

MANCHESTER NH

Latitude = 42.93 N

Longitude = 71.43 W

Period of Record = 1973 to 1996

WMO No. 743945

Elevation = 233 feet

Average Pressure = 29.73 inches Hg

Design Criteria Data

	Design Value	Mean Coincident (Average) Values			
		Wet Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Dry Bulb Temperature (T)	(°F)				
Median of Extreme Highs	97	76	105	8.0	WSW
0.4% Occurrence	92	73	92	9.4	WSW
1.0% Occurrence	90	72	88	8.9	WSW
2.0% Occurrence	87	70	85	8.5	WSW
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	12	10	7	7.0	N
99.0% Occurrence	6	5	5	7.6	N
99.6% Occurrence	1	0	4	7.5	N
Median of Extreme Lows	-7	-7	3	5.1	NNW
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Wet Bulb Temperature (T_{wb})	(°F)				
Median of Extreme Highs	78	90	121	8.2	W
0.4% Occurrence	76	87	117	7.4	WSW
1.0% Occurrence	74	84	110	6.8	WSW
2.0% Occurrence	73	82	106	6.6	WSW
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Humidity Ratio (HR)	(gr/lb)				
Median of Extreme Highs	126	82	0.83	10.1	SE
0.4% Occurrence	123	83	0.82	5.9	S
1.0% Occurrence	116	79	0.77	5.1	S
2.0% Occurrence	111	78	0.74	4.5	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		29	559	94	420

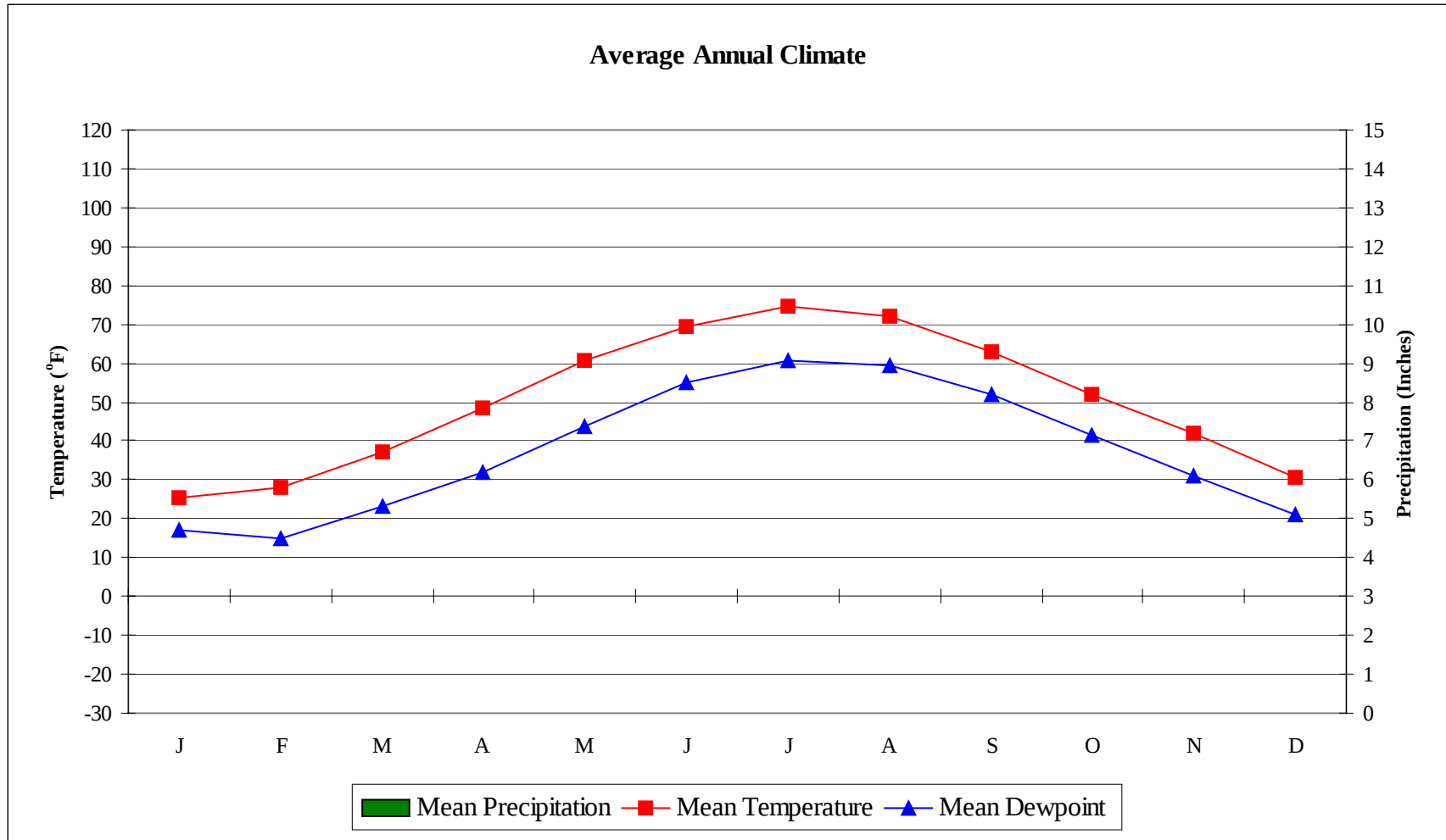
Other Site Data

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°F-RH 60% Latent + Sensible
7	2.5	90	0.4 + 0.5
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
53.0	N/A	N/A	58

