

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### June 2016

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 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 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	77.3	52.5	64.9	64.8	56	75	0	0	.....	0	0.00	0.0	30.12	29.98	30.059	0.1	0.1	301	9	NW	6	299	235	
2	74.7	60.7	67.7	67.5	57	70	0	3	.....	0	0.00	0.0	30.04	29.90	29.978	1.9	1.9	209	21	SSW	10	223	153	
3	80.6	56.5	68.5	69.2	58	70	0	4	.....	0	0.06	0.0	29.94	29.87	29.906	1.6	1.3	229	18	SSW	9	211	286	
4	78.7	52.9	65.8	64.6	55	74	0	1	.....	0	0.00	0.0	29.98	29.88	29.927	0.3	0.3	309	12	NNE	8	282	250	
5	64.6	51.5	58.0	59.5	57	92	6	0	.....	0	1.88	0.0	29.88	29.45	29.662	0.9	0.7	198	15	S	10	310	41	
6	76.5	58.2	67.4	65.9	57	75	0	3	.....	0	0.12	0.0	29.53	29.43	29.475	3.0	2.8	239	26	WNW	10	272	211	
7	72.0	53.6	62.8	60.5	55	83	2	0	..3.....	0	0.30	0.0	29.50	29.36	29.430	0.4	0.4	246	12	W	8	257	169	
8	60.5	44.9	52.7	52.4	47	83	12	0	.....	0	0.10	0.0	29.62	29.41	29.502	2.3	2.2	302	25	WNW	11	312	150	
9	52.2	44.0*	48.1*	47.3	42	82	17	0	.....	0	0.02	0.0	29.82	29.61	29.699	2.9	2.9	303	25	NW	14	300	78	
10	65.8	44.3	55.1	52.7	47	81	10	0	.....	0	0.01	0.0	29.99	29.82	29.930	0.4	0.3	338	14	WNW	7	298	247	
11	58.0	45.0	51.5	52.0	50	94	13	0	.....	0	0.05	0.0	29.97	29.57	29.787	1.0	1.0	214	14	SSW	7	221	48	
12	61.4	44.9	53.2	50.5	48	90	12	0	.....	0	0.17	0.0	29.73	29.44	29.607	2.4	2.0	290	30	W	12	303	68	
13	62.2	45.1	53.6	53.4	49	86	11	0	.....	0	0.04	0.0	29.79	29.70	29.749	2.8	2.6	308	26	NW	13	303	149	
14	73.7	45.4	59.5	59.1	51	75	5	0	.....	0	0.00	0.0	29.89	29.79	29.846	1.1	1.1	302	18	NW	7	285	304	
15	78.1	48.8	63.4	64.0	54	72	1	0	.....	0	0.00	0.0	29.89	29.78	29.835	0.8	0.7	291	13	W	8	285	303	
16	78.8	48.4	63.6	63.9	51	68	1	0	.....	0	0.00	0.0	29.81	29.74	29.778	0.3	0.2	18	14	W	6	45	324	
17	79.7	44.5	62.1	63.6	50	66	2	0	..3.....	0	0.00	0.0	30.03	29.81	29.917	0.4	0.4	315	16	WNW	6	297	320	
18	84.0	47.7	65.9	66.5	52	64	0	1	.....	0	0.00	0.0	30.18	30.02	30.123	0.1	0.1	274	10	WNW	6	302	314	
19	87.6*	57.4	72.5	72.3	58	61	0	8	.....	0	0.00	0.0	30.20	30.07	30.134	1.4	1.4	215	18	SW	9	211	276	
