

SITKA/JAPONSKI AK

Latitude = 57.07 N

Longitude = 135.30 W

Period of Record = 1973 to 1996

WMO No. 703710

Elevation = 66 feet

Average Pressure = 29.79 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	76	64	68	6.5	WNW
0.4% Occurrence	67	59	61	7.9	WNW
1.0% Occurrence	65	58	60	8.4	SW
2.0% Occurrence	62	56	59	8.6	SW
Mean Daily Range	9	-	-	-	-
97.5% Occurrence	25	23	13	6.5	E
99.0% Occurrence	19	17	9	7.6	E
99.6% Occurrence	14	12	7	8.6	E
Median of Extreme Lows	11	9	5	9.7	E
	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	65	72	79	6.3	SW
0.4% Occurrence	60	64	68	7.7	SW
1.0% Occurrence	59	63	67	7.9	SW
2.0% Occurrence	58	61	65	7.8	SW
	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	84	70	0.56	6.9	SW
0.4% Occurrence	71	61	0.48	7.0	SW
1.0% Occurrence	69	60	0.47	7.3	SW
2.0% Occurrence	67	59	0.45	7.2	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	1	0	2

Other Site Data

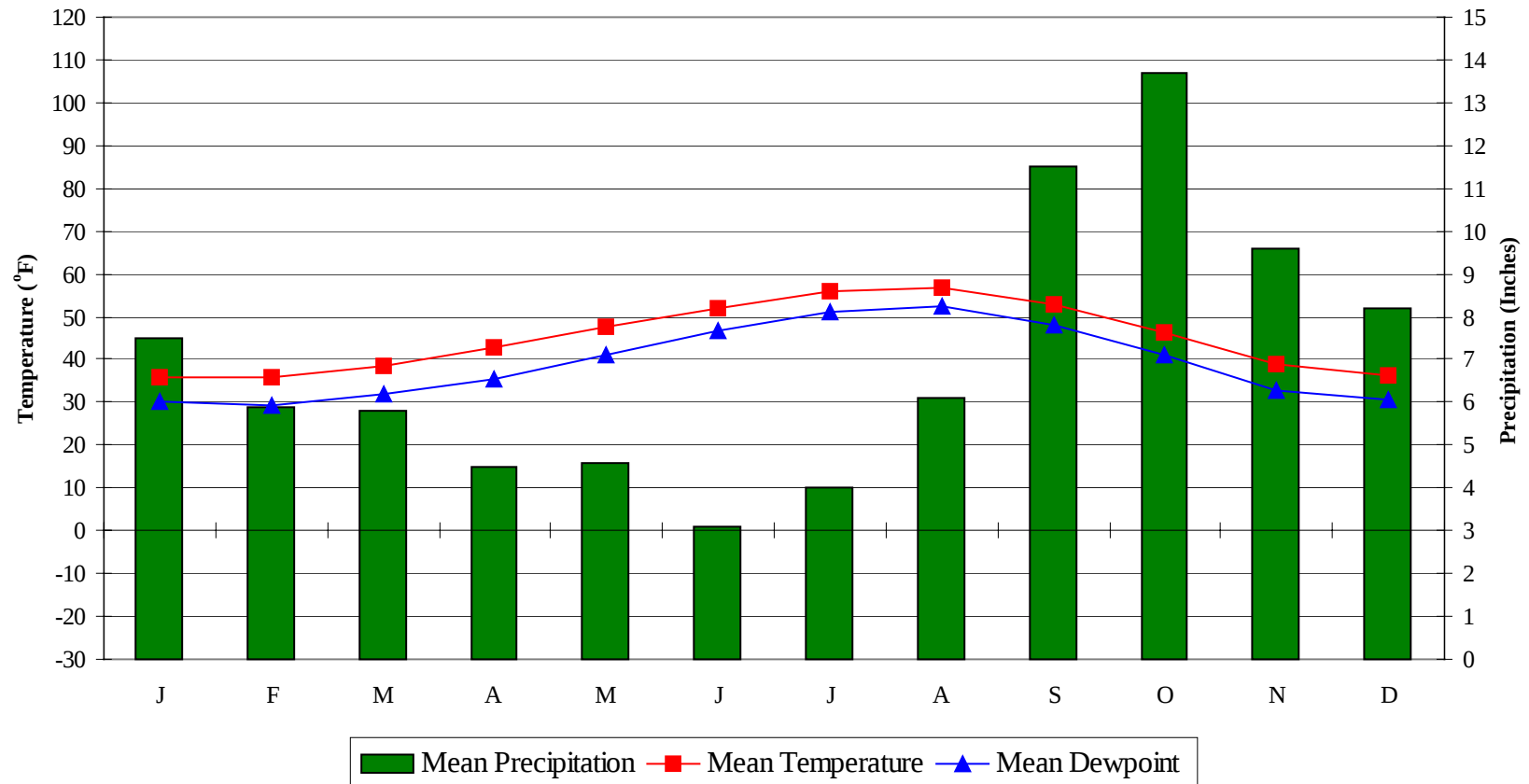
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
5	1.2	120	0.0 + 0.0
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
47.5	56	45	41

