

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

September 2023

Station: Westford

Latitude: 43° 37' 38" N Longitude: 73° 02' 30" 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	74.7	46.2	60.4	58.7	53	84	4	0	.....	0	0.00	0.0	30.28	30.15	30.211	0.2	0.2	223	9	WSW	5	246	228
2	75.7	51.5	63.6	63.0	58	85	1	0	.....	0	0.01	0.0	30.17	29.88	30.020	1.5	1.5	180	20	SSE	8	172	181
3	84.0	62.1	73.0	70.5	65	84	0	8	.....	0	0.00	0.0	29.89	29.78	29.841	0.9	0.9	196	13	SSE	7	256	204
4	87.7	60.9	74.3	72.4	68	87	0	10	.....	0	0.00	0.0	29.86	29.79	29.817	0.3	0.3	221	9	SSE	5	260	211
5	88.9	65.2	77.0	74.2	70	88	0	12	.....	0	0.00	0.0	29.94	29.86	29.889	0.2	0.1	265	8	WSW	4	248	185
6	89.5	65.7	77.6*	75.3	71	86	0	13	.....	0	0.00	0.0	29.88	29.69	29.786	0.4	0.4	248	10	WNW	6	275	216
7	87.7	64.7	76.2	72.0	69	91	0	12	..3.....	0	1.02	0.0	29.81	29.66	29.720	0.9	0.8	187	30	S	15	252	141	
8	82.7	63.9	73.3	70.9	68	90	0	9	..3.....	0	0.52	0.0	29.97	29.75	29.850	1.3	1.2	183	18	SSE	7	213	179	
9	72.9	57.7	65.3	63.3	60	89	0	1	.....	0	0.01	0.0	30.13	29.97	30.075	0.2	0.1	0	10	N	3	344	140
10	68.2	58.7	63.4	63.3	62	96	1	0	..3.....	0	0.77	0.0	30.13	30.04	30.062	0.3	0.1	230	11	WSW	6	256	57	
11	64.8	55.7	60.3	63.8	63	96	4	0	.....	0	0.03	0.0	30.05	30.00	30.046	0.0	0.0	292	9	W	0	292	11
12	77.7	54.9	66.3	63.8	63	96	0	2	.....	0	0.00	0.0	30.05	29.89	30.046	0.0	0.0	292	11	E	0	292	11
13	67.0	54.2	60.6	62.7	61	96	4	0	.....	0	0.91	0.0	30.05	29.83	30.011	0.2	0.2	247	11	SSE	6	243	9
14	64.9	49.2	57.1	54.3	52	92	8	0	.....	0	0.01	0.0	30.13	29.93	29.995	0.5	0.5	264	16	SW	8	263	26
15	67.7	47.2	57.4	56.2	52	86	7	0	.....	0	0.00	0.0	30.18	30.01	30.114	0.2	0.2	322	13	NW	4	10	171
16	70.5	50.1	60.3	57.1	53	87	4	0	.....	0	0.00	0.0	30.01	29.80	29.878	1.1	1.0	270	16	W	8	259	144
17	72.5	49.8	61.1	59.7	55	85	3	0	.....	0	0.01	0.0	29.89	29.81	29.847	0.5	0.4	222	10	WSW	6	247	176
