

1876

## Meteorological Statistics

William Cheney

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extent, characteristics and amount of rain fall have not been previously recorded, I believe your committee will do valuable service by collecting and presenting them to the scientific world. I would suggest as persons from whom informatton might be obtained the names of the Hon. H. C. Wait, of St. Cloud, (who had a mill on the Sauk that weathered the flood); Alexander Moore, Esq., Sauk Centre (whose mill was destroyed); Hon. W. Adley, (at that time of Osakis) Register U. S. Land Office, Alexandria; Hon. F. B. Van Hoesen, Alexandria; Hon. H. C. Burbank, (now of St. Paul, but who then was engaged in the freighting to the frontier forts); William McArthur, Otter Tail City; Sam'l. Lawrence, Minneapolis, and Saml. Brown, son of Hon. I. R. Brown, Brown's Valley (Head of Lake Traverse). The records of the forts above named which forts were to the west perhaps of the whole storm, are I presume the only authentic *records* of rainfall in all that country, but I doubt not patient inquiry among the old settlers will give approximately the extent and quantity of rainfall of this remarkable storm.

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## METEOROLOGICAL STATISTICS.

BY WM. CHENEY.\*

The following statistics are the result of personal observations taken daily, at 7 A. M. and 2 and 9 P. M., and extend over a period of more than eleven years, beginning with Nov. 1st, 1864.

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\*Correspondent of the Smithsonian Institute, and Volunteer Observer, U. S. Signal Service.

Minneapolis is in Lat. 45° N. Long.  
93° 10' W., height above the sea  
856 feet.

YEARLY TEMPERATURES.

Mean temperature year	1865,	44 82
" "	1866,	42 12
" "	1867,	40 56
" "	1868,	41 64
" "	1869,	41 53
" "	1870,	44 79
" "	1871,	42 30
" "	1872,	40 67
" "	1873,	40 75
" "	1874,	42 79
" "	1875,	43 05
Average yearly mean tempera- ture for eleven years,		42 27

SPRING TEMPERATURES.

Mean temp'ture Spring	1865,	42 68
" "	1866,	43 78
" "	1867,	34 16
" "	1868,	44 48
" "	1869,	39 49
" "	1870,	45 73
" "	1871,	46 11
" "	1872,	39 86
" "	1873,	41 27
" "	1874,	40 37
" "	1875,	38 24
Average mean Spring tempera- ture for eleven years,		41 47

SUMMER TEMPERATURES.

Mean temp. Summer	1865,	69 23
" "	1866,	70 95
" "	1867,	68 56
" "	1868,	70 87
" "	1869,	66 99
" "	1870,	69 77
" "	1871,	68 58
" "	1872,	69 92
" "	1873,	71 90
" "	1874,	71 42
" "	1875,	66 04
Average mean Summer tempera- ture for eleven years,		69 48

AUTUMN TEMPERATURES.

Mean temp. Autumn	1865,	50 88
" "	1866,	46 31
" "	1867,	47 52
" "	1868,	41 24

" "	1869,	41 20
" "	1870,	49 13
" "	1871,	42 78
" "	1872,	42 15
" "	1873,	39 29
" "	1874,	45 88
" "	1875,	40 19
Average mean Autumn tempera- ture for eleven years,		44 23

WINTER TEMPERATURES.

Mean temp. Winter	1864-5	15 54
" "	1865-6	7 70
" "	1866-7	12 46
" "	1867-8	10 54
" "	1868-9	16 89
" "	1869-70	14 29
" "	1870-1	15 50
" "	1871-2	11 48
" "	1872-3	5 36
" "	1873-4	15 94
" "	1874-5	3 60
Average mean Winter tempera- ture for eleven years,		11 75

MAXIMUM TEMPERATURES.

