YARMOUTH CN	
Latitude = 43.83 N	WMO No. 716030
Longitude = 66.08 W	Elevation = 141 feet
Period of Record = 1973 to 1996	Average Pressure = 29.79 inches Hg

Design Criteria Data

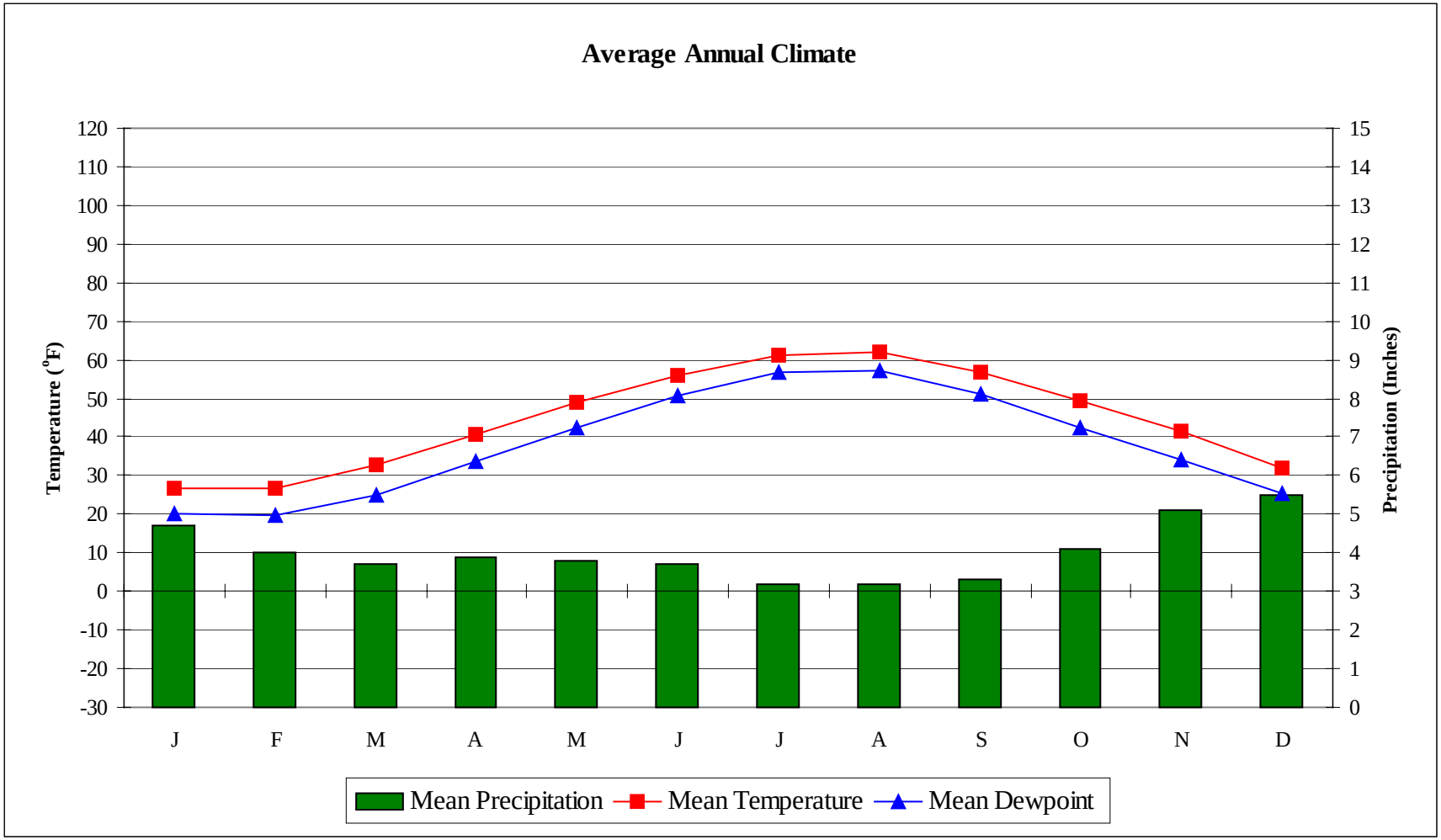
		Mean Coincident (Average) Values			
Dry Bulb Temperature (T)	**Design Value (^oF)**	Wet Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	79	70	93	10.4	S
0.4% Occurrence	73	65	82	9.8	S
1.0% Occurrence	72	65	82	9.9	S
2.0% Occurrence	70	64	80	10.1	W
Mean Daily Range	13	-	-	-	-
97.5% Occurrence	14	12	8	13.0	NW
99.0% Occurrence	10	9	7	13.1	NW
99.6% Occurrence	7	6	6	12.1	NW
Median of Extreme Lows	1	0	4	15.3	NNW
		Mean Coincident (Average) Values			
Wet Bulb Temperature (T_{wb})	**Design Value (^oF)**	Dry Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	72	75	111	9.8	S
0.4% Occurrence	68	71	96	9.6	S
1.0% Occurrence	66	69	89	9.8	S
2.0% Occurrence	65	68	86	10.0	S
		Mean Coincident (Average) Values			
Humidity Ratio (HR)	**Design Value (gr/lb)**	Dry Bulb Temperature (^oF)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	111	74	0.74	9.0	S
0.4% Occurrence	97	70	0.65	9.8	S
1.0% Occurrence	91	68	0.61	9.4	S
2.0% Occurrence	86	66	0.57	10.2	S
Air Conditioning/		$T \geq 93^oF$	$T \geq 80^oF$	$T_{wb} \geq 73^oF$	$T_{wb} \geq 67^oF$
Humid Area Criteria	# of Hours	0	1	2	79

Other Site Data

Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75^oF-RH 60% Latent + Sensible
5	N/A	N/A	0.2 + 0.0
Ground Water Temperature (^oF) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft^2)	Average Annual Freeze-Thaw Cycles (#)
47.1	N/A	N/A	55

