

KALISPELL/GLACIER MT

Latitude = 48.30 N

WMO No. 727790

Longitude = 114.20 W

Elevation = 2973 feet

Period of Record = 1973 to 1996

Average Pressure = 26.90 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	94	63	49	8.7	S
0.4% Occurrence	89	63	52	8.6	S
1.0% Occurrence	86	62	52	8.8	S
2.0% Occurrence	82	60	53	8.5	S
Mean Daily Range	21	-	-	-	-
97.5% Occurrence	5	4	6	5.9	NNE
99.0% Occurrence	-3	-4	3	7.0	NNE
99.6% Occurrence	-12	-12	2	3.5	NNE
Median of Extreme Lows	-20	-20	1	2.0	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	68	85	84	6.6	S
0.4% Occurrence	65	83	72	7.4	S
1.0% Occurrence	63	80	66	7.7	S
2.0% Occurrence	62	79	63	7.8	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	97	74	0.58	4.8	S
0.4% Occurrence	83	70	0.50	6.0	S
1.0% Occurrence	77	68	0.47	6.0	S
2.0% Occurrence	72	67	0.44	6.2	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		8	282	1	16

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	1.3	90	0.0 + 0.3
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 (#)
45.6	N/A	45	101

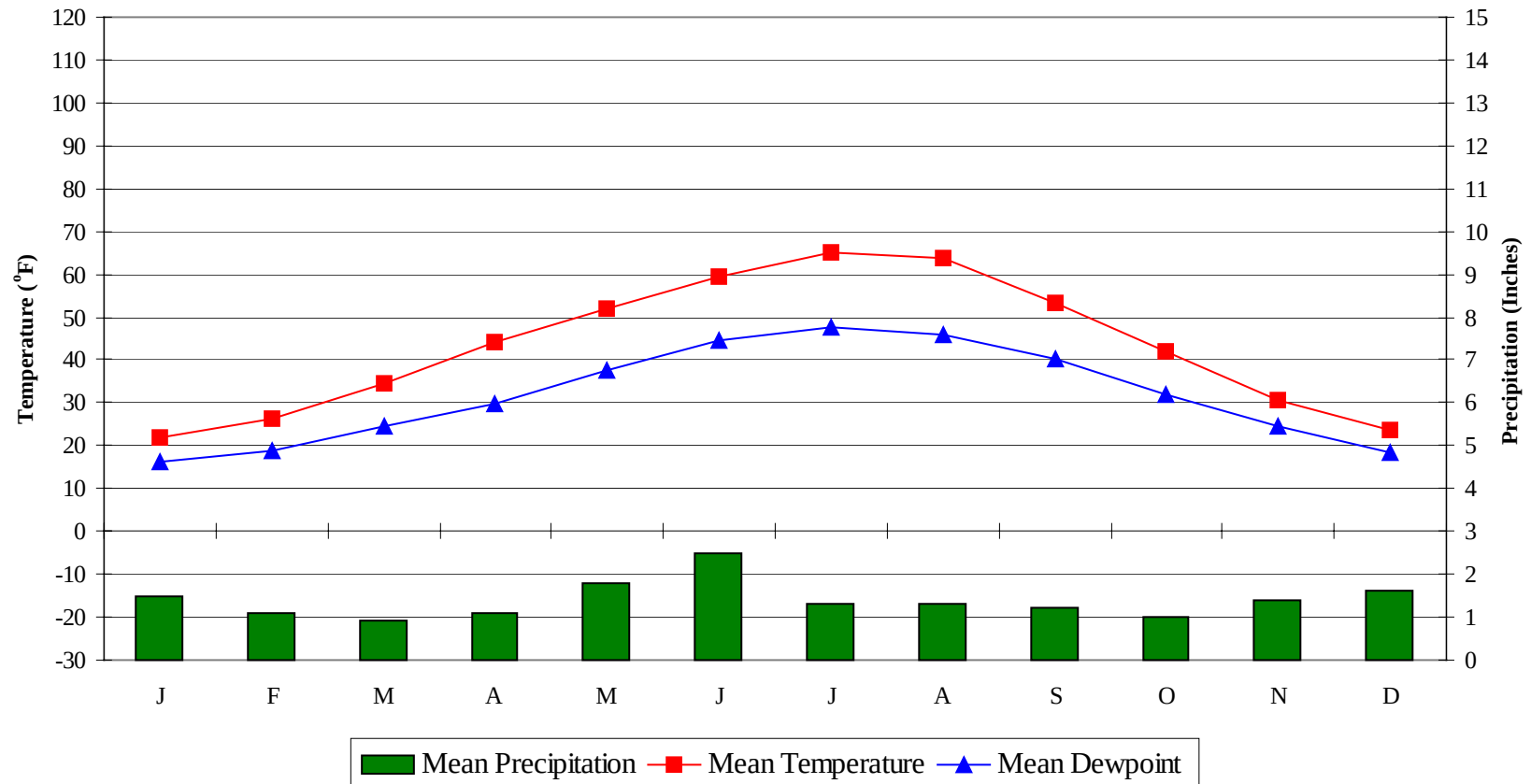
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

