

MANSFIELD/LAHM OH

Latitude = 40.82 N

Longitude = 82.52 W

Period of Record = 1973 to 1996

WMO No. 725246

Elevation = 1296 feet

Average Pressure = 28.63 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	75	108	11.2	WSW
0.4% Occurrence	88	73	106	11.0	SW
1.0% Occurrence	86	72	103	11.2	SW
2.0% Occurrence	84	71	100	11.1	SW
Mean Daily Range	16	-	-	-	-
97.5% Occurrence	10	9	7	11.3	W
99.0% Occurrence	4	3	5	11.6	WSW
99.6% Occurrence	-2	-3	4	12.6	WSW
Median of Extreme Lows	-7	-7	3	13.5	WSW
	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	79	88	138	10.7	WSW
0.4% Occurrence	76	84	125	10.9	SW
1.0% Occurrence	75	83	121	11.0	SW
2.0% Occurrence	73	80	114	10.5	SW
	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	142	85	0.90	9.8	SW
0.4% Occurrence	130	81	0.82	10.7	SW
1.0% Occurrence	124	80	0.79	10.6	SW
2.0% Occurrence	116	77	0.74	10.4	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		5	449	224	1086

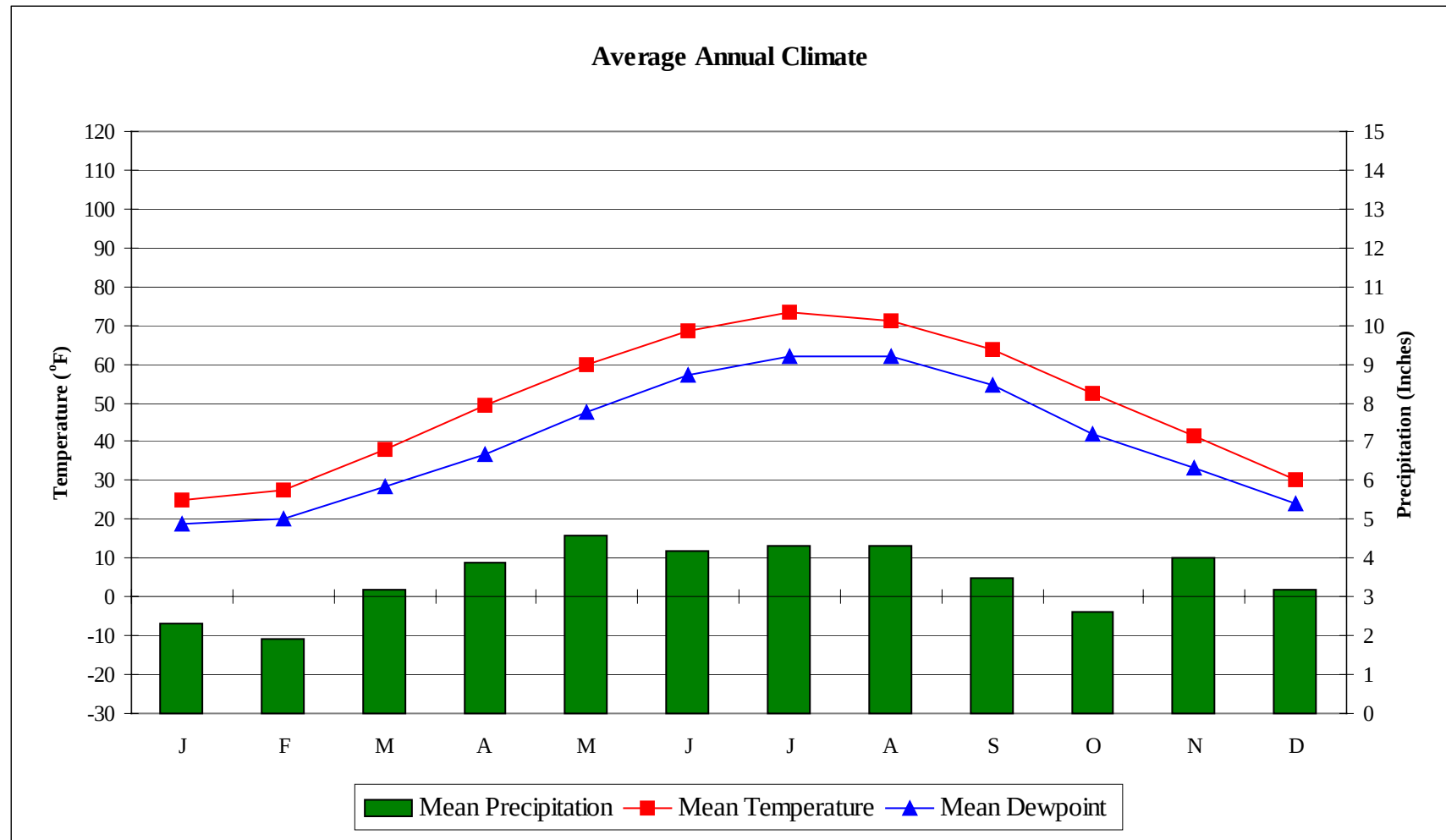
Other Site Data

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
6	2.8	90	1.3 + 0.4
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 (#)
52.6	N/A	17	54

