

SAN ANGELO/MATHIS TX

Latitude = 31.37 N

WMO No. 722630

Longitude = 100.50 W

Elevation = 1910 feet

Period of Record = 1973 to 1996

Average Pressure = 27.99 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	104	70	66	12.4	S
0.4% Occurrence	99	71	74	11.1	S
1.0% Occurrence	97	70	77	11.5	S
2.0% Occurrence	95	70	80	11.8	S
Mean Daily Range	24	-	-	-	-
97.5% Occurrence	29	27	18	8.6	NE
99.0% Occurrence	24	22	14	9.3	NE
99.6% Occurrence	19	17	11	9.1	N
Median of Extreme Lows	11	10	7	11.8	NNE
	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	77	90	123	12.4	S
0.4% Occurrence	75	89	113	12.6	S
1.0% Occurrence	74	88	110	12.2	S
2.0% Occurrence	73	87	106	11.8	S
	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	136	85	0.85	9.8	S
0.4% Occurrence	124	79	0.77	10.6	S
1.0% Occurrence	119	78	0.74	10.5	S
2.0% Occurrence	118	77	0.74	8.8	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		334	1822	309	2494

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
11	4.0	90	2.2 + 2.1
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 (#)
66.9	N/A	3	36

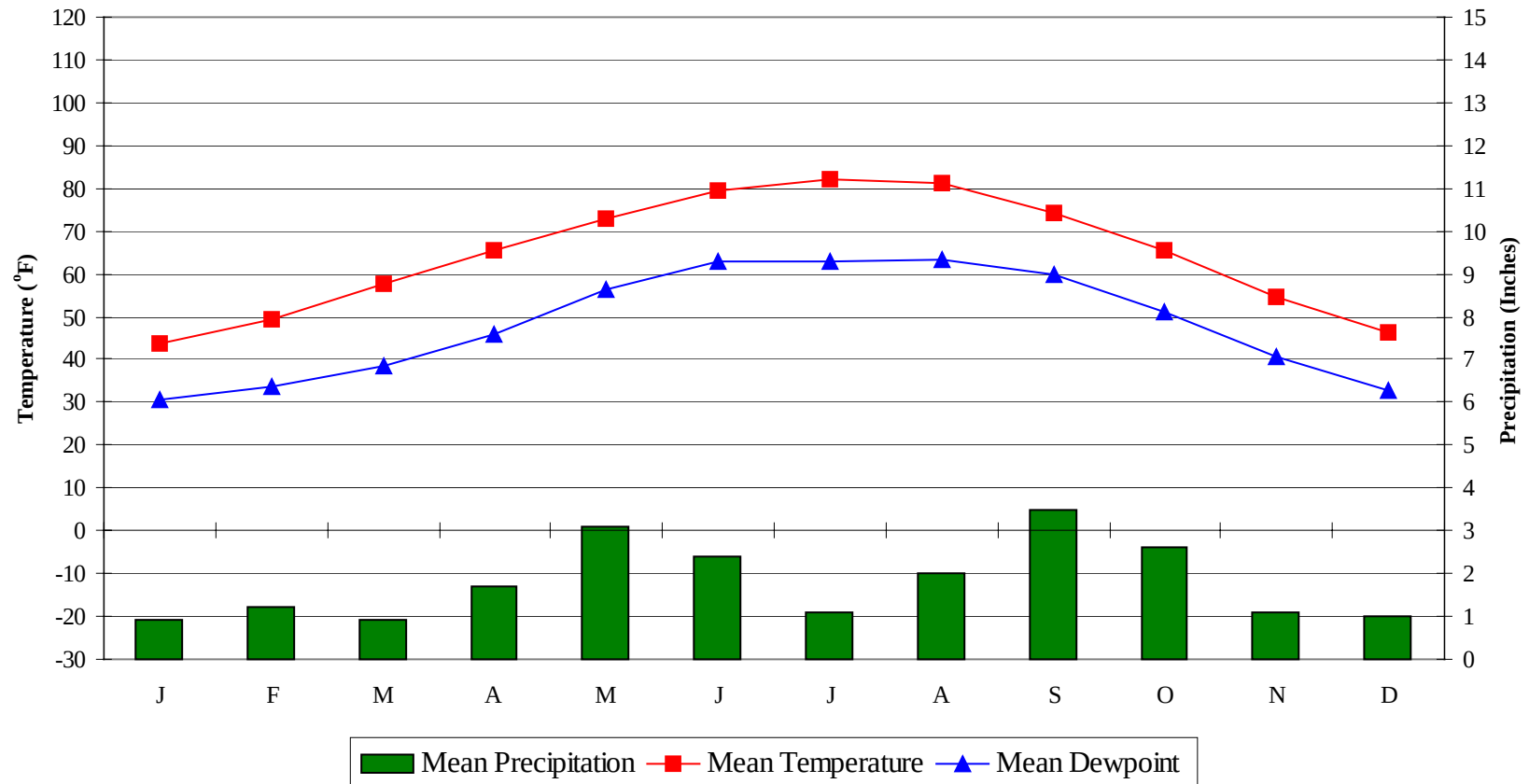
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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Average Annual Climate

