

PELLSTON/EMMET MI

Latitude = 45.57 N

WMO No. 727347

Longitude = 84.80 W

Elevation = 719 feet

Period of Record = 1973 to 1996

Average Pressure = 29.17 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	92	74	102	15.6	WSW
0.4% Occurrence	87	71	93	13.3	WSW
1.0% Occurrence	84	70	90	12.9	W
2.0% Occurrence	81	68	84	12.5	W
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	3	2	5	7.0	WNW
99.0% Occurrence	-5	-5	3	4.5	WNW
99.6% Occurrence	-12	-12	2	3.0	WNW
Median of Extreme Lows	-22	-22	1	1.8	NW
	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	87	131	12.9	WSW
0.4% Occurrence	74	83	113	12.8	WSW
1.0% Occurrence	72	80	106	11.9	WSW
2.0% Occurrence	70	78	100	11.2	W
	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	135	84	0.88	11.1	WSW
0.4% Occurrence	118	79	0.77	11.4	WSW
1.0% Occurrence	110	77	0.72	10.5	W
2.0% Occurrence	102	75	0.67	10.2	W
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		3	236	70	472

Other Site Data

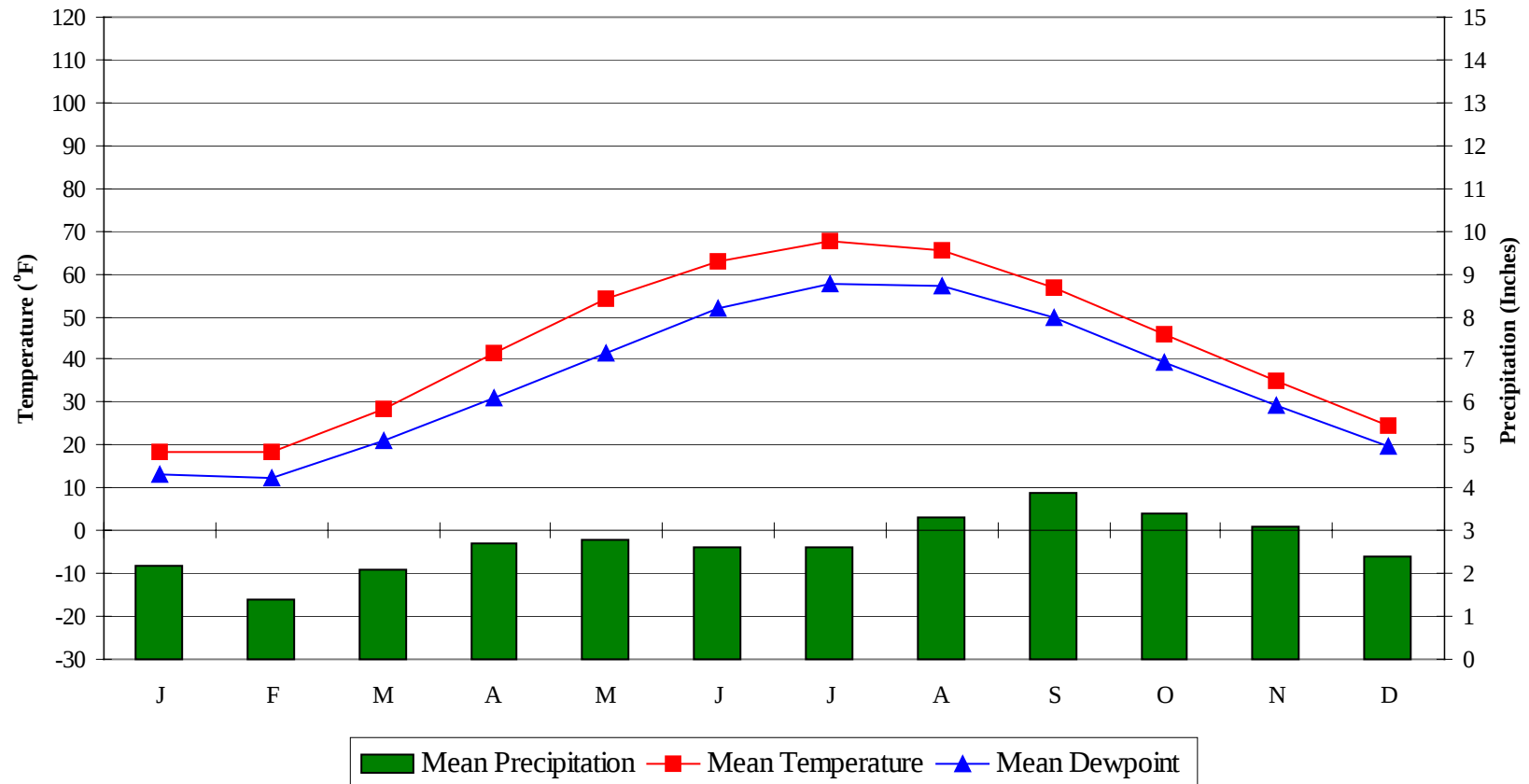
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
5	2.3	90	0.6 + 0.2
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
45.8	N/A	N/A	74

