum sector of wind: 895.6 miles from SSW  
2325.5 total miles of wind**