

EL PASO TX	
Latitude = 31.80 N	WMO No. 722700
Longitude = 106.40 W	Elevation = 3918 feet
Period of Record = 1972 to 1996	Average Pressure = 26.02 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	105	65	42	8.1	S
0.4% Occurrence	102	65	45	8.3	W
1.0% Occurrence	99	64	49	8.5	S
2.0% Occurrence	96	64	53	8.5	S
Mean Daily Range	27	-	-	-	-
97.5% Occurrence	30	27	18	5.0	N
99.0% Occurrence	25	22	15	4.5	N
99.6% Occurrence	21	19	13	4.5	N
Median of Extreme Lows	15	14	9	4.1	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	72	85	109	6.2	S
0.4% Occurrence	70	85	99	6.7	S
1.0% Occurrence	69	85	94	6.9	S
2.0% Occurrence	68	84	90	7.1	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	127	74	0.74	4.1	N
0.4% Occurrence	114	73	0.67	5.9	N
1.0% Occurrence	111	73	0.65	6.1	N
2.0% Occurrence	104	73	0.60	6.1	N
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		420	1860	2	572

Other Site Data

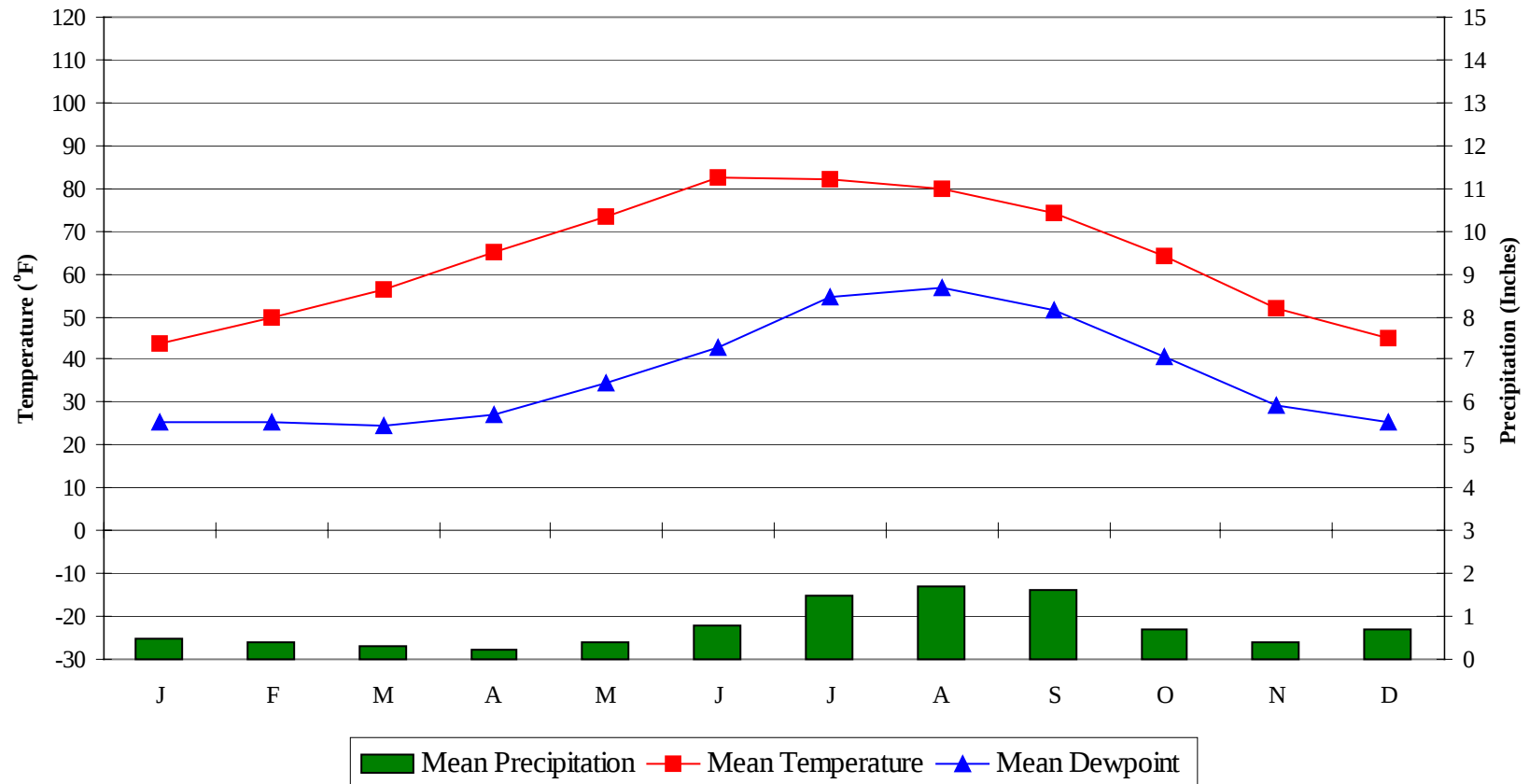
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
11	2.5	90	0.3 + 2.3
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
66.4	0	8	49