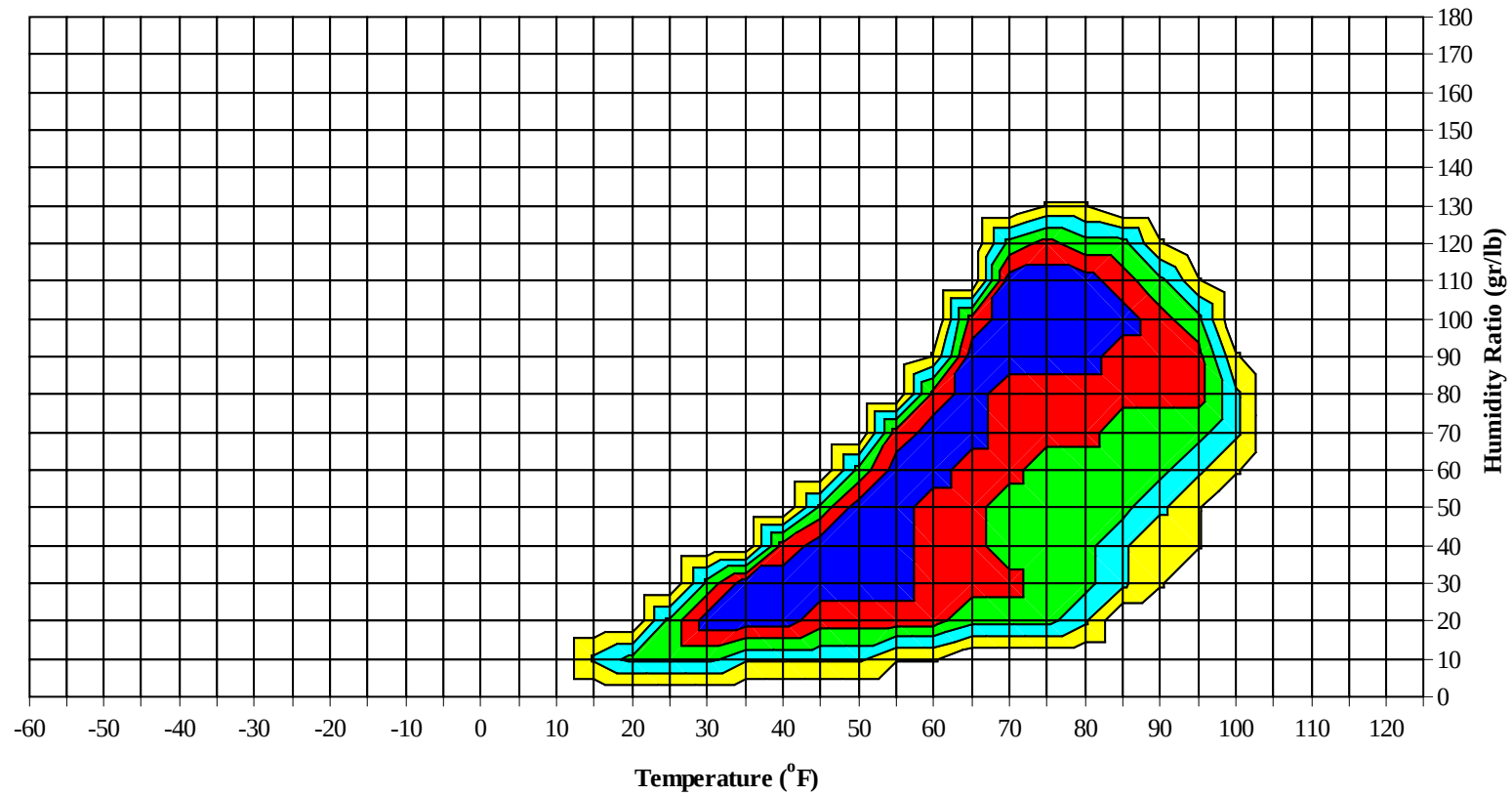


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Long Term Psychrometric Summary



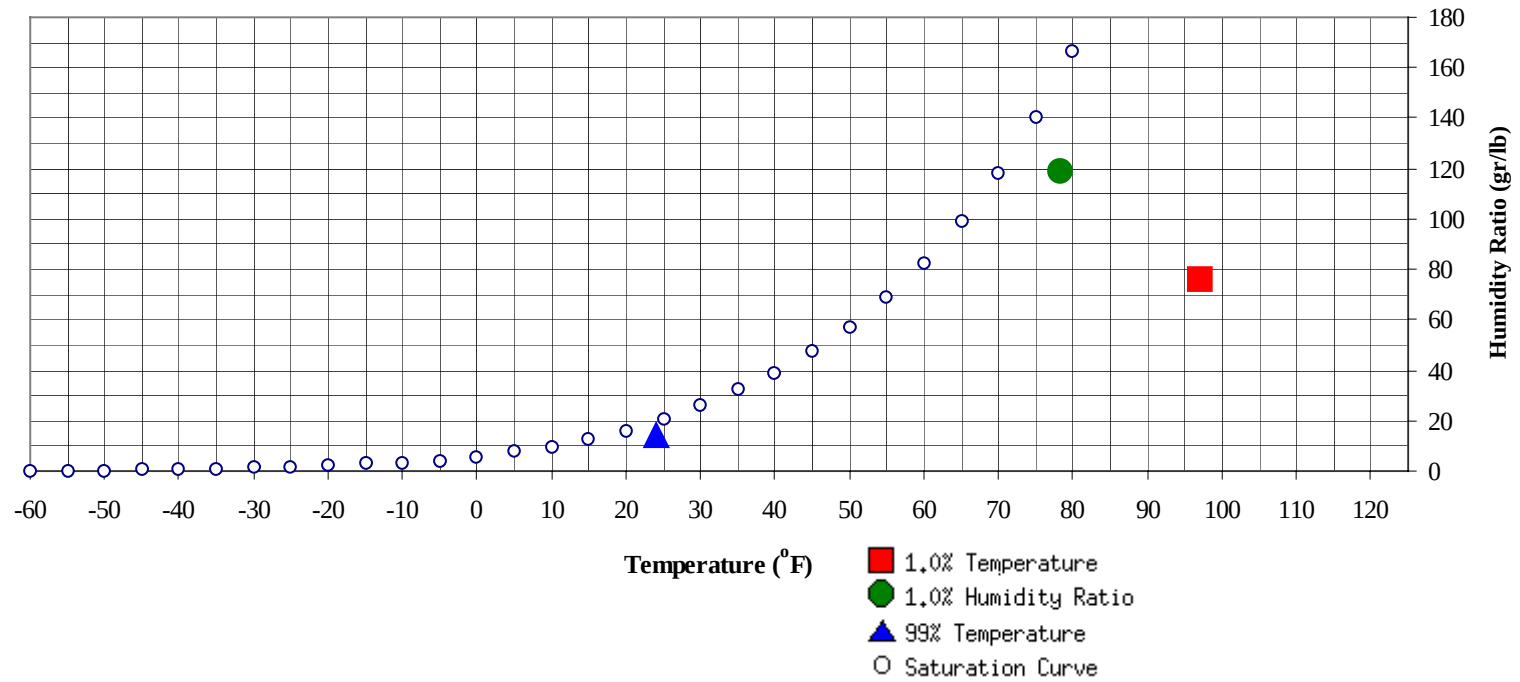
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	24	14.1	7.9		119	78.3	72.3	70	37.4

