

TRIPOLI LY	
Latitude = 32.67 N	WMO No. 620100
Longitude = 13.15 E	Elevation = 266 feet
Period of Record = 1973 to 1996	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	113	75	69	11.2	SSW
0.4% Occurrence	107	75	82	11.9	N
1.0% Occurrence	104	74	82	11.7	N
2.0% Occurrence	100	72	78	11.6	ENE
Mean Daily Range	22	-	-	-	-
97.5% Occurrence	44	42	37	4.8	WSW
99.0% Occurrence	41	40	34	4.5	WSW
99.6% Occurrence	39	38	31	4.7	WSW
Median of Extreme Lows	36	36	29	5.1	WSW
	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	88	104	175	12.2	WNW
0.4% Occurrence	81	98	131	12.7	ENE
1.0% Occurrence	78	92	121	11.6	ENE
2.0% Occurrence	77	90	117	11.3	ENE
	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	177	100	1.15	12.7	NNW
0.4% Occurrence	141	87	0.94	9.9	ENE
1.0% Occurrence	132	84	0.87	10.6	ENE
2.0% Occurrence	125	83	0.83	9.2	ENE
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		433	1642	586	2025

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
10	N/A	N/A	1.6 + 2.4
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 (#)
71.0	N/A	N/A	0

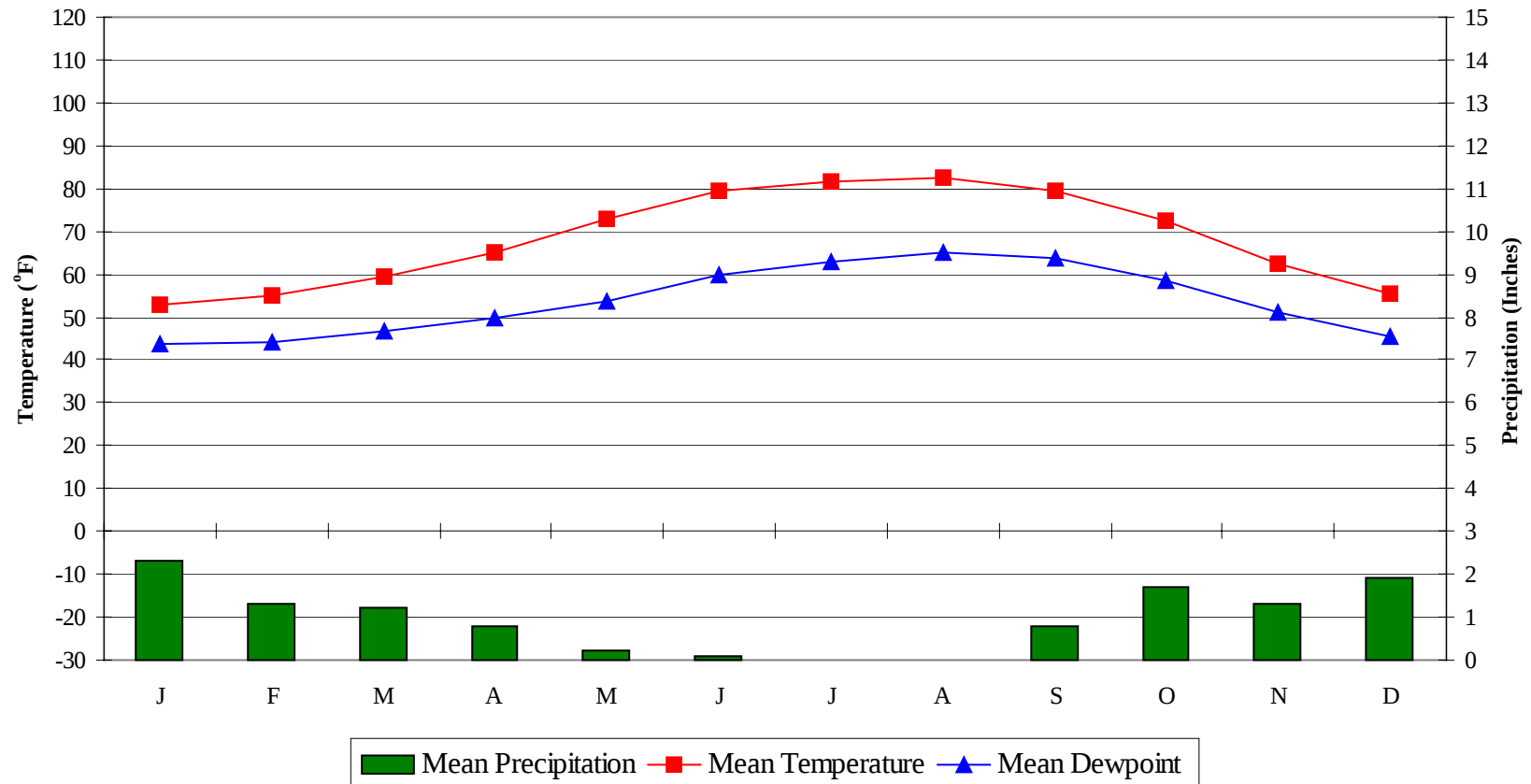
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

