

AMARILLO TX

Latitude = 35.23 N

Longitude = 101.70 W

Period of Record = 1973 to 1996

WMO No. 723630

Elevation = 3606 feet

Average Pressure = 26.29 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	101	66	54	15.5	S
0.4% Occurrence	97	67	63	15.4	S
1.0% Occurrence	94	66	66	15.3	S
2.0% Occurrence	92	67	70	15.2	S
Mean Daily Range	25	-	-	-	-
97.5% Occurrence	18	16	11	11.7	N
99.0% Occurrence	12	11	9	11.6	N
99.6% Occurrence	6	5	6	12.2	N
Median of Extreme Lows	-3	-4	4	12.8	N
	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	74	88	115	15.5	S
0.4% Occurrence	71	86	104	15.2	S
1.0% Occurrence	70	86	99	14.8	S
2.0% Occurrence	69	85	95	14.5	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	122	76	0.72	12.9	S
0.4% Occurrence	113	75	0.67	12.2	S
1.0% Occurrence	109	75	0.65	12.8	S
2.0% Occurrence	105	73	0.62	11.1	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		147	1098	7	705

Other Site Data

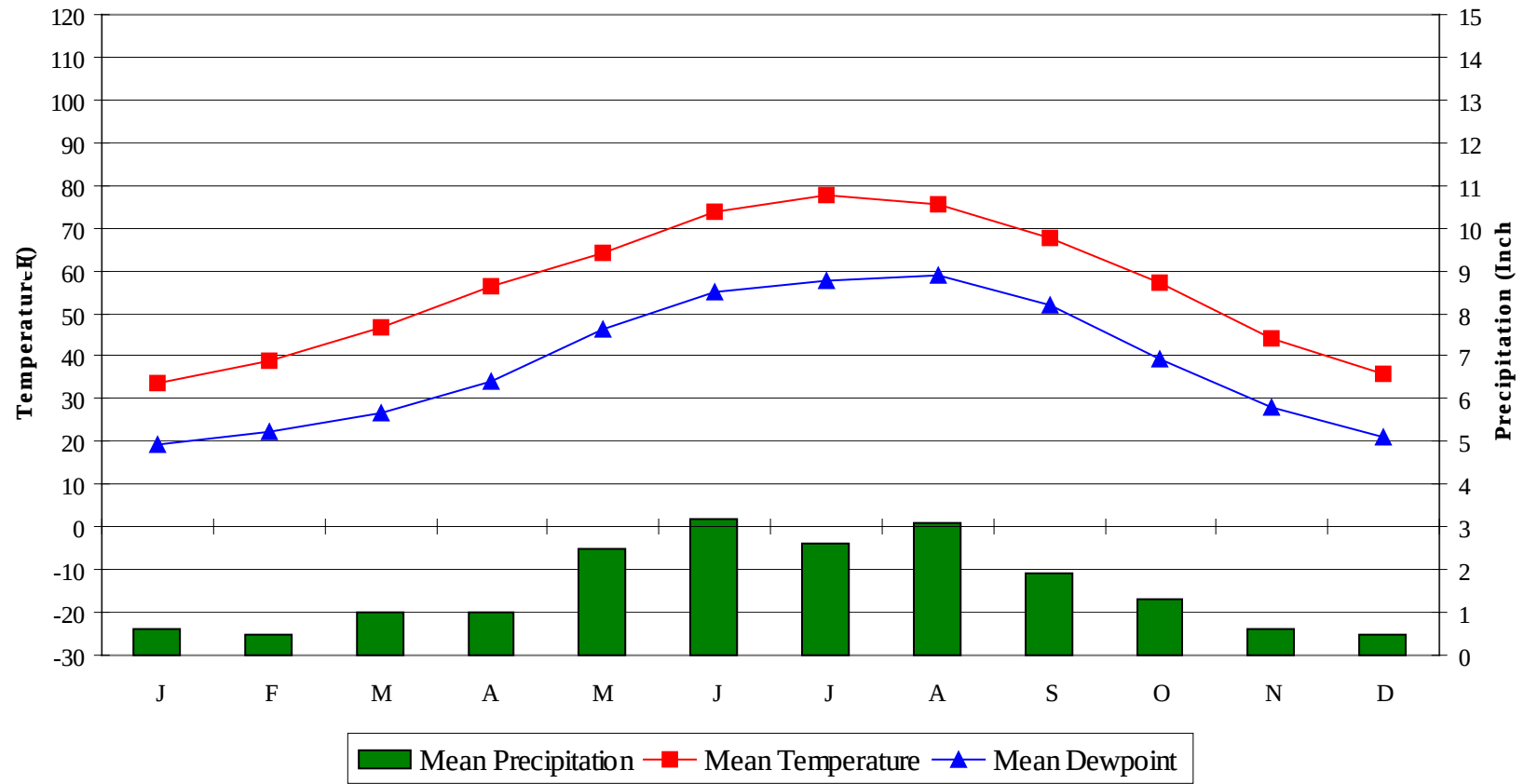
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
7	3.5	90	0.4 + 1.2
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
58.7	N/A	10	85