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

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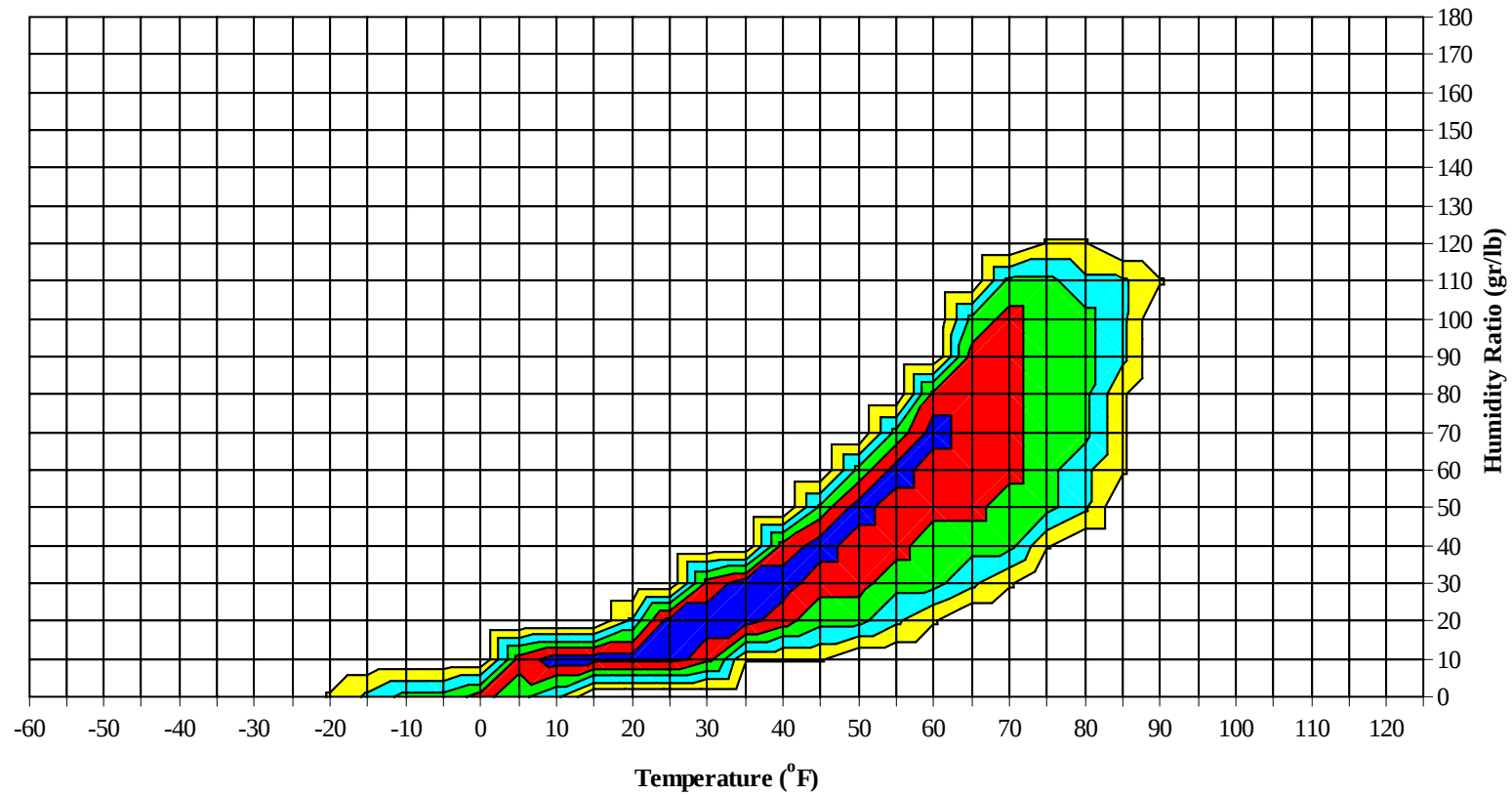
Average Annual Climate



PELLSTON/EMMET MI

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Long Term Psychrometric Summary

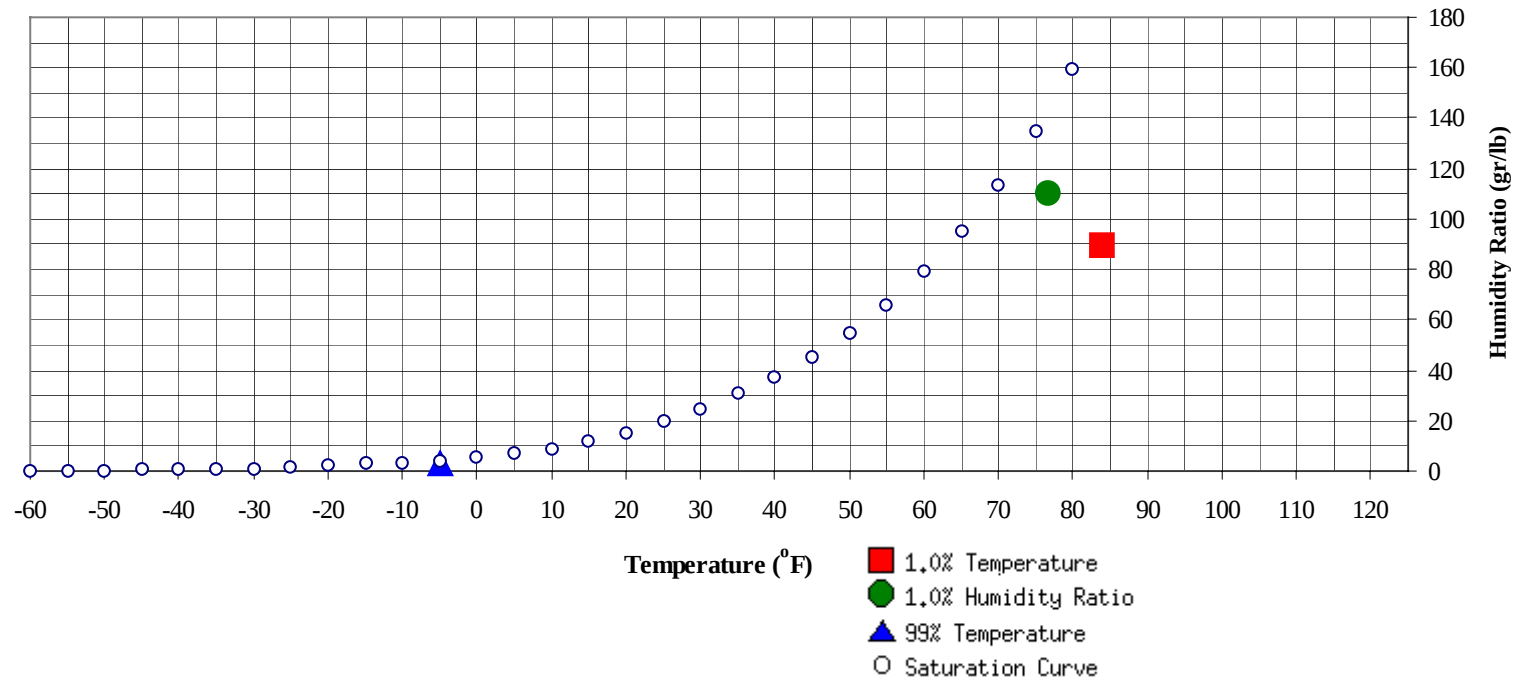


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

PELLSTON/EMMET MI

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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	-5	3.3	-0.7		109.9	76.8	71.4	69.1	35.6

