

BARSTOW-DAGGETT CA

Latitude = 34.85 N

WMO No. 723815

Longitude = 116.70 W

Elevation = 1926 feet

Period of Record = 1973 to 1996

Average Pressure = 27.91 inches Hg

Design Criteria Data

		Mean Coincident (Average) Values			
	Design Value	Wet Bulb Temperature	Humidity Ratio	Wind Speed	Prevailing Direction
	(°F)	(°F)	(gr/lb)	(mph)	(NSEW)
Dry Bulb Temperature (T)					
Median of Extreme Highs	112	70	50	9.9	WNW
0.4% Occurrence	109	69	49	11.6	W
1.0% Occurrence	106	68	49	11.8	W
2.0% Occurrence	104	67	48	11.6	W
Mean Daily Range	26	-	-	-	-
97.5% Occurrence	37	32	20	7.1	W
99.0% Occurrence	33	28	17	6.7	W
99.6% Occurrence	29	25	13	6.1	W
Median of Extreme Lows	22	18	8	4.8	W
		Mean Coincident (Average) Values			
	Design Value	Dry Bulb Temperature	Humidity Ratio	Wind Speed	Prevailing Direction
	(°F)	(°F)	(gr/lb)	(mph)	(NSEW)
Wet Bulb Temperature (T_{wb})					
Median of Extreme Highs	76	95	110	10.8	ENE
0.4% Occurrence	73	95	92	10.2	E
1.0% Occurrence	72	96	86	10.3	E
2.0% Occurrence	70	96	75	10.3	W
		Mean Coincident (Average) Values			
	Design Value	Dry Bulb Temperature	Vapor Pressure	Wind Speed	Prevailing Direction
	(gr/lb)	(°F)	(in. Hg)	(mph)	(NSEW)
Humidity Ratio (HR)					
Median of Extreme Highs	133	79	0.82	8.7	ENE
0.4% Occurrence	111	80	0.69	8.1	W
1.0% Occurrence	93	85	0.58	9.4	W
2.0% Occurrence	83	85	0.52	9.8	W
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		1018	2523	54	548

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	1.4	85	0.1 + 3.7
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 (#)
70.8	N/A	N/A	14

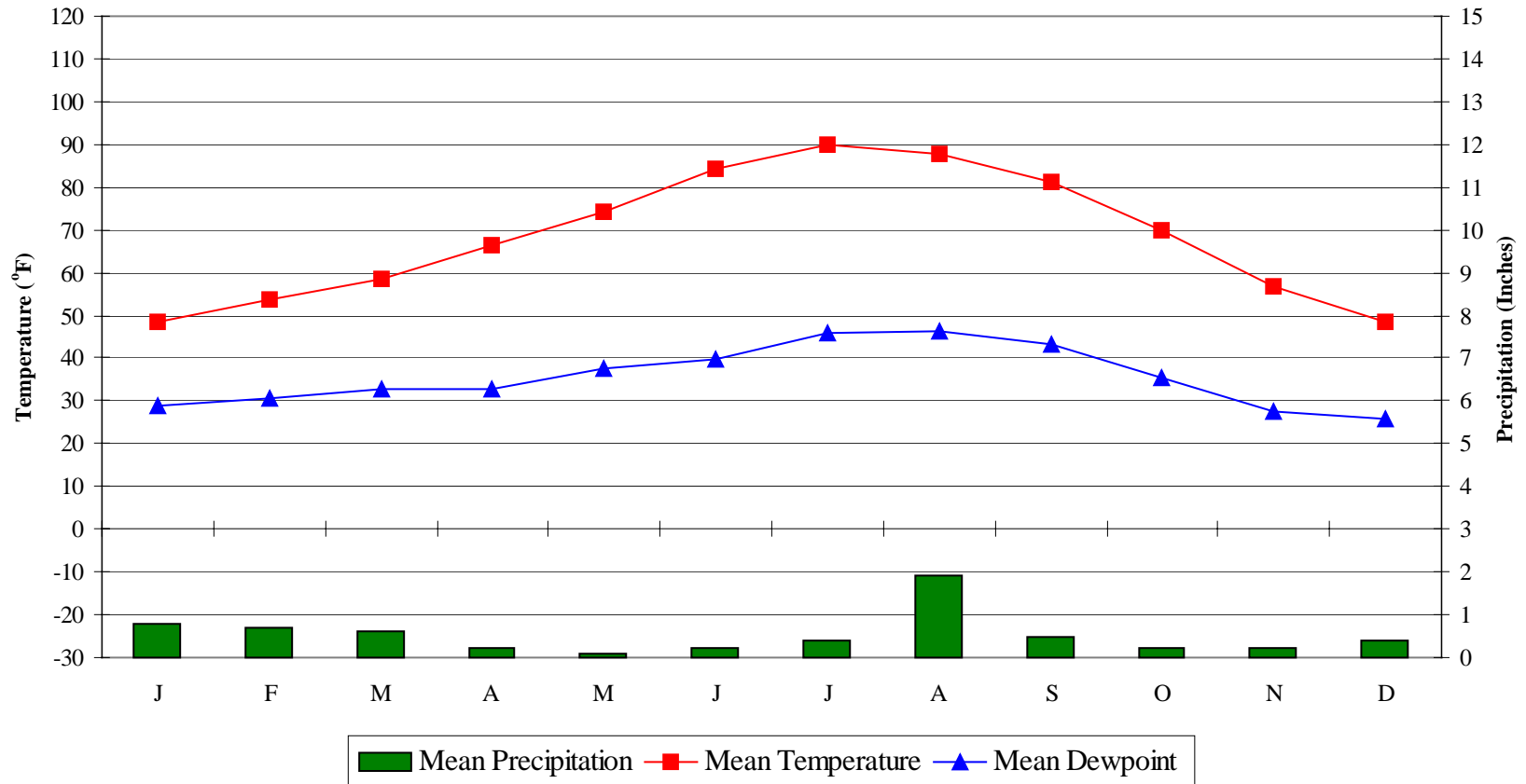
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

