

HALIFAX CN

Latitude = 44.88 N

Longitude = 63.50 W

Period of Record = 1973 to 1993

WMO No. 713953

Elevation = 476 feet

Average Pressure = 29.39 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	88	71	86	12.5	SW
0.4% Occurrence	81	68	85	11.3	SSW
1.0% Occurrence	79	67	80	11.2	SSW
2.0% Occurrence	75	65	77	11.3	SSW
Mean Daily Range	15	-	-	-	-
97.5% Occurrence	7	6	5	10.2	NW
99.0% Occurrence	1	0	4	9.9	NW
99.6% Occurrence	-2	-3	3	11.2	NW
Median of Extreme Lows	-8	-9	2	13.3	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	75	82	117	11.9	SSW
0.4% Occurrence	71	77	104	10.9	SSW
1.0% Occurrence	69	75	98	11.1	SSW
2.0% Occurrence	67	72	91	10.6	SSW
	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	120	80	0.78	11.0	SSW
0.4% Occurrence	106	73	0.69	11.3	SSW
1.0% Occurrence	101	71	0.67	13.3	SSW
2.0% Occurrence	93	70	0.61	10.6	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	54	15	217

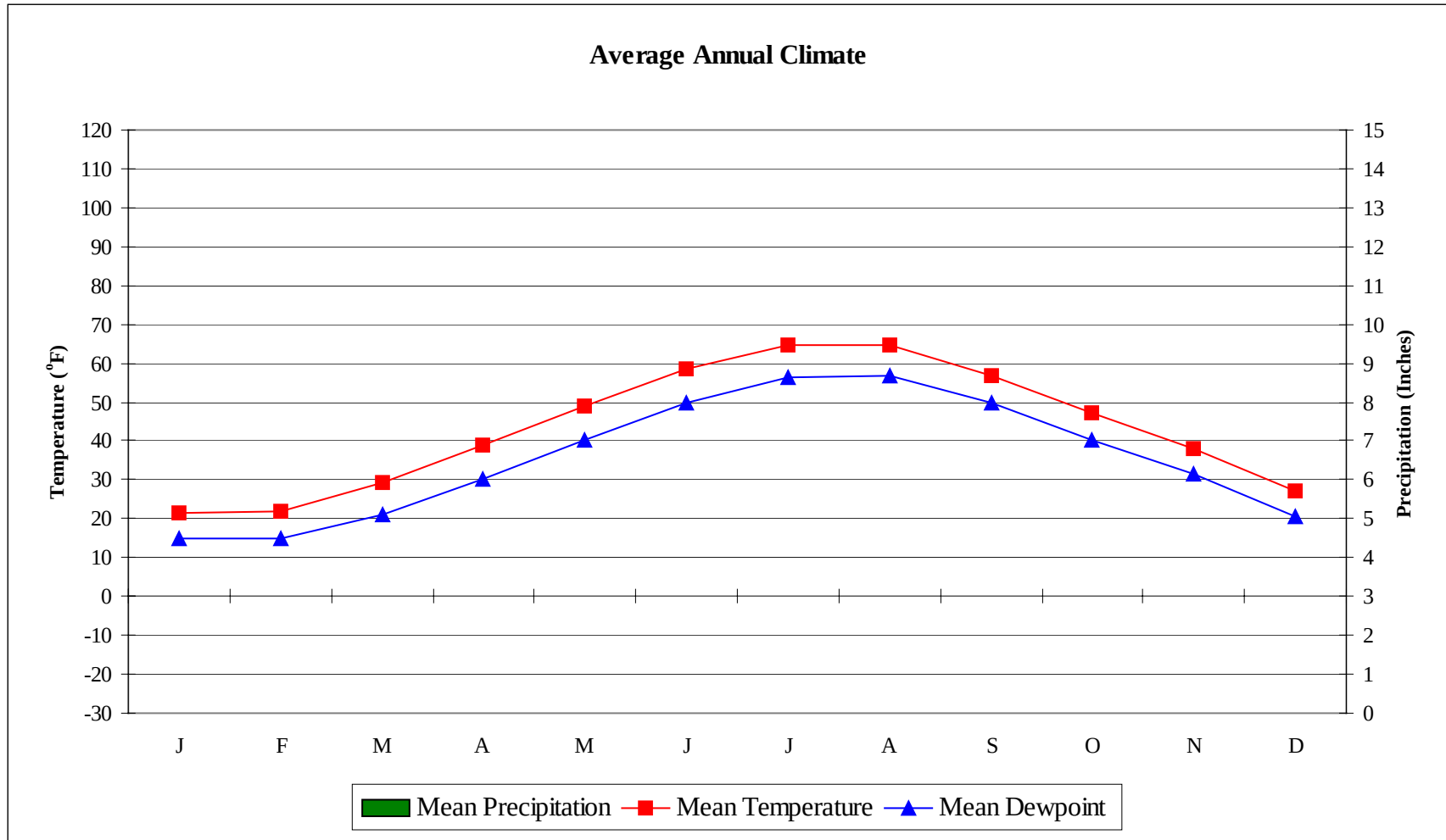
Other Site Data

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
5	N/A	N/A	0.3 + 0.1
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 (#)
45.4	N/A	N/A	60