TRIPOLI

LY

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Average Annual Climate

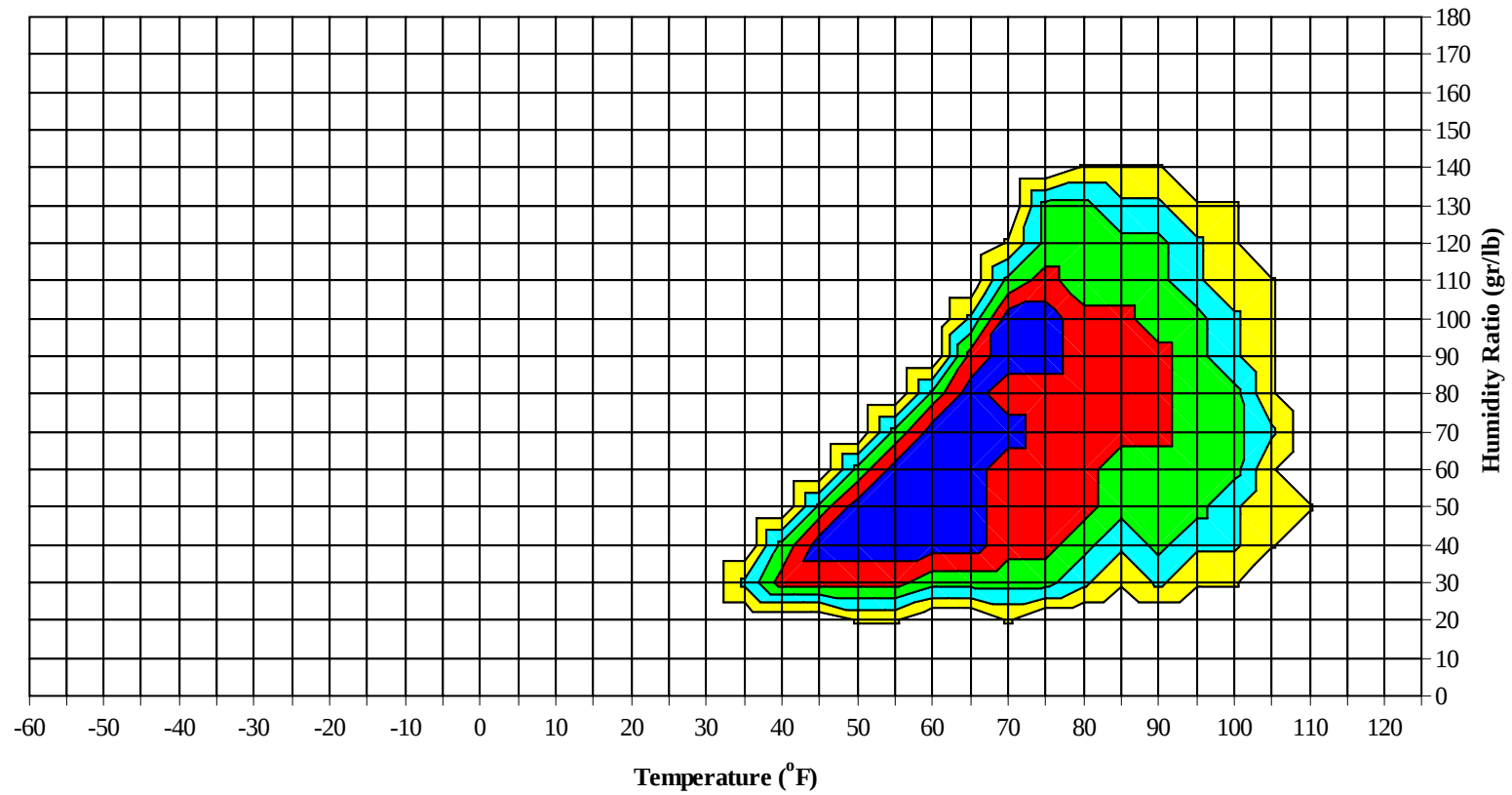


TRIPOLI

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WMO No. 620100

Long Term Psychrometric Summary

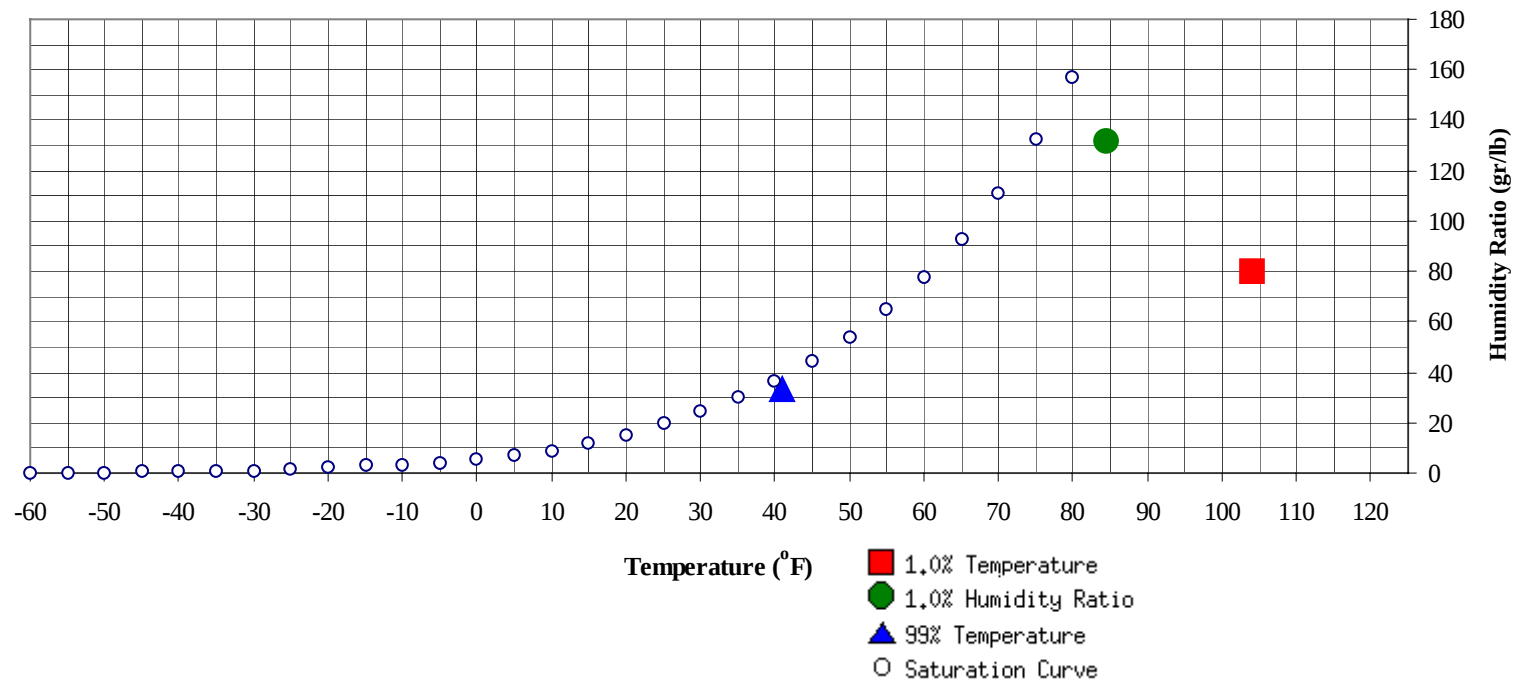


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

TRIPOLI LY

WMO No. 620100

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
99% Dry Bulb	41	33.5	15.0		131.6	84.4	77.3	74.8	40.9

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	104	80.2	73.9	37.6

TRIPOLI LY

WMO No. 620100

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		
115 / 119															
110 / 114															
105 / 109															
100 / 104															
95 / 99							0		0	69.5		1	0	1	69.8
90 / 94	0			0	60.0	1	0		1	66.1	3	0		3	64.9
85 / 89	0	0		0	67.0	1	0		1	63.4	4	2		6	63.8
80 / 84	0	1	0	1	61.0	4	2		6	61.2	0	13	6	19	62.0
75 / 79	0	4	1	5	59.3	0	10	5	15	59.0	2	22	13	36	59.8
70 / 74	0	11	4	14	56.4	0	22	12	34	57.0	4	32	20	55	58.0
65 / 69	0	21	12	33	54.8	1	24	14	39	54.9	5	36	25	65	56.2
60 / 64	2	57	29	88	53.4	5	52	33	90	53.4	16	70	54	140	54.8
55 / 59	16	74	70	159	51.1	23	56	61	139	51.0	52	45	72	169	52.5
50 / 54	59	48	76	184	48.6	55	34	61	150	48.2	76	16	44	137	49.3
45 / 49	99	24	44	168	44.6	86	15	32	133	44.7	65	5	12	82	45.1
40 / 44	52	6	10	68	40.4	42	4	5	51	40.7	23	1	2	26	40.9
35 / 39	19	2	2	23	36.8	12	1	0	13	36.7	4	0	0	4	37.6
30 / 34	1	0		1	32.7	0			0	32.0					

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.

TRIPOLI LY

WMO No. 620100

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		
115 / 119												1	0	1	81.0
110 / 114												3	1	4	74.9
105 / 109		0	0	0	71.0		2	1	3	71.5		7	4	11	75.6
