CLIMATOLOGICAL DATA FOR JULY, 1912.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

The month was cool and wet, with an unusually large number of thunderstorms, which is in contradistinction to the conditions prevailing during the same month a year ago when the weather was warm and dry and very few thunderstorms occurred. The rainfall was unevenly distributed, there being a few places where it was excessive and partook of the nature of "cloudbursts," while in a few other localities no rain fell during the entire month. Fortunately the cloudbursts occurred in sparsely settled places, mostly in Oregon and Idaho, and the damage done was insignificant. At Boise the rainfall was excessive for about 1 hour on the night of 30–31, and is the only excessive rainfall ever recorded at that station. While the unusually large amount of precipitation was harmful to the grain crop and hindered its harvest, this drawback was much more than made up by the beneficial effects in the dry farming areas, and the good it did to pasturage and to late crops in general. Also, irrigated sections and placer mining interests profited by the abundance of rain in localities where a shortage of water is usually experienced during dry summers. The outlook from an agricultural standpoint, so far as staple crops are concerned, was considered to be exceptionally good at the close of the month. No serious interruptions to transportation or construction work were reported. No forest fires gained any headway, and the atmosphere was unusually free from smoke or haze, but the sunshine in nearly all sections was below the average.

TEMPERATURE.

Temperatures averaged much below the normal all over the upper Columbia and Snake River drainage areas and in central Oregon. The coolest weather, as compared with the normal, was in Idaho, where it was from 2° to 3° below the July average. In Montana this was the coolest July for 15 years, and in Idaho the coolest since 1903. West of the Cascade Mountains the weather was also cooler than usual in a majority of places, although many localities showed average conditions. There was no very hot weather during the month, but there were two pronounced warm periods, when temperatures in the nineties were experienced over most of the district. Minimum temperatures for the month occurred as a rule during the opening days. The region having the highest mean temperature was the Yakima Valley and the Columbia River lands between Priest Rapids and The Dalles. Mean temperatures of 70° and over were general over this area. Cool weather with temperatures ranging from 56° to 60° prevailed in the coast region. The mean temperature for the district, determined from 258 stations, was 64.6°, which is 1.6° below the normal. The highest temperature of the month was 107°, recorded at two stations, Blalock, Oreg., on the 16th, and Kennewick, Wash., on the 20th. The lowest temperature was 22° at Loon Creek, Idaho, on the 3d. The highest mean temperature was 76.4° at Blalock, and the lowest was 52.0 at Moran, Wyo.

PRECIPITATION.

Showers were frequent in the Montana watershed, and the total rainfall greatly exceeded the average. In Idaho July was the wettest month on record with one exception. The amounts were unevenly distributed over Oregon and Washington, in some cases being largely deficient and in others they were above the normal. The rainfall was most abundant in northwestern Washington, in parts of the Blue Mountains, in Montana, and in the upper Snake River watershed. In the latter regions the amounts were the largest, approximating 3 inches. Several cloudbursts were reported from places in Idaho and eastern Oregon, and a notable one occurred in Asotin Creek Canyon, Asotin County, Wash., but none was destructive. The month opened with a general wet period, lasting from one to two weeks over most districts. There was a second rainy period lasting from the 18th to 25th, and showers were fairly general again during the closing days of the month. Very little rain fell during the month in the Columbia River district of southeastern Washington, and almost none at all in Josephine and Curry Counties, in Oregon. The average precipitation, determined from 359 stations, was 0.99 inch, or 0.26 inch above the normal. The largest monthly amount was 4.05 inches at Snake River, Wyo., and none occurred at Mountain Ranch, Oreg. The greatest 24-hour rainfall was 1.42 inches at Almo, Idaho.

MISCELLANEOUS PHENOMENA.

Thunderstorms were of more than ordinary frequency. In Oregon and Washington they occurred mainly on the 2d and 3d, from the 19th to the 22d, and on the 30th and 31st. In Idaho a number occurred on the opening days of the month, but the period in which a majority were reported was from the 20th to the end of the month. Hail occurred in connection with a good many of these storms. The highest wind of the month was 52 miles per hour from the southwest at Walla Walla, Wash., on the 20th. Velocities over 30 miles per hour were recorded at Boise, Pocatello, Lewiston, Seattle, Spokane, North Head, and Tatoosh Island on different dates.

THE RIVERS.

All the rivers in this district fell steadily during July, except the Kootenai at Bonners Ferry, which rose slightly about the middle of the month. The fall in the Willamette River was less marked than it was in the Columbia and Snake Rivers.

The Willamette River averaged 0.3 foot above normal. The highest stage at Portland was 16.6 feet on the 1st, and the lowest was 7.4 feet on the 31st. The highest water at Salem was 3.1 feet on the 2d, and the lowest was 0.7 on the 31st.

The Columbia River averaged 3.3 feet below its monthly normal. The greatest departure in its lower course was 5.1 feet below normal at The Dalles and Cascade Locks, and for its upper course 5.4 feet below normal at Northport, Wash. The highest stage at Vancouver was 17 feet on the 1st and at Wenatchee 31.1 feet on the 2d. The lowest water at Vancouver was 7.5 feet on the 31st and at Wenatchee 19 feet on the same date. The highest and lowest stages at Northport, Wash., were 21.3 feet and 9.3 feet on the 1st and 31st, respectively.

The Snake River averaged slightly above normal, and it was 5.5 feet to 8.6 feet lower than in June. The highest stage at Lewiston was 10 feet on the 1st, and the lowest stage 2.7 on the 31st. Navigation was suspended on the lower Snake shortly after the middle of the month on account of the low stages in the river.

RECONNOISSANCE OF THE DESCHUTES RIVER IN JULY, 1912.

By JOHN H. LEWIS, State Engineer and Secretary of the State Land Board.

That there is some truth in the statement that the Deschutes River is the most wonderful stream in the world is the opinion derived from a 10-days' trip covering its entire drainage basin.

Building is active in most of the Crook County towns, and many acres are now being cleared and put into crops for the first time. Perhaps the greatest area cleared this season is along Squaw Creek, near Sisters, as a result of the recent adjudication of water rights by the board of control. Those having incomplete rights must put the water to use this fall or it will revert to the new appropriators, who are eagerly awaiting the chance of using the water. The recent rain has given to the dry-farming sections a prosperous look, and the building of the North Canal diversion insures the irrigated section near Bend a reliable water supply.

This present development is nothing when compared with the possibilities for future development.

The Deschutes River at Benham Falls has a mean annual discharge of 1,220,000 acre-feet of water, as shown by eight years' records. The minimum year furnished 1,070,000 acre-feet, so that it is safe to say that there is available at this point for irrigation purposes 1,000,000 acre-feet of water. This will irrigate 333,000 acres of land, or a strip 1 mile wide and 520 miles long.

The regular flow will ultimately irrigate about 120,000 acres between Bend and Crooked River. Every drop of the remaining water can and should be stored for irrigation purposes through the construction of a 60-foot dam at Benham Falls. This could be released in the summer and diverted near Cline Falls for the irrigation of 110,000 acres on Agency Plain, for the irrigation of 50,000 to 100,000 acres on the west side of the Deschutes River and north of Laidlaw and, by diverting above Bend, 50,000 acres could be irrigated in the Benham Falls segregation just south of Prineville. There are no great engineering difficulties to be overcome in the construction of this project, and it appears that it is one of the cheapest in the State to construct.

The entire flow near the head of the river can be used for the irrigation of about 60,000 acres above the Benham Falls reservoir without materially affecting the above figures, as the seepage would be collected in the reservoir below.

Between Benham Falls and Cline Falls there is 1,300 feet fall. About 60 per cent of the 1,000,000 acre-feet of water would be discharged through the dam for irrigation purposes during July and August, and would be available for the development of power, which can be transmitted economically two to four hundred miles for the pumping of water to irrigate other lands, say along the Columbia River. This water at a 100-foot drop immediately below the dam would furnish 56,800 horsepower, which at 50 per cent of plant efficiency will lift 2,500 second-feet 100 feet above the Columbia River for the irrigation of 200,000 acres of land. There is another fall of 100 feet a short distance below and above the first diversion for irrigation, and the amount of summer power which can be developed in the 1,300 feet fall to the last diversion at Cline Falls is almost inconceivable.

