

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

October 2023

Station: Westford
 Latitude: 43° 37' 38" N Longitude: 73° 02' 30" 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			2 Minute	
																				Speed	Dir		Speed	Dir	Speed	Dir
1	2	3	4A	4B	5	6	7	8																
1	75.8	48.3	62.1	60.7	56	86	3	0	.....	0	0.00	0.0	30.23	30.16	30.193	0.3	0.2	307	11	NW	6	268	158
2	73.9	43.7	58.8	56.8	52	85	6	0	.....	0	0.00	0.0	30.22	30.10	30.172	0.3	0.3	257	9	WSW	6	253	163
3	82.7	51.4	67.0	64.5	59	82	0	2	.....	0	0.01	0.0	30.12	30.04	30.084	0.9	0.8	178	12	S	7	172	156
4	85.4	57.1	71.3*	68.4	62	83	0	6	.....	0	0.01	0.0	30.17	30.08	30.119	0.4	0.4	191	9	WSW	5	250	156
5	80.0	57.4	68.7	67.1	60	80	0	4	.....	0	0.00	0.0	30.14	30.00	30.074	1.8	1.8	176	24	S	11	184	133
6	72.0	55.9	64.0	64.1	58	81	1	0	.....	0	T	0.0	30.00	29.85	29.932	1.6	1.5	172	22	SSE	9	173	73
7	65.8	46.1	56.0	58.8	56	92	9	0	.....	0	2.07	0.0	29.85	29.48	29.668	1.3	0.8	240	23	W	12	267	24
8	55.0	45.6	50.3	48.7	46	90	14	0	.....	0	0.53	0.0	29.50	29.34	29.406	4.0	3.9	179	28	ESE	13	173	63
9	57.9	41.7	49.8	48.3	42	78	15	0	.....	0	0.00	0.0	29.71	29.49	29.605	4.0	4.0	175	23	SSE	13	175	129
10	60.9	42.2	51.6	48.9	42	77	13	0	.....	0	0.00	0.0	29.78	29.69	29.726	1.7	1.7	179	21	S	10	162	95
11	53.2	43.1	48.1	47.8	45	89	17	0	.....	0	0.06	0.0	29.85	29.75	29.789	0.9	0.9	177	21	SSE	8	178	43
12	58.1	37.2	47.6	46.6	44	89	17	0	.....	0	0.03	0.0	29.90	29.82	29.850	1.2	1.1	229	18	W	10	257	79
13	57.5	37.0	47.3	46.9	43	87	17	0	.....	0	0.01	0.0	29.94	29.89	29.917	2.0	2.0	267	15	W	9	263	77
14	56.4	41.9	49.2	47.9	45	90	16	0	.....	0	0.02	0.0	29.91	29.60	29.773	0.5	0.5	270	13	W	8	249	73
15	52.1	41.5	46.8	46.5	44	92	18	0	.....	0	0.14	0.0	29.60	29.47	29.516	0.7	0.7	285	15	WNW	9	267	51
16	57.7	45.2	51.5	49.1	47	93	13	0	.....	0	0.05	0.0	29.75	29.50	29.615	1.1	1.1	344	16	N	7	344	72
17	53.9	43.1	48.5	48.3	46	93	16	0	.....	0	0.01	0.0	30.02	29.75	29.886	0.4	0.4	268	10	W	6	278	48
18	58.2	44.3	51.3	50.2	45	84	14	0	.....	0	0.00	0.0	30.12	30.02	30.079	1.1	1.1	209	14	S	7	222	88
19	60.7	44.9	52.8	52.5	46	79	12	0	.....	0	0.00	0.0	30.08	29.86	29.996	3.0	3.0	178	22	S	11	178	91
20	61.0	52.6	56.8	55.8	51	83	8	0	.....	0	0.00	0.0	29.86	29.46	29.688	3.1	3.0	164	25	S	11	171	42
21	56.4	46.5	51.5	53.2	52	96	13	0	.....	0	2.70	0.0	29.46	29.15	29.249	2.2	2.0	256	21	S	13	253	19
22	46.6	39.5	43.0	41.9	40	93	21	0	.....	0	0.36	0.0	29.82	29.22	29.497	3.2	3.2	231	16	W	10	265	34
23	46.5	32.9	39.7	40.9	39	94	25	0	.....	0	0.12	0.0	30.25	29.82	30.087	1.2	1.1	273	14	NW	8	265	40
24	53.6	31.2	42.4	43.1	39	86	22	0	..3.....	0	0.05	0.0	30.29	30.15	30.232	3.0	3.0	173	19	SE	11	172	31	
25	62.6	48.0	55.3	56.9	48	73	9	0	.....	0	0.02	0.0	30.17	30.03	30.105	5.3	5.3	175	25	SSE	13	171	43
26	63.6	56.2	59.9	60.1	54	80	5	0	.....	0	0.04	0.0	30.14	30.05	30.102	1.9	1.9	179	13	S	6	168	24
27	71.1	53.7	62.4	62.1	57	84	2	0	.....	0	0.01	0.0	30.05	29.86	29.945	3.9	3.8	177	18	S	10	183	48
28	65.6	40.0	52.8	57.5	53	84	12	0	.....	0	0.04	0.0	30.12	29.79	29.906	3.1	2.1	208	18	S	10	290	43
29	41.0	36.7	38.9	38.3	34	83	26	0	.....	0	0.01	T	30.23	30.03	30.146	0.5	0.3	6	8	NNW	5	358	27
30	40.3	32.3	36.3	37.1	36	95	29	0	.....	0	0.76	0.0	30.03	29.72	29.841	1.1	1.0	274	15	W	9	267	10
31	40.7	26.1*	33.4*	31.6	26	81	31	0	.....	0	0.02	0.0	30.11	29.95	30.055	1.3	1.3	257	15	W	9	260	113
Sum	Sum	-----	-----	---	----	Ttl	Ttl						Total	Total	For the month:						---			
1866	1363					404	12		Number of Days				7.07	T	30.29	29.15	29.879	1.8	1.3	199	28	ESE	13	173
Avg	Avg	Avg	Mean	Avg	Avg	----	----		Precip				Season Ttl	Date	Date	-----	----	---		Date	Date	Avg		
60.2	44.0	52.1	51.6	47	85.8	----	----		≥.01 inch	22	47.39	T	24	21	-----	----	---			8	8			72
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			591	405	Thunder	1	Precipitation			Snow, Ice Plts											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	0	2.70	21	T	29	0						-						
0	0	3	0	----	----	Clear	4	Partly Cloudy			6	Cloudy			21									

