Climatological Data for December, 1910.

DISTRICT No. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The weather during December, 1910, was generally pleasant and unusually warm. During the middle of the month foggy weather was reported at many stations in the Utah and Nevada areas, and during the fore part of the month in the Oregon area. In the Utah area it was the warmest December but one in 20 years, while December, 1909, was the coldest. In Nevada the temperature averaged about 2.5° above normal and 10° higher than during December last year. The precipitation for the month was above normal somewhat, but averaged only about one-half as much as that of December, 1909.

TEMPERATURE.

The mean temperature for the district for December was 31.1°, which was about 3° above normal. The highest mean temperatures were recorded in the sheltered valleys of northern Utah and in the southern portions of the Nevada and the Utah areas. The greatest plus departures occurred in the Salt Lake and Utah Lake Valleys of Utah and in the Idaho and Wyoming areas. The minus departures were small and occurred at only a few stations in the extreme western portion of Utah.

The mean temperatures at the various stations ranged from 20° at Cokeville, Wyo., to 39.5° at Battle Mountain, Nev., where the temperature averaged 8.4° above normal, being the greatest plus departure for the month. The greatest minus departure was 2.1° at Frisco, Utah.

As a rule, the first half of the month was warm, the highest temperatures being recorded on various dates from the 1st to the 12th. The highest temperature reported was 74° at Battle Mountain, Nev., on the 2d, and at Iosepa, Utah, on the 8th. After the 15th the temperature fell promptly, and averaged normal or slightly below for the remainder of the month. The lowest temperatures were recorded in the last decade. The lowest was 13° below zero at Scipio, Utah, on the 22d. Only 12 stations out of 71 reported temperatures of zero or below.

PRECIPITATION.

The precipitation for the district averaged only slightly above normal. The map of precipitation shows a remarkably even distribution, which is unusual. The largest amounts fell on the western slope of the Wasatch Mountains, in Utah, and in the extreme western portion of Nevada and eastern portion of California. Most stations reported amounts above normal. At those stations reporting amounts below normal the deficiencies were small. In the Idaho, Oregon, Wyoming, and California areas good amounts were measured.

The section director of Utah, in referring to the precipitation of that area, says:

> Contrary to the usual rule, the mountain districts did not receive the greatest amount of precipitation; but stations well scattered in all parts of the State are among those receiving heavy precipitation. However, those stations showing least precipitation are fairly well confined to the more level portion of the State and more or less distant from the mountains. The chronological precipitation distribution shows a dry week from the 12th to the 19th, but otherwise no long spells occurred without rain or snow. A general rain fell on the 3d, and general precipitation, mostly rain, fell from the 9th to the 12th. During the last 11 days of the month light scattered snows occurred nearly every day, some stations reporting several inches on the 19th and 21st, just previous to the hardest cold snap of the month.

The section director of Nevada reports:

> The number of rainy days was about normal, and the cloudiness was nearly normal in the south portion, but greater than normal elsewhere. As usual, the precipitation was heaviest on the eastern slope of the Sierra Nevada Mountains. Moderate amounts fell in parts of the west and north portions and in the extreme south. Most of the moisture fell during the first half of the month, and especially on the 2d and 3d, and from the 9th to the 12th.

SNOW.

The depth of snow at the higher altitudes on December 31, 1910, was less than it has been for years. Those correspondents who have ventured a prediction say that there will be a scarcity of water for irrigation during the coming season.

In the Utah area the ground was frozen in the higher regions, but the more level portions were bare of snow and unfrozen. Very nearly all correspondents reported amounts in the mountains below the average and below those observed on the last of December, 1909.

In the Nevada area most of the precipitation was in the form of rain. The average depth of snow for the month at the mountain stations was about 6 inches. This is only one-half the amount that fell in November. There was practically no snow on the ground at these stations on December 31, 1910, while the normal depth on that date ranges from 10 to 30 inches.

GREAT SALT LAKE.

The Weather Bureau established a gauge at Great Salt Lake in July, 1903, when the lake level was 0.8 foot. The reading on December 31, 1910, was 5.1 feet. During this period the highest reading was 7.1 feet on May 15, 1910, and the lowest, 1.1 below the zero of the gauge in November, 1905. The following table gives the average, highest, and lowest for each year since 1903:

	1903	1904	1905	1906	1907	1908	1909	1910
	Feet.	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*	*Feet.*
Averages	.....	0.4	−0.1	0.3	2.5	3.5	4.9	6.0
Highest	0.8	1.5	0.8	1.4	3.8	4.1	5.7	7.1
Lowest	−0.8	−0.5	−1.1	−1.0	0.5	3.0	3.4	5.0

WEATHER BUREAU RECORDS AND THEIR USE.

W. W. MCLAUGHLIN, U. S. Irrigation Engineer, Logan, Utah.

The increasing activity in dry farming and the rapid development of irrigation enterprises in Utah during the past few years have created an extensive demand upon the part of the layman and the investor for information of the precipitation at various points in this State. With a comparatively small number of local observation stations of the Weather Bureau, it is often necessary to use the records obtained in one place as a basis of what may be anticipated at an adjoining place. These records have been used in many instances by persons not familiar with the many conditions influencing precipitation and the results arrived at by the layman have in most cases been erroneous. Several years' investigation of the precipitation records of this intermountain country has indicated to the writer that with our diverse topography and changeable air circulation there are several physical conditions that must be known and constantly kept in mind if it is wished to approximate the precipitation of one place from the records of another.

It is the wish of the writer in this article to impress upon the reader the importance of a proper understanding of this question and point out some of the more important physical features that influence local precipitation. It is not the purpose of this article to point out all the features which influence precipitation but only a few of the more important.

