

MORGANTOWN/HART WV

Latitude = 39.65 N

WMO No. 724176

Longitude = 79.92 W

Elevation = 1247 feet

Period of Record = 1973 to 1996

Average Pressure = 28.70 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	92	74	104	7.6	SW
0.4% Occurrence	89	73	102	8.0	SW
1.0% Occurrence	87	72	101	8.0	SW
2.0% Occurrence	84	71	96	7.7	SW
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	15	13	8	8.0	WSW
99.0% Occurrence	9	8	6	7.3	SW
99.6% Occurrence	4	3	5	7.0	SW
Median of Extreme Lows	-2	-2	3	7.0	SW
	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	79	87	141	8.4	SW
0.4% Occurrence	76	84	126	7.4	SW
1.0% Occurrence	75	83	122	7.2	SW
2.0% Occurrence	73	80	114	7.0	SSW
	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	146	85	0.94	7.9	SW
0.4% Occurrence	133	80	0.85	6.9	SSW
1.0% Occurrence	125	78	0.79	7.0	SSW
2.0% Occurrence	120	77	0.77	6.0	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		9	519	236	1187

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	2.7	90	1.7 + 0.5
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 (#)
55.2	N/A	N/A	56

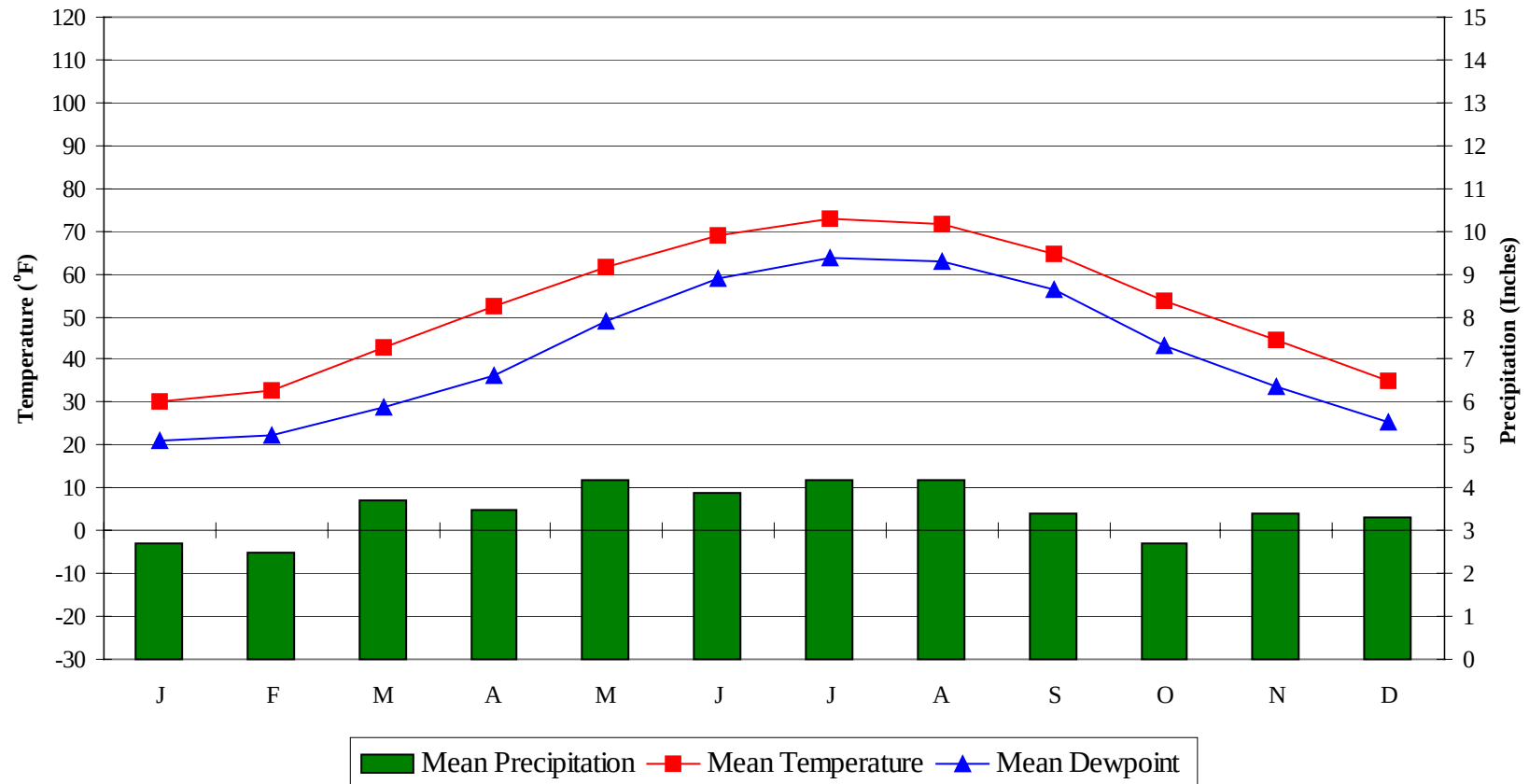
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