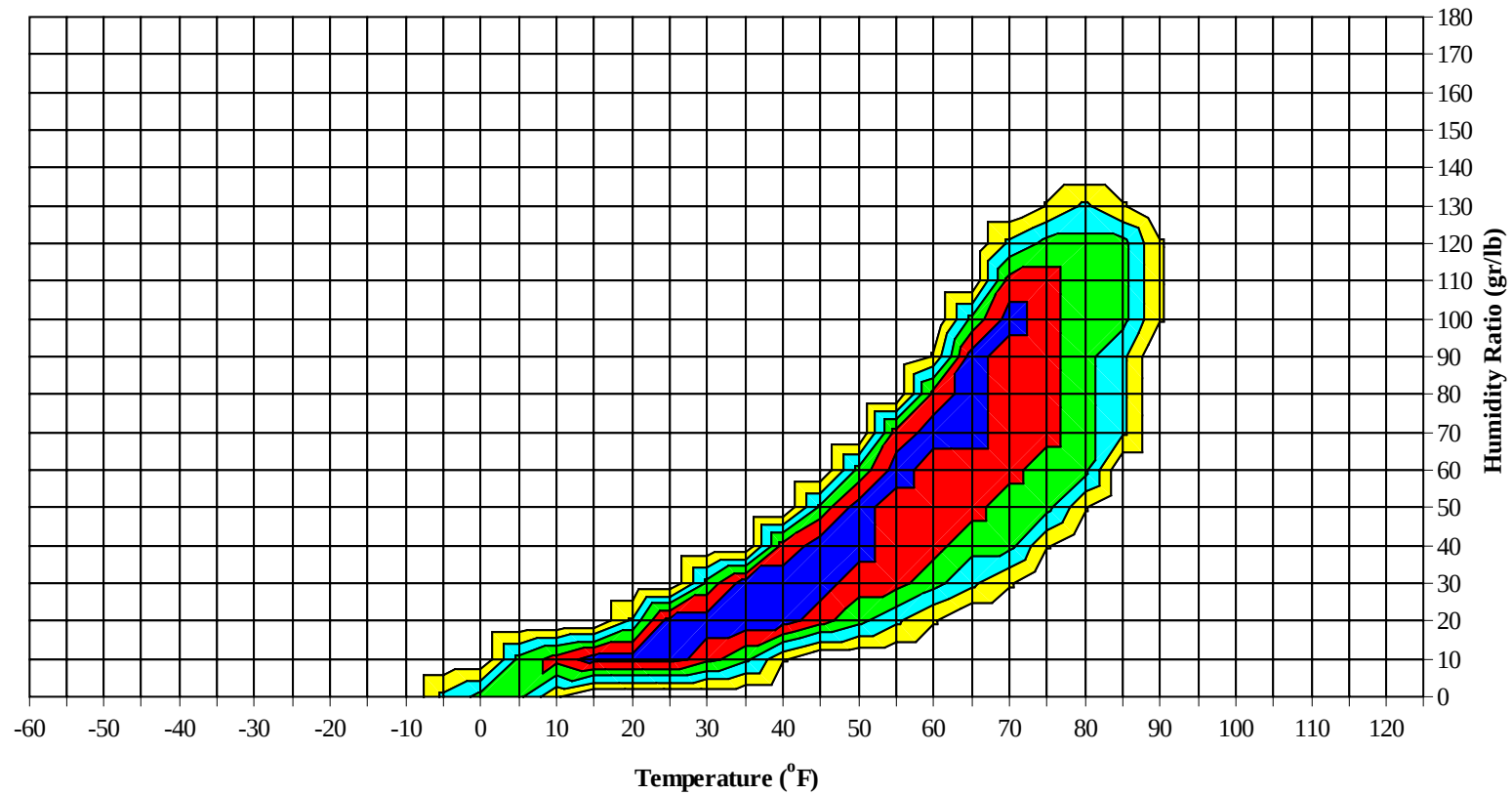
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

MANSFIELD/LAHM OH

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Long Term Psychrometric Summary

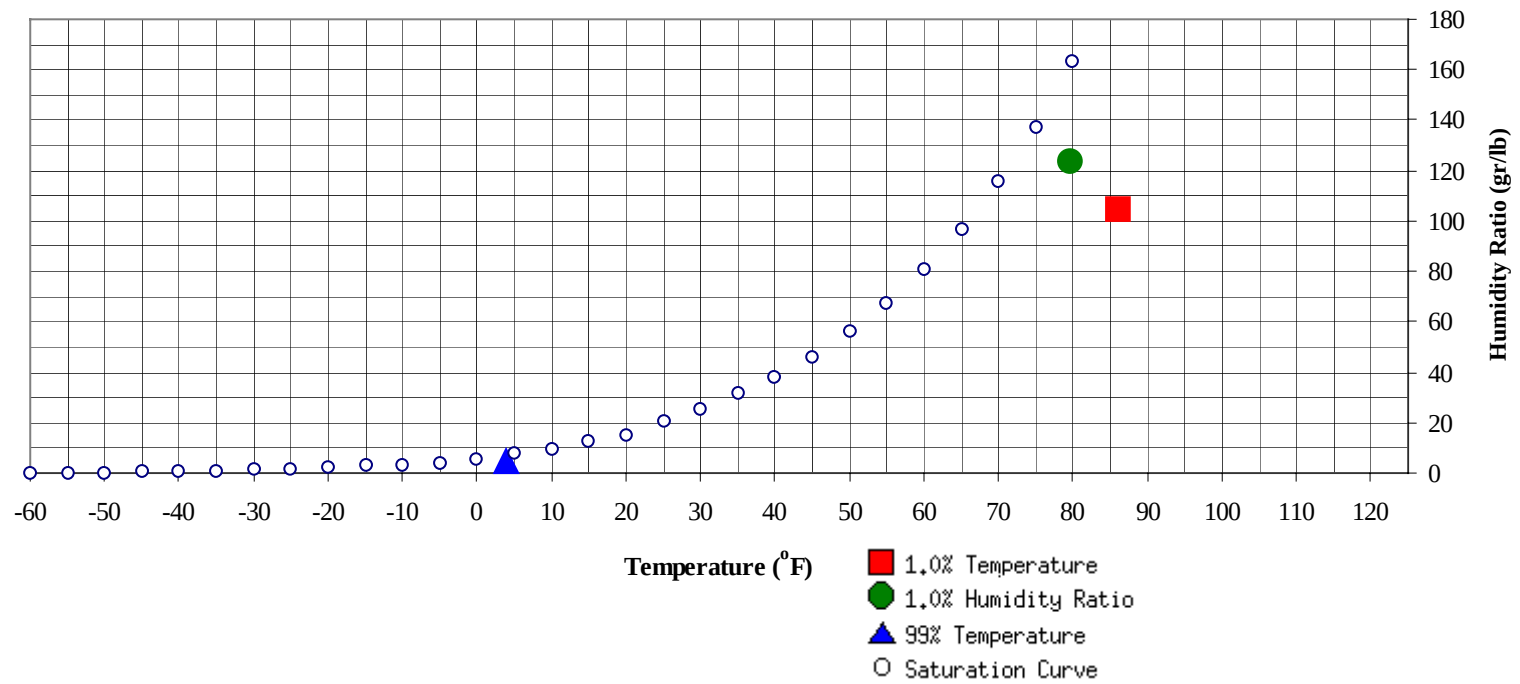


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

MANSFIELD/LAHM OH

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Psychrometric Summary of Peak Design Values



99% Dry Bulb	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
	4	5.1	1.7		123.9	79.7	74.2	72	38.5

