

ANDERSEN AFB	MY	
Latitude = 13.58 N		WMO No. 912180
Longitude = 144.93 E		Elevation = 607 feet
Period of Record = 1967 to 1996		Average Pressure = 29.19 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	89	79	139	9.3	E
0.4% Occurrence	88	79	138	9.7	E
1.0% Occurrence	87	78	138	10.0	E
2.0% Occurrence	86	78	137	10.0	E
Mean Daily Range	7	-	-	-	-
97.5% Occurrence	75	72	118	10.0	ENE
99.0% Occurrence	74	72	117	10.0	ENE
99.6% Occurrence	73	71	114	10.1	ENE
Median of Extreme Lows	71	70	109	9.8	ENE
	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	82	86	158	7.5	E
0.4% Occurrence	81	85	152	8.4	E
1.0% Occurrence	80	84	147	8.9	E
2.0% Occurrence	79	83	143	9.1	E
	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	169	85	1.07	7.9	E
0.4% Occurrence	155	83	1.00	7.3	E
1.0% Occurrence	154	83	1.00	6.9	E
2.0% Occurrence	150	83	0.97	7.8	E
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	4686	7539	8735

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	N/A	N/A	20.8 + 3.9
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 (#)
82.5	N/A	N/A	0

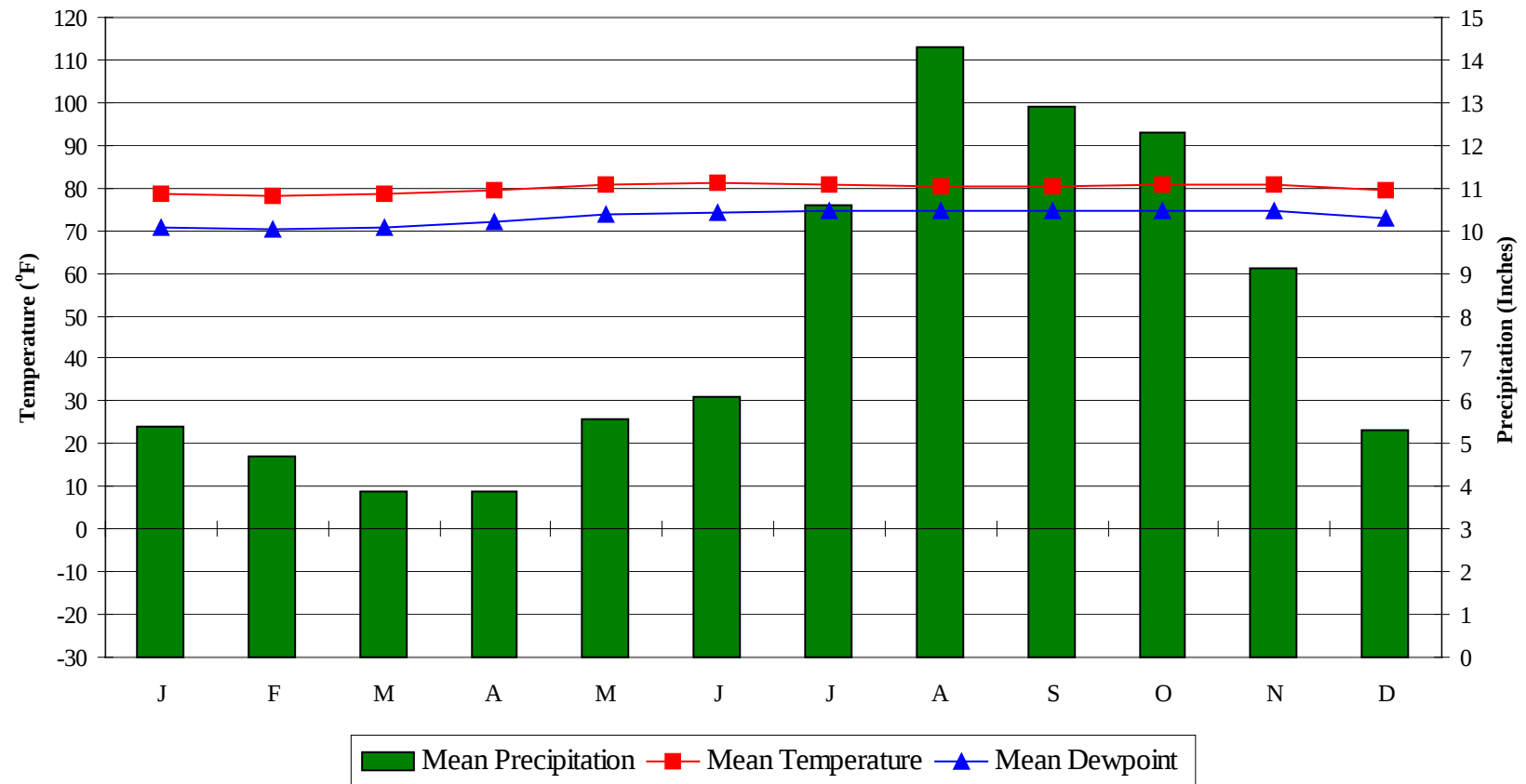
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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Average Annual Climate

