

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### February 2019

Station: Westford

Latitude: 44° 37' 38" 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		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	15.8	-0.6	7.6	6.4	-4	62	57	0	.....	14	0.00	0.0	30.31	30.19	30.260	3.1	3.0	258	21	W	12	259	95
2	18.1	-0.1	9.0	10.4	6	81	56	0	.....	16	0.18	2.5	30.29	29.91	30.080	2.2	2.2	211	20	SW	10	216	37
3	37.1	13.8	25.4	23.6	21	91	39	0	.....6..	15	0.20	0.2	30.13	29.90	30.023	1.1	1.1	206	16	SSW	9	200	16
4	48.6	36.8	42.7*	40.8	37	85	22	0	.....	11	T	0.0	29.96	29.77	29.891	3.8	3.8	210	24	S	11	193	21
5	48.3	15.0	31.6	37.1	32	81	33	0	.....	6	0.15	T	30.20	29.70	29.884	4.9	3.3	238	29	W	18	286	44
6	32.9	9.7	21.3	19.9	16	85	43	0	.....6..	6	0.36	0.0	30.28	30.01	30.160	0.4	0.4	209	12	N	7	204	45
7	38.0	29.2	33.6	33.9	33	95	31	0	.2.....	5	0.08	0.0	30.11	29.76	30.016	1.7	1.7	198	19	SSW	9	186	28
8	42.0	18.0	30.0	32.9	26	77	35	0	.....	4	0.01	T	30.05	29.49	29.750	9.6	8.3	254	41	W	23	294	90
9	19.6	10.7	15.2	15.2	3	59	49	0	.....	4	0.00	0.0	30.60	30.05	30.406	6.5	6.2	297	31	WNW	19	283	112
10	23.4	8.9	16.1	14.9	6	67	49	0	.....	4	0.00	0.0	30.60	30.37	30.496	1.1	1.0	282	16	WNW	9	308	108
11	16.6	0.9	8.8	11.3	3	68	56	0	.....	4	0.00	0.0	30.53	30.33	30.412	0.3	0.3	349	12	NNE	5	316	113
12	23.6	-2.4	10.6	9.9	4	76	54	0	.....	7	0.31	3.1	30.53	29.76	30.286	0.4	0.4	184	15	S	6	196	41
13	32.1	22.8	27.4	26.6	22	84	37	0	.....	10	0.45	4.6	29.77	29.47	29.562	2.1	1.9	248	22	WSW	12	256	12
14	30.5	16.7	23.6	22.3	14	71	41	0	.....	9	0.00	0.0	29.97	29.60	29.850	2.4	2.4	262	21	WSW	11	289	106
15	39.3	21.2	30.3	32.4	26	78	35	0	..3.....	7	0.18	0.0	29.92	29.46	29.652	3.3	2.6	210	25	WNW	13	284	49
16	29.7	12.7	21.2	23.6	15	71	43	0	.....	7	T	T	30.04	29.65	29.820	3.0	2.7	295	24	W	14	282	94
17	19.3	2.4	10.8	11.1	4	73	54	0	.....	7	0.00	0.0	30.19	30.01	30.105	0.1	0.1	319	9	NNW	5	284	113
