

IMPERIAL	CA	WMO No. 747185
Latitude = 32.83 N		Elevation = -56 feet
Longitude = 115.50 W		Average Pressure = 29.91 inches Hg
Period of Record = 1973 to 1996		

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	115	74	62	7.5	E
0.4% Occurrence	111	73	64	7.5	E
1.0% Occurrence	109	73	66	8.0	E
2.0% Occurrence	107	73	67	8.1	E
Mean Daily Range	28	-	-	-	-
97.5% Occurrence	41	36	24	4.5	WSW
99.0% Occurrence	37	33	20	4.3	WSW
99.6% Occurrence	34	30	18	4.2	WSW
Median of Extreme Lows	30	27	15	4.7	WSW
	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	84	98	147	9.0	ESE
0.4% Occurrence	80	96	125	9.1	ESE
1.0% Occurrence	79	96	120	8.9	ESE
2.0% Occurrence	78	96	114	8.7	ESE
	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	157	90	1.04	7.3	ESE
0.4% Occurrence	137	89	0.90	8.8	ESE
1.0% Occurrence	132	88	0.88	8.4	ESE
2.0% Occurrence	123	88	0.82	7.8	ESE
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		1461	3296	893	1930

Other Site Data

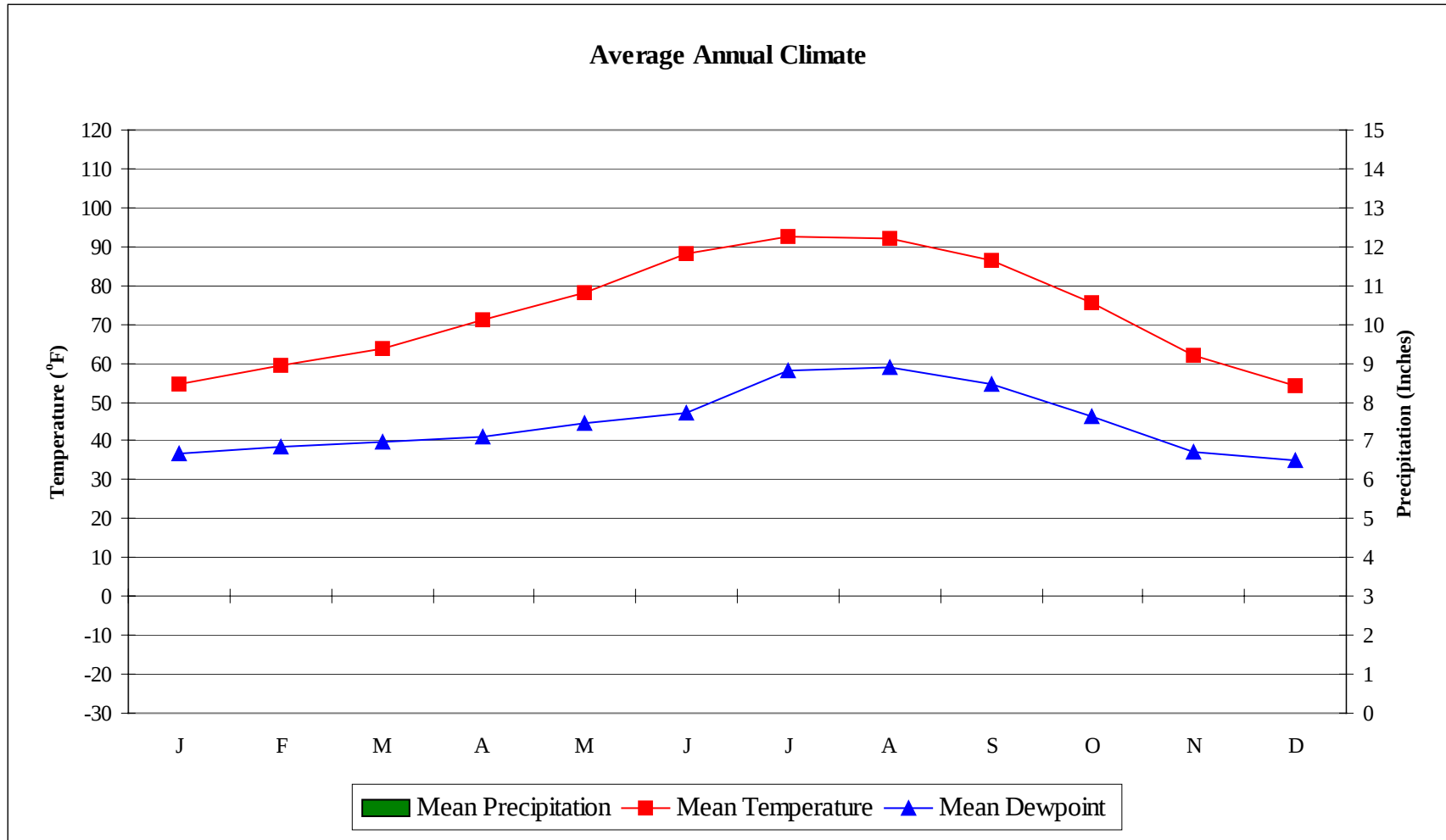
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
10	1.5	85	1.3 + 5.1
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
75.6	N/A	N/A	3