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	97	76.4	70.4	35.3

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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		
110 / 114															
105 / 109															
100 / 104															
95 / 99							0		0	62.0		0		0	56.0
90 / 94							0	0	0	59.4		1	1	2	60.1
85 / 89		0		0	57.0		1	1	2	57.5		6	2	8	60.1
80 / 84		1	0	1	55.5		5	1	6	56.1		17	8	25	59.4
75 / 79		4	1	5	54.1		11	5	16	55.3		25	15	40	58.1
70 / 74		11	3	14	53.1		18	9	27	53.9	1	38	28	67	56.3
65 / 69	0	21	8	29	51.3	1	26	17	44	52.3	15	39	35	89	55.3
60 / 64	3	26	18	47	49.8	8	31	27	66	51.2	28	37	43	108	52.2
55 / 59	9	27	25	61	47.6	18	27	31	76	48.7	37	28	37	102	48.9
50 / 54	20	32	35	87	44.6	28	28	36	92	45.2	44	22	33	99	45.4
45 / 49	27	29	39	95	41.3	31	24	32	87	41.8	39	16	22	77	41.6
40 / 44	35	28	40	103	37.4	42	21	29	92	38.2	36	8	13	57	37.7
35 / 39	52	25	34	111	33.8	39	12	17	68	34.0	25	5	7	37	33.9
30 / 34	48	21	23	92	29.7	30	10	10	50	29.7	13	3	4	20	29.0
25 / 29	31	13	14	58	25.2	15	6	6	27	25.2	6	2	2	10	24.9
20 / 24	16	5	5	26	20.6	7	2	2	11	21.0	3	1	0	4	19.7
15 / 19	6	2	2	10	16.0	2	2	1	5	15.8	0	0		0	14.4
10 / 14	2	0	1	3	11.7	2	1	0	3	11.0	0			0	11.3
5 / 9	1	0	0	1	6.2	0	0	0	0	6.8	0			0	8.0
0 / 4	0		0	0	1.3	0	0		0	1.9					
-5 / -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.

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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		
110 / 114												0	0	0	70.7
105 / 109							0	0	0	67.3		1	0	1	70.3
100 / 104							2	1	3	67.1		4	2	6	70.1
95 / 99		1	0	1	63.0		7	3	10	67.8		17	9	26	71.2
90 / 94		8	3	11	62.4		22	12	34	67.6		49	32	81	71.1
85 / 89		22	10	32	62.3		38	24	62	67.3	0	60	44	104	70.6
80 / 84	0	35	20	55	61.8	1	55	41	97	66.4	9	56	54	119	69.7
75 / 79	0	42	32	74	60.8	18	49	48	115	65.5	64	31	50	144	68.6
70 / 74	14	44	45	104	59.4	57	37	48	142	64.2	87	14	33	134	66.9
65 / 69	41	33	42	117	58.0	61	20	37	118	61.2	56	5	14	75	63.8
60 / 64	47	25	35	108	54.1	62	11	23	96	57.7	19	2	3	24	60.0
55 / 59	46	14	24	84	50.4	28	4	7	39	53.5	4	0	0	4	55.3
50 / 54	38	8	16	62	46.1	15	1	4	20	49.0	1			1	50.9
45 / 49	28	4	8	40	42.5	5	0	1	6	44.4					
40 / 44	16	2	3	21	38.6	1		0	1	41.3					
35 / 39	6	0	1	7	34.4	0			0	37.8					
30 / 34	3	0	0	3	30.5										
25 / 29	0			0	26.6										
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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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		
110 / 114															
105 / 109		1	0	1	71.8		0	0	0	69.9					
100 / 104		9	6	15	70.8		4	2	6	70.8		1	0	1	71.1
95 / 99		40	25	65	70.7		37	19	56	71.0		8	3	11	69.8
90 / 94		68	43	110	70.8		69	38	107	70.9	0	27	12	39	69.9
85 / 89	1	57	46	104	70.4	0	58	44	101	70.4	0	50	27	77	69.6
80 / 84	25	45	56	126	69.6	16	47	61	123	69.5	3	55	43	101	68.3
75 / 79	95	18	43	156	68.8	83	21	49	153	68.6	28	41	48	117	67.4
70 / 74	93	7	26	126	67.5	103	10	32	144	67.5	75	26	52	153	66.4
65 / 69	31	2	4	37	65.0	42	2	5	49	64.7	61	16	28	105	62.9
60 / 64	3	0	0	3	60.5	4	0	0	4	61.0	34	7	15	56	58.0
55 / 59	0			0	53.6	1			1	55.8	21	4	8	33	53.4
50 / 54											12	2	4	18	49.6
45 / 49											6	1	1	8	45.2
40 / 44											1	0	0	1	41.0
35 / 39											0			0	36.9
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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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		
110 / 114															
105 / 109															
100 / 104															
95 / 99		1	0	1	64.7										
90 / 94		4	1	5	65.8		0	0	0	60.0					
85 / 89		19	6	25	66.1		2	0	2	59.9		0		0	57.5
80 / 84	0	42	17	58	65.2		8	1	9	61.4		1	0	1	54.6
75 / 79	2	48	27	76	63.5		23	6	29	61.5		6	1	7	55.2
70 / 74	20	47	43	109	62.2	4	33	15	52	59.7		18	4	22	55.3
65 / 69	39	37	51	127	59.8	14	34	29	78	57.6	2	25	11	38	54.1
60 / 64	54	24	46	124	56.6	25	38	36	100	54.1	7	32	23	62	51.9
55 / 59	44	13	29	86	52.3	32	30	39	102	50.5	13	31	31	75	48.8
50 / 54	40	8	17	65	48.1	33	24	37	94	46.3	24	33	40	97	45.3
45 / 49	28	3	8	39	44.0	35	20	30	85	42.2	36	29	40	105	41.7
40 / 44	14	1	3	18	39.6	35	13	21	69	38.1	39	26	37	102	37.8
35 / 39	4	1	1	6	35.3	29	8	15	52	34.3	47	19	30	96	33.7
30 / 34	2	0	1	3	30.6	20	3	8	31	29.6	41	14	18	73	29.4
25 / 29	0			0	27.7	10	1	2	13	25.0	22	5	8	35	24.8
20 / 24						3	0	0	3	20.5	9	3	3	15	20.0
15 / 19						0			0	15.8	4	2	2	8	15.3
10 / 14											2	1	2	5	10.7
5 / 9											1	0	0	1	5.7
0 / 4											0		0	0	0.6
-5 / -1											0			0	-2.5

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.

