

SOUDA, GREECE

Latitude = 35.48 N

Longitude = 24.12 E

Period of Record = 1973 to 1996

WMO No. 167460

Elevation = 495 feet

Average Pressure = 29.42 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	102	69	55	9.5	NW
0.4% Occurrence	94	67	59	9.5	WNW
1.0% Occurrence	91	67	64	9.7	WNW
2.0% Occurrence	88	67	66	10.1	WNW
Mean Daily Range	13	-	-	-	-
97.5% Occurrence	45	42	35	8.1	N
99.0% Occurrence	43	40	31	9.1	N
99.6% Occurrence	41	38	30	9.2	N
Median of Extreme Lows	37	35	27	9.8	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	75	84	114	8.8	WNW
0.4% Occurrence	72	82	101	8.8	WNW
1.0% Occurrence	71	81	97	8.5	WNW
2.0% Occurrence	70	80	94	8.2	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	127	77	0.83	6.4	WNW
0.4% Occurrence	112	76	0.74	4.9	WNW
1.0% Occurrence	105	75	0.69	5.8	WNW
2.0% Occurrence	99	75	0.65	6.4	WNW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		55	983	32	1027

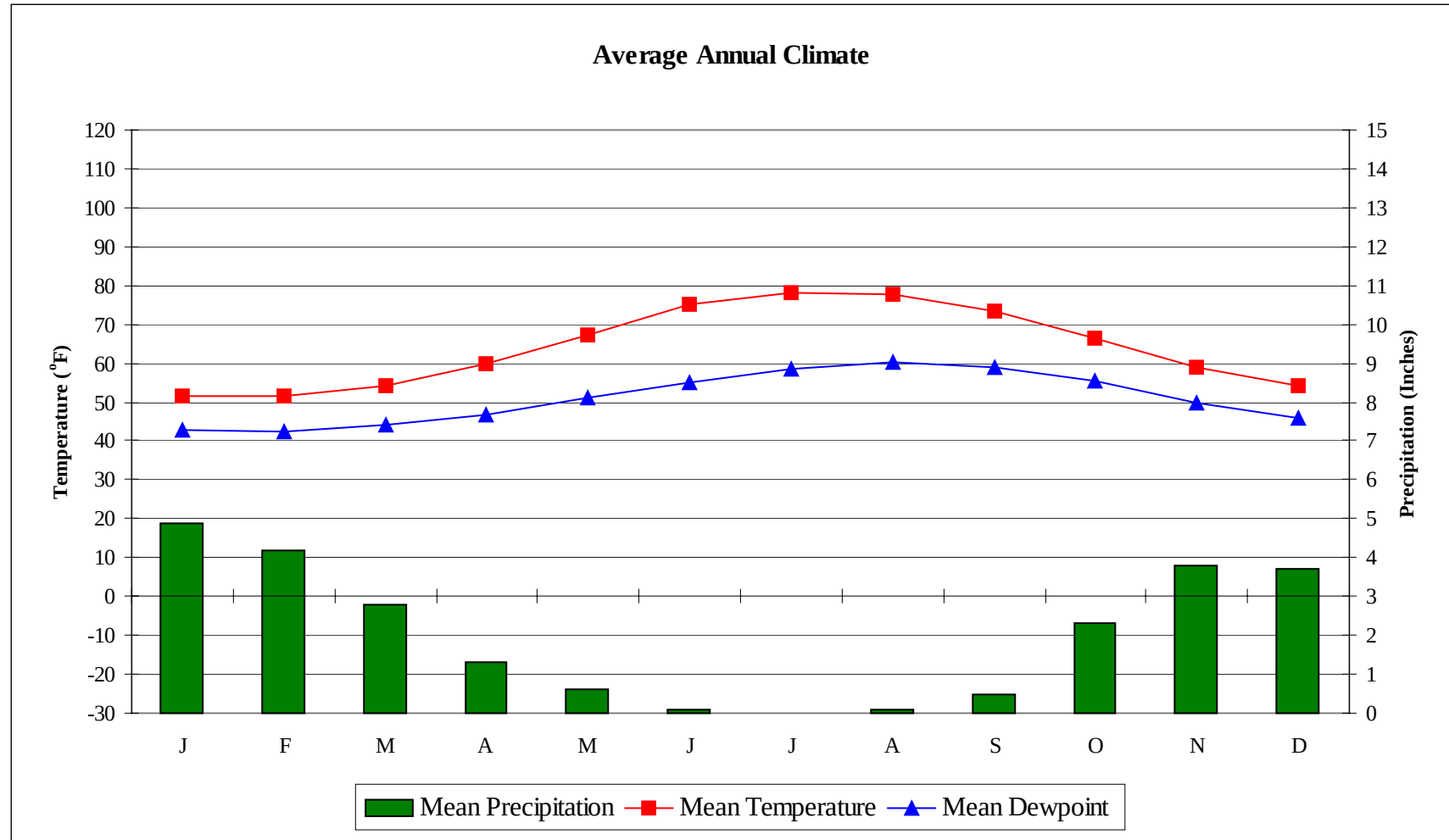
Other Site Data

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
9	N/A	N/A	0.5 + 0.9
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 (#)
66.8	N/A	N/A	0