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

MANCHESTER NH

WMO No. 743945

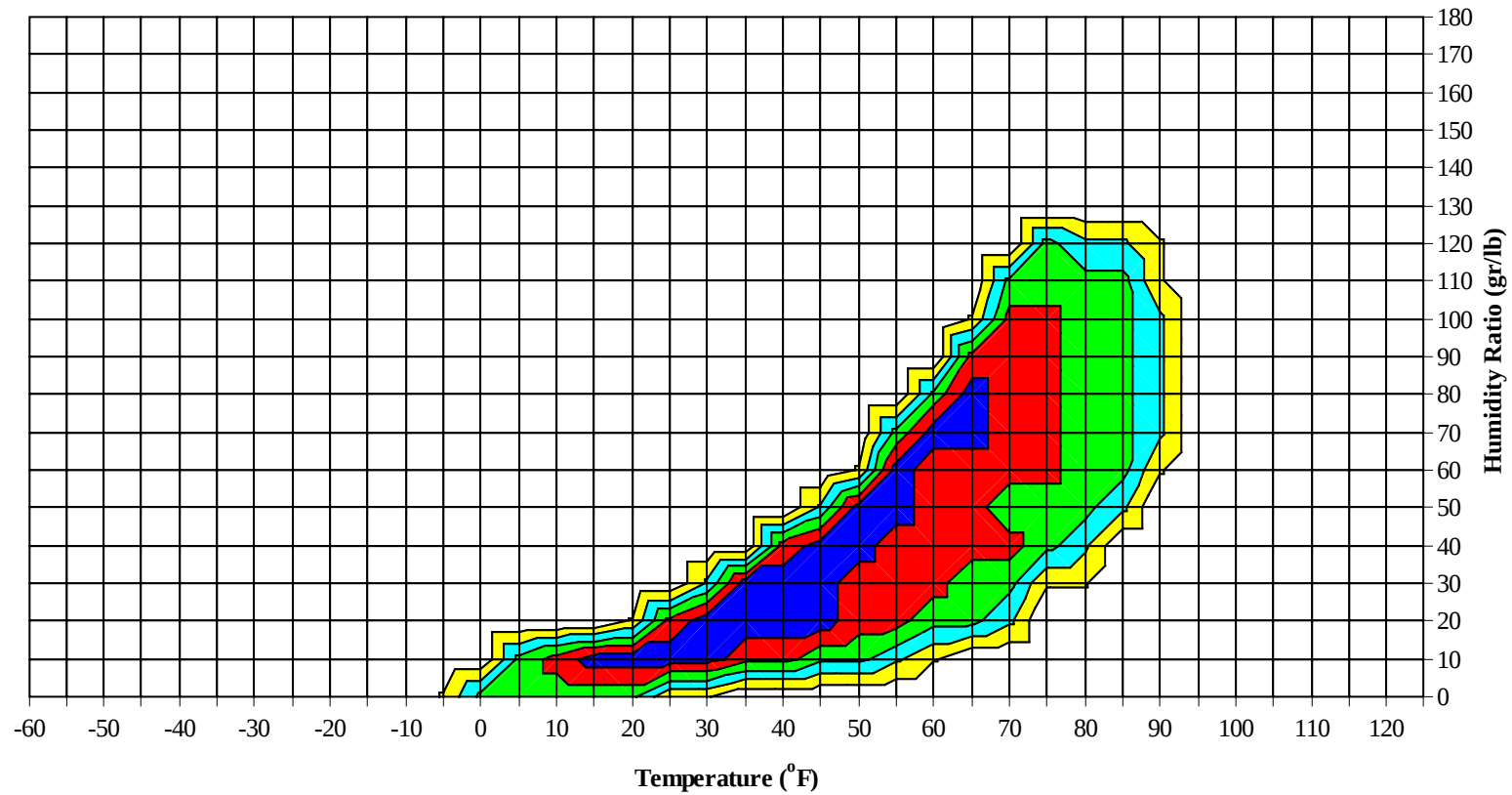


No Precipitation Data Available

MANCHESTER NH

WMO No. 743945

Long Term Psychrometric Summary

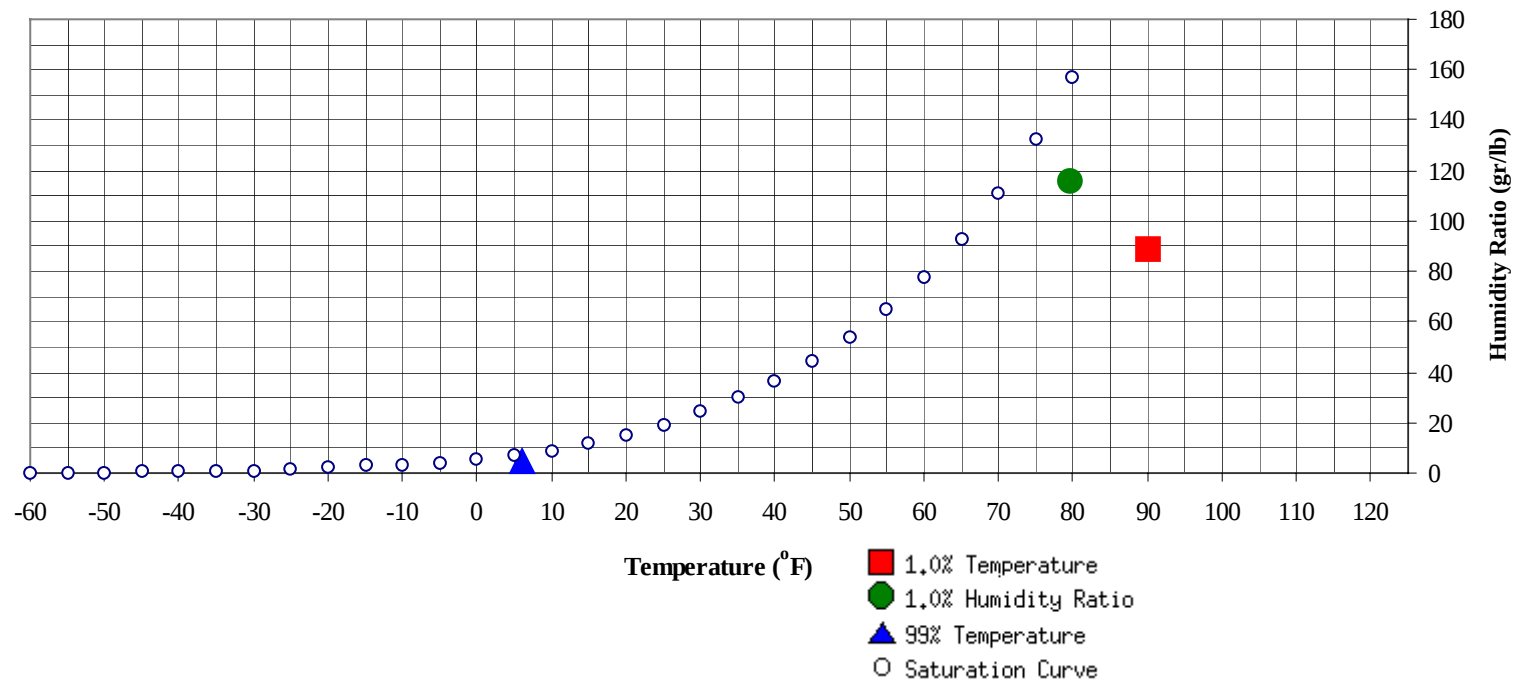


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

MANCHESTER NH

WMO No. 743945

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
99% Dry Bulb	6	5.1	2.2		115.5	79.5	73.5	71	37.2

