

WASHINGTON/DULLES VA

Latitude = 38.95 N

Longitude = 77.45 W

Period of Record = 1973 to 1996

WMO No. 724030

Elevation = 322 feet

Average Pressure = 29.68 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	97	76	103	9.1	SW
0.4% Occurrence	93	76	107	9.0	SW
1.0% Occurrence	90	74	104	8.8	S
2.0% Occurrence	88	73	101	8.7	S
Mean Daily Range	21	-	-	-	-
97.5% Occurrence	19	17	10	7.4	NW
99.0% Occurrence	14	12	7	7.1	NW
99.6% Occurrence	9	8	6	5.7	NW
Median of Extreme Lows	-1	-2	3	6.1	WNW
	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	81	91	139	8.5	SSW
0.4% Occurrence	78	89	126	8.2	S
1.0% Occurrence	77	87	122	8.0	S
2.0% Occurrence	75	84	116	7.6	S
	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	150	85	0.98	6.9	S
0.4% Occurrence	132	84	0.88	7.0	S
1.0% Occurrence	126	80	0.83	8.0	S
2.0% Occurrence	120	79	0.79	6.8	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		44	786	524	1672

Other Site Data

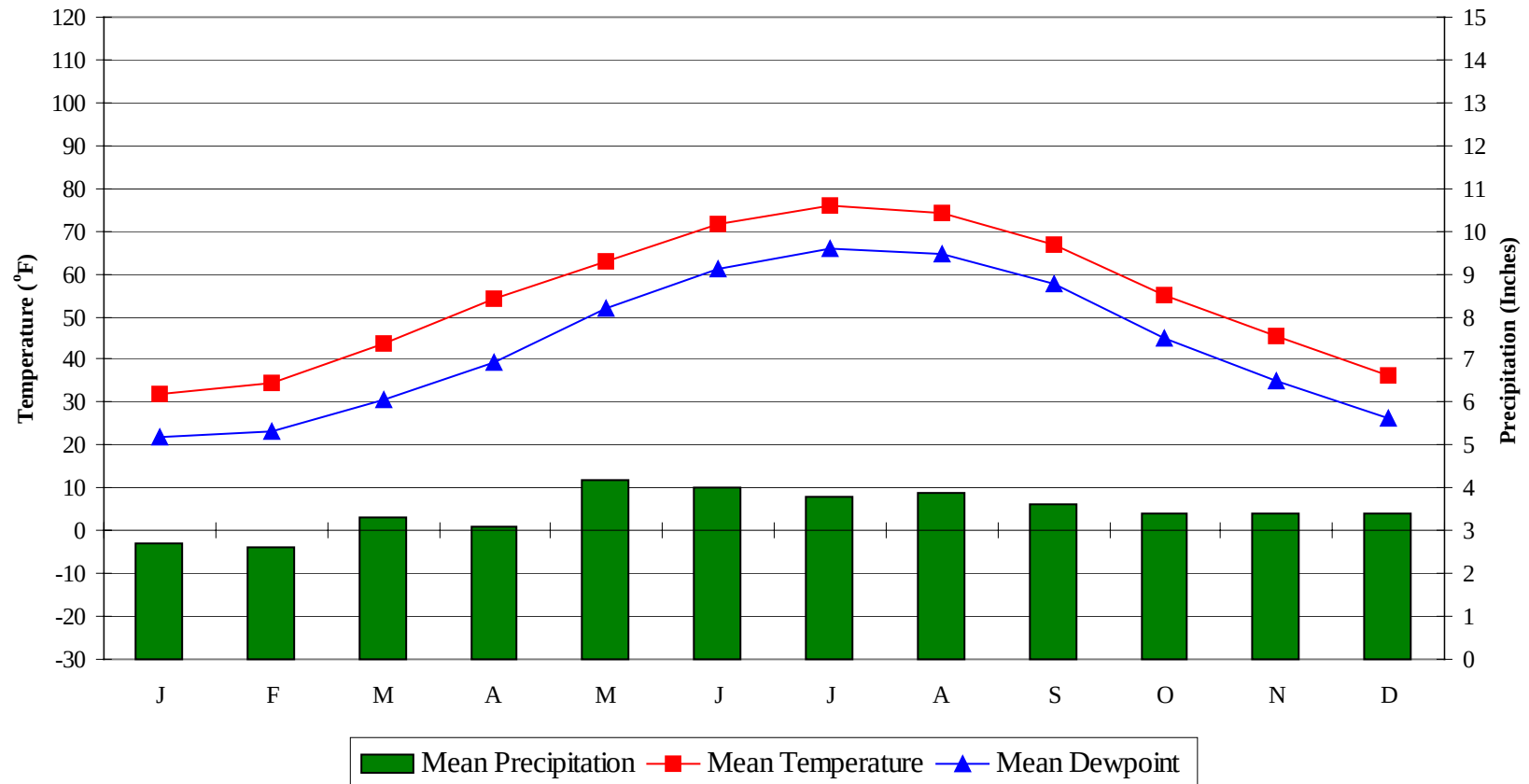
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
7	3.3	90	2.5 + 0.8
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
56.9	N/A	23	76