Maximum temp.	1865, June 2d,	95
" "	1866, July 12th,	98
" "	1867, Aug. 7th,	87
" "	1868, July 16th,	101
" "	1869, July 2d,	92
" "	1870, June 29th,	96
" "	1871, July 12th,	93
" "	1872, June 25th and July 14th,	94
" "	1873, June 25th,	96
" "	1874, May 27th and Sept. 7th,	94
" "	1875, Sept. 8th,	91

MINIMUM TEMPERATURES.

Minimum temp.	1865, Dec. 21st,*	-33
" "	1866, Feb. 15th,	-31
" "	1867, Jan. 29th,	-32
" "	1868, Jan. 12th,	-40
" "	1869, Mar. 4th,	-23
" "	1870, Jan. 18th	-30
" "	1871, Dec. 27th,	-29
" "	1872, Dec. 24th,	-38
" "	1873, Jan. 28th,	-34
" "	1874, Feb. 24th,	-28
" "	1875, Jan. 8th,	-33
Average minimum temperature for last eleven years,		-32

\*—Below zero.

*Water Deposit from Rain and Melted Snow in Inches.*

MONTHS.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	AVERAGE FOR 10 YEARS.
January .....	2.050	1.500	1.750	0.620	2.000	1.625	0.300	1.830	0.498	0.825	1.300
February .....	0.200	1.050	1.500	2.800	0.557	0.275	0.450	1.550	0.915	1.450	1.074
March .....	1.070	1.275	0.900	0.960	2.857	2.776	2.000	1.048	1.835	2.120	1.684
April .....	2.592	0.414	2.014	1.311	1.037	4.997	1.763	2.854	0.761	2.730	2.047
May .....	0.065	3.626	4.376	2.520	3.952	3.116	4.931	5.694	1.614	3.420	3.331
June .....	7.275	9.242	4.230	3.548	1.584	3.107	3.465	4.909	9.683	4.572	5.161
July .....	1.459	5.461	3.087	2.948	3.846	1.927	5.223	2.992	1.641	1.118	2.970
August .....	4.895	2.725	2.807	9.640	6.020	5.396	3.057	3.325	3.428	7.512	4.880
September .....	2.220	5.599	2.779	11.448	4.066	2.246	3.080	2.275	4.545	2.672	4.093
October .....	1.943	0.917	4.922	0.654	2.051	2.341	0.447	3.055	2.501	1.088	1.991
November .....	2.350	0.678	4.128	0.679	1.760	1.973	1.593	1.030	1.120	0.875	1.618
December .....	0.165	1.085	0.550	0.945	0.600	1.125	0.637	0.530	0.502	1.650	0.778
Total .....	26.284	33.572	33.043	38.073	30.330	30.904	26.946	31.092	29.043	30.032	

Average yearly deposit for 10 years 30.931 inches.

Average summer deposit for 10 years 13.012 "

" winter " " " " 3.153 "

*..... Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian In-  
stitute, Washington, D. C., for the years 1866 to 1872, inclusive.*

1866.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin <sup>a</sup>	Relative humidity in 100ths, 100 being com- plete saturation.	Prevailing Winds.
	Months.	Max.	Min.	Mean.	R'ge.	Max.	Min.	Mean.	Range.	Amount of rain and melt'd snow in inches.	Depth of snow in inches.		
January .....	41	*—25	8.18	66	29.992	28.580	29.173	1.412	2.050	20½	5.80	.....	W. & S. W.
February.....	40	*—31	6.80	71	29.586	28.494	29.146	1.092	0.200	1¾	4.60	.....	N. & W.
March .....	43	*— 8	17.82	51	29.684	28.469	29.200	1.215	1.070	9¾	5.70	.53	N. W.
April.....	82	19	42.28	63	29.447	28.332	28.959	1.115	2.592	0	7.	.58	S. & N. W.
May.....	87	30	58.72	57	29.319	28.557	28.984	.762	0.065	0	3.90	.45	W. & N. W.
June.....	88	51	67.19	37	29.380	28.446	28.907	.934	7.275	0	5.10	.63	S. W. & W.
July.....	98	63	78.48	35	29.288	28.622	28.973	.666	1.459	0	3.70	.69	S. W.
August.....	85	46	67.17	39	29.356	28.601	29.049	.755	4.895	0	4.90	.64	.....
September...	86	32	56.06	54	29.344	28.711	29.062	.633	2.220	0	4.60	.59	.....
October.....	86	18	49.20	68	29.557	28.531	29.072	1.026	1.943	2¼	5.50	.67	.....
November.....	57	3	33.67	54	29.616	28.422	29.019	1.194	2.350	6½	7.	.....	.....
December.....	52	*—14	17.37	66	29.613	28.393	29.077	1.220	0.165	1¾	4.70	.....	.....
Total for year.									26.284	42¾			
Mean for year.			42.12				29.052				5.20		