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	90	88.7	71.8	35.6

MANCHESTER NH

WMO No. 743945

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

Period of Record = 1973 to 1996

Temperature Range (°F)	January					February					March				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104															
95 / 99															
90 / 94															
85 / 89												0		0	
80 / 84												0	0	0	55.0
75 / 79												1	0	1	56.1
70 / 74											0	3	1	3	56.3
65 / 69		0	0	0	59.4		0	0	0	50.5	0	3	2	5	54.9
60 / 64	0	1	1	2	57.9		2	1	3	49.8	0	8	4	11	51.1
55 / 59	1	3	1	5	52.7	0	3	2	5	47.9	1	11	6	19	46.6
50 / 54	1	3	3	8	47.0	0	7	4	10	43.8	6	24	15	46	43.4
45 / 49	3	8	4	14	41.5	4	13	7	24	40.9	10	35	26	71	40.0
40 / 44	7	23	14	44	37.0	10	27	19	56	36.5	30	51	47	128	36.7
35 / 39	22	32	32	85	33.4	20	31	32	84	32.3	44	46	53	142	32.8
30 / 34	36	43	42	120	28.9	33	41	41	115	28.2	58	32	46	136	28.6
25 / 29	32	41	42	114	24.3	28	35	40	104	23.6	35	18	25	78	24.0
20 / 24	37	37	41	115	19.7	35	31	31	98	19.2	27	11	14	52	19.4
15 / 19	33	24	28	85	15.0	31	16	23	71	14.8	18	3	7	29	14.9
10 / 14	30	18	23	71	10.7	27	9	13	49	10.2	10	2	2	13	10.7
5 / 9	20	10	11	41	6.1	18	5	6	30	5.9	7	1	0	8	6.4
0 / 4	14	3	5	23	1.2	10	3	3	15	1.3	1	0	0	1	2.9
-5 / -1	7	1	2	10	-2.6	4	1	1	6	-2.5	0	0	0	0	-2.5
-10 / -6	3	1	1	5	-7.4	3	0	0	3	-6.9	0	0	0	0	-5.0
-15 / -11	1	0	0	1	-11.5	0			0	-10.0					
-20 / -16	0			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.

MANCHESTER NH

WMO No. 743945

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

Period of Record = 1973 to 1996

Temperature Range (°F)	April					May					June				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104												0	0	0	78.6
95 / 99							1	0	1	66.0		2	0	2	75.5
90 / 94		0	0	0	67.0		4	2	6	69.3		11	4	15	71.3
85 / 89		1	0	1	65.3	0	9	3	12	66.5	0	23	10	33	68.6
80 / 84		3	1	3	60.4	0	16	7	23	64.2	4	44	25	72	66.4
75 / 79		5	2	7	58.7	1	22	12	35	60.8	10	45	35	90	64.5
70 / 74		10	5	15	56.3	5	37	24	66	57.9	27	44	47	118	62.6
65 / 69	1	15	10	26	54.3	12	42	33	87	55.1	48	31	45	123	60.6
60 / 64	5	25	17	48	50.0	32	46	46	123	53.1	58	22	39	119	57.6
55 / 59	13	35	24	73	47.0	44	32	44	120	50.4	49	13	22	84	53.8
50 / 54	20	46	38	104	43.4	63	24	45	132	47.6	34	5	12	51	49.7
45 / 49	42	45	49	137	41.0	51	12	24	86	43.9	10	1	1	12	46.0
40 / 44	59	35	52	146	37.6	28	3	7	38	39.7	1	0		1	41.8
35 / 39	54	13	30	97	33.8	10	0	1	11	36.3	0			0	
30 / 34	34	3	11	48	29.8	2	0	0	2	32.0					
25 / 29	8	1	1	10	24.5	0	0		0	25.0					
20 / 24	3	1	1	4	19.5										
15 / 19	1	0	0	1	15.3										
10 / 14	0	0		0	11.0										
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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MANCHESTER NH

WMO No. 743945

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

Period of Record = 1973 to 1996

Temperature Range (°F)	July					August					September				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	77.1										
95 / 99		4	2	6	76.8		2	0	2	74.0		0		0	
90 / 94	0	23	8	31	73.8		14	4	18	72.6		2	0	2	73.8
85 / 89	1	42	22	65	71.0		32	12	44	70.8		8	2	10	71.1
80 / 84	6	63	40	108	68.7	1	54	29	84	68.7	0	18	6	25	68.6
75 / 79	23	51	53	127	67.0	16	57	46	119	66.8	2	30	16	49	66.2
70 / 74	63	35	57	155	65.8	52	48	65	165	65.3	16	41	32	88	63.6
65 / 69	65	18	40	123	62.5	63	23	48	134	62.3	22	50	40	112	59.4
60 / 64	60	9	21	91	59.4	63	13	32	107	58.5	44	50	56	149	56.7
55 / 59	23	2	5	30	55.0	36	4	9	50	54.2	57	30	47	134	53.2
50 / 54	6	0	0	6	50.2	14	1	2	17	50.2	43	9	26	78	48.5
45 / 49	1			1	47.7	2		0	2	45.3	29	2	12	43	44.0
40 / 44						1			1	41.6	19	0	3	23	39.9
35 / 39											6		0	6	36.0
30 / 34											1		0	1	32.3
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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MANCHESTER NH

WMO No. 743945

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)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104															
95 / 99															
90 / 94															
85 / 89		1		1	66.0										
80 / 84		2	0	2	65.3		0		0	63.0					
75 / 79	0	8	1	9	62.6		1	0	1	61.1					
70 / 74	1	18	6	25	60.2		3	1	3	60.3		0		0	
65 / 69	4	26	13	43	57.9	1	6	4	11	58.9		1	0	1	57.7
60 / 64	14	42	30	86	54.8	6	12	8	26	55.2	1	2	1	4	54.8
55 / 59	25	46	40	111	51.3	7	18	10	35	50.6	1	3	2	7	49.0
50 / 54	37	50	52	139	46.8	13	34	24	72	46.1	1	9	6	17	46.2
45 / 49	48	32	50	130	42.9	23	48	34	105	41.6	7	16	11	34	42.0
40 / 44	53	18	35	106	38.8	37	49	48	134	37.7	14	31	21	67	37.1
35 / 39	37	4	15	56	34.9	46	36	45	127	33.4	33	48	39	120	33.4
30 / 34	25	1	6	31	30.7	54	23	43	120	29.2	52	51	58	162	29.1
25 / 29	6		0	6	26.7	33	8	16	58	25.1	38	37	42	117	24.4
20 / 24						14	2	5	20	20.0	37	24	27	88	19.9
15 / 19						4	1	2	7	15.9	26	14	20	59	15.2
10 / 14						1	0	0	1	12.1	14	8	14	36	10.8
5 / 9						0	0	0	0	9.0	14	3	5	21	6.5
0 / 4						0	0	0	0	2.0	7	1	2	10	1.7
-5 / -1											1	0	0	1	-2.4
-10 / -6											0	0	0	0	-7.0
-15 / -11											0	0	0	0	
-20 / -16											0			0	