100 / 104		1	1	2	74.1		11	5	16	70.9	0	18	10	27	72.9
95 / 99		4	2	6	69.3	0	16	7	22	68.6	1	27	13	41	71.6
90 / 94	0	9	5	14	65.8	1	27	12	41	67.1	4	36	20	60	69.5
85 / 89	0	10	6	16	64.6	2	26	14	42	66.1	7	34	22	63	68.8
80 / 84	2	25	13	41	63.2	9	42	28	79	64.5	21	56	40	116	67.8
75 / 79	4	35	19	58	61.3	18	44	36	97	62.9	31	41	51	123	66.2
70 / 74	11	49	29	89	59.1	29	49	46	124	61.2	61	15	54	130	65.3
65 / 69	15	40	33	88	57.7	39	20	44	103	60.5	60	2	21	83	63.3
60 / 64	46	43	63	152	56.2	79	9	40	128	58.7	44	0	4	48	60.1
55 / 59	69	17	52	137	53.2	48	2	13	64	54.8	11		0	11	55.6
50 / 54	57	5	15	78	49.5	20	0	1	21	50.5	0			0	52.5
45 / 49	30	1	2	33	45.5	2			2	46.2					
40 / 44	4		0	4	41.4										
35 / 39	1			1	37.2										
30 / 34															

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TRIPOLI LY

WMO No. 620100

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		
115 / 119		0	0	0	71.8		1		1	80.9		0		0	79.0
110 / 114		3	1	4	74.8		1	0	1	76.1		0	0	0	73.8
105 / 109		11	5	16	74.7		8	2	10	76.1		5	1	6	75.1
100 / 104		20	9	28	74.0	0	24	8	32	74.3		14	5	18	73.5
95 / 99	0	36	16	52	72.2	0	42	16	59	73.1		24	10	34	72.4
90 / 94	2	54	28	83	71.4	1	64	33	98	72.7	2	44	18	64	71.5
85 / 89	7	48	33	88	70.6	7	49	39	95	72.4	5	47	24	76	71.2
80 / 84	19	51	58	127	69.6	24	43	68	135	71.6	16	62	54	132	70.5
75 / 79	46	22	61	129	69.0	66	12	66	144	70.5	43	31	74	148	69.5
70 / 74	100	3	35	138	67.4	109	3	16	129	68.2	86	9	46	142	67.1
65 / 69	52	1	3	56	64.4	35	0	0	35	64.8	58	2	8	68	64.4
60 / 64	21		0	21	61.0	6	0	0	6	61.4	27	1	1	29	60.9
55 / 59	1			1	56.8						2	0		2	56.6
50 / 54															
45 / 49															
40 / 44															
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.

