

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### August 2018

Station: Westford

Latitude: 44° 37' 38" N Longitude: 73° 02' 29" 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	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1																							
2																							
3																							
4	66.5	66.3	66.4	66.4	65	96	0	2	..3.....	0	0.00	0.0	30.03	30.03	30.028	0.3	0.3	225	9	SW	0	0	0
5	87.3	61.6	74.5	73.7	67	81	0	10	.....	0	0.01	0.0	30.10	29.99	30.040	0.1	0.1	348	9	WSW	0	0	245
6	90.8	66.7	78.8	78.0	70	77	0	14	..3.....	0	0.00	0.0	30.02	29.86	29.933	0.7	0.6	231	15	W	4	291	241
7	81.0	65.2	73.1	72.8	69	87	0	8	..3.....	0	0.02	0.0	29.88	29.81	29.841	0.1	0.1	255	10	WNW	3	280	112
8	83.0	63.8	73.4	72.5	68	87	0	9	..3.....	0	0.15	0.0	29.88	29.68	29.801	0.0	0.0	254	13	W	7	267	177
9	81.5	66.6	74.0	72.4	66	81	0	10	.....	0	0.01	0.0	29.76	29.64	29.693	0.9	0.8	283	20	W	8	295	221
10	76.5	52.0	64.3	65.1	57	78	0	0	..3.....	0	0.39	0.0	29.92	29.75	29.860	0.2	0.2	304	15	W	7	310	269
11	79.9	48.3	64.1	64.5	57	80	1	0	.....	0	0.00	0.0	29.99	29.92	29.953	0.0	0.0	189	10	SE	2	200	223
12	80.3	57.9	69.1	67.9	63	86	0	4	.....	0	0.00	0.0	30.08	29.98	30.044	0.0	0.0	191	8	SW	1	226	143
13	83.8	59.4	71.6	70.4	65	85	0	7	.....	0	T	0.0	30.08	29.90	30.001	0.0	0.0	288	6	W	2	289	163
14	82.2	64.0	73.1	71.6	68	88	0	8	.....	0	0.09	0.0	29.90	29.71	29.796	0.0	0.0	244	11	SSW	3	207	142
15	82.5	63.4	73.0	71.3	68	88	0	8	..3.....	0	0.38	0.0	29.88	29.73	29.792	0.1	0.1	240	10	SSW	5	215	171
16	77.4	53.5	65.5	66.8	61	83	0	1	.....	0	0.11	0.0	30.04	29.88	29.967	0.1	0.1	305	13	W	6	289	251
17	74.6	52.7	63.6	64.8	63	94	1	0	..3.....	0	0.32	0.0	30.04	29.77	29.928	0.2	0.2	212	16	S	6	202	82
18	70.6	56.1	63.3	63.0	61	95	1	0	.....	0	0.62	0.0	29.92	29.75	29.834	0.1	0.0	285	12	SSW	3	223	58
19	80.4	52.3	66.4	64.8	58	82	0	1	.....	0	0.01	0.0	30.06	29.92	30.001	0.1	0.0	39	10	ESE	4	92	243
20	79.5	54.5	67.0	65.8	59	81	0	3	.....	0	0.00	0.0	30.15	30.05	30.097	0.0	0.0	219	8	S	1	199	227
21	78.1	53.2	65.6	65.8	59	80	0	1	.....	0	0.01	0.0	30.09	29.75	29.960	0.3	0.3	198	23	SSW	5	210	187
22	73.5	60.5	67.0	66.5	61	83	0	3	.....	0	0.07	0.0	29.76	29.52	29.623	1.5	1.1	257	26	W	12	299	91
23	75.6	48.4	62.0	61.5	52	73	3	0	.....	0	0.01	0.0	29.97	29.76	29.863	0.5	0.5	295	15	NNW	7	308	224
24	81.7	55.9	68.8	67.1	59	77	0	4	.....	0	0.00	0.0	30.16	29.97	30.078	0.5	0.5	220	14	SSW	6	214	214
25	80.5	56.2	68.4	68.0	59	76	0	4	.....	0	0.00	0.0	30.20	30.08	30.146	0.6	0.5	218	19	S	7	219	222
26	75.6	61.1	68.3	67.9	62	83	0	4	.....	0	0.06	0.0	30.09	29.89	29.974	0.8	0.8	217	19	SSW	6	215	127
27	78.8	62.5	70.7	70.8	66	86	0	6	.....	0	0.01	0.0	30.02	29.90	29.960	0.1	0.1	257	9	WNW	4	287	149
28	87.8	69.7	78.8	77.2	71	82	0	14	.....	0	0.25	0.0	29.90	29.78	29.846	1.2	1.1	237	21	W	10	249	163
29	89.9	68.7	79.3*	76.2	70	82	0	15	.....	0	0.00	0.0	29.88	29.72	29.811	1.0	0.9	238	27	W	11	289	165
30	72.1	48.6	60.3	60.8	57	88	4	0	.....	0	0.14	0.0	30.22	29.82	30.048	0.4	0.2	322	16	WNW	7	300	109
31	77.4	43.1*	60.3*	60.4	54	82	5	0	.2.....	0	0.02	0.0	30.31	30.20	30.247	0.1	0.1	227	11	SW	4	266	224
Sum	Sum	-----	-----	---	----	Ttl	Ttl				Total	Total	For the month:						---				
2229	1632					15	136		Number of Days		2.68	0.0	30.31	29.52	29.935	0.4	0.3	248	27	W	12	299	
Avg	Avg	Avg	Mean	Avg	Avg	----	----		Precip		Season Ttl	Date	Date	-----	----	----	---	Date	Date	Avg			
79.6	58.3	68.9	68.4	63	83.6	----	----		≥.01 inch	19	2.68	0.0	31	22	-----	----	----	---	29	22	173		
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			15	136	Thunder	7	Precipitation			Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	1	0.94	17-18	0.0	-	0						-					
2	0	0	0	----	----	Clear	6	Partly Cloudy			14	Cloudy			7								