\* Below zero.

*Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institution, Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.*

1867.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin' s	Relative humidity in 100ths, 100 being complete saturation.	Prevailing Winds.
Months.	Max.	Min.	Mean.	R'ge.	Max.	Min.	Mean.	Range.	Amount of rain and melt'd snow in inches.	Depth of snow in inches.	0 perfectly clear, 10 entire cloudiness.		
January . . . . .	38	*—32	8.33	70	29.611	28.672	29.085	.939	1.500	16 $\frac{3}{8}$	6.67	.....	N. W.
February . . . . .	44	*—30	14.11	74	29.503	28.437	29.022	1.066	1.120	10 $\frac{1}{2}$	6.20	.....	N.
March . . . . .	44	*—22	12.41	66	29.485	28.615	29.207	.870	1.275	12 $\frac{3}{4}$	5.00	.....	N. W.
April . . . . .	64	21	41.39	43	29.323	28.538	29.006	.785	.414	0	5.30	.....	S.
May . . . . .	70	28	48.51	42	29.324	28.664	29.017	.660	3.626	0	6.30	.59	S.
June . . . . .	86	51	68.07	35	29.241	28.630	28.958	.611	9.242	0	6.00	.62	S. & S. W.
July . . . . .	84	53	67.64	31	29.324	28.702	29.040	.622	5.461	0	4.30	.67	S.
August . . . . .	87	48	69.96	39	29.326	28.883	29.096	.443	2.725	0	3.30	.72	S.
September . . . . .	83	44	60.50	39	29.419	28.625	29.174	.794	5.599	0	3.50	.69	S.
October . . . . .	72	28	47.90	44	29.505	28.611	29.008	.894	.917	0	4.50	.68	S.
November . . . . .	63	*—6	34.15	69	29.503	28.286	29.145	1.217	.678	2 $\frac{3}{4}$	4.60	.57	N. W. & S.
December . . . . .	34	*—16	14.89	50	29.688	28.396	29.100	1.292	1.085	9 $\frac{3}{4}$	6.00	.54	N. W. & S.
Total for year . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	33.642	52 $\frac{3}{8}$	.....	.....	.....
Mean for year . . . . .	.....	.....	40.56	.....	.....	.....	29.071	.....	.....	.....	5.14	.....	.....

\*Below zero.

Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

Months.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloud's, 0 perfectly clear; 10 entire cloudiness.	Relative humidity in hundredths, 100 being complete saturation.	Prevailing Winds.
	Max.	Min.	Mean.	R'ge	Max.	Min.	Mean.	Range.	Am't rain and m'd snow in inches.	Depth of Snow in inches.			
January .....	30	*—40	3.85	70	29.660	28.343	29.132	1.317	1.750	19 $\frac{1}{2}$	6.3	.48	N. W. & S.
February .....	46	*—26	12.72	72	29.723	28.806	29.227	.917	1.500	11 $\frac{1}{2}$	5.3	.50	N. W. & S.
March .....	67	*—15	32.19	82	29.531	28.833	29.059	1.148	.900	2 $\frac{1}{2}$	5.8	.59	S. & N. W.
April .....	72	8	38.57	64	29.627	28.120	29.137	1.507	2.014	3 $\frac{1}{2}$	5.3	.51	NWS&SW.
May .....	91	38	59.68	53	29.353	28.726	29.135	.627	4.376	0	4.8	.55	S. & N.
June .....	96	47	68.01	49	29.500	28.668	29.050	.832	4.230	0	5.1	.69	S.
July .....	101	63	78.46	38	29.006	28.553	28.814	.453	3.087	0	4.3	.71	S. & S. E.
August .....	87	48	66.14	39	29.190	28.496	28.889	.694	2.807	0	5.1	.70	S. & S. W.
September .....	72	25	50.54	47	29.341	28.470	28.921	.871	2.779	0	5.3	.68	W. & N. W.
October .....	78	19	42.71	59	29.480	28.475	28.957	1.005	4.922	1 $\frac{1}{4}$	5.9	.63	S.
November .....	59	10	30.48	49	29.428	28.472	28.955	.956	4.128	8 $\frac{1}{4}$	6.8	.72	N. & S.
December .....	37	*—19	15.20	56	29.568	28.266	29.035	1.302	.550	5 $\frac{1}{2}$	6.2	.58	N. W.
Total for year .....									33.043	52 $\frac{1}{4}$			
Mean for year .....			41.64				29.026				5.5	.61	

\*Below zero.

Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute  
Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

1869.	Thermometer in the open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin's.	Relative humidity in hundredths, 100 being complete saturation.	Prevailing Winds.
	Months.	Max.	Min.	Mean.	Range.	Max.	Min.	Mean.	Range.	Amount of rain melted and snow in inches.	Depth of snow in inches.		
January	39	*—13	17.95	52	29.160	28.370	28.902	.790	.620	6 $\frac{1}{2}$	4.8	.67	S.
February	42	*—18	17.58	60	29.344	28.426	28.909	.918	2.800	18 $\frac{3}{4}$	6.1	.62	N. W. & S.
March	54	*—23	20.32	77	29.463	28.454	28.956	1.009	.960	5 $\frac{1}{2}$	4.5	.61	N. S. & W.
April	69	12	40.53	57	29.260	28.278	28.847	.982	1.311	6	6.1	.61	N. & N. W.
May	90	39	57.63	51	29.124	28.514	28.831	.610	2.520	0	4.7	.61	W.
June	86	47	64.44	39	29.035	28.778	28.885	.257	3.548	0	5.4	.72	N.
July	92	52	68.47	40	29.133	28.249	28.827	.884	2.948	0	5.9	.72	N. W. & S.
August	85	52	68.05	33	29.226	28.463	28.907	.763	9.640	0	6.3	.80	S.
September	86	28	58.90	58	29.224	28.653	28.852	.571	11.448	0	5.9	.77	S. & S. E.
October	73	12	37.29	61	29.304	28.444	28.878	.860	.654	0	5.3	.65	N. W. & N.
November	67	2	27.54	65	29.223	28.414	28.922	.809	.679	5 $\frac{3}{8}$	7.7	.69	N.
December	40	*—18	18.12	58	29.414	28.536	28.998	.878	.945	9 $\frac{1}{8}$	7.3	.69	S. & W.
Total for year									38.073	50 $\frac{3}{8}$			
Mean for year			41.53				28.892				5.8	.68	

\*Below zero.



Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

1870.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudiness.	Relative humidity in hundredths, 100 being complete saturation.	Prevailing Winds.	
	Months.	Max.	Min.	Mean.	R'ge	Max.	Min.	Mean.	Range.	Am't rain and melted snow in inches.				Depth of Snow in the feet.
January	32	*—30	9.86	62	29.465	28.190	28.967	1.275	2.000	21½	6.1	.58	S. & N. W	
February	36	*—29	14.88	65	29.453	28.241	28.913	1.212	.557	4½	6.	.61	S. & N.	
March	46	*—16	25.23	62	29.410	28.328	28.984	1.082	2.857	25	7.5	.64	N. & E.	
April	84	23	49.29	61	29.354	28.436	28.969	.918	1.037	1½	4.6	.56	S.	
May	91	44	62.79	47	29.120	28.341	28.846	.779	3.952	0	5.6	.67	S. & S. W.	
June	96	49	70.92	47	29.170	28.661	28.961	.509	1.584	0	4.7	.69	S.	
July	96	56	72.89	40	29.184	28.693	28.919	.491	3.846	0	4.5	.69	S.	
August	90	46	65.50	44	29.224	28.512	28.923	.712	6.020	0	4.6	.71	S. & N.	
September	82	50	63.47	32	29.282	28.827	29.053	.455	4.066	0	6.3	.78	N. E.	
October	80	20	47.00	60	29.259	28.518	28.949	.741	2.051	0	6.8	.72	S. E. & N. W.	
November	63	6	36.83	57	29.397	28.453	28.941	.944	1.760	⅞	6.2	.64	S. & N.	
December	53	*—21	17.30	74	29.410	28.269	28.967	1.141	.600	6	5.2	.71	N. W.	
Total for year									30.330	59½				
Mean for year			44.79				28.949					5.7	.66	

\*Below zero.

Meteorology.

Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute  
Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

1871.	Thermometer in the open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin's.	Relative humidity in hundredths, 100 being complete saturation.	Prevailing Winds.
	Months.	Max.	Min.	Mean.	R'ge	Max.	Min.	Mean.	Range.	Amount of rain and melted snow in inches.	Depth of snow in inches.		
January	39	*—23	11.29	62	29.570	28.341	29.051	1.229	1.625	16½	7.1	.76	N.W.&S.E.
February	44	*—24	17.90	68	29.464	28.218	28.889	1.246	.275	2½	5.8	.77	S.
March	51	3	30.14	48	29.272	28.024	28.853	1.248	2.776	12½	6.6	.76	N. E.
April	76	25	45.47	51	29.116	28.024	28.704	1.092	4.997	1	6.8	.67	N.E.&S.E.
May	91	38	63.03	53	29.222	28.669	28.949	.553	3.116	0	4.2	.56	N.E.&S.E.
June	91	50	67.8	41	29.099	28.564	28.876	.535	3.107	0	3.8	.63	S.E.&N.E.
July	93	53	70.00	40	29.203	28.601	28.898	.602	1.927	0	5.1	.68	N.E.&S.E.
August	92	45	67.86	47	29.178	28.456	28.872	.722	5.396	0	4.0	.72	S. E.
September	88	30	57.44	58	29.400	28.604	29.066	.796	2.246	0	5.2	.70	N.E. & S.E.
October	80	20	45.83	60	29.451	28.525	28.913	.926	2.341	0	5.9	.70	S. & N. E.
November	53	*—16	25.07	69	29.395	28.592	29.019	.803	1.973	6	7.0	.75½	S.E.&N.E.
December	41	*—29	5.79	70	29.427	28.394	29.014	1.033	1.125	11½	5.9	.68	S.E.&N.W.
Total for year									30.904	56			
Mean for year			42.30				28.625				5.6	.69	

\*Below zero.

*Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute, Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.*