KALISPELL/GLACIER

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WMO No. 727790

Average Annual Climate

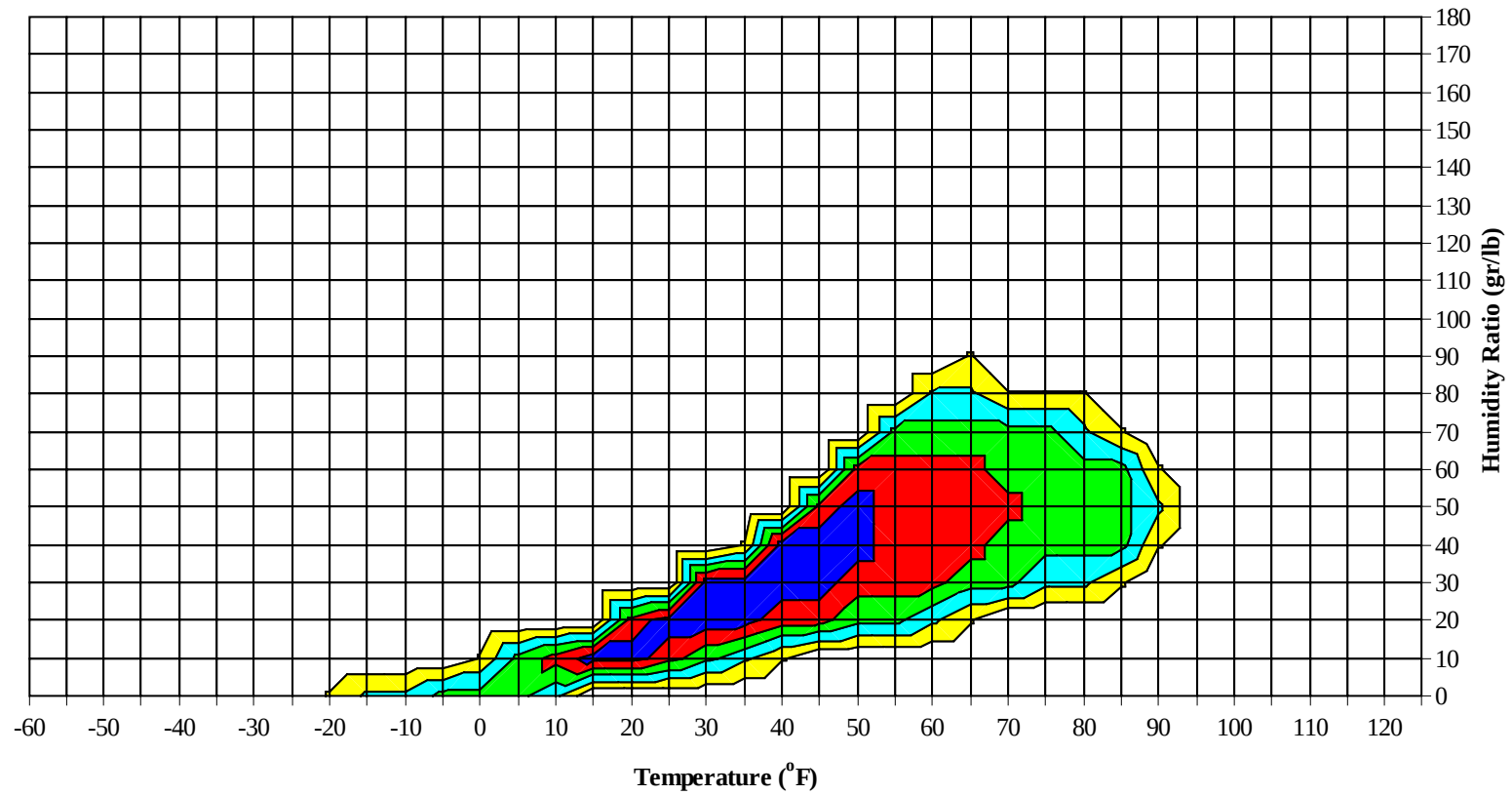


KALISPELL/GLACIER

MT

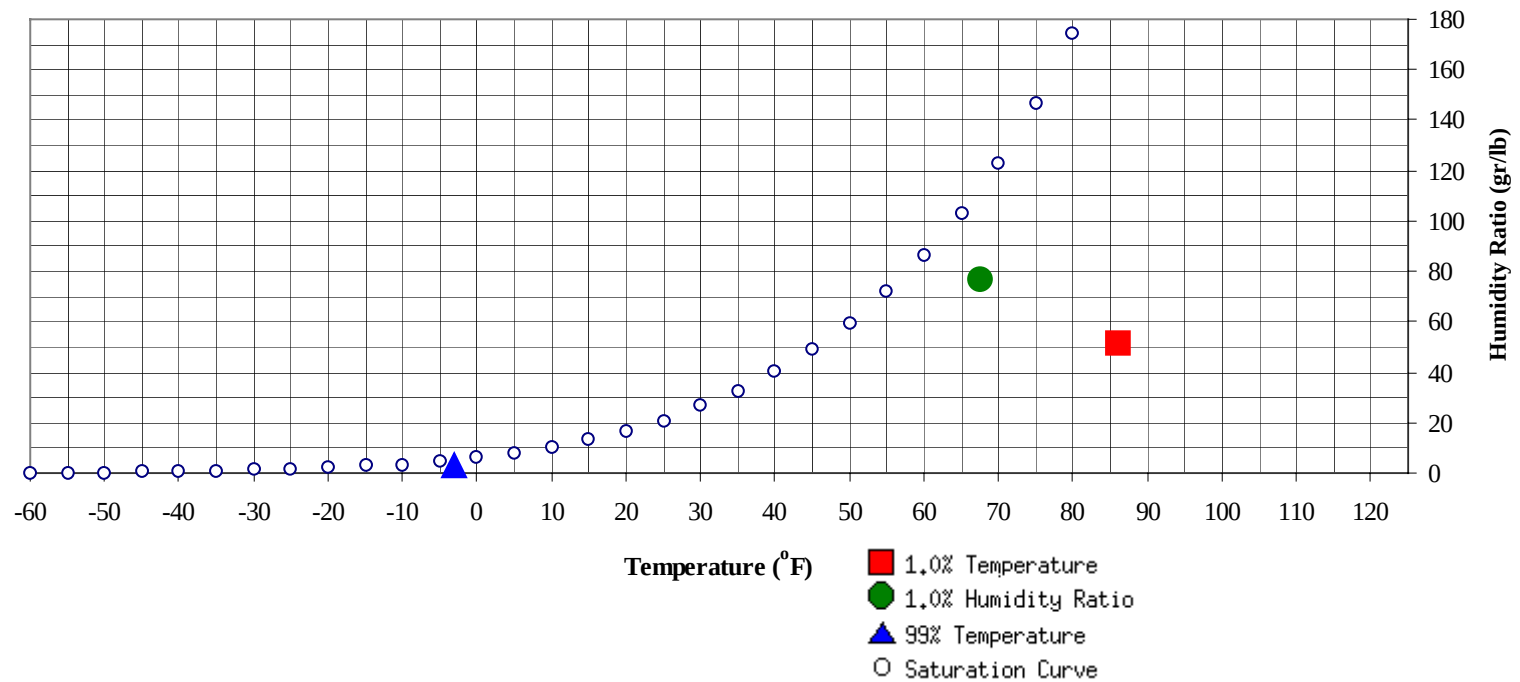
WMO No. 727790

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

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)
	-3	3.4	-0.2		77	67.6	60.7	57	28.2

