

BECKLEY MEMORIAL WV

Latitude = 37.78 N

WMO No. 724120

Longitude = 81.12 W

Elevation = 2513 feet

Period of Record = 1973 to 1996

Average Pressure = 27.43 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	88	70	90	8.6	N
0.4% Occurrence	85	70	95	8.7	W
1.0% Occurrence	82	69	94	8.5	W
2.0% Occurrence	80	68	92	8.5	W
Mean Daily Range	17	-	-	-	-
97.5% Occurrence	15	14	9	9.5	WNW
99.0% Occurrence	8	7	7	9.2	WNW
99.6% Occurrence	3	2	5	8.5	WNW
Median of Extreme Lows	-2	-2	4	9.3	W
	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	83	124	8.9	W
0.4% Occurrence	72	80	112	8.1	W
1.0% Occurrence	71	79	109	7.9	W
2.0% Occurrence	70	77	106	7.7	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	129	79	0.79	7.3	W
0.4% Occurrence	118	75	0.72	7.6	W
1.0% Occurrence	113	74	0.69	7.0	WSW
2.0% Occurrence	109	73	0.67	6.8	WSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	234	23	775

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
7	2.5	90	1.0 + 0.2
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 (#)
54.1	N/A	30	49

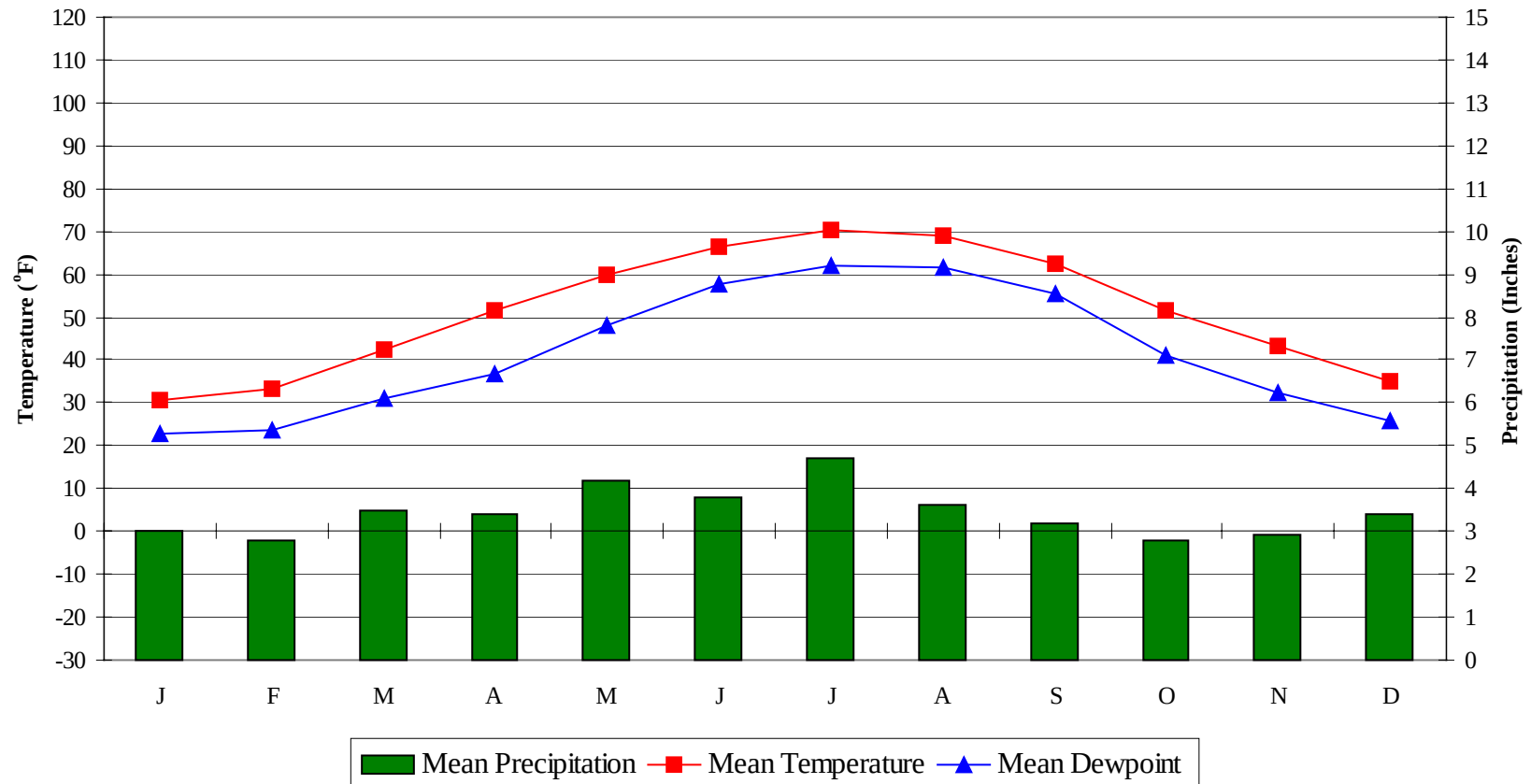
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