1872.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin' <sup>a</sup>	Relative humidity in 100ths, 100 being complete saturation.	Prevailing Winds.
	Months.	Max.	Min.	Mean.	R'ge.	Max.	Min.	Mean.	Range.	Amount of rain and melt'd snow in inches.	Depth of snow in inches.		
January . . . . .	40	*—24	11.64	64	29.436	28.593	29.009	.843	.300	3	6.1	.72	S. E. & N. W.
February . . . . .	47	*—21	17.38	68	29.326	28.166	28.897	1.160	.450	4	5.1	.68	S. E.
March . . . . .	45	*—18	19.65	63	29.583	28.385	28.994	1.198	2.000	2 1/4	5.3	.67	N.
April . . . . .	83	14	44.12	69	29.334	28.227	28.819	1.107	1.763	3	6.6	.59	S. & S. E.
May . . . . .	86	34	55.98	52	29.245	28.484	28.884	.761	4.931	0	6.8	.65	S. E. & N. E.
June . . . . .	94	54	68.75	40	29.259	28.573	28.860	.686	3.465	0	6.3	.72	S. E.
July . . . . .	94	54	71.47	40	29.108	28.616	28.901	.492	5.223	0	4.5	.72	S. E. & N. E.
August . . . . .	91	49	69.50	42	29.140	28.621	28.964	.519	3.057	0	4.5	.76	S. E. & N. E.
September . . . . .	92	33	57.84	59	29.146	28.432	28.865	.764	3.080	0	5.6	.79	N. E. & S. E.
October . . . . .	76	23	45.59	53	29.299	28.389	28.961	.910	.447	0	3.9	.60	S. & S. E.
November . . . . .	53	*—22	22.90	75	29.536	28.446	28.932	1.090	1.593	1 3/4	7.1	.70	N. & N. W.
December . . . . .	38	*—38	2.76	76	29.481	28.340	29.112	1.141	.637	6 3/8	5.2	.56	N. & S. E.
Total for year . . . . .									26.946	51 7/8			
Mean for year . . . . .			40.67				28.933				5.6		

\*—Below zero.

Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute, Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

1873.	Thermometer in the open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin's.	Relative humidity in hundredths, 100 being complete saturation.	Prevailing Winds.
	Months.	Max.	Min.	Mean.	Range.	Max.	Min.	Mean.	Range.	Amount of rain and melted snow in inches.	Depth of snow in inches.		
January	31	*—34	3.17	65	29.522	28.346	28.937	1.176	1.830	18½	6.5	.59	S. & N. W.
February	43	*—27	10.65	70	29.482	28.405	28.903	1.077	1.550	12	5.3	.65	S. & N. W.
March	55	*—23	25.15	78	29.545	28.291	28.915	1.254	1.048	5½	5.6	.72	S.
April	68	26	42.48	42	29.243	28.544	28.880	.699	2.854	9¾	6.5	.63	N. E. & N.
May	78	36	56.17	42	29.318	28.495	28.864	.823	5.694	0	6.4	.60	S. & N. E.
June	96	55	73.49	41	29.228	28.525	28.824	.703	4.909	0	5.1	.67	S. E. & S.
July	94	55	71.20	39	29.132	28.656	28.903	.476	2.992	0	5.	.70	S. E.
August	89	56	71.02	33	29.180	28.740	28.768	.440	3.325	0	4.2	.72	S.
September	84	31	53.70	53	29.216	28.456	28.919	.760	2.275	0	5.6	.74	N. & S. E.
October	76	16	40.05	60	29.387	28.465	28.972	.922	3.055	11	5.9	.75	S. & N. W.
November	48	*—13	24.11	61	29.406	28.399	28.951	1.007	1.030	9½	6.2	.80	S.
December	36	*—22	15.89	58	29.444	28.417	29.005	1.027	.530	6	5.9	.72	S.
Total for year	.....	.....	.....	.....	.....	.....	.....	.....	31.092	72	.....	.....	.....
Mean for year	.....	.....	40.75	.....	.....	.....	28.903	.....	.....	.....	5.6	.69	.....

\*Below zero.

Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute, Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