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

SOUDA, GREECE

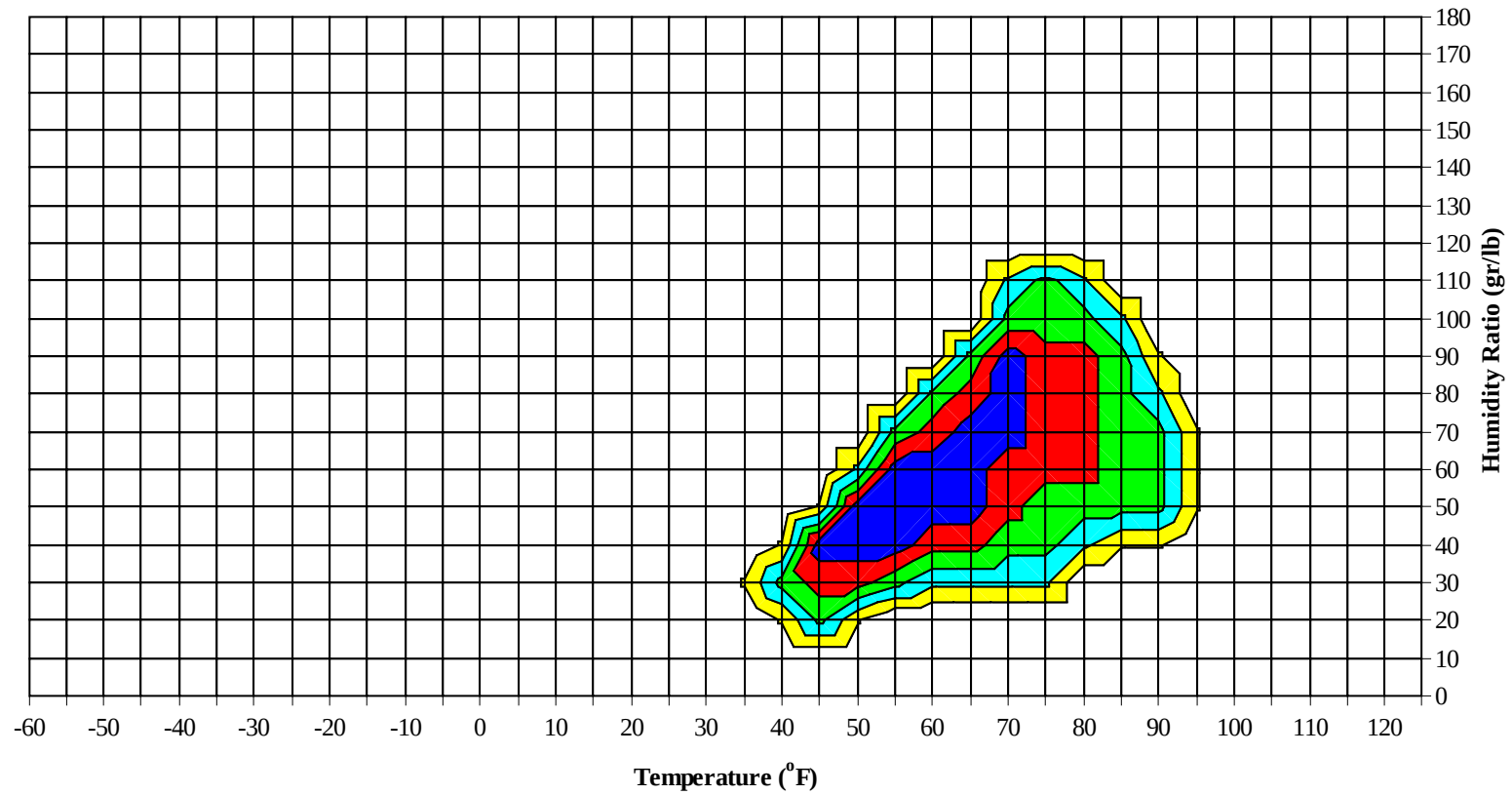
WMO No. 167460



SOUDA, GREECE

WMO No. 167460

Long Term Psychrometric Summary

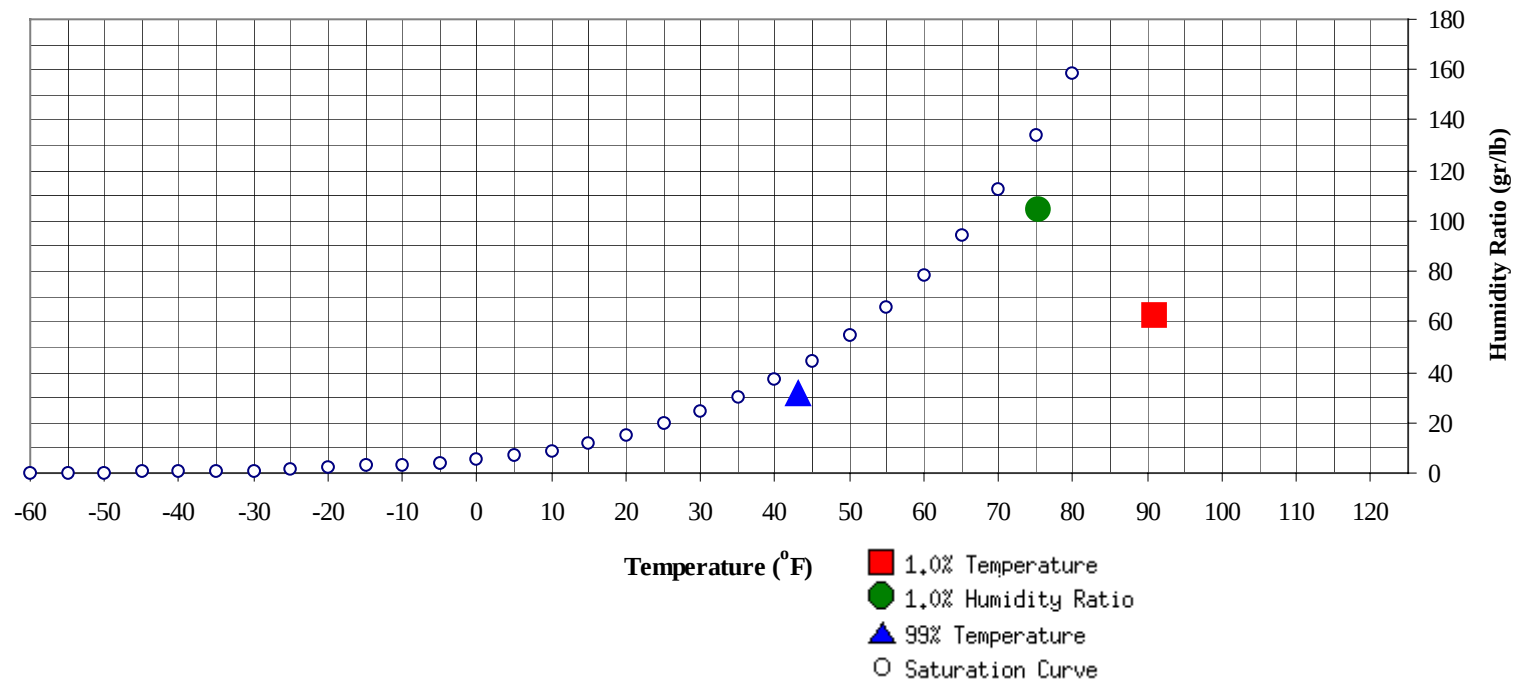


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

SOUDA, GREECE

WMO No. 167460

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)
	43	31.4	15.2		105	75.3	70.3	68	34.5

