

RED BLUFF CA

Latitude = 40.15 N

Longitude = 122.20 W

Period of Record = 1973 to 1995

WMO No. 725910

Elevation = 354 feet

Average Pressure = 29.58 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	111	71	52	8.4	SSE
0.4% Occurrence	105	70	52	9.2	S
1.0% Occurrence	102	69	53	9.4	S
2.0% Occurrence	99	67	51	9.6	S
Mean Daily Range	23	-	-	-	-
97.5% Occurrence	36	34	26	5.9	NNW
99.0% Occurrence	33	31	23	5.5	NNW
99.6% Occurrence	30	28	19	5.4	NNW
Median of Extreme Lows	26	24	16	6.3	NNW
	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	75	100	87	9.6	S
0.4% Occurrence	72	97	77	9.3	S
1.0% Occurrence	71	95	74	9.2	S
2.0% Occurrence	69	93	68	8.9	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	109	83	0.72	5.5	SSE
0.4% Occurrence	91	80	0.60	6.5	SSE
1.0% Occurrence	85	80	0.56	7.1	S
2.0% Occurrence	79	78	0.52	7.4	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		485	1571	29	524

Other Site Data

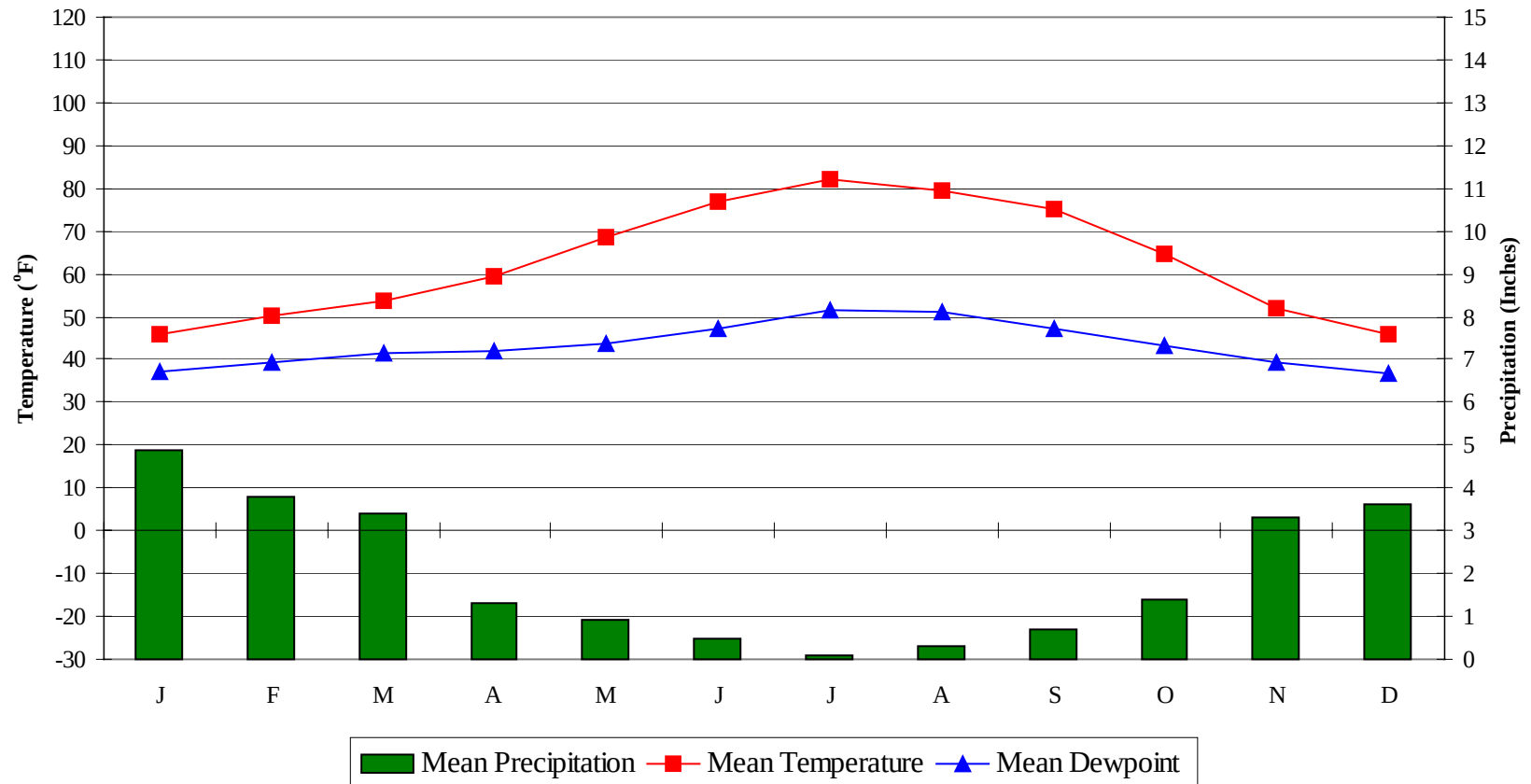
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
11	1.3	85	0.1 + 2.1
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
65.4	N/A	N/A	10