TRIPOLI LY

WMO No. 620100

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		
115 / 119															
110 / 114															
105 / 109		0	0	0	77.3										
100 / 104		4	1	5	72.1										
95 / 99		11	3	14	69.8		0		0	72.8					
90 / 94		22	8	30	68.5		1	0	1	68.1					
85 / 89	1	23	10	34	68.5	0	3	1	4	64.9		0	0	0	61.0
80 / 84	5	47	26	78	67.5	0	13	5	17	63.5		2	1	3	61.7
75 / 79	17	63	50	130	65.9	1	33	12	45	62.8	0	7	3	10	59.2
70 / 74	46	45	73	164	64.6	4	56	31	91	60.8	1	23	9	33	57.5
65 / 69	52	18	41	111	62.6	13	48	41	103	59.2	1	36	16	52	56.1
60 / 64	78	12	31	120	59.5	44	45	70	159	57.1	6	64	41	111	54.4
55 / 59	43	3	6	52	55.2	78	28	56	163	53.8	31	62	77	169	51.8
50 / 54	7	0	0	7	51.5	72	11	21	104	49.6	85	37	71	192	48.7
45 / 49	0		0	0	45.8	24	2	3	29	44.6	89	15	28	131	44.6
40 / 44	0			0	42.0	4	0	0	4	40.2	31	2	3	36	40.2
35 / 39						0	0		0	38.0	6	0	0	6	36.7
30 / 34											0		0	0	32.0

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TRIPOLI LY

WMO No. 620100

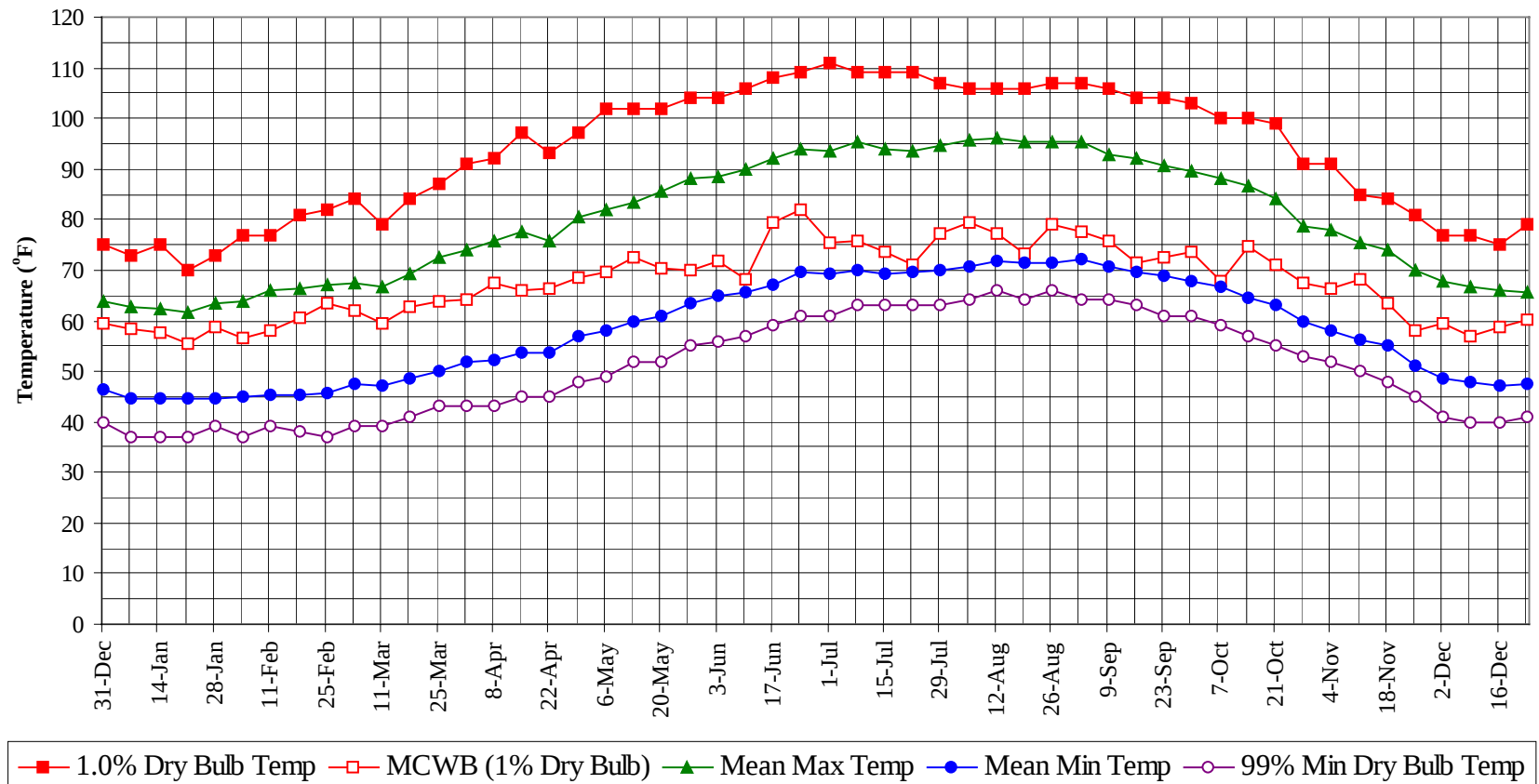
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

