

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

January 2010

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 hvly 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						Sun		
	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	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	31.1	24.7	27.9	27.9	25	90	37	0	.....	8	0.00	0.0	29.94	29.70	29.838	0.5	0.4	217	7	SW	0	0	
2	28.4	9.1	18.8	18.3	16	89	46	0	.....	22	0.53	14.2	29.70	29.47	29.645	2.9	2.7	329	18	NNW	10	301	
3	18.2	7.5	12.9	11.9	9	87	52	0	.....6	26	0.58	12.7	29.61	29.40	29.495	1.2	1.2	299	19	W	11	296	
4	19.0	14.1	16.6	16.6	14	89	48	0	.....6	22	0.06	0.3	29.75	29.60	29.678	0.0	0.0	0	0	W	0	264	
5	20.1	13.7	16.9	17.4	15	89	48	0	.....6	19	0.06	0.4	29.72	29.65	29.685	0.0	0.0	0	0	W	0	264	
6	21.6	17.9	19.8	19.5	17	90	45	0	.....6	18	0.07	0.8	29.72	29.63	29.666	0.0	0.0	0	0	W	0	265	
7	22.3	15.4	18.8	18.6	16	88	46	0	.....	17	0.02	0.5	29.85	29.72	29.800	0.0	0.0	0	0	W	0	265	
8	18.0	12.5	15.3	15.3	12	87	49	0	.....	23	0.09	8.0	29.90	29.72	29.795	0.0	0.0	0	0	W	0	265	
9	14.5	-2.3	6.1	5.9	1	80	58	0	.....	19	0.01	0.5	30.26	29.90	30.121	0.0	0.0	0	0	WNW	0	300	
10	15.2	-4.5	5.3	6.7	1	77	60	0	.....	16	0.00	0.0	30.26	30.06	30.180	1.5	1.5	214	12	SSW	9	215	
11	26.1	15.2	20.7	21.9	17	82	44	0	.....	16	0.04	0.9	30.06	29.97	30.014	2.9	2.3	221	12	S	8	197	
12	22.3	4.9	13.6	13.2	8	79	51	0	.....	15	0.02	0.9	30.14	30.01	30.064	2.0	2.0	340	14	WNW	8	329	
13	17.0	-2.4	7.3	9.3	5	81	57	0	.....6	16	0.00	0.9	30.18	30.11	30.142	1.2	1.2	205	10	SSW	5	217	
14	33.6	17.0	25.3	25.2	20	82	39	0	.....	14	T	T	30.20	29.97	30.118	4.3	4.2	206	23	S	15	210	
15	36.0	32.6	34.3	34.3	29	81	30	0	.....	12	0.01	0.0	30.09	29.92	29.994	4.4	3.5	238	22	S	12	215	
16	35.5	29.6	32.6	32.5	27	81	32	0	.....	11	0.00	0.0	30.11	30.01	30.060	4.1	3.5	259	23	WNW	13	293	
17	39.1	30.3	34.7	34.2	29	80	30	0	.....	10	0.00	0.0	30.11	29.80	29.980	3.3	3.1	195	18	SSW	10	188	
18	37.3	29.4	33.3	33.5	30	87	32	0	.....	9	0.03	T	29.89	29.73	29.786	0.7	0.3	182	10	SSW	6	187	