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

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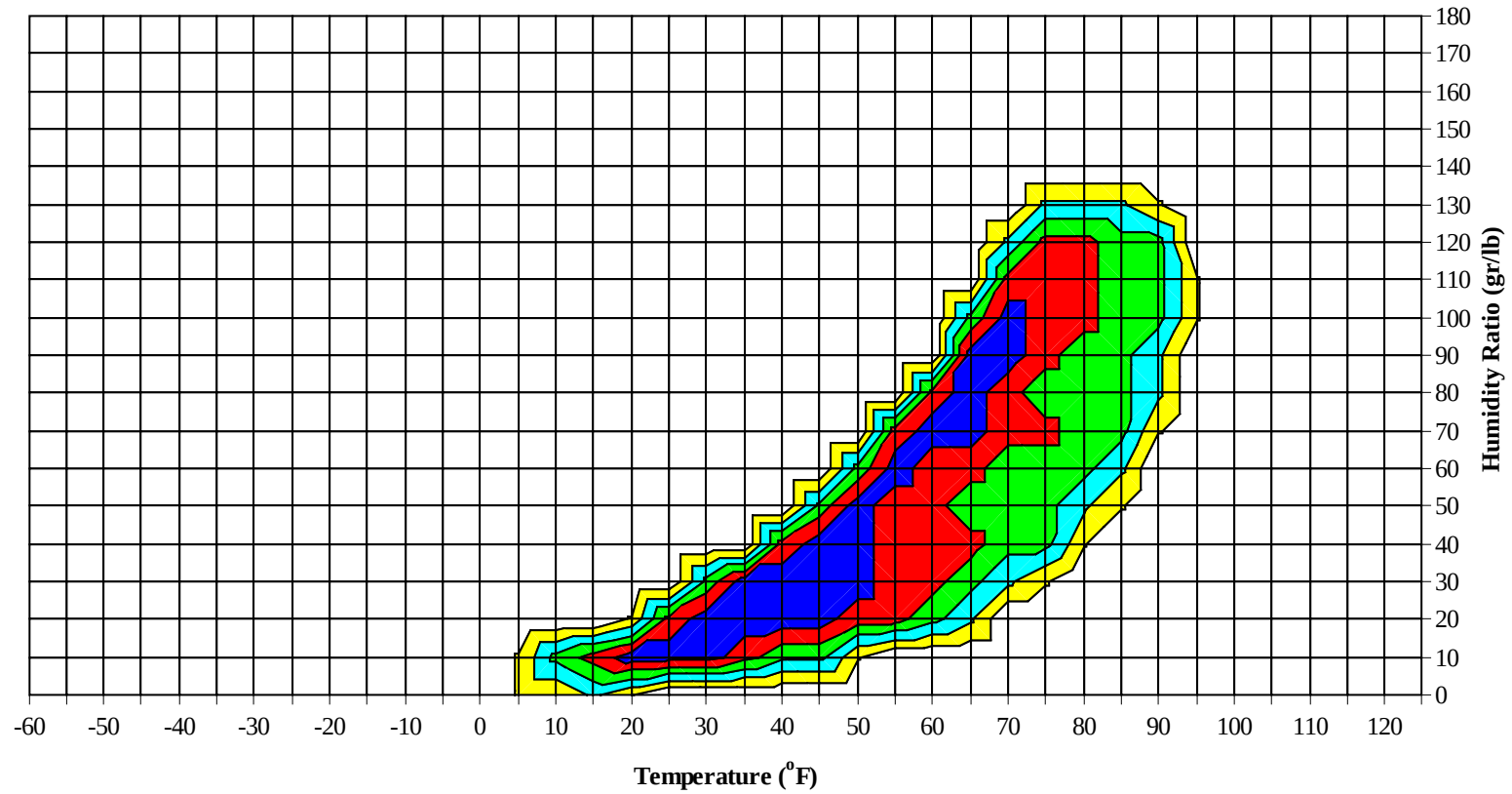
Average Annual Climate



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Long Term Psychrometric Summary

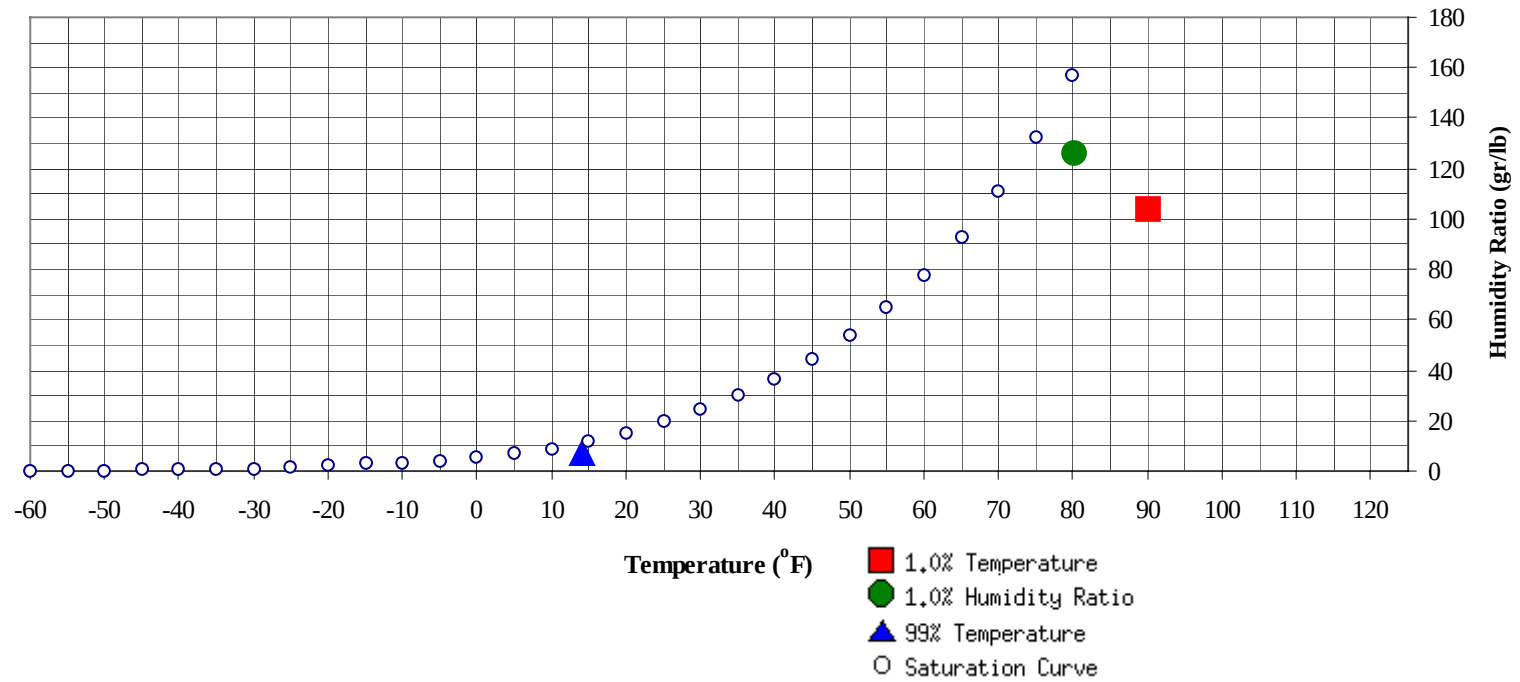


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	14	7.1	4.4		126	80.1	75.1	73.2	39.0