20	86.4	61.5	74.0*	75.0	62	65	0	9	..3.....	0	0.00	0.0	30.08	29.60	29.889	3.6	3.6	211	22	SSW	11	214	288	
21	77.6	54.6	66.1	65.5	54	68	0	2	..3.....	0	0.08	0.0	29.73	29.56	29.676	2.0	1.9	277	31	SSW	10	243	249	
22	67.7	48.3	58.0	57.0	52	85	7	0	.....	0	0.55	0.0	29.84	29.69	29.755	0.5	0.4	264	13	SSW	7	281	181	
23	75.1	50.5	62.8	61.8	53	74	2	0	.....	0	0.01	0.0	29.89	29.80	29.831	0.7	0.6	281	12	SW	8	292	299	
24	78.0	45.4	61.7	61.5	51	72	3	0	.....	0	0.00	0.0	30.08	29.89	30.017	0.2	0.2	306	14	W	7	296	311	
25	84.4	48.2	66.3	66.3	55	71	0	1	.....	0	0.00	0.0	30.15	30.07	30.102	0.2	0.2	249	12	SSW	7	215	306	
26	87.4	54.3	70.9	72.4	60	67	0	6	.....	0	0.00	0.0	30.11	29.94	30.040	0.9	0.9	216	16	W	8	220	293	
27	76.0	66.7	71.3	70.7	62	75	0	7	.....	0	0.05	0.0	29.94	29.80	29.854	4.0	4.0	210	23	SSW	11	211	152	
28	81.4	63.2	72.3	69.5	65	85	0	7	..3.....	0	0.18	0.0	29.85	29.76	29.812	2.9	2.8	217	24	S	12	292	207	
29	76.4	58.4	67.4	65.9	62	88	0	2	..3.....	0	0.34	0.0	29.88	29.78	29.813	0.9	0.7	281	21	W	9	308	187	
30	81.1	52.8	66.9	66.4	57	76	0	2	.....	0	0.00	0.0	29.94	29.88	29.909	0.8	0.7	257	12	SSW	8	280	295	
<b>Sum</b>	<b>Sum</b>				---	--	<b>Ttl</b>	<b>Ttl</b>					<b>Total</b>	<b>Total</b>		<b>For the month:</b>						---		
2238	1550						104	56		<b>Number of Days</b>			3.96	0.0	30.20	29.36	29.835	1.4	1.0	253	31	SSW	14	300
<b>Avg</b>	<b>Avg</b>	<b>Avg</b>	<b>Mean</b>	<b>Avg</b>	<b>Avg</b>	<b>Avg</b>	--	--		<b>Precip</b>			<b>Season Ttl</b>	<b>Date</b>	<b>Date</b>		--	--	---	<b>Date</b>	<b>Date</b>	<b>Avg</b>		
74.6	51.7	63.1	62.7	54	76.2	--	--	--	<b>≥.01 inch</b>	16			17.55	38.7	19	7		--	--	---	21	9	223	
<b>Number of Days</b>							<b>Season to Date</b>	<b>Snow, Ice ≥1.0 inch</b>	0	<b>Greatest in 24 Hours and Dates</b>						<b>Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date</b>								
<b>Max Temperature</b>			<b>Min Temperature</b>			7108	100	<b>Thunder</b>	6	<b>Precipitation</b>			<b>Snow, Ice Plts</b>											
<b>≥ 90°F</b>	<b>≤ 32°F</b>	<b>≤ 32°F</b>	<b>≤ 0°F</b>	--	--	--	--	<b>Heavy Fog</b>	0	2.00	5- 6	0.0	-	0						-				
0	0	0	0	--	--	--	--	<b>Clear</b>	11	<b>Partly Cloudy</b>			12	<b>Cloudy</b>			7							

