

BERGSTROM AFB/AUSTIN TX

Latitude = 30.20 N

WMO No. 722545

Longitude = 97.68 W

Elevation = 541 feet

Period of Record = 1967 to 1996

Average Pressure = 29.41 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	75	91	6.9	S
0.4% Occurrence	99	76	97	6.7	S
1.0% Occurrence	97	76	100	7.5	S
2.0% Occurrence	95	76	103	7.7	S
Mean Daily Range	20	-	-	-	-
97.5% Occurrence	35	32	22	6.6	N
99.0% Occurrence	30	27	17	6.8	N
99.6% Occurrence	26	23	13	8.0	N
Median of Extreme Lows	19	17	8	6.4	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	81	92	144	8.9	S
0.4% Occurrence	79	90	133	8.1	S
1.0% Occurrence	78	89	129	7.9	S
2.0% Occurrence	78	89	129	7.9	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	153	87	1.00	6.3	S
0.4% Occurrence	140	83	0.91	7.8	S
1.0% Occurrence	137	83	0.90	5.9	S
2.0% Occurrence	134	81	0.88	5.1	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		344	2105	2010	3809

Other Site Data

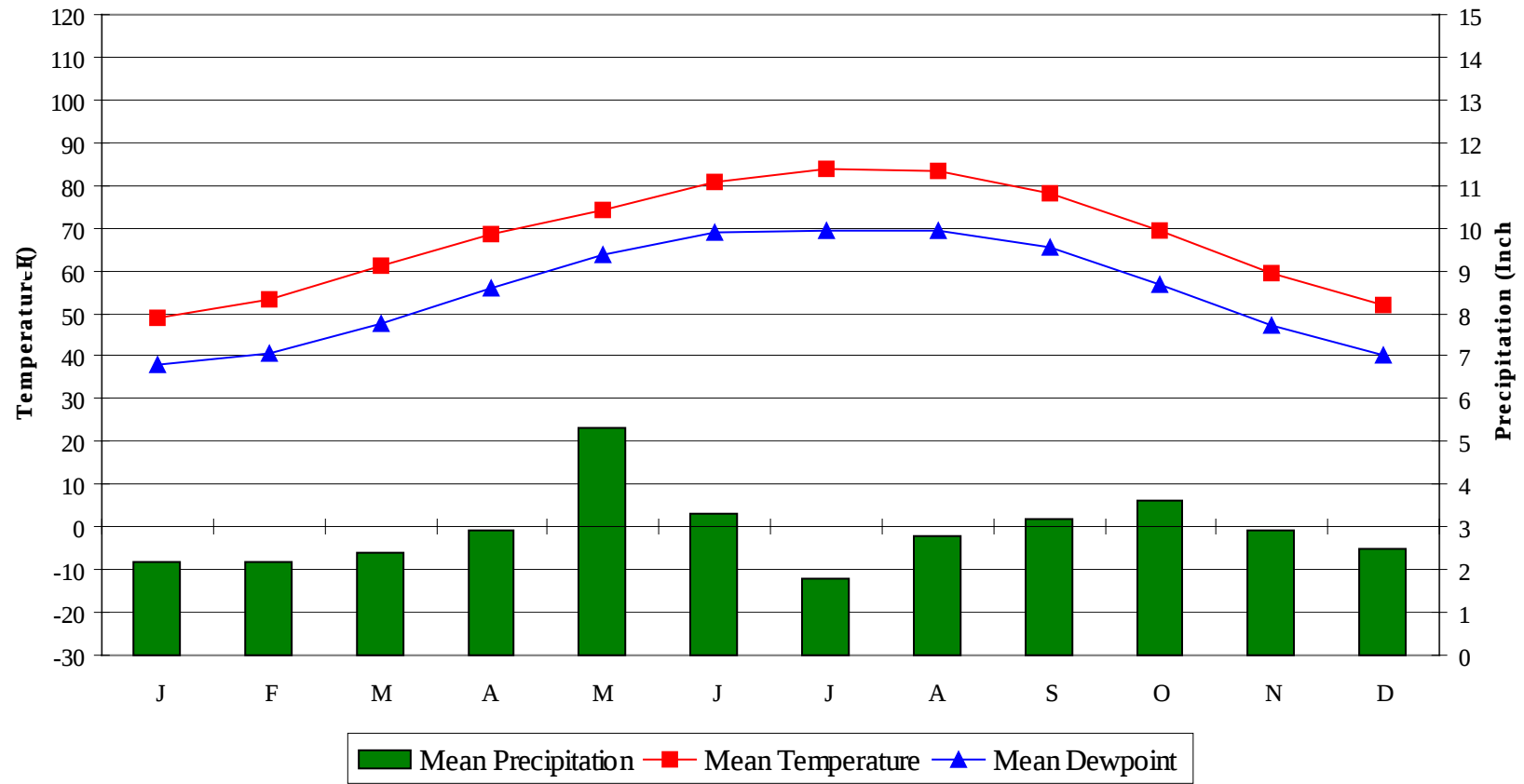
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
10	4.3	90	5.6 + 2.4
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
70.3	4	2	13