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	90	104.1	74.4	38.0

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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		
100 / 104															
95 / 99															
90 / 94															
85 / 89												1	0	1	63.8
80 / 84												2	0	2	62.5
75 / 79							0	0	0	62.7		4	2	6	60.0
70 / 74		0	0	0	59.2		2	0	2	56.1	0	7	4	11	57.7
65 / 69	0	1	0	1	56.8	0	4	1	5	53.9	3	13	8	24	55.9
60 / 64	1	4	3	8	55.4	2	8	5	15	52.8	5	22	14	41	52.1
55 / 59	2	6	3	11	50.1	4	10	7	21	49.8	8	30	21	59	48.7
50 / 54	3	12	7	22	45.7	5	17	13	35	45.5	16	37	31	84	45.2
45 / 49	7	21	14	42	41.4	12	27	17	56	41.3	28	40	39	107	41.6
40 / 44	16	38	28	82	37.3	16	35	32	83	37.1	42	40	44	126	37.7
35 / 39	36	50	43	129	33.1	30	37	36	103	33.0	44	27	40	111	33.1
30 / 34	48	48	54	150	29.3	40	38	42	120	28.7	46	16	25	87	29.0
25 / 29	44	32	39	115	24.4	38	25	35	98	24.0	30	5	13	48	24.4
20 / 24	36	19	29	84	19.8	36	12	21	69	19.8	18	3	5	26	20.1
15 / 19	25	9	15	49	15.3	25	5	10	40	15.4	6	1	1	8	15.4
10 / 14	16	4	7	27	10.5	12	1	3	16	10.7	2	0		2	11.1
5 / 9	8	2	3	13	6.0	3	1	1	5	6.0	1			1	7.0
0 / 4	4	1	2	7	1.2	1	0	0	1	1.2	0			0	0.5
-5 / -1	2	0	0	2	-3.4	1	0	0	1	-3.1					
-10 / -6	1	0	0	1	-6.5	1			1	-6.8					
-15 / -11	0		0	0	-12.4	0			0	-11.0					
-20 / -16	0			0	-15.9										

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		
100 / 104															
95 / 99							0		0	74.0		1	0	1	77.1
90 / 94		0	0	0	67.8		2	0	2	74.0		14	3	17	74.5
85 / 89		4	1	5	65.4	0	13	3	16	70.2	0	38	10	48	72.3
80 / 84		8	3	11	63.6	0	29	10	39	68.1	2	62	27	91	70.0
75 / 79	0	15	8	23	61.6	2	37	19	58	64.8	10	57	45	112	67.7
70 / 74	2	23	16	41	58.4	8	44	34	86	62.6	49	37	63	149	66.6
65 / 69	8	33	25	66	55.8	32	48	47	127	60.4	71	21	46	138	63.5
60 / 64	16	38	29	83	53.0	51	35	47	133	57.3	48	7	27	82	59.2
55 / 59	24	38	35	97	49.7	50	23	41	114	53.4	34	2	13	49	54.7
50 / 54	39	37	43	119	46.3	49	13	28	90	49.1	17	0	5	22	50.5
45 / 49	49	26	39	114	42.4	30	2	14	46	44.6	8		1	9	46.0
40 / 44	43	11	24	78	38.0	19	0	4	23	40.1	2		0	2	42.0
35 / 39	30	4	13	47	33.8	7		1	8	36.0	0			0	35.0
30 / 34	20	1	5	26	29.7	1		0	1	31.9					
25 / 29	8		1	9	25.6										
20 / 24	1		0	1	21.7										
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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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		
100 / 104		0	0	0	75.0		0	0	0	77.4					
95 / 99		9	2	11	76.4		4	0	4	76.1		2	0	2	74.7
90 / 94	0	33	8	41	75.7		24	5	29	75.1		7	1	8	74.0
85 / 89	1	64	23	88	73.5		58	17	75	73.2		20	4	24	72.0
80 / 84	6	67	40	113	71.6	2	67	35	104	71.5	0	38	12	50	69.9
75 / 79	31	47	60	138	70.5	20	51	54	125	69.9	3	45	26	75	67.5
70 / 74	87	22	68	177	68.9	79	32	72	183	68.5	31	53	49	134	65.8
65 / 69	71	5	33	109	65.0	75	10	42	128	64.8	53	40	52	146	62.6
60 / 64	32	1	10	43	60.4	43	2	16	60	60.3	48	23	43	114	58.7
55 / 59	13		4	17	55.5	18	0	5	23	55.7	42	7	28	77	54.6
50 / 54	6		0	6	51.4	8	0	2	10	51.0	33	3	15	51	50.2
45 / 49	1			1	47.3	2	0	0	2	46.2	19	0	6	25	45.9
40 / 44	0			0	40.5	1			1	42.7	9	0	2	11	41.4
35 / 39						0			0	36.0	3		0	3	36.9
30 / 34											0			0	32.8
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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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		
100 / 104															
95 / 99															
90 / 94															
85 / 89		1	0	1	69.5										
80 / 84		8	1	9	67.5		1	0	1	65.5					
75 / 79	0	19	4	23	65.3		4	0	4	63.3		0		0	61.8
70 / 74	3	33	12	48	62.2	0	11	3	14	60.8	0	2	0	2	62.1
65 / 69	9	44	25	77	59.7	4	18	9	31	59.0	1	4	2	7	59.8
60 / 64	24	47	36	106	56.0	8	24	16	48	55.3	3	5	5	13	56.6
55 / 59	33	45	43	120	52.0	16	31	22	69	51.1	4	12	7	23	51.3
50 / 54	39	31	46	116	47.7	24	42	33	99	46.4	10	20	11	41	46.5
45 / 49	46	14	40	100	43.9	28	39	36	103	41.9	13	35	22	70	41.9
40 / 44	37	5	23	65	39.8	37	36	43	116	37.7	26	50	38	114	37.7
35 / 39	32	1	12	45	35.7	38	23	40	101	33.7	40	49	52	142	33.3
30 / 34	20	0	5	25	31.3	41	8	25	74	29.8	49	32	46	128	29.1
25 / 29	6		1	7	26.7	28	2	12	42	25.4	43	21	34	98	24.4
20 / 24	1			1	22.6	11	0	3	14	21.4	29	10	18	57	20.1
15 / 19						3	0	0	3	16.8	16	4	9	29	15.4
10 / 14						1		0	1	11.0	8	1	3	12	10.8
5 / 9											4	1	1	6	6.4
0 / 4											2	0	1	3	1.4
-5 / -1											1			1	-2.1
-10 / -6															
-15 / -11															
-20 / -16															

