

ANCHORAGE AK

Latitude = 61.17 N

Longitude = 150.00 W

Period of Record = 1973 to 1996

WMO No. 702730

Elevation = 131 feet

Average Pressure = 29.60 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	76	61	57	8.6	W
0.4% Occurrence	71	58	53	8.5	WNW
1.0% Occurrence	68	57	52	8.6	WNW
2.0% Occurrence	65	56	51	9.0	WNW
Mean Daily Range	12	-	-	-	-
97.5% Occurrence	0	-1	4	5.7	N
99.0% Occurrence	-6	-6	3	4.7	N
99.6% Occurrence	-10	-10	2	3.8	N
Median of Extreme Lows	-14	-14	2	3.3	N
	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	63	72	69	7.8	WNW
0.4% Occurrence	60	68	63	7.9	WNW
1.0% Occurrence	58	64	60	7.7	WNW
2.0% Occurrence	57	63	59	7.7	WNW
	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	72	63	0.48	6.5	WNW
0.4% Occurrence	69	62	0.46	6.8	WNW
1.0% Occurrence	65	61	0.44	6.7	WNW
2.0% Occurrence	62	60	0.42	6.8	WNW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	0	0	0

Other Site Data

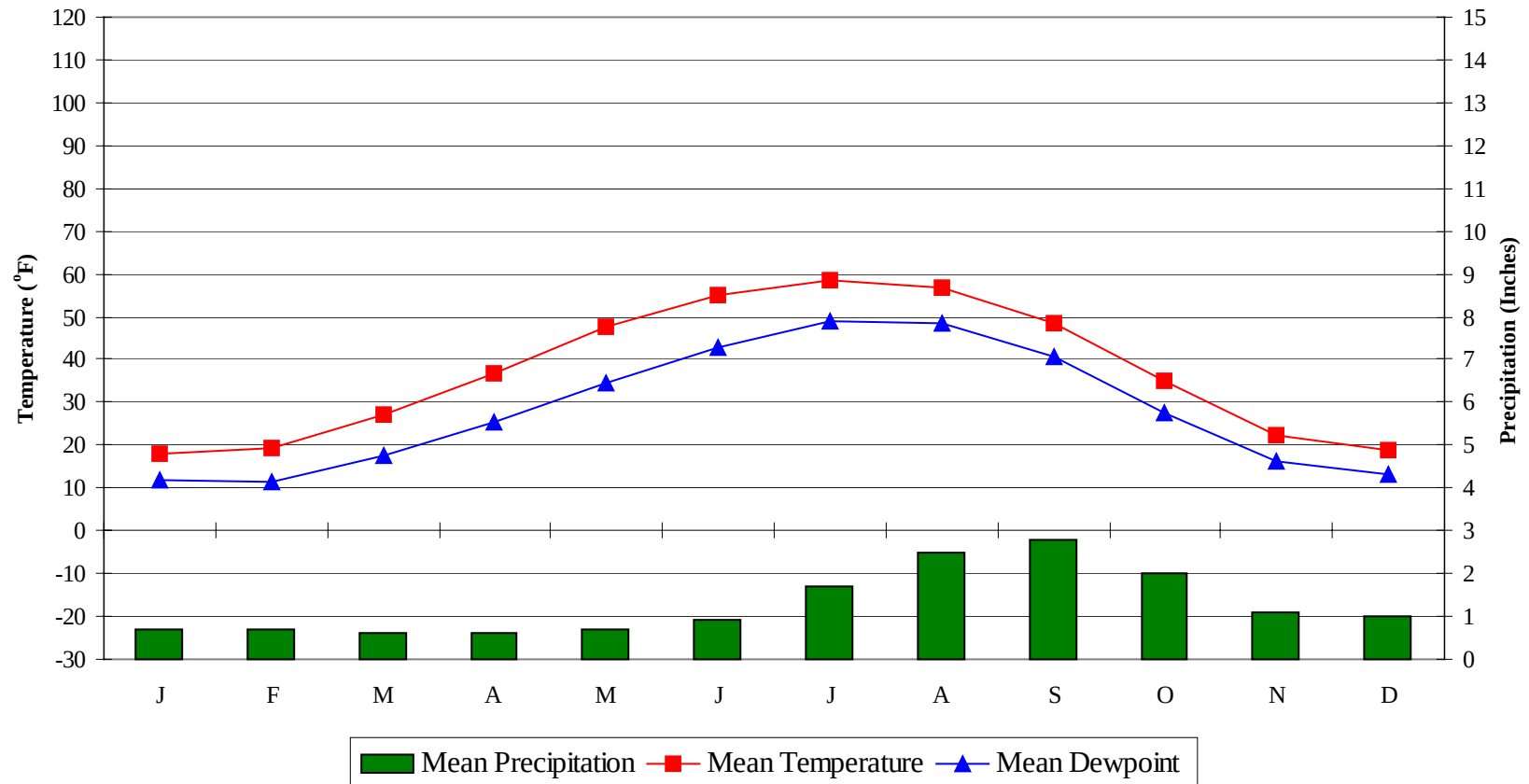
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
4	0.6	100	0.0 + 0.0
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
39.6	129	65	65