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

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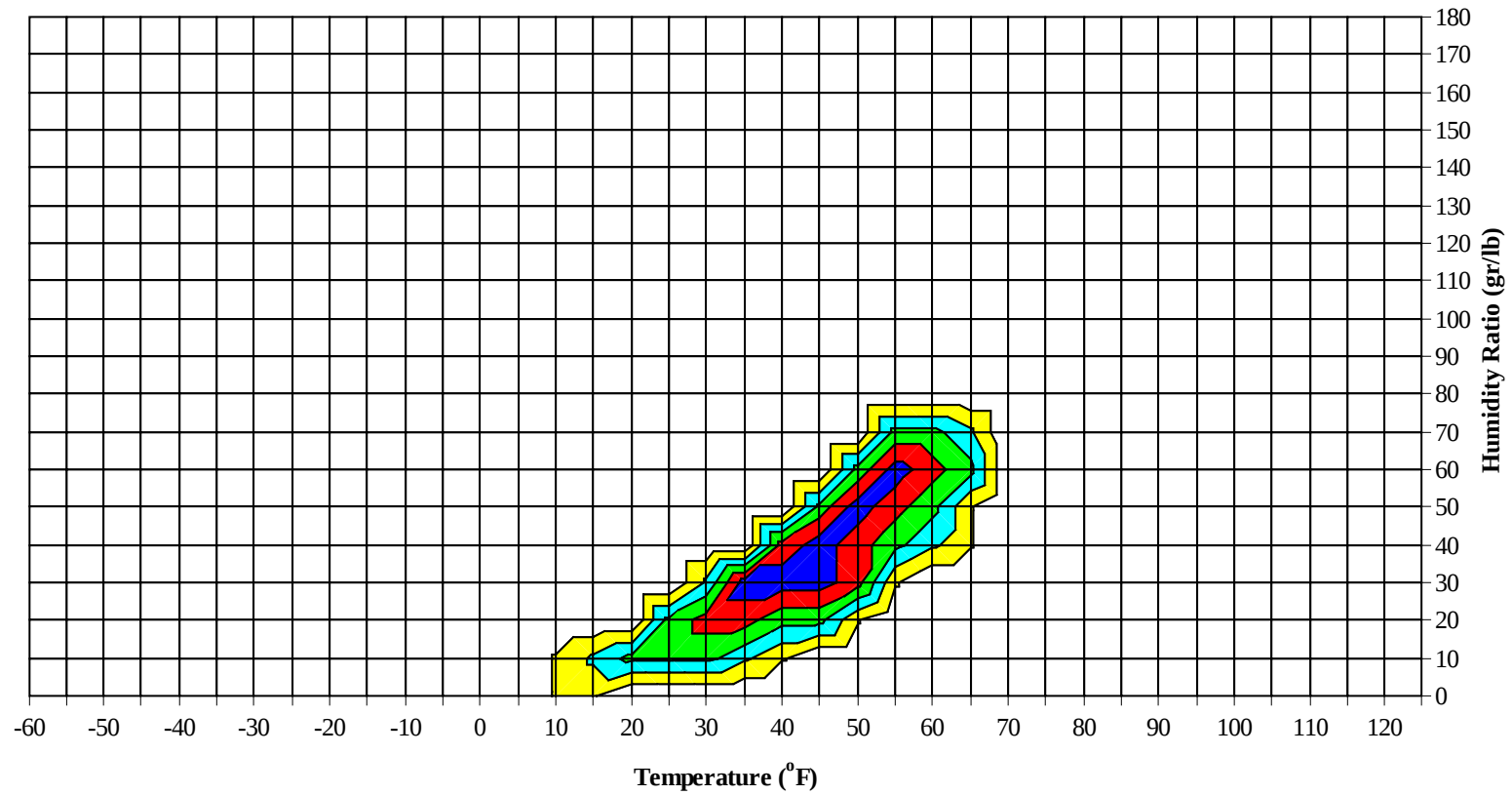
Average Annual Climate



SITKA/JAPONSKI AK

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Long Term Psychrometric Summary