TABLE 1.—*Climatological data for December, 1910. District No. 10, Great Basin.*

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, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Border	Uinta	6,085	9	20.7	+ 6.5	43	1	− 3	19	37	0.32	− 0.55	0.17	.....	6	10	4	17	w.	S. W. Condron.
Cokeville	do	6,204	1	20.0	.....	41	....	− 8	26	29	0.49	.....	0.18	3.5	5	19	4	8	nw.	E. J. Tuckett.
Evanston	do	6,860	13	25.8	+ 5.3	57	1	0	14†	41	1.35	− 0.03	0.54	4.0	5	12	9	10	sw.	Frank Tucker.
Idaho.																				
Geneva	Bear Lake	.....	3	.....	.....	.....	.....	.....	.....	.....	1.14	.....	0.98	6.0	6	23	6	2	.....	F. W. Boehme.
Grace	Bannock	5,400	4	29.6	.....	55	1	7	28	32	1.07	.....	0.44	4.1	6	13	6	12	n.	Cyril B. Dickson.
Paris	Bear Lake	5,946	16	.....	.....	54	2	9	22	30[i]	.....	.....	.....	.....	.....	.....	.....	.....	w.	John Norton.
Stone	Oneida	4,520	1	31.5	.....	62	3	3	31	42	0.62	.....	0.35	1.0	3	12	1	18	n.	Thos. W. Roe.
Weston	do	4,400	13	30.3	+ 5.6	51	1	7	26	26	1.19	+ 0.09	0.32	2.0	7	8	3	20	n.	Wm. Chatterton.
Utah.																				
Alpine	Utah	4,900	14	.....	.....	.....	.....	.....	.....	.....	1.36	+ 0.10	0.40	3.2	6	9	4	18	.....	George Stevens.
Beaver	Beaver	6,000	7	32.4	.....	64	2	8	22†	31	1.72	.....	0.55	12.7	8	7	16	8	n.	James Connell.
Black Rock	Millard	4,872	10	29.4	.....	59	1	− 9	29	41	0.28	.....	0.28	3.5	1	4	10	17	.....	W. D. Livingston.
Castle Rock	Summit	6,244	8	.....	.....	.....	.....	.....	.....	.....	1.21	.....	0.35	6.5	8	10	7	14	w.	David Moore.
Cedar City	Iron	5,750	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Parley Dalley.
Corinne	Boxelder	4,240	41	30.0	+ 1.0	52	10	14	27	29	1.38	− 0.17	1.00	0.5	4	2	8	21	n.	A. C. Murphy.
Deseret	Millard	4,541	16	29.6	+ 3.7	61	9	2	23†	34	0.53	± 0.00	0.30	3.0	4	7	3	21	n.	S. W. Western.
Farmington	Davis	4,267	11	34.0	+ 2.7	51	10	14	22	23	2.24	+ 0.45	0.50	7.2	10	11	9	11	nw.	Charles Boylin.
Fillmore	Millard	5,100	20	33.0	+ 2.5	62	1	7	22†	37	1.70	+ 0.60	0.44	.....	7	.....	.....	.....	.....	J. J. Starley.
Frisco	Beaver	7,318	16	32.4	− 2.1	60	2	8	28	28	0.53	+ 0.13	0.23	.....	3	.....	.....	.....	.....	E. R. Smyth.
Garrison	Millard	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. M. Smith.
Government Creek	Tooele	5,277	10	30.0	+ 0.9	56	2	4	22	28	0.53	− 0.30	0.24	.....	4	5	9	16	n.	Walter James.
Grantsville	do	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Allen J. Fraser.
Grouse Creek	Boxelder	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.03	.....	0.44	0.0	4	19	8	4	sw.	Phillip Paskett.
Heber	Wasatch	5,606	18	28.4	+ 5.5	58	1	− 5	22	35	1.47	− 0.16	0.75	5.5	6	17	3	11	s.	John Crook.
Henefer	Summit	5,301	12	31.2	+ 7.1	63	1	2	26	41	1.90	+ 0.30	0.43	5.2	10	13	4	14	nw.	Wm. Brewer.
Ibapah (near)	Juab	7,500	8	28.8	.....	56	1	1	26	34	1.74	.....	0.54	17.7	7	17	3	10	nw.	J. S. Lawton.
Ibex	Millard	.....	.....	33.8	.....	66	9	13	22	30	0.44	.....	0.40	3.0	2	3	4	24	.....	John J. Watson.
International	Tooele	5,370	1	32.6	.....	56	8	12	26	25	0.57	.....	0.28	6.8	4	10	10	11	se.	I. S. & R. Co.
Iosepa	do	.....	.....	36.4	.....	74	8	12	26	53	0.34	.....	0.15	0.9	4	11	0	20	.....	Geo. K. Hubbell.
Kanosh	Millard	5,250	3	.....	.....	.....	.....	.....	.....	.....	1.73	.....	0.60	.....	5	.....	.....	.....	.....	Geo. Crane.
Kelton	Boxelder	4,230	33	27.2	− 0.4	46	2	2	31	32	0.50	− 0.23	0.15	1.0	4	6	19	6	s.	F. W. Klock.
Levan	Juab	5,010	22	29.2	+ 3.6	55	9	2	27	28	1.35	− 0.31	0.58	8.1	6	10	2	19	n.	Wm. Brown.
Logan	Cache	4,507	20	29.9	+ 4.0	52	8	6	31	24	1.45	+ 0.43	0.40	4.7	9	.....	.....	.....	.....	Utah Exp. Station.
Lucin	Boxelder	4,504	7	31.4	.....	62	1	− 4	26	48	0.20	.....	0.05	.....	4	3	16	12	.....	C. J. Burke.
Manti	Sanpete	5,575	17	26.6	+ 1.0	48	9	0	22	24	0.98	+ 0.18	0.43	7.0	6	11	0	20	.....	J. M. Anderson.
Marion	Summit	6,750	7	.....	.....	.....	.....	.....	.....	.....	1.78	.....	0.41	5.5	11	11	6	14	nw.	Jas. Woolstenhulme.
Marysvale	Piute	6,280	12	29.9	+ 3.5	64	9	− 3	27	43	0.91	+ 0.23	0.31	9.3	7	5	9	17	n.	John W. Henry.
Meadowville	Rich	6,200	11	27.9	+ 2.7	55	2	8	26	32	1.15	+ 0.04	0.55	0.2	5	19	2	10	w.	J. S. Moffat.
Milford	Beaver	4,962	7	29.6	.....	62	3†	− 6	29	37	1.20	.....	0.80	12.0	2	8	8	15	n.	J. C. Manuel.
Millville	Cache	4,848	16	.....	.....	.....	.....	.....	.....	.....	1.77	+ 0.72	0.57	.....	7	6	16	9	n-s.	Fred Yeates.
Minersville	Beaver	5,070	13	.....	.....	.....	.....	.....	.....	.....	1.41	+ 0.56	0.68	13.0	6	.....	.....	.....	.....	Geo. Roberts, sr.
Modena	Iron	5,479	10	31.1	− 0.6	64	1	6	27	36	0.35	− 0.23	0.14	2.4	7	3	13	15	w.	U. S. Weather Bureau.
Morgan	Morgan	4,280	8	30.8	.....	58	1	5	22†	35	4.00	.....	1.00	9.0	8	8	13	10	sw.	W. Visick.
Moroni	Sanpete	5,519	3	32.0	.....	60	1	5	22	35	1.20	.....	0.44	5.3	9	14	2	15	w.	B. F. Ellason.
Mount Nebo	Utah	4,650	9	26.5[i]	.....	46[i]	11	7	27	29[i]	1.15	.....	0.45	6.0	4	8[i]	5[i]	9[i]	n.	D. C. Walkey.
Nephi (near)	Juab	6,059	8	.....	.....	.....	.....	.....	.....	.....	0.84	.....	0.65	.....	3	.....	.....	.....	.....	S. Boswell.