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	91	62.4	67.1	31.7

SOUDA, GREECE

WMO No. 167460

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		
105 / 109															
100 / 104															
95 / 99															
90 / 94															
85 / 89															
80 / 84															
75 / 79		0		0	53.6		1	0	1	56.1		0		0	58.5
70 / 74	0	2	1	3	54.9	0	4	1	5	54.5	1	9	3	13	55.1
65 / 69	1	5	2	8	54.1	0	7	2	9	54.0	2	21	6	29	54.8
60 / 64	4	36	8	47	53.5	6	36	14	56	52.9	7	58	24	89	53.7
55 / 59	21	81	51	152	51.2	17	66	41	124	50.8	39	78	75	192	51.7
50 / 54	101	82	109	292	48.0	81	62	87	230	47.8	110	55	90	255	48.2
45 / 49	93	35	63	191	43.5	87	36	60	183	43.6	68	20	39	127	43.8
40 / 44	25	7	13	44	39.2	27	8	15	50	39.0	18	3	8	28	39.0
35 / 39	4	1	2	7	36.3	6	3	4	13	35.6	3	2	2	7	35.8
30 / 34			0	0	30.0	1	0	0	1	32.7	1	0	0	1	33.0

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.

SOUDA, GREECE

WMO No. 167460

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		
105 / 109															
100 / 104												2	0	2	69.9
95 / 99		0		0	60.3		1		1	64.8		4	1	5	67.7
90 / 94		1	0	1	61.0		3	1	4	64.8	0	21	5	26	66.3
85 / 89		1	0	1	60.7	0	7	1	8	63.2	2	32	11	45	65.4
80 / 84	0	3	1	4	59.5	1	28	8	37	62.7	10	76	33	119	64.4
75 / 79	2	13	5	19	57.3	6	60	22	89	61.1	32	73	64	170	63.2
70 / 74	4	40	13	57	56.7	20	69	47	135	59.6	75	27	76	178	62.5
65 / 69	7	48	22	78	55.7	41	40	55	136	58.7	74	3	38	116	61.1
60 / 64	28	84	60	172	54.3	93	33	76	202	56.9	42	2	11	54	58.6
55 / 59	89	38	92	218	52.3	71	6	34	111	53.5	5		1	6	54.5
50 / 54	93	11	43	146	48.8	16	0	4	20	49.6					
45 / 49	17	1	4	22	44.9	1			1	46.4					
40 / 44	1		0	1	41.4										
35 / 39															
30 / 34															

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.

SOUDA, GREECE

WMO No. 167460

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		
105 / 109		0	0	0	70.0	0			0	73.0					
100 / 104		2	1	3	69.1	0	1	0	1	69.5		0		0	69.0
95 / 99	0	10	3	13	67.7	0	5	1	6	68.5		2	0	2	68.0
90 / 94	1	29	8	38	67.3	0	23	5	28	68.3	0	8	1	9	67.2
85 / 89	3	48	19	70	66.9	1	54	14	69	67.9	0	19	4	22	67.1
80 / 84	17	106	56	180	66.5	10	113	55	178	67.4	2	72	20	94	67.1
75 / 79	63	49	93	204	65.8	61	50	101	211	66.8	19	96	59	173	65.6
70 / 74	126	4	63	194	64.9	142	3	68	213	65.5	94	37	104	236	64.6
65 / 69	34	0	5	39	62.1	33	0	4	37	62.8	82	5	43	130	62.0
60 / 64	4	0	0	4	59.4	2	0	0	2	59.8	40	1	9	49	58.8
55 / 59						0			0	58.0	3	0	1	4	54.7
50 / 54											0			0	51.0
45 / 49															
40 / 44															
35 / 39															
30 / 34															

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SOUDA, GREECE

WMO No. 167460

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		
105 / 109															
100 / 104															
95 / 99		0		0	64.8										
90 / 94		2	0	2	64.5		0		0	59.5					
85 / 89	0	6	1	7	64.5		0	0	0	61.1					
80 / 84	1	20	3	24	65.0		1	0	1	60.5					
75 / 79	4	47	15	66	64.3	1	6	1	8	60.8		0		0	58.3
70 / 74	20	76	46	142	62.8	2	28	5	35	60.2	0	4	1	5	57.4
65 / 69	52	49	71	171	61.1	6	48	19	72	59.0	1	17	2	20	56.8
60 / 64	106	35	77	219	58.2	41	74	68	183	56.9	11	65	23	98	54.9
55 / 59	53	11	31	95	53.8	108	61	97	266	53.0	54	82	84	219	52.3
50 / 54	13	1	4	18	50.5	65	19	42	126	48.8	115	55	95	266	48.7
45 / 49	0			0	39.0	16	3	8	27	44.4	55	22	36	113	43.5
40 / 44						1	0	0	1	41.1	12	3	7	22	40.0
35 / 39						0			0	38.0	1	0	0	1	37.5
30 / 34															

