

U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU

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CLIMATOLOGICAL SERVICE

DISTRICT No. 9, COLORADO VALLEY

FREDERICK H. BRANDENBURG  
DISTRICT EDITOR

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REPORT FOR JULY, 1912

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Prepared under direction of WILLIS L. MOORE, Chief U. S. Weather Bureau



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## CLIMATOLOGICAL DATA FOR JULY, 1912.

### DISTRICT No. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

#### GENERAL SUMMARY.

As in June, stagnant and ill-defined low pressure prevailed throughout the Colorado basin during the greater part of July. While normally this is the prevailing distribution of pressure during the summer months, it is not usual for it to be attended by such low mean temperatures and widespread and copious precipitation as characterized the month. Freezing temperatures occurred during the first decade at a number of stations in western Colorado, and also at one or more points in other parts of the district. The persistency of precipitation was detrimental to haymaking, and injuriously affected the strawberry crop of Routt County, Colo. On the other hand, the waterholes have been filled and a luxuriant growth of grass now covers most of the ranges. Heavy rainfalls occurred in Arizona and New Mexico, but beyond filling the arroyos and temporarily delaying traffic no damage resulted. Wind storms were frequent in the southern half of the district. During the night of the 17th a violent electrical storm occurred in the Salt River Valley, Ariz. The section director reports that in localities the winds reached a velocity never before known in that State, particularly near Mesa and Chandler, where they approached the destructiveness of a tornado, and where two fatalities occurred by the wrecking of buildings. The damage caused by the storm in these localities is estimated at \$300,000.

#### TEMPERATURE.

The mean of the 145 stations reporting was  $70.9^{\circ}$ , or  $3.3^{\circ}$  below the normal. The mean for July, 1911, was  $72.3^{\circ}$ . The highest monthly mean was  $90.6^{\circ}$  at Sentinel, Ariz., and the lowest  $45.7^{\circ}$  at Corona, Colo. The first decade was cold; on the 3d, 4th, and 5th the average daily deficiency was generally more than  $10^{\circ}$ , and as much as  $15^{\circ}$  or  $20^{\circ}$  on the 4th in the central part of the district. The second decade was warmer, but not more than two days were warmer than the normal. The last decade was cooler than the normal, especially in central and northern Arizona. The highest temperatures occurred principally on the 10th, 11th, and 17th, while the lowest occurred generally on the 4th and 5th. Thin ice formed in northern Arizona at an altitude of 6,500 feet on these dates and the lowest temperature ever recorded in July occurred in central and northern Arizona.

Details of temperature are summarized in the following table:

Areas of States in district No. 9.	Temperature.					
	Mean.	Departure from normal.	Highest.	Station.	Lowest.	Station.
Western Wyoming.....	62.4	.....	92	Green River.....	31	Pinedale.
Western Colorado.....	62.1	-2.6	101	Rangely.....	17	Chromo.
Eastern Utah.....	68.6	-2.9	105	Springsdale (near).....	24	Strawberry Tun- nel (east).
Western New Mexico.....	70.7	-2.3	105	Canebray.....	29	Berger's ranch.
Arizona.....	77.2	-4.0	114	At 3 stations.....	26	Flagstaff No. 1.
Southeastern Nevada.....	75.6	.....	113	Logan.....	40	Caliente.

#### PRECIPITATION.

The average for the 201 stations reporting was 2.65 inches, or 1.13 inches above the normal. The average for July, 1911, was 3.18 inches. The first 5 days were showery in western Colorado and eastern Utah; the rest of the decade was generally fair. On the 11th well-distributed rains set in over the central and southern parts of the district, and rain fell daily at the majority of stations till the close of the month. Monthly amounts in excess of 4 inches occurred at .8 stations in western Colorado, 6 in western New Mexico, and 28 in Arizona. The greatest monthly amount was 9.16 inches at Lakeside, Ariz., and the least amount, a trace, at Aztec, Ariz.

The average number of days with 0.01 inch or more precipitation was 6 in western Wyoming; 12 in western Colorado; 8 in eastern Utah; 9 in western New Mexico; 9 in Arizona; and 4 in southeastern Nevada. For the district as a whole the average was 9 days.

The average precipitation and departures from the normal on the different watersheds are given in the following table:

Watershed.	Green.		Grand.		San Juan.		Little Colorado.		Gila.		Mimbres.		Colorado proper.	
	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.	Average.	Departure.
	1.10	+0.66	2.41	+0.51	2.20	+0.47	3.05	+2.07	3.51	+1.54	3.64	+0.82	1.47	+0.53

## MISCELLANEOUS.

The average amount of sunshine reported was as follows: Grand Junction, 70, -7 per cent; Durango, 79, +2 per cent; Phoenix, 76, -8 per cent; and Yuma, 90, +2 per cent.

The relative humidity was greater than usual. The following are the values: Grand Junction, 44; Durango, 56; Phoenix, 44; and Yuma, 51 per cent.

## RIVERS.

In the upper tributaries of the Colorado there was a general fall in the stages. In the Green the fall was regular; but in the Grand a moderate rise began on the 17th, and in the San Juan a similar rise occurred on the 22d. At Topock, on the trunk stream, a sharp rise was in progress at the beginning of the month, the highest stage being reached on the 6th. A steady decline followed until the 28th.

