Climatological Data for December, 1909.

DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.

BERNARD BUNNEMEYER, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The most remarkable feature of the month was the severe and protracted cold weather which affected the entire district. It was not only the coldest month of the year 1909, but also the coldest December on record; and in a large number of localities, especially in the upper Rio Grande and upper Rio Pecos valleys, all previous records of low temperatures were broken.

The precipitation averaged but slightly greater than the normal in Colorado and New Mexico, but there was a decided excess in Texas, due to unusually heavy rains in the eastern portion of the State. Practically all the precipitation over the upper portions of the Rio Grande and Rio Pecos watersheds was in the form of snow, the greatest depth in Colorado being nearly 5.5 feet at Cumbres. In New Mexico the snowfall ranged from 43 inches at Chama, in the northern portion of the Territory, to 3 inches in the more southern localities, the average depth being about 9 inches. In Texas comparatively heavy snows occurred in the northern half of the State on several days, the greatest amount reported being 7 inches at Crockett, but at the close of the month most of it had disappeared. In Colorado and New Mexico, however, the continued cold weather prevented the snow over the upper Rio Grande and Rio Pecos watersheds from melting, and the accumulated depth was much greater at the close of the month than usual, giving fair indications of a good supply of water. Much of the snow at the lower levels was not well packed, but at the higher levels the condition was generally good.

The number of days with .01 or more precipitation averaged about 6 in Colorado, 4 in New Mexico and 5 in Texas, there being 4 more or less well-defined storm periods at irregular intervals from the 2d to the 25th, after which date the weather was generally fair. Despite the rather frequent storms and severe cold there was a large number of clear days in many sections of the district.

TEMPERATURE.

The temperature was decidedly below the normal throughout the district. The deficiency was greatest in the interior and least in the lower Rio Grande Valley and on the Gulf coast, the average for the district being about 6°. The first 3 days and the last day of the month were warm, with maximum temperatures approximating closely those of previous Decembers. On the 4th cold weather overspread the district and it continued cold, with but little interruption, until near the close of the month. The severest weather occurred from the 15th to the 22d. During this period freezing temperatures, with heavy sleet, were recorded southward to the Gulf coast, and temperatures below zero, accompanied by a general snowfall, occurred in the northwestern portion of Texas, and in New Mexico and Colorado.

The 19th was the coldest day of the month and the lowest temperatures recorded were: −39° in Colorado at Wagon Wheel Gap; −33° in New Mexico at Estancia; and −6° in Texas at Mt. Blanco. The highest temperatures reported were 48° in Colorado at Wagon Wheel Gap on the 1st; 78° in New Mexico at Carlsbad on the 31st; and 90° in Texas at Falfurrias and at San Juanito on the 3d.

PRECIPITATION.

The precipitation over the Rio Grande watershed averaged about 1.10 inches, which was slightly greater than the normal. Deficiencies occurred, however, in a number of separated localities. The snowfall was heavy throughout the greater part of the mountains, the greatest depth reported being about 5.5 feet at Cumbres, Colo., and 3.6 feet at Chama, N. Mex. There was no snow over a long stretch of the valley south of Comstock, Tex.

In the Rio Pecos drainage basin the precipitation was slightly deficient, although there was an excess in several localities, mostly in the upper portion. The monthly amounts ranged from 0.12 inch at Fort Sumner to 1.73 inches at Windsors and averaged 0.62 inch. This was an increase of more than 50 per cent over the November precipitation. The snowfall was heavy over the upper watershed, the greatest depth reported being 29 inches at Harveys Upper Ranch. The least was 1 inch at Barstow in the lower valley.

The precipitation over the Nueces and San Antonio watersheds averaged very nearly normal, while those of the Guadalupe, Lavaca, Brazos, Trinity, Neches, and Sabine had a general excess, which was most pronounced over the 3 drainage basins last named, the excess over the Trinity being 1.24, and over the Neches and Sabine as much as 3.00 inches. The Colorado watershed was the only one in Texas with a generally deficient precipitation. The following are the averages for the various drainage basins: Nueces, 1.62; San Antonio, 1.95; Guadalupe, 2.36; Lavaca, 2.96; Colorado, 1.43; Brazos, 2.61; Trinity, 3.56; Neches, 6.69; Sabine, 6.66; and the coastal plains, 1.89 inches.

RIVER CONDITIONS.

While the Rio Grande and Rio Pecos were generally lower than during the preceding month, the other rivers in the district were considerably higher, the gain amounting to several feet in case of the Brazos, Trinity, and Sabine rivers. The Rio Grande was unusually low at Eagle Pass, nearly normal at Zapata, and somewhat below normal at Brownsville, but there was ample water for irrigation and other purposes.

Sharp rises of 10 or more feet occurred from the 1st to the 3d in the upper and middle Brazos and upper Trinity, and less pronounced rises occurred in the upper and middle Colorado. A second rise of 4 feet took place at Dallas from the 5th to the 6th, which brought the river at that place to within a few feet of flood stage. Timely warnings of these rises were issued from this office.

SNOWFALL IN THE MOUNTAINS.

The following reports of the snowfall in the mountain districts of the Rio Grande and Rio Pecos watersheds have been furnished by the section directors of the Colorado and New Mexico sections:

Report of Mr. F. H. Brandenburg, Section Director, Colorado Section:

The distribution of the snowfall up to December 31 was irregular and, as a whole, considerably less than for the corresponding period last year. The ground was not deeply frozen when the first snow fell, and it is likely that considerable moisture will be absorbed when melting begins. Continued cold and the general absence of high winds have been unfavorable to packing. The warm spell at the close of December, which caused considerable settling and some melting, put the snow at moderate elevations in a condition favorable for solidifying, but at higher altitudes, where the weather has remained very cold, the snow is still in a comparatively loose state.

In the region drained by the Rio Grande the snowfall has been greater than for the corresponding period last year, as well as greater than the average.

Report of Mr. C. E. Linney, Section Director, New Mexico Section:

Fairly heavy snow fell in the mountain districts during the closing days of November, and frequent snowstorms during December gradually increased the depth of snow. The unusually protracted cold weather during December, which was the coldest month for the Territory on record, prevented the snow from melting, and at the close of the month the accumulated depth was much greater over all the watersheds of New Mexico than for the past several years.

In the Rio Grande watershed the average for the valleys was nearly 10 inches and in the mountains 27 inches, 5 inches more than it was a year ago. In the valleys of the Pecos and Southeast watershed the average was 8 inches and in the mountains 16 inches, a material increase over last year.