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

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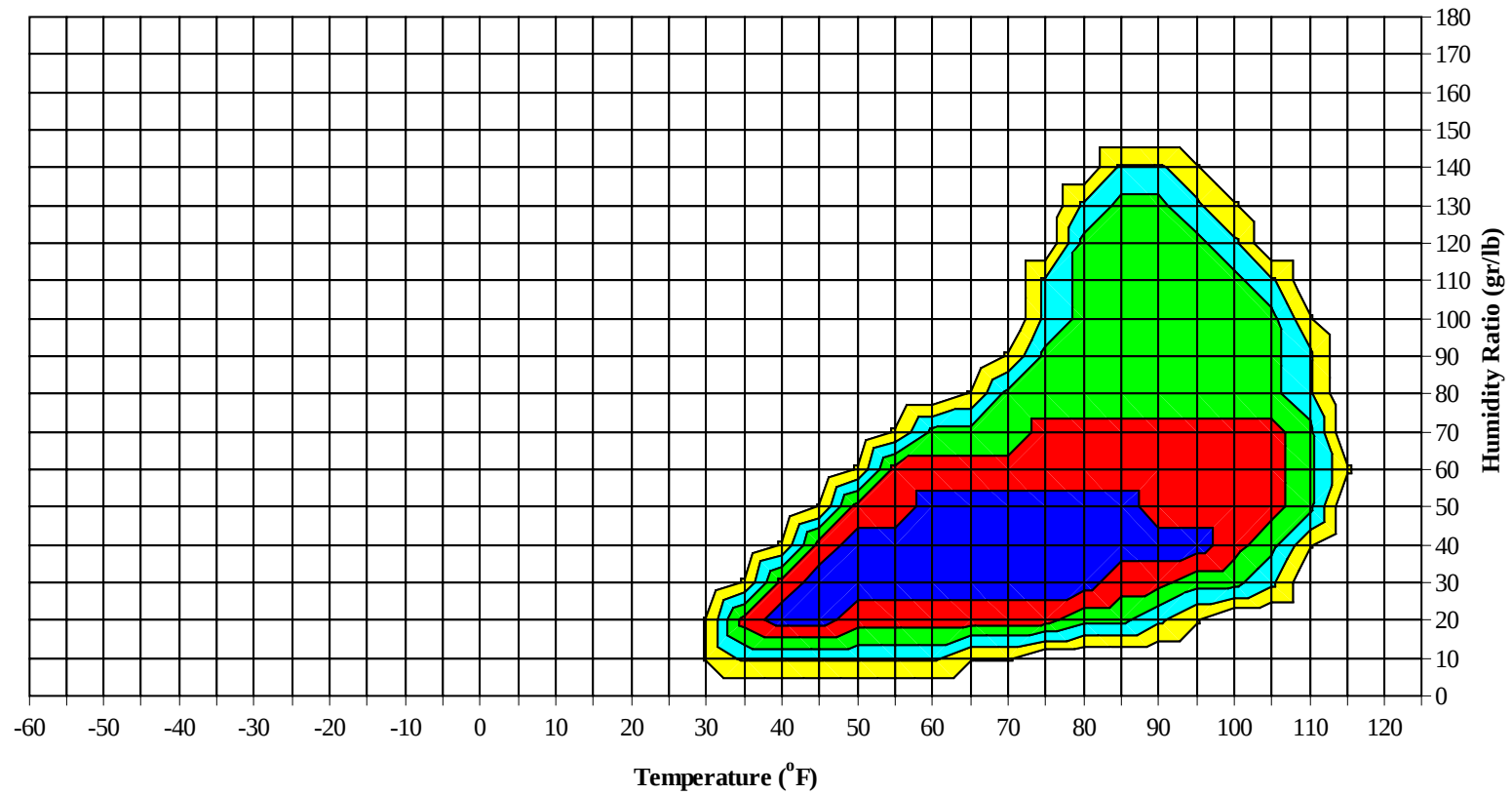
No Precipitation Data Available

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Long Term Psychrometric Summary



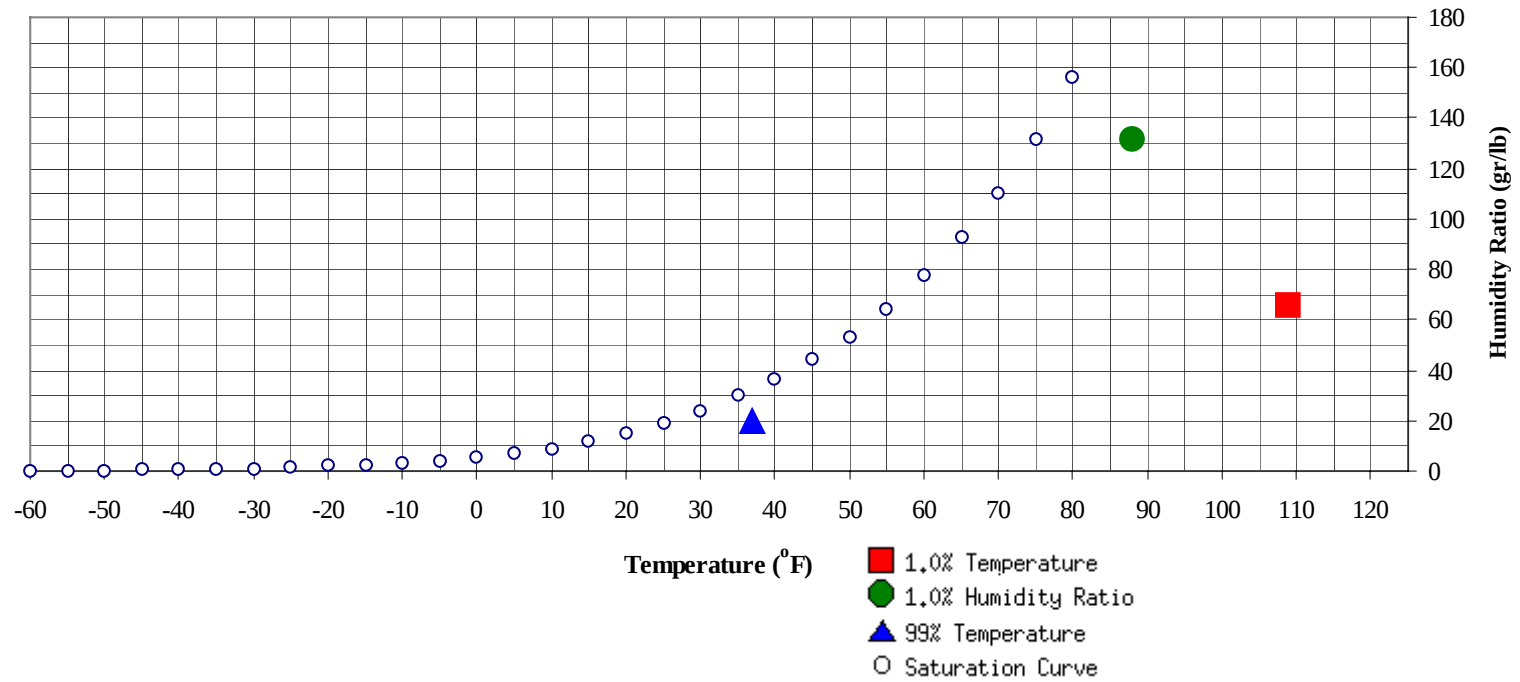
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	37	20.2	12.0		131.6	87.9	78.5	75	41.8