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	86	51.7	61.5	28.8

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															
80 / 84															
75 / 79															
70 / 74												0		0	51.0
65 / 69												0	0	0	49.8
60 / 64							0	0	0	48.0		2	1	3	46.2
55 / 59							0	0	0	45.5		6	3	9	43.8
50 / 54		0	0	0	40.0		3	1	4	41.9	0	18	8	26	41.6
45 / 49	0	2	0	2	39.8	0	9	3	12	39.5	1	37	21	59	38.9
40 / 44	5	14	8	27	37.3	4	24	13	41	36.7	13	58	43	114	36.4
35 / 39	22	37	27	86	34.0	27	50	44	121	33.4	46	56	63	165	33.5
30 / 34	42	43	51	136	30.2	47	49	55	151	29.8	70	37	59	166	29.7
25 / 29	35	39	41	115	25.4	44	27	38	109	25.4	60	15	28	103	25.1
20 / 24	35	33	33	101	20.8	32	20	22	74	20.6	32	9	11	52	20.3
15 / 19	29	25	26	80	16.1	25	14	16	55	15.6	10	4	5	19	15.2
10 / 14	26	19	20	65	11.3	14	11	12	37	10.4	8	3	4	15	10.2
5 / 9	18	13	14	45	6.0	13	8	9	30	5.7	5	1	1	7	6.4
0 / 4	14	12	11	37	1.1	8	4	4	16	1.2	2	0	1	3	1.5
-5 / -1	7	4	6	17	-3.1	4	2	2	8	-3.1	1	0	0	1	-3.2
-10 / -6	6	3	5	14	-7.4	3	1	2	6	-7.3	0			0	-6.0
-15 / -11	3	1	3	7	-12.3	2	1	2	5	-12.7					
-20 / -16	4	1	2	7	-16.9	2	1	1	4	-16.9					
-25 / -21	1	0	1	2	-21.8	1	0	0	1	-21.3					
-30 / -26	1	0	0	1	-26.1	0	0	0	0	-26.0					
-35 / -31	0	0	0	0	-31.4										
-40 / -36	0	0		0	-35.3										

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.

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															
90 / 94							1	0	1	63.3		1	1	2	64.6
85 / 89							1	1	2	61.1		7	4	11	62.7
80 / 84		1	0	1	55.0		5	3	8	58.2		17	11	28	60.4
75 / 79		2	1	3	55.0		10	6	16	56.6	0	26	16	42	58.9
70 / 74		6	3	9	52.8	0	18	11	29	54.7	1	37	22	60	56.9
65 / 69		12	6	18	50.3	1	29	17	47	52.3	6	44	29	79	54.9
60 / 64	0	18	13	31	47.9	5	42	28	75	50.0	19	43	40	102	53.1
55 / 59	2	30	19	51	45.3	15	50	41	105	47.9	45	34	44	123	51.0
50 / 54	10	46	34	90	42.8	36	49	51	135	45.5	61	22	43	126	48.1
45 / 49	24	52	46	122	39.9	62	30	47	138	42.7	57	7	23	87	44.3
40 / 44	43	44	49	136	37.0	63	12	31	105	39.0	35	1	6	42	40.7
35 / 39	59	21	41	121	33.7	43	2	12	57	35.1	14	0	1	15	36.6
30 / 34	61	6	21	88	29.9	20	0	2	22	31.0	3		0	3	32.2
25 / 29	31	1	6	38	25.5	4		0	4	26.1	0			0	27.0
20 / 24	9	0	1	10	21.0	0			0	22.3					
15 / 19	2	0	0	2	16.3										
10 / 14	0			0	10.4										
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															
-35 / -31															
-40 / -36															

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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	66.0										
95 / 99		1	0	1	64.2		1	0	1	64.2		0	0	0	63.3
90 / 94		10	5	15	63.5		8	4	12	62.6		0	0	0	60.3
85 / 89		23	13	36	62.2		21	12	33	61.3		2	1	3	60.0
80 / 84		37	24	61	61.1		34	19	53	60.2		10	4	14	59.0
75 / 79	0	43	26	69	59.4	0	42	24	66	58.8		19	9	28	57.3
70 / 74	5	46	31	82	57.9	3	44	29	76	57.3	0	31	14	45	55.5
65 / 69	17	37	35	89	56.2	12	37	33	82	55.6	1	33	18	52	53.4
60 / 64	38	30	43	111	54.8	31	32	42	105	54.0	5	38	26	69	51.5
55 / 59	58	16	42	116	52.5	56	20	44	120	51.8	16	40	36	92	49.3
50 / 54	68	4	22	94	49.3	66	7	30	103	48.8	32	35	47	114	46.8
45 / 49	46	0	6	52	45.4	51	1	9	61	44.9	54	21	47	122	43.6
40 / 44	14		1	15	41.3	21	0	2	23	40.7	61	8	25	94	39.9
35 / 39	3		0	3	36.8	8	0	0	8	36.4	44	2	10	56	35.7
30 / 34	0			0	31.0	1			1	32.4	20	0	3	23	31.5
25 / 29											6	0	1	7	26.2
20 / 24											2		0	2	22.0
15 / 19											0			0	18.5
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															
-30 / -26															
-35 / -31															
-40 / -36															

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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															
80 / 84		0	0	0	59.7										
75 / 79		1	0	1	55.8										
70 / 74		6	2	8	53.7										
65 / 69		10	3	13	51.5		0		0	51.0					
60 / 64	0	20	7	27	49.2		1	0	1	49.5					
55 / 59	2	34	14	50	46.6	0	2	1	3	46.8		0		0	48.0
50 / 54	7	47	26	80	44.1	2	8	3	13	44.8	0	1	0	1	43.8
45 / 49	18	51	45	114	41.8	8	18	9	35	41.5	2	4	2	8	41.0
40 / 44	39	41	54	134	38.7	13	38	24	75	37.9	6	14	7	27	37.7
35 / 39	51	23	46	121	34.8	36	53	46	134	34.2	21	33	27	81	34.2
30 / 34	54	11	33	98	30.5	62	55	68	185	30.3	40	49	49	138	30.3
25 / 29	49	3	13	65	26.0	46	29	38	113	25.6	46	50	50	146	25.5
20 / 24	20	1	4	25	21.2	32	16	23	71	20.7	47	38	43	128	21.0
15 / 19	6	0	1	7	16.3	18	7	11	36	15.9	29	25	26	80	16.3
10 / 14	1	0	0	1	11.2	11	6	8	25	10.8	20	12	16	48	11.1
5 / 9	0	0	0	0	6.0	6	3	4	13	6.0	15	9	12	36	6.3
0 / 4	0		0	0	0.8	3	2	3	8	1.3	8	5	8	21	1.3
-5 / -1	0		0	0	-2.0	1	1	1	3	-3.0	4	3	3	10	-3.2
-10 / -6						2	0	1	3	-7.6	4	3	3	10	-7.3
-15 / -11						1	0	1	2	-12.1	2	1	2	5	-12.4
-20 / -16						0		0	0	-15.3	1	1	1	3	-17.1
-25 / -21											1	0	1	2	-21.8
-30 / -26											1	0	0	1	-26.5
-35 / -31											0	0	0	0	-30.7
-40 / -36															

