

CORDOVA/MILE 13 AK

Latitude = 60.50 N

Longitude = 145.50 W

Period of Record = 1973 to 1996

WMO No. 702960

Elevation = 43 feet

Average Pressure = 29.71 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	78	62	55	6.9	W
0.4% Occurrence	71	59	55	6.8	SW
1.0% Occurrence	67	57	55	7.1	WSW
2.0% Occurrence	64	56	54	6.7	SW
Mean Daily Range	14	-	-	-	-
97.5% Occurrence	5	4	6	1.1	E
99.0% Occurrence	-2	-2	4	0.8	E
99.6% Occurrence	-8	-8	3	0.5	E
Median of Extreme Lows	-10	-10	2	0.7	E
	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	65	74	76	6.8	SW
0.4% Occurrence	61	69	65	6.7	WSW
1.0% Occurrence	59	66	62	6.4	SW
2.0% Occurrence	57	63	59	6.2	WSW
	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	83	68	0.56	5.9	WSW
0.4% Occurrence	69	65	0.47	5.9	SW
1.0% Occurrence	64	61	0.44	5.7	E
2.0% Occurrence	62	59	0.42	5.6	E
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	3	0	1

Other Site Data

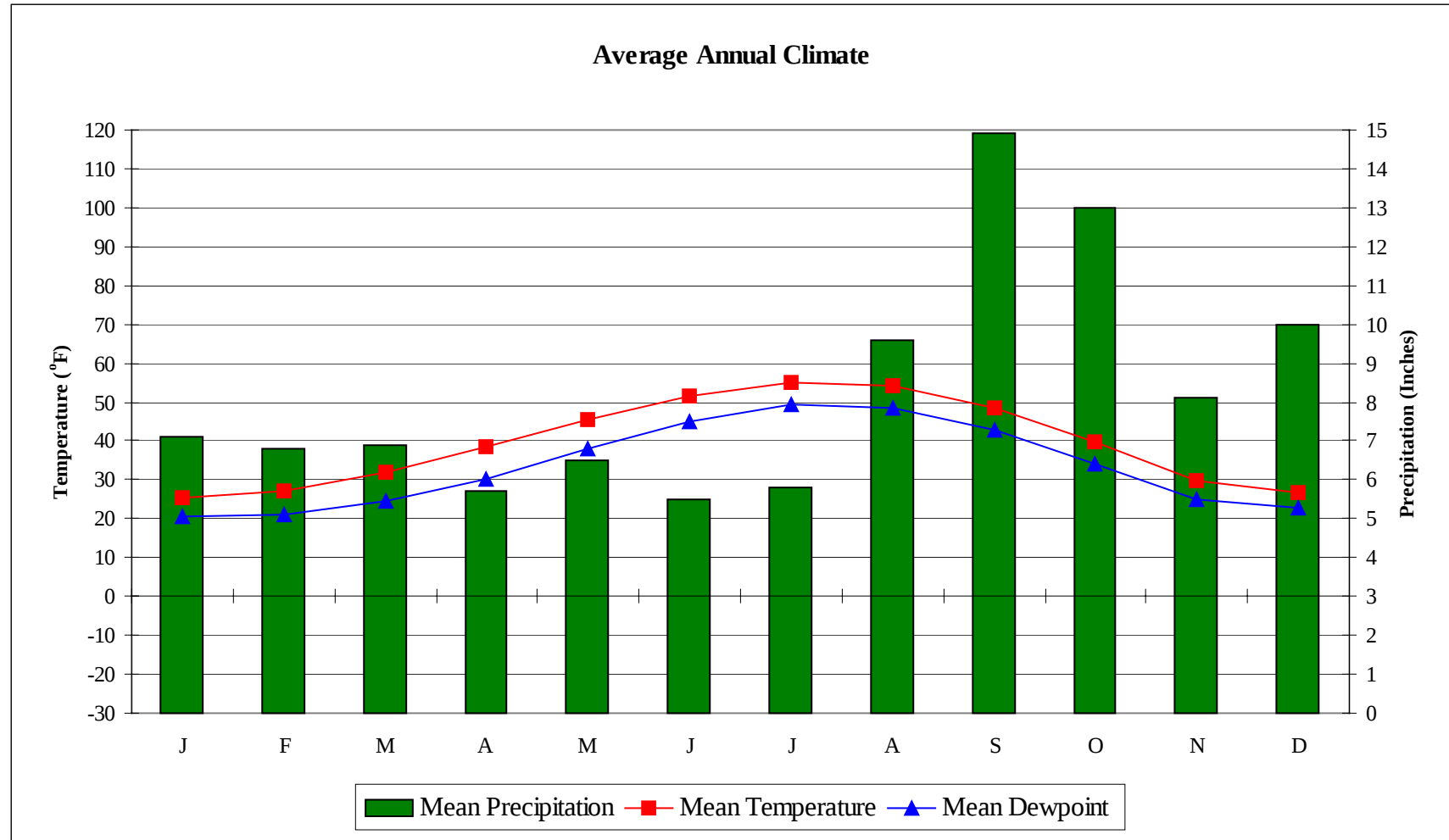
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
4	1.0	130	0.0 + 0.0
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
42.0	N/A	N/A	86