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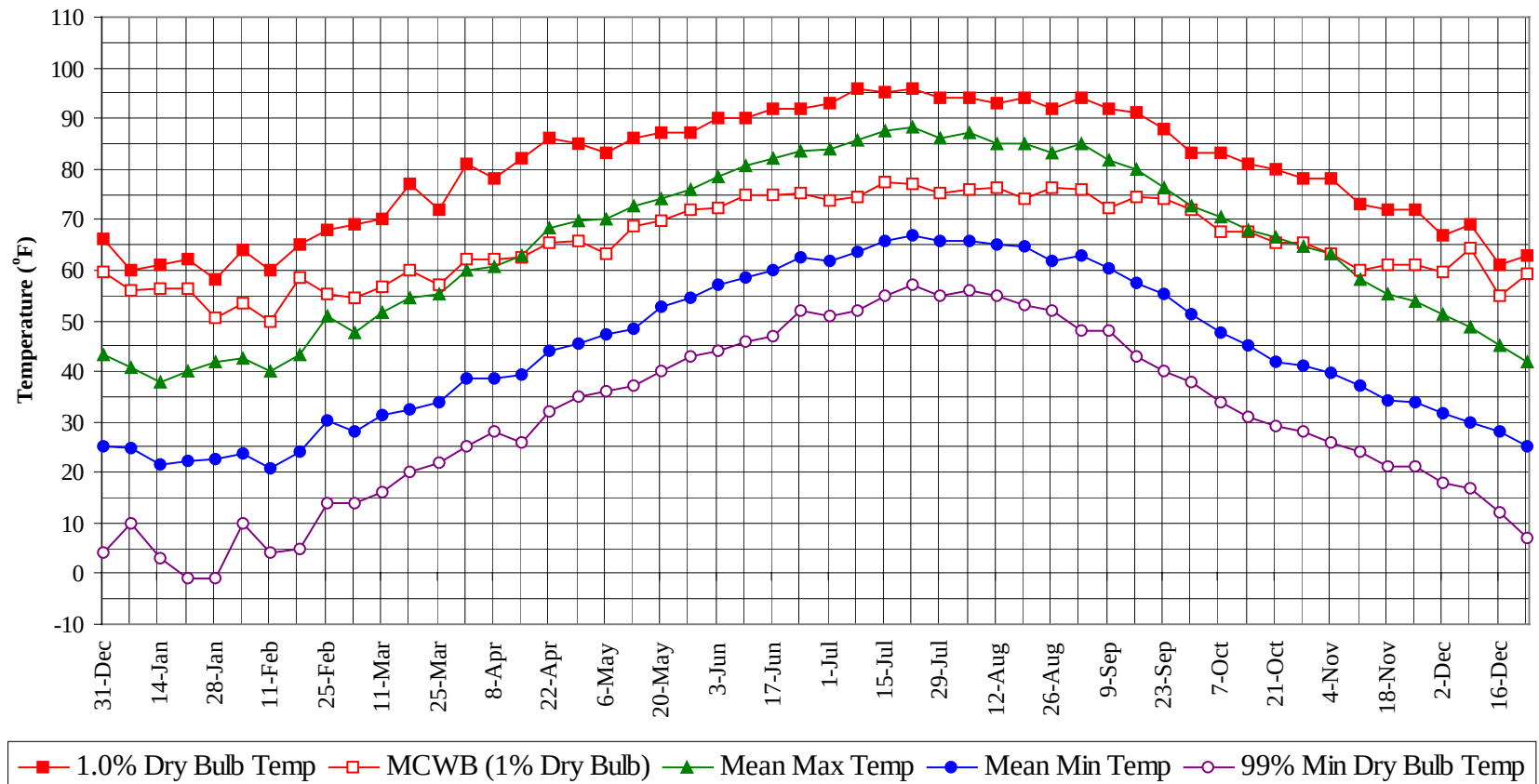
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