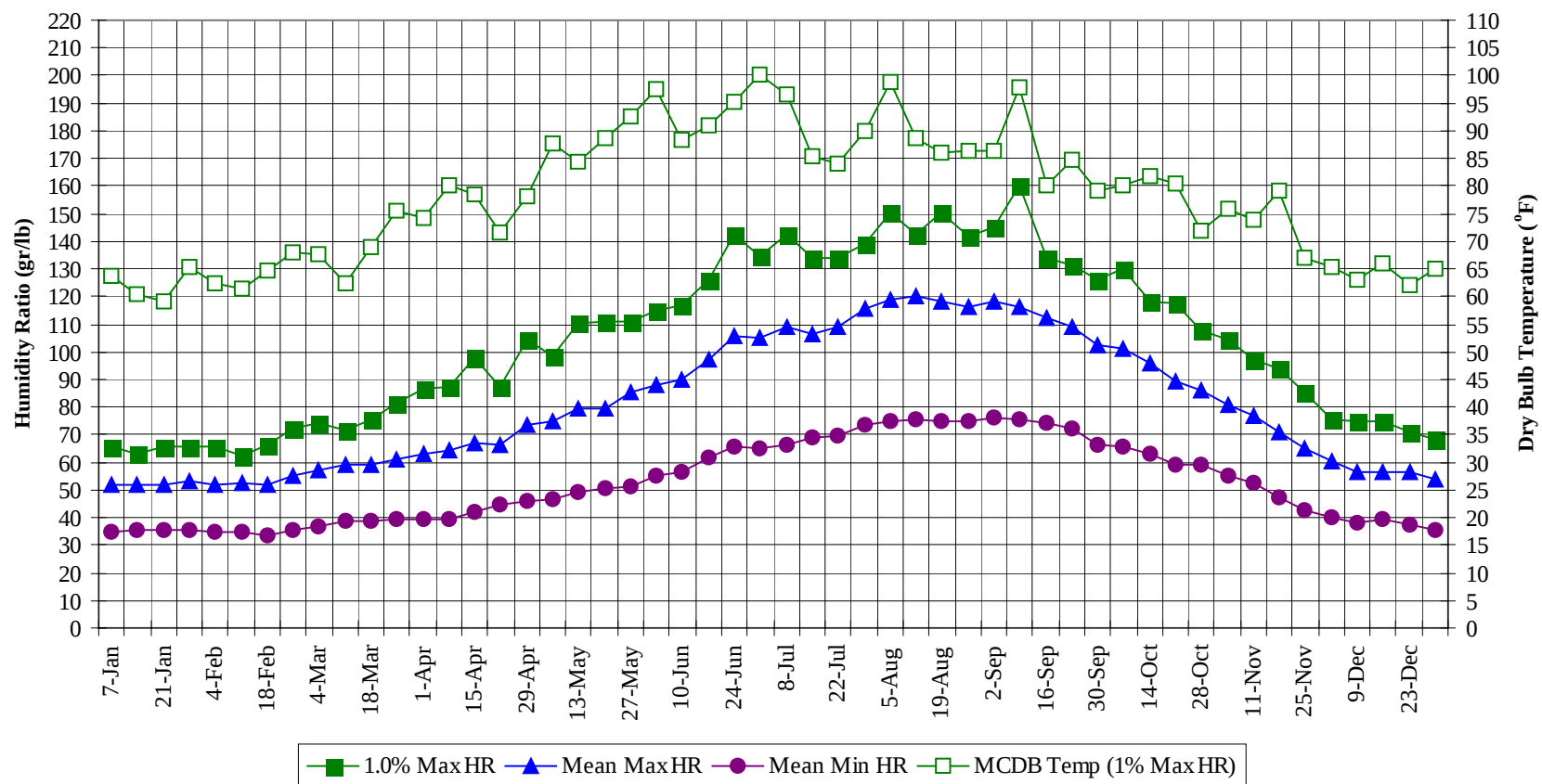
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
115 / 119		2	0	2	79.2
110 / 114		8	2	10	75.0
105 / 109		36	13	49	75.1
100 / 104	0	94	38	131	73.3
95 / 99	2	163	68	234	71.8
90 / 94	10	267	127	404	70.5
85 / 89	31	252	156	439	69.8
80 / 84	98	363	305	766	68.3
75 / 79	231	324	397	953	66.5
70 / 74	454	317	378	1148	63.8
65 / 69	334	242	258	834	60.3
60 / 64	375	347	364	1085	56.6
55 / 59	373	281	394	1049	52.6
50 / 54	427	148	281	855	48.9
45 / 49	391	59	118	568	44.7
40 / 44	154	12	19	185	40.5
35 / 39	40	4	2	46	36.9
30 / 34	1	0	0	1	32.5

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.