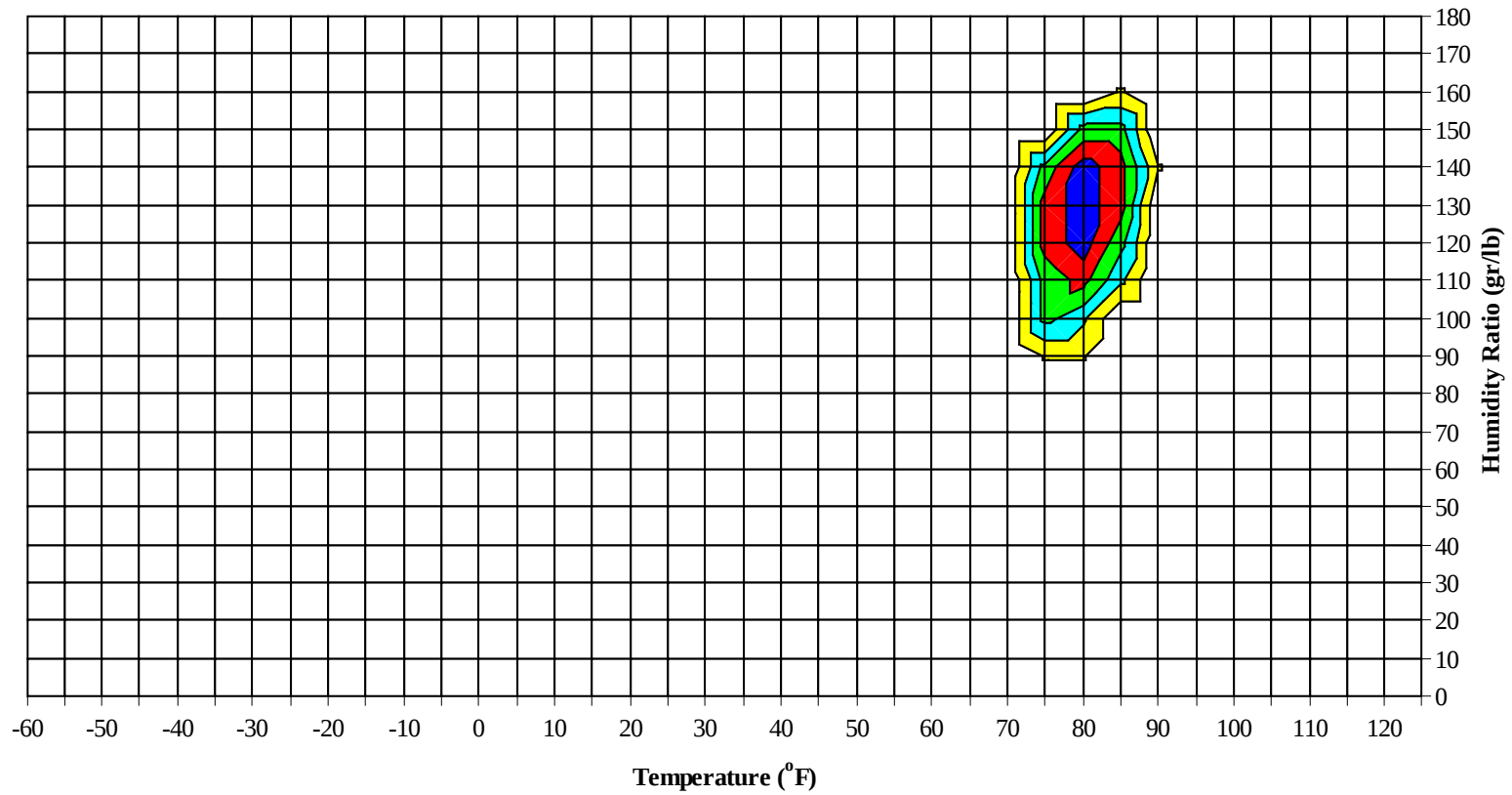


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Long Term Psychrometric Summary