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

HALIFAX CN

WMO No. 713953

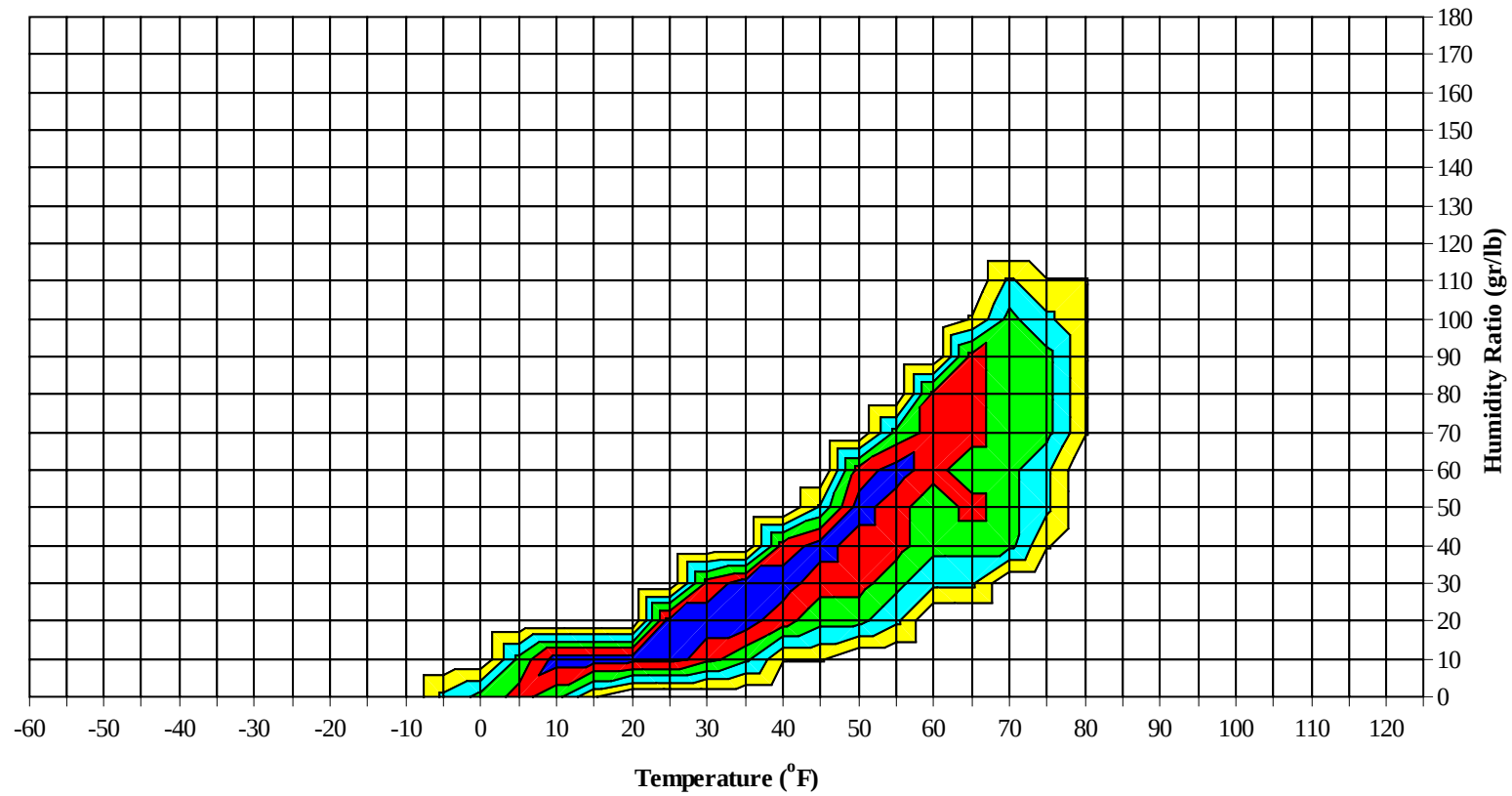


No Precipitation Data Available

HALIFAX CN

WMO No. 713953

Long Term Psychrometric Summary

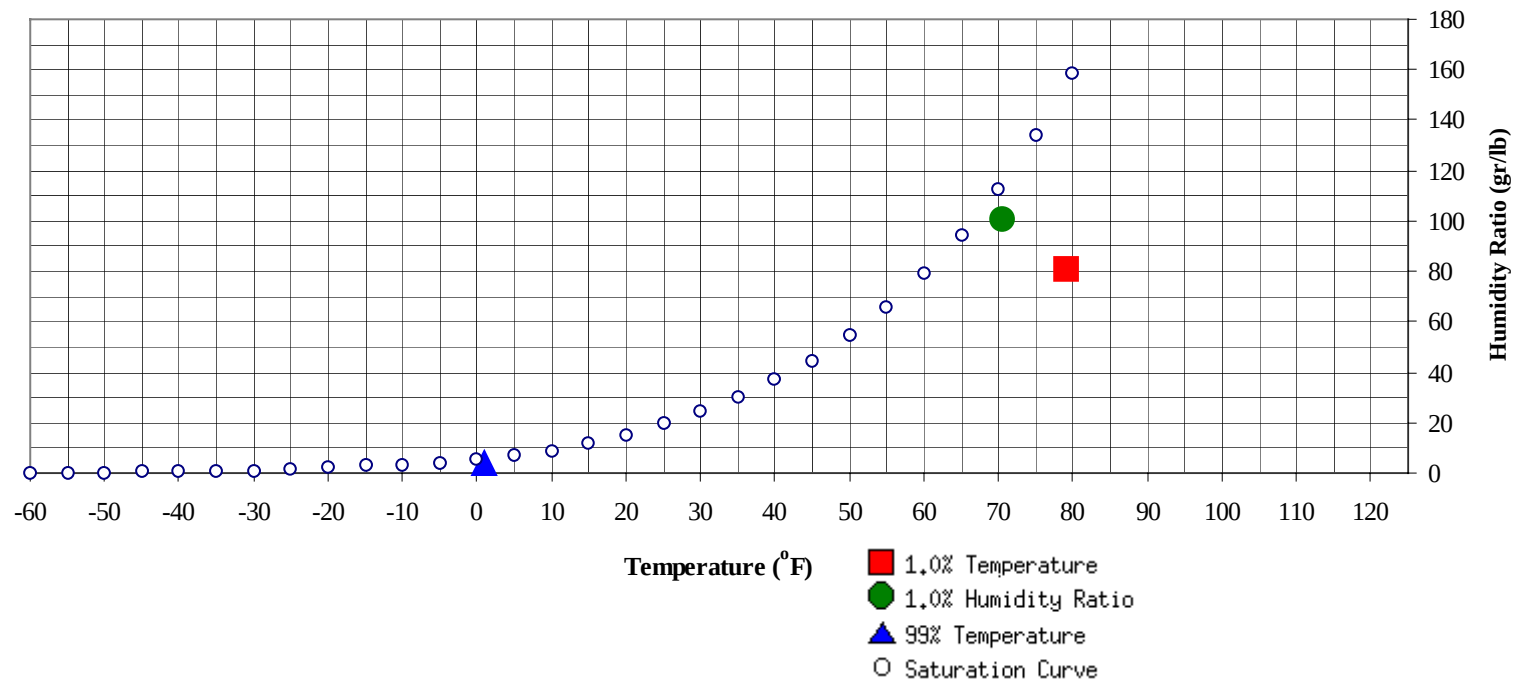


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

HALIFAX CN

WMO No. 713953

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	1	3.9	0.8		100.8	70.6	68.1	66.9	32.7