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

CORDOVA/MILE 13

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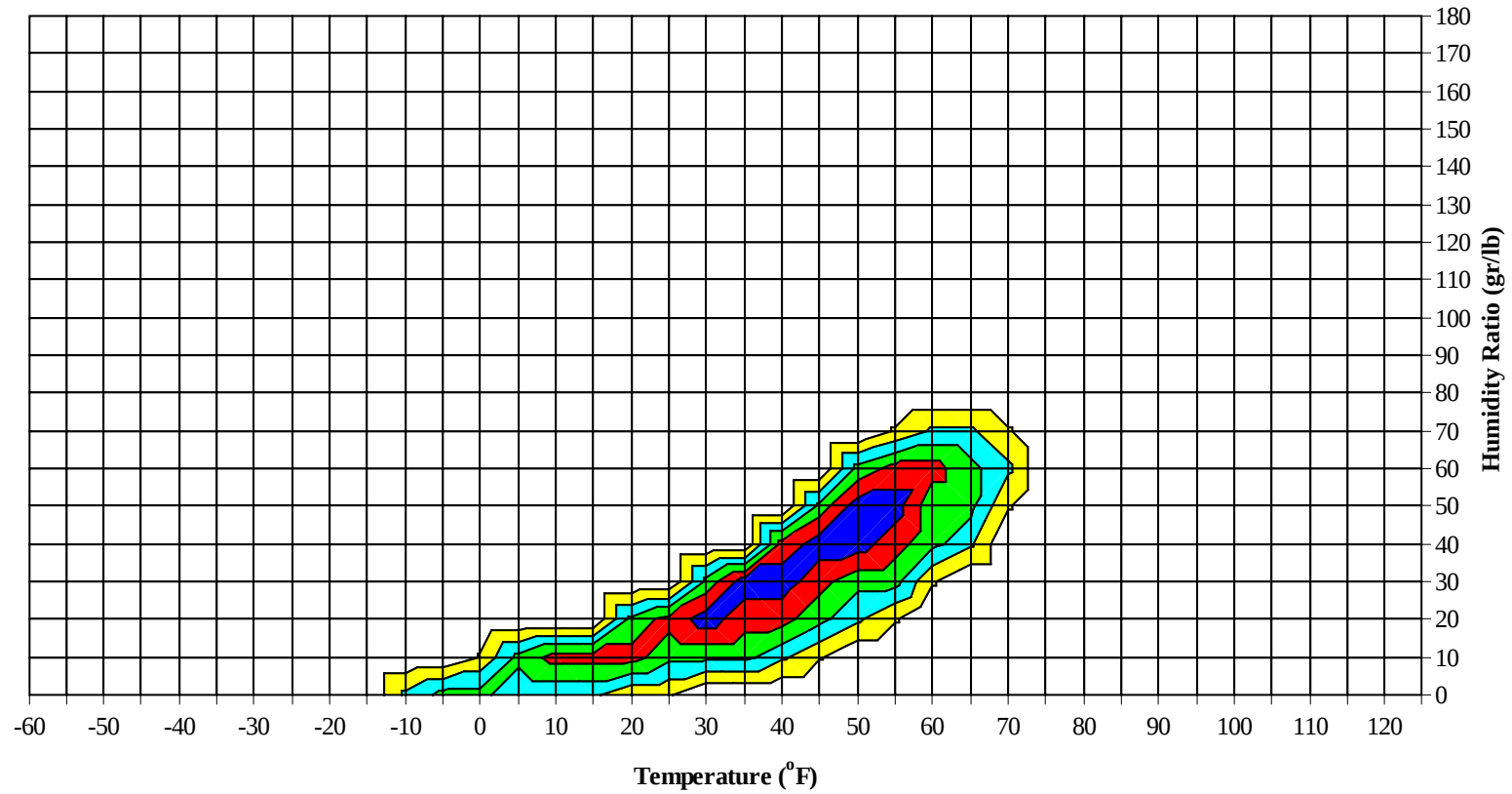


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Long Term Psychrometric Summary



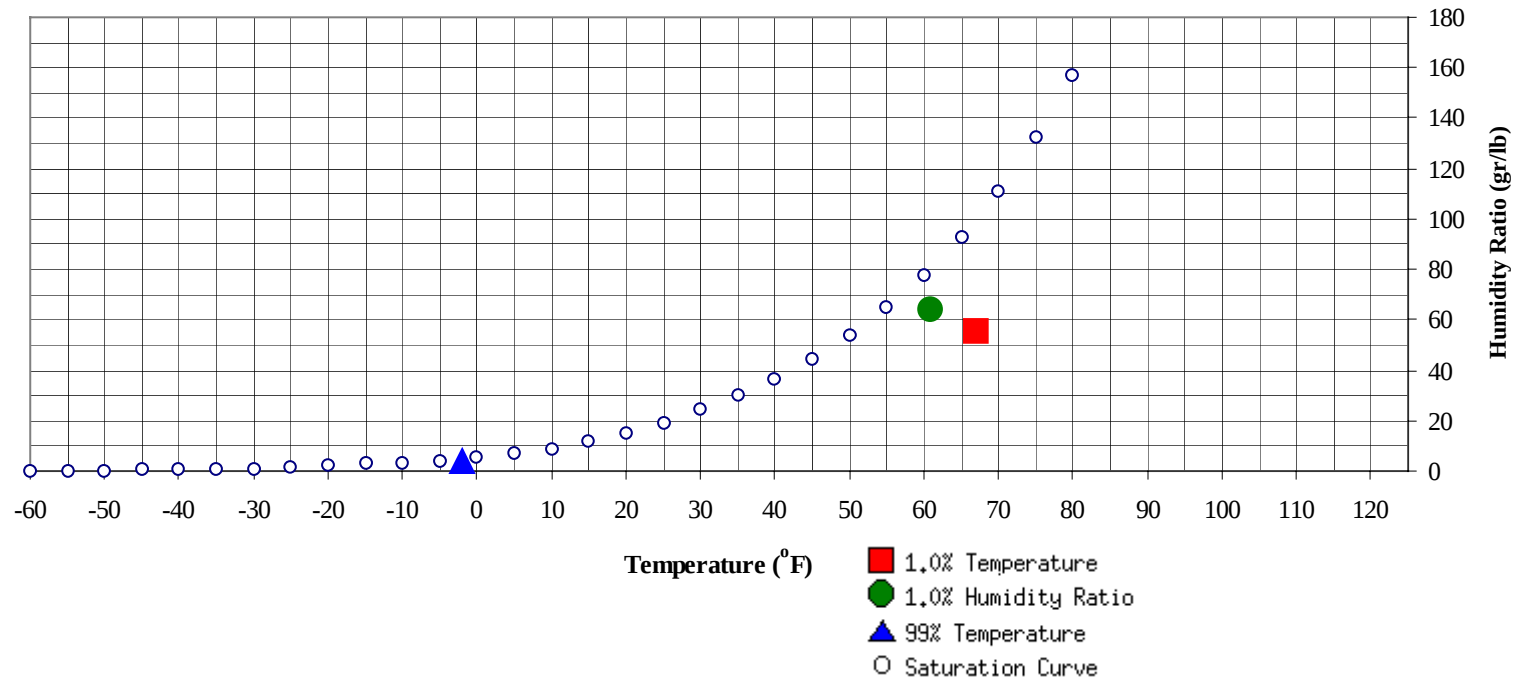
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	-2	3.9	0.1		64.4	60.9	57.3	55	24.6