SAN ANGELO/MATHIS TX WMO No. 722630
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		
110 / 114		0	0	0	70.7
105 / 109		2	1	3	70.8
100 / 104		20	11	31	70.3
95 / 99		113	60	172	70.5
90 / 94	0	247	141	389	70.1
85 / 89	2	313	202	517	69.0
80 / 84	53	366	299	718	67.4
75 / 79	289	319	322	929	66.0
70 / 74	453	307	337	1096	63.7
65 / 69	359	261	280	900	59.4
60 / 64	292	233	269	794	54.5
55 / 59	254	180	231	665	50.2
50 / 54	257	161	222	640	46.0
45 / 49	236	129	181	546	42.0
40 / 44	220	102	146	468	38.0
35 / 39	203	70	105	378	33.9
30 / 34	158	52	64	274	29.6
25 / 29	85	26	32	143	25.1
20 / 24	38	11	11	60	20.5
15 / 19	13	5	5	23	15.7
10 / 14	6	2	3	11	11.0
5 / 9	2	1	0	3	6.0
0 / 4	1	0	0	1	1.2
-5 / -1	0			0	-2.5

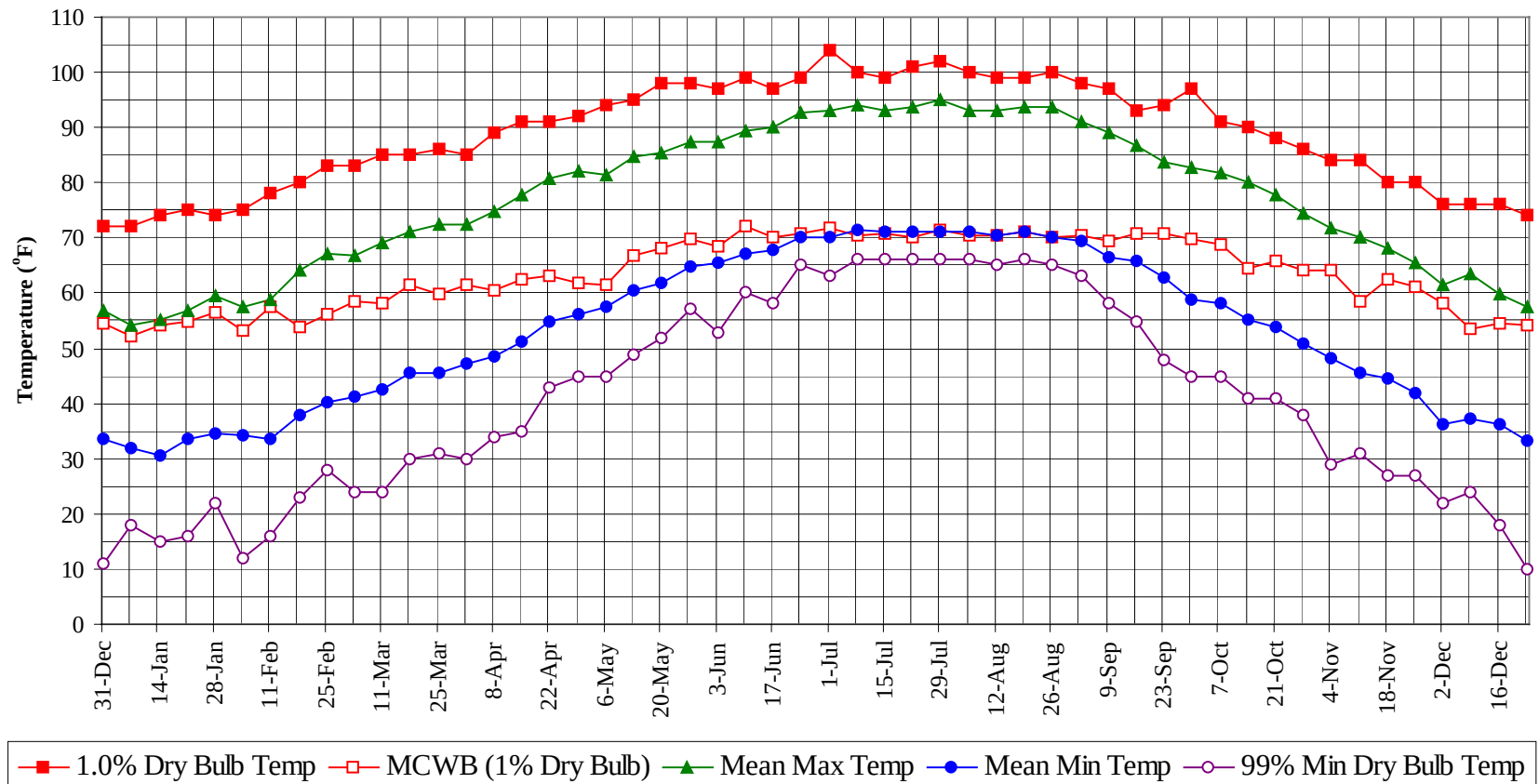
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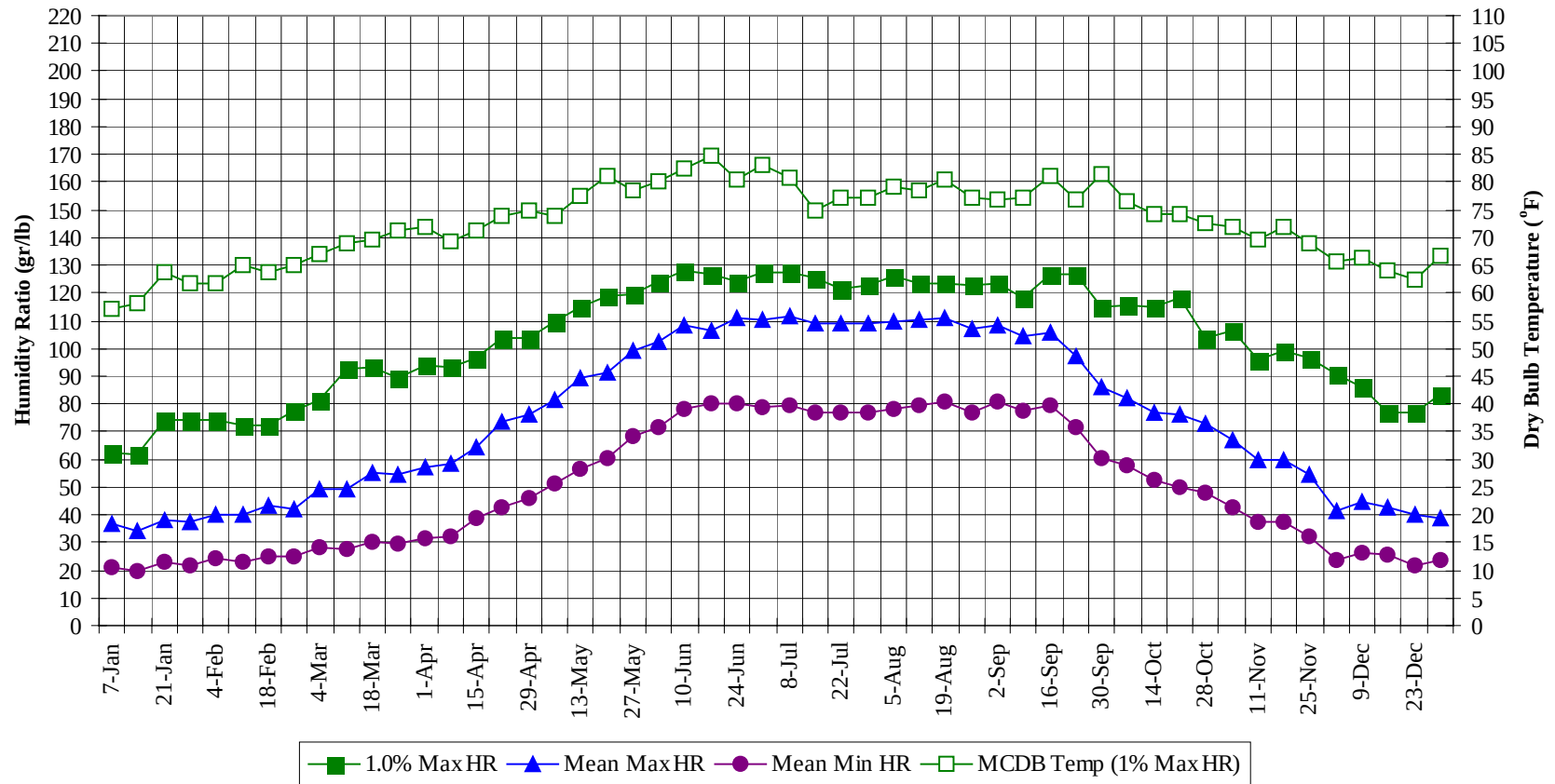
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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