TABLE 1.—*Climatological data for December, 1909. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	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 clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Amethyst (near)	Mineral	8,730	1																	Don C. La Font.
Blanca	Costilla	8,403		11.8		47	23	−27	19	48	0.14		0.05	2.2	4	14	17	0	sw.	L. C. Audrain.
Cumbres	Conejos	10,015	3								5.05		1.35	65.5	12					Venita A. Good.
Garnett	Costilla	7,576	16	10.0		40	13	−33	18	54	0.32	+ 0.07	0.12	6.8	3	15	12	4		Chas. Speiser.
Hermit	Hinsdale	9,843									1.22		0.51	19.5	9	17	5	9		C. C. Mason.
La Veta Pass	Costilla	9,000									1.64		0.85	25.8	6	12	11	8	w.	Norvin R. Lively.
Manassa	Conejos	7,700	3	11.1[a]		47[a]	31	−31[a]	19	51[a]	0.25		0.25	2.5	1				sw.	J. B. Chapman.
Platoro	do	9,675	2								4.33		1.18	53.0	12	18	6	7	w.	Walter R. Hook.
Saguache	Saguache	7,740	17													22	4	5	w.	Eugene Williams.
San Luis	Costilla	7,794	18	15.2	− 7.8	47	31	−28	19	53	0.45	− 0.26	0.40	4.5	2	23	8	0	sw.	P. B. Albright.
Wagon Wheel Gap	Mineral	8,434	10	6.6	− 5.3	48	1	−39	19	61	0.94	+ 0.12	0.27	17.0	6	14	13	4	w.	Ellwood Bergey.
New Mexico.																				
Agricultural College	Dona Ana	3,863	43	38.0	− 4.1	68	1†	3	20	43	0.48	+ 0.04	0.28	3.0	2	19	6	6	nw.	N. M. Agric. College.
Alamogordo (near)	Otero	4,338	9	38.2		68	2	0	19	42	0.94		0.54	6.0	2	18	6	7	sw.	Jas. C. Dunn.
Alamogordo	do	4,320									0.42		0.32	4.0	2					Agent E. P. & S. W. R. R.
Albuquerque	Bernalillo	5,200	32			62	1	0	20	41	0.19	− 0.20	0.10	2.0	3	18	8	5	n.	University of N. M.
Amizett	Taos	9,018									3.21		0.10	57.5	10	10	7	14		Geo. W. Oates.
Ancho	Lincoln	6,112									1.37		0.96	17.0	3	15	0	16	sw.	Agent E. P. &S. W. R. R.
Aspen Grove Ranch	Rio Arriba	9,000									1.48		0.43	24.8	6	21	0	10		Junius D. Maupin.
Bateman Ranch	do	8,900									1.06		0.26	17.0	7	16	2	13	w.	John W. Bateman.
Bluewater	Valencia	6,732	8	22.5		63	31	−17	19	53	0.80		0.32	8.5	8	12	2	17	n.	Bluewater Developm't Co
Bluewater Reservoir	do	9,000									0.52		0.27	5.0	2	10	11	10	w.	Do.
Boaz	Chaves	4,154		32.6		67	31	− 9	20	46	0.32		0.32	3.5	2	19	6	6	w.	D. C. Savage.
Capitan	Lincoln	6,348									0.43		0.22	6.5	3	13	12	6	w.	Agent E. P. & S. W. R. R.
Carlsbad	Eddy	3,120	15	39.6	− 3.4	78	31	0	20	52	0.50	0.00	0.37	3.0	3	14	12	5	se.	U. S. Reclamation Serv.
Carrizozo (1)	Lincoln	5,429	2																	A. H. Harvey.
Carrizozo (2)	do	5,438									0.75		0.40	7.5	2					Agent E. P. & S. W. R. R.
Chama	Rio Arriba	7,851	8	15.5	−11.2	46	2	−16	5†	43	3.32	+ 0.98	0.56	43.0	10	17	6	8	sw.	Frank C. Johnson.
Cloudcroft (1)	Otero	8,650	7																	M. P. Coakly.
Cloudcroft (2)	do	8,650																		Agent E. P. & S. W. R. R.
Corona	Lincoln	6,666									1.08		0.51	11.0	3	12	9	10	n.	Do.
Coyote	do	5,800									1.62		0.84	6.5	4	16	2	13	sw.	Do.
Cundiyo	Santa Fe	6,889									0.88		0.30	7.7	5	19	6	6	w.	Teofilo Vijil.
Demonstration Farm	San Miguel	6,800	1								0.16		0.09	1.5	2					Erb and Westerman.
Duran (1)	Torrance	6,272	1																	W. H. Birkhead.
Duran (2)	do	6,272									0.40		0.40	6.0	2	22	3	3		Agent E. P. & S. W. R. R.
Edison Mine	Taos	10,600																		Frank L. Paxton.
Elk (near)	Chaves		10	36.0	− 3.4	72	31	− 5	20	38	0.50	− 0.16	0.28	7.0	2	16	13	2	w.	Boyd Williams.
Escondido	Otero	4,014									0.30		0.30	3.0	1	11	14	6	sw.	Agent E. P. & S. W. R. R.
Española	Rio Arriba	5,590	13	26.2	− 2.6	59	1	− 1	20	42	0.37	+ 0.04	0.37	1.0	1	25	4	2	n.	Mrs. E. F. McBride.
Estancia	Torrance	6,140	4	19.4		53	10†	−33	19	50	0.78		0.78	9.5	2	18	10	3	e.	Agent N. M. Cent. R. R.
Fort Stanton	Lincoln	6,231	30	32.2	− 3.9	72	31	−16	20	52	0.25	− 0.54	0.15	4.0	3	21	7	3	w.	U. S. Sanitarium.
Fort Sumner	Guadalupe	3,960	7			62	26	−11	19		0.12		0.12	2.5	2					F. A. Manzonares.
Gallinas	Lincoln	6,635									0.60		0.40	6.0	3	26	0	5	w.	Agent E. P. & S. W. R. R.
Gallinas Planting Stat'n.	San Miguel	7,500	3	28.8		65	30	−10	18	48	0.66		0.22	5.4	6	11	17	3	w.	U. S. Forest Service.
Harvey's Upper Ranch	do	9,400									1.67		0.49	29.0	7	16	10	5	se.	Simon B. Warner.
Hillsboro	Sierra	5,224	10	34.4	− 4.5	67	31	2	20	42	0.74	+ 0.06	0.24	5.5	5	20	6	5	w.	J. M. Webster.
Hodges	Taos	8,484									0.88		0.27	11.0	5				n.	Ralph W. Johnson.