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WMO No. 743945

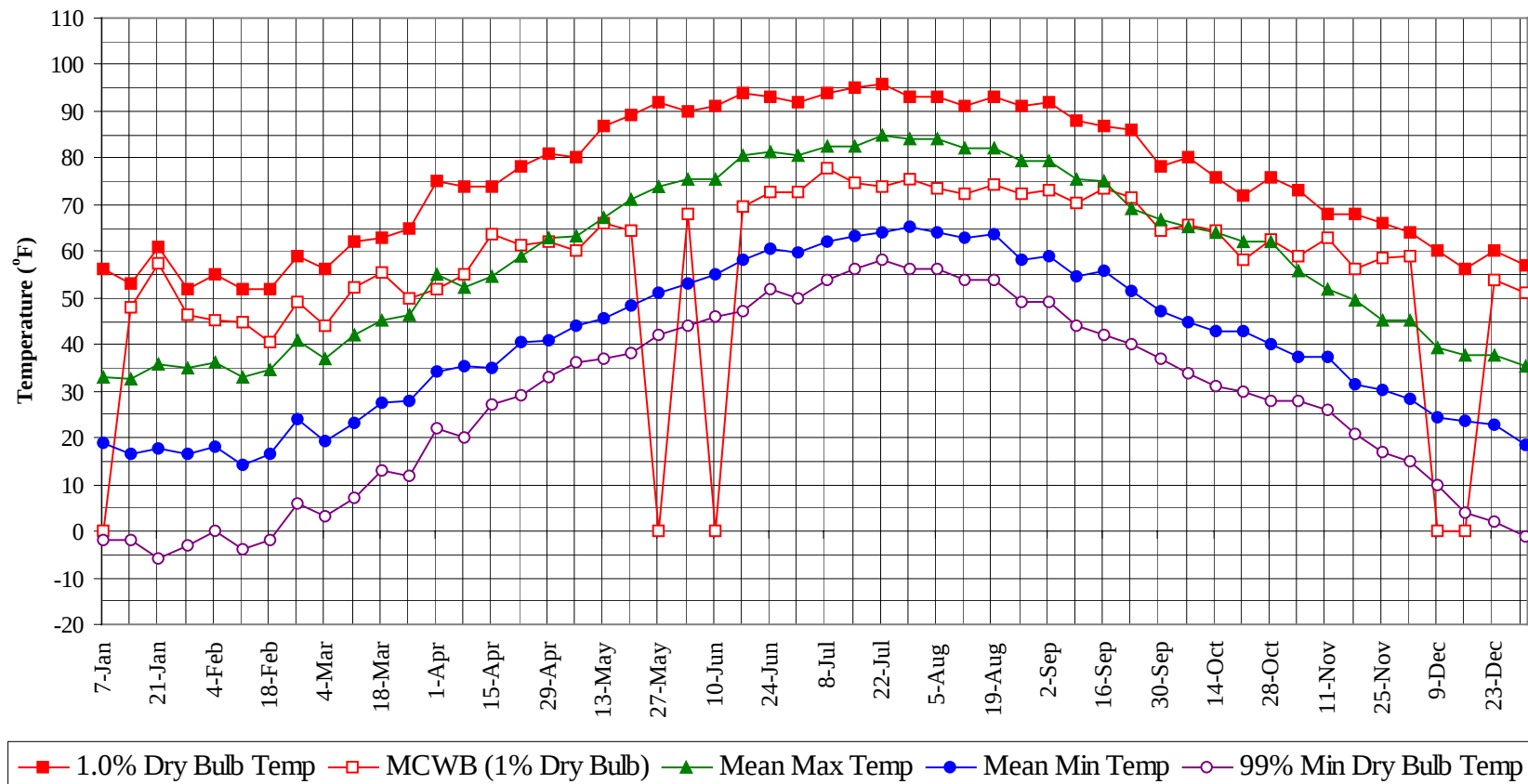
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