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

RED BLUFF CA

WMO No. 725910

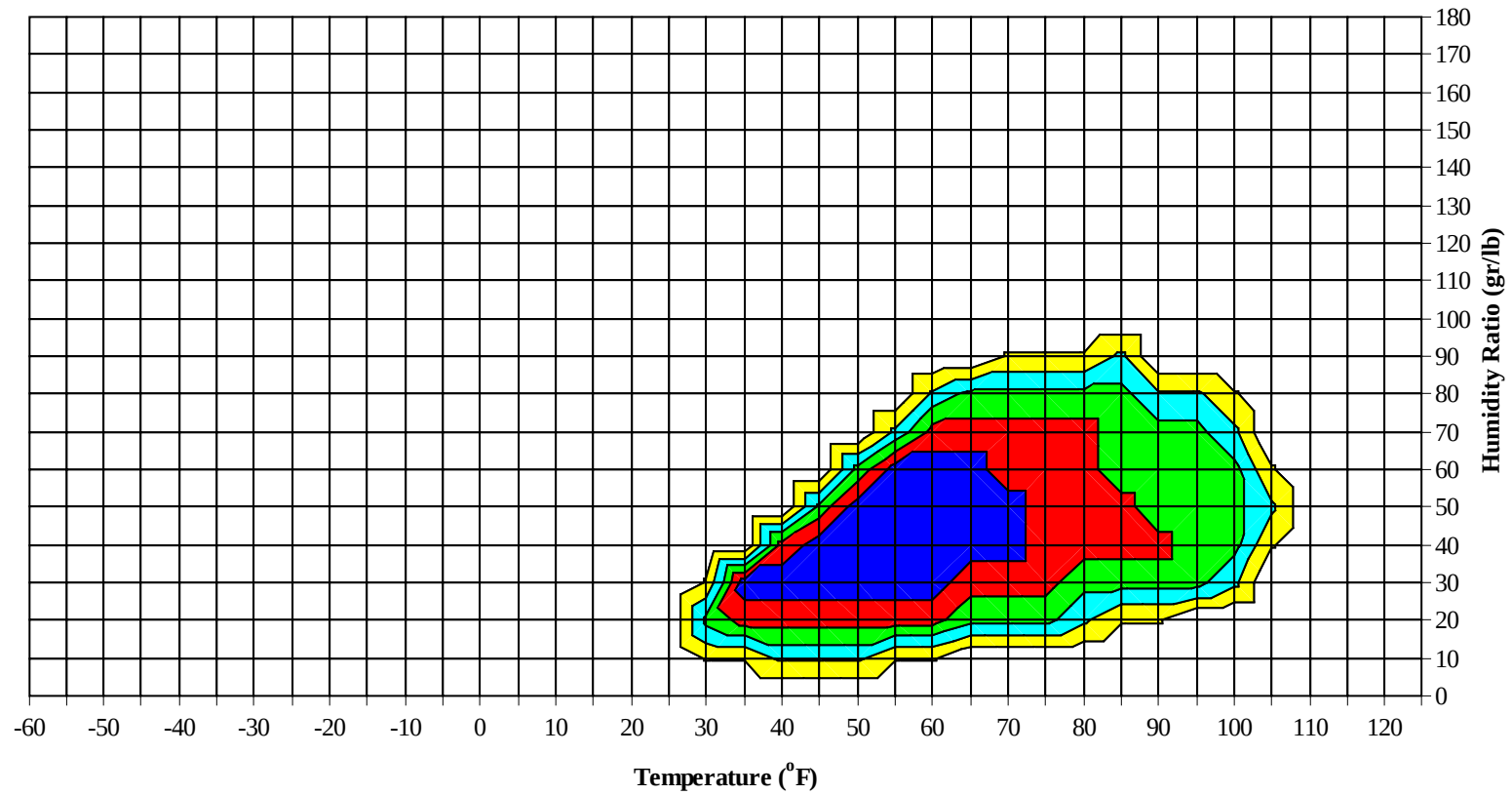
Average Annual Climate



RED BLUFF CA

WMO No. 725910

Long Term Psychrometric Summary

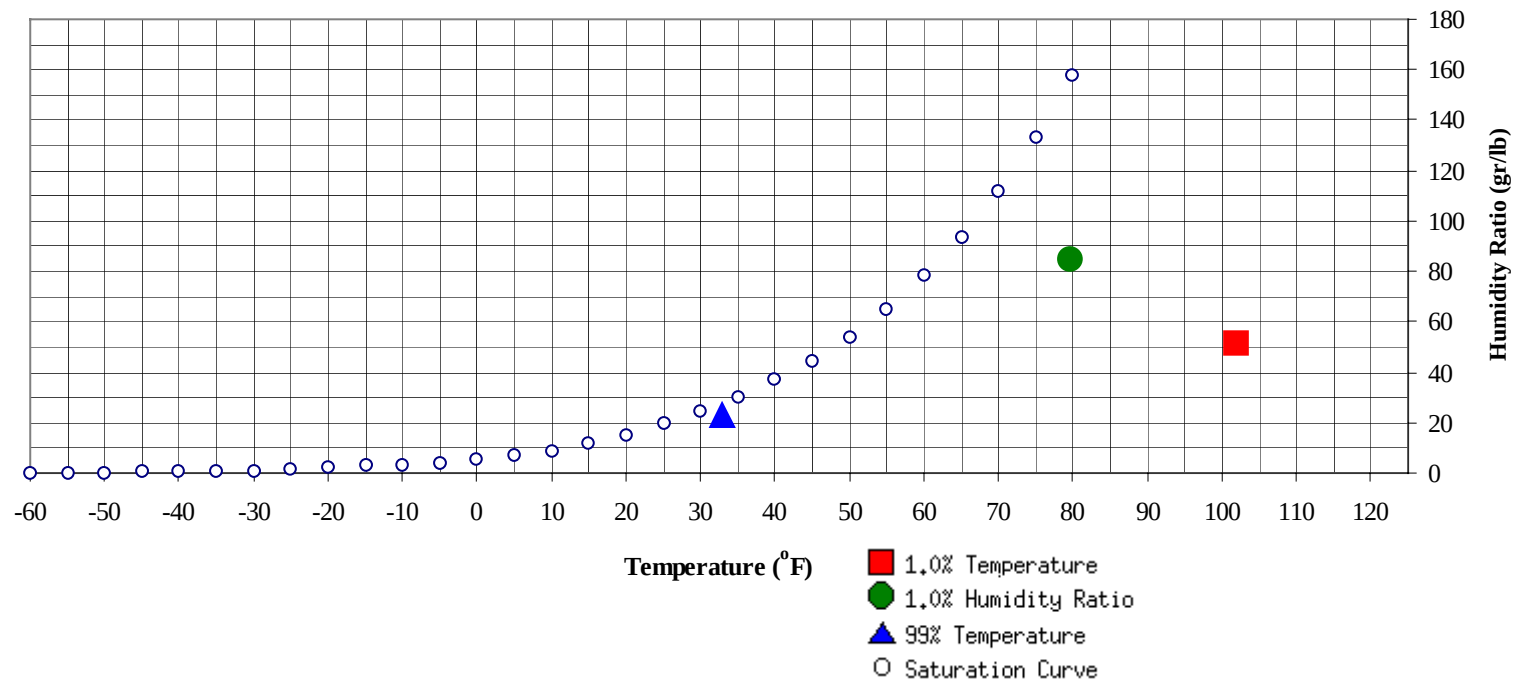


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

RED BLUFF CA

WMO No. 725910

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)
	33	23.3	11.5		84.7	79.5	67.8	62.1	32.3