18	14.0	2.8	8.4	10.6	5	78	56	0	.....	10	0.12	3.7	30.31	29.89	30.026	0.5	0.4	319	14	W	7	307	50
19	16.8	-0.1	8.3	8.1	-1	67	56	0	.....	8	0.00	0.0	30.58	30.31	30.504	0.8	0.8	314	14	WNW	7	305	137
20	24.3	2.9	13.6	15.5	8	71	51	0	.....	8	0.00	0.0	30.57	29.97	30.410	0.9	0.9	210	12	SW	9	210	82
21	36.3	22.0	29.1	31.1	26	83	36	0	.....	9	0.41	1.2	30.05	29.75	29.853	5.2	4.0	243	27	W	14	295	26
22	31.2	18.3	24.8	25.3	19	75	40	0	.....	8	T	T	30.46	30.05	30.304	0.6	0.6	303	18	NNW	8	282	94
23	35.8	14.3	25.0	24.6	17	75	40	0	.....	8	0.00	0.0	30.49	30.13	30.371	0.1	0.0	358	7	WNW	5	313	126
24	40.5	25.0	32.8	34.1	29	80	32	0	...4.6...	7	0.38	T	30.14	29.14	29.536	3.7	3.2	200	28	SE	12	268	57
25	32.7	12.3	22.5	23.3	16	73	42	0	.....	7	0.01	T	30.05	29.15	29.502	11.1	10.4	283	38	WNW	24	295	54
26	12.6	-1.0	5.8	6.3	-5	60	59	0	.....	7	0.00	0.0	30.48	30.05	30.285	6.6	6.5	313	33	WNW	21	283	155
27	7.3	-7.2*	0.1*	1.9	-6	69	65	0	.....	7	0.01	0.2	30.51	30.09	30.351	0.3	0.3	328	16	NNW	9	359	83
28	19.5	-1.8	8.9	8.3	-1	67	56	0	.....	7	0.02	0.4	30.31	30.07	30.215	0.2	0.2	327	10	N	5	312	166
Sum	Sum	-----	-----	---	----	Ttl	Ttl		Number of Days	Total	Total	For the month:										---	
786	303					1267	0			2.85	15.9	30.60	29.14	30.072	2.7	1.9	259	41	W	24	295		
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip	Season Ttl	Date	Date	-----	----	----	---	Date	Date	Avg					
28.1	10.8	19.4	20.0	13	75.1	----	----	≥.01 inch	15	8.15	101.1	9	24	-----	----	----	---	8	25	77			
Number of Days						Season to Date	Snow, Ice ≥1.0 inch	5	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date								
Max Temperature			Min Temperature			5971	0	Thunder	1	Precipitation			Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	1	0.00	-	4.6	13	16			2								
0	17	27	7	----	----	Clear	7	Partly Cloudy			6	Cloudy			15								