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WMO No. 167460

Period of Record = 1973 to 1996

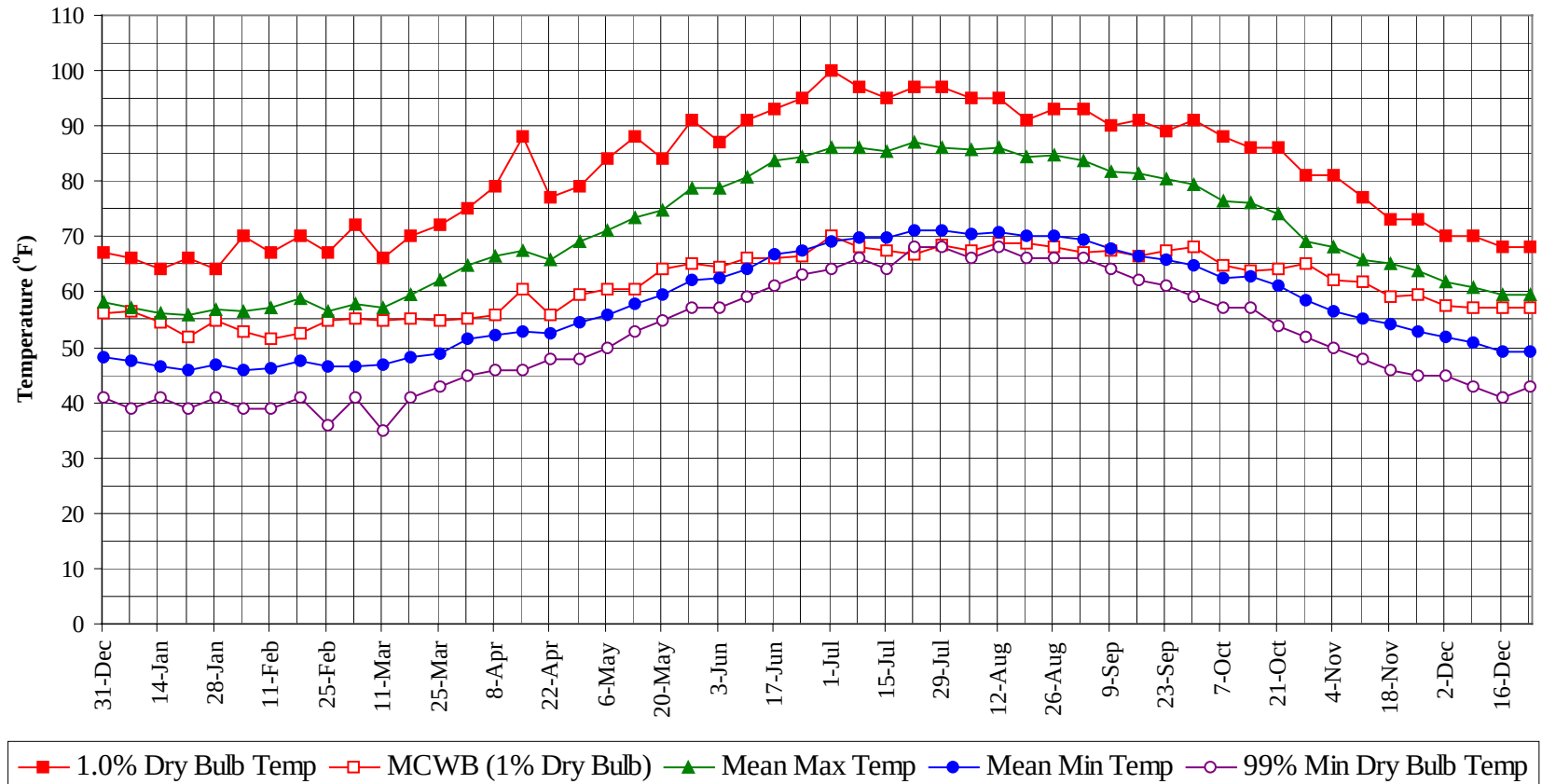
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WMO No. 167460