*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

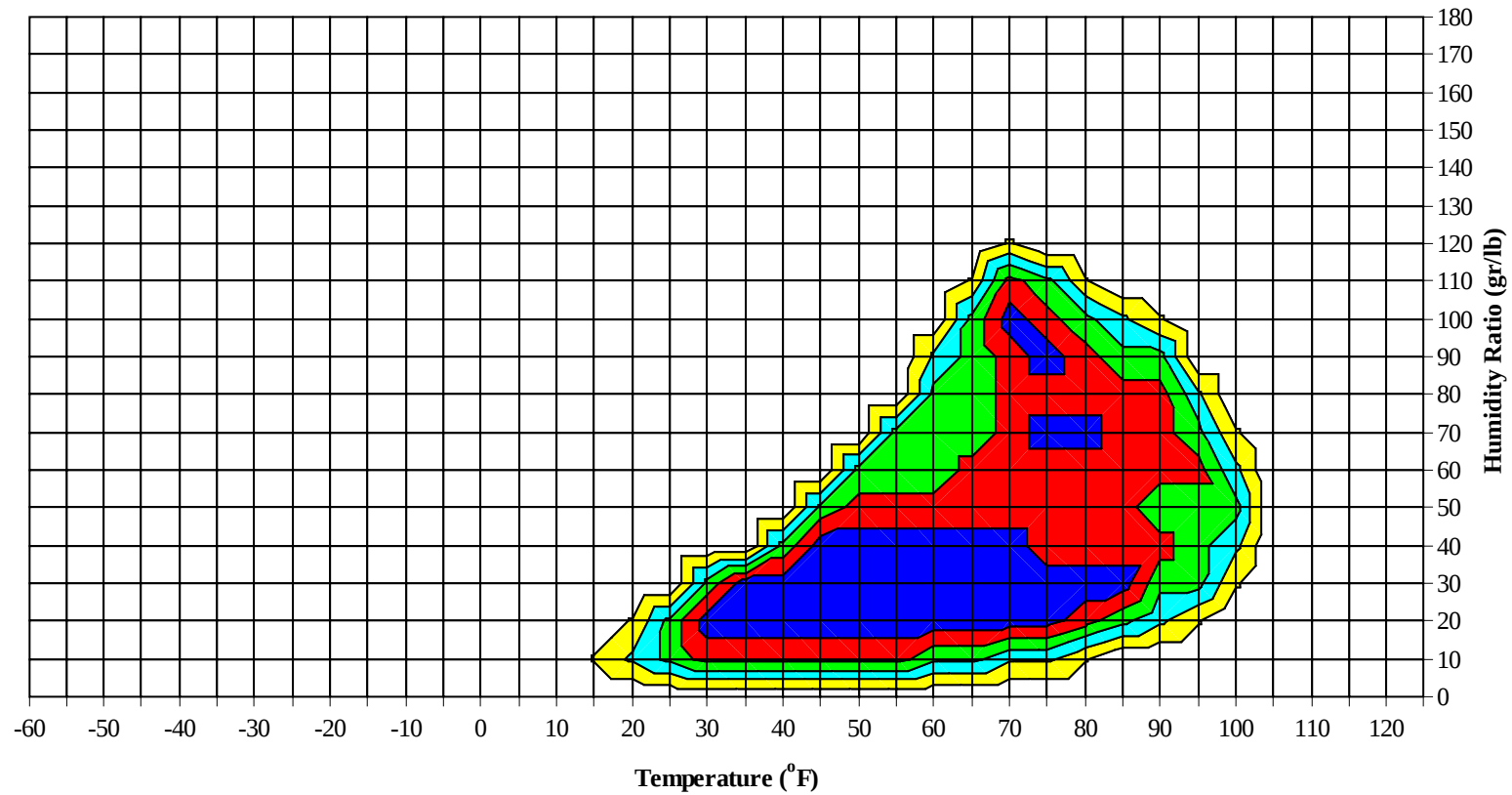


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Long Term Psychrometric Summary