**NOTES:**

- Units: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.
- Column 4A: value is (MAX+MIN) ÷ 2.
- Data in columns 4B, 5, 6, 15, 16, 23 are updated continuously, there by achieving a "true" mean.
- 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 W/m² and is continuously averaged for 24 hours.

## OBSERVATIONS AT 3-HOUR INTERVALS

## February 2019: 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
00	0	30.19	0.00	5	-3	68	25	10	18	0	30.29	0.00	2	-3	77	23	0	0	0	30.06	0.00	18	16	92	28	0	0
03	0	30.21	0.00	2	-7	67	21	0	7	0	30.27	0.00	5	-1	78	22	0	0	0	30.08	0.00	17	15	92	28	0	0
06	0	30.25	0.00	0	-7	72	21	1	11	0	30.20	0.00	4	-1	79	20	1	8	0	30.10	0.00	15	13	92	36	0	0
09	33	30.30	0.00	2	-5	70	24	3	13	114	30.13	0.00	8	2	75	20	5	12	35	30.12	0.00	18	16	91	00	0	0
12	441	30.27	0.00	12	-2	53	22	3	10	132	30.00	0.00	13	1	58	19	7	16	44	30.09	0.00	22	19	86	17	0	0
15	98	30.24	0.00	15	-6	37	27	5	15	62	29.92	0.00	14	10	87	21	2	10	23	29.98	0.00	25	23	91	21	0	0
18	0	30.28	0.00	7	-6	55	30	0	0	0	29.94	0.00	16	13	90	21	3	7	0	29.94	0.00	30	29	95	22	2	5
21	0	30.29	0.00	5	-2	71	25	0	4	0	30.01	0.00	17	15	91	20	0	0	0	29.90	0.00	34	32	94	21	3	9
FEB 04									FEB 05									FEB 06									
00	0	29.90	0.00	37	34	90	21	5	12	0	29.77	0.00	48	40	73	20	5	20	0	30.20	0.00	15	11	83	00	0	0
03	0	29.89	0.00	39	35	85	20	8	13	0	29.72	0.00	45	39	78	20	8	14	0	30.24	0.00	13	10	88	04	0	0
06	0	29.92	0.00	37	35	91	21	7	11	0	29.73	0.00	43	40	91	20	8	16	0	30.25	0.00	10	7	89	03	0	0
09	91	29.96	0.00	40	37	89	22	2	8	28	29.75	0.00	44	41	89	22	6	12	125	30.25	0.00	15	11	86	03	0	0
12	91	29.92	0.00	42	37	83	17	4	7	265	29.77	0.00	47	41	78	25	5	12	163	30.20	0.00	20	14	77	02	0	0
15	49	29.89	0.00	42	37	85	19	4	8	65	29.91	0.00	39	32	76	29	6	16	90	30.14	0.00	24	16	72	10	0	0
18	0	29.88	0.00	41	37	86	20	3	7	0	30.07	0.00	29	22	77	32	8	13	0	30.07	0.00	25	20	82	19	2	8
21	0	29.82	0.00	44	39	81	18	1	6	0	30.16	0.00	19	14	79	33	4	11	0	30.01	0.00	30	29	94	20	1	8
FEB 07									FEB 08									FEB 09									
00	0	30.03	0.00	33	32	95	20	4	12	0	29.77	0.00	37	35	92	15	3	12	0	30.05	0.00	18	6	59	28	12	27
03	0	30.05	0.00	33	32	95	21	5	10	0	29.67	0.00	37	35	93	20	7	14	0	30.13	0.00	15	9	76	30	12	23
06	0	30.07	0.00	34	33	95	22	0	4	0	29.55	0.00	42	38	88	19	15	36	0	30.26	0.00	13	2	62	30	13	20
09	46	30.08	0.00	32	30	95	22	0	0	32	29.64	0.00	39	37	94	21	0	7	141	30.40	0.00	13	2	61	33	8	22
12	134	30.09	0.00	33	32	95	22	0	0	599	29.68	0.00	41	29	63	28	10	21	487	30.47	0.00	17	3	53	32	9	23
15	70	30.01	0.00	35	34	95	07	0	0	81	29.78	0.00	31	20	64	28	12	29	193	30.53	0.00	19	4	50	33	1	21