BARSTOW-DAGGETT

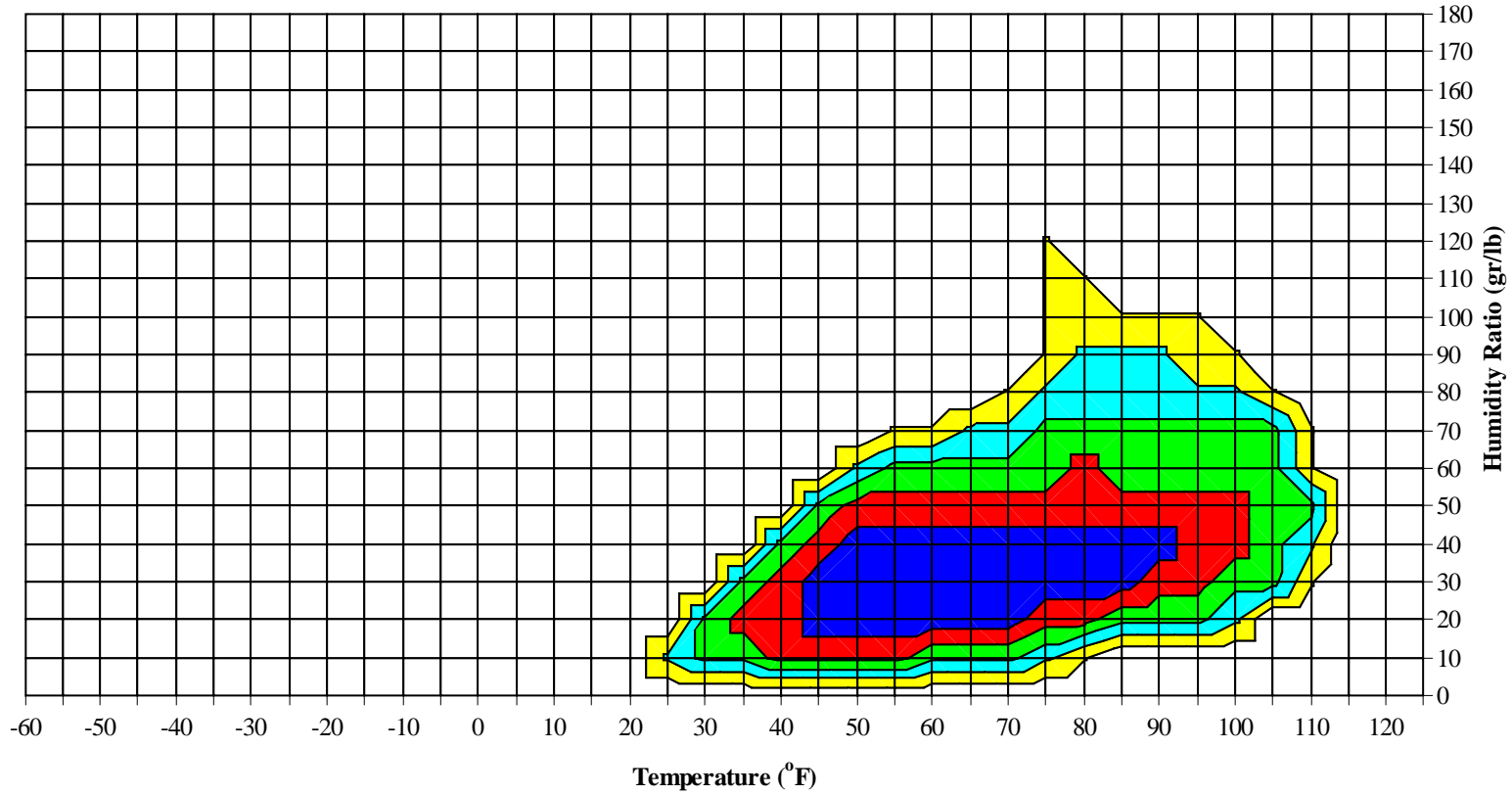
CA

WMO No. 723815

Average Annual Climate

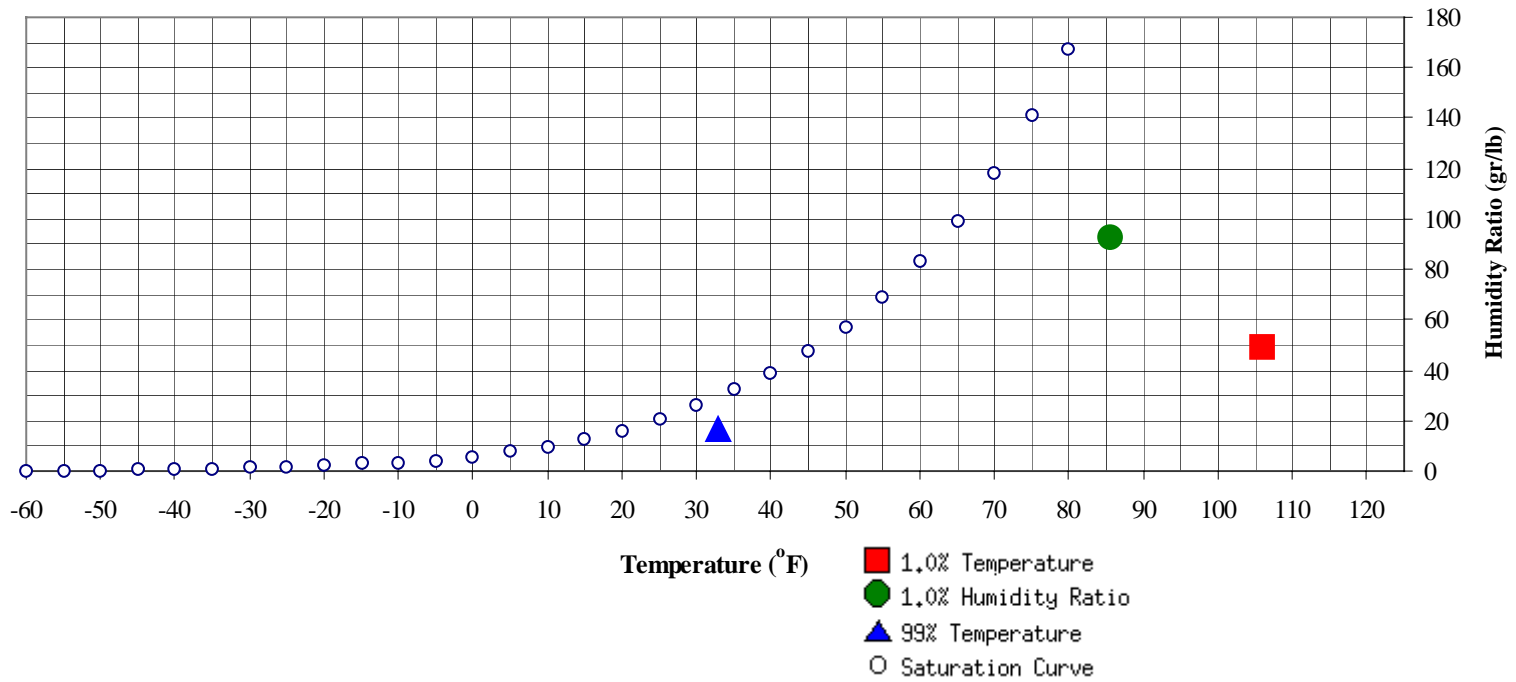


Long Term Psychrometric Summary



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

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	33	17	10.5	Ratio	93.1	85.4	70	63	35.1

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	106	48.9	68	33.2

BARSTOW-DAGGETT

CA

WMO No. 723815

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

Period of Record = 1973 to 1996

Temperature Range (°F)	January				M C W B (°F)	February				M C W B (°F)	March				M C W B (°F)	
	Hour Group (LST)			Total Obs		Hour Group (LST)			Total Obs		Hour Group (LST)			Total Obs		
	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			
115 / 119																
110 / 114																
105 / 109																
100 / 104																
95 / 99																
90 / 94												0		0	59.3	
85 / 89							1		1	57.5		4	1	5	56.5	
80 / 84		0		0	52.7		3	1	4	55.6		12	3	15	55.2	
75 / 79		1	0	1	52.4		11	2	13	53.5		25	9	34	53.8	
70 / 74		9	1	10	50.8		25	8	33	51.3	0	36	19	55	51.9	
65 / 69			23	4	49.1		0	36	15	49.6		2	49	32	84	49.9
60 / 64	1	40	13	54	47.1		3	47	28	47.6		14	52	45	111	48.2
55 / 59	4	55	30	89	45.0		14	44	51	45.8		45	42	59	146	46.3
50 / 54	17	58	59	133	42.9		47	32	57	43.5		69	21	52	142	44.0
45 / 49	45	37	68	150	40.4		64	16	37	40.3		68	6	21	95	40.8
40 / 44	77	18	47	142	36.6		56	6	16	36.5		39	1	6	46	36.8
35 / 39	61	6	21	87	32.6		25	2	7	31.9		10	0	1	11	32.3
30 / 34	32	1	5	38	28.1		11	1	2	28.3		1		0	1	29.9
25 / 29	10	0	1	11	23.4		2	0	0	23.2		0			0	25.0
20 / 24	1		0	1	19.6		1		0	17.6		0			0	
15 / 19	0		0	0	14.0											
10 / 14																

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.

BARSTOW-DAGGETT

CA

WMO No. 723815

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		