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

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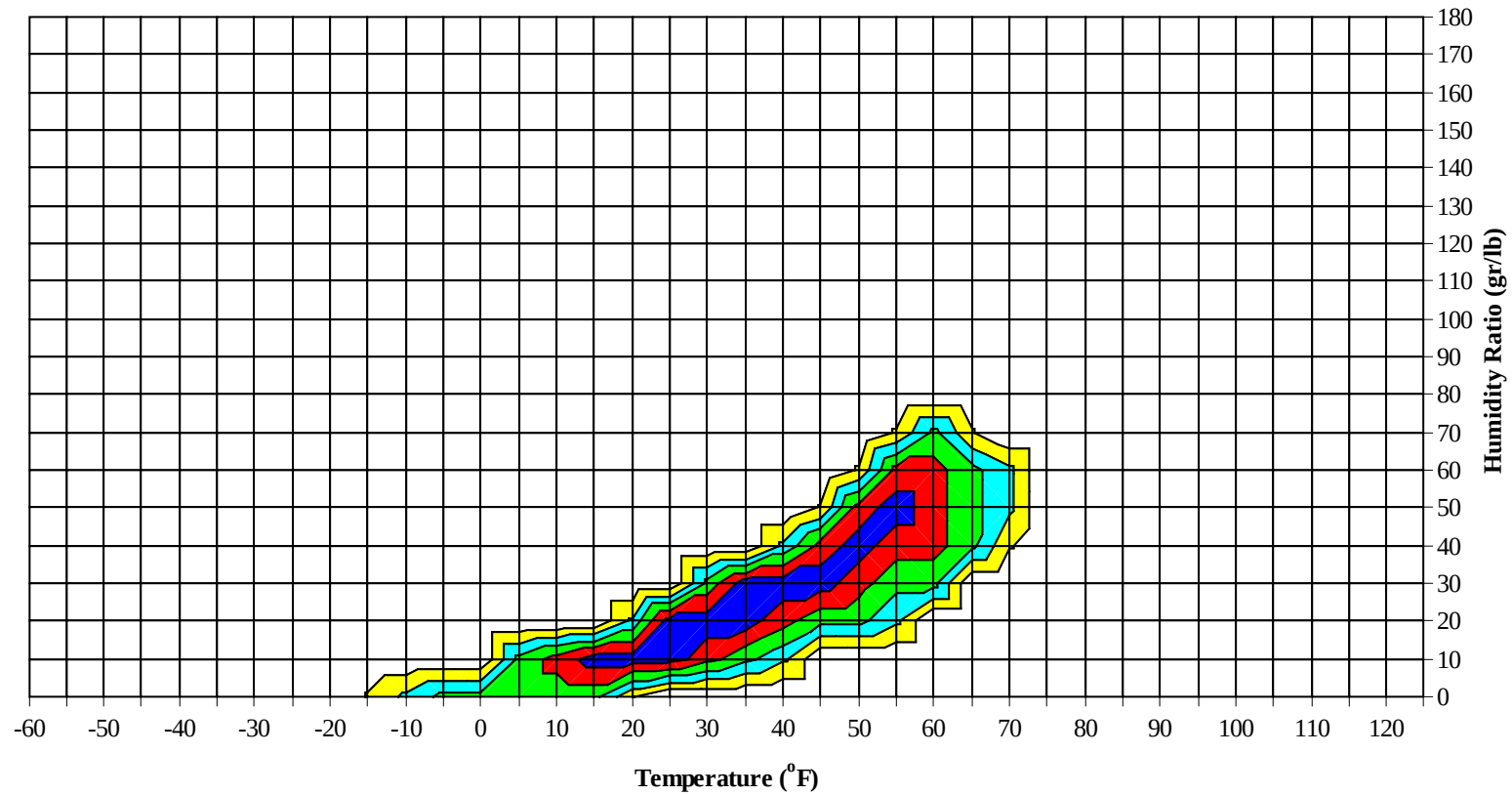
Average Annual Climate



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Long Term Psychrometric Summary

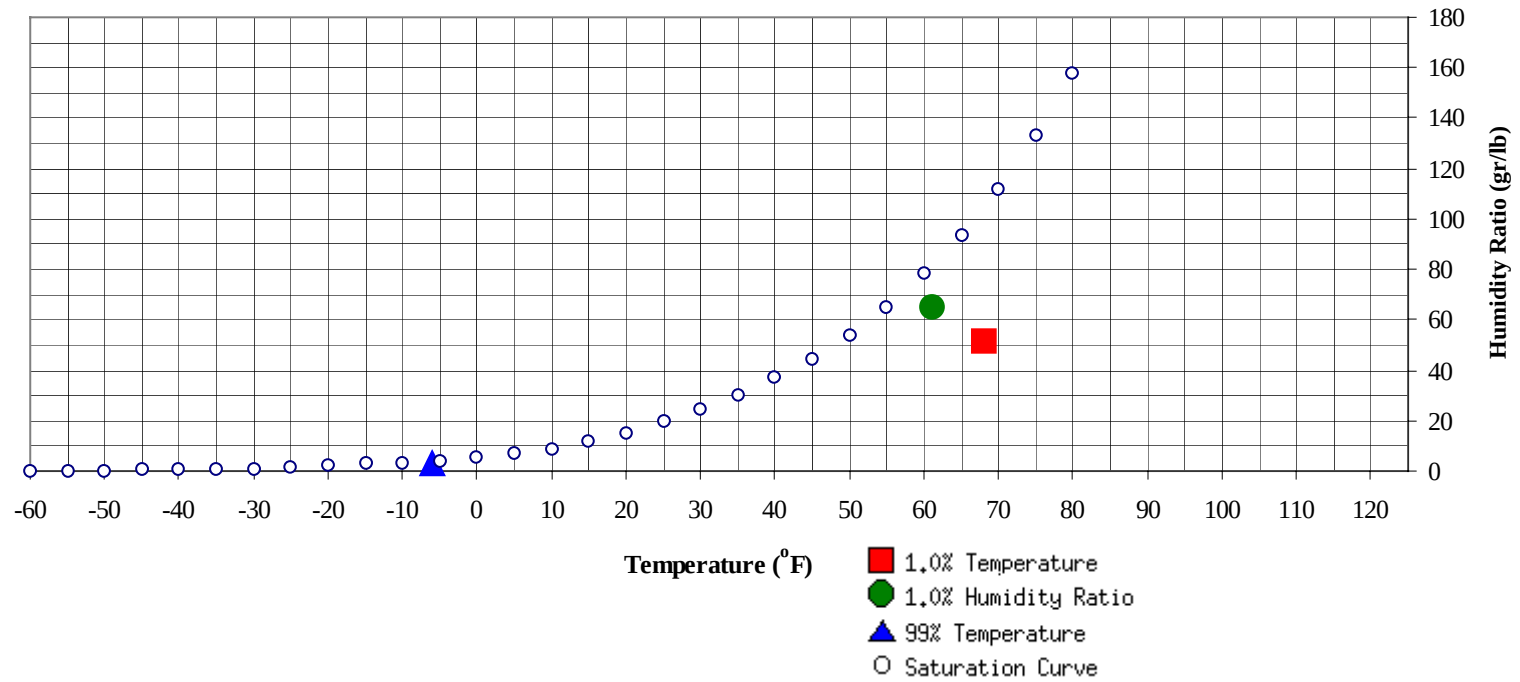


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



	(°F)	MCHR	Enthalpy	1.0% Humidity Ratio	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	-6	2.8	-1.0	Ratio	65.1	61	57.3	55.1	24.8