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	102	51.4	68.5	32.6

RED BLUFF CA

WMO No. 725910

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

Period of Record = 1973 to 1995

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		
115 / 119															
110 / 114															
105 / 109															
100 / 104															
95 / 99															
90 / 94															
85 / 89								0	0						
80 / 84							1	0	1	59.3	0	2	1	3	59.1
75 / 79		1		1	53.7		4	1	5	56.0	0	7	3	10	57.9
70 / 74		4	1	5	53.2		11	3	14	55.2	0	18	7	25	56.3
65 / 69		9	2	11	50.5		16	6	22	53.0	0	33	15	48	54.2
60 / 64	0	21	6	27	49.7	0	33	15	48	51.3	2	55	35	92	52.3
55 / 59	5	40	22	67	49.3	8	50	38	96	50.0	25	57	60	142	50.5
50 / 54	28	58	46	133	47.4	41	55	66	162	47.8	68	47	66	181	47.7
45 / 49	34	50	56	141	43.5	66	38	54	158	44.0	77	19	43	139	43.6
40 / 44	64	43	68	175	39.8	57	14	30	101	39.2	55	8	14	77	39.5
35 / 39	74	18	38	130	35.3	36	4	8	48	34.5	18	1	3	22	35.3
30 / 34	36	4	8	48	31.0	14	0	2	16	29.8	3	0	1	4	31.8
25 / 29	6	0	1	7	26.1	2	0	0	2	23.5	0			0	28.0
20 / 24	0			0	21.9	0			0	18.3					
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.

RED BLUFF CA

WMO No. 725910

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1973 to 1995

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															
105 / 109							0	0	0	68.6		0	0	0	72.0
100 / 104							1	1	2	67.8		4	2	6	69.6
95 / 99		0		0	62.0		8	3	11	66.4		13	7	21	68.3
90 / 94		1	1	2	65.9		17	8	26	64.2		24	14	38	66.4
85 / 89		5	2	7	62.7	0	28	15	43	62.2	0	35	21	55	64.8
80 / 84		15	6	21	60.6	1	39	23	63	60.5	2	43	33	78	63.4
75 / 79	0	25	13	39	58.2	5	43	32	80	58.6	10	40	40	90	61.7
70 / 74	1	38	22	61	56.0	16	41	41	98	56.7	22	34	42	98	60.1
65 / 69	5	44	33	82	54.0	32	32	44	107	54.8	43	25	39	107	58.3
60 / 64	17	52	47	116	52.0	56	26	40	122	52.9	63	13	23	99	56.6
55 / 59	50	35	54	139	50.1	71	11	28	109	50.6	59	6	14	79	54.4
50 / 54	75	20	40	134	47.3	49	3	10	62	47.4	31	2	4	37	51.4
45 / 49	58	5	17	80	43.6	15	0	2	17	43.6	9	1	1	11	49.0
40 / 44	28	1	5	34	39.7	3		1	4	40.5	1		0	1	45.5
35 / 39	6		0	6	35.6	0			0	35.0					
30 / 34	0			0	31.7										
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.

RED BLUFF CA

WMO No. 725910

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

Period of Record = 1973 to 1995

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	69.6		1	0	1	73.0		0	0	0	73.6
110 / 114		3	1	4	70.9		1	0	1	72.5		1	0	1	71.6
105 / 109		12	5	18	70.2		6	2	8	69.8		1	0	1	69.7
100 / 104		31	15	45	69.0		21	8	30	68.5		11	3	14	67.3
95 / 99	0	46	26	72	67.8		38	18	55	66.8		27	8	35	65.6
90 / 94	0	50	32	82	66.5	0	50	27	77	65.8	0	39	16	55	64.2
85 / 89	6	44	44	94	65.4	2	48	36	87	64.8	0	42	21	63	62.9
80 / 84	18	31	48	97	64.2	10	37	46	93	63.8	2	41	32	74	61.4
75 / 79	47	18	40	105	62.4	24	25	49	98	62.3	10	35	42	87	60.1
70 / 74	69	9	25	103	60.3	55	14	37	106	60.3	29	25	47	101	58.7
65 / 69	65	3	8	76	58.0	86	6	20	111	58.1	65	13	44	122	56.9
60 / 64	35	1	3	40	55.9	58	1	5	65	56.3	82	6	21	109	54.6
55 / 59	8	0	0	8	53.2	11		0	11	52.5	44	1	5	50	51.6
50 / 54	0			0	48.0	1			1	50.6	8		0	8	48.3
45 / 49											0			0	46.5
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.

RED BLUFF CA

WMO No. 725910

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

Period of Record = 1973 to 1995

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		0		0	69.0										
100 / 104		2	0	2	66.2										
95 / 99	0	5	1	6	64.6										
90 / 94	0	13	3	16	62.9										
85 / 89	0	21	5	26	60.9		0		0	61.0			0	0	
80 / 84	0	31	10	41	59.6		2	0	2	58.7		0	0	0	59.0
75 / 79	1	41	18	60	58.1		8	1	9	56.6		0	0	0	55.4
70 / 74	5	40	28	74	56.3		19	3	22	55.6		3	0	3	53.3
65 / 69	14	37	43	95	54.7		29	8	37	52.9		8	1	9	51.0
60 / 64	45	34	59	139	53.4	4	42	25	71	51.8	1	25	4	30	49.4
55 / 59	78	18	48	144	51.0	23	52	42	117	49.8	5	38	16	59	48.3
50 / 54	67	5	25	97	47.6	44	46	66	156	47.1	24	61	48	133	47.0
45 / 49	30	1	5	36	43.6	67	28	57	153	43.6	52	60	71	183	43.8
40 / 44	7	0	1	8	39.9	59	12	30	101	39.5	61	32	62	155	39.5
35 / 39	1			1	37.4	31	2	7	40	34.8	60	15	35	111	35.2
30 / 34	0			0		8	0	2	10	30.0	36	6	10	52	31.1
25 / 29						3		0	3	25.7	6	1	1	8	25.9
20 / 24											1	0	0	1	18.7
15 / 19											0	0	0	0	16.2
10 / 14													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.