1874.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Cloudin's	in 100ths, 100 being cor- plete saturation.	Prevailing Winds.
	Max.	Min.	Mean.	R'ge.	Max.	Min.	Mean.	Range.	Amount of rain and melt'd snow in inches.	Depth of snow in inches.	0 perfectly clear, 10 un- der cloud- iness.		
January . . . . .	38	*—26	10.50	64	29.647	28.183	29.017	1.464	.498	6 <sup>3</sup> / <sub>8</sub>	6.2	.64	S.
February . . . . .	36	*—28	10.67	64	29.592	28.310	29.036	1.282	.915	9 <sup>1</sup> / <sub>2</sub>	5.5	.62	S.
March . . . . .	52	*—11	22.58	63	29.546	28.461	29.004	1.085	1.835	15 <sup>3</sup> / <sub>8</sub>	5.	.66	N. W.
April . . . . .	72	9	36.56	63	29.317	28.498	29.004	.819	.761	0	4.9	.56	N. & N. W.
May . . . . .	94	37	61.96	57	29.182	28.574	28.892	.608	1.614	0	4.7	.56	S.
June . . . . .	92	49	68.75	43	29.074	28.394	28.831	.680	9.683	0	6.2	.72	S. & S. E.
July . . . . .	92	60	74.67	32	29.132	28.494	28.858	.638	1.641	0	3.3	.68	S.
August . . . . .	91	57	70.75	34	29.173	28.447	28.847	.726	3.428	0	5.3	.75	S.
September . . . . .	94	38	60.63	56	29.038	28.472	28.744	.566	4.545	0	5.	.74	S.
October . . . . .	76	23	49.18	53	29.256	28.304	28.843	1.052	2.501	<sup>3</sup> / <sub>4</sub>	5.3	.72	S. & N.
November . . . . .	73	*—10	27.72	83	29.472	28.142	28.800	1.330	1.120	2 <sup>7</sup> / <sub>8</sub>	5.7	.75	N. W. & S.
December . . . . .	50	*—25	17.19	75	29.483	28.337	28.837	1.146	.502	5 <sup>1</sup> / <sub>8</sub>	5.2	.72	S. & N. W.
Total for year . . . . .													
Mean for year . . . . .			42.79				28.892		29.043	40	5.2	.67	

\*—Below zero.

Record of Meteorological Observations made at Minneapolis, Minn., by Wm. Cheney, correspondent of the Smithsonian Institute Washington, D. C., for the years 1866 to 1872, inclusive.—Continued.

1875.	Thermometer in open air.				Barometer reduced to freezing point.				Rain and Snow.		Clouds, 0 perfectly clear; 10 entire cloudiness.	Relative humidity in hundredths, 100 being complete saturation.	Prevailing Winds.
	Months.	Max.	Min.	Mean.	Range.	Max.	Min.	Mean.	Range.	Am't rain and m't'd snow in inches.			
January	23	*—33	*—4.36	56	29.327	28.547	28.963	0.780	0.825	8 $\frac{3}{8}$	4.8	.53	N. W.
February	27	*—31	*—2.62	58	29.468	28.362	28.885	1.106	1.450	15 $\frac{1}{4}$	4.9	.58	N. W.
March	55	*—20	20.01	75	29.216	28.224	28.785	0.992	2.120	18 $\frac{1}{8}$	6.1	.74	N. & S.
April	62	11	37.77	51	29.095	28.388	28.791	0.707	2.730	5	6.4	.67	N.
May	88	30	56.91	58	29.228	28.214	28.722	1.014	3.420	0	4.9	.58	S. E.
June	92	46	62.14	36	29.073	28.334	28.750	0.739	4.572	0	6.3	.73	S. E.
July	90	58	70.10	32	29.062	28.474	28.780	0.588	1.118	0	3.8	.62	N. W.
August	86	49	65.89	37	29.118	28.504	28.746	0.614	7.512	0	5.1	.72	N. W & S.
September	91	34	56.41	57	29.247	28.464	28.832	0.783	2.672	0	5.2	.78	N. & S.
October	79	22	41.63	57	29.143	28.354	28.780	0.789	1.088	1 $\frac{1}{2}$	6.5	.70	N.
November	56	*—22	22.52	78	29.437	28.274	28.827	1.163	0.875	7 $\frac{1}{2}$	5.9	.66	S. E.
December	52	*—20	22.66	72	29.127	28.214	28.698	0.913	1.650	6 $\frac{3}{4}$	7.3	.78	S. E. & N.
Total for year.									30.032	63			
Mean for year.			43.05				28.796				5.6	.67	