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.

OBSERVATIONS AT 3-HOUR INTERVALS

October 2023: Westford

Table with 30 columns (Hour, Sunshine, Pressure, Rainfall rate, Temperature, Dew Point, Humidity, Direction, Speed, Gust) and 73 rows (OCT 01 to OCT 18). Each row represents a 3-hour interval.

MAXIMUM SHORT DURATION PRECIPITATION

Table with 13 columns (Time Period (minutes): 5, 10, 15, 20, 30, 45, 60, 80, 100, 120, 150, 180) and 4 rows (Precipitation, 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

October 2023: Westford

Hour	OCT 19									OCT 20									OCT 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	30.08	0.00	48	45	90	18	0	6	0	29.86	0.00	54	47	78	18	3	20	0	29.46	0.00	56	53	90	14	1	9
03	0	30.08	0.00	47	44	91	18	1	4	0	29.82	0.00	53	47	81	16	5	16	0	29.38	0.39	54	53	95	09	0	1
06	0	30.07	0.00	47	44	89	17	2	6	0	29.78	0.00	53	49	85	16	8	25	0	29.32	0.16	54	53	96	11	1	4
09	111	30.07	0.00	51	45	82	17	1	4	83	29.76	0.00	55	50	83	13	1	10	28	29.28	0.05	53	52	96	08	0	0
12	366	30.02	0.00	59	49	69	18	5	11	120	29.70	0.00	61	52	72	15	4	12	93	29.21	0.04	54	53	96	08	0	0
15	297	29.95	0.00	60	48	66	17	5	21	46	29.65	0.00	58	52	80	17	4	9	53	29.16	0.08	54	53	96	24	1	7
18	0	29.91	0.00	55	48	75	17	3	6	0	29.60	0.00	56	52	84	18	0	5	0	29.16	0.07	53	51	96	28	7	15
21	0	29.90	0.00	53	46	77	19	4	11	0	29.54	0.00	56	52	88	12	0	5	0	29.17	0.00	52	51	96	27	7	16

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	29.887	49	46	91	1.3	22	0.8
03	0	29.877	48	45	90	1.0	18	0.9
06	0	29.878	48	45	91	1.7	17	1.4
09	97	29.895	51	48	90	2.3	19	1.8
12	275	29.884	57	50	79	3.0	20	2.1
15	168	29.862	58	50	75	2.5	20	1.7
18	6	29.868	54	48	83	1.3	23	0.7
21	0	29.886	50	46	88	1.2	20	0.9