MORGANTOWN/HART

WV

WMO No. 724176

Average Annual Climate

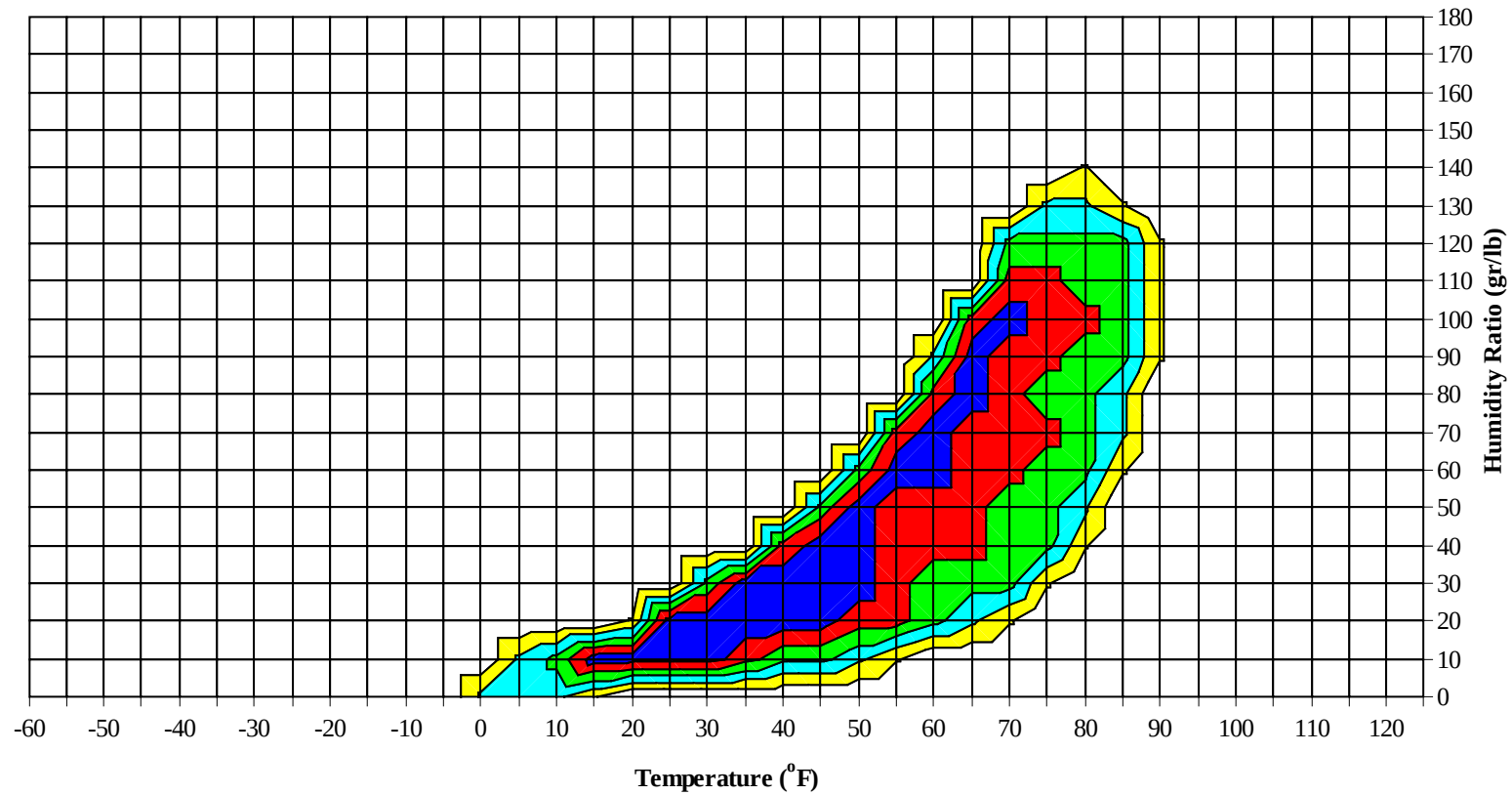


MORGANTOWN/HART

WV

WMO No. 724176

Long Term Psychrometric Summary

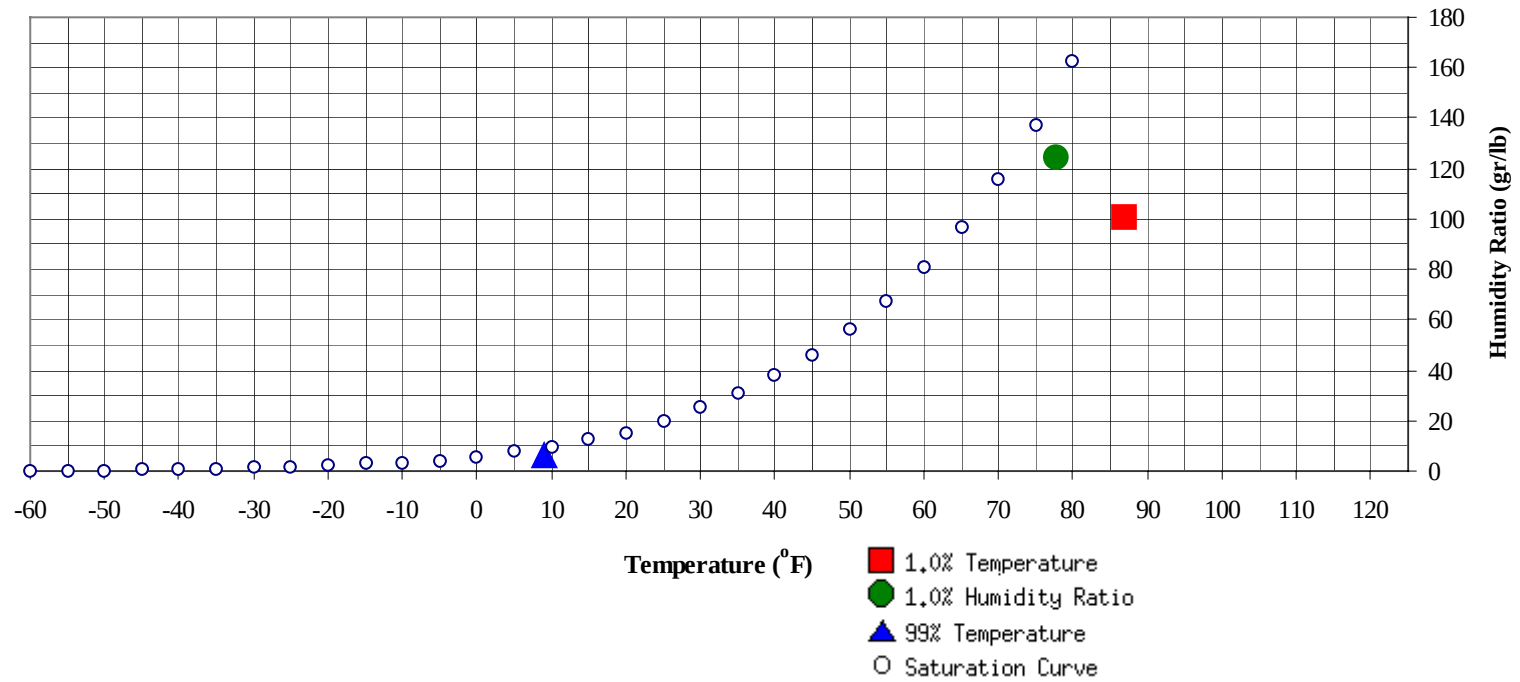


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

MORGANTOWN/HART WV

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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)
	9	6.3	3.1		124.6	77.7	73.6	72	38.1