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

BERGSTROM AFB/AUSTIN TX

WMO No. 722545

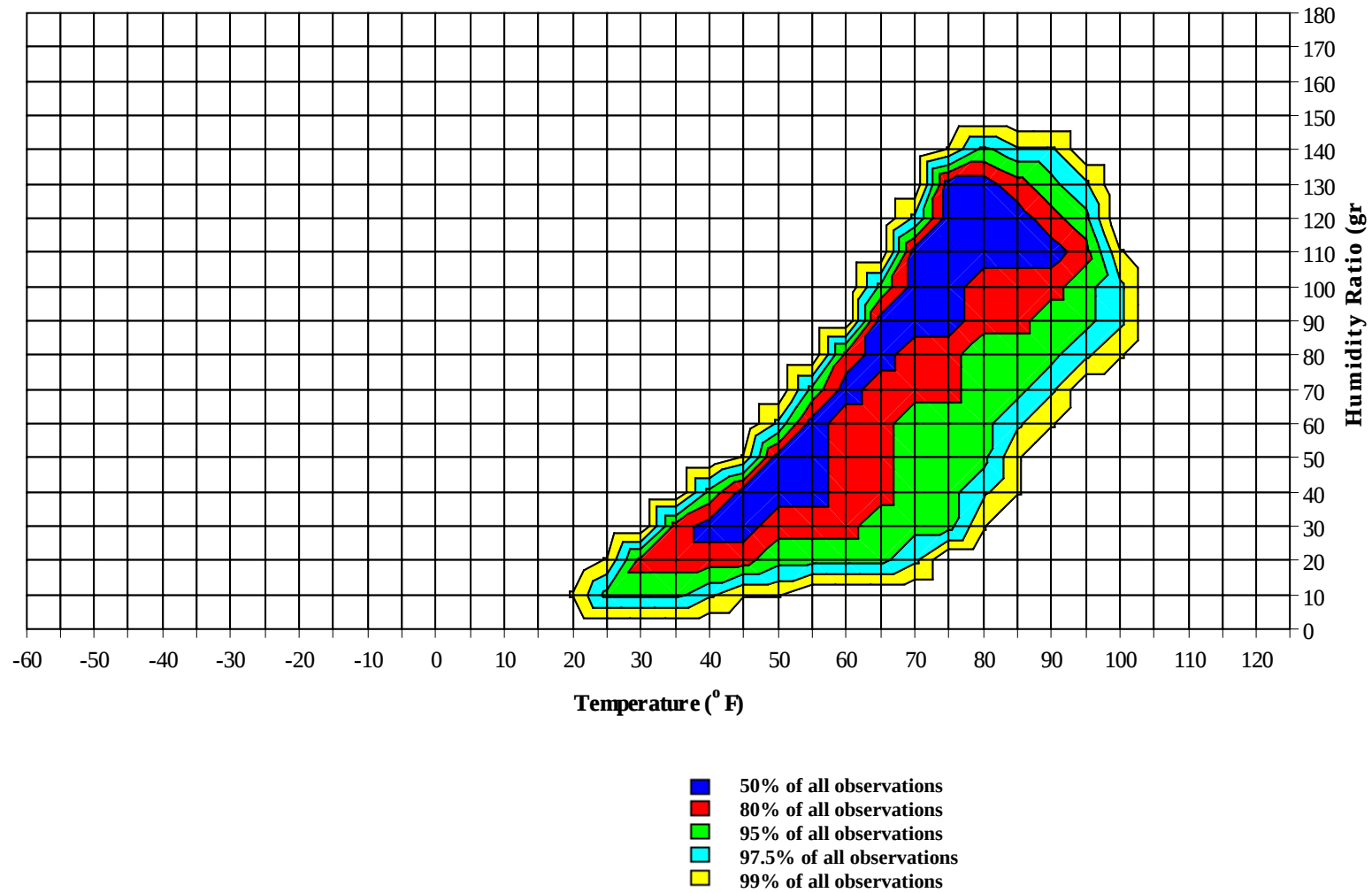
Average Annual Climate



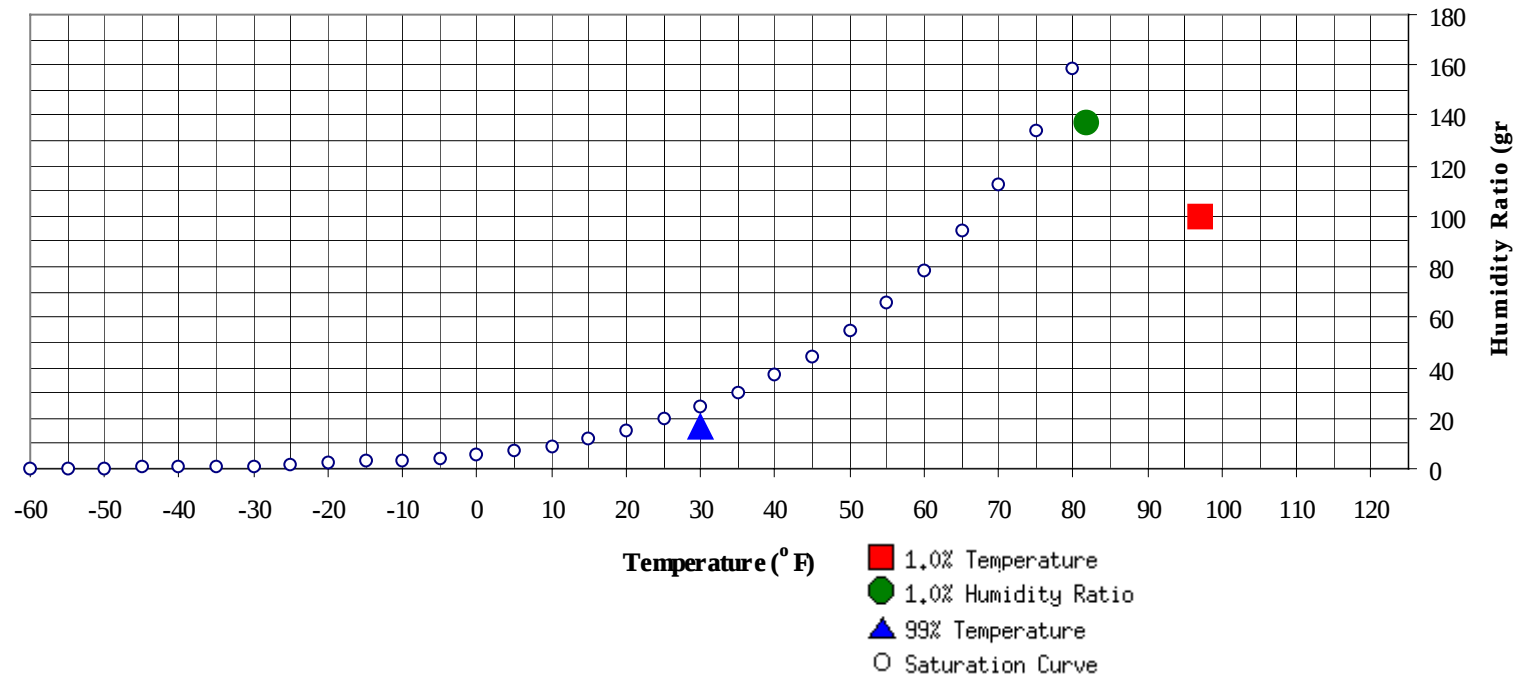
BERGSTROM AFB/AUSTIN TX

WMO No. 722545

Long Term Psychrometric Summary



Psychrometric Summary of Peak Design Values



	(°F)	MCHR	Enthalpy	1.0% Humidity	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	30	16.5	9.7	Ratio	137.2	81.8	77.6	75.9	41.1