**NOTES:**

- Units: 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 W/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

## August 2018: Westford

Hour	AUG 01									AUG 02									AUG 03									
	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	Direction	Speed	Gust	Direction	Speed	Gust	Direction	Speed	Gust	Direction	Speed	Gust	
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### MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Ended: Date	19	19	19	19	19	19	19	19	19	19	19	19
Ended: Time	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

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

## August 2018: Westford

Hour	AUG 19									AUG 20									AUG 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	29.92	0.00	57	55	96	00	0	0	0	30.05	0.00	56	55	95	29	0	0	0	30.08	0.00	56	55	95	30	0	0
03	0	29.93	0.00	55	54	97	00	0	0	0	30.09	0.00	56	55	97	29	0	0	0	30.06	0.00	54	52	96	29	0	0
06	0	29.96	0.00	55	54	97	00	0	0	0	30.13	0.00	55	53	96	18	0	0	5	30.06	0.00	54	53	96	29	0	0
09	272	30.02	0.00	61	60	97	00	0	0	418	30.14	0.00	70	62	77	13	0	5	353	30.04	0.00	66	62	88	21	0	0
12	777	30.03	0.00	76	62	62	00	0	8	752	30.12	0.00	76	61	60	26	0	0	675	29.98	0.00	75	62	65	23	0	7
15	696	29.99	0.00	79	60	51	06	0	2	766	30.08	0.00	78	64	61	15	0	0	315	29.92	0.00	74	62	65	13	1	5
18	102	30.01	0.00	74	64	70	29	0	0	90	30.05	0.00	76	65	69	30	0	0	70	29.86	0.00	72	61	70	23	0	8
21	0	30.04	0.00	59	56	90	29	0	0	0	30.08	0.00	61	58	92	29	0	0	0	29.83	0.00	68	60	76	17	1	7
AUG 22									AUG 23									AUG 24									
00	0	29.75	0.00	68	61	78	20	0	6	0	29.76	0.00	61	54	79	29	1	8	0	29.97	0.00	58	51	79	20	0	5
03	0	29.65	0.00	67	61	80	21	2	9	0	29.78	0.00	52	50	91	30	0	0	0	30.00	0.00	59	53	80	21	1	7
06	0	29.59	0.00	65	62	91	17	1	7	0	29.82	0.00	49	46	92	30	0	0	0	30.04	0.00	57	53	87	22	0	0
09	37	29.55	0.00	66	64	95	20	5	11	420	29.86	0.00	63	53	70	28	1	5	306	30.09	0.00	65	58	78	21	1	12
12	137	29.54	0.00	73	66	81	29	4	16	512	29.89	0.00	69	50	52	28	2	10	598	30.11	0.00	74	63	69	14	1	11
15	362	29.57	0.00	72	63	74	26	1	7	733	29.87	0.00	73	51	47	28	2	9	619	30.10	0.00	80	65	60	27	0	9
18	69	29.62	0.00	67	60	78	29	0	7	79	29.88	0.00	72	54	54	31	0	0	81	30.10	0.00	80	65	61	22	0	1
21	0	29.71	0.00	62	57	83	30	0	5	0	29.94	0.00	57	53	87	27	0	0	0	30.14	0.00	64	61	92	22	0	0
AUG 25									AUG 26									AUG 27									