1.0% Dry Bulb	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
	68	51.8	57.1	24.4

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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		
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64															
55 / 59															
50 / 54												0		0	41.0
45 / 49	1	1	0	2	38.6	0	1	0	1	38.3	0	3	2	5	38.3
40 / 44	5	5	4	14	36.2	3	7	6	16	36.0	4	20	14	38	35.3
35 / 39	13	14	14	41	33.6	11	17	16	44	33.4	21	51	52	125	32.5
30 / 34	30	36	33	99	30.0	26	33	35	94	29.7	52	61	63	177	29.0
25 / 29	40	42	43	125	25.4	33	35	34	102	25.2	54	46	48	148	24.6
20 / 24	36	37	37	110	20.8	32	33	31	96	20.2	45	31	32	108	19.9
15 / 19	30	29	25	84	15.9	28	33	31	92	15.2	30	19	18	67	15.3
10 / 14	24	23	24	71	10.9	24	26	27	77	10.4	20	9	11	40	10.4
5 / 9	21	21	21	63	5.9	23	19	22	64	5.8	13	4	5	22	5.9
0 / 4	18	18	17	53	1.2	23	13	14	50	1.2	6	2	2	10	1.3
-5 / -1	11	10	10	31	-3.0	10	5	4	19	-2.9	2	0	0	2	-3.2
-10 / -6	10	7	10	27	-7.3	8	3	3	14	-6.9	2	0	0	2	-7.3
-15 / -11	5	3	5	13	-11.8	2	0	2	4	-11.7	0	0	0	0	-11.4
-20 / -16	3	1	2	6	-16.7	1	0	1	2	-16.8	0	0		0	-16.0
-25 / -21	2	1	2	5	-21.8	0			0	-20.4		0		0	-20.0
-30 / -26	1	0	0	1	-26.2										

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		
80 / 84															
75 / 79							0		0	55.5		1	1	2	60.1
70 / 74							1	1	2	54.5		6	5	11	57.3
65 / 69							4	3	7	52.0					
60 / 64		0	0	0	48.2	0	15	11	26	49.7	0	24	18	42	54.8
55 / 59		2	1	3	44.8	3	41	29	73	46.8	5	54	42	101	52.5
50 / 54	0	14	9	23	41.9	20	85	64	169	44.2	44	86	76	206	49.9
45 / 49	2	45	29	76	39.2	74	72	89	235	41.5	101	58	74	233	47.3
40 / 44	23	70	70	163	36.4	97	26	42	165	38.6	77	11	23	111	44.4
35 / 39	74	62	75	211	33.3	44	4	8	56	34.8	12	0	1	13	40.7
30 / 34	82	29	37	148	29.5	9	0	1	10	30.5	1			1	36.7
25 / 29	37	11	12	60	24.5	1			1	25.1	0			0	
20 / 24	11	4	4	19	19.6										
15 / 19	5	2	2	9	14.8										
10 / 14	3	1	1	5	9.8										
5 / 9	2	0	0	2	5.6										
0 / 4	1	0		1	2.4										
-5 / -1	0			0	-1.7										
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															

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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		
80 / 84			0	0	62.0		0	0	0	66.3					
75 / 79		2	2	4	61.1		1	1	2	63.3					
70 / 74		12	10	22	59.3		6	4	10	59.8		0	0	0	53.5
65 / 69	1	41	31	73	57.1	0	30	19	49	57.4		2	1	3	54.5
60 / 64	23	90	77	190	54.8	12	81	62	155	54.9	1	15	8	24	52.9
55 / 59	116	85	102	303	52.7	83	90	98	270	52.8	9	51	38	98	50.5
50 / 54	98	17	26	141	50.2	109	36	54	199	49.7	52	82	83	217	47.9
45 / 49	9	0	1	10	46.2	35	5	10	50	45.4	89	57	67	213	44.4
40 / 44	0			0	42.4	8	0	1	9	40.3	49	21	26	96	39.9
35 / 39						1			1	34.8	23	8	12	43	34.3
30 / 34						0			0	31.2	11	3	5	19	29.1
25 / 29											4	0	1	5	24.4
20 / 24											1		0	1	21.2
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															

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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		
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64															
55 / 59	0	1	0	1	48.8										
50 / 54	3	10	6	19	45.3	0		0	0	43.2					
45 / 49	17	35	28	80	42.4	2	2	2	6	40.8	0	1	0	1	38.2
40 / 44	36	49	44	129	38.8	4	7	4	15	37.6	3	4	2	9	36.6
35 / 39	56	58	59	173	34.2	15	19	17	51	34.0	9	10	12	31	34.0
30 / 34	65	50	59	174	29.9	31	41	40	112	29.9	28	28	28	84	30.2
25 / 29	34	23	27	84	25.1	45	48	43	136	25.3	42	49	45	137	25.5
20 / 24	17	11	12	40	20.4	42	43	42	127	20.7	46	42	42	131	20.7
15 / 19	11	6	7	24	15.5	39	37	36	112	15.8	37	38	39	114	16.1
10 / 14	7	3	5	15	10.9	25	24	27	76	11.1	27	25	25	77	11.1
5 / 9	2	1	1	4	6.8	18	10	16	44	6.3	18	21	20	59	6.2
0 / 4	0	0	0	0	1.9	11	8	8	27	1.4	16	15	15	46	1.2
-5 / -1		0		0	-2.0	4	2	3	9	-2.9	9	7	9	25	-3.1
-10 / -6						2	1	2	5	-7.0	8	5	6	19	-7.4
-15 / -11						0		0	0	-10.8	3	2	3	8	-12.0
-20 / -16											1	0	1	2	-16.6
-25 / -21											0	0		0	-20.2
-30 / -26															