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	79	80.5	66.7	31.6

HALIFAX CN

WMO No. 713953

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

Period of Record = 1973 to 1993

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		
90 / 94															
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64												0	0	0	53.3
55 / 59							0	0	0	41.5		2	0	2	48.8
50 / 54	1	3	2	6	50.6	1	1	0	2	48.3	1	7	3	11	46.3
45 / 49	5	6	4	15	45.7	3	6	4	13	45.0	7	20	11	38	43.1
40 / 44	7	8	6	21	40.9	3	8	6	17	40.5	9	23	15	47	39.2
35 / 39	18	25	22	65	36.0	13	22	16	51	35.5	21	47	39	107	34.4
30 / 34	33	36	35	104	30.8	29	39	34	102	30.4	57	62	66	185	29.9
25 / 29	31	41	39	111	24.9	37	43	46	125	24.8	55	41	54	150	24.6
20 / 24	25	29	29	83	20.4	22	31	32	85	20.2	32	16	21	69	20.0
15 / 19	35	37	35	107	15.9	35	31	35	101	15.9	31	18	22	71	15.6
10 / 14	28	31	36	95	10.7	31	21	22	74	10.7	18	8	13	39	10.7
5 / 9	32	20	24	76	5.9	25	14	16	55	5.7	11	2	4	17	5.8
0 / 4	21	8	12	41	0.8	17	5	9	31	0.6	5	1	0	6	1.2
-5 / -1	8	2	3	13	-3.6	6	2	2	10	-3.8	0	0		0	-4.2
-10 / -6	3	1	1	5	-7.3	2	1	0	3	-7.6	0	0		0	-7.7
-15 / -11	1	0	0	1	-12.7	1	0	0	1	-11.5					
-20 / -16	0	0		0	-16.0	0		0	0	-16.6					

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.

HALIFAX CN

WMO No. 713953

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

Period of Record = 1973 to 1993

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		
90 / 94						0	0	0	66.4		0			0	70.9
85 / 89						1	0	1	67.2		2	1	3	70.4	
80 / 84						1	1	2	65.4		0	5	1	6	67.2
75 / 79						3	1	4	62.0		0	19	6	25	63.6
70 / 74		1	0	1	54.8	0	10	3	13	58.1	2	40	15	57	61.1
65 / 69		2	0	2	54.8	0	13	5	18	56.4	4	36	21	61	58.9
60 / 64		6	2	8	53.2	2	34	14	50	53.3	23	58	50	131	56.9
55 / 59	0	13	6	19	48.8	11	56	32	99	50.9	68	47	67	182	53.9
50 / 54	6	33	16	55	46.0	42	58	58	158	48.2	83	23	50	156	49.8
45 / 49	19	49	34	102	42.3	67	39	62	168	43.7	45	6	23	74	44.8
40 / 44	25	37	35	97	38.6	49	19	35	103	39.6	12	1	5	18	40.3
35 / 39	56	59	66	181	34.7	59	11	31	101	35.9	3	1	1	5	37.0
30 / 34	90	33	64	187	30.3	18	2	6	26	31.1					
25 / 29	34	6	14	54	25.1	1	0	0	1	25.8					
20 / 24	7	1	2	10	19.8	0		0	0						
15 / 19	3	0	0	3	16.3										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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HALIFAX CN

WMO No. 713953

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

Period of Record = 1973 to 1993

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		
90 / 94		0		0	78.0	0	0	0	0	72.0					
85 / 89		2	0	2	70.6	0	2	0	2	71.9					
80 / 84		14	3	17	68.7	3	16	3	22	69.4	0	1	0	1	69.1
75 / 79	0	49	16	65	65.2	14	43	14	71	66.8	1	7	1	9	66.4
70 / 74	4	72	40	116	63.0	38	64	38	140	64.6	6	25	6	37	62.9
65 / 69	22	47	47	116	62.2	53	57	53	163	62.7	17	36	17	70	61.2
60 / 64	95	45	82	222	59.8	79	49	80	208	59.5	53	76	53	182	58.2
55 / 59	87	15	47	149	55.0	45	15	45	105	54.9	71	59	71	202	53.8
50 / 54	38	3	11	52	51.0	14	2	14	30	50.0	56	29	56	141	49.4
45 / 49	3	0	1	4	46.4	1		1	2	44.8	28	6	28	62	44.3
40 / 44										40.5	6	1	6	13	39.9
35 / 39											1	0	1	2	36.3
30 / 34															29.8
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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HALIFAX CN

WMO No. 713953

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

Period of Record = 1973 to 1993

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		
90 / 94															
85 / 89															
80 / 84															
75 / 79		0		0	65.3										
70 / 74	0	2	0	2	63.7										
65 / 69	1	7	1	9	62.3										
60 / 64	8	28	11	47	58.7	2	4	1	7	59.7					
55 / 59	23	46	32	101	53.9	7	13	9	29	54.7	0	1	1	2	54.3
50 / 54	35	57	49	141	48.8	17	26	19	62	50.1	7	7	5	19	50.7
45 / 49	50	57	56	163	43.4	25	37	34	96	44.3	10	13	11	34	45.6
40 / 44	38	31	42	111	39.2	24	36	29	89	39.5	11	14	12	37	40.6
35 / 39	60	15	43	118	35.1	44	56	52	152	34.7	23	34	29	86	35.5
30 / 34	29	4	12	45	30.4	59	42	55	156	29.9	47	52	52	152	30.3
25 / 29	3	0	2	5	26.0	39	19	28	86	24.9	41	45	44	131	24.9
20 / 24	0		0	0	21.5	15	4	8	27	20.4	24	26	26	76	20.5
15 / 19						7	2	4	13	16.0	32	25	29	86	16.0
10 / 14						2	0	1	3	11.4	25	18	21	64	10.8
5 / 9											16	9	10	35	5.9
0 / 4											9	3	5	17	0.7
-5 / -1											2	0	1	3	-3.8
-10 / -6											1	0	0	1	-7.1
-15 / -11															
-20 / -16															