TABLE 1.—Climatological data for July, 1912. District No. 9, Colorado Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.								Precipitation, in inches.								Sky.	Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days with 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>Wyoming.</i>																						
Battle Mountain.	Carbon.	7,306	—	58.5	+ 2.1	82	26†	31	10	40	1.10	+ 0.32	0.65	0	2	10	20	1	sw.	U. S. Forest Service.		
Daniel.	Uinta.	6,740	13	62.5	—	87*	28	35*	5	46*	0.72	—	0.27	0	8 <sup>a</sup>	18 <sup>a</sup>	7 <sup>a</sup>	10	6	w.	J. M. Van Dervort.	
Eden.	Sweetwater.	6,577	3	66.0	—	92	29	37	4	45	0.59	—	0.36	0	3	15	10	6	w.	Eden Valley L. & I. Co.		
Green River.	do.	6,083	7	66.0	—	84	24	31	14	47	1.21	—	0.65	0	6	—	—	—	nw.	Geo. H. Maxon.		
Pinedale.	Fremont.	7,167	6	58.8	—	84	24	31	14	47	1.21	—	0.65	0	6	—	—	—	Do.	U. S. Forest Service.		
Rambler.	Carbon.	9,232	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Do.	Ira Dodge.	
Willow Creek Cabin.	Fremont.	7,500	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Big Piney.	Uinta.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Colorado.</i>																						
Ashcroft.	Pitkin.	9,483	10	53.8	— 1.0	79	10†	30	6	45	2.59	+ 0.59	0.51	0	18	—	—	—	—	—	Dan McArthur.	
Breckenridge.	Summit.	9,536	23	52.0	— 1.3	74	11†	28	7	44	—	—	—	0	2	16	13	13	nw.	Mrs. J. G. Thompson.		
Buford.	Rio Blanco.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	w.	Mrs. H. Genier.	
Cascade.	San Juan.	8,900	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cedaredge.	Delta.	6,175	14	67.6	— 2.3	89	17	40	5	37	1.42	+ 0.62	0.47	0	51	22	11	7	13	—	Harry A. Cobbet.	
Chromo.	Archuleta.	7,500	6	60.0	—	86	11	17	8	64	1.40	—	0.30	0	9	11	19	1	—	Lawrence Nolan.		
Cochetopa.	Saguache.	9,038	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Bessie McDonough.	
Collbran.	Mesa.	6,000	19	65.9	— 2.6	87	17	39	5	35	2.00	+ 0.84	0.52	0	14	13	15	3	sw.	A. A. Wood.		
Columbine.	Routt.	9,766	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	sw.	Mrs. M. A. Caron.	
Columbine Ranch.	Delta.	6,925	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	George W. Wade.	
Corona.	Grand.	11,660	5	45.7	—	60	17†	26	5	26	4.54	—	1.08	3.0	9	—	—	—	—	w.	U. S. Weather Bureau.	
Cortez.	Moffat.	6,100	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	W. G. Clucas.	
Craig.	Garfield.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Joseph F. Haubrich.	
Crawford (near).	Montrose.	6,600	2	64.8	—	84	10	38	5	32	2.54	—	0.73	0	12	18	9	4	—	—	—	
Crested Butte.	Gunnison.	8,867	2	53.2	—	77	17	32	18†	44	2.84	—	0.62	0	11	8	4	19	w.	Charles L. Ross.		
De Beque.	Mesa.	4,935	2	72.8 <sup>b</sup>	—	95 <sup>b</sup>	10	44 <sup>b</sup>	6	46 <sup>b</sup>	—	—	—	0	7 <sup>b</sup>	10 <sup>b</sup>	3 <sup>b</sup>	3 <sup>b</sup>	w.	H. M. Quigley.		
Delta.	Delta.	4,965	22	71.4	— 2.7	100	10	40	5	54	1.09	+ 0.23	0.46	0	7	20	10	1	—	E. M. Getts.		
Dillon.	Summit.	8,800	2	53.0	—	75	27†	33	2†	40	5.64	—	0.80	0	16	3	13	15	n.	Harry T. Hamilton.		
Durango.	La Plata.	6,534	17	65.6	— 3.1	88	11	36	5	43	2.29	+ 0.74	1.71	0	14	8	19	4	nw.	U. S. Weather Bureau.		
Eureka.	San Juan.	10,000	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	San Juan W. & P. Co.	
Fraser.	Grand.	8,560	3	51.0	—	74	17	27	6†	44	3.79	—	0.71	0	15	3	21	5	—	L. D. C. Gaskill.		
Fruita.	Mesa.	4,516	13	71.8	— 3.3	96	10†	40	5	52	1.23	+ 0.35	0.54	0	6	10	17	4	se.	J. B. Willcox.		
Glenwood Park.	Garfield.	7,000	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	A. F. Terrill.	
Gladstone.	San Juan.	10,400	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	San Juan W. & P. Co.	
Glenwood Springs (near).	Garfield.	5,323	14	63.0	— 4.6	88	17	36	4	43	2.63	+ 1.35	0.60	0	11	20	6	5	w.	E. A. O'Neil.		