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

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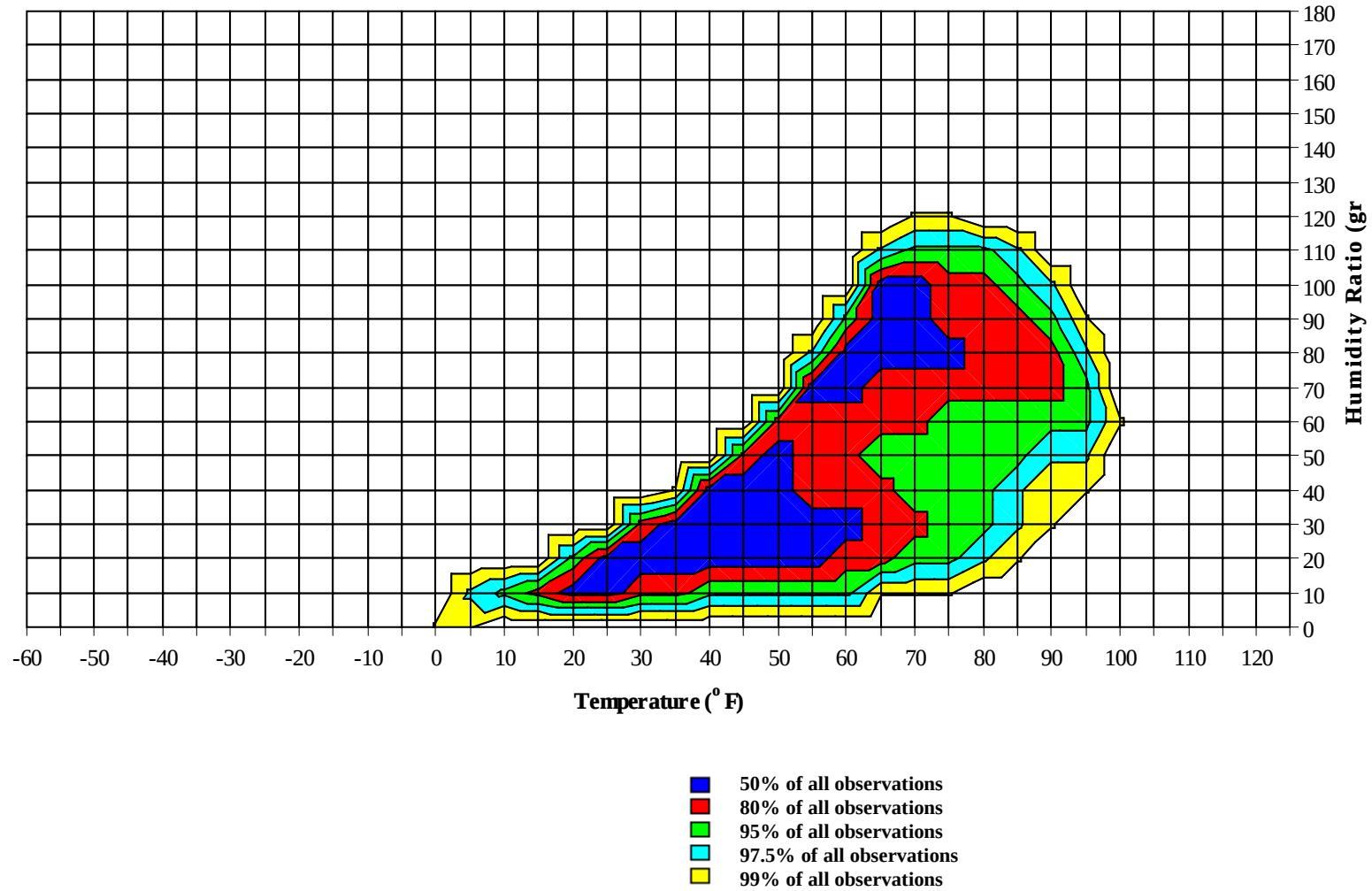
Average Annual Climate



AMARILLO TX

WMO No. 723630

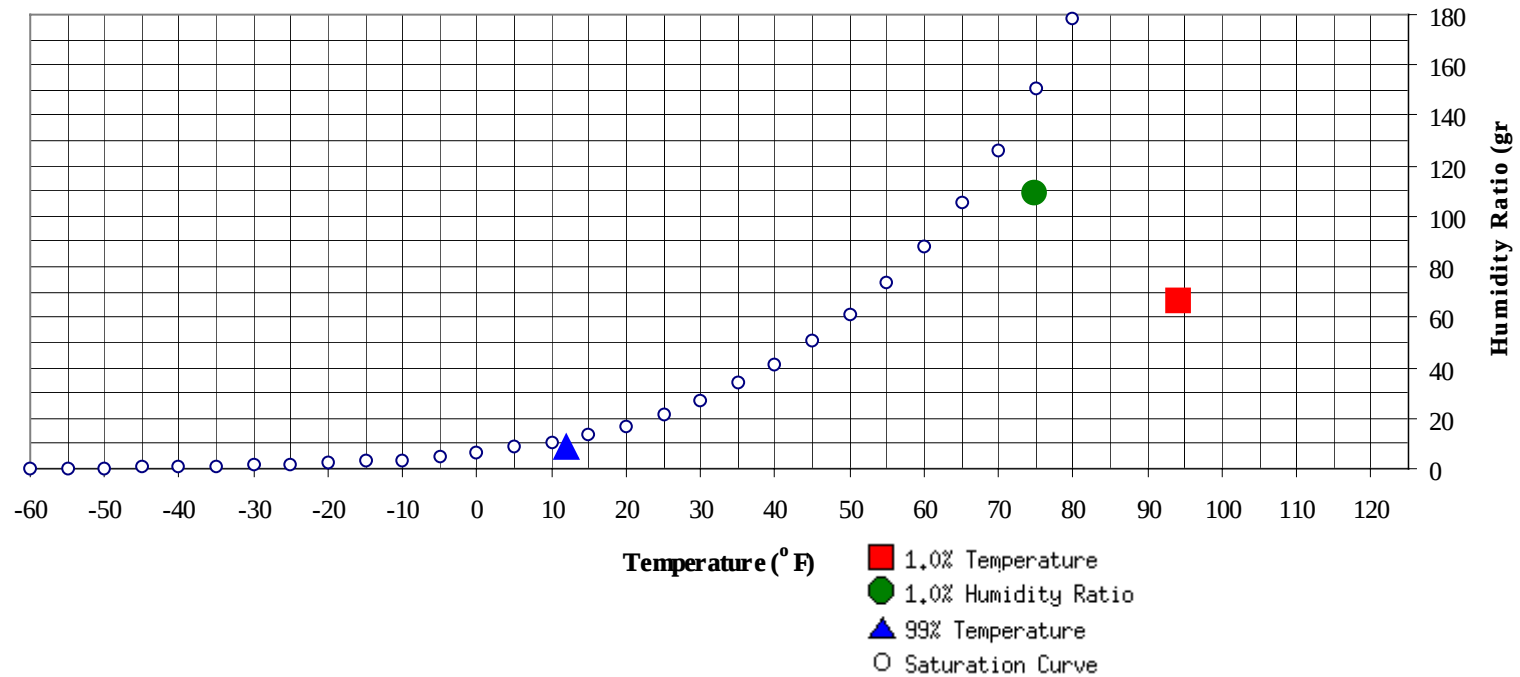
Long Term Psychrometric Summary



AMARILLO TX

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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	12	8.6	4.2		109.2	74.9	68.6	66	35.0