Hondo Reservoir	Chaves	3,904	1	35.4		72	2	−14	20	46	0.30		0.17	3.5	2	16	9	6	w.	U. S. Reclamation Serv.
Hope	Eddy		3																	N. L. Johnson.
Hopewell	Rio Arriba	9,500		13.0		40	30	−23	19	44	2.08		0.60	28.0	9	7	16	8	w.	John T. Blanton.
Laguna	Valencia	5,840	5	23.8[a]		56[a]	1	−20[a]	19	35[a]	0.72		0.64	9.0	2					Gus Weiss.
Lagunita	Guadalupe	4,500	5	32.4		67	31	−14	20	39	0.29		0.27	5.0	2	18	9	4	w.	P. A. Turnbull.
La Huerta	Eddy	3,111	1					0	20		0.46		0.41	3.0	2	16	6	9	se.	D. Barclay Sutherland.
Lake Valley	Sierra	5,415	5								0.60		0.24	12.2	5	17	9	5	sw.	Wm. P. Keil.
Las Vegas	San Miguel	6,384	23	27.6	− 5.5	64	30†	−15	19	50	0.44	− 0.19	0.17	4.7	3	20	9	2	w.	Dr. Wm. C. Bailey.
Los Lunas (near)	Valencia	4,900	18	24.6	− 8.6	62	2	−25	19	41	0.92	+ 0.43	0.80	8.0	2	15	7	9		Richard Pohl.
Los Tanos	Guadalupe	4,919									0.36		0.26	4.5	2	21	3	7	w.	Agent E. P. & S. W. R. R.
Magdalena	Socorro	6,557	4	26.1		55	1†	−21	19	40	1.18		0.60	14.2	3	19	10	2	w.	Wm. Pender.
Mineral Hill	San Miguel	7,050	5								0.71		0.43	8.0	3	19	1	10	sw.	W. M. Nelson.
Monument	Eddy	3,500	4																	James M. Cook.
Mountainair	Torrance	6,547	7	26.0		57	2	− 8	20	34	1.79		1.11	19.0	4	21	6	4	sw.	John W. Corbett.
Newman	Otero	3,989				68	2	4	20	36	0.63		0.40	3.5	2	23	1	7	sw.	Agent E. P. & S. W. R. R.
Noria	Dona Ana	4,414									0.24		0.24	3.0	1	22	3	6	nw.	Do.
Orogrande	Otero	4,171									0.82		0.36	6.5	4	12	8	11	w.	Do.
Oscuro (near)	Lincoln	5,016									0.28		0.15	3.0	3	25	2	4	n.	Eugene F. Jones.
Oscuro (2)	do	5,016																		Agent E. P. & S. W. R. R.
Otis	Eddy	3,100									0.61		0.30	6.5	4	18	9	4	se.	A. M. Hove.
Otto	Santa Fe	6,200									0.25		0.18	4.1	7					Otto Goetz.
Pastura	Guadalupe	5,285									0.45		0.18	5.0	3	23	0	8	ne.	Agent E. P. & S. W. R. R.
Red River	Taos	8,650		14.6		50	31	−27	19	46	2.26		0.52	32.0	7	8	18	5	e.	Mrs. L. R. Penn.
Rincon	Dona Ana	4,030	11	38.6	− 2.3	72	2†	6	5	50	0.36	− 0.12	0.25	4.5	3	12	10	9	s.	Chas. H. Raitt.
Rio Grande Dam	Sierra	4,265	11	34.4	− 2.6	69	2	− 3	19	43	0.22	− 0.27	0.22	2.6	2	16	3	12	nw.	U. S. Reclamation Serv.
Rosedale	Socorro	6,910	5	29.8		56	30	− 4	20	34	1.29		0.56	14.6	6	20	4	7	w.	W. H. Martin.
Roswell	Chaves	3,578	12	34.2	− 7.0	73	2	−10	20	43	0.31	− 0.24	0.18	2.9	3	12	13	6	n.	U. S. Weather Bureau.
San Marcial	Socorro	4,439	14	32.1	− 5.9	69	2	− 8	20	41	0.32	− 0.10	0.32	4.0	2	7	12	12	n.	Agent A. T. & S. F. R. R.
San Rafael	Valencia	6,509	6	26.8		78	29	−14	20	69	1.25		0.53	8.5	5	19	6	6	sw.	Dr. C. M. Grover.
Santa Fe	Santa Fe	7,013	37	21.9	− 8.4	55	31	− 6	19	35	0.55	− 0.21	0.19	5.6	7	16	12	3	ne.	Section Center.
Santa Rosa (1)	Guadalupe	4,624	10	33.4		69	31	−11	17	44	0.24		0.13	5.0	4	19	9	3	w.	John L. Chapman.
Santa Rosa (2)	do	4,624									0.50		0.50	4.0	1	22	7	2		Agent E. P. & S. W. R. R.
Socorro	Socorro	4,600	19	26.7	− 9.0	60	10	−16	21	43	1.04	+ 0.36	0.50	6.3	6				n.	J. J. Leeson.
Stanley (near)	Santa Fe	6,317		20.8		60	31	−25	20	46	0.29		0.21	4.2	3	23	5	3	nw.	L. J. Cartwright.
Strauss	Dona Ana	4,080	11																	Agent Southern Pac. R.R.
Taos	Taos	6,983	12	23.4	− 3.2	58	31	−19	19	47	0.69	+ 0.01	0.29	8.5	4	22	8	1	w.	Alexander Gusdorf.
Taos Canyon	do	8,959									1.65		0.32	6.8	9				w.	Leocadio Martinez, jr.
Tecolote	Lincoln	6,539									0.25		0.17	2.0	2	15	8	8	w.	Agent E. P. & S. W. R. R
Three Rivers	Otero	4,559									0.18		0.18	2.0	1	14	12	5	ne.	Do.
Torrance	Torrance	6,433									0.85		0.45	11.0	2					Do.
Tres Piedras	Taos	8,076	5	15.9		48	1	−23	19	50	1.75		0.84	25.0	5	15	8	8	sw.	Edwin B. Seward.
Truchos	Rio Arriba	7,935				52	31				1.30		0.48	18.0	4	11	20	0		Ignacio Cordova.
Tularosa (1)	Otero	4,436	2	38.0[b]		67[b]	2†	4[b]	20	41[b]	0.19		0.19	3.0	1	10	14	7	n.	Irby L. Fairless.
Tularosa (2)	do	4,436									0.48		0.32	6.0	2	21	3	7	nw.	Agent E. P. & S. W. R. R.
Vaughn	Guadalupe																			Do.
Winsors	San Miguel	8,200	12	22.8	− 4.6	53	31	−18	19	54	1.73	+ 0.73	0.36	20.0	9	13	11	7	w.	Henry D. Winsor.
Texas.																				
Abilene	Taylor	1,738	24	38.6	− 6.4	75	3	3	20	34	0.73	− 0.40	0.48	2.5	4	11	11	9	s.	U. S. Weather Bureau.
Albany	Shackleford	1,429	15	36.4	− 8.6	79	3	− 2	20	37	0.60	− 1.11	0.20	4.0	3					N. L. Bartholomew.