Oak City	Millard	4,900	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Nielson.
Ogden	Weber	4,310	9	33.7	.....	51	1	15	22	21	1.16	.....	0.34	1.0	7	7[a]	6[a]	17[a]	nw.	Enoch Farr.
Park City	Summit	7,800	14	.....	.....	.....	.....	.....	.....	.....	0.61	− 1.34	0.26	.....	8	16	9	6	.....	Irvin Evans.
Parowan	Iron	5,970	20	34.2	+ 5.4	64	1	10	31	35	1.79	+ 0.92	0.85	.....	4	11	0	20	.....	S. M. Matheson.
Payson	Utah	4,637	8	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.48	9.0	8	4	11	16	sw.	D. L. Coombs.
Pinto	Washington	5,907	14	34.0[i]	+ 6.9	61	1	1	31	36[i]	0.71	+ 0.05	0.36	9.0	4	3[i]	6[i]	12[i]	n.	J. H. Harrison.
Promontory	Boxelder	4,913	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. C. Houghton.
Provo	Utah	4,532	22	31.8	+ 2.5	61	1	3	22	35	1.85	+ 0.33	0.45	6.0	7	7	12	12	n.	James A. Oliver.
Randolph	Rich	6,442	8	.....	.....	.....	.....	.....	.....	.....	0.57	.....	0.32	.....	4	17	0	14	sw.	Wm. Rex.
Richfield	Sevier	5,350	20	30.2	+ 1.6	64	9	5	22	32	0.92	+ 0.27	0.42	5.0	4	15	6	10	.....	Joseph J. Jensen.
Saltair	Salt Lake	4,220	8	34.8	.....	54	9	18	26	16	0.87	.....	0.21	4.8	10	.....	.....	.....	.....	E. J. Bench.
Salt Lake City	do	4,360	37	35.4	+ 3.3	56	1	18	22	21	1.16	− 0.17	0.30	7.1	10	6	6	19	nw.	U. S. Weather Bureau.
Scipio	Millard	5,260	17	29.6	+ 3.0	63	1	−13	22	47	1.24	+ 0.21	0.61	3.0	5	6	4	21	sw.	Thos. Memmott.
Silver City	Juab	6,127	1	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.24	6.0	8	11	7	13	nw.	J. L. Stark.
Spanish Fork	Utah	4,585	1	33.2	.....	59	1	14	26	22	3.84	.....	1.80	25.0	8	10	11	10	.....	U. S. Reclamation Service.
Strawberry Tunnel	do	7,650	5	28.2	.....	55	1	2	26	34	2.70	.....	0.45	27.0	12	16	6	9	.....	Do.
Thistle	do	5,075	19	28.8	+ 2.3	50	2†	− 4	26	34	2.32	+ 0.89	0.52	8.0	9	15	3	13	nw.	John Thorgeirson.
Tooele	Tooele	4,900	15	29.0	− 1.5	47	3	15	26	17	0.74	− 0.24	0.19	3.0	5	4	9	18	nw.	E. A. Bonelli.
Utah Lake Pumping Sta	Utah	4,500	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Knight.
Woodruff	Rich	6,500	12	23.9	+ 4.1	56	1	− 7	26	46	0.10	− 0.68	0.08	1.0	2	12	8	11	.....	J. Sidney Pusey.
Oregon.																				
Burns	Harney	4,157	20	26.6	+ 1.0	50	2	0	20	31	1.27	+ 0.05	0.48	17.0	5	24	4	3	.....	J. C. Welcome, jr.
Christmas Lake	Lake	4,300	3	30.6	.....	53	1	3	22	38	0.86	.....	0.25	2.0	8	4	9	18	sw.	John C. Green.
Paisley	do	4,500	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. C. Woodward.
California.																				
Al Tahoe	Eldorado	6,235	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. H. Bolingbroke.
Glen Alpine Springs	do	6,850	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Carl Fleugge.
Tahoe	Placer	.....	.....	34.5	.....	52	1†	15	26†	24	3.90	.....	.....	3.0	6	12	8	11	w.	R. M. Watson.
Truckee	Nevada	5,819	39	29.6	+ 0.9	60	1	− 5	28	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Nevada.																				
Aurora	Esmeralda	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. I. Cain.
Austin	Lander	6,594	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Forest Service.
Battle Mountain	do	4,843	39	39.5	+ 8.4	74	2	8	18†	48	1.23	+0.53	0.50	5.0	5	17	2	12	.....	Southern Pacific Co.
Beowawe	Eureka	4,905	39	32.0	+ 2.2	60	4	5	19	38	1.42	+0.05	0.50	4.0	4	17	8	6	s.	Do.
Carlin	Elko	5,232	39	32.7	+ 6.3	66	1	4	28	50	.....	.....	.....	0.2	1	25	0	6	.....	Do.
Carson Dam	Churchill	4,032	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Cherry Creek	White Pine	6,450	2	32.4	.....	64	1	5	26†	36	1.03	.....	0.50	2.5	4	14	9	8	w.	J. H. Leishman.
Clover Valley	Elko	6,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. F. Wiseman.
Cobre	do	.....	1	29.9	.....	60	1	0	22	45	0.38	.....	0.22	0.0	3	25	2	4	nw.	Southern Pacific Co.
Columbia	Esmeralda	5,750	3	33.6	.....	60	1	5	27	33	1.09	.....	0.58	11.0	4	18	7	6	nw.	A. Booth.
Dutton	Elko	5,100	2	28.3	.....	63	1	2	1	61	0.65	.....	0.30	1.5	4	4	8	19	w.	Golconda Cattle Co.
Elko	do	5,342	39	31.8	+ 4.8	58	2	5	26	40	0.27	−0.91	0.09	0.5	5	12	10	9	s.	Southern Pacific Co.
Ely	White Pine	6,421	19	.....	.....	.....	.....	.....	.....	.....	0.62	−0.42	0.46	7.0	2	.....	.....	.....	w.	G. C. Hunting.
Eureka	Eureka	6,500	7	33.4	.....	64	1	6	26	32	0.63	.....	0.20	9.5	6	11	3	17	n.	Clay Simms.
Fallon	Churchill	3,965	5	33.8	.....	66	8	12	30	42	0.56	.....	0.25	3.5	8	9	8	14	ne.	U. S. Experiment Farm.
Fernley	Lyon	4,200	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. G. A. Steele.
Gardnerville	Douglas	4,830	10	36.0	+ 3.6	65	9†	12	31	46	1.17	−0.82	0.60	2.0	4	7	14	10	e.	Wm. Dangberg.
Geyser	Lincoln	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. J. F. Wambolt.
Glenbrook	Douglas	.....	1	37.8	.....	63	2	15	26†	33	2.21	.....	.....	11.0	10	18	11	2	e.	C. C. Henningsen.
Golconda	Humboldt	4,697	31	32.8	+ 0.1	56	12	10	19†	31	1.60	+0.75	0.50	4.0	5	18	6	7	.....	Southern Pacific Co.
Halleck	Elko	5,631	17	29.8	+ 4.9	55	1	0	25	37	1.06	−0.12	0.43	1.5	4	16	9	6	.....	Do.