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	94	66.3	66.4	33.0

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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		
105 / 109															
100 / 104															
95 / 99															
90 / 94												0	0	0	55.0
85 / 89							0		0	52.5		1	0	1	55.1
80 / 84							1	0	1	51.1		6	2	7	53.4
75 / 79		0	0	1	50.3		3	1	4	51.4		11	6	17	51.8
70 / 74		2	1	3	48.6		7	3	9	49.0	0	20	10	29	50.0
65 / 69		7	2	9	46.0	0	14	7	21	47.2	0	22	14	37	48.2
60 / 64		12	4	16	44.1	1	19	11	31	45.1	3	29	22	54	46.2
55 / 59	1	18	9	27	41.9	2	23	14	38	42.6	8	31	27	67	44.4
50 / 54	2	27	15	44	39.4	5	25	21	51	40.5	19	34	38	91	42.1
45 / 49	7	27	23	57	37.1	13	26	31	70	38.1	33	28	37	98	39.4
40 / 44	15	28	31	75	34.6	24	24	32	80	35.3	45	23	35	103	36.5
35 / 39	29	29	38	96	31.6	41	23	32	97	32.6	49	18	25	92	32.8
30 / 34	51	31	45	127	28.4	46	21	28	95	28.9	46	12	17	75	29.1
25 / 29	51	24	32	107	24.6	41	17	17	75	25.0	24	7	9	40	24.7
20 / 24	43	18	24	85	20.3	24	10	12	46	20.6	10	3	4	17	20.3
15 / 19	25	11	13	48	15.6	13	5	7	25	15.9	4	2	2	8	15.6
10 / 14	15	7	8	30	11.0	7	3	4	14	11.0	3	1	1	5	11.2
5 / 9	8	2	3	14	6.3	4	2	2	9	6.2	2	0	0	2	6.8
0 / 4	3	1	1	5	1.5	2	1	2	4	1.2	0			0	3.0
-5 / -1	1	0	0	1	-2.7	2	0	1	3	-3.0					
-10 / -6	0		0	0	-5.9	0	0	0	1	-6.8					
-15 / -11						0			0	-10.0					

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.

AMARILLO TX

WMO No. 723630

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		
105 / 109												1	0	1	64.8
100 / 104							0	0	0	64.6		4	2	6	65.3
95 / 99		0		0	61.0		2	1	3	61.5		12	7	19	66.2
90 / 94		1	0	1	59.6		8	4	12	61.0		29	15	44	66.3
85 / 89		6	2	8	57.4		15	8	23	60.2	0	42	26	68	65.8
80 / 84		17	8	25	55.4		31	16	47	60.2	2	49	35	87	65.0
75 / 79		26	15	41	54.5	1	41	26	68	59.6	14	44	43	101	63.6
70 / 74	1	30	21	52	53.4	6	46	37	89	58.2	43	29	45	118	62.3
65 / 69	5	35	28	68	51.3	23	40	41	104	56.7	71	17	36	124	60.8
60 / 64	16	36	39	90	49.6	49	31	45	126	54.9	63	8	21	92	58.1
55 / 59	29	31	38	98	47.2	70	19	34	122	52.1	33	3	8	44	54.2
50 / 54	44	23	32	99	44.5	53	9	21	83	48.2	11	1	2	14	50.0
45 / 49	48	16	25	90	40.9	28	3	8	39	43.4	2		0	2	46.1
40 / 44	43	8	17	68	37.3	13	2	4	19	39.5					
35 / 39	30	6	10	46	33.3	5	1	1	7	35.7					
30 / 34	18	3	5	26	30.0	1		0	2	32.8					
25 / 29	5	0	1	7	25.6										
20 / 24	1		0	1	20.2										
15 / 19	0			0	17.0										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															

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AMARILLO TX

WMO No. 723630

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		
105 / 109															
100 / 104		3	1	4	66.8		1	0	1	67.0		0		0	65.8
95 / 99		20	9	29	67.1		11	3	14	67.4		3	1	3	65.6
90 / 94		49	28	76	67.4		41	18	59	67.7	0	14	4	19	64.5
85 / 89	0	60	36	95	67.2		56	30	87	67.5	0	30	13	43	64.2
80 / 84	3	55	49	107	66.2	0	53	39	92	66.8	0	43	23	66	63.8
75 / 79	28	35	53	116	64.6	13	40	56	109	65.3	2	40	33	74	62.5
70 / 74	80	18	46	145	63.6	66	24	57	147	64.0	16	38	46	100	61.1
65 / 69	97	6	22	125	62.4	104	14	32	149	62.7	52	28	45	125	59.8
60 / 64	36	1	5	42	59.8	54	5	12	71	60.2	67	20	38	126	57.1
55 / 59	4		0	4	55.1	10	1	2	13	55.6	50	10	18	78	52.5
50 / 54	0			0	49.6	1		0	1	52.3	29	8	11	48	48.3
45 / 49											15	4	5	23	43.7
40 / 44											6	1	2	10	39.7
35 / 39											2	1	1	4	35.1
30 / 34											1	0	0	1	31.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															

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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		
105 / 109															
100 / 104															
95 / 99		0		0	62.0										
90 / 94		1	0	2	58.7										
85 / 89		9	2	11	58.8		0	0	0	52.2					
80 / 84		18	6	24	57.9		2	0	2	53.5					
75 / 79	0	28	11	39	57.1		7	1	8	52.8		1		1	50.9
70 / 74	0	37	19	56	55.4		15	4	19	51.4		4	1	5	48.8
65 / 69	4	37	30	70	53.5	0	20	7	28	49.1		10	2	12	47.0
60 / 64	18	37	44	99	52.1	2	26	16	44	48.1	0	16	5	21	45.0
55 / 59	41	30	47	119	49.9	8	28	23	59	46.0	2	20	10	32	43.2
50 / 54	63	24	39	126	46.2	16	31	32	79	43.0	5	29	17	51	40.4
45 / 49	51	14	26	91	42.2	30	29	38	97	40.0	9	31	24	65	37.4
40 / 44	38	7	15	60	37.8	41	28	34	103	36.7	17	32	35	84	34.8
35 / 39	19	3	6	29	33.8	46	21	32	99	33.1	38	30	45	113	31.9
30 / 34	9	2	3	14	29.8	41	17	29	87	29.1	55	29	46	129	28.5
25 / 29	2	0	1	3	24.8	31	8	15	54	24.7	50	20	30	100	24.5
20 / 24	1	1	0	2	20.7	15	4	6	24	20.3	36	11	16	63	20.3
15 / 19	1	0	0	1	16.6	6	1	2	10	16.0	15	6	9	30	15.7
10 / 14	0			0	13.0	2	0	1	4	10.9	9	4	4	17	10.7
5 / 9						1	0	1	2	6.7	5	2	3	11	6.4
0 / 4						0	0		0	2.7	3	2	2	8	1.2
-5 / -1											2	1	1	4	-2.8
-10 / -6											0			0	-6.0
-15 / -11															