115 / 119															
110 / 114							0		0	66.0		3	0	3	68.5
105 / 109						0	1	0	1	65.2		20	6	27	67.1
100 / 104						0	7	1	8	65.0		37	15	53	65.5
95 / 99		3	1	4	61.2	0	20	6	26	62.8		53	29	82	63.3
90 / 94		12	3	15	59.2	0	37	15	53	60.8	2	47	38	87	61.6
85 / 89		22	9	31	57.2	1	49	27	78	58.9	12	37	45	94	60.1
80 / 84	0	33	16	49	55.3	5	46	37	88	57.3	30	21	43	94	58.4
75 / 79	1	43	26	70	53.6	15	34	44	92	55.6	58	12	31	101	56.8
70 / 74	7	44	35	86	51.9	40	27	44	111	54.0	60	6	20	86	54.8
65 / 69	22	38	43	103	50.3	60	17	34	110	52.1	45	2	9	56	52.9
60 / 64	45	28	45	118	48.2	56	8	22	87	49.8	24	1	3	28	50.6
55 / 59	67	12	40	119	46.2	44	3	13	60	47.4	8	0	1	9	48.1
50 / 54	64	4	19	86	43.5	22	0	4	26	44.3	2	0	0	2	46.2
45 / 49	30	1	4	34	40.6	4		1	5	40.3	0			0	42.7
40 / 44	5	0	0	5	36.3	0			0	35.8					
35 / 39	0	0		0	32.5										
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															

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.

BARSTOW-DAGGETT

CA

WMO No. 723815

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		
115 / 119		0	0	0	71.8		0		0	73.0					
110 / 114		8	2	10	70.0		6	1	7	69.7					
105 / 109		43	14	57	68.4		29	8	37	68.8		5	0	5	68.0
100 / 104		59	32	91	66.8		54	22	77	66.9		25	6	31	66.8
95 / 99	0	60	45	106	65.4	0	61	41	102	65.4		48	17	65	64.6
90 / 94	6	43	53	102	64.1	4	45	51	100	64.4	0	51	31	82	62.9
85 / 89	32	23	51	106	62.8	21	30	49	101	63.3	3	43	40	86	61.6
80 / 84	69	8	35	113	61.3	59	15	40	114	61.7	18	33	48	99	60.1
75 / 79	79	3	12	94	59.1	71	6	26	103	60.3	50	19	45	115	58.6
70 / 74	48	1	3	52	57.7	59	2	9	70	57.8	65	11	31	107	56.5
65 / 69	12	0	0	12	54.6	26	0	1	28	55.4	54	4	15	73	53.9
60 / 64	2			2	52.1	6			6	52.7	34	1	5	40	51.0
55 / 59	0			0	50.0	0			0	50.7	12	0	1	13	48.0
50 / 54											3			3	44.7
45 / 49															
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															