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	84	90	69.9	34.3

PELLSTON/EMMET MI

WMO No. 727347

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		
95 / 99															
90 / 94															
85 / 89															
80 / 84															
75 / 79												0		0	61.0
70 / 74												0	0	0	59.3
65 / 69												1	0	1	54.7
60 / 64											0	2	1	3	51.9
55 / 59							0		0	46.5	0	5	3	8	49.4
50 / 54		0	0	0	47.3	0	1	0	1	44.5	1	9	4	14	45.5
45 / 49	1	1	1	3	43.6	1	3	1	5	41.9	3	16	9	28	41.1
40 / 44	2	4	3	9	38.7	3	8	6	17	37.4	9	29	20	58	37.5
35 / 39	6	14	9	29	34.2	7	22	15	44	33.8	25	48	39	113	34.0
30 / 34	33	35	34	102	30.6	25	30	29	84	30.3	49	52	56	158	30.1
25 / 29	31	41	36	108	25.4	25	35	30	90	25.3	43	31	44	118	25.3
20 / 24	35	46	39	121	20.7	25	38	31	95	20.5	34	25	28	86	20.4
15 / 19	36	41	41	119	15.9	28	31	33	92	15.7	26	18	21	65	15.7
10 / 14	32	30	32	94	11.0	25	25	28	77	10.9	21	8	13	42	11.1
5 / 9	24	18	24	65	6.5	25	15	24	63	6.3	14	4	7	24	6.2
0 / 4	17	9	13	38	1.6	19	9	14	41	1.6	8	2	3	13	1.5
-5 / -1	10	4	6	20	-2.7	11	4	6	21	-2.6	6	0	1	7	-2.8
-10 / -6	8	3	5	16	-7.1	14	3	4	20	-7.0	4	0	0	4	-7.0
-15 / -11	6	2	3	11	-11.9	9	1	2	12	-11.8	2	0	0	2	-11.7
-20 / -16	4	1	1	6	-16.9	3	1	1	5	-16.6	1			1	-16.5
-25 / -21	1	0	0	1	-21.0	2	0	0	2	-21.8	0			0	-20.5
-30 / -26	0	0		0	-27.0	1	0	0	1	-27.2					
-35 / -31	0	0		0	-32.5	0			0	-30.2					
-40 / -36						0			0	-35.5					

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.

PELLSTON/EMMET MI

WMO No. 727347

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		
95 / 99												0	0	0	75.0
90 / 94		0	0	0	64.0		0	0	0	68.4		2	1	3	73.5
85 / 89		1	0	1	64.7		4	1	5	68.4		9	3	12	70.2
80 / 84		2	1	3	64.2		10	4	14	66.1	1	24	10	35	67.3
75 / 79		2	1	3	62.6	0	18	8	25	62.7	5	38	21	63	64.9
70 / 74	1	6	3	10	58.9	2	24	14	40	59.9	8	44	32	85	62.0
65 / 69	2	10	5	17	55.6	6	33	23	63	56.6	20	47	41	108	59.7
60 / 64	3	14	10	26	52.2	17	38	31	86	53.8	36	37	47	120	57.0
55 / 59	5	18	13	37	48.5	25	41	39	105	50.3	53	26	41	119	53.6
50 / 54	11	30	21	62	44.5	39	35	42	116	47.1	50	11	26	88	49.6
45 / 49	16	37	31	84	41.2	46	27	39	112	43.2	37	3	13	53	45.3
40 / 44	28	44	42	114	37.9	48	14	28	90	39.2	21	0	4	25	40.9
35 / 39	50	40	48	138	34.1	38	4	14	56	34.7	9		1	10	36.6
30 / 34	59	25	39	123	30.2	26	1	5	32	30.6					
25 / 29	43	11	20	74	25.3										
20 / 24	21	2	6	29	20.8										
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															
-35 / -31															
-40 / -36															

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PELLSTON/EMMET MI

WMO No. 727347

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		
95 / 99		1	0	1	75.5		0	0	0	75.6					
90 / 94		5	1	6	74.0		2	0	2	74.3		0		0	76.9
85 / 89		17	7	24	71.7	0	11	4	15	71.9		2	1	3	73.2
80 / 84	1	41	19	60	69.0	0	31	12	43	69.4		8	2	10	69.0
75 / 79	7	59	40	106	66.3	5	53	30	88	67.1	1	17	6	24	66.7
70 / 74	19	56	52	128	64.2	18	59	46	123	64.9	7	28	16	51	63.9
65 / 69	42	42	50	134	62.2	40	51	57	148	62.3	15	40	29	84	61.0
60 / 64	59	20	44	123	59.1	53	30	46	129	59.2	25	49	40	114	57.6
55 / 59	54	7	26	87	54.8	53	8	33	94	55.1	39	49	50	139	53.7
50 / 54	38	0	8	46	50.6	39	2	16	57	50.6	52	30	44	127	49.7
45 / 49	19		2	21	46.1	25	0	4	29	46.2	37	13	27	77	45.1
40 / 44	7		0	7	41.6	11	0	1	12	41.5	30	3	18	51	40.6
35 / 39	1			1	37.5	3	0	0	3	36.3	21	0	6	27	36.5
30 / 34						1	0		1	32.5	11		2	13	31.6
25 / 29							0		0		2		0	2	27.8
20 / 24							0		0		0			0	23.1
15 / 19							0		0						
10 / 14							0		0						
5 / 9							0		0						
0 / 4							0		0						
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															
-35 / -31															
-40 / -36															

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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		
95 / 99															
90 / 94															
85 / 89	0			0	68.0										
80 / 84	0	1	0	1	65.0										
75 / 79	0	2	0	2	64.0										
70 / 74	0	6	2	8	61.3		0		0	60.2					
65 / 69	3	13	5	21	58.3	0	1	0	1	57.9					
60 / 64	6	23	14	43	55.4	1	4	1	6	55.1	0	0	0	0	59.3
55 / 59	15	35	25	75	52.0	5	9	5	19	52.7	0	1	0	1	54.2
50 / 54	28	47	34	109	48.1	7	13	10	30	48.4	1	1	0	2	48.7
45 / 49	39	53	48	139	44.0	14	25	20	59	43.6	1	4	2	7	43.3
40 / 44	50	41	55	145	39.6	27	37	32	96	39.1	5	8	6	19	38.8
35 / 39	46	22	41	108	35.0	43	54	49	146	34.5	21	32	25	78	34.5
30 / 34	40	6	21	67	31.0	58	53	59	170	30.3	53	57	56	166	30.5
25 / 29	17	0	4	21	26.9	44	30	42	116	25.6	50	46	50	146	25.6
20 / 24	3	0	0	3	22.1	22	11	15	48	21.0	34	37	35	107	20.9
15 / 19	1			1	18.0	10	3	6	19	16.4	32	31	30	94	15.9
10 / 14						4	2	2	8	11.9	23	19	25	66	11.3
5 / 9						2	0	1	3	6.8	12	7	10	29	6.7
0 / 4						1	0	0	1	1.8	6	2	4	12	1.9
-5 / -1						0			0	-1.3	3	1	3	7	-2.7
-10 / -6											3	1	2	6	-7.0
-15 / -11											2	0	1	3	-11.8
-20 / -16											1	0	0	1	-16.2
-25 / -21											0	0		0	-22.3
-30 / -26											0	0		0	-26.4
-35 / -31															
-40 / -36															

