

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

September 2003

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			Wind						Sun		
	Maximum	Minimum	Average	Mean	Dew Point		Mean	Heating			Cooling	Water Equivalent	Ice Pellets Snow	Adj. to Sea Level			Avg Speed	Res Speed	Res Dir	Peak			Minute	
														Maximum	Minimum	Mean				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	68.8	51.6	60.2	59.4	53	80	5	0	.....	0	0.00	0.0	30.20	30.09	30.145	3.0	2.9	193	14	S	0	0	
2	71.8	55.6	63.7	61.3	57	86	2	0	.....	0	0.00	0.0	30.16	30.10	30.127	0.6	0.4	290	10	WNW	0	0	
3	72.0	55.1	63.5	62.1	57	85	2	0	..3.....	0	0.04	0.0	30.14	29.87	30.040	1.9	1.7	178	14	SSW	0	0		
4	72.7	57.3	65.0	64.9	60	86	1	0	.....	0	0.00	0.0	29.87	29.68	29.762	2.1	1.9	194	14	SSE	3	294	
5	65.6	52.0	58.8	58.9	54	84	7	0	.....	0	0.02	0.0	30.06	29.79	29.928	1.1	1.1	287	16	WNW	0	0	
6	72.5	47.1	59.8	59.1	52	79	6	0	.....	0	0.00	0.0	30.11	29.97	30.039	1.2	0.9	240	17	W	0	0	
7	66.8	51.7	59.3	58.3	54	86	6	0	.....	0	0.00	0.0	30.05	29.94	29.986	1.1	0.8	200	11	S	0	0	
8	68.8	44.9	56.9	55.7	49	82	9	0	..2.....	0	0.00	0.0	30.25	30.05	30.148	0.5	0.4	345	12	W	0	0		
9	68.4	38.9	53.7	52.8	46	81	12	0	.....	0	0.00	0.0	30.37	30.26	30.309	0.4	0.3	312	10	W	0	0	
10	73.7	40.5	57.1	56.3	49	79	8	0	.....	0	0.00	0.0	30.29	30.15	30.230	0.5	0.3	262	7	S	0	0	
11	80.5	51.9	66.2	65.6	59	80	0	1	.....	0	0.00	0.0	30.28	30.19	30.240	0.2	0.1	322	7	NW	0	0	
12	78.1	54.8	66.4	64.9	56	76	0	1	.....	0	0.00	0.0	30.33	30.22	30.267	1.2	1.0	181	13	S	0	112	
13	75.8	43.2	59.5	62.7	55	77	6	0	.....	0	0.00	0.0	30.31	30.24	30.265	0.9	0.8	185	11	SSE	0	0	
14	80.7	62.9	71.8	71.6	66	83	0	6	.....	0	0.00	0.0	30.24	30.10	30.172	1.9	1.8	186	22	SSW	0	0	
15	80.1	66.6	73.3	72.1	65	79	0	8	.....	0	0.00	0.0	30.11	29.93	30.034	2.7	2.5	178	24	S	0	0	
16	72.3	55.1	63.7	63.7	56	78	2	0	.....	0	0.13	0.0	30.12	29.92	30.009	1.4	1.0	296	19	WNW	0	0	
17	72.5	47.4	60.0	59.2	50	74	6	0	.....	0	0.00	0.0	30.38	30.12	30.289	0.4	0.2	334	10	WNW	0	0	