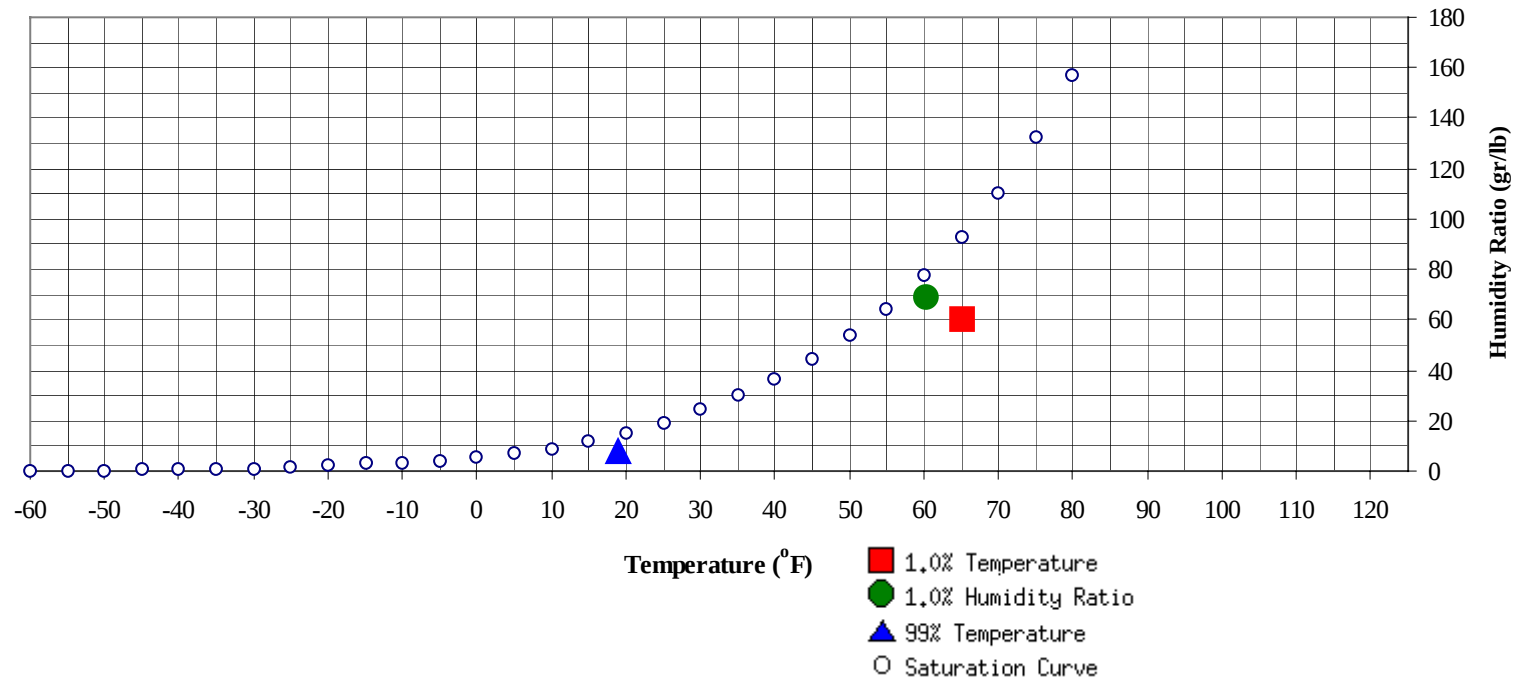


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	19	8.2	5.8		69.3	60.3	58.2	57	25.2

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	65	60.3	57.9	25.0

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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		
90 / 94															
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64															
55 / 59	0	0	0	0	47.9	0	0	0	0	47.9	0	1		1	44.5
50 / 54	2	3	2	7	45.0	2	5	2	9	44.5	1	7	2	10	43.8
45 / 49	18	25	21	64	42.4	13	23	16	52	41.9	10	47	18	75	41.6
40 / 44	56	67	56	179	39.6	50	73	54	177	39.1	54	107	80	241	38.8
35 / 39	67	74	69	210	35.5	57	63	67	187	35.1	93	66	100	259	35.1
30 / 34	51	47	53	151	30.8	50	34	49	133	30.3	65	14	38	117	30.7
25 / 29	28	18	25	70	25.4	26	13	18	56	25.1	18	4	7	29	25.3
20 / 24	13	7	12	32	20.2	12	8	10	30	19.6	4	1	3	8	20.6
15 / 19	6	3	6	15	15.2	10	4	7	21	14.8	3	0	1	4	16.3
10 / 14	4	4	3	11	9.9	2	1	2	5	10.8	0		0	0	12.8
5 / 9	2	1	1	4	6.4	1	0	0	1	6.4					
0 / 4	0	0	0	0	2.5	0			0	3.0					

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.

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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		
90 / 94															
85 / 89															
80 / 84															
75 / 79		0		0	56.0		0		0	54.0		0	0	0	63.1
70 / 74		1	0	1	54.2		1	1	2	55.3		1	0	1	61.5
65 / 69		1	0	1	52.9	0	2	1	3	54.2	1	6	2	9	57.9
60 / 64	0	3	1	4	50.9	1	8	3	12	52.7	1	27	10	38	54.9
55 / 59	0	10	3	13	47.8	3	31	12	46	50.1	17	81	45	142	52.2
50 / 54	4	36	13	53	45.1	26	96	53	174	47.4	106	102	119	327	49.4
45 / 49	32	87	55	174	42.6	101	92	110	302	44.4	97	23	59	179	46.1
40 / 44	87	80	98	265	39.5	93	17	61	170	40.7	18	0	6	24	41.8
35 / 39	87	20	59	166	35.7	24	1	8	33	36.8	0		0	0	38.1
30 / 34	27	1	10	38	31.4	1		0	1	33.3					
25 / 29	4	0	1	5	25.5										
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															

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 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		
90 / 94	0			0	68.0										
85 / 89	0	0		0	62.0										
80 / 84	0	0	0	0	63.6			0	0	68.0					
75 / 79	0	0	0	0	65.1		1	0	1	63.9		0	0	0	66.2
70 / 74	0	3	1	4	61.1		5	2	7	61.3		2	0	2	61.5
65 / 69	0	14	5	19	58.7	0	21	7	28	59.6	1	8	2	11	57.1
60 / 64	6	66	26	98	56.5	9	79	33	121	57.0	2	31	9	42	55.3
55 / 59	82	128	115	325	54.1	105	122	134	361	54.7	38	105	69	213	53.6
50 / 54	141	37	97	275	51.1	116	19	68	204	51.5	108	79	107	294	50.1
45 / 49	19	0	4	23	47.3	17	0	4	21	47.2	69	13	45	127	45.8
40 / 44	0			0	43.5	1	0	0	1	43.2	20	1	7	28	41.6
35 / 39											2		1	3	36.8
30 / 34											0		0	0	32.2
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															

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 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		
90 / 94															
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69		0		0	60.0										
60 / 64	1	1	1	3	53.9										
55 / 59	5	16	8	29	52.3	1	1	1	3	48.5	0		0	0	52.2
50 / 54	48	81	50	179	48.6	7	10	8	25	47.4	1	2	1	4	45.0
45 / 49	86	100	95	281	44.4	35	50	36	120	43.3	21	25	23	69	42.9
40 / 44	64	39	60	163	40.4	66	83	70	220	39.6	64	71	63	198	39.4
35 / 39	34	11	27	71	35.9	64	56	66	186	35.4	74	82	75	231	35.4
30 / 34	9	1	6	16	30.7	38	28	34	100	30.5	46	39	48	132	31.4
25 / 29	1	0	1	2	23.9	18	10	16	43	24.9	20	16	19	55	25.2
20 / 24	0	0	0	0	18.6	9	3	7	19	19.9	10	7	8	25	19.8
15 / 19						2	0	2	4	16.2	7	5	8	20	14.5
10 / 14						0	0	0	0	10.5	4	2	3	9	10.6
5 / 9						0	0	0	0	6.5	1	0	1	2	5.9
0 / 4						0		0	0	2.0					

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.