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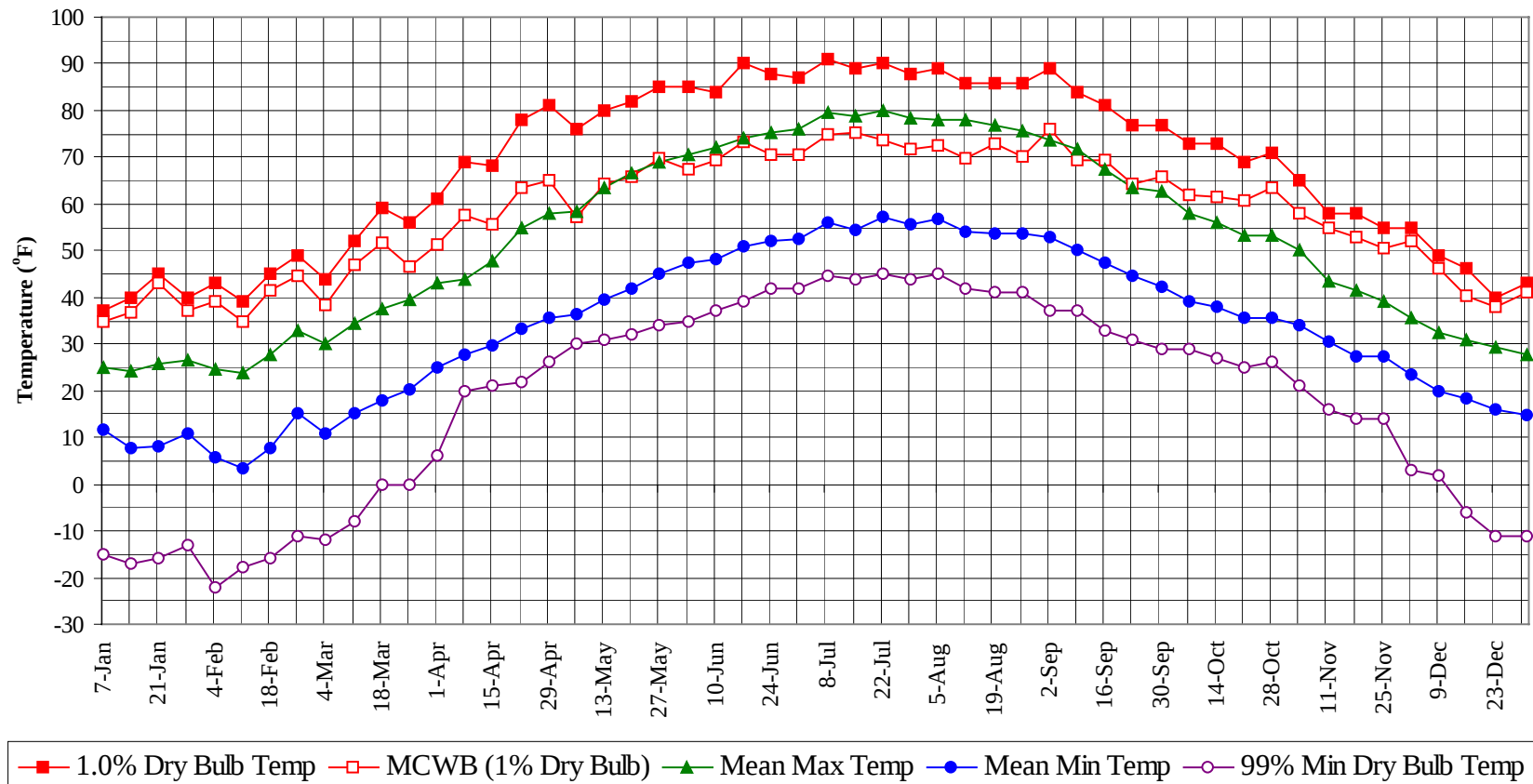
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

