

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### March 2012

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	Res	Res	Peak			Minute	
																				Speed	Speed		Dir	Speed
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	31.1	26.2	28.7	28.8	23	79	36	0	.....	7	0.25	2.2	29.93	29.74	29.819	1.7	1.6	179	18	SE	9	178	26	
2	37.6	26.5	32.0	30.7	23	74	32	0	.....	5	0.00	0.0	30.00	29.69	29.927	4.7	4.6	197	18	SSW	10	171	68	
3	48.2	30.8	39.5	37.6	27	67	25	0	..4.....	3	0.04	T	29.69	29.26	29.413	8.0	6.9	226	36	W	22	267	107	
4	36.3	11.4	23.8	26.3	20	76	41	0	.....	5	0.17	3.4	29.67	29.48	29.561	2.4	1.2	280	22	WNW	14	260	44	
5	20.1	4.7*	12.4*	10.9	1	65	52	0	.....	6	0.06	1.7	30.36	29.67	30.018	1.5	1.4	304	18	NW	9	268	133	
6	31.4	5.6	18.5	19.1	3	53	46	0	.....	5	0.00	0.0	30.57	30.36	30.481	1.5	1.3	210	18	S	10	196	175	
7	54.0	31.4	42.7	43.8	23	44	22	0	.....	2	0.00	0.0	30.39	30.04	30.190	9.3	9.3	205	33	SSW	16	211	161	
8	57.7	37.1	47.4	50.7	38	64	17	0	.....	T	0.17	0.0	30.04	29.52	29.777	10.0	9.0	215	33	SSW	18	304	47	
9	37.1	22.9	30.0	28.7	20	70	35	0	.....	T	0.09	0.8	30.13	29.72	29.981	3.8	3.5	301	25	WNW	14	290	165	
10	32.4	17.9	25.2	25.5	17	72	40	0	.....	T	0.06	2.4	30.50	30.13	30.367	1.8	1.3	284	15	SW	8	288	166	
11	52.8	28.4	40.6	40.0	23	51	24	0	.....	T	0.00	0.0	30.36	30.15	30.232	6.5	6.4	209	22	SSW	13	212	187	
12	61.3	38.9	50.1	49.7	32	51	15	0	.....	0	0.00	0.0	30.22	29.99	30.140	1.2	1.0	224	16	WSW	9	250	156	
13	62.4	46.2	54.3	53.8	40	60	11	0	.....	0	0.18	0.0	29.99	29.79	29.856	4.5	3.8	229	21	S	14	292	87	
14	54.4	36.8	45.6	41.4	36	80	19	0	.....	0	0.06	0.0	30.22	29.87	30.053	1.7	1.5	288	15	W	9	295	38	
15	54.9	32.4	43.7	41.7	36	81	21	0	.23.....	0	0.11	0.0	30.31	30.13	30.226	0.4	0.2	233	14	SSW	8	183	162	
16	44.6	38.2	41.4	42.2	40	91	23	0	.....	0	0.41	0.0	30.22	30.01	30.082	4.9	4.7	200	26	S	13	196	23	
17	59.0	34.4	46.7	46.0	39	77	18	0	.2.....	0	0.01	0.0	30.32	30.17	30.248	1.5	1.3	215	15	S	10	204	187	
18	76.2	47.4	61.8	60.4	45	57	3	0	.....	0	0.00	0.0	30.18	30.02	30.114	6.0	6.0	208	21	S	13	213	193	
19	77.1	49.2	63.1	62.5	50	67	2	0	.....	0	0.03	0.0	30.14	30.05	30.094	1.1	0.8	232	14	SW	9	216	184	