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	86	104.4	72.6	37.0

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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															
80 / 84												0		0	59.5
75 / 79												2	0	2	59.0
70 / 74												4	2	6	56.9
65 / 69							0	0	0	61.8		0	7	6	12 55.2
60 / 64	0	1	1	2	56.7	0	2	1	3	52.3	3	11	10	24	53.0
55 / 59	3	2	3	7	53.1	1	5	4	10	49.8	11	18	14	43	49.9
50 / 54	3	4	4	11	47.7	5	9	7	21	47.4	14	21	22	56	46.2
45 / 49	6	8	6	20	42.8	9	13	12	34	42.5	20	27	24	72	41.9
40 / 44	10	14	14	38	38.6	13	21	18	52	37.8	22	34	27	83	37.7
35 / 39	21	30	27	78	34.0	20	28	30	78	33.9	34	38	41	113	33.5
30 / 34	39	48	48	135	29.8	34	36	32	102	29.8	47	41	43	132	29.3
25 / 29	34	40	38	112	25.2	29	34	34	97	24.9	42	23	31	96	25.0
20 / 24	34	34	33	101	20.4	28	29	29	86	20.2	26	13	17	55	20.4
15 / 19	30	26	28	85	15.6	25	21	24	70	15.5	15	6	6	26	15.6
10 / 14	26	19	20	65	11.1	19	14	17	49	10.8	8	3	4	14	11.1
5 / 9	18	10	13	41	6.2	20	8	10	38	6.2	3	1	2	5	6.4
0 / 4	12	5	7	25	1.3	12	4	5	21	1.2	3	0	0	3	1.4
-5 / -1	6	3	3	11	-2.9	5	1	2	8	-3.2	1			1	-2.7
-10 / -6	4	2	2	8	-7.3	3	0	0	3	-6.5	0			0	-5.0
-15 / -11	1	1	1	3	-11.9	0			0	-10.2					
-20 / -16	1	1	1	3	-17.1										
-25 / -21	0	0	0	0	-21.1										

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.

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	77.0
95 / 99												0	0	0	73.8
90 / 94												3	1	4	72.9
85 / 89		0	0	0	64.4		3	1	4	69.6		14	6	20	71.2
80 / 84		3	1	4	63.1		15	6	21	67.4	0	38	20	58	69.2
75 / 79		10	4	14	61.7	1	28	16	45	64.8	8	55	39	103	66.6
70 / 74	1	14	9	24	59.0	7	38	27	73	61.8	34	56	54	144	64.6
65 / 69	6	20	16	42	56.1	21	40	38	100	58.8	61	37	50	148	61.7
60 / 64	21	27	24	72	53.7	41	42	43	125	55.5	52	23	35	110	57.6
55 / 59	20	28	30	78	49.7	43	35	40	118	51.2	42	10	21	74	53.7
50 / 54	21	37	34	93	45.5	42	26	36	103	47.5	27	3	9	39	49.2
45 / 49	29	33	35	97	41.8	44	16	25	85	43.7	12	1	3	16	45.3
40 / 44	43	29	36	108	38.1	31	4	12	47	39.4	4		1	5	41.1
35 / 39	44	21	28	93	34.0	13	1	3	17	35.1	0			0	37.6
30 / 34	31	13	18	62	29.9	5	0	0	5	30.9					
25 / 29	16	3	5	25	25.4	0			0	25.0					
20 / 24	6	1	1	8	20.9										
15 / 19	1	0	0	1	15.8										
10 / 14	0			0	9.0										
5 / 9	0			0	8.0										
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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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															
95 / 99		1	0	1	75.6		0		0	75.5					
90 / 94		8	3	11	74.9		3	1	4	75.9		1	0	1	72.5
85 / 89	0	30	15	45	72.9		19	7	26	73.9		4	2	6	72.6
80 / 84	4	62	33	99	70.3	1	53	23	77	71.0		19	7	26	70.1
75 / 79	22	70	56	148	68.0	12	68	52	132	68.6	2	35	19	56	67.2
70 / 74	59	51	67	178	66.3	51	59	69	179	66.5	18	50	37	105	64.8
65 / 69	71	20	44	135	63.1	75	31	56	162	63.3	38	49	47	134	61.5
60 / 64	56	6	21	83	59.3	62	12	26	100	59.3	42	41	47	130	57.4
55 / 59	25	1	7	33	54.8	29	3	12	44	54.8	46	28	39	113	53.3
50 / 54	10		1	11	50.7	15	0	2	17	50.4	50	11	26	87	49.2
45 / 49	1		0	1	46.1	4		0	4	46.5	27	3	11	40	44.9
40 / 44						0			0	41.8	12	0	4	16	40.4
35 / 39											5		0	5	36.3
30 / 34											0			0	33.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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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		
100 / 104															
95 / 99															
90 / 94															
85 / 89															
80 / 84		1	0	1	63.7										
75 / 79		8	1	9	63.5		0		0	58.7					
70 / 74	0	22	9	31	61.2		3	0	3	60.2		0		0	63.0
65 / 69	7	28	19	54	58.4	1	8	5	14	58.6		0	0	0	61.3
60 / 64	21	37	33	91	55.2	10	18	14	41	55.6	1	3	2	6	56.8
55 / 59	28	41	38	107	50.9	15	19	19	52	51.9	5	6	7	19	52.9
50 / 54	42	47	47	136	47.0	20	28	21	69	47.0	7	9	7	23	48.1
45 / 49	45	34	42	122	42.9	21	32	28	81	42.5	10	14	10	33	43.0
40 / 44	45	20	34	99	39.1	28	35	38	101	38.2	14	22	16	52	38.8
35 / 39	34	8	18	60	34.7	42	39	41	122	33.7	31	41	38	110	34.1
30 / 34	18	3	7	28	30.7	46	39	45	130	29.7	53	57	59	169	30.1
25 / 29	5		1	6	25.9	35	14	20	69	25.4	48	37	44	129	25.3
20 / 24	1		0	1	21.7	17	4	7	28	21.1	30	24	23	77	20.5
15 / 19						4	1	2	7	16.5	16	15	19	51	15.9
10 / 14						1	1	0	2	11.3	15	10	10	35	11.0
5 / 9						0	0	0	0	6.4	10	6	7	23	6.3
0 / 4						0		0	0	3.0	5	3	3	11	1.5
-5 / -1											1	1	2	4	-2.6
-10 / -6											1	1	1	3	-7.4
-15 / -11											0	0	0	0	-12.9
-20 / -16											0			0	-16.7
-25 / -21															