19	33.3	27.8	30.5	30.3	28	90	34	0	.....	9	0.05	T	29.89	29.83	29.861	0.2	0.2	95	4	ESE	2	58	
20	29.1	23.4	26.3	26.7	24	91	39	0	.2.....	9	T	T	30.07	29.82	29.932	1.1	1.0	343	16	WNW	9	321		
21	28.0	13.5	20.8	20.6	17	85	44	0	.....	9	T	T	30.21	30.07	30.157	1.2	0.9	325	13	N	7	344	
22	27.8	9.3	18.5	17.1	13	85	46	0	.....	9	0.00	0.0	30.23	30.06	30.117	0.7	0.3	326	8	N	5	304	
23	28.6	3.5	16.1	14.8	7	71	48	0	.....	9	0.00	0.0	30.32	30.21	30.271	0.2	0.1	343	6	S	3	313	
24	39.8	15.0	27.4	30.3	20	66	37	0	.....	9	0.02	0.0	30.22	29.79	30.036	5.1	5.0	199	28	S	17	208	
25	53.8*	35.9	44.9*	45.4	41	85	20	0	.....	2	1.01	0.0	29.79	29.08	29.366	7.8	5.9	204	45	S	23	191	
26	36.2	31.6	33.9	33.5	25	70	31	0	.....	2	T	T	29.66	29.31	29.446	6.4	6.1	254	24	WSW	15	250	
27	33.2	25.4	29.3	30.2	21	69	36	0	.....	2	0.04	T	29.99	29.66	29.868	4.5	4.3	258	20	W	13	273	
28	30.3	9.0	19.6	22.7	13	66	45	0	.....	2	0.04	1.5	29.98	29.66	29.846	7.6	6.1	243	28	W	17	286	
29	9.1	-4.6	2.3	1.6	-11	56	63	0	.....	2	0.00	0.0	30.26	29.92	30.127	8.1	8.0	302	28	WNW	17	297	
30	8.8	-8.9*	-0.0*	-1.7	-10	68	65	0	.....	2	0.00	0.0	30.33	30.09	30.235	0.9	0.8	335	17	WNW	9	325	
31	19.9	-4.2	7.8	10.4	3	74	57	0	.....	2	0.01	0.2	30.09	29.88	29.987	3.3	3.2	212	15	SSW	10	215	
Sum	Sum	-----	-----	---	----	Ttl	Ttl															---		
833	441					1369	0		Number of Days				2.69	41.8	30.33	29.08	29.913	2.5	1.6	244	45	S	23	191
Avg	Avg	Avg	Mean	Avg	Avg	----	----		Precip				Season Ttl	Date	Date	-----	----	----	---	Date	Date	Avg		
26.9	14.2	20.6	20.8	16	80.5	----	----		≥.01 inch	18			2.69	64.7	30	25	-----	----	----	---	25	25		
Number of Days						Season to Date	Snow, Ice ≥1.0 inch	4	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date									
Max Temperature			Min Temperature			4288	0	Thunder	0	Precipitation			Snow, Ice Plts											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	1	1.03	24-25	14.2	2				26			3						
0	21	29	6	----	----	Clear	4	Partly Cloudy			4	Cloudy			23									