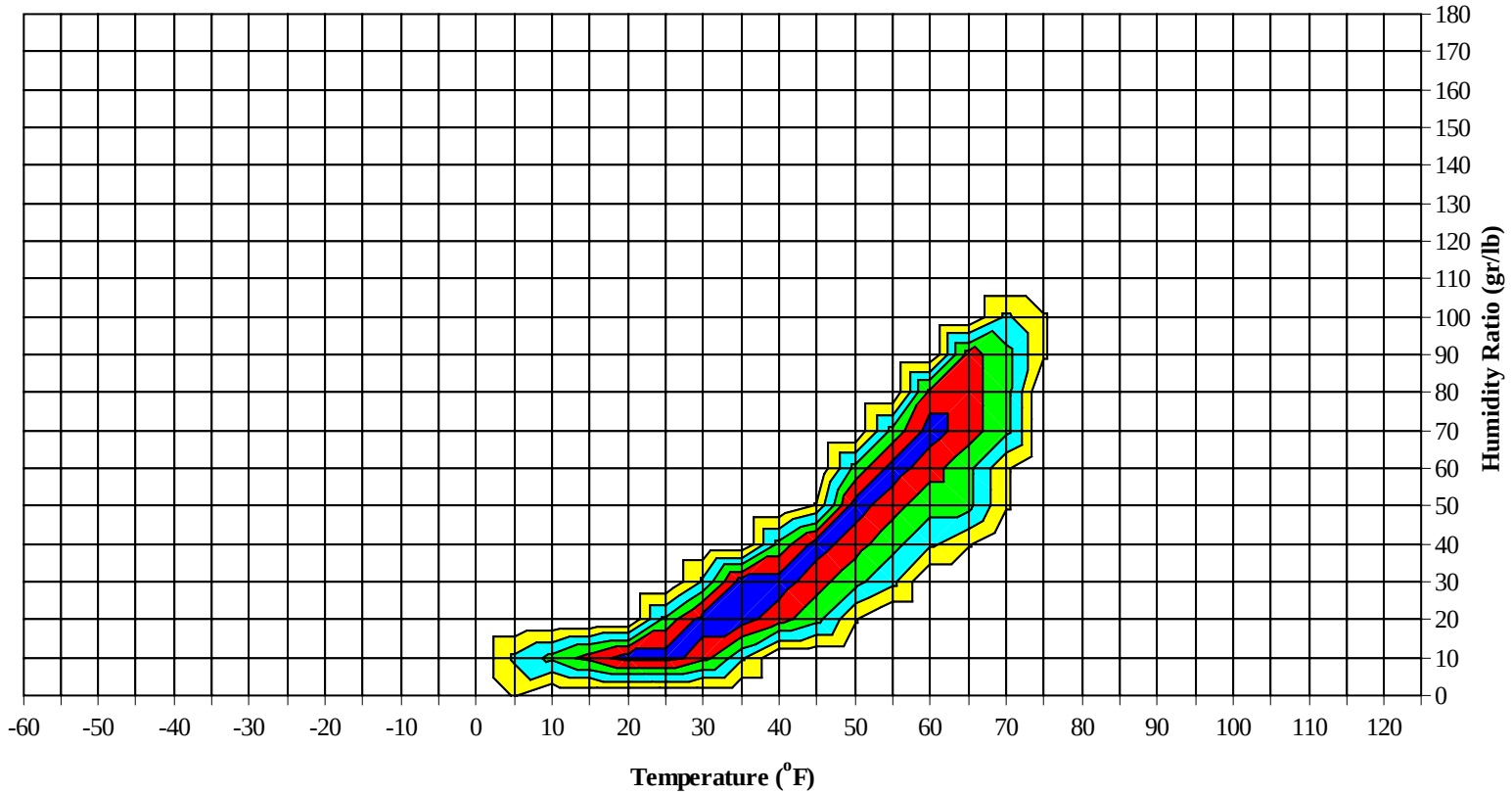
*Note: Temperatures at greater depths can be estimated by adding 1.5^oF per 100 feet additional depth.

YARMOUTH CN WMO No. 716030



YARMOUTH CN WMO No. 716030

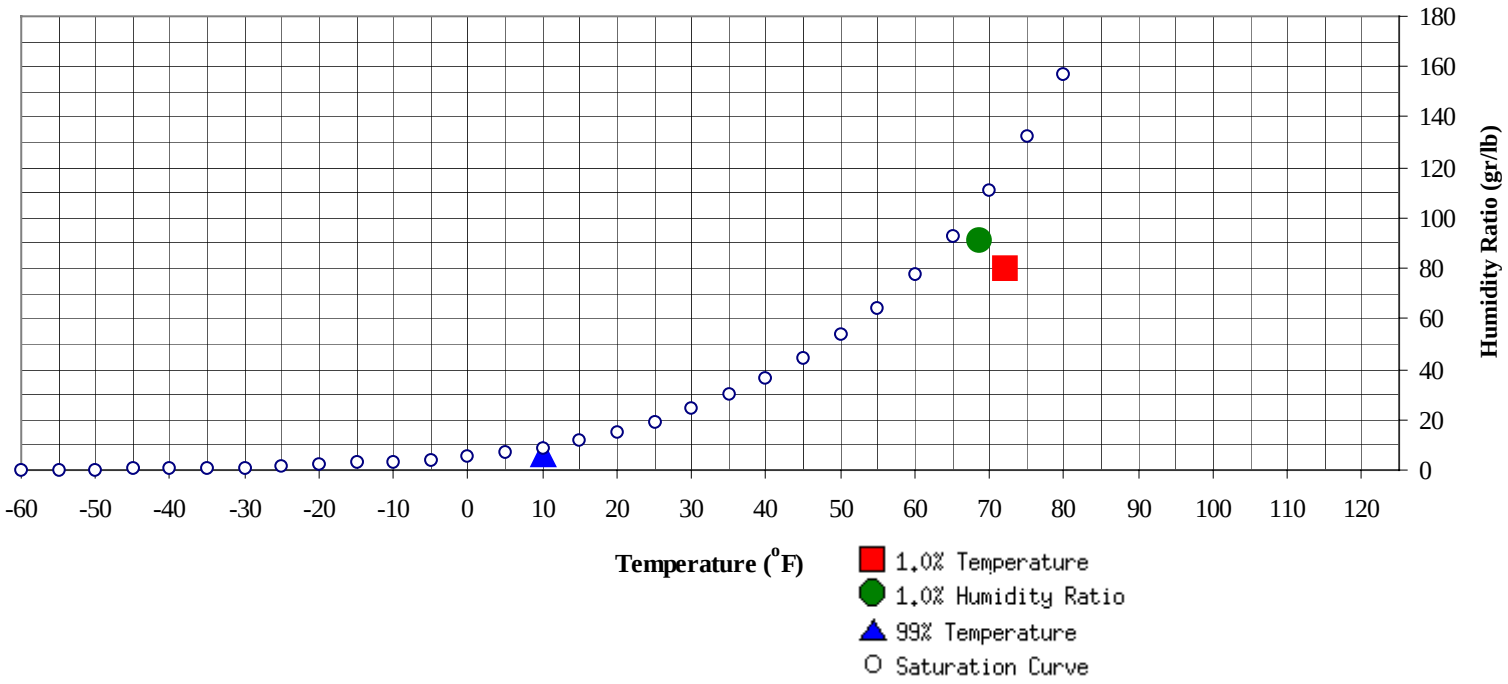
Long Term Psychrometric Summary



- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

YARMOUTH CN WMO No. 716030

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)
99% Dry Bulb	10	6.7	3.4

	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
1.0% Humidity Ratio	91	68.5	65.8	64.4	30.6

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	72	80.3	64.8	29.8

YARMOUTH CN WMO No. 716030

Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	January Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	February Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	March Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64												0		0	57.3
55 / 59	0	0	0	0	52.8						0	2	0	2	50.8
50 / 54	2	4	2	8	50.2	0	1	0	1	48.8	1	10	3	14	47.6
45 / 49	8	7	7	22	45.7	4	8	4	16	44.6	9	25	14	48	43.9
40 / 44	11	16	13	40	40.3	9	13	10	32	40.4	18	36	20	74	39.5
35 / 39	34	43	41	118	35.4	27	34	33	94	35.2	45	63	66	174	34.6
30 / 34	41	43	44	128	29.7	40	45	50	135	29.7	71	53	75	199	29.5
25 / 29	39	39	46	124	24.5	39	48	48	135	24.3	51	30	40	121	24.3
20 / 24	28	29	26	83	19.9	30	27	29	86	19.9	22	14	17	53	19.5
15 / 19	38	36	38	112	15.9	38	25	27	90	15.7	20	12	11	43	15.6
10 / 14	28	20	24	72	11.1	24	14	18	56	10.8	9	3	2	14	11.1
5 / 9	15	7	6	28	6.5	10	7	4	21	6.3	2	0	0	2	6.2
0 / 4	3	2	2	7	1.4	3	1	1	5	1.6	0	0		0	1.0
-5 / -1	1	0	0	1	-3.0	0	0	0	0	-4.0					
-10 / -6	0			0	-6.5	0	0	0	0	-8.4					