BECKLEY MEMORIAL

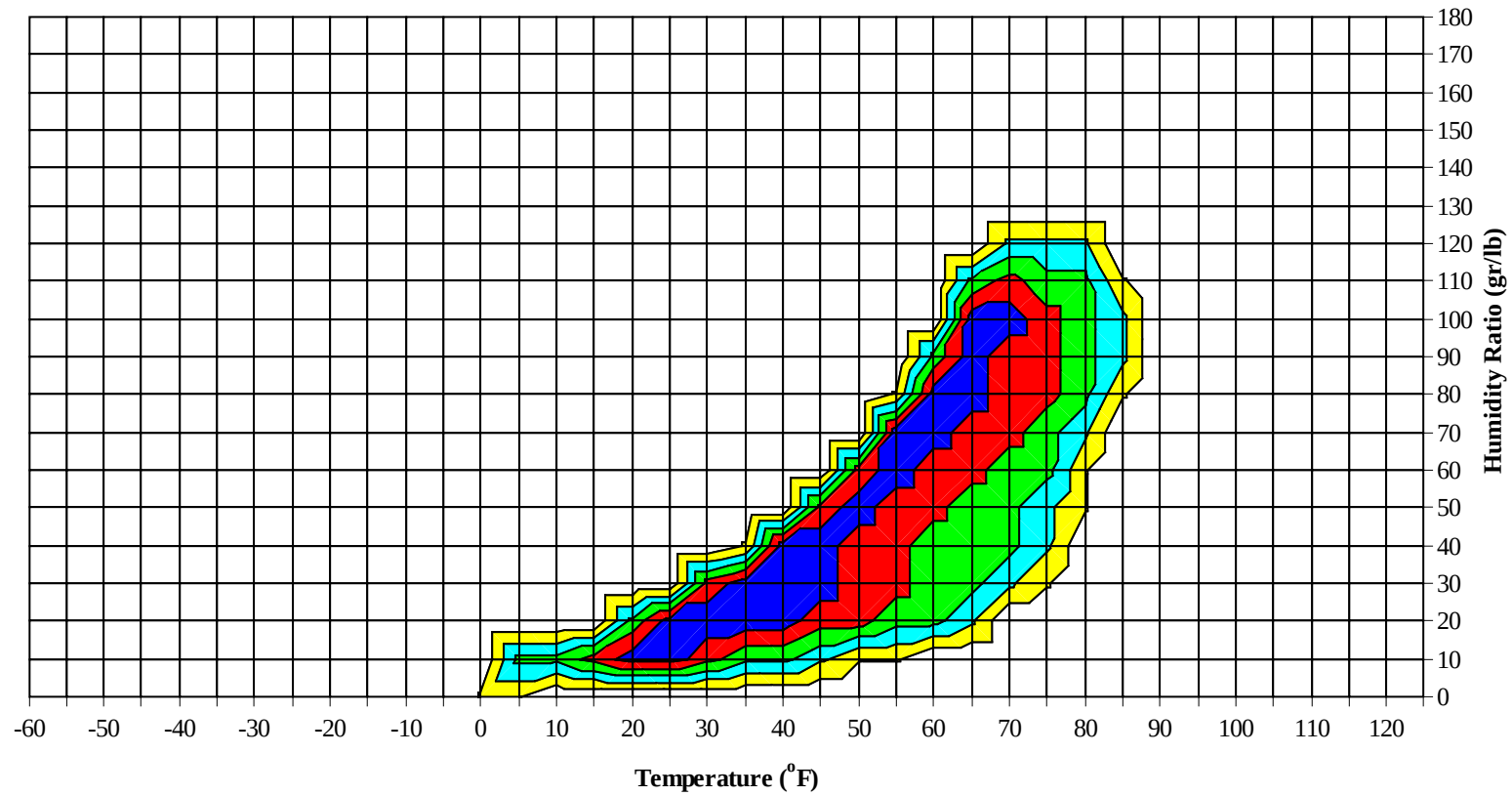
WV

WMO No. 724120

Average Annual Climate

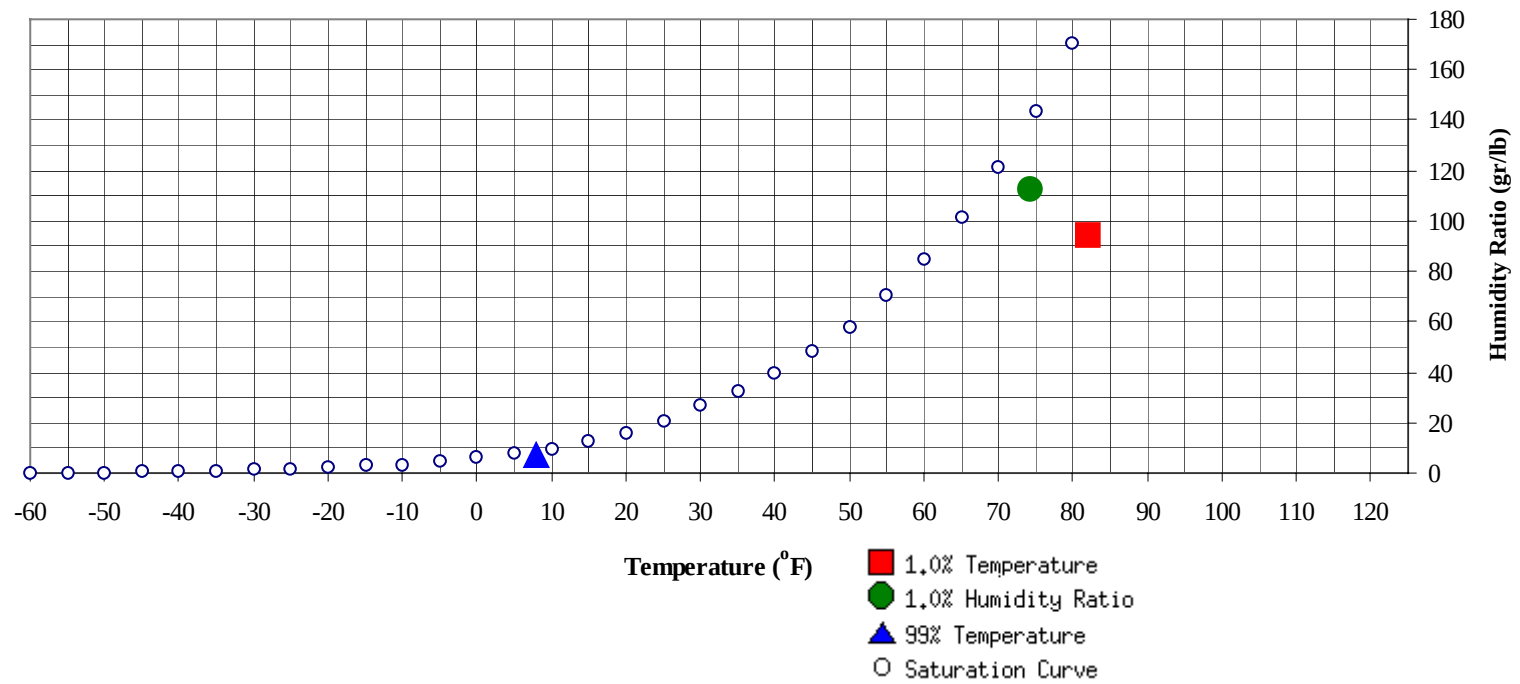


Long Term Psychrometric Summary



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

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)
	8	6.9	3.0		112.7	74.3	69.9	68	35.4