SITKA/JAPONSKI AK

WMO No. 703710

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

Period of Record = 1973 to 1996

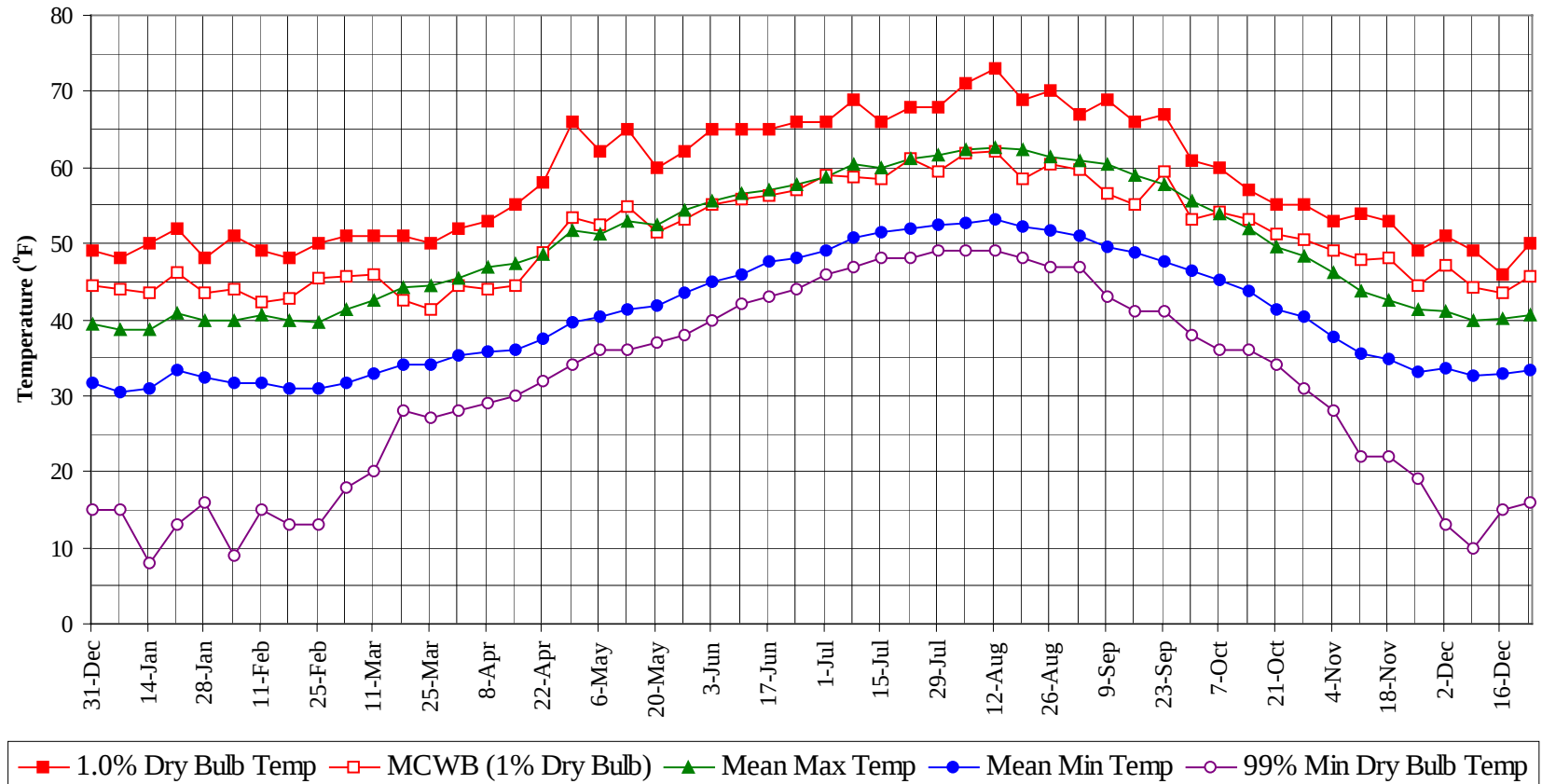
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
90 / 94	0			0	68.0
85 / 89	0	0		0	62.0
80 / 84	0	0	0	0	64.0
75 / 79	0	3	1	4	63.8
70 / 74	0	12	4	16	60.4
65 / 69	2	51	17	70	58.4
60 / 64	19	213	81	314	56.1
55 / 59	253	491	384	1128	53.6
50 / 54	562	472	520	1554	49.5
45 / 49	520	486	486	1492	44.1
40 / 44	571	544	556	1672	39.6
35 / 39	502	375	471	1348	35.4
30 / 34	286	164	239	689	30.8
25 / 29	114	61	86	261	25.2
20 / 24	48	26	39	113	19.9
15 / 19	27	13	24	64	15.0
10 / 14	10	7	9	26	10.4
5 / 9	4	1	3	8	6.3
0 / 4	1	0	1	2	2.4

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.