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

Period of Record = 1973 to 1996

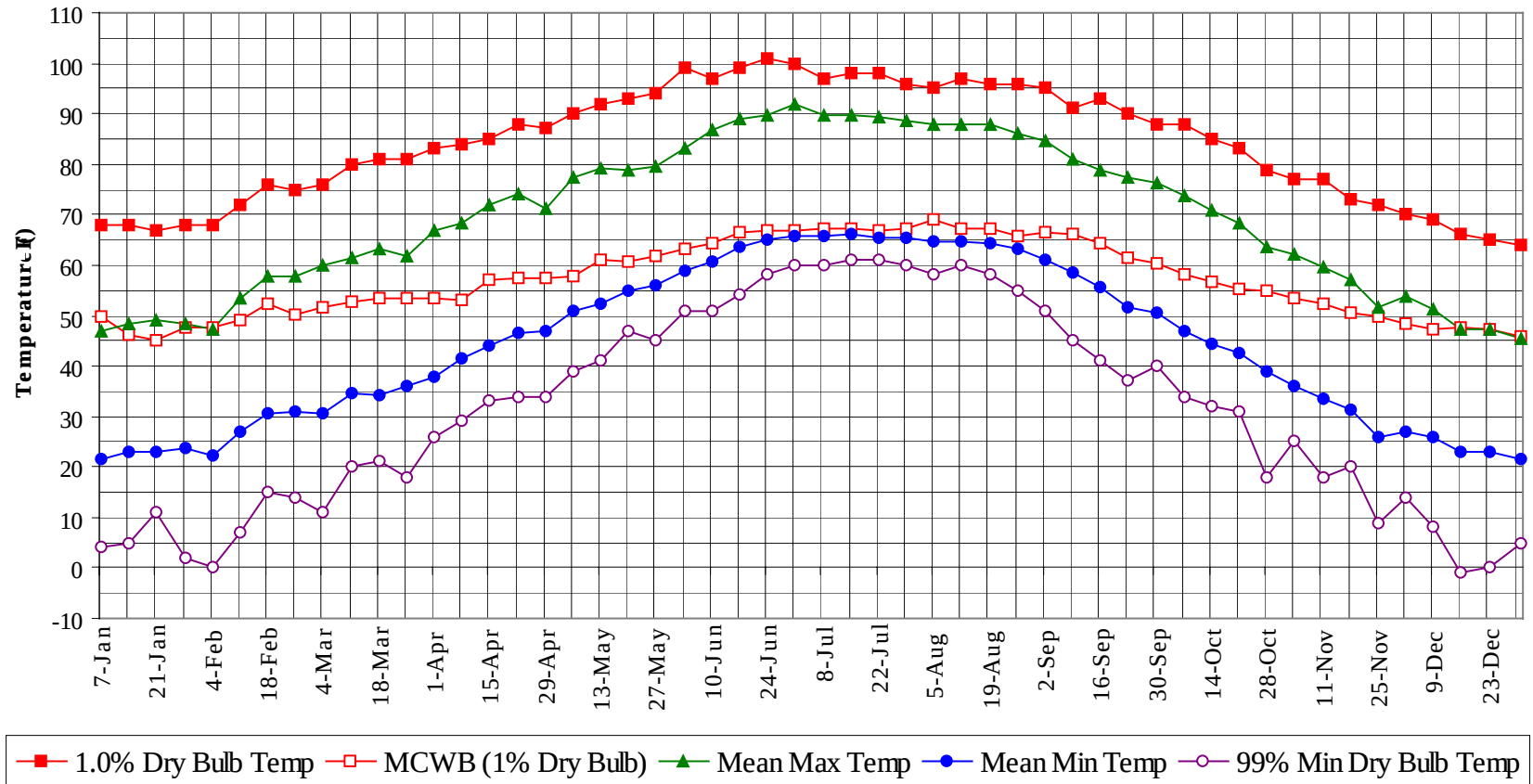
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109		1	0	1	64.8
100 / 104		8	4	12	66.0
95 / 99		48	21	69	66.6
90 / 94	0	146	71	217	66.5
85 / 89	0	221	120	341	65.6
80 / 84	6	276	179	461	63.9
75 / 79	59	276	247	582	61.9
70 / 74	216	270	290	775	60.2
65 / 69	361	248	265	874	57.9
60 / 64	311	239	260	810	53.6
55 / 59	254	213	230	697	48.7
50 / 54	247	210	225	682	44.2
45 / 49	233	178	216	627	40.0
40 / 44	242	155	203	599	36.3
35 / 39	259	132	190	582	32.6
30 / 34	267	114	173	555	28.8
25 / 29	204	76	106	386	24.7
20 / 24	129	46	62	238	20.4
15 / 19	65	25	32	122	15.7
10 / 14	35	15	19	69	11.0
5 / 9	21	7	10	38	6.3
0 / 4	8	4	5	17	1.3
-5 / -1	5	1	2	7	-2.8
-10 / -6	1	0	0	1	-6.3
-15 / -11	0			0	-10.0