TABLE 1.—*Climatological data for December, 1910. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				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, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Nevada—Continued.																				
Jean	Clark	2,074	2																	Salt Lake Route.
Leetville	Churchill	4,020	3																	U. S. Reclamation Service.
Lewer's Ranch	Washoe	5,500	22	37.0	+ 2.6	65	1	12	26	31	4.55	+1.14		7.0	5	10	17	4		Ross Lewers.
Lovelock	Humboldt	3,977	7																	C. H. Allender.
McAfee's Ranch	Esmeralda	4,835	6																	C. H. Rodenkirch.
Millett	Nye		2	30.4		59	1	− 2	22	43	0.79		0.34	0.0	3	12	7	12	n.	Fred J. Jones.
Mina	Esmeralda	4,600	3	39.1		66	3	14	14†	37	0.70		0.40	7.0	3	9	6	16	s.	Southern Pacific Co.
Palmetto	do	6,780	20	43.2	+12.0	68	7†	7	31	55	0.53	−0.49	0.28	8.5	5					A. J. Akin.
Potts	Nye	6,990	17	28.0	+ 3.1	58	2	− 8	26	41	0.27	−0.24	0.20	6.0	3	5	6	20	s.	Miss Mamie Potts.
Quinn River Ranch	Humboldt	4,850	8	35.1[b]		68[b]	1	13[b]	1	55[b]	1.43		0.58	0.0	6	17	3	11	w.	F. M. Payne.
Reno	Washoe	4,532	39	37.0	+ 3.3	64	1	13	19	39	1.44	−0.23	0.74	3.1	9	7	10	14	w.	U. S. Weather Bureau.
Soda Lake	Churchill	4,534	3	34.2		61	8	13	30	36	0.45		0.30	2.2	3	9	13	9	n.	U. S. Reclamation Service
Tecoma	Elko	4,812	32	27.2	+ 1.1	58	1	− 8	26	46	0.12	−0.55	0.10	0.0	3	5	7	19		Southern Pacific Co.
Tonopah	Nye	6,090	3	34.9		56	1	14	31	21	0.75		0.64	10.8	4	7	18	6	w.	U. S. Weather Bureau.
Wabuska	Lyon	4,347	7																	V. H. Bernard.
Wells	Elko	5,631	38								2.05	+1.02	1.00	6.0	6	10	6	15	s.	Southern Pacific Co.
Winnemuca	Humboldt	4,432	31	33.2	+ 2.5	59	1	9	28	39	2.01	+1.02	0.59	3.0	10	9	6	16	ne.	U. S. Weather Bureau.