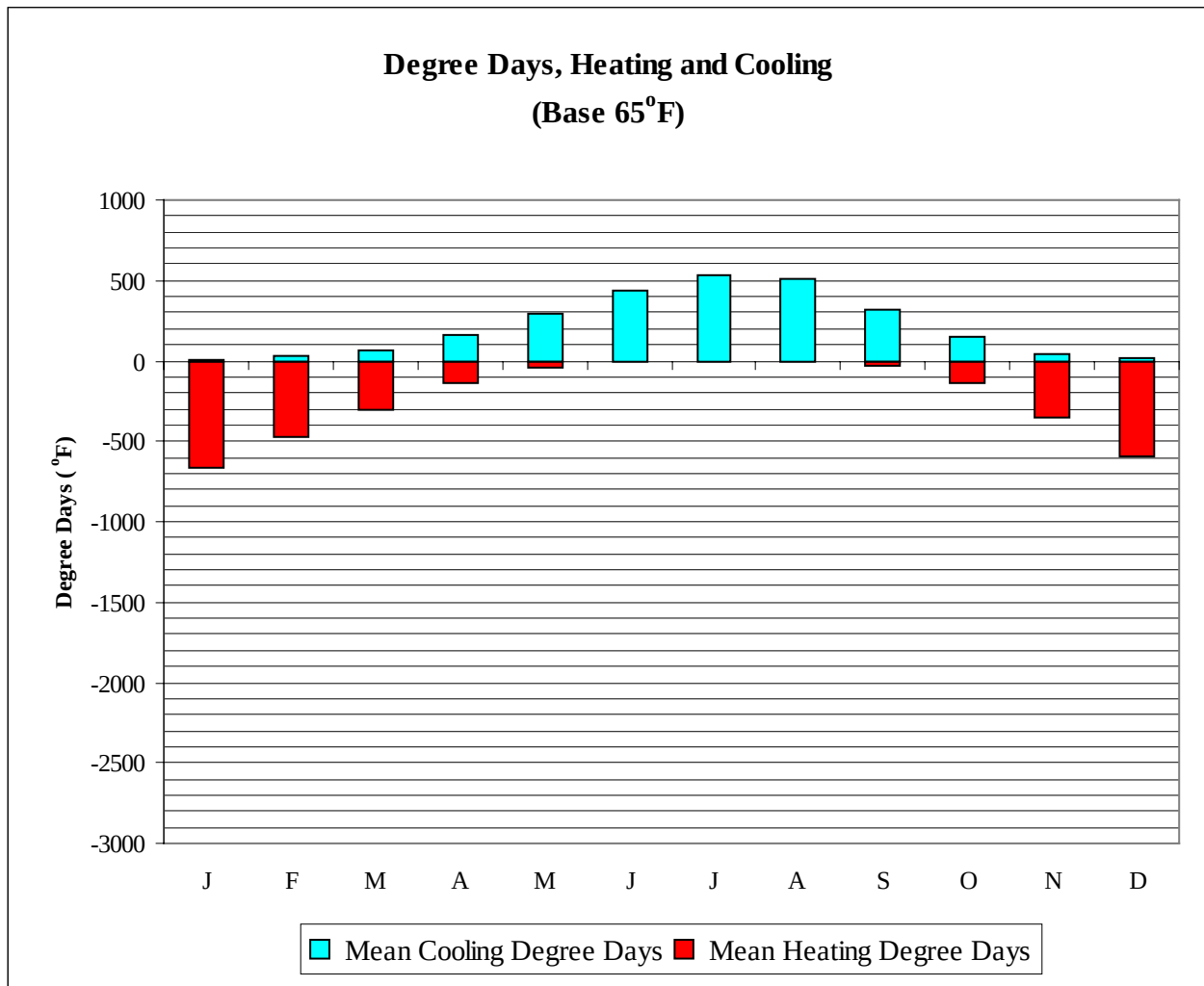
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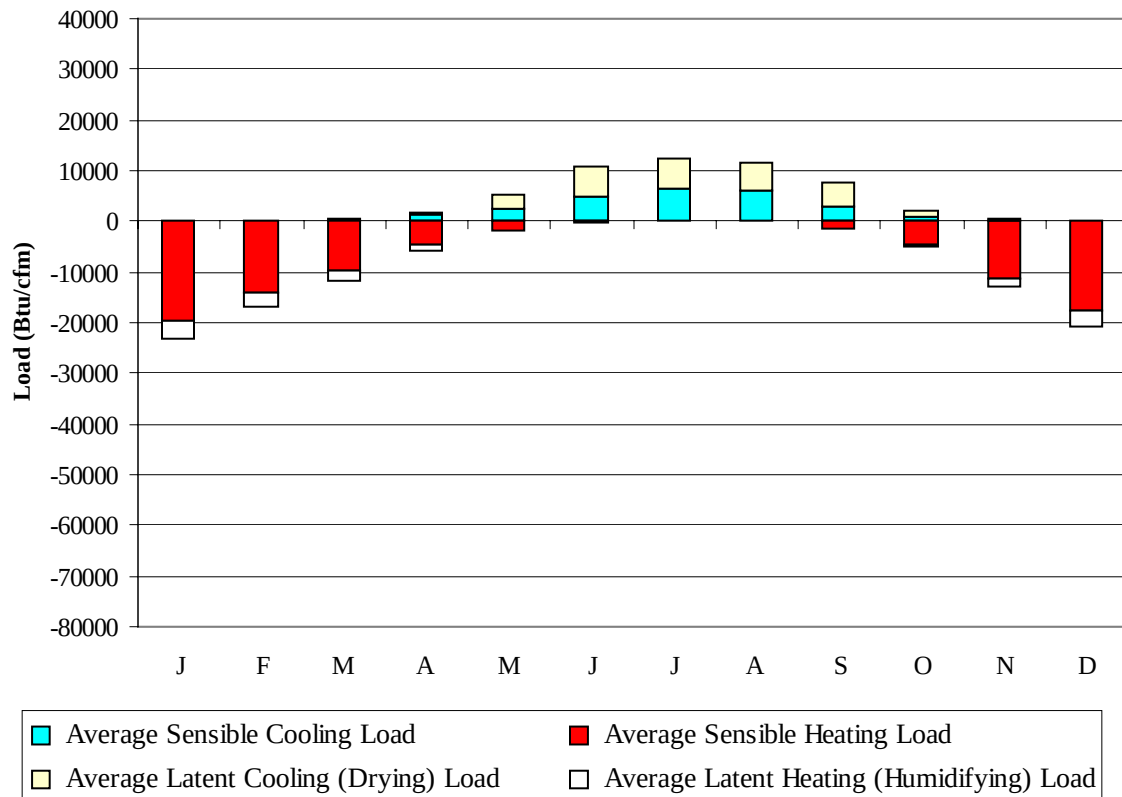
Long Term Dry Bulb Temperature and Humidity Summary