	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
1.0% Dry Bulb	97	99.9	75.5	39.0

BERGSTROM AFB/AUSTIN TX

WMO No. 722545

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

Period of Record = 1967 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							0		0	64.3					
95 / 99							0		0	63.8		0	0	0	64.9
90 / 94							0	0	0	63.7		1	0	1	65.0
85 / 89		0	0	0	58.8		1	0	1	62.2		5	2	7	66.0
80 / 84		2	0	2	61.9		5	1	6	62.6		16	7	23	65.2
75 / 79		9	2	11	63.4		15	5	20	61.5		33	18	51	63.8
70 / 74	2	20	9	31	62.0	1	24	13	38	59.8	14	46	40	100	62.9
65 / 69	9	25	19	53	59.3	11	30	26	66	58.7	34	45	48	127	59.9
60 / 64	13	27	26	65	55.0	19	30	34	83	55.3	35	37	44	115	55.4
55 / 59	18	32	32	81	50.8	21	30	33	84	51.1	41	26	38	105	51.2
50 / 54	26	35	38	99	46.8	33	29	39	101	46.7	44	17	24	86	46.9
45 / 49	38	31	39	108	42.6	43	26	31	100	42.6	38	11	15	64	42.6
40 / 44	43	28	35	106	38.0	39	16	22	77	38.4	24	7	8	39	38.4
35 / 39	46	23	29	97	34.1	30	10	10	50	34.1	13	3	2	17	33.9
30 / 34	31	9	14	55	29.3	17	5	7	29	29.5	5	1	1	7	28.9
25 / 29	15	6	5	25	24.7	7	2	2	11	24.9	1	0	0	1	24.5
20 / 24	6	1	1	8	20.0	3	1	1	5	20.2	0	0		0	19.5
15 / 19	1	0	0	1	15.5	0	0		0	15.5	0			0	16.0
10 / 14	0			0	11.0										
5 / 9															

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.

BERGSTROM AFB/AUSTIN TX

WMO No. 722545

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)**Period of Record = 1967 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															
100 / 104							0		0	75.0		1	0	1	76.3
95 / 99		0	0	0	68.5		1	0	1	75.2		12	6	19	76.5
90 / 94		2	1	3	71.1		12	4	16	74.3		59	27	86	75.9
85 / 89		15	6	21	69.1		45	22	67	73.2	0	76	48	124	74.6
80 / 84	0	43	20	63	68.4	1	72	45	118	71.1	16	56	63	136	73.6
75 / 79	5	59	43	107	66.7	33	60	68	161	69.8	98	24	60	182	72.4
70 / 74	44	52	62	159	65.2	84	35	60	180	67.5	88	10	29	126	69.2
65 / 69	55	33	48	136	61.4	66	16	32	114	63.4	30	1	6	37	64.9
60 / 64	48	19	32	99	56.8	40	5	13	58	58.8	7	0	1	8	59.5
55 / 59	39	10	16	66	52.1	16	1	3	20	53.5	1			1	55.6
50 / 54	27	5	8	40	47.5	6		0	6	49.2					
45 / 49	13	1	3	17	42.8	1			1	44.6					
40 / 44	6	0	1	7	38.7	0			0	41.5					
35 / 39	2		0	2	33.9										
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															

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.

BERGSTROM AFB/AUSTIN TX

WMO No. 722545

Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)**Period of Record = 1967 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		0	0	0	75.8		0	0	0	74.8		0		0	76.0
100 / 104		7	3	10	74.6		7	3	10	75.6		1	0	1	75.3
95 / 99		46	24	70	75.2		47	23	70	75.7		13	4	17	75.5
90 / 94		80	44	124	75.3		80	40	120	75.2		46	17	64	74.7
85 / 89	0	69	53	122	74.7	1	62	52	116	74.5	0	63	33	95	73.4
80 / 84	34	33	66	132	74.0	33	37	70	139	74.0	8	54	54	116	72.2
75 / 79	142	11	48	201	72.7	134	12	49	194	72.7	76	36	67	179	71.4
70 / 74	68	3	10	81	69.9	71	4	10	86	69.5	85	17	41	143	68.1
65 / 69	4	0	0	4	63.6	8	0	1	9	63.6	34	8	14	56	62.1
60 / 64						1			1	57.5	21	3	7	31	56.9
55 / 59											11	0	3	14	52.7
50 / 54											4	0	0	4	49.3
45 / 49											1		0	1	45.7
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															

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.

BERGSTROM AFB/AUSTIN TX

WMO No. 722545

Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)**Period of Record = 1967 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		1	0	1	70.7										
90 / 94		11	2	13	72.7		0		0	61.0					
85 / 89		35	10	45	71.2		4	0	4	69.9		0		0	63.9
80 / 84	1	52	26	79	69.0		18	3	21	68.1		3	0	3	66.2
75 / 79	20	48	46	114	67.9	2	32	14	49	66.7	0	13	3	16	65.2
70 / 74	38	41	52	132	65.2	18	39	31	88	64.1	5	26	14	46	63.2
65 / 69	49	27	45	120	61.4	22	32	34	89	60.2	16	30	22	68	60.0
60 / 64	47	17	33	97	56.9	29	33	38	101	55.6	17	34	30	81	55.0
55 / 59	40	9	19	68	52.5	35	31	37	104	51.1	20	36	37	93	50.6
50 / 54	32	5	10	47	48.5	36	25	34	95	47.0	30	36	39	106	46.5
45 / 49	13	2	3	18	44.3	37	15	25	77	42.8	41	29	40	111	42.4
40 / 44	5	0	1	6	39.9	33	8	14	54	38.8	44	23	32	99	38.4
35 / 39	2	0	0	2	35.4	17	2	5	24	34.0	37	10	17	64	33.6
30 / 34	0			0	32.0	8	1	2	11	29.5	23	5	7	35	29.1
25 / 29						2	0	0	2	25.1	9	2	3	14	24.3
20 / 24						1		0	1	20.1	3	1	1	5	19.0
15 / 19											2	0	1	3	14.6
10 / 14											0	0	0	0	9.2
5 / 9											0			0	5.6