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	109	65.9	73.3	36.6

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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		
120 / 124															
115 / 119															
110 / 114															
105 / 109															
100 / 104															
95 / 99							0	0	0	66.2		1	0	1	65.2
90 / 94							1	0	1	64.8		4	1	5	62.2
85 / 89							4	0	4	61.1		16	3	19	61.4
80 / 84		3		3	56.9		16	3	19	58.7	0	31	9	40	59.1
75 / 79		16	1	17	56.0	0	33	8	41	57.2	0	49	18	67	57.1
70 / 74		37	5	42	54.5	0	46	16	62	55.0	2	59	31	92	55.1
65 / 69	0	55	14	69	52.4	2	52	29	83	53.0	12	46	44	102	53.3
60 / 64	2	59	35	97	50.7	10	40	47	98	51.4	35	30	55	119	51.4
55 / 59	16	43	58	117	48.9	33	20	53	107	49.4	59	9	47	115	49.0
50 / 54	39	25	66	129	46.1	57	9	38	104	46.0	68	3	30	101	45.8
45 / 49	65	8	42	116	42.1	57	3	20	80	42.1	48	0	9	57	42.3
40 / 44	69	3	21	92	38.0	43	1	7	51	37.6	20		2	22	37.9
35 / 39	41	0	5	46	33.2	18		1	19	33.2	2			2	33.6
30 / 34	14		1	15	29.1	3		0	3	28.9	0			0	30.0
25 / 29	2		0	2	25.3	0		0	0	24.4					
20 / 24	0			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 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		
120 / 124												0		0	72.0
115 / 119												1	0	1	72.3
110 / 114							1	0	1	70.8		12	4	16	72.0
105 / 109		0		0	64.0		4	1	5	69.6		37	12	50	70.4
100 / 104		3	1	4	67.5		16	4	21	68.0	0	55	24	79	68.7
95 / 99		12	2	14	66.1	0	40	13	54	66.1	2	55	30	87	67.2
90 / 94		26	7	33	63.8	1	54	24	79	64.4	10	42	38	90	65.7
85 / 89		42	15	57	61.4	3	47	28	78	62.9	23	23	41	86	63.8
80 / 84	1	49	22	73	59.4	12	38	36	85	60.9	44	10	41	95	61.9
75 / 79	7	47	32	85	57.5	24	27	44	95	59.0	55	4	30	88	59.8
70 / 74	20	35	42	97	55.6	50	16	41	107	57.3	60	1	14	75	57.7
65 / 69	38	17	44	99	53.8	63	5	29	97	55.0	33	0	4	37	55.2
60 / 64	59	7	40	106	51.5	55	1	19	75	52.3	12		1	13	52.1
55 / 59	61	2	22	85	48.8	30	0	7	37	49.1	2		0	2	49.9
50 / 54	38	0	10	48	45.5	10		1	11	45.7	0			0	48.0
45 / 49	14	0	2	16	42.0	1		0	1	42.2					
40 / 44	3			3	38.1			0	0						
35 / 39	0			0	34.7										
30 / 34															
25 / 29															
20 / 24															

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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		
120 / 124		0	0	0	75.6										
115 / 119		2	0	2	74.3		1	0	1	76.6		0		0	75.0
110 / 114		16	6	22	73.7		12	4	16	75.2		4	1	5	72.7
105 / 109		54	23	77	73.2		52	18	70	74.4		21	5	26	73.0
100 / 104	0	76	35	111	72.7	0	72	34	107	73.4		53	16	69	72.0
95 / 99	4	59	42	106	72.3	3	59	46	108	72.7	0	60	28	88	70.3
90 / 94	21	32	57	110	71.2	24	35	57	115	72.2	5	51	41	98	69.2
85 / 89	55	8	50	113	69.8	60	12	48	119	70.9	21	28	50	98	67.9
80 / 84	92	2	29	123	68.4	80	4	31	115	68.3	59	16	48	123	66.7
75 / 79	55	0	5	60	63.8	51	1	9	62	63.7	60	6	33	99	63.1
70 / 74	17		1	18	59.2	25	0	1	26	58.9	56	1	13	71	59.8
65 / 69	3			3	54.6	5	0		5	54.3	27	0	4	31	56.0
60 / 64	0			0	51.2	0			0	52.3	10	0	1	11	52.0
55 / 59											2	0	0	2	48.4
50 / 54											0			0	44.0
45 / 49															
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															

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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		
120 / 124															
115 / 119															
110 / 114		0		0	73.0										
105 / 109		1		1	70.3										
100 / 104		9	1	10	68.7										
95 / 99	0	25	4	29	67.0		0		0	65.0					
90 / 94	0	47	10	57	65.2		2		2	63.0					
85 / 89	1	52	20	73	63.7		16	0	16	60.9					
80 / 84	3	49	34	87	62.2	0	34	3	37	59.3		2		2	57.6
75 / 79	16	40	51	108	60.3	0	49	11	60	57.0		17	0	17	56.3
70 / 74	45	18	56	119	58.8	1	54	23	78	55.0	0	43	3	46	54.0
65 / 69	64	5	38	108	56.1	9	42	36	87	52.8	0	57	12	69	52.1
60 / 64	61	1	22	83	52.6	26	28	56	109	50.8	2	54	36	92	50.3
55 / 59	34	0	9	43	48.4	46	11	50	107	48.0	13	39	53	106	48.4
50 / 54	17		2	19	44.3	63	5	36	104	44.7	33	25	64	122	45.5
45 / 49	5		1	6	40.3	49	0	18	67	40.5	59	9	47	115	41.4
40 / 44	1			1	35.4	33	0	6	39	36.3	81	2	25	108	37.2
35 / 39						12		1	13	32.2	44	0	7	51	32.8
30 / 34						1		0	1	27.7	12		1	13	28.9
25 / 29								0	0		3		0	3	24.3
20 / 24											0			0	19.9