18	59.5	55.1	57.3	57.5	56	94	7	0	.....	0	0.08	0.0	29.84	29.70	29.781	0.1	0.1	174	11	S	3	182	34
19	57.9	55.5	56.7	56.7	56	96	8	0	.....	0	0.77	0.0	29.96	29.67	29.778	2.7	2.7	260	23	WSW	9	253	24
20	68.1	46.2	57.1	56.3	51	83	8	0	.....	0	0.00	0.0	30.18	29.96	30.072	0.8	0.8	249	12	W	6	258	201
21	68.8	42.4	55.6	53.6	49	85	9	0	.....	0	0.00	0.0	30.32	30.17	30.262	0.4	0.3	254	10	WSW	5	273	189
22	72.9	42.3	57.6	55.7	51	86	7	0	.....	0	0.01	0.0	30.41	30.31	30.348	0.3	0.3	219	10	SSE	5	253	186
23	70.4	46.5	58.5	56.9	53	88	6	0	.....	0	0.00	0.0	30.31	30.19	30.252	0.1	0.1	24	7	ENE	3	56	145
24	70.8	48.4	59.6	57.0	53	88	5	0	.....	0	0.00	0.0	30.19	30.10	30.144	0.1	0.1	227	6	SW	3	137	123
25	70.9	46.9	58.9	56.4	52	87	6	0	.....	0	0.01	0.0	30.33	30.08	30.183	0.3	0.2	356	12	NNW	6	350	145
26	67.5	40.5	54.0	52.3	47	85	10	0	.....	0	0.00	0.0	30.44	30.33	30.394	0.3	0.2	335	11	NNW	5	261	174
27	68.0	38.2*	53.1*	51.0	47	87	12	0	.....	0	0.01	0.0	30.41	30.30	30.359	0.3	0.2	269	9	WSW	6	258	157
28	71.0	42.6	56.8	54.5	50	87	8	0	.....	0	0.00	0.0	30.33	30.23	30.281	0.0	0.0	206	6	SSW	2	205	147
29	64.7	45.4	55.0	54.3	51	89	10	0	.....	0	0.01	0.0	30.25	30.19	30.222	0.0	0.0	195	6	SSE	2	239	74
30	72.3	47.1	59.7	58.2	53	85	5	0	.....	0	0.00	0.0	30.24	30.16	30.191	0.3	0.2	282	12	W	8	252	162
Sum	Sum	-----	-----	---	----		Ttl	Ttl					Total	Total	For the month:						---			
2180	1555						137	67	Number of Days				4.18	0.0	30.44	29.66	30.049	0.5	0.3	234	30	S	15	252
Avg	Avg	Avg	Mean	Avg	Avg		----	----	Precip				Season Ttl	Date	Date	-----	----	----	---	Date	Date	Avg		
72.7	51.8	62.2	60.7	57	88.5		----	----	≥.01 inch	15			40.32	0.0	26	7	-----	----	----	---	7	7	135	
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			187	393	Thunder	3	Precipitation			Snow, Ice Plts											
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----			Heavy Fog	0	1.05	7- 8	0.0	-	0						-				
1	0	0	0	----	----			Clear	9	Partly Cloudy		14	Cloudy		7									