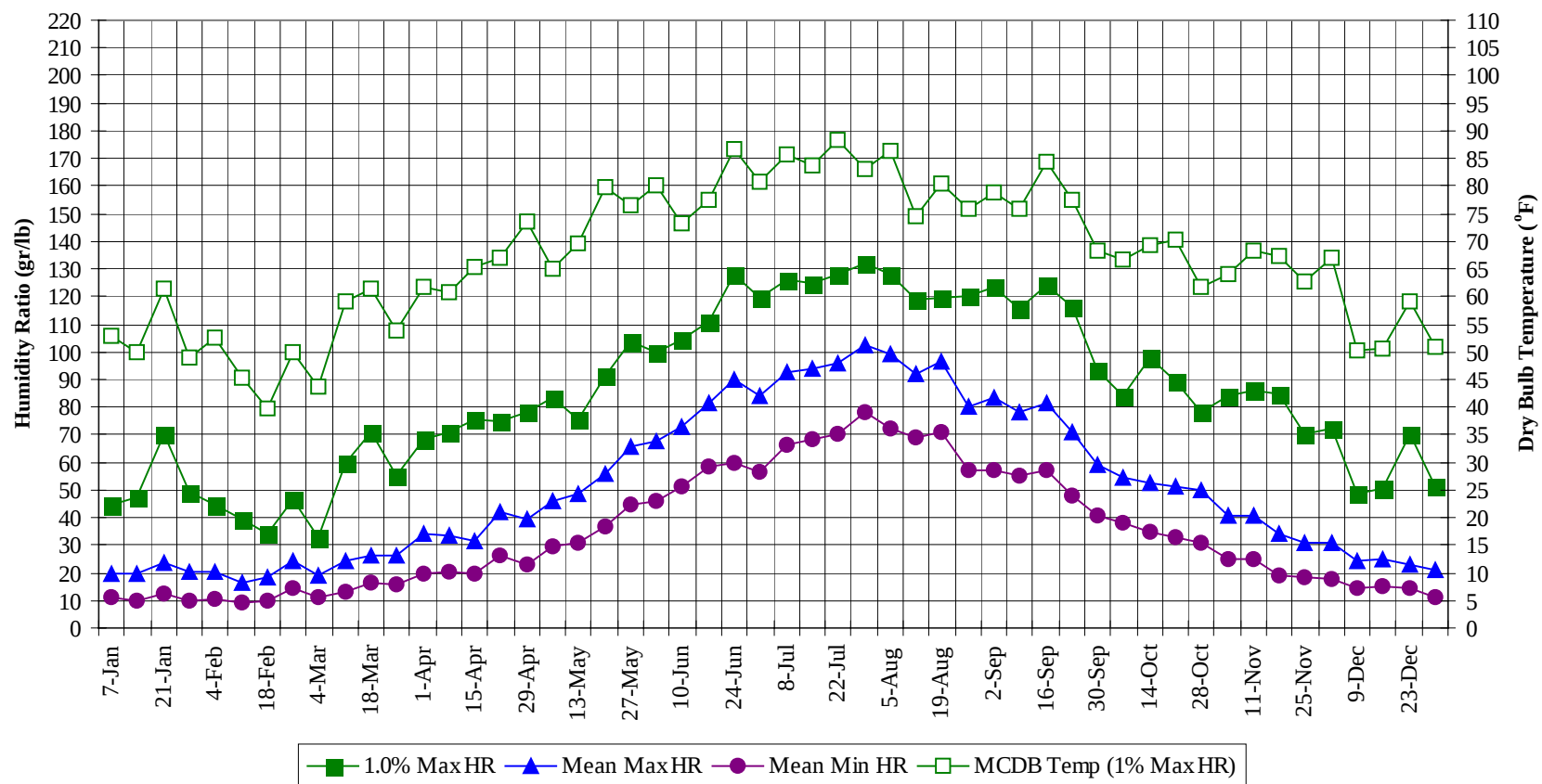
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	77.8
95 / 99		8	3	11	75.6
90 / 94	0	54	19	73	72.7
85 / 89	1	117	49	167	70.1
80 / 84	13	204	103	320	67.7
75 / 79	59	222	158	438	65.6
70 / 74	177	243	227	646	63.4
65 / 69	235	220	224	679	59.7
60 / 64	304	231	247	782	56.0
55 / 59	277	201	206	683	51.4
50 / 54	252	213	224	690	46.5
45 / 49	234	207	218	660	42.0
40 / 44	256	237	253	746	37.6
35 / 39	255	209	256	720	33.3
30 / 34	273	191	260	723	28.9
25 / 29	165	138	174	477	24.2
20 / 24	139	104	124	367	19.6
15 / 19	101	57	85	243	15.0
10 / 14	74	38	53	165	10.6
5 / 9	53	18	23	94	6.1
0 / 4	30	7	11	47	1.4
-5 / -1	12	2	3	16	-2.6
-10 / -6	7	2	1	9	-7.2
-15 / -11	1	0	1	2	-11.4
-20 / -16	0			0	

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Annual Summary of Temperatures