18	0	30.01	0.00	34	32	95	20	0	0	0	29.86	0.00	25	15	66	26	14	32	0	30.57	0.00	15	-0	51	31	0	1
21	0	29.90	0.00	37	35	92	18	4	10	0	29.94	0.00	22	13	67	25	12	22	0	30.58	0.00	16	2	55	26	5	13
FEB 10									FEB 11									FEB 12									
00	0	30.59	0.00	14	5	69	24	0	7	0	30.37	0.00	15	9	77	32	0	0	0	30.52	0.00	2	-4	77	05	0	0
03	0	30.58	0.00	11	3	69	30	0	0	0	30.33	0.00	15	9	76	30	0	0	0	30.51	0.00	2	-5	73	03	0	0
06	0	30.57	0.00	9	2	72	26	0	3	0	30.35	0.00	11	6	78	02	0	5	0	30.47	0.00	-2	-7	79	04	0	0
09	193	30.58	0.00	12	3	68	27	0	6	227	30.40	0.00	11	4	74	02	0	8	134	30.44	0.00	4	-2	73	08	0	0
12	471	30.51	0.00	19	6	56	25	2	11	485	30.41	0.00	16	3	56	32	0	7	171	30.36	0.00	12	0	59	08	0	0
15	211	30.44	0.00	23	8	53	30	2	11	192	30.40	0.00	15	1	54	31	1	9	60	30.24	0.00	16	4	60	05	0	0
18	0	30.41	0.00	17	9	68	31	0	1	0	30.44	0.00	9	-2	60	01	0	0	0	30.14	0.00	17	14	88	18	1	8
21	0	30.39	0.00	12	7	80	31	0	0	0	30.50	0.00	3	-4	71	05	0	0	0	29.96	0.00	19	17	90	20	0	6
FEB 13									FEB 14									FEB 15									
00	0	29.77	0.00	24	19	84	18	4	10	0	29.61	0.00	23	16	72	26	3	13	0	29.92	0.00	25	19	76	21	2	6
03	0	29.64	0.00	25	22	90	20	0	0	0	29.67	0.00	21	15	76	26	3	12	0	29.83	0.00	22	18	83	17	0	0
06	0	29.53	0.00	24	22	93	01	0	0	0	29.75	0.00	20	14	79	26	4	11	0	29.75	0.00	33	22	64	16	0	16
10	18	29.53	0.00	26	25	94	01	0	0	116	29.85	0.00	20	13	74	26	4	16	54	29.66	0.00	32	26	79	18	5	15
12	44	29.50	0.00	32	29	88	19	0	0	457	29.91	0.00	25	13	60	25	4	9	279	29.58	0.00	38	30	73	17	5	21
15	69	29.49	0.00	32	26	78	24	4	9	248	29.93	0.00	30	14	51	31	3	10	113	29.49	0.00	39	34	81	17	2	8
18	0	29.55	0.00	27	21	78	25	6	13	0	29.95	0.00	23	14	67	26	0	5	0	29.53	0.00	34	33	93	26	6	12
21	0	29.58	0.00	25	18	73	26	4	14	0	29.96	0.00	18	14	83	25	0	0	0	29.60	0.00	33	25	73	29	8	15
FEB 16									FEB 17									FEB 18									
00	0	29.65	0.00	30	22	73	28	6	16	0	30.04	0.00	13	7	78	32	0	0	0	30.01	0.00	10	4	79	31	0	0
03	0	29.68	0.00	27	18	70	24	1	10	0	30.09	0.00	9	4	79	33	0	0	0	29.95	0.00	13	6	74	00	0	0
06	0	29.70	0.00	27	19	74	26	5	20	0	30.13	0.00	4	0	84	30	0	0	0	29.91	0.00	12	6	79	00	0	0
09	195	29.75	0.00	27	19	71	25	5	10	241	30.18	0.00	8	3	81	04	0	6	32	29.90	0.00	13	9	86	01	0	0
12	237	29.78	0.00	27	18	69	28	2	11	522	30.16	0.00	18	6	60	32	0	0	102	29.93	0.00	14	9	83	01	0	5
15	283	29.84	0.00	25	14	63	32	6	16	294	30.13	0.00	18	6	60	30	0	6	285	30.00	0.00	13	6	74	02	2	8
18	0	29.95	0.00	19	11	69	33	4	11	0	30.07	0.00	12	4	69	31	0	0	0	30.12	0.00	7	-0	72	01	0	0
21	0	30.00	0.00	17	10	72	32	3	11	0	30.04	0.00	11	4	74	31	0	0	0	30.22	0.00	9	3	76	27	2	9