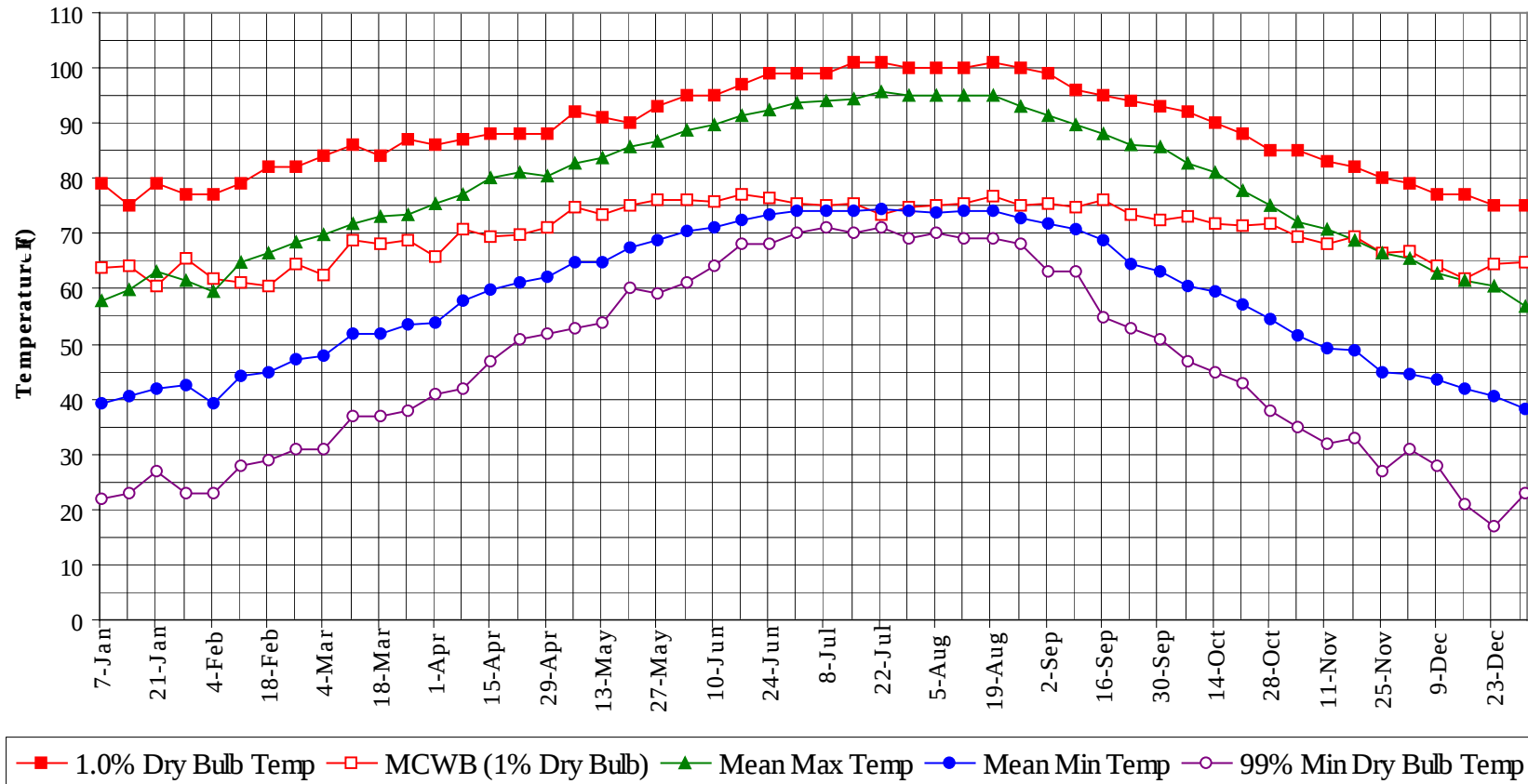
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

BERGSTROM AFB/AUSTIN TX WMO No. 722545
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)
Period of Record = 1967 to 1996

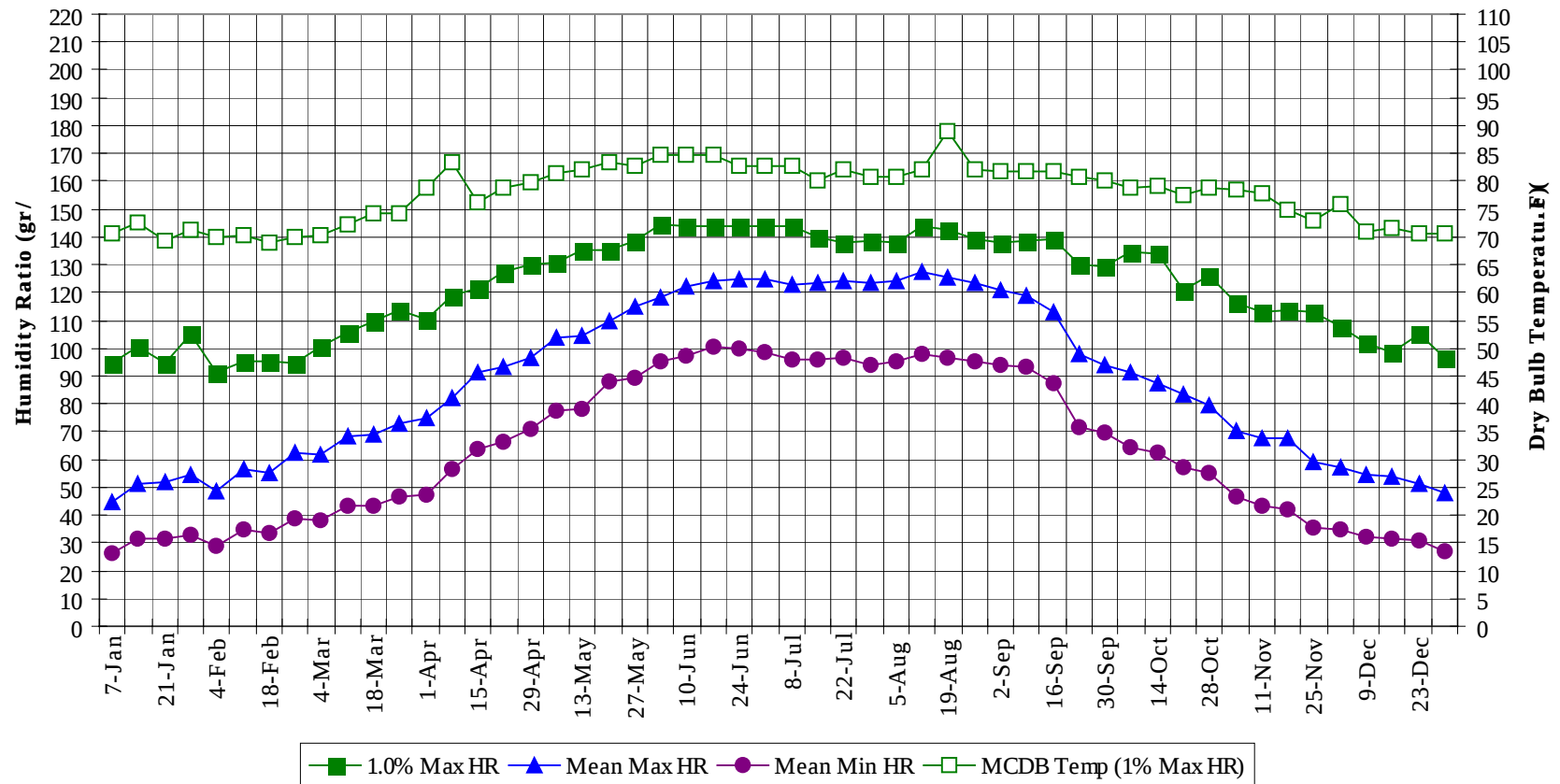
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109		0	0	0	75.5
100 / 104		15	7	22	75.1
95 / 99		121	57	178	75.5
90 / 94		290	134	424	75.1
85 / 89	2	373	226	601	73.6
80 / 84	95	390	355	841	71.8
75 / 79	514	351	426	1291	70.2
70 / 74	522	316	371	1209	66.3
65 / 69	337	249	294	880	61.1
60 / 64	276	207	258	740	56.1
55 / 59	244	176	219	638	51.4
50 / 54	237	152	194	584	47.0
45 / 49	223	116	156	495	42.7
40 / 44	192	82	112	385	38.4
35 / 39	143	47	63	254	34.0
30 / 34	84	21	33	137	29.3
25 / 29	33	9	11	54	24.6
20 / 24	13	3	3	19	19.7
15 / 19	4	1	1	6	14.9
10 / 14	0	0	0	0	9.3
5 / 9	0			0	5.6