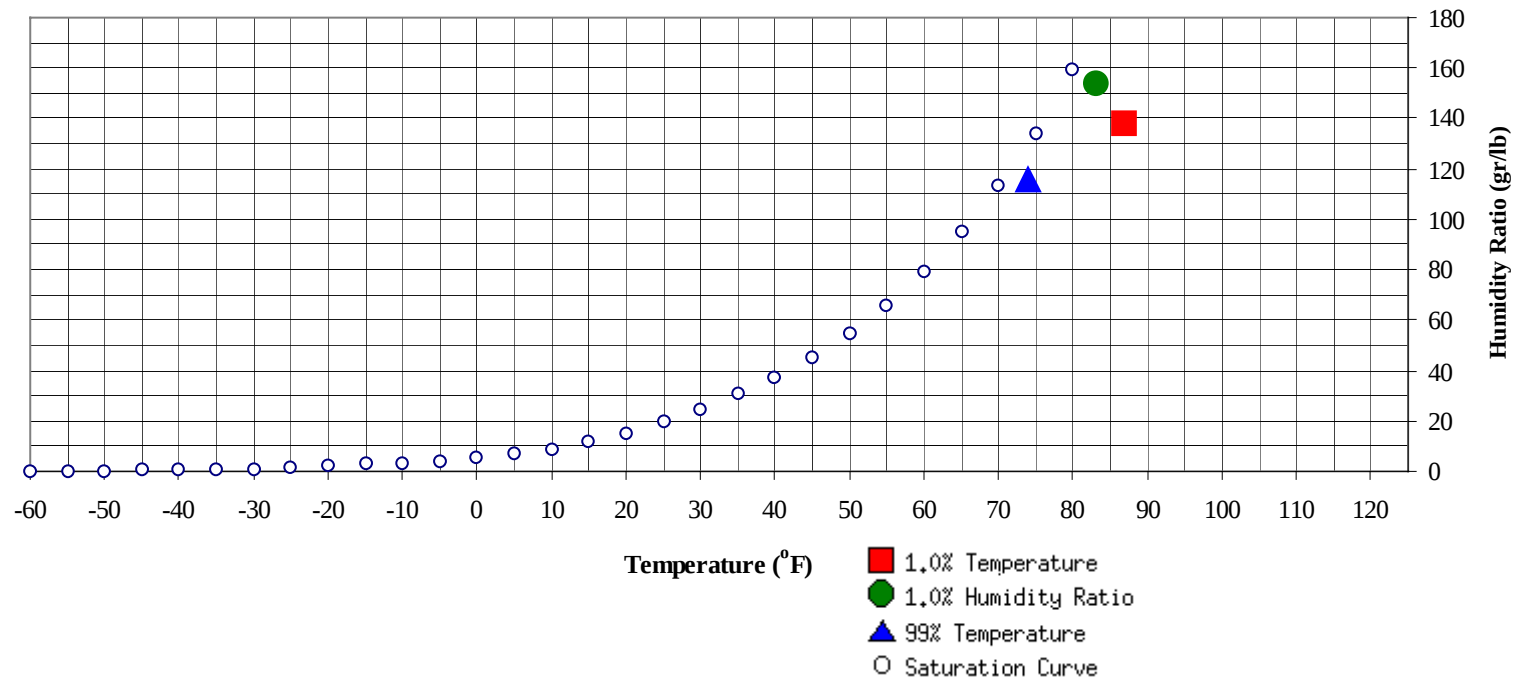
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	74	115.4	35.8		154	83.2	80.1	79	44.1

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	87	138.1	78.7	42.6

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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		
90 / 94															
85 / 89		7	0	7	76.6		5	0	6	76.3		10	0	10	76.8
80 / 84	20	175	50	245	74.5	6	150	33	190	74.1	14	190	46	249	74.4
75 / 79	211	63	191	465	72.6	197	64	182	443	72.2	222	46	199	467	72.6
70 / 74	17	3	6	26	70.7	21	4	9	34	70.5	13	2	3	18	71.1
65 / 69								0	0	68.5					

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 = 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		
90 / 94	0	0		0	79.0	0	2	0	3	79.8		0	0	0	80.1
85 / 89	1	31	2	33	77.3	3	69	8	80	77.7	1	88	6	95	78.0
80 / 84	30	180	78	289	75.3	87	165	150	402	76.1	124	134	175	433	76.4
75 / 79	205	28	158	391	73.4	155	12	89	257	74.4	114	16	58	188	74.9
70 / 74	4	1	2	7	71.5	2		1	2	72.6	2	1	1	3	72.4
65 / 69															

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 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		
90 / 94		0		0	78.5		1		1	80.0		1		1	79.8
85 / 89	1	67	6	73	78.1	0	67	4	71	78.5	1	67	6	74	78.5
80 / 84	100	155	160	415	76.7	87	142	138	367	76.9	81	140	135	357	76.8
75 / 79	145	25	80	250	75.0	154	36	104	295	74.8	151	30	96	277	74.9
70 / 74	3	1	2	5	72.2	6	2	3	11	71.8	7	2	3	12	71.8
65 / 69															

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 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		
90 / 94		1		1	81.9		0		0	82.0		0	0	0	78.5
85 / 89	3	65	5	73	78.9	0	42	1	43	78.3	0	17	1	18	77.7
80 / 84	97	157	151	405	76.9	102	176	148	426	76.7	49	194	89	332	75.8
75 / 79	143	25	90	259	75.1	136	22	90	248	75.1	194	36	157	388	74.0
70 / 74	4	1	1	6	71.8	1	1	1	3	72.5	4	1	1	6	71.8
65 / 69															