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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		
120 / 124		0	0	0	74.6
115 / 119		4	1	5	74.6
110 / 114		44	14	58	73.6
105 / 109		169	56	225	72.9
100 / 104	0	285	114	399	71.6
95 / 99	10	310	163	482	69.9
90 / 94	63	292	232	587	68.2
85 / 89	163	246	250	659	66.1
80 / 84	295	251	253	799	63.7
75 / 79	272	289	242	803	59.7
70 / 74	280	311	247	838	56.6
65 / 69	259	280	257	796	53.8
60 / 64	271	221	316	808	51.3
55 / 59	293	126	304	722	48.7
50 / 54	320	66	252	638	45.6
45 / 49	293	21	140	454	41.7
40 / 44	247	5	64	317	37.5
35 / 39	116	1	14	132	33.0
30 / 34	32		3	35	28.9
25 / 29	5		0	5	24.7
20 / 24	0			0	19.9

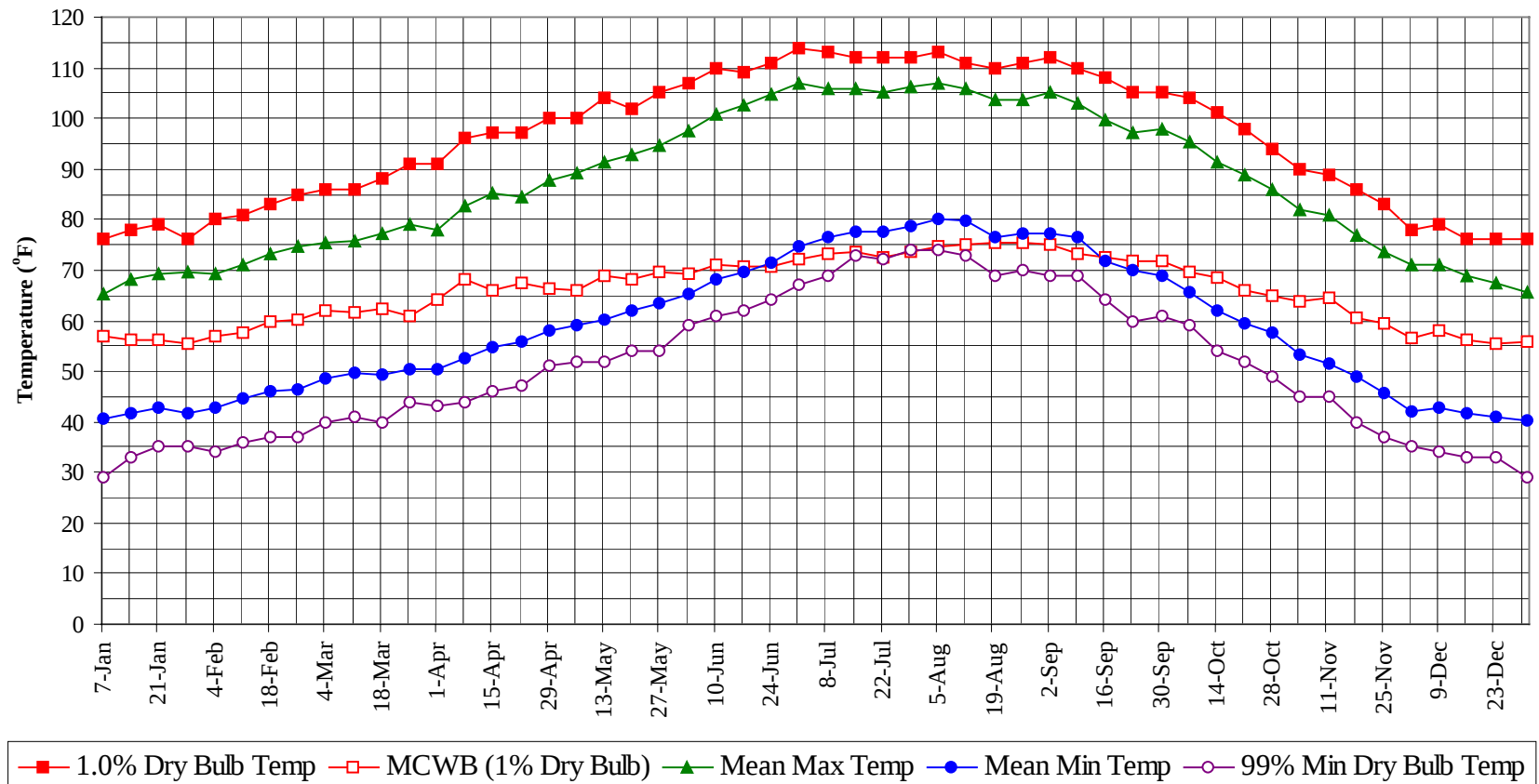
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

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Annual Summary of Temperatures