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

Period of Record = 1973 to 1996

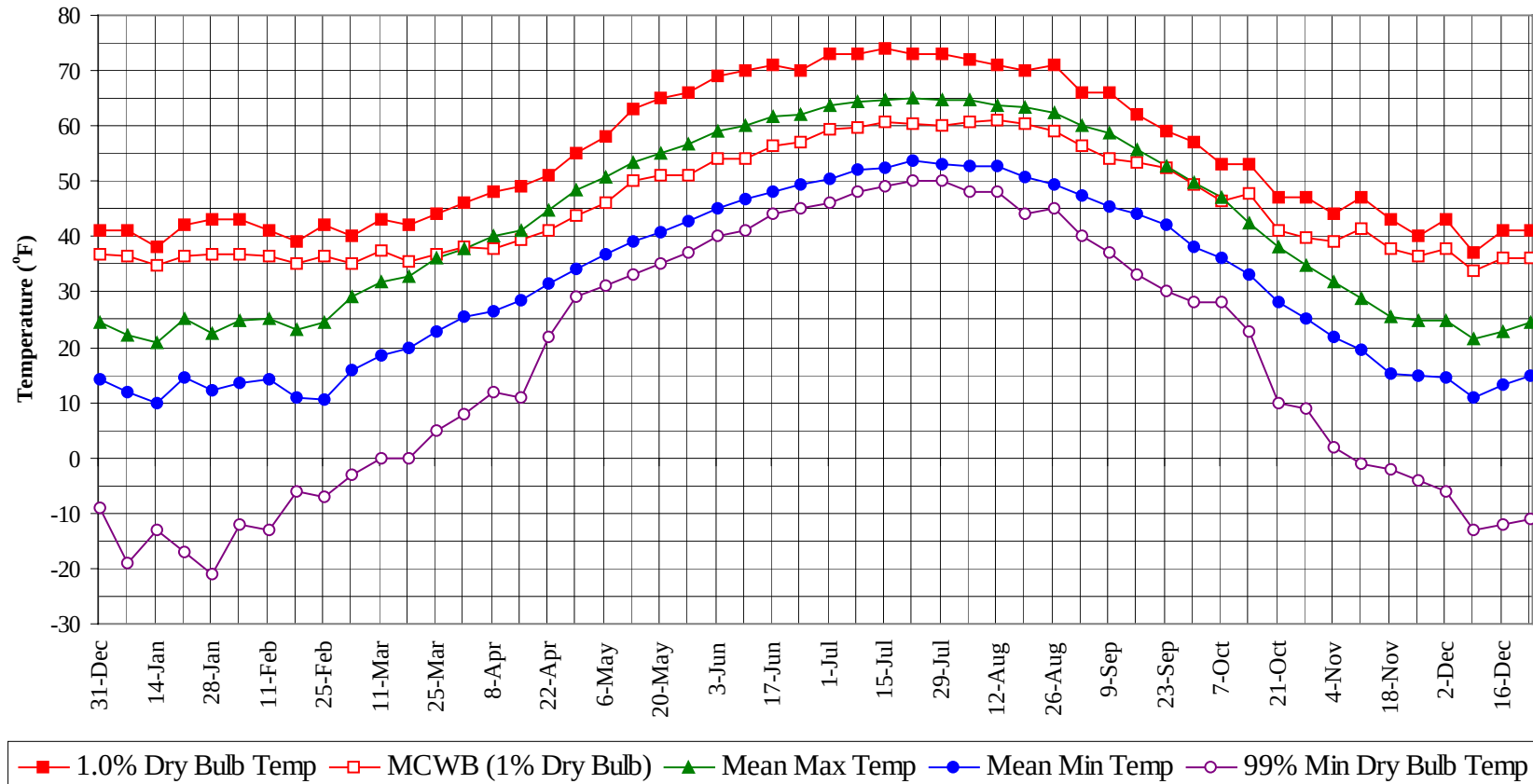
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
80 / 84		0	0	0	65.8
75 / 79		4	3	7	61.3
70 / 74		25	20	45	58.7
65 / 69	2	101	72	175	56.4
60 / 64	41	256	199	495	54.0
55 / 59	255	357	343	955	51.4
50 / 54	383	302	316	1001	47.6
45 / 49	306	231	250	788	42.8
40 / 44	245	209	214	669	38.0
35 / 39	269	242	265	777	33.6
30 / 34	335	282	302	919	29.7
25 / 29	289	255	251	795	25.1
20 / 24	229	201	200	630	20.5
15 / 19	180	164	159	503	15.7
10 / 14	129	111	120	360	10.8
5 / 9	97	76	86	259	6.0
0 / 4	76	55	56	187	1.2
-5 / -1	36	25	27	88	-3.0
-10 / -6	30	15	21	66	-7.2
-15 / -11	10	5	10	25	-11.9
-20 / -16	5	2	4	11	-16.7
-25 / -21	2	1	2	5	-21.7
-30 / -26	1	0	0	1	-26.2

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.