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: Sunshine index 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 January 2010: 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							
	JAN 19									JAN 20									JAN 21									
01	29.88	0.00	29	27	92	07	0	3	29.82	0.00	28	26	92	04	0	0	30.08	0.00	24	21	87	32	2	6				
04	29.88	0.00	30	28	92	15	0	4	29.84	0.00	25	23	92	04	0	0	30.13	0.00	21	17	86	34	2	5				
07	29.87	0.00	29	27	92	18	0	0	29.88	0.00	24	22	93	04	0	0	30.18	0.00	19	17	90	31	5	8				
10	29.89	0.00	31	28	90	18	0	1	29.91	0.00	27	25	93	01	2	5	30.20	0.00	21	18	88	31	1	3				
13	29.85	0.00	32	29	87	04	1	4	29.90	0.00	29	27	93	33	3	9	30.20	0.00	25	19	78	04	1	4				
16	29.84	0.00	33	29	86	04	0	1	29.97	0.00	28	25	90	35	3	12	30.19	0.00	25	18	75	05	0	3				
19	29.83	0.00	30	27	90	04	0	0	30.02	0.00	27	24	89	04	0	2	30.17	0.00	17	14	88	06	0	2				
22	29.84	0.00	28	26	92	04	0	0	30.06	0.00	28	25	90	29	3	5	30.11	0.00	15	12	88	17	0	0				
	JAN 22									JAN 23									JAN 24									
01	30.11	0.00	17	14	89	21	2	5	30.22	0.00	11	8	88	02	0	0	30.18	0.00	17	10	74	09	0	0				
04	30.11	0.00	14	11	88	21	0	0	30.26	0.00	8	5	87	02	0	0	30.18	0.00	16	10	75	11	0	1				
07	30.08	0.00	11	8	87	08	0	1	30.31	0.00	4	0	85	02	0	0	30.12	0.00	28	11	50	20	5	12				
10	30.11	0.00	21	19	89	04	1	2	30.32	0.00	16	12	83	02	0	2	30.09	0.00	32	13	45	18	9	17				
13	30.06	0.00	27	21	77	01	1	7	30.27	0.00	25	9	49	35	0	3	30.00	0.00	36	19	51	20	13	26				
16	30.10	0.00	23	17	77	33	1	4	30.28	0.00	27	7	43	03	0	0	29.98	0.00	37	28	71	20	6	20				
19	30.16	0.00	15	12	86	35	0	0	30.28	0.00	16	8	68	03	0	0	29.93	0.00	37	29	71	16	5	10				
22	30.20	0.00	14	11	88	01	0	0	30.24	0.00	15	6	67	16	0	1	29.88	0.00	38	33	83	18	4	8				
	JAN 25									JAN 26									JAN 27									
01	29.76	0.00	41	38	89	19	7	14	29.33	0.00	35	25	68	31	6	12	29.68	0.00	30	26	85	23	4	8				
04	29.65	0.00	45	40	84	18	7	12	29.34	0.00	33	22	65	28	4	11	29.75	0.00	31	25	78	25	4	14				
07	29.53	0.00	46	40	82	17	7	19	29.37	0.00	33	23	66	22	3	6	29.80	0.00	32	23	71	26	6	17				
10	29.36	0.00	49	43	80	19	14	35	29.40	0.00	33	25	72	21	6	11	29.89	0.00	31	20	63	26	10	17				
13	29.13	0.00	54	46	74	19	13	32	29.40	0.00	34	26	72	24	4	10	29.90	0.00	30	20	66	27	4	9				
16	29.11	0.32	48	46	94	18	5	9	29.48	0.00	34	27	75	24	6	13	29.92	0.00	31	20	62	25	2	4				
19	29.18	0.00	45	43	94	23	3	7	29.57	0.00	33	25	70	25	10	20	29.97	0.00	30	21	71	24	6	12				
22	29.29	0.00	38	34	83	27	10	18	29.63	0.00	32	25	73	26	10	18	29.98	0.00	28	16	59	26	4	9				
	JAN 28									JAN 29									JAN 30									
01	29.98	0.00	26	12	56	24	4	12	29.95	0.00	7	-3	63	29	13	20	30.25	0.00	-5	-13	68	33	6	15				
04	29.93	0.00	26	15	64	20	3	12	30.02	0.00	4	-6	62	29	9	19	30.28	0.00	-7	-14	68	33	2	13				
07	29.88	0.00	25	16	69	19	4	11	30.09	0.00	1	-9	62	30	5	11	30.29	0.00	-9	-14	75	03	0	0				
10	29.82	0.00	28	19	67	19	11	19	30.16	0.00	2	-12	52	30	12	18	30.32	0.00	-2	-11	64	11	0	2				
13	29.68	0.00	29	22	74	20	10	21	30.10	0.00	4	-12	47	30	11	25	30.25	0.00	5	-7	58	31	1	6				
16	29.71	0.00	24	20	87	30	4	9	30.16	0.00	3	-13	46	30	12	19	30.20	0.00	7	-5	56	06	0	3				
19	29.85	0.00	16	7	67	26	6	16	30.23	0.00	-1	-15	50	31	10	21	30.18	0.00	-1	-8	72	05	0	0				
22	29.90	0.00	11	-6	46	26	13	25	30.26	0.00	-4	-15	58	30	6	10	30.12	0.00	-3	-9	75	05	0	0				
	JAN 31																											