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	82	94.2	68.9	34.4

BECKLEY MEMORIAL
WV
WMO No. 724120
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		
95 / 99															
90 / 94															
85 / 89															
80 / 84															
75 / 79												1	1	2	57.0
70 / 74							0	0	0	53.1		8	3	11	54.8
65 / 69		0		0	54.0		2	0	2	53.4		15	8	23	53.2
60 / 64	0	3	0	3	51.7	1	7	4	12	49.9	7	21	16	44	51.7
55 / 59	2	8	5	15	49.4	4	13	10	27	48.6	16	27	26	69	49.2
50 / 54	6	16	12	34	46.4	13	20	19	52	46.1	26	30	31	87	45.7
45 / 49	15	24	20	59	42.1	17	22	21	60	41.4	31	34	34	99	41.6
40 / 44	24	29	29	82	38.2	21	26	26	73	37.2	34	31	33	98	37.9
35 / 39	30	33	36	99	33.9	28	25	28	81	33.0	36	27	30	93	33.5
30 / 34	41	41	40	122	29.4	35	34	34	103	29.1	35	28	32	95	29.4
25 / 29	45	32	39	116	24.9	33	28	29	90	24.6	32	17	21	70	24.8
20 / 24	24	25	21	70	20.3	23	18	20	61	20.2	17	7	8	32	20.3
15 / 19	22	16	20	58	15.6	18	13	15	46	15.2	7	3	3	13	16.0
10 / 14	14	11	12	37	10.8	12	8	11	31	10.7	3	1	1	5	10.7
5 / 9	10	5	8	23	6.2	12	4	5	21	6.4	2	1	1	4	6.4
0 / 4	8	3	4	15	1.3	6	1	1	8	1.5	1	0	0	1	2.9
-5 / -1	3	1	1	5	-3.0	1	0	0	1	-2.9	0			0	-4.0
-10 / -6	2	1	1	4	-7.7	1	0	0	1	-7.4					
-15 / -11	1	0	1	2	-12.1	0		0	0	-11.5					
-20 / -16	1	0		1	-16.6	0			0	-15.0					
-25 / -21	0			0	-20.0										

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.

BECKLEY MEMORIAL
WV
WMO No. 724120
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		
95 / 99															
90 / 94															
85 / 89		0		0	59.0		1	0	1	68.0		2	1	3	69.2
80 / 84		2	1	3	59.2		10	2	12	64.7		29	7	36	68.1
75 / 79		12	5	17	58.1		31	12	43	62.6	1	62	25	88	66.3
70 / 74	0	25	12	37	56.4	2	48	25	75	60.3	12	69	50	131	64.3
65 / 69	4	34	23	61	54.1	18	46	42	106	58.4	60	47	69	175	62.4
60 / 64	23	33	32	88	52.3	53	44	56	153	56.2	86	21	52	159	59.1
55 / 59	36	32	42	110	49.5	59	29	41	129	52.5	43	8	23	74	54.2
50 / 54	35	30	32	97	45.1	42	21	33	96	47.9	25	3	9	37	49.9
45 / 49	36	26	29	91	41.4	35	13	21	69	43.7	9	0	3	12	45.6
40 / 44	32	20	26	78	37.5	24	5	11	40	40.0	4		0	4	41.1
35 / 39	32	15	20	67	34.0	11	0	3	14	34.9	1			1	37.2
30 / 34	23	9	14	46	29.6	4	0	0	4	30.5					
25 / 29	13	3	4	20	25.2	0			0	27.8					
20 / 24	4	1	1	6	20.9										
15 / 19	0			0	14.7										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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BECKLEY MEMORIAL
WV
WMO No. 724120
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		
95 / 99						0			0	70.0					
90 / 94		1	0	1	69.2	1	0		1	69.4					
85 / 89		14	4	18	70.4	10	2		12	70.1		1	0	1	68.1
80 / 84		53	17	70	69.4	0	45	12	57	69.2		11	2	13	68.5
75 / 79	3	79	40	123	67.7	1	75	30	106	67.6	0	40	9	49	66.1
70 / 74	35	65	72	172	66.3	22	69	67	158	65.9	3	55	27	85	64.3
65 / 69	108	29	77	213	64.3	98	34	82	214	64.0	41	55	58	154	62.6
60 / 64	67	7	30	104	60.3	80	12	41	133	60.2	68	41	61	169	59.1
55 / 59	24	0	7	31	55.7	34	2	10	46	56.0	52	22	42	116	54.5
50 / 54	9		1	10	51.0	11	0	3	14	51.4	38	11	24	73	49.9
45 / 49	2		0	2	46.4	3		0	3	46.9	22	3	12	37	45.4
40 / 44	0			0	42.8	0			0	43.3	12	1	4	17	41.2
35 / 39											4	0	1	5	36.3
30 / 34											1		0	1	32.3
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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BECKLEY MEMORIAL
WV
WMO No. 724120
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		
95 / 99															
90 / 94															
85 / 89															
80 / 84															
75 / 79		4	1	5	61.9		1		1	57.7					
70 / 74	0	24	5	29	58.6		6	1	7	57.2		0		0	58.8
65 / 69	2	38	15	55	56.2	0	15	4	19	54.7	0	2	0	2	57.2
60 / 64	19	45	35	98	54.9	6	26	14	46	53.6	1	7	2	10	54.1
55 / 59	36	39	44	120	51.5	22	30	30	82	50.3	7	14	11	32	51.3
50 / 54	45	36	44	126	47.0	28	30	33	91	46.1	12	21	18	51	47.0
45 / 49	41	27	41	109	42.7	29	29	30	88	41.4	19	31	26	76	41.6
40 / 44	42	21	31	94	38.9	35	29	33	97	37.1	25	34	31	90	37.3
35 / 39	33	9	22	64	35.0	33	29	33	95	33.2	33	34	37	104	33.4
30 / 34	21	3	9	33	30.6	33	27	32	92	29.3	49	38	45	132	29.2
25 / 29	8	0	2	10	26.0	30	13	22	65	25.2	37	31	34	102	25.0
20 / 24	1		0	1	22.4	16	4	6	26	20.8	27	17	18	62	20.3
15 / 19	0			0	18.3	5	1	2	8	16.4	15	12	14	41	15.6
10 / 14						1	0	1	2	11.6	11	4	8	23	10.8
5 / 9						0	0	0	0	7.2	6	2	3	11	6.5
0 / 4											3	1	1	5	1.4
-5 / -1											0	0	0	0	-2.4
-10 / -6											0	0	0	0	-7.1
-15 / -11											1	0	0	1	-11.7
-20 / -16															
-25 / -21															