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	87	100.5	72.3	36.7

MORGANTOWN/HART WV

WMO No. 724176

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												1	0	1	60.2
75 / 79											6	2		8	59.0
70 / 74		0		0	57.1		1	0	1	55.4	0	10	5	15	56.3
65 / 69	0	1	0	1	56.3	0	3	1	4	53.5	5	14	11	30	53.7
60 / 64	2	4	1	7	53.5	1	8	5	14	51.1	8	19	17	44	51.6
55 / 59	4	7	6	17	49.8	5	11	8	24	48.4	14	24	21	59	48.4
50 / 54	8	12	11	31	45.1	12	16	17	45	45.7	19	30	29	78	45.0
45 / 49	13	19	17	49	41.4	13	20	20	53	41.4	29	30	32	90	41.0
40 / 44	18	24	19	61	37.6	18	24	22	64	37.2	30	30	34	93	36.8
35 / 39	27	34	34	95	33.4	26	30	27	83	33.1	35	33	34	101	32.9
30 / 34	47	46	53	146	29.2	34	35	36	105	29.0	41	30	35	105	28.8
25 / 29	39	32	34	105	24.7	33	29	33	95	24.2	35	14	19	67	24.4
20 / 24	27	27	26	80	20.0	29	22	24	75	19.7	17	6	7	30	19.8
15 / 19	22	20	22	64	15.2	19	15	17	51	15.1	8	3	3	14	15.2
10 / 14	16	12	14	42	10.7	16	8	9	33	10.6	4	1	2	7	10.3
5 / 9	11	5	5	21	6.1	10	3	3	16	6.2	2	0	0	2	6.4
0 / 4	7	2	3	12	1.5	4	1	1	6	1.5	0			0	3.5
-5 / -1	2	1	2	5	-2.9	1	0	0	1	-2.4					
-10 / -6	2	1	1	4	-7.2	0			0	-7.6					
-15 / -11	1	1	1	3	-12.3										
-20 / -16	1	0	0	1	-16.5										

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.

MORGANTOWN/HART WV

WMO No. 724176

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												0		0	73.5
90 / 94		0	0	0	63.0		0	0	0	68.0		4	1	5	74.0
85 / 89		2	0	2	62.9		7	2	9	67.7		23	6	29	71.6
80 / 84		9	3	12	61.4		25	9	34	66.2	0	54	21	75	69.1
75 / 79	0	16	8	24	59.5	1	35	20	56	63.8	6	54	38	98	66.9
70 / 74	3	22	16	41	57.5	9	42	32	83	61.6	34	52	59	144	65.0
65 / 69	11	26	23	60	54.7	31	41	46	117	59.2	63	30	56	148	62.8
60 / 64	20	28	31	79	52.3	48	35	45	127	56.1	55	15	32	102	58.7
55 / 59	29	33	32	94	48.9	43	29	37	108	51.9	39	7	20	66	54.5
50 / 54	28	32	35	95	45.1	42	22	30	93	47.8	28	2	7	36	50.4
45 / 49	34	28	31	93	41.2	37	11	19	67	43.7	12	0	2	14	46.1
40 / 44	37	23	29	89	37.7	24	2	8	34	39.7	3		0	3	41.9
35 / 39	36	14	20	70	33.6	10	1	2	13	35.1	0			0	38.6
30 / 34	24	7	10	41	29.6	3			3	31.1					
25 / 29	11	3	3	17	24.9	0			0	27.7					
20 / 24	3	0	1	4	20.1										
15 / 19	1			1	16.3										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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MORGANTOWN/HART WV

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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		
95 / 99		1	0	1	72.3		1	0	1	74.1					
90 / 94		13	3	16	74.4		8	2	10	73.3		1		1	71.9
85 / 89		39	14	53	72.8		29	8	37	72.6		9	1	10	72.1
80 / 84	1	65	32	98	70.6	0	64	26	90	70.5	0	28	8	36	70.0
75 / 79	16	65	55	136	69.0	11	64	49	124	68.6	2	46	22	70	67.4
70 / 74	68	44	72	184	67.7	55	50	73	179	67.2	22	52	45	120	65.4
65 / 69	78	17	49	144	64.4	81	22	56	159	64.3	46	40	52	139	62.6
60 / 64	52	4	19	75	60.3	54	8	24	86	60.1	48	32	45	126	58.2
55 / 59	22	0	4	26	55.8	30	1	8	39	55.9	48	21	35	104	54.1
50 / 54	8		1	9	51.5	12	0	2	14	51.2	35	8	21	64	50.0
45 / 49	2			2	46.4	3		0	3	46.4	22	2	8	32	45.4
40 / 44	0			0	41.8	1			1	42.3	11	1	3	15	41.4
35 / 39						0			0	37.5	4		0	4	36.6
30 / 34											0			0	32.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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MORGANTOWN/HART WV

WMO No. 724176

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		2	0	2	65.9										
75 / 79		16	3	19	63.5		3	0	3	62.0		0		0	63.8
70 / 74	2	27	10	39	60.6	0	9	3	12	58.9		1	0	1	61.4
65 / 69	11	35	25	71	58.5	5	17	9	31	56.5	0	3	1	4	57.6
60 / 64	25	41	37	103	55.5	15	22	20	57	53.8	5	8	6	19	54.4
55 / 59	28	38	42	108	51.1	20	22	26	68	50.4	9	14	13	36	51.2
50 / 54	42	38	46	125	47.2	23	30	28	81	46.1	12	18	13	43	46.3
45 / 49	47	28	42	117	43.3	26	35	30	91	41.8	15	27	20	62	41.6
40 / 44	42	16	27	85	39.2	32	32	34	98	37.6	22	36	28	86	37.4
35 / 39	30	5	13	48	35.0	35	31	39	105	33.5	41	39	43	123	33.2
30 / 34	15	1	4	20	30.8	43	27	34	104	29.5	50	39	50	139	29.1
25 / 29	5		1	6	26.7	27	8	14	49	25.3	33	26	29	88	24.8
20 / 24	0			0	22.1	9	2	3	14	20.9	24	17	20	61	20.0
15 / 19						3	0	1	4	16.5	17	12	14	43	15.4
10 / 14						1	0	0	1	10.9	10	5	6	21	10.9
5 / 9						0		0	0	7.7	5	2	3	10	6.2
0 / 4											3	1	1	5	1.5
-5 / -1											1	0	0	1	-3.0
-10 / -6											0	0	0	0	-7.0
-15 / -11											0	0	0	0	-12.5
-20 / -16															