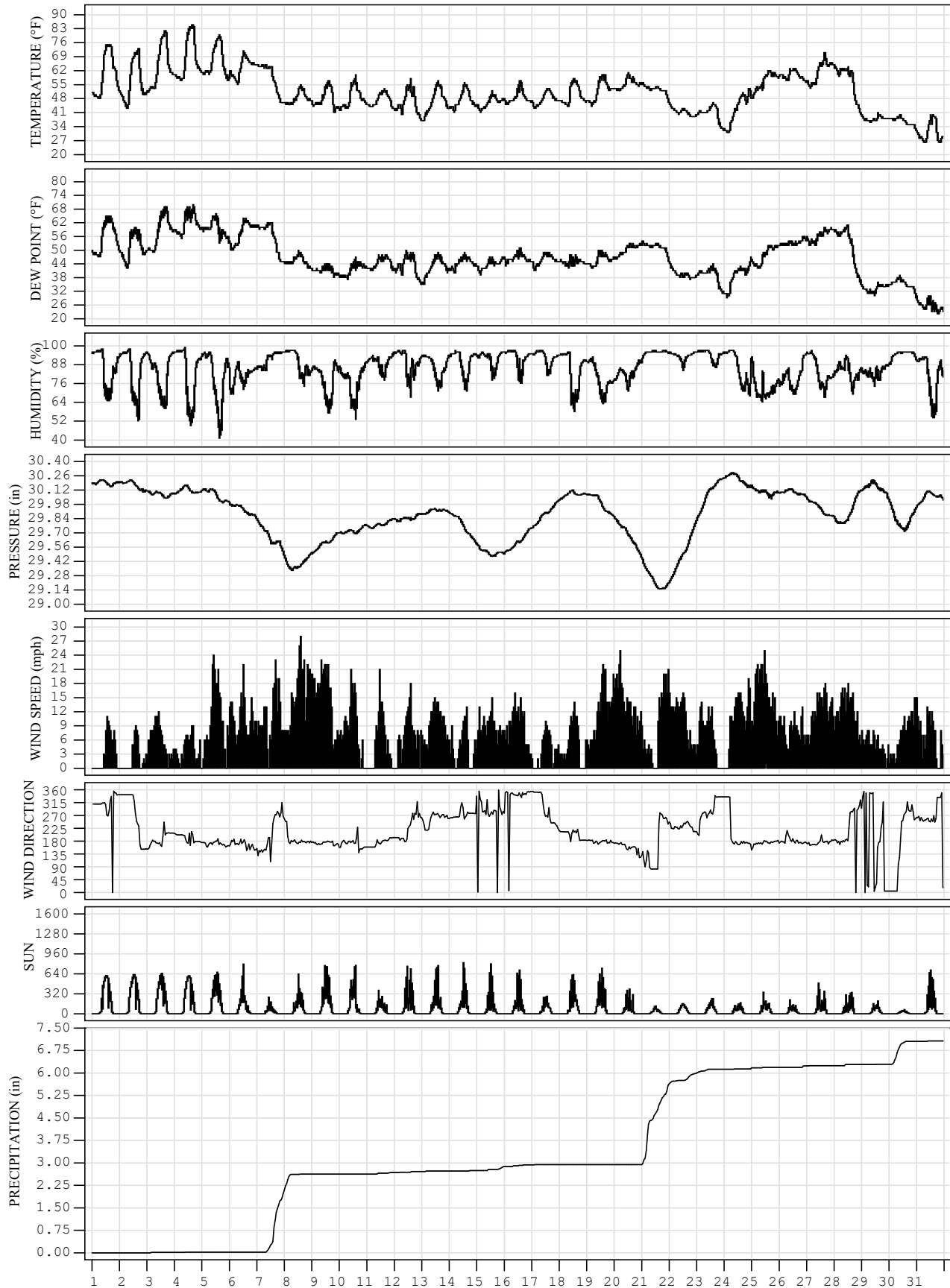
HOURLY PRECIPITATION (Water Equivalent) October 2023: Westford

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				0.01																					03
04									0.01																04
05																									05
06																									06
07								0.04	0.05	0.07	0.08	0.03	0.09	0.50	0.21	0.25	0.13	0.12	0.13	0.04	0.06	0.15	0.12		07
08	0.14	0.08	0.12	0.11	0.06	0.01							0.01	0.09											08
09														0.01											09
10																									10
11									0.01	0.02								0.01	0.01	0.01					11
12				0.01											0.02										12
13																									13
14																	0.02								14
15									0.03	0.01								0.01	0.01	0.02	0.02	0.03	0.01		15
16								0.02					0.01			0.02									16
17			0.01																						17
18																									18
19																									19
20																									20
21	0.04	0.12	0.05	0.26	0.53	0.34	0.11	0.02	0.02	0.06	0.09	0.06	0.06	0.08	0.15	0.07	0.08	0.09	0.04	0.07	0.01	0.10	0.19	0.06	21
22	0.04	0.02	0.02			0.01	0.01	0.01						0.01	0.02	0.03	0.05	0.04	0.03	0.02	0.01	0.01	0.01	0.02	22
23	0.02	0.01	0.01	0.02		0.01		0.02	0.01	0.02															23
24									0.01															0.04	24
25										0.02															25
26																									26
27			0.01																			0.03	0.01		27
28										0.04															28
29														0.01											29
30			0.01	0.04	0.09	0.08	0.16	0.11	0.08	0.08	0.04	0.02	0.02	0.02	0.01										30
31										0.02															31
Sum	0.24	0.23	0.23	0.45	0.69	0.45	0.28	0.18	0.17	0.35	0.21	0.16	0.13	0.21	0.70	0.31	0.40	0.28	0.21	0.24	0.12	0.20	0.38	0.25	Sum