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WMO No. 713953

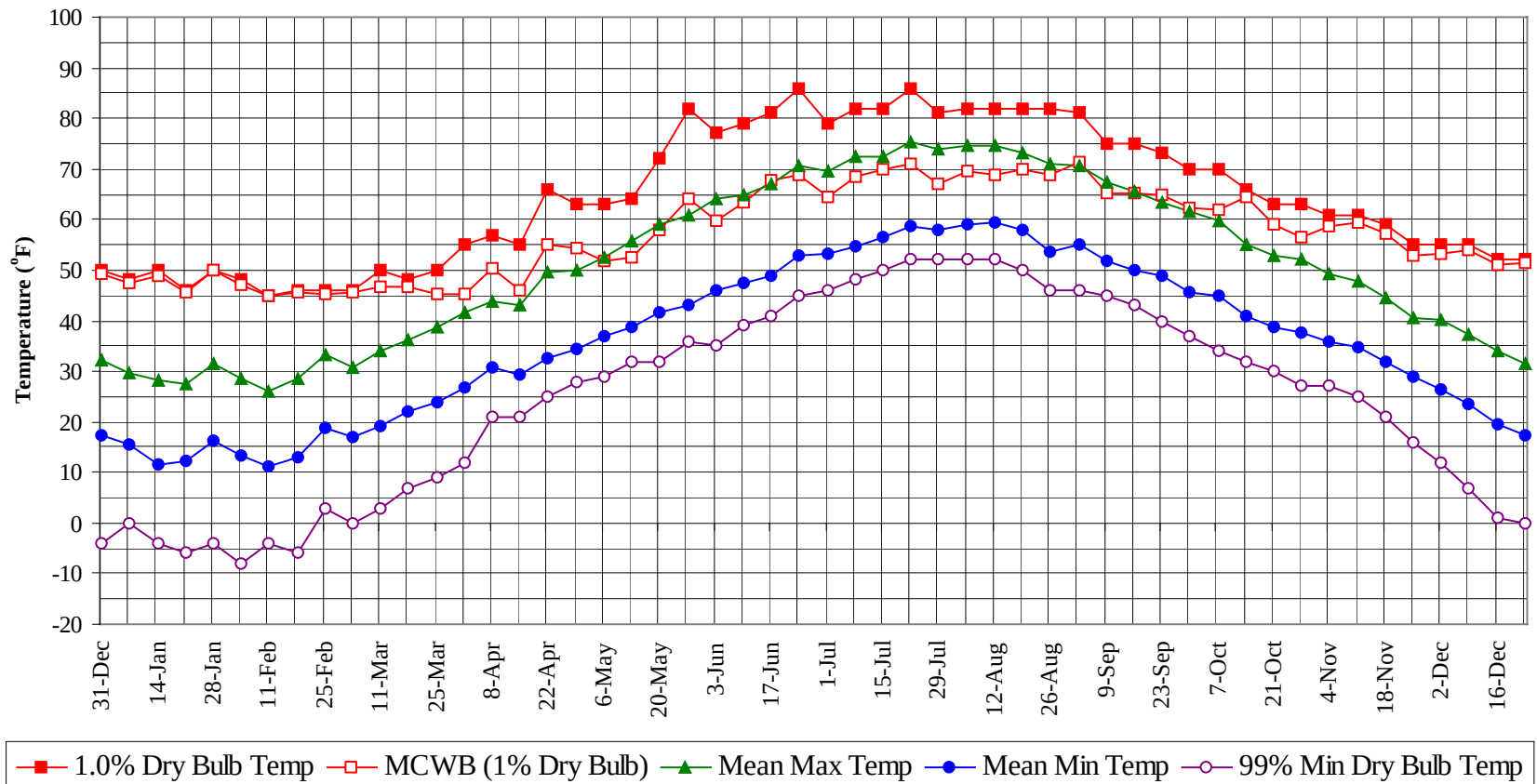
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1993