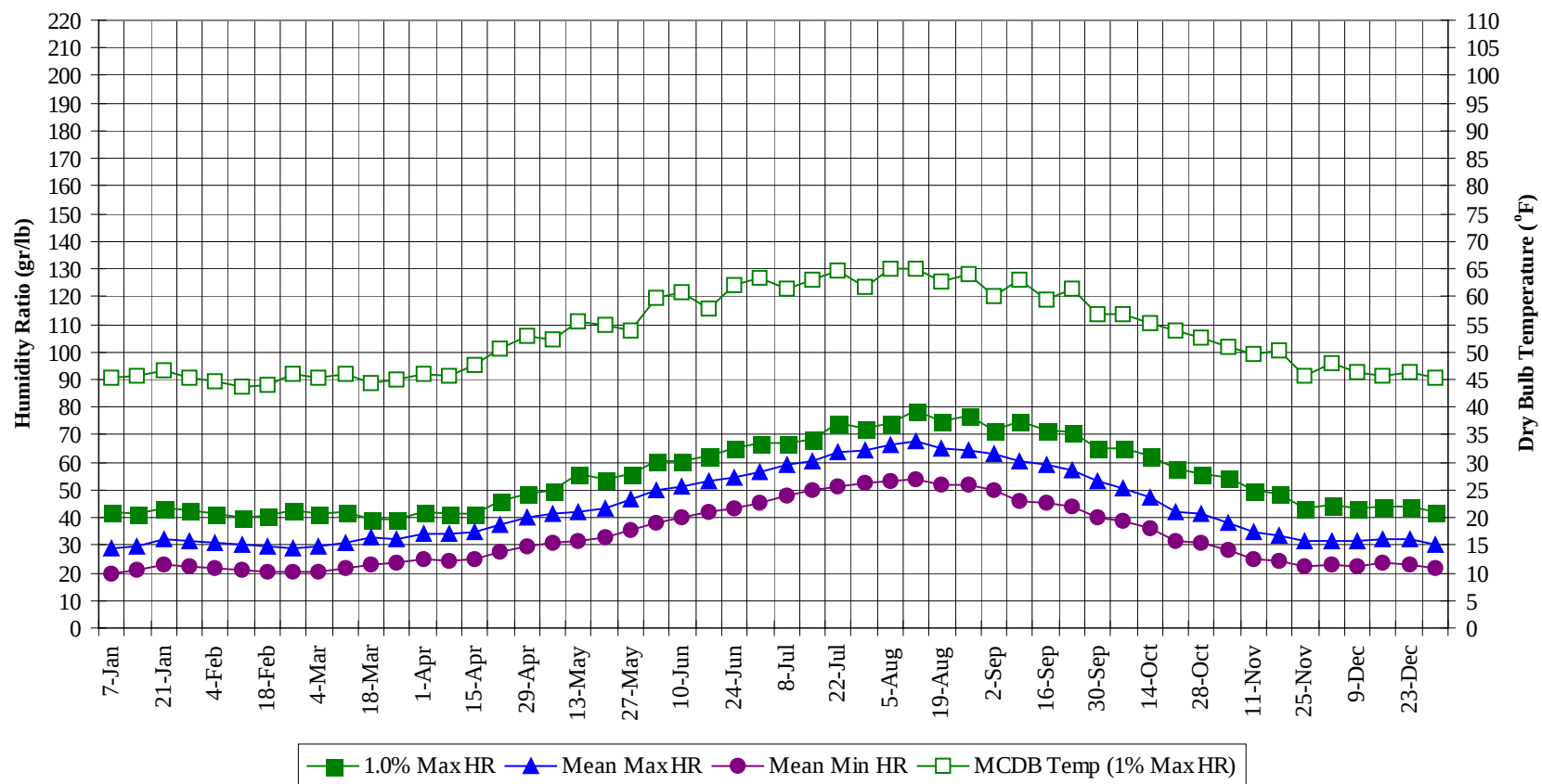
SITKA/JAPONSKI AK

WMO No. 703710

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