Grand Junction.	Mesa.	4,608	21	74.7	— 4.5	95	17	49	5	33	0.78	+ 0.28	0.30	0	9	10	14	7	se.	U. S. Weather Bureau.		
Grand Lake.	Grand.	8,163	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	w.	Mrs. Belle Kaufman.	
Grand Valley.	Garfield.	5,089	20	70.3	— 2.4	97	17	41	9	51	0.80	— 0.13	0.32	0	7	5	21	5	—	David Evans.		
Gunnison.	Gunnison.	7,670	19	61.2	+ 0.1	84	21	31	6	46	1.44	+ 0.10	0.41	0	12	11	16	4	sw.	Clarence Adams.		
Hesperus (near).	La Plata.	7,610	5	63.7	— 3.2	86	10	32	5	42	2.18	+ 0.56	0.59	0	11	6	5	20	—	G. F. Snyder.		
Horseshy.	Montrose.	8,700	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lawrence Finch.	
Iron Mountain.	Oury.	10,000	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. Amanda E. Foley.	
Lake City.	Hinsdale.	8,686	7	58.6	—	82	9	32	5	40	2.45	—	0.63	0	20	17	9	8	s.	J. F. Maurer.		
Lay.	Moffat.	6,190	18	65.0	— 1.5	89	24	35	3	48	1.69	+ 0.78	0.29	0	14	9	8	8	sw.	A. G. Wallihan.		
Mancos.	Montezuma.	6,960	13	63.7	— 3.2	86	10	32	5	42	2.18	+ 0.56	0.38	0	12	11	17	3	se.	B. M. Krumpantzyk.		
Marble.	Gunnison.	7,351	3	58.2	—	82	17	32	4†	43	2.13	—	0.50	0	12	19	9	3	ne.	F. E. Morse.		
Marshall Pass.	Saguache.	10,846	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Wm. L. Williams.	
Meeker (near).	Rio Blanco.	6,182	20	62.0	— 3.5	88	20	35	3†	40	3.59	+ 1.99	0.60	0	12	10	15	6	—	T. Baker.		
Monrose.	Montrose.	5,811	23	69.5	— 0.2	92	10†	41	5	42	1.59	+ 0.75	0.48	0	11	11	18	2	w.	U. S. Reclamation Service.		
Nast.	Pitkin.	7,953	2	55.5	—	80	17	31	6	44	3.71	—	0.97	0	8	10	14	7	w.	Arthur Hanthorn.		
Pagoda.	Routt.	6,500	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. J. W. Scott.	
Pagoosa Springs.	Archuleta.	7,108	5	62.0	—	89	10	24	5	59	2.89	—	0.64	0	11	7	21	3	sw.	E. T. Walker.		
Paonia.	Delta.	5,694	17	67.5	— 5.0	89	10	45	5	39	1.50	+ 0.53	0.70	0	7	14	15	2	sw.	J. M. Underwood.		
Pitkin.	Gunnison.	9,500	1	59.9	—	84	18†	35	3	42	2.29	—	0.62	0	9	8	17	6	—	Mrs. Maggie Cammann.		
Pyramid.	Rio Blanco.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	E. E. Egry.	
Rangely.	do.	5,050	13	67.4	— 2.5	101	18	37	5	57	1.10	+ 0.47	0.70	0	3	11	11	9	w.	J. H. McGuire.		
Redcliff.	Eagle.	8,695	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dorothea Greiner.	
Redvale.	Montrose.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dr. E. S. C. Foster.	
Rico.	Dolores.	8,824	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Clinton B. Smith.	
Rifle.	Garfield.	5,437	—	69.4	—	92	17†	43	4	42	0.98	—	0.23	0	11	13	14	4	sw.	Herman Eiche.		
River Portal.	Montrose.	6,570	6	65.4	—	89	10	40	5	43	1.09	—	0.20	0	14	20	3	—	—	U. S. Reclamation Service.		
Sapinero (near).	Gunnison.	8,125	9	56.7	—	77	21	32	6	41	1.71	—	0.33	0	15	13	12	6	w.	W. F. Irving.		
Shoshone.	Garfield.	6,110	2	67.4	—	91	21	45	6	40	3.00	—	0.34	0	17	12	9	10	—	Central Colo. Power Co.		
Silverton (near).	San Juan.	9,400	5	52.6	—	74	11†	25	1	38	4.17	—	0.55	0	15	12	6	13	—	San Juan W. & P. Co.		
Spruce Lodge.	Grand.	9,600	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	H. J. Wills.	
Tacoma.	Routt.	6,633	9	59.6	—	88	10	31	4	51	4.98	—	0.72	0	14	16	11	4	—	Herbert B. Gee.		
Terrellide.	La Plata.	7,300	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	San Juan W. & P. Co.	
Terminal Dam.	San Miguel.	8,756	—	57.0	—	81	17	29	5†	50	3.09	—	0.58	0	21	15	7	9	w.	Wm. T. March.		
Uncompahgre Plateau.	La Plata.	8,300	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	San Juan W. & P. Co.	
Yampa (near).	Routt.	8,000	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Martin Esser.	
Aneth.	San Juan.	4,800	8	77.4	—	97	11	46	4	42	0.56	—	0.24	0	6	18	11	2	—	—	H. R. Antes.	
Bluff.	do.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. H. P. Raplee.	
Canaan.	Washington.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	J. M. Lauritzen.	
Castle Dale.	Emery.	5																				