**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: Solar Radiation is measured in Watts/m^2 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

## June 2016: 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						Direction	Speed	Gust	Direction	Speed	Gust																																																																																																																																																																																																						
JUN 19												JUN 20												JUN 21																																																																																																																																																																																																							
01	0	30.16	0.00	59	51	73	21	0	0	0	30.05	0.00	63	57	81	19	1	6	0	29.62	0.00	64	61	92	22	1	8	04	0	30.16	0.00	60	48	66	20	1	6	0	30.05	0.00	64	57	78	20	3	8	0	29.63	0.00	64	60	89	23	0	10	07	49	30.18	0.00	64	53	69	21	2	10	58	30.04	0.00	67	60	81	20	5	11	35	29.68	0.00	59	56	88	29	0	0	10	605	30.18	0.00	76	59	57	21	6	11	671	30.00	0.00	77	64	66	21	8	18	584	29.68	0.00	67	53	61	29	1	9	13	624	30.15	0.00	81	64	58	21	0	9	858	29.91	0.00	83	65	54	22	4	18	292	29.69	0.00	72	55	56	29	1	7	16	675	30.11	0.00	87	67	53	23	0	1	160	29.80	0.00	85	64	49	22	6	15	918	29.69	0.00	72	51	48	24	4	13	19	79	30.08	0.00	83	62	50	19	1	7	121	29.70	0.00	82	61	50	22	4	18	77	29.68	0.00	69	49	49	27	2	9	22	0	30.09	0.00	68	60	76	19	0	0	0	29.65	0.00	77	61	58	19	1	12	0	29.73	0.00	59	49	70	22	0	0
JUN 22												JUN 23												JUN 24																																																																																																																																																																																																							
01	0	29.72	0.00	52	47	84	23	0	0	0	29.83	0.00	51	49	93	22	0	0	0	29.90	0.00	49	47	92	04	0	0	04	0	29.69	0.00	48	46	90	22	0	0	0	29.83	0.00	53	51	93	21	0	0	0	29.93	0.00	47	45	96	04	0	0	07	114	29.71	0.00	54	52	94	21	0	4	35	29.84	0.00	53	51	94	19	0	0	42	30.00	0.00	50	49	97	04	0	0	10	18	29.75	1.29	55	53	94	31	1	8	705	29.84	0.00	67	53	61	21	3	10	687	30.04	0.00	69	55	61	27	0	1	13	728	29.76	0.00	62	57	82	19	1	91	123	29.81	0.00	71	54	55	33	0	8	889	30.05	0.00	73	53	49	30	0	8	16	220	29.76	0.00	63	55	75	23	0	0	686	29.80	0.00	74	54	49	34	0	10	671	30.05	0.00	76	53	44	31	0	4	19	98	29.79	0.00	63	56	78	29	0	2	111	29.82	0.00	70	54	58	16	0	0	81	30.04	0.00	73	55	55	29	0	0	22	0	29.84	0.00	55	52	92	29	0	0	0	29.87	0.00	54	50	86	04	0	0	0	30.08	0.00	54	49	83	29	0	0