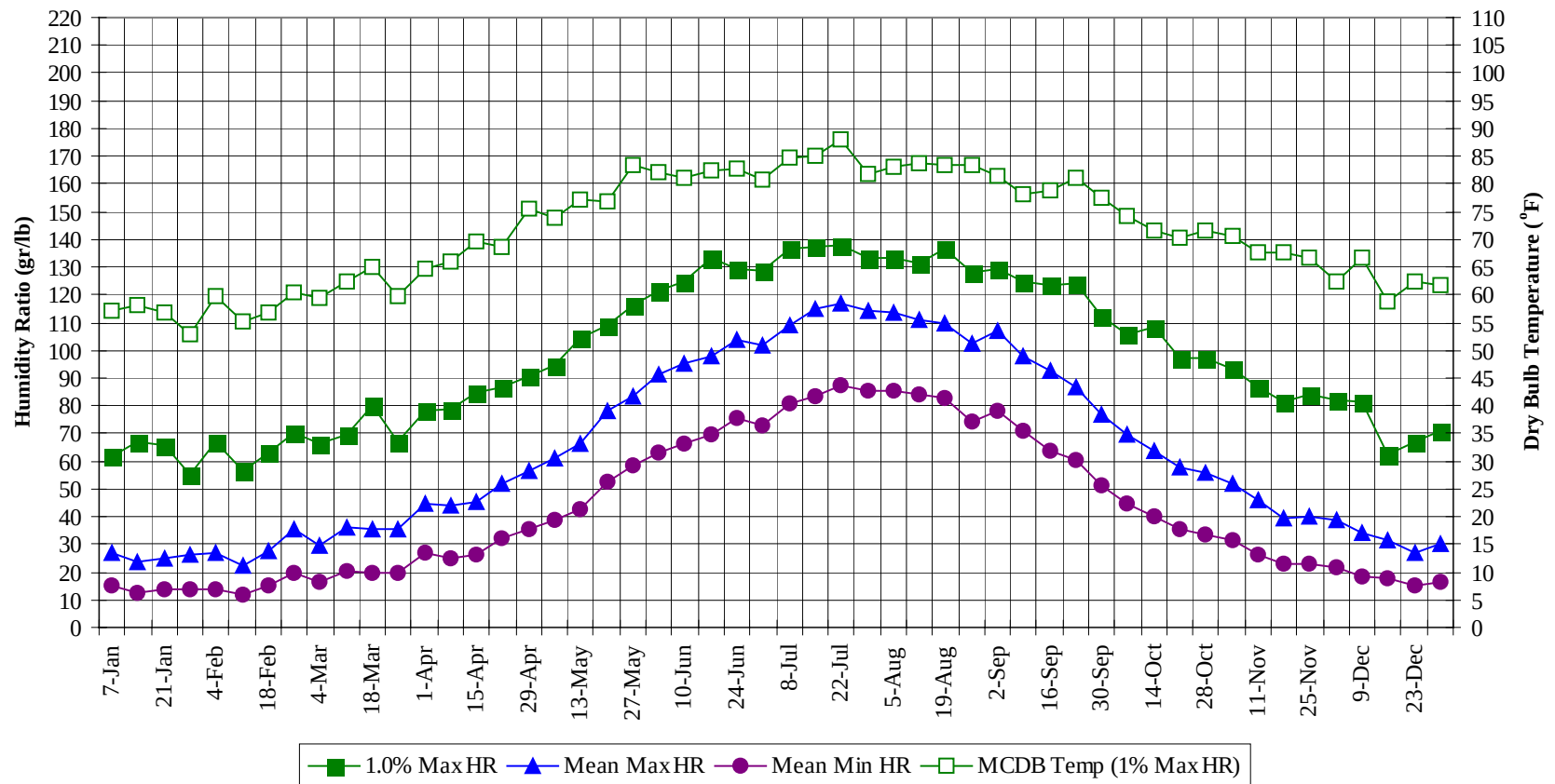
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	76.1
95 / 99		16	2	18	76.2
90 / 94	0	81	17	98	75.1
85 / 89	1	198	58	257	72.6
80 / 84	10	281	129	420	70.3
75 / 79	66	280	217	563	68.1
70 / 74	259	267	320	845	66.1
65 / 69	325	242	289	856	61.9
60 / 64	278	215	248	741	56.9
55 / 59	246	204	226	676	52.1
50 / 54	249	214	234	697	47.2
45 / 49	243	206	229	678	42.6
40 / 44	247	217	240	704	38.0
35 / 39	261	192	239	692	33.5
30 / 34	267	146	204	617	29.3
25 / 29	197	86	135	418	24.5
20 / 24	132	44	76	253	20.0
15 / 19	76	18	36	130	15.4
10 / 14	39	7	13	59	10.7
5 / 9	15	3	5	23	6.1
0 / 4	7	1	3	11	1.2
-5 / -1	3	0	0	3	-3.1
-10 / -6	1	0	0	1	-6.6
-15 / -11	0		0	0	-12.1
-20 / -16	0			0	-15.9

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



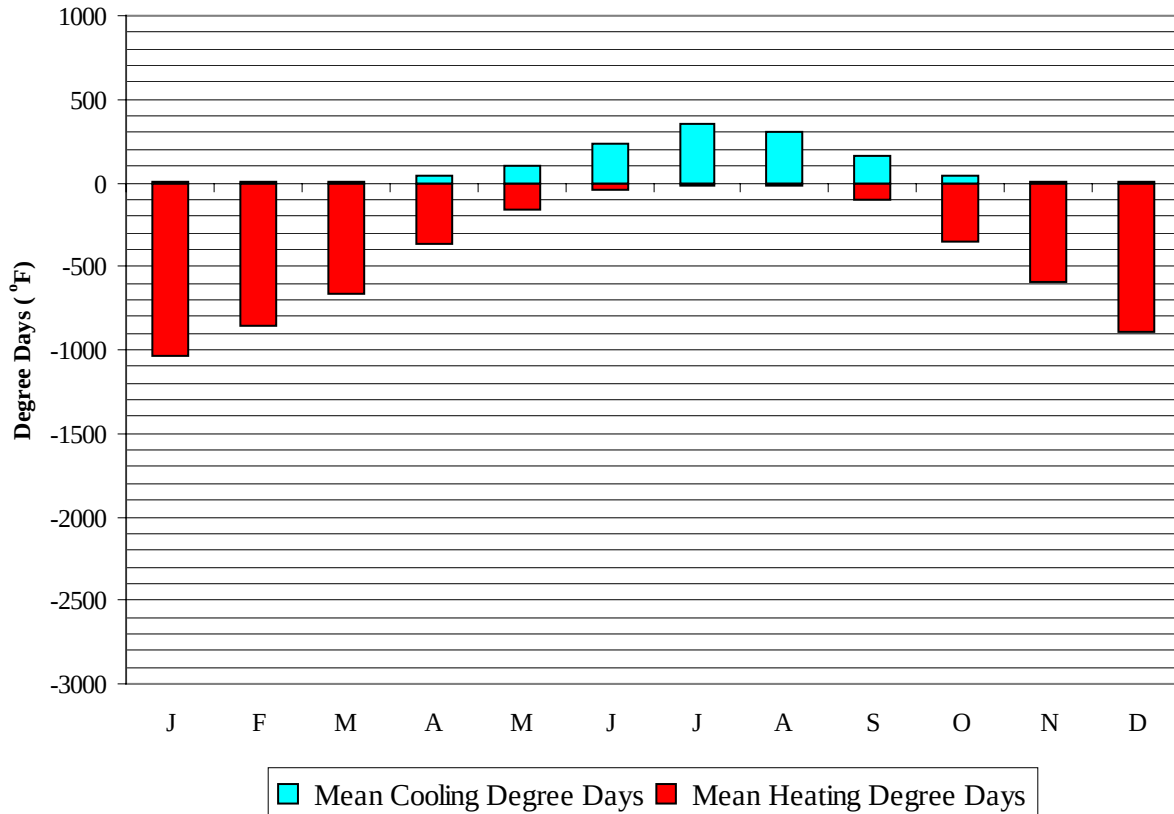
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Long Term Dry Bulb Temperature and Humidity Summary