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 Totals

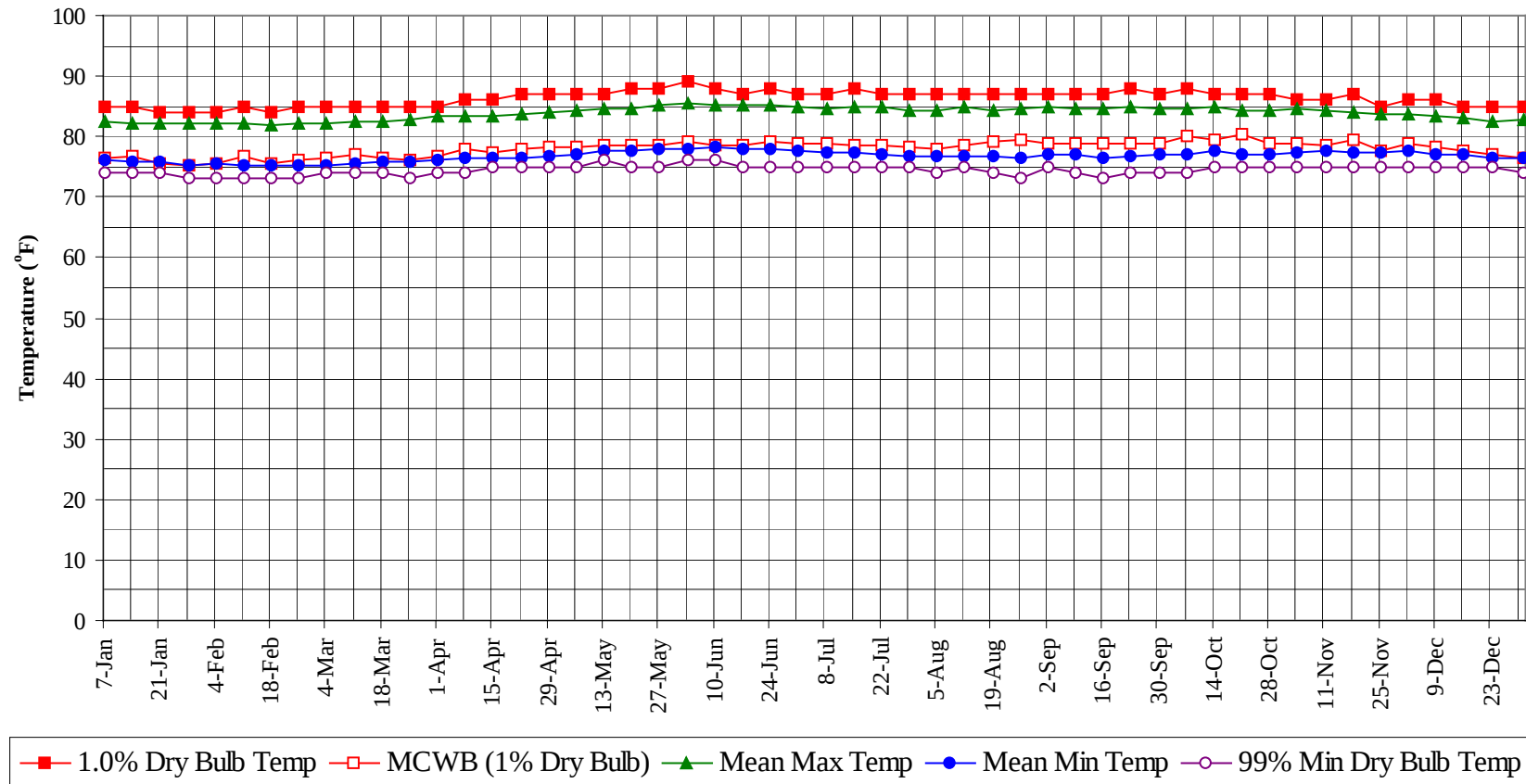
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

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Annual Summary of Temperatures