20	78.4	49.1	63.8	62.9	51	67	1	0	.....	0	0.00	0.0	30.22	30.13	30.172	1.0	0.7	219	10	S	7	255	192	
21	80.4*	55.3	67.9*	66.7	50	57	0	3	.....	0	0.00	0.0	30.27	30.12	30.189	2.8	2.6	211	15	S	10	218	199	
22	78.7	54.9	66.8	65.2	53	65	0	2	.....	0	T	0.0	30.13	30.00	30.069	3.8	2.5	231	19	NW	11	319	180	
23	64.3	44.7	54.5	53.6	34	52	10	0	.....	0	0.00	0.0	30.16	30.06	30.107	1.5	1.4	348	19	NW	10	306	197	
24	45.8	37.5	41.6	41.4	23	49	23	0	.....	0	T	0.0	30.16	29.95	30.082	0.6	0.5	358	12	NNE	6	290	83	
25	45.1	40.0	42.5	43.1	38	81	22	0	.....	0	0.03	0.0	29.96	29.68	29.803	4.8	4.7	208	22	S	11	214	44	
26	44.2	23.0	33.6	29.5	18	63	31	0	.....	0	0.10	0.4	30.13	29.62	29.898	6.6	6.3	331	31	WNW	17	331	114	
27	35.7	16.5	26.1	26.0	6	43	38	0	.....	0	0.00	0.0	30.32	30.05	30.218	1.9	1.8	348	21	N	10	323	217	
28	45.5	29.2	37.4	37.3	25	63	27	0	.....	0	0.13	0.1	30.08	29.46	29.701	4.3	3.5	201	25	S	12	186	48	
29	34.7	30.1	32.4	32.4	29	87	32	0	.....	0	0.02	0.6	29.95	29.58	29.786	1.9	1.9	331	18	N	12	316	31	
30	40.1	23.1	31.6	30.8	18	59	33	0	.....	0	0.02	0.0	30.09	29.94	30.014	3.3	3.2	326	22	WNW	12	317	216	
31	47.6	26.1	36.8	35.9	20	53	28	0	.....	0	0.00	0.0	30.03	29.86	29.939	1.0	0.8	328	16	WNW	9	289	214	
<b>Sum</b>	<b>Sum</b>	<b>-----</b>	<b>-----</b>	<b>---</b>	<b>----</b>	<b>Ttl</b>	<b>Ttl</b>	<b>Number of Days</b>		<b>For the month:</b>													<b>---</b>	
1569	996					727	5			1.94	11.6	30.57	29.26	30.018	3.4	2.1	231	36	W	22	267			
<b>Avg</b>	<b>Avg</b>	<b>Avg</b>	<b>Mean</b>	<b>Avg</b>	<b>Avg</b>	<b>----</b>	<b>----</b>	<b>Precip</b>		<b>Season Ttl</b>		<b>Date</b>	<b>Date</b>	<b>-----</b>	<b>----</b>	<b>----</b>	<b>---</b>	<b>Date</b>	<b>Date</b>	<b>Avg</b>				
50.6	32.1	41.4	40.8	29	65.1	----	----	≥.01 inch 18		6.13	67.1	6	3	-----	----	----	---	3	3	130				
<b>Number of Days</b>						<b>Season to Date</b>		<b>Snow, Ice ≥1.0 inch</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>			5595	5	<b>Thunder</b>		<b>Precipitation</b>		<b>Snow, Ice Plts</b>												
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	<b>Heavy Fog</b>		2	0.52	15-16	3.4	4	7						1					
0	4	17	0	----	----	<b>Clear</b>		8	<b>Partly Cloudy</b>		10	<b>Cloudy</b>		12										