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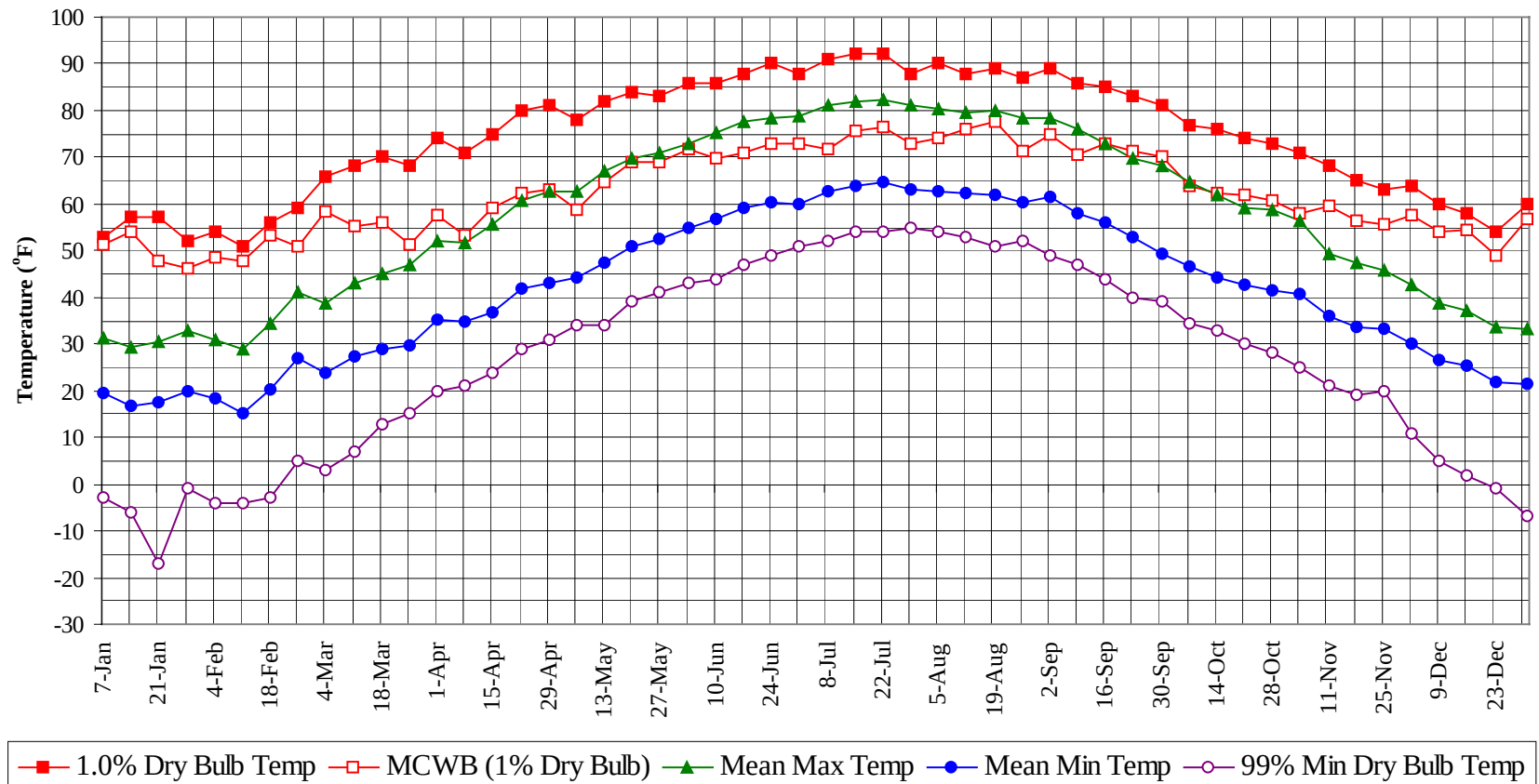
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