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 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		
115 / 119															
110 / 114															
105 / 109															
100 / 104		2	0	2	63.6										
95 / 99		9	1	10	62.7										
90 / 94		20	4	24	60.5		0		0	58.0					
85 / 89		36	10	47	58.5		2	0	2	57.6					
80 / 84	0	47	22	69	57.1		11	1	12	56.2					
75 / 79	5	45	38	88	55.4		26	3	29	53.9		3		3	53.6
70 / 74	19	42	47	109	53.7	0	39	11	50	51.6		9	1	10	51.6
65 / 69	41	26	50	118	51.8	2	43	25	70	49.8	0	27	4	31	49.3
60 / 64	66	15	38	119	49.5	10	44	40	95	47.3	1	48	12	61	46.7
55 / 59	62	5	25	92	46.7	36	42	51	129	44.6	6	55	33	94	44.7
50 / 54	36	1	8	45	41.9	57	23	50	130	41.7	19	51	55	124	42.1
45 / 49	13	0	3	16	37.7	53	8	32	93	38.1	45	32	60	137	39.0
40 / 44	4		1	5	34.3	41	3	18	61	34.0	65	17	46	128	35.1
35 / 39	1		0	1	28.9	26	0	7	33	30.4	61	6	25	92	31.4
30 / 34						11		2	13	26.4	34	1	9	44	27.5
25 / 29						3			3	22.7	11	0	3	14	22.9
20 / 24											3	0	1	4	18.3
15 / 19											1		0	1	13.2
10 / 14											1			1	9.6

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.