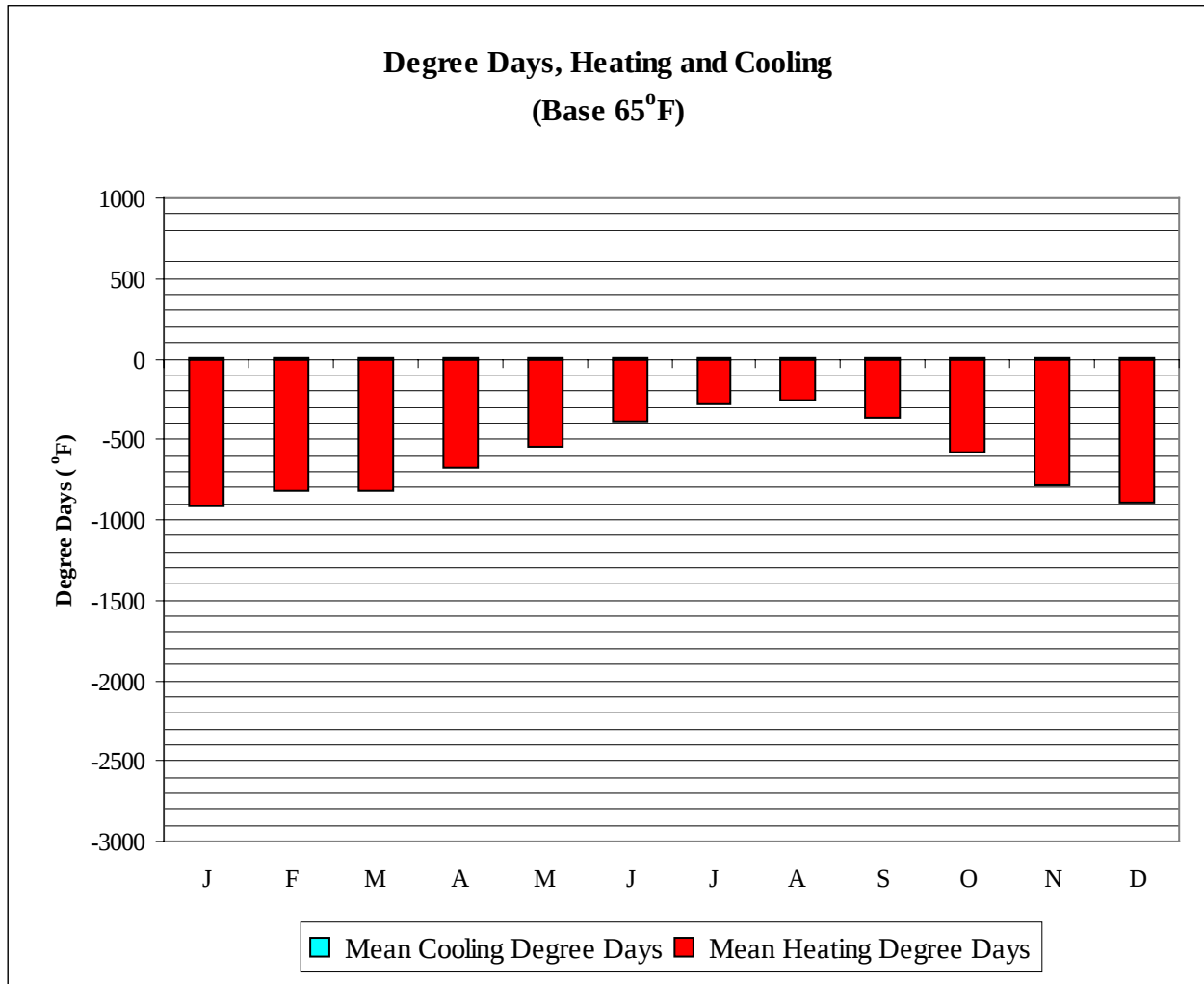


SITKA/JAPONSKI AK

WMO No. 703710

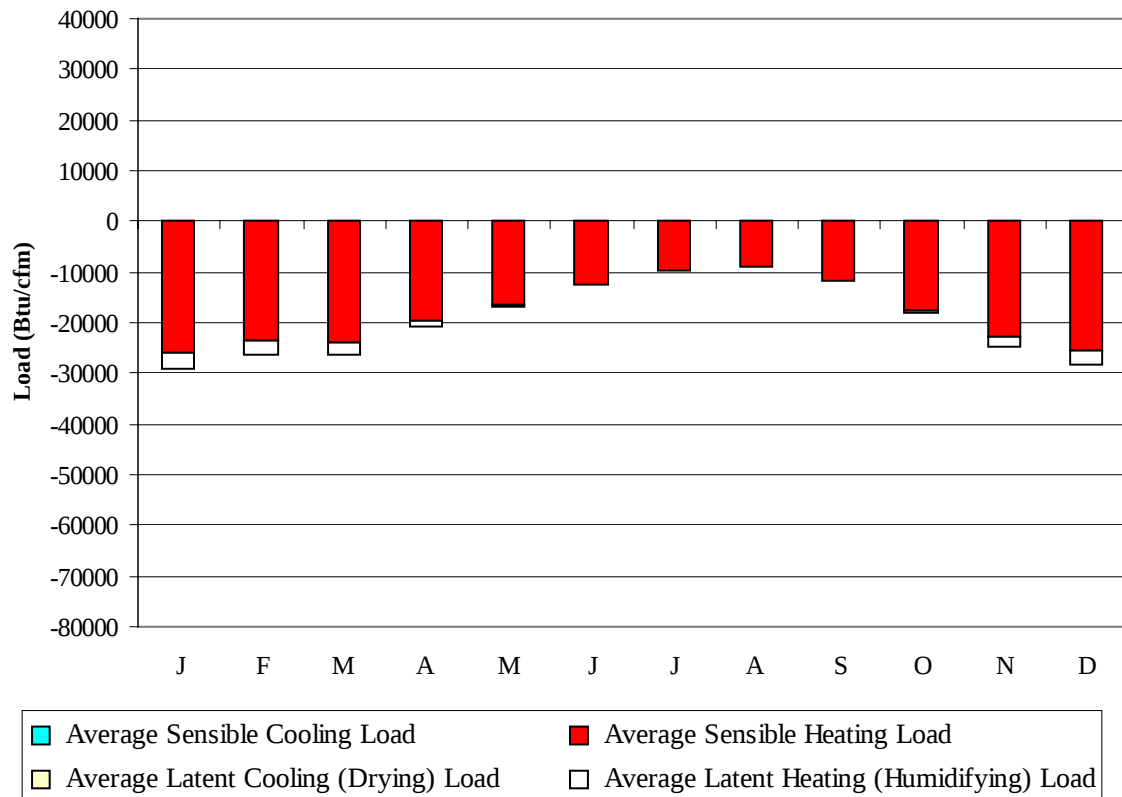
Long Term Dry Bulb Temperature and Humidity Summary