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.

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



BERGSTROM AFB/AUSTIN TX

WMO No. 722545

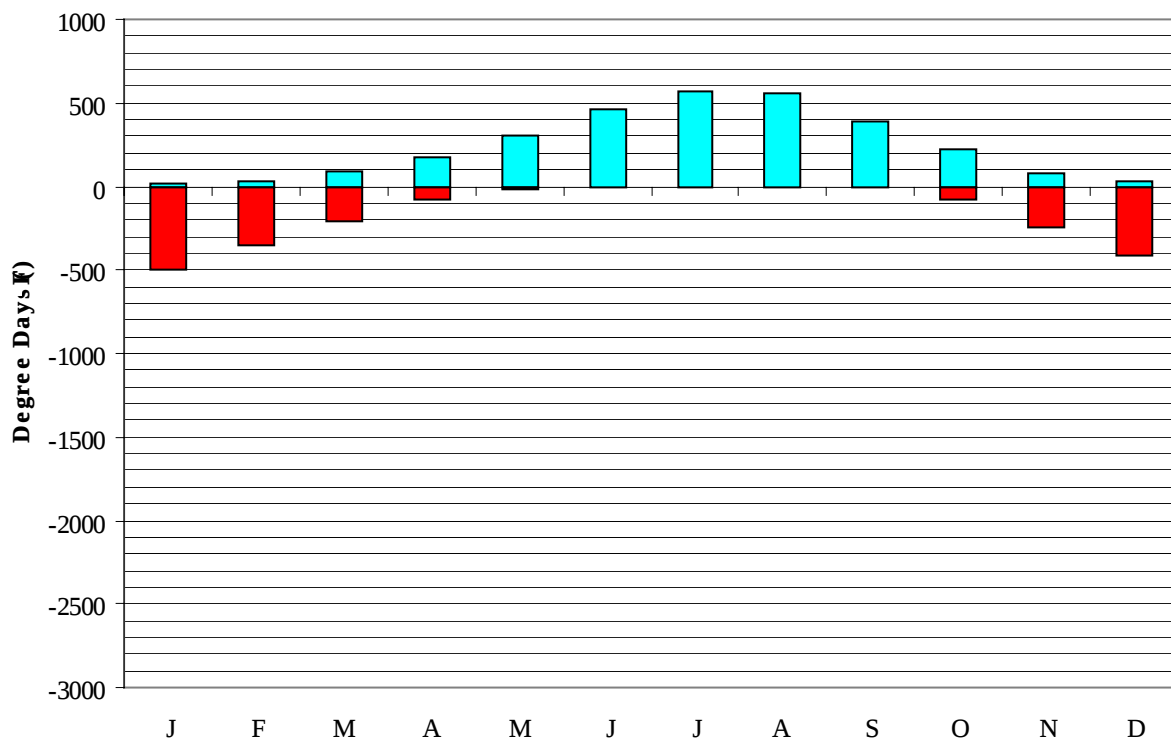
Long Term Dry Bulb Temperature and Humidity Summary