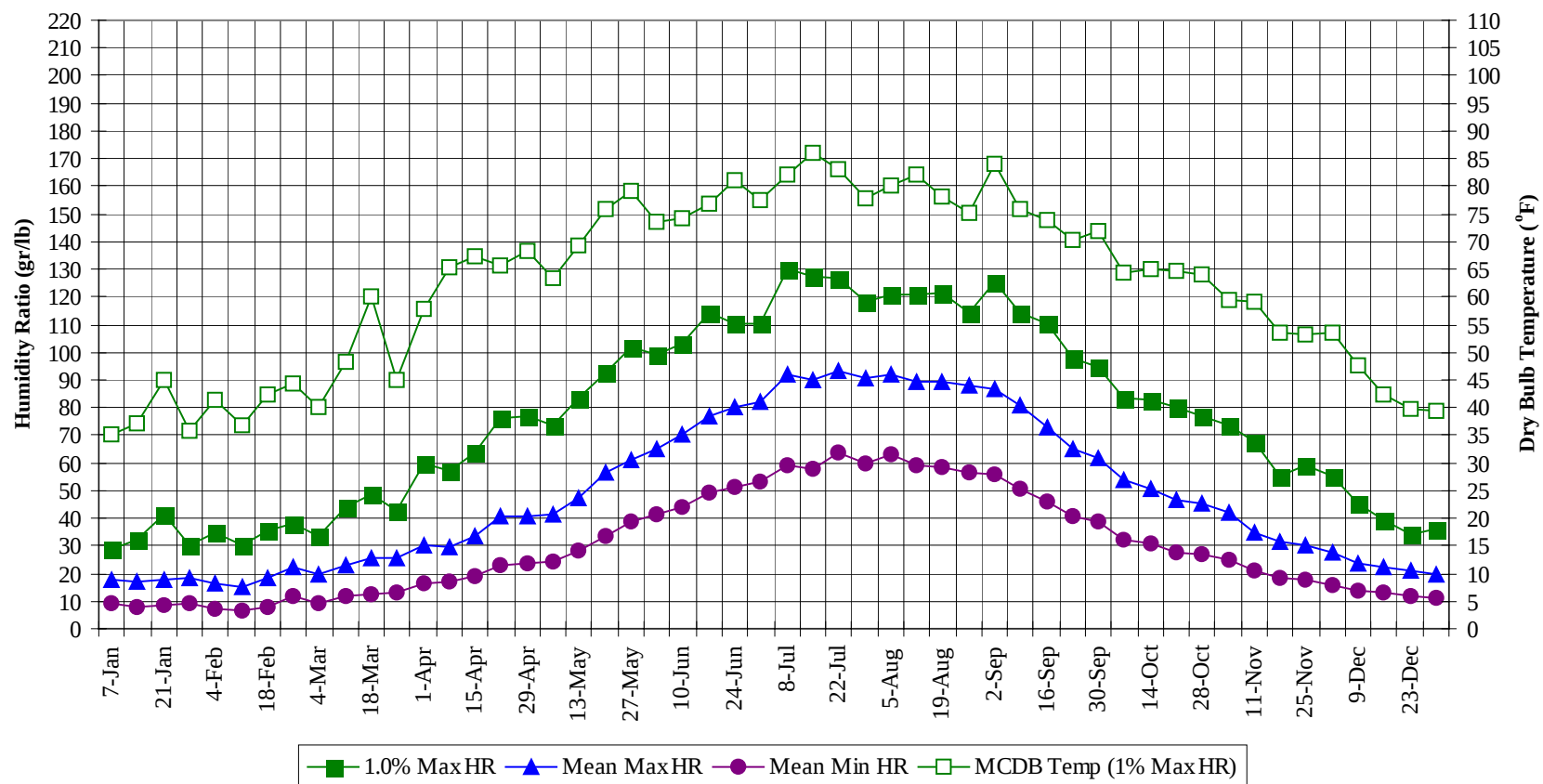
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		1	0	1	75.4
90 / 94		10	3	13	73.8
85 / 89	0	43	16	59	71.1
80 / 84	2	113	46	161	68.4
75 / 79	19	187	104	310	65.9
70 / 74	56	222	162	440	63.4
65 / 69	130	236	209	574	60.6
60 / 64	204	214	231	649	57.2
55 / 59	251	196	233	680	53.0
50 / 54	266	178	204	647	48.4
45 / 49	237	182	196	614	43.7
40 / 44	239	188	212	638	39.1
35 / 39	269	238	246	753	34.5
30 / 34	353	261	303	917	30.4
25 / 29	256	195	228	679	25.5
20 / 24	176	162	157	494	20.7
15 / 19	134	125	135	394	15.8
10 / 14	105	82	100	287	11.1
5 / 9	77	44	65	187	6.4
0 / 4	51	22	33	107	1.6
-5 / -1	31	10	16	57	-2.7
-10 / -6	29	7	12	48	-7.0
-15 / -11	20	3	6	28	-11.8
-20 / -16	10	2	2	14	-16.7
-25 / -21	4	1	0	5	-21.5
-30 / -26	2	0	0	2	-27.1
-35 / -31	1	0		1	-31.5
-40 / -36	0			0	-35.5