00	0	30.16	0.00	61	59	93	22	0	0	0	30.09	0.00	63	57	80	22	1	5	0	29.92	0.00	67	65	93	24	0	0
03	0	30.17	0.00	60	58	95	22	0	0	0	30.06	0.00	63	58	84	21	0	5	0	29.94	0.00	65	63	95	21	0	0
06	0	30.18	0.00	57	55	96	22	0	0	0	30.03	0.00	61	57	87	22	2	8	0	29.97	0.00	63	62	96	21	0	0
09	313	30.20	0.00	67	62	85	22	1	9	380	30.00	0.00	70	62	75	21	2	13	227	30.00	0.00	71	67	87	26	0	1
12	721	30.17	0.00	79	65	64	21	1	11	214	29.95	0.00	71	63	76	20	1	11	517	30.00	0.00	77	67	70	28	0	8
15	656	30.10	0.00	81	61	52	22	2	8	357	29.92	0.00	73	68	84	18	0	12	185	29.97	0.00	78	68	71	27	0	0
18	216	30.09	0.00	77	58	52	21	2	10	72	29.91	0.00	72	67	84	21	0	0	65	29.94	0.00	76	70	82	20	0	0
21	0	30.09	0.00	65	56	72	21	0	1	0	29.92	0.00	68	65	89	21	0	4	0	29.92	0.00	68	66	93	20	0	0
AUG 28									AUG 29									AUG 30									
00	0	29.90	0.00	72	68	87	20	0	6	0	29.87	0.00	73	69	86	25	0	5	0	29.83	0.00	71	69	92	23	1	4
03	0	29.86	0.00	73	69	86	23	0	10	0	29.86	0.00	70	68	93	21	0	0	0	29.84	0.00	68	66	93	29	2	11
06	0	29.87	0.00	70	69	95	23	0	0	0	29.86	0.00	69	68	95	21	0	5	0	29.93	0.00	59	57	95	03	0	9
09	163	29.87	0.00	73	72	96	25	1	7	146	29.84	0.00	75	71	87	23	0	4	207	30.03	0.00	59	56	91	26	0	8
12	258	29.83	0.00	81	75	82	20	2	12	591	29.80	0.00	84	75	74	21	1	13	362	30.09	0.00	65	59	80	30	0	9
15	420	29.78	0.00	87	74	66	20	1	12	629	29.72	0.00	90	74	61	24	0	21	199	30.12	0.00	63	56	79	36	0	3
18	91	29.80	0.00	82	71	68	25	1	11	25	29.77	0.00	77	69	77	20	0	8	74	30.14	0.00	62	55	77	34	0	4
21	0	29.84	0.00	76	69	78	25	1	7	0	29.79	0.00	73	68	86	21	0	5	0	30.19	0.00	50	48	93	03	0	0
AUG 31																											
00	0	30.22	0.00	49	48	95	03	0	0																		
03	0	30.24	0.00	47	46	96	03	0	0																		
06	0	30.27	0.00	43	42	96	03	0	0																		
09	388	30.30	0.00	54	53	97	03	0	0																		
12	728	30.27	0.00	70	59	68	12	0	5																		
15	657	30.23	0.00	77	62	60	27	1	8																		
18	171	30.23	0.00	76	63	64	22	0	1																		
21	0	30.21	0.00	64	59	84	17	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 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
00	0	29.925	64	61	90	0.1	24	0.1
03	0	29.923	62	60	93	0.2	24	0.2
06	2	29.937	60	59	95	0.1	21	0.1
09	271	29.956	67	64	88	0.4	22	0.4
12	535	29.945	75	66	72	0.7	24	0.5
15	482	29.916	77	65	67	0.9	26	0.7
18	123	29.908	75	65	72	0.3	23	0.3
21	0	29.927	66	62	87	0.2	26	0.2