## DISTRICT NO. 9. CLIMATOLOGICAL SUMMARY.

JULY, 1912

TABLE I.—Climatological data for July, 1912. District No. 9—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.	Prevailing wind direction.	Observers.					
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.				Total snowfall, unmelted.	Number of partly cloudy days.	Number of clear days.	Number of rainy days, 0.01 inch or more.	Number of cloudy days.
<i>Utah—Continued.</i>																			
Loa.	Wayne.	7,000	19																
Manila.	Uinta.	6,225	2	63.6	90	17	35	5	45	0.55	0.20	0	5	12	17	2			
Moab.	Grand.	4,000	22	77.0	- 0.6	102	17	46	54	0.70	+ 0.31	0.32	0	8	5	20	6		
Monticello.	San Juan.	7,545	3	63.5	85	17†	39	4†	40	3.11	0.60	0	10	10	21	0	sw.		
New Harmony.	Washington.										3.15	1.30	0	4					
Orderville.	Kane.	6,660									1.79	0.55	0	14					
Pine Valley.	Washington.	6,000									3.05	1.02	0	11	8	10	13	s.	
Price.	Carbon.	5,557	1	70.0	96	17	46	4	45	1.04	0.26	0	9	18	8	5	se.		
Ranch.	Kane.	6,700	9	60.6	83	17	35	2†	38	1.39	0.70	0	3	12	15	4	s.		
San Rafael.	Emery.										0.74	0	9	9	7	15			
St. George.	Washington.	2,880	25	75.9	- 6.4	103	16	50	54	1.61	+ 0.54	0.87	0	6	1	11	19		
Scofield.	Carbon.	7,625	2	56.3	85	17	26	49	1.70	0.45	0.45	0	6	13	16	2	s.		
Springdale (near).	Washington.	3,500	4	81.6	105	16	56	31	35	1.35	0.65	0	5	13	0	18			
Strawberry T'ml (east).	Utah.	53.8		80	17	24	5	50	2.30										
Sunnyside.	Carbon.	5,280	7								0.67	0	12	7	10	14	w.		
Teasdale.	Wayne.	7,000	2	61.6	84	10	35	5	38	1.34	0.49	0	6	13	16	2	sw.		
Thompsons.	Grand.	5,150	1								1.22	0.54	0	4	8	19	4	sw.	
Tropic.	Garfield.	7,000	15	64.6	- 2.9	91	10†	38	44	1.75	+ 0.84	0.54	0	6	3	22	6	sw.	
Troutcreek Ranger.	Uinta.	9,200									2.71	0.53	0	15	4	13	14		
Vernal.	do.	5,050	15	67.4	- 4.4	93	10†	40	5	46	0.48	- 0.30	0.18	0	5	21	6	4	
White Rocks.	do.										0.78	0.26	0	8	6	16	9		
Woodside.	Emery.	4,645	1	72.9		100	17	43	5	48	0.36	0.25	0	2	11	16	4	s.	
<i>New Mexico.</i>																			
Alma.	Socorro.	5,500	15	73.2	- 1.2	100	9†	43	5	51	3.55	+ 1.06	0.82	0	10	6	23	2	sw.
Aragon.	do.	5	65.4		90	10	38	4	43	3.51	0.60	0	10	7	21	3	sw.		
Aztec.	San Juan.	5,590	12								1.53	+ 0.45	0.94	0	4	8	19	4	sw.
Berger's Ranch.	McKinley.	8,000		60.8		86	10	29	5	49	2.95	0.72	0	15	8	14	9	w.	
Blackrock.	do.	6,500	3								2.71	0.53	0	18	9	4	18	w.	
Bloomfield.	San Juan.	5,500	17	73.0	- 1.6	97	17	38	5	54	0.67	- 0.29	0.37	0	5	6	24	1	se.
Cambray.	Luna.	4,215	13			105	8				1.87	+ 0.39	1.58	0	7	11	13	7	w.
Cliff.	Grant.	4,470	12	74.0	- 3.1	98	10	46	4	40	5.33	+ 2.61	1.10	0	13				
Columbus.	Luna.	4,054	3								2.22	0.98	0	8	14	14	3	sw.	
Deming.	do.	4,333	32	82.8		103	11	60	5†	38	2.00	- 0.07	1.05	0	3	15	13	3	sw.
Dulce.	Rio Arriba.	6,756	15	65.8*	+ 0.7	88	11†	30*	5	53*	2.71	- 0.04	0.55	0	10	11	17	3	sw.
Fort Bayard.	Grant.	6,152	37	70.6	2.1	95	10	51	24	33	2.42	- 1.60	0.47	0	14	16	15	0	w.
Fruitland.	San Juan.	4,800	18	70.8	- 3.7	94	17	40	5	46	2.29	+ 1.38	1.75	0	4	12	19	0	sw.