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BECKLEY MEMORIAL**WV**

WMO No. 724120

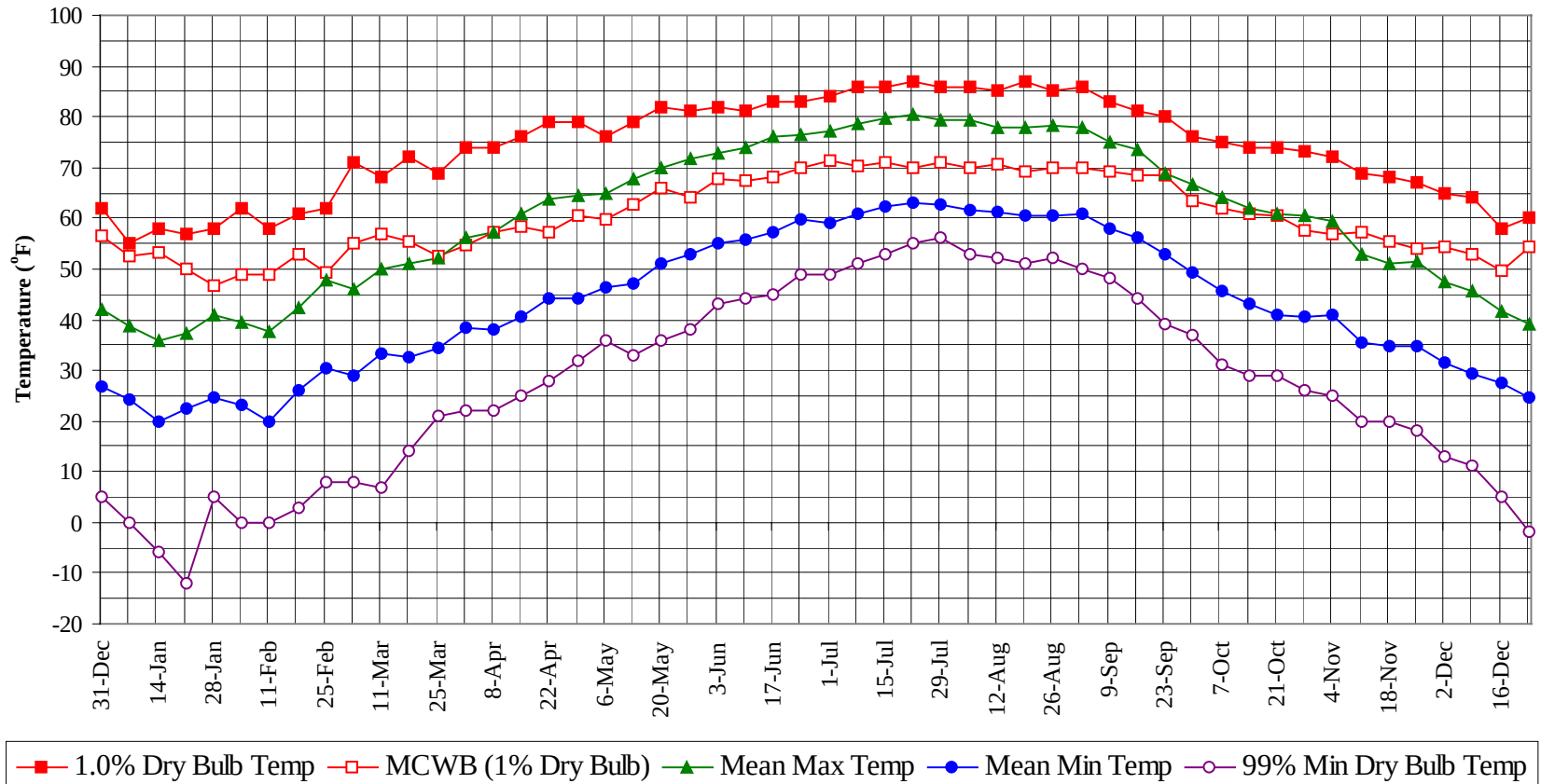
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