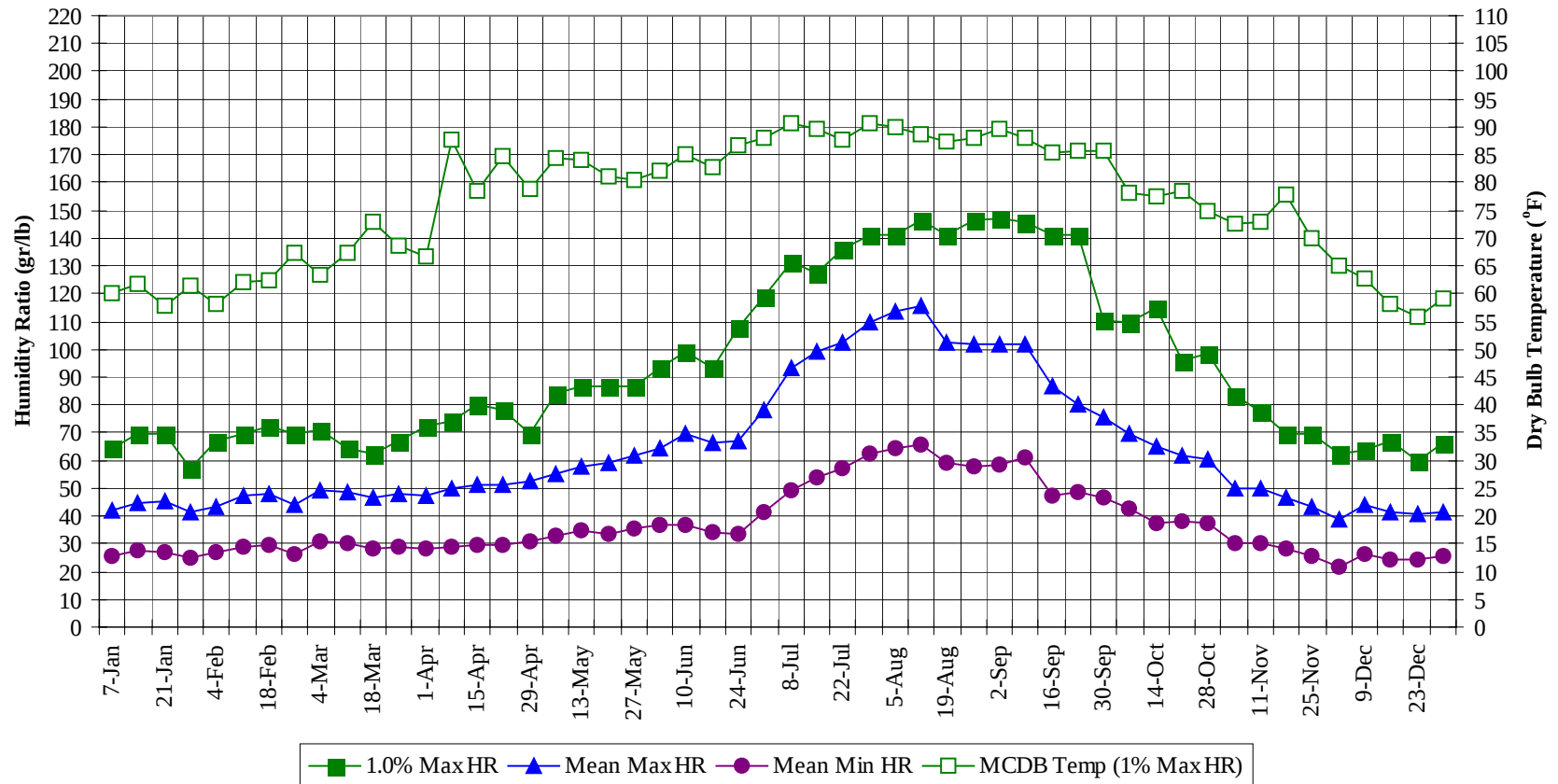


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Long Term Humidity and Dry Bulb Temperature Summary



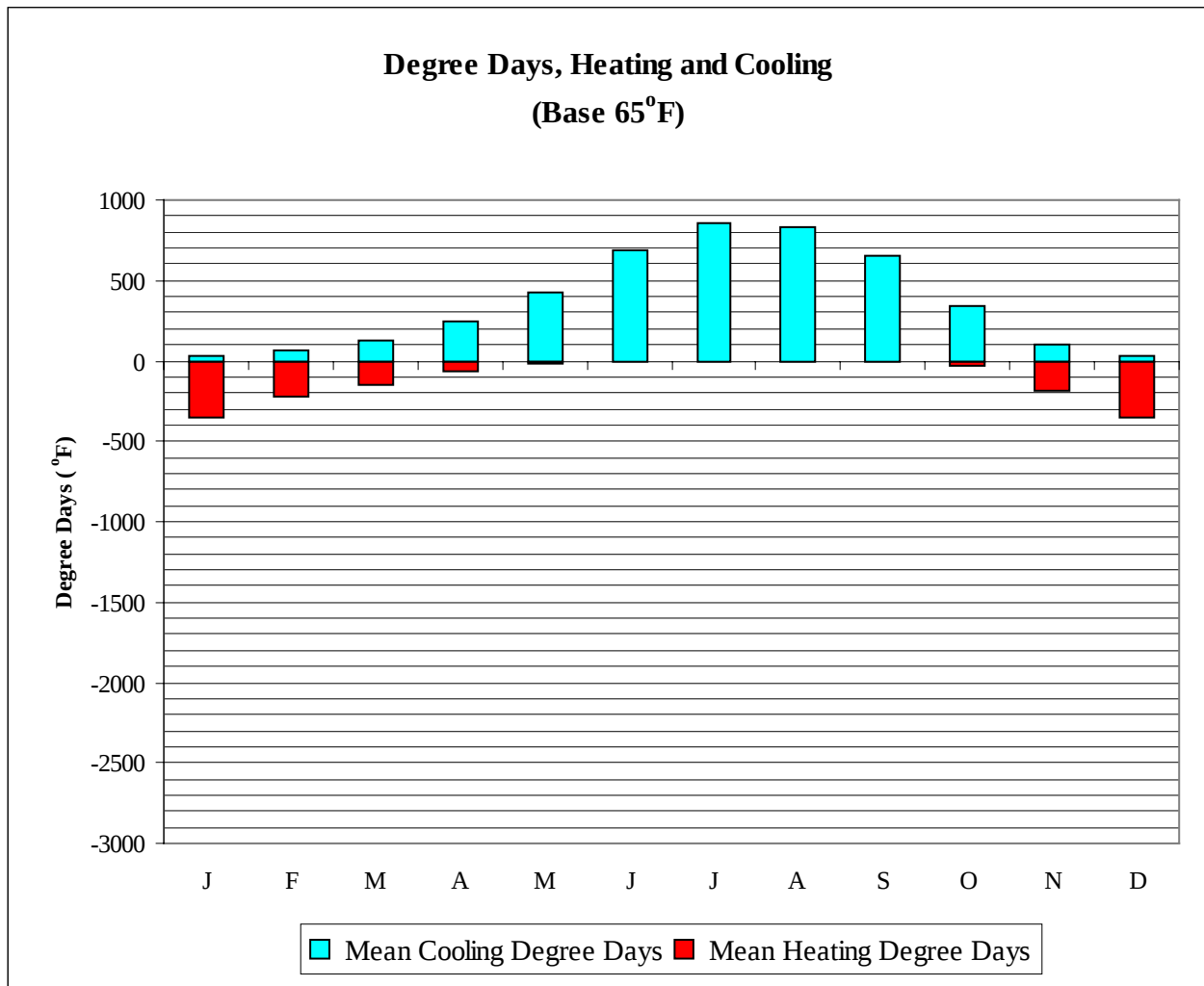
IMPERIAL**CA****WMO No. 747185****Long Term Dry Bulb Temperature and Humidity Summary**