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

YARMOUTH CN WMO No. 716030

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	April Hour Group (LST) 01 To 08	April 09 To 16	April 17 To 00	April Total Obs	April MCWB (°F)	May Hour Group (LST) 01 To 08	May 09 To 16	May 17 To 00	May Total Obs	May MCWB (°F)	June Hour Group (LST) 01 To 08	June 09 To 16	June 17 To 00	June Total Obs	June MCWB (°F)
85 / 89															
80 / 84															
75 / 79												1	0	1	66.1
70 / 74		0		0	62.0		2	0	2	60.6	0	13	2	15	62.4
65 / 69		0	0	0	57.6	0	6	1	7	59.6	1	29	5	35	60.6
60 / 64	0	3	1	4	54.8	1	25	6	32	55.9	16	82	36	135	58.0
55 / 59	1	14	4	19	50.9	12	62	25	99	52.0	71	80	84	236	54.2
50 / 54	9	34	16	59	47.6	51	86	68	205	48.6	98	31	87	217	50.3
45 / 49	31	72	42	144	43.2	84	51	91	226	44.2	48	3	23	74	45.5
40 / 44	40	55	54	149	39.1	64	13	44	121	40.1	5	0	2	7	41.0
35 / 39	85	43	86	215	34.9	32	3	13	48	35.9	0		0	0	37.8
30 / 34	60	15	32	107	30.2	4	0	1	5	31.3					
25 / 29	13	3	5	21	24.7	0			0	28.5					
20 / 24	2	0	0	2	19.8										
15 / 19	0	0	0	0	15.1										
10 / 14		0		0	12.0										
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

YARMOUTH CN WMO No. 716030

Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	July Hour Group (LST) 01 To 08	July 09 To 16	July 17 To 00	July Total Obs	July MCWB (°F)	August Hour Group (LST) 01 To 08	August 09 To 16	August 17 To 00	August Total Obs	August MCWB (°F)	September Hour Group (LST) 01 To 08	September 09 To 16	September 17 To 00	September Total Obs	September MCWB (°F)
85 / 89							0		0	68.5					
80 / 84		0		0	72.4		1	0	1	70.1		0		0	66.0
75 / 79		8	1	9	66.8		11	1	12	68.5		1	0	1	66.6
70 / 74	1	45	9	55	64.6	2	57	11	70	65.3	0	12	2	14	64.1
65 / 69	10	72	28	110	62.6	15	79	33	127	63.0	3	31	7	41	62.0
60 / 64	78	93	99	270	59.9	85	84	102	271	60.0	31	95	49	175	58.9
55 / 59	110	27	90	227	55.6	102	16	82	200	55.4	81	78	91	250	54.4
50 / 54	44	2	21	67	51.3	38	1	19	58	50.9	69	19	63	151	49.9
45 / 49	5		1	6	46.8	5		0	5	46.1	41	4	23	68	44.7
40 / 44											11	0	3	14	40.3
35 / 39											5		1	6	36.6
30 / 34											0			0	31.2
25 / 29											0			0	27.0
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

YARMOUTH CN WMO No. 716030

Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	October					November					December				
	Hour Group (LST)				MCWB	Hour Group (LST)				MCWB	Hour Group (LST)				MCWB
	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)
85 / 89															
80 / 84															
75 / 79															
70 / 74		1		1	65.1										
65 / 69	0	4	1	5	62.7										
60 / 64	10	26	12	48	59.5	1	3	1	5	58.5			0	0	58.0
55 / 59	31	66	35	132	54.4	8	15	9	32	54.6	1	1	1	3	55.0
50 / 54	53	71	69	193	49.0	30	43	29	102	49.8	7	9	8	24	50.6
45 / 49	60	55	70	184	43.2	40	52	53	145	43.6	20	25	19	64	45.0
40 / 44	42	18	33	93	38.8	35	41	43	119	38.6	21	30	23	74	39.6
35 / 39	36	6	23	65	34.8	54	49	51	154	33.9	44	49	51	144	34.7
30 / 34	15	1	6	22	30.4	44	24	35	103	29.3	51	51	53	155	29.6
25 / 29	2		0	2	26.4	22	9	17	48	24.7	39	36	40	115	24.4
20 / 24						4	2	3	9	20.3	24	18	21	63	20.0
15 / 19						2	0	1	3	16.5	21	16	19	56	16.1
10 / 14											14	9	10	33	11.3
5 / 9											6	3	2	11	6.8
0 / 4											1	0	1	2	0.8
-5 / -1															
-10 / -6															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