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	67	55.2	57.4	24.7

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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		
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64															
55 / 59						0		0	0	43.1		0	0	0	42.5
50 / 54	0			0	42.0	0		0	0	40.5	0	2	1	3	41.6
45 / 49	2	3	3	8	41.3	1	4	2	7	40.6	1	14	4	19	39.7
40 / 44	27	31	28	86	38.4	18	31	20	70	37.8	15	59	29	103	37.0
35 / 39	47	51	44	141	35.1	42	55	48	145	34.8	53	89	72	214	34.1
30 / 34	41	45	46	131	31.2	41	43	44	128	30.7	69	49	68	186	30.4
25 / 29	27	26	29	82	25.8	27	32	33	93	25.1	33	19	38	89	25.3
20 / 24	20	24	22	66	21.2	23	23	20	67	20.4	26	9	18	53	20.7
15 / 19	21	22	20	63	16.1	18	15	18	51	15.8	22	4	10	36	16.1
10 / 14	16	18	18	52	11.2	14	9	16	39	11.0	14	1	4	19	11.3
5 / 9	16	13	14	43	6.4	14	5	10	29	6.4	7	1	3	11	6.7
0 / 4	12	8	13	33	1.7	11	3	7	21	1.5	4	0	2	6	1.6
-5 / -1	7	3	6	16	-2.8	7	1	3	11	-2.7	2	0	0	2	-2.7
-10 / -6	6	3	5	14	-7.2	4	1	2	7	-6.9	1		0	1	-7.4
-15 / -11	3	1	1	5	-11.6	3	0	1	4	-11.4	0			0	-10.0
-20 / -16	1	0	1	2	-16.3	0	0		0	-15.5					
-25 / -21	0	0	0	0	-20.6										

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.

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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		
85 / 89															
80 / 84															
75 / 79							0	0	0	57.0		0	0	0	65.0
70 / 74							3	1	4	54.5		2	1	3	60.6
65 / 69		0	0	0	52.1		5	3	8	52.8		5	2	7	58.1
60 / 64		3	1	4	49.1		0	15	5	20	0	14	6	20	56.1
55 / 59		9	4	13	46.3		2	33	14	49	1	33	14	48	54.1
50 / 54	0	25	8	33	43.6		2	33	14	49	9	68	39	116	51.5
45 / 49	5	52	24	81	40.7		10	66	37	113	58	83	87	228	48.8
40 / 44	37	86	65	189	38.0		50	79	75	204	105	32	74	211	45.5
35 / 39	71	50	77	198	34.8		96	40	82	218	52	3	16	71	41.4
30 / 34	69	12	42	122	30.8		56	6	26	88	14	0	1	15	36.5
25 / 29	38	4	15	57	26.0		28	1	6	35	1			1	32.8
20 / 24	15	0	3	18	21.6		5		0	5					
15 / 19	3		1	4	16.6		0			0					
10 / 14	1		0	1	12.4										
5 / 9	0		0	0	6.4										
0 / 4	0		0	0	2.5										
-5 / -1	0			0	-1.3										
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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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		
85 / 89		0	0	0	61.4		0	0	0	67.7					
80 / 84		1	1	2	62.9		0	0	0	66.8					
75 / 79		4	1	5	61.7		2	1	3	60.6					
70 / 74	0	10	4	14	60.6		11	4	15	59.5		1	0	1	56.2
65 / 69	1	22	10	33	58.7	0	25	9	34	58.2	0	8	2	10	54.7
60 / 64	3	57	25	85	56.0	2	58	24	84	55.8	0	22	6	28	53.1
55 / 59	26	104	79	209	53.2	28	99	73	201	53.3	7	58	25	90	51.4
50 / 54	125	50	106	281	50.2	116	49	98	264	50.3	43	87	69	199	48.8
45 / 49	77	1	21	99	46.6	61	4	31	95	46.2	85	51	81	217	45.2
40 / 44	14	0	1	15	41.6	28		7	35	41.2	47	10	37	94	40.9
35 / 39	2		0	2	37.3	11		1	12	37.0	31	2	14	47	36.3
30 / 34	0			0	33.0	1			1	31.9	19	0	6	25	31.6
25 / 29						0			0	28.0	6		1	7	26.8
20 / 24											1			1	22.1
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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.