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	76.0	57.1	65.1	40.8	29.0	64.4	60.2	42.3	25.7
14-Jan	78.0	56.1	68.3	41.7	33.0	69.3	61.7	45.0	27.5
21-Jan	79.0	56.3	69.3	42.7	35.0	69.3	57.8	45.1	27.2
28-Jan	76.0	55.5	69.5	41.6	35.0	57.4	61.4	41.5	24.7
4-Feb	80.0	56.8	69.2	42.7	34.0	67.2	58.0	43.3	27.1
11-Feb	81.0	57.6	71.1	44.7	36.0	69.3	61.9	47.0	29.2
18-Feb	83.0	59.9	73.1	46.1	37.0	72.1	62.4	47.8	29.5
25-Feb	85.0	60.3	74.7	46.4	37.0	69.3	67.4	44.2	26.3
4-Mar	86.0	62.1	75.5	48.7	40.0	70.7	63.3	49.2	30.7
11-Mar	86.0	61.5	75.9	49.6	41.0	64.4	67.2	48.5	30.0
18-Mar	88.0	62.4	77.2	49.4	40.0	62.3	72.9	46.7	28.4
25-Mar	91.0	60.8	79.1	50.5	44.0	67.2	68.6	47.7	28.8
1-Apr	91.0	64.0	77.9	50.5	43.0	72.1	66.6	47.2	28.1
8-Apr	96.0	68.0	82.7	52.6	44.0	74.2	87.6	49.7	28.8
15-Apr	97.0	66.0	85.1	54.8	46.0	79.8	78.6	51.4	29.8
22-Apr	97.0	67.4	84.6	55.8	47.0	78.4	84.8	51.1	29.5
29-Apr	100.0	66.4	87.7	57.9	51.0	69.3	78.7	52.8	30.8
6-May	100.0	65.9	89.1	59.0	52.0	84.0	84.3	55.3	33.0
13-May	104.0	68.9	91.2	60.3	52.0	86.8	84.1	57.8	34.5
20-May	102.0	68.2	92.7	61.9	54.0	86.8	81.2	59.2	33.7
27-May	105.0	69.8	94.5	63.6	54.0	86.8	80.5	61.5	35.3
3-Jun	107.0	69.4	97.4	65.3	59.0	93.1	82.1	64.6	36.5
10-Jun	110.0	71.2	100.6	68.3	61.0	99.4	85.1	69.6	37.0
17-Jun	109.0	70.7	102.7	69.6	62.0	93.1	82.8	66.5	34.1
24-Jun	111.0	70.7	104.6	71.4	64.0	107.8	86.6	67.0	33.4
1-Jul	114.0	72.2	106.8	74.9	67.0	119.0	87.9	77.9	41.3
8-Jul	113.0	73.3	106.0	76.4	69.0	131.6	90.6	93.1	49.0
15-Jul	112.0	73.6	106.0	77.7	73.0	127.4	89.6	99.2	53.9
22-Jul	112.0	72.5	105.2	77.8	72.0	135.8	87.8	102.5	57.2
29-Jul	112.0	73.8	106.3	78.7	74.0	141.4	90.5	109.6	62.4
5-Aug	113.0	74.9	106.9	80.0	74.0	141.4	90.1	113.9	64.1
12-Aug	111.0	74.9	105.8	79.9	73.0	146.3	88.8	115.6	65.7
19-Aug	110.0	75.6	103.6	76.7	69.0	141.4	87.4	102.5	59.4
26-Aug	111.0	75.3	103.7	77.1	70.0	146.3	88.0	101.6	57.9
2-Sep	112.0	74.9	105.2	77.2	69.0	147.0	89.7	101.9	58.2
9-Sep	110.0	73.3	103.0	76.6	69.0	145.6	87.9	102.0	60.9
16-Sep	108.0	72.6	99.7	71.8	64.0	141.4	85.5	86.6	47.6
23-Sep	105.0	71.8	97.2	69.9	60.0	141.4	85.8	79.9	48.9
30-Sep	105.0	71.7	97.8	69.0	61.0	110.6	85.8	75.3	46.6
7-Oct	104.0	69.7	95.3	65.5	59.0	109.9	78.1	69.4	42.4
14-Oct	101.0	68.6	91.3	62.1	54.0	114.8	77.4	64.9	37.5
21-Oct	98.0	65.9	89.0	59.6	52.0	95.9	78.6	61.9	37.9
28-Oct	94.0	64.9	85.8	57.7	49.0	98.7	74.7	60.3	37.5
4-Nov	90.0	63.8	81.9	53.2	45.0	83.3	72.4	49.7	30.3
11-Nov	89.0	64.4	81.0	51.6	45.0	77.7	73.0	50.1	29.9
18-Nov	86.0	60.5	77.0	48.8	40.0	69.3	77.9	46.7	28.4
25-Nov	83.0	59.4	73.5	45.6	37.0	69.3	70.1	43.2	25.7
2-Dec	78.0	56.4	70.9	42.0	35.0	62.3	64.9	39.0	21.9
9-Dec	79.0	58.2	71.0	42.7	34.0	63.7	62.7	43.9	26.0
16-Dec	76.0	56.1	69.0	41.6	33.0	67.2	58.3	41.1	24.3
23-Dec	76.0	55.6	67.5	40.9	33.0	59.5	55.9	40.8	24.5
31-Dec	76.0	55.7	65.7	40.3	29.0	66.5	59.0	41.2	25.3