For the greatest good to the greatest number the Deschutes River between Cline Falls and the junction with Crooked River should be dried up except for seepage water. Below this point the river is of most value for power, and the total possible diversions for irrigation outlined above, without considering return seepage, will not seriously affect its value for such purpose, but, with return seepage, may improve the power value of the lower river.

Sixteen dam sites have been located in the narrow rock-walled canyon from the Columbia River to just below the junction of the Metolius with the Deschutes River. With 4,000 second-feet at the 1,300 feet of fall which can be developed at these sites 600,000 theoretical horsepower can be generated. With the low and high year flow equalized at the Benham Falls reservoir and with a 120-foot dam in the Crooked River about 40 miles above Prineville, this low water flow can be increased to about 6,000 second-feet and the power to nearly 900,000 horsepower. This is about six times the present installed steam and hydroelectric machine capacity in the vicinity of Portland and about 40 times the low-water power development at Oregon City. Besides this, an enormous quantity of power can be developed on the Metolius River and at other points.

These possibilities could be greatly complicated by development at the wrong time and place, and if carried out under our present wasteful system of competition the expense to the public will be greatly increased through lack of harmony between plants.

The above information, though preliminary, has been gathered by the State and the U. S. Geological Survey acting in cooperation. A complete report will be available early next year. This stream affords a striking example where to secure the highest, most logical, and orderly development; the entire stream should be turned over to one corporation subject to regulation, or else developed by the public as the need arises. To promote the immediate and best use of this stream is one of the problems which should receive careful consideration at the hands of the State legislature.