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WMO No. 723630

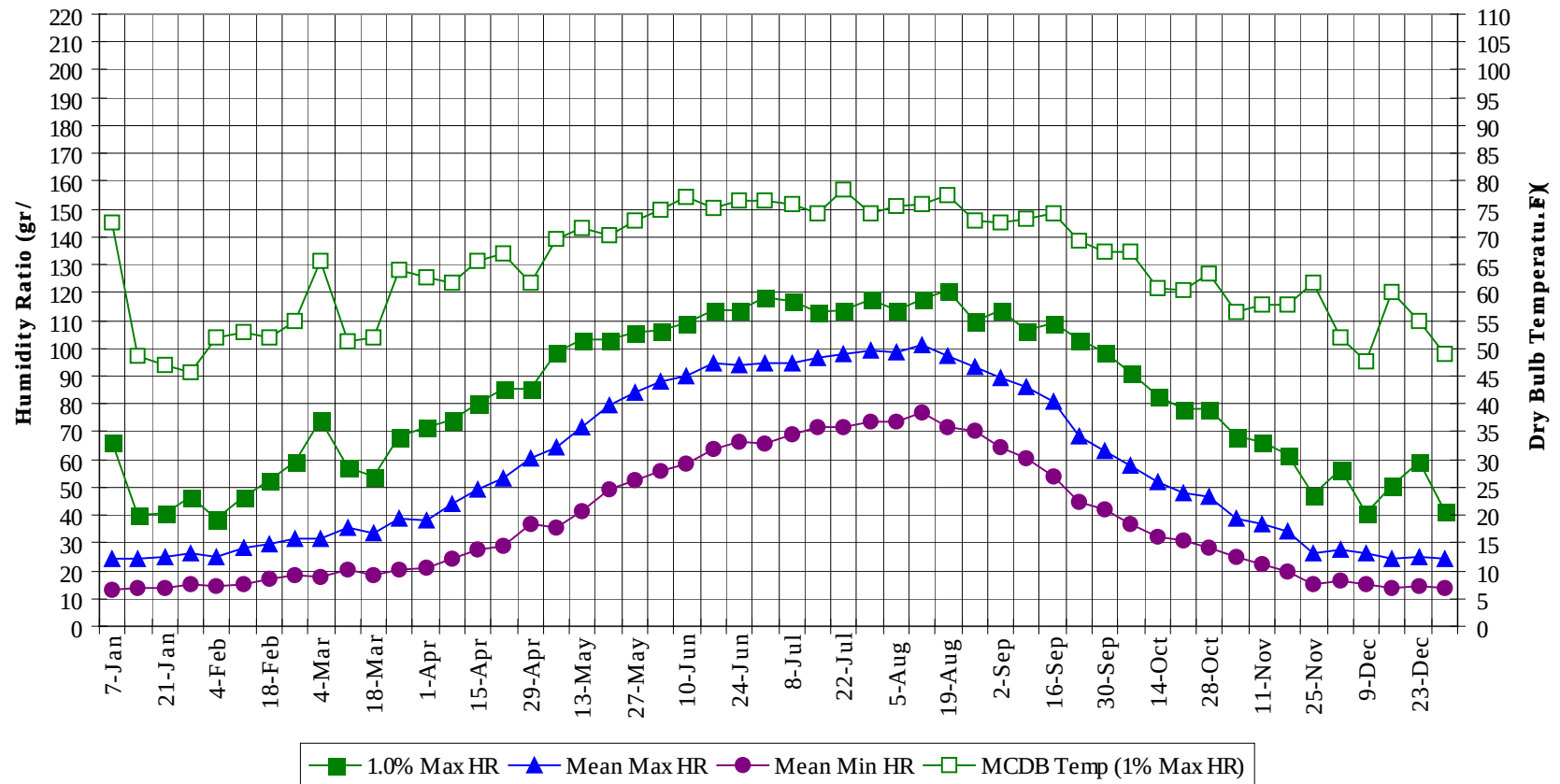
Annual Summary of Temperatures



AMARILLO TX

WMO No. 723630

Long Term Humidity and Dry Bulb Temperature Summary



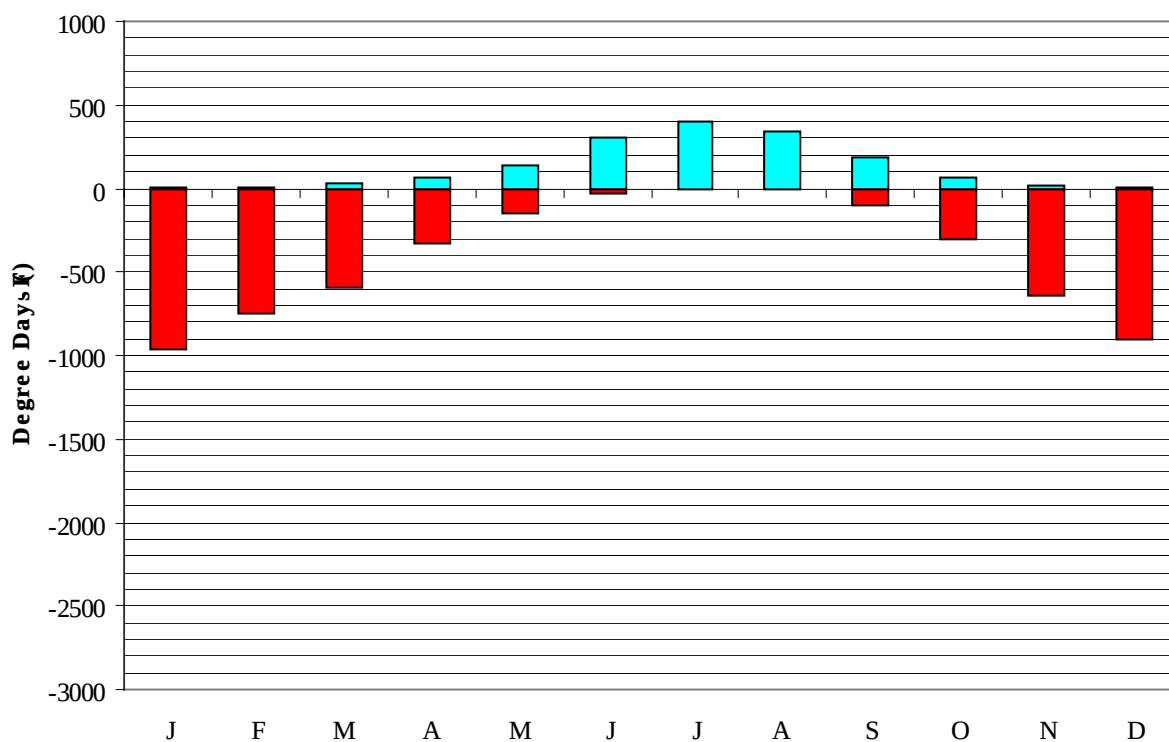
AMARILLO TX**WMO No. 723630****Long Term Dry Bulb Temperature and Humidity Summary**