RED BLUFF CA**WMO No. 725910****Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)****Period of Record = 1973 to 1995**

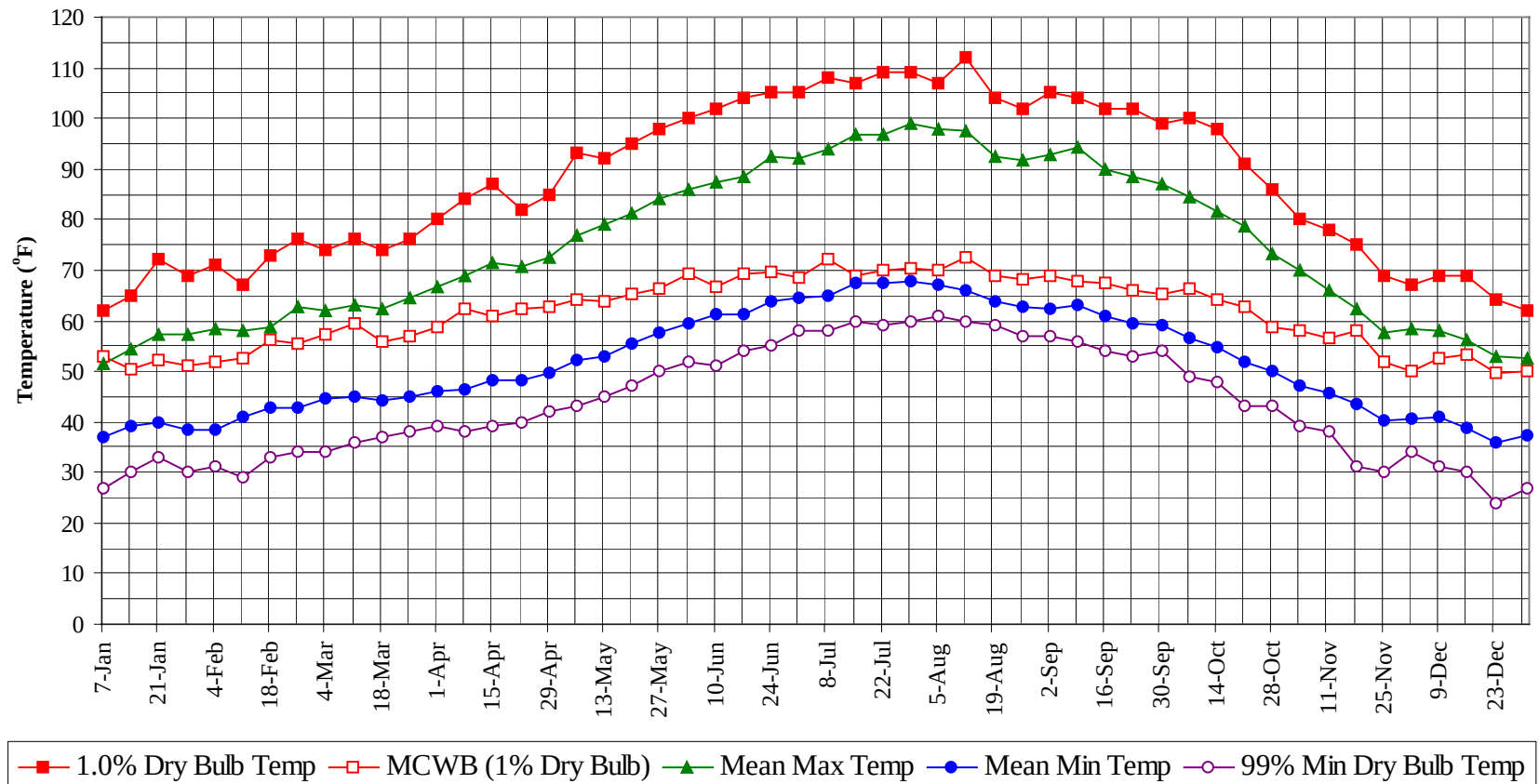
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
115 / 119		1	0	1	72.5
110 / 114		5	2	7	71.5
105 / 109		23	9	32	70.0
100 / 104		79	33	113	68.5
95 / 99	0	146	69	215	66.8
90 / 94	1	204	104	310	65.2
85 / 89	11	231	154	396	63.8
80 / 84	42	238	202	482	62.1
75 / 79	110	243	237	590	60.2
70 / 74	217	248	252	716	58.0
65 / 69	330	245	246	821	55.7
60 / 64	362	302	276	940	53.1
55 / 59	362	303	323	987	50.3
50 / 54	416	291	373	1080	47.5
45 / 49	400	200	311	911	43.7
40 / 44	334	107	213	655	39.6
35 / 39	222	40	91	352	35.2
30 / 34	95	11	21	127	30.8
25 / 29	17	1	3	21	25.7
20 / 24	2	0	0	2	19.1
15 / 19	0	0	0	0	16.2
10 / 14			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.