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

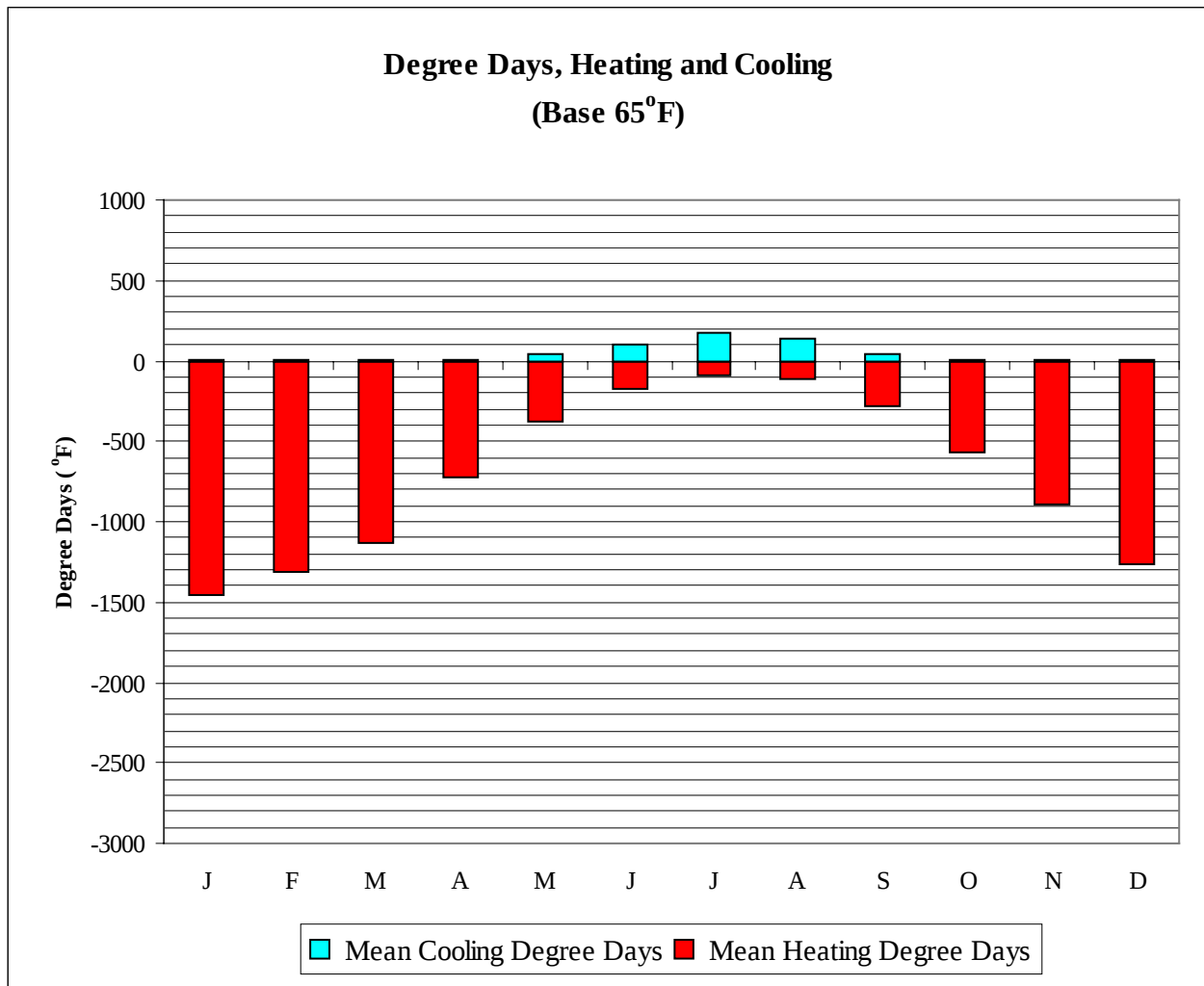


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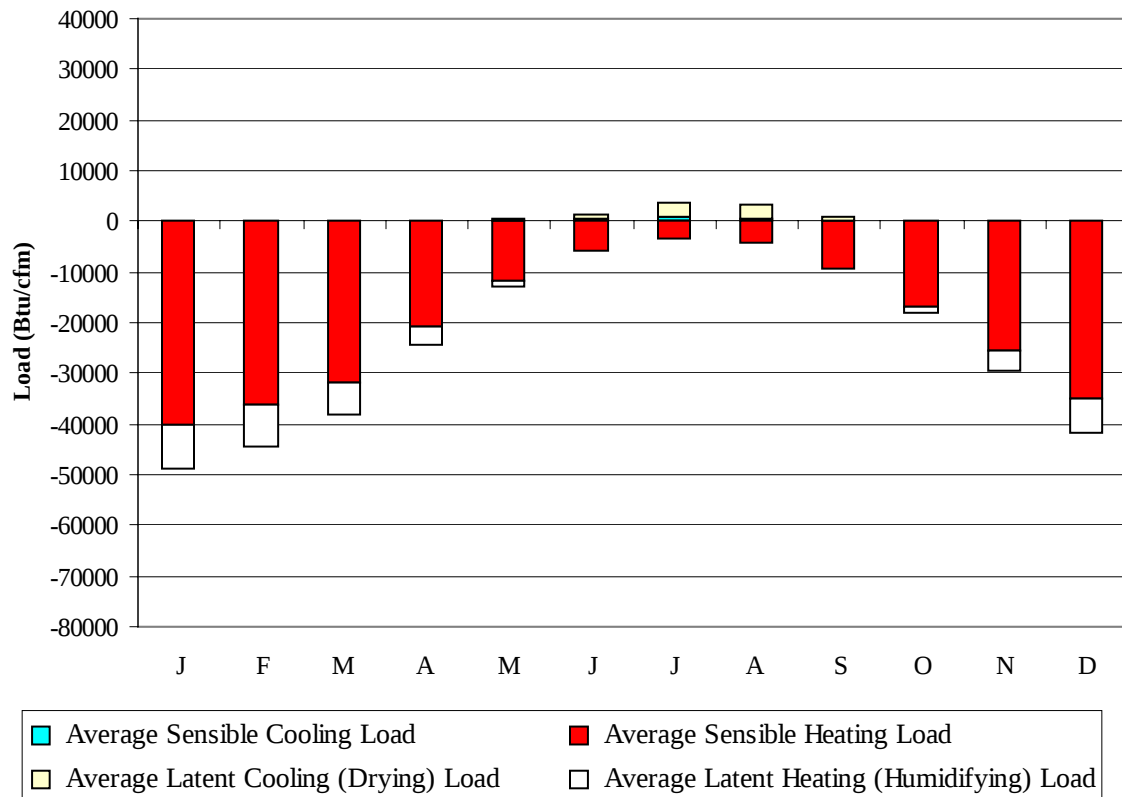
Long Term Dry Bulb Temperature and Humidity Summary

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	37.0	34.7	25.1	11.8	-15.0	28.7	35.1	17.5	9.3
14-Jan	40.0	36.8	24.2	7.6	-17.0	32.2	37.1	17.0	8.1
21-Jan	45.0	43.1	25.6	8.0	-16.0	41.3	45.1	18.0	8.7
28-Jan	40.0	37.0	26.7	11.0	-13.0	30.1	35.9	18.7	9.4
4-Feb	43.0	39.3	24.7	5.8	-22.0	35.0	41.3	16.6	7.5
11-Feb	39.0	34.7	23.7	3.5	-18.0	30.1	36.6	15.3	6.7
18-Feb	45.0	41.7	27.7	7.6	-16.0	35.7	42.3	18.1	8.2
25-Feb	49.0	44.5	32.7	15.4	-11.0	37.8	44.4	22.6	11.9
4-Mar	44.0	38.3	30.3	10.9	-12.0	33.6	40.0	19.6	9.3
11-Mar	52.0	46.8	34.3	15.0	-8.0	44.1	48.4	23.2	12.0
18-Mar	59.0	51.8	37.6	18.1	0.0	48.3	60.1	25.5	12.5
25-Mar	56.0	46.4	39.5	20.3	0.0	42.7	44.8	25.8	13.5
1-Apr	61.0	51.3	43.0	25.0	6.0	59.5	57.6	30.1	16.4
8-Apr	69.0	57.7	44.0	27.9	20.0	57.4	65.4	29.7	17.1
15-Apr	68.0	55.6	47.8	29.6	21.0	63.7	67.2	33.3	18.8
22-Apr	78.0	63.3	54.9	33.1	22.0	76.3	65.7	40.5	22.7
29-Apr	81.0	64.9	57.9	35.8	26.0	77.0	68.4	41.0	23.7
6-May	76.0	57.4	58.2	36.3	30.0	73.5	63.2	41.1	24.5
13-May	80.0	64.2	63.5	39.4	31.0	83.3	69.2	47.5	28.1
20-May	82.0	66.0	66.5	42.0	32.0	92.4	75.8	56.5	33.7
27-May	85.0	69.6	69.2	44.9	34.0	101.5	79.2	60.9	38.9
3-Jun	85.0	67.3	70.5	47.2	35.0	99.4	73.5	65.3	41.7
10-Jun	84.0	69.3	72.2	48.0	37.0	102.9	74.2	70.5	43.9
17-Jun	90.0	73.1	74.1	51.0	39.0	114.1	77.0	76.6	49.2
24-Jun	88.0	70.7	75.2	52.1	42.0	110.6	81.1	80.0	51.4
1-Jul	87.0	70.4	75.9	52.5	42.0	110.6	77.4	81.8	53.0
8-Jul	91.0	74.8	79.5	55.8	44.5	130.2	82.2	91.9	59.1
15-Jul	89.0	75.3	78.7	54.5	44.0	127.4	86.0	90.1	57.7
22-Jul	90.0	73.5	80.0	57.0	45.0	126.7	83.2	93.3	63.6
29-Jul	88.0	71.8	78.2	55.4	44.0	118.3	77.9	90.8	60.0
5-Aug	89.0	72.6	78.0	56.9	45.0	121.1	80.1	92.3	63.1
12-Aug	86.0	69.9	77.9	54.1	42.0	121.1	82.3	89.3	58.8
19-Aug	86.0	73.0	76.8	53.8	41.0	121.8	78.1	89.3	58.7
26-Aug	86.0	70.2	75.8	53.5	41.0	114.1	75.3	88.2	56.7
2-Sep	89.0	75.9	73.7	52.9	37.0	125.3	84.1	86.5	56.1
9-Sep	84.0	69.3	71.9	50.2	37.0	114.1	75.8	81.1	50.8
16-Sep	81.0	69.3	67.2	47.5	33.0	110.6	73.8	73.2	45.9
23-Sep	77.0	64.3	63.4	44.5	31.0	98.0	70.2	65.1	40.8
30-Sep	77.0	65.9	62.8	42.4	29.0	94.5	72.0	61.8	38.6
7-Oct	73.0	61.9	58.1	39.2	29.0	83.3	64.4	54.1	32.0
14-Oct	73.0	61.6	56.1	38.1	27.0	82.6	65.1	50.3	30.9
21-Oct	69.0	60.9	53.4	35.8	25.0	79.8	64.8	46.6	27.4
28-Oct	71.0	63.3	53.4	35.7	26.0	77.0	63.9	45.4	27.0
4-Nov	65.0	58.1	50.0	34.2	21.0	73.5	59.4	42.0	25.1
11-Nov	58.0	54.8	43.5	30.5	16.0	67.9	59.3	35.1	21.0
18-Nov	58.0	53.0	41.3	27.3	14.0	55.3	53.4	31.7	18.3
25-Nov	55.0	50.5	39.1	27.2	14.0	58.8	53.2	30.4	17.7
2-Dec	55.0	52.1	35.6	23.5	3.0	55.3	53.4	27.6	16.1
9-Dec	49.0	46.1	32.4	20.0	2.0	45.5	47.6	23.8	13.7
16-Dec	46.0	40.4	31.0	18.3	-6.0	39.2	42.5	22.6	12.9
23-Dec	40.0	38.1	29.3	16.1	-11.0	34.3	39.7	21.1	12.0
31-Dec	43.0	40.9	27.6	14.8	-11.0	36.4	39.5	19.9	11.1