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	79.0	63.8	57.8	39.2	22.0	94.5	70.6	44.7	26.0
14-Jan	75.0	64.2	59.8	40.5	23.0	100.8	72.5	51.5	31.8
21-Jan	79.0	60.6	63.2	41.8	27.0	94.5	69.2	51.8	31.2
28-Jan	77.0	65.6	61.6	42.5	23.0	105.0	71.2	54.4	32.6
4-Feb	77.0	61.8	59.6	39.2	23.0	91.0	69.9	48.5	28.6
11-Feb	79.0	61.3	64.9	44.2	28.0	95.2	70.2	56.3	34.6
18-Feb	82.0	60.6	66.3	44.7	29.0	95.2	69.1	54.8	33.3
25-Feb	82.0	64.5	68.3	47.3	31.0	94.5	69.8	62.1	39.1
4-Mar	84.0	62.3	69.9	47.7	31.0	100.8	70.4	61.6	38.1
11-Mar	86.0	68.8	71.8	51.8	37.0	105.7	72.1	68.3	43.2
18-Mar	84.0	68.0	73.1	51.9	37.0	109.9	74.4	69.0	43.1
25-Mar	87.0	68.9	73.5	53.7	38.0	113.4	74.2	72.6	46.9
1-Apr	86.0	65.8	75.3	53.8	41.0	110.6	78.7	74.5	47.1
8-Apr	87.0	70.8	77.1	57.7	42.0	119.0	83.4	82.0	56.3
15-Apr	88.0	69.6	80.0	59.9	47.0	121.8	76.2	91.2	63.8
22-Apr	88.0	69.6	81.1	61.2	51.0	127.4	78.9	93.2	66.5
29-Apr	88.0	71.2	80.3	62.2	52.0	130.2	79.7	96.8	71.1
6-May	92.0	74.6	82.9	64.8	53.0	130.9	81.6	103.6	77.5
13-May	91.0	73.4	83.9	64.9	54.0	135.1	82.2	104.2	77.9
20-May	90.0	75.2	85.7	67.4	60.0	135.1	83.5	109.6	87.8
27-May	93.0	76.2	86.8	68.8	59.0	138.6	82.8	114.8	89.2
3-Jun	95.0	76.1	88.7	70.3	61.0	144.2	84.7	118.4	95.1
10-Jun	95.0	75.8	89.6	71.0	64.0	143.5	84.8	122.0	96.9
17-Jun	97.0	77.1	91.5	72.5	68.0	143.5	84.7	124.4	100.3
24-Jun	99.0	76.5	92.4	73.4	68.0	143.5	82.9	124.9	99.5
1-Jul	99.0	75.4	93.8	74.0	70.0	143.5	82.8	125.0	98.5
8-Jul	99.0	75.1	93.9	74.1	71.0	143.5	82.8	123.1	96.0
15-Jul	101.0	75.3	94.2	74.1	70.0	140.0	80.2	123.7	96.0
22-Jul	101.0	73.6	95.6	74.4	71.0	137.9	81.9	124.3	96.8
29-Jul	100.0	74.6	95.0	74.0	69.0	138.6	80.6	123.6	94.1
5-Aug	100.0	75.2	95.0	73.7	70.0	137.9	80.8	124.2	95.0
12-Aug	100.0	75.4	95.0	74.2	69.0	143.5	82.2	127.4	98.1
19-Aug	101.0	76.8	95.1	74.2	69.0	142.8	89.0	125.5	96.5
26-Aug	100.0	75.2	93.2	72.9	68.0	139.3	82.1	123.3	95.4
2-Sep	99.0	75.5	91.3	71.7	63.0	137.9	81.9	121.0	94.1
9-Sep	96.0	74.7	89.6	70.9	63.0	138.6	81.7	119.1	93.2
16-Sep	95.0	76.2	88.0	68.8	55.0	139.3	81.9	113.2	87.1
23-Sep	94.0	73.3	86.1	64.4	53.0	130.2	80.8	98.1	71.9
30-Sep	93.0	72.5	85.8	63.0	51.0	129.5	80.2	93.9	69.4
7-Oct	92.0	73.1	82.6	60.5	47.0	134.4	78.7	91.2	64.2
14-Oct	90.0	71.8	81.3	59.3	45.0	133.7	79.2	87.7	62.4
21-Oct	88.0	71.3	77.6	57.2	43.0	121.1	77.3	83.1	57.1
28-Oct	85.0	71.8	75.0	54.3	38.0	126.0	78.8	79.3	55.0
4-Nov	85.0	69.3	72.2	51.5	35.0	116.2	78.5	70.5	46.9
11-Nov	83.0	68.0	70.7	49.0	32.0	112.7	77.9	67.8	43.2
18-Nov	82.0	69.5	68.7	48.9	33.0	113.4	74.8	67.5	42.0
25-Nov	80.0	66.5	66.3	44.9	27.0	112.7	72.8	58.8	35.4
2-Dec	79.0	66.9	65.4	44.5	31.0	107.8	75.9	57.4	35.1
9-Dec	77.0	64.1	62.8	43.6	28.0	101.5	70.8	54.2	32.4
16-Dec	77.0	61.7	61.6	41.9	21.0	98.7	71.5	54.1	31.5
23-Dec	75.0	64.5	60.3	40.6	17.0	105.0	70.6	51.1	30.9
31-Dec	75.0	64.7	56.9	38.3	23.0	96.6	70.6	47.9	27.2

BERGSTROM AFB/AUSTIN TX

WMO No. 722545

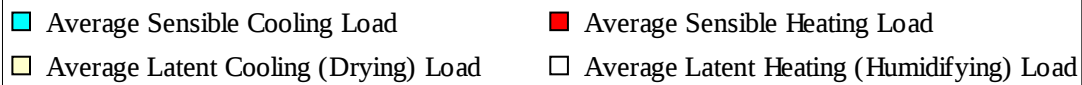
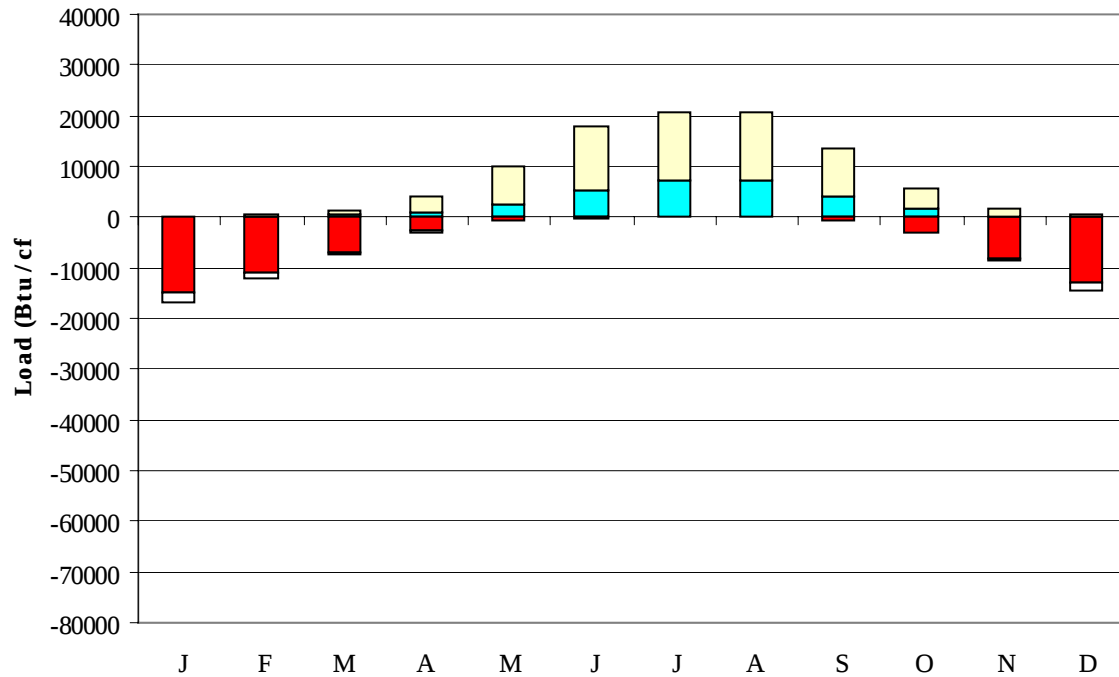
Degree Days, Heating and Cooling (Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	20	495
FEB	35	353
MAR	89	204
APR	171	73
MAY	300	16
JUN	456	1
JUL	565	0
AUG	557	0
SEP	387	10
OCT	216	77
NOV	73	243
DEC	29	414
ANN	2897	1886