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MORGANTOWN/HART WV

WMO No. 724176

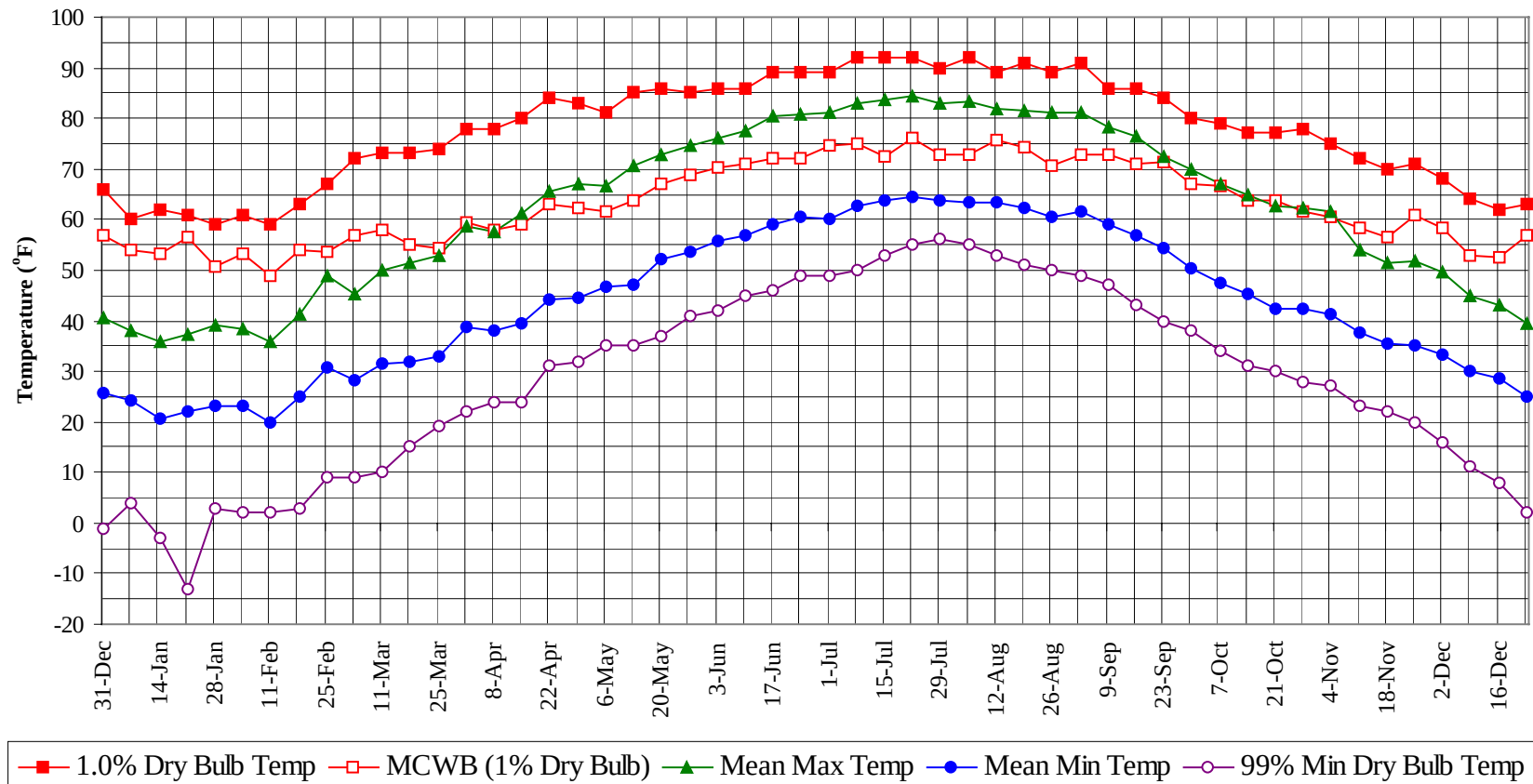
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

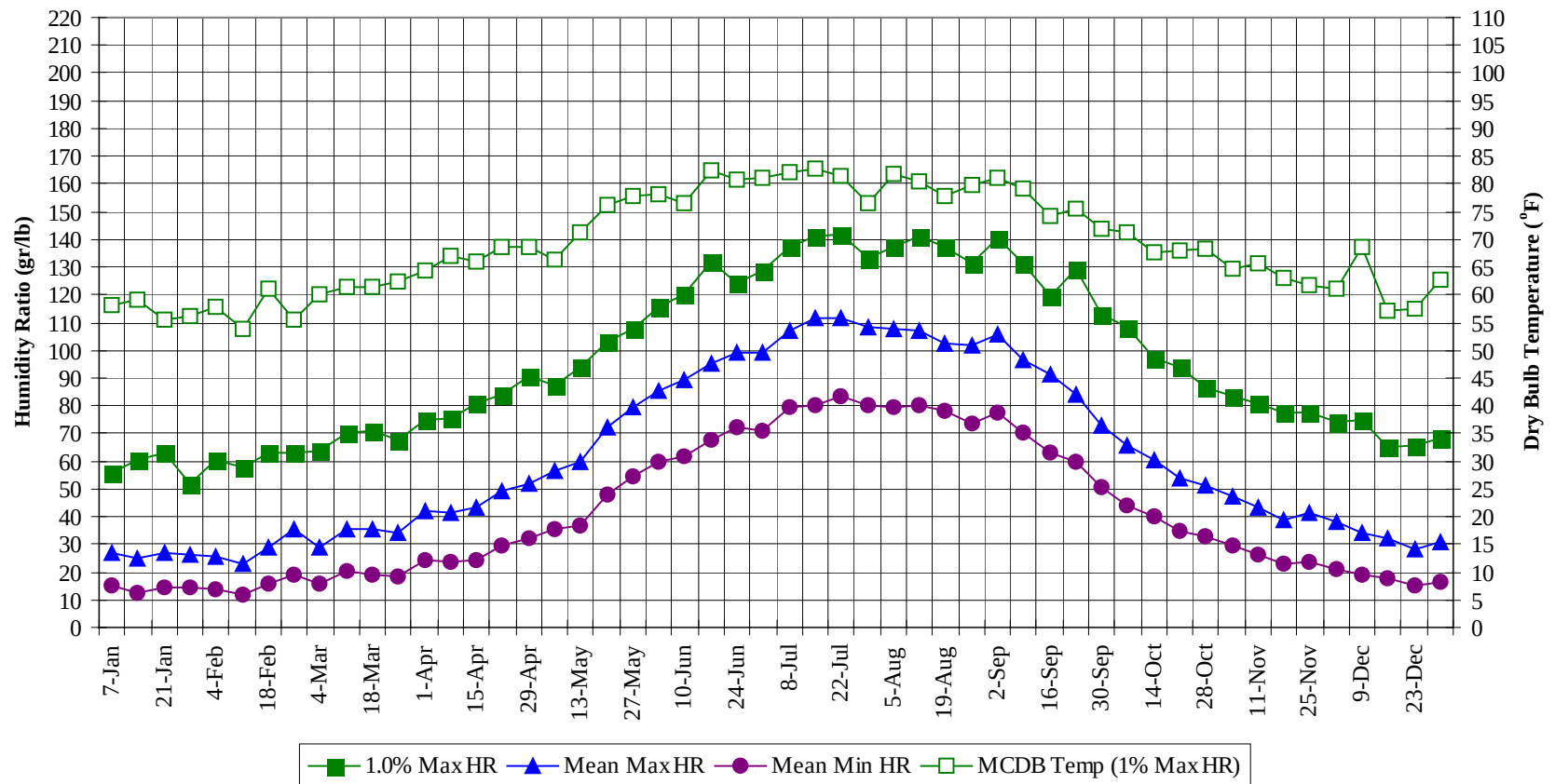
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		2	0	2	73.2
90 / 94		26	6	32	73.7
85 / 89		107	31	138	72.0
80 / 84	2	249	98	349	69.4
75 / 79	35	305	193	534	67.0
70 / 74	191	307	313	812	64.9
65 / 69	331	247	329	906	61.3
60 / 64	333	223	283	838	56.5
55 / 59	293	208	249	750	51.7
50 / 54	270	208	240	717	46.9
45 / 49	254	199	220	672	42.3
40 / 44	241	187	205	632	37.9
35 / 39	245	187	212	643	33.5
30 / 34	261	184	222	667	29.2
25 / 29	184	112	132	429	24.7
20 / 24	110	75	81	265	19.9
15 / 19	71	49	57	176	15.2
10 / 14	49	27	31	106	10.6
5 / 9	28	11	11	50	6.2
0 / 4	15	4	4	23	1.5
-5 / -1	5	2	2	9	-2.8
-10 / -6	2	1	1	4	-7.2
-15 / -11	1	1	1	3	-12.4
-20 / -16	1	0	0	1	-16.5
			</		