**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^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

## March 2012: 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						
MAR 01																											
01	0	29.86	0.00	30	22	72	16	1	11	0	29.94	0.00	27	20	74	20	2	6	0	29.64	0.00	32	25	76	18	5	12
04	0	29.76	0.00	30	21	68	15	3	18	0	29.97	0.00	27	21	75	19	4	11	0	29.51	0.00	32	26	77	18	9	26
07	12	29.76	0.00	28	22	77	17	4	8	0	29.98	0.00	28	21	76	19	5	10	9	29.41	0.00	34	29	79	19	5	15
10	97	29.76	0.00	30	24	76	19	2	8	47	29.99	0.00	29	22	74	20	6	12	118	29.35	0.00	37	31	80	20	7	19
13	60	29.79	0.00	30	25	82	21	0	1	401	29.97	0.00	35	26	70	20	5	13	643	29.31	0.00	43	37	77	20	6	11
16	35	29.82	0.00	30	26	84	17	1	5	121	29.92	0.00	36	27	69	21	4	11	123	29.29	0.00	45	25	44	25	9	17
19	0	29.89	0.00	28	24	85	21	3	7	0	29.88	0.00	32	24	73	18	4	12	0	29.40	0.00	38	22	51	24	11	24
22	0	29.91	0.00	26	22	85	20	2	4	0	29.80	0.00	31	25	76	18	6	11	0	29.45	0.00	37	22	54	23	7	25
MAR 02																											
MAR 03																											
MAR 04																											
MAR 05																											
MAR 06																											
MAR 07																											
MAR 08																											
MAR 09																											
MAR 10																											
MAR 11																											
MAR 12																											
MAR 13																											
MAR 14																											
MAR 15																											
MAR 16																											
MAR 17																											
MAR 18																											

### MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.04	0.07	0.08	0.09	0.12	0.16	0.17	0.17	0.17	0.18	0.20	0.21
Ended: Date	13	13	13	13	13	13	13	13	13	13	16	16
Ended: Time	1045	1050	1052	1059	1108	1120	1120	1120	1120	1120	0934	0950

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

## March 2012: 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								
MAR 19																													
01	0	30.05	0.00	60	45	57	20	0	1	0	30.14	0.00	55	50	84	31	0	0	0	30.20	0.00	59	51	75	19	1	5		
04	0	30.06	0.00	54	49	83	18	4	7	0	30.15	0.00	50	45	83	16	0	1	0	30.20	0.00	59	49	69	20	4	7		
07	5	30.09	0.00	50	46	87	19	0	0	7	30.19	0.00	50	46	86	16	4	8	7	30.24	0.00	56	48	74	21	5	7		
10	422	30.11	0.00	62	51	67	20	6	13	422	30.22	0.00	65	52	62	21	6	9	438	30.27	0.00	65	53	66	22	7	12		
13	652	30.12	0.00	73	55	52	30	0	4	654	30.20	0.00	74	55	51	27	1	7	677	30.21	0.00	76	54	46	27	2	8		
16	457	30.08	0.00	77	54	45	30	1	7	446	30.14	0.00	78	53	43	29	2	7	461	30.14	0.00	79	52	38	19	2	13		
19	5	30.09	0.00	65	52	63	31	0	0	7	30.14	0.00	68	54	61	31	0	0	7	30.13	0.00	72	52	50	22	0	1		
22	0	30.12	0.00	58	51	76	31	0	0	0	30.19	0.00	60	52	77	30	0	0	0	30.14	0.00	65	44	48	20	4	5		
MAR 20																													
MAR 21																													
MAR 22																													
MAR 23																													
MAR 24																													
01	0	30.12	0.00	62	48	61	20	4	10	0	30.08	0.00	53	47	82	01	0	1	0	30.11	0.00	44	19	36	03	1	9		
04	0	30.10	0.00	58	51	76	21	5	10	0	30.09	0.00	49	43	80	02	0	0	0	30.11	0.00	41	18	40	03	0	6		
07	9	30.11	0.00	56	50	83	21	0	6	9	30.13	0.00	46	41	83	02	0	3	0	30.13	0.00	38	12	35	01	0	8		
10	431	30.09	0.00	64	54	71	21	6	15	466	30.15	0.00	56	34	43	32	0	9	153	30.13	0.00	40	17	40	01	0	5		
13	663	30.05	0.00	77	55	46	25	6	10	708	30.14	0.00	60	29	31	31	6	13	258	30.10	0.00	44	23	43	31	3	8		
16	425	30.01	0.00	78	55	46	32	2	13	497	30.07	0.00	64	32	30	02	4	10	172	30.06	0.00	46	24	42	00	0	3		
19	0	30.01	0.00	67	54	63	31	0	1										0	30.03	0.00	41	32	70	31	0	0		
22	0	30.06	0.00	62	53	74	31	0	10	0	30.09	0.00	47	25	41	01	0	4	0	29.99	0.00	40	32	73	34	0	0		
MAR 25																													
MAR 26																													
MAR 27																													
01	0	29.94	0.00	40	33	77	20	1	4	0	29.66	0.00	44	40	87	19	4	7	0	30.14	0.00	22	3	43	35	2	16		
04	0	29.87	0.00	44	33	65	21	0	7	0	29.72	0.00	33	30	88	33	9	23	0	30.19	0.00	19	2	46	35	2	13		
07	0	29.85	0.00	42	37	82	21	5	18	7	29.84	0.00	27	20	74	33	9	21	12	30.26	0.00	17	3	54	34	1	8		
10	120	29.84	0.00	42	39	91	21	4	14	98	29.93	0.00	25	15	67	33	7	18	496	30.31	0.00	25	7	45	00	4	11		
13	179	29.80	0.00	43	39	86	21	4	14	357	29.95	0.00	26	14	60	31	7	23	737	30.30	0.00	31	10	41	35	4	11		
16	72	29.75	0.00	45	40	82	19	5	10	503	29.95	0.00	30	13	49	33	8	19	478	30.22	0.00	35	7	31	31	3	6		
19	0	29.72	0.00	45	40	83	20	3	8	12	29.99	0.00	29	8	41	33	5	22	19	30.19	0.00	32	6	33	00	0	0		
22	0	29.70	0.00	43	39	85	20	4	8	0	30.08	0.00	26	5	40	01	5	20	0	30.13	0.00	28	13	54	00	0	0		
MAR 28																													
MAR 29																													
MAR 30																													
01	0	30.04	0.00	31	6	35	18	0	7	0	29.60	0.00	34	32	93	33	5	10	0	29.95	0.00	31	23	70	33	5	13		
04	0	29.98	0.00	31	20	62	18	3	9	0	29.64	0.00	32	30	94	34	1	9	0	29.96	0.00	28	17	61	31	9	19		
07	5	29.83	0.00	33	24	69	19	5	11	0	29.71	0.00	30	29	94	35	0	5	18	30.00	0.00	24	14	66	33	0	11		
10	100	29.71	0.00	37	22	53	19	6	15	69	29.78	0.00	31	28	91	34	3	7	513	30.08	0.00	28	17	62	33	6	12		
13	234	29.56	0.00	45	25	46	19	10	18	100	29.83	0.00	33	29	87	35	1	6	747	30.07	0.00	36	22	56	33	3	7		
16	35	29.47	0.00	44	29	57	19	9	19	44	29.85	0.00	34	29	80	32	1	3	452	30.00	0.00	39	18	42	00	3	10		
19	0	29.49	0.00	43	35	75	20	0	8	0	29.90	0.00	33	29	86	32	5	9	14	30.01	0.00	33	18	52	03	0	2		
22	0	29.57	0.00	39	36	88	31	3	9	0	29.93	0.00	31	27	83	30	2	9	0	30.01	0.00	30	18	60	06	0	0		
MAR 31																													
01	0	30.01	0.00	26	18	71	06	0	0																				
04	0	29.99	0.00	28	20	70	06	0	0																				
07	14	29.99	0.00	30	18	61	06	0	3																				
10	462	29.99	0.00	37	20	49	28	1	3																				
13	747	29.94	0.00	45	17	32	32	1	9																				
16	520	29.88	0.00	47	20	34	35	3	11																				
19	16	29.87	0.00	42	20	42	34	0	5																				
22	0	29.87	0.00	33	21	62	31	0	2																				