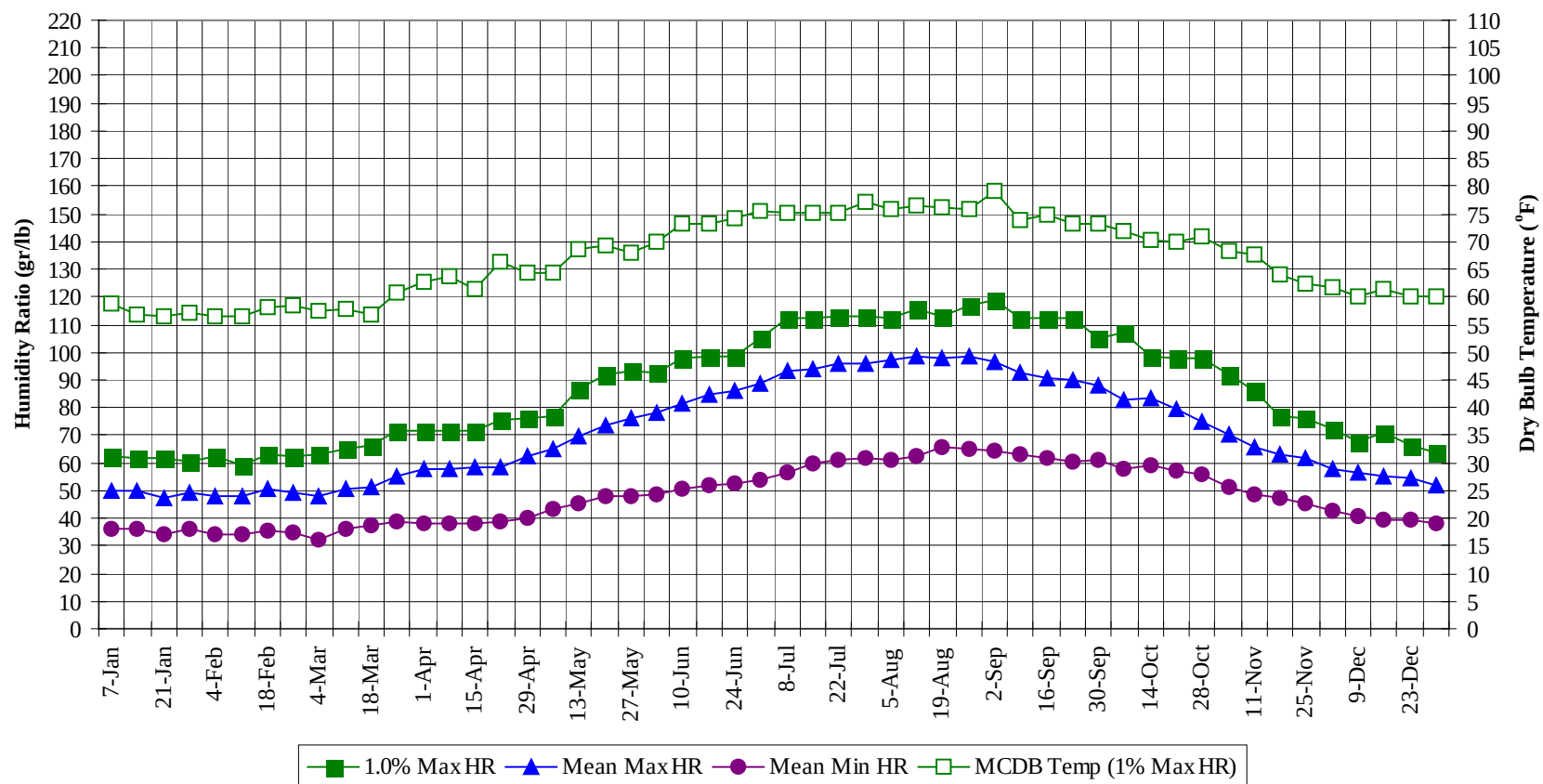
Annual Summary of Temperatures



SOUDA, GREECE

WMO No. 167460

Long Term Humidity and Dry Bulb Temperature Summary



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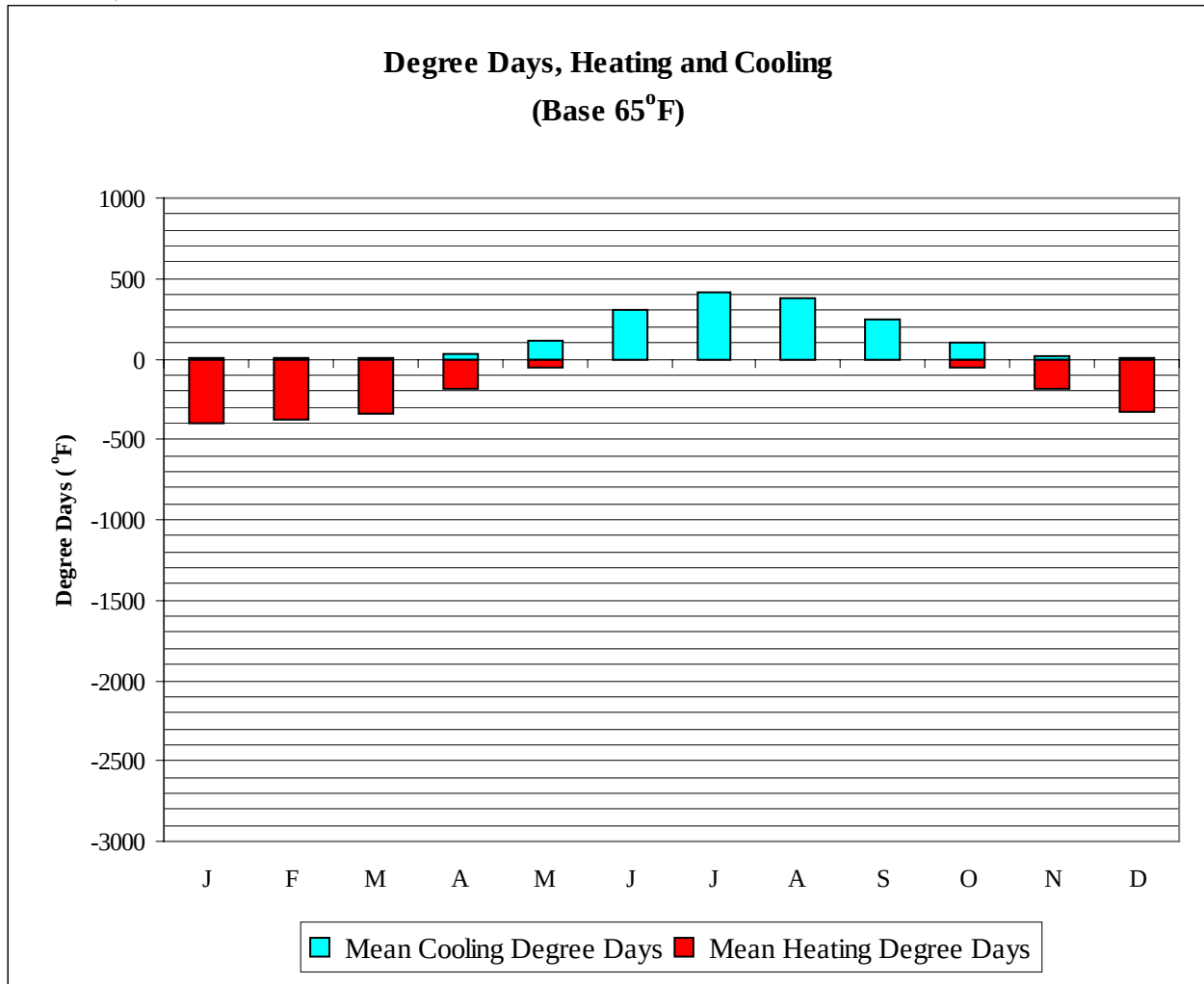
WMO No. 167460