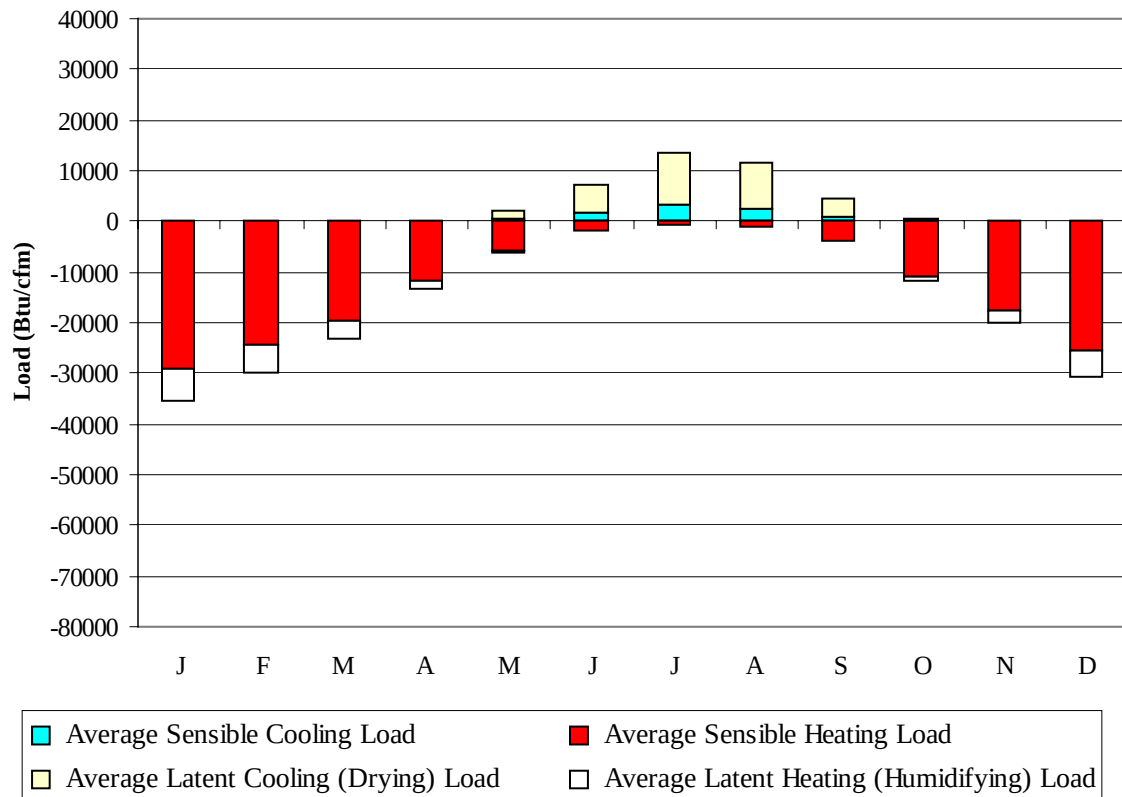
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	60.0	55.9	40.6	24.8	10.0	61.6	57.0	26.8	14.8
14-Jan	61.0	56.5	37.9	21.6	3.0	67.2	58.0	23.9	12.8
21-Jan	62.0	56.4	40.1	22.3	-1.0	65.8	56.9	25.3	13.9
28-Jan	58.0	50.4	41.8	22.7	-1.0	55.3	52.8	26.2	14.0
4-Feb	64.0	53.3	42.7	23.8	10.0	67.2	59.7	26.7	14.1
11-Feb	60.0	49.9	40.1	20.9	4.0	56.7	55.2	22.4	12.1
18-Feb	65.0	58.6	43.2	24.2	5.0	63.0	56.8	27.4	15.0
25-Feb	68.0	55.3	50.8	30.3	14.0	70.0	60.4	35.8	19.4
4-Mar	69.0	54.6	47.6	28.0	14.0	66.5	59.4	29.3	16.2
11-Mar	70.0	56.6	51.8	31.2	16.0	69.3	62.2	36.4	20.3
18-Mar	77.0	59.8	54.5	32.6	20.0	79.8	65.2	35.7	19.8
25-Mar	72.0	57.3	55.3	33.8	22.0	67.2	59.7	35.7	20.0
1-Apr	81.0	62.1	59.9	38.8	25.0	78.4	64.7	44.6	27.1
8-Apr	78.0	62.3	60.8	38.8	28.0	79.1	66.0	43.8	25.2
15-Apr	82.0	62.5	62.8	39.3	26.0	84.7	69.5	45.3	26.2
22-Apr	86.0	65.3	68.3	44.1	32.0	86.8	68.5	51.9	31.9
29-Apr	85.0	65.7	69.7	45.5	35.0	90.3	75.5	56.2	35.7
6-May	83.0	63.1	70.1	47.5	36.0	94.5	73.7	61.1	38.8
13-May	86.0	68.7	72.5	48.3	37.0	104.3	77.2	66.1	42.5
20-May	87.0	69.7	74.2	52.5	40.0	109.2	76.7	78.3	52.5
27-May	87.0	71.9	76.1	54.7	43.0	116.2	83.4	83.2	58.2
3-Jun	90.0	72.3	78.5	57.0	44.0	121.8	82.0	91.0	63.3
10-Jun	90.0	74.8	80.8	58.7	46.0	124.6	81.0	95.0	66.2
17-Jun	92.0	74.8	82.2	60.1	47.0	133.0	82.3	97.8	69.7
24-Jun	92.0	75.2	83.5	62.5	52.0	129.5	82.7	103.9	75.4
1-Jul	93.0	73.6	83.9	61.7	51.0	128.8	80.9	101.8	72.8
8-Jul	96.0	74.4	85.6	63.7	52.0	136.5	84.9	109.0	80.7
15-Jul	95.0	77.4	87.5	65.8	55.0	137.2	85.2	115.2	83.7
22-Jul	96.0	77.2	88.3	66.7	57.0	137.9	88.0	116.7	87.0
29-Jul	94.0	75.3	86.1	65.9	55.0	133.0	81.9	114.3	85.6
5-Aug	94.0	76.0	87.2	65.7	56.0	133.0	82.9	113.3	85.4
12-Aug	93.0	76.4	85.2	65.1	55.0	131.6	83.8	111.0	84.1
19-Aug	94.0	74.3	84.9	64.7	53.0	136.5	83.5	109.6	83.0
26-Aug	92.0	76.4	83.3	61.8	52.0	128.1	83.3	102.8	74.5
2-Sep	94.0	76.0	85.0	63.0	48.0	129.5	81.4	106.9	78.3
9-Sep	92.0	72.2	81.6	60.3	48.0	124.6	78.2	97.7	70.8
16-Sep	91.0	74.6	79.9	57.4	43.0	123.2	78.7	92.7	63.4
23-Sep	88.0	74.1	76.3	55.4	40.0	123.9	81.1	86.8	60.5
30-Sep	83.0	71.9	72.5	51.1	38.0	112.0	77.6	77.1	51.1
7-Oct	83.0	67.6	70.5	47.5	34.0	105.7	74.1	69.3	44.6
14-Oct	81.0	67.5	68.1	45.0	31.0	108.5	71.5	63.8	40.3
21-Oct	80.0	65.5	66.4	41.8	29.0	97.3	70.4	57.5	35.4
28-Oct	78.0	65.6	64.8	41.1	28.0	97.3	71.4	55.5	33.6
4-Nov	78.0	63.3	63.3	39.5	26.0	93.1	70.5	51.8	31.6
11-Nov	73.0	60.1	58.3	37.1	24.0	86.8	67.7	45.7	26.4
18-Nov	72.0	61.0	55.4	34.1	21.0	81.2	67.8	39.5	23.1
25-Nov	72.0	61.0	53.9	33.7	21.0	84.0	66.6	40.0	23.3
2-Dec	67.0	59.8	51.3	31.8	18.0	81.9	62.3	38.9	21.5
9-Dec	69.0	64.4	48.7	29.9	17.0	81.2	66.6	33.9	18.5
16-Dec	61.0	54.9	45.1	28.2	12.0	62.3	58.7	31.5	17.9
23-Dec	63.0	59.2	42.0	25.2	7.0	67.2	62.3	27.1	15.2
31-Dec	66.0	59.7	43.2	25.3	4.0	70.7	61.6	30.4	16.2