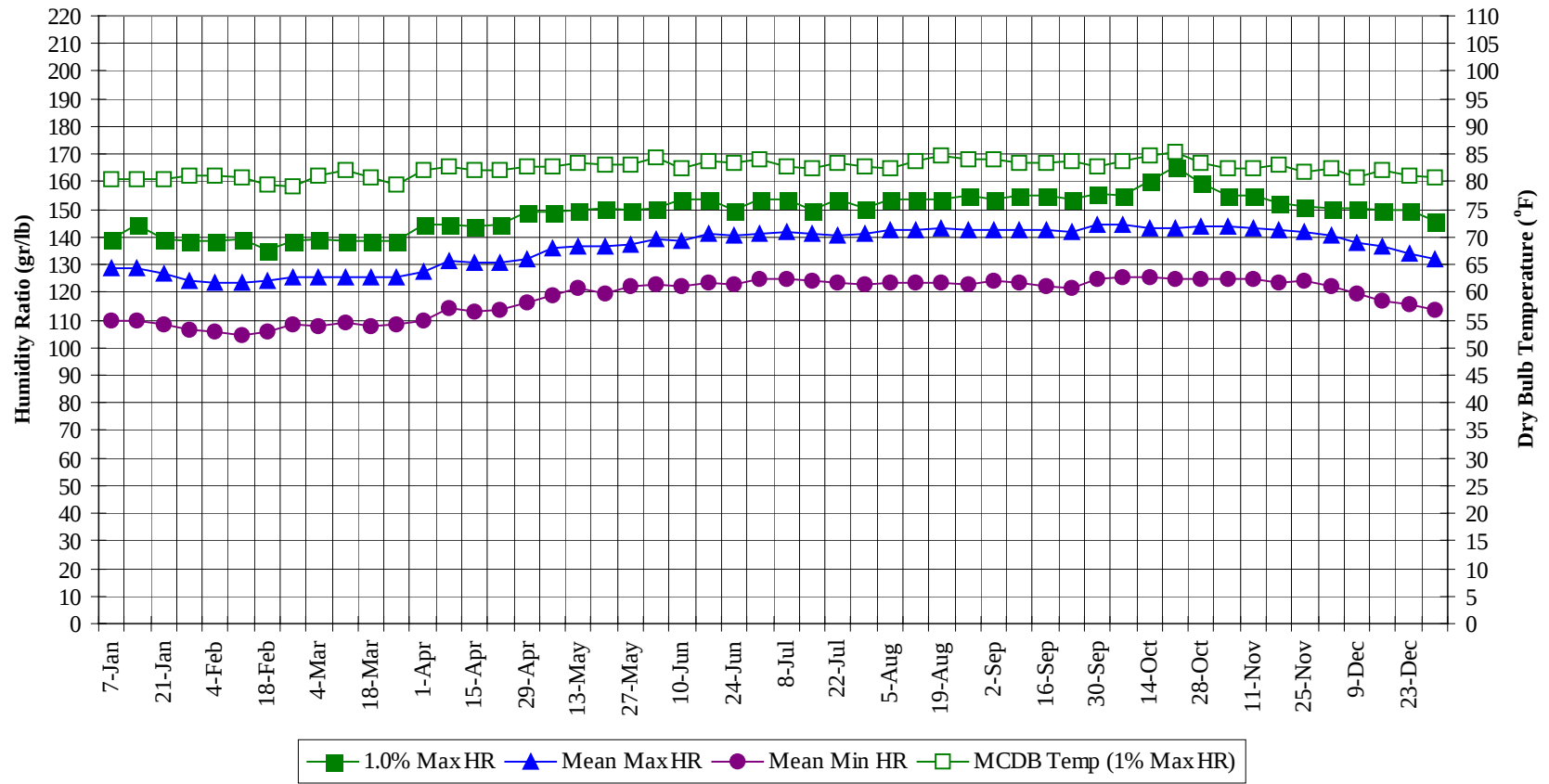


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WMO No. 912180

Long Term Humidity and Dry Bulb Temperature Summary



ANDERSEN AFB**MY****WMO No. 912180****Long Term Dry Bulb Temperature and Humidity Summary**