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KALISPELL/GLACIER MT

WMO No. 727790

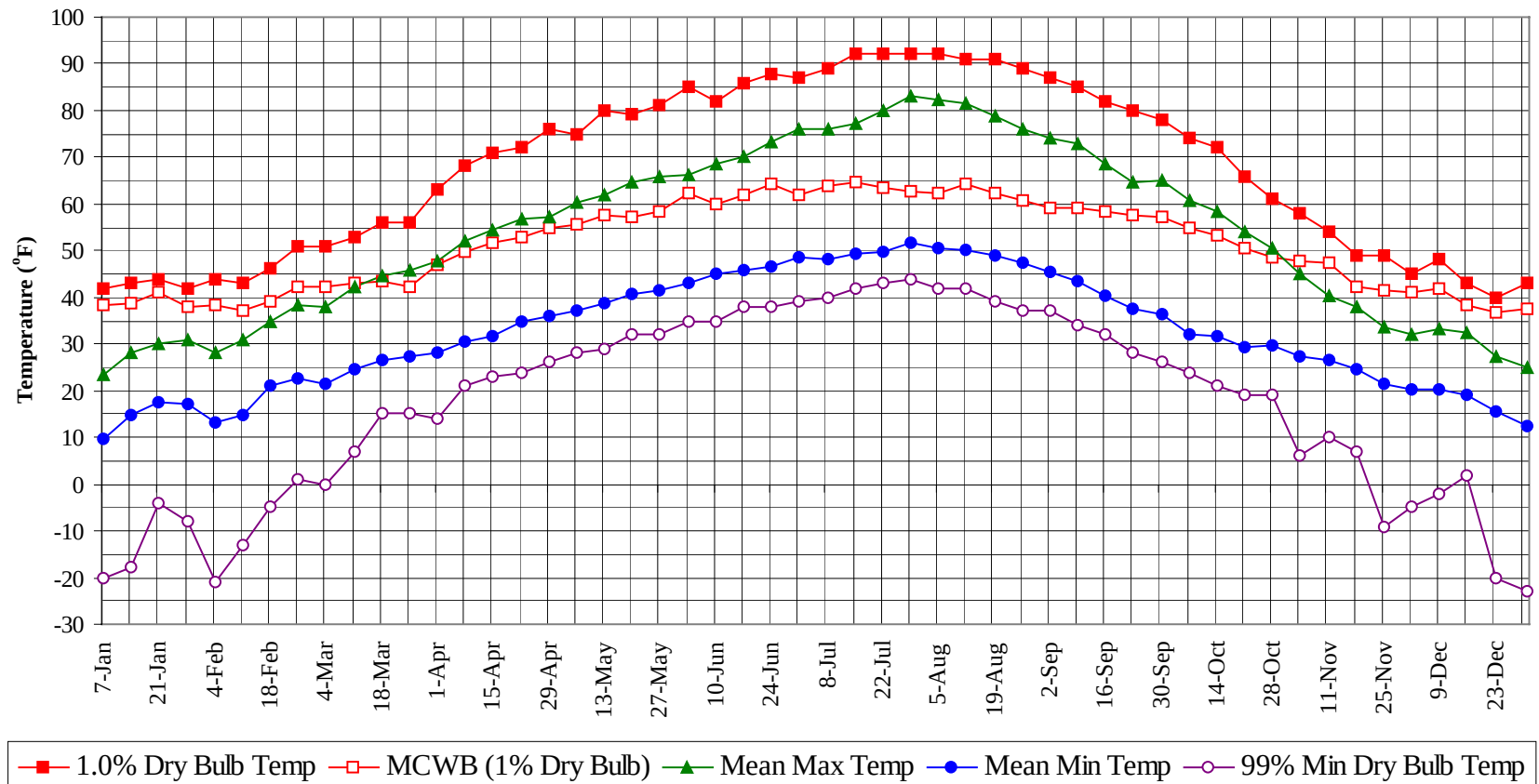
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