TABLE 1.—*Climatological data for December, 1909. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit. Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Precipitation, in inches. Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Texas—Cont'd.																				
Alvin	Brazoria	49	10								3.21	− 0.52	1.43	0.0	4	12	3	16	nw.	F. A. Smith.
Anahuac§	Chambers										2.13		0.90	0.0	4					B. H. Collins.
Austin	Travis	650	23	44.6	− 7.7	78	3†	21	20	39	1.80	− 0.88	0.60	0.0	6	16	6	9	w.	A. Deussen.
Ballinger§§	Runnels	1,637	14	38.9	− 6.5	81	3	3	20	41	1.16	− 0.02	0.50	2.0	3	17	5	9	n.	E. M. Eubank.
Barstow	Ward	2,573	2	42.4		88	1	3	20	60	0.75		0.62	1.0	2	21	3	7	w.	W. H. Denis.
Beaumont	Jefferson	29	12	51.8		80	4†	21	19	35	5.17	+ 1.95	1.87	0.0	6	10	0	21	n.	Jno. Bender.
Beeville§§	Bee	225	13	51.4	− 3.2	84	3	28	20	38	2.32	+ 0.59	0.75	0.0	7	12	7	12	n.	L. E. Dickey.
Big Springs	Howard	2,396	7	39.4		77	3	− 3	20	38	0.64		0.26	4.0	3	20	4	7	s.	B. Reagan.
Blanco§§	Blanco	1,350	13	42.2	− 6.7	83	3	19	20	45	2.80	+ 1.10	0.80	1.0	8	19	6	6	n.	R. C. Crist.
Boerne	Kendall	1,412	17	46.3	− 2.9	81	3	23	19	46	2.76	+ 0.68	1.15	0.0	7	8	7	16	n.	F. W. Schweppe.
Booth§§	Fort Bend	81	8								2.52		0.52	0.0	10	17	0	14	n.	T. R. Booth.
Boquillas	Brewster																			M. A. Ernst.
Bowie	Montague	1,113	9	38.2	− 7.5	77	3	3	20	43	1.02		0.49	5.3	4	19	3	9	n.	Craig Anderson.
Brazoria	Brazoria	35	20	53.2	− 2.8	82	14	25	26	41	3.01	− 0.26	0.85	0.0	11	16	4	11	n.	Mrs. M. A. Stephens.
Brazos	Palo Pinto	801									2.73		0.98	5.6	5	20	0	11	e.	Robt. E. Boyett.
Brenham§§	Washington	350	20	45.6	− 8.5	80	3	22	20	41	4.85	+ 1.30	1.87	0.0	10	14	3	14	n.	Mrs. B. F. Sloan.
Bridgeport§§	Wise	754									1.49		0.90	4.9	4	19	0	12	n.	Thos. C. West.
Brighton	Nueces	12	13	52.7	− 2.7	81	3	32	19†	41	1.51	+ 0.20	1.09	0.0	3				nw.	G. H. Ritter.
Brownsville	Cameron	38	20	58.2	− 3.3	85	2	33	20	32	2.10	+ 0.65	1.09	0.0	8				n.	U. S. Weather Bureau.
Brownwood§§	Brown	1,342	19	38.8	− 7.3	79	2	7	20†	53	0.80	− 0.97	0.55	2.0	5	17	7	7	n.	Mrs. Pearl Smith.
Cameron§§	Milam		1	43.0		80	5	19	20	48	3.20		0.90	0.0	7	22	6	3	n.	J. E. Watts.
Carmona	Polk		1	45.2		81	3†	20	21	42	7.42		3.46	0.0	9	18	3	10	n.	G. S. Warner.
Claytonville	Fisher	2,100	5	36.2		77	3	2	21	42	0.35		0.35	3.5	1	15	11	5	s.	Wm. Lanius.
Coleman	Coleman	1,710	15	35.0[b]		85[c]	3	8[a]	20	49[c]	0.41	− 0.75	0.21	2.0	2					J. H. Tucker.
Colorado	Mitchell	2,066	15	38.2[e]	− 9.5	78[e]	31	13[e]	5†	51[e]	0.86	+ 0.06		5.0	2				n.	R. M. Webb.
Columbia	Brazoria	34	20	50.4	− 5.2	84	4	25	26	39	2.84	− 0.36	0.81	0.0	8	18	5	8	n.	R. B. Loggins.
Columbus§§	Colorado	206	5								4.04		1.62	0.0	8	12	5	14	n.	Mrs. Sophie Bridge.
Comstock	Valverde			44.2		75	3	21	19	37	0.64		0.34	1.0	3	22	2	7	se.	A. D. Brown.
Corpus Christi	Nueces	20	22	53.6	− 3.0	80	3	30	20	32	0.90	− 0.42	0.46	0.0	7	10	7	14	n.	U. S. Weather Bureau.
Corsicana§§	Navarro	445	20	40.8	− 8.4	78	3†	14	20†	42	3.77	+ 1.26	1.80	2.0	9	19	1	11	nw.	E. L. Gibson.
Crockett	Houston	350	5	45.0		81	4	19	20	42	4.86		1.20	7.0	9	18	3	10	s.	A. M. Bencher.
Cuero§§	DeWitt	177	20	50.7	− 3.5	88	4	24	20	51	2.22	− 0.14	1.05	0.0	7	16	0	15	n.	H. R. Forbese.
Dallas§§	Dallas	466	20	38.2	− 4.4	79	3†	8	20†	57	2.58	+ 0.24	1.12	3.0	8	18	0	13	n.	G. A. Eisenlohr.
Danevang	Wharton	145	13	52.6[d]		81	4	18[a]	20	40[a]	1.65	− 2.36	0.70	0.0	3	15	7	9	n.	H. P. Hermansen.
Decatur	Wise	1,047	3	46.3[c]		71[f]	31	26	5†	32[f]	1.55		0.60	5.5	4	26	2	3		Agent Ft. W. & D. C. Ry.
Del Rio	Valverde	952	3	47.0	− 5.4	82	4	26	19	45	1.14	− 0.42	0.56	0.0	7	17	6	8	se.	U. S. Weather Bureau.
Dialville	Cherokee	575	11	43.1		78	4	16	20	43	5.94	+ 0.67	3.20	0.0	7					J. M. B. McKnight.
Dublin§§	Erath	1,466	14	40.2	− 6.8	74	3	14	20	36	2.05	+ 0.45	0.80	3.5	5	10	15	6	n.	Jno. O. Shafer.
Duval	Travis	820	20	46.2	− 5.9	77	3†	20	20	41	2.50	+ 0.13	0.97	1.0	6	19	0	12	n.	J. C. Edgar.
Eagle Pass	Maverick	800	20	50.7	− 2.4	86	4	25	16	46	0.60	− 0.33	0.40	0.0	5	8	16	7		Jos. Metcalfe.
Edna	Jackson										2.46		0.58	0.0	7					E. L. Faires.
El Paso	El Paso	3,762	30	40.4	− 4.4	69	2	16	20	38	0.56	+ 0.04	0.41	4.1	3	13	13	5	nw.	U. S. Weather Bureau.
Encinal	La Salle		1	52.0		88	4	28	16	46	1.94		1.52	0.0	3	10	11	10	n.	H C Braden.
Fairland	Burnet			44.3		77	4†	17	20	42	1.43		0.74	1.0	6	19	5	7	n.	R. L. Bush.
Falfurrias	Starr		2	54.8		90	3	26	13	50	0.95		0.80	0.0	4	16	2	13	nw.	W. A. Gardner.
Flatonia	Fayette	465	1	48.6		83	3	21	20	38	3.15		1.24	1.0	8	17	2	12	n.	Julius Laux.
Fort Clark §§	Kinney	1,050	22	45.2	− 3.9	80[a]	3	21	18	40[a]						16	12	3	n.	Post Surgeon.
Fort McIntosh	Webb	460	23	54.5	+ 1.6	89	4	29	16	45	1.26	+ 0.15	0.62	0.0	6	14	0	17	w.	Do.
Fort Stockton	Pecos	3,050	4	44.1	− 1.7	83	31	6	20	51	0.90	+ 0.18	0.63	2.7	4	13	11	7	ne.	H. H. Butz.
Fort Worth	Tarrant	670	14	39.4	− 8.1	77	31	9	20	35	2.81	+ 1.59	1.26	3.0	5	17	5	9	nw.	U. S. Weather Bureau.
Fredericksburg	Gillespie	1,742	20	43.5	− 6.1	76	3	18	19†	37	0.94	− 0.78	0.42	2.0	4	8	7	16	n.	Arthur Striegler.
Gainesville	Cooke	738	20	35.6	−10.0	72	3	4	20	33	2.18	+ 0.08	0.50	6.5	8					J. L. Hickson.
Galveston	Galveston	69	39	52.4	− 3.9	76	3	31	20	24	2.51	− 1.22	0.83	0.0	9	11	10	10	se.	U. S. Weather Bureau.
Gatesville	Coryell	795	5	41.4		75	4†	14	20	40	2.20		0.90	0.0	4	14	17	0		John Ryan.
Georgetown§§	Williamson	750	14	41.6	− 7.9	78	3	18	20	49	1.93	− 0.43	0.68	0.8	9	17	3	11	n.	Prof. R. E. Young.
Gonzales§§	Gonzales	299	4								3.03		0.95	0.0	9	16	0	15	n.	J. M. Johnson.
Graham	Young	1,040	5	36.6[c]		67	4	6[j]	21	37[j]	1.42		0.77	6.5	3	23	1	7	n.	C. W. Johnson.
Grandfalls	Ward																			W. C. Bridwell.
Grapevine	Tarrant	670	19	39.6[d]	− 8.2	76[d]	3	9[d]	20	33[d]	3.56	+ 1.52	1.65	4.0	6	10[d]	9[d]	8[d]	n.	W. J. Crowley.
Greenville§§	Hunt	550	9	37.8		76	4	10	20	41	3.95		1.95	5.0	5	15	0	16	n.	J. P. Regan.
Hallettsville	Lavaca	235	18	49.1	− 4.1	81	3	26	20	33	3.46	+ 0.95	1.21	T.	4	13	8	10	s.	Dr. J. E. Lay.
Haskell	Haskell	4,013	18	35.8	− 8.9	79	3	− 3	20	43	0.97	− 0.18	0.60	3.7	3	17	4	10	n.	P. D. Saunders.
Hebbronville	Duval		2								1.14		0.89	0.0	2					Henry Edds.
Hempstead§§	Waller	254	5								3.38		0.85	0.0	5	12	3	16	n.	J. H. Hancock.