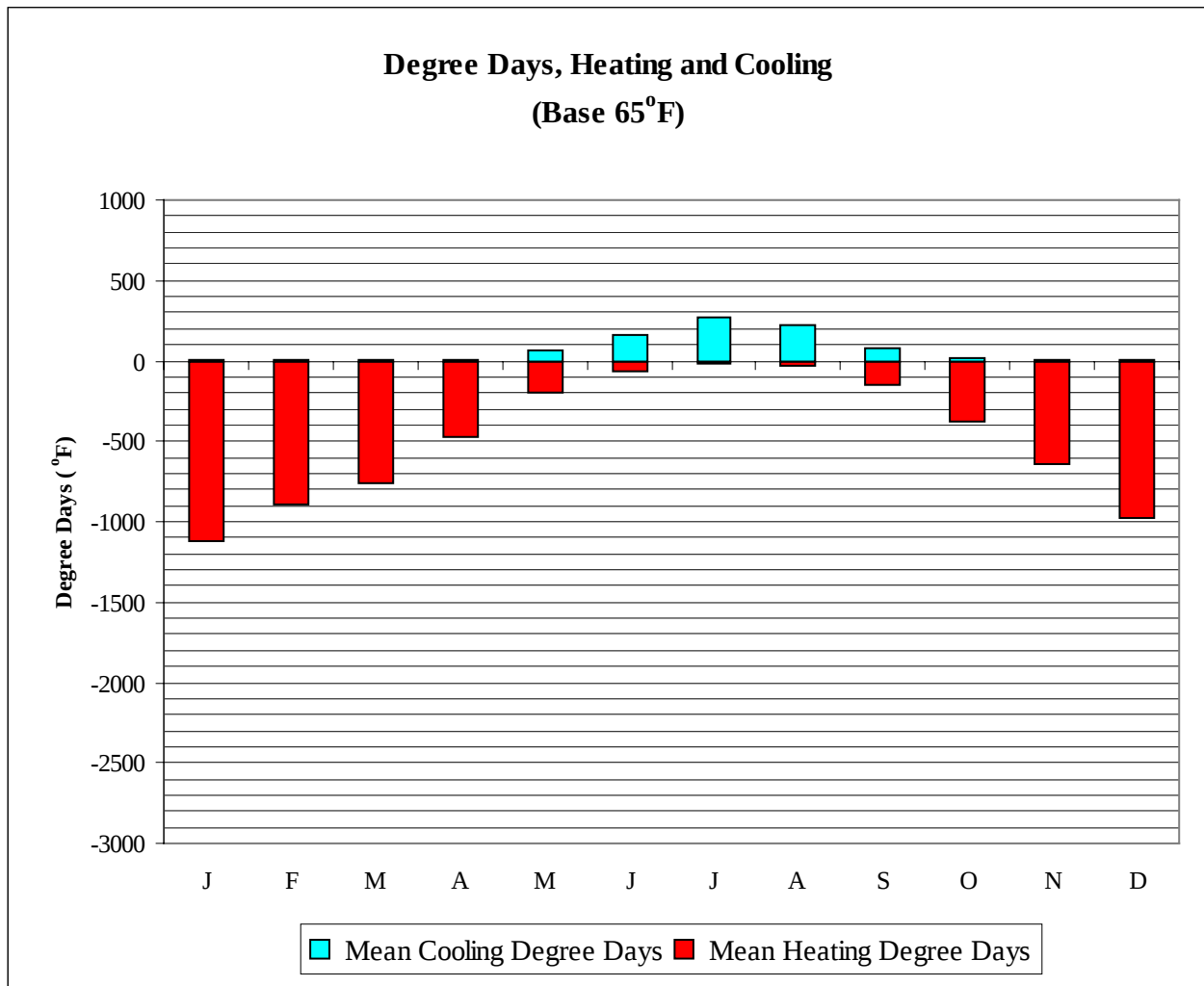


Long Term Humidity and Dry Bulb Temperature Summary



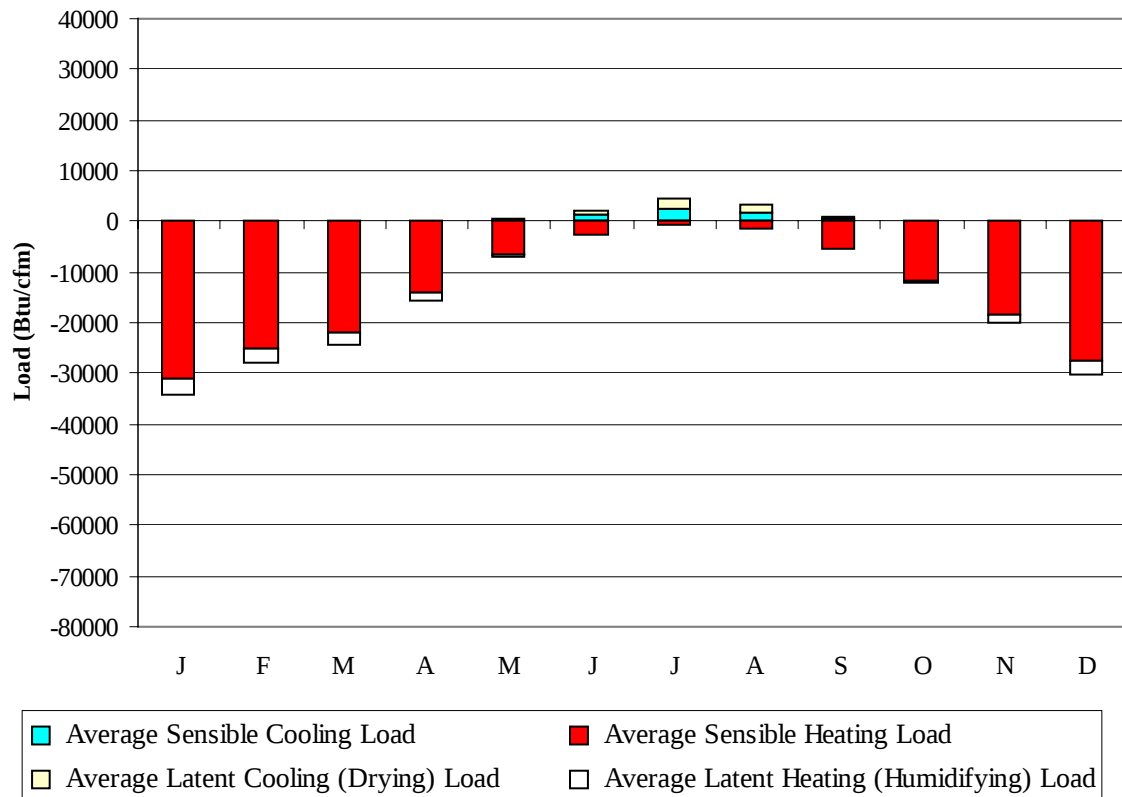
MANCHESTER NH**WMO No. 743945****Long Term Dry Bulb Temperature and Humidity Summary**

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	56.0	.	33.1	18.9	-2.0	44.8	52.8	19.5	11.3
14-Jan	53.0	48.0	32.7	16.7	-2.0	47.6	50.0	19.7	10.1
21-Jan	61.0	57.2	35.9	17.9	-6.0	70.0	61.3	23.9	12.4
28-Jan	52.0	46.4	34.9	16.6	-3.0	49.0	49.0	20.5	10.1
4-Feb	55.0	45.2	36.2	18.2	0.0	44.8	52.4	20.1	10.7
11-Feb	52.0	45.0	33.1	14.1	-4.0	39.2	45.3	16.6	8.9
18-Feb	52.0	40.7	34.7	16.4	-2.0	34.3	39.8	18.1	9.8
25-Feb	59.0	49.3	41.0	24.1	6.0	46.9	49.9	24.3	14.3
4-Mar	56.0	44.0	37.1	19.2	3.0	32.9	43.7	18.9	11.1
11-Mar	62.0	52.4	42.0	23.2	7.0	59.5	59.3	24.4	13.4
18-Mar	63.0	55.3	45.0	27.6	13.0	70.7	61.5	26.0	16.6
25-Mar	65.0	50.0	46.4	27.9	12.0	55.3	54.0	26.5	16.1
1-Apr	75.0	51.8	54.9	34.2	22.0	68.6	61.8	34.2	19.6
8-Apr	74.0	55.0	52.3	35.4	20.0	70.7	60.8	33.2	20.5
15-Apr	74.0	63.5	54.6	35.1	27.0	75.6	65.2	31.2	19.9
22-Apr	78.0	61.4	58.9	40.6	29.0	74.9	67.0	42.1	26.2
29-Apr	81.0	62.3	62.8	40.9	33.0	78.4	73.5	39.7	23.0
6-May	80.0	60.3	63.4	44.0	36.0	83.3	65.1	45.8	29.9
13-May	87.0	66.0	67.1	45.6	37.0	75.6	69.5	48.4	31.0
20-May	89.0	64.3	71.0	48.4	38.0	91.0	79.8	55.9	36.5
27-May	92.0	.	73.7	51.3	42.0	103.6	76.6	65.7	44.3
3-Jun	90.0	67.9	75.5	52.9	44.0	100.1	80.0	67.7	46.1
10-Jun	91.0	.	75.3	55.0	46.0	104.3	73.2	72.6	51.1
17-Jun	94.0	69.7	80.6	58.3	47.0	111.3	77.6	81.7	58.3
24-Jun	93.0	72.8	81.5	60.4	52.0	128.1	86.7	89.9	59.7
1-Jul	92.0	72.8	80.6	59.8	50.0	119.7	80.8	84.1	56.2
8-Jul	94.0	77.6	82.4	62.2	54.0	126.0	85.7	92.6	66.3
15-Jul	95.0	74.8	82.5	63.1	56.0	124.6	83.9	93.7	68.1
22-Jul	96.0	74.0	84.8	63.9	58.0	128.1	88.4	95.8	70.3
29-Jul	93.0	75.3	83.9	65.1	56.0	132.3	83.1	102.5	78.1
5-Aug	93.0	73.5	83.9	64.1	56.0	128.1	86.3	99.1	72.5
12-Aug	91.0	72.2	82.1	62.9	54.0	119.0	74.7	92.0	68.8
19-Aug	93.0	74.1	82.1	63.7	54.0	119.7	80.4	96.9	71.2
26-Aug	91.0	72.3	79.3	58.1	49.0	120.4	76.0	79.9	57.1
2-Sep	92.0	73.3	79.3	59.1	49.0	123.2	78.7	83.2	57.5
9-Sep	88.0	70.2	75.5	54.7	44.0	115.5	75.9	78.1	55.4
16-Sep	87.0	73.7	75.2	55.7	42.0	123.9	84.4	81.2	56.9
23-Sep	86.0	71.4	69.3	51.4	40.0	116.2	77.6	71.0	48.2
30-Sep	78.0	64.5	66.8	47.0	37.0	93.1	68.4	58.9	40.8
7-Oct	80.0	65.6	65.3	45.0	34.0	84.0	66.6	54.7	38.0
14-Oct	76.0	64.4	63.9	42.8	31.0	98.0	69.3	52.3	34.9
21-Oct	72.0	58.3	62.2	42.9	30.0	89.6	70.3	51.2	33.0
28-Oct	76.0	62.3	61.9	40.1	28.0	78.4	61.7	49.8	30.9
4-Nov	73.0	58.8	55.8	37.5	28.0	84.0	64.0	40.5	25.1
11-Nov	68.0	62.8	51.8	37.2	26.0	86.1	68.2	40.5	24.8
18-Nov	68.0	56.0	49.4	31.4	21.0	84.7	67.3	34.3	19.2
25-Nov	66.0	58.5	45.1	30.2	17.0	70.0	62.6	30.7	18.2
2-Dec	64.0	59.0	45.3	28.1	15.0	72.1	67.0	30.9	17.8
9-Dec	60.0	.	39.3	24.5	10.0	48.3	50.3	24.2	14.2
16-Dec	56.0	.	37.6	23.5	4.0	50.4	50.7	24.7	15.2
23-Dec	60.0	54.0	37.6	22.7	2.0	70.0	59.0	23.2	14.2
31-Dec	57.0	51.0	35.2	18.7	-1.0	51.1	50.8	21.3	11.2