JUN 25												JUN 26												JUN 27																																																																																																																																																																																																							
01	0	30.08	0.00	51	48	91	29	0	0	0	30.08	0.00	56	53	88	26	0	0	0	29.93	0.00	69	59	69	20	4	9	04	0	30.08	0.00	49	47	94	29	0	0	0	30.10	0.00	54	52	92	26	0	0	0	29.89	0.00	69	60	73	19	0	11	07	49	30.13	0.00	53	52	97	29	0	0	54	30.11	0.00	65	57	76	19	0	7	149	29.88	0.00	71	61	72	20	5	13	10	670	30.14	0.00	73	57	57	20	1	7	668	30.10	0.00	77	63	61	21	4	13	123	29.85	0.00	72	62	70	21	7	19	13	872	30.12	0.00	79	60	51	12	0	0	835	30.05	0.00	84	67	57	21	0	8	100	29.84	0.00	71	63	75	21	9	19	16	668	30.10	0.00	83	58	43	26	0	2	608	30.00	0.00	87	66	50	21	0	13	236	29.82	0.00	74	65	73	22	4	19	19	62	30.08	0.00	80	62	53	26	0	0	70	29.96	0.00	81	63	54	21	2	10	83	29.81	0.00	73	63	70	21	7	20	22	0	30.09	0.00	60	56	87	26	0	0	0	29.94	0.00	70	59	68	21	0	3	0	29.83	0.00	68	63	84	20	5	11
JUN 28												JUN 29												JUN 30																																																																																																																																																																																																							
01	0	29.82	0.00	67	63	90	21	5	10	0	29.79	0.00	64	63	97	12	1	4	0	29.89	0.00	58	57	96	31	0	0	04	0	29.81	0.00	66	63	91	22	4	10	0	29.79	0.00	63	62	97	21	0	5	0	29.90	0.00	56	55	97	24	0	1	07	123	29.84	0.00	68	64	89	20	5	11	37	29.81	0.00	63	62	97	24	0	4	54	29.91	0.00	58	57	98	20	1	6	10	338	29.84	0.00	72	66	82	21	4	13	622	29.81	0.00	71	66	83	27	0	8	684	29.93	0.00	72	61	68	25	3	10	13	898	29.81	0.00	77	68	74	21	6	18	174	29.79	0.00	73	64	74	28	3	8	953	29.92	0.00	75	61	63	30	2	9	16	172	29.78	0.00	74	65	72	29	12	24	784	29.82	0.00	72	64	75	01	0	6	772	29.90	0.00	80	61	52	29	1	5	19	18	29.80	0.00	66	63	89	35	0	4	54	29.82	0.00	70	60	71	29	6	10	49	29.91	0.00	76	57	53	28	0	0	22	0	29.79	0.00	64	63	96	03	0	0	0	29.87	0.00	59	58	94	31	0	3	0	29.92	0.00	58	54	86	28	0	0