Gage.	Luna.	4,486	12	77.1		101	25	59	16†	36	5.75	+ 3.56	2.00	0	10	18	2	11	w.
Gila Planting Station.	Grant.	6,475	1			93	10	51	3†	32	3.23	0.70	0	13	16	11	4	se.	
G. O. S. Ranch.	do.	8,000	9	69.0		98	10	42	4†	48	2.91	0.92	0	10	7	18	6	e.	
Hachita.	do.	4,504	5								3.25	1.50	0	8	7	11	13	w.	
Haynes.	Rio Arriba.	6,600	1	67.3		91	28	35	5	50	1.36	0.48	0	5	9	19	3	rw.	
Hermanes.	Luna.	4,451	3			101	9	54	5	51	1.19	0.20	0	9	13	2	16	w.	
Lordsburg.	Grant.	4,245	29	77.0	- 5.3	104	10	50	6	47	4.19	+ 2.34	1.10	0	10	1	29	1	sw.
Luna.	do.	7,300	7	63.2*		88	11	33	5	49	3.39	+ 1.10	0.67	0	10	5	26	0	s.
Mimbres.	Grant.	5,007	7								4.81	1.07	0	10	15	15	1	sw.	
Pinos Altos (near).	do.	7,253	1								4.30	0.78	0	14	7	24	0	se.	
Pratt.	do.	4,415	3								1.56	0.94	0	4	23	8	0	w.	
Redrock.	do.	4,150	7								3.51	1.31	0	12	6	22	3		
Rodeo.	do.	4,118	3			104	10†				1.50	0.75	0	7	5	18	8		
Silver City.	do.	5,860	1	72.0		100	10	49	5	40	5.40	1.83	0	12	18	10	3	w.	
<i>Arizona.</i>																			
Allaire Ranch.	Cochise.	4,184	16								4.31	+ 1.72	1.13	0	12	11	11	9	w.
Alpine.	Apache.	8,500	3	58.2		88	11				3.33	0.75	0	13	9	19	3	sw.	
Aztec.	Yuma.	492	12	88.9	- 6.4	112	8	65	4†	41	T.	- 0.22	T.	0	0	11	0	20	w.
Benson.	Cochise.	3,523	30	75.6	- 9.5	106	9				4.28	+ 0.14	0.70	0	8				se.
Bisbee.	do.	5,500	22	71.8	- 3.5	95	10	53	5	51	3.34	+ 1.74	2.00	0	16	8	7	16	sw.
Blue.	Greenlee.	6,000									4.48	0.73	0	12	7	24	0	s.	
Bowie.	Cochise.	3,756	34	76.8	- 3.7	109	10	49	26	44	4.20	+ 1.50	1.27	0	6	2	19	10	se.
Buckeye.	Maricopa.	950	20	86.4	- 1.0	112	11	56	4	46	1.16	- 0.07	0.68	0	5	19	8	4	sw.
Canilie.	Santa Cruz.	5,225	3								8.51	3.00	0	17	6	17	8	se.	
Casa Grande.	Pinal.	1,396	30			109	10	56	3	44	4.52	1.30	+ 0.54	0	5	20	1	10	w.
Casa Grande Ruins.	do.	1,422	4	84.7							4.52	1.41	0	9	11	15	5	sw.	
Cavecreek.	Maricopa.	1,520	5								3.76	0.75	0	12	8	18	5		
Chin Lee.	Apache.	6,090	4	70.0		96	10†				55b	0.02	0.48	0	9	5	5	21	sw.
Chlarsons Mill.	Graham.	8,000	7	63.6		84	10	40	5†	30	5.21	1.00	0	12	2	20	9		
Clifton.	Greenlee.	3,584	4	83.1		109	10	64	4†	34	5.21	+ 3.35	1.93	0	11	12	17	2	
Cline.	Gila.	2,300	11	81.2	- 3.2	105	10	54	4†	46	3.03	+ 1.14	0.60	0	8	9	17	5	sw.
Cochise.	do.	4,219	14	77.1	- 4.3	104	10	43	6†	57	4.45	+ 2.40	1.14	0	12	19	1	11	sw.
Columbia.	Yavapai.	1,900	12	86.6	- 1.1	110	9	64	26	32	8.00	+ 5.89	2.65	0	10	19	1	9	se.
Courtland.	Cochise.	4,543	3								3.76	0.75	0	12	8	18	5	sw.	
Dos Cabezos.	do.	5,250	4	72.4		104	8	40	29	54	5.84	1.13	0	14	8	13	10	w.	
Douglas.	do.	3,920	9	77.4		107	10	41	5	56	2.31	0.40	0	17	11	7	13	sw.	
Dudleyville.	Pinal.	2,204	11	77.2	- 10.1	103	10	56	3†	40	3.90	+ 1.93	1.50	0	15	9	12	10	sw.
Fairbank.	Cochise.	3,862	3								6.48	2.40	0	9	3	13	15	sw.	
Flagstaff (1).	Coconino.	6,907	20	61.2	- 3.8	85	11	32	4†	43	4.96	+ 3.17	1.18	0	18	5	15	11	w.
Florence.	do.	7,500	4	58.1		84	11	26	5	49	3.51	0.60	0	14	9	12	10	sw.	
Fort Apache.	Navajo.	1,504	12	85.6	- 2.7	111	11	66	2†										