Long Term Dry Bulb Temperature and Humidity Summary

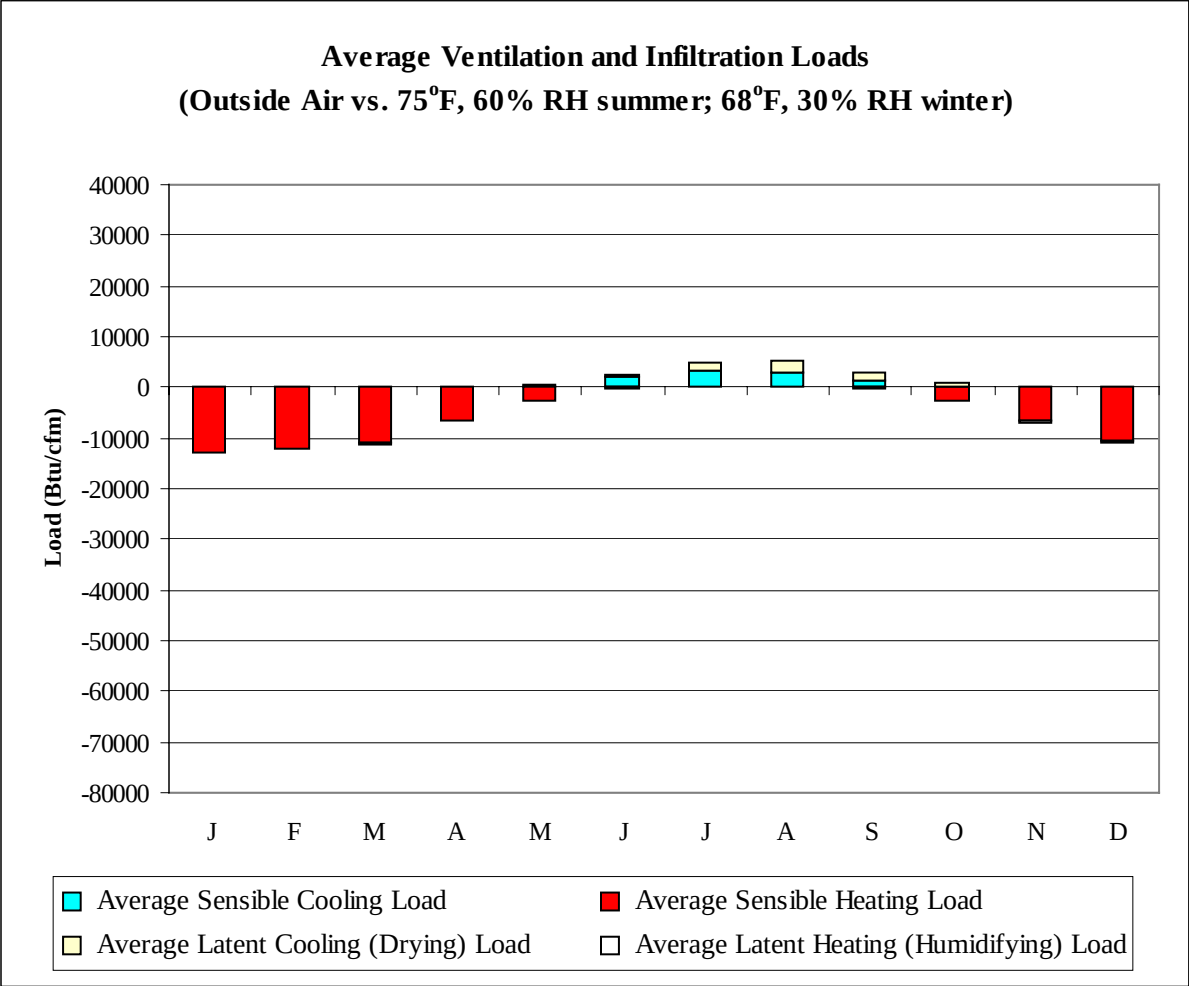
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	66.0	56.4	57.1	47.4	39.0	62.3	58.8	50.0	36.0
14-Jan	64.0	54.4	56.3	46.7	41.0	61.6	56.8	49.7	36.3
21-Jan	66.0	51.9	55.8	45.9	39.0	61.6	56.4	47.3	33.9
28-Jan	64.0	54.8	56.8	47.0	41.0	60.2	57.2	49.2	35.9
4-Feb	70.0	52.8	56.5	46.0	39.0	62.3	56.4	47.8	34.0
11-Feb	67.0	51.6	57.1	46.3	39.0	58.8	56.5	48.0	34.3
18-Feb	70.0	52.7	58.8	47.5	41.0	63.0	58.0	50.8	35.3
25-Feb	67.0	54.7	56.5	46.4	36.0	62.3	58.3	49.4	34.9
4-Mar	72.0	55.1	58.0	46.7	41.0	63.0	57.3	47.9	32.3
11-Mar	66.0	55.0	57.2	46.9	35.0	65.1	57.7	50.4	36.0
18-Mar	70.0	55.1	59.4	48.0	41.0	66.5	56.9	51.5	37.3
25-Mar	72.0	55.0	62.3	49.0	43.0	71.4	60.9	55.0	38.7
1-Apr	75.0	55.1	64.7	51.6	45.0	71.4	62.8	57.7	38.2
8-Apr	79.0	55.8	66.4	52.2	46.0	71.4	63.7	58.0	38.1
15-Apr	88.0	60.6	67.4	52.9	46.0	71.4	61.5	58.7	38.3
22-Apr	77.0	55.8	65.8	52.5	48.0	75.6	66.5	58.7	38.6
29-Apr	79.0	59.6	69.1	54.4	48.0	76.3	64.2	62.6	39.9
6-May	84.0	60.4	71.0	56.0	50.0	77.0	64.4	65.0	43.4
13-May	88.0	60.5	73.3	57.9	53.0	86.8	68.5	69.4	45.0
20-May	84.0	64.2	74.8	59.5	55.0	91.7	69.3	73.6	48.0
27-May	91.0	65.3	78.8	62.1	57.0	93.1	68.1	75.9	47.7
3-Jun	87.0	64.3	78.7	62.6	57.0	92.4	69.9	78.0	48.5
10-Jun	91.0	66.2	80.9	64.2	59.0	98.0	73.2	81.2	50.8
17-Jun	93.0	66.1	83.8	66.6	61.0	98.7	73.4	84.5	52.0
24-Jun	95.0	66.6	84.4	67.5	63.0	98.7	74.3	86.2	52.4
1-Jul	100.0	70.1	86.1	69.3	64.0	105.0	75.5	88.5	53.8
8-Jul	97.0	68.1	86.1	69.7	66.0	112.0	75.3	93.2	56.2
15-Jul	95.0	67.5	85.4	69.9	64.0	112.0	75.2	94.1	59.9
22-Jul	97.0	66.7	87.0	71.1	68.0	112.7	75.2	96.1	60.9
29-Jul	97.0	68.5	86.1	71.2	68.0	112.7	77.1	96.1	61.9
5-Aug	95.0	67.5	85.8	70.5	66.0	112.0	75.9	97.0	61.3
12-Aug	95.0	68.7	86.1	70.9	68.0	115.5	76.7	98.2	62.1
19-Aug	91.0	68.9	84.4	70.2	66.0	112.7	76.1	98.0	65.5
26-Aug	93.0	68.2	84.9	70.1	66.0	116.9	75.8	98.7	65.3
2-Sep	93.0	67.0	83.6	69.3	66.0	119.0	79.1	96.5	64.6
9-Sep	90.0	67.4	81.8	67.8	64.0	112.0	74.0	92.9	63.3
16-Sep	91.0	66.4	81.4	66.5	62.0	112.0	75.0	90.8	61.5
23-Sep	89.0	67.5	80.3	65.9	61.0	112.0	73.2	89.7	60.6
30-Sep	91.0	68.0	79.4	64.9	59.0	105.0	73.3	88.2	61.0
7-Oct	88.0	64.8	76.5	62.4	57.0	107.1	71.8	82.6	57.7
14-Oct	86.0	63.7	76.2	62.9	57.0	98.7	70.2	83.7	59.2
21-Oct	86.0	64.2	74.0	61.0	54.0	98.0	70.1	79.3	57.3
28-Oct	81.0	65.0	69.2	58.6	52.0	98.0	70.8	74.5	56.0
4-Nov	81.0	62.0	68.1	56.5	50.0	91.7	68.3	70.2	51.3
11-Nov	77.0	61.7	65.7	55.1	48.0	86.1	67.8	65.5	48.5
18-Nov	73.0	59.1	65.2	54.1	46.0	77.0	64.1	63.1	47.5
25-Nov	73.0	59.4	64.0	52.9	45.0	76.3	62.5	62.0	45.4
2-Dec	70.0	57.6	61.8	52.0	45.0	72.1	61.7	58.1	42.7
9-Dec	70.0	57.2	60.8	50.9	43.0	67.9	60.1	56.3	40.8
16-Dec	68.0	57.2	59.4	49.3	41.0	70.7	61.5	54.9	39.6
23-Dec	68.0	57.1	59.5	49.2	43.0	66.5	60.2	54.8	39.5
31-Dec	67.0	56.2	58.0	48.4	41.0	63.7	60.1	52.1	37.9