BARSTOW-DAGGETT CA

WMO No. 723815

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

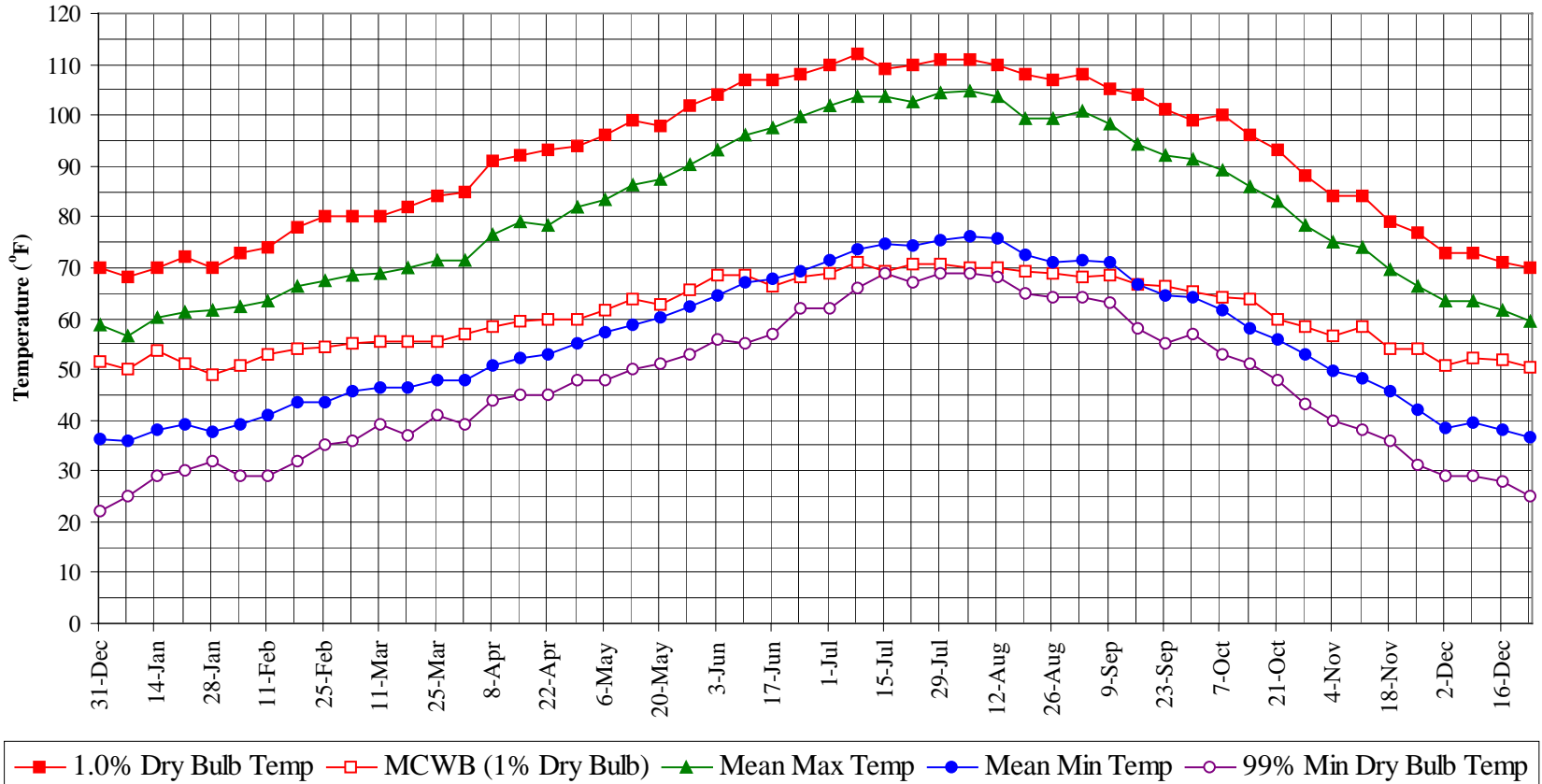
Period of Record = 1973 to 1996

Annual Totals

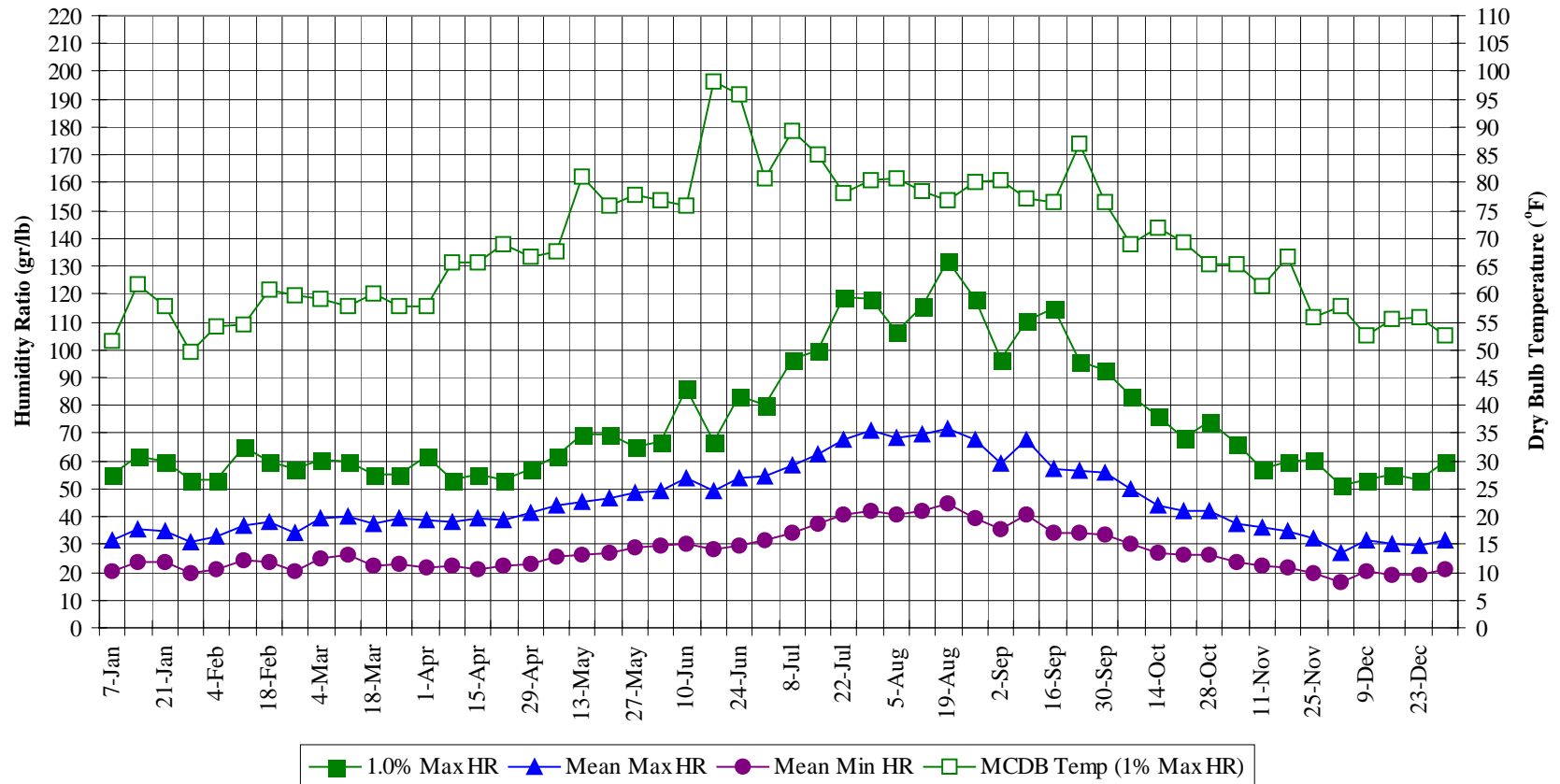
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
	115 / 119	0	0		
110 / 114		17	3	20	69.6
105 / 109	0	96	28	124	68.2
100 / 104	0	182	77	259	66.5
95 / 99	0	253	138	391	64.6
90 / 94	13	255	189	457	62.7
85 / 89	71	247	228	545	60.9
80 / 84	185	229	240	654	59.0
75 / 79	284	228	233	744	56.8
70 / 74	304	252	226	782	54.1
65 / 69	269	266	233	768	51.3
60 / 64	264	285	257	805	48.5
55 / 59	297	259	308	864	45.8
50 / 54	331	189	311	831	42.9
45 / 49	317	101	231	649	39.8
40 / 44	284	44	137	465	35.8
35 / 39	181	13	61	256	31.8
30 / 34	87	3	17	107	27.7
25 / 29	26	1	4	31	23.1
20 / 24	5	0	1	6	18.4
15 / 19	1		0	1	13.2
10 / 14	1			1	9.6