TABLE 2.—*Daily precipitation for December, 1910. District No. 10, Great Basin.*

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.
Wyoming.																																	
Border	Bear		.06						.02	T.	T.	.17													T.			.02	.03	.02			0.32
Cokeville	do			.18	.12	T.				T.	.02	.09	T.									T.			T.				T.		T.	.08	0.49
Evanston	do				.09					.37	.24	.54										T.			T.			T.	T.		T.	.11	1.35
Idaho.																																	
Geneva	Bear				.98							.09										.03								.02	.01	.01	1.14
Grace	do			.40					T.		.11	.44									T.	T.						.04	T.		.06	.02	1.07
Oxford	do																																
Paris‖	do			.50								.25																					
Stone	Deep Creek				.35						.24																				.03		0.62
Weston	Bear			.32	.20						.18	.31																	.10		.05	.03	1.19
Utah.																																	
Alpine	Great Salt Lake			.40						.10		.36	.20										.25							.05			1.36
Beaver	Sevier Lake			.05								.25	.15								.30	.32				.55	.05					.05	1.72
Black Rock	do											T.									.28					T.						T.	0.28
Castle Rock	Great Salt Lake			.10	.05					.30	.35	.31		.04								.03			T.							.03	1.21
Cedar City	Desert																																
Corinne	Great Salt Lake								.23		1.00	.10																			.05		1.38
Deseret	Sevier Lake			.02								.20									T.	.30										.01	0.53
Farmington	Great Salt Lake			.05	.06			T.		.23	.47	.50	.21									.10							.10		.12	.40	2.24
Fillmore	Sevier Lake			.01								.44	.14								.40	.18				.10						.43	1.70
Frisco	Desert												.20								.23					.10							0.53
Garrison	do																																
Government Creek	do			.02							T.	.07										.20										.24	0.53
Grantsville	Great Salt Lake																																
Grouse Creek	Desert			.30	.11					T.	.44	.28													T.							T.	1.03
Heber	Great Salt Lake			.16						.05	.75	.06									*	.35										.10	1.47
Henefer	do			.02	.42					.15	.43	.29	.05									.05			.03				.06		T.	.40	1.90
Ibapah (near)	Desert			.07							.04	.30	.23								.54	.30										.26	1.74
Ibex	do			T.								.04									.40												0.44
International	Great Salt Lake									T.	T.	.28									.22							.01			.06		0.57
Iosepa	Desert										.15	.10									.04											.05	0.34
Kanosh	Sevier Lake											.10	.60									.50				.32						.21	1.73
Kelton	Great Salt Lake			.15							.15	.10														T.						.10	0.50
Levan	Sevier Lake			T.							T.	.45	.09								*	.58							.08	.05		.10	1.35
Logan	Great Salt Lake		*	.20					.09	.05	.21	.40													.06			.02			.26	.16	1.45
Lucin	Desert			.05	.05					.05	.05	T.																					0.20
Manti	Sevier Lake											.43	.10								.16	.14				.04						.11	0.98
Marion	Great Salt Lake			.05	.07			T.		.07	.41	.23	.22								.15	.30	T.		.13				.05			.10	1.78
Marysvale	Sevier Lake			.08	.03							.18	.05								.31	.08				.18							0.91
Meadowville	Great Salt Lake			T.	.55					.20		.30	.05																			.05	1.15
Milford	Sevier Lake			T.							T.	T.									.40					.80							1.20
Millville	Great Salt Lake			.57						.16	.18	.57													.05			T.			.07	.17	1.77
Minersville	Sevier Lake											.02	.07									.41				.68	.13				.10		1.41
Modena	Desert			T.							.01	.11	.01							.05	.09				.01	.07	T.	T.				T.	0.35
Morgan	Great Salt Lake			.30	.20					1.00	.80	.80										.10									.60	.20	4.00
Moroni	Sevier Lake			.15	.03				T.		.09	.44	.17								.21	.04			T.				.04			.03	1.20
Mount Nebo	Great Salt Lake										.20	.45									.21	.29										T.	1.15
Nephi (near)	do											.15										.65										.04	0.84
Oak City	Sevier Lake																																
Ogden	Great Salt Lake		.22	.05						.11	.34	.23	.11										.10										1.16
Panguitch Lake	Sevier Lake																																
Park City	Great Salt Lake		.02	.08									.01								.26	.09		.08	.07					.03			0.61
Parowan	Desert										.85										.40					.20						.34	1.79
Payson	Great Salt Lake			.05	.04					T.	.08	.17	.48								.30	.35							T.			.33	1.80
Pinto	Desert										.15										.36					.10						.10	0.71
Promontory	Great Salt Lake																																
Provo	do			.10						T.	.20	.40	.45								.10	.40										.20	1.85
Randolph	do			.03	.15						.07	.32																			T.	T.	0.57
Richfield	Sevier Lake											.42									.20					.20							.10	0.92
Saltair	Great Salt Lake			.03	.01					.01	.21	.12	.11								.08	.11						.07				.12	0.87
Salt Lake City	do			.02						.08	.20	.28	.02								.15	.17			T.			T.	.06		.15	.03	1.16
Scipio	Desert			.09								.61	.10								.36					T.					.08		1.24
Sevier Mine	Sevier Lake																																
Silver City	Desert				.01						.02	.24	.13								.22	.16						.01				.01	0.80
Spanish Fork	Great Salt Lake			.50	.09						.10	*	.65								.30	.30							.10		*	1.80	3.84
Strawberry Tunnel	do			.35	.30					T.	.10	.05	.15								.20	.30	.15		.10				.45	.25		.30	2.70
Thistle	do			.18	.50						.10	.22	.52								.20	.20			T.				.10	T.		.30	2.32
Tooele	do									T.	.13	.17	.11								T.	.19						T.	T.			.14	0.74
Utah Lake Pump. Sta.	do																																
Woodruff	do											.08																				.02	0.10
Oregon.																																	
Ana River	SE. Drainage			T.					.02		.05						T.				.05			T.							T.		0.12
Burns	do		.20	.26				.23									.48															.10	1.27
Burns Mill	do			.30					.50							.35																40	1.55
Christmas Lake	do			.20			T.		.10	.03	.10	.06					.25	.09							.03								0.86
Diamond	do																																
Embody	do																																
Fort Rock	do			.15							.17						.10																0.42
Paisley	do																																
Plush	do																																
Seneca	do																																
Valley Falls	do																																
California.																																	
Al Tahoe	Truckee																																
Bijou	do	.15		1.82	.04		.03	.09			.04	.51					.04	.09								.05							2.86
Boca	do																																
Bodie	East Walker																																
Bridgeport	do						.08			*	.11																						0.19
Brockway	Truckee																																
Deer Park	do		.03	3.42	.05		.17	.12		.16	.86	.96						.26													.07		6.70
Donner Ice Camp	do		*	2.35			T.	T.	T.		.01			T.			*	.30															2.66
Fales' Hot Springs	East Walker			.65							.12							.07			.04					T.							0.88
Glen Alpine Springs	Truckee																																
Hobart Mills	do		.25	2.00	.07		.02	.01	.01	T.	.09	.57	.04				.07	.30	T.												T.		3.43
Lundy	East Walker		.85							.30									.50														1.65
Markleeville	East Carson		.09	1.53							.11	.11	.09					.40		T.						T.							2.33
McKinney	Truckee		.59	2.64	.12		.11	.01		.27	.31	.63					.08	.10								.29							5.15
Shields Ranch	East Walker		*	.60	.20						.20							.55								.05							1.60
Silver Creek	East Carson																																
Tahoe	Truckee		*	2.50				T.	.20	.40	*	.80					T.									T.							3.90
Tallac	do		.25	2.00				.10			.30	.70						.30															3.65
Truckee	do																																
Woodfords	West Carson		*	1.10							*	.85						.20	.20														2.35