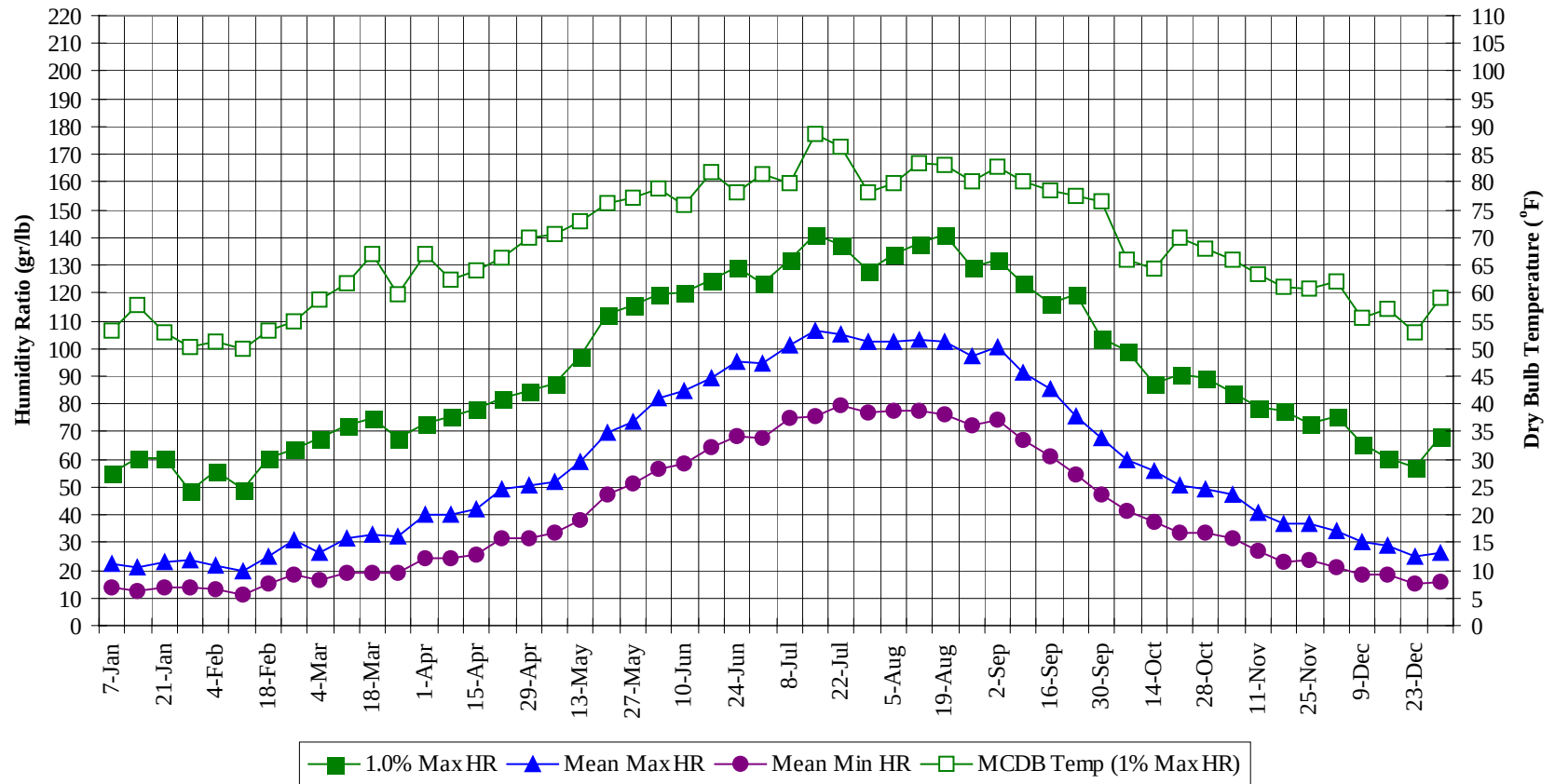
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104	0			0	77.0
95 / 99	1			0	1 75.2
90 / 94	14			5	19 74.6
85 / 89	0	70	29	99	72.7
80 / 84	5	189	86	280	69.9
75 / 79	47	274	179	500	67.2
70 / 74	178	296	263	736	64.7
65 / 69	294	240	269	803	61.1
60 / 64	320	223	248	791	56.6
55 / 59	277	194	229	699	51.9
50 / 54	260	196	217	674	47.4
45 / 49	230	183	198	610	42.8
40 / 44	220	182	203	604	38.5
35 / 39	237	205	234	676	34.0
30 / 34	263	236	263	762	29.8
25 / 29	199	151	183	533	25.2
20 / 24	135	105	117	357	20.4
15 / 19	86	69	83	238	15.7
10 / 14	66	45	53	164	10.9
5 / 9	48	25	34	108	6.2
0 / 4	30	12	16	59	1.4
-5 / -1	13	4	8	25	-3.0
-10 / -6	9	3	3	14	-7.1
-15 / -11	3	2	1	5	-12.0
-20 / -16	1	1	1	3	-17.1
-25 / -21	0	0	0	0	-21.1