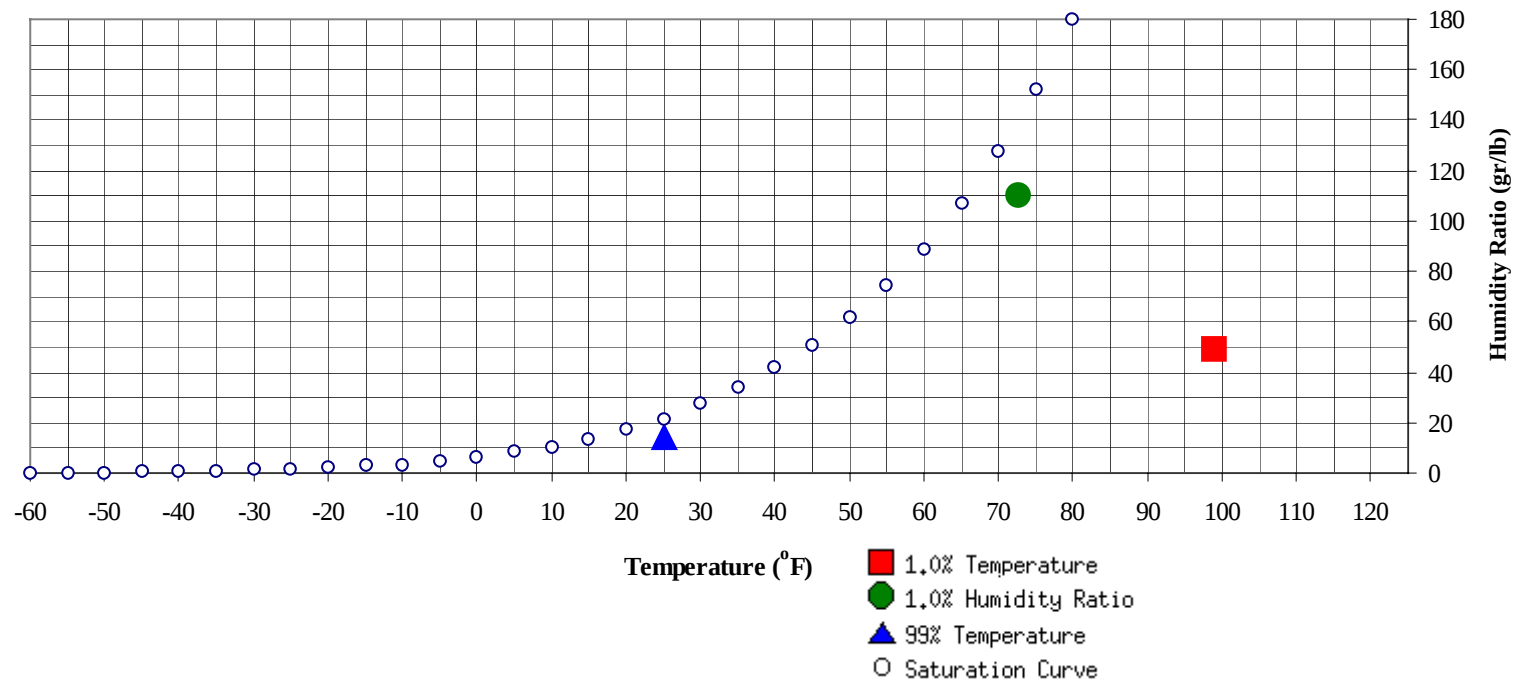


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	25	14.4	8.2		110.6	72.6	68	66	34.7

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	99	48.9	64.5	31.5

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

Period of Record = 1972 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															
90 / 94															
85 / 89												1	0	1	55.9
80 / 84							1	0	1	52.6		8	2	10	53.0
75 / 79		0		0	53.2		5	1	6	50.6		27	13	40	51.1
70 / 74		2	0	2	48.2		19	6	25	49.1	0	40	24	64	49.0
65 / 69		12	3	15	46.6	0	28	17	45	47.3	6	44	39	89	46.8
60 / 64	1	30	11	42	45.0	5	40	28	73	45.2	17	45	40	102	44.8
55 / 59	2	47	26	75	43.1	11	43	37	91	43.3	29	38	43	110	42.9
50 / 54	12	50	44	106	41.2	23	38	42	103	41.2	46	25	39	110	40.7
45 / 49	29	42	48	119	39.0	39	26	39	104	38.7	52	13	27	92	37.9
40 / 44	39	31	45	115	35.7	43	14	27	84	35.2	48	5	15	68	34.8
35 / 39	52	19	38	109	32.2	44	7	16	67	31.9	29	1	4	34	31.2
30 / 34	55	10	22	87	28.6	33	3	7	43	28.2	13	1	2	16	27.3
25 / 29	36	4	8	48	24.7	17	1	2	20	23.8	6	0	1	7	22.9
20 / 24	17	0	2	19	20.7	6	0	1	7	19.7	2		0	2	19.4
15 / 19	5	0	0	5	16.5	2	0	0	2	15.7	0			0	17.0
10 / 14	1			1	12.1	0			0	11.0					
5 / 9						0			0	8.0					
0 / 4															

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 = 1972 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												1	0	1	67.9
105 / 109												6	2	8	65.0
100 / 104							0	0	0	63.0		25	11	36	63.7
95 / 99		0		0	60.7		8	3	11	60.7	0	47	25	72	62.5
90 / 94		3	1	4	59.2		31	13	44	59.0	2	59	41	102	61.3
85 / 89		18	7	25	55.8	0	52	28	80	57.2	7	48	44	99	60.4
80 / 84	0	42	22	64	53.6	3	60	43	106	55.5	28	33	45	106	59.4
75 / 79	1	51	36	88	51.6	17	47	48	112	54.0	52	15	33	100	58.3
70 / 74	11	46	44	101	49.8	40	30	45	115	52.6	62	6	23	91	57.7
65 / 69	26	33	39	98	47.9	55	13	32	100	51.3	49	2	11	62	56.2
60 / 64	44	22	33	99	46.1	56	6	21	83	50.2	28	0	4	32	52.9
55 / 59	44	13	26	83	43.8	43	2	11	56	47.6	9		1	10	48.4
50 / 54	46	7	18	71	41.0	22	1	3	26	43.5	2			2	44.3
45 / 49	35	2	8	45	38.0	9	0	0	9	38.8	0			0	37.7
40 / 44	18	1	3	22	34.5	2			2	35.4					
35 / 39	10	1	1	12	30.9	0			0	30.7					
30 / 34	3	1	1	5	29.2										
25 / 29	1		0	1	26.2										
20 / 24	0			0	24.0										
15 / 19															
10 / 14															
5 / 9															
0 / 4															

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

Period of Record = 1972 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		0	0	0	67.3										
105 / 109		2	1	3	65.8		0	0	0	65.7					
100 / 104		14	7	21	65.7		4	1	5	66.2		0	0	0	66.2
95 / 99		47	22	69	65.4		34	11	45	66.2		11	2	13	64.3
90 / 94	0	64	36	99	65.5		65	30	95	66.2		33	10	43	63.8
85 / 89	6	56	45	107	65.2	1	59	42	102	66.0	0	52	24	76	63.3
80 / 84	31	40	55	126	64.4	15	47	56	118	65.1	3	57	39	99	62.5
75 / 79	65	17	43	125	63.9	56	24	58	138	64.6	15	43	51	109	61.6
70 / 74	87	6	32	125	63.8	96	11	35	142	64.0	56	23	54	133	60.9
65 / 69	51	1	8	60	62.8	65	3	13	81	62.7	70	11	35	116	59.4
60 / 64	7	0	0	7	59.7	14	1	2	17	58.7	55	6	16	77	56.2
55 / 59	0			0	50.5	1	0		1	54.8	26	3	8	37	52.1
50 / 54											12	1	2	15	48.6
45 / 49											3	0	0	3	44.0
40 / 44											0			0	38.8
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															