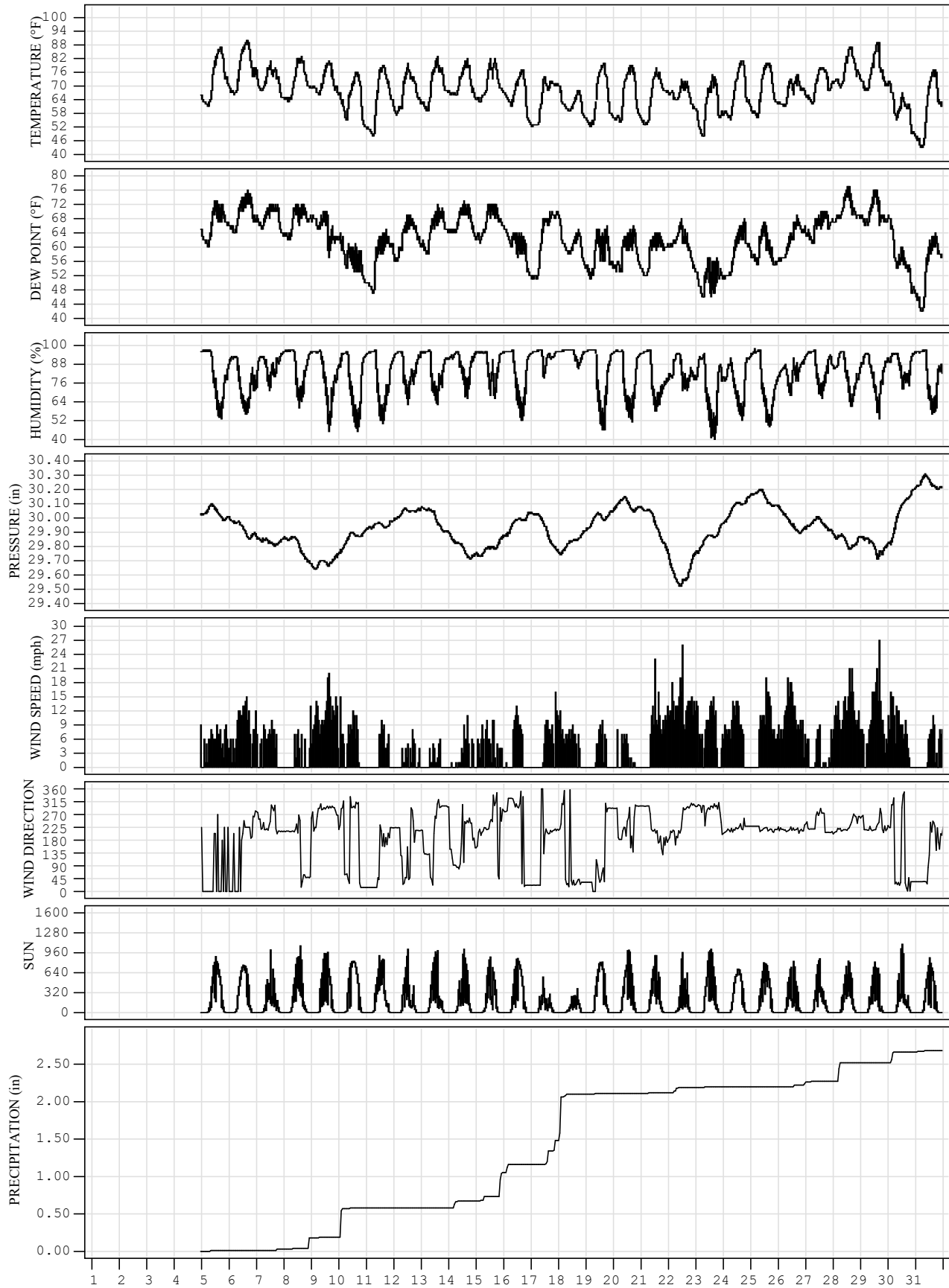
## HOURLY PRECIPITATION (Water Equivalent) August 2018: Westford

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								0.01																	05
06																									06
07																	0.02								07
08								0.01																	08
09								0.01													0.14				09
10		0.35	0.03							0.01															10
11																									11
12																									12
13																									13
14					0.05	0.03		0.01																	14
15				0.01			0.05														0.23	0.08	0.01		15
16			0.07	0.04																					16
17																									17
18	0.10	0.48			0.01	0.01	0.02						0.01	0.03	0.14					0.01	0.13				18
19								0.01																	19
20																									20
21								0.01																	21
22					0.02		0.04		0.01																22
23								0.01																	23
24																									24
25																									25
26																									26
27					0.01									0.02									0.02	0.02	27
28					0.17	0.08																			28
29																									29
30			0.04	0.09	0.01																				30
31		0.01						0.01																	31
Sum	0.10	0.84	0.14	0.14	0.27	0.12	0.13	0.06	0.01	0.01	0.00	0.00	0.01	0.05	0.14	0.00	0.00	0.02	0.00	0.01	0.36	0.22	0.03	0.02	Sum