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	36	-15031	242	-1851
FEB	124	-11011	218	-1218
MAR	368	-6866	1067	-579
APR	959	-2820	3110	-152
MAY	2363	-818	7588	-4
JUN	5127	-82	12860	0
JUL	7324	-2	13388	0
AUG	7165	-9	13572	0
SEP	3890	-468	9478	-2
OCT	1680	-2886	4022	-55
NOV	293	-7975	1388	-641
DEC	49	-12804	472	-1549
ANN	29378	-60772	67405	-6051

Average Annual Solar Radiation – Nearest Available Site

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

City: AUSTIN
 State: TX
 WBAN No: 13958
 Lat(N): 30.3
 Long(W): 97.7
 Elev(ft): 620

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.889
 Vert Gap: 0.65

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	1500	1720	1870	2090	2150	2010	1660	1380	1050	880	1540
	Std Dev	77	97	116	161	149	130	137	111	118	109	103	68	32
	Minimum	800	980	1240	1480	1450	1810	1770	1740	1410	1110	800	770	1500
	Maximum	1110	1400	1740	2100	2110	2310	2380	2230	1930	1550	1250	1080	1610
	Diffuse	410	490	630	740	830	810	750	700	640	500	420	380	610
Clear Day	Global	1320	1630	2030	2380	2560	2620	2570	2400	2100	1720	1370	1210	1990
NORTH	Global	270	320	400	460	560	640	610	500	410	340	280	250	420
	Diffuse	270	320	400	450	500	520	510	460	410	340	280	250	390
Clear Day	Global	240	290	360	440	590	710	650	490	370	310	250	230	410
EAST	Global	570	690	810	870	900	1010	1100	1070	910	780	620	540	820
	Diffuse	320	380	470	540	580	610	610	580	510	420	340	300	470
Clear Day	Global	880	1050	1220	1340	1390	1390	1370	1340	1230	1070	900	820	1170
SOUTH	Global	1200	1210	1080	850	660	590	640	820	1040	1260	1260	1200	980
	Diffuse	420	460	520	530	520	510	510	530	540	500	440	400	490
Clear Day	Global	2050	1930	1600	1090	740	610	660	930	1360	1770	1980	2040	1390
WEST	Global	610	760	920	1000	1060	1170	1160	1100	970	870	680	580	910
	Diffuse	330	390	490	560	610	630	620	590	520	430	350	300	480
Clear Day	Global	880	1050	1220	1340	1390	1390	1370	1340	1230	1070	900	820	1170

Average Annual Solar Heat and Illumination – Nearest Available Site

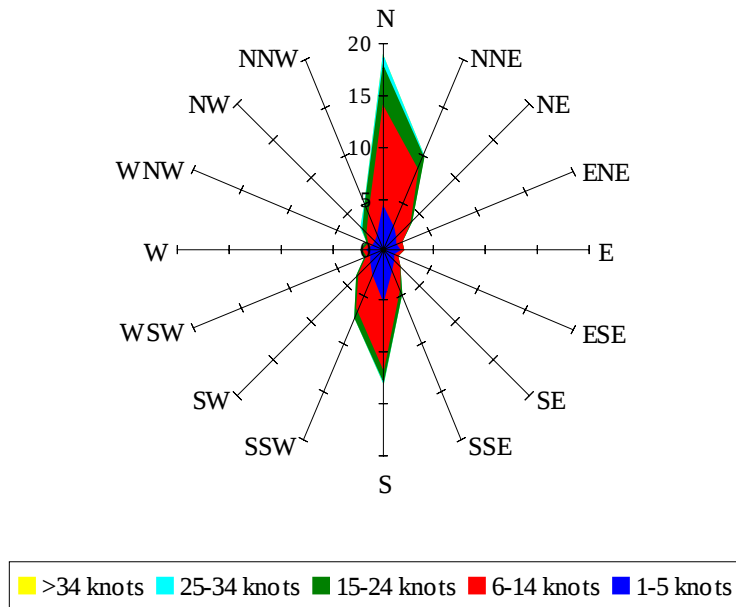
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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 NORTH	Unshaded	650	840	1070	1250	1360	1530	1580	1470	1210	990	730	600	1110
	Unshaded	180	220	270	320	360	400	390	330	280	240	200	170	280
	Shaded	160	190	240	280	310	350	340	300	250	210	170	150	250
EAST	Unshaded	390	480	570	610	640	710	780	760	640	550	430	370	580
	Shaded	340	410	480	500	510	570	620	620	530	460	370	320	480
SOUTH	Unshaded	880	860	720	520	400	370	380	480	660	880	920	900	660
	Shaded	830	700	410	320	320	320	320	330	340	620	840	860	520
WEST	Unshaded	430	530	650	720	760	830	830	780	690	620	480	400	640
	Shaded	370	460	540	590	620	680	680	650	580	530	410	350	540