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WMO No. 722700

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

Period of Record = 1972 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		0		0	60.7										
90 / 94		4	1	5	59.7										
85 / 89		19	4	23	59.3		0		0	58.0					
80 / 84	0	44	11	55	57.8		3	0	3	54.4					
75 / 79	1	51	26	78	56.6		14	2	16	53.0		1	0	1	51.4
70 / 74	5	47	40	92	55.1	0	32	9	41	51.0		6	1	7	49.2
65 / 69	21	36	46	103	53.8	2	40	21	63	49.4	0	19	5	24	47.4
60 / 64	49	23	47	119	51.9	10	43	33	86	47.5	1	35	16	52	45.6
55 / 59	58	12	37	107	49.1	19	41	40	100	45.3	7	45	28	80	43.6
50 / 54	53	6	22	81	45.4	33	32	42	107	42.5	16	48	42	106	41.5
45 / 49	39	3	10	52	41.8	41	20	40	101	39.3	29	38	45	112	38.9
40 / 44	15	1	3	19	37.9	48	10	27	85	36.0	37	26	42	105	35.8
35 / 39	6	1	2	9	33.7	43	4	16	63	32.1	50	16	36	102	32.2
30 / 34	2	0	0	2	29.0	26	2	8	36	28.2	55	9	21	85	28.6
25 / 29	0			0	24.0	13	1	2	16	23.8	30	3	8	41	24.3
20 / 24						4	0	0	4	20.1	14	1	3	18	19.8
15 / 19						1	0	0	1	16.3	5	0	1	6	14.8
10 / 14						0	0	0	0	11.3	2	0	0	2	10.4
5 / 9						0		0	0	5.3	1		0	1	7.1
0 / 4						0			0	3.0					

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.

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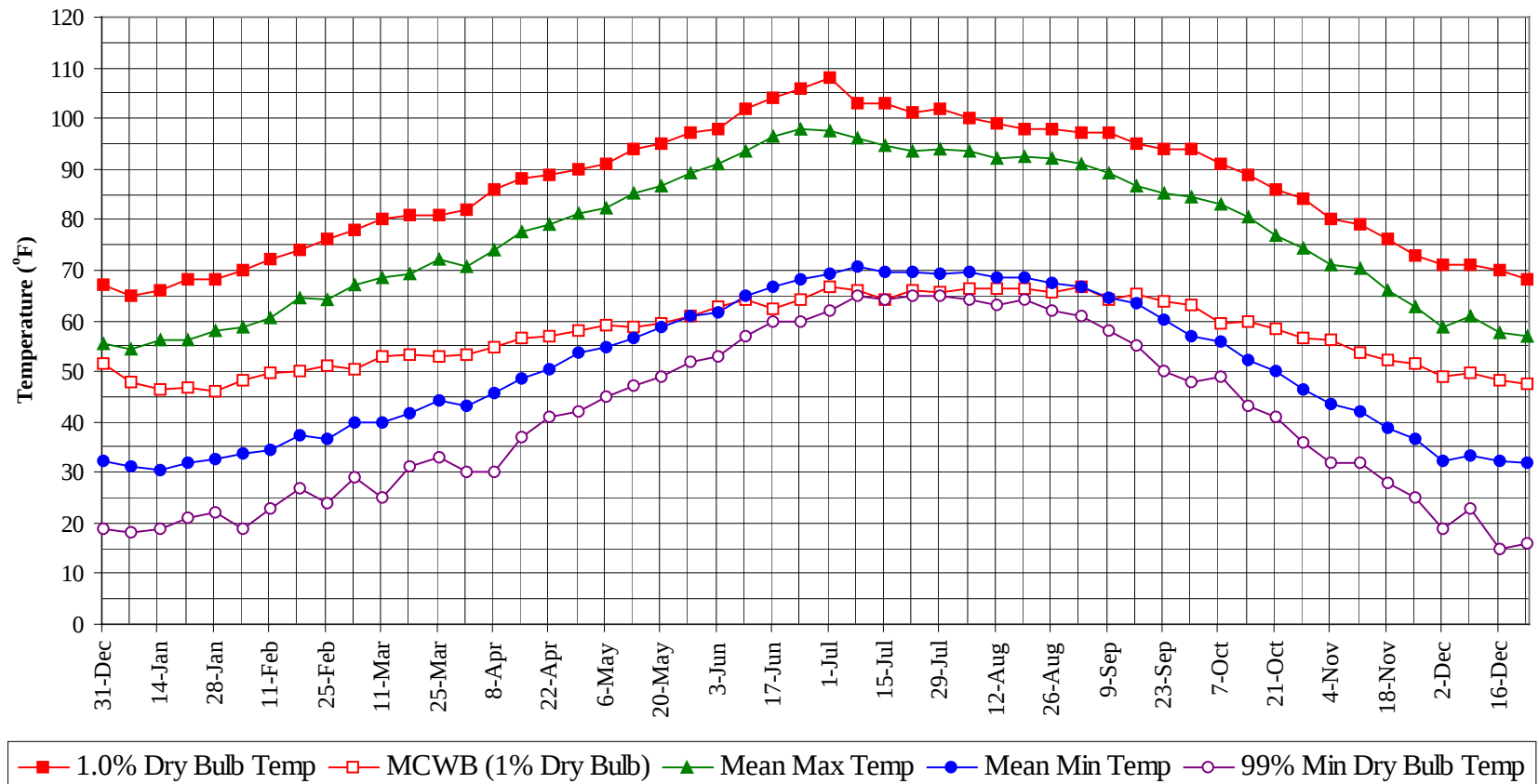
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1972 to 1996