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



MORGANTOWN/HART WV

WMO No. 724176

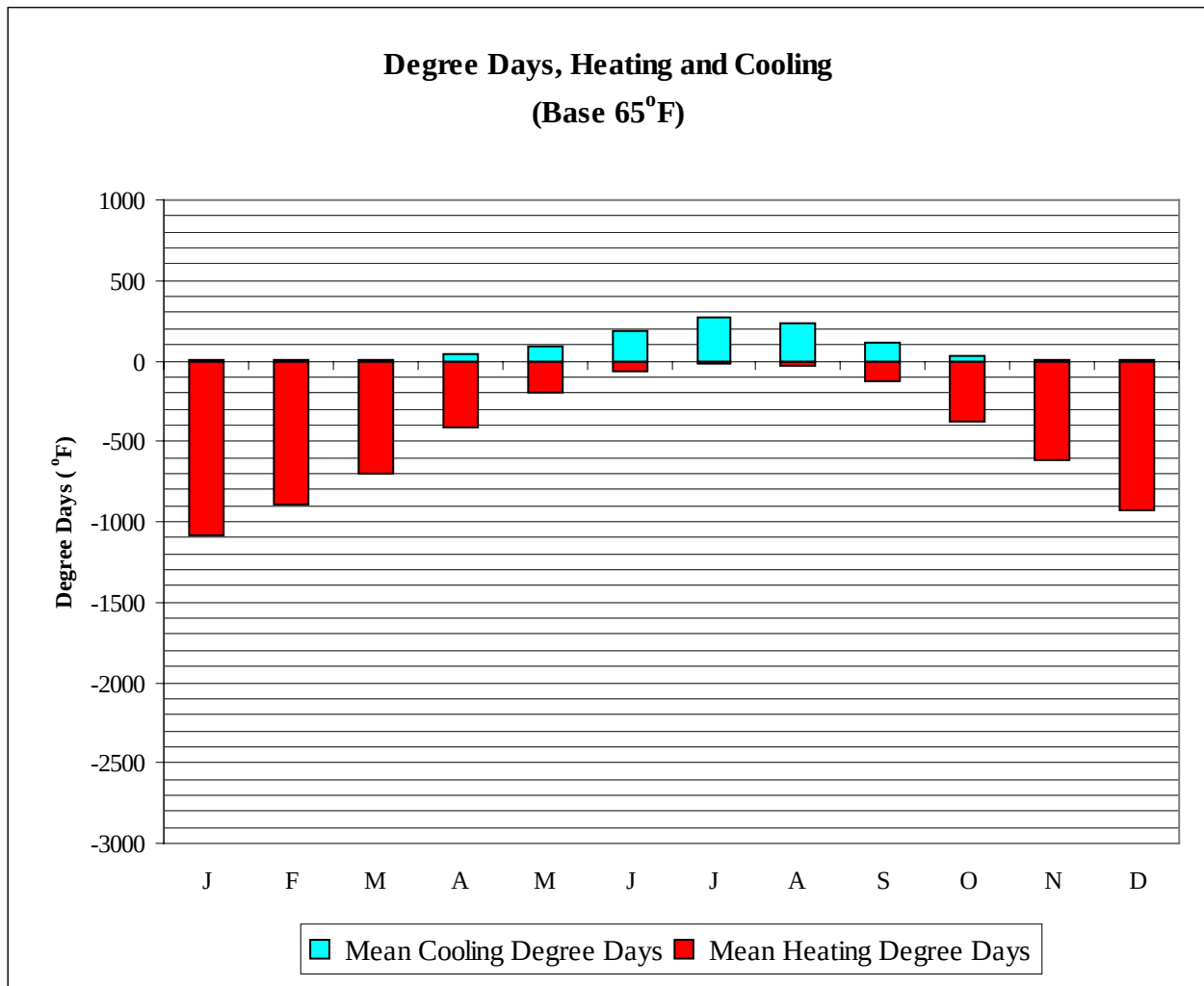
Long Term Dry Bulb Temperature and Humidity Summary