## 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	--	--	--	--	--	--	--	--	--	--	--	--
Ended: Time	----	----	----	----	----	----	----	----	----	----	----	----

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 2019: 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
00	0	30.31	0.00	6	0	77	32	1	11	0	30.55	0.00	6	-0	74	22	0	0	0	29.97	0.00	24	20	88	16	4	8
03	0	30.39	0.00	4	-1	79	33	0	9	0	30.56	0.00	5	-1	76	21	0	0	0	29.85	0.00	22	20	91	19	2	10
06	0	30.46	0.00	2	-2	82	01	0	8	0	30.52	0.00	8	3	79	21	0	0	0	29.75	0.00	28	25	90	21	7	22
09	287	30.54	0.00	6	0	77	04	0	0	193	30.54	0.00	13	5	69	21	2	7	76	29.76	0.00	32	29	88	21	8	15
12	555	30.55	0.00	13	1	58	30	0	10	258	30.47	0.00	20	10	64	22	2	8	62	29.78	0.00	36	31	82	27	7	15
15	311	30.53	0.00	16	0	49	31	1	11	216	30.39	0.00	24	13	62	21	4	9	30	29.82	0.00	36	29	76	24	3	13
18	0	30.53	0.00	10	-3	54	30	0	3	0	30.33	0.00	21	13	69	21	0	0	0	29.88	0.00	35	28	76	24	2	15
21	0	30.57	0.00	10	-1	62	26	0	5	0	30.19	0.00	22	13	66	19	1	9	0	29.98	0.00	33	27	76	29	4	18
FEB 22									FEB 23									FEB 24									
00	0	30.05	0.00	31	25	78	32	0	10	0	30.45	0.00	20	15	80	29	0	0	0	30.14	0.00	25	20	80	22	0	0
03	0	30.14	0.00	27	22	82	06	0	0	0	30.45	0.00	15	12	89	29	0	0	0	30.01	0.00	33	21	61	17	4	10
06	0	30.22	0.00	21	16	80	31	0	0	0	30.48	0.00	17	15	90	29	0	0	0	29.87	0.00	31	27	85	17	6	19
09	190	30.32	0.00	24	18	77	29	2	7	160	30.48	0.00	24	18	77	23	0	0	83	29.70	0.00	33	28	85	15	2	10
12	345	30.34	0.00	28	19	70	29	0	11	504	30.42	0.00	33	20	58	01	0	2	327	29.42	0.00	40	32	72	17	4	19
15	171	30.34	0.00	31	19	62	32	0	4	246	30.33	0.00	35	21	58	05	0	2	181	29.28	0.00	37	33	88	18	3	12
18	0	30.39	0.00	27	19	72	30	1	5	0	30.28	0.00	28	20	72	18	0	0	0	29.15	0.00	37	33	85	21	5	12
21	0	30.42	0.00	21	15	79	29	0	0	0	30.25	0.00	24	19	82	18	0	0	0	29.17	0.00	36	30	80	26	6	14
FEB 25									FEB 26									FEB 27									
00	0	29.16	0.00	32	28	86	24	1	10	0	30.05	0.00	12	3	67	30	12	23	0	30.48	0.00	-1	-9	68	33	0	8
03	0	29.16	0.00	30	24	78	25	7	24	0	30.14	0.00	9	3	74	29	7	15	0	30.50	0.00	-4	-11	72	32	0	6
06	0	29.22	0.00	28	20	72	25	13	27	0	30.25	0.00	4	-5	67	27	1	14	0	30.49	0.00	-5	-11	76	32	0	0
09	116	29.29	0.00	26	19	73	25	10	27	315	30.29	0.00	5	-8	54	31	10	19	250	30.46	0.00	1	-9	63	01	0	0
12	171	29.43	0.00	24	18	77	29	11	28	580	30.28	0.00	9	-6	49	31	7	29	302	30.39	0.00	6	-9	49	32	0	0
15	121	29.59	0.00	21	16	79	29	14	25	380	30.29	0.00	9	-6	48	31	13	28	100	30.29	0.00	6	-7	53	21	0	0
18	0	29.77	0.00	20	9	63	31	10	28	0	30.37	0.00	5	-7	55	32	9	13	0	30.23	0.00	5	-1	74	20	0	0
21	0	29.94	0.00	16	5	64	28	13	32	0	30.40	0.00	2	-7	65	33	0	9	0	30.16	0.00	5	1	84	20	0	0
FEB 28																											
00	0	30.09	0.00	5	2	86	02	0	0																		
03	0	30.07	0.00	5	2	86	02	0	0																		
06	0	30.14	0.00	0	-3	84	01	0	0																		
09	278	30.22	0.00	7	-1	70	01	0	0																		
12	633	30.26	0.00	15	1	53	33	1	7																		
15	417	30.25	0.00	18	-1	41	33	3	9																		
18	0	30.27	0.00	12	-2	53	28	0	0																		
21	0	30.30	0.00	6	-2	69	28	0	0																		

### 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 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
00	0	30.070	19	13	79	2.6	25	1.8
03	0	30.065	18	12	80	2.3	24	1.7
06	0	30.068	17	12	81	2.9	23	2.2
09	136	30.090	19	13	78	2.6	25	1.8
12	316	30.070	24	14	67	3.0	26	2.0
15	166	30.054	25	14	66	3.2	29	2.4
18	0	30.070	21	13	73	2.7	28	2.0
21	0	30.081	19	13	77	2.5	27	2.1