18	74.7	45.4	60.0	60.4	50	72	5	0	.....	0	0.00	0.0	30.45	30.28	30.374	0.8	0.3	128	16	S	0	0	
19	73.5	56.6	65.0	66.7	56	69	0	0	.....	0	0.06	0.0	30.27	29.86	30.053	4.8	4.4	155	32	SE	13	190	
20	73.7	53.9	63.8	64.6	59	82	2	0	.....	0	0.15	0.0	30.20	29.90	30.047	2.5	1.7	229	19	SSW	0	0	
21	65.5	46.5	56.0	56.7	52	84	9	0	.....	0	0.00	0.0	30.31	30.20	30.271	0.1	0.0	302	7	W	0	0	
22	71.3	43.1	57.2	58.5	52	79	8	0	.....	0	0.00	0.0	30.28	29.90	30.144	2.2	1.9	166	27	S	0	0	
23	63.4	54.5	59.0	58.7	55	88	7	0	.....	0	0.64	0.0	29.89	29.61	29.735	3.2	2.5	168	21	SE	0	0	
24	66.3	47.3	56.8	56.6	50	79	9	0	.....	0	0.00	0.0	30.02	29.84	29.957	2.3	2.1	197	18	S	0	0	
25	67.4	49.4	58.4	58.6	50	75	7	0	.....	0	0.17	0.0	30.00	29.79	29.872	5.3	4.9	192	31	S	0	0	
26	67.6	39.2	53.4	53.0	46	80	12	0	.....	0	0.00	0.0	30.10	29.99	30.043	0.7	0.4	202	11	ESE	0	0	
27	73.5	52.8	63.1	65.8	59	79	2	0	.....	0	0.00	0.0	29.99	29.81	29.893	4.3	4.0	161	26	SE	12	181	
28	66.6	48.8	57.7	57.0	54	92	8	0	.....	0	1.59	0.0	29.81	29.69	29.737	1.7	1.1	138	18	SE	7	128	
29	58.7	43.9	51.3	50.8	48	91	14	0	..3.....	0	0.01	0.0	29.95	29.74	29.820	1.7	1.7	185	14	S	0	0		
30	57.6	42.5	50.0	49.3	41	74	15	0	.....	0	0.00	0.0	30.13	29.95	30.061	2.2	2.0	203	14	SSW	0	0	
Sum	Sum	-----	-----	---	----	Ttl	Ttl						For the month:						---					
2121	1501					170	16	Number of Days		2.81	0.0	30.45	29.61	30.067	1.8	1.2	187	32	SE	13	190			
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl	Date	Date	-----	----	----	----	Date	Date	Avg					
70.7	50.0	60.4	60.2	54	80.6	----	----	>.01 inch	9	29.87	0.0	18	23	-----	----	----	----	19	19					
Number of Days								Season to Date	Snow, Ice >1.0 inch	0	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date							
Max Temperature				Min Temperature				248	316	Thunder	2	Precipitation		Snow, Ice Plts										
> 90°F	< 32°F	< 32°F	< 0°F	----	----	Heavy Fog	1	1.59	27-28	0.0	-		0											
0	0	0	0	----	----	Clear	10	Partly Cloudy	14	Cloudy	6													

