

LAKE CO, CO, USA

WMO#: 724673

Lat: **39.23N** Long: **106.32W** Elev: **3026** StdP: **69.88** Time Zone: **-7.00 (NAM)** Period: **98-10** WBAN: **93009**

Annual Heating and Humidification Design Conditions

Coldest Month	Heating DB		Humidification DP/MCDB and HR						Coldest month WS/MCDB				MCWS/PCWD to 99.6% DB	
			99.6%			99%			0.4%		1%			
	99.6%	99%	DP	HR	MCDB	DP	HR	MCDB	WS	MCDB	WS	MCDB	MCWS	PCWD
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
12	-22.0	-18.9	-27.2	0.5	-17.6	-24.8	0.6	-15.6	10.8	-6.6	9.4	-6.8	3.0	40

Annual Cooling, Dehumidification, and Enthalpy Design Conditions

Hottest Month	Hottest Month DB Range	Cooling DB/MCWB						Evaporation WB/MCDB						MCWS/PCWD to 0.4% DB	
		0.4%		1%		2%		0.4%		1%		2%			
		DB	MCWB	DB	MCWB	DB	MCWB	WB	MCDB	WB	MCDB	WB	MCDB	MCWS	PCWD
(a)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
7	16.3	23.0	8.8	22.4	8.8	21.2	8.5	11.4	18.1	10.7	17.7	10.1	17.0	4.9	310

Dehumidification DP/MCDB and HR									Enthalpy/MCDB						Hours 8 to 4 & 12.8/20.6
0.4%			1%			2%			0.4%		1%		2%		
DP	HR	MCDB	DP	HR	MCDB	DP	HR	MCDB	Enth	MCDB	Enth	MCDB	Enth	MCDB	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
9.1	10.4	12.1	8.0	9.7	11.5	7.6	9.4	11.3	41.2	17.9	39.2	17.7	37.3	16.5	788

Extreme Annual Design Conditions

Extreme Annual WS			Extreme Max WB	Extreme Annual DB				n-Year Return Period Values of Extreme DB							
				Mean		Standard deviation		n=5 years		n=10 years		n=20 years		n=50 years	
1%	2.5%	5%		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
9.2	8.3	7.5	15.7	-26.5	26.3	2.6	0.9	-28.4	26.9	-29.9	27.4	-31.3	27.9	-33.2	28.5

Monthly Climatic Design Conditions

		Annual (d)	Jan (e)	Feb (f)	Mar (g)	Apr (h)	May (i)	Jun (j)	Jul (k)	Aug (l)	Sep (m)	Oct (n)	Nov (o)	Dec (p)
(5) Temperatures, Degree-Days and Degree-Hours	Tavg	1.8	-8.0	-7.8	-4.4	0.0	5.4	10.2	13.5	12.0	8.3	2.9	-3.4	-8.0
	Sd	4.53	4.14	4.63	4.14	4.08	2.92	1.75	1.82	2.97	3.96	5.34	4.81	
	HDD10.0	3232	557	499	445	302	147	33	1	4	62	221	403	558
	HDD18.3	6042	815	733	703	552	400	243	150	196	301	479	653	817
	CDD10.0	232	0	0	0	0	5	39	109	67	12	0	0	0
	CDD18.3	0	0	0	0	0	0	0	0	0	0	0	0	0
	CDH23.3	39	0	0	0	0	0	3	32	4	0	0	0	0
	CDH26.7	1	0	0	0	0	0	0	1	0	0	0	0	0
(13) Precipitation	PrecAvg	437	38	30	36	35	32	29	50	53	36	28	33	37
	PrecMax	612	105	81	70	82	98	83	74	72	113	90	78	112
	PrecMin	348	10	11	12	16	4	0	10	18	6	4	8	4
	PrecSD	71.5	26.0	20.0	16.6	14.9	18.6	15.5	15.1	16.0	21.8	17.9	15.2	25.2
(17) Monthly Design Dry Bulb and Mean Coincident Wet Bulb Temperatures	0.4%	DB	7.0	6.4	10.1	13.9	21.4	23.8	26.1	23.8	22.2	17.4	12.6	6.3
		MCWB	-1.1	-1.5	1.3	3.1	7.3	8.8	9.5	8.7	7.9	4.9	1.6	-1.4
	2%	DB	2.9	3.7	7.6	12.0	18.0	22.4	24.0	22.4	19.1	14.9	9.9	3.0
		MCWB	-2.9	-2.6	-0.1	2.0	5.8	8.3	9.2	8.8	7.1	3.9	1.2	-3.0
	5%	DB	1.4	1.9	6.1	10.0	16.3	21.2	22.8	21.1	17.9	12.8	7.6	1.3
		MCWB	-3.3	-3.3	-1.0	1.3	4.8	7.7	9.0	8.8	6.5	3.0	-0.2	-3.5
	10%	DB	-1.0	-0.9	3.7	7.9	14.1	19.1	22.1	19.0	17.2	11.1	5.1	-0.9
		MCWB	-4.3	-4.6	-2.1	0.4	4.1	6.9	9.0	8.5	6.2	2.4	-1.4	-4.2
(25) Monthly Design Wet Bulb and Mean Coincident Dry Bulb Temperatures	0.4%	WB	-0.5	0.0	1.7	3.9	8.4	11.3	13.1	12.1	9.7	6.2	2.7	-0.5
		MCDB	3.1	4.5	8.6	12.0	19.1	21.5	19.0	17.4	17.6	13.1	10.1	5.0
	2%	WB	-1.8	-2.1	0.3	2.5	6.7	9.6	11.7	11.2	8.8	5.0	1.4	-1.9
		MCDB	2.2	2.2	6.7	9.7	16.2	18.8	18.6	17.2	15.8	12.7	9.0	1.9
	5%	WB	-3.0	-3.3	-0.7	1.5	5.7	8.7	11.0	10.5	7.9	3.9	0.2	-2.9
		MCDB	0.4	0.8	5.0	8.6	14.5	17.2	18.1	16.8	14.9	11.3	6.7	0.5
	10%	WB	-4.0	-4.4	-1.7	0.7	4.9	7.7	10.4	9.9	7.0	2.9	-1.0	-4.0
		MCDB	-0.8	-1.1	3.1	7.3	13.3	17.0	17.5	16.0	14.2	9.0	4.6	-0.7
(33) Mean Daily Temperature Range	5% DB	MDBR	11.3	11.4	11.6	11.8	13.9	16.3	16.3	14.9	15.1	12.7	12.2	11.0
		MCDBR	13.9	14.1	14.3	15.3	17.1	18.9	18.4	17.6	17.6	16.6	15.5	13.0
		MCWBR	9.5	9.7	8.4	7.7	7.5	8.2	7.0	7.0	8.0	8.4	8.7	8.7
	5% WB	MCDWR	12.1	12.1	13.0	13.5	15.9	17.0	14.9	13.7	15.1	14.7	14.0	11.3
		MCWBR	8.6	8.6	8.0	7.2	7.3	7.9	6.4	6.0	7.4	7.7	8.0	7.9
(38) Clear Sky Solar Irradiance	taub		0.223	0.232	0.232	0.231	0.233	0.242	0.252	0.263	0.259	0.255	0.229	0.223
	taud		2.654	2.503	2.530	2.587	2.637	2.683	2.699	2.690	2.737	2.700	2.700	2.656
	Ebn,noon		995	1016	1043	1054	1047	1032	1020	1006	1000	980	979	971
	Edh,noon		64	85	93	95	92	88	86	85	76	70	61	59

Nomenclature:

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