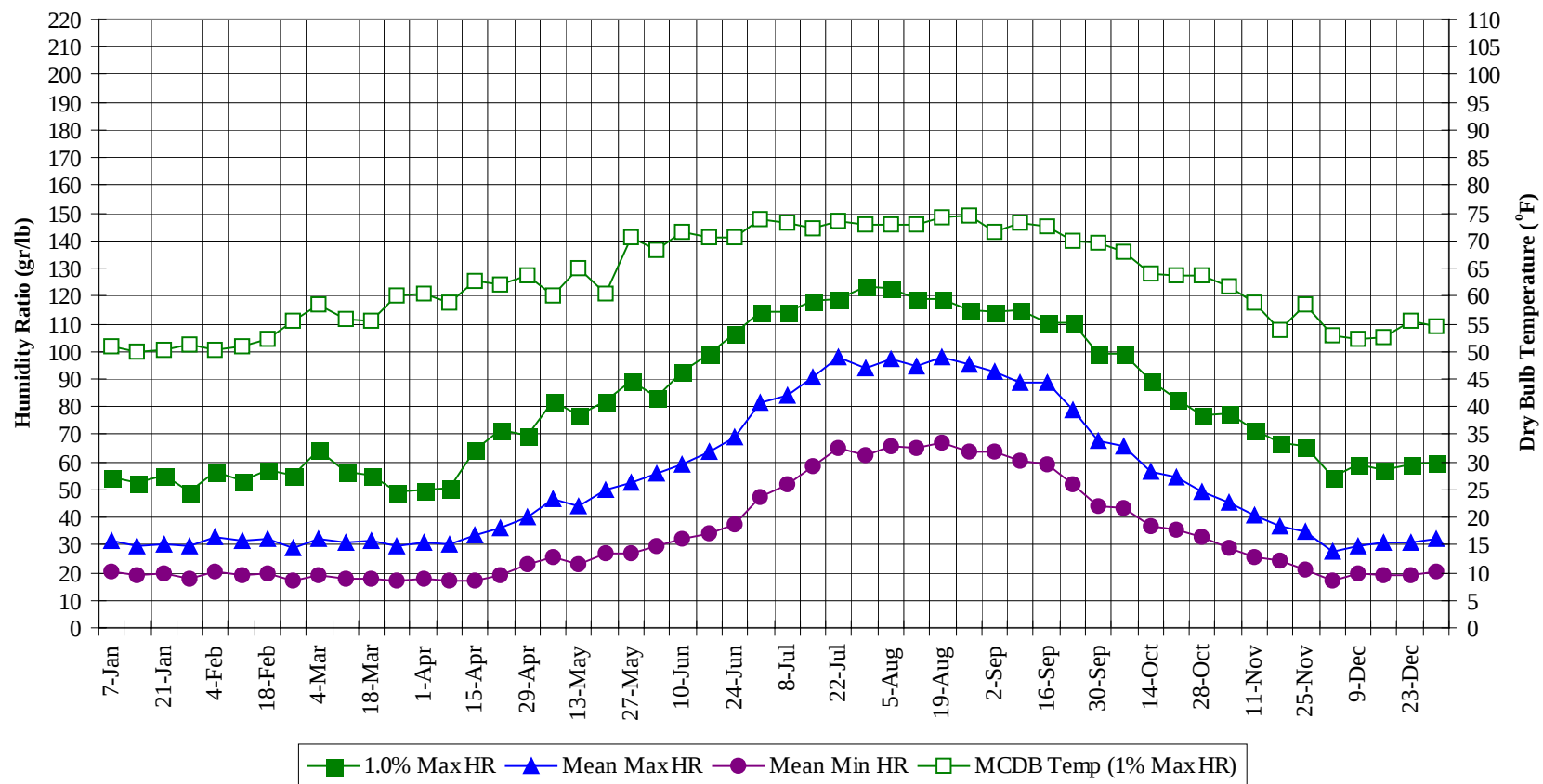
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
110 / 114		1	0	1	67.8
105 / 109		9	3	12	65.3
100 / 104		43	18	61	64.6
95 / 99	0	145	62	207	64.3
90 / 94	2	255	130	387	63.6
85 / 89	15	304	191	510	62.2
80 / 84	79	333	270	682	60.4
75 / 79	205	293	308	806	58.7
70 / 74	354	267	313	934	57.0
65 / 69	342	242	272	856	53.6
60 / 64	285	252	254	791	48.9
55 / 59	249	245	257	751	45.3
50 / 54	267	209	256	732	42.1
45 / 49	276	147	219	642	39.0
40 / 44	253	89	163	505	35.6
35 / 39	237	49	115	401	32.0
30 / 34	190	26	61	277	28.5
25 / 29	104	8	21	133	24.3
20 / 24	43	2	6	51	20.1
15 / 19	13	1	2	16	15.6
10 / 14	3	0	0	3	10.9
5 / 9	1		0	1	6.6
0 / 4	0			0	3.0