Henderson	Rusk										7.79		3.75	1.5	9	16	3	12		M. Kangerga.
Hewitt	McLennan	664	14								3.05	+ 1.40	0.92	0.8	6					I. H. Earle.
Hillsboro	Hill	628	17	43.3		74	2†	12	20	48										Thompson & Campbell.
Hondo	Medina	901	7	47.6		79	1	23	20	38	1.48		0.80	0.0	4	12	13	6		H. E. Haas.
Houston§§	Harris	53	20	49.4	− 4.6	80	4	25	20	35	2.32	− 0.77	0.71	T.	9	10	11	10	n.	U. S. Weather Bureau.
Hubbard	Hill	638																		J. C. Mecklin.
Huntsville§§	Walker	400	21	43.4	− 9.1	79	3†	21	20	42	4.90	+ 1.15	1.42	0.0	6	13	0	18	n.	W. Y. Barr.
Jewett§§	Leon	496	5	41.2		80	3†	18	20†	46	3.37		0.87	5.0	6	20	4	7	n.	Earle Adkisson.
Junction	Kimble	1,645	7																	J. T. Rowsey.
Kaufman	Kaufman	448	10	40.4	− 7.8	77	4	9	20	30	5.04	+ 1.76		2.0	5	17	5	9	n.	B. J. Hubbard.
Keene	Johnson			39.7		74	3	13[a]	20	42[a]	3.43		1.11	1.8	8	15	6	10		Industrial Academy.
Kerrville§§	Kerr	1,650	14	43.2	− 2.8	75	4	16	20	46	1.42	− 0.32	0.58	5.8	4	15	3	13	n.	Mrs. F. Coleman.
Knickerbocker	Tom Green	2,050	5	41.3		80	3	2	20	39	0.74		0.40	2.5	4	19	8	4	ne.	Jos. Tweedy.
Kopperl	Bosque	576	9								5.04		2.80	0.8	6	14	8	9	n.	T. A. Johnson.
Lampasas§§	Lampasas	1,026	18	42.9	− 6.3	82	31	15	20	58	2.79	+ 1.07	1.23	2.0	8	17	9	5	n.	Mrs. K. I. Webber.
La Parra	Cameron	38	7								1.50		1.50	0.0	1					Jno. G. Kenedy.
Laureles Ranch	Nueces	20	10								2.18	+ 0.57	1.50	0.0	3					Matt Cody.
Liberty§§	Liberty	38	5	48.7		80	3†	22	13	43	4.11		1.40	0.0	8	11	7	13	n.	Mrs. Fannie Sneed.
Llano	Llano	1,040	18	45.3	− 5.3	78	3	15	20	42	1.07	− 0.25	1.00	0.5	3	22	7	2	ne.	E. W. Torrence.
Llano Grande	Hidalgo		1	49.9		89	17	23	26	45	0.60		0.60	0.0	1	15	2	14	n.	M. D. Wardlow.
Long Lake§§	Anderson		4								3.59		0.76	0.0	8	14	4	13	n.	Geo. Ellis
Longview§§	Gregg	336	20	40.2	− 9.0	78	4	18	20†	40	7.38	+ 2.99	1.86	2.7	9	18	1	12	ne.	C. A. Propst.
Lufkin	Angelina	325	2	45.8		88	4	21	13†	39	6.87		2.73	0.5	10	20	4	7	n.	T. A. King.
Luling§§	Caldwell	418	20	46.0	− 7.5	81	3	22	20	35	2.29	+ 0.22	0.91	0.0	8	16	2	13	n.	John Carter.
Marble Falls§§	Burnet	771	1								2.52		0.94	T.	7	15	3	13	n.	Wm. Harrison.
Marfa	Presidio		1								1.20		1.00	2.0	2					R. K. Colquitt.
Marshall	Harrison	375		42.1		79	4	12	20	38	8.47		3.95	1.7	10	8	14	9	nw.	Lee Scott.
Mexia§§	Limestone	537	5	39.6		79	3†	15	20	44	4.51		1.13	4.7	8	14	9	9	n.	Miss Josephine Newman.
Midland	Midland										0.32		0.20	2.0	2	17	8	6	sw.	H. J. Elder.
Mt. Blanco	Crosby	2,750	21	34.6	− 7.1	77	31	− 6	19	44						16	6	9	nw.	H. C. Smith.
Nacogdoches§§	Nacogdoches	371	10	43.3	− 5.5	80	4	19	21	36	8.40	+ 3.49	2.31	0.0	10	16	4	11	n.	Miss Mary Hofmann.
New Braunfels	Comal	720	20	46.6	− 6.3	80	3	23	20	37	1.61	− 0.60	0.74	0.0	5	17	4	10	n.	J. Giesecke.
Palestine	Anderson	510	27	42.2	− 7.2	78	4	18	20	36	2.40	− 1.27	1.03	0.3	8	13	10	8	n.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for December, 1909. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	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 clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Cont'd.																				
Panter	Hood	1,000	19								3.84	+ 1.84	1.33	4.0	6					E. H. Snider.
Pierce	Wharton		3	46.0		77	3	22	20	33	2.05		1.10	0.0	3	10	11	10		R. B. Pointer.
Plainview	Hale	3,370	1	33.6		77	31	− 4	20	46	0.27		0.12	3.0	4	17	6	8	w.	J. F. Sander.
Port Lavaca	Calhoun	20	8	52.2[b]		83	4	27[d]	20	36[d]	2.02		0.92	T.	3	13	8	10	n.	J. H. Bickford.
Ricardo	Nueces			55.2		87	3	30	13†	40	1.20		0.47	0.0	5	17	6	8	n.	Lindsay Waters.
Riverside§§	Walker	169	5								6.55		1.80	0.0	7	16	0	15	n.	Mrs. C. W. Higdon.
Robert Lee§§	Coke	1,850	1	38.3		80	3	3	20	44	0.73		0.40	2.5	3	15	8	8	n.	H. D. Pearce.
Rockland§§	Tyler	136	5								6.13		2.40	0.0	6	15	3	13	n.	D. W. Bellamy.
Rossville	Atascosa	558	2	49.4		83	3	20	19	36	1.79		0.87	0.0	6	14	8	9	n.	W. F. M. Ross.
Runge	Karnes	308	14								1.71	− 0.53	1.47	0.0	2					Reiffert & Frobese.
Sabinal	Uvalde	964	5	50.0		83	4	24	20	43	1.43		0.84	0.0	4	14	4	13	n.	Jas. Johnston.
San Angelo	Tom Green		1	40.6		79	3	6	20	44	1.15		0.60	2.0	3	20	5	6	sw.	C. W. Goff.
San Antonio	Bexar	701	24	47.9	− 5.2	81	3	24	20	35	1.38	− 0.18	0.80	0.0	8	12	8	11	n.	U. S. Weather Bureau.
San Augustine	San Augustine			44.2		79	4	19	21	38	6.70		2.00	0.0	9	13	9	9		F. A. Wilson.
San Juanita§	Hidalgo			57.4		90	3	30	26	44	1.01		0.42	0.0	5	5	6	20	n.	J. B. McAllen.
San Marcos§§	Hayes	588	16	44.8	− 7.6	79	4	23	20†	43	2.50	+ 0.99	0.80	0.0	7	17	0	14	n.	Miss L. C. Ford.
San Saba	San Saba	1,712	5	41.2		77	3†	9	20	46	1.99		0.78	0.1	7	23	1	7	n.	Jas. Burns.
Santa Gertrudes	Nueces		7								1.05		1.05	0.0	1					J. B. Wright, jr.
Seymour	Baylor	1,180	3	38.2		77	31	4	20	38	0.55		0.15	2.5	4	20	2	9	n.	F. M. Deaver.
Somerville	Burleson	251		47.4		83	3	21	28	45	2.69		1.05	0.0	8	8	0	23	n.	W. A. Dolan.
Sonora	Sutton	2,200	6	41.0[g]		78[g]	3	7[g]	20	44[g]	0.85[g]		0.30	0.0[g]	3[g]	5[g]	14[g]	5[g]	s.[g]	Mike Murphy.
Sugarland	Fort Bend	79	11	49.8[a]		80	2†	27[a]	20	43[a]	2.28	− 0.80	0.65	0.0	6	12	9	10	n.	O. M. Bakke.
Taylor	Williamson	583	8	43.4	− 7.2	80	3	20	20	37	1.66	− 0.96	0.62	0.0	9	17	4	10	n.	U. S. Weather Bureau.
Temple	Bell	630	15	41.0	− 8.6	77	3†	10	20	42	2.74	− 0.21	0.95	T.	5	21	0	10	w.	W. B. Tyer.
Tilden	McMullen		3	51.2[c]		89[c]	3	24[c]	13†	48[c]	1.84		0.75	0.0	7	9[c]	10[c]	9[c]	ne.	Wm. Kuykendall.
Uvalde	Uvalde	937	1	49.0		83	4	24	13†	48	1.26		0.93	0.0	3	16	5	10	n.	F. M. Getzendaner.
Valley Junction§§	Robertson	289	4								5.60		1.60	0.0	7	15	3	13	n.	T. M. Williams.
Victoria§§	Victoria	187	11	50.6	− 5.2	83	3	26	20	35	2.23	+ 0.12	1.00	0.0	5	17	1	13	n.	C. C. Zirjacks.
Waco§§	McLennan	424	20	41.0	− 9.9	78	4	15	20	42	4.69	+ 2.39	2.20	1.5	5	15	0	16	n.	E. H. Hall.
Waxahachie§§	Ellis	556	13	38.0	− 7.9	79	3	9	20†	47	3.87	+ 1.39	2.00	1.2	7	17	4	10	n.	C. D. Longserre.
Weatherford§§	Parker	864	20	38.0	− 9.7	75	3	10	20	36	6.43	+ 4.64	3.58	3.7	5	18	3	10	s.	Miss J. Stickfort.
Wharton§§	Wharton	105	7	49.8		82	3	26	20†	44	2.02		0.50	0.0	6	15	1	15	n.	Mrs. F. M. Hughs.
Wills Point	Van Zandt	524	4	39.6		71	3	11	20	38	6.23		1.85	1.0	8	10	1	20	n.	W. W. Gibbard.
Zapata	Zapata			55.2		87	4	29	16	46	0.63		0.34	0.0	4	13	3	15	n.	F. H. Earnest.

* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry-bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖‖ 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.
[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

TABLE 2.—*Daily precipitation for December, 1909. District No. 8, Texas and Rio Grande Valley.*

Stations.	River basins.	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	
Colorado																																	
Amethyst (near)	Rio Grande																																
Blanca	Trinchera		T.	.03	T.		T.				T.				T.			.05	.02				.04										0.14
Cumbres	Conejos		1.35	.78	.20	T.	.34	.24		.10	.12			T.			T.	.66	T.		T.	T.	.82	.29	.07							.08	5.05
Garnett	Rio Grande										.10							.12						.10									0.32
Hermit	do		.30	.14	T.	T.	.08	T.		.14						.08		.06				T.	.13	.22	.07								1.22
La Veta Pass	Trinchera		.25	.13	.10									.16			.15	.85															1.64
Manassa	Conejos			T.														.25					T.										0.25
Platoro	do		.81	1.18	.24	T.	.16				.32				.03			.12	.04				.34	.17	.42							.50	4.33
Saguache	San Luis																																
San Luis	Culebra						.05				T.							.40															0.45
Wagon Wheel Gap	Rio Grande		.27	.27	.20													.10					.10										0.94
New Mexico																																	
Agricultural College	Rio Grande																		.28					.20									0.48
Alamogordo (near)	do																	.54					.40										0.94
Alamogordo (2)	do																		.32					.10									0.42
Albuquerque	do										.01							.08							.10								0.19
Amizett	do			*	.50	*	1.10					*	.42		.35							.30	*	.54									3.21
Ancho	do															.01					.96	.40											1.37
Aspen Grove Ranch	do		.20	.10			.12				.25							.43						.38									1.48
Bateman's Ranch	do		.16	T.	.02		.19			T.	.16							.26				T.	.09		.18							T.	1.06
Bluewater	do			.14			T.	*	.12		.04							*	.32				.06	.12									0.80
Bluewater Reservoir	do		.25	T.		T.	T.									T.					.27												0.52
Boas	Pecos																	T.	.32														0.32
Capitan	do																.07	.22	.14														0.43
Carlsbad	do				T.													T.	.37				.12	.01									0.50
Carrizoso (1)	Rio Grande																																
Carrizoso (2)	do					T.											T.			.40				.35									0.75
Chama	do		.40	.54	.24		.56				.14							.42				.56	.16	.16	.14								3.32
Cloudcroft (1)	Pecos																																
Cloudcroft (2)	do																																
Corona	do																	.51	.42					T.	.15								1.08
Coyote	Rio Grande										.02							.84	.73					.03									1.62
Cundiyo	do			.30			.08	.04										.25								.21							0.88
Demonstration Farm	Pecos							.07										.09															0.16
Duran (1)	do																																
Duran (2)	do					T.												*	.40														0.40
Edison Mine	Rio Grande																																
Elk (near)	Pecos						T.											.28	.22														0.50
Escondido	Rio Grande						T.											T.	.30					T.									0.30
Espanola	do						T.			.37				T.				T.															0.37
Estancia	do																	*	.78														0.78
Fort Stanton	Pecos																*	.15	.10	T.													0.25
Fort Sumner	do																	*	.12														0.12
Gallinas	do																	.40	.10													.10	0.60
Gallinas Planting Stat.	do		.11	.01	.22		.03				.09							.20															0.66
Harvey's Upper Ranch	do		T.	.27	.49	T.	.31				.13				T.			.24					.07		.16								1.67
Hillsboro	Rio Grande		.20					T.											.24	.12				.08	.10								0.74
Hodges	do			.27	.12		.16	.12										.21															0.88
Hondo Reservoir	Pecos																	.13	.17														0.30
Hope	do																																
Hopewell	Rio Grande		.60	.23	.02		.20			T.	.25							.32	T.			.02	.25	T.	.19							T.	2.08
Laguna	do								T.									.64	.08					T.									0.72
Lagunita	Pecos			.02														*	.27														0.29
La Huerta	do				.05													T.	.41														0.46
Lake Valley	Rio Grande		T.	.02			.02											.16	.24		T.	T.		.16									0.60
Las Vegas	Pecos			T.	.17										T.			.13	.14						T.								0.44
Los Lunas	Rio Grande		.12															.80															0.92
Los Tanos	Pecos			T.	.10														.26														0.36
Magdalena	Rio Grande			.18			T.				T.							.60	.40				T.	T.									1.18
Mineral Hill	Pecos				.20		.08												.43														0.71
Monument	do																																
Mountainair	Rio Grande				.42		.19				T.							1.11			T.			.07									1.79
Newman	do																	*	.23	T.				T.	.40								0.63
Noria	do																	T.	.24					T.									0.24
Orogrande	do																		.36	.14	T.			.20	.12								0.82
Oscura (near)	do																		*	.15					.13								0.28
Oscura (2)	do																																
Otis	Pecos				.06		T.											T.	.30	.10			T.	.15									0.61
Otto	Rio Grande		.01	.01			.01				.01							*	.18	T.													0.25
Pastura	Pecos																	.18	.18				.09										0.45
Red River	Rio Grande		.36	.52											.27			.50	.07				.12		.42	T.							2.26
Rincon	do																T.	.11						.25	T.								0.36
Rio Grande Dam	do																	*	.22		T.	T.		T.									0.22
Rosedale	do		*	.56		*	.06				T.							.15	.48	.03				.01									1.29
Roswell	Pecos																	.12	.18				.01										0.31
San Marcial	Rio Grande																	*	.32		T.												0.32
San Rafael	do		.05	.53			.27																*	.40									1.25
Santa Fe	do		.08	T.	T.	.06	.07				.13							.02				T.	T.	.15	.04								0.55
Santa Rosa (1)	Pecos			.01	.10							T.				T.		*	.13														0.24
Santa Rosa (2)	do																	.50															0.50
Socorro	Rio Grande		.10								.02							.12	.50			.10	.20										1.04
Stanley	do		T.	T.		T.	T.			T.	T.							.02	.21						.06								0.29
Strauss	do																																
Taos	do						.29											.16					.08		.16								0.69
Taos Canyon	do		.13	.32	.19		.25				.12				.12			.26				T.	.08		.18								1.65
Tecolote	do			T.							T.							.17	T.		T.	T.		T.	.08								0.25
Three Rivers	do														T.			.18		T.													0.18
Torrance	Pecos																	.40	.45														0.85
Tres Piedras	Rio Grande	T.	T.	.49	.20	T.				10							.84							.21									1.75
Truchas	do				T.	.30						.28						T.	.24					.48									1.30
Tularosa (1)	do																		.19	T.		T.		T.									0.19
Tularosa (2)	do																	.32	.16														0.48
Vaughn	Pecos																																
Winsors	do		.03	.32	.36		.23				.26							.07	.13			.02			.31								1.73
Texas.																																	
Abilene	Brazos				T.														.23	.02			T.	.45	.03								0.73
Albany	do																		.20	.20				.20									0.60
Alvin‖	Coast					.61							1.43						.58							.59							3.21
Anahuac	do												.90						.33	.70					.20								2.13
Austin	Colorado					.60					.04	.19						T.	T.	.40				.31	.26								1.80
Ballinger‖	do																			.36				.30	.50								1.16
Barstow	Pecos											T.							.12	T.			.62										0.75
Beaumont‖	Neches	.71						1.47				1.87				.18			.41							.53							5.17
Beeville‖	Coast	T.				.70						T.	.05						.12	.25	.75			T.	.40	.05							2.32

TABLE 2.—*Daily precipitation for December, 1909. District No. 8*—Continued.