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	72.0	52.1	54.3	31.9	18.0	62.3	57.1	36.7	20.8
14-Jan	74.0	54.2	55.2	30.6	15.0	61.6	58.1	34.3	19.4
21-Jan	75.0	54.9	56.9	33.5	16.0	74.2	63.8	38.2	22.9
28-Jan	74.0	56.5	59.6	34.5	22.0	74.2	61.7	37.8	21.7
4-Feb	75.0	53.3	57.6	34.3	12.0	74.2	61.6	40.0	24.3
11-Feb	78.0	57.4	58.9	33.5	16.0	72.1	64.9	39.8	23.1
18-Feb	80.0	54.0	64.2	38.0	23.0	72.1	63.9	43.3	25.2
25-Feb	83.0	56.0	67.2	40.2	28.0	77.7	65.0	42.1	24.7
4-Mar	83.0	58.4	66.9	41.4	24.0	81.2	67.1	49.4	28.3
11-Mar	85.0	58.1	69.2	42.7	24.0	92.4	69.0	49.1	27.8
18-Mar	85.0	61.5	71.1	45.5	30.0	93.1	69.5	54.9	30.2
25-Mar	86.0	59.8	72.5	45.6	31.0	89.6	71.2	54.8	29.7
1-Apr	85.0	61.6	72.5	47.1	30.0	93.8	71.9	57.2	31.3
8-Apr	89.0	60.6	74.9	48.7	34.0	93.1	69.4	58.4	32.0
15-Apr	91.0	62.5	77.8	51.3	35.0	96.6	71.1	64.2	38.5
22-Apr	91.0	63.1	80.8	54.9	43.0	103.6	74.0	73.8	42.5
29-Apr	92.0	61.7	82.0	56.1	45.0	103.6	75.0	76.2	46.1
6-May	94.0	61.5	81.5	57.4	45.0	109.9	73.9	81.3	51.3
13-May	95.0	66.9	84.6	60.3	49.0	114.8	77.4	89.5	56.2
20-May	98.0	68.0	85.5	61.9	52.0	119.0	81.1	91.0	60.4
27-May	98.0	69.8	87.3	64.7	57.0	119.7	78.5	99.2	68.1
3-Jun	97.0	68.6	87.4	65.6	53.0	123.9	80.1	102.6	71.4
10-Jun	99.0	72.1	89.2	67.1	60.0	128.1	82.5	108.1	78.3
17-Jun	97.0	70.1	89.9	67.9	58.0	126.7	84.6	106.6	79.8
24-Jun	99.0	70.7	92.7	70.2	65.0	123.9	80.4	111.1	80.1
1-Jul	104.0	71.8	93.2	70.0	63.0	127.4	82.9	110.5	78.9
8-Jul	100.0	70.5	93.9	71.4	66.0	127.4	80.7	111.6	79.4
15-Jul	99.0	70.8	93.0	71.0	66.0	125.3	74.8	108.8	77.0
22-Jul	101.0	70.1	93.8	71.3	66.0	121.8	77.2	108.8	77.0
29-Jul	102.0	71.4	94.9	71.0	66.0	122.5	77.2	108.8	76.8
5-Aug	100.0	70.6	93.0	71.0	66.0	126.0	79.1	109.7	78.3
12-Aug	99.0	70.5	93.1	70.5	65.0	123.2	78.4	110.2	79.7
19-Aug	99.0	71.1	93.9	71.3	66.0	123.2	80.4	110.9	80.7
26-Aug	100.0	70.3	93.8	70.2	65.0	122.5	77.3	107.2	76.7
2-Sep	98.0	70.5	91.0	69.3	63.0	123.2	76.8	108.6	80.9
9-Sep	97.0	69.6	89.2	66.6	58.0	118.3	77.1	104.3	77.2
16-Sep	93.0	70.9	86.7	65.7	55.0	126.7	81.2	105.6	79.3
23-Sep	94.0	70.7	83.8	62.8	48.0	126.7	76.8	97.3	71.4
30-Sep	97.0	69.6	82.9	58.9	45.0	114.8	81.4	86.2	60.5
7-Oct	91.0	68.9	81.9	58.1	45.0	115.5	76.5	82.3	58.0
14-Oct	90.0	64.4	80.1	55.0	41.0	114.8	74.2	76.9	52.5
21-Oct	88.0	65.9	77.9	53.9	41.0	118.3	74.3	76.4	49.6
28-Oct	86.0	64.2	74.5	51.0	38.0	103.6	72.5	72.6	47.8
4-Nov	84.0	64.0	71.9	48.1	29.0	106.4	71.9	67.3	42.9
11-Nov	84.0	58.3	70.1	45.5	31.0	95.9	69.6	59.9	37.3
18-Nov	80.0	62.6	68.1	44.5	27.0	99.4	72.1	59.8	37.2
25-Nov	80.0	61.2	65.4	41.9	27.0	96.6	68.9	54.5	32.4
2-Dec	76.0	58.0	61.4	36.2	22.0	90.3	65.8	41.2	23.8
9-Dec	76.0	53.7	63.4	37.1	24.0	86.1	66.3	44.7	26.1
16-Dec	76.0	54.6	59.8	36.1	18.0	77.0	63.9	42.5	25.5
23-Dec	74.0	54.3	57.6	33.3	10.0	77.0	62.5	40.4	22.0
31-Dec	72.0	54.6	56.7	33.6	11.0	83.3	66.6	38.7	23.3