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

September 2003: Westford

Hour	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity			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	Direction	Speed	Gust						Direction	Speed	Gust			
SEP 01									SEP 02									SEP 03															
01		30.20	0.00	52	48	86	18	1	3		30.11	0.00	58	54	89	18	1	4		30.14	0.00	57	54	90	20	0	1						
04		30.17	0.00	54	49	84	20	2	6		30.11	0.00	57	55	96	00	0	0		30.12	0.00	58	55	89	18	2	5						
07		30.18	0.00	54	49	82	20	4	10		30.13	0.00	56	55	96	00	0	0		30.13	0.00	55	53	94	20	0	1						
10		30.18	0.00	60	53	78	18	5	11		30.16	0.00	62	58	87	00	0	0		30.11	0.00	65	58	77	18	3	10						
13		30.14	0.00	66	56	71	18	3	12		30.13	0.00	68	60	75	27	2	7		30.04	0.00	70	60	69	13	4	11						
16		30.10	0.00	67	56	67	24	3	10		30.11	0.00	71	61	70	29	0	2		29.97	0.00	68	59	72	18	2	8						
19		30.10	0.00	61	57	85	18	2	3		30.12	0.00	65	57	75	00	0	0		29.95	0.00	61	59	93	18	1	5						
22		30.13	0.00	59	56	89	20	3	7		30.14	0.00	57	56	98	20	0	2		29.92	0.00	61	58	96	20	1	5						
SEP 04									SEP 05									SEP 06															
01		29.86	0.00	61	59	94	20	3	10		29.80	0.00	61	54	78	29	0	2		30.06	0.00	51	50	97	00	0	0						
04		29.80	0.00	60	58	93	20	1	6		29.82	0.00	58	53	84	29	1	5		30.06	0.00	48	47	97	00	0	0						
07		29.78	0.00	61	58	92	20	1	5		29.89	0.00	53	53	97	00	0	0		30.10	0.00	50	49	98	00	0	0						
10		29.76	0.00	67	62	86	18	4	9		29.94	0.00	61	55	81	27	3	9		30.10	0.00	62	54	74	20	2	7						
13		29.72	0.00	73	65	78	20	4	11		29.96	0.00	60	58	91	29	2	7		30.05	0.00	68	51	55	29	2	6						
16		29.69	0.00	71	64	79	22	5	9		29.96	0.00	64	55	71	29	5	11		29.98	0.00	72	53	52	27	2	8						
19		29.73	0.00	71	63	76	29	1	5		29.99	0.00	60	56	86	00	0	0		29.97	0.00	64	55	71	18	1	5						
22		29.77	0.00	60	55	85	18	0	1		30.04	0.00	55	52	90	00	0	0		29.99	0.00	58	53	81	18	1	5						
SEP 07									SEP 08									SEP 09															
01		29.98	0.00	54	50	86	18	0	1		30.06	0.00	53	52	98	00	0	0		30.27	0.00	46	44	95	00	0	0						
04		29.95	0.00	54	51	89	20	2	6		30.09	0.00	48	47	98	00	0	0		30.29	0.00	43	42	95	00	0	0						
07		29.98	0.00	54	50	86	18	2	6		30.14	0.00	47	47	98	00	0	0		30.34	0.00	39	39	97	00	0	0						
10		29.98	0.00	63	55	73	18	2	7		30.16	0.00	60	54	78	00	0	3		30.37	0.00	58	52	79	04	0	1						
13		29.97	0.00	66	59	76	29	2	7		30.17	0.00	66	49	55	27	2	12		30.35	0.00	65	49	57	00	1	3						
16		29.97	0.00	62	58	86	00	0	2		30.15	0.00	68	49	51	00	1	6		30.30	0.00	67	50	53	31	2	6						
19		30.00	0.00	60	57	91	00	0	2		30.17	0.00	61	49	65	00	0	0		30.28	0.00	60	51	73	00	0	0						