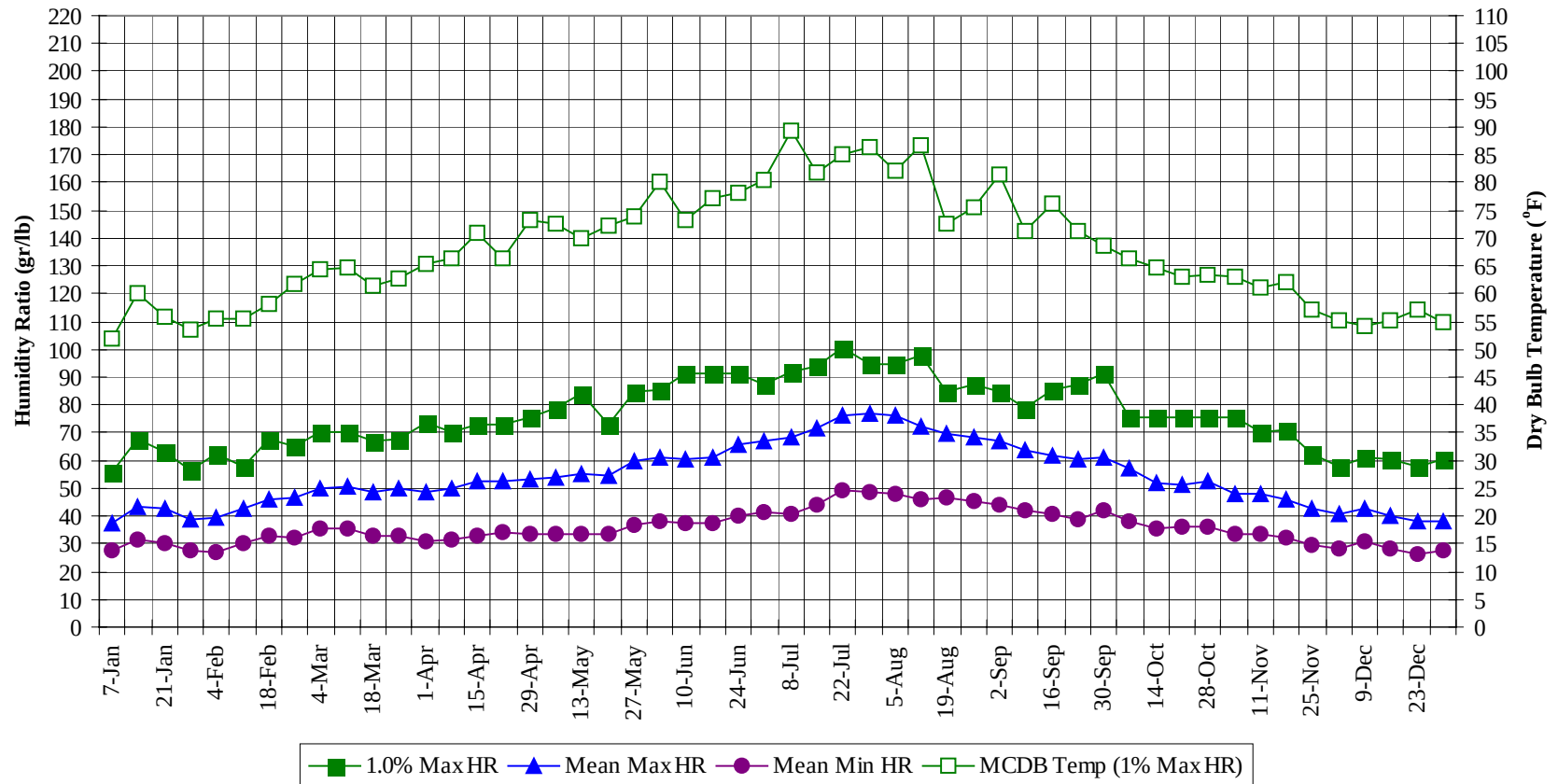
RED BLUFF CA

WMO No. 725910

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



RED BLUFF CA

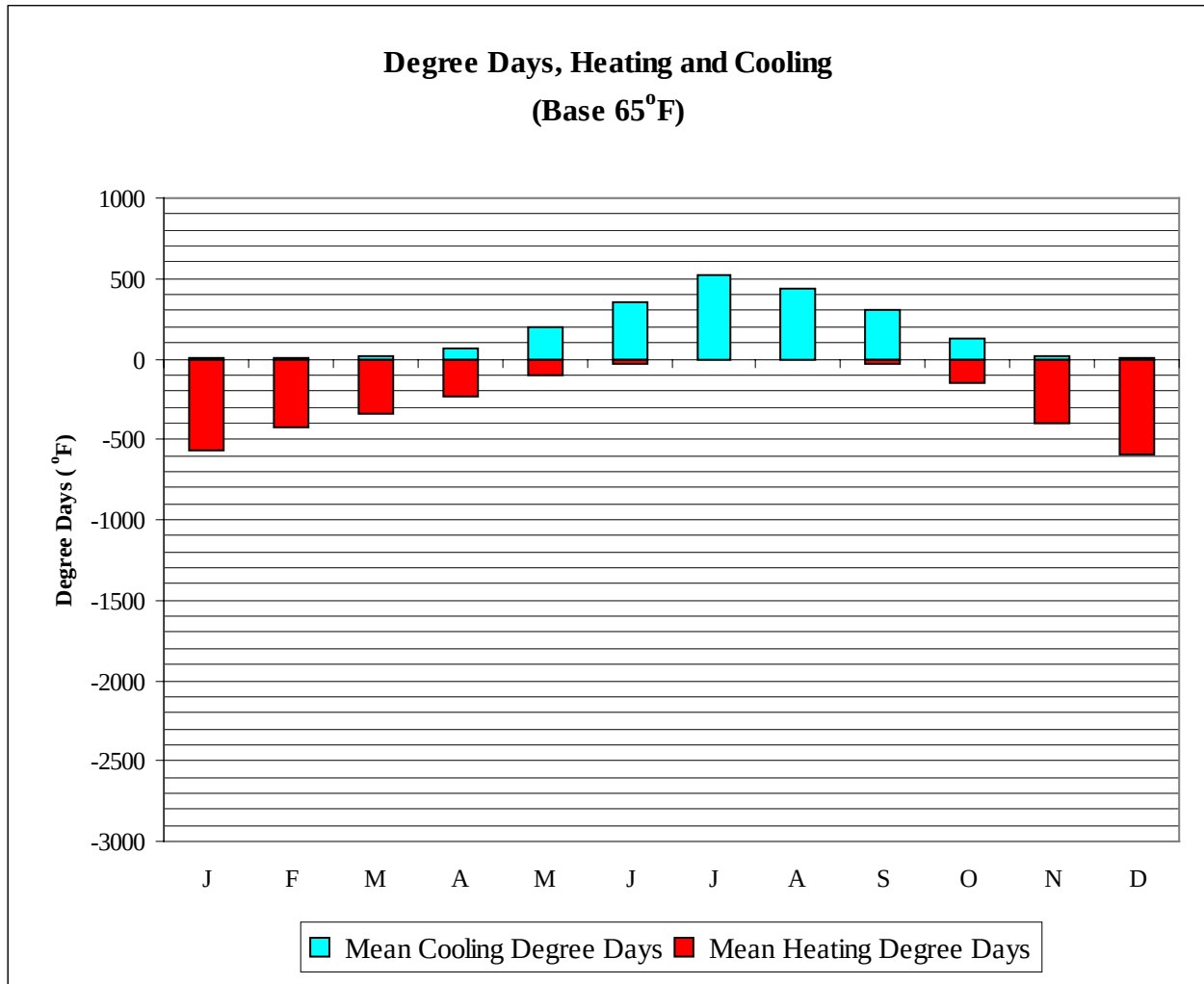
WMO No. 725910

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	62.0	53.0	51.5	36.8	27.0	56.0	51.9	37.7	27.7
14-Jan	65.0	50.5	54.5	39.1	30.0	67.9	59.9	43.1	31.5
21-Jan	72.0	52.3	57.4	40.0	33.0	63.0	56.0	42.8	30.4
28-Jan	69.0	51.2	57.4	38.3	30.0	56.7	53.6	38.8	27.4
4-Feb	71.0	51.9	58.3	38.6	31.0	62.3	55.5	39.7	27.0
11-Feb	67.0	52.6	58.0	41.0	29.0	58.1	55.6	42.9	30.4
18-Feb	73.0	56.2	58.8	42.8	33.0	67.9	58.1	45.7	33.1
25-Feb	76.0	55.4	62.7	42.8	34.0	65.1	61.8	46.7	32.1
4-Mar	74.0	57.4	62.0	44.7	34.0	70.0	64.2	49.8	35.3
11-Mar	76.0	59.4	63.1	44.8	36.0	70.0	64.6	50.5	35.1
18-Mar	74.0	55.7	62.2	44.4	37.0	67.2	61.3	48.8	33.1
25-Mar	76.0	56.9	64.4	44.9	38.0	67.9	62.8	49.9	32.9
1-Apr	80.0	58.8	66.6	46.1	39.0	73.5	65.5	48.6	30.6
8-Apr	84.0	62.3	68.9	46.4	38.0	70.0	66.2	49.7	31.5
15-Apr	87.0	61.0	71.5	48.1	39.0	72.8	70.8	52.5	32.7
22-Apr	82.0	62.2	70.6	48.2	40.0	72.8	66.2	52.7	34.2
29-Apr	85.0	62.6	72.6	49.5	42.0	75.6	73.3	52.9	33.4
6-May	93.0	64.1	76.7	52.4	43.0	79.1	72.4	54.0	33.5
13-May	92.0	63.6	79.2	53.1	45.0	84.0	70.0	55.5	33.8
20-May	95.0	65.4	81.4	55.3	47.0	72.8	72.1	54.7	33.4
27-May	98.0	66.4	84.2	57.6	50.0	84.7	73.7	60.1	36.6
3-Jun	100.0	69.3	86.0	59.6	52.0	85.4	80.0	61.3	38.4
10-Jun	102.0	66.5	87.4	61.4	51.0	91.0	73.2	60.4	37.5
17-Jun	104.0	69.3	88.6	61.2	54.0	91.0	77.2	60.8	37.4