TABLE 2.—*Daily precipitation for December, 1910. District No. 10*—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	
Nevada.																																	
Aurora	East Walker																																
Austin	Reese																																
Battle Mountain	Humboldt			.27						.20	.20	.06						.50															1.23
Beowawe	do		.32							.48		.50					.12																1.42
Carlin	do																																
Carson Dam	Carson																																
Cherry Creek	Humboldt			.30	.03						T.	.50									.20										T.	T.	1.03
Clover Valley	do																																
Cobre	do			T.						.03	.22	.13																					0.38
Columbia	Desert																	.01		*	.58												1.09
Dutton	Humboldt									.20		.30						.10														.05	0.65
Elko	do			.07			T.			.03	.09	.07																T.			.01		0.27
Ely	do																	.46	.16														0.62
Eureka	do			.10								.20									.15							.05			.05	.08	0.63
Fallon	Carson		.05	.10			T.				.07	.06					*	.25							.02						.01		0.56
Fernley	Truckee																																
Gardnerville	Carson			.01	.36		T.				T.	.60														T.	.20						1.17
Geyser	Humboldt																																
Glenbrook	Truckee			*	.60					.06	*	.45					*	.50								.50					*	.10	2.21
Golconda	Humboldt									.40	.50	.30						.30														.10	1.60
Halleck	do		.09							.39	.43																				T.	.15	1.06
Jean	Desert																																
Leetville	Carson																																
Lewer's Ranch	Truckee		*	2.85								1.00						.30								.40							4.55
Lovelock	Humboldt																																
McAfees Ranch	Desert																																
Millett	Reese			.30						.15											.34												0.79
Mina	Desert																	.20		.40		.10											0.70
North Fork	Humboldt	*	.75						T.	.30	.50																				.04	.50	2.09
Palmetto	Desert																		.12	.04	.28	.30		.10		.04	.05						0.93
Paradise Valley	Little Humboldt																																
Potts	Reese			T.							T.	.05						T.			.20							T.			T.	.02	0.27
Quinn River Ranch	Humboldt			.22					.06	.29	.36	.58						.02															1.43
Reno	Truckee		.20	.55			T.				.42	.08					.05	.08		T.				T.	.02	.03					.01		1.44
Rose Creek	Humboldt		.10	.70		.03			.06	.80	.30	.36						.70										.08				.08	3.21
Smith	West Walker		T.	.26						.06	.05							.20							.08			.04					0.49
Spooner's Ranch	Truckee		*	1.76			T.	T.		.06	*	.68						.20									.15			.08	.10		3.03
Soda Lake	Carson		T.	.13														.30			.02												0.45
Sweetwater	East Walker														.20	.25	.27	.22	.05			T.				.05	.10						1.14
Tecoma	Humboldt									.01	.01	.10														.10							0.12
Tonopah	Desert										T.							.01		.38	.26										T.		0.79
Wabuska	Walker																																
Wells	Humboldt		*	.05					*	1.00	.80	.20																					2.05
Willow Point	Little Humboldt			.18						*	.36						*	.40															0.94
Winnemucca	Humboldt		.11	.44			.02		.01	.48	.57	.06					T.	.30										T.			.01	.01	2.01