YARMOUTH CN WMO No. 716030

Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

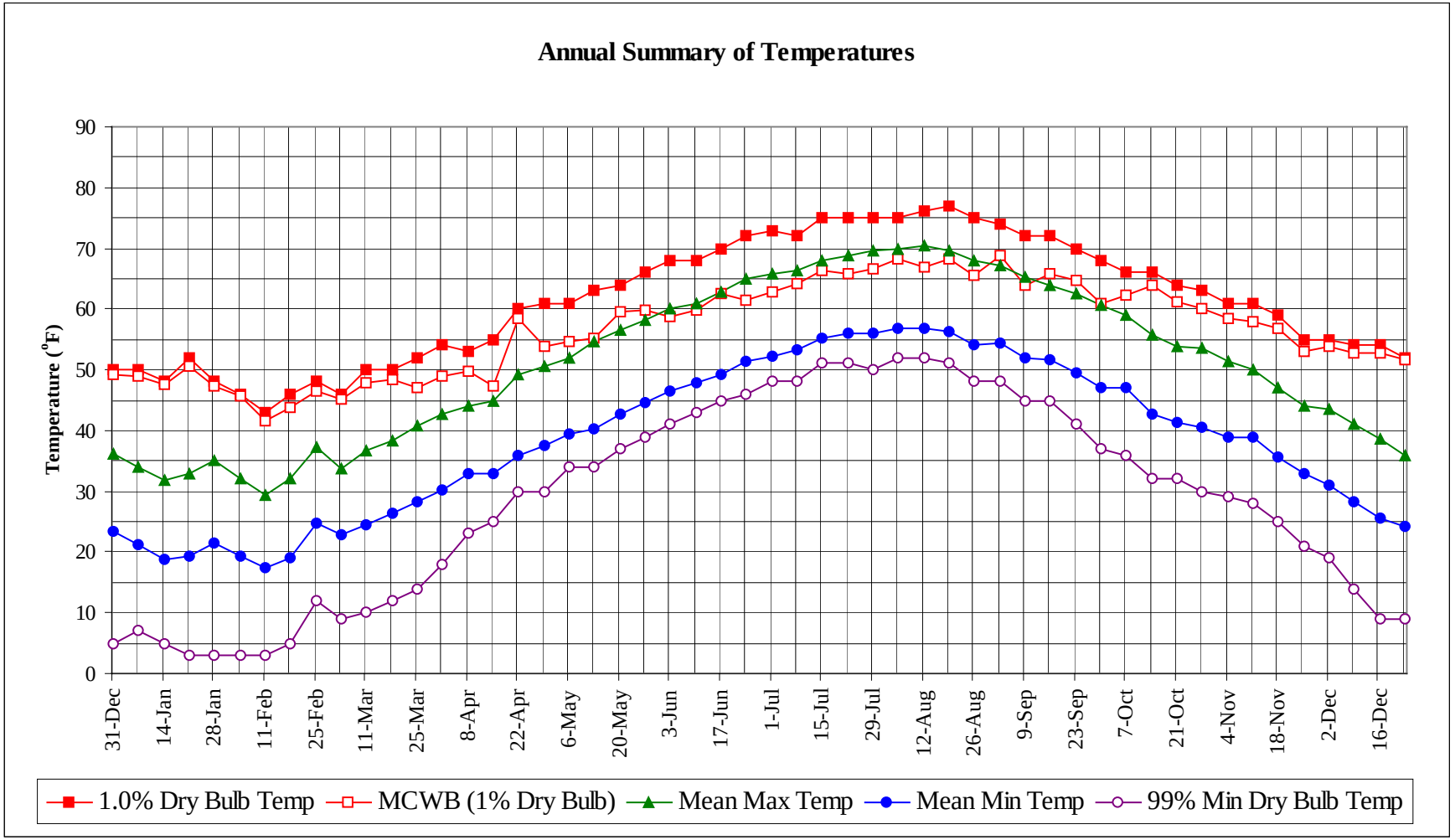
Period of Record = 1973 to 1996

Annual Totals

Temperature Range (°F)	Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
85 / 89		0		0	68.5
80 / 84		1	0	1	69.9
75 / 79		22	2	24	67.6
70 / 74	3	129	23	155	64.6
65 / 69	29	222	74	325	62.4
60 / 64	220	412	305	937	59.3
55 / 59	415	361	421	1196	54.5
50 / 54	402	310	386	1098	49.6
45 / 49	353	304	348	1005	44.0
40 / 44	256	222	245	723	39.4
35 / 39	363	291	363	1017	34.8
30 / 34	327	233	296	856	29.7
25 / 29	205	168	196	569	24.4
20 / 24	111	89	96	296	19.9
15 / 19	121	89	96	306	15.8
10 / 14	76	46	54	176	11.0
5 / 9	33	17	13	63	6.5
0 / 4	7	3	3	13	1.4
-5 / -1	1	0	0	1	-3.1
-10 / -6	0	0	0	0	-8.0

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

YARMOUTH CN WMO No. 716030



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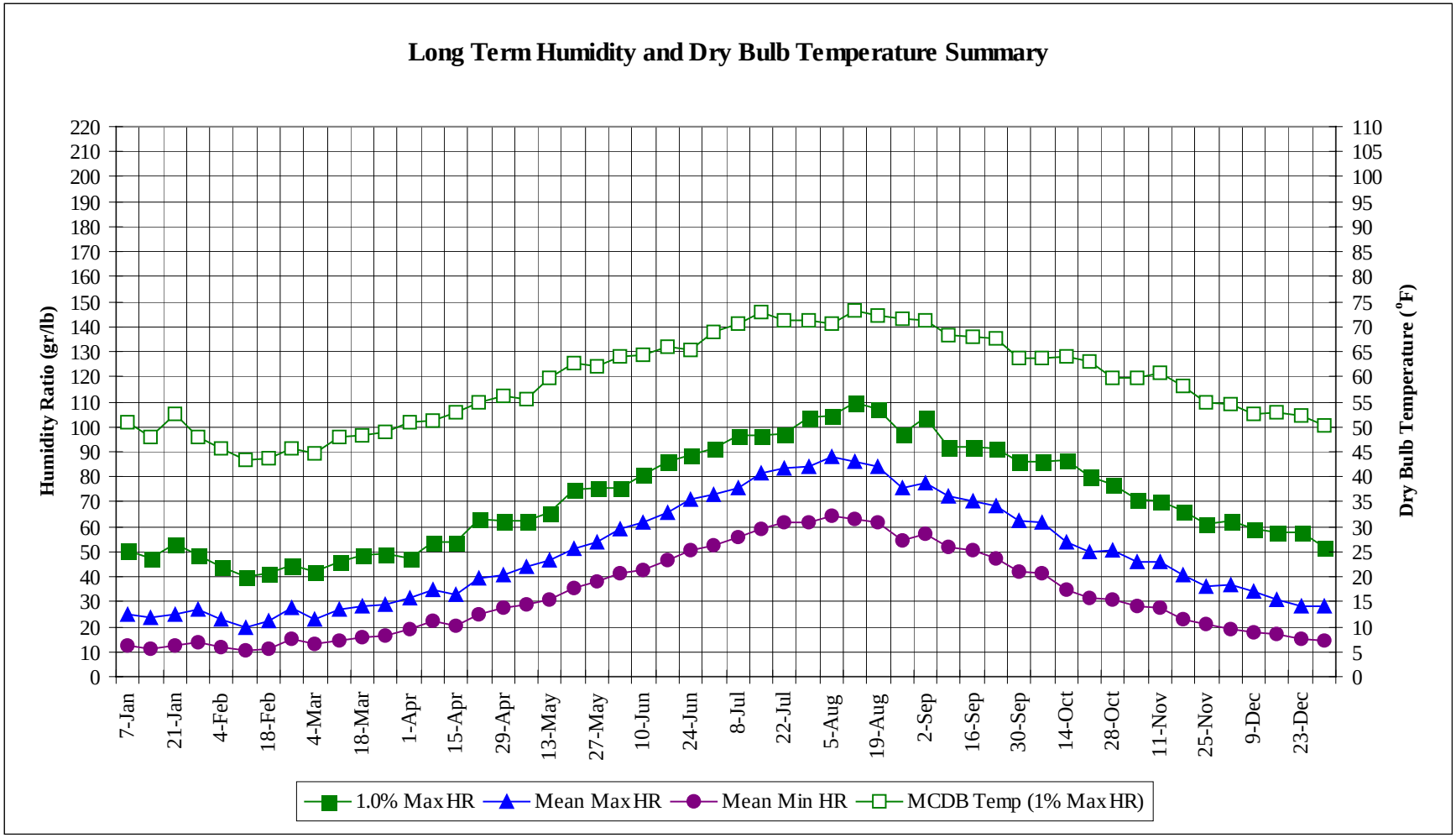
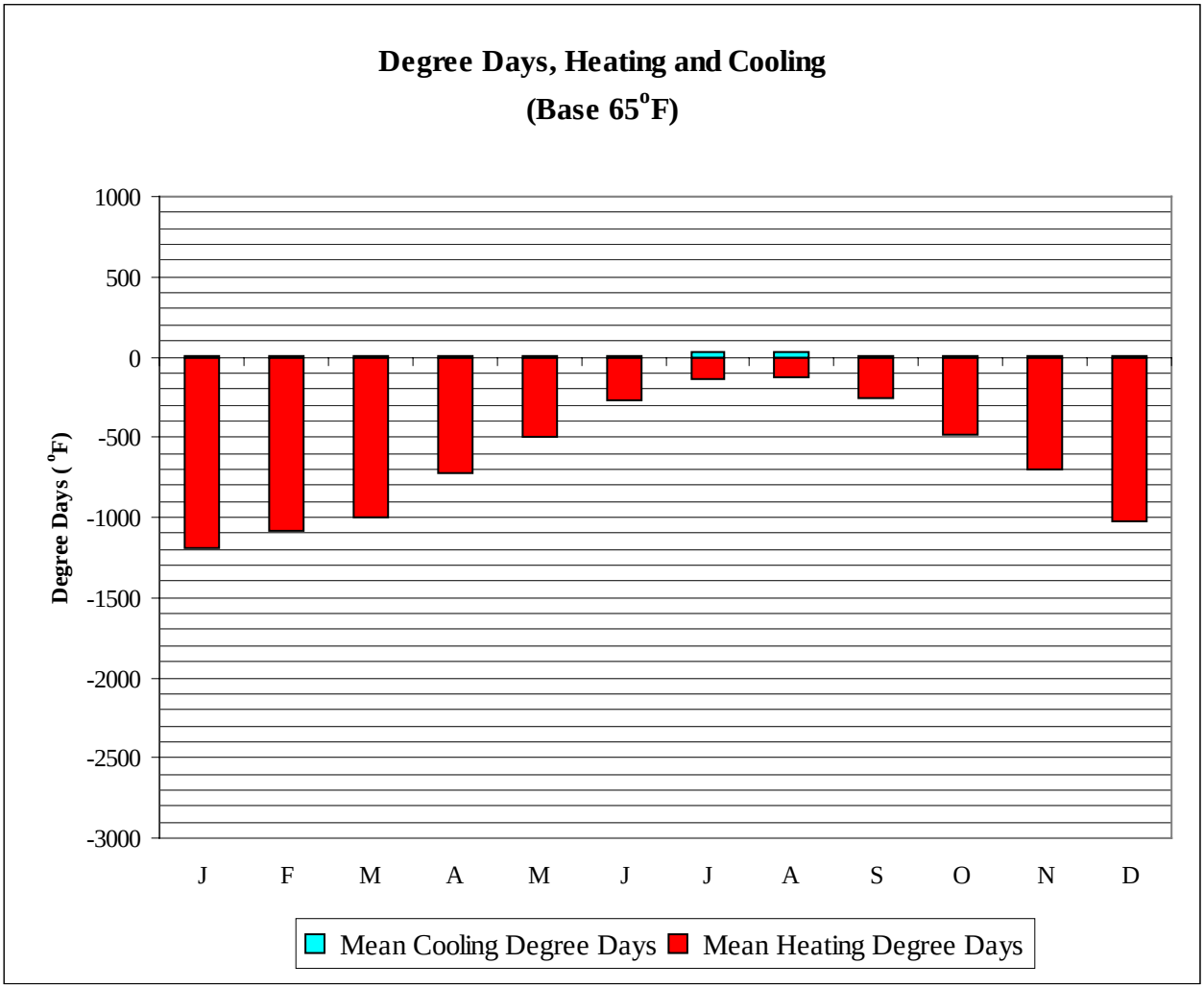