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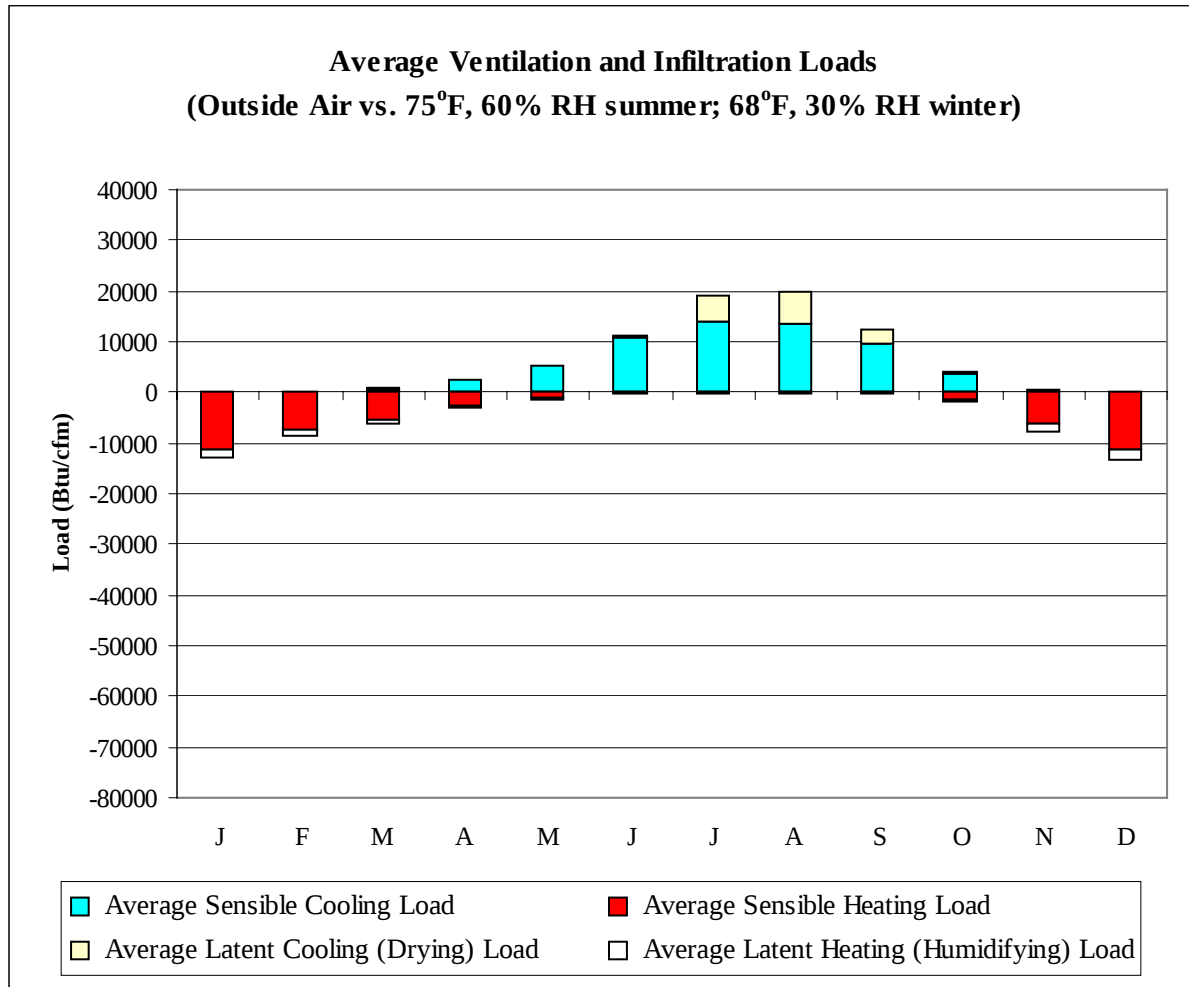


	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	26	349
FEB	62	221
MAR	121	151
APR	247	69
MAY	430	23
JUN	687	2
JUL	853	0
AUG	837	0
SEP	648	2
OCT	337	32
NOV	101	186
DEC	27	359
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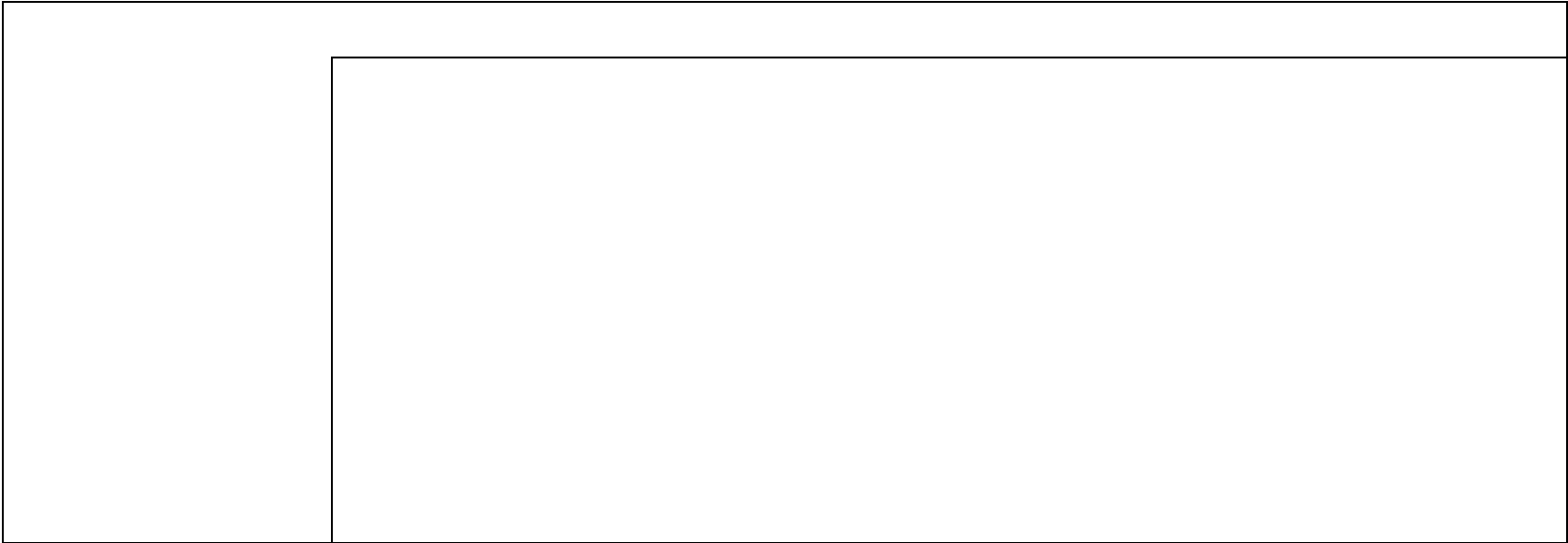
WMO No. 747185