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

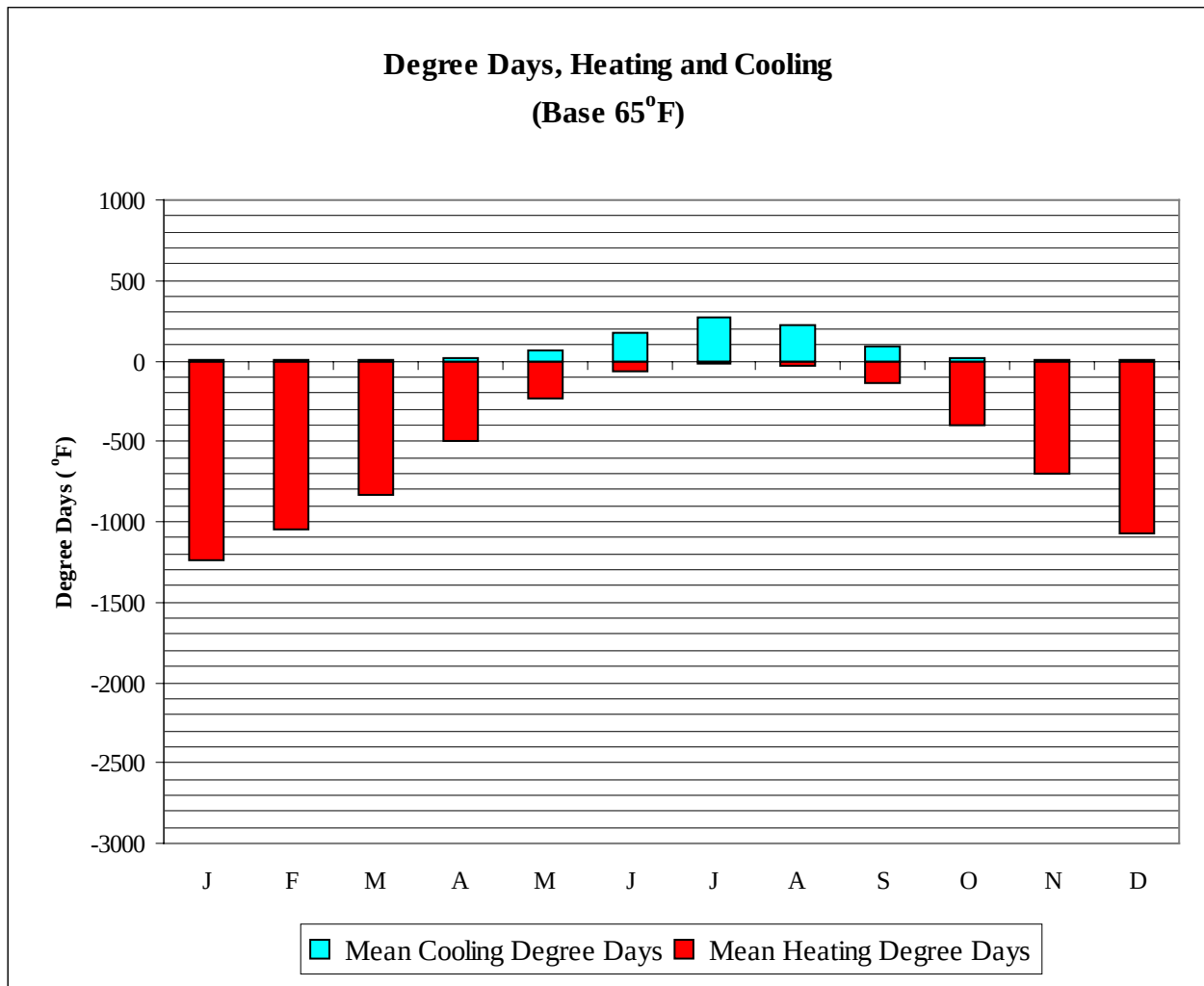


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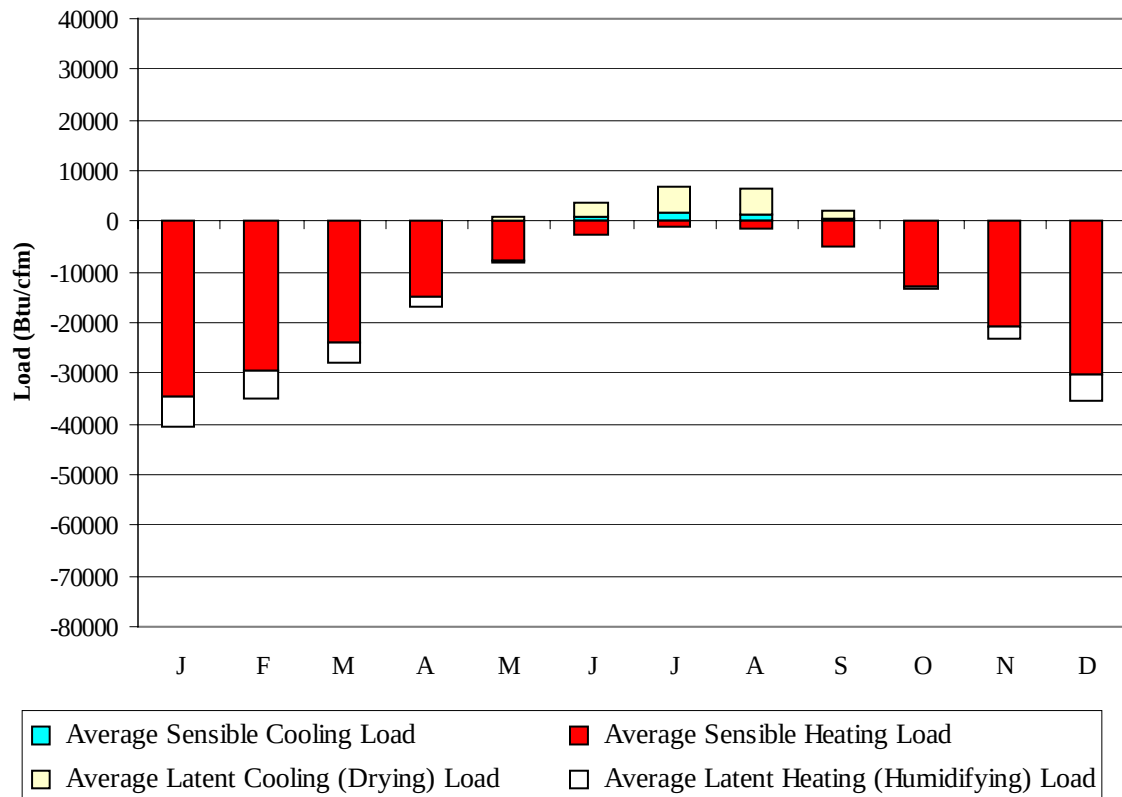
Long Term Dry Bulb Temperature and Humidity Summary

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	53.0	51.3	31.2	19.6	-3.0	55.3	53.3	22.5	13.7
14-Jan	57.0	53.9	29.3	16.8	-6.0	60.2	57.9	21.2	12.3
21-Jan	57.0	47.7	30.5	17.4	-17.0	60.2	53.0	23.0	13.7
28-Jan	52.0	46.3	33.0	19.9	-1.0	48.3	50.3	23.4	14.0
4-Feb	54.0	48.6	31.1	18.5	-4.0	56.0	51.1	21.7	13.2
11-Feb	51.0	47.6	29.0	15.2	-4.0	49.0	49.8	19.5	11.4
18-Feb	56.0	53.1	34.5	20.3	-3.0	60.2	53.1	24.7	15.1
25-Feb	59.0	50.9	41.2	27.1	5.0	63.7	54.7	31.0	18.7
4-Mar	66.0	58.4	38.7	24.0	3.0	67.9	58.9	26.4	16.2
11-Mar	68.0	55.1	43.1	27.4	7.0	72.1	61.8	31.9	19.0
18-Mar	70.0	55.9	45.0	28.9	13.0	74.9	67.0	32.7	19.3
25-Mar	68.0	51.3	47.0	29.9	15.0	67.9	59.6	32.4	19.4
1-Apr	74.0	57.7	51.9	35.1	20.0	72.8	66.9	39.9	24.3
8-Apr	71.0	53.5	51.5	35.0	21.0	75.6	62.4	40.0	24.5
15-Apr	75.0	59.3	55.8	36.9	24.0	78.4	64.0	42.4	25.4
22-Apr	80.0	62.5	60.8	42.0	29.0	81.9	66.4	49.2	31.3
29-Apr	81.0	63.0	62.8	43.0	31.0	84.7	70.1	50.7	31.5
6-May	78.0	58.8	62.7	44.3	34.0	87.5	70.6	51.9	33.2
13-May	82.0	64.6	67.2	47.2	34.0	97.3	73.1	59.2	37.9
20-May	84.0	68.9	69.7	50.8	39.0	112.0	76.3	69.3	47.1
27-May	83.0	68.9	71.0	52.4	41.0	115.5	77.3	73.4	51.3
3-Jun	86.0	71.8	72.9	54.9	43.0	119.7	78.9	82.0	56.8
10-Jun	86.0	69.7	75.2	56.7	44.0	120.4	76.0	85.0	58.5
17-Jun	88.0	70.8	77.8	59.0	47.0	124.6	81.9	89.4	64.6
24-Jun	90.0	72.7	78.4	60.4	49.0	129.5	78.3	95.3	68.6
1-Jul	88.0	72.9	78.6	60.1	51.0	123.2	81.5	94.6	67.8
8-Jul	91.0	71.6	81.1	62.6	52.0	132.3	79.8	101.4	75.0
15-Jul	92.0	75.5	82.1	63.9	54.0	141.4	88.5	106.1	75.8
22-Jul	92.0	76.4	82.3	64.5	54.0	137.2	86.3	105.3	79.6
29-Jul	88.0	72.8	81.0	63.0	55.0	128.1	78.3	102.5	76.6
5-Aug	90.0	74.2	80.5	62.9	54.0	133.7	79.9	102.4	77.2
12-Aug	88.0	76.1	79.4	62.1	53.0	137.9	83.5	103.1	77.6
19-Aug	89.0	77.5	79.8	62.0	51.0	141.4	83.1	102.2	76.3
26-Aug	87.0	71.5	78.5	60.5	52.0	129.5	80.2	97.3	71.9
2-Sep	89.0	74.9	78.4	61.4	49.0	132.3	82.7	100.7	74.2
9-Sep	86.0	70.7	75.9	58.0	47.0	123.2	80.0	91.0	66.8
16-Sep	85.0	72.8	73.0	56.1	44.0	116.2	78.4	85.5	61.0
23-Sep	83.0	71.3	69.7	52.8	40.0	119.7	77.4	75.4	54.3
30-Sep	81.0	70.3	68.1	49.1	39.0	103.6	76.5	67.4	47.2
7-Oct	77.0	63.9	64.5	46.8	34.5	99.4	66.1	60.1	41.1
14-Oct	76.0	62.5	61.8	44.4	33.0	87.5	64.4	55.8	37.7
21-Oct	74.0	62.0	59.3	42.7	30.0	90.3	69.8	50.9	33.4
28-Oct	73.0	60.9	58.8	41.6	28.0	89.6	67.8	49.4	33.3
4-Nov	71.0	57.9	56.5	40.6	25.0	84.0	66.0	47.2	31.4
11-Nov	68.0	59.7	49.4	36.1	21.0	79.1	63.3	40.9	27.0
18-Nov	65.0	56.3	47.4	33.7	19.0	77.7	61.0	36.5	23.2
25-Nov	63.0	55.6	45.8	33.1	20.0	72.8	60.9	36.7	23.7
2-Dec	64.0	57.8	42.6	30.2	11.0	75.6	62.0	34.3	20.8
9-Dec	60.0	54.1	38.9	26.7	5.0	65.8	55.4	30.0	18.7
16-Dec	58.0	54.5	37.2	25.4	2.0	60.2	57.3	28.8	18.1
23-Dec	54.0	48.8	33.6	21.8	-1.0	57.4	53.0	25.0	15.1
31-Dec	60.0	56.9	33.3	21.4	-7.0	68.6	59.2	26.4	15.8