Stations.	River basins.	Day of month. 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	Total.
Texas—Cont'd.																																	
Big Springs	Colorado				T.													T.	.20	.26				.18									0.64
Blanco‖	Guadalupe	.20				.80							.12						.50	.60				.28	.29	.01							2.80
Boerne	San Antonio				1.15						.20	.01						T.	.75	.05			.29	.31									2.76
Booth‖	Brazos	.24	.03			.42							.52					.03	.52	.48	.18			.04		.06							2.52
Boquillas	Rio Grande																																
Bowie	Trinity								.03										.40	.10				.49									1.02
Brazoria	Brazos	.06				.52					T.	T.	.50					.85	.08	.50	.10		.02	.17	.19	.02						T.	3.01
Brazos‖	...do		.43			.98													.21	.19					.92								2.73
Brenham‖	...do	.14				.53						.17	1.87					T.	.31	1.03	.10			.15	.30	.25							4.85
Bridgeport‖	Trinity		.50			.90														.04	.05			T.									1.49
Brighton	Coast	T.				.19															1.09			.23									1.51
Brownsville	Rio Grande					.44			T.	.08									.02	.39	1.09	.02		.02	.04						T.		2.10
Brownwood‖	Colorado					.05													.05	.05		T.		.10	.55								0.80
Cameron‖	Brazos					.90						.05	.42						T.	.50	.60			.21	.52								3.20
Carmona	Neches	.45				1.06	T.	T.				3.46	.13					.10	.30	.74				.14	1.04								7.42
Claytonville	Brazos				T.															.35													0.35
Coleman	Colorado																			.20				.21									0.41
Colorado	...do																		*	.86													0.86
Columbia	Brazos	.08									T.		.81		.22			.65	T.	.56	.12		.22		.18								2.84
Columbus‖	Colorado	.30				.46						.20	1.62						.16		1.04			.14	.12								4.04
Comstock	Rio Grande																		.24					.34	.06								0.64
Corpus Christi	Coast				T.	.10				T.	T.	T.						.03	.01	.45	.08			.15	.08								0.90
Corsicana‖	Trinity	.32				.55						.17	.27						.15	.20				.17	1.80	.14							3.77
Crockett	...do	.75				.90	.01				T.	.81	.11					.01	T.	.70				.37	1.20								4.86
Cuero‖	Guadalupe	.02				.38						.05						.30				1.05				.35	.07						2.22
Dallas‖	Trinity				.02	1.10						.10	.01					.25	T.	.17					.91	.02							2.58
Danevang	Coast					.55						T.						.40		.70													1.65
Decatur	Trinity					.60													.35	.20				.40									1.55
Del Rio	Rio Grande											.13	.18						.42	.16			.07	.17	.01								1.14
Dialville	Neches				.85		.01				T.	3.20							.01	.40				.32	1.15							T.	5.94
Dublin‖	Brazos	.50				.40						T.							.15	.20				T.	.80								2.05
Duval	Colorado				T.	.57				.45	T.	.11						T.	T.	.10				.97	.30								2.50
Eagle Pass	Rio Grande					.05														*	.40			*	.15								0.60
Edna	Lavaca				.58								.48			T.		.20	.30			.40	.20	.30									2.46
El Paso	Rio Grande			T.														.14	.27					.15									0.56
Encinal	Nueces																				1.52			.35	.07								1.94
Fairland	Colorado				.25						T.	.18								.05	.05			.74	.16								1.43
Falfurrias	Coast					T.					T.							T.		.25	.55			.10	.05								0.95
Flatonia	Guadalupe					.55					.05	.60						T.	.17	1.24			.10	.11	.33								3.15
Fort Clark‖	Rio Grande																																
Fort McIntosh	...do										.09									.62	.27		.05	.17	.06								1.26
Fort Stockton	Pecos																	T.	.02	.10	.15	T.	T.	.63									0.90
Fort Worth	Trinity				1.26						T.	T.							.20	.10				.76	.49								2.81
Fredericksburg	Colorado										T.								.20	.20				.42	.12								0.94
Gainesville	Trinity				.33	.28			.05			.01							.50	.10			.48	.43									2.18
Galveston	Coast	.62			.10	.18	T.				T.	.83	T.		.02	.03		.33	T.	.16		T.	T.		.24							T.	2.51
Gatesville	Brazos					.50					.30													.90	.50								2.20
Georgetown‖	...do	.02				.68	.01					.02	.38						T.	.40	T.			.08	.27	.07							1.93
Gonzales‖	Guadalupe					.69						.30	.11						.25	.95	.23		.15		.28	.07							3.03
Graham	Brazos				T.														.55	.10				.77									1.42
Grandfalls	Pecos																																
Grapevine	Trinity				*	1.65													*	.49				*	1.42								3.56
Greenville‖	Sabine	.40				.75						.35							.30	.20					1.95								3.95
Hallettsville	Lavaca					.74					T.	1.01	T.					T.	T.	1.21			T.		.50								3.46
Haskell	Brazos																		.35	.02				.60									0.97
Hebbronville	Coast																			.89				.25									1.14
Hempstead‖	Brazos	.85				.73							.50	T.						.75		T.	T.	T.	T.	.55							3.38
Henderson	Neches	1.10				.64	.05					3.75	.10						.40	.30				.35	1.10								7.79
Hewitt	Brazos				T.	.92					T.	.40							.08	.25			T.	.60	.80								3.05
Hillsboro	...do	.71					.93						.76																				
Hondo	Nueces				T.					T.	.10								T.	T.	.80			.37	.21								1.48
Houston	Coast				T.	.34	T.	T.			T.	.71	T.		.02	.06		.36	.12	.63	.01		T.		.07							T.	2.32
Hubbard	Trinity																																
Huntsville‖	...do	1.08				1.42						.17	.60						.52						1.11								4.90
Jewett‖	...do					.65					.35		.30							.50					.87	.70							3.37
Junction	Colorado																																
Kaufman	Trinity					.80	T.					1.77							T.	.20				*	2.27								5.04
Keene	Brazos	.02			.85	.84					T.	.10							T.	.18	.15			.18	1.11								3.43
Kerrville‖	Guadalupe	.23																		.58				.25	.36								1.42
Knickerbocker	Colorado				T.														.04	.25			T.	.40	.05								0.74
Kopperl‖	Brazos		.38			1.50						T.							.04		.12			T.	2.80	.20							5.04
Lampasas‖	...do	1.23											.05	.06					*	*	.60			T.	.22	.63							2.79
La Parra	Coast																				1.50												1.50
Laureles Ranch	...do									.46												1.50			22								2.18
Liberty‖	Trinity	.37			.63							.10	1.40					T.	.50	.85	.10				T.	.16							4.11
Llano	Colorado				T.							T.							T.	.05				1.00	.02								1.07
Llano Grande	Rio Grande					T.														T.	.60	T.		T.									0.60
Long Lake‖	Trinity	.61					.68					.30	.50						.04	.34	T.				.76	.36							3.59
Longview‖	Sabine	1.56				.96		.12				.46	1.86						.32	.27	T.				1.05	.78							7.38
Lufkin	Neches	.66				.82	.04					2.73	.51					.06	.11	.59				.17	1.18								6.87
Luling‖	Guadalupe					.51					T.	11	.10						T.	.91	.10			.15	.35	.06							2.29
Marble Falls‖	Colorado	.50				.94						T.	.08						T.		.40	T.		.28	.30	.02							2.52
Marfa	Rio Grande																		.20					1.00									1.20
Marshall	Sabine	.70		T.		.68	.15	.04				3.95	.70						.45	.27				.15	1.38								8.47
Mexia‖	Brazos	.23				.75						.53	.97						.09	.38					1.13	.43							4.51
Midland	Colorado																		.20					.12									0.32
Mount Blanco	Brazos																																
Nacogdoches‖	Neches	1.01				.93		.10				.75	2.31						.18	.40	.40				1.00	1.32							8.40
New Braunfels	Guadalupe					.18					.11									.74				.37	.21								1.61
Palestine	Trinity				.34	.13	T.				.01	.65							.13	.04				.51	.59								2.40
Panter	Brazos	1.20			1.33															*	.42			.12	.77								3.84
Pierce	Colorado					.64						.31											1.10										2.05
Plainview	Brazos				T.		T.											.05	.08	.12			T.	.02									0.27
Port Lavaca	Coast					.84						.26			T.			T.	T.	.92			T.	T.	T.								2.02
Ricardo	...do					.13													.10	.30	.47	T.		.20	T.								1.20
Riverside‖	Trinity	.84				1.20						.26	1.75						.50		T.				.20	1.80							6.55
Robert Lee‖	Colorado																		T.	.30				.40	.03								0.73
Rockland‖	Neches	.35				1.11							2.40						.38	.75					1.14								6.13
Rossville	Nueces					T.					T.	.03						.02	.19	.63				.87	.05								1.79
Runge	San Antonio																					1.47			.24								1.71
Sabinal	Nueces											.14							.84	T.		T.		.33	.12								1.43
San Angelo	Colorado																		T.	.60				.50	.05								1.15
San Antonio	San Antonio										.04	.02						.02	.45	.39		T.	T.	.34	.12							T.	1.38
San Augustine	Neches	.87		T.		.94	.03	T.			T.	2.00	1.10						.05	.60				.06	1.05								6.70

TABLE 2.—*Daily precipitation for December, 1909. District No. 8*—Continued.

Stations.	River basins.	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	
Texas—Cont'd.																																	
San Juanita	Coast					.12				T.										.21	.42	T.	T.	.18	.08								1.01
San Marcos‖	Guadalupe					.25					.05		.20							.30	.20			.70	.80								2.50
San Saba	Colorado				.78	.01						.02							.38	.12				.50	.18								1.99
Santa Gertrudes‖	Coast																				1.05												1.05
Seymour	Brazos				T.		T.		T.									T.	.15	.10				.15	.15								0.55
Somerville	...do					.07						1.05							*	*	.50	T.	1.00	.02		.05							2.69
Sonora	Rio Grande																																
Sugarland	Brazos				.65							.31			T.			.36	.54				.32		.10								2.28
Taylor	...do	.01			.62						.07	.20						.01	.18	.06				.33	.18							T.	1.66
Temple‖	Brazos	T.				.55													T.	.79				.30	.95	.15							2.74
Tilden	Nueces					.12					.07							T.	.06	.75	.38			.37	.19								1.84
Uvalde	...do																			.93			T.	.25		.08						T.	1.26
Valley Junction‖	Brazos						1.00				1.40	.50							.10	.50	.50				1.60								5.60
Victoria‖	Guadalupe					.50						.30							*	1.00				.43									2.23
Waco‖	Brazos					1.60							.54						.20	.15	T.	T.			2.20								4.69
Waxahachie‖	Trinity	.25				.69						.37	.35						.09	.12					2.00	T.							3.87
Weatherford‖	...do	3.58				1.08													.27	.18					1.32								6.43
Wharton‖	Colorado					.50							.33						.38	.50	.12			.19	T.								2.02
Wills Point	Sabine	.04			.20	.55	T.		T.	T.	T.	1.42							.50	1.00				.67	1.85							T.	6.23
Zapata	Rio Grande										T.									.24	.34	T.	.02	.03									0.63

TABLE 3.—*Maximum and minimum temperatures at selected stations December, 1909. District No. 8, Texas and Rio Grande Valley.*