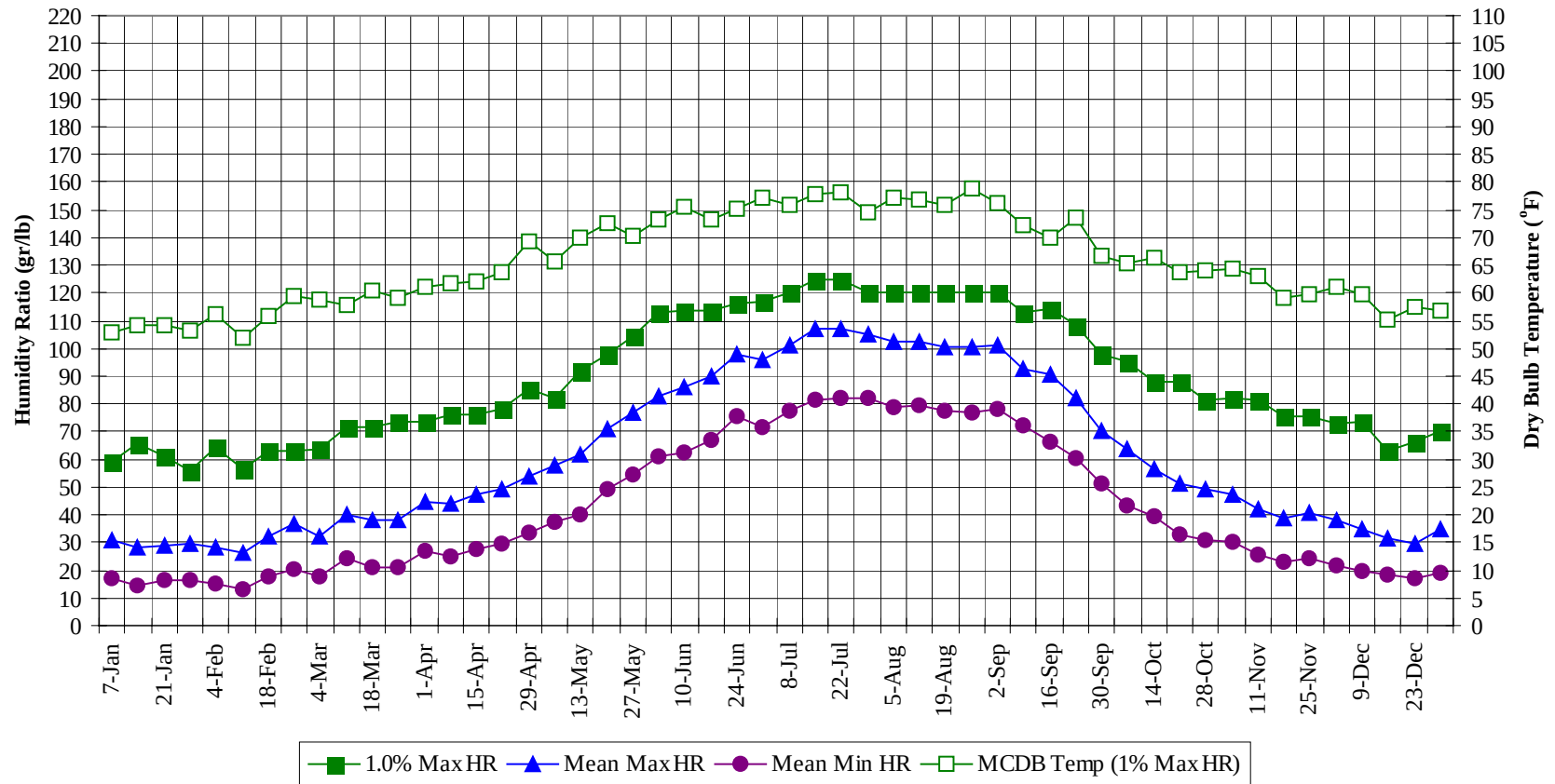
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		0		0	70.0
90 / 94		2	1	3	69.3
85 / 89		28	7	35	70.0
80 / 84	0	154	42	196	68.6
75 / 79	6	311	124	441	66.2
70 / 74	77	374	266	717	63.9
65 / 69	342	320	383	1045	61.6
60 / 64	418	264	347	1029	57.2
55 / 59	337	223	290	850	52.0
50 / 54	290	214	257	761	47.1
45 / 49	257	208	235	700	42.3
40 / 44	251	194	221	666	38.0
35 / 39	236	169	208	613	33.7
30 / 34	237	177	202	616	29.4
25 / 29	195	123	148	466	25.0
20 / 24	111	71	74	256	20.4
15 / 19	67	44	53	164	15.6
10 / 14	41	25	32	98	10.8
5 / 9	30	12	18	60	6.4
0 / 4	18	5	6	29	1.4
-5 / -1	4	2	2	8	-2.9
-10 / -6	3	1	1	5	-7.6
-15 / -11	2	1	1	4	-11.9
-20 / -16	1	0		1	-16.5
-25 / -21	0			0	-20.0

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Annual Summary of Temperatures