Annual Summary of Temperatures

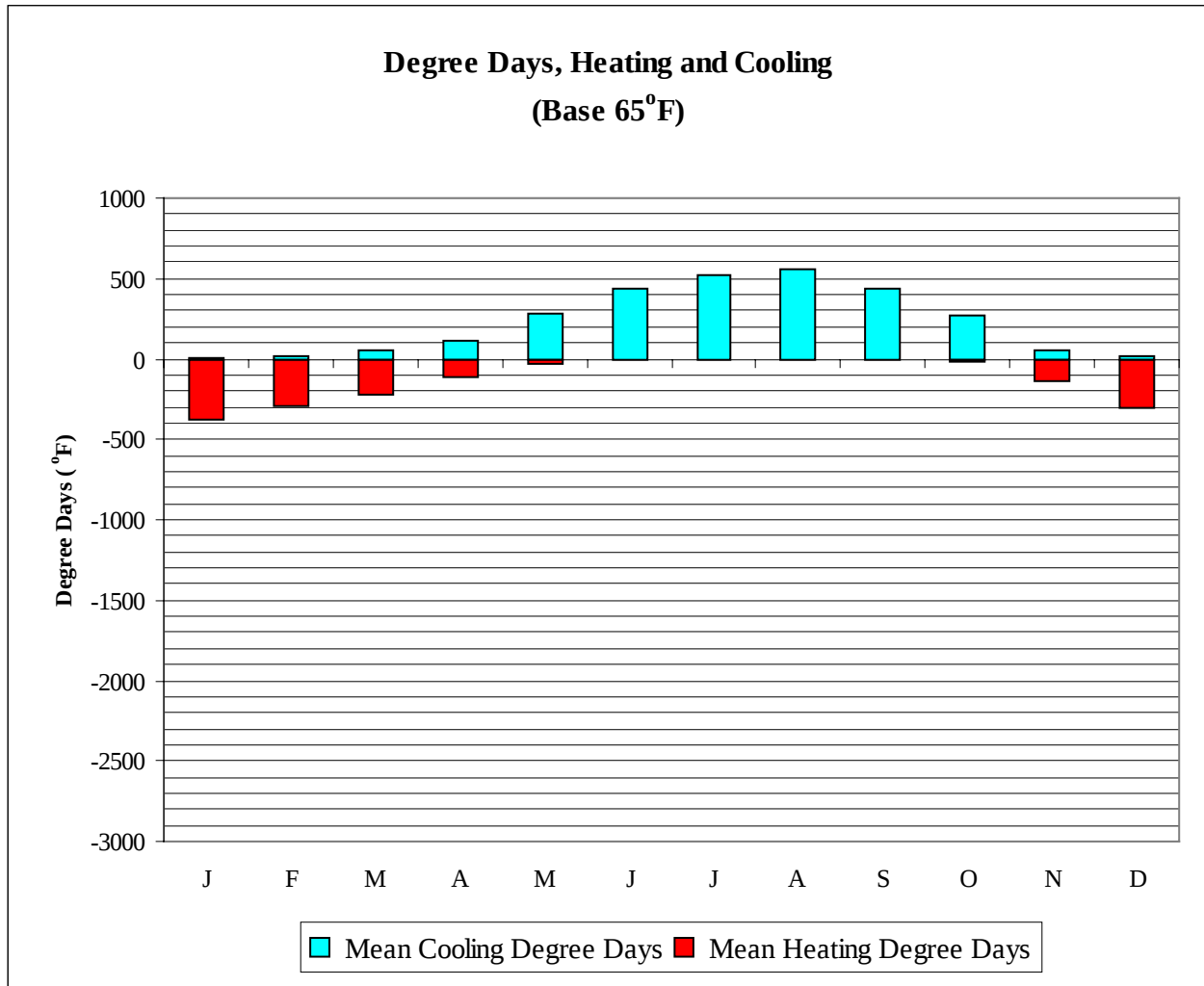


Long Term Humidity and Dry Bulb Temperature Summary



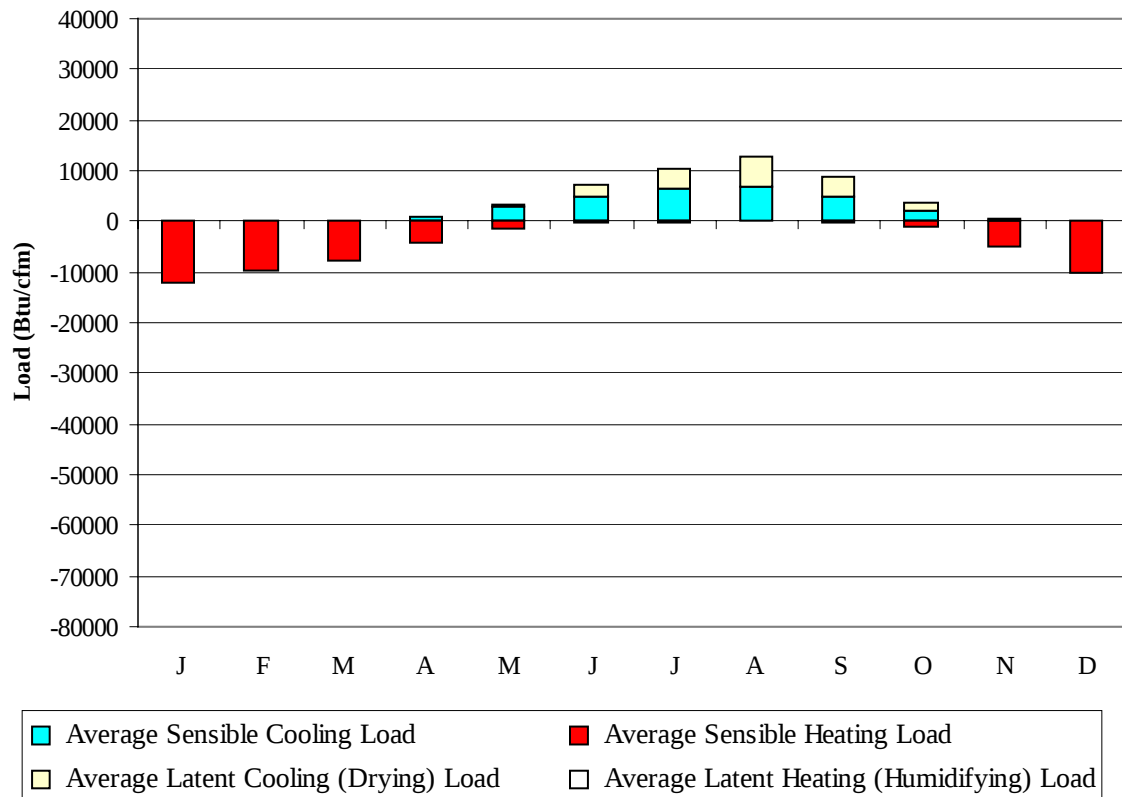
TRIPOLI LY**WMO No. 620100****Long Term Dry Bulb Temperature and Humidity Summary**