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1119
FEB	0	896
MAR	2	762
APR	10	470
MAY	67	196
JUN	166	64
JUL	268	16
AUG	216	30
SEP	74	153
OCT	12	376
NOV	2	636
DEC	0	978
ANN	818	5696

Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	0	-31165	0	-2897
FEB	0	-25077	0	-2777
MAR	4	-21860	0	-2295
APR	45	-14203	5	-1300
MAY	409	-6643	82	-251
JUN	1307	-2582	768	-9
JUL	2403	-848	2040	0
AUG	1578	-1369	1515	-5
SEP	397	-5528	579	-57
OCT	27	-11686	36	-346
NOV	2	-18531	11	-1389
DEC	0	-27526	0	-2753
ANN	6172	-167018	5036	-14079

Average Annual Solar Radiation – Nearest Available Site

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

City: CONCORD
 State: NH
 WBAN No: 14745
 Lat(N): 43.2
 Long(W): 71.5
 Elev(ft): 345

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.626
 Vert Gap: 0.33

AVERAGE INCIDENT SOLAR RADIATION (Btu/sq.ft./day), Percentage Uncertainty = 11		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Global	600	890	1230	1490	1780	1920	1920	1680	1320	920	570	480	1240
	Std Dev	47	75	98	119	154	143	106	77	91	62	40	36	39
	Minimum	510	720	1000	1260	1480	1610	1740	1550	1170	810	450	400	1170
	Maximum	690	1080	1430	1680	2080	2170	2100	1870	1490	1140	630	550	1290
	Diffuse	310	450	600	690	800	850	820	720	570	420	310	260	570
Clear Day	Global	770	1140	1650	2160	2520	2650	2560	2240	1760	1230	820	660	1680
NORTH	Global	190	270	360	430	550	620	580	470	360	270	190	160	370
	Diffuse	190	270	360	420	500	530	510	450	360	270	190	160	350
Clear Day	Global	170	240	320	410	580	690	630	470	340	250	170	150	370
EAST	Global	430	600	780	910	1030	1090	1080	980	790	590	380	340	750
	Diffuse	240	340	450	510	590	630	620	550	440	330	230	200	430
Clear Day	Global	610	850	1130	1350	1490	1530	1490	1380	1160	880	630	540	1090
SOUTH	Global	1060	1210	1170	1000	890	840	890	1000	1110	1110	880	880	1000
	Diffuse	370	470	530	540	570	580	590	560	510	420	330	310	480
Clear Day	Global	1800	1960	1880	1520	1200	1040	1090	1350	1690	1860	1780	1700	1570
WEST	Global	420	600	770	890	1000	1090	1080	1000	820	610	380	330	750
	Diffuse	240	340	450	520	600	640	630	560	460	330	230	200	430
Clear Day	Global	610	850	1130	1350	1490	1530	1490	1380	1160	880	630	540	1090

Average Annual Solar Heat and Illumination – Nearest Available Site

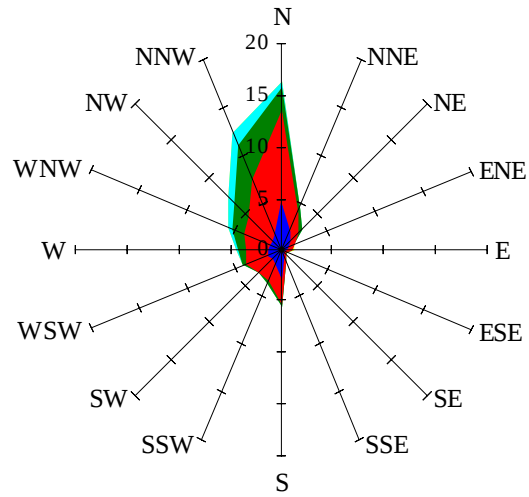
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 11		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	380	600	860	1070	1280	1390	1390	1210	940	630	370	300	870
NORTH	Unshaded	130	190	250	290	360	410	380	320	250	190	130	110	250
	Shaded	110	160	210	250	310	350	330	280	220	160	110	93	220
EAST	Unshaded	290	420	550	650	730	770	770	700	560	420	270	230	530
	Shaded	260	360	470	540	600	630	630	580	460	360	230	200	440
SOUTH	Unshaded	800	890	820	660	570	520	550	650	760	810	660	670	700
	Shaded	780	820	630	400	340	350	350	370	520	700	630	650	540
WEST	Unshaded	290	420	550	630	710	770	770	710	590	430	270	230	530
	Shaded	250	360	460	520	580	630	630	590	500	370	230	200	440

AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 11											
		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	42	71	77	57	19	54	86	98	91	63
	M.Cloudy	27	47	49	37	13	34	55	70	64	41
NORTH	M.Clear	10	14	15	12	7	13	16	16	16	14
	M.Cloudy	11	16	17	14	6	13	17	19	18	14
EAST	M.Clear	73	50	15	12	7	82	67	23	16	14
	M.Cloudy	31	30	17	14	6	37	39	23	18	14
SOUTH	M.Clear	47	80	86	63	21	12	39	52	45	20
	M.Cloudy	22	40	43	31	9	13	27	39	34	16
WEST	M.Clear	10	14	30	69	55	12	16	16	57	80
	M.Cloudy	11	16	23	33	19	13	17	19	40	42
M.Clear	(% hrs)	33	32	32	32	34	37	36	25	24	30
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	32	67	80	70	39	14	36	39	19	0
	M.Cloudy	19	40	54	47	24	9	23	23	12	0
NORTH	M.Clear	9	14	15	14	10	5	9	10	6	0
	M.Cloudy	8	14	17	16	9	4	9	10	6	0
EAST	M.Clear	68	64	20	14	10	35	31	10	6	0
	M.Cloudy	23	31	19	16	9	11	16	10	6	0
SOUTH	M.Clear	27	63	78	67	34	36	78	82	47	0
	M.Cloudy	13	31	46	39	17	12	30	29	16	0
WEST	M.Clear	9	14	15	57	71	5	9	25	40	0
	M.Cloudy	8	14	17	34	30	4	9	14	14	0
M.Clear	(% hrs)	34	43	37	34	38	34	31	30	31	35

Wind Summary - December, January, and February

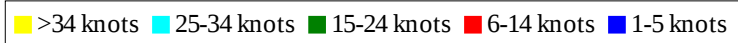
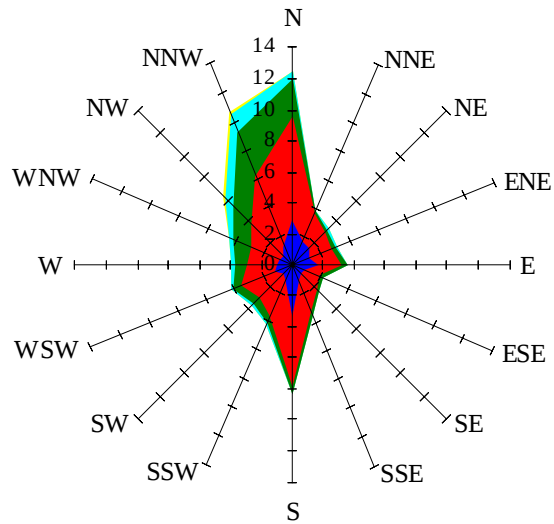
Labels of Percent Frequency on North Axis



Percent Calm = 27.20

Wind Summary - March, April, and May

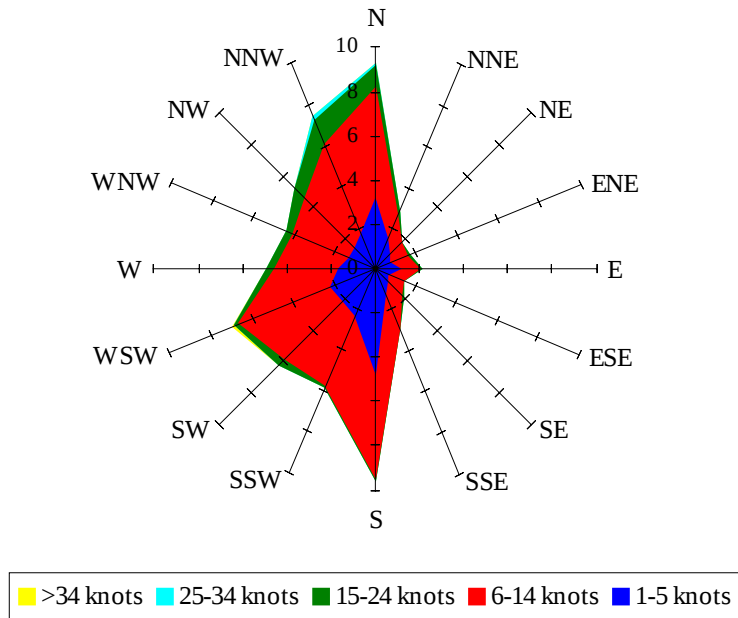
Labels of Percent Frequency on North Axis



Percent Calm = 21.46

Wind Summary - June, July, and August

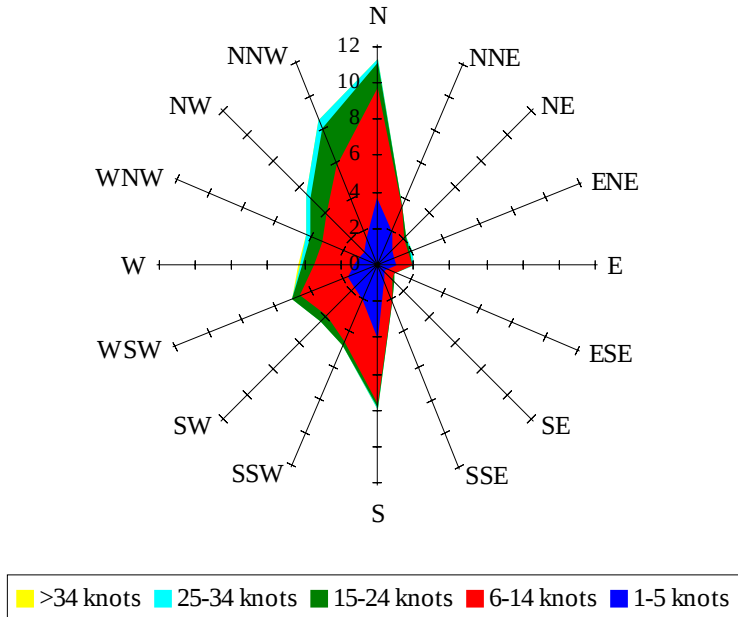
Labels of Percent Frequency on North Axis



Percent Calm = 26.80

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 31.23