24-Jun	105.0	69.5	92.5	63.8	55.0	91.0	78.2	66.0	40.2
1-Jul	105.0	68.5	92.2	64.6	58.0	87.5	80.4	67.2	41.2
8-Jul	108.0	72.0	93.7	64.8	58.0	91.7	89.3	68.0	41.0
15-Jul	107.0	69.1	96.9	67.5	60.0	93.8	81.6	71.7	43.8
22-Jul	109.0	70.1	97.0	67.6	59.0	100.8	85.2	76.4	49.5
29-Jul	109.0	70.3	99.0	67.6	60.0	94.5	86.4	77.2	48.5
5-Aug	107.0	69.9	98.0	67.1	61.0	94.5	82.0	75.9	47.6
12-Aug	112.0	72.6	97.5	66.0	60.0	98.0	86.7	72.4	46.0
19-Aug	104.0	68.8	92.5	63.7	59.0	84.7	72.6	69.7	46.4
26-Aug	102.0	68.3	91.9	62.6	57.0	87.5	75.4	68.1	45.1
2-Sep	105.0	68.8	92.8	62.5	57.0	84.7	81.4	67.1	44.0
9-Sep	104.0	67.7	94.2	63.2	56.0	79.1	71.3	63.9	42.0
16-Sep	102.0	67.3	89.8	60.8	54.0	85.4	76.1	61.6	40.6
23-Sep	102.0	65.9	88.5	59.5	53.0	87.5	71.3	60.5	38.9
30-Sep	99.0	65.1	87.1	58.9	54.0	91.0	68.5	60.9	42.0
7-Oct	100.0	66.4	84.6	56.7	49.0	75.6	66.5	56.8	38.3
14-Oct	98.0	64.3	81.6	54.7	48.0	75.6	64.8	51.8	35.8
21-Oct	91.0	62.6	78.7	51.9	43.0	75.6	63.2	51.4	35.9
28-Oct	86.0	58.6	73.4	50.0	43.0	75.6	63.4	52.4	36.1
4-Nov	80.0	58.1	70.0	47.1	39.0	75.6	63.1	48.1	33.5
11-Nov	78.0	56.4	66.0	45.9	38.0	70.0	61.1	48.0	33.2
18-Nov	75.0	58.1	62.4	43.5	31.0	70.7	62.2	46.2	32.2
25-Nov	69.0	51.7	57.7	40.3	30.0	62.3	57.1	42.7	29.7
2-Dec	67.0	50.0	58.5	40.5	34.0	58.1	55.2	40.8	28.5
9-Dec	69.0	52.7	58.1	41.1	31.0	60.9	54.3	43.0	31.0
16-Dec	69.0	53.3	56.1	38.8	30.0	60.2	55.2	40.2	28.2
23-Dec	64.0	49.5	53.1	35.8	24.0	58.1	57.2	37.9	26.1
31-Dec	62.0	50.1	52.6	37.2	27.0	60.2	54.8	38.2	27.6