YARMOUTH CN WMO No. 716030

Long Term Dry Bulb Temperature and Humidity Summary

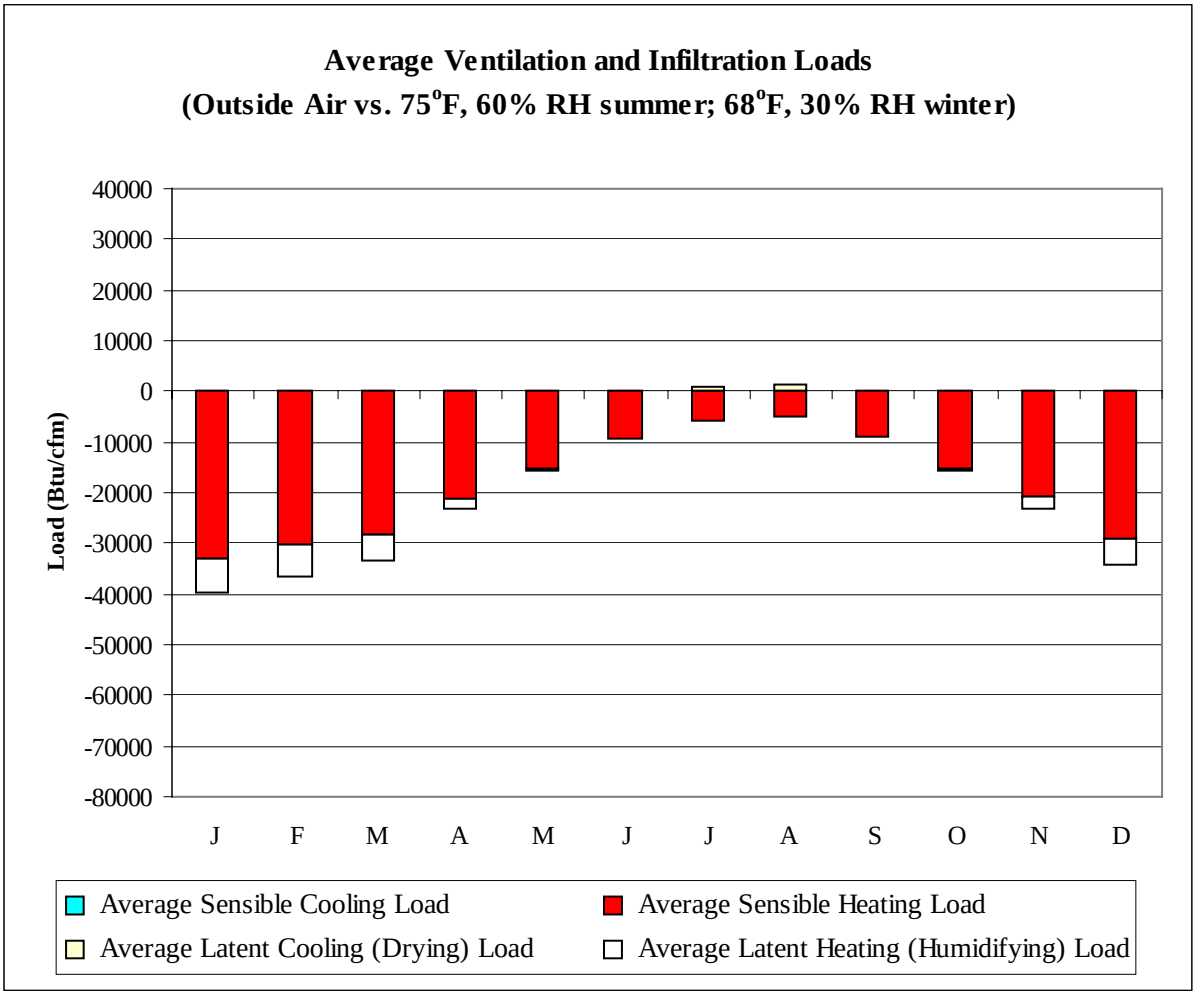
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	50.0	49.0	33.9	21.3	7.0	50.4	51.0	25.2	12.7
14-Jan	48.0	47.5	31.9	18.7	5.0	47.6	48.0	24.0	11.4
21-Jan	52.0	50.7	33.0	19.4	3.0	53.2	52.6	25.1	12.8
28-Jan	48.0	47.4	35.0	21.5	3.0	48.3	47.9	26.7	13.5
4-Feb	46.0	45.7	32.1	19.4	3.0	44.1	45.7	22.9	11.8
11-Feb	43.0	41.7	29.4	17.3	3.0	39.9	43.3	20.0	10.5
18-Feb	46.0	43.9	32.0	19.0	5.0	41.3	43.7	22.6	10.9
25-Feb	48.0	46.5	37.2	24.8	12.0	44.8	45.5	27.9	15.3
4-Mar	46.0	45.0	33.8	22.8	9.0	42.0	44.5	23.0	12.9
11-Mar	50.0	47.9	36.6	24.3	10.0	46.2	47.9	26.7	14.3
18-Mar	50.0	48.3	38.3	26.4	12.0	48.3	48.3	28.5	15.9
25-Mar	52.0	47.1	40.7	28.2	14.0	49.0	49.0	29.2	16.6
1-Apr	54.0	48.9	42.8	30.1	18.0	47.6	50.8	31.6	19.2
8-Apr	53.0	49.8	44.0	32.9	23.0	53.9	51.3	34.8	22.5
15-Apr	55.0	47.2	44.8	32.8	25.0	53.9	52.9	33.1	20.6
22-Apr	60.0	58.5	49.1	36.0	30.0	63.0	54.8	39.3	25.3
29-Apr	61.0	53.8	50.5	37.5	30.0	62.3	56.3	40.6	27.7
6-May	61.0	54.8	52.0	39.4	34.0	62.3	55.4	43.9	29.1
13-May	63.0	55.3	54.8	40.4	34.0	65.8	59.8	46.3	31.2
20-May	64.0	59.4	56.6	42.8	37.0	74.9	62.6	51.2	35.4
27-May	66.0	59.7	58.2	44.5	39.0	75.6	62.1	53.9	37.9
3-Jun	68.0	58.9	60.2	46.6	41.0	75.6	64.0	59.1	41.4
10-Jun	68.0	59.8	60.9	47.7	43.0	80.5	64.3	61.5	42.8
17-Jun	70.0	62.4	62.7	49.1	45.0	86.1	66.0	65.9	46.3
24-Jun	72.0	61.4	64.9	51.3	46.0	88.9	65.5	70.9	50.4
1-Jul	73.0	62.8	65.7	52.2	48.0	91.0	69.1	72.9	52.2
8-Jul	72.0	64.1	66.4	53.3	48.0	96.6	70.7	75.7	55.5
15-Jul	75.0	66.3	68.1	55.1	51.0	96.6	72.8	81.2	59.3
22-Jul	75.0	65.8	68.8	56.1	51.0	97.3	71.2	83.7	61.9
29-Jul	75.0	66.6	69.5	56.0	50.0	103.6	71.2	83.8	61.6
5-Aug	75.0	68.3	70.0	56.8	52.0	104.3	70.6	88.0	64.4
12-Aug	76.0	67.0	70.4	56.9	52.0	109.9	73.1	86.2	63.3
19-Aug	77.0	68.4	69.6	56.2	51.0	107.1	72.3	84.1	61.7
26-Aug	75.0	65.7	68.1	54.1	48.0	97.3	71.5	75.3	54.7
2-Sep	74.0	68.7	67.2	54.4	48.0	103.6	71.3	77.8	57.0
9-Sep	72.0	63.8	65.4	51.9	45.0	91.7	68.3	72.1	52.2
16-Sep	72.0	65.8	64.0	51.7	45.0	91.7	67.9	70.4	50.5
23-Sep	70.0	64.7	62.5	49.5	41.0	91.0	67.5	68.5	47.0
30-Sep	68.0	60.9	60.5	46.9	37.0	86.1	63.8	62.2	41.7
7-Oct	66.0	62.2	59.0	47.0	36.0	86.1	63.8	61.7	41.3
14-Oct	66.0	63.9	55.9	42.8	32.0	86.8	63.9	54.1	34.8
21-Oct	64.0	61.2	53.8	41.4	32.0	79.8	63.0	49.9	31.5
28-Oct	63.0	60.0	53.5	40.6	30.0	77.0	59.7	50.3	30.9
4-Nov	61.0	58.4	51.4	39.0	29.0	70.7	59.9	46.2	28.2
11-Nov	61.0	58.0	49.9	38.9	28.0	70.0	60.8	45.7	27.7
18-Nov	59.0	56.7	47.0	35.5	25.0	66.5	58.2	40.4	23.2
25-Nov	55.0	53.0	43.9	32.9	21.0	60.9	54.7	36.0	21.1
2-Dec	55.0	53.8	43.5	30.9	19.0	62.3	54.5	36.7	18.9
9-Dec	54.0	52.8	41.1	28.4	14.0	58.8	52.5	34.2	17.6
16-Dec	54.0	52.7	38.6	25.4	9.0	58.1	52.8	30.7	17.0
23-Dec	52.0	51.6	36.0	24.3	9.0	58.1	52.3	28.3	15.3
31-Dec	50.0	49.2	36.3	23.3	5.0	51.8	50.1	28.3	14.3