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

September 2023: Westford

Hour	SEP 19									SEP 20									SEP 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	29.71	0.00	58	56	96	08	0	0	0	29.96	0.00	56	54	93	21	0	4	0	30.18	0.00	46	45	95	05	0	0
03	0	29.68	0.00	57	56	97	26	1	8	0	29.99	0.00	52	50	94	27	1	3	0	30.19	0.00	44	42	96	05	0	0
06	0	29.68	0.00	56	56	97	24	3	14	0	30.03	0.00	51	50	95	24	0	0	0	30.23	0.00	43	42	96	05	0	0
09	25	29.71	0.11	57	56	97	25	3	9	301	30.07	0.00	55	53	93	24	0	2	269	30.28	0.00	54	53	98	05	0	0
12	107	29.74	0.00	57	56	97	25	7	17	686	30.09	0.00	64	54	68	23	4	8	638	30.29	0.00	65	54	68	26	0	4
15	49	29.79	0.00	57	56	96	26	4	14	580	30.09	0.00	66	50	56	27	2	8	543	30.27	0.00	67	53	59	26	3	10
18	7	29.86	0.00	56	55	95	25	4	12	32	30.08	0.00	63	54	72	05	0	0	44	30.28	0.00	65	56	75	25	0	0
21	0	29.92	0.00	56	54	94	27	0	8	0	30.15	0.00	48	46	93	05	0	0	0	30.31	0.00	49	47	93	25	0	0
SEP 22									SEP 23									SEP 24									
00	0	30.32	0.00	46	45	95	25	0	0	0	30.31	0.00	51	49	96	21	0	0	0	30.19	0.00	53	52	95	27	0	0
03	0	30.33	0.00	44	43	96	25	0	0	0	30.30	0.00	49	48	96	21	0	0	0	30.16	0.00	52	51	96	27	0	0
06	0	30.37	0.00	43	42	96	10	0	0	0	30.29	0.00	47	46	96	21	0	0	0	30.16	0.00	51	50	97	27	0	0
09	276	30.41	0.00	53	52	98	10	0	0	244	30.30	0.00	54	54	98	21	0	0	127	30.17	0.00	56	55	98	27	0	0
12	633	30.39	0.00	69	58	67	21	1	6	584	30.27	0.00	68	59	72	03	1	4	480	30.17	0.00	65	57	73	30	0	3
15	548	30.33	0.00	72	57	60	19	0	5	563	30.21	0.00	70	55	59	04	2	5	330	30.12	0.00	68	59	73	19	2	4
18	51	30.31	0.00	66	60	80	21	0	0	35	30.20	0.00	62	58	87	27	0	0	47	30.11	0.00	64	58	80	24	0	0
21	0	30.32	0.00	53	51	93	21	0	0	0	30.20	0.00	54	52	94	27	0	0	0	30.11	0.00	51	49	93	24	0	0
SEP 25									SEP 26									SEP 27									
00	0	30.10	0.00	48	47	95	24	0	0	0	30.33	0.00	47	46	95	01	0	0	0	30.40	0.00	43	41	95	00	0	0
03	0	30.08	0.00	48	47	96	22	0	0	0	30.35	0.00	44	42	95	01	0	0	0	30.39	0.00	40	39	95	00	0	0
06	0	30.09	0.00	49	48	97	22	0	0	0	30.39	0.00	42	40	95	01	0	0	0	30.38	0.00	39	38	96	00	0	0
09	236	30.16	0.00	54	54	98	24	0	3	292	30.44	0.00	50	48	94	03	1	5	265	30.40	0.00	49	48	98	00	0	0
12	624	30.19	0.00	69	59	71	34	0	6	506	30.44	0.00	63	51	66	35	1	5	555	30.39	0.00	62	52	69	32	3	5
15	102	30.19	0.00	69	57	65	35	2	10	552	30.39	0.00	67	56	67	26	1	7	278	30.33	0.00	65	55	70	24	2	8
18	44	30.24	0.00	64	58	81	01	0	0	54	30.37	0.00	62	53	73	00	0	2	30	30.31	0.00	61	55	81	25	0	0
21	0	30.29	0.00	52	50	93	01	0	0	0	30.39	0.00	47	45	93	00	0	0	0	30.32	0.00	48	47	94	24	0	0
SEP 28									SEP 29									SEP 30									
00	0	30.32	0.00	47	46	96	24	0	0	0	30.24	0.00	48	47	95	27	0	0	0	30.21	0.00	53	51	95	15	0	0
03	0	30.31	0.00	45	44	96	24	0	0	0	30.22	0.00	48	47	96	27	0	0	0	30.17	0.00	53	50	92	10	0	2
06	0	30.31	0.00	44	43	96	24	0	0	0	30.22	0.00	46	45	96	27	0	0	0	30.19	0.00	47	46	95	10	0	0
09	225	30.33	0.00	52	51	98	24	0	0	88	30.24	0.00	53	52	98	27	0	0	142	30.24	0.00	54	53	96	06	0	0
12	487	30.31	0.00	67	57	70	24	0	0	258	30.24	0.00	63	55	76	16	0	4	594	30.21	0.00	70	56	63	34	0	3
15	513	30.25	0.00	70	58	66	05	0	0	221	30.20	0.00	64	56	74	10	0	0	188	30.18	0.00	69	59	71	27	2	10
18	26	30.23	0.00	63	57	81	27	0	0	21	30.20	0.00	59	55	87	10	0	0	26	30.17	0.00	65	57	76	31	0	0
21	0	30.24	0.00	51	49	93	27	0	0	0	30.22	0.00	53	51	92	15	0	0	0	30.19	0.00	53	51	93	31	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	30.041	55	54	95	0.1	17	0.1
03	0	30.034	54	53	95	0.1	23	0.1
06	0	30.040	53	52	96	0.2	23	0.1
09	192	30.065	59	58	96	0.7	18	0.5
12	460	30.060	68	61	77	1.5	23	1.0
15	391	30.030	71	61	73	1.5	26	1.1
18	71	30.020	68	61	81	0.3	25	0.2
21	0	30.041	57	55	93	0.1	20	0.0