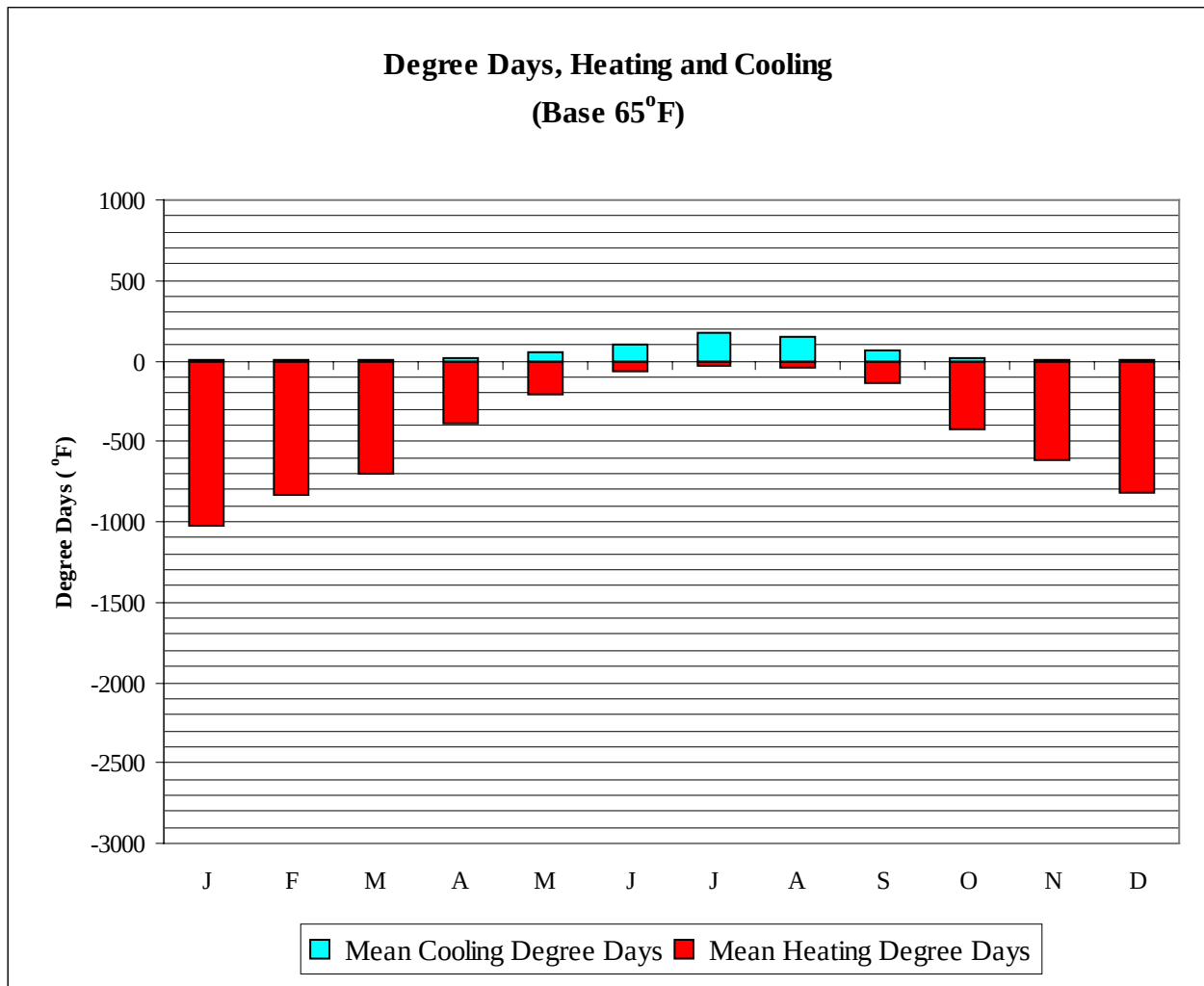


Long Term Humidity and Dry Bulb Temperature Summary



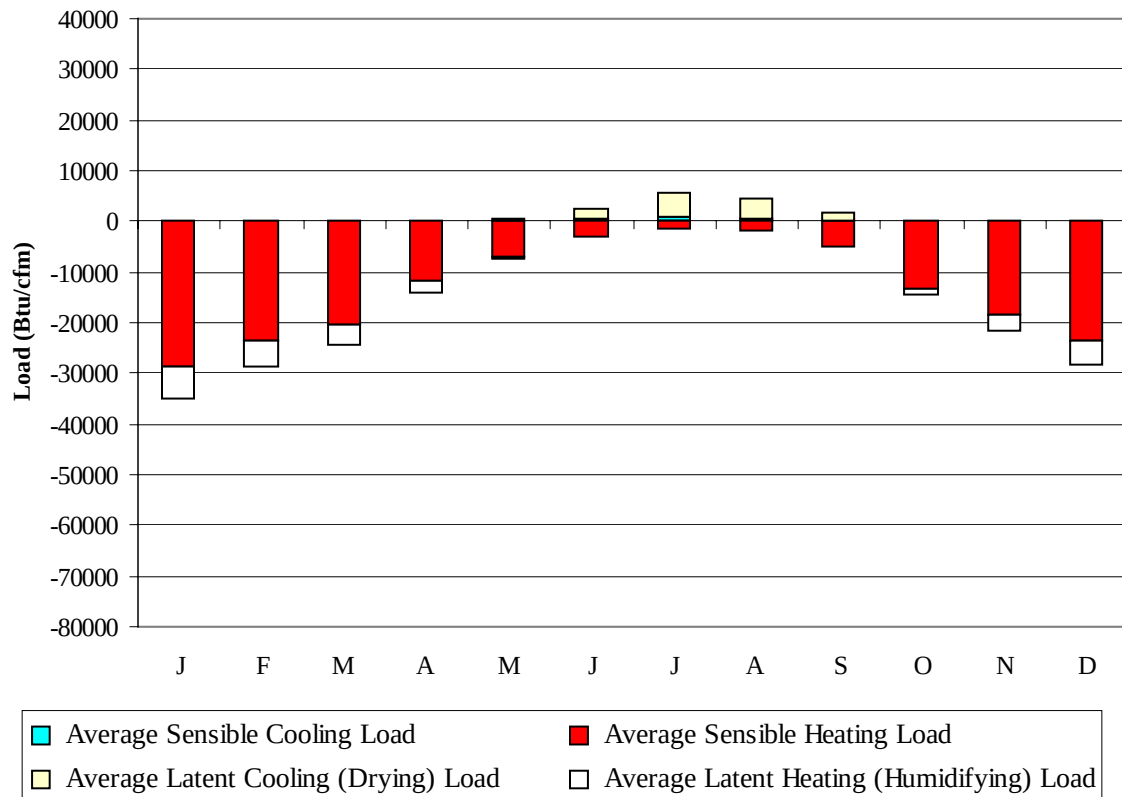
BECKLEY MEMORIAL**WV****WMO No. 724120****Long Term Dry Bulb Temperature and Humidity Summary**

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	55.0	52.3	38.6	24.1	0.0	58.8	52.9	30.6	17.2
14-Jan	58.0	53.1	36.0	20.0	-6.0	65.8	54.3	28.0	14.4
21-Jan	57.0	50.0	37.2	22.3	-12.0	60.9	54.1	28.6	16.5
28-Jan	58.0	46.9	40.8	24.8	5.0	56.0	53.3	29.4	16.7
4-Feb	62.0	48.8	39.6	23.0	0.0	64.4	56.2	28.6	15.4
11-Feb	58.0	48.7	37.6	19.8	0.0	56.7	51.8	26.0	13.3
18-Feb	61.0	52.9	42.4	26.0	3.0	63.0	55.8	32.5	17.9
25-Feb	62.0	49.3	47.6	30.4	8.0	63.0	59.5	37.0	20.6
4-Mar	71.0	55.2	45.9	28.9	8.0	63.7	58.6	31.9	18.0
11-Mar	68.0	56.9	50.1	33.4	7.0	71.4	57.8	40.0	24.6
18-Mar	72.0	55.3	51.0	32.6	14.0	71.4	60.4	38.4	20.8
25-Mar	69.0	52.3	52.1	34.3	21.0	73.5	59.2	38.3	21.1
1-Apr	74.0	54.7	56.1	38.4	22.0	73.5	61.0	44.8	26.9
8-Apr	74.0	57.1	57.3	37.9	22.0	76.3	61.6	44.3	24.9
15-Apr	76.0	58.4	61.0	40.6	25.0	76.3	62.1	47.4	27.3
22-Apr	79.0	57.4	63.9	44.2	28.0	78.4	63.6	49.2	29.3
29-Apr	79.0	60.5	64.5	44.3	32.0	85.4	69.4	53.6	33.3
6-May	76.0	59.9	65.0	46.4	36.0	81.9	65.7	57.9	37.3
13-May	79.0	62.5	67.6	47.0	33.0	91.7	70.0	61.7	40.2
20-May	82.0	65.8	69.8	51.2	36.0	98.0	72.4	71.2	49.4
27-May	81.0	64.1	71.9	53.0	38.0	104.3	70.1	76.7	54.8
3-Jun	82.0	67.6	72.7	55.2	43.0	112.7	73.2	83.0	61.0
10-Jun	81.0	67.4	74.1	55.8	44.0	113.4	75.6	86.2	62.6
17-Jun	83.0	67.9	76.1	57.1	45.0	113.4	73.2	89.9	67.0
24-Jun	83.0	70.0	76.5	59.6	49.0	116.2	75.3	97.8	75.3
1-Jul	84.0	71.3	77.1	59.0	49.0	116.9	77.2	96.0	71.7
8-Jul	86.0	70.1	78.7	60.7	51.0	120.4	75.9	100.9	77.3
15-Jul	86.0	71.0	79.6	62.3	53.0	124.6	77.8	106.9	81.5
22-Jul	87.0	69.8	80.4	62.8	55.0	124.6	78.1	107.1	82.2
29-Jul	86.0	71.0	79.2	62.6	56.0	120.4	74.6	104.9	82.0
5-Aug	86.0	69.7	79.4	61.6	53.0	120.4	77.2	102.2	78.8
12-Aug	85.0	70.5	78.0	61.2	52.0	120.4	76.9	102.4	79.6
19-Aug	87.0	69.3	77.9	60.4	51.0	120.4	75.8	100.5	77.6
26-Aug	85.0	70.1	78.4	60.5	52.0	120.4	78.8	100.4	76.9
2-Sep	86.0	69.9	78.0	60.8	50.0	120.4	76.2	101.1	78.4
9-Sep	83.0	69.2	74.8	58.0	48.0	112.7	72.3	92.9	72.0
16-Sep	81.0	68.3	73.6	56.0	44.0	114.1	70.0	90.5	66.5
23-Sep	80.0	68.5	68.9	52.7	39.0	108.5	73.4	82.2	60.2
30-Sep	76.0	63.5	66.6	49.1	37.0	98.0	66.5	70.3	51.1
7-Oct	75.0	61.8	64.0	45.5	31.0	95.2	65.3	63.7	43.6
14-Oct	74.0	60.8	61.9	43.1	29.0	88.2	66.2	56.8	39.2
21-Oct	74.0	60.4	60.8	40.8	29.0	88.2	63.8	51.5	32.8
28-Oct	73.0	57.5	60.5	40.7	26.0	81.2	64.0	49.0	31.1
4-Nov	72.0	56.8	59.4	40.8	25.0	81.9	64.4	47.2	30.4
11-Nov	69.0	57.3	52.7	35.6	20.0	81.2	63.2	41.9	25.3
18-Nov	68.0	55.4	50.9	34.8	20.0	75.6	59.0	38.8	23.1
25-Nov	67.0	54.1	51.3	34.9	18.0	75.6	59.7	40.5	24.6
2-Dec	65.0	54.4	47.5	31.5	13.0	72.8	61.1	38.0	21.5
9-Dec	64.0	53.0	45.5	29.5	11.0	73.5	59.6	35.1	19.9
16-Dec	58.0	49.7	41.8	27.5	5.0	63.0	55.0	31.4	18.2
23-Dec	60.0	54.5	38.9	24.5	-2.0	66.5	57.5	29.8	16.9
31-Dec	62.0	56.6	42.1	26.8	5.0	70.0	56.9	34.8	19.2