YARMOUTH CN WMO No. 716030



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1187
FEB	0	1082
MAR	0	1001
APR	0	727
MAY	1	500
JUN	7	274
JUL	26	140
AUG	33	125
SEP	7	255
OCT	0	490
NOV	0	706
DEC	0	1024
ANN	74	7511

YARMOUTH CN WMO No. 716030

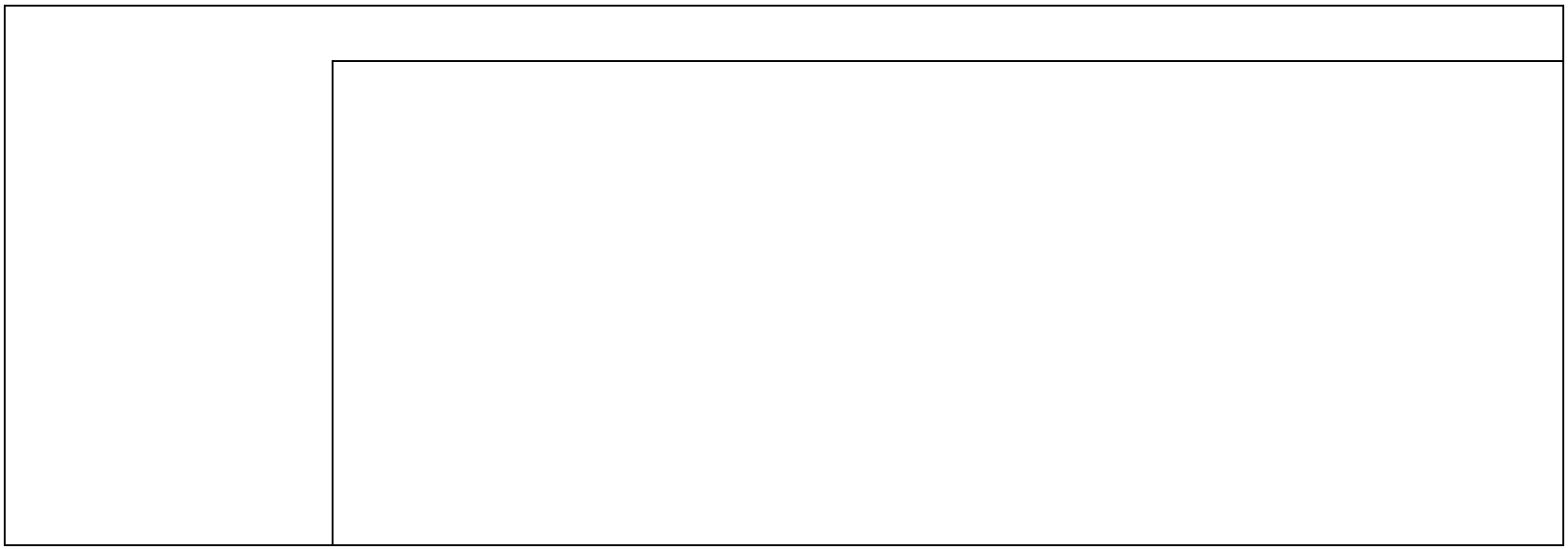


	Average Sensible Cooling Load (Btu/cfm)	Average Sensible Heating Load (Btu/cfm)	Average Latent Cooling Load (Btu/cfm)	Average Latent Heating Load (Btu/cfm)
JAN	0	-33184	0	-6742
FEB	0	-30236	0	-6327
MAR	0	-28364	0	-5165
APR	0	-21162	0	-2110
MAY	0	-15353	5	-353
JUN	1	-9316	110	-10
JUL	10	-5629	772	0
AUG	20	-5138	1174	0
SEP	3	-8814	226	-41
OCT	0	-15073	43	-754
NOV	0	-20623	0	-2555
DEC	0	-28951	0	-5200
ANN	34	-221843	2330	-29257