22		30.05	0.00	53	52	97	00	0	0		30.22	0.00	47	45	93	00	0	0		30.28	0.00	46	44	95	00	0	0						
SEP 10									SEP 11									SEP 12															
01		30.28	0.00	44	44	98	00	0	0		30.20	0.00	60	52	76	20	1	3		30.25	0.00	58	58	98	29	0	1						
04		30.27	0.00	42	42	98	00	0	0		30.20	0.00	54	52	92	00	0	0		30.27	0.00	56	56	98	00	0	0						
07		30.28	0.00	41	41	98	00	0	0		30.25	0.00	53	52	97	00	0	0		30.31	0.00	55	54	98	00	0	0						
10		30.28	0.00	60	53	78	18	2	6		30.28	0.00	70	58	66	00	0	0		30.33	0.00	68	62	81	18	3	10						
13		30.23	0.00	68	49	50	27	3	6		30.26	0.00	77	62	61	00	0	4		30.28	0.00	76	62	62	13	1	3						
16		30.17	0.00	73	53	50	27	0	2		30.24	0.00	79	65	62	29	1	4		30.24	0.00	77	56	48	18	2	7						
19		30.17	0.00	63	56	78	00	0	0		30.25	0.00	69	64	83	00	0	0		30.23	0.00	66	52	61	11	1	3						
22		30.20	0.00	55	53	93	00	0	0		30.25	0.00	62	60	94	00	0	0		30.25	0.00	57	49	74	18	1	5						
SEP 13									SEP 14									SEP 15															
01		30.26	0.00	54	48	79	18	0	3		30.24	0.00	66	63	90	18	0	2		30.11	0.00	70	66	87	18	2	6						
04		30.27	0.00	51	43	74	18	2	7		30.22	0.00	66	63	89	18	0	4		30.09	0.00	69	65	89	18	2	6						
07		30.31	0.00	43	41	92	00	0	0		30.23	0.00	63	62	96	00	0	0		30.09	0.00	67	63	88	20	0	2						
10		30.29	0.00	66	54	65	15	2	8		30.21	0.00	75	67	77	15	4	11		30.08	0.00	75	65	72	18	7	14						
13		30.26	0.00	73	60	64	15	2	6		30.17	0.00	78	70	76	20	3	10		30.04	0.00	76	65	68	18	5	12						
16		30.24	0.00	75	65	71	18	2	8		30.11	0.00	79	69	71	20	4	12		29.99	0.00	78	68	71	20	2	7						
19		30.25	0.00	69	64	85	13	0	2		30.12	0.00	75	69	80	13	1	6		29.95	0.00	72	64	77	13	1	6						
22		30.25	0.00	67	62	85	18	1	5		30.12	0.00	71	66	85	18	3	10		29.95	0.00	67	64	90	20	1	5						
SEP 16									SEP 17									SEP 18															
01		29.93	0.00	68	64	87	15	0	1		30.14	0.00	58	48	71	24	0	3		30.37	0.00	48	47	95	00	0	0						
04		29.92	0.00	66	62	87	20	2	7		30.20	0.00	53	49	89	00	0	0		30.36	0.00	50	47	91	00	0	0						
07		30.00	0.00	58	56	94	02	0	3		30.29	0.00	48	47	96	00	0	0		30.43	0.00	46	44	96	00	0	0						
10		30.04	0.00	60	58	93	00	0	0		30.33	0.00	64	54	70	06	0	2		30.45	0.00	63	56	78	02	0	1						
13		30.02	0.00	68	59	71	27	3	7		30.32	0.00	69	48	48	06	1	3		30.41	0.00	72	50	47	13	1	9						
16		30.00	0.00	71	52	51	31	5	11		30.31	0.00	72	53	51	29	2	7		30.34	0.00	74	53	49	02	1	4						
19		30.04	0.00	63	49	60	24	0	1		30.33	0.00	59	52	79	00	0	0		30.34	0.00	65	52	62	18	1	4						
22		30.09	0.00	58	50	75	20	0	4		30.37	0.00	51	49	94	31	0	1		30.31	0.00	60	51	72	06	0	0						

MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.04	0.07	0.10	0.11	0.13	0.17	0.21	0.25	0.29	0.30	0.30	0.30
Ended: Date	28	28	28	28	28	28	28	28	28	28	28	28
Ended: Time	1520	1525	1530	1530	1546	1556	1608	1629	1652	1652	1652	1652

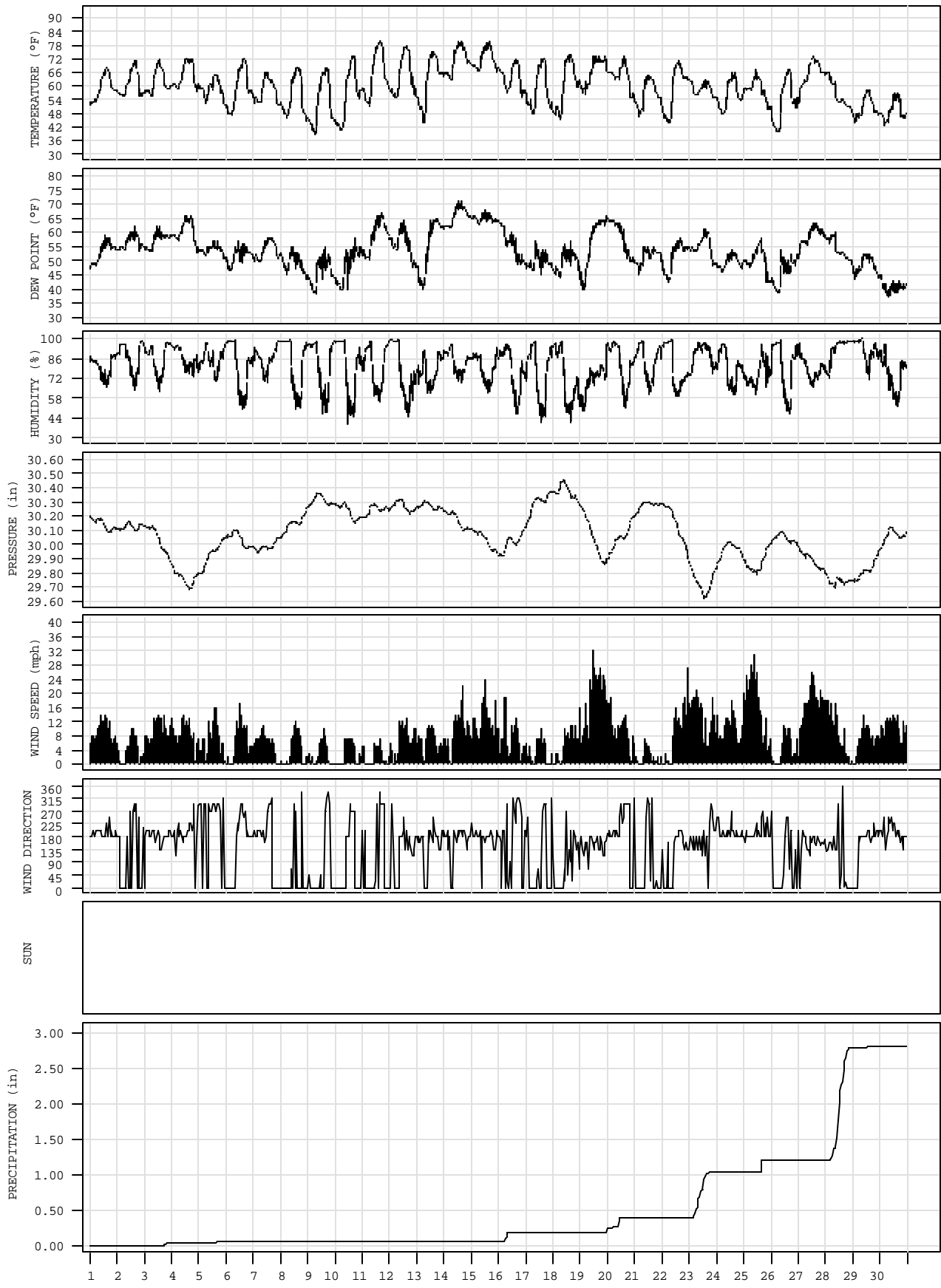
The precipitation amounts may occur at any time during the month. The time indicated is the ending time of the interval. Date and time are not entered for trace amounts.