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1024
FEB	0	828
MAR	4	699
APR	20	387
MAY	49	205
JUN	104	71
JUL	168	27
AUG	144	36
SEP	60	140
OCT	12	431
NOV	3	622
DEC	0	821
ANN	565	5291

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	-28856	0	-6232
FEB	0	-23486	0	-5341
MAR	2	-20454	0	-3955
APR	44	-11906	6	-2098
MAY	150	-6960	267	-357
JUN	400	-2966	2000	-8
JUL	954	-1445	4899	0
AUG	712	-1809	3823	0
SEP	174	-5125	1517	-29
OCT	6	-13369	42	-1257
NOV	1	-18309	2	-3422
DEC	0	-23399	0	-4953
ANN	2443	-158084	12556	-27652

Average Annual Solar Radiation – Nearest Available Site

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

City: CHARLESTON
 State: WV
 WBAN No: 13866
 Lat(N): 38.37
 Long(W): 81.6
 Elev(ft): 951

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.487
 Vert Gap: 0.312

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	620	850	1180	1510	1780	1910	1840	1670	1370	1040	680	530	1250
	Std Dev	46	79	99	152	141	125	123	99	88	76	77	42	49
	Minimum	550	700	970	1160	1530	1680	1480	1490	1210	890	530	460	1110
	Maximum	710	1030	1340	1870	2030	2200	2090	1850	1660	1260	830	620	1360
	Diffuse	380	490	610	740	840	900	890	800	650	480	370	320	620
Clear Day	Global	970	1320	1790	2240	2520	2620	2530	2270	1870	1400	1010	850	1790
NORTH	Global	210	280	360	440	540	610	570	480	390	300	220	190	380
	Diffuse	210	280	360	440	500	540	520	470	390	300	220	190	370
Clear Day	Global	190	250	330	430	580	680	620	480	370	280	210	170	380
EAST	Global	390	520	690	860	970	1000	950	880	760	620	420	330	700
	Diffuse	260	340	430	530	590	630	620	560	470	370	270	220	440
Clear Day	Global	710	920	1150	1340	1420	1440	1400	1310	1150	930	730	640	1100
SOUTH	Global	840	930	990	900	800	750	770	900	1010	1110	890	760	890
	Diffuse	360	430	500	540	560	580	580	570	530	450	360	320	480
Clear Day	Global	1940	1980	1770	1370	1030	880	930	1200	1560	1810	1870	1860	1510
WEST	Global	400	540	710	870	980	1060	1020	970	830	670	440	350	740
	Diffuse	260	340	440	530	600	650	630	580	490	370	270	220	450
Clear Day	Global	710	920	1150	1340	1420	1440	1400	1310	1150	930	730	640	1100

Average Annual Solar Heat and Illumination – Nearest Available Site

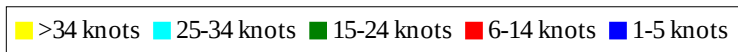
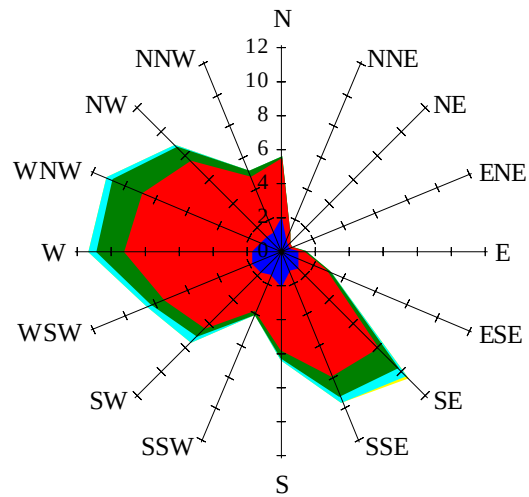
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	410	580	830	1090	1290	1390	1330	1210	980	730	460	350	890
NORTH	Unshaded	150	200	250	300	360	400	380	330	270	210	150	130	260
	Shaded	130	170	220	270	320	360	340	290	240	190	140	110	230
EAST	Unshaded	270	360	490	610	690	710	680	620	540	430	290	230	490
	Shaded	240	320	430	540	600	610	580	540	470	380	260	200	430
SOUTH	Unshaded	630	670	680	590	500	460	470	570	680	800	660	570	610
	Shaded	600	620	550	410	350	360	360	390	510	700	630	550	500
WEST	Unshaded	280	380	500	620	700	750	730	690	590	470	310	240	520
	Shaded	250	330	440	540	610	650	630	600	520	420	280	220	460