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	73.0	58.4	62.9	44.6	37.0	65.8	63.7	51.7	34.6
14-Jan	75.0	57.7	62.3	44.6	37.0	63.0	60.5	51.9	35.2
21-Jan	70.0	55.4	61.8	44.4	37.0	65.8	59.1	52.1	35.3
28-Jan	73.0	58.9	63.4	44.6	39.0	65.8	65.2	53.0	35.6
4-Feb	77.0	56.5	63.9	44.8	37.0	65.8	62.4	52.2	34.6
11-Feb	77.0	57.8	65.9	45.4	39.0	62.3	61.3	52.3	34.8
18-Feb	81.0	60.5	66.3	45.2	38.0	66.5	64.8	51.7	33.2
25-Feb	82.0	63.5	67.2	45.7	37.0	72.1	68.0	55.2	35.7
4-Mar	84.0	61.8	67.4	47.5	39.0	74.2	67.7	57.2	36.7
11-Mar	79.0	59.6	66.8	47.1	39.0	71.4	62.4	58.9	38.8
18-Mar	84.0	62.9	69.2	48.5	41.0	75.6	69.0	59.0	38.9
25-Mar	87.0	63.7	72.5	49.9	43.0	81.2	75.4	61.0	39.5
1-Apr	91.0	64.1	74.1	51.7	43.0	86.8	74.3	62.8	39.7
8-Apr	92.0	67.5	75.8	52.3	43.0	87.5	80.0	64.7	39.7
15-Apr	97.0	65.8	77.5	53.8	45.0	98.0	78.4	67.1	41.9
22-Apr	93.0	66.2	75.8	53.7	45.0	87.5	71.7	66.3	44.6
29-Apr	97.0	68.6	80.3	57.0	48.0	104.3	78.3	73.3	45.9
6-May	102.0	69.7	81.8	58.0	49.0	98.7	87.6	74.8	46.4
13-May	102.0	72.5	83.5	59.8	52.0	110.6	84.3	79.7	49.2
20-May	102.0	70.4	85.6	61.0	52.0	111.3	88.8	79.2	50.5
27-May	104.0	70.0	88.2	63.5	55.0	111.3	92.7	85.6	51.5
3-Jun	104.0	71.9	88.6	64.8	56.0	114.8	97.7	88.0	55.0
10-Jun	106.0	68.0	90.0	65.5	57.0	116.9	88.3	90.2	56.3
17-Jun	108.0	79.4	92.1	67.1	59.0	126.0	90.9	97.4	61.9
24-Jun	109.0	82.0	94.0	69.6	61.0	142.8	95.2	105.8	65.8
1-Jul	111.0	75.6	93.6	69.1	61.0	134.4	100.0	104.8	65.3
8-Jul	109.0	75.9	95.5	70.0	63.0	142.8	96.6	109.0	66.1
15-Jul	109.0	73.5	93.9	69.2	63.0	133.7	85.4	106.7	68.7
22-Jul	109.0	70.9	93.5	69.6	63.0	133.7	84.2	109.0	69.7
29-Jul	107.0	77.2	94.6	69.8	63.0	139.3	90.0	115.6	73.5
5-Aug	106.0	79.2	95.7	70.8	64.0	150.5	98.9	119.0	74.7
12-Aug	106.0	77.1	96.2	71.8	66.0	142.8	88.6	120.4	75.4
19-Aug	106.0	73.3	95.4	71.4	64.0	150.5	86.0	118.2	74.9
26-Aug	107.0	79.0	95.3	71.4	66.0	142.1	86.3	116.2	74.9
2-Sep	107.0	77.6	95.5	72.1	64.0	144.9	86.5	118.5	75.9
9-Sep	106.0	75.9	92.7	70.6	64.0	160.3	97.9	116.3	75.7
16-Sep	104.0	71.3	92.0	69.5	63.0	133.7	80.2	112.5	74.0
23-Sep	104.0	72.7	90.8	68.8	61.0	131.6	84.6	109.0	72.3
30-Sep	103.0	73.7	89.7	67.7	61.0	126.0	79.3	102.5	66.1
7-Oct	100.0	67.7	88.0	66.8	59.0	130.2	80.0	101.1	65.6
14-Oct	100.0	74.6	86.6	64.7	57.0	118.3	81.9	95.7	63.3
21-Oct	99.0	71.0	84.0	63.1	55.0	117.6	80.4	89.3	58.8
28-Oct	91.0	67.4	78.8	60.0	53.0	107.8	72.0	85.8	59.2
4-Nov	91.0	66.3	77.9	58.0	52.0	104.3	75.9	80.7	55.0
11-Nov	85.0	68.0	75.3	56.2	50.0	97.3	73.7	76.8	52.6
18-Nov	84.0	63.6	74.0	55.0	48.0	93.8	79.0	70.6	47.5
25-Nov	81.0	58.0	70.1	51.0	45.0	85.4	67.1	64.8	42.4
2-Dec	77.0	59.3	67.7	48.6	41.0	75.6	65.2	60.4	40.3
9-Dec	77.0	57.0	66.6	48.0	40.0	74.9	63.1	56.3	38.1
16-Dec	75.0	58.7	65.9	47.1	40.0	74.9	66.0	56.8	39.2
23-Dec	79.0	60.2	65.8	47.4	41.0	70.7	62.1	56.2	37.6
31-Dec	75.0	59.6	63.8	46.3	40.0	68.6	65.1	54.1	35.8



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	6	376
FEB	18	295
MAR	48	221
APR	115	108
MAY	278	32
JUN	438	5
JUL	519	1
AUG	554	0
SEP	437	2
OCT	265	22
NOV	59	132
DEC	13	303
ANN	2749	1497