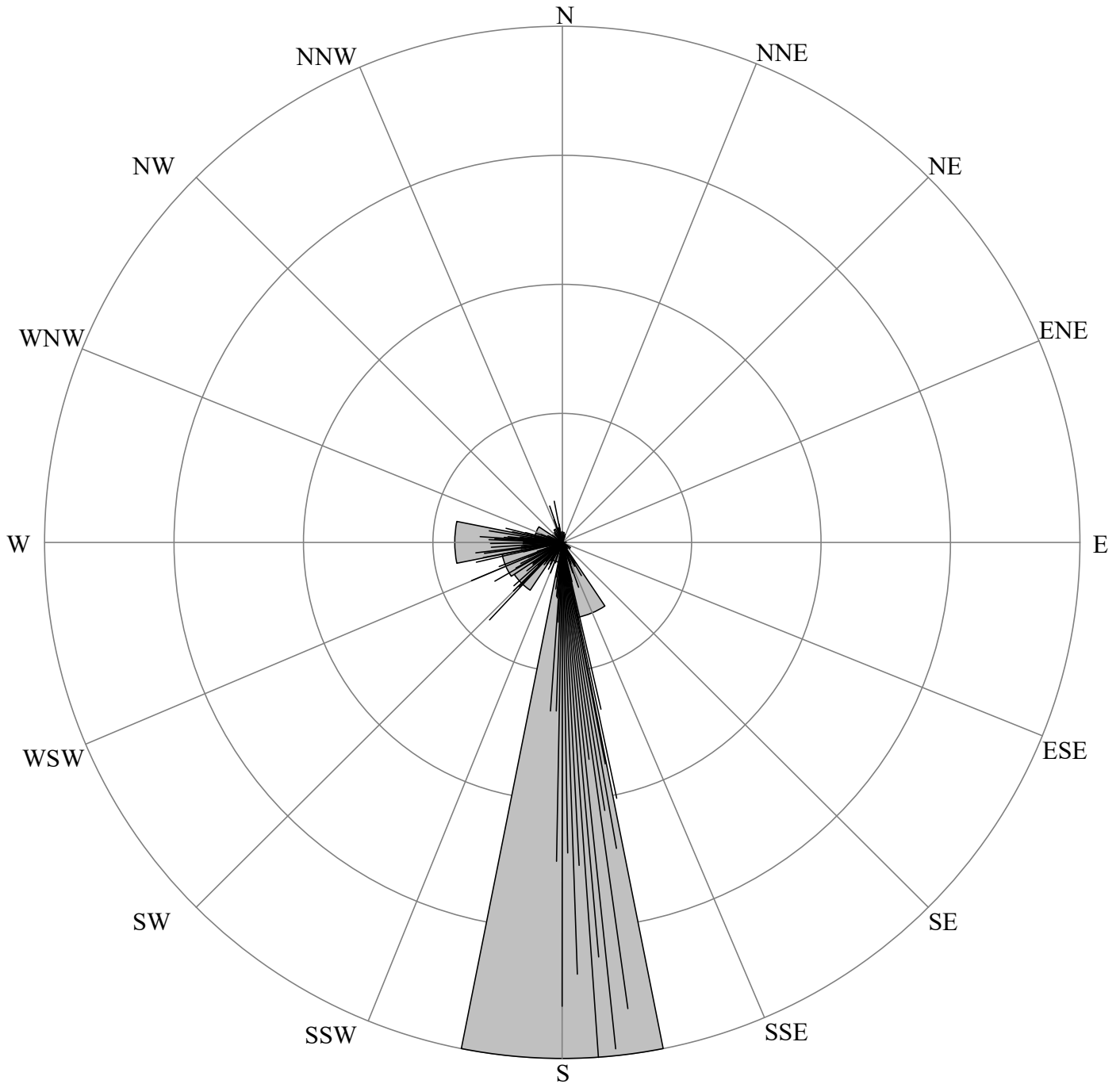
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA

October 2023: Westford



Wind Rose: October 2023
Westford



Maximum direction of wind: 74.3 miles from 176°
Maximum sector of wind: 780.8 miles from S
1371.1 total miles of wind