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

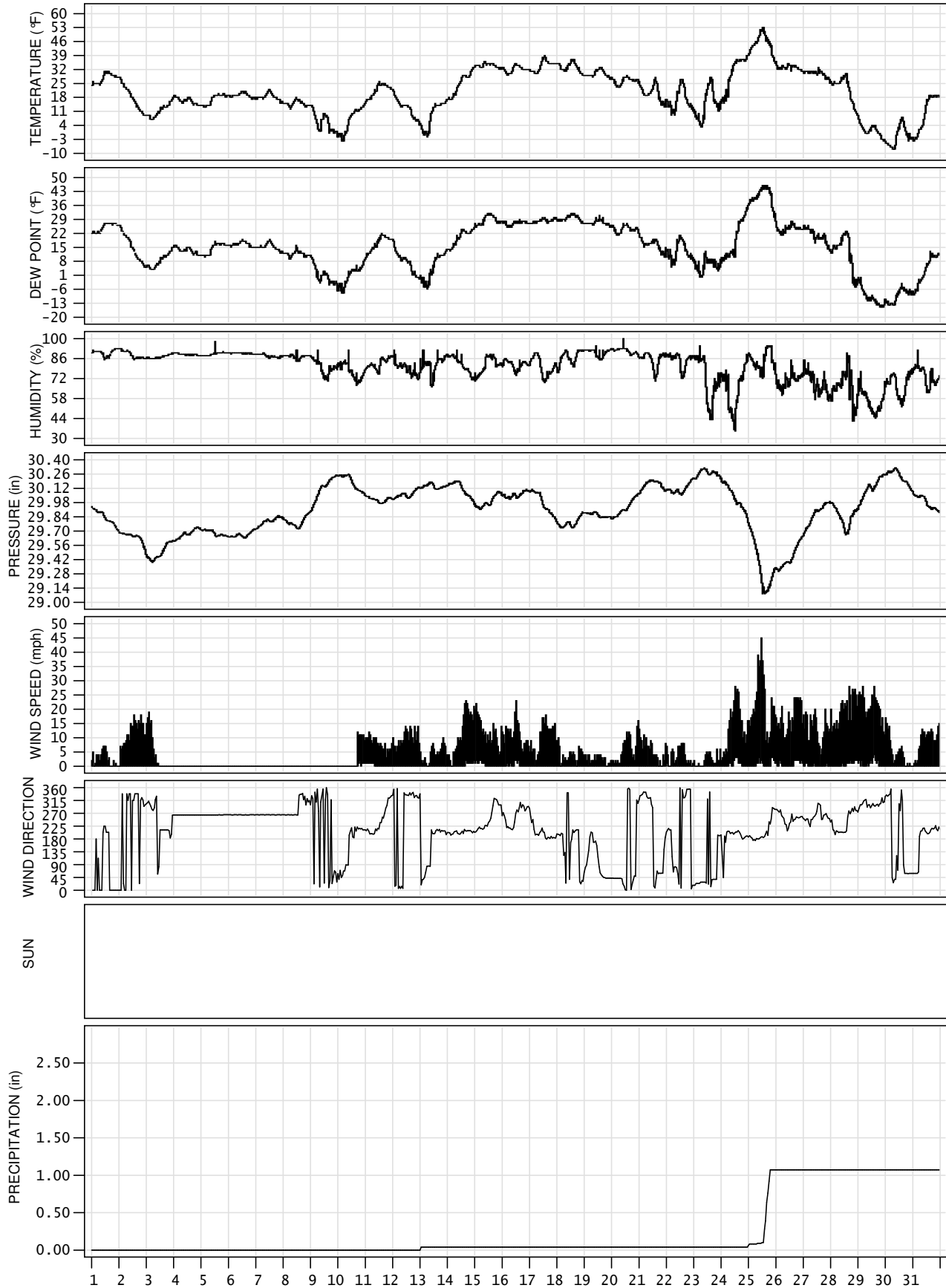
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		29.911	20	15	83	2.3	26	1.3
04		29.914	18	14	83	1.9	24	1.2
07		29.922	18	14	82	1.9	23	1.3
10		29.933	22	16	80	3.3	23	2.2
13		29.882	24	18	76	3.2	24	1.9
16		29.894	23	17	78	2.3	26	1.3
19		29.922	21	16	81	2.5	26	1.7
22		29.924	20	15	80	3.2	26	2.3