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	60.0	53.8	38.1	24.3	4.0	56.0	58.0	27.2	14.9
14-Jan	62.0	53.2	35.9	20.4	-3.0	60.2	59.0	25.1	12.7
21-Jan	61.0	56.5	37.1	22.0	-13.0	63.0	55.5	26.6	14.5
28-Jan	59.0	50.7	39.0	23.2	3.0	51.8	56.0	26.5	14.3
4-Feb	61.0	53.2	38.5	23.2	2.0	60.2	58.0	25.8	13.8
11-Feb	59.0	48.8	35.9	19.8	2.0	58.1	53.8	22.8	12.0
18-Feb	63.0	53.8	41.4	24.8	3.0	63.0	61.1	28.7	15.5
25-Feb	67.0	53.7	48.9	30.6	9.0	63.0	55.3	35.4	19.4
4-Mar	72.0	57.0	45.2	28.1	9.0	63.7	60.3	29.0	16.0
11-Mar	73.0	57.8	49.8	31.6	10.0	70.0	61.5	35.6	20.1
18-Mar	73.0	55.2	51.5	31.8	15.0	70.7	61.4	35.7	19.1
25-Mar	74.0	54.2	52.8	33.0	19.0	67.9	62.3	34.4	18.5
1-Apr	78.0	59.6	58.5	38.9	22.0	74.9	64.3	42.0	24.4
8-Apr	78.0	58.0	57.7	38.0	24.0	75.6	66.9	41.6	23.3
15-Apr	80.0	59.2	61.2	39.4	24.0	80.5	66.1	43.2	24.3
22-Apr	84.0	62.9	65.6	44.1	31.0	84.0	68.5	49.1	29.8
29-Apr	83.0	62.5	67.0	44.5	32.0	90.3	68.8	52.0	32.1
6-May	81.0	61.6	66.7	46.6	35.0	87.5	66.3	56.2	35.2
13-May	85.0	63.9	70.5	47.2	35.0	93.8	71.1	59.8	36.8
20-May	86.0	67.1	72.8	52.1	37.0	102.9	76.3	72.0	48.2
27-May	85.0	68.9	74.6	53.8	41.0	107.8	77.9	79.2	54.3
3-Jun	86.0	70.1	76.1	55.6	42.0	115.5	78.0	85.4	59.6
10-Jun	86.0	70.8	77.5	56.9	45.0	120.4	76.6	89.1	61.6
17-Jun	89.0	72.2	80.5	58.9	46.0	132.3	82.6	95.3	67.5
24-Jun	89.0	72.0	80.9	60.5	49.0	123.9	80.8	99.3	72.3
1-Jul	89.0	74.7	81.0	60.1	49.0	128.8	81.1	99.1	71.1
8-Jul	92.0	74.8	83.1	62.8	50.0	137.2	82.2	107.0	79.7
15-Jul	92.0	72.4	83.6	63.7	53.0	141.4	82.6	111.5	80.4
22-Jul	92.0	76.1	84.5	64.4	55.0	142.1	81.4	111.7	83.2
29-Jul	90.0	72.7	83.1	63.6	56.0	133.0	76.6	108.5	79.9
5-Aug	92.0	72.8	83.2	63.3	55.0	137.2	81.8	107.7	79.8
12-Aug	89.0	75.6	82.0	63.3	53.0	141.4	80.6	106.9	80.0
19-Aug	91.0	74.1	81.6	62.3	51.0	137.2	77.8	102.7	77.9
26-Aug	89.0	70.8	81.1	60.6	50.0	131.6	79.9	101.9	73.8
2-Sep	91.0	72.7	81.3	61.5	49.0	140.7	81.2	106.0	77.3
9-Sep	86.0	72.6	78.4	59.0	47.0	131.6	79.2	96.3	70.3
16-Sep	86.0	70.9	76.6	56.8	43.0	119.7	74.1	91.0	63.3
23-Sep	84.0	71.3	72.3	54.3	40.0	129.5	75.6	84.2	59.9
30-Sep	80.0	66.9	70.0	50.4	38.0	112.7	71.9	72.8	50.3
7-Oct	79.0	66.5	67.0	47.4	34.0	108.5	71.3	65.7	43.7
14-Oct	77.0	63.6	64.9	45.3	31.0	97.3	67.7	60.1	39.9
21-Oct	77.0	63.6	62.6	42.4	30.0	93.8	68.0	54.0	34.5
28-Oct	78.0	61.7	62.2	42.4	28.0	86.8	68.3	51.3	32.7
4-Nov	75.0	60.6	61.5	41.1	27.0	83.3	64.6	47.4	29.7
11-Nov	72.0	58.4	54.1	37.6	23.0	80.5	65.6	43.2	26.0
18-Nov	70.0	56.6	51.6	35.3	22.0	77.7	63.1	39.0	22.8
25-Nov	71.0	60.7	51.9	35.2	20.0	77.7	61.7	41.5	23.6
2-Dec	68.0	58.3	49.7	33.3	16.0	74.2	60.9	38.3	21.1
9-Dec	64.0	53.0	45.0	30.0	11.0	74.9	68.6	34.3	18.9
16-Dec	62.0	52.4	43.2	28.6	8.0	65.1	57.2	31.9	17.8
23-Dec	63.0	56.9	39.4	25.0	2.0	65.8	57.6	28.3	15.1
31-Dec	66.0	56.8	40.4	25.7	-1.0	68.6	62.6	30.6	16.6