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

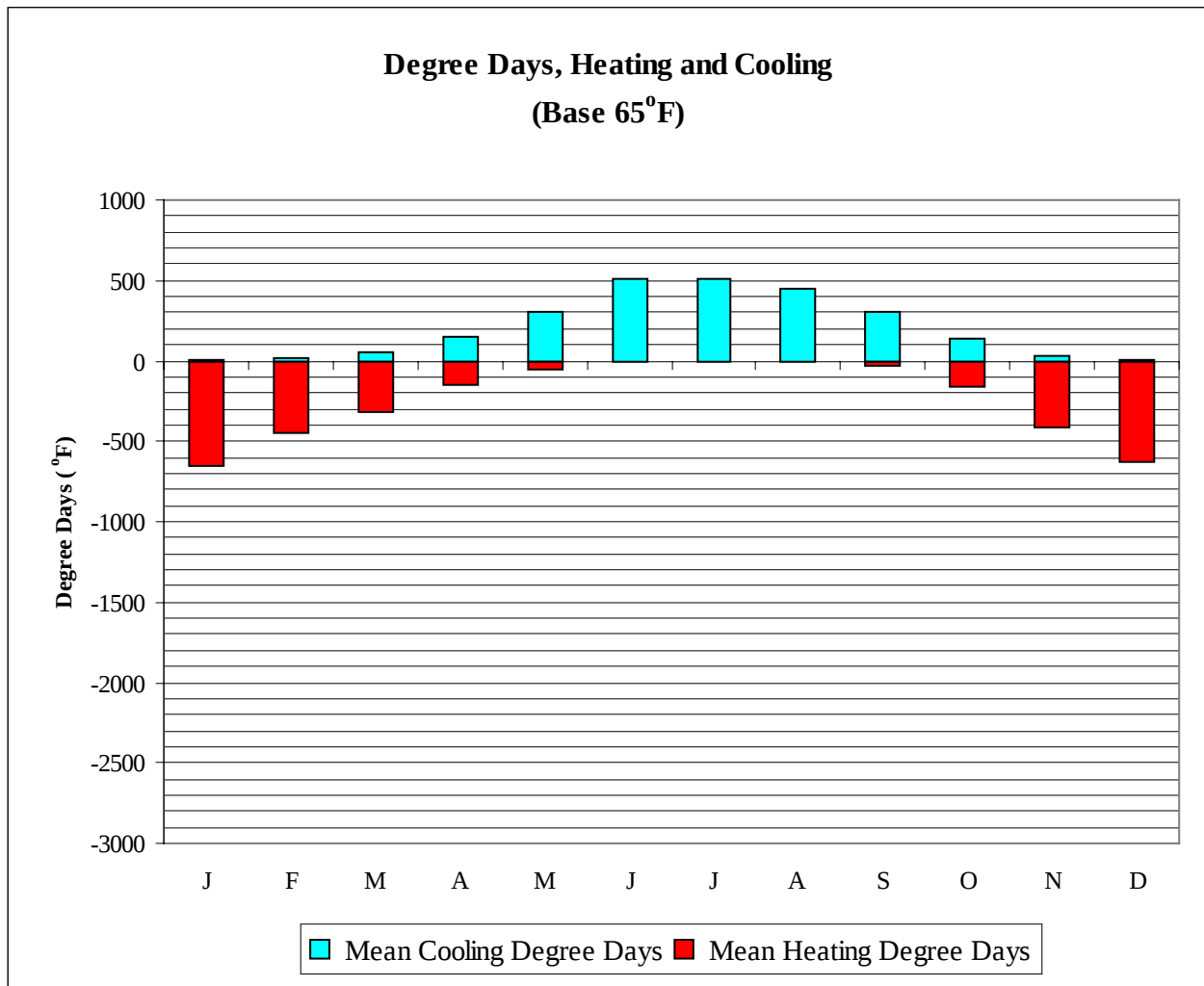


EL PASO TX**WMO No. 722700****Long Term Dry Bulb Temperature and Humidity Summary**

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	65.0	47.7	54.5	31.2	18.0	54.6	50.9	31.8	20.2
14-Jan	66.0	46.5	56.3	30.5	19.0	52.5	50.0	29.4	19.1
21-Jan	68.0	46.8	56.3	31.8	21.0	55.3	50.2	30.5	19.4
28-Jan	68.0	46.0	58.1	32.7	22.0	49.0	51.1	29.3	18.1
4-Feb	70.0	48.2	58.9	33.6	19.0	56.7	50.4	32.5	20.1
11-Feb	72.0	49.6	60.5	34.3	23.0	53.2	50.8	31.6	19.3
18-Feb	74.0	49.9	64.5	37.5	27.0	57.4	52.2	31.9	19.8
25-Feb	76.0	51.2	64.1	36.6	24.0	55.3	55.5	29.1	17.0
4-Mar	78.0	50.3	67.2	40.0	29.0	64.4	58.6	32.3	19.1
11-Mar	80.0	53.0	68.5	39.8	25.0	56.7	55.9	30.7	17.7
18-Mar	81.0	53.4	69.2	41.6	31.0	55.3	55.4	31.3	17.8
25-Mar	81.0	52.9	72.2	44.2	33.0	49.0	60.2	29.9	17.2
1-Apr	82.0	53.3	70.7	43.3	30.0	49.7	60.5	31.0	17.6
8-Apr	86.0	54.6	74.1	45.6	30.0	50.4	58.8	30.3	16.9
15-Apr	88.0	56.5	77.7	48.6	37.0	64.4	62.6	33.4	17.3
22-Apr	89.0	57.0	79.1	50.5	41.0	71.4	62.0	36.1	18.9
29-Apr	90.0	58.1	81.2	53.7	42.0	69.3	63.6	40.1	22.9
6-May	91.0	59.0	82.3	54.7	45.0	81.9	60.2	46.7	25.5
13-May	94.0	58.7	85.2	56.6	47.0	77.0	65.0	44.0	23.1
20-May	95.0	59.3	86.5	58.8	49.0	81.9	60.3	50.2	26.9
27-May	97.0	60.9	89.2	61.1	52.0	89.6	70.6	52.3	26.9
3-Jun	98.0	62.8	90.9	61.6	53.0	83.3	68.2	55.5	29.6
10-Jun	102.0	64.2	93.4	64.9	57.0	92.4	71.6	59.3	32.0
17-Jun	104.0	62.5	96.4	66.9	60.0	99.4	70.6	63.8	33.9
24-Jun	106.0	64.1	97.7	68.2	60.0	106.4	70.5	69.1	37.4
1-Jul	108.0	66.7	97.6	69.3	62.0	114.1	74.0	81.3	47.3
8-Jul	103.0	65.9	96.1	70.7	65.0	114.1	73.1	84.0	51.8
15-Jul	103.0	64.3	94.5	69.6	64.0	118.3	72.1	90.6	58.5
22-Jul	101.0	66.1	93.6	69.6	65.0	119.0	73.4	97.6	65.2
29-Jul	102.0	65.7	94.0	69.3	65.0	123.2	72.8	93.6	62.6
5-Aug	100.0	66.4	93.6	69.6	64.0	122.5	72.8	97.0	65.6
12-Aug	99.0	66.5	92.2	68.5	63.0	119.0	72.9	94.9	65.2
19-Aug	98.0	66.3	92.6	68.6	64.0	119.0	74.1	97.6	66.9
26-Aug	98.0	65.7	92.1	67.6	62.0	114.8	74.6	95.3	63.6
2-Sep	97.0	66.7	90.8	66.6	61.0	114.1	71.6	92.6	63.6
9-Sep	97.0	64.3	89.2	64.7	58.0	114.8	73.2	88.4	60.2
16-Sep	95.0	65.1	86.6	63.4	55.0	110.6	72.4	88.7	59.2
23-Sep	94.0	63.8	85.0	60.2	50.0	110.6	69.9	79.1	51.8
30-Sep	94.0	63.1	84.4	56.8	48.0	99.4	69.7	67.3	43.7
7-Oct	91.0	59.3	82.9	55.8	49.0	99.4	67.9	65.6	43.1
14-Oct	89.0	59.9	80.6	52.3	43.0	89.6	64.1	56.7	36.6
21-Oct	86.0	58.3	77.0	49.9	41.0	82.6	63.6	54.6	35.3
28-Oct	84.0	56.7	74.2	46.5	36.0	77.0	63.8	49.2	33.0
4-Nov	80.0	56.2	70.9	43.6	32.0	77.7	61.9	45.1	29.1
11-Nov	79.0	53.6	70.3	42.0	32.0	71.4	58.7	40.6	25.8
18-Nov	76.0	52.2	65.9	38.8	28.0	67.2	54.0	36.6	24.1
25-Nov	73.0	51.4	62.8	36.6	25.0	65.8	58.5	34.5	21.3
2-Dec	71.0	48.8	58.7	32.4	19.0	54.6	52.8	27.5	17.2
9-Dec	71.0	49.5	60.8	33.5	23.0	58.8	52.1	29.9	19.5
16-Dec	70.0	48.3	57.7	32.4	15.0	57.4	52.5	31.1	19.4
23-Dec	68.0	47.6	56.9	32.0	16.0	58.8	55.4	30.9	19.0
31-Dec	67.0	51.4	55.6	32.3	19.0	59.5	54.5	32.2	20.5