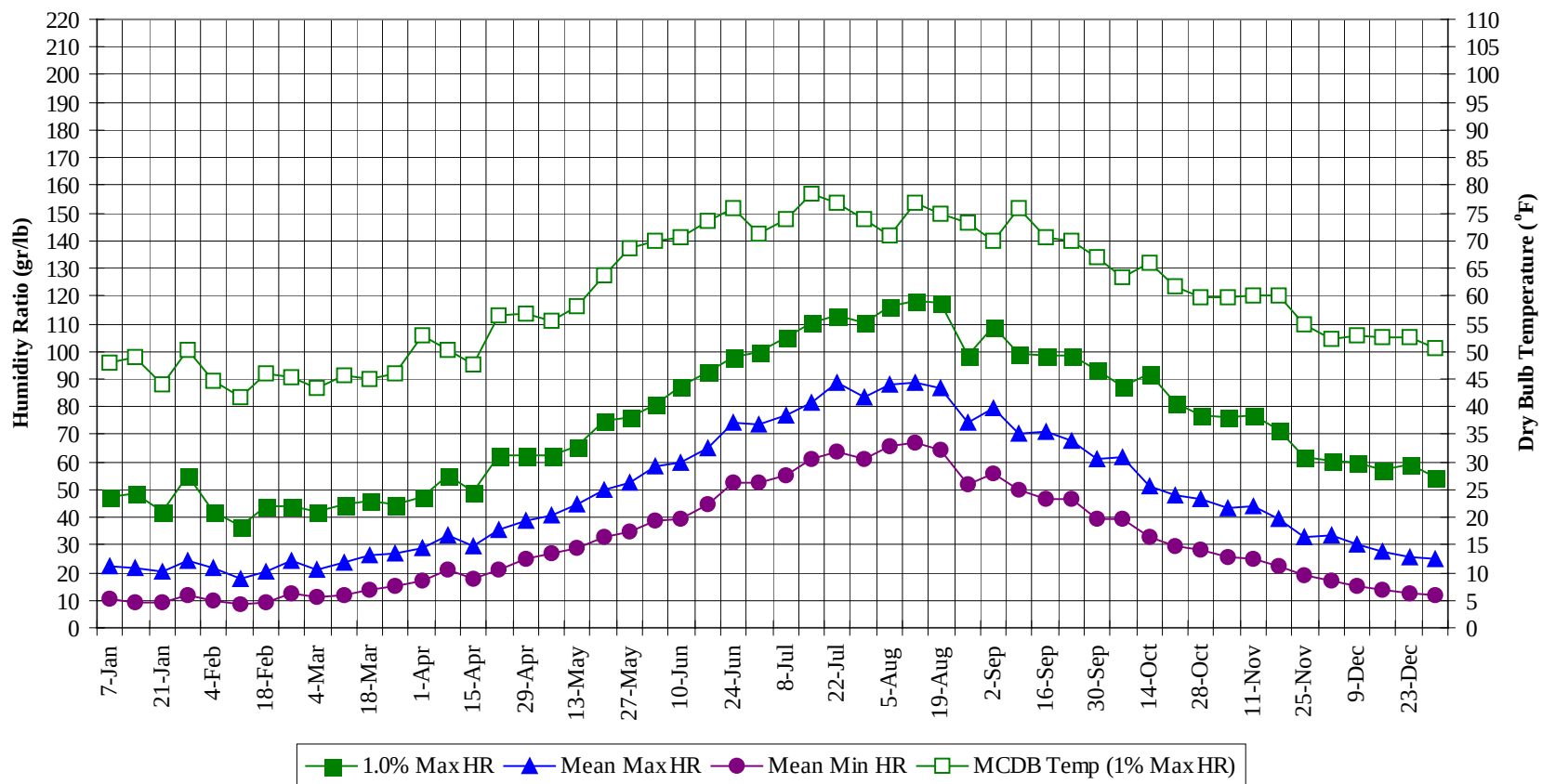
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
90 / 94		1	0	1	70.1
85 / 89		7	1	8	70.6
80 / 84	0	37	9	46	68.7
75 / 79	0	119	37	156	65.5
70 / 74	13	208	101	322	63.0
65 / 69	65	194	141	400	61.4
60 / 64	246	296	288	830	58.5
55 / 59	324	264	303	891	53.8
50 / 54	329	248	279	856	49.1
45 / 49	287	241	266	794	43.8
40 / 44	194	180	192	566	39.5
35 / 39	303	271	302	876	35.1
30 / 34	366	274	328	968	30.3
25 / 29	246	201	231	678	24.9
20 / 24	127	110	122	359	20.3
15 / 19	146	117	130	393	15.9
10 / 14	108	81	95	284	10.8
5 / 9	87	47	57	191	5.8
0 / 4	54	19	28	101	0.8
-5 / -1	17	5	6	28	-3.7
-10 / -6	7	3	2	12	-7.4
-15 / -11	1	0	0	1	-12.2
-20 / -16	1	0	0	1	-16.3

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Annual Summary of Temperatures