TABLE 1.—Climatological data for July, 1912. District No. 9—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Arizona—Continued.</i>																				
Keams Canyon.	Navajo.	6,600	7	68.6	—	91	10†	39	4†	44	2.78	—	1.20	0	8	14	17	0	w.	David E. Livesay.
Kingman.	Mohave.	3,326	10	80.0	— 2.5	102	10	55	3†	39	0.09	— 0.79	0.03	0	4	18	0	13	s.	Agent A. T. & S. F. Ry.
Lakeside.	Navajo.	6,500	8	64.6	—	92	10	38	5	46	9.16	+ 7.02	3.57	0	14	8	0	23	sw.	Prof. Joseph Peterson.
Lewis Springs.	Cochise.	4,029	3	—	—	—	—	—	—	4.19	—	1.00	0	11	5	7	19	—	Agent E. P. & S. W. R. R.	
McNeal.	do.	4,490	2	—	—	—	—	—	—	3.16	—	0.67	0	13	6	21	4	sw.	Miles McNeal.	
Maricopa.	Pinal.	1,186	36	88.0	— 5.9	114	10	58	5	47	1.80	+ 1.03	1.10	0	5	18	10	3	w.	Agent S. P. Ry.
Mesa.	Maricopa.	1,244	17	82.2	— 6.2	107	9	56	3	43	1.57	+ 0.15	0.80	0	4	9	15	7	sw.	C. L. Diehl.
Mohawk Summit.	Yuma.	538	12	—	—	114	8	64	4	—	0.19	— 0.03	0.12	0	4	21	3	7	w.	Agent S. P. Ry.
Naco.	Cochise.	4,579	3	—	—	—	—	—	—	—	3.73	—	1.65	0	12	7	24	0	—	Agent E. P. & S. W. R. R.
Natural Bridge.	Gila.	4,990	23	—	—	—	—	—	—	3.64	+ 1.14	1.00	0	9	8	2	sw.	D. G. Goodfellow.		
Oracle.	Pinal.	4,500	20	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	J. W. Lawson.
Osborn.	Cochise.	4,676	3	—	—	—	—	—	—	—	3.85	—	1.14	0	15	5	22	4	w.	Agent E. P. & S. W. R. R.
Paradise.	do.	5,436	5	69.6	—	104	8	42	5	51	4.89	—	2.58	0	11	4	23	4	nw.	J. C. Hancock.
Parker.	Yuma.	345	14	88.4	— 3.7	113	10	65	5†	45	1.78	+ 1.41	0.50	0	6	6	20	8	sw.	M. A. Israel, M. D.
Payson.	Gila.	5,550	4	70.3	—	97	10	42	4	47*	1.73	—	0.44	0	6	—	—	—	—	Mart McDonald.
Phoenix.	Maricopa.	1,108	17	85.4	— 5.0	108	10	63	5	37	1.29	+ 0.22	0.52	0	9	12	12	7	e.	U. S. Weather Bureau.
Phoenix (1).	do.	1,092	20	85.4	— 3.6	109	8†	58	4	46	2.03	+ 0.81	1.45	0	3	12	13	6	w.	George Acuff.
Phoenix (2).	do.	1,189	4	85.2	—	105	10	60	4†	42	1.82	—	0.92	0	5	22	0	9	sw.	Salt River Val. Nurseries.
Pinal Ranch.	Pinal.	4,520	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Irion & Craig.
Pinto.	Apache.	5,660	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. Celia F. Henning.
Prescott.	Yavapai.	5,320	44	67.5	— 4.0	93	10	34	3	42	6.19	+ 3.29	1.93	0	15	13	5	sw.	John W. Flinn, M. D.	
Quartzsite.	Yuma.	800	5	89.2	—	114	11	52	3	42	1.75	—	1.20	0	6	11	11	9	sw.	W. E. Scott.
Redrock.	Pinal.	1,864	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	W. J. Crowell.
Roosevelt.	Gila.	2,175	7	—	—	108	10†	—	—	—	3.95	—	0.95	0	4	14	17	0	sw.	U. S. Reclamation Service.
Sacaton.	Pinal.	1,280	5	85.6	—	110	10	56	4	46	4.27	—	2.00	0	6	6	25	0	w.	E. W. Hudson.
St. Michaels.	Apache.	6,950	25	67.2	— 2.0	90	11†	39	5	44	1.33	— 0.74	0.40	0	9	4	16	11	sw.	Rev. A. Weber, O. F. M.
Salome.	Yuma.	1,875	5	78.3	—	106	11	50	3†	47	0.89	—	0.82	0	2	13	15	3	se.	Mrs. M. B. Swartz.
San Simon.	Cochise.	3,609	27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Agent S. P. Ry.
Seligman.	Yavapai.	5,219	7	67.6	—	91	9†	37	4	47	1.50	—	1.00	0	11	8	0	23	sw.	Librarian A. T. & S. F. Ry.
Sentinel.	Maricopa.	685	14	90.6	— 4.1	112	11	60	4	39	0.07	— 0.61	0.04	0	4	19	10	2	sw.	Agent S. P. Ry.
Silverbell.	Pima.	2,650	7	82.6	—	104	11	60	4	29	4.86	—	1.30	0	8	15	0	16	s.	Imperial Copper Co.
Snowflake.	Navajo.	5,644	6	68.6	—	96	10†	37	4†	53	0.65	—	0.12	0	7	5	7	19	sw.	Wm. J. Flake.
Springerville.	Apache.	6,862	2	63.6	—	89	10	37	0	48	2.04	—	0.70	0	11	15	6	10	sw.	U. S. Forest Service.
Supai.	Coconino.	3,200	4	77.4	—	108	10†	46	4	49	1.62	—	0.36	0	10	8	9	14	—	Laura B. Symons.
Tempe.	Maricopa.	1,165	8	85.0	—	110	10	57	4	44	2.67	—	0.70	0	9	14	14	3	nw.	F. H. Simmons.
Thatcher.	Graham.	2,800	9	81.6	—	113	10	51	5	53	3.16	—	0.63	0	12	9	18	4	sw.	Prof. J. H. Larson.
Tombstone.	Cochise.	4,550	17	76.2	— 2.1	105	10	53	3	40	5.42	+ 2.25	1.48	0	9	6	23	2	—	F. N. Walcott.
Truxton.	Mohave.	3,997	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Truxton Canyon Ind. School.
Tuba.	Coconino.	4,500	12	72.6	— 5.1	97	17	44	4	44	0.98	+ 0.32	0.31	0	8	10	15	6	sw.	H. P. Marble.
Tucson.	Pima.	2,320	32	81.6	— 5.1	105	7†	—	—	—	43*	3.00	+ 0.90	1.20	0	8	5	10	nw.	University of Arizona.
Tucson (1).	do.	2,380	4	80.3	—	107	8	42	4	51	3.41	—	1.11	0	8	13	10	8	sw.	James F. Record.
Tucson (2).	do.	2,526	80.8	—	106	10	52	5	44	3.49	—	0.96	0	12	12	3	16	w.	U. S. Coast & Geodetic Surv.	
Vail.	Yavapai.	3,421	14	81.2	— 4.5	104	11	52	24	39	4.06	+ 3.00	2.01	0	3	24	0	7	—	Agent S. P. Ry.
Walnut Grove.	Yavapai.	3,649	22	—	—	—	—	—	—	—	5.52	+ 3.68	1.67	0	9	—	—	—	—	J. O. Carter.
Wickenburg.	Maricopa.	2,072	13	82.2	— 3.5	113	11	54	25	50	2.22	+ 1.21	1.40	0	2	16	12	3	sw.	Agent S. F. P. & P. Ry.
Wilcox.	Cochise.	4,164	32	75.4	— 6.4	103	10	50	5	48	3.30	+ 1.31	0.72	0	10	—	—	—	s.	Agent S. P. Ry.
Williams.	Coconino.	6,750	13	64.7	— 3.3	88	8†	32	4	50	4.97	+ 2.04	1.42	0	7	10	21	0	—	E. J. Nordyke.
Winslow.	Navajo.	4,853	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	John F. Bauer.
Yarnell.	Yavapai.	4,700	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	E. L. Bartholomew.
Yuma.	Yuma.	141	32	88.8	— 2.1	110	11	61	4	40	0.18	+ 0.06	0.14	0	2	28	3	0	sw.	U. S. Weather Bureau.
Yuma (1).	do.	150	5	83.1	—	107	11	53	2†	47	0.08	—	0.06	0	2	24	5	2	sw.	E. L. Crane.
Caliente.	Lincoln.	4,407	2	68.8	—	100	16	40	8	53	0.32	—	0.10	0	4	21	8	2	se.	Salt Lake Route.
Logan.	Clark.	1,355	5	82.5	—	113	16	55	4	46	0.44	—	0.22	0	4	24	6	1	s.	O. W. Jarvis.