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1450
FEB	0	1313
MAR	0	1135
APR	8	722
MAY	42	381
JUN	98	169
JUL	170	87
AUG	133	111
SEP	40	287
OCT	5	568
NOV	0	898
DEC	0	1258
ANN	497	8379

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	-40003	0	-8742
FEB	0	-36224	0	-8074
MAR	0	-31833	0	-6328
APR	36	-20952	3	-3237
MAY	203	-11897	222	-971
JUN	544	-5885	883	-34
JUL	1043	-3322	2683	-2
AUG	665	-4127	2549	-8
SEP	144	-9355	760	-131
OCT	8	-16977	27	-1051
NOV	0	-25606	0	-3725
DEC	0	-35013	0	-6883
ANN	2643	-241194	7127	-39186

Average Annual Solar Radiation – Nearest Available Site

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

City: SAULT STE. MARIE
 State: MI
 WBAN No: 14847
 Lat(N): 46.47
 Long(W): 84.37
 Elev(ft): 725

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.721
 Vert Gap: 0.329

AVERAGE INCIDENT SOLAR RADIATION (Btu/sq.ft./day), Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Global	490	820	1240	1510	1790	1920	1910	1580	1120	710	430	380	1160
	Std Dev	27	53	91	127	143	140	110	110	101	47	34	31	32
	Minimum	430	710	990	1310	1500	1620	1740	1340	920	620	340	280	1100
	Maximum	530	900	1410	1790	2130	2130	2160	1800	1360	850	500	450	1220
	Diffuse	340	480	660	680	710	760	720	650	550	410	310	280	550
Clear Day	Global	670	1050	1600	2130	2500	2660	2560	2200	1680	1130	710	560	1620
NORTH	Global	180	270	380	430	540	610	580	450	340	240	170	150	360
	Diffuse	180	270	380	420	470	510	490	420	340	240	170	150	340
Clear Day	Global	150	210	300	410	590	710	650	450	310	220	150	120	360
EAST	Global	340	550	800	930	1050	1080	1100	930	690	460	280	260	710
	Diffuse	230	340	480	510	560	590	580	510	410	290	200	180	410
Clear Day	Global	590	840	1160	1400	1540	1590	1550	1410	1160	870	610	500	1100
SOUTH	Global	810	1130	1250	1080	960	890	940	1000	960	830	590	640	920
	Diffuse	380	490	580	540	550	560	560	530	470	370	290	310	470
Clear Day	Global	1850	2050	2020	1640	1300	1150	1200	1440	1760	1900	1800	1730	1650
WEST	Global	330	550	800	930	1070	1120	1140	990	720	470	280	260	720
	Diffuse	230	350	480	520	570	600	590	520	410	290	200	190	410
Clear Day	Global	590	840	1160	1400	1540	1590	1550	1410	1160	870	610	500	1100

Average Annual Solar Heat and Illumination – Nearest Available Site

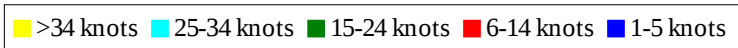
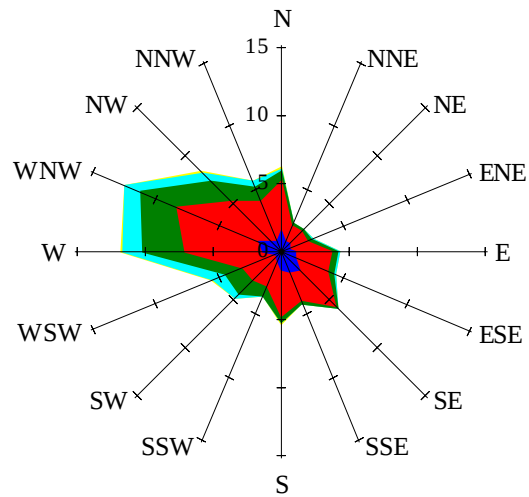
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	310	540	860	1080	1290	1390	1380	1130	780	480	280	240	820
NORTH	Unshaded	130	190	260	290	350	400	380	300	230	170	120	100	240
	Shaded	99	150	210	250	300	340	320	260	190	130	91	80	200
EAST	Unshaded	230	380	560	660	750	770	780	660	490	320	190	180	500
	Shaded	190	320	460	530	590	600	620	530	400	260	160	150	400
SOUTH	Unshaded	610	830	890	730	620	560	590	660	670	600	440	480	640
	Shaded	580	750	660	410	320	330	320	340	440	500	410	450	460
WEST	Unshaded	230	380	560	670	770	800	820	710	510	330	200	180	510
	Shaded	190	320	460	530	610	630	640	570	420	270	160	150	410

AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	25	60	75	66	35	39	74	94	96	77
	M.Cloudy	17	41	52	47	25	23	45	62	63	48
NORTH	M.Clear	7	13	14	14	9	19	14	16	16	14
	M.Cloudy	7	15	18	17	10	12	15	18	18	15
EAST	M.Clear	67	67	22	14	9	78	79	43	16	14
	M.Cloudy	23	35	21	17	10	28	39	31	18	15
SOUTH	M.Clear	30	73	93	81	42	10	32	54	55	36
	M.Cloudy	13	37	48	44	21	9	22	36	37	24
WEST	M.Clear	7	13	14	57	73	10	14	16	37	75
	M.Cloudy	7	15	18	34	31	9	15	18	29	40
M.Clear	(% hrs)	28	29	29	28	28	34	35	34	34	36
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	15	51	72	73	53	2	24	35	25	3
	M.Cloudy	9	28	44	44	31	2	16	22	16	3
NORTH	M.Clear	6	11	14	14	12	1	7	9	8	2
	M.Cloudy	4	11	15	15	11	1	7	10	7	1
EAST	M.Clear	48	72	40	14	12	7	38	10	8	2
	M.Cloudy	14	28	25	15	11	2	14	10	7	1
SOUTH	M.Clear	11	51	76	77	52	5	62	83	65	10
	M.Cloudy	6	22	39	39	24	2	19	26	19	3
WEST	M.Clear	6	11	14	38	71	1	7	9	38	12
	M.Cloudy	4	11	15	24	30	1	7	10	14	3
M.Clear	(% hrs)	25	25	23	23	26	16	18	18	15	17

Wind Summary - December, January, and February

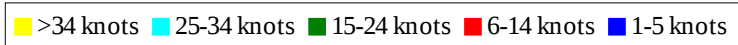
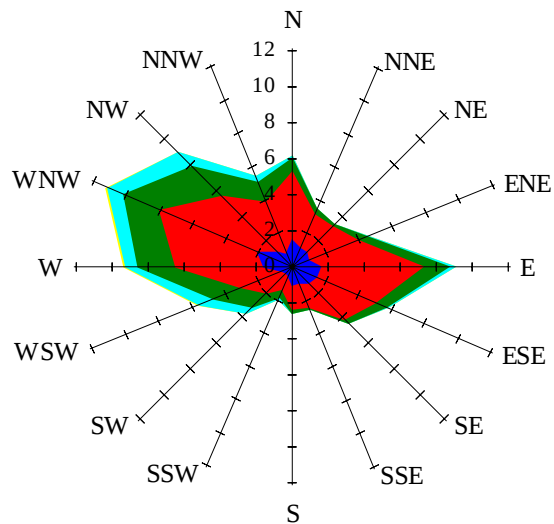
Labels of Percent Frequency on North Axis



Percent Calm = 11.91

Wind Summary - March, April, and May

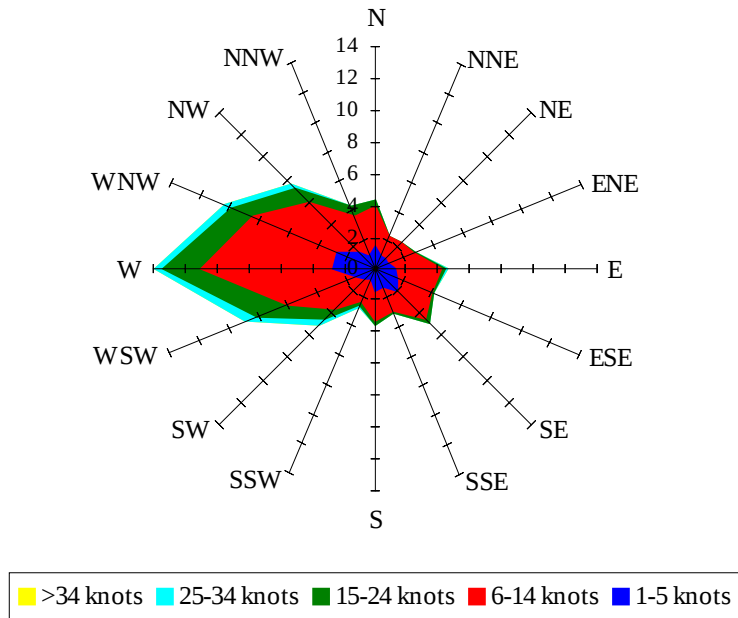
Labels of Percent Frequency on North Axis



Percent Calm = 12.47

Wind Summary - June, July, and August

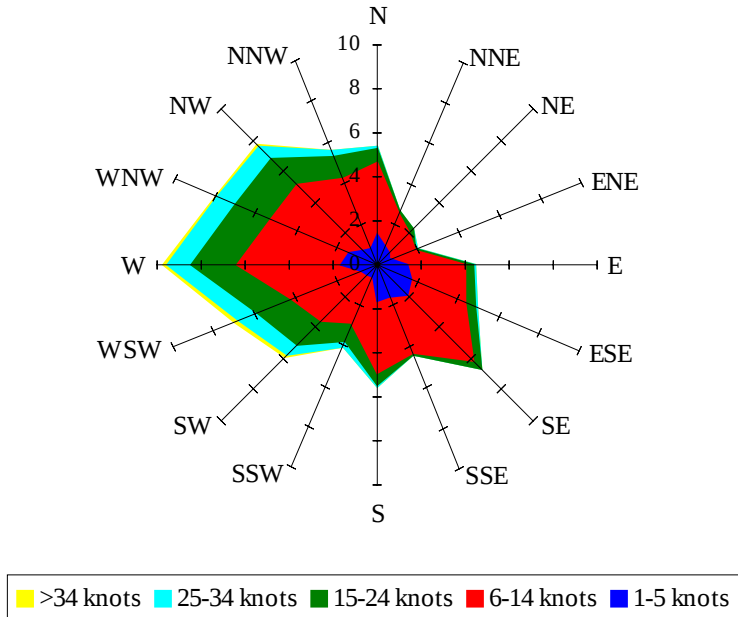
Labels of Percent Frequency on North Axis



Percent Calm = 16.41

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 13.77