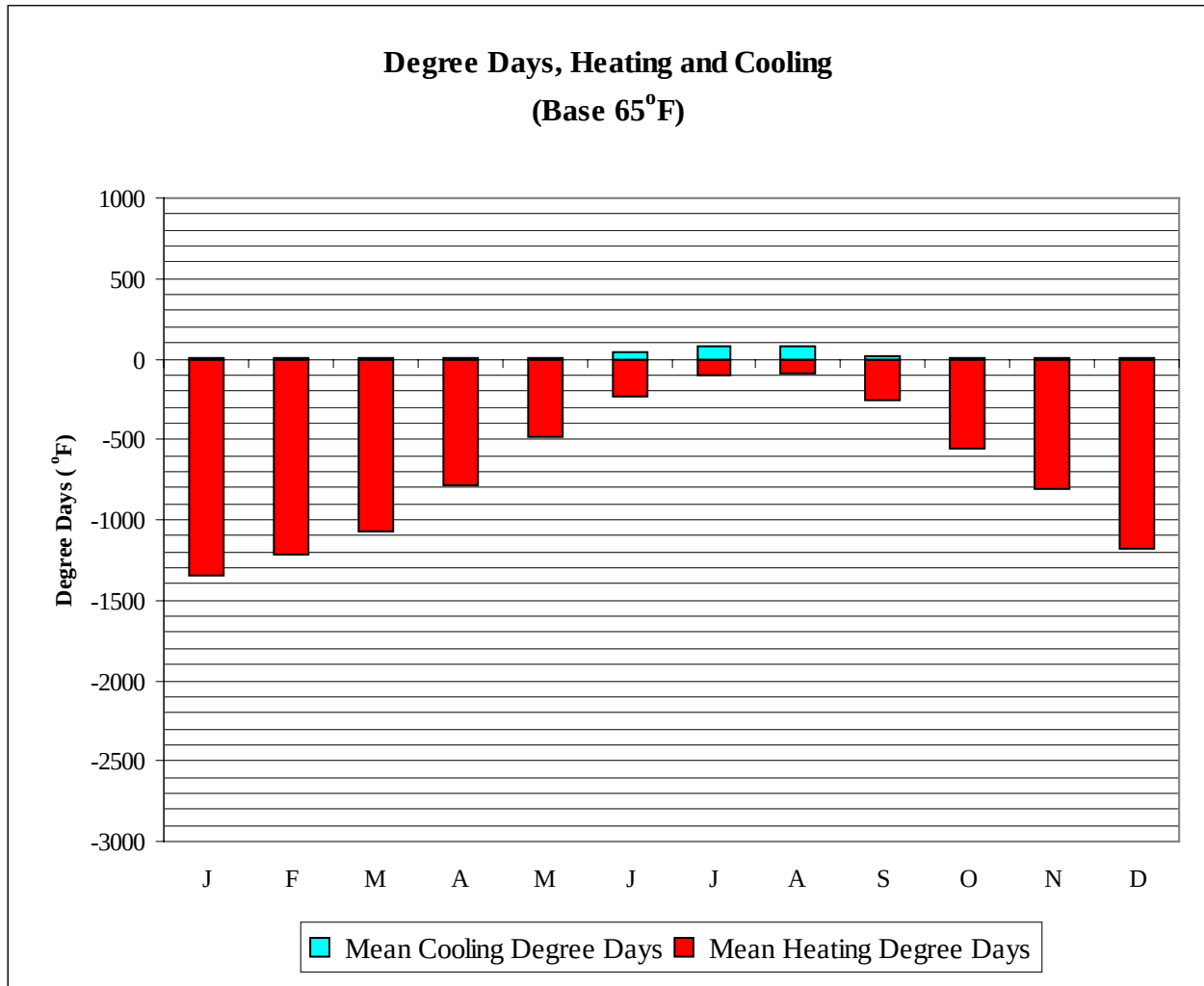


Long Term Humidity and Dry Bulb Temperature Summary



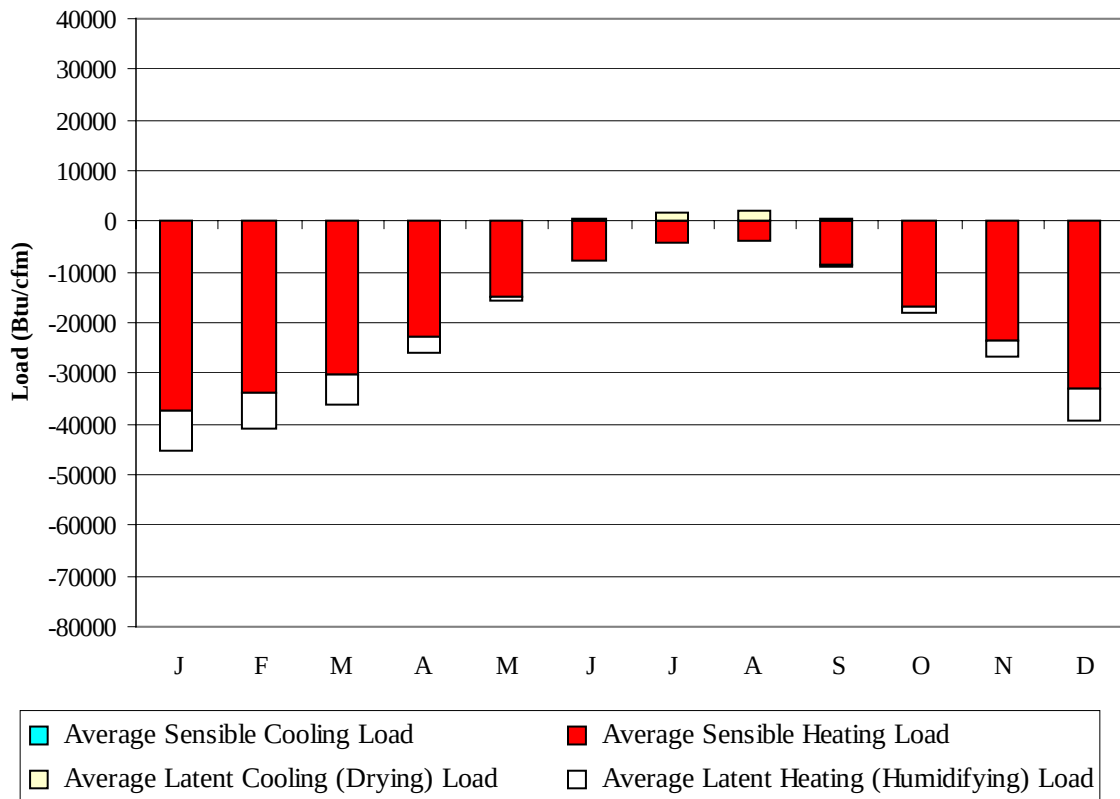
HALIFAX CN**WMO No. 713953****Long Term Dry Bulb Temperature and Humidity Summary**

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	48.0	47.4	29.7	15.4	0.0	47.6	48.1	22.5	10.7
14-Jan	50.0	48.9	28.2	11.6	-4.0	48.3	48.9	22.0	9.0
21-Jan	46.0	45.5	27.5	12.1	-6.0	42.0	43.9	20.5	9.4
28-Jan	50.0	49.9	31.3	16.1	-4.0	55.3	50.1	24.4	11.7
4-Feb	48.0	47.2	28.8	13.4	-8.0	42.0	44.5	21.4	10.0
11-Feb	45.0	44.8	25.9	11.3	-4.0	37.1	41.6	17.7	8.4
18-Feb	46.0	45.6	28.4	12.9	-6.0	44.1	46.0	20.1	9.0
25-Feb	46.0	45.3	33.4	18.7	3.0	44.1	45.2	24.0	12.6
4-Mar	46.0	45.5	30.9	16.9	0.0	42.0	43.4	20.9	10.9
11-Mar	50.0	46.7	34.1	19.2	3.0	44.8	45.6	23.7	11.9
18-Mar	48.0	46.6	36.2	22.1	7.0	46.2	45.0	26.1	13.9
25-Mar	50.0	45.3	38.7	23.9	9.0	44.8	45.9	26.9	14.8
1-Apr	55.0	45.2	41.6	26.8	12.0	47.6	52.8	29.0	17.2
8-Apr	57.0	50.5	43.6	30.8	21.0	55.3	50.3	33.4	21.1
15-Apr	55.0	46.1	43.2	29.2	21.0	49.0	47.5	29.4	17.7
22-Apr	66.0	54.9	49.4	32.4	25.0	62.3	56.3	35.7	21.2
29-Apr	63.0	54.3	50.0	34.5	28.0	62.3	56.9	38.7	25.0
6-May	63.0	51.9	52.3	36.8	29.0	62.3	55.6	40.8	26.8
13-May	64.0	52.6	55.9	38.6	32.0	65.8	58.2	44.5	29.1
20-May	72.0	57.8	59.1	41.6	32.0	74.9	63.8	50.1	32.9
27-May	82.0	64.1	61.0	43.2	36.0	76.3	68.6	52.8	35.1
3-Jun	77.0	59.8	64.0	46.1	35.0	80.5	70.1	58.3	38.6
10-Jun	79.0	63.2	64.8	47.5	39.0	87.5	70.8	59.6	39.5
17-Jun	81.0	67.8	67.1	48.8	41.0	92.4	73.5	64.7	44.4
24-Jun	86.0	68.9	70.7	52.9	45.0	98.0	75.9	74.3	52.3
1-Jul	79.0	64.3	69.5	53.2	46.0	100.1	71.4	73.5	52.7
8-Jul	82.0	68.5	72.3	54.8	48.0	105.0	73.8	77.0	55.4
15-Jul	82.0	69.7	72.5	56.4	50.0	110.6	78.5	81.4	61.0
22-Jul	86.0	71.1	75.4	58.5	52.0	112.7	77.0	88.8	64.0
29-Jul	81.0	67.0	73.9	57.8	52.0	110.6	74.0	83.7	60.9
5-Aug	82.0	69.4	74.6	58.9	52.0	116.2	71.0	88.1	65.5
12-Aug	82.0	68.9	74.7	59.5	52.0	118.3	76.7	88.9	66.9
19-Aug	82.0	70.1	73.4	58.0	50.0	117.6	74.8	86.9	64.6
26-Aug	82.0	68.8	71.1	53.7	46.0	98.7	73.1	74.2	51.8
2-Sep	81.0	71.5	70.5	54.9	46.0	109.2	70.0	79.4	56.1
9-Sep	75.0	65.1	67.3	51.6	45.0	99.4	75.8	70.6	49.6
16-Sep	75.0	65.0	65.5	50.1	43.0	98.7	70.6	70.9	46.9
23-Sep	73.0	65.0	63.5	49.0	40.0	98.7	69.8	67.8	46.4
30-Sep	70.0	62.2	61.4	45.6	37.0	93.1	66.8	61.2	39.4
7-Oct	70.0	62.1	59.6	44.9	34.0	87.5	63.4	61.9	39.6
14-Oct	66.0	64.4	54.9	40.8	32.0	91.7	66.2	51.2	32.8
21-Oct	63.0	59.0	52.8	38.8	30.0	81.2	61.8	47.9	29.4
28-Oct	63.0	56.5	52.3	37.7	27.0	77.0	59.9	46.8	27.9
4-Nov	61.0	58.7	49.4	35.7	27.0	76.3	59.7	43.6	25.8
11-Nov	61.0	59.3	47.8	34.7	25.0	77.0	59.9	44.2	25.2
18-Nov	59.0	57.3	44.7	31.9	21.0	71.4	60.2	39.5	22.3
25-Nov	55.0	52.9	40.4	29.0	16.0	61.6	55.0	33.0	19.2
2-Dec	55.0	53.1	40.1	26.5	12.0	60.2	52.1	33.6	17.2
9-Dec	55.0	54.1	37.1	23.4	7.0	59.5	52.7	30.4	15.0
16-Dec	52.0	50.9	34.1	19.5	1.0	57.4	52.7	27.6	13.8
23-Dec	52.0	51.5	31.7	17.5	0.0	58.8	52.7	25.3	12.2
31-Dec	50.0	49.4	32.2	17.2	-4.0	54.6	50.6	25.2	11.9