SOUDA, GREECE

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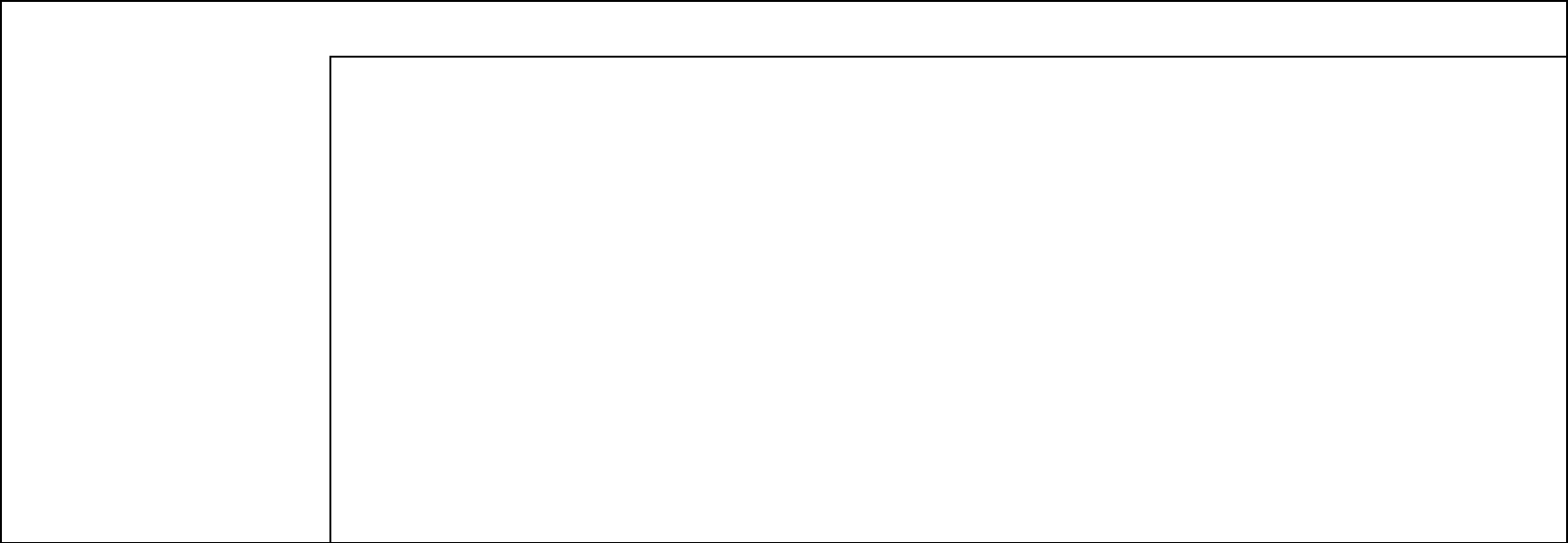
	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	1	405
FEB	2	381
MAR	6	340
APR	29	185
MAY	118	55
JUN	300	4
JUL	410	0
AUG	383	0
SEP	243	4
OCT	101	54
NOV	16	186
DEC	2	324
ANN	1611	1938