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1236
FEB	0	1053
MAR	3	835
APR	19	497
MAY	69	230
JUN	171	64
JUL	271	20
AUG	220	30
SEP	95	137
OCT	17	407
NOV	2	706
DEC	0	1077
ANN	867	6292

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	-34452	0	-6174
FEB	0	-29488	0	-5370
MAR	2	-23999	1	-3874
APR	52	-14990	13	-1748
MAY	265	-7697	730	-299
JUN	898	-2571	2621	-5
JUL	1784	-989	5219	0
AUG	1195	-1439	5142	-1
SEP	371	-4973	1862	-32
OCT	15	-12741	105	-738
NOV	0	-20596	5	-2596
DEC	0	-30328	0	-4923
ANN	4582	-184263	15698	-25760

Average Annual Solar Radiation – Nearest Available Site

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

City: MANSFIELD
 State: OH
 WBAN No: 14891
 Lat(N): 40.82
 Long(W): 82.52
 Elev(ft): 1296

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.557
 Vert Gap: 0.324

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	540	790	1080	1450	1750	1930	1900	1670	1330	950	570	440	1200
	Std Dev	36	73	82	127	141	118	96	109	97	75	58	37	36
	Minimum	470	680	950	1110	1480	1740	1730	1390	1170	800	440	380	1130
	Maximum	610	1050	1260	1660	2040	2310	2080	1830	1500	1190	670	530	1300
	Diffuse	360	480	630	750	850	890	890	780	630	460	350	310	620
Clear Day	Global	840	1200	1680	2170	2490	2610	2520	2240	1800	1300	890	730	1710
NORTH	Global	200	270	350	440	550	620	590	480	380	290	200	170	380
	Diffuse	200	270	350	430	510	540	530	470	380	290	200	170	360
Clear Day	Global	190	250	330	430	580	680	630	480	360	270	200	170	380
EAST	Global	340	480	650	850	990	1080	1070	960	810	600	360	280	710
	Diffuse	240	320	420	520	600	640	640	570	470	350	240	200	440
Clear Day	Global	630	840	1090	1310	1420	1450	1410	1310	1130	880	660	560	1060
SOUTH	Global	740	880	910	900	840	800	840	940	1040	1040	730	610	860
	Diffuse	340	420	490	540	580	590	600	580	530	440	330	290	480
Clear Day	Global	1790	1900	1790	1450	1130	970	1020	1270	1610	1800	1760	1700	1510
WEST	Global	340	490	640	820	960	1050	1050	970	800	590	360	280	700
	Diffuse	240	330	430	530	610	650	650	580	470	350	240	200	440
Clear Day	Global	630	840	1090	1310	1420	1450	1410	1310	1130	880	660	560	1060

Average Annual Solar Heat and Illumination – Nearest Available Site

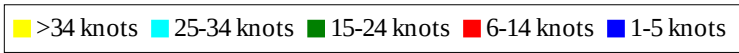
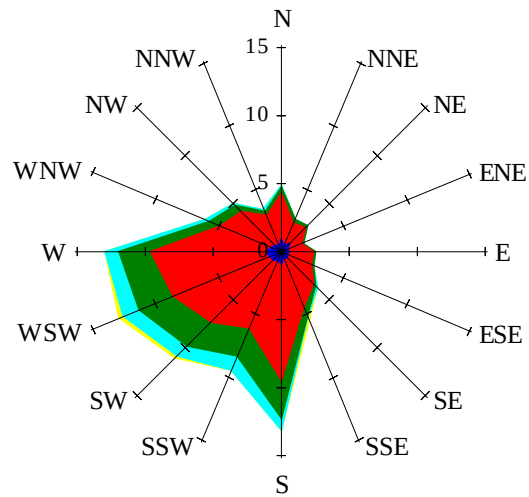
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	360	540	760	1040	1260	1400	1380	1210	950	650	380	290	850
NORTH	Unshaded	140	190	240	300	360	410	390	330	260	200	140	120	260
	Shaded	120	160	210	260	320	360	340	290	230	170	120	99	220
EAST	Unshaded	240	340	460	600	710	770	770	680	570	420	250	190	500
	Shaded	210	290	390	510	590	650	650	580	490	370	220	170	430
SOUTH	Unshaded	550	650	640	600	530	490	520	600	710	750	540	460	590
	Shaded	520	590	500	400	350	360	360	380	510	650	510	430	460
WEST	Unshaded	240	350	450	580	690	750	750	690	570	420	250	190	490
	Shaded	200	300	390	500	580	630	630	590	490	360	220	170	420