### 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

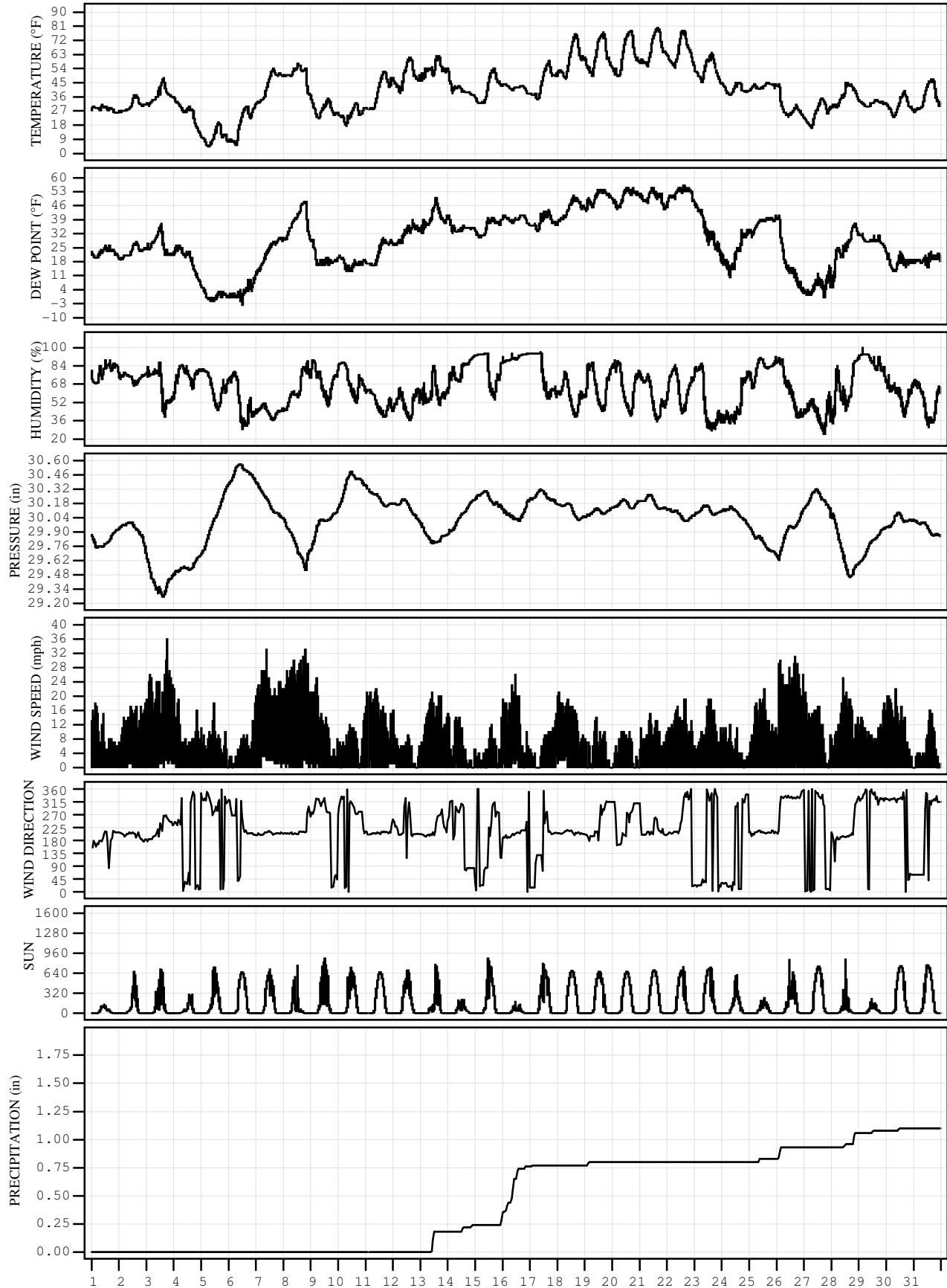
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01	0	30.015	38	28	69	3.3	23	2.0
04	0	30.011	36	28	72	3.7	22	2.1
07	9	30.034	35	27	74	3.6	21	2.5
10	307	30.047	40	29	66	4.8	23	3.2
13	476	30.024	46	31	58	3.9	23	2.6
16	273	29.990	48	31	53	3.7	24	2.1
19	3	29.997	43	30	63	2.2	23	1.4
22	0	30.017	40	29	67	2.5	22	1.5