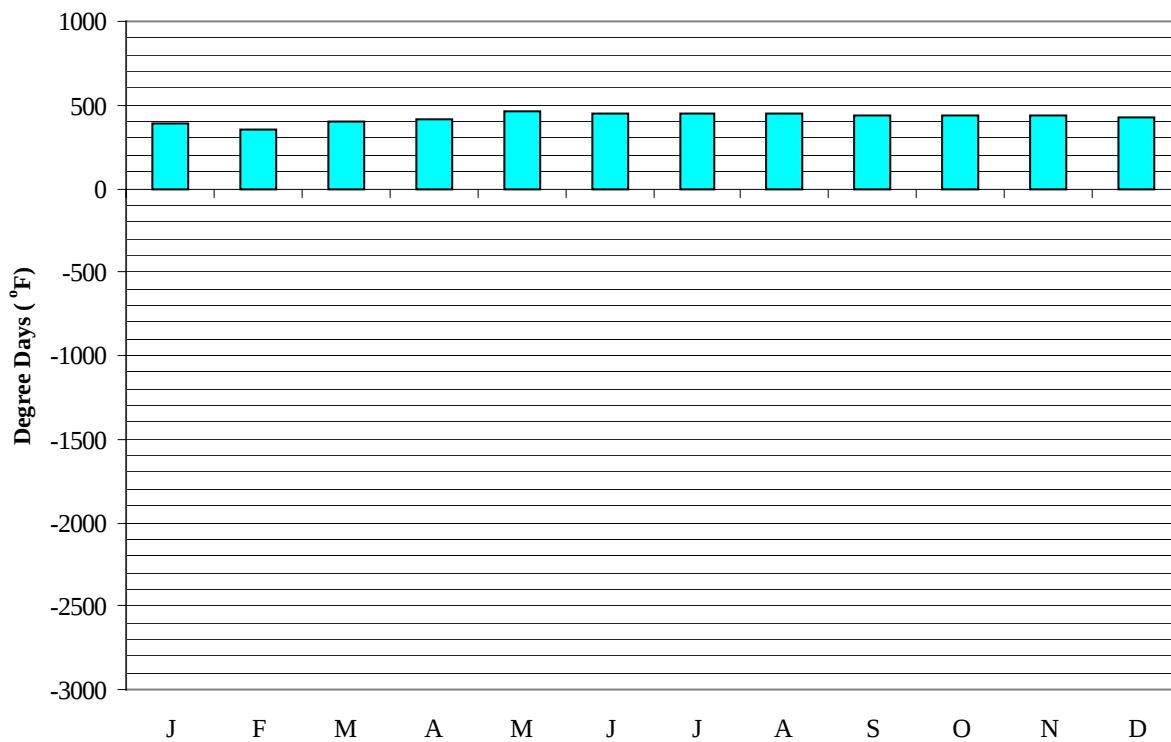
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	85.0	76.4	82.5	76.1	74.0	139.3	80.3	128.6	109.7
14-Jan	85.0	76.6	82.2	75.8	74.0	144.2	80.6	128.5	109.5
21-Jan	84.0	75.5	82.2	75.8	74.0	139.3	80.6	126.8	108.5
28-Jan	84.0	75.3	82.1	75.4	73.0	138.6	81.1	124.2	106.6
4-Feb	84.0	75.4	82.1	75.4	73.0	138.6	81.0	123.6	106.0
11-Feb	85.0	76.6	82.1	75.3	73.0	139.3	80.8	123.5	104.4
18-Feb	84.0	75.5	81.9	75.2	73.0	135.1	79.4	124.1	105.7
25-Feb	85.0	76.3	82.1	75.3	73.0	138.6	79.1	125.7	108.5
4-Mar	85.0	76.4	82.3	75.3	74.0	139.3	81.0	125.3	107.4
11-Mar	85.0	77.1	82.3	75.4	74.0	138.6	82.0	125.4	108.7
18-Mar	85.0	76.4	82.5	75.7	74.0	138.6	80.8	125.3	108.0
25-Mar	85.0	76.0	82.8	75.9	73.0	138.6	79.4	125.2	108.1
1-Apr	85.0	76.7	83.4	76.1	74.0	144.2	82.0	127.6	109.8
8-Apr	86.0	77.8	83.4	76.4	74.0	144.2	82.8	131.2	114.3
15-Apr	86.0	77.3	83.5	76.4	75.0	143.5	82.2	130.7	113.1
22-Apr	87.0	77.8	83.8	76.6	75.0	144.2	82.1	130.9	113.6
29-Apr	87.0	78.4	83.9	76.9	75.0	149.1	82.8	132.3	116.0
6-May	87.0	78.1	84.3	77.2	75.0	149.1	82.7	135.7	119.1
13-May	87.0	78.5	84.5	77.6	76.0	149.8	83.3	136.8	121.2
20-May	88.0	78.5	84.7	77.5	75.0	150.5	83.1	136.4	119.8
27-May	88.0	78.4	85.2	78.0	75.0	149.8	83.0	137.4	122.0
3-Jun	89.0	79.3	85.4	78.1	76.0	150.5	84.4	139.5	122.8
10-Jun	88.0	78.5	85.2	78.2	76.0	154.0	82.4	138.9	122.3
17-Jun	87.0	78.7	85.1	77.9	75.0	154.0	83.7	141.1	123.6
24-Jun	88.0	79.2	85.3	77.9	75.0	149.8	83.6	140.5	123.1
1-Jul	87.0	78.8	84.9	77.6	75.0	154.0	83.9	141.4	124.7
8-Jul	87.0	78.8	84.7	77.4	75.0	154.0	82.8	141.7	124.8
15-Jul	88.0	78.6	84.9	77.4	75.0	149.8	82.5	141.2	124.3
22-Jul	87.0	78.6	84.8	77.0	75.0	154.0	83.3	140.7	123.5
29-Jul	87.0	78.2	84.4	76.7	75.0	150.5	82.8	141.0	123.0
5-Aug	87.0	77.8	84.4	76.8	74.0	154.0	82.6	142.4	123.6
12-Aug	87.0	78.7	84.8	76.8	75.0	154.0	83.8	142.2	123.4
19-Aug	87.0	79.2	84.4	76.6	74.0	154.0	84.7	143.2	123.4
26-Aug	87.0	79.6	84.5	76.4	73.0	154.7	83.9	142.7	123.0
2-Sep	87.0	79.0	84.9	77.1	75.0	154.0	84.0	142.7	124.4
9-Sep	87.0	78.9	84.7	76.9	74.0	154.7	83.5	142.2	123.4
16-Sep	87.0	78.9	84.5	76.4	73.0	154.7	83.5	142.8	122.5
23-Sep	88.0	78.8	85.0	76.9	74.0	154.0	83.8	141.9	121.8
30-Sep	87.0	78.9	84.7	76.9	74.0	155.4	82.6	144.2	124.7
7-Oct	88.0	80.0	84.7	77.2	74.0	154.7	83.8	144.2	125.4
14-Oct	87.0	79.5	85.0	77.6	75.0	160.3	84.6	143.2	125.3
21-Oct	87.0	80.5	84.4	77.0	75.0	165.2	85.5	143.4	124.9
28-Oct	87.0	78.9	84.4	77.1	75.0	159.6	83.3	143.9	124.7
4-Nov	86.0	78.7	84.6	77.5	75.0	154.7	82.5	143.9	124.9
11-Nov	86.0	78.4	84.4	77.7	75.0	154.7	82.5	143.3	124.6
18-Nov	87.0	79.4	84.1	77.5	75.0	152.6	83.1	142.6	123.4
25-Nov	85.0	77.8	83.7	77.4	75.0	151.2	81.8	142.0	124.3
2-Dec	86.0	78.8	83.8	77.5	75.0	150.5	82.5	140.3	122.1
9-Dec	86.0	78.3	83.5	77.1	75.0	150.5	80.9	137.9	119.3
16-Dec	85.0	77.6	83.2	76.9	75.0	149.8	82.0	136.5	117.1
23-Dec	85.0	76.9	82.6	76.6	75.0	149.8	81.0	133.7	115.6
31-Dec	85.0	76.5	82.8	76.3	74.0	145.6	80.6	132.0	113.9