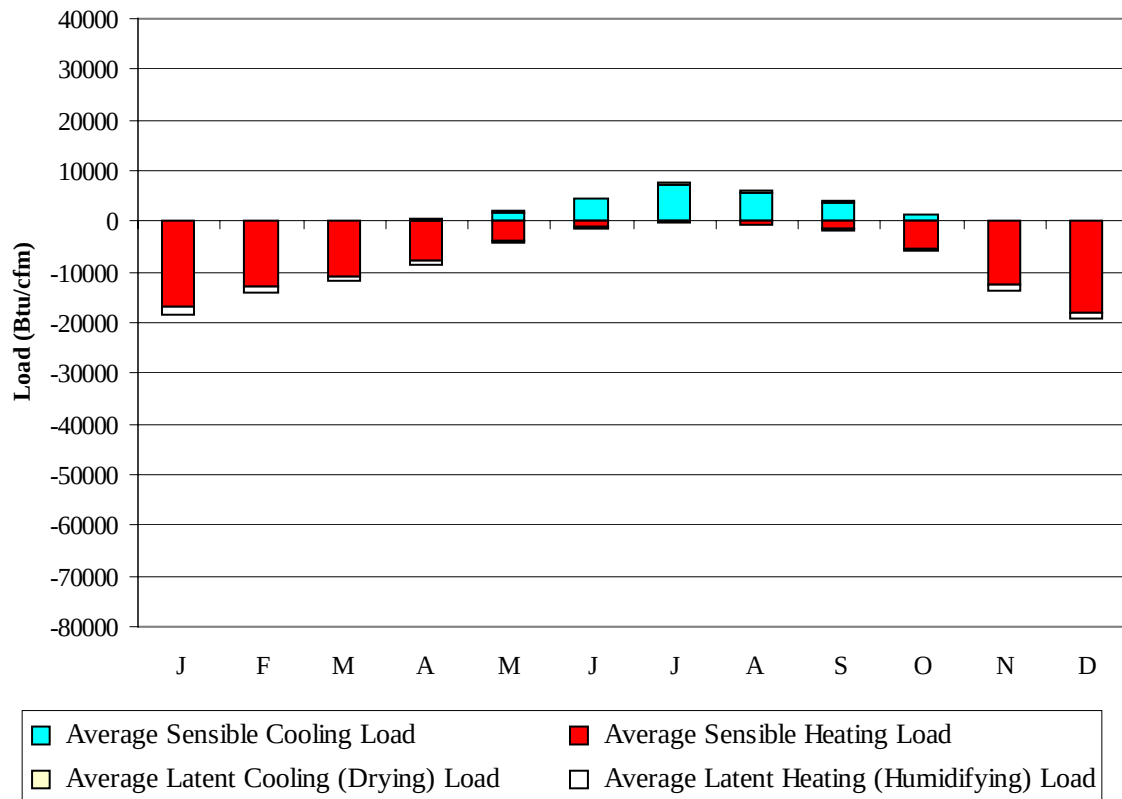
RED BLUFF CA

WMO No. 725910



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	2	568
FEB	7	421
MAR	15	345
APR	60	231
MAY	196	97
JUN	359	26
JUL	519	6
AUG	434	9
SEP	301	31
OCT	127	148
NOV	13	404
DEC	1	597
ANN	2036	2883

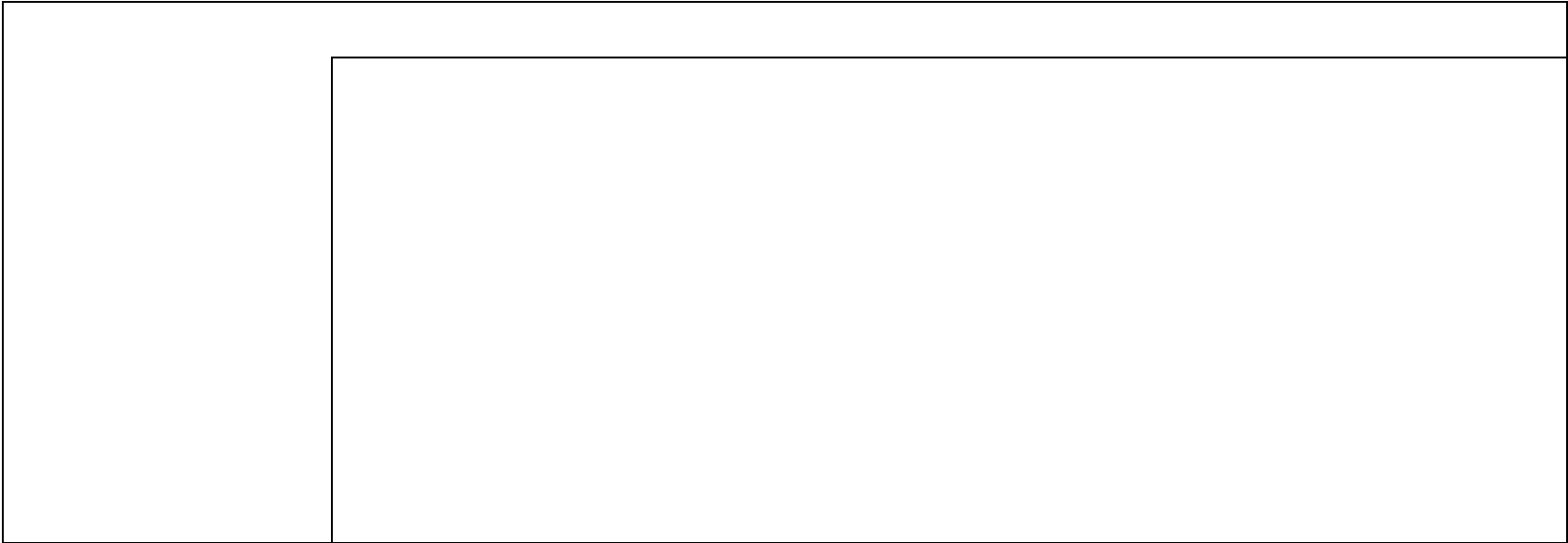
Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	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	1	-17005	0	-1362
FEB	13	-13007	0	-1055
MAR	37	-11066	2	-788
APR	320	-7760	18	-736
MAY	1903	-3651	32	-533
JUN	4484	-1188	131	-238
JUL	7344	-373	283	-41
AUG	5728	-589	166	-39
SEP	3820	-1453	77	-248
OCT	1214	-5325	5	-593
NOV	31	-12639	0	-1090
DEC	2	-17856	0	-1465
ANN	24897	-91912	714	-8188