\* <sup>a</sup>, <sup>b</sup>, <sup>c</sup>, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

\*\* Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

## DISTRICT No. 9. CLIMATOLOGICAL SUMMARY.

JULY, 1912

TABLE 2.—*Daily precipitation for July, 1912. District No. 9, Colorado Valley.*

TABLE 2.—*Daily precipitation for July, 1912. District No. 9—Continued.*

## DISTRICT NO. 9. CLIMATOLOGICAL SUMMARY.

JULY, 1912

TABLE 2.—*Daily precipitation for July, 1912. District No. 9—Continued.*

Stations.	Watershed.	Day of month.																														Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Arizona—Contd.																																			
Maricopa.....	Gila																																		1.80
Mesa   .....	Salt																																	1.57	
Mohawk Summit.....	Gila																																	0.19	
Naco.....	San Pedro																																	3.73	
Natural Bridge.....	Verde																																	3.64	
Osborn.....	San Pedro																																	3.85	
Paradise.....	Desert																																	4.89	
Parker.....	Colorado																																	1.78	
Payson.....	Verde																																	1.73	
Phoenix.....	Salt																																	1.29	
Phoenix (1).....	do																																	2.03	
Phoenix (2).....	do																																	1.82	
Pinal Ranch.....	Gila																																		
Pinto.....	L. Colorado																																	2.22	
Prescott.....	Hassayampa																																	6.19	
Quartzite.....	Colorado																																	1.75	
Redrock.....	Santa Cruz																																		
Roosevelt.....	Salt																																	3.95	
Sacaton.....	Gila																																	4.27	
St. Michaels.....	L. Colorado	T.																																1.33	
Salome.....	Colorado																																	0.89	
Seligman.....	Verde																																	1.50	
Sentinel.....	Gila																																	0.07	
Silverbell.....	Santa Cruz																																	4.86	
Snowflake.....	L. Colorado																																	0.65	
Springerville.....	do																																	2.04	
Supai.....	Colorado																																	1.62	
Tempe.....	Salt																																	2.67	
Thatcher.....	Gila																																	3.16	
Tombstone.....	San Pedro																																	5.42	
Truxton.....	Colorado																																		
Tuba.....	Little Colorado																																		
Tucson.....	Santa Cruz																																	3.00	
Tucson (1).....	do																																	3.41	
Tucson (2).....	do																																	3.49	
Vail.....	do																																	4.06	
Walnut Grove.....	Hassayampa																																	5.52	
Wickenburg.....	do																																	2.22	
Willcox.....	Desert																																	3.30	
Williams.....	Colorado																																	4.97	
Winslow.....	Little Colorado																																		
Yarnell.....	Hassayampa																																	0.18	
Yuma.....	Colorado																																	0.08	
Yuma (1).....	do																																		
<i>Nevada.</i>																																			
Caliente.....	Colorado																																	0.32	
Logan.....	do																																	0.44	

\* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

JULY, 1912.

## DISTRICT NO. 9. CLIMATOLOGICAL SUMMARY.

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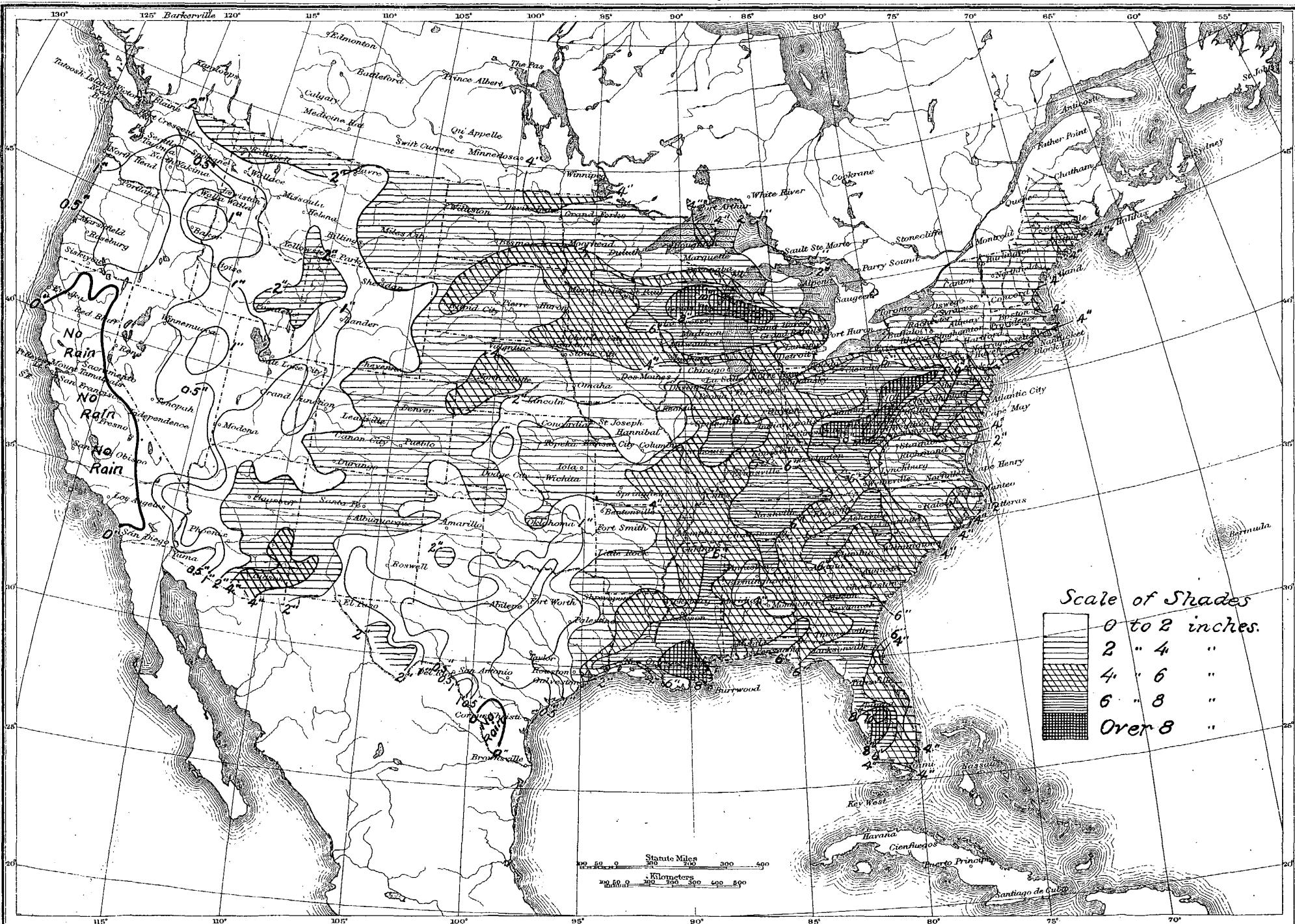
TABLE 3.—Maximum and minimum temperatures for July, 1912. District No. 9, Colorado Valley.