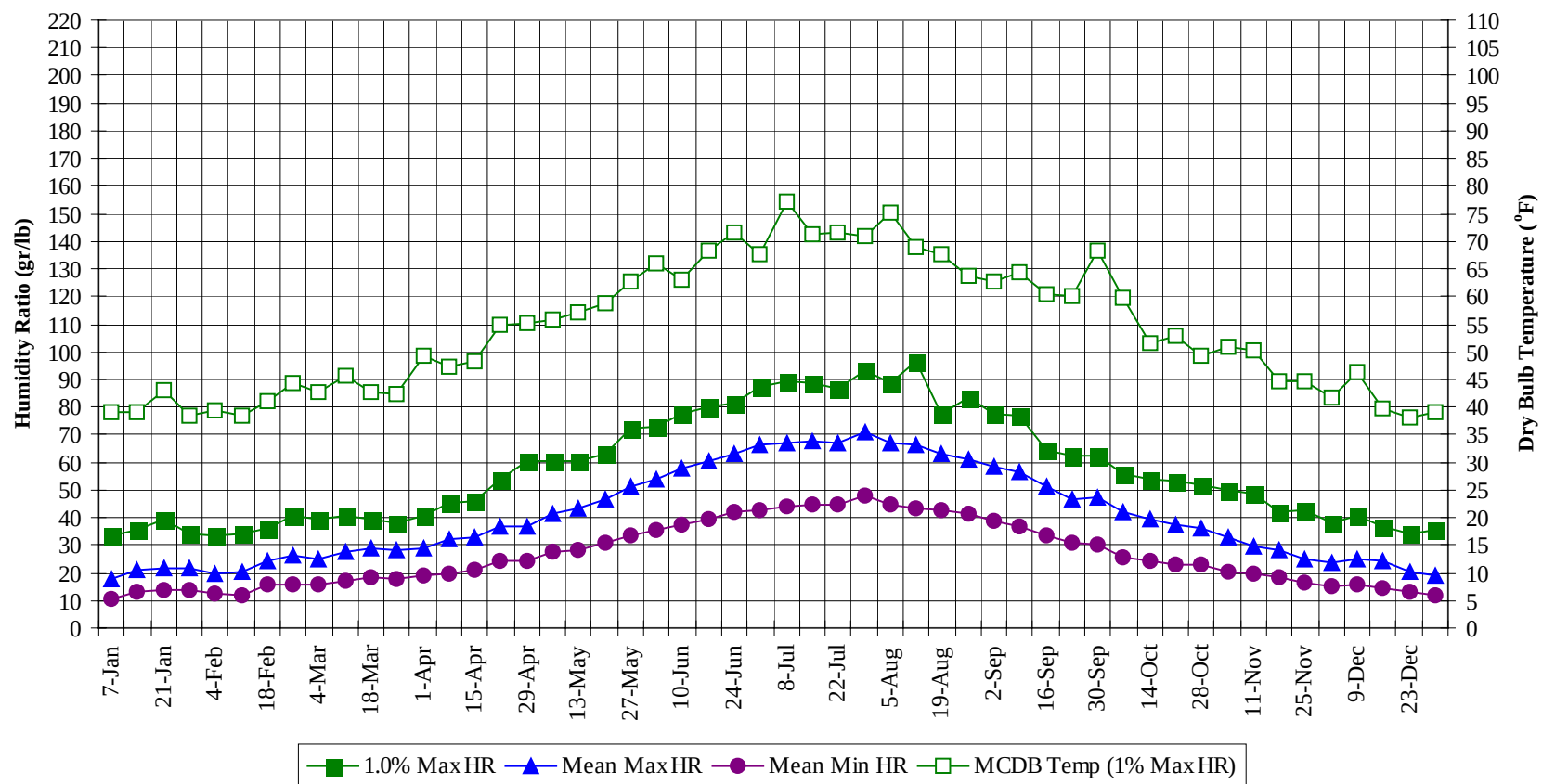
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		0	0	0	66.0
95 / 99		1	1	2	64.1
90 / 94		20	10	30	63.1
85 / 89		54	31	85	61.8
80 / 84		104	61	165	60.4
75 / 79	1	144	83	228	58.6
70 / 74	9	188	112	309	56.6
65 / 69	36	203	141	380	54.5
60 / 64	97	225	200	521	52.4
55 / 59	194	231	243	668	49.8
50 / 54	283	237	261	781	46.4
45 / 49	321	231	254	806	42.4
40 / 44	315	254	261	830	38.2
35 / 39	371	279	315	965	34.2
30 / 34	420	253	342	1015	30.1
25 / 29	321	166	217	704	25.5
20 / 24	209	118	139	466	20.8
15 / 19	119	77	85	281	16.0
10 / 14	80	52	60	192	10.9
5 / 9	57	35	40	132	6.0
0 / 4	36	23	27	86	1.2
-5 / -1	17	9	12	38	-3.1
-10 / -6	14	7	11	32	-7.4
-15 / -11	8	4	7	19	-12.4
-20 / -16	7	3	4	14	-16.9
-25 / -21	4	1	2	7	-21.7
-30 / -26	2	1	1	4	-26.3
-35 / -31	0	0	0	0	-31.1
-40 / -36	0	0		0	-35.3