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



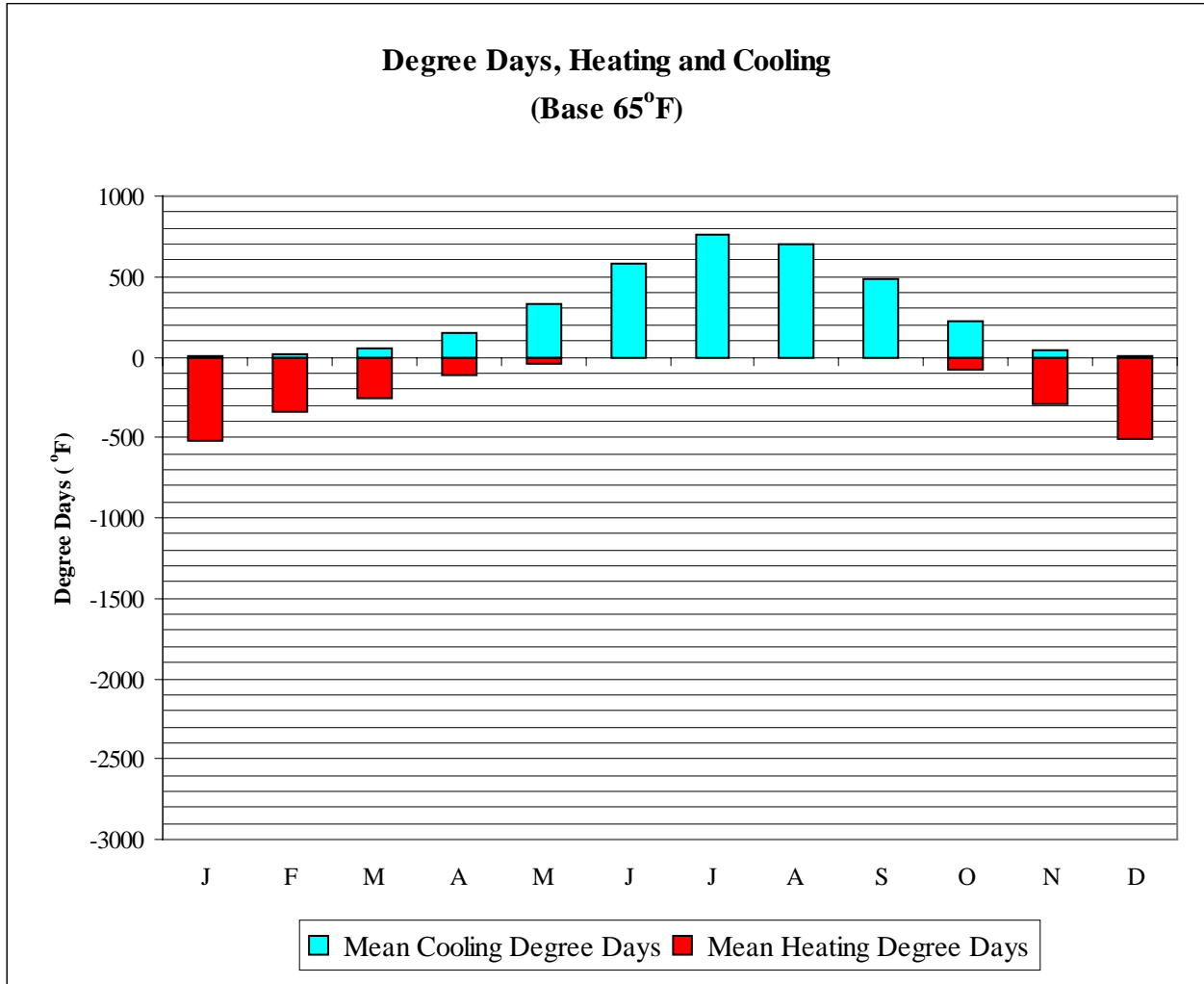
BARSTOW-DAGGETT

CA

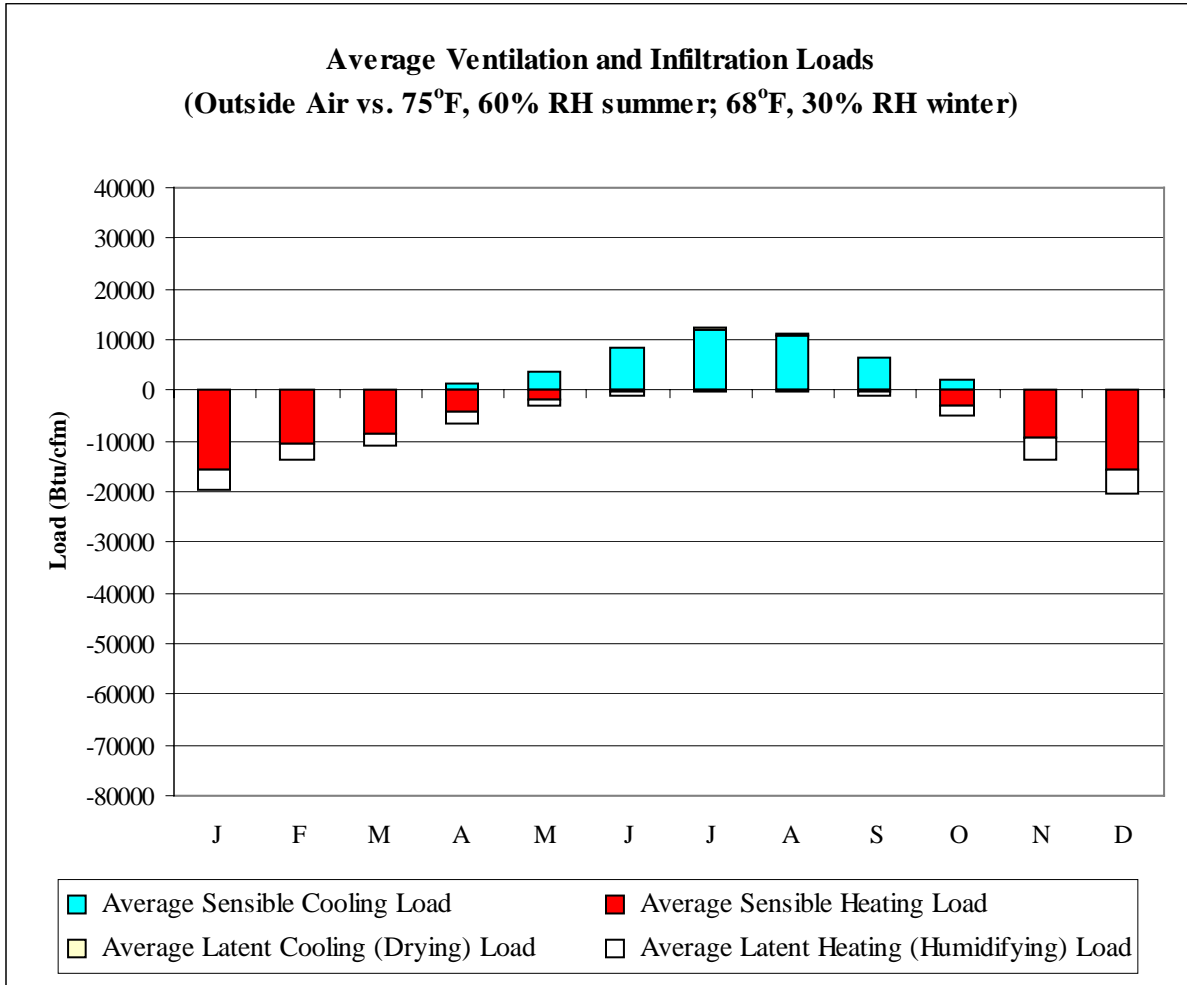
WMO No. 723815

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	50.2	56.6	35.9	25.0	55.3	51.6	31.8	20.5
14-Jan	70.0	53.6	60.3	38.0	29.0	61.6	61.7	35.5	23.7
21-Jan	72.0	51.1	61.4	39.3	30.0	59.5	57.7	34.7	23.5
28-Jan	70.0	49.1	61.5	37.8	32.0	53.2	49.7	31.2	19.8
4-Feb	73.0	50.8	62.3	39.1	29.0	53.2	54.1	32.6	21.0
11-Feb	74.0	52.9	63.5	40.9	29.0	65.1	54.5	36.5	24.2
18-Feb	78.0	54.0	66.3	43.3	32.0	59.5	60.9	38.1	23.6
25-Feb	80.0	54.6	67.6	43.6	35.0	57.4	59.6	34.2	20.6
4-Mar	80.0	55.3	68.4	45.5	36.0	60.2	59.1	39.5	24.8
11-Mar	80.0	55.5	69.0	46.4	39.0	59.5	57.8	40.4	26.0
18-Mar	82.0	55.5	69.9	46.3	37.0	55.3	59.9	37.5	22.6
25-Mar	84.0	55.4	71.5	48.0	41.0	55.3	57.9	39.5	23.1
1-Apr	85.0	56.9	71.4	47.9	39.0	61.6	57.9	38.5	22.0
8-Apr	91.0	58.3	76.4	50.7	44.0	53.2	65.8	38.2	22.0
15-Apr	92.0	59.5	79.1	52.3	45.0	55.3	65.6	39.2	21.2
22-Apr	93.0	59.7	78.5	53.0	45.0	53.2	68.8	38.4	22.0
29-Apr	94.0	60.0	82.0	55.3	48.0	57.4	66.5	41.4	23.1
6-May	96.0	61.5	83.5	57.4	48.0	61.6	67.8	44.2	25.6
13-May	99.0	63.8	86.1	58.6	50.0	69.3	81.1	45.3	26.5
20-May	98.0	62.9	87.4	60.1	51.0	69.3	75.9	46.3	26.6
27-May	102.0	65.7	90.1	62.2	53.0	65.1	77.8	48.6	28.7
3-Jun	104.0	68.5	93.1	64.5	56.0	67.2	76.8	49.5	29.7
10-Jun	107.0	68.7	96.2	67.1	55.0	86.1	75.8	53.9	30.2
17-Jun	107.0	66.3	97.7	67.8	57.0	67.2	98.3	49.4	28.5
24-Jun	108.0	68.2	99.9	69.3	62.0	83.3	95.9	53.9	29.6
1-Jul	110.0	68.7	102.0	71.6	62.0	79.8	80.7	54.6	31.5