Average Annual Solar Radiation – Nearest Available Site

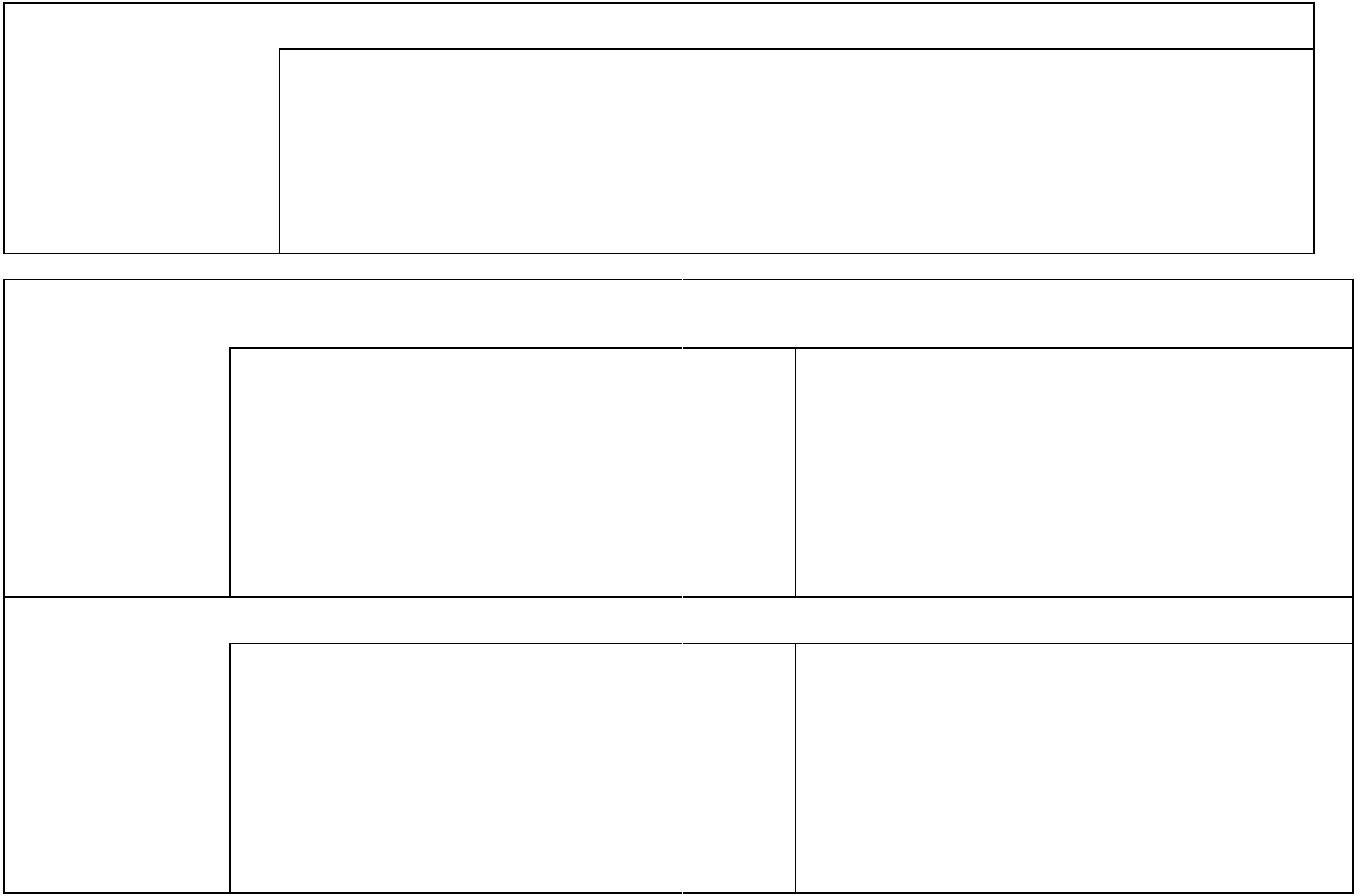
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