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	68.0	50.0	47.1	21.6	4.0	66.5	72.5	24.3	13.3
14-Jan	68.0	46.2	48.2	23.1	5.0	39.9	48.6	24.4	14.1
21-Jan	67.0	45.1	49.0	23.0	11.0	40.6	47.0	24.8	13.8
28-Jan	68.0	47.6	48.3	23.7	2.0	46.9	45.8	26.2	15.2
4-Feb	68.0	47.8	47.4	22.2	0.0	38.5	51.8	25.2	14.4
11-Feb	72.0	49.1	53.3	26.9	7.0	46.9	53.0	28.2	15.4
18-Feb	76.0	52.3	57.7	30.7	15.0	52.5	51.8	29.5	17.1
25-Feb	75.0	50.1	57.8	31.0	14.0	58.8	54.9	31.8	18.3
4-Mar	76.0	51.6	59.8	30.5	11.0	74.2	65.6	31.7	17.5
11-Mar	80.0	52.8	61.3	34.7	20.0	57.4	51.3	35.7	20.1
18-Mar	81.0	53.6	63.3	34.4	21.0	53.9	51.8	33.7	18.2
25-Mar	81.0	53.5	61.8	36.2	18.0	68.6	64.0	38.5	20.4
1-Apr	83.0	53.6	66.9	37.9	26.0	71.4	62.8	38.1	20.7
8-Apr	84.0	53.1	68.2	41.4	29.0	74.2	61.9	43.8	24.2
15-Apr	85.0	57.1	71.8	44.1	33.0	79.8	65.7	49.3	27.7
22-Apr	88.0	57.6	74.0	46.5	34.0	85.4	67.0	52.9	29.0
29-Apr	87.0	57.4	71.3	46.9	34.0	85.4	61.7	60.3	36.9
6-May	90.0	57.9	77.4	50.7	39.0	98.7	69.5	64.1	35.6
13-May	92.0	61.1	79.2	52.5	41.0	102.9	71.6	71.4	41.7
20-May	93.0	60.8	78.7	54.9	47.0	102.9	70.4	79.5	49.5
27-May	94.0	61.9	79.6	56.0	45.0	105.7	72.8	83.8	52.3
3-Jun	99.0	63.3	83.2	59.0	51.0	106.4	74.7	87.7	56.1
10-Jun	97.0	64.2	86.6	60.8	51.0	109.2	77.2	89.9	58.8
17-Jun	99.0	66.6	89.1	63.5	54.0	113.4	75.1	94.4	63.7
24-Jun	101.0	66.7	89.8	64.9	58.0	113.4	76.6	94.0	66.6
1-Jul	100.0	67.0	91.7	65.9	60.0	118.3	76.7	94.7	65.8
8-Jul	97.0	67.3	89.6	65.8	60.0	116.9	75.9	94.3	69.0
15-Jul	98.0	67.3	89.7	66.2	61.0	112.7	74.3	96.4	71.8
22-Jul	98.0	66.9	89.5	65.3	61.0	113.4	78.3	97.6	71.8
29-Jul	96.0	67.1	88.7	65.4	60.0	117.6	74.1	99.4	73.8
5-Aug	95.0	69.1	88.1	64.8	58.0	113.4	75.4	98.5	73.5
12-Aug	97.0	67.3	87.9	64.8	60.0	117.6	76.0	101.1	76.8
19-Aug	96.0	67.4	88.0	64.5	58.0	121.1	77.3	97.0	71.9
26-Aug	96.0	65.9	86.1	63.3	55.0	109.9	73.0	93.2	70.0
2-Sep	95.0	66.3	84.6	61.0	51.0	113.4	72.7	89.5	64.3
9-Sep	91.0	66.1	80.9	58.5	45.0	106.4	73.1	86.2	60.4
16-Sep	93.0	64.5	78.8	55.5	41.0	109.2	74.1	80.9	54.1
23-Sep	90.0	61.5	77.4	51.7	37.0	102.9	69.4	68.6	44.6
30-Sep	88.0	60.2	76.3	50.7	40.0	98.7	67.4	63.2	41.8
7-Oct	88.0	58.2	73.9	47.0	34.0	91.0	67.2	57.8	36.9
14-Oct	85.0	56.8	70.8	44.3	32.0	82.6	60.7	52.2	32.0
21-Oct	83.0	55.3	68.4	42.5	31.0	78.4	60.4	48.2	31.0
28-Oct	79.0	54.8	63.4	39.0	18.0	78.4	63.4	46.5	28.3
4-Nov	77.0	53.6	62.2	36.2	25.0	68.6	56.6	39.1	24.9
11-Nov	77.0	52.3	59.6	33.6	18.0	66.5	57.9	36.7	22.0
18-Nov	73.0	50.4	57.0	31.4	20.0	61.6	57.9	34.2	19.8
25-Nov	72.0	49.6	51.5	26.0	9.0	47.6	61.6	26.4	15.0
2-Dec	70.0	48.4	53.7	26.9	14.0	56.7	51.7	27.4	16.2
9-Dec	69.0	47.2	51.1	26.0	8.0	40.6	47.7	26.0	15.3
16-Dec	66.0	47.7	47.3	23.1	-1.0	50.4	60.0	24.5	13.9
23-Dec	65.0	47.4	47.3	22.9	0.0	58.8	55.0	25.3	14.6
31-Dec	64.0	45.9	45.5	21.6	5.0	41.3	48.9	24.4	13.6

AMARILLO TX

WMO No. 723630

Degree Days, Heating and Cooling
(Base 65°F)



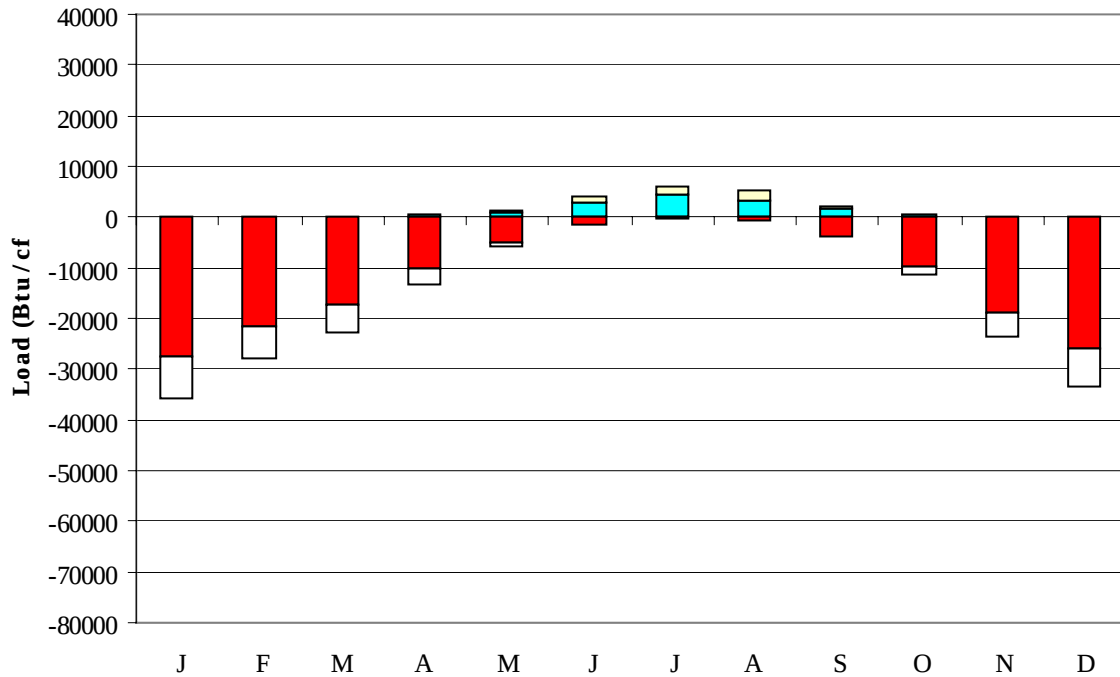
■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	2	968
FEB	6	746
MAR	24	587
APR	62	327
MAY	135	147
JUN	302	32
JUL	403	5
AUG	339	11
SEP	185	98
OCT	68	308
NOV	13	636
DEC	2	903
ANN	1540	4768