TABLE 1.—*Climatological data for July, 1912. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 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.		
Montana.																				
Anaconda	Deer Lodge	5,300	10	59.7	− 3.1	87	25†	35	8	42	1.78	+ 0.57	0.43	0	12	7	18	6	.....	C. D. Demond.
Butte	Silverbow	5,716	17	60.4	− 3.1	87	28	38	9	38	1.63	+ 0.40	0.30	0	10	12	7	12	nw.	J. R. Wharton.
Columbia Falls	Flathead	3,106	16	60.2	− 3.6	96	30	31	4	46	2.67	+ 1.13	0.42	0	12	12	6	13	sw.	J. M. Grist.
Como	Ravalli	3,700	3	62.6	.....	92	30	40	9	37	0.86	.....	0.39	0	7	15	6	10	.....	Hiram Platt.
Dayton	Flathead	.....	7	61.8	.....	86	30	40	14	36	2.77	.....	1.39	0	7	18[a]	6[a]	6[a]	.....	A. J. Ruechell.
East Anaconda	Deer Lodge	5,500	6	59.0	.....	85	30	35	14	33	2.51	.....	.....	.....	10	7	18	6	w.	C. D. Demond.
Fortine	Lincoln	2,975	6	58.6	.....	90	30	30	14	51	3.24	.....	0.70	0	14	8	9	14	sw.	Mike Petery.
Hamilton	Ravalli	3,575	9	63.0	− 2.6	89	30	41	2†	38	1.28	− 0.13	0.70	0	8	17	5	9	n.	Hamilton Cham. of Com.
Hat Creek	Powell	6,000	2	.....	.....	.....	.....	.....	.....	.....	2.40	.....	0.60	0	12	6	14	11	w.	M. K. Landreth.
Haugan	Missoula	3,150	....	59.0	.....	95	29†	32	12	50	0.89	.....	0.32	0	10	13	14	4	sw.	U. S. Forest Service.
Heron	Sanders	2,261	....	62.8	.....	96	30	39	2	53	2.16	.....	0.47	0	12	18[a]	3[a]	9[a]	sw.	E. Knott.
Kalispell	Flathead	2,965	13	60.5	− 3.8	90	30	40	14	40	1.56	+ 0.72	0.39	0	12	2	16	13	w.	U. S. Weather Bureau.
Libby	Lincoln	2,055	2	62.1	.....	98	30	36	28	56	1.01	.....	0.30	0	10	5	23	3	.....	U. S. Forest Service.
Lost Creek	Deer Lodge	5,200	2	.....	.....	.....	.....	.....	.....	.....	1.78	.....	0.76	0	6	16	7	8	w.	Frank Henault.
Missoula	Missoula	3,225	32	63.4	− 3.7	96	30	40	6	46	1.94	+ 0.85	0.62	0	13	.....	.....	.....	.....	U. S. Weather Bureau.
Ophir	Powell	6,800	3	.....	.....	.....	.....	.....	.....	.....	3.23	.....	0.85	0	12	15	10	6	w.	E. S. Wilton.
Ovando	....do.	4,207	12	58.6	− 1.5	93	30	33	6	52	1.15	+ 0.03	0.40	0	9	0[a]	30[a]	0[a]	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	8	58.6[b]	.....	90[b]	26	34[b]	9	46[b]	2.30	.....	0.82	0	8	14[g]	3[g]	7[g]	sw.	G. T. Bramble.
Plains	Sanders	2,475	13	61.6[i]	− 4.0	94[i]	30	38[i]	3	41[i]	.....	.....	.....	.....	.....	9[i]	0[i]	13[i]	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	4	57.4	.....	92	30	30	28	57	1.89	.....	0.31	0	13	11	5	15	.....	A. D. Stillman.
Poison	....do.	2,920	4	65.1	.....	85	15†	42	6	37	1.29	.....	0.38	0	6	.....	.....	.....	.....	F. P. Brown.
St. Ignatius	Missoula	2,700	6	62.2	.....	87	30	40	9	41	2.75	.....	0.77	0	10	14	13	4	nw.	U. S. Reclamation Service.
Saltese	....do.	3,600	7	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.52	0	3	23	0	8	w.	E. K. Tarbox.
Stevensville	Ravalli	.....	....	62.0	.....	93	30	40	2†	41	1.40	.....	0.71	0	9	20	4	7	w.	University Orchard Co.
Thompson Falls	Sanders	2,462	....	63.8	.....	98	30	39	6	54	1.12	.....	0.47	0	9	15	11	5	w.	U. S. Forest Service.
Willow Glen Stock Farm.	Deer Lodge	5,064	1	57.2	.....	86	29	29	12	41	.....	.....	.....	.....	.....	13	8	10	ne.	G. E. Luce.
Wyoming.																				
Afton	Uinta	6,200	8	.....	.....	86	27	.....	.....	.....	2.21	.....	0.95	0	7	17	1	13	w.	A. V. Call.
Alta	....do.	7,000	2	56.1	.....	83	28	29	9	45	2.44	.....	0.80	0	11	12	10	9	sw.	Mrs. Lucy Brown.
Bechler River	Yellowstone Park.	.....	....	.....	.....	.....	.....	.....	.....	.....	3.80	.....	1.20	0	10	13	13	5	sw.	U. S. Army.
Bedford	Uinta	5,900	12	57.6	− 2.0	81	17†	34	5	42	1.97	+ 1.16	0.78	0	6	15	7	5	w.	C. G. Heiner.
Moran	....do.	.....	....	52.0	.....	87	18	32	10	48	2.05	.....	0.51	0	10	4	13	14	.....	U. S. Reclamation Service.
Snake River	Yellowstone Park.	7,000	6	57.1	.....	84	28†	31	9	44	4.05	.....	1.23	0	10	14	8	9	w.	U. S. Army.
Nevada.																				
San Jacinto	Elko	.....	7	.....	.....	82	23†	.....	....	....	0.09	.....	0.07	0	2	25	0	6	nw.	Marriner Browning.
Utah.																				
Standrod	Boxelder	.....	7	64.0	.....	89	28	39	1†	35	2.01	.....	0.95	0	9	18	4	9	sw.	T. B. Jones.
Idaho.																				
Albion	Cassia	4,650	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Bocock.
Almo	....do.	.....	3	.....	.....	.....	.....	.....	.....	.....	3.62	.....	1.42	0	6	14	8	9	.....	Wm. D. Cahoon.
American Falls	Oneida	4,341	21	64.4	− 4.7	99	28	34	9	56	2.76	+ 2.17	0.98	0	8	20	8	3	ne.	Geo. Stoll.
Arrow Rock	Boise	3,100	....	69.4	.....	101	17†	38	18	57	0.87	.....	0.65	0	3	27	1	3	w.	U. S. Reclamation Service.
Blackfoot	Bingham	4,503	16	60.9	− 7.0	93	28	30	9	55	2.19	+ 1.62	0.87	0	7	17	11	3	sw.	E. A. Dowd.
Blackfoot Dam	Bannock	6,200	3	58.8	.....	84	17	28	9	43	2.45	.....	1.15	0	9	16	3	12	.....	S. C. Waddell.
Bogus Creek	Boise	4,200	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. P. Ingraham.
Boise	Ada	2,739	27	68.8	− 4.0	97	17	40	3	36	1.27	+ 1.09	1.27	0	2	11	12	8	nw.	U. S. Weather Bureau.