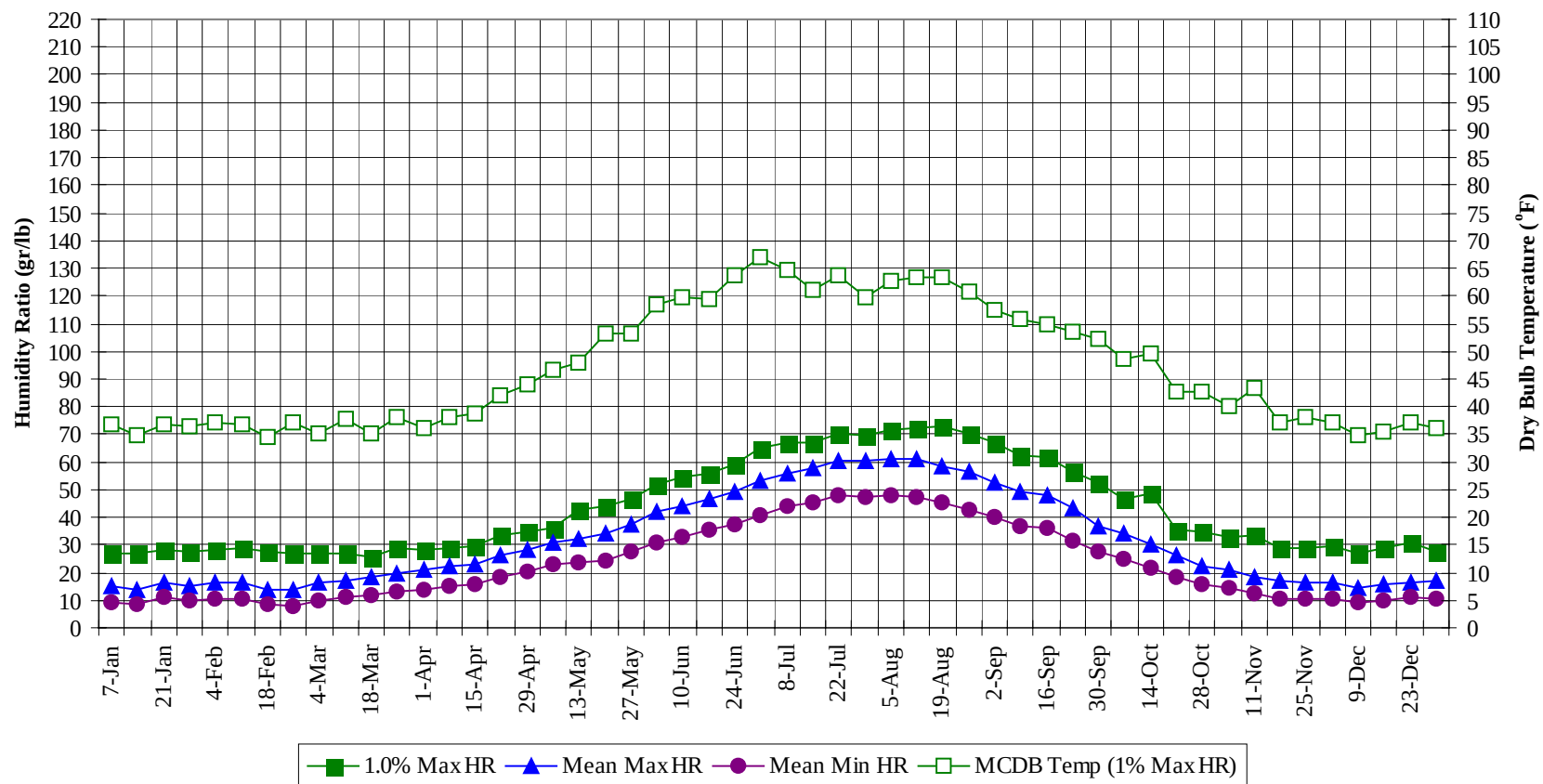
ANCHORAGE AK

WMO No. 702730

Annual Summary of Temperatures

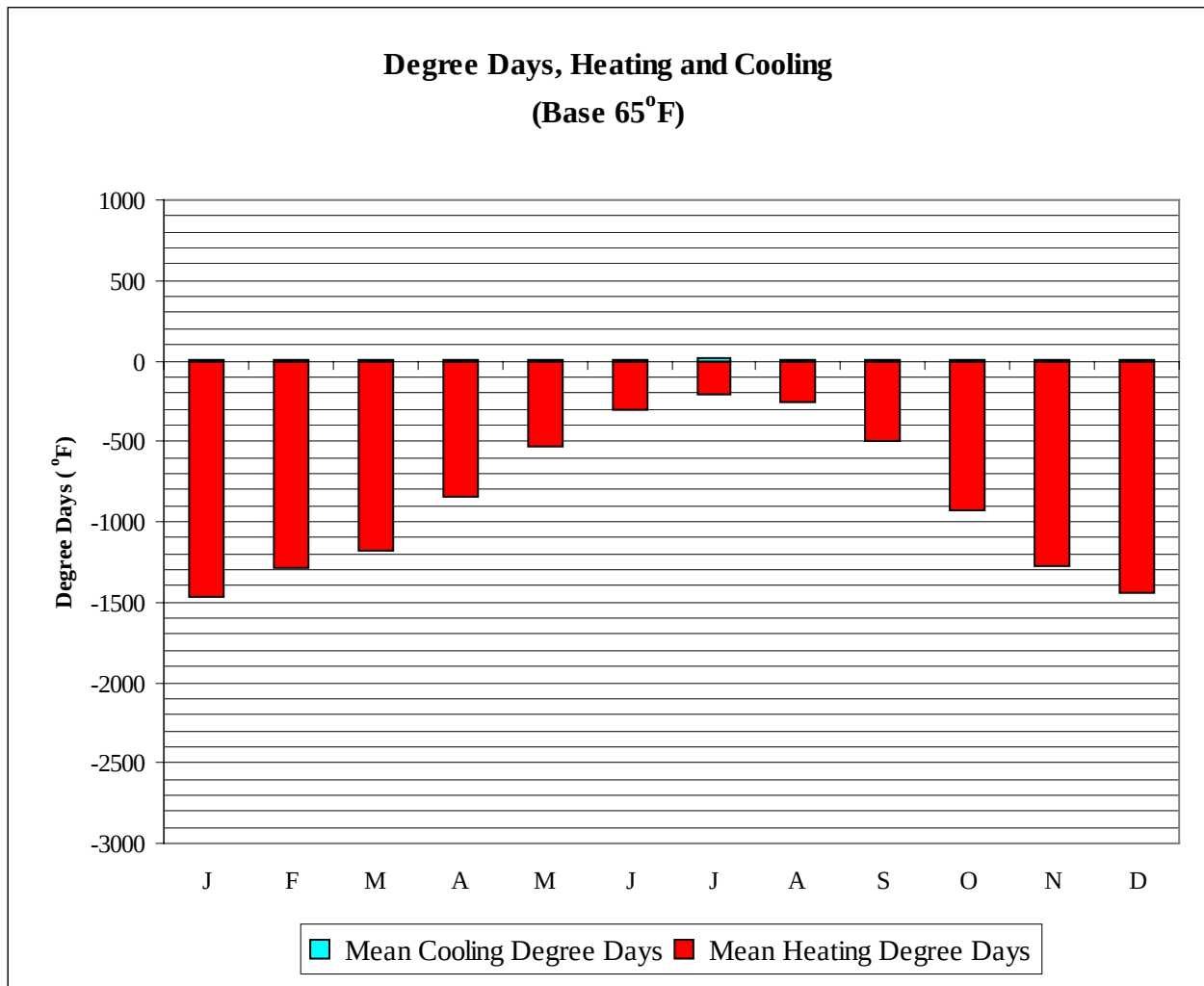


Long Term Humidity and Dry Bulb Temperature Summary



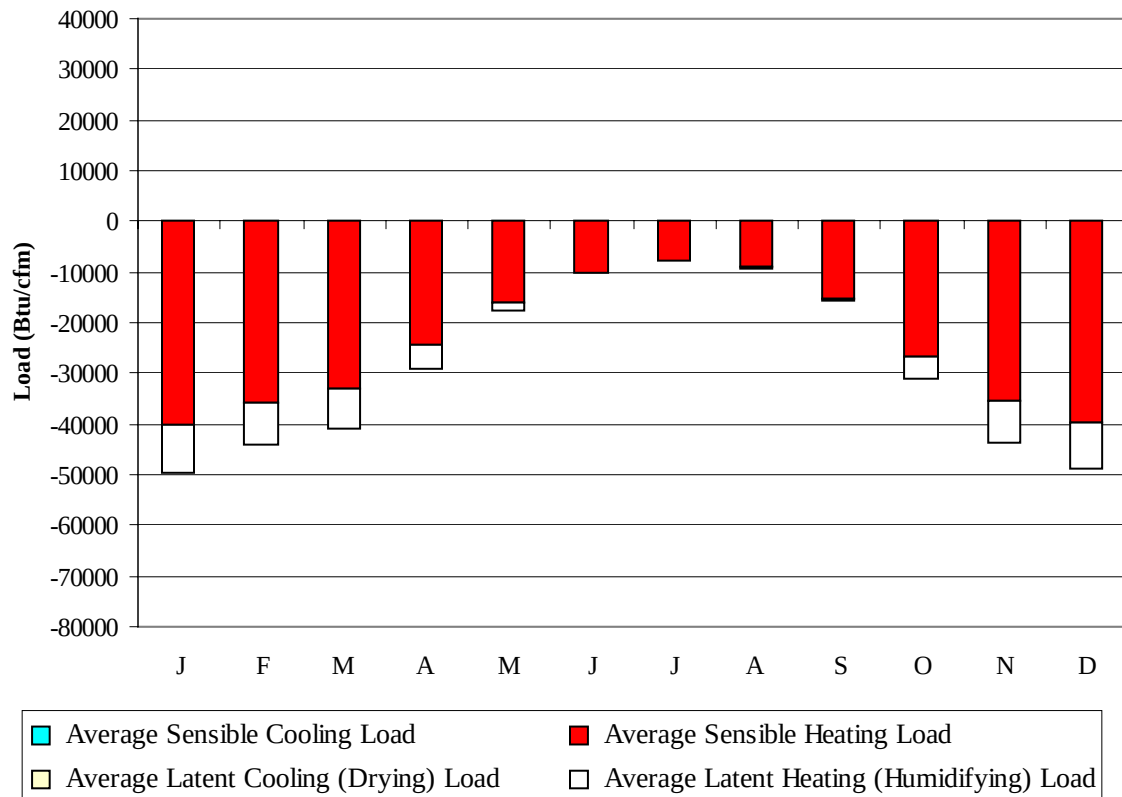
ANCHORAGE AK**WMO No. 702730****Long Term Dry Bulb Temperature and Humidity Summary**

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	41.0	36.5	22.1	11.8	-19.0	26.6	36.8	15.0	9.5
14-Jan	38.0	34.7	20.7	9.9	-13.0	26.6	35.0	13.7	8.5
21-Jan	42.0	36.3	25.1	14.4	-17.0	28.0	36.7	16.7	10.9
28-Jan	43.0	36.9	22.4	12.1	-21.0	27.3	36.6	15.2	10.1
4-Feb	43.0	36.9	24.7	13.7	-12.0	28.0	37.0	16.4	10.4
11-Feb	41.0	36.3	25.0	14.2	-13.0	28.7	36.9	16.1	10.7
18-Feb	39.0	35.0	23.3	10.9	-6.0	27.3	34.5	13.6	8.3
25-Feb	42.0	36.4	24.4	10.7	-7.0	26.6	37.1	13.6	8.1
4-Mar	40.0	35.2	29.1	15.8	-3.0	27.0	35.1	16.4	9.9
11-Mar	43.0	37.4	31.9	18.6	0.0	26.6	37.8	17.3	11.0
18-Mar	42.0	35.4	32.9	19.8	0.0	25.9	35.0	18.5	12.0
25-Mar	44.0	36.7	36.0	22.8	5.0	28.7	38.0	19.7	13.1
1-Apr	46.0	38.0	37.6	25.4	8.0	28.0	36.1	21.0	14.1
8-Apr	48.0	38.0	40.3	26.5	12.0	28.7	38.0	22.3	15.0
15-Apr	49.0	39.5	41.2	28.5	11.0	29.4	38.7	22.8	15.9
22-Apr	51.0	41.2	44.7	31.6	22.0	33.6	41.9	26.0	18.7
29-Apr	55.0	43.8	48.4	34.1	29.0	35.0	44.1	28.2	20.5
6-May	58.0	46.3	50.9	36.7	31.0	36.4	46.8	30.5	22.9
13-May	63.0	50.0	53.3	39.0	33.0	42.7	48.0	32.4	23.9
20-May	65.0	51.2	55.0	40.9	35.0	44.1	53.3	34.1	24.5
27-May	66.0	50.9	56.7	42.7	37.0	46.9	53.3	37.2	27.5
3-Jun	69.0	53.9	59.1	45.1	40.0	51.8	58.3	42.2	31.0