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



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1033
FEB	1	856
MAR	10	666
APR	40	370
MAY	107	167
JUN	236	44
JUL	348	13
AUG	304	21
SEP	156	99
OCT	37	351
NOV	9	591
DEC	1	897
ANN	1250	5108

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	-29184	0	-6320
FEB	0	-24362	1	-5473
MAR	35	-19564	8	-3712
APR	193	-11550	86	-1570
MAY	621	-5848	1477	-154
JUN	1753	-1813	5298	-3
JUL	3166	-664	10212	0
AUG	2537	-977	8851	0
SEP	987	-3635	3593	-9
OCT	116	-11102	554	-622
NOV	12	-17528	78	-2571
DEC	0	-25635	9	-5105
ANN	9420	-151862	30167	-25539

Average Annual Solar Radiation – Nearest Available Site

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

City: STERLING
 State: VA
 WBAN No: 93738
 Lat(N): 38.95
 Long(W): 77.45
 Elev(ft): 269

Stn Type: Primary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.504
 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	670	930	1250	1590	1820	1990	1910	1710	1410	1070	720	580	1310
	Std Dev	65	86	99	158	117	120	134	95	103	94	68	43	50
	Minimum	530	730	1060	1330	1630	1740	1600	1550	1260	900	580	490	1180
	Maximum	780	1070	1420	1940	2040	2200	2130	1880	1610	1260	850	650	1400
	Diffuse	330	430	570	720	860	950	940	850	660	460	340	290	620
Clear Day	Global	950	1290	1760	2220	2510	2600	2520	2250	1840	1370	980	820	1760
NORTH	Global	200	270	350	450	550	630	590	500	390	300	220	180	390
	Diffuse	200	270	350	440	510	560	540	480	390	300	220	180	370
Clear Day	Global	190	250	330	430	580	680	620	480	370	280	200	170	380
EAST	Global	440	590	760	930	1020	1080	1040	960	830	670	480	390	760
	Diffuse	250	330	430	530	610	670	650	600	490	370	270	220	450
Clear Day	Global	710	910	1140	1330	1420	1430	1390	1300	1140	920	720	630	1090
SOUTH	Global	1040	1130	1100	970	830	790	810	930	1060	1170	1040	950	990
	Diffuse	360	430	500	550	580	610	610	600	540	460	370	320	490
Clear Day	Global	1940	1980	1780	1390	1050	910	960	1210	1560	1800	1850	1850	1520
WEST	Global	450	590	770	910	990	1050	1010	940	820	670	470	390	760
	Diffuse	250	330	430	540	620	670	660	600	490	370	270	220	460
Clear Day	Global	710	910	1140	1330	1420	1430	1390	1300	1140	920	720	630	1090

Average Annual Solar Heat and Illumination – Nearest Available Site

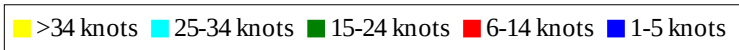
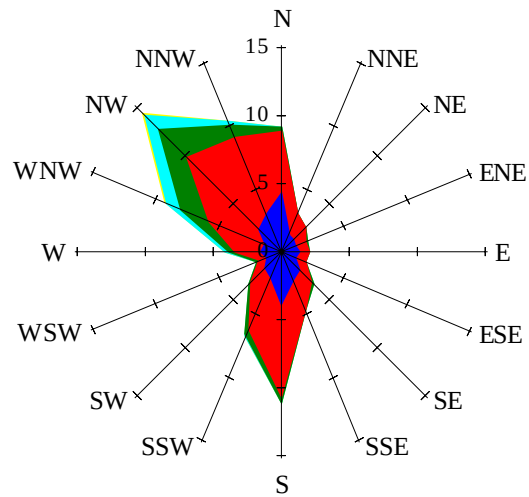
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	440	630	890	1140	1320	1440	1390	1240	1010	740	480	370	930
NORTH	Unshaded	140	190	240	300	370	410	390	340	270	210	150	130	260
	Shaded	130	170	220	270	330	370	350	300	240	190	130	110	230
EAST	Unshaded	300	420	540	660	720	770	730	680	590	470	330	260	540
	Shaded	270	370	470	570	620	660	630	580	520	410	300	240	470
SOUTH	Unshaded	780	830	760	630	520	490	500	600	720	840	780	720	680
	Shaded	760	770	610	420	360	370	370	400	530	740	750	700	560
WEST	Unshaded	310	420	540	650	700	740	720	670	580	470	320	270	530
	Shaded	280	370	480	560	600	640	610	570	500	420	290	240	470