### 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	0	29.828	56	52	88	0.7	21	0.6
04	0	29.830	55	52	90	1.1	27	0.8
07	61	29.855	56	53	90	1.6	25	1.1
10	500	29.861	66	56	72	2.6	24	2.0
13	615	29.842	70	57	65	1.9	25	1.2
16	465	29.817	72	56	61	1.7	27	1.4
19	81	29.814	69	55	64	1.5	27	0.9
22	0	29.833	58	53	83	0.6	24	0.4

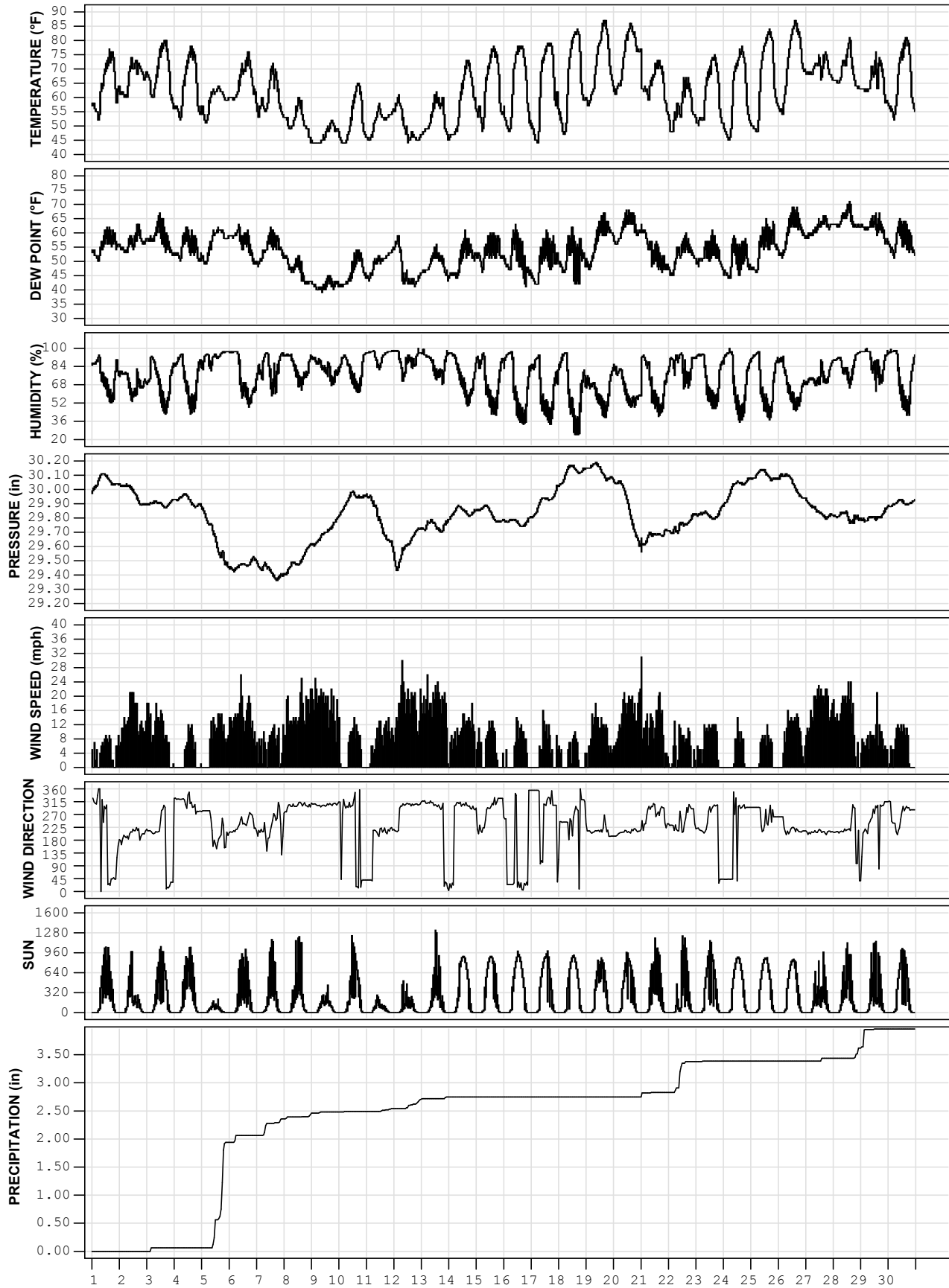
## HOURLY PRECIPITATION (Water Equivalent) June 2016: Westford

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				0.06																					03
04																									04
05									0.06	0.12	0.32				0.02	0.04	0.13	0.47	0.58	0.12	0.02				05
06					0.03	0.09																			06
07					0.01	0.05	0.12	0.04								0.01				0.01	0.05	0.01			07
08		0.01	0.02												0.01										08
09							0.01	0.01													0.01	0.02	0.03		09
10				0.01																					10
11													0.01	0.01						0.01		0.01			11
12										0.02			0.04		0.01					0.02	0.02	0.02	0.02	0.01	12
13	0.01																			0.02	0.02	0.01			13
14																									14
15																									15
16																									16
17																									17
18																									18
19																									19
20																									20
21	0.07							0.01																	21
22					0.04	0.04			0.29	0.09	0.06				0.03										22
23					0.01																				23
24																									24
25																									25
26																									26
27														0.05											27
28																			0.01	0.06	0.01	0.10			28
29	0.02		0.30	0.01																					29
30											0.01														30
<b>Sum</b>	0.10	0.01	0.32	0.07	0.04	0.15	0.10	0.13	0.05	0.35	0.23	0.39	0.05	0.06	0.06	0.06	0.15	0.47	0.59	0.22	0.12	0.16	0.04	0.04	<b>Sum</b>