Bonners Ferry	Bonner	1,850	5	60.4	.....	93	30	37	13	47	1.83	.....	0.57	0	9	14	7	10	sw.	W. H. Heideman.
Boulder Mine	Boise	4,800	3	.....	.....	.....	.....	.....	.....	.....	1.07	.....	0.60	0	3	20	8	3	.....	Patrick Moriarty.
Buhl	Twin Falls	3,800	5	68.4	.....	97	17	39	3	44	0.18	.....	0.10	0	5	23	6	2	w.	S. C. Orr.
Caldwell	Canyon	2,372	8	67.8	.....	98	17	38	3	47	1.22	.....	1.12	0	5	8	22	1	w.	Wm. J. Boone.
Caldwell Ex. Station	....do.	.....	....	68.3	.....	99	17	36	3	49	0.79	.....	0.58	0	4	.....	.....	.....	.....	C. B. Hampson.
Camas	Fremont	4,815	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Ednah Faulkner.
Cambridge	Washington	2,651	16	67.8	− 4.3	102	29	35	3	49	0.65	+ 0.32	0.27	0	4	.....	.....	.....	.....	C. H. Shepherd.
Cedar Creek Dam	Twin Falls	5,220	2	.....	.....	.....	.....	.....	.....	.....	0.14	.....	0.12	0	3	14	11	6	w.	Robert Hoffman.
Chesterfield	Bannock	5,424	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. S. West.
Clarks Fork	Bonner	2,084	....	62.3	.....	87	30	41	2	39	1.80	.....	0.50	0	10	13	14	4	.....	Wm. Potter.
Clyde	Custer	6,000	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. L. Sutcliffe.
Council	Adams	3,059	....	68.2[e]	.....	100[e]	28	39[e]	3	48[e]	0.89	.....	0.45	0	4	.....	.....	.....	n.	F. L. Featherston.
Culdesac	Nez Perce	1,520	4	66.2[a]	.....	102[a]	29	41[a]	4†	50[a]	0.54	.....	0.44	0	2	.....	.....	.....	.....	Mrs. B. B. Caldwell.
Deary	Latah	2,854	....	61.7	.....	99	30	34	2	51	0.62	.....	0.51	0	2	11	18	2	sw.	W. J. Davis.
Dent	Clearwater	1,350	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Emil Schnessler.
Driggs	Fremont	6,097	5	57.6	.....	83	26†	29	9	44	2.97	.....	0.90	0	6	10	7	14	sw.	W. H. Durant.
Emmett	Canyon	2,350	5	69.0	.....	102	18	38	3	47	0.89	.....	0.84	0	2	14	15	2	s.	U. S. Forest Service.
Forney	Lemhi	6,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. B. Merritt.
Garden Valley	Boise	3,600	4	.....	.....	.....	.....	.....	.....	.....	1.02	.....	0.63	0	3	16	12	3	.....	Mrs. Gertrude M. Ross.
Garnet	Elmore	2,575	13	73.9	− 4.9	105	17	43	3	49	.....	.....	.....	0	.....	26	0	5	.....	A. A. Kenison.
Glenns Ferry	....do.	2,569	4	71.2	.....	104	17	37	2	54	0.55	.....	0.55	0	1	23	4	4	.....	I. E. Perkins.
Gooding	Lincoln	3,572	3	66.9	.....	103	28	35	2†	54	0.33	.....	0.20	0	4	18	10	3	w.	John Krall, jr.
Grand Forks	Shoshone	3,000	3	57.6[g]	.....	94[g]	29†	33[g]	1	56[g]	1.25	.....	0.48	0	.....	.....	.....	.....	sw.	F. W. Beier.
Grandview	Owyhee	.....	3	69.0	.....	103	17	38[a]	3	55[a]	0.32	.....	0.18	0	5	22	4	5	nw.	N. G. Massey.
Grimes Pass	Boise	5,200	3	.....	.....	.....	.....	.....	.....	.....	0.76	.....	0.53	0	4	.....	.....	.....	.....	Jos. M. Clarke.
Guffey	Owyhee	2,381	4	72.4	.....	102	17	41	3	51	0.73	.....	0.47	0	4	26	4	1	nw.	Fred Perry.
Hailey	Blaine	5,347	10	64.8	− 2.5	95	17†	35	2	45	1.43	+ 0.91	1.22	0	3	10	15	6	sw.	U. S. Forest Service.
Hollister	Twin Falls	4,550	....	66.2	.....	96	19	33	3	44	0.66	.....	0.34	0	5	10	19	2	w.	J. W. Bouten.
Hotspring	Owyhee	2,590	7	70.7	.....	100	17	42	2†	45	0.63	.....	0.63	0	1	13	13	5	.....	J. M. Waterhouse.
Idaho Falls	Bonneville	4,742	17	65.0	− 2.4	94	29	35	2†	44	1.60	+ 1.02	1.07	0	6	14	4	13	ne.	Dr. T. M. Bridges.
Indian Valley	Adams	2,999	3	.....	.....	.....	.....	.....	.....	.....	0.38	.....	0.24	0	4	23	3	5	n.	A. M. Henke.
Irwin	Bonneville	6,500	3	62.3	.....	92	17	34	11	50	2.01	.....	0.38	0	10	.....	.....	.....	.....	Eva Johnston.
Kellogg	Shoshone	2,305	8	62.0	.....	96	30	39	4†	50	1.40	.....	0.38	0	7	13	1	17	.....	W. McM. Huff.
Kirkham	Boise	4,200	3	.....	.....	.....	.....	.....	.....	.....	0.45	.....	0.30	0	2	14	12	5	w.	Mrs. Josie B. West.
Kooskia	Idaho	1,261	4	67.6	.....	101	29	43	2	53	1.20	.....	0.45	0	5	11	13	7	.....	U. S. Forest Service.
Lakeview	Bonner	2,250	15	62.6	− 2.5	88	30	40	1	37	2.06	+ 0.98	0.70	0	8	12	8	11	sw.	E. D. Faust.
Landore	Adams	5,300	8	56.6	.....	86	17†	31	3	42	1.33	.....	0.40	T.	6	15	14	2	.....	Mrs. Emma L. Brown.
Leadore	Lemhi	.....	....	56.4	.....	89	26	30	2†	55	1.18	.....	0.65	0	10	13	11	7	w.	Jos. Balluff.
Lewiston	Nez Perce	757	12	71.4	− 2.2	101	29	48	2	43	0.24	−0.18	0.14	0	4	14	6	11	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	3	.....	.....	.....	.....	.....	.....	.....	0.96	.....	0.88	T.	3	6	14	11	w.	Solon McCoy.
Loon Creek	Custer	6,000	3	55.5[a]	.....	92[a]	28	22[a]	3	59[a]	.....	.....	.....	T.	.....	.....	.....	.....	.....	Mrs. Mary Williams.
Mackay	....do.	5,897	5	62.4[g]	.....	92[g]	31	35[g]	2†	44[g]	0.74	.....	0.64	0	2	.....	.....	.....	nw.	U. S. Forest Service.
Meridian	Ada	2,657	2	67.9	.....	98	17	37	3	46	0.16	.....	0.14	0	3	17	9	5	nw.	A. W. Garrett.
Mesa	Adams	3,275	2	69.4[f]	.....	101[f]	29	39[f]	3	36[f]	.....	.....	.....	0	.....	.....	.....	.....	n.	I. S. Carter.
Middle Fork	Idaho	1,397	2	68.8	.....	100	29	46	9	49	1.38	.....	0.46	0	9	.....	.....	.....	.....	Jos. McGhee.