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	28	64	80	67	34	38	76	98	98	75
	M.Cloudy	16	37	46	39	20	23	48	68	68	50
NORTH	M.Clear	8	13	15	14	9	20	16	17	17	16
	M.Cloudy	7	14	17	15	9	12	16	19	19	17
EAST	M.Clear	64	62	19	14	9	70	77	42	17	16
	M.Cloudy	17	28	18	15	9	27	40	32	19	17
SOUTH	M.Clear	29	66	84	71	35	11	28	47	47	28
	M.Cloudy	11	29	36	30	14	9	21	35	35	22
WEST	M.Clear	8	13	15	57	68	11	16	17	42	75
	M.Cloudy	7	14	17	27	21	9	16	19	32	43
M.Clear	(% hrs)	25	22	21	22	23	43	41	30	27	32
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	18	57	80	79	54	6	33	44	31	5
	M.Cloudy	10	33	52	52	34	4	18	24	18	3
NORTH	M.Clear	7	13	16	16	13	3	9	10	9	2
	M.Cloudy	5	13	17	17	13	2	8	10	8	2
EAST	M.Clear	47	72	39	16	13	21	41	11	9	2
	M.Cloudy	13	29	27	17	13	4	14	10	8	2
SOUTH	M.Clear	12	50	73	72	46	17	69	85	65	12
	M.Cloudy	6	23	41	42	25	4	18	23	18	3
WEST	M.Clear	7	13	16	42	71	3	9	12	42	16
	M.Cloudy	5	13	17	29	34	2	8	11	14	4
M.Clear	(% hrs)	43	42	33	29	36	19	18	17	15	17

Wind Summary - December, January, and February

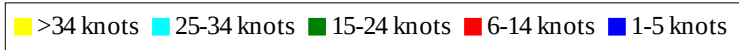
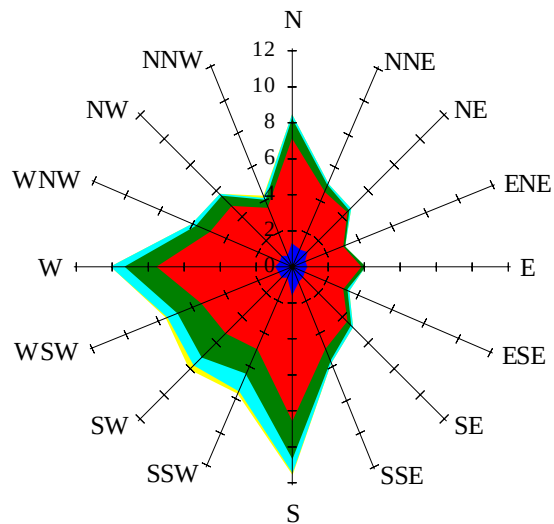
Labels of Percent Frequency on North Axis



Percent Calm = 1.55

Wind Summary - March, April, and May

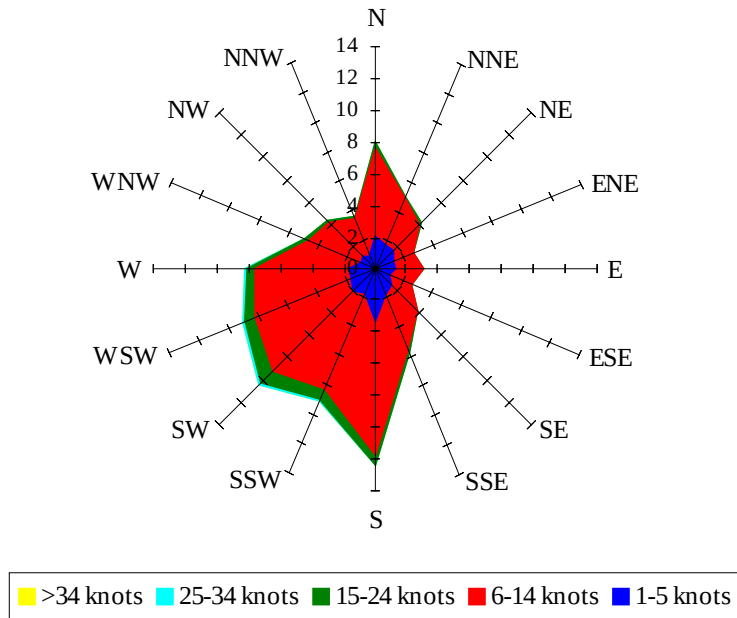
Labels of Percent Frequency on North Axis



Percent Calm = 1.77

Wind Summary - June, July, and August

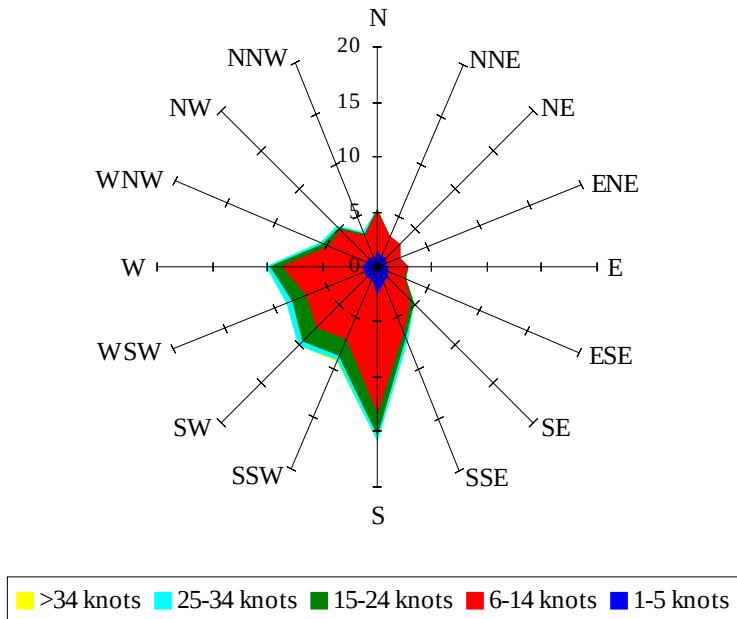
Labels of Percent Frequency on North Axis



Percent Calm = 3.97

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 2.34