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	12	-11957	0	-68
FEB	65	-9597	7	-65
MAR	238	-7633	18	-54
APR	826	-4151	142	-42
MAY	2698	-1552	539	-17
JUN	5063	-305	2290	-3
JUL	6309	-99	4051	-1
AUG	6933	-35	5837	0
SEP	4719	-145	4171	-2
OCT	2068	-1138	1575	-4
NOV	195	-5005	166	-25
DEC	23	-9944	2	-52
ANN	29149	-51561	18798	-333

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

No Solar Radiation
Data Available

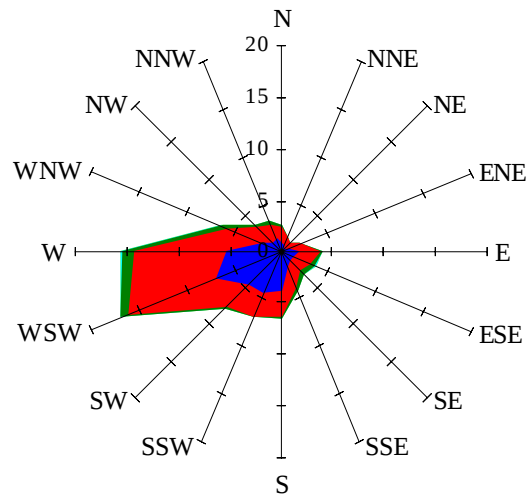


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

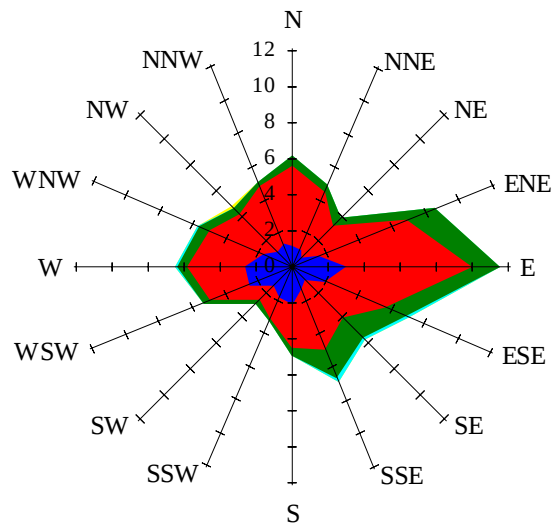
Labels of Percent Frequency on North Axis



Percent Calm = 12.21

Wind Summary - March, April, and May

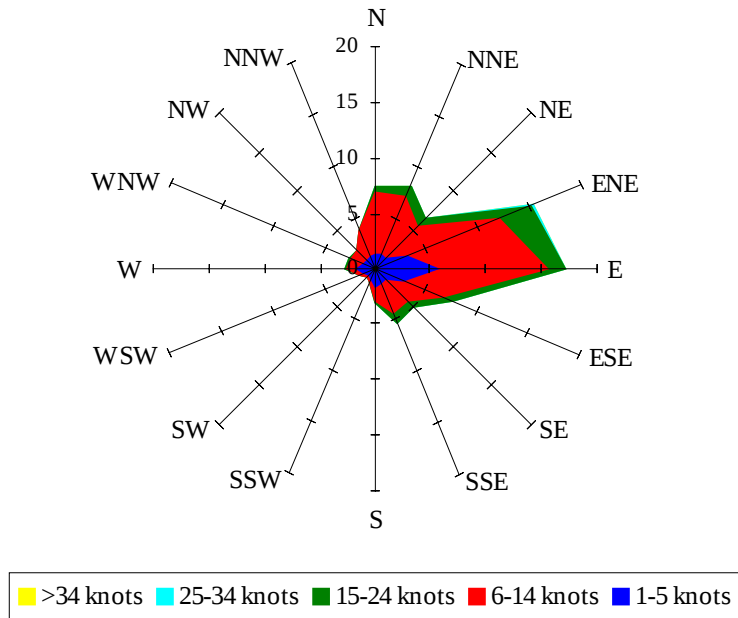
Labels of Percent Frequency on North Axis



Percent Calm = 8.47

Wind Summary - June, July, and August

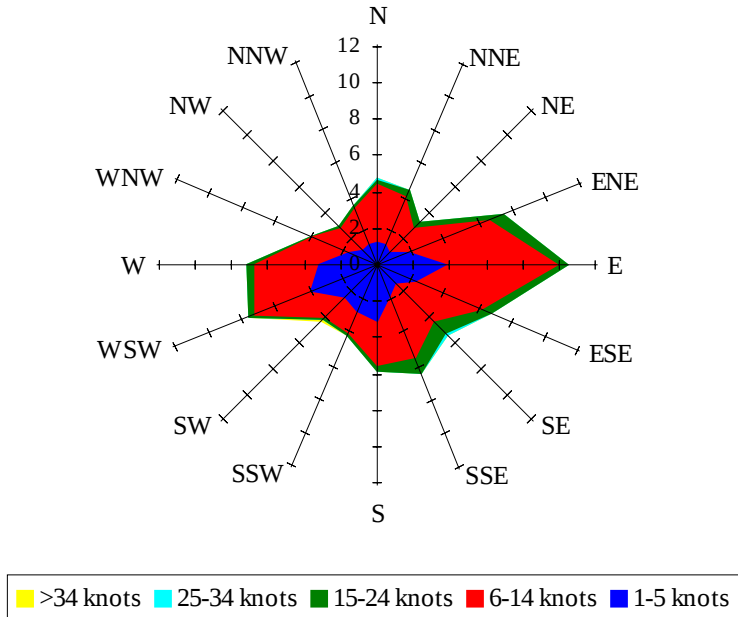
Labels of Percent Frequency on North Axis



Percent Calm = 9.73

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 12.48