TABLE 1.—*Climatological data for July, 1912. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	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, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Idaho—Continued.																				
Milner	Twin Falls	4,110	8	67.6		98	28†	33	2	44	0.49		0.29	0	5	16	10	5	w.	J. K. Young.
Moscow	Latah	2,748	20	63.4	− 3.1	95	31	39	2	40	0.44	− 0.29	0.18	0	3	15	9	7	se.	University of Idaho.
Mountainhome	Elmore	3,150	7	66.2		99	28	35	9	55	0.67		0.52	0	2	19	9	3		Mrs. Ellen Manion.
Murtaugh	Twin Falls		6	63.8[d]		95[d]	28	35[d]	2	48[d]	0.26		0.26	0	1				w.	J. E. Steinour.
New Meadows	Adams	3,950	8																	E. G. Dunn.
Nezperce	Lewis	3,082	3	61.2		89	30	34	1†	43	1.09		0.35	0	8	21	4	6		P. Mitchell.
Oakley	Cassia	4,700	19	67.0	− 3.5	95	17	39	3	45	2.77	+ 2.22	1.25	0	5	11	16	4		John Adams.
O'Hara Bar	Idaho	1,557	2								0.85		0.60	0						J. D. Agnew.
Orofino	Clearwater	1,027	8	67.6		98	29†	43	10	46	0.68		0.36	0	5	12	19	0		Geo. Alteneder.
Payette	Canyon	2,159	22	69.0	− 4.6	101	17	36	3	50	0.26	− 0.05	0.14	0	3	15	10	6	n.	E. F. Allen.
Pebble	Bannock	5,277	3								1.77			0						Alexander McQueen.
Pierson	Custer	7,000	2	56.2		87	28	27	6	51	0.89		0.49	2.0	3	25	3	3		David P. Clarke.
Pleasant Valley	Ada	3,000	5	66.0		100	17	30	3†	51	0.93		0.87	0	2	23	6	2	nw.	C. E. Friedrich.
Pocatello	Bannock	4,483	13	67.4	− 3.8	93	28	42	9	39	1.63	+ 1.00	0.77	0	7	14	9	8	se.	U. S. Weather Bureau.
Pocatello Nursery	do	5,396	5	62.2		89	17	35	2	42	2.50		0.63	0	9	15	11	5	sw.	Mrs. Fannie E. Say.
Poplar	Bonneville	5,500	2	64.0		91	17†	35	2	45	1.01		0.65	0	5	13	13	5	sw.	C. M. Lawrence.
Porthill	Bonner	1,665	23	61.8	− 4.0	85	30	41	3	39	2.44	+ 1.30	0.60	0	11	11	9	11		H. A. French.
Priest River Experiment Station:																				
No. 1	do	2,500		61.2		86	30	39	2†	36	2.58		0.72	0	14	7	10	14	sw.	D. R. Brewster.
No. 2	do	2,500		62.4		96	30	37	3	47	2.43		0.64	0	14	8	14	9	sw.	Do.
No. 3	do			60.6		94	30	34	14	54	2.68		0.69	0	16	8	11	12	se.	Do.
Pyle Creek	Boise	3,100	3								0.92		0.62	0	5	18	6	7	s.	P. V. Smith.
Richfield	Lincoln	4,306	3	65.6		97	28	33	3	48	0.54		0.44	0	3	19	8	4	sw.	Idaho Irrigation Co.
Roseberry	Boise	4,872	1	55.4		90	17	26	23	53	0.95		0.43	0	7	16	9	6	n.	Dr. Wallace Johnson.
Roseworth	Twin Falls	4,650									0.39		0.38	0	2	4	23	4	nw.	D. B. Hartwell.
Rupert	Lincoln	4,204	6	65.2		95	28	34	2	49	1.55		0.85	0	5	20	4	7	sw.	Will Parry.
St. Anthony	Fremont	4,968																		Heber C. Sharp.
St. Maries	Kootenai	2,263	15	64.7	− 1.1	92	30	42	2†	42	1.08	0.00	0.50	0	6	9	9	13	w.	J. S. Turnbull.
Salmon	Lemhi	4,040	7	65.0		97	28	39	9	44	0.89		0.85	0	2	24	6	1	nw.	B. C. d'Easum.
Sandpoint	Bonner	2,086	2	61.5		91	30	38	2†	48	1.97		0.56	0	9	12	5	14	n.	J. H. Edgerton.
Sheep Hill	Boise	5,000	3								1.24		1.03	0	4					C. M. Gardner.
Shoshone	Lincoln	3,968	4	65.0		90	17	36	3	37	0.01		0.01	0	1	15	16	0	w.	Zell Truman.
Silver City	Owyhee	6,280	5								1.04		0.38	0	4	21	5	5	s.	A. D. Bradfield.
Smith Prairie	Elmore	5,200	3																	Wm. W. Newell.
Soldier Creek	Blaine	5,755	2	59.1[i]		87[i]	28	32[i]	2	44[i]	3.07		2.79	0	4				nw.	J. E. Minear.
Spirit Lake	Kootenai	2,560	2	61.3		90	19†	35	27†	55	2.15		1.08	0	8	21	4	6	ne.	M. C. Krause.
Springfield	Bingham	4,420	4	66.4		96	28	33	9	51	1.53		1.08	0	3	13	12	6	sw.	Mrs. W. A. Edwards.
Sugar	Fremont	4,892	5	63.0		91	24†	34	9	46	2.02		1.30	0	4	23	1	7	sw.	Utah-Idaho Sugar Co.
Sunnyside	Elmore	3,500	3	69.8		101	17†	35	8	60	1.58		1.10	0	3				nw.	Col. M. W. Wood.
Tripod Mountain	Boise	4,300	3								1.21		0.91	0	3	20	6	5		Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	7	67.0		97	28	39	2	53	0.48		0.35	0	3	12	18	1	sw.	J. A. Waters.
Vernon	Fremont	5,050	14	60.6	− 3.4	89	28	34	9	42	1.83	+ 1.14	0.57	0	5	15	12	4	sw.	A. M. Slatery.
Wallace	Shoshone	2,728	5	61.5		96	30	38	2†	48	1.21		0.47	0	9				w.	U. S. Weather Bureau.
Weiser	Washington	2,114		72.4		106	17	37	3	52	0.09		0.05	0	2	13	10	8	se.	J. W. Lapish.
Wendell	Lincoln	3,400	4	67.8		103	28	34	2†	55	0.04		0.04	0	1	14	16	1	w.	Chas. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	21	60.4[g]	+ 0.3	96	17	45	6†	42	1.34	+ 0.43		0		5[f]	20[f]	0[f]	w.	C. S. Weatherwax.
Anacortes	Skagit	60	18																	
Baker	do	200	6	64.8		98	17	47	6	43	1.36		0.37	0	6	16	2	13		R. M. White.
Bellingham	Whatcom	60	17	64.0	+ 3.2	92	17	46	9	37	1.33	+ 0.57	0.58	0	7	21	7	3		Sanford B. Mayhew.
Bellingham (near)	do	107		61.8		89	17	42	7†	37				0		14	10	7		U.S.Bureau Plant Industry.
Blaine	do	57	15	60.8	− 0.1	90	17	42	29	38	1.50	− 0.35	0.50	0	10	13	11	7	sw.	John W. Sheets.
Blewett	Chelan	2,200	2																	
Bremerton	Kitsap	30									1.20		0.41	0	6					U. S. Navy Yard.
Brewster	Okanogan	1,620	2	69.6		99	30	47	1	40	0.70		0.20	0	8	18	10	3	sw.	Mrs. H. F. Bertram.
Bumping Lake	Yakima	3,400		58.0		90	30	33	7	43	0.05		0.02	0	3	16	2	13		U. S. Reclamation Service.
Cedar River	King	535	5								1.16		0.38	0	8	14	5	12		Geo. Landsburg.
Centralia	Lewis	212	19	64.0	− 0.3	99	18	42	10†	45	0.58	− 0.09	0.15	0	6	14	7	10	w.	I. S. Turner.
Cheney	Spokane	2,351	13																	
Cle Elum	Kittitas	1,930	13	62.3	− 1.5	97	30	36	25	56	0.42	+ 0.07	0.38	0	2	25	6	0	sw.	J. A. Belmer.
Clearbrook	Whatcom	140	9	61.2		91	17†	40	6†	43	3.05		0.76	0	10	12	9	10	s.	Geo. Gibbs.
Colfax	Whitman	2,300	23	64.8	0.0	100	30	35	27	56	0.34	− 0.30	0.15	0	5	18[a]	5[a]	7[a]	sw.	I. B. Doolittle.
Colville	Stevens	1,635	12	64.9	− 3.2	95	20	40	3	43	2.93	+ 1.74	0.78	0	9	14	5	12	sw.	W. L. Sax.
Colville Forest Sta	do			62.8		90	30	38	3†	47						11	2	18	s.	U. S. Forest Service.
Conconully	Okanogan	2,300	12	65.2	− 1.3	94	30	44	1	43	1.97	+ 0.87	0.41	0	13	14	5	12		Wm. Baines.
Cowiche	Yakima	1,874	12																	
Crescent	Lincoln	2,250	12																	
Darrington	Snohomish																			
Davenport	Lincoln	2,450	3	64.8[a]		94	30	37[a]	5	44[a]	0.49		0.21	0	3	15	11	5		J. L. Thayer.
Dayton	Columbia	1,700	26	68.0	− 1.5	95	29	43	4	37	0.68	+ 0.07	0.38	0	4	11	19	1	sw.	W. W. Hendron.
Deer Park	Spokane	2,050	3	62.9		94	30	38	3†	51	1.13		0.44	0	7	26	2	3	sw.	Robert Allison, jr.
Detroit	Mason	30	4	64.0		96	18	43	6	43	1.36		0.45	0	4	17	5	9	s.	Walter O. Eckert.
Dixie	Walla Walla	5,000	3								1.62		0.93	0	5	15	3	13	sw.	T. Z. Andrews.
Douglas Lake	Skagit																			
Dryden	Chelan	960	2								0.74		0.52	0	5	25	3	3	nw.	Wenatchee Valley Gas & Electric Co.
Duckabush	Jefferson	380	4																	
Ellensburg	Kittitas	1,571	24	66.5	+ 0.1	98	30	43	4†	49	0.38	+ 0.10	0.23	0	2	25	5	1	nw.	R. L. Barnes.
Ephrata	Grant	1,265	9																	
Forks	Clallam	480	3																	
Fort Simcoe	Yakima	1,427	18																	
Gerome	Stevens	2,900	3	67.1		94	30	42	3†	43	0.85		0.35	0	6	15	9	7		J. H. C. Scurlock.
Goat Lake	Snohomish	2,900	3								3.89		0.92	0	11					C. M. Mackintosh.
Gold Basin	do	1,360		60.4		93	17	42	3†	45	1.38		0.42	0	5	20	7	4	nw.	U. S. Forest Service.
Gold Creek	Yakima	2,600	3																	
Goldendale	Klickitat	1,600	6	66.6		97	16†	38	3	46	0.14	− 0.03	0.08	0	2	8	21	2	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	9								2.08		0.56	0	8	11	11	9	nw.	C. H. Cleaver.
Grays River	Wahkikuk																			
Guler	Klickitat	2,200																		
Hanford	Benton			74.8		104	29	47	2	50	0.09		0.09	0	1	17	9	5	nw.	F. L. Bash.
Hatton	Adams	1,100	7	69.6		102	29†	40	2	52	0.30		0.13	0	4	13	8	10	sw.	A. V. Marion.
Huntsville	Columbia	1,400	4																	
Irene Mountain	Okanogan	3,015	3								2.67		0.66	0	11	9	9	13	s.	Mrs. Manda Shain.
Kennewick	Benton	368	17	74.8[e]	− 2.8	107[e]	20	49[e]	5†	49[e]	0.10	− 0.03	0.07	0	3	15[e]	4[e]	7[e]		R. E. Reed.
Kent	King			63.0		93	18	41	8	39	0.99		0.49	0	6	14	8	9	n.	A. O. Jeffries.