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	31	68	82	70	35	37	77	98	97	74
	M.Cloudy	18	40	49	43	21	24	50	70	70	49
NORTH	M.Clear	9	14	15	14	9	21	16	17	17	16
	M.Cloudy	8	15	17	15	9	13	17	19	19	16
EAST	M.Clear	68	63	17	14	9	67	76	41	17	16
	M.Cloudy	20	30	18	15	9	29	41	32	19	16
SOUTH	M.Clear	30	66	81	69	35	11	26	43	42	24
	M.Cloudy	12	31	39	34	15	10	21	33	34	20
WEST	M.Clear	9	14	15	60	72	11	16	17	43	75
	M.Cloudy	8	15	17	31	25	10	17	19	34	43
M.Clear	(% hrs)	26	26	27	25	27	28	34	28	28	36
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	19	60	83	80	54	10	38	49	35	6
	M.Cloudy	11	35	54	54	33	6	21	26	20	4
NORTH	M.Clear	7	14	16	16	13	4	10	11	9	3
	M.Cloudy	5	13	18	18	13	3	9	11	9	2
EAST	M.Clear	48	72	38	16	13	31	43	11	9	3
	M.Cloudy	15	30	27	18	13	7	16	11	9	2
SOUTH	M.Clear	13	49	71	68	43	25	73	88	69	16
	M.Cloudy	7	23	41	41	22	6	22	27	21	4
WEST	M.Clear	7	14	16	44	72	4	10	14	47	22
	M.Cloudy	5	13	18	30	32	3	9	12	17	6
M.Clear	(% hrs)	25	38	34	35	41	20	21	22	23	25

Wind Summary - December, January, and February

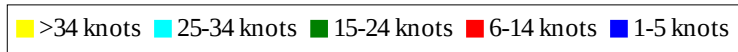
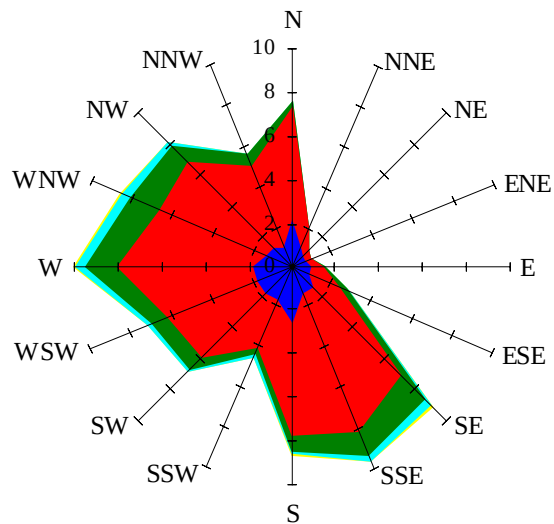
Labels of Percent Frequency on North Axis



Percent Calm = 5.85

Wind Summary - March, April, and May

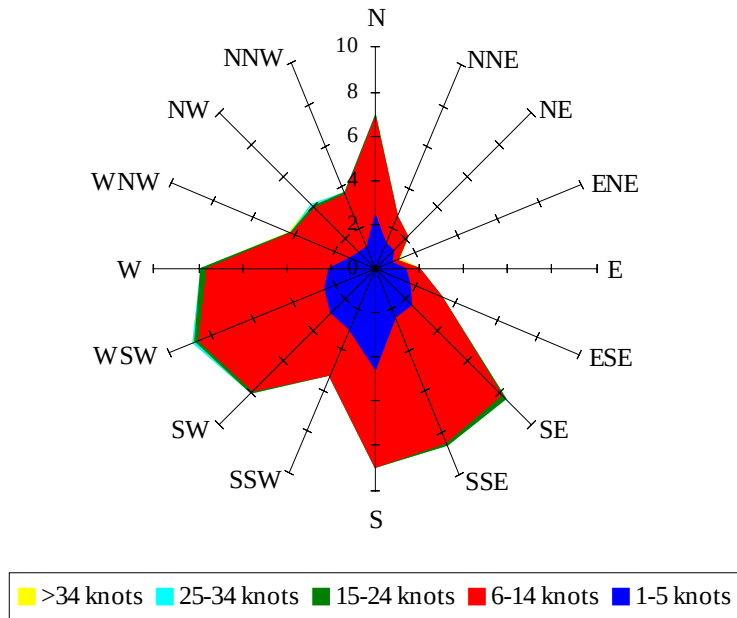
Labels of Percent Frequency on North Axis



Percent Calm = 6.53

Wind Summary - June, July, and August

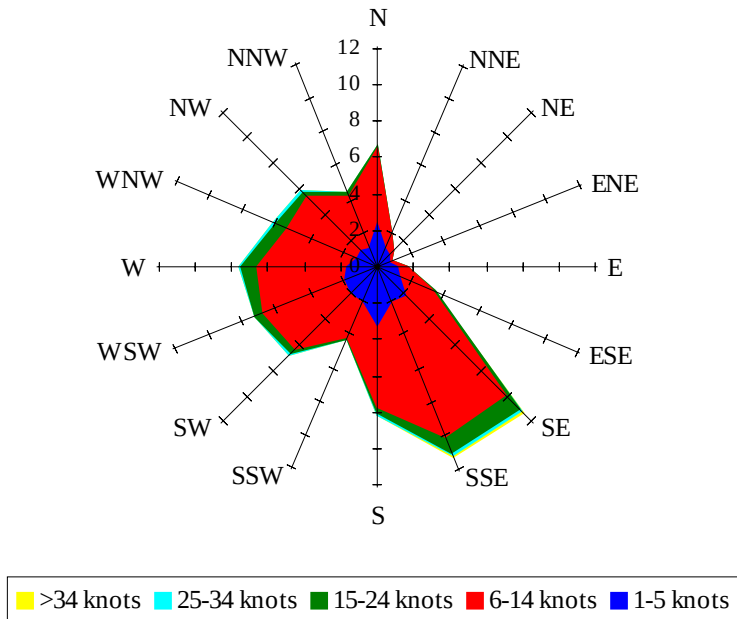
Labels of Percent Frequency on North Axis



Percent Calm = 14.78

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 11.80