TABLE 3.—*Maximum and minimum temperatures at selected stations, December, 1910. District No. 10, Great Basin.*

Date.	Wyoming.						Utah.																					
	Border.		Evanston.		Weston, Idaho.		Corinne.		Deseret.		Government Creek.		Ibapah.		Marysvale.		Meadowville.		Modena.		Ogden.		Parowan.		Provo.		Salt Lake City.	
	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	43	16	57	22	51	25	30	23	59	25	52	29	56	33	59	25	43	18	64	28	51	30	64	29	61	26	56	35
2	36	30	56	25	42	28	32	24	50	25	56	32	48	33	60	21	55	25	58	28	48	31	59	32	50	25	51	35
3	33	28	46	35	44	35	42	25	45	37	49	39	42	32	62	34	45	34	56	32	47	31	59	32	49	35	52	41
4	33	22	38	28	44	32	36	23	47	30	49	30	34	18	46	27	38	25	49	23	46	34	53	26	47	29	50	36
5	27	5	37	18	45	29	40	27	48	15	43	23	41	15	46	11	36	22	43	15	42	28	49	20	46	20	47	30
6	38	19	42	9	41	21	38	20	44	19	43	23	43	25	49	17	54	12	54	22	41	29	51	26	53	21	47	30
7	39	10	43	26	46	29	33	22	53	21	47	20	44	27	52	18	42	25	58	26	46	30	60	26	55	25	50	35
8	40	20	43	16	41	31	30	26	52	21	51	26	46	28	53	20	39	20	58	25	43	29	55	29	50	24	53	34
9	34	20	42	33	47	36	30	26	61	32	54	41	41	34	64	21	42	31	53	34	50	39	49	32	52	38	54	40
10	38	24	38	32	40	33	52	23	46	33	48	32	39	32	55	27	39	31	54	31	42	38	52	34	48	35	47	40
11	39	24	37	32	41	36	50	22	48	34	49	37	37	28	54	38	41	33	48	33	43	39	53	34	50	39	51	40
12	37	27	37	29	46	33	49	34	49	34	44	35	30	24	46	34	37	32	47	29	45	37	52	29	47	32	46	37
13	28	14	32	2	40	24	46	30	39	22	38	20	42	12	43	27	34	24	45	25	40	29	49	28	46	25	43	31
14	21	12	36	0	41	18	43	27	36	22	32	20	49	21	33	16	29	14	35	19	37	28	48	28	40	21	39	28
15	20	8	40	1	31	20	37	21	29	26	28	20	52	22	43	14	31	14	29	18	37	29	48	20	36	21	35	32
16	24	−1	47	6	31	27	34	30	26	24	26	20	48	21	42	8	32	17	26	17	38	29	46	12	36	24	35	29
17	24	0	40	8	39	22	32	30	29	21	26	20	39	20	45	21	35	15	32	13	32	27	46	13	35	26	33	27
18	23	−2	41	5	38	16	30	29	29	27	27	21	45	11	37	16	32	16	34	17	33	20	45	15	36	28	35	26
19	34	−3	44	10	29	15	30	29	28	25	24	14	47	23	40	9	37	19	30	19	32	27	40	13	31	28	33	27
20	34	3	35	17	34	16	35	21	28	23	28	20	35	22	36	20	40	20	34	21	32	26	37	17	31	26	31	26
21	33	4	30	18	34	25	28	17	38	25	30	13	26	10	34	22	35	19	41	26	35	28	35	23	28	21	35	28
22	23	2	23	2	36	12	32	20	30	5	32	4	32	4	34	1	29	12	30	15	34	15	40	18	36	3	35	18
23	30	4	34	13	35	18	30	21	29	2	41	14	44	16	36	0	38	16	37	14	36	21	45	15	37	7	36	22
24	35	5	35	22	40	22	41	18	34	11	40	28	36	28	47	13	38	25	49	23	37	29	50	25	38	14	38	28
25	29	6	30	1	36	10	36	18	32	24	34	19	29	11	38	14	30	14	30	23	35	19	43	18	40	13	35	25
26	27	7	31	0	32	7	38	21	31	2	31	9	32	1	30	10	26	8	28	8	.....	.....	38	14	34	5	34	20
27	26	10	27	2	30	10	40	14	27	3	29	14	22	12	26	−3	30	10	36	6	33	19	32	13	35	9	33	19
28	24	4	22	5	30	13	36	16	32	2	28	12	23	5	36	4	27	15	29	8	32	26	34	15	33	13	33	24
29	29	11	27	8	34	16	38	19	33	3	34	13	38	8	32	−2	31	15	35	7	37	26	34	16	39	7	37	25
30	30	6	32	12	33	24	36	23	40	17	36	26	32	15	43	16	31	21	38	18	37	28	36	18	44	20	42	29
31	31	7	28	10	29	16	30	22	36	16	32	9	19	3	26	5	25	10	30	17	32	21	40	10	35	14	30	20
Mns.	30.4	11.0	37.1	14.4	38.6	22.5	36.6	23.3	39.0	20.2	38.1	22.0	38.4	19.2	43.5	16.3	36.1	19.7	41.6	20.6	39.3[a]	28.1[a]	46.5	21.9	41.9	21.7	41.2	29.6