HOURLY PRECIPITATION (Water Equivalent)
September 2003: Westford

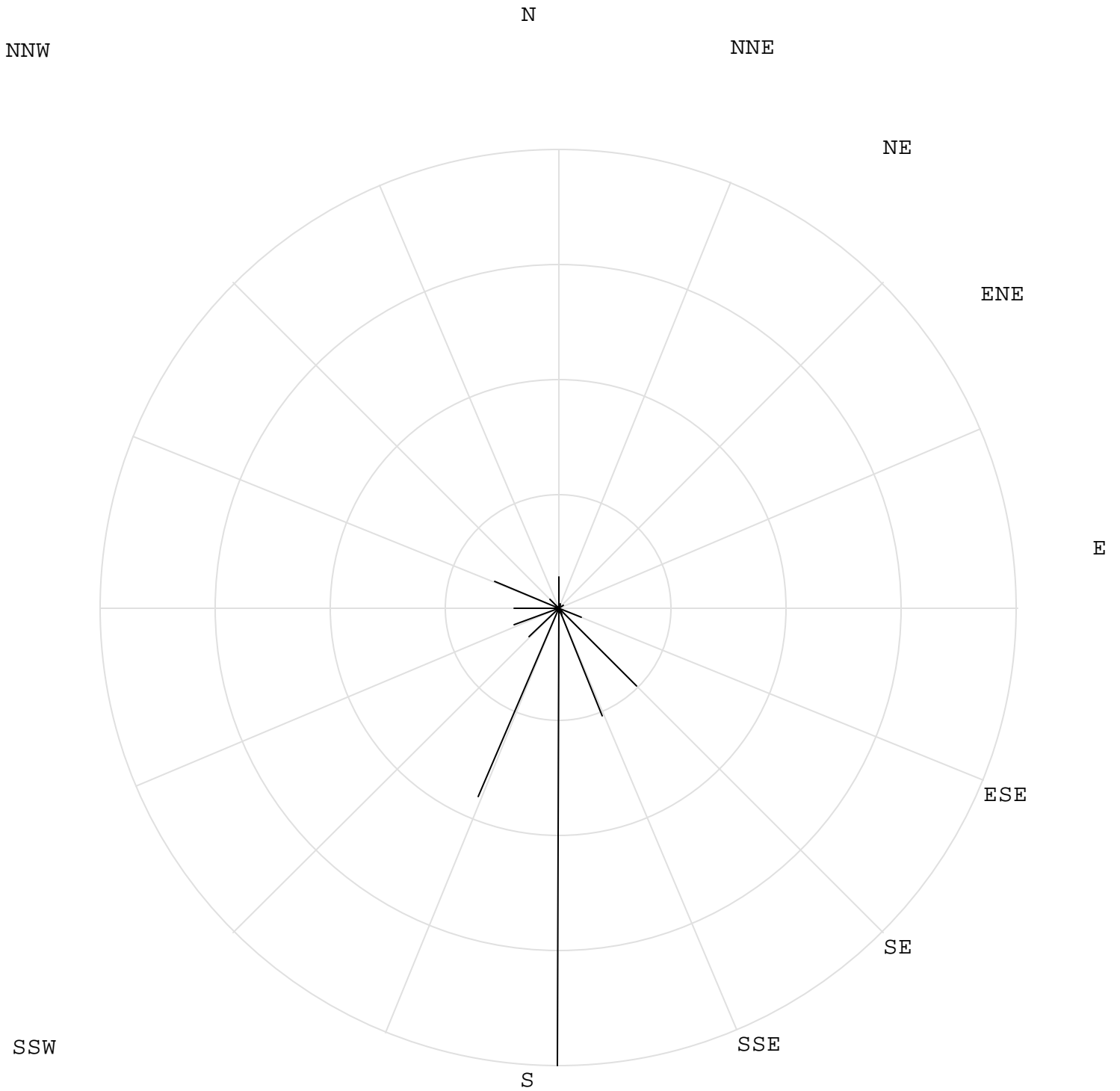
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02																									02
03																		0.03		0.01					03
04																									04
05													0.01			0.01									05
06																									06
07																									07
08																									08
09																									09
10																									10
11																									11
12																									12
13																									13
14																									14
15																									15
16						0.05	0.02	0.05	0.01																16
17																									17
18																									18
19																							0.06		19
20				0.01	0.02					0.08	0.04														20
21																									21
22																									22
23				0.02	0.04	0.06	0.03	0.12	0.02	0.09	0.01	0.01	0.14	0.05	0.03			0.02							23
24																									24
25																0.17									25
26																									26
27																									27
28					0.01	0.05	0.10		0.02	0.13	0.26	0.24	0.17	0.08	0.04	0.17	0.13	0.04	0.10	0.02	0.03				28
29													0.01												29
30																									30
Sum	0.00	0.00	0.00	0.03	0.07	0.16	0.15	0.17	0.05	0.30	0.31	0.25	0.33	0.13	0.07	0.35	0.13	0.09	0.10	0.03	0.03	0.00	0.00	0.06	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.)

HOURLY-BY-HOURLY DATA
September 2003: Westford



Wind Rose: September 2003
Westford



Maximum direction of wind: 473.0 miles from 180°.
1267.7 total miles of wind.