TABLE 1.—*Climatological data for July, 1912. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	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, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Washington—Contd.																				
Kettle Falls	Stevens	1,265	3	66.8	.....	98	30	44	6	50	1.96	.....	0.46	0	8	14	13	4	.....	Harry S. Cole.
Kiona	Benton	430	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kosmos	Lewis	775	6	63.4	.....	98	17	42	14	47	1.52	.....	10.1	0	8	10	16	5	ne.	J. A. Ulsh.
La Center	Clarke	250	15	61.9	− 2.9	96	17	42	6	44	0.85	+ 0.08	0.39	0	6	12	16	3	sw.	Joseph Brothers.
La Crosse	Whitman	1,400	3	66.6	.....	99	30	39	4†	47	0.55	.....	0.41	0	3	16	8	7	w.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	3	.....	.....	.....	.....	.....	.....	.....	0.14	.....	0.04	0	5	10	6	15	nw.	U. S. Reclamation Service.
Lake Kachess	do	2,335	4	61.6	.....	96	30	38	26	46	0.32	.....	0.14	0	5	19	2	10	w.	U. S. Reclamation Service.
Lake Keechelus	do	2,479	4	.....	.....	.....	.....	.....	.....	.....	0.41	.....	0.17	0	3	16	5	10	w.	U. S. Reclamation Service.
Lakeside	Chelan	1,116	21	71.8	− 1.1	99	30	49	2	38	0.15	+ 0.19	0.13	0	2	11	17	3	w.	W. H. VanMeter.
Laurel	Klickitat	1,900	3	.....	.....	.....	.....	.....	.....	.....	0.29	.....	0.18	0	4	13	18	0	w.	Mrs. Minnie E. Strout.
Laurier	Ferry	1,644	2	64.9	.....	97	30†	41	3	49	2.14	.....	0.59	.....	14	6	7	18	s.	Mrs. J. S. Myers.
Lone Tree	Chehalis	14	3	59.4	.....	85	17	49	11	27	1.50	.....	0.74	0	8	7	16	8	nw.	U. S. Engineers Corps.
Longmires Springs	Pierre	2,800	3	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.50	0	2	.....	.....	.....	.....	National Park Ranger.
Lost Creek	Okanogan	3,125	3	.....	.....	.....	.....	.....	.....	.....	1.24	.....	1.06	0	8	12	10	9	.....	P. H. Leese.
McConihe	Grant	1,072	.....	71.6	.....	101	30	42	2	47	0.12	.....	0.12	0	1	17	5	9	w.	Lucien McConihe.
McCumbers Ranch	Yakima	2,182	3	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.30	0	1	13	17	1	w.	Mrs. Mary McCumber.
Moses Lake	Grant	.....	.....	71.6	.....	105	29	39	2	50	0.04	.....	0.04	0	1	26	1	4	sw.	C. C. Ward.
Mottinger	Benton	307	12	74.2	− 1.7	103	16	52	1†	42	0.07	− 0.12	0.05	0	2	21	9	1	w.	G. H. Mottinger.
Mount Pleasant	Clallam	500	.....	60.2	.....	84	15†	40	6	29	1.29	.....	0.65	0	7	17	4	10	nw.	Wm. M. Dorr.
Moxee	Yakima	1,000	20	70.2	− 1.1	101	16†	43	3	51	0.29	+ 0.03	0.16	0	3	16	9	6	w.	H. B. Scudder.
Newport	Stevens	2,400	2	62.0	.....	94	30	38	27	51	2.49	.....	1.14	0	12	15	11	5	sw.	Chas. M. Talmadge.
North Head	Pacific	211	10	56.8	− 0.9	75	17	51	12	20	0.94	+ 0.40	0.22	0	10	4	8	19	nw.	U. S. Weather Bureau.
Northport	Stevens	1,350	13	66.7	.....	99	30	45	2	44	1.48	+ 0.06	0.54	0	10	14	16	1	.....	W. F. Case.
North Yakima	Yakima	1,070	3	71.2	.....	98	16	48	3†	41	0.22	.....	0.15	0	2	22	6	3	nw.	Albert Bender.
Nutland	Klickitat	.....	3	70.9	.....	101	17	50	1†	41	0.39	.....	0.18	0	4	.....	.....	.....	.....	Miss Ruth Shepard.
Odessa	Lincoln	1,540	9	68.2	.....	99	29†	39	3	50	0.19	.....	0.07	0	5	12	18	1	sw.	H. W. Rieke.
Olga	San Juan	50	22	59.8	+ 0.4	84	17	43	6	25	1.28	+ 0.55	0.78	0	6	17	11	3	s.	Cecil S. Willis.
Olympia	Thurston	200	34	63.8	+ 0.8	96	18	40	6	45	1.63	+ 0.94	0.70	0	5	17	2	12	sw.	M. O'Conner.
Omak	Okanogan	850	3	69.8	.....	102	30	43	6	50	1.90	.....	0.68	0	6	16	9	6	n.	Saint John Umbrite.
Oroville	do	922	3	72.1	.....	98	29	50	14	41	1.37	.....	0.75	0	6	11	6	14	n.	M. C. Jackman.
Peola	Garfield	5,000	3	.....	.....	.....	.....	.....	.....	.....	1.97	.....	0.72	0	7	19	9	3	nw.	Samuel Gruell, sr.
Pomeroy	do	1,500	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Crescent	Clallam	200	17	55.8	− 0.5	84	17	40	8	33	1.35	+ 0.74	0.58	0	8	7	14	10	nw.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	22	60.7	− 0.2	84	17	45	9	30	0.93	+ 0.18	0.55	0	6	17	3	11	nw.	F. Plummer.
Prosser	Benton	650	.....	72.2	.....	102	16†	46	8	50	.....	.....	.....	0	.....	23	4	4	.....	E. L. Capps.
Pullman	Whitman	2,550	20	66.3	− 1.2	99	30	41	2	44	0.28	−0.36	0.10	0	5	23	5	3	sw.	State Agricultural College.
Queets River	Chehalis	16	.....	58.0	.....	84	17	41	8	35	2.77	.....	0.91	0	13	10	9	12	w.	C. A. Bullard.
Quiniault	do	300	5	63.0	.....	98	17	43	1	43	2.81	.....	0.68	0	9	13	11	7	w.	A. V. Higley.
Republic	Ferry	2,628	12	62.0	− 2.6	96	30	36	3	54	2.29	.....	0.58	0	13	15	8	8	s.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	4	67.0[d]	.....	91[d]	15	48[d]	1	31[d]	0.72	.....	0.40	0	4	12[d]	4[d]	11[d]	nw.	James W. Nicol.
Ritzville	Adams	1,825	13	.....	.....	.....	.....	.....	.....	.....	0.09	.....	0.09	0	1	.....	.....	.....	.....	Agent N. P. Ry.
Robertsville	Klickitat	.....	.....	61.6	.....	97	16	37	8	48	0.30	.....	0.25	0	2	16	15	0	.....	R. R. Couger.
Rock Lake	Whitman	1,910	6	66.1	.....	96	30	41	5	43	0.47	.....	0.16	0	4	15	5	11	sw.	P. M. Ramsey.
Rosalia	do	2,425	20	64.9	− 0.1	94	30	38	2	40	1.00	+ 0.12	0.65	0	6	16	10	5	sw.	Hans Mumm.
Russells Ranch	Yakima	2,870	3	.....	.....	.....	.....	.....	.....	.....	0.45	.....	0.32	0	4	19	9	3	w.	Mrs. Adella Russell.