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	48.0	44.0	38.7	30.4	15.0	42.0	45.4	28.8	19.9
14-Jan	50.0	43.5	38.6	30.8	8.0	41.3	45.8	29.4	21.1
21-Jan	52.0	46.2	40.9	33.3	13.0	43.4	46.5	32.4	23.3
28-Jan	48.0	43.5	39.9	32.4	16.0	42.7	45.2	31.2	22.3
4-Feb	51.0	44.1	40.0	31.7	9.0	41.3	44.7	30.7	21.8
11-Feb	49.0	42.2	40.7	31.6	15.0	39.9	43.8	30.0	20.8
18-Feb	48.0	42.9	39.9	31.0	13.0	40.6	44.1	29.4	20.3
25-Feb	50.0	45.5	39.7	30.9	13.0	42.7	46.1	29.0	20.1
4-Mar	51.0	45.8	41.2	31.6	18.0	41.3	45.4	29.7	20.1
11-Mar	51.0	46.0	42.6	32.9	20.0	42.0	46.1	31.0	21.9
18-Mar	51.0	42.5	44.2	34.2	28.0	39.2	44.2	32.8	23.3
25-Mar	50.0	41.4	44.6	34.2	27.0	39.2	45.0	32.3	23.4
1-Apr	52.0	44.4	45.4	35.2	28.0	42.0	45.9	33.9	24.7
8-Apr	53.0	43.9	46.9	35.7	29.0	41.3	45.8	34.2	24.6
15-Apr	55.0	44.4	47.3	36.0	30.0	41.3	47.7	34.6	24.7
22-Apr	58.0	48.9	48.7	37.5	32.0	46.2	50.4	37.1	27.4
29-Apr	66.0	53.4	51.7	39.6	34.0	48.3	52.7	39.8	29.6
6-May	62.0	52.3	51.3	40.4	36.0	49.7	52.2	41.5	30.7
13-May	65.0	54.9	53.0	41.3	36.0	56.0	55.5	42.2	31.3
20-May	60.0	51.6	52.4	41.9	37.0	53.9	55.0	43.2	33.0
27-May	62.0	53.1	54.3	43.5	38.0	56.0	54.0	46.8	35.4
3-Jun	65.0	55.1	55.6	45.1	40.0	60.2	59.8	49.8	38.4
10-Jun	65.0	55.8	56.6	45.9	42.0	60.2	60.6	51.1	39.8
17-Jun	65.0	56.3	57.0	47.6	43.0	62.3	57.7	53.1	42.0
24-Jun	66.0	57.0	57.8	48.1	44.0	65.1	62.1	54.8	43.4
1-Jul	66.0	59.1	58.8	49.1	46.0	67.2	63.4	56.8	45.1
8-Jul	69.0	58.7	60.4	50.8	47.0	67.2	61.5	59.0	47.7
15-Jul	66.0	58.5	60.0	51.4	48.0	68.6	63.0	60.7	49.9
22-Jul	68.0	61.1	61.2	52.1	48.0	74.2	64.7	63.7	51.5
29-Jul	68.0	59.4	61.8	52.4	49.0	72.1	61.6	64.5	52.6
5-Aug	71.0	61.8	62.4	52.7	49.0	74.2	65.2	66.2	53.3
12-Aug	73.0	62.2	62.7	53.1	49.0	79.1	65.0	67.4	53.9
19-Aug	69.0	58.5	62.3	52.2	48.0	74.9	62.7	64.7	52.1
26-Aug	70.0	60.4	61.3	51.8	47.0	77.0	64.0	64.5	51.7
2-Sep	67.0	59.6	60.9	51.0	47.0	71.4	60.2	63.2	50.2
9-Sep	69.0	56.5	60.4	49.6	43.0	74.9	62.9	60.4	46.1
16-Sep	66.0	55.0	59.0	48.8	41.0	71.4	59.5	59.0	45.4
23-Sep	67.0	59.4	57.9	47.6	41.0	70.7	61.4	57.4	43.9
30-Sep	61.0	53.3	55.6	46.3	38.0	65.1	56.7	52.9	40.2
7-Oct	60.0	54.1	53.9	45.3	36.0	65.1	56.9	50.5	38.9
14-Oct	57.0	53.1	51.9	43.7	36.0	62.3	55.1	47.4	36.4
21-Oct	55.0	51.2	49.5	41.4	34.0	58.1	53.8	42.1	31.7
28-Oct	55.0	50.5	48.3	40.4	31.0	56.0	52.4	41.3	30.8
4-Nov	53.0	49.1	46.3	37.8	28.0	54.6	51.0	38.2	28.1
11-Nov	54.0	47.9	43.7	35.5	22.0	49.7	49.5	34.5	24.9
18-Nov	53.0	48.2	42.6	34.7	22.0	48.3	50.1	33.8	24.5
25-Nov	49.0	44.4	41.2	33.1	19.0	43.4	45.6	31.3	22.2
2-Dec	51.0	47.1	41.1	33.5	13.0	44.8	48.0	31.8	22.8
9-Dec	49.0	44.2	40.0	32.7	10.0	43.4	46.4	31.3	22.5
16-Dec	46.0	43.5	40.1	33.0	15.0	44.1	45.6	32.0	23.3
23-Dec	50.0	45.6	40.7	33.3	16.0	44.1	46.2	32.0	23.3
31-Dec	49.0	44.5	39.4	31.8	15.0	42.4	45.5	30.0	21.7



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	912
FEB	0	821
MAR	0	825
APR	0	671
MAY	1	544
JUN	1	388
JUL	3	287
AUG	4	262
SEP	1	362
OCT	0	584
NOV	0	781
DEC	0	889
ANN	10	7326