CORDOVA/MILE 13

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WMO No. 702960

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		
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64		0		0	51.0										
55 / 59	0	4	1	5	47.3										
50 / 54	6	31	10	47	46.5	0	1	0	1	46.7		0	0	0	39.1
45 / 49	40	77	52	169	43.5	6	9	7	22	42.8	2	1	2	5	41.6
40 / 44	72	78	75	225	39.8	32	44	33	109	39.1	24	28	25	77	38.6
35 / 39	48	32	48	128	35.5	52	55	49	157	35.2	53	56	54	162	35.1
30 / 34	36	16	33	85	30.9	43	51	48	142	30.9	54	55	56	164	31.2
25 / 29	24	6	18	48	26.3	32	30	33	94	25.8	29	31	30	90	26.0
20 / 24	10	2	6	18	21.5	22	18	22	62	21.1	21	20	19	60	21.2
15 / 19	7	1	3	11	16.8	14	14	16	44	16.1	14	17	16	47	16.1
10 / 14	3	1	2	6	11.6	12	9	12	33	11.2	15	15	15	45	11.3
5 / 9	1	0	0	1	7.1	14	5	11	30	6.6	12	10	11	33	6.6
0 / 4	0		0	0	1.9	8	3	6	17	1.9	8	7	9	24	1.5
-5 / -1						3	1	2	6	-2.4	6	4	5	15	-2.8
-10 / -6						1	0	0	1	-6.1	5	2	5	12	-7.0
-15 / -11						0			0	-11.0	3	1	2	6	-12.1
-20 / -16											1	0	1	2	-15.3
-25 / -21															

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CORDOVA/MILE 13 AK**WMO No. 702960****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		
85 / 89		0	0	0	63.8
80 / 84		2	1	3	64.2
75 / 79		8	3	11	61.0
70 / 74	0	30	11	41	59.1
65 / 69	2	75	29	106	57.2
60 / 64	7	188	75	269	54.8
55 / 59	74	373	235	682	52.2
50 / 54	359	392	414	1165	48.9
45 / 49	434	326	374	1135	44.4
40 / 44	463	409	418	1290	39.3
35 / 39	477	397	434	1308	35.1
30 / 34	402	273	348	1024	30.9
25 / 29	221	147	197	564	25.7
20 / 24	141	97	111	349	21.0
15 / 19	99	75	84	257	16.1
10 / 14	77	53	68	197	11.2
5 / 9	64	34	49	147	6.5
0 / 4	44	22	36	102	1.6
-5 / -1	27	10	16	53	-2.7
-10 / -6	17	6	12	35	-7.0
-15 / -11	10	3	5	18	-11.7
-20 / -16	2	1	1	4	-15.8
-25 / -21	0	0	0	0	-20.6
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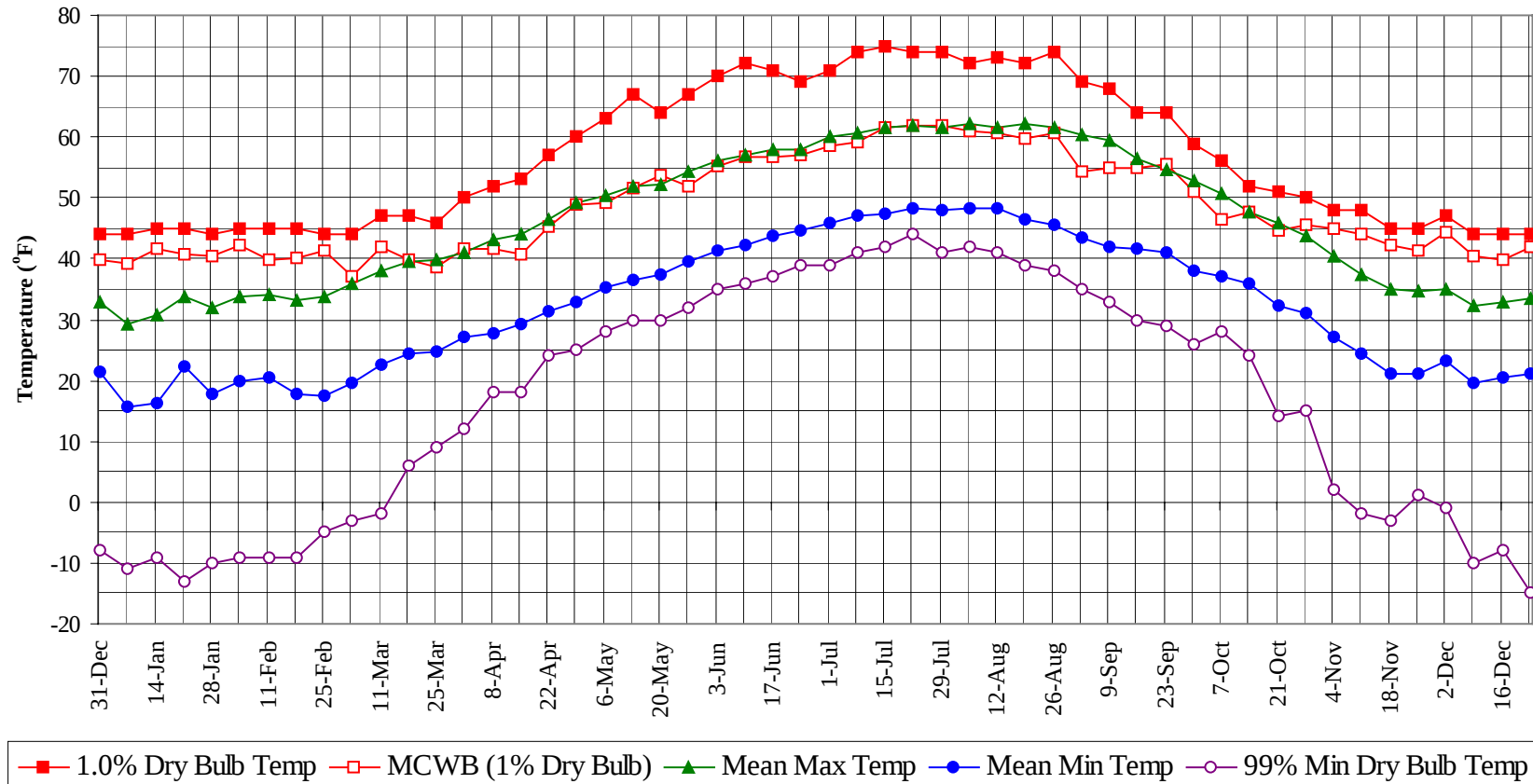
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CORDOVA/MILE 13