	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	41	-11157	2	-1581
FEB	266	-7339	4	-1066
MAR	723	-5342	3	-783
APR	2400	-2660	13	-524
MAY	5350	-1045	108	-234
JUN	10616	-118	513	-210
JUL	14143	-3	4741	-63
AUG	13744	-4	6276	-79
SEP	9528	-103	3019	-68
OCT	3620	-1351	393	-315
NOV	591	-6338	15	-1364
DEC	37	-11399	1	-1927
ANN	61059	-46859	15088	-8214

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

No Solar Radiation
Data Available

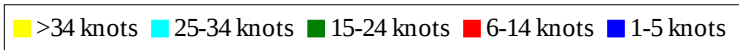
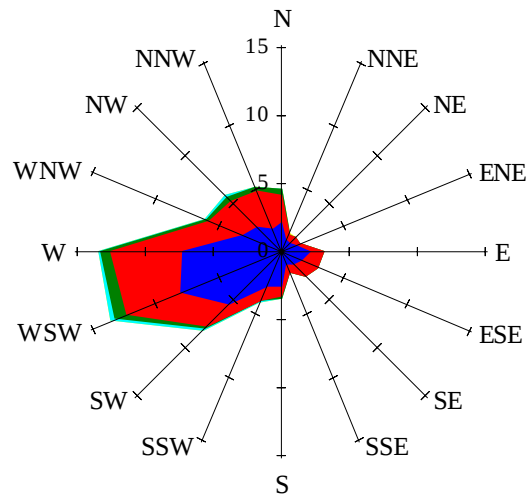


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

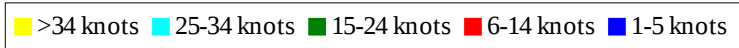
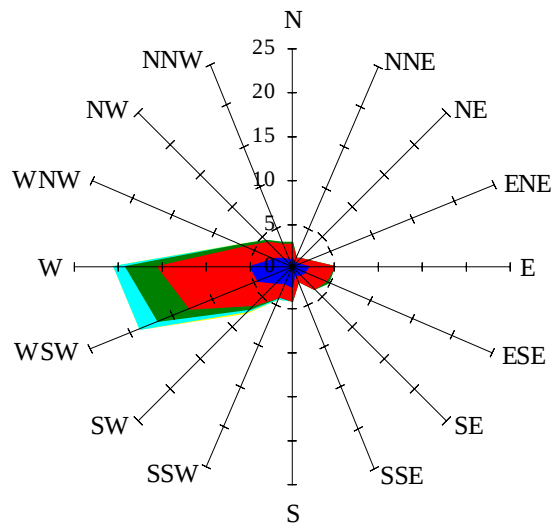
Labels of Percent Frequency on North Axis



Percent Calm = 22.74

Wind Summary - March, April, and May

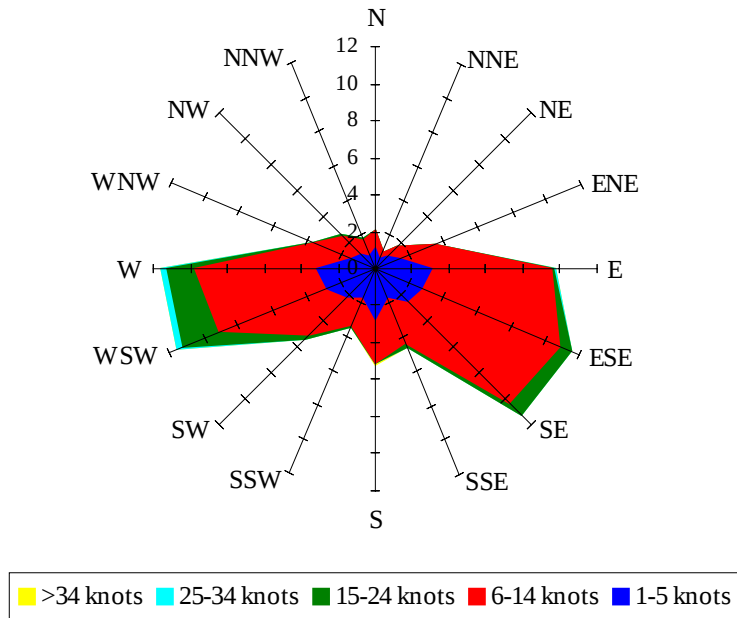
Labels of Percent Frequency on North Axis



Percent Calm = 10.29

Wind Summary - June, July, and August

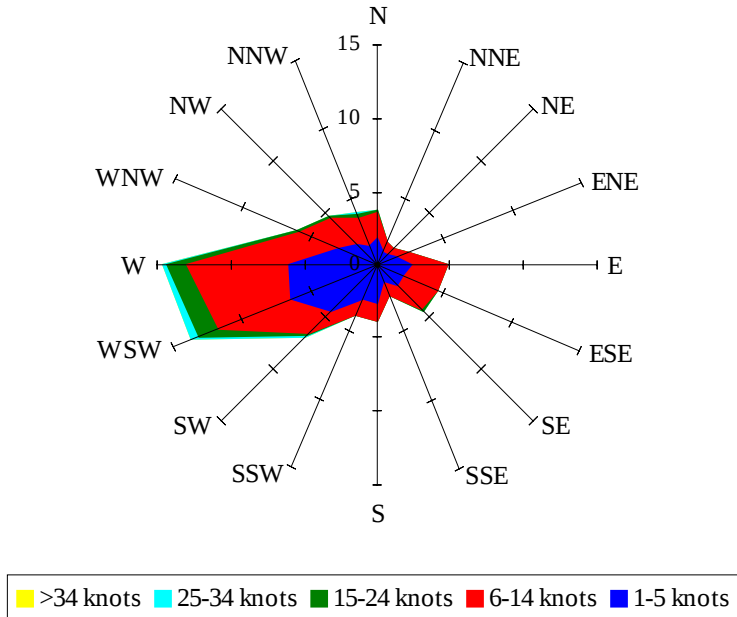
Labels of Percent Frequency on North Axis



Percent Calm = 9.83

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 17.74