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1348
FEB	0	1213
MAR	0	1071
APR	0	786
MAY	9	489
JUN	36	231
JUL	82	99
AUG	79	95
SEP	16	257
OCT	1	555
NOV	0	812
DEC	0	1181
ANN	223	8137

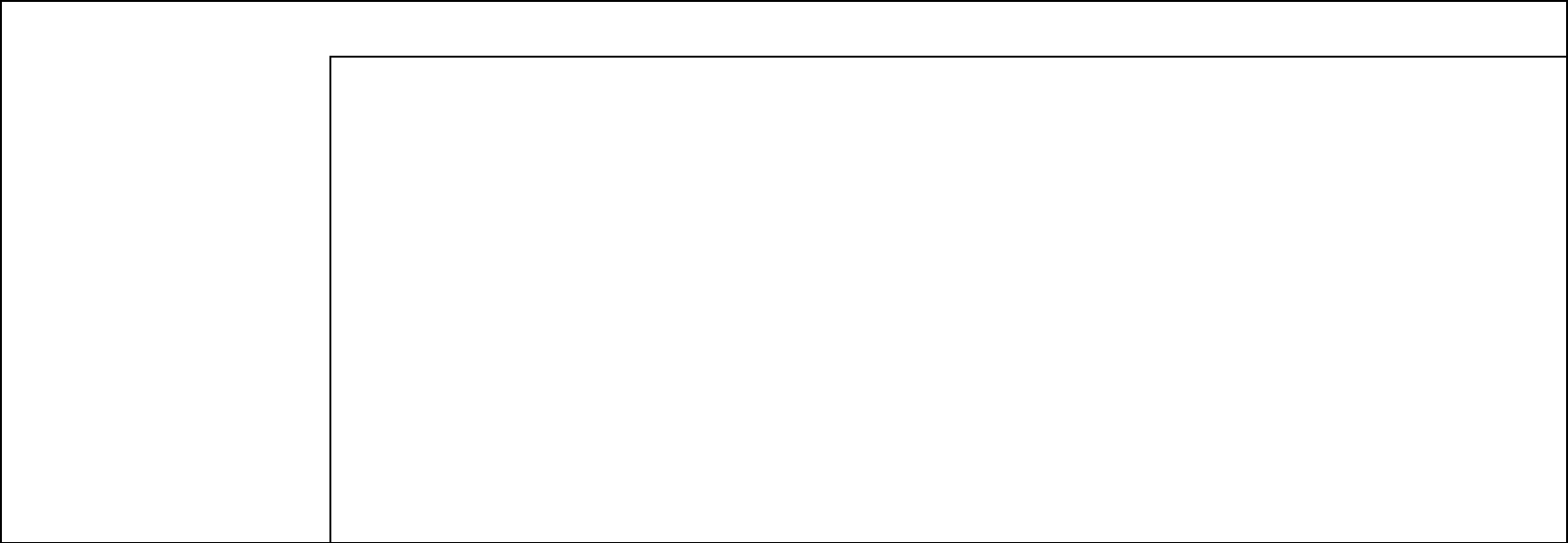
Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	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	-37353	0	-8031
FEB	0	-33627	0	-7410
MAR	0	-30095	0	-6126
APR	0	-22693	0	-3179
MAY	35	-14904	3	-862
JUN	122	-7845	268	-47
JUL	271	-4109	1358	-1
AUG	268	-3937	1948	-3
SEP	19	-8734	384	-88
OCT	0	-16779	61	-1095
NOV	0	-23374	4	-3178
DEC	0	-33015	0	-6485
ANN	715	-236465	4026	-36505

Average Annual Solar Radiation – Nearest Available Site
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation
Data Available