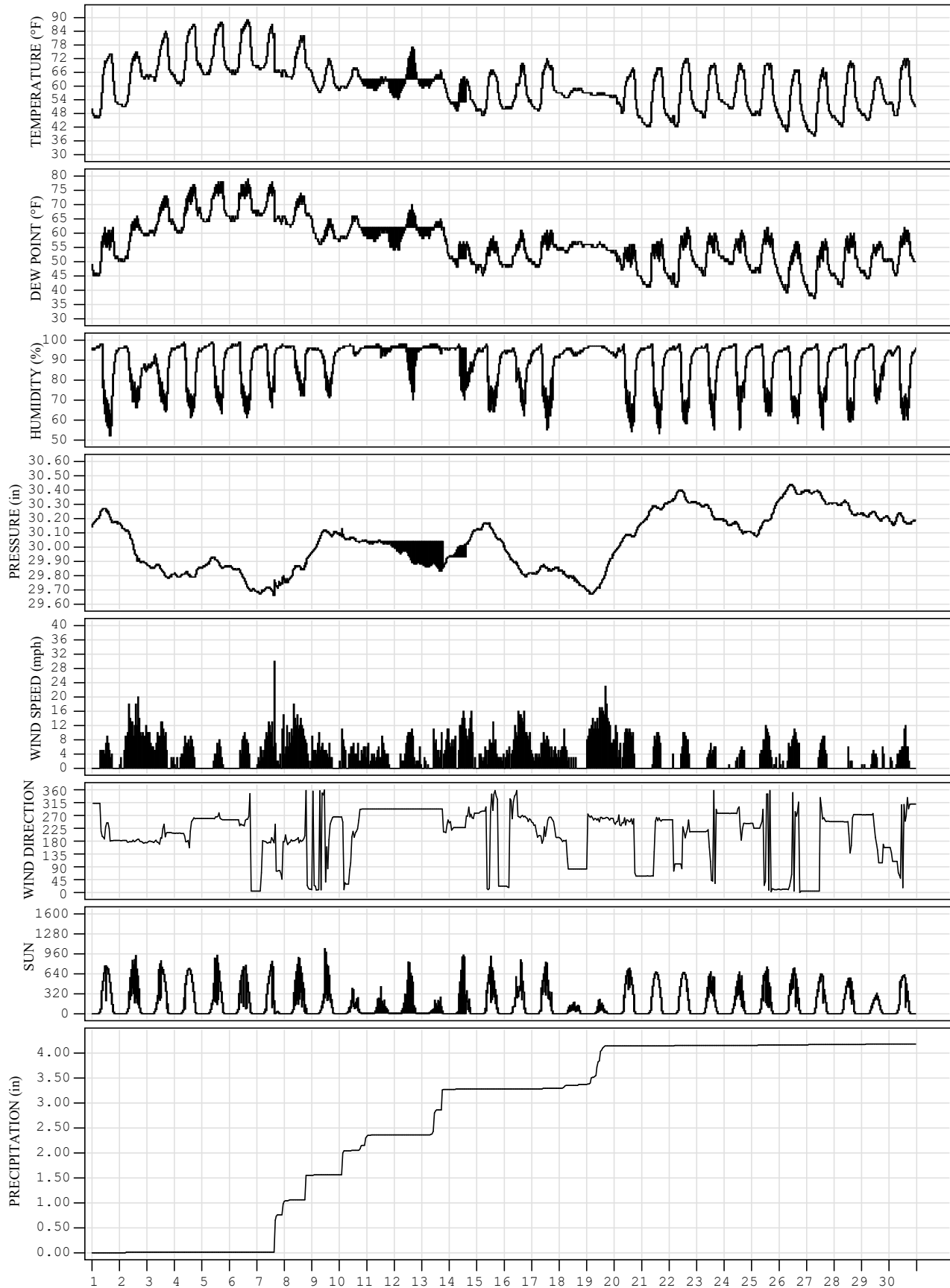
HOURLY PRECIPITATION (Water Equivalent) September 2023: Westford

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						0.01																		02	
03																								03	
04																								04	
05																								05	
06																								06	
07																								07	
08	0.01			0.01	0.01										0.64	0.08	0.03					0.22	0.05	08	
09		0.01																0.49						09	
10			0.44	0.04						0.01							0.03	0.06	0.01			0.15	0.03	10	
11	0.02			0.01																				11	
12																								12	
13							0.01	0.01	0.05	0.37	0.04	0.02					0.40	0.01						13	
14						0.01																		14	
15																								15	
16										0.01														16	
17																								17	
18			0.01	0.01	0.03	0.01											0.02							18	
19	0.01		0.02	0.10	0.01		0.02	0.02	0.17	0.10	0.02	0.19	0.03	0.04	0.02	0.02								19	
20																								20	
21																								21	
22					0.01																			22	
23																								23	
24																								24	
25						0.01																		25	
26																								26	
27		0.01																						27	
28																								28	
29				0.01																				29	
30																								30	
Sum	0.04	0.02	0.47	0.18	0.06	0.04	0.02	0.03	0.18	0.16	0.40	0.23	0.05	0.04	0.02	0.66	0.10	0.46	0.56	0.01	0.00	0.00	0.37	0.08	Sum