AMARILLO TX

WMO No. 723630

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



	Average Sensible Cooling Load (Btu/cfm)	Average Sensible Heating Load (Btu/cfm)	Average Latent Cooling Load (Btu/cfm)	Average Latent Heating Load (Btu/cfm)
JAN	1	-27484	0	-8348
FEB	13	-21456	0	-6395
MAR	94	-17383	0	-5277
APR	374	-10304	1	-2807
MAY	1041	-5165	164	-623
JUN	3092	-1473	913	-61
JUL	4419	-423	1678	-6
AUG	3419	-751	1930	-2
SEP	1584	-3645	610	-136
OCT	401	-9844	28	-1578
NOV	30	-18664	0	-4820
DEC	1	-25786	0	-7766
ANN	14469	-142378	5324	-37819

Average Annual Solar Radiation – Nearest Available Site

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

City: AMARILLO
 State: TX
 WBAN No: 23047
 Lat(N): 35.23
 Long(W): 101.7
 Elev(ft): 3603

Stn Type: Secondary

SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1

Overhang: 0.399

Vert Gap: 0.288

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	940	1200	1560	1930	2100	2260	2210	1990	1660	1380	1000	840	1590
	Std Dev	67	88	113	102	121	121	110	111	90	111	74	66	30
	Minimum	790	960	1400	1710	1870	2030	2030	1800	1550	1160	820	670	1530
	Maximum	1040	1350	1750	2130	2300	2500	2480	2210	1910	1590	1120	990	1650
	Diffuse	310	400	520	610	690	680	690	620	540	380	320	280	500
Clear Day	Global	1150	1490	1950	2370	2620	2700	2630	2400	2030	1590	1210	1040	1930
NORTH	Global	230	290	370	450	560	640	610	480	390	310	250	210	400
	Diffuse	230	290	370	430	490	510	500	450	380	310	250	210	370
Clear Day	Global	210	260	330	430	590	700	650	470	350	290	220	190	390
EAST	Global	640	770	950	1120	1150	1230	1230	1150	980	860	660	580	940
	Diffuse	290	360	450	530	580	600	600	550	470	380	300	260	450
Clear Day	Global	840	1010	1250	1410	1470	1480	1470	1390	1260	1050	850	770	1190
SOUTH	Global	1500	1460	1320	1070	810	710	760	930	1180	1490	1470	1460	1180
	Diffuse	400	450	500	530	530	520	520	500	450	450	400	360	470
Clear Day	Global	2110	2040	1770	1290	910	750	810	1090	1530	1900	2050	2080	1530
WEST	Global	650	790	970	1120	1160	1210	1200	1110	1000	890	680	600	950
	Diffuse	290	360	460	540	590	610	610	560	490	380	310	260	460
Clear Day	Global	840	1010	1250	1410	1470	1480	1470	1390	1260	1050	850	770	1190

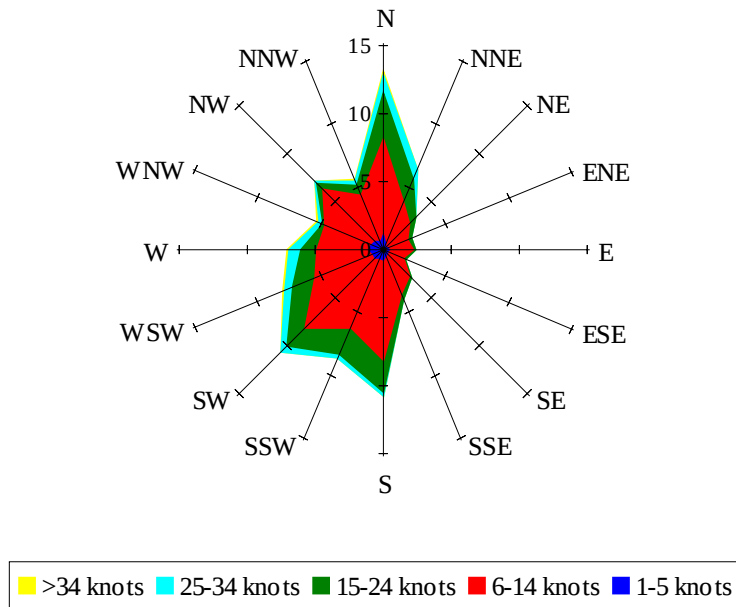
Average Annual Solar Heat and Illumination – Nearest Available Site

(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	620	830	1120	1410	1530	1660	1620	1460	1200	970	670	550	1140
NORTH	Unshaded	160	200	250	300	360	400	390	320	270	210	170	150	270
	Shaded	150	190	240	280	340	370	360	300	250	200	160	140	250
EAST	Unshaded	440	540	670	800	820	870	870	820	700	610	460	400	670
	Shaded	410	500	620	720	730	780	780	740	630	570	430	370	610
SOUTH	Unshaded	1130	1060	890	660	470	410	440	560	770	1050	1100	1100	800
	Shaded	1110	1000	740	460	340	340	340	380	590	950	1070	1090	700
WEST	Unshaded	450	560	690	800	830	860	860	790	720	630	480	410	670
	Shaded	420	510	630	730	750	770	770	720	650	580	440	380	610