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	37	72	83	67	29	44	81	101	95	69
	M.Cloudy	22	44	51	41	18	29	57	74	71	49
NORTH	M.Clear	10	14	15	13	8	19	17	18	18	16
	M.Cloudy	9	15	17	14	7	14	18	20	20	16
EAST	M.Clear	73	59	15	13	8	71	73	35	18	16
	M.Cloudy	26	32	17	14	7	33	46	30	20	16
SOUTH	M.Clear	37	71	83	67	29	12	30	46	42	22
	M.Cloudy	16	37	43	33	13	11	25	37	34	19
WEST	M.Clear	10	14	20	66	68	12	17	18	50	75
	M.Cloudy	9	15	19	33	24	11	18	20	39	45
M.Clear	(% hrs)	33	29	30	32	34	40	38	33	29	33
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	25	64	84	78	48	13	40	47	30	3
	M.Cloudy	15	40	57	53	31	8	24	28	18	2
NORTH	M.Clear	8	15	17	16	13	5	10	11	8	2
	M.Cloudy	7	15	18	17	12	4	10	11	8	1
EAST	M.Clear	57	69	32	16	13	38	40	11	8	2
	M.Cloudy	19	35	25	17	12	11	18	11	8	1
SOUTH	M.Clear	18	54	73	67	38	34	77	87	63	8
	M.Cloudy	9	29	44	41	21	10	29	34	23	3
WEST	M.Clear	8	15	17	50	70	5	10	19	47	11
	M.Cloudy	7	15	18	33	33	4	10	13	18	3
M.Clear	(% hrs)	42	43	38	35	38	29	31	30	32	35

Wind Summary - December, January, and February

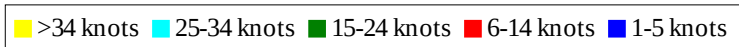
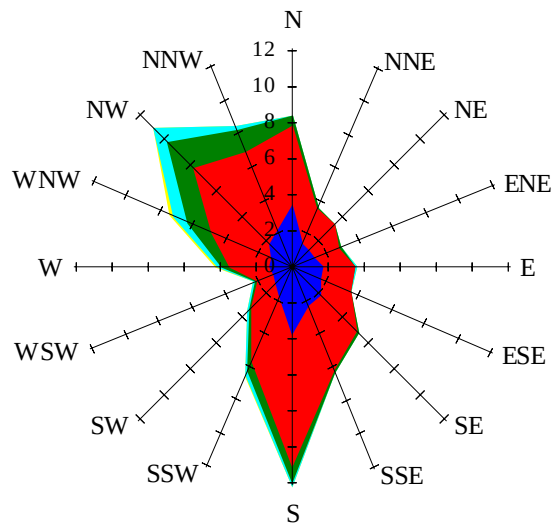
Labels of Percent Frequency on North Axis



Percent Calm = 11.44

Wind Summary - March, April, and May

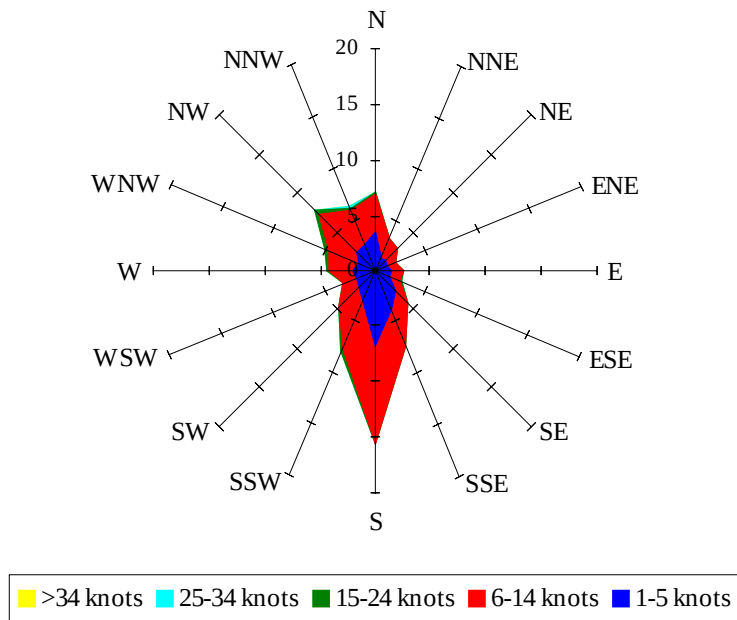
Labels of Percent Frequency on North Axis



Percent Calm = 9.33

Wind Summary - June, July, and August

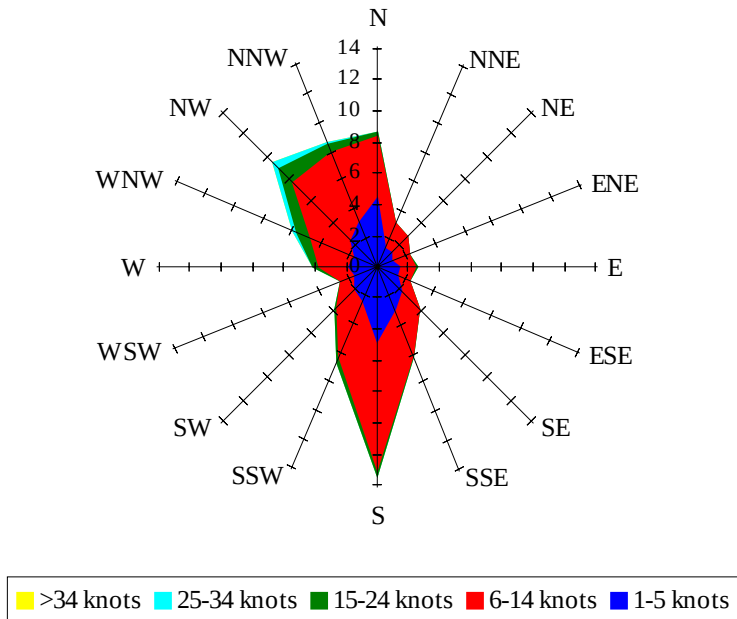
Labels of Percent Frequency on North Axis



Percent Calm = 14.65

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 14.99