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	9	664
FEB	25	469
MAR	71	304
APR	156	137
MAY	293	39
JUN	435	4
JUL	536	0
AUG	507	1
SEP	313	33
OCT	149	134
NOV	43	359
DEC	13	588
ANN	2549	2732

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	15	-19502	1	-3783
FEB	100	-14115	2	-2639
MAR	379	-9685	79	-1927
APR	1150	-4747	450	-875
MAY	2695	-1658	2471	-74
JUN	4806	-278	5858	-1
JUL	6562	-45	5867	0
AUG	5962	-64	5768	0
SEP	2946	-1353	4522	-23
OCT	997	-4766	1158	-271
NOV	149	-11197	202	-1570
DEC	19	-17498	12	-3291
ANN	25780	-84908	26390	-14454

Average Annual Solar Radiation – Nearest Available Site

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

City: SAN ANGELO
 State: TX
 WBAN No: 23034
 Lat(N): 31.37
 Long(W): 100.5
 Elev(ft): 1910

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.296
 Vert Gap: 0.245

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	1010	1280	1640	1930	2060	2200	2190	2020	1670	1420	1100	940	1620
	Std Dev	94	106	132	135	120	112	152	123	127	119	86	75	35
	Minimum	830	1070	1370	1710	1770	2030	1770	1680	1490	1210	940	770	1550
	Maximum	1170	1470	1900	2180	2260	2500	2460	2260	1940	1620	1280	1110	1710
	Diffuse	360	450	550	660	740	730	710	660	610	460	370	330	550
Clear Day	Global	1290	1610	2030	2390	2590	2650	2600	2420	2100	1690	1340	1180	1990
NORTH	Global	260	320	380	460	570	650	630	500	410	330	270	240	420
	Diffuse	260	320	380	450	490	510	500	460	410	330	270	240	390
Clear Day	Global	230	290	350	440	590	710	650	480	370	310	250	220	410
EAST	Global	630	770	950	1030	1050	1120	1200	1150	950	820	670	590	910
	Diffuse	310	380	470	550	590	600	600	570	500	410	330	290	470
Clear Day	Global	880	1050	1240	1370	1410	1420	1410	1360	1240	1070	890	810	1180
SOUTH	Global	1400	1390	1250	960	710	620	660	840	1070	1350	1430	1410	1090
	Diffuse	410	470	510	530	520	510	510	520	520	470	430	390	480
Clear Day	Global	2080	1970	1640	1140	770	630	690	950	1400	1810	2010	2060	1430
WEST	Global	670	820	990	1120	1150	1220	1190	1110	990	890	730	630	960
	Diffuse	320	390	480	560	600	620	610	580	510	410	340	290	480
Clear Day	Global	880	1050	1240	1370	1410	1420	1410	1360	1240	1070	890	810	1180

Average Annual Solar Heat and Illumination – Nearest Available Site

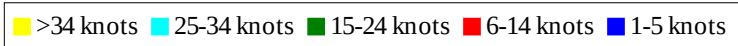
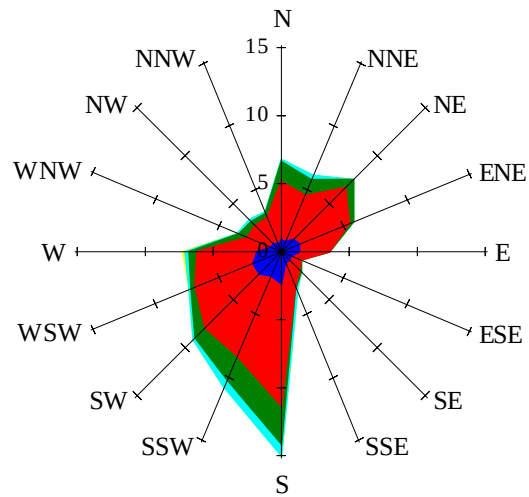
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	680	900	1180	1410	1510	1620	1610	1480	1210	1010	760	630	1170
NORTH	Unshaded	180	220	270	310	360	410	390	330	280	230	190	170	280
	Shaded	170	210	250	300	340	380	370	310	270	220	180	160	260
EAST	Unshaded	440	540	670	730	740	790	850	820	670	580	470	410	640
	Shaded	410	510	630	680	680	730	790	760	630	540	450	390	600
SOUTH	Unshaded	1040	990	830	580	420	370	390	490	680	940	1050	1050	740
	Shaded	1030	950	720	450	350	340	340	380	560	870	1040	1040	670
WEST	Unshaded	460	580	710	800	820	870	850	790	710	640	520	440	680
	Shaded	440	540	660	740	760	800	790	740	660	600	490	420	640