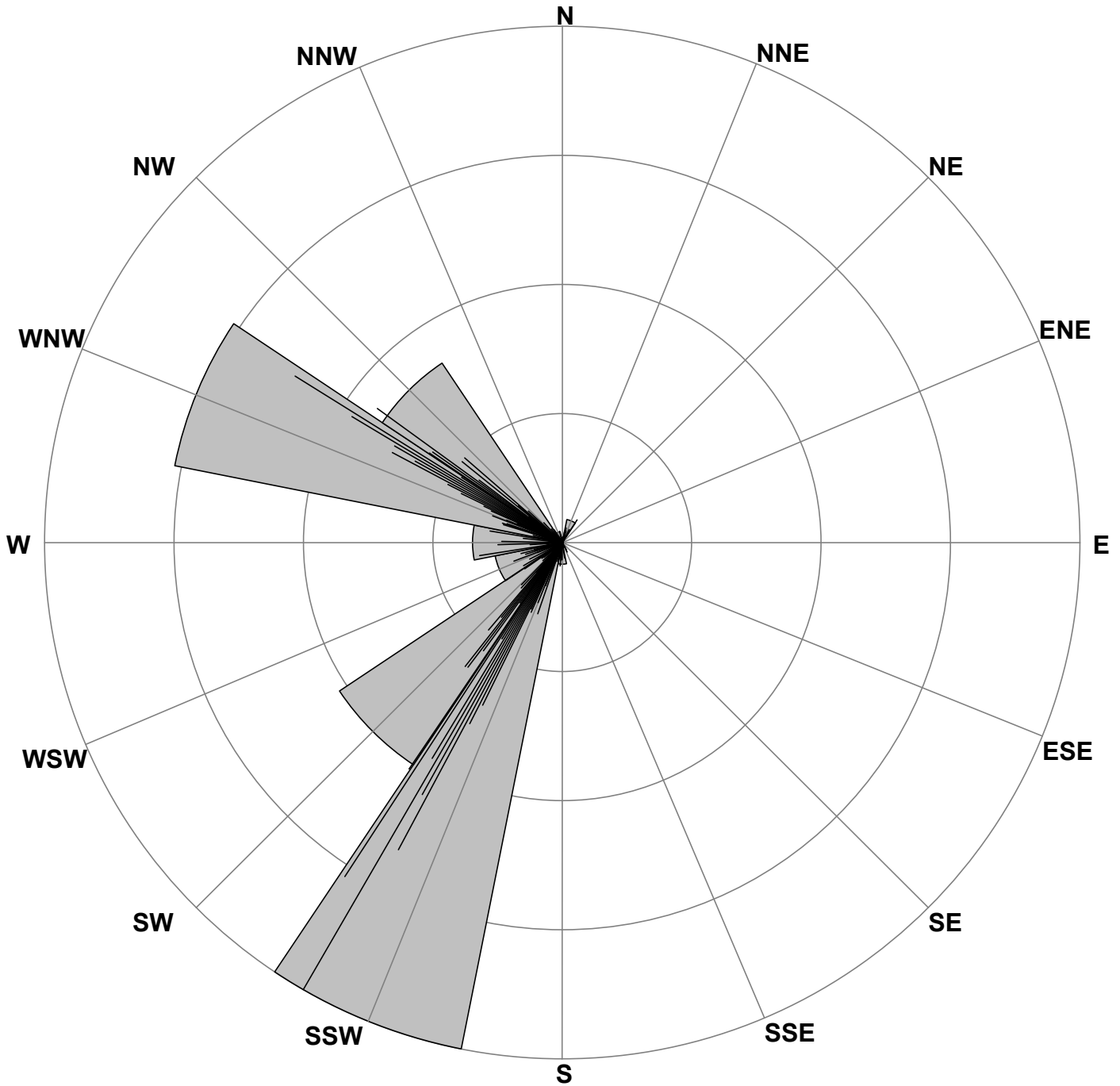
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA

## June 2016: Westford



**Wind Rose: June 2016  
Westford**



**Maximum direction of wind: 59.4 miles from 210°  
Maximum sector of wind: 314.1 miles from SSW  
984.1 total miles of wind**