Date.	Colorado.				New Mexico.																Texas.							
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountainair.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Springs.		Brownsville.		Corpus Christi.	
	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...	39	9	45	10	68	25	70	27	57	36	55	30	55	34	65	28	44	22	59	34	60	45	63	36	85	60	79	60
2...	37	11	44	9	68	38	75	34	61	25	57	33	55	35	73	30	44	32	64	32	70	40	71	37	85	61	73	58
3...	36	9	44	12	65	46	75	44	53	42	53	33	47	32	68	36	40	27	56	40	75	53	77	46	83	68	80	68
4...	23	8	44	1	48	35	69	36	47	25	38	21	35	19	52	24	30	9	48	21	60	33	64	36	81	74	78	74
5...	20	−12	43	− 4	47	7	53	13	49	7	37	8	27	12	44	10	33	7	45	16	39	21	48	24	77	56	76	47
6...	30	0	30	10	50	37	49	30	41	25	33	22	32	22	52	24	27	9	41	28	53	26	57	33	76	50	66	45
7...	24	− 7	26	− 2	49	18	49	15	49	10	33	9	36	13	41	12	30	5	45	12	33	17	50	20	66	54	55	43
8...	29	− 7	30	− 3	57	30	55	21	52	21	41	19	42	22	50	22	36	15	48	22	33	20	38	26	60	49	56	36
9...	30	− 3	42	1	60	24	52	21	64	12	49	19	47	24	51	16	39	16	56	21	48	19	55	20	59	53	61	38
10...	34	4	37	24	64	30	72	35	56	28	48	30	46	38	68	26	35	19	52	30	63	45	68	35	77	52	69	61
11...	38	− 8	30	− 1	49	28	64	34	46	26	38	13	39	22	47	27	27	6	43	25	51	32	57	38	78	67	78	52
12...	27	−10	35	− 5	50	16	55	16	43	11	42	8	44	13	52	14	29	3	49	17	45	24	55	20	74	48	58	44
13...	40	3	41	10	54	20	66	24	52	31	47	14	50	26	58	25	38	16	56	33	62	28	66	28	71	36	70	38
14...	37	− 7	39	5	75	32	60	27	46	25	39	16	42	20	53	27	32	12	50	28	52	31	53	29	80	58	65	56
15...	28	− 9	34	− 6	47	28	49	29	44	10	40	10	33	16	47	18	32	5	45	18	50	25	51	23	68	50	62	45
16...	20	1	31	− 7	53	31	59	25	48	20	42	13	42	22	53	25	32	10	51	17	56	31	56	24	65	41	59	40
17...	12	−23	33	−20	50	24	54	25	21	8	29	7	31	16	33	15	22	7	33	−11	44	18	34	19	78	57	64	47
18...	10	−33	20	−13	24	20	25	18	18	− 5	18	− 5	22	7	19	13	18	− 2	16	−10	19	16	21	16	70	38	47	33
19...	15	−21	15	−28	24	5	24	12	34	− 5	19	− 7	28	− 1	18	− 6	20	− 6	28	−12	24	11	30	15	39	34	33	30
20...	17	−22	24	−22	29	3	23	0	34	−16	22	− 8	21	− 4	22	−10	20	− 3	29	9	30	3	31	− 3	44	33	39	30
21...	23	− 6	20	−18	34	25	30	15	41	− 2	28	12	23	3	26	7	26	8	28	11	33	14	31	11	42	37	43	35
22...	29	11	35	− 4	33	30	33	28	48	3	30	21	38	12	30	22	32	12	33	7	36	30	35	.....	42	40	44	39
23...	25	2	35	4	38	30	36	32	45	10	33	13	33	14	33	29	39	10	41	12	35	32	35	.....	45	40	51	40
24...	23	1	29	7	52	35	58	32	38	28	24	12	36	16	50	31	27	8	40	26	59	35	56	.....	53	44	52	46
25...	20	−24	26	−22	46	25	52	23	50	14	31	6	48	14	52	22	29	2	47	17	47	29	49	.....	59	47	59	43
26...	24	−19	27	−13	52	25	58	21	48	12	38	11	47	13	52	19	37	8	55	21	57	29	51	.....	65	35	53	40
27...	35	−19	37	− 5	58	22	67	26	52	23	43	12	54	25	62	20	39	4	55	30	47	30	49	35	76	44	75	46
28...	39	−15	33	− 7	53	26	57	21	51	30	38	14	49	24	54	21	38	14	48	27	52	28	55	25	72	42	61	40
29...	28	−19	31	−13	57	30	60	28	54	25	39	12	55	24	56	21	42	13	59	16	54	27	61	30	68	47	55	44
30...	25	−21	35	−15	57	28	65	25	60	25	38	16	56	26	62	20	42	13	66	26	61	34	65	39	70	46	63	48
31...	39	2	47	14	66	28	78	26	72	23	49	24	50	23	66	26	55	22	69	38	75	48	75	37	77	63	76	60
Mns	27.3	−7.2	33.6	−3.3	50.3	25.8	54.6	24.6	40.7	18.8	37.8	14.1	40.7	18.8	48.7	19.8	33.4	10.4	46.9	20.0	49.1	28.2	51.8	26.9[e]	67.3	49.2	61.3	46.0

Date.	Texas.																											
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	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...	77	36	66	40	85	47	75	37	64	46	74	63	74	57	74	58	71	52	66	50	53	30	74	45	62	39	72	46
2...	77	38	69	46	85	46	77	42	61	45	68	61	78	58	74	52	73	40	68	45	65	33	76	47	64	35	71	45
3...	80	44	66	50	87	64	79	42	75	54	76	68	81	59	80	59	78	46	78	54	68	38	81	63	75	44	80	57
4...	82	56	50	32	89	56	64	38	69	34	75	71	70	60	80	70	88	67	78	42	56	22	79	57	50	28	79	42
5...	58	38	46	16	86	52	53	19	37	25	72	49	60	41	71	42	75	35	47	31	38	13	57	38	37	19	43	34
6...	57	34	51	36	75	42	63	38	50	32	72	50	57	40	57	43	48	35	47	34	49	24	58	36	45	27	53	32
7...	52	36	50	27	71	41	55	20	40	21	56	44	57	41	49	34	46	37	40	29	31	11	49	34	49	17	46	32
8...	57	35	56	34	60	35	51	27	30	23	50	41	57	35	52	33	49	38	43	28	29	13	51	32	45	21	44	27
9...	48	29	61	26	56	43	74	23	40	18	58	35	54	29	56	30	52	24	46	22	46	17	49	28	48	21	46	23
10...	59	40	66	42	62	42	77	36	59	40	68	58	68	51	70	47	59	34	61	39	68	30	60	46	56	39	60	46
11...	62	39	50	36	75	51	64	40	59	34	71	47	77	64	74	45	70	55	68	38	58	30	71	45	56	33	69	39
12...	56	34	47	22	73	43	55	22	37	25	48	36	64	40	45	32	60	30	38	25	45	20	55	36	43	22	45	31
13...	69	28	60	30	77	32	74	32	54	25	61	37	64	31	64	29	60	21	58	23	47	25	69	34	50	25	64	29
14...	69	36	57	33	81	44	60	32	54	35	68	58	66	43	70	49	67	4	60	41	46	27	68	41	48	25	60	42
15...	57	36	47	33	75	48	50	23	50	30	58	44	57	41	52	37	59	33	47	32	46	22	56	37	49	30	53	33
16...	59	26	51	28	65	29	66	23	58	30	57	43	57	31	55	34	59	23	56	32	51	24	57	32	55	30	56	30
17...	64	32	45	23	70	36	54	24	43	23	61	47	59	39	53	42	52	37	52	36	38	15	54	37	39	19	51	28
18...	32	27	25	20	65	37	24	17	23	19	47	36	39	30	43	30	45	28	36	26	18	13	37	27	22	17	28	22
19...	31	26	30	13	45	32	27	16	26	17	40	34	32	27	32	29	28	26	27	23	19	− 3	31	25	34	18	27	21
20...	42	28	29	10	43	31	35	6	32	9	39	31	35	26	35	25	37	21	34	18	33	− 4	40	24	36	4	33	20
21...	42	36	34	28	44	36	37	25	38	12	41	32	38	30	40	26	41	32	37	20	29	14	41	30	37	9	35	24
22...	40	37	35	30	45	37	37	30	45	28	49	38	44	35	51	36	48	33	45	28	32	11	39	35	41	30	40	32
23...	40	36	39	31	46	37	43	34	40	34	54	44	49	37	50	40	54	36	39	34	32	26	41	34	43	33	37	36
24...	62	40	51	36	65	42	61	38	52	34	64	48	50	39	62	45	41	35	43	34	47	30	60	38	55	31	54	36
25...	59	32	48	27	67	40	58	28	48	33	52	39	54	34	55	36	54	29	47	32	46	18	58	37	49	26	51	34
26...	58	35	50	26	65	32	69	28	54	28	50	37	56	29	58	32	56	21	53	29	60	24	56	32	59	21	55	28
27...	77	32	58	29	74	36	68	37	48	34	69	46	64	36	69	41	64	31	54	36	46	22	70	40	46	28	55	34
28...	63	31	55	29	73	36	61	31	57	31	52	42	59	31	60	36	61	26	57	30	46	23	62	32	55	22	60	28
29...	60	31	58	33	72	36	66	28	42	30	53	44	59	35	56	38	57	32	46	32	52	23	58	37	58	25	52	32
30...	65	37	59	30	70	38	69	29	60	27	57	46	63	31	58	35	58	23	58	30	66	22	65	34	65	34	63	28
31...	70	48	69	31	74	39	83	40	77	44	65	57	72	51	74	55	72	40	71	44	77	31	72	55	77	40	72	46
Mns	58.8	35.3	50.9	29.9	68.4	40.6	59.0	29.2	49.1	29.7	58.9	46.0	58.5	39.7	58.7	40.0	57.5	34.2	51.6	32.8	46.4	20.8	57.9	37.7	49.9	26.4	53.4	33.5