Seattle	King	123	20	63.4	− 0.1	87	18	50	7	25	1.15	+ 0.46	0.50	0	11	10	9	12	n.	U. S. Weather Bureau.
Sedro Woolley	Skagit	38	15	62.6	+ 0.2	89	18	42	6	39	1.18	− 0.23	0.37	0	7	14	10	7	.....	Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	5	74.8	.....	102	25	46	1†	36	0.24	.....	0.16	0	3	28	0	3	ne.	C. E. Comstock.
Skagit Power Dam	Whatcom	510	2	66.0	.....	96	17†	43	27	42	2.16	.....	0.64	0	9	16	5	10	.....	C. B. Emery.
Snohomish	Snohomish	100	18	62.4	− 0.3	93	30	37	27†	49	2.15	+ 0.96	0.80	0	6	14	10	7	nw.	James Bylling.
Snoqualmie Falls	King	667	12	65.1	.....	95	18	44	8	42	0.99	− 0.20	0.30	0	9	19	0	12	.....	O. N. Wiswell.
Snoqualmie Pass	do	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Snyders Ranch	Okanogan	2,200	3	61.4	.....	97	30	34	6	57	0.45	.....	0.33	0	3	18	10	3	e.	Geo. M. Snyder.
South Bend	Pacific	.....	17	61.4	− 1.2	92	16	46	30	39	1.01	− 0.01	0.31	0	9	12	9	10	w.	Winifred E. Buckingham.
Spokane	Spokane	1,943	31	66.6	− 2.2	94	30	43	2	38	1.30	+ 0.63	0.45	0	10	9	14	8	sw.	U. S. Weather Bureau.
State University	King	179	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stokes Ranch	Okanogan	2,670	3	.....	.....	.....	.....	.....	.....	.....	1.02	.....	0.40	0	5	9	20	2	w.	Chas. W. Gunn.
Sumner	Pierce	77	4	62.8	.....	92	18	39	8	40	1.50	.....	0.56	0	8	13	8	10	w.	H. E. Thompson.
Sunnyside	Yakima	740	17	69.7	− 2.0	98	16†	40	28	54	0.45	+ 0.22	0.27	0	4	16	13	2	nw.	U. S. Reclamation Service.
Tacoma	Pierce	213	26	63.2	− 0.2	92	18	47	8	29	1.21	+ 0.55	0.53	0	6	13	5	13	n.	U. S. Weather Bureau.
Tatoosh Island	Clallam	85	27	55.6	+ 0.5	82	17	47	19	29	1.48	− 0.30	0.86	0	12	5	9	17	s.	Do.
Tieton	Yakima	2,000	3	63.4	.....	94	29	36	6	46	0.53	.....	0.32	0	3	18	8	5	w.	U. S. Reclamation Service.
Tonasket	Okanogan	945	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Touchet	Walla Walla	556	5	70.4	.....	101	29	44	8†	54	0.05	.....	0.03	0	2	15	14	2	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	3	.....	.....	.....	.....	.....	.....	.....	3.10	.....	1.20	0	5	13	14	4	n.	R. H. King.
Trinidad	Douglas	900	8	75.2	.....	101	29	43	5	34	0.62	.....	0.31	0	2	24	6	1	nw.	J. C. Wheeler.
Vancouver	Clarke	100	37	66.8	− 6.2	97	17	50	3†	44	0.88	− 0.04	0.48	0	6	12	8	11	nw.	A. A. Quarmberg.
Vashon Island	King	40	23	61.2	− 1.8	82	18	45	8	28	0.98	+ 0.44	0.47	0	8	13	6	12	n.	Miss Gertrude McClintock.
Wahluke	Grant	410	8	73.6	.....	101	29	49	2†	44	0.12	.....	0.12	0	1	14	6	11	.....	F. C. Koppen.
Wallace	Okanogan	4,000	3	.....	.....	.....	.....	.....	.....	.....	3.59	.....	0.98	0	9	15	11	5	s.	Geo. A. Wallace.
Walla Walla	Walla Walla	1,000	28	72.6	− 1.5	100	29	49	2	39	0.59	+ 0.20	0.28	0	4	17	8	6	sw.	U. S. Weather Bureau.
Washougal	Skamania	650	12	64.4	− 0.9	89	16†	46	6	36	0.49	− 0.65	0.35	0	4	18	4	9	w.	F. M. Grout.
Waterville	Douglas	2,624	22	64.4[a]	+ 2.3	98	30	40[b]	6	47[b]	0.67	+ 0.22	0.42	0	3	24[c]	3[c]	1[c]	w.	O. R. Hopewell.
Wenatchee	Chelan	.....	.....	72.4	.....	106	30	50	1†	46	0.53	.....	0.35	0	4	19	10	2	n.	A. A. Piper.
Wenatchee (near)	do	1,169	13	68.2	− 1.3	95	30	47	2	31	0.70	+ 0.27	0.31	0	5	16	11	4	w.	Geo. A. Pitcher.
White Salmon	Klickitat	325	.....	69.0	.....	102	18	45	2	44	0.09	.....	0.03	0	3	21	5	5	w.	C. W. J. Reckers.
Wilbur	Lincoln	2,203	13	64.5	0.0	98	30	34	2	47	1.03	+ 0.45	0.55	0	6	14	8	9	sw.	Rollin J. Reeves.
Wind River	Skamania	1,300	.....	64.4	.....	95	15†	41	6	43	0.56	.....	0.29	0	4	12	7	12	se.	U. S. Forest Service.
Winthrop	Okanogan	1,765	.....	67.3	.....	101	30	44	1	53	1.20	.....	0.40	0	7	19	9	3	.....	Methow Trading Co.
Yacolt	Clarke	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.48	.....	0.35	0	4	18	0	13	sw.	C. R. Miller.
Yale	Cowlitz	375	5	64.7	.....	95	14†	44	3	38	0.57	.....	0.36	0	5	15	6	10	sw.	J. A. Williams.
Zillah	Yakima	800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.																				
Albany	Linn	212	30	66.1	− 0.2	100	16	46	25	42	0.58	+ 0.09	0.24	0	8	15	7	9	n.	F. M. French.
Ashland	Jackson	1,963	28	68.2	− 1.6	98	16	43	1†	38	0.86	+ 0.40	0.50	0	3	16	11	4	nw.	G. G. Eubanks.
Astoria	Clatsop	16	51	61.0	− 0.6	87	15	50	6†	29	1.23	+ 0.18	0.39	0	8	17	4	10	nw.	Irving Club.
Austin	Grant	4,050	1	56.0	.....	89	16	30	9	54	0.73	.....	0.26	0	5	12	4	15	w.	U. S. Forest Service.
Avalon Orchard	Hood River	1,650	2	63.5	.....	94	16	38	2	44	0.26	.....	0.10	0	5	21	6	4	nw.	
Baker	Baker	3,466	22	62.2	− 2.8	89	16	38	1	40	1.65	+ 1.22	0.80	0	7	16	9	6	nw.	U. S. Weather Bureau.
Bay City	Tillamook	14	18	59.8	+ 0.5	83	15	44	6	34	0.81	− 0.83	0.40	0	8	13	5	13	nw.	John O. Bozorth.
Bend	Crook	3,629	8	62.4	.....	100	16	32	1†	54	1.11	.....	0.40	0	6	22	7	2	sw.	Bend Bulletin.
Black Butte	Lane	1,200	11	60.8	− 3.6	91	15	41	2	45	0.40	− 0.43	0.15	0	3	27	3	1	nw.	Wm. Harris.
Blalock	Gilliam	237	14	76.4[a]	− 1.6	107[a]	16	52[a]	3	42[a]	T.	− 0.13	T.	0	0	16	10	5	w.	Geo. W. Long.
Brogan	Malheur	2,600	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. B. Cox.
Buell	Polk	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. V. D. Paul.
Burns	Harney	4,157	21	.....	.....	.....	.....	36	1	.....	0.91	+ 0.70	0.50	0	4	12	13	6	.....	J. C. Welcome, jr.