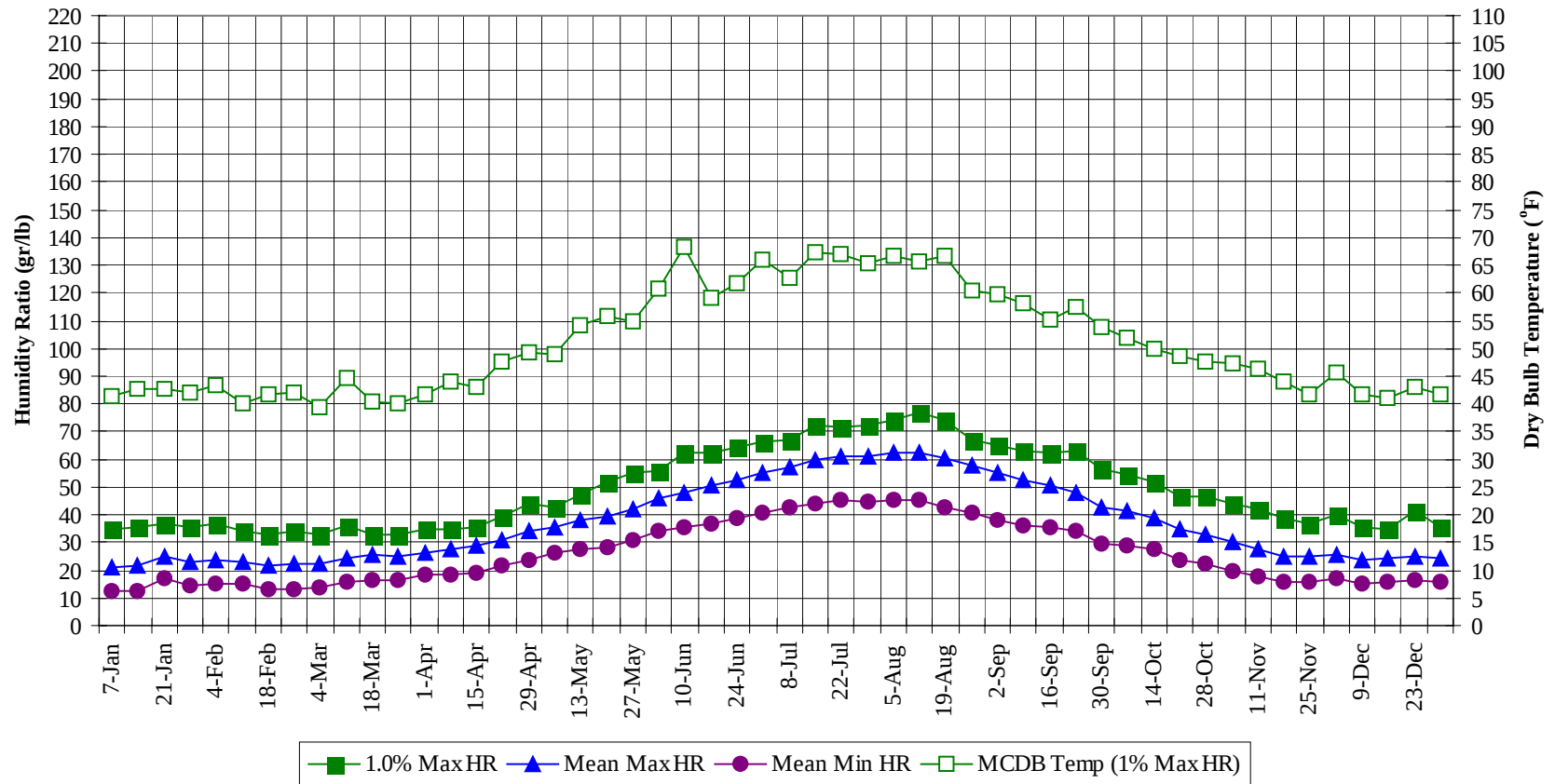
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WMO No. 702960