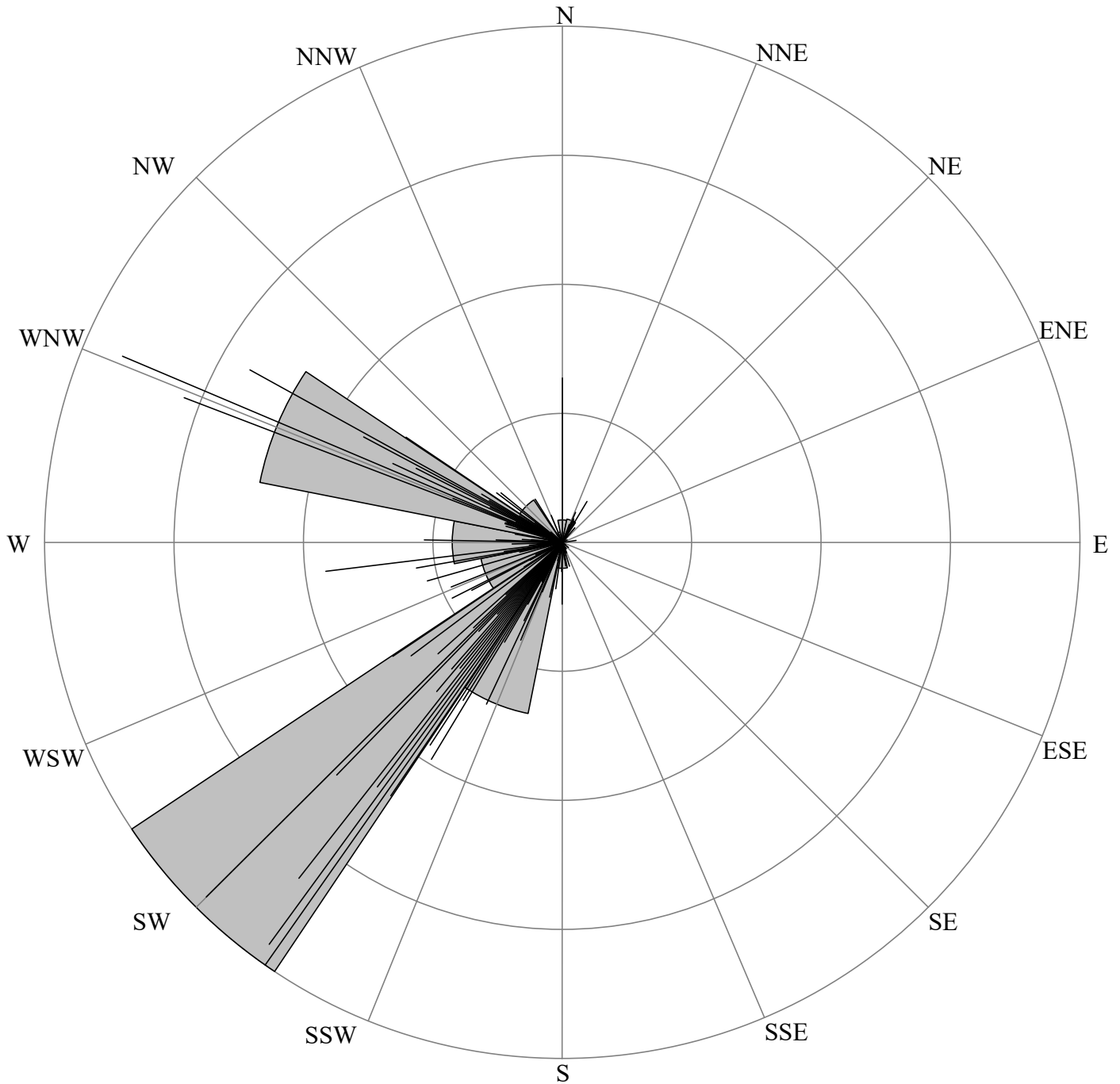
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA

## August 2018: Westford



Wind Rose: August 2018  
Westford



Maximum direction of wind: 10.5 miles from 215°  
Maximum sector of wind: 89.4 miles from SW  
232.2 total miles of wind