8-Jul	112.0	71.1	103.5	73.5	66.0	96.6	89.3	58.7	33.9
15-Jul	109.0	69.3	103.7	74.6	69.0	100.1	85.0	62.3	37.2
22-Jul	110.0	70.9	102.5	74.3	67.0	119.0	78.2	67.8	40.5
29-Jul	111.0	70.7	104.5	75.3	69.0	118.3	80.4	71.0	41.9
5-Aug	111.0	69.9	104.9	76.0	69.0	106.4	80.7	68.0	40.5
12-Aug	110.0	70.2	103.6	75.8	68.0	115.5	78.6	69.7	42.3
19-Aug	108.0	69.1	99.2	72.5	65.0	132.3	76.7	71.6	44.4
26-Aug	107.0	69.1	99.3	71.0	64.0	118.3	80.1	67.9	39.5
2-Sep	108.0	68.2	100.8	71.5	64.0	96.6	80.3	59.3	35.6
9-Sep	105.0	68.5	98.4	71.1	63.0	110.6	77.3	67.4	40.4
16-Sep	104.0	66.7	94.3	66.6	58.0	114.8	76.5	57.2	33.9
23-Sep	101.0	66.5	92.0	64.6	55.0	95.9	87.1	56.7	34.1
30-Sep	99.0	65.2	91.4	64.2	57.0	92.4	76.5	55.7	33.5
7-Oct	100.0	64.1	89.3	61.7	53.0	83.3	69.0	49.7	30.4
14-Oct	96.0	63.7	85.8	58.2	51.0	76.3	71.8	44.0	26.7
21-Oct	93.0	59.9	82.9	55.9	48.0	68.6	69.4	42.0	26.1
28-Oct	88.0	58.4	78.4	53.1	43.0	74.2	65.2	42.0	26.5
4-Nov	84.0	56.5	74.9	49.7	40.0	66.5	65.3	37.3	23.6
11-Nov	84.0	58.3	74.0	48.3	38.0	57.4	61.5	35.8	22.4
18-Nov	79.0	54.2	69.7	45.7	36.0	59.5	66.5	34.6	21.9
25-Nov	77.0	54.1	66.2	42.0	31.0	60.2	55.9	32.0	19.8
2-Dec	73.0	50.7	63.3	38.6	29.0	51.1	57.7	27.2	16.6
9-Dec	73.0	52.3	63.4	39.6	29.0	53.2	52.6	31.3	20.6
16-Dec	71.0	51.7	61.6	38.2	28.0	55.3	55.4	30.1	19.3
23-Dec	70.0	50.3	59.4	36.7	25.0	53.2	55.7	29.8	18.9
31-Dec	70.0	51.4	58.7	36.4	22.0	59.5	52.5	31.8	20.9



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	5	516
FEB	21	337
MAR	51	253
APR	153	118
MAY	332	41
JUN	581	6
JUL	762	0
AUG	705	0
SEP	488	9
OCT	223	75
NOV	43	293
DEC	6	513
ANN	3369	2161