	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	-12766	0	-152
FEB	1	-11975	0	-192
MAR	5	-11041	0	-142
APR	78	-6706	1	-65
MAY	490	-2642	115	-14
JUN	2135	-365	516	-4
JUL	3433	-31	1570	-2
AUG	2887	-20	2263	-1
SEP	1204	-346	1494	0
OCT	328	-2572	515	-2
NOV	22	-6776	29	-13
DEC	0	-10658	0	-83
ANN	10583	-65898	6503	-670

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

No Solar Radiation
Data Available

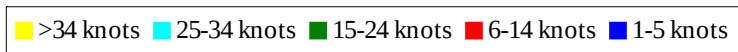
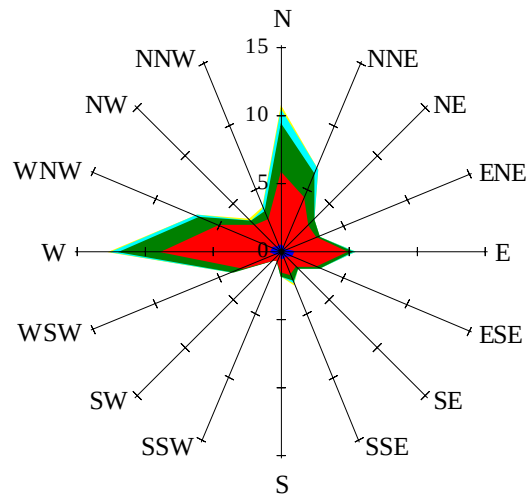


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

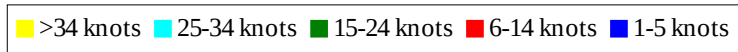
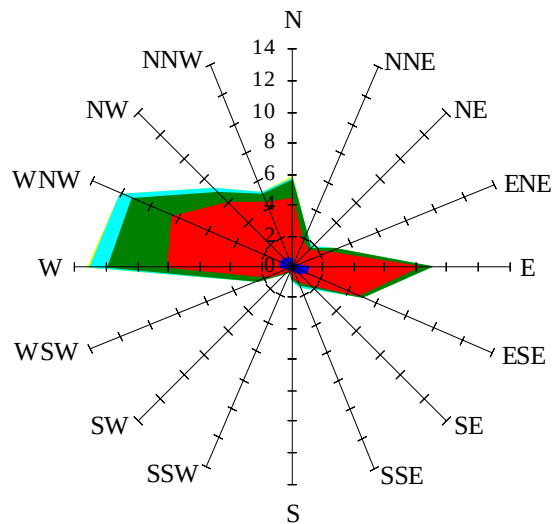
Labels of Percent Frequency on North Axis



Percent Calm = 31.17

Wind Summary - March, April, and May

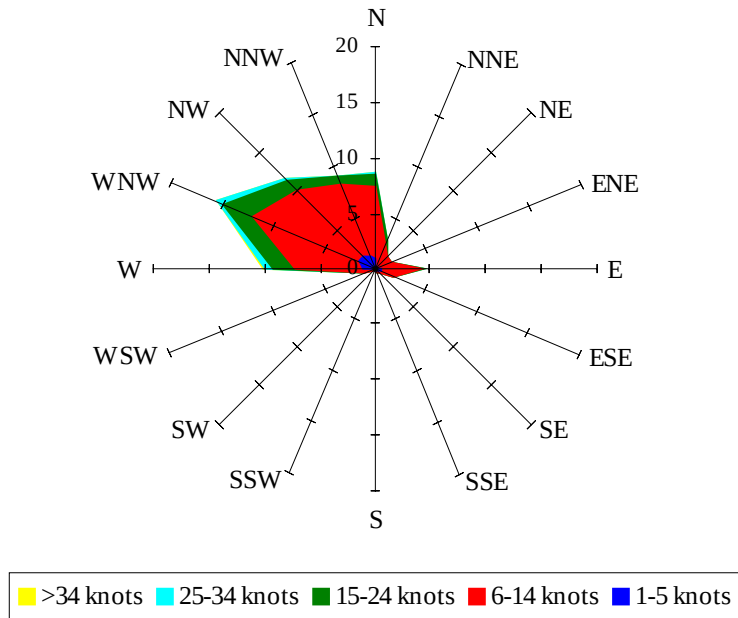
Labels of Percent Frequency on North Axis



Percent Calm = 28.66

Wind Summary - June, July, and August

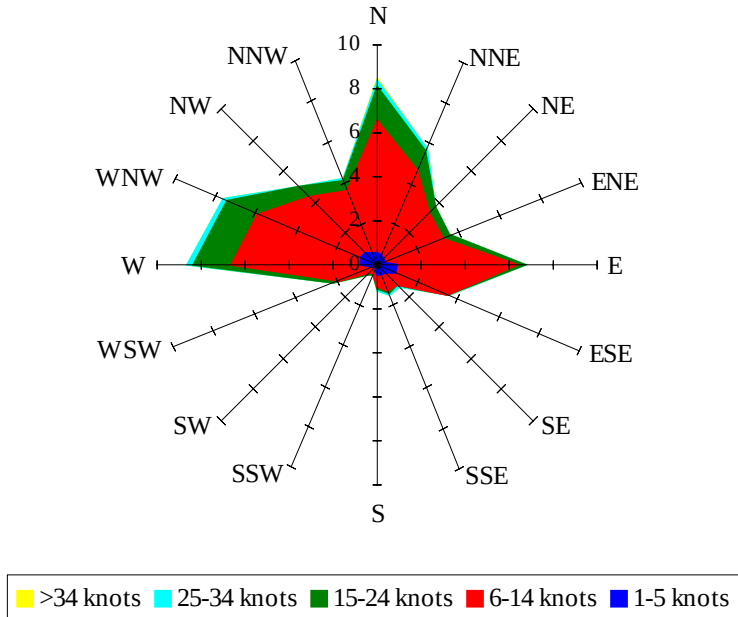
Labels of Percent Frequency on North Axis



Percent Calm = 30.79

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 35.61