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



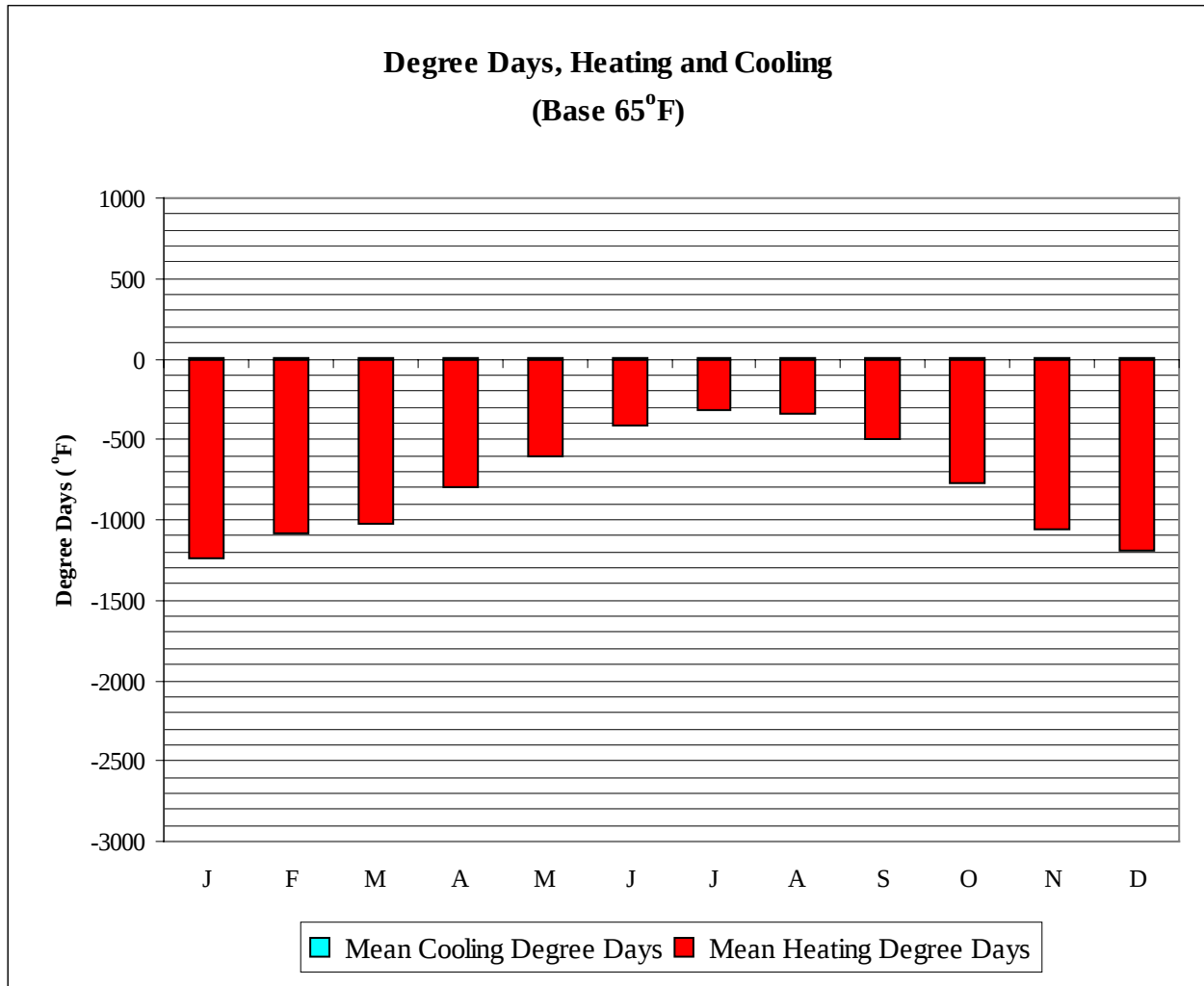
CORDOVA/MILE 13**AK****WMO No. 702960****Long Term Dry Bulb Temperature and Humidity Summary**

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	44.0	39.3	29.2	15.8	-11.0	35.0	41.3	20.9	12.6
14-Jan	45.0	41.6	30.8	16.2	-9.0	35.7	42.7	21.8	12.8
21-Jan	45.0	40.8	33.8	22.4	-13.0	37.1	42.6	25.3	17.3
28-Jan	44.0	40.4	32.0	17.7	-10.0	35.7	42.0	23.1	14.2
4-Feb	45.0	42.1	33.7	19.8	-9.0	37.1	43.2	23.9	15.1
11-Feb	45.0	39.8	34.1	20.4	-9.0	34.3	40.1	23.2	15.1
18-Feb	45.0	40.2	33.3	17.9	-9.0	32.9	41.8	21.7	13.1
25-Feb	44.0	41.3	33.8	17.3	-5.0	34.3	41.9	22.4	13.3
4-Mar	44.0	37.2	36.0	19.5	-3.0	32.9	39.4	22.4	14.1
11-Mar	47.0	42.1	37.9	22.7	-2.0	36.4	44.6	24.2	15.9
18-Mar	47.0	39.9	39.6	24.5	6.0	32.9	40.5	25.6	16.7
25-Mar	46.0	38.7	40.0	24.8	9.0	32.9	40.1	25.2	16.7
1-Apr	50.0	41.5	41.1	27.1	12.0	35.0	41.9	26.6	18.3
8-Apr	52.0	41.7	43.3	27.7	18.0	35.0	43.9	27.5	18.3
15-Apr	53.0	40.6	44.1	29.1	18.0	35.7	43.0	28.6	19.2
22-Apr	57.0	45.2	46.4	31.5	24.0	39.2	47.6	31.0	22.0
29-Apr	60.0	48.8	49.1	32.7	25.0	44.1	49.1	34.1	23.4
6-May	63.0	49.1	50.3	35.2	28.0	42.7	48.8	35.4	26.0
13-May	67.0	51.5	51.9	36.6	30.0	47.6	54.2	37.8	27.8
20-May	64.0	53.8	52.3	37.4	30.0	51.8	55.9	39.4	28.5
27-May	67.0	51.8	54.2	39.6	32.0	55.3	54.8	41.8	31.1
3-Jun	70.0	55.2	56.2	41.4	35.0	56.0	60.7	45.8	34.0
10-Jun	72.0	56.6	56.9	42.4	36.0	62.3	68.3	48.1	35.6
17-Jun	71.0	56.6	57.9	43.8	37.0	62.3	59.1	50.3	37.0
24-Jun	69.0	57.0	58.0	44.6	39.0	64.4	61.6	52.4	38.9
1-Jul	71.0	58.6	60.0	45.8	39.0	66.5	65.9	55.2	40.8
8-Jul	74.0	59.2	60.8	47.1	41.0	67.2	62.8	57.3	43.0
15-Jul	75.0	61.6	61.5	47.3	42.0	72.1	67.4	59.8	43.8
22-Jul	74.0	62.0	61.7	48.4	44.0	71.4	67.1	61.0	45.5
29-Jul	74.0	61.8	61.7	47.9	41.0	72.1	65.4	60.8	44.7
5-Aug	72.0	61.0	62.3	48.4	42.0	74.2	66.6	62.4	45.1
12-Aug	73.0	60.6	61.6	48.3	41.0	77.0	65.6	62.6	45.4
19-Aug	72.0	59.7	62.1	46.6	39.0	74.2	66.7	60.4	42.9
26-Aug	74.0	60.8	61.5	45.6	38.0	67.2	60.6	57.6	40.8
2-Sep	69.0	54.4	60.3	43.4	35.0	65.1	59.7	55.1	38.4
9-Sep	68.0	55.0	59.4	41.9	33.0	63.0	58.2	52.6	36.1
16-Sep	64.0	55.0	56.4	41.7	30.0	62.3	55.2	50.9	35.2
23-Sep	64.0	55.7	54.6	41.0	29.0	63.0	57.3	48.3	34.0
30-Sep	59.0	50.9	52.7	38.0	26.0	56.7	53.9	42.6	29.6
7-Oct	56.0	46.6	50.7	37.0	28.0	54.6	51.8	41.1	28.6
14-Oct	52.0	47.6	47.7	36.0	24.0	51.8	50.1	38.9	27.7
21-Oct	51.0	44.7	45.7	32.2	14.0	46.9	48.5	34.7	23.6
28-Oct	50.0	45.7	43.8	31.0	15.0	46.9	47.7	32.9	22.4
4-Nov	48.0	45.0	40.4	27.1	2.0	44.1	47.3	30.0	20.0
11-Nov	48.0	44.1	37.5	24.5	-2.0	42.0	46.2	27.3	17.7
18-Nov	45.0	42.3	34.9	21.0	-3.0	38.5	43.9	25.2	15.6
25-Nov	45.0	41.5	34.8	21.2	1.0	37.1	41.8	25.0	15.6
2-Dec	47.0	44.4	35.0	23.2	-1.0	39.9	45.6	25.3	17.0
9-Dec	44.0	40.5	32.4	19.6	-10.0	35.7	41.8	24.0	15.4
16-Dec	44.0	39.8	33.0	20.3	-8.0	35.0	40.9	24.2	15.5
23-Dec	44.0	42.0	33.4	21.1	-15.0	41.3	43.1	25.1	16.2
31-Dec	44.0	39.8	32.8	21.5	-8.0	35.7	41.7	24.0	16.0