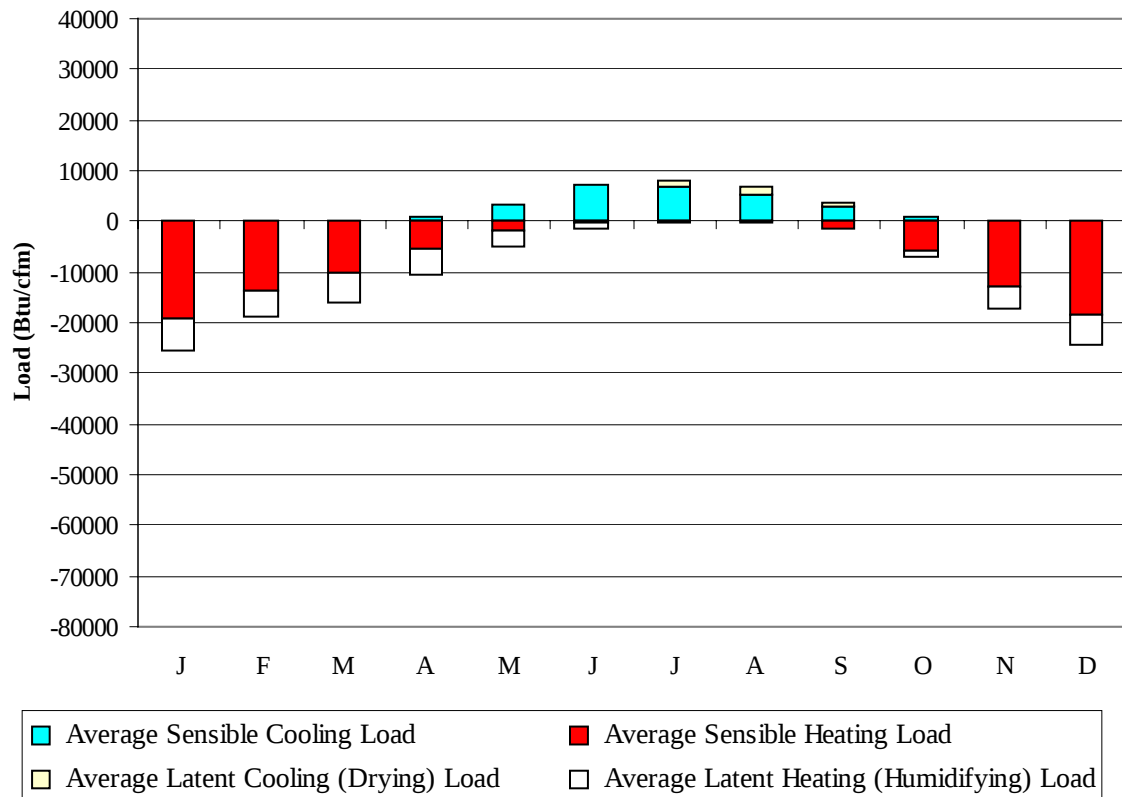
EL PASO TX

WMO No. 722700



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	2	655
FEB	13	444
MAR	51	316
APR	147	154
MAY	303	49
JUN	508	7
JUL	512	1
AUG	451	2
SEP	306	31
OCT	138	163
NOV	26	415
DEC	4	627
ANN	2458	2864