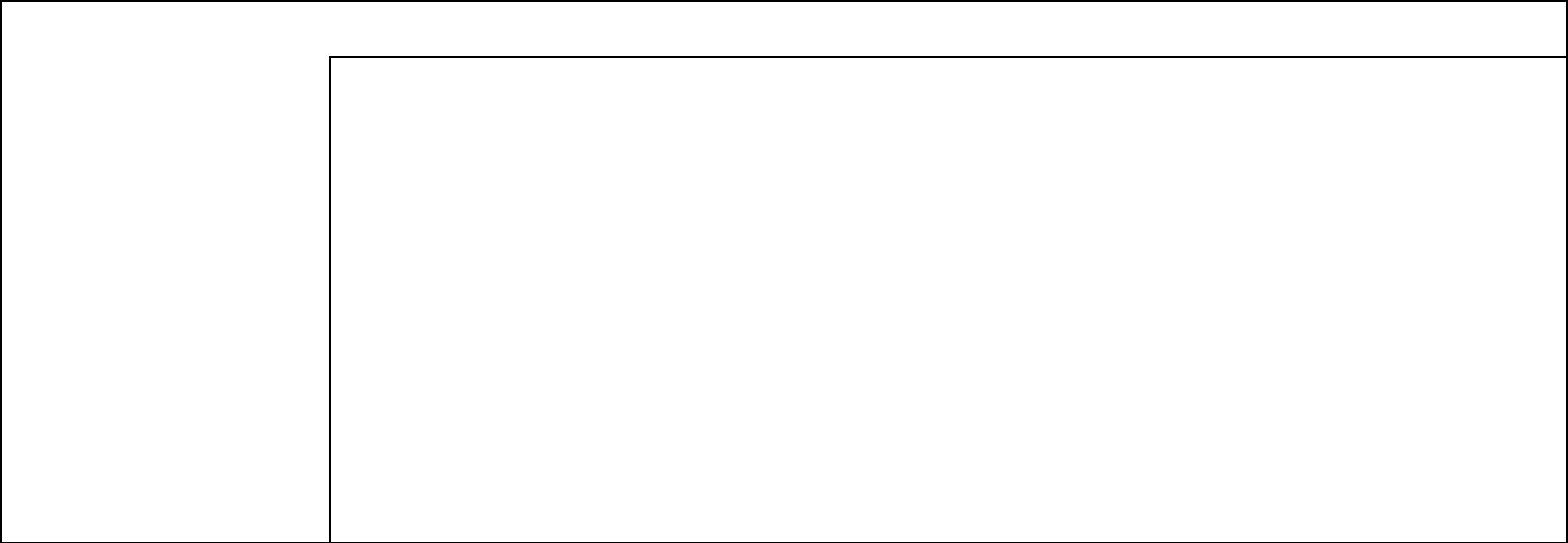


	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	2	-15704	0	-3823
FEB	45	-10674	0	-2910
MAR	204	-8483	0	-2515
APR	1194	-4338	0	-2369
MAY	3641	-1733	4	-1234
JUN	8304	-327	71	-689
JUL	11920	-17	441	-303
AUG	10628	-48	654	-357
SEP	6263	-459	248	-693
OCT	1967	-2908	2	-1997
NOV	153	-9526	0	-4011
DEC	2	-15630	0	-4668
ANN	44323	-69847	1420	-25569

Average Annual Solar Radiation – Nearest Available Site

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

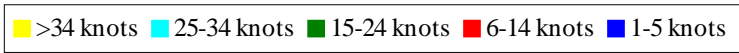
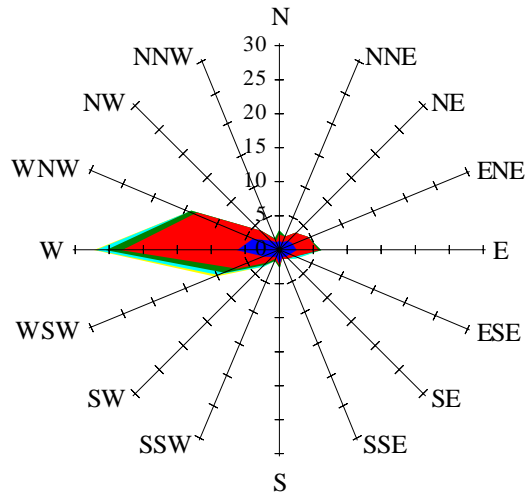
No Solar Radiation
Data Available



Average Annual Solar Heat and Illumination – Nearest Available Site

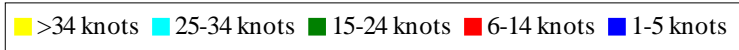
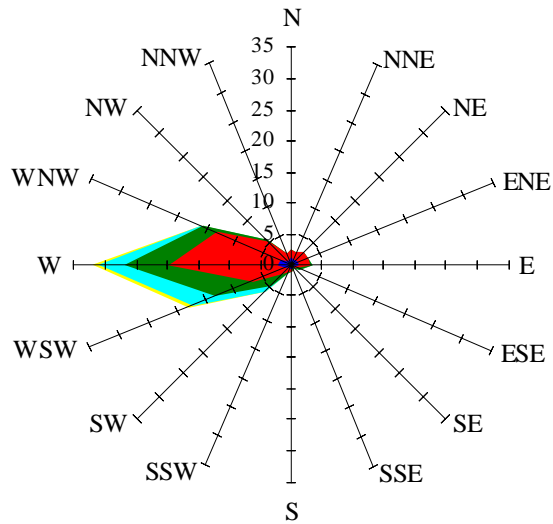
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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



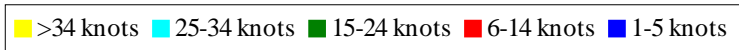
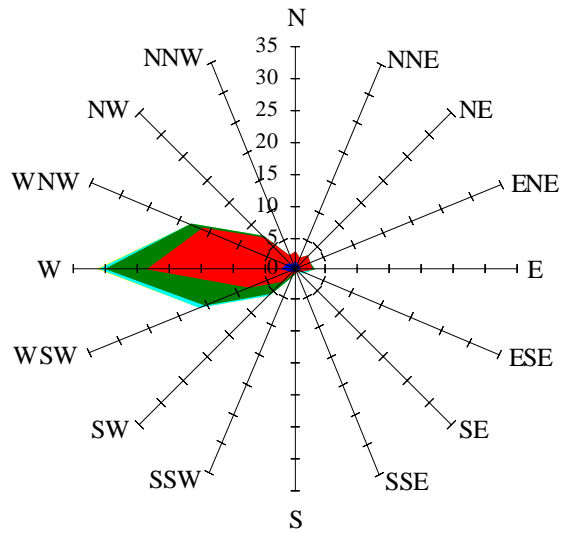
Percent Calm = 13.62

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



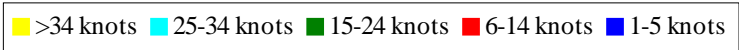
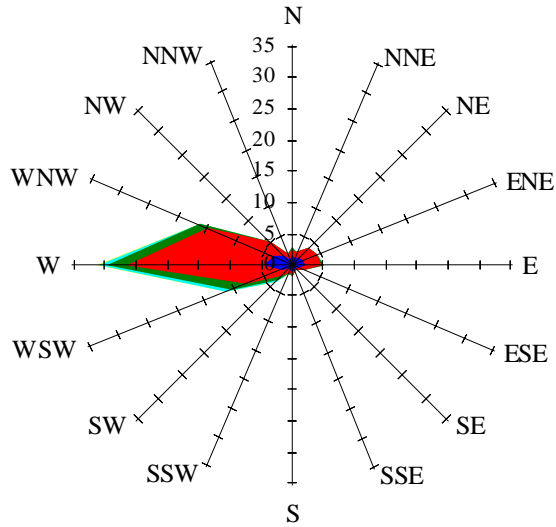
Percent Calm = 4.17

Wind Summary - June, July, and August
Labels of Percent Frequency on North Axis



Percent Calm = 3.43

Wind Summary - September, October, and November
Labels of Percent Frequency on North Axis



Percent Calm = 8.10