CORDOVA/MILE 13

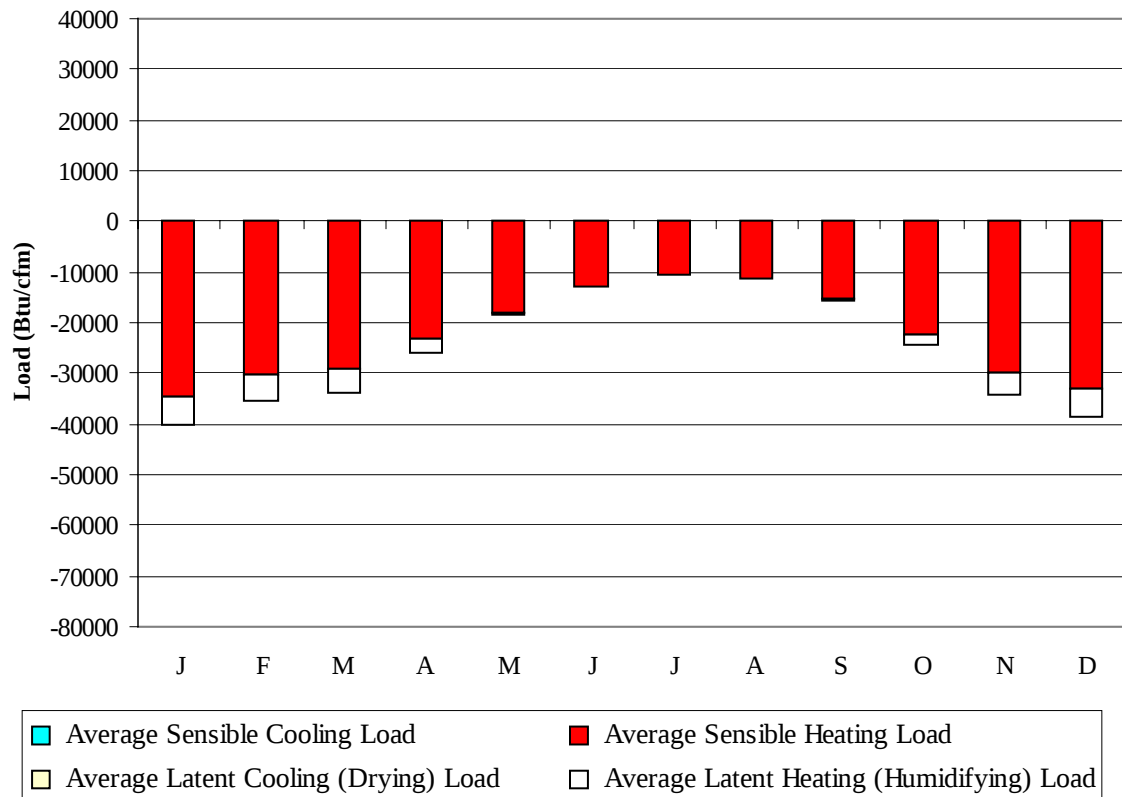
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WMO No. 702960



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1235
FEB	0	1079
MAR	0	1028
APR	0	800
MAY	1	603
JUN	4	414
JUL	9	323
AUG	8	341
SEP	1	499
OCT	0	775
NOV	0	1062
DEC	0	1188
ANN	23	9347