MORGANTOWN/HART

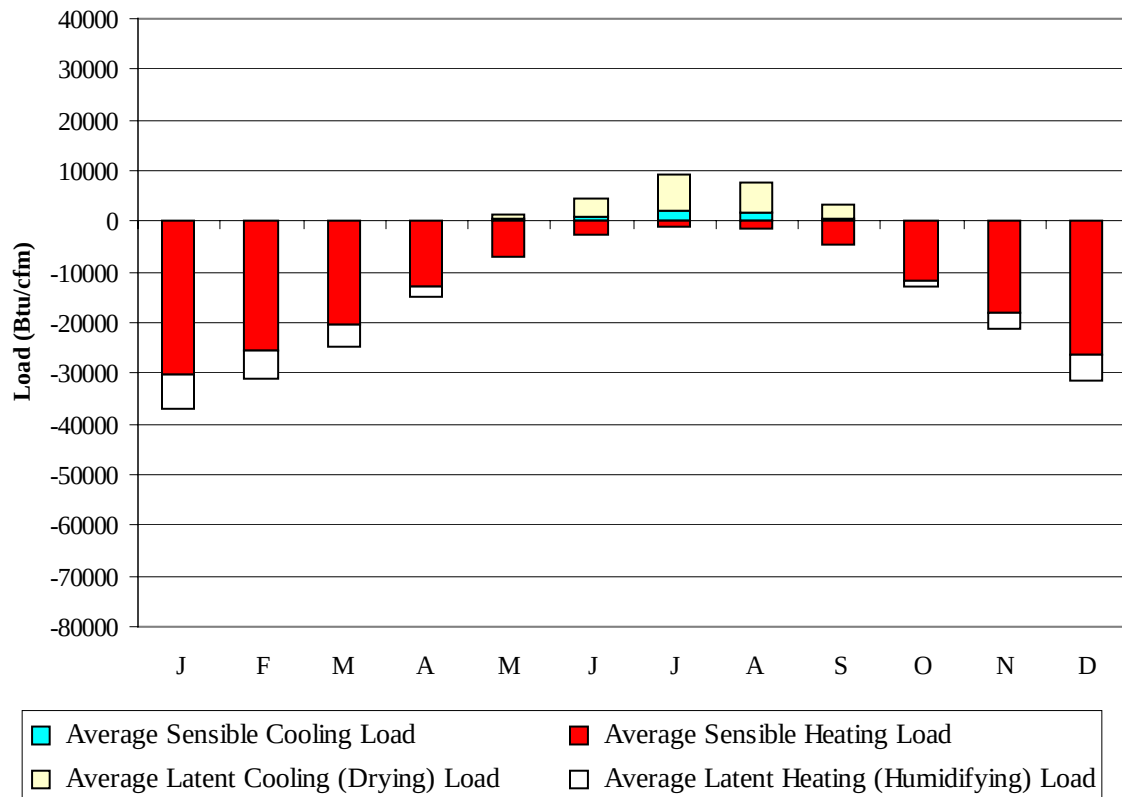
WV

WMO No. 724176



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1081
FEB	0	896
MAR	10	700
APR	37	417
MAY	91	201
JUN	183	62
JUL	269	21
AUG	237	31
SEP	113	125
OCT	26	376
NOV	7	616
DEC	1	924
ANN	975	5450

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	-30417	0	-6627
FEB	0	-25390	0	-5806
MAR	18	-20425	2	-4151
APR	153	-12779	32	-2126
MAY	454	-6824	773	-335
JUN	1112	-2465	3336	-2
JUL	1943	-1044	7317	0
AUG	1546	-1440	5982	-1
SEP	510	-4524	2890	-26
OCT	46	-11849	236	-852
NOV	3	-18192	11	-2895
DEC	0	-26334	2	-5266
ANN	5785	-161683	20581	-28087

Average Annual Solar Radiation – Nearest Available Site

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

City: ELKINS
 State: WV
 WBAN No: 13729
 Lat(N): 38.88
 Long(W): 79.85
 Elev(ft): 1949

Stn Type: Secondary

SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1

Overhang: 0.502

Vert Gap: 0.315

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	610	830	1130	1440	1680	1810	1760	1590	1310	980	640	510	1190
	Std Dev	46	73	85	131	138	111	92	88	97	76	68	37	33
	Minimum	520	680	950	1190	1410	1640	1550	1430	1150	850	520	450	1120
	Maximum	700	990	1290	1790	1890	2100	1910	1770	1510	1210	820	590	1260
	Diffuse	390	510	630	760	860	920	920	810	650	480	380	340	640
Clear Day	Global	960	1310	1780	2250	2530	2640	2550	2280	1870	1390	1000	840	1780
NORTH	Global	220	290	360	440	530	590	560	480	380	290	220	190	380
	Diffuse	220	290	360	440	500	530	520	460	380	290	220	190	370
Clear Day	Global	190	250	330	430	580	680	620	480	360	280	200	170	380
EAST	Global	370	490	650	820	920	930	870	800	690	570	390	320	650
	Diffuse	260	340	430	520	590	620	610	550	460	350	260	220	430
Clear Day	Global	710	920	1140	1350	1440	1450	1410	1320	1160	930	730	630	1100
SOUTH	Global	810	890	940	870	780	740	760	870	970	1030	820	710	850
	Diffuse	370	440	490	540	560	580	580	570	520	440	350	320	480
Clear Day	Global	1950	1990	1790	1390	1060	900	950	1210	1580	1830	1870	1860	1530
WEST	Global	390	520	680	830	940	1000	970	930	790	620	420	340	700
	Diffuse	260	350	430	530	600	640	630	580	480	360	260	230	450
Clear Day	Global	710	920	1140	1350	1440	1450	1410	1320	1160	930	730	630	1100

Average Annual Solar Heat and Illumination – Nearest Available Site

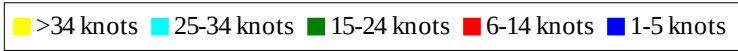
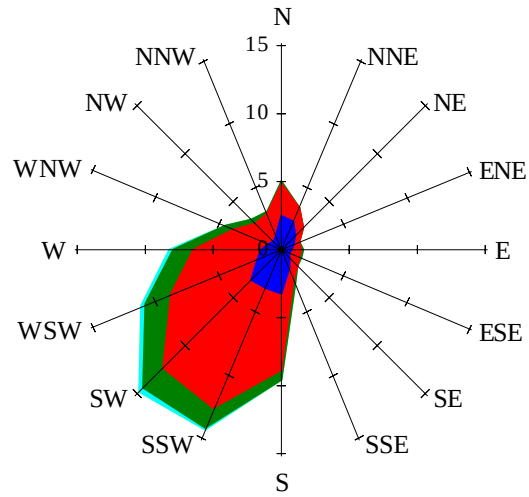
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	400	570	800	1030	1210	1310	1270	1150	940	680	430	340	850
NORTH	Unshaded	150	200	250	300	360	390	370	320	270	200	150	130	260
	Shaded	130	170	220	270	310	340	330	290	240	180	130	110	230
EAST	Unshaded	260	350	460	580	650	660	610	560	480	400	270	220	460
	Shaded	230	300	400	500	560	560	520	480	410	350	240	190	390
SOUTH	Unshaded	600	650	650	570	490	460	480	560	660	740	610	530	580
	Shaded	580	590	520	390	350	350	360	380	490	650	580	510	480
WEST	Unshaded	270	370	480	590	660	710	690	660	560	440	290	230	500
	Shaded	240	320	420	510	570	600	590	570	490	390	260	210	430