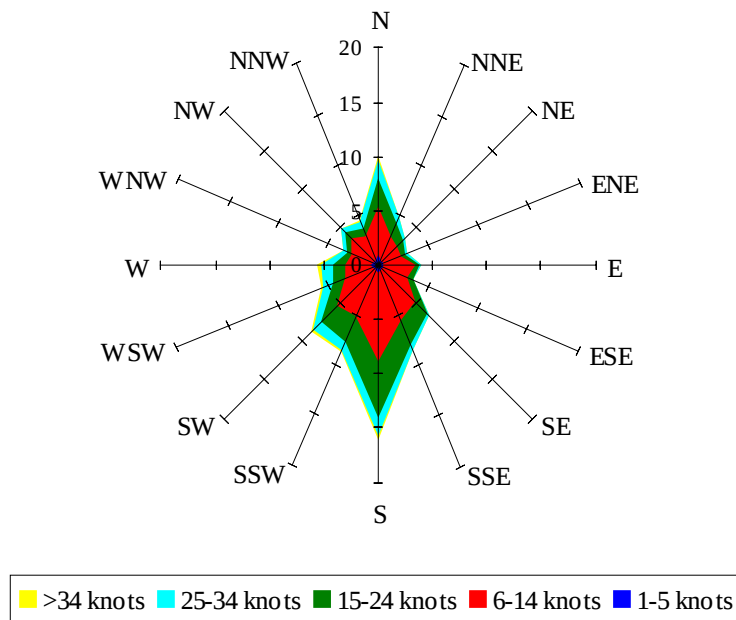
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	28	69	89	81	47	31	74	101	104	83
	M.Cloudy	17	46	62	57	33	21	53	73	81	63
NORTH	M.Clear	8	13	15	14	10	24	14	16	16	15
	M.Cloudy	7	15	18	16	11	14	16	18	18	17
EAST	M.Clear	73	73	27	14	10	69	82	49	16	15
	M.Cloudy	26	41	24	16	11	32	51	38	18	17
SOUTH	M.Clear	26	63	80	73	43	9	17	36	38	23
	M.Cloudy	12	36	51	47	26	8	17	30	34	22
WEST	M.Clear	8	13	15	56	81	9	14	16	35	74
	M.Cloudy	7	15	18	38	43	8	16	18	31	55
M.Clear	(% hrs)	45	46	46	43	45	55	57	58	52	51
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	15	59	88	89	65	8	42	58	47	16
	M.Cloudy	9	38	58	64	47	6	27	39	32	11
NORTH	M.Clear	6	12	15	16	13	4	10	11	10	5
	M.Cloudy	4	13	17	18	15	3	10	13	11	5
EAST	M.Clear	49	81	47	16	13	36	55	16	10	5
	M.Cloudy	16	39	32	18	15	10	27	15	11	5
SOUTH	M.Clear	9	44	68	70	49	26	79	97	85	40
	M.Cloudy	5	25	41	47	32	8	36	49	41	16
WEST	M.Clear	6	12	15	37	76	4	10	11	49	50
	M.Cloudy	4	13	17	30	46	3	10	13	27	18
M.Clear	(% hrs)	50	52	53	51	51	48	48	49	50	52

Wind Summary - December, January, and February **Labels of Percent Frequency on North Axis**



Percent Calm = 1.97

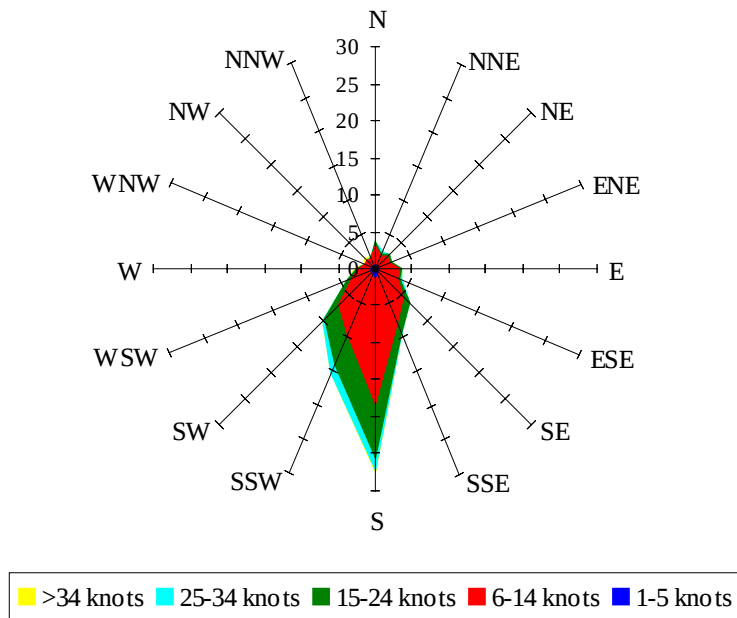
Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



Percent Calm = 1.02

Wind Summary - June, July, and August

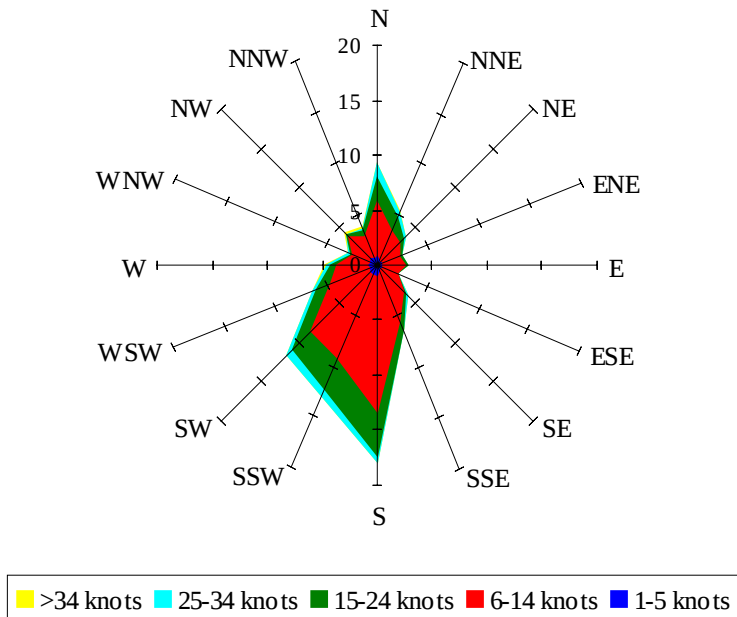
Labels of Percent Frequency on North Axis



Percent Calm = 1.20

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 1.48