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

No Solar Radiation
Data Available

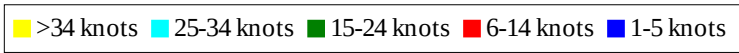
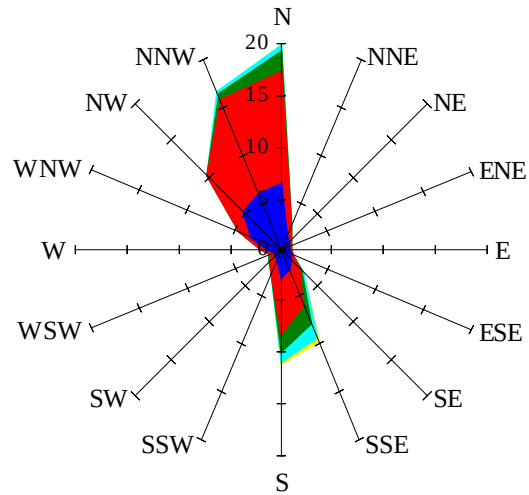


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

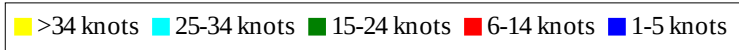
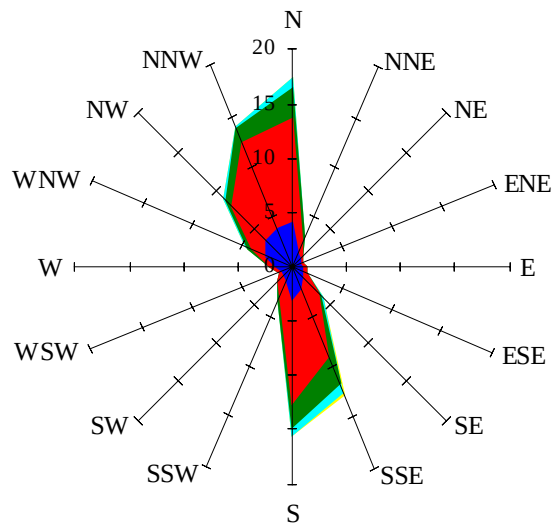
Labels of Percent Frequency on North Axis



Percent Calm = 11.06

Wind Summary - March, April, and May

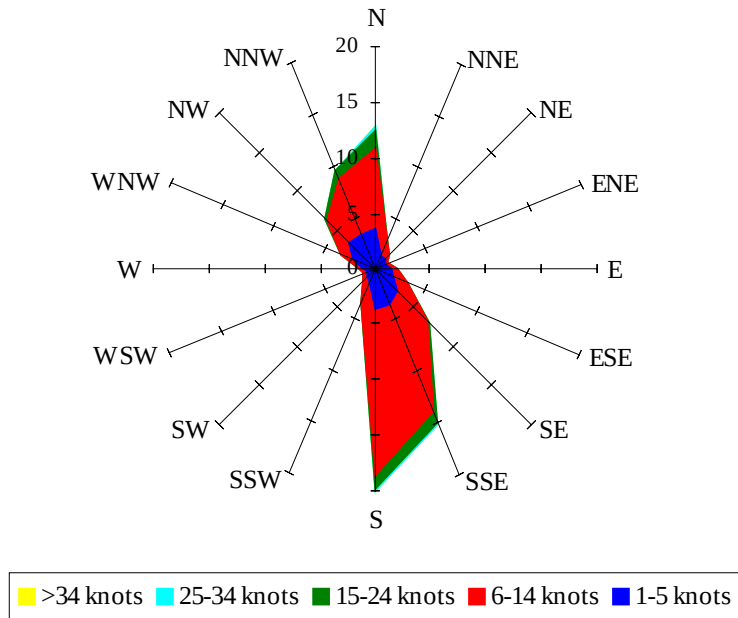
Labels of Percent Frequency on North Axis



Percent Calm = 6.77

Wind Summary - June, July, and August

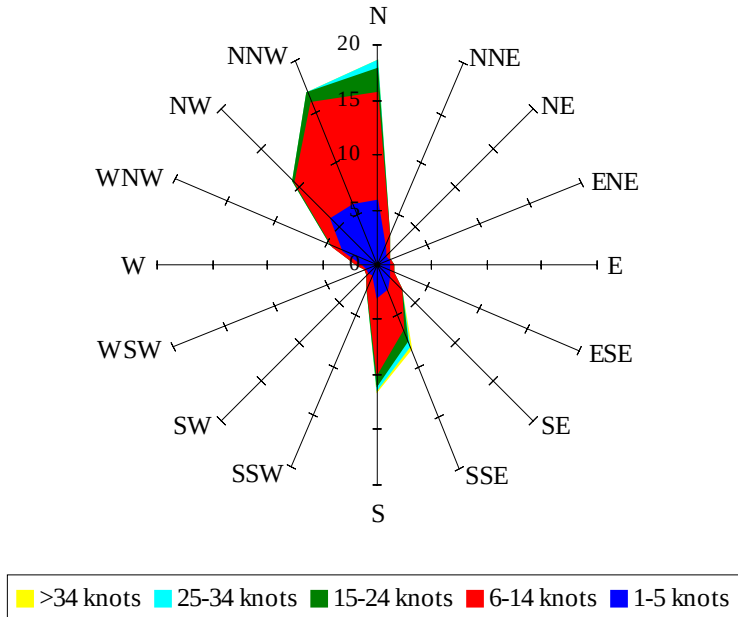
Labels of Percent Frequency on North Axis



Percent Calm = 7.43

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 10.66