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



■ Mean Cooling Degree Days
 ■ Mean Heating Degree Days

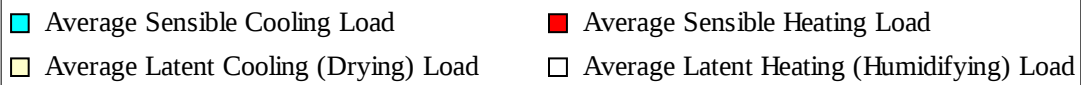
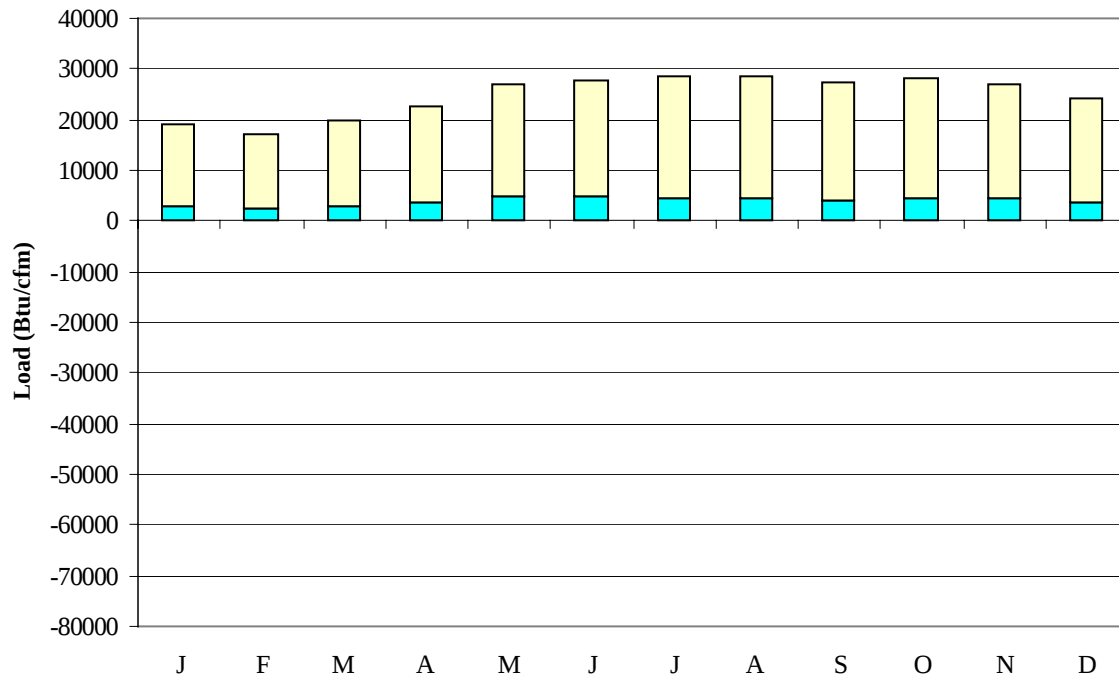
	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	393	0
FEB	348	0
MAR	396	0
APR	409	0
MAY	458	0
JUN	454	0
JUL	455	0
AUG	444	0
SEP	433	0
OCT	437	0
NOV	436	0
DEC	422	0
ANN	5084	0

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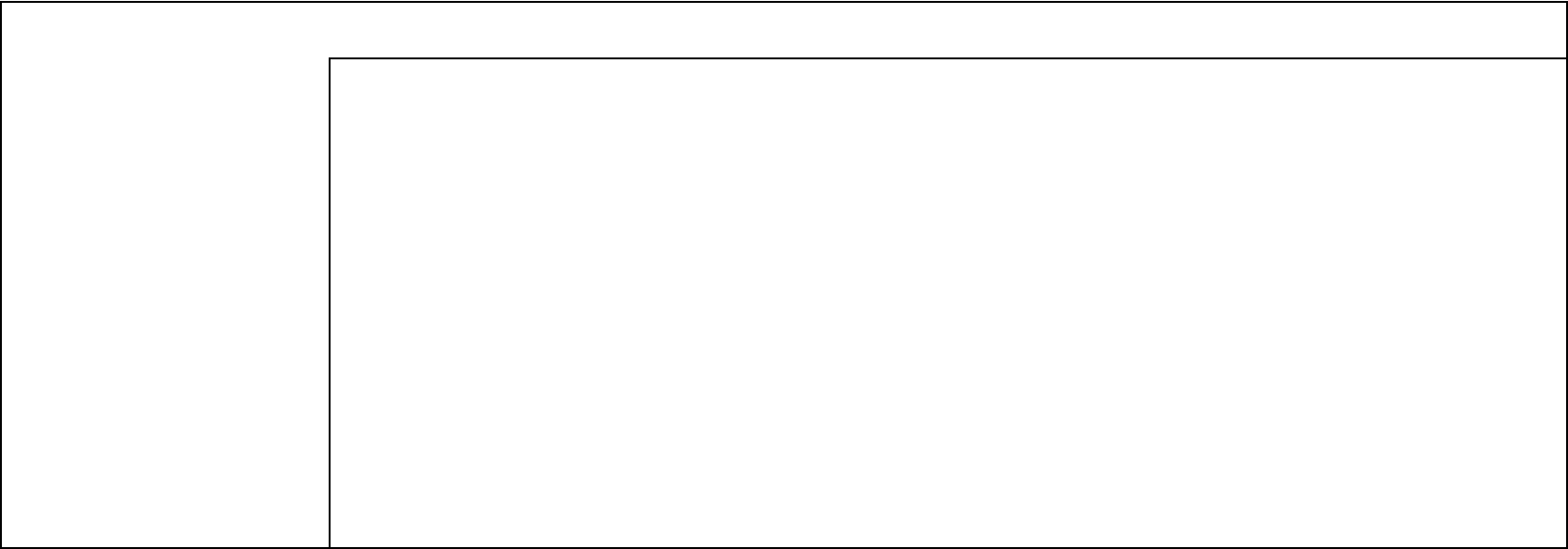
Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	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	2810	0	16434	0
FEB	2412	0	14537	0
MAR	2996	0	16890	0
APR	3580	0	18906	0
MAY	4690	0	22447	0
JUN	4829	0	22943	0
JUL	4600	0	23929	0
AUG	4300	0	24080	0
SEP	4258	0	23193	0
OCT	4401	0	23630	0
NOV	4330	0	22808	0
DEC	3697	0	20318	0
ANN	46903	0	250115	0