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	-26043	0	-2864
FEB	0	-23474	0	-2960
MAR	0	-23806	0	-2324
APR	0	-19709	0	-1013
MAY	0	-16498	0	-147
JUN	0	-12385	0	-1
JUL	7	-9813	5	0
AUG	2	-9141	13	0
SEP	0	-11697	4	-22
OCT	0	-17550	0	-421
NOV	0	-22581	0	-1985
DEC	0	-25458	0	-2650
ANN	9	-218155	22	-14387

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

No Solar Radiation
Data Available

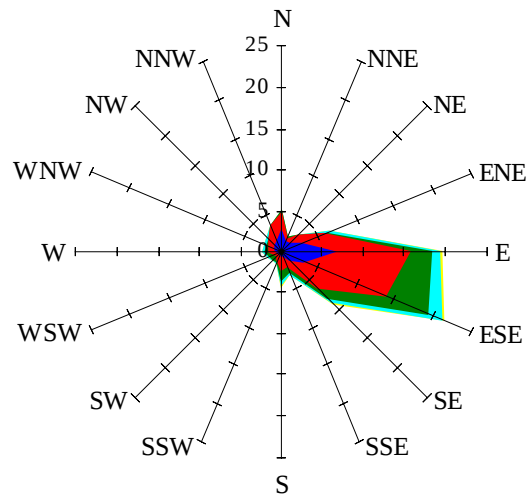


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

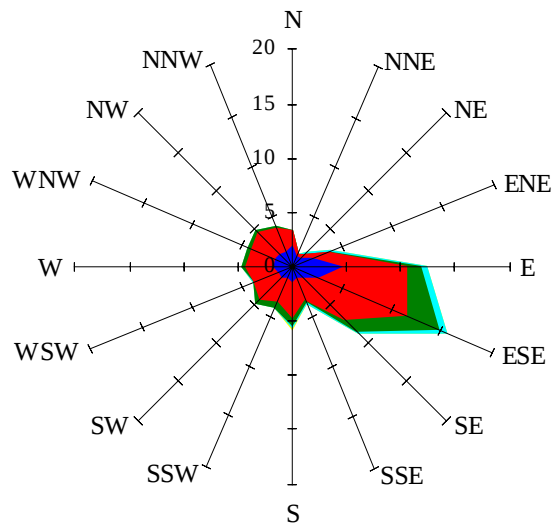
Labels of Percent Frequency on North Axis



Percent Calm = 12.78

Wind Summary - March, April, and May

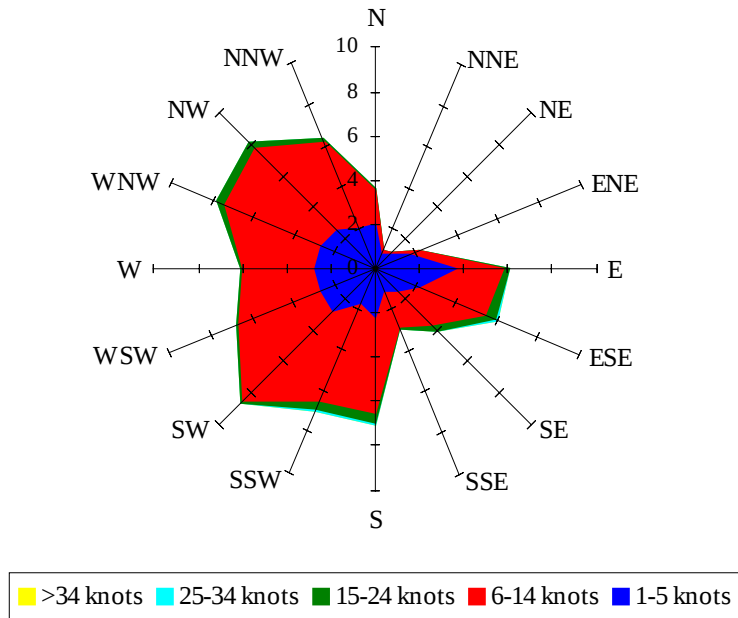
Labels of Percent Frequency on North Axis



Percent Calm = 13.97

Wind Summary - June, July, and August

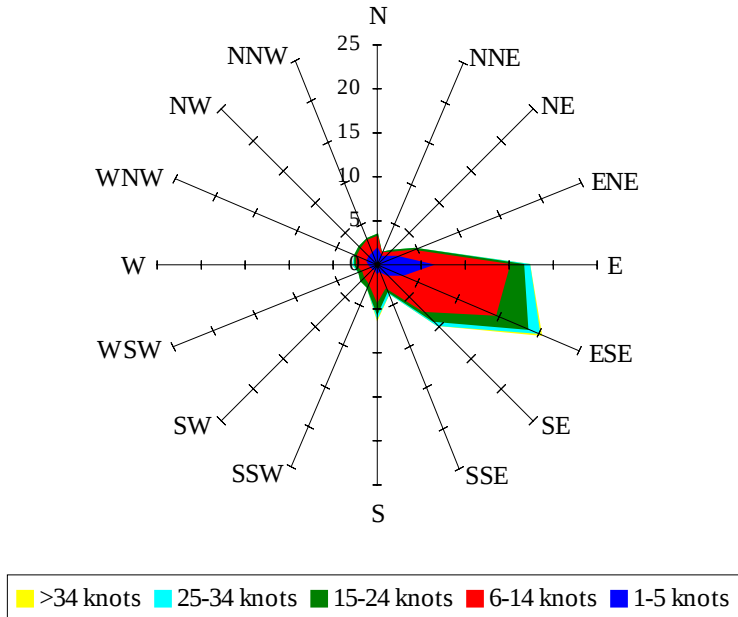
Labels of Percent Frequency on North Axis



Percent Calm = 16.09

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 11.97