Date.	Wyoming.				Colorado.							Utah.							New Mexico.									
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George. §§		Bloomfield.		Fort Bayard.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1....	69	40	79	48	76	46	87	62	71	38	70	40	72	34	74	32	85	48	93	63	92	65	90	57	85	52	84	58
2....	70	39	81	40	78	46	85	65	72	37	72	47	71	35	79	35	83	43	92	66	88	63	83	59	84	52	83	55
3....	69	42	79	48	65	46	73	56	74	42	72	35	67	34	78	32	80	50	89	73	81	66	79	65	81	58	81	55
4....	71	43	69	37	61	42	66	50	75	39	66	35	54	31	81	35	76	42	80	61	57	83	53	70	50	78	52	82
5....	70	41	79	40	75	36	89	49	79	35	70	39	67	42	83	36	90	54	86	46	93	50	81	38	82	52	82	
6....	75	45	82	42	83	41	91	58	77	31	62	55	78	33	75	32	89	47	98	56	95	48	95	51	88	43	87	54
7....	70	35	88	55	84	44	93	62	74	34	50	40	79	38	80	35	93	47	100	56	94	55	95	60	90	40	89	59
8....	65	38	81	46	83	42	93	59	80	45	83	40	78	33	80	37	92	48	99	75	97	55	96	61	94	46	92	59
9....	71	40	84	41	85	44	94	56	78	32	84	35	79	32	85	55	92	45	99	66	99	52	98	55	93	47	92	61
10....	69	31	89	49	88	47	95	60	81	39	85	40	88	37	81	52	97	47	100	63	100	54	96	61	96	45	95	62
11....	74	38	86	53	88	50	94	66	82	36	85	45	80	37	85	56	95	58	104	73	99	54	102	62	95	51	91	62
12....	74	37	82	47	84	62	90	65	79	38	74	50	71	46	80	51	85	57	101	71	95	63	96	68	93	59	90	61
13....	70	40	84	38	85	58	88	63	80	40	81	41	80	36	82	50	80	49	96	73	89	62	86	68	95	56	84	62
14....	74	43	84	41	81	52	85	63	73	53	78	52	75	53	76	50	83	47	92	71	95	60	93	66	95	56	85	61
15....	80	41	91	51	83	50	90	60	78	57	80	46	77	41	81	52	90	53	98	64	100	64	93	62	85	58	93	61
16....	81	43	88	54	81	51	93	64	75	56	81	45	82	38	86	51	96	49	100	71	99	63	103	61	95	60	82	58
17....	81	42	71	46	87	52	95	65	79	50	85	40	83	40	82	51	97	48	104	69	102	58	101	71	97	64	86	57
18....	73	42	85	49	84	57	92	67	83	44	85	47	81	40	81	51	95	60	99	78	97	67	83	65	94	61	85	61
19....	64	52	88	58	79	58	80	47	77	56	76	50	85	55	82	58	94	75	95	72	93	65	92	63	81	61	83	59
20....	72	57	90	60	86	54	90	60	78	53	88	45	78	51	81	52	88	55	99	67	96	60	98	66	95	62	83	61
Mns.	74.5	42.5	84.5	47.5	80.5	50.7	87.5	61.9	77.4	44.9	78.1	46.0	76.9	42.3	80.1	47.5	88.5	51.9	96.3	68.5	93.8	60.3	89.4	62.4	90.0	55.9	83.6	57.7

Date.	Arizona.														Logan, Nev.													
	Bisbee.	Flagstaff.	Fort Apache. §§	Grand Canyon. §§	Parker.	Phoenix.	Prescott.	St. Michaels.	Tucson.	Yuma.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1....	88	61	72	41	87	51	74	35	100	72	101	73	81	43	79	45	99	67	100	71	95	58	100	65	89	60		
2....	83	64	72	42	87	48	76	37	93	76	100	69	73	43	79	49	98	64	95	65	99	55	100	66	89	60		
3....	81	64	62	49	82	46	79	36	88	72	90	69	69	34	75	55	92	67	87	65	95	55	100	66	89	65		
4....	79	66	66	32	78	45	80	39	97	70	90	63	63	77	40	69	44	90	66	96	61	90	55	99	61	89	55	
5....	84	53	75	32	87	44	80	38	103	65	100	63	85	43	81	39	97	54	104	64	94	58	100	64	94	58	93	58
6....	89	62	79	38	92	49	81	40	108	69	103	67	87	49	86	42	102	62	103	67	101	60	100	63	99	66	100	60
7....	93	64	80	42	93	52	82	41	108	65	101	71	87	48	86	52	105	63	105	66	100	66	102	61	99	65	102	61
8....	92	65	82	43	94	50	83	42	106	69	103	70	88	46	87	50	105	63	108	68	102	61	105	64	99	65	104	61
9....	93	69	82	41	94	54	86	48	105	65	105	72	89	50	89	49	102	68	108	72	105	64	105	66	99	65	104	64
10....	95	68	82	48	99	58	85	53	113	68	108	76	93	54	88	51	105	71	109	72	104	69	104	66	99	65	104	69
11....	94	71	85	44	98	63	78	53	111	75	108	82	94	54	90	53	105	80	110	77	105	76	105	80	102	76	102	76
12....	86	62	77	50	95	59	79	54	92	78	96	78	84	61	88	63	97	76	93	79	102	76	102	76	99	76	102	76
13....	77	59	67	54	81	59	83	55	98	75	95	71	78	59	79	56	87	67	100	75	94	70	100	75	94	70	97	70
14....	79	61	75	46	81	51	81	55	100	75	98	72	83	51	80	54	92	69	100	73	99	66	100	73	99	66	99	76
15....	86	60	82	47	92	57	80	54	105	78	104	74	88	53	85	52	100	70	110	75	104	65	104	66	99	71	104	65
16....	84	60	82	54	87	58	81	54	108	75	103	82	90	61	86	52	101	71	108	84	113	67	104	70	99	70	104	70
17....	85	60	78	51	89	59	81	53	103	78	100	70	81	59	90	51	98	68	100	78	104	70	104	70	99	70	104	70
18....	76	62	78	52	90	57	80	54	102	78	98	70	83	57	88	53	99	73	106	80	92	71	106	80	99	71	106	71
19....	82	61	74	53	85	61	76	49	105	78	99	71	81	61	81	57	93	68	105	80	99	71	105	80	99	71	105	71
20....	78	64	76	49	88	58	70	49	110	79	104	75	84	56	84	55	96	73	108	77	99	71	108	77	99	71	108	71
21....	78	62	75	54	83	60	78	47	106	76	98	77	83	64	79	54	92	72										

### Total Precipitation, July, 1912.



Departure of the Mean Temperature from the Normal, July, 1912.