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	35	77	95	82	43	34	77	102	102	76
	M.Cloudy	19	46	59	52	28	21	56	78	80	59
NORTH	M.Clear	9	14	16	15	10	24	18	17	17	17
	M.Cloudy	8	17	19	17	11	13	18	19	19	18
EAST	M.Clear	76	69	21	15	10	65	77	43	17	17
	M.Cloudy	20	34	21	17	11	26	51	36	19	17
SOUTH	M.Clear	29	61	74	64	35	10	17	29	29	17
	M.Cloudy	12	31	42	37	19	9	17	27	27	17
WEST	M.Clear	9	14	16	63	79	10	17	17	42	75
	M.Cloudy	8	17	19	36	35	9	17	19	36	55
M.Clear	(% hrs)	32	35	39	42	43	26	37	41	45	54

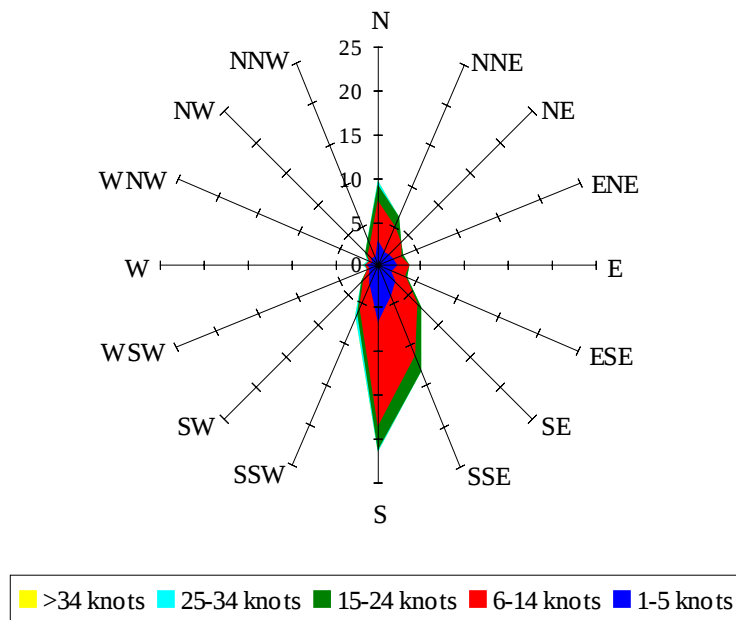
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	20	66	92	91	62	18	53	66	51	15
	M.Cloudy	12	44	68	67	44	10	30	38	30	10
NORTH	M.Clear	7	14	17	17	14	6	11	13	11	5
	M.Cloudy	6	15	19	19	15	5	12	14	12	4
EAST	M.Clear	55	77	42	17	14	52	54	13	11	5
	M.Cloudy	17	42	34	19	15	11	23	14	12	4
SOUTH	M.Clear	12	43	63	62	41	39	82	94	80	35
	M.Cloudy	7	28	45	45	28	10	30	38	32	11
WEST	M.Clear	7	14	17	45	76	6	11	14	55	47
	M.Cloudy	6	15	19	35	46	5	12	15	25	14
M.Clear	(% hrs)	38	40	43	44	49	34	37	39	40	41

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



Percent Calm = 17.99

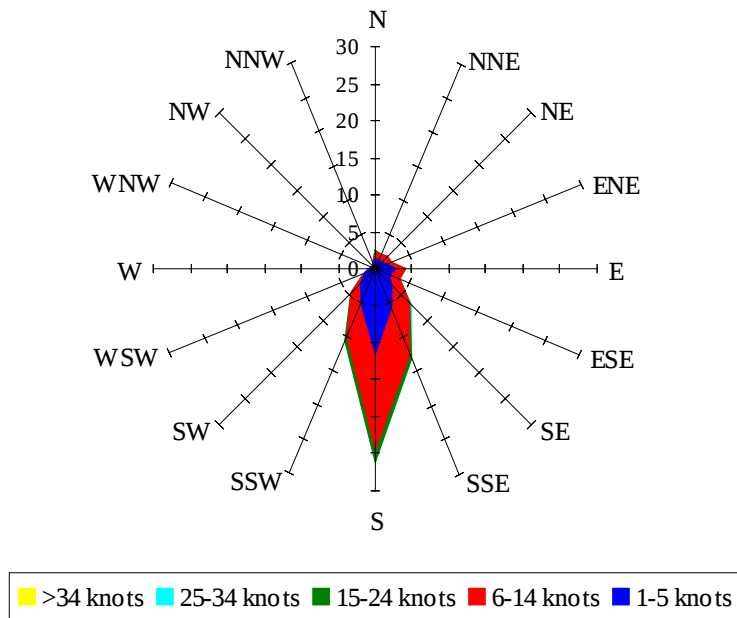
Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



Percent Calm = 12.40

Wind Summary - June, July, and August

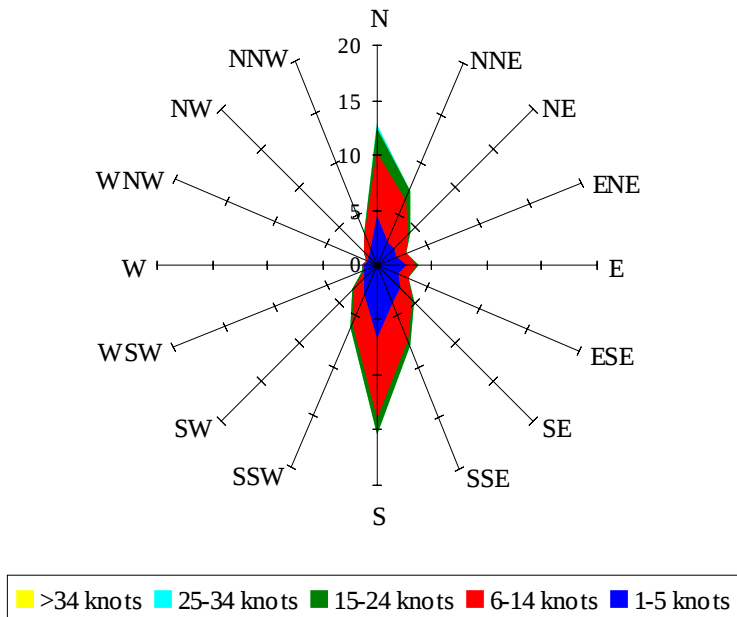
Labels of Percent Frequency on North Axis



Percent Calm = 17.04

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 21.46