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

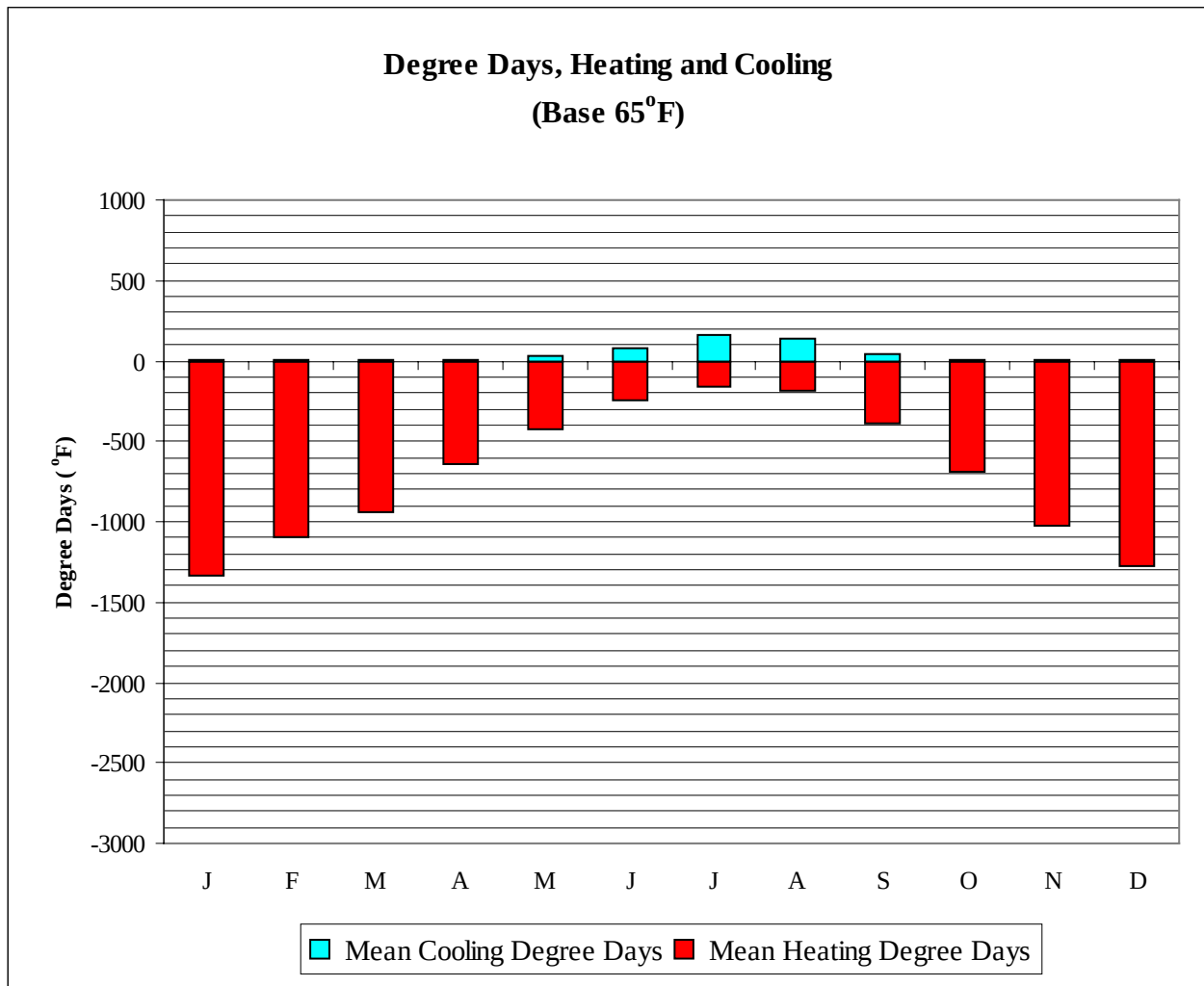


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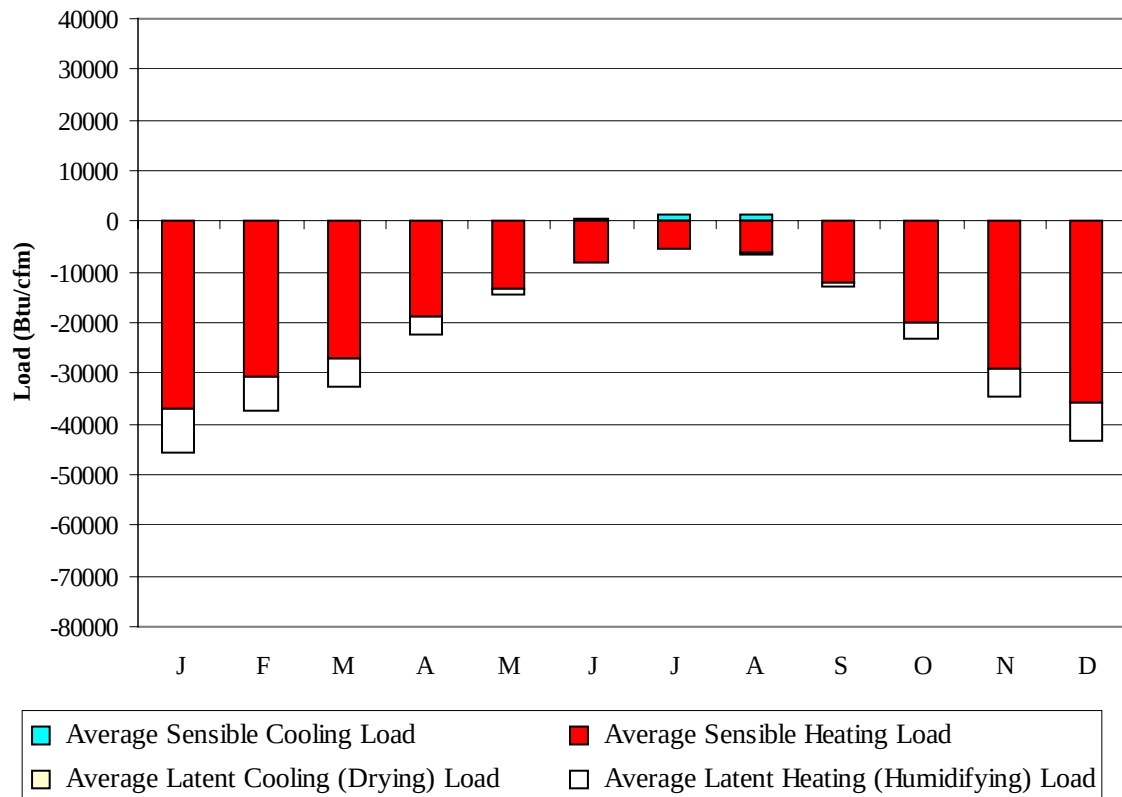
Long Term Dry Bulb Temperature and Humidity Summary

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	42.0	38.3	23.4	9.5	-20.0	33.6	39.1	17.4	10.6
14-Jan	43.0	38.6	28.0	14.9	-18.0	35.7	39.2	20.7	13.0
21-Jan	44.0	41.2	30.1	17.5	-4.0	39.2	43.0	21.7	13.6
28-Jan	42.0	37.9	30.8	17.2	-8.0	34.3	38.4	22.0	13.9
4-Feb	44.0	38.5	28.3	13.2	-21.0	33.6	39.3	19.8	12.3
11-Feb	43.0	37.1	30.7	14.6	-13.0	34.3	38.3	20.7	12.0
18-Feb	46.0	39.1	34.8	21.1	-5.0	36.4	40.9	24.5	16.0
25-Feb	51.0	42.1	38.5	22.5	1.0	40.6	44.4	26.1	15.9
4-Mar	51.0	42.1	38.1	21.4	0.0	39.2	42.6	24.7	15.7
11-Mar	53.0	43.1	42.3	24.8	7.0	40.6	45.5	27.7	17.4
18-Mar	56.0	43.3	44.5	26.5	15.0	39.2	42.9	28.6	18.6
25-Mar	56.0	42.4	46.0	27.5	15.0	37.8	42.5	28.1	18.0
1-Apr	63.0	46.9	47.8	28.1	14.0	40.6	49.2	28.8	18.7
8-Apr	68.0	49.8	52.1	30.4	21.0	45.5	47.2	32.2	19.9
15-Apr	71.0	51.6	54.5	31.6	23.0	46.2	48.1	33.2	21.0
22-Apr	72.0	53.0	56.7	34.7	24.0	53.9	54.9	36.5	24.1
29-Apr	76.0	54.7	57.3	35.8	26.0	60.2	55.1	36.6	24.4
6-May	75.0	55.8	60.2	37.0	28.0	60.2	55.8	41.6	27.5
13-May	80.0	57.6	62.0	38.8	29.0	60.2	57.3	43.5	27.9
20-May	79.0	57.2	64.6	40.9	32.0	63.0	58.7	46.9	30.9
27-May	81.0	58.3	65.8	41.4	32.0	72.1	62.6	51.0	33.4
3-Jun	85.0	62.1	66.2	42.9	35.0	72.8	66.0	53.7	35.7
10-Jun	82.0	60.0	68.6	45.0	35.0	77.7	63.2	57.5	37.2
17-Jun	86.0	61.8	70.0	45.9	38.0	79.8	68.4	60.1	39.4
24-Jun	88.0	64.4	73.3	46.5	38.0	81.2	71.5	63.3	42.1
1-Jul	87.0	61.9	76.0	48.4	39.0	87.5	67.6	66.2	42.9
8-Jul	89.0	63.9	75.9	48.3	40.0	89.6	77.1	66.9	44.2
15-Jul	92.0	64.8	77.2	49.4	42.0	88.9	71.3	67.6	44.8
22-Jul	92.0	63.3	80.0	49.8	43.0	86.8	71.6	67.1	44.6
29-Jul	92.0	62.8	83.1	51.5	44.0	93.1	70.8	70.9	47.8
5-Aug	92.0	62.2	82.4	50.6	42.0	88.9	75.1	66.9	44.7
12-Aug	91.0	64.1	81.4	50.0	42.0	96.6	69.0	66.1	43.6
19-Aug	91.0	62.3	78.6	48.8	39.0	77.7	67.8	63.0	42.8
26-Aug	89.0	60.6	75.9	47.2	37.0	83.3	63.8	61.1	41.5
2-Sep	87.0	59.1	74.2	45.4	37.0	77.7	62.8	58.7	38.9
9-Sep	85.0	59.1	72.8	43.6	34.0	77.0	64.4	56.3	37.0
16-Sep	82.0	58.4	68.5	40.1	32.0	64.4	60.3	50.9	33.4
23-Sep	80.0	57.5	64.8	37.6	28.0	62.3	59.9	46.9	30.8
30-Sep	78.0	57.2	65.1	36.4	26.0	62.3	68.4	47.5	30.2
7-Oct	74.0	54.9	60.8	32.3	24.0	56.0	59.8	41.9	25.3
14-Oct	72.0	53.4	58.4	31.5	21.0	53.9	51.5	39.2	24.0
21-Oct	66.0	50.6	53.9	29.3	19.0	53.2	52.8	37.6	23.1
28-Oct	61.0	48.4	50.3	29.6	19.0	51.8	49.3	36.4	22.9
4-Nov	58.0	47.9	45.0	27.5	6.0	49.7	50.9	32.9	20.7
11-Nov	54.0	47.5	40.4	26.7	10.0	48.3	50.2	29.9	19.9
18-Nov	49.0	42.1	38.1	24.5	7.0	42.0	44.6	28.3	18.2
25-Nov	49.0	41.6	33.6	21.5	-9.0	42.7	44.5	25.0	16.5
2-Dec	45.0	41.1	32.0	20.4	-5.0	37.8	41.7	23.9	15.2
9-Dec	48.0	41.8	33.1	20.4	-2.0	40.6	46.1	24.9	16.0
16-Dec	43.0	38.4	32.4	19.1	2.0	37.1	39.8	24.1	14.7
23-Dec	40.0	36.8	27.3	15.5	-20.0	34.3	38.2	20.5	12.9
31-Dec	43.0	37.6	24.9	12.4	-23.0	35.7	39.1	19.1	12.1