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	31	74	93	84	48	31	75	102	104	81
	M.Cloudy	18	49	65	58	32	20	52	75	80	63
NORTH	M.Clear	8	14	16	15	11	24	17	17	17	16
	M.Cloudy	8	16	19	17	12	14	17	19	19	17
EAST	M.Clear	75	73	26	15	11	65	80	48	17	16
	M.Cloudy	24	41	24	17	12	29	49	38	19	17
SOUTH	M.Clear	26	60	75	68	40	9	15	30	31	18
	M.Cloudy	12	36	50	43	23	8	17	27	29	19
WEST	M.Clear	8	14	16	59	83	9	15	17	37	75
	M.Cloudy	8	16	19	39	41	8	16	19	33	56
M.Clear	(% hrs)	46	47	48	48	48	44	49	52	56	59
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	16	63	91	92	66	13	49	65	53	18
	M.Cloudy	10	39	61	67	47	8	31	42	33	12
NORTH	M.Clear	6	14	16	16	14	5	11	12	11	6
	M.Cloudy	5	14	18	19	15	4	11	14	12	5
EAST	M.Clear	50	80	46	16	14	46	56	15	11	6
	M.Cloudy	16	38	33	19	15	12	27	15	12	5
SOUTH	M.Clear	9	41	63	64	44	33	80	95	84	41
	M.Cloudy	6	24	41	45	30	9	35	47	38	16
WEST	M.Clear	6	14	16	40	76	5	11	12	53	53
	M.Cloudy	5	14	18	32	46	4	11	14	27	19
M.Clear	(% hrs)	47	49	47	46	50	43	44	46	50	49

Wind Summary - December, January, and February

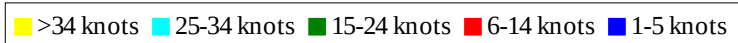
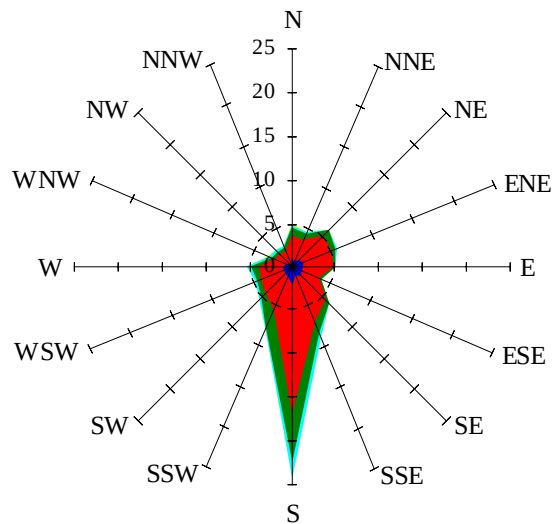
Labels of Percent Frequency on North Axis



Percent Calm = 5.09

Wind Summary - March, April, and May

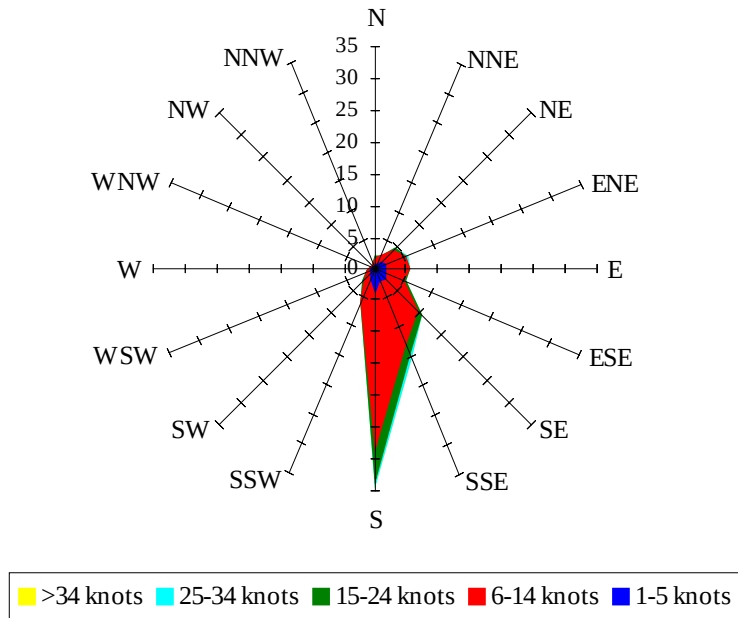
Labels of Percent Frequency on North Axis



Percent Calm = 2.98

Wind Summary - June, July, and August

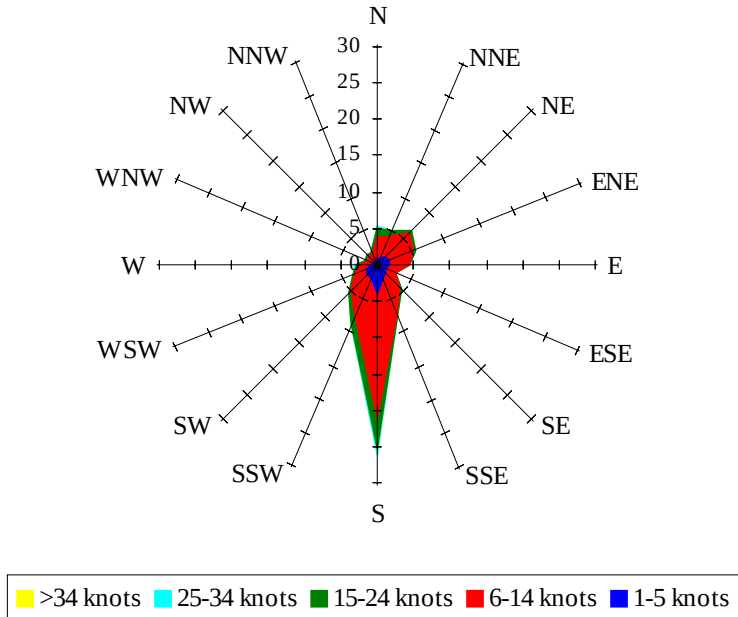
Labels of Percent Frequency on North Axis



Percent Calm = 4.10

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 6.33