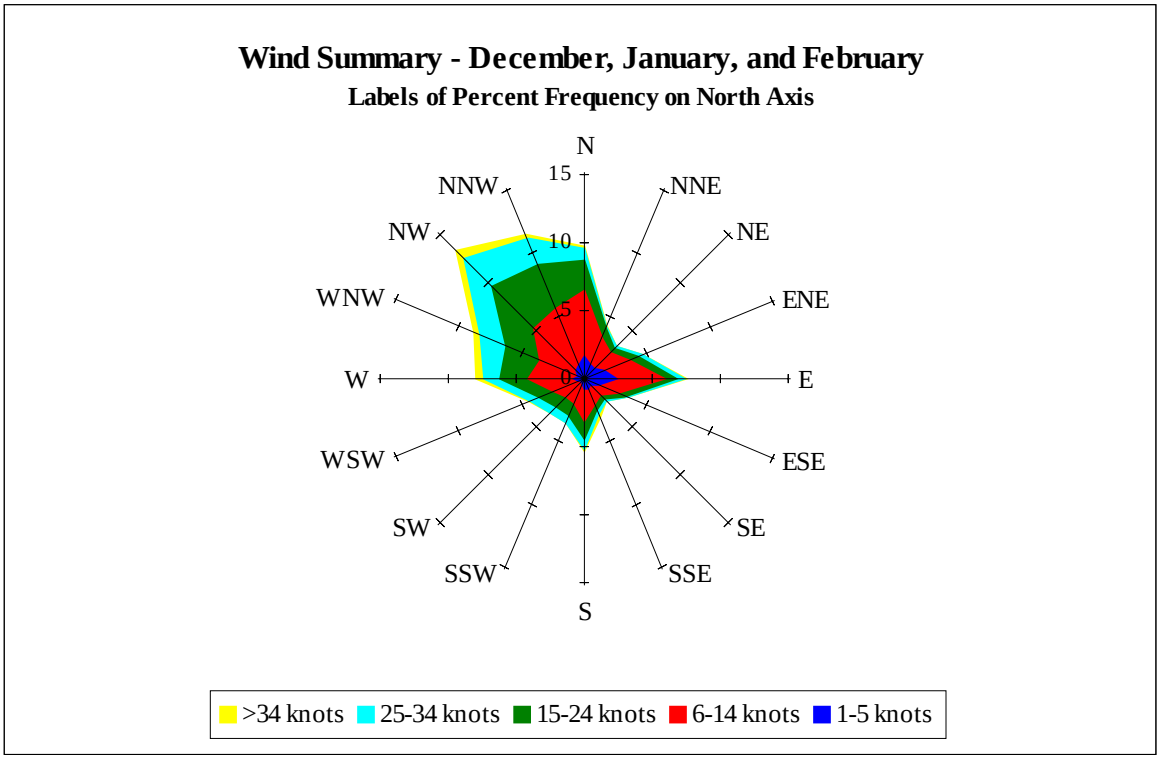
No Solar Radiation
Data Available



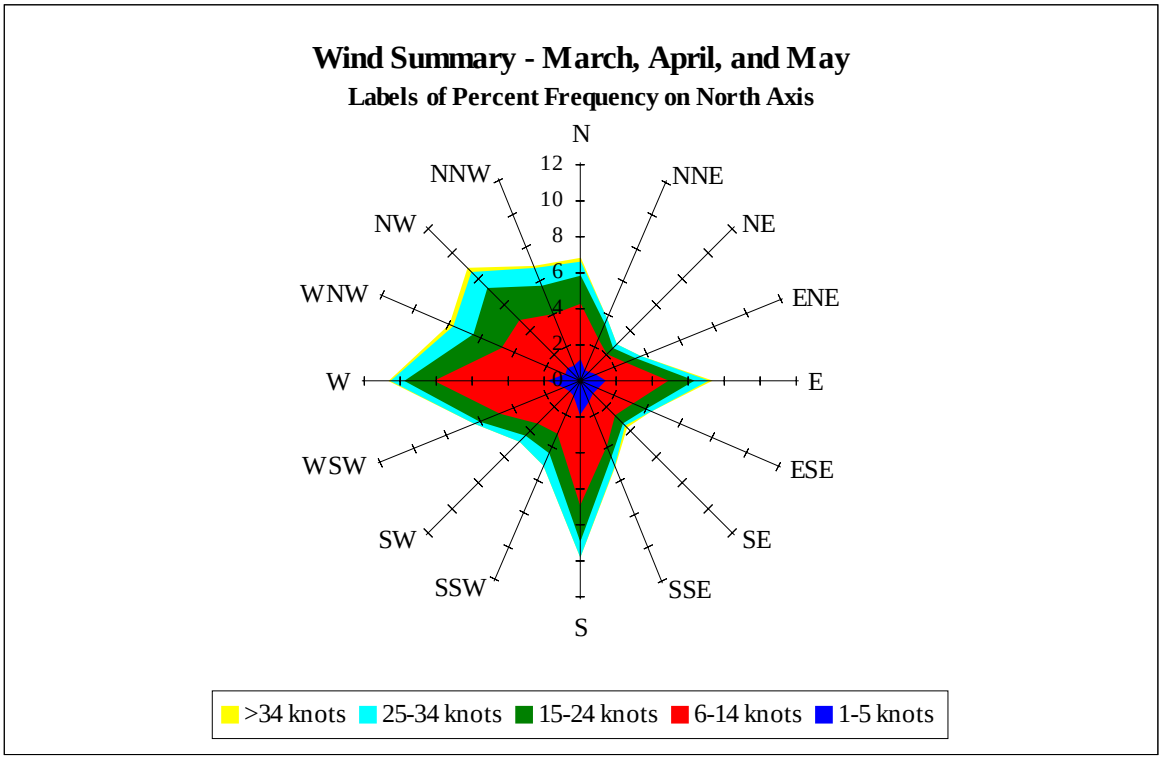
Average Annual Solar Heat and Illumination – Nearest Available Site

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

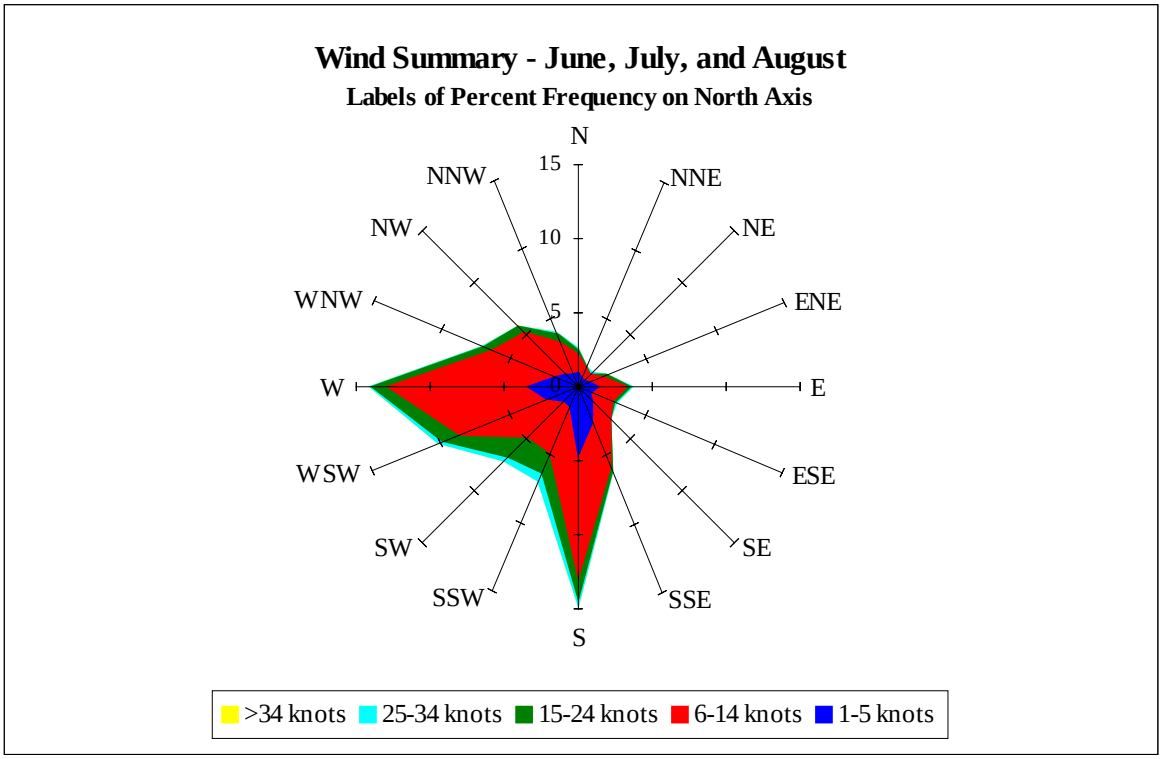




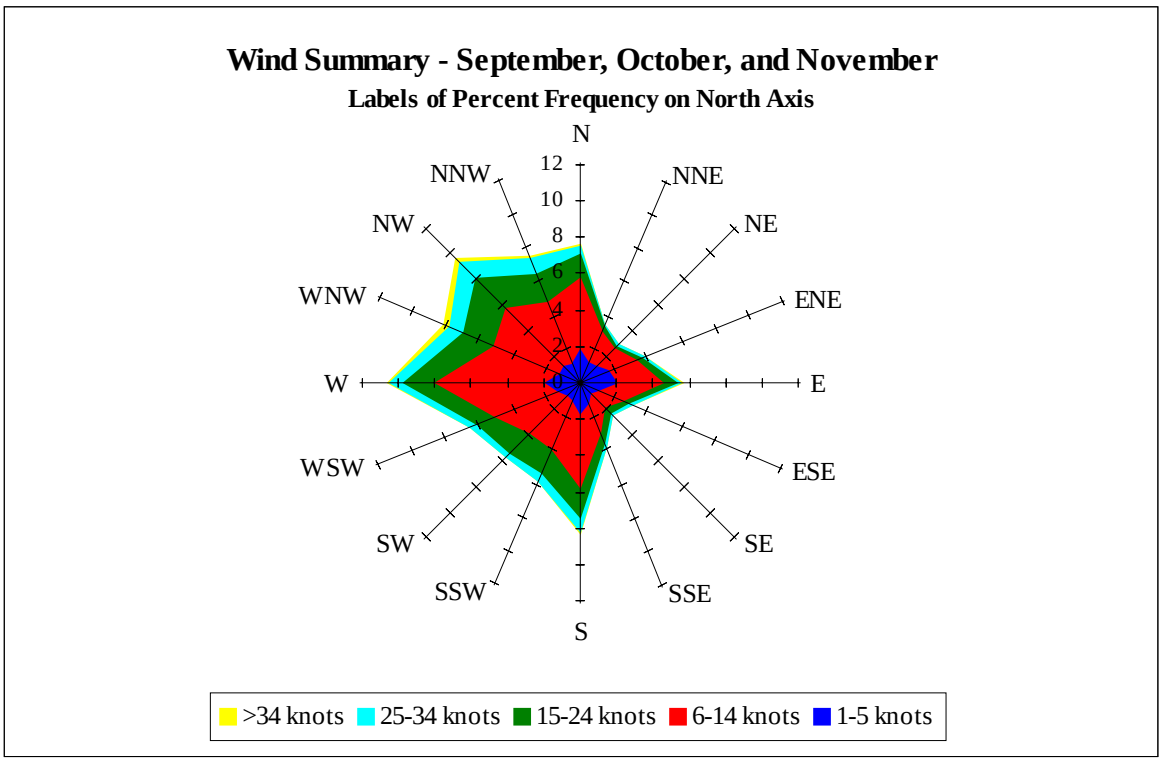
Percent Calm = 4.45



Percent Calm = 3.67



Percent Calm = 7.31



Percent Calm = 5.78