TABLE 1.—*Climatological data for July, 1912. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	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, 0.01 inch or more.	Sky. Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.
Oregon—Continued.																				
Cascade Locks	Hood River	100	22	66.0	− 1.9	94	15	49	3†	39	0.47	− 0.30	0.18	0	4	17	4	10	w.	Val. W. Tomkins.
Cazadero	Clackamas	503	3	65.0[a]		95[b]	17	46	3	41	0.64		0.23	0	8	14	2	15	nw.	Alf. Drill.
Cliff	Lake	4,300	5	58.5		94	16†	28	3	57	0.59		0.33	0	4	17	6	8	nw.	John C. Green.
Condon	Gilliam	2,884	5	63.2		95	16	40	8†	43	0.90		0.43	0	8	13	5	13	w.	C. H. Williams.
Corvallis	Benton	266	24	65.2	− 0.1	97	15	43	24	45	0.17	− 0.11	0.15	0	2	17	2	0	nw.	Oregon Agricultural College.
Crescent	Klamath	4,400		56.6		95	16	26	9	60	0.26		0.07	0	6	21	8	2	sw.	A. M. Caisse.
Dayville	Grant	2,200	18	64.3	− 4.6	94	16	40	9	47	0.52	− 0.33	0.13	0	7	16	11	4	nw.	Dr. J. Campbell-Martin.
Deadwood	Lane	350	2	63.8		95	16	46	1†	38	0.34		0.19	0	2	15	8	8	w.	Jos. Slemmons.
Doraville	Columbia	600	10	62.0	− 0.6	94	17	47	6†	35	1.75	+ 0.85	0.37	0	13	13	5	13	nw.	Jos. Hackenberg.
Drain	Douglas	300	10	65.0		99	16	43	1	44	0.20		0.12	0	3	11	13	7	nw.	Ira Wimberly.
Echo	Umatilla	625	8	71.4		102	16	48	1†	46	0.35		0.28	0	3	15	4	12	w.	R. B. Stanfield.
Ella	Morrow	830	8																	Carl F. Troedson.
Eugene	Lane	449	22	65.4	− 0.2	95	16	46	1	35	0.57	+ 0.03	0.36	0	4	17	5	9	nw.	University of Oregon.
Fairview	Coos	142	16																	Wm. Bettys.
Forest Grove	Washington	220	23																	Pacific University.
Gardiner	Douglas	72	23																	Hon. J. S. Gray.
Glendale	do	1,441	8	68.0		105	16	41	1†	51	0.16		0.12	0	2	23	8	0	nw.	B. J. Simpson.
Glenora	Tillamook	575	21	62.2	− 0.8	98	17	42	2†	50	1.49	+ 0.34	0.64	0	7	16	3	12	nw.	Mrs. Jennie A. Reeher.
Gold Beach	Curry	40	11	58.5		72	15	45	1	25	0.20	− 0.05	0.20	0	1	30	1	0	n.	John W. Riley.
Grants Pass	Josephine	956	24	68.0	− 1.6	105	16	37	1	50	T.	− 0.11	T.	0	0	20	9	2	sw.	John B. Paddock.
Grass Valley	Sherman	2,381	11	63.6		98	15†	38	4†	53	0.14		0.12	0	2	18	3	10	w.	Agent O.-W. R. & N. Co.
Gurdane	Umatilla	3,500	3	65.6		91	16	43	1	31	0.29		0.16	0	3	19	10	2	w.	Miss Belle Ely.
Headworks	Clackamas	719	10	63.6		99	17	46	3†	45	0.92	− 0.45	0.30	0	6	18	4	9	sw.	Portland Water Works.
Heppner	Morrow	1,950	22	66.2	− 2.6	95	16	46	2	38	0.72	+ 0.15	0.35	0	7	13	16	2	w.	Frank Gilliam.
Hermiston	Umatilla	451	5	71.6		101	16†	48	1†	50	0.03		0.03	0	1	25	6	0		C. W. Kellogg.
Hermoso Rio	Crook	2,110	2	65.2		98	16	40	2†	50	0.11		0.05	0	3	21	5	5	e.	Carl T. Hubbard.
Hood River	Hood River	300	22	68.9	+ 1.6	100	15†	42	2†	47	T.	− 0.19	T.	0	0	16	5	10	w.	H. L. Hasbrouck.
Hood River No. 2	do	485	1	68.6		101	18	46	2	45	0.02		0.02	0	1	22	5	4	w.	W. H. Lawrence.
Hood River, No. 3	do	620	1	67.6		101	15†	40	2†	58	0.19		0.10	0	2	16	15	0	nw.	W. A. Newman.
Hood River, No. 4	do	850	1	66.4		97	15†	41	2	45	0.24		0.19	0	3	19	8	4	nw.	Fordham B. Kimball.
Huntington	Baker	2,165	11																	Agent O.-W. R. & N. Co.
Jacksonville	Jackson	1,640	24	68.6	− 1.3	99	16	39	1	41	0.03	− 0.16	0.03	0	1	21	6	4		E. Britt.
Joseph	Wallowa	4,400	23	60.8	− 1.8	91	17	33	2	38	2.36	+ 1.45	0.72	0	10	11	7	13	s.	F. F. McCully.
Klamath Agency	Klamath	4,169	4	59.4		92	19†	34	3	53	0.80		0.80	0	1	25	6	0	s.	Edson C. Watson.
Klamath Falls	do	4,100	23	63.6	− 4.5	95	16	33	1	35	0.18	− 0.02	0.07	0	4	19	8	4	nw.	Augusta J. Hayden.
La Grande	Union	2,784	24	64.2	− 4.5	94	29	39	1	44	1.36	+ 0.72	0.28	0	9	19	6	6	nw.	W. A. Worstell.
Lakeview	Lake	4,825	29																	Ralph C. Koozer.
McKenzie Bridge	Lane	1,400	11	64.1	− 0.07	100	16†	37	26	54	0.92	− 0.24	0.40	0	7	14	0	17	sw.	Geo. Frissell.
McMinnville	Yamhill	182	25	65.6	+ 0.9	99	16	43	26	49	0.34	− 0.04	0.10	0	5	17	6	8	nw.	M. E. Pettit.
Marshfield	Coos	34	11	58.6	− 0.8	78	15	44	1†	32	0.10		0.06	0	2	21	2	8	nw	U. S. Weather Bureau.
Meadow Brook Ranch	Hood River	850	1	66.2		95	16†	44	2	43	0.08		0.05	0	2	23	7	1	w.	John W. Palmer.
Medford	Jackson	1,425	2	69.7		103	16	41	1†	47	0.20		0.20	0	1	23	6	2	nw.	U. S. Weather Bureau.
Merrill	Klamath	4,070	7	62.6[a]		94[a]	16	30[a]	1	46[a]	0.25		0.25	0	1	25	4	2		Mrs. Agness Ritchson.
Metolius	Crook	2,525	2																	W. E. Lottman.
Mikkalo	Gilliam	1,400	6	70.4		103	16	41	4	44	0.10		0.10	0	1	28	2	1	w.	Frank Little.
Miramonte Farm	Clackamas	195	24	65.6	+ 0.4	94	16	47	3†	39	0.93	+ 0.39	0.41	0	7	17	2	12	ne.	G. Muecke.
Monroe	Benton	350	15	64.4	− 0.9	94	15†	44	3	38	1.06	+ 0.74	0.72	0	4	20	4	7	nw.	L. A. Peek.
Mount Angel	Marion	485	26	66.2		92	17	49	3	33	0.72		0.27	0	5	16	2	13	s.	Dr. Urban Fischer.
Musick	Douglas	5,000	3	56.1		87	16	34	1	30	1.10		0.70	0	5	14	3	14	sw.	Alex. Lundberg.
Newport	Lincoln	69	25	56.0	− 1.7	79	15	45	10†	34	0.67	− 0.19	0.50	0	4	12	9	10	nw.	Wm. Mathews.
Odel	Hood River	1,000	1	67.5		98	16	40	2	43	0.17		0.10	0	2	19	5	7		T. A. Decker.
Ortley	Wasco	1,600	1	65.0		96	16	39	11	38	0.20		0.10	0	2	19	6	6	w.	L. D. Firebaugh.
Paisley	Lake	4,500	9																	E. C. Woodward.
Parkdale	Hood River	1,450	1	61.3		93	16	36	2†	49	0.14		0.14	0	1	14	16	1	w.	Isaac Beal.
Pendleton	Umatilla	1,070	23	69.0	− 2.4	100	16	45	4	48	0.39	− 0.03	0.25	0	3	16	9	6	w.	E. F. Overill.
Pilot Rock	do	1,817	4	68.7		101	17	44	1†	44	1.28		0.70	0	5	24	2	5	nw.	John P. McManus.
Pompeii	Clackamas	3,879	17																	E. Coalman.
Portland	Multnomah	57	42	67.4	+ 1.1	96	17	53	3	33	0.48	− 0.06	0.23	0	5	15	4	12	nw.	U. S. Weather Bureau.
Port Orford	Curry	80	7																	J. D. Loucks.
Prairie City	Grant	3,425	1	65.4		102	16	40	4	54	0.35		0.12	0	7	17	10	4	nw.	A. M. F. Kirchheimer.
Prineville	Crook	2,864	16																	Geo. Summers.
Prospect	Jackson	2,800	6	64.2		99	16	30	1†	51	0.37		0.19	0	4	12	17	2	w.	H. C. Stoddard.
Ramsey	Wasco	1,350	11	63.0		92	19	38	2†	44	0.21		0.10	0	3	19	6	5	w.	Mrs. Iva B. Collins.
Range	Grant	3,500	4	59.4		92	16†	35	8	52	0.95		0.30	0	4	16	12	3		Mrs. Emma Arbuckle.
Redmond	Crook		1	62.8		97	16	38	3†	49	0.15		0.12	0	2	18	12	1	w.	E. E. Foote.
Richland	Baker	2,350	11	67.0		97	17†	41	2†	45	1.35		0.95	0	3	19	6	6	sw.	L. G. Morgan.
Riverside	Malheur	3,000	13																	Mrs. Leah Fairman.
Roseburg	Douglas	510	34	67.2	+ 1.1	100	16	47	1	43	0.20	− 0.14	0.16	0	2	13	15	3	n.	U. S. Weather Bureau.
Salem	Marion	120	22	66.5	+ 0.1	94	16	49	3	32	0.32	− 0.16	0.12	0	4	17	2	12	nw.	M. P. Baldwin.
Seneca	Grant	4,800	1	54.0		87	16	29	23	49	0.79		0.40	0	3	16	7	8	nw.	E. J. Southworth.
Silver Lake	Lake	4,700	15	61.6	− 3.0	95	16	31	1	54	0.76	+ 0.26	0.21	0	6	18	10	3	n.	G. W. Marvin.
Siskiyou	Jackson	4,115	4	61.1		92	16	37	1	33	0.19		0.12	0	2	3	22	6	ne.	U. S. Weather Bureau.
Sparta	Baker	4,150	21	62.1		92	16	35	2	43	2.15		0.95	0	9	15	8	8	w.	J. A. Wright.
Stafford	Clackamas	400	16	65.2	− 1.1	96	17	47	3†	36	0.94	+ 0.09	0.31	0	8				ne.	John P. Gage.
The Dalles	Wasco	112	38	71.8	+ 0.5	100	16	47	2	40	0.02	− 0.14	0.01	0	2	22	3	6	w.	S. L. Brooks.
Toledo	Lincoln	75	22	57.4	− 3.7	92	15	40	1	15	0.40	− 0.16	0.30	0	2	24	6	1		C. B. Crosno.
Umatilla	Umatilla	340	24	74.0	− 1.4	103	29	51	2	46	0.06	− 0.12	0.06	0	1	15	2	14	sw.	Mrs. Helen T. Duncan.
Union	Union	2,787		61.9		90	16	38	1	44	1.50		0.39	0	10	10	17	4	n.	Robt. Withycombe.
Vale	Malheur	2,242	20	69.6	− 0.8	101	17†	35	3	53	0.14	− 0.14	0.10	0	3	29	2	0	ne.	H. P. Osborne.
Van	Harney	3,506																		Geo. Howe.
Vida	Lane	980	1	64.1		94	16	44	8	38	0.49		0.16	0	5	15	6	10	w.	W. H. Pendell.
Waldo	Josephine		1	66.2[b]		101[b]	16	39[b]	1	44[b]	T.		T.	0	0	20[b]	8[b]	1[b]	n.	M. M. Lewis.
Wallace Orchard	Polk	170	3	64.8		95	17	44	3	40	0.37		0.12	0	6	12	12	7		Chas. A. Park.
Wallowa	Wallowa	2,935	9	61.6		95	29	37	8†	49	1.30		0.56	0	6	10	8	13	nw.	L. J. Coverstone.
Wamic	Wasco	1,500	11																	A. J. Swift.
Warmspring	Crook	1,500	10																	Claud C. Covey.
Wasco	Sherman			69.0		99	16	48	2	44	0.08		0.08	0	1	21	5	5	w.	
Westfall	Malheur	3,000	1																	H. M. Gilliam.
Weston	Umatilla	1,800	20	66.6		95	16	43	7	44	0.04		0.04	0	3	