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	-19366	0	-5987
FEB	11	-13517	0	-5431
MAR	157	-10057	0	-6117
APR	1021	-5208	0	-5165
MAY	3146	-1945	5	-3002
JUN	7166	-397	229	-1152
JUL	6743	-90	1300	-102
AUG	5197	-168	1597	-11
SEP	2998	-1359	645	-138
OCT	939	-5618	30	-1307
NOV	43	-12787	0	-4336
DEC	1	-18596	0	-5940
ANN	27422	-89108	3806	-38688

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

No Solar Radiation
Data Available

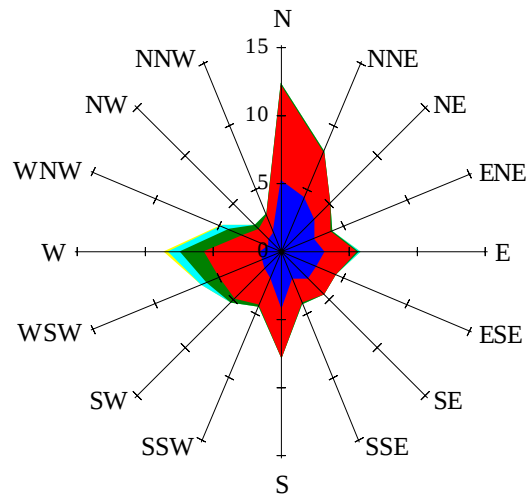


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

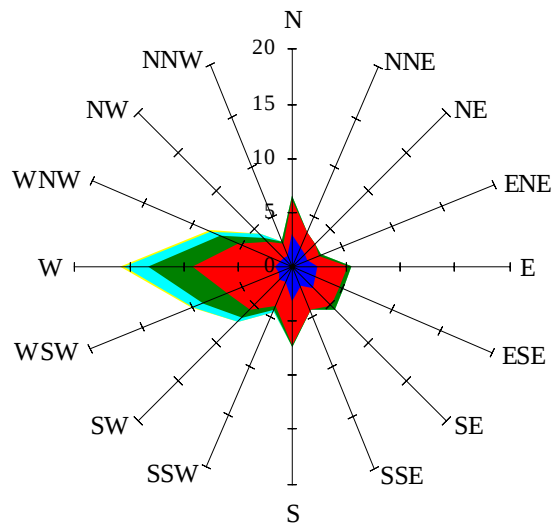
Labels of Percent Frequency on North Axis



Percent Calm = 10.51

Wind Summary - March, April, and May

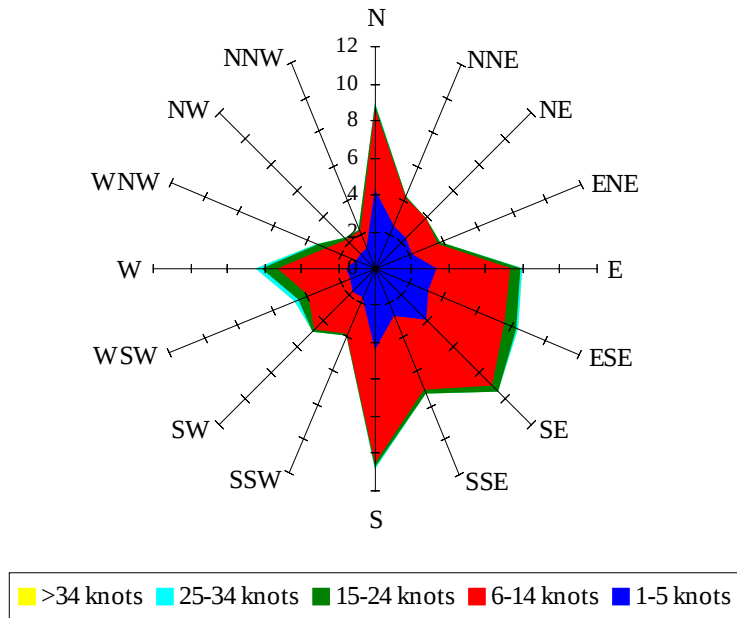
Labels of Percent Frequency on North Axis



Percent Calm = 6.11

Wind Summary - June, July, and August

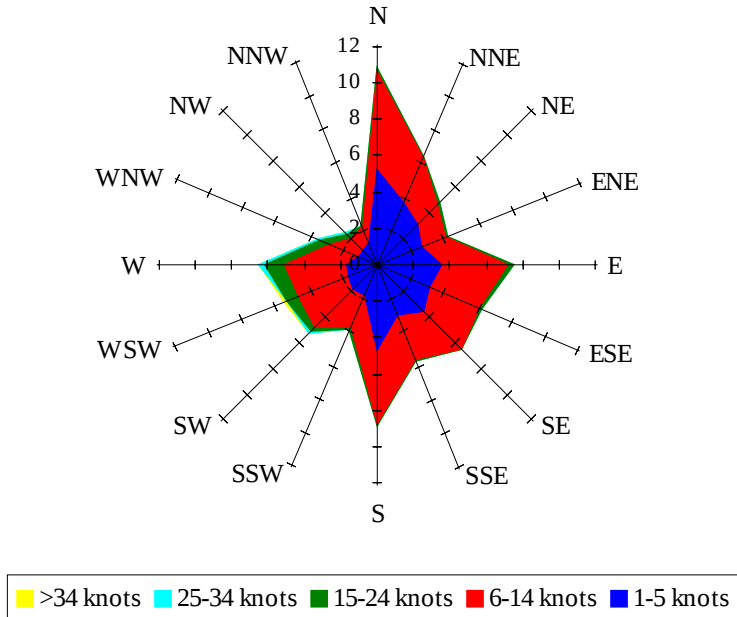
Labels of Percent Frequency on North Axis



Percent Calm = 8.35

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 10.33