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1339
FEB	0	1092
MAR	0	946
APR	6	636
MAY	26	428
JUN	72	245
JUL	157	156
AUG	139	185
SEP	42	391
OCT	4	691
NOV	0	1028
DEC	0	1281
ANN	445	8418

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	-37107	0	-8548
FEB	0	-30511	0	-6931
MAR	0	-26934	0	-5873
APR	11	-18746	0	-3609
MAY	116	-13245	1	-1280
JUN	431	-8118	5	-194
JUL	1309	-5443	43	-98
AUG	1132	-6273	31	-129
SEP	193	-12080	0	-711
OCT	5	-20178	0	-2818
NOV	0	-28968	0	-5534
DEC	0	-35609	0	-7777
ANN	3197	-243212	80	-43502

Average Annual Solar Radiation – Nearest Available Site

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

City: KALISPELL
 State: MT
 WBAN No: 24146
 Lat(N): 48.3
 Long(W): 114.27
 Elev(ft): 2966

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.773
 Vert Gap: 0.324

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	390	640	980	1370	1710	1940	2110	1770	1280	790	400	310	1140
	Std Dev	37	62	111	106	131	168	147	165	159	87	27	21	39
	Minimum	290	480	800	1180	1430	1720	1760	1540	1000	640	360	260	1070
	Maximum	470	730	1270	1620	1930	2360	2460	2060	1610	1000	460	350	1210
Clear Day	Diffuse	300	420	540	680	780	790	640	570	470	360	290	240	510
	Global	600	960	1500	2100	2530	2720	2610	2220	1670	1090	660	490	1600
	Global	160	230	320	420	550	640	620	470	330	230	160	130	360
	Diffuse	160	230	320	410	490	530	490	420	330	230	160	130	320
Clear Day	Global	120	180	270	390	610	740	670	450	300	200	130	98	350
	Global	260	420	640	870	1050	1160	1310	1140	870	550	270	200	730
	Diffuse	190	290	390	500	580	610	590	520	400	290	190	160	390
	Global	560	820	1130	1420	1610	1660	1620	1460	1200	880	600	470	1120
Clear Day	Global	600	850	1010	1020	960	940	1080	1180	1230	1050	580	490	920
	Diffuse	320	410	470	530	580	590	560	530	460	370	280	260	450
	Global	1840	2040	2000	1700	1380	1230	1280	1530	1850	1980	1850	1720	1700
	Global	270	450	640	860	1020	1140	1270	1110	850	550	280	210	720
Clear Day	Diffuse	200	290	400	510	590	620	590	520	410	290	190	160	400
	Global	560	820	1130	1420	1610	1660	1620	1460	1200	880	600	470	1120

Average Annual Solar Heat and Illumination – Nearest Available Site

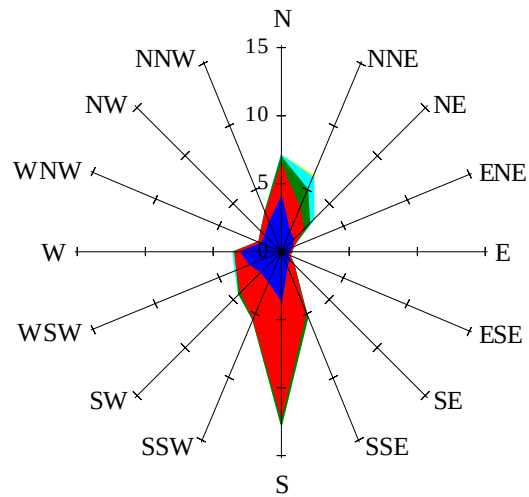
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	250	420	680	970	1220	1400	1530	1270	900	520	260	200	800
NORTH	Unshaded	110	160	220	290	370	420	400	310	230	160	110	88	240
	Shaded	81	120	170	230	300	350	340	260	190	130	83	66	200
EAST	Unshaded	180	290	450	620	750	830	940	820	620	390	190	140	520
	Shaded	150	240	360	490	580	630	730	650	500	320	150	110	410
SOUTH	Unshaded	450	630	720	690	620	600	680	780	860	770	440	370	630
	Shaded	420	550	520	380	320	330	330	350	540	640	400	340	430
WEST	Unshaded	190	310	460	620	730	810	910	790	610	390	190	140	510
	Shaded	150	250	360	480	560	620	710	620	490	320	160	120	410