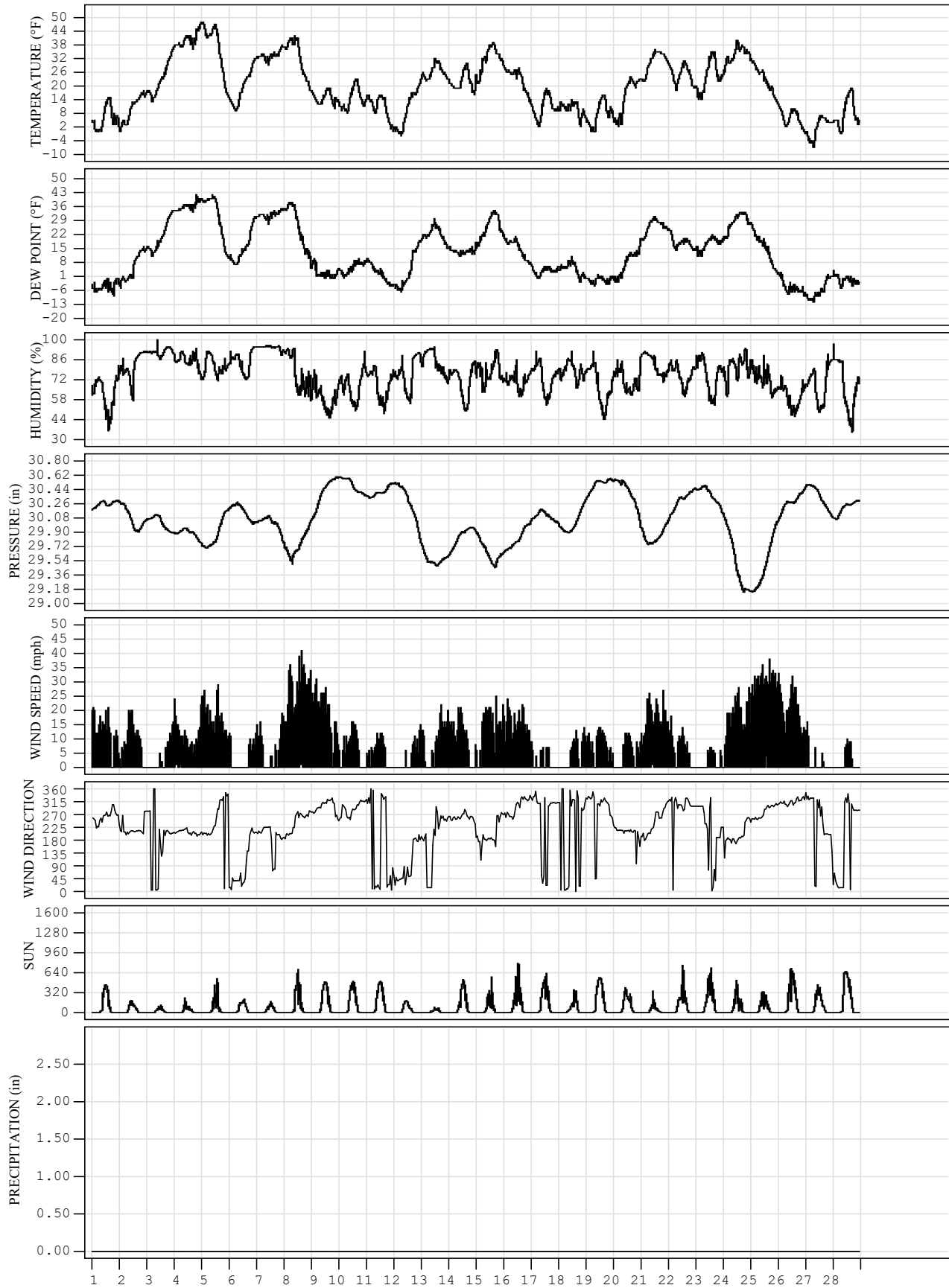
## HOURLY PRECIPITATION (Water Equivalent) February 2019: Westford

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	
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02																									02
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27																									27
28																									28
<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>