## HOURLY PRECIPITATION (Water Equivalent) March 2012: Westford

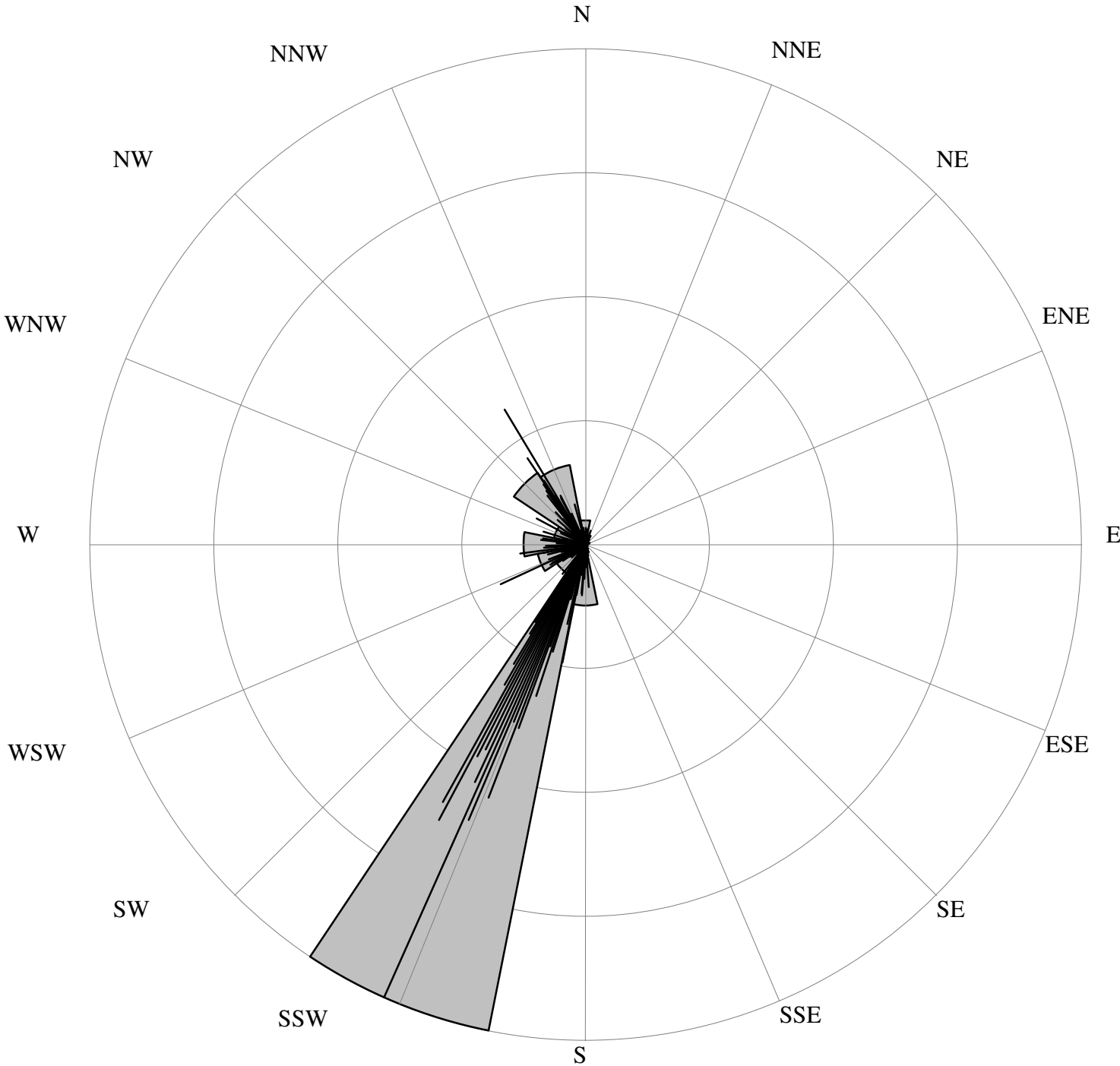
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02																									02
03																									03
04																									04
05																									05
06																									06
07																									07
08																									08
09																									09
10																									10
11																									11
12																									12
13									0.01	0.10	0.07														13
14												0.03	0.01							0.01	0.01				14
15																						0.04	0.07		15
16	0.01		0.01	0.04	0.03		0.04	0.07	0.10			0.07	0.02						0.02						16
17		0.01																							17
18																									18
19			0.02	0.01																					19
20																									20
21																									21
22																									22
23																									23
24																									24
25								0.03																	25
26		0.01	0.06	0.03																					26
27																									27
28										0.01	0.01	0.01							0.08	0.02					28
29										0.01	0.01	0.01													29
30										0.01	0.01														30
31																									31
<b>Sum</b>	0.01	0.02	0.09	0.08	0.03	0.00	0.00	0.04	0.10	0.11	0.12	0.10	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.10	0.03	0.01	0.04	0.07	<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  
March 2012: Westford



Wind Rose: March 2012  
Westford



Maximum direction of wind: 169.9 miles from 204°  
Maximum sector of wind: 1333.3 miles from SSW  
2540.6 total miles of wind