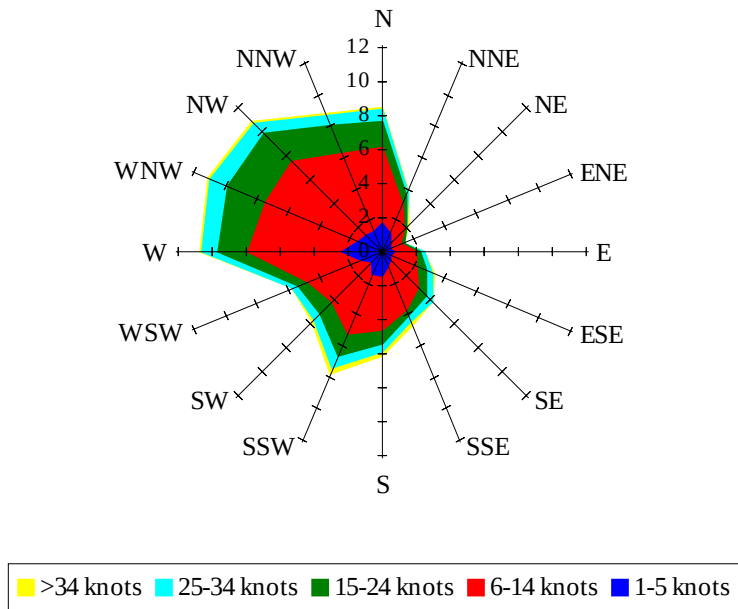


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

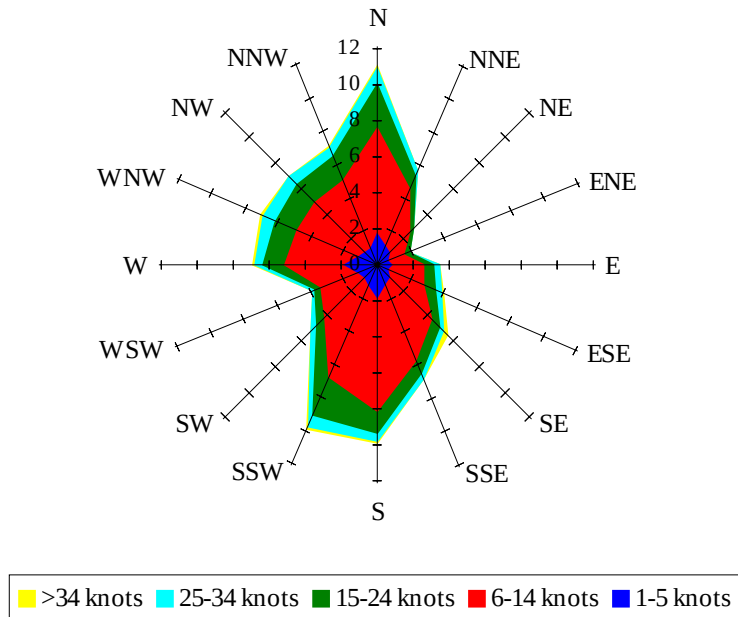
Labels of Percent Frequency on North Axis



Percent Calm = 3.48

Wind Summary - March, April, and May

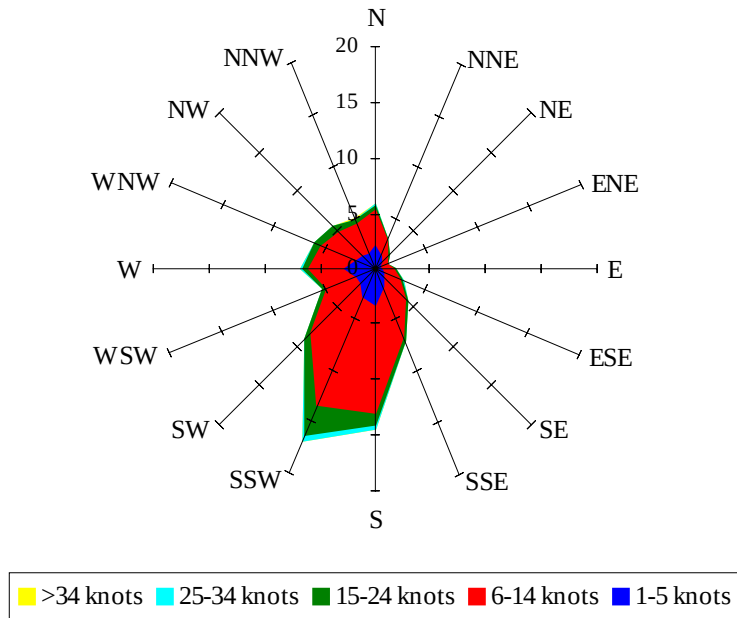
Labels of Percent Frequency on North Axis



Percent Calm = 3.16

Wind Summary - June, July, and August

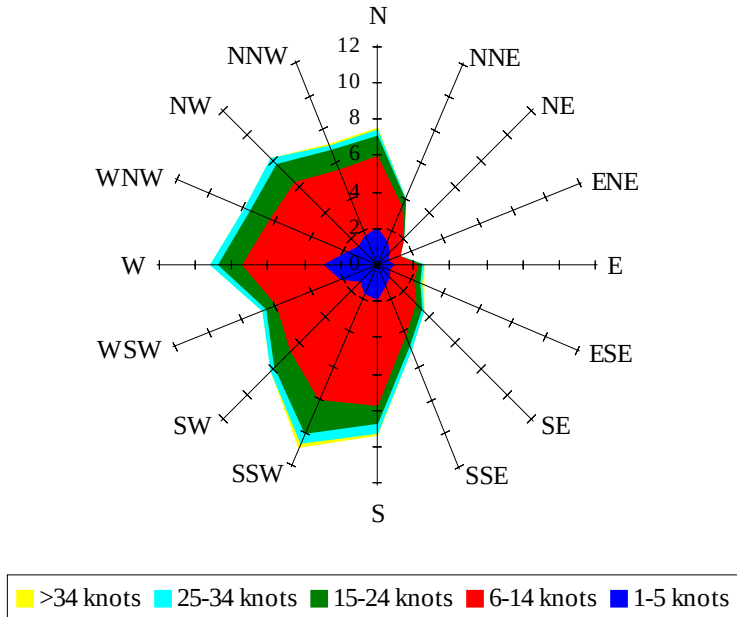
Labels of Percent Frequency on North Axis



Percent Calm = 5.01

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 4.24