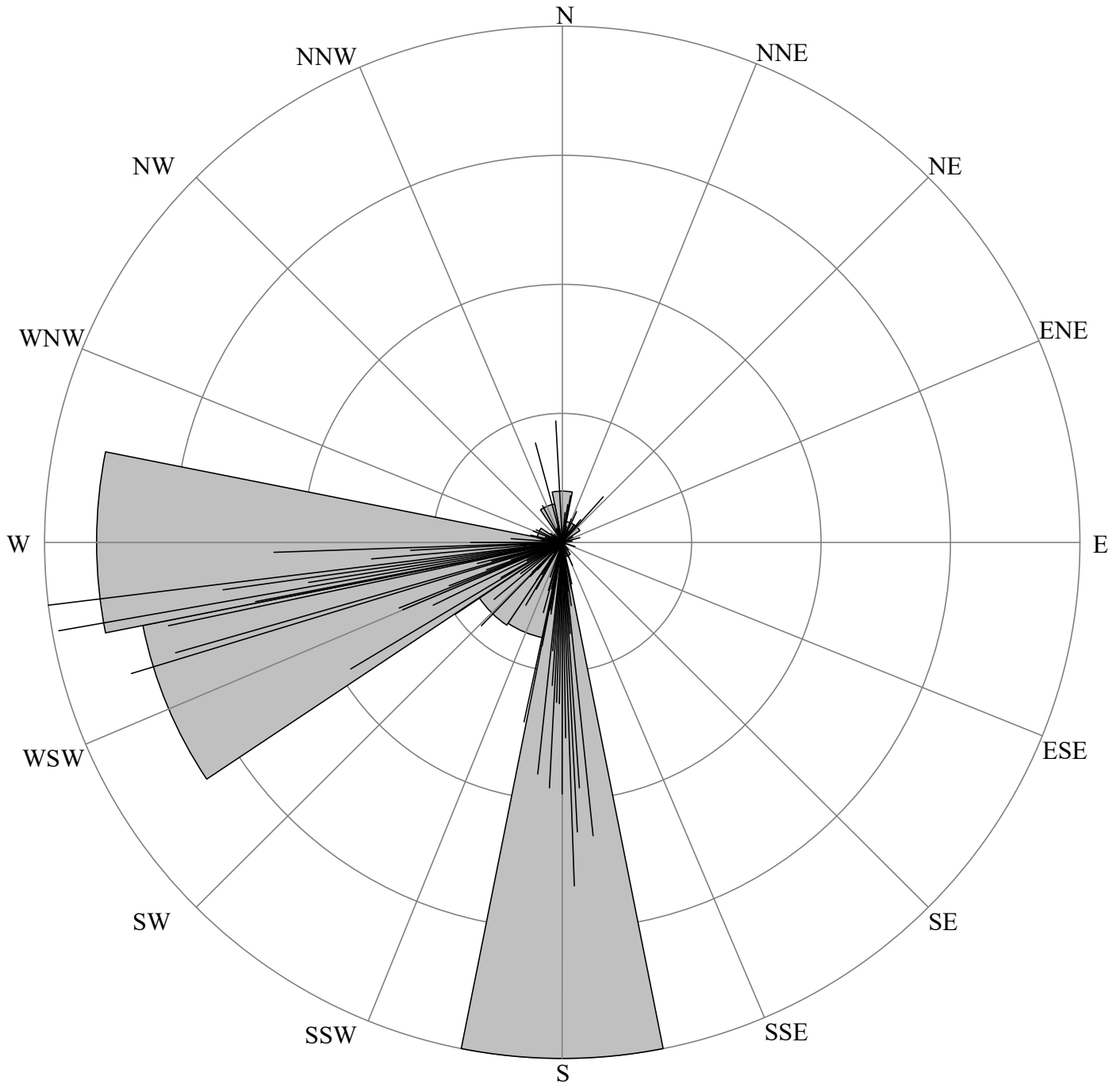
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOUR-BY-HOUR DATA

September 2023: Westford



Wind Rose: September 2023
Westford



Maximum direction of wind: 16.1 miles from 263°
Maximum sector of wind: 99.1 miles from S
345.6 total miles of wind