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	34	70	82	70	33	40	79	99	96	72
	M.Cloudy	19	40	48	41	19	24	49	69	68	47
NORTH	M.Clear	9	14	15	13	9	20	16	17	17	16
	M.Cloudy	8	15	17	15	8	12	17	19	19	16
EAST	M.Clear	72	62	15	13	9	71	75	38	17	16
	M.Cloudy	21	29	17	15	8	27	39	30	19	16
SOUTH	M.Clear	34	69	82	69	33	11	28	44	42	23
	M.Cloudy	13	31	38	32	14	10	21	34	33	19
WEST	M.Clear	9	14	16	63	71	11	16	17	46	76
	M.Cloudy	8	15	17	30	23	10	17	19	34	42
M.Clear	(% hrs)	18	21	22	21	22	19	28	23	21	26
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	21	62	84	80	52	11	39	48	33	4
	M.Cloudy	12	35	54	53	32	7	22	27	19	3
NORTH	M.Clear	7	14	16	16	13	5	10	11	9	2
	M.Cloudy	6	14	18	17	12	3	9	11	8	2
EAST	M.Clear	53	71	35	16	13	34	42	11	9	2
	M.Cloudy	14	30	26	17	12	8	16	11	8	2
SOUTH	M.Clear	15	51	72	68	42	29	76	88	67	12
	M.Cloudy	7	24	42	41	22	7	23	28	21	3
WEST	M.Clear	7	14	16	47	72	5	10	16	47	17
	M.Cloudy	6	14	18	31	33	3	9	12	16	4
M.Clear	(% hrs)	10	32	29	29	34	14	16	17	19	21

Wind Summary - December, January, and February

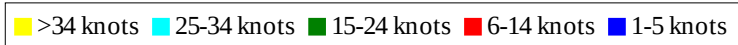
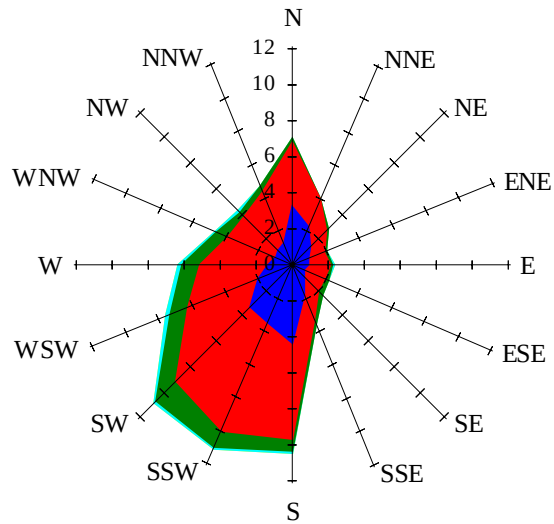
Labels of Percent Frequency on North Axis



Percent Calm = 12.27

Wind Summary - March, April, and May

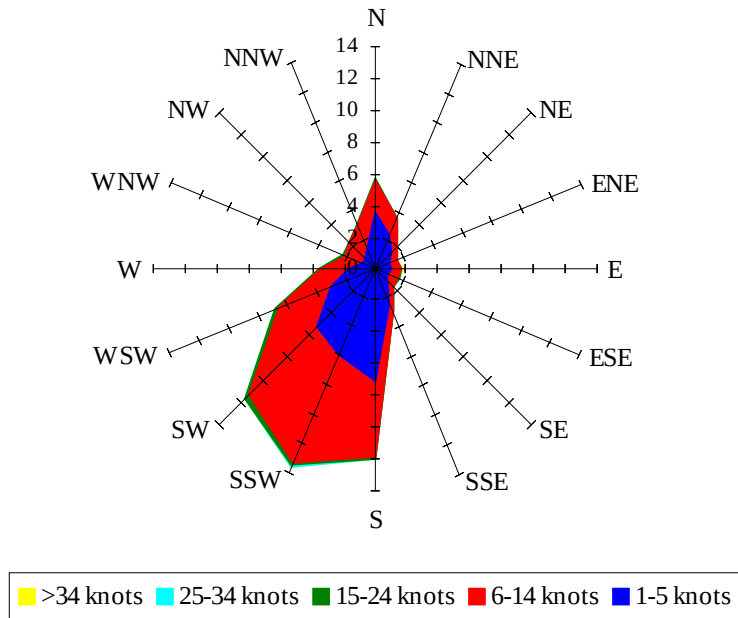
Labels of Percent Frequency on North Axis



Percent Calm = 14.72

Wind Summary - June, July, and August

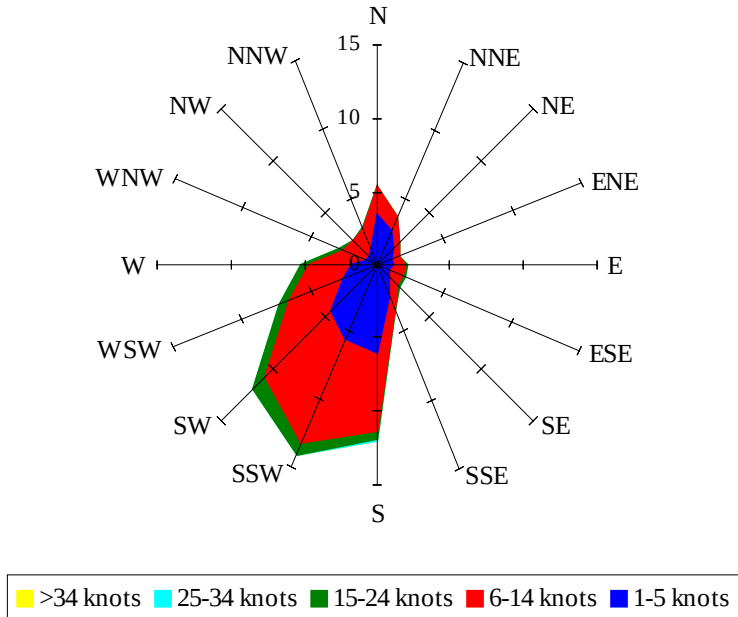
Labels of Percent Frequency on North Axis



Percent Calm = 24.69

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 19.47