10-Jun	70.0	54.0	60.1	46.8	41.0	54.6	59.9	44.0	33.0
17-Jun	71.0	56.5	61.9	48.1	44.0	56.0	59.5	46.6	35.2
24-Jun	70.0	57.2	62.1	49.6	45.0	58.8	63.7	49.5	37.7
1-Jul	73.0	59.5	63.8	50.5	46.0	65.1	66.9	53.1	40.8
8-Jul	73.0	59.6	64.4	52.0	48.0	67.2	64.8	55.7	43.8
15-Jul	74.0	60.6	64.7	52.5	49.0	67.2	61.1	57.6	45.3
22-Jul	73.0	60.3	65.2	53.8	50.0	70.0	63.7	60.7	48.1
29-Jul	73.0	60.1	64.9	52.9	50.0	69.3	59.9	60.3	47.3
5-Aug	72.0	60.7	64.7	52.9	48.0	71.4	62.7	61.1	48.1
12-Aug	71.0	61.1	63.6	52.9	48.0	72.1	63.3	61.0	47.5
19-Aug	70.0	60.3	63.3	50.6	44.0	72.8	63.2	58.6	45.2
26-Aug	71.0	58.9	62.3	49.5	45.0	70.0	60.6	56.3	42.6
2-Sep	66.0	56.4	60.1	47.4	40.0	67.2	57.6	52.9	39.9
9-Sep	66.0	54.1	58.7	45.6	37.0	62.3	56.0	49.6	36.5
16-Sep	62.0	53.4	55.9	44.0	33.0	61.6	55.0	48.2	36.1
23-Sep	59.0	52.4	52.7	42.1	30.0	56.7	53.6	43.4	31.8
30-Sep	57.0	49.5	49.9	38.0	28.0	52.5	52.3	37.1	27.4
7-Oct	53.0	46.6	47.1	36.1	28.0	46.9	48.6	34.1	24.7
14-Oct	53.0	47.7	42.4	33.1	23.0	48.3	49.7	30.3	21.5
21-Oct	47.0	41.2	38.3	28.2	10.0	35.7	42.7	26.0	18.5
28-Oct	47.0	39.9	34.8	25.3	9.0	35.0	42.6	22.6	16.0
4-Nov	44.0	39.0	31.7	21.7	2.0	32.9	40.0	20.8	14.5
11-Nov	47.0	41.4	28.9	19.7	-1.0	33.6	43.5	18.6	12.5
18-Nov	43.0	37.9	25.5	15.2	-2.0	28.7	37.1	16.9	10.7
25-Nov	40.0	36.4	24.7	14.9	-4.0	28.7	38.1	16.3	10.5
2-Dec	43.0	37.7	24.8	14.5	-6.0	29.4	37.2	16.2	10.4
9-Dec	37.0	33.9	21.4	10.9	-13.0	26.6	34.7	14.5	9.0
16-Dec	41.0	36.2	22.8	13.4	-12.0	28.7	35.5	15.6	10.1
23-Dec	41.0	36.2	24.4	14.8	-11.0	30.8	37.2	16.7	10.8
31-Dec	41.0	36.8	24.6	14.2	-9.0	27.3	36.3	16.9	10.8