Date.	Burns, Oreg.		Nevada.																									
			Elko.		Ely.		Eureka.		Fallon.		Jean.		Lovelock.		Millett.		Mina.		Quinn River Ranch.		Reno.		Tecoma.		Tonopah.		Winnemucca.	
	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	44	21	57	17	68	29	64	32	57	15	.....	.....	.....	.....	59	16	62	30	68	13	64	25	58	14	56	43	59	20
2	50	34	58	19	65	32	53	37	52	21	.....	.....	.....	.....	49	23	62	34	51	25	56	42	54	16	55	45	54	27
3	44	26	50	12	68	29	45	34	50	40	.....	.....	.....	.....	49	36	66	34	49	39	49	39	56	14	49	40	47	36
4	42	20	45	23	62	33	43	26	52	20	.....	.....	.....	.....	48	31	64	36	49	31	51	28	52	18	43	28	47	28
5	43	9	49	24	67	31	46	20	44	17	.....	.....	.....	.....	41	11	56	20	49	22	40	24	48	16	46	32	42	25
6	44	24	51	28	63	30	50	30	50	27	.....	.....	.....	.....	45	23	60	34	43	21	55	30	46	18	52	38	46	25
7	42	22	50	20	66	28	50	30	49	28	.....	.....	.....	.....	51	28	60	40	49	18	48	33	52	18	52	41	49	24
8	40	20	52	18	59	23	56	30	66	26	.....	.....	.....	.....	58	29	58	32	40	28	60	39	48	20	49	40	54	32
9	42	22	50	29	43	20	54	35	59	43	.....	.....	.....	.....	58	39	60	34	43	35	61	44	46	18	54	40	50	40
10	44	28	50	27	56	26	47	36	53	36	.....	.....	.....	.....	50	34	58	42	46	38	56	44	44	18	45	37	48	40
11	40	18	50	35	57	34	42	35	56	36	.....	.....	.....	.....	51	36	60	34	55	35	54	36	42	20	46	34	45	35
12	42	16	48	27	64	36	46	35	53	27	.....	.....	.....	.....	48	23	56	30	56	26	48	33	46	28	44	31	50	31
13	34	14	44	19	62	31	47	20	49	20	.....	.....	.....	.....	48	12	54	26	59	25	50	29	48	18	44	30	51	28
14	32	14	46	8	66	30	52	20	40	16	.....	.....	.....	.....	48	10	52	14	50	18	34	26	44	22	46	33	48	25
15	34	18	42	12	56	29	52	22	33	13	.....	.....	.....	.....	47	7	48	18	50	20	40	24	42	18	51	30	45	23
16	34	14	43	16	59	32	51	20	35	22	.....	.....	.....	.....	47	6	51	14	37	20	51	21	36	14	46	27	41	22
17	32	1	45	13	65	38	42	22	37	30	.....	.....	.....	.....	44	14	48	30	46	28	35	30	36	13	36	22	37	25
18	19	2	42	10	61	32	49	16	40	14	.....	.....	.....	.....	50	14	56	26	57	23	39	18	38	14	45	26	39	19
19	25	9	50	15	67	33	51	18	40	13	.....	.....	.....	.....	52	12	48	22	41	18	39	13	32	16	42	24	40	13
20	24	0	48	32	62	28	43	28	43	27	.....	.....	.....	.....	45	30	46	34	43	18	47	29	36	15	30	24	37	22
21	34	4	37	21	58	29	35	18	34	26	.....	.....	.....	.....	34	2	48	22	42	21	42	24	38	14	25	21	37	16
22	36	9	37	11	51	20	36	7	30	25	.....	.....	.....	.....	38	−1	50	24	41	15	43	24	36	12	34	23	37	12
23	36	5	49	16	38	1	47	16	32	26	.....	.....	.....	.....	30	3	46	20	43	15	39	23	40	0	42	27	43	11
24	37	9	56	28	49	10	44	25	40	27	.....	.....	.....	.....	38	13	46	22	46	23	46	26	38	4	40	31	43	21
25	35	14	48	14	60	26	36	16	47	28	.....	.....	.....	.....	35	19	43	32	46	18	39	25	36	−6	32	21	38	19
26	38	5	38	5	56	25	35	6	41	14	.....	.....	.....	.....	33	4	38	21	.....	.....	41	19	38	−8	25	16	39	11
27	42	9	36	13	60	28	30	12	42	19	.....	.....	.....	.....	35	5	39	18	.....	.....	39	22	42	0	29	18	36	13
28	44	24	34	8	65	30	30	8	44	13	.....	.....	.....	.....	38	3	42	17	40	33	44	17	36	9	27	16	38	9
29	35	8	36	9	40	19	31	10	35	14	.....	.....	.....	.....	28	2	38	18	34	14	46	23	32	2	30	23	37	14
30	37	14	38	11	42	21	38	18	42	12	.....	.....	.....	.....	44	10	48	16	39	19	45	28	30	3	33	19	37	22
31	44	22	38	15	44	16	29	14	38	18	.....	.....	.....	.....	37	15	47	22	40	25	39	19	28	7	22	14	34	22
Mns.	38.4	14.7	45.7	17.9	58.0	26.7	44.3	22.5	44.6	23.0	.....	.....	.....	.....	44.5	16.4	51.9	26.3	46.6[b]	23.6[b]	46.5	27.6	41.9	12.4	41.0	28.8	43.5	22.9