HOURLY PRECIPITATION (Water Equivalent) January 2010: Westford

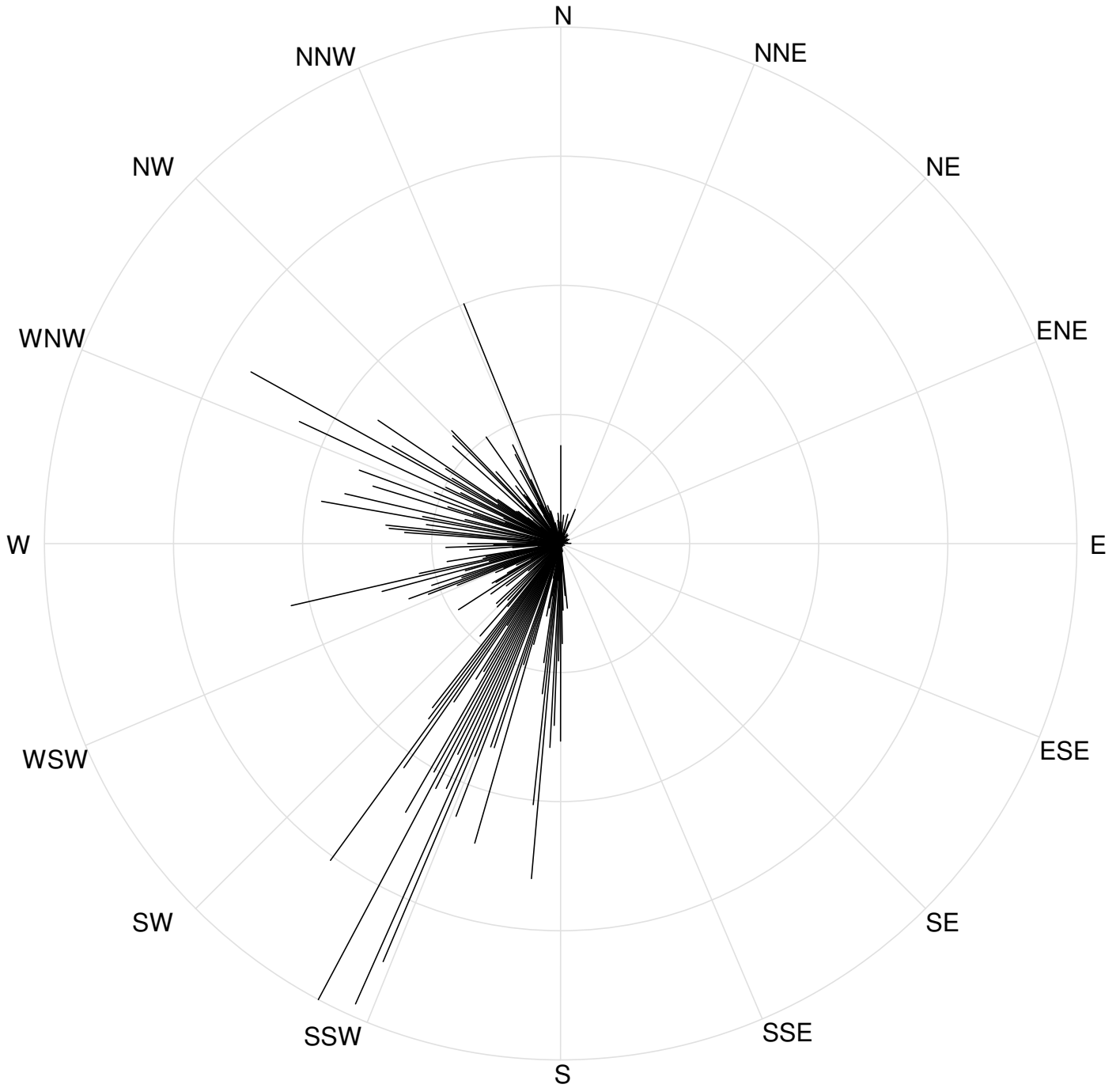
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02																									02
03																									03
04																									04
05																									05
06																									06
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08																									08
09																									09
10																									10
11																									11
12																									12
13	0.04																							13	
14																								14	
15																								15	
16																								16	
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19																								19	
20																								20	
21																								21	
22																								22	
23																								23	
24																								24	
25	0.02						0.01				0.01		0.18	0.11	0.25	0.12	0.16	0.15					0.02	25	
26																								26	
27																								27	
28																								28	
29																								29	
30																								30	
31																								31	
Sum	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.18	0.11	0.25	0.12	0.16	0.15	0.00	0.00	0.00	0.00	0.02	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 January 2010: Westford



Wind Rose: January 2010
Westford



Maximum direction of wind: 51.2 miles from 208°.
1830.6 total miles of wind.