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	23	55	68	59	31	40	73	93	94	75
	M.Cloudy	14	33	44	39	20	23	48	63	62	52
NORTH	M.Clear	7	11	13	12	8	18	14	16	16	14
	M.Cloudy	6	12	15	14	8	11	15	18	17	16
EAST	M.Clear	64	64	20	12	8	80	78	43	16	14
	M.Cloudy	20	28	18	14	8	30	43	32	17	16
SOUTH	M.Clear	29	72	90	78	40	10	34	56	58	37
	M.Cloudy	11	30	43	38	18	9	24	38	38	27
WEST	M.Clear	7	11	13	53	68	10	14	16	37	74
	M.Cloudy	6	12	15	29	27	9	15	18	28	46
M.Clear	(% hrs)	19	20	16	15	16	38	36	32	28	28
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	16	51	72	73	52	1	20	31	22	1
	M.Cloudy	9	31	46	45	34	1	13	19	14	1
NORTH	M.Clear	6	11	13	13	11	0	6	8	7	1
	M.Cloudy	4	11	15	15	12	0	6	9	6	1
EAST	M.Clear	57	75	40	13	11	3	36	10	7	1
	M.Cloudy	15	34	26	15	12	1	11	9	6	1
SOUTH	M.Clear	13	54	81	82	55	2	60	81	62	5
	M.Cloudy	6	27	43	42	30	1	15	24	17	1
WEST	M.Clear	6	11	13	38	73	0	6	8	36	6
	M.Cloudy	4	11	15	25	37	0	6	9	12	2
M.Clear	(% hrs)	43	43	42	40	35	9	10	8	9	12

Wind Summary - December, January, and February

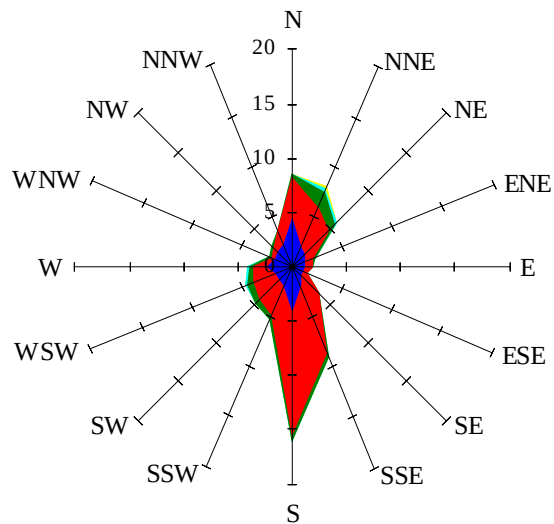
Labels of Percent Frequency on North Axis



Percent Calm = 38.64

Wind Summary - March, April, and May

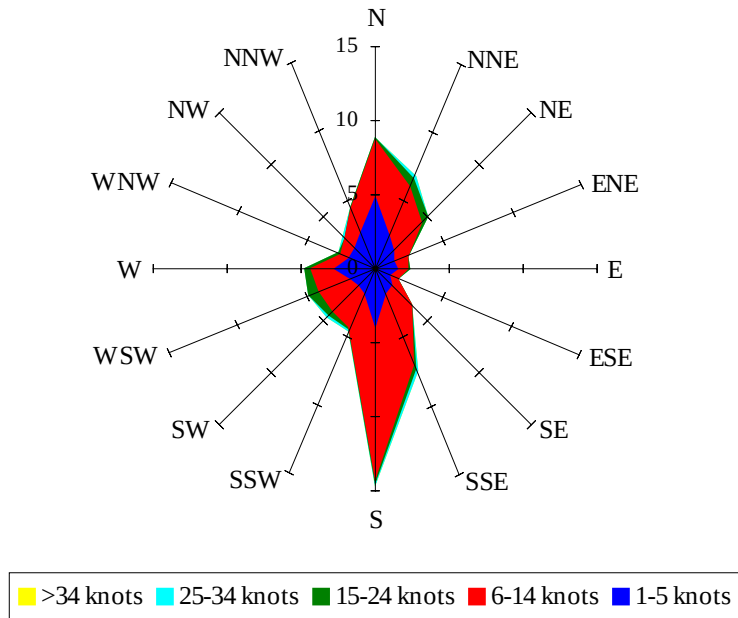
Labels of Percent Frequency on North Axis



Percent Calm = 17.85

Wind Summary - June, July, and August

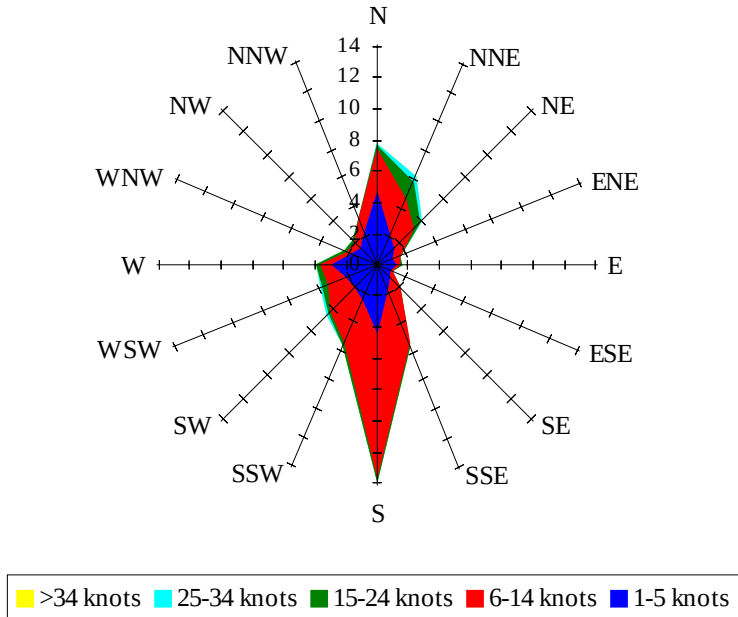
Labels of Percent Frequency on North Axis



Percent Calm = 18.90

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 31.88