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1462
FEB	0	1292
MAR	0	1174
APR	0	842
MAY	1	534
JUN	6	305
JUL	12	207
AUG	6	263
SEP	0	492
OCT	0	933
NOV	0	1281
DEC	0	1438
ANN	26	10223

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	-40312	0	-9209
FEB	0	-35698	0	-8504
MAR	0	-32832	0	-7897
APR	0	-24156	0	-4822
MAY	0	-16239	0	-1532
JUN	1	-10131	0	-85
JUL	5	-7581	0	-2
AUG	4	-9127	1	-65
SEP	0	-15077	0	-703
OCT	0	-26605	0	-4289
NOV	0	-35543	0	-7981
DEC	0	-39680	0	-9012
ANN	10	-292981	1	-54101

Average Annual Solar Radiation – Nearest Available Site

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

City: ANCHORAGE
 State: AK
 WBAN No: 26451
 Lat(N): 61.17
 Long(W): 150.02
 Elev(ft): 115

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.154
 Vert Gap: 0.2

AVERAGE INCIDENT SOLAR RADIATION (Btu/sq.ft./day), Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Global	90	300	720	1150	1440	1560	1470	1120	710	350	130	49	760
	Std Dev	10	41	65	115	129	149	134	105	70	31	15	6	25
	Minimum	70	230	550	1000	1190	1310	1160	920	580	280	110	38	710
	Maximum	110	400	830	1420	1660	1890	1700	1320	820	430	160	57	800
	Diffuse	66	190	410	600	750	850	800	630	410	230	92	39	420
Clear Day	Global	110	370	910	1640	2210	2490	2330	1790	1110	500	160	60	1150
NORTH	Global	38	110	240	370	510	600	550	390	240	130	53	22	270
	Diffuse	38	110	240	360	460	520	490	370	240	130	53	22	250
Clear Day	Global	38	100	210	370	630	840	730	430	240	120	51	25	320
EAST	Global	81	240	540	800	930	940	870	710	490	260	110	44	500
	Diffuse	49	140	310	460	550	600	560	450	300	160	69	27	310
Clear Day	Global	140	400	830	1310	1610	1740	1650	1370	950	500	190	82	900
SOUTH	Global	310	660	1040	1120	1060	1010	990	930	810	600	380	190	760
	Diffuse	110	250	420	530	580	620	590	490	360	240	140	70	370
Clear Day	Global	690	1340	1840	1910	1750	1660	1670	1770	1800	1470	840	470	1440
WEST	Global	82	250	540	790	920	980	950	740	500	270	120	44	520
	Diffuse	49	150	310	460	550	610	580	450	300	160	69	28	310
Clear Day	Global	140	400	830	1310	1610	1740	1650	1370	950	500	190	82	900

Average Annual Solar Heat and Illumination – Nearest Available Site

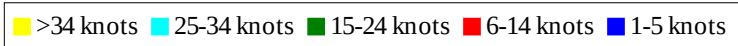
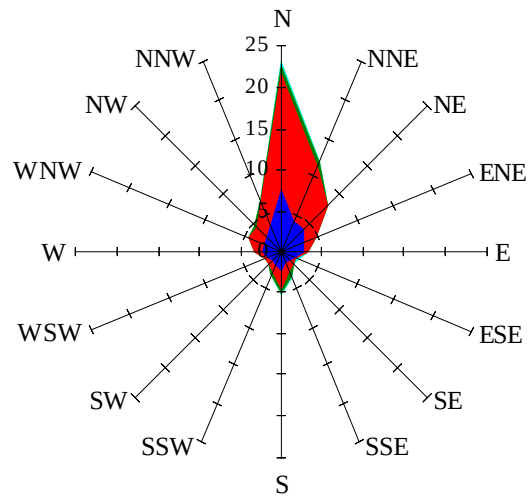
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	51	180	460	790	1020	1110	1040	780	470	220	75	28	520
	NORTH	Unshaded	26	76	160	250	350	410	370	270	170	91	37	15
	Shaded	25	74	160	250	340	400	360	260	160	89	36	15	180
EAST	Unshaded	51	170	380	570	670	670	620	500	340	180	73	27	350
	Shaded	50	160	370	560	650	650	610	490	340	180	72	26	350
SOUTH	Unshaded	240	500	770	800	730	690	680	650	590	450	290	150	540
	Shaded	240	500	760	790	720	670	660	640	580	440	290	150	540
WEST	Unshaded	52	170	380	560	660	700	680	530	350	180	76	27	360
	Shaded	51	170	370	550	640	680	660	520	350	180	75	26	360

AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9											
		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	9	31	45	42	24	34	59	76	80	68
	M.Cloudy	7	21	31	29	17	20	35	47	50	43
NORTH	M.Clear	4	9	11	10	7	15	13	15	15	14
	M.Cloudy	3	9	12	11	7	10	13	16	16	14
EAST	M.Clear	30	54	25	10	7	70	76	48	15	14
	M.Cloudy	9	23	17	11	7	24	34	28	16	14
SOUTH	M.Clear	13	57	85	79	43	9	39	67	74	55
	M.Cloudy	5	24	37	34	17	8	22	36	40	31
WEST	M.Clear	4	9	11	39	54	9	13	15	26	64
	M.Cloudy	3	9	12	21	20	8	13	16	21	35
M.Clear	(% hrs)	30	29	30	31	29	14	17	17	18	18
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	7	30	48	51	39	0	0	6	4	0
	M.Cloudy	4	16	26	28	21	0	0	5	3	0
NORTH	M.Clear	3	8	11	11	10	0	0	3	2	0
	M.Cloudy	2	7	10	11	8	0	0	2	1	0
EAST	M.Clear	27	59	41	11	10	0	0	6	2	0
	M.Cloudy	6	18	18	11	8	0	0	3	1	0
SOUTH	M.Clear	5	42	75	83	58	0	0	28	16	0
	M.Cloudy	2	14	27	30	20	0	0	7	4	0
WEST	M.Clear	3	8	11	24	56	0	0	3	8	0
	M.Cloudy	2	7	10	14	19	0	0	2	2	0
M.Clear	(% hrs)	18	18	20	20	21	27	24	24	24	26

Wind Summary - December, January, and February

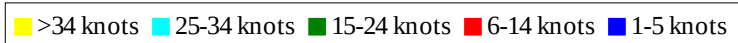
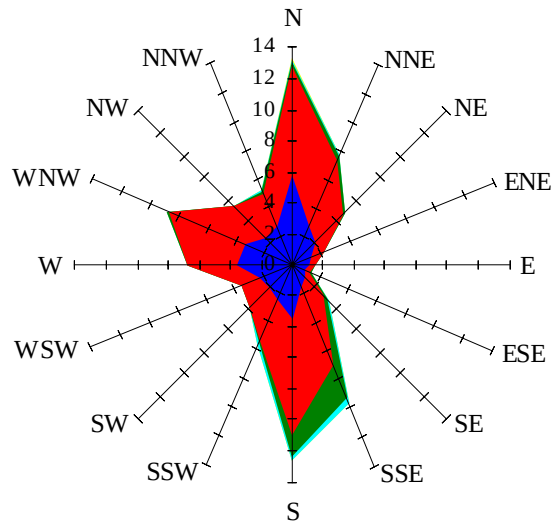
Labels of Percent Frequency on North Axis



Percent Calm = 11.12

Wind Summary - March, April, and May

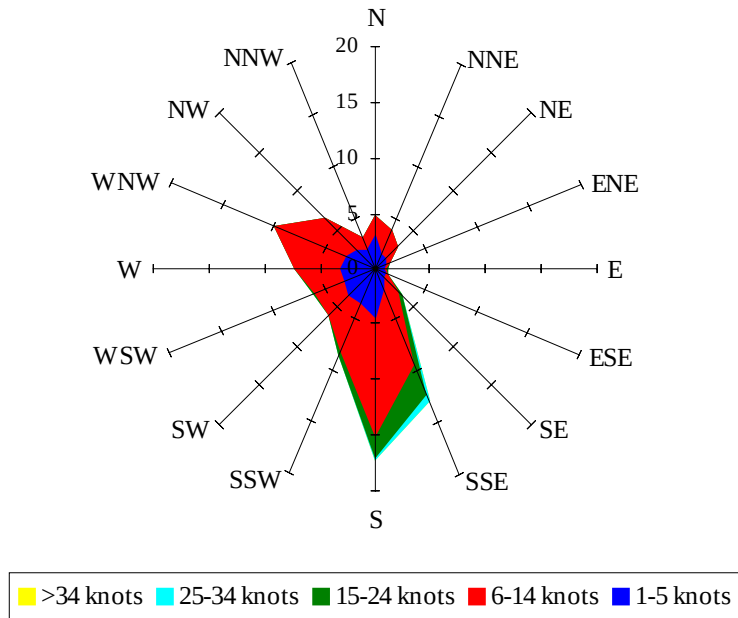
Labels of Percent Frequency on North Axis



Percent Calm = 6.32

Wind Summary - June, July, and August

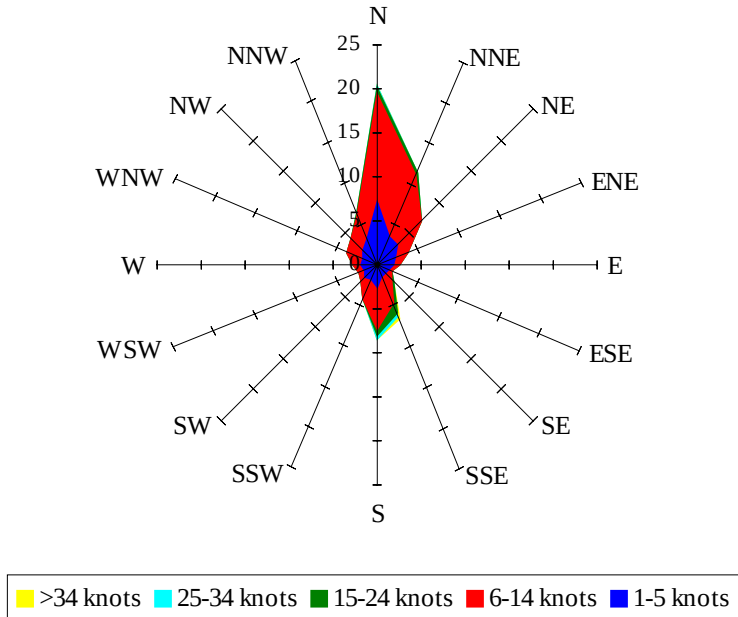
Labels of Percent Frequency on North Axis



Percent Calm = 5.38

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 9.29