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	0	-34415	0	-5723
FEB	0	-30166	0	-5334
MAR	0	-29046	0	-4705
APR	0	-23069	0	-2737
MAY	0	-18021	0	-595
JUN	6	-12990	2	-34
JUL	19	-10661	6	-4
AUG	9	-11127	11	-56
SEP	0	-15240	0	-378
OCT	0	-22459	0	-1809
NOV	0	-29855	0	-4355
DEC	0	-33205	0	-5231
ANN	34	-270254	19	-30961

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

No Solar Radiation
Data Available

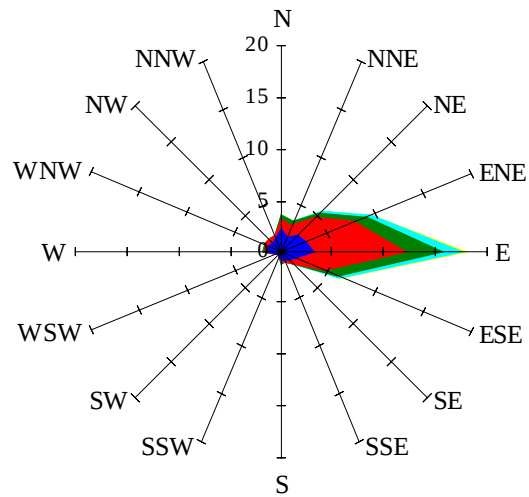


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

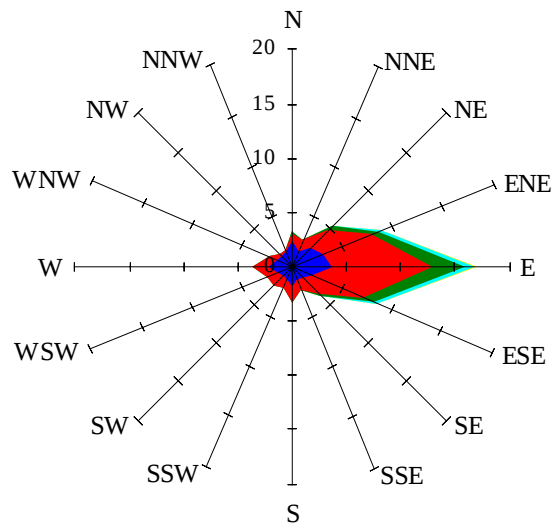
Labels of Percent Frequency on North Axis



Percent Calm = 41.81

Wind Summary - March, April, and May

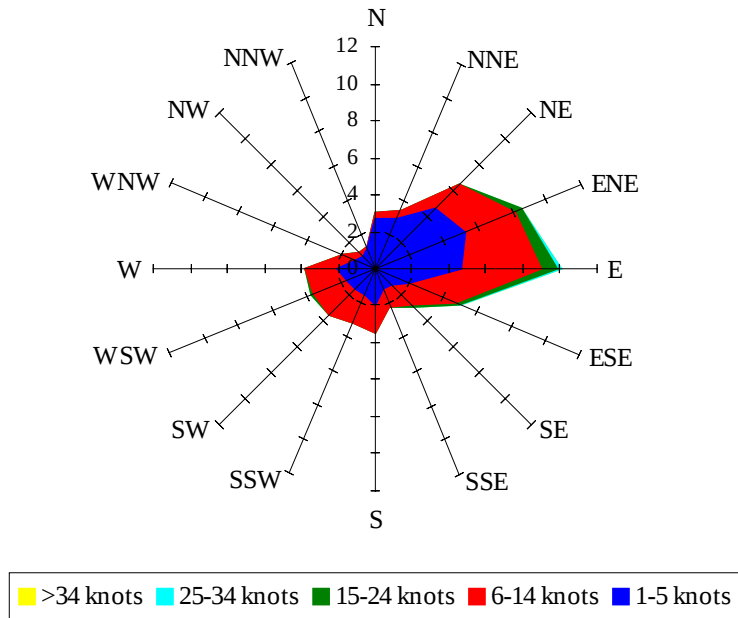
Labels of Percent Frequency on North Axis



Percent Calm = 30.52

Wind Summary - June, July, and August

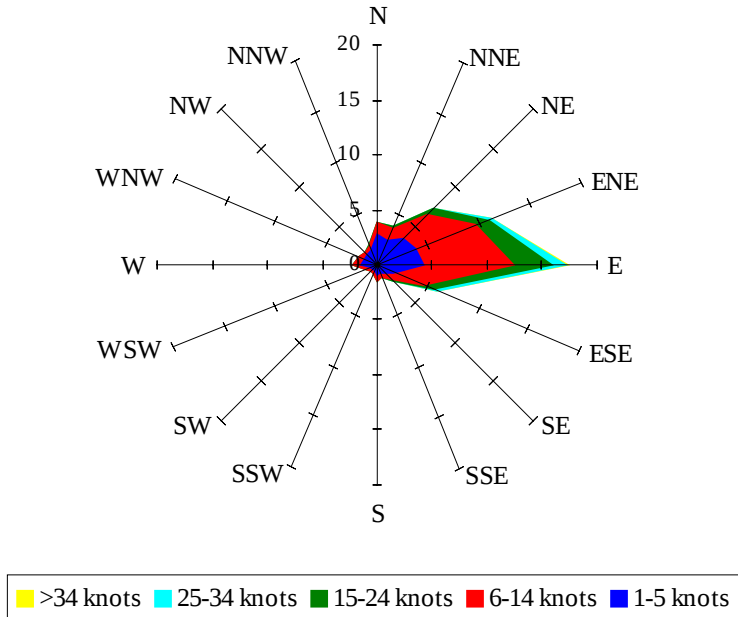
Labels of Percent Frequency on North Axis



Percent Calm = 36.38

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 35.84