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

No Solar Radiation
Data Available

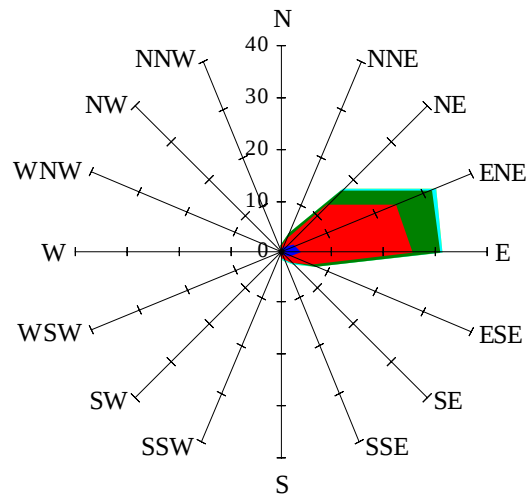


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

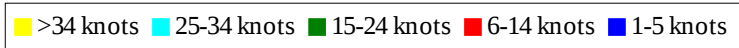
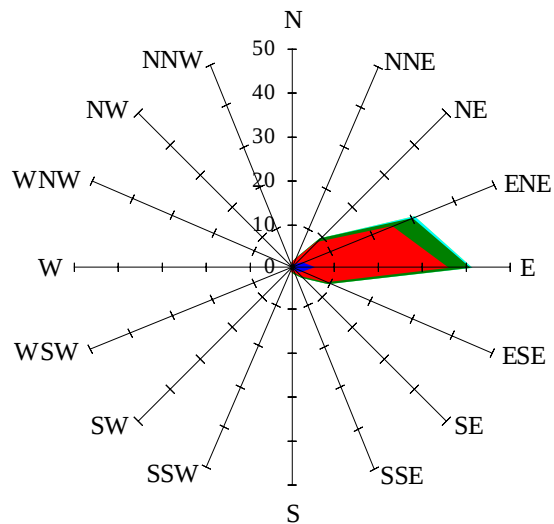
Labels of Percent Frequency on North Axis



Percent Calm = 1.25

Wind Summary - March, April, and May

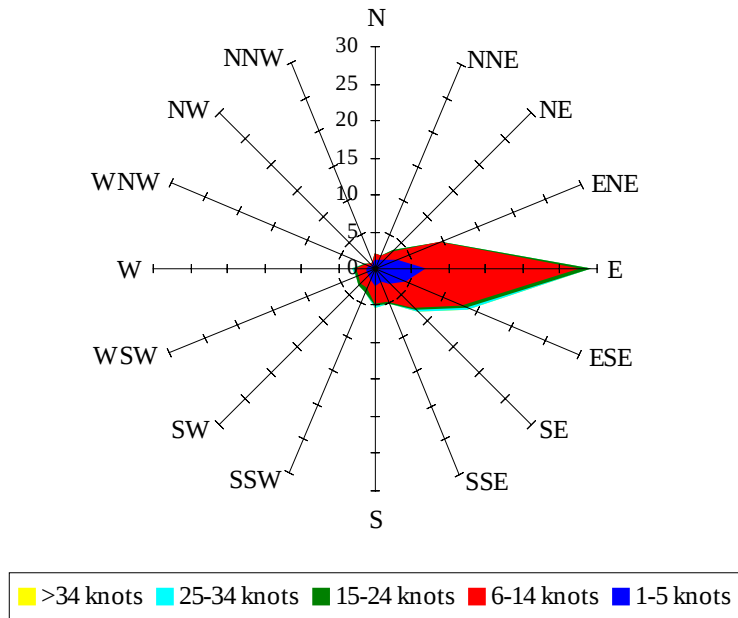
Labels of Percent Frequency on North Axis



Percent Calm = 1.70

Wind Summary - June, July, and August

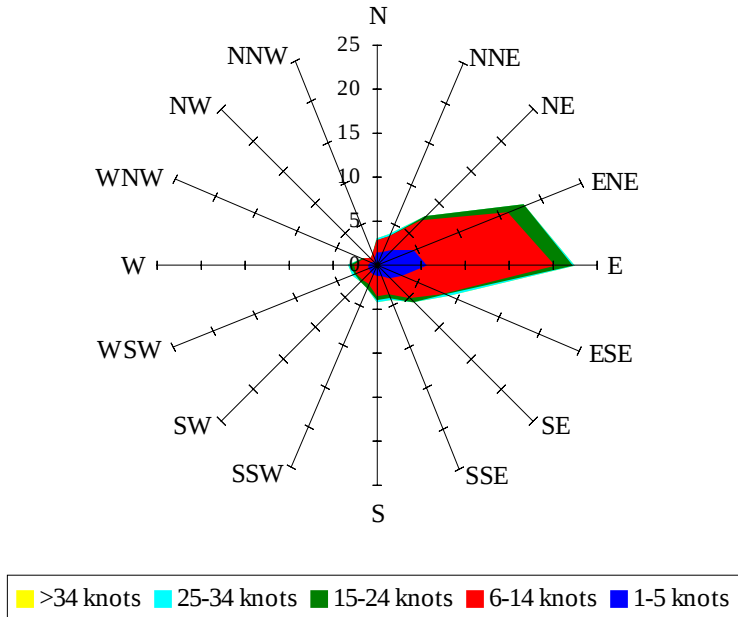
Labels of Percent Frequency on North Axis



Percent Calm = 8.33

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 7.20