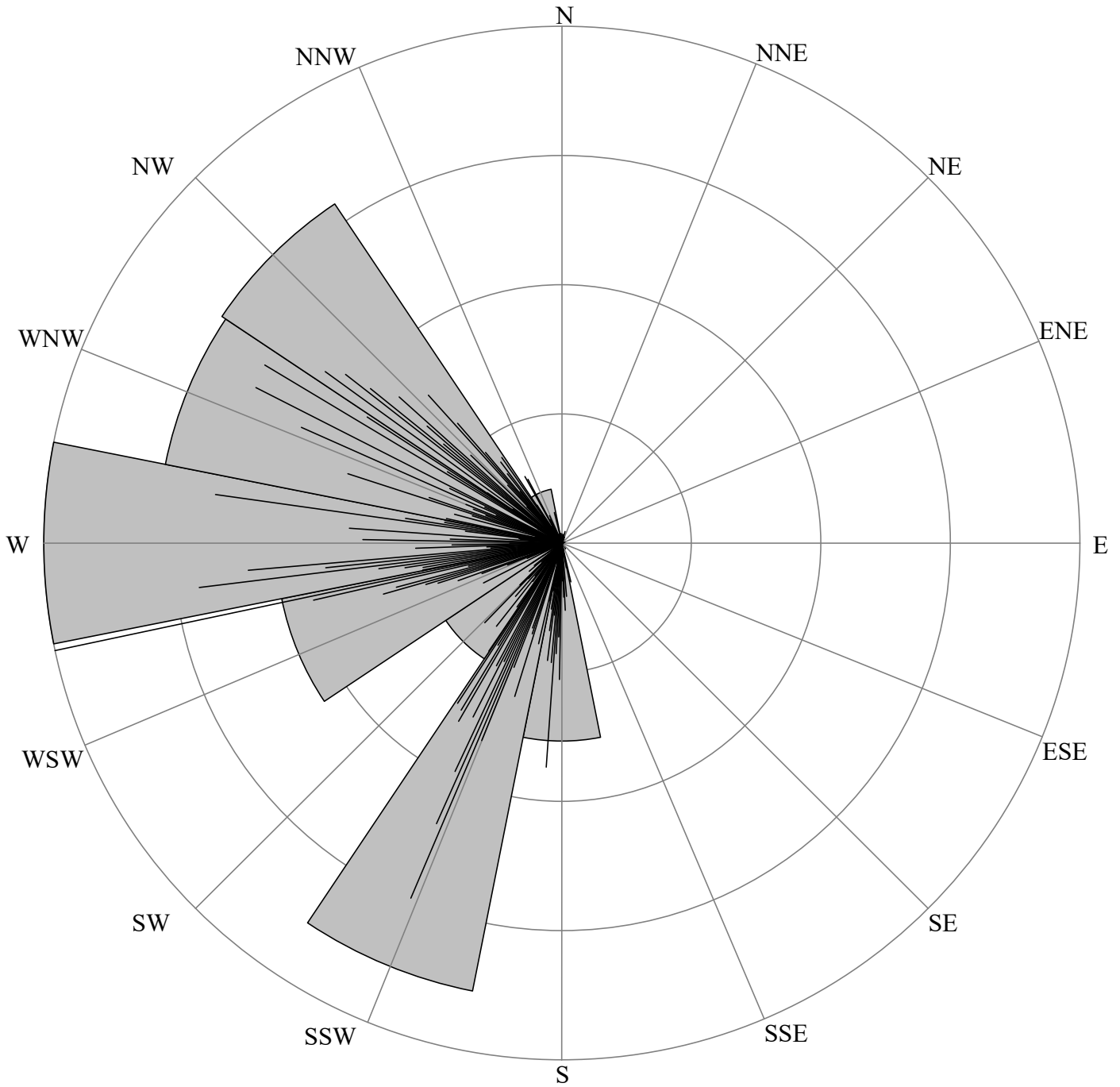
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA

## February 2019: Westford



Wind Rose: February 2019  
Westford



Maximum direction of wind: 57.0 miles from 258°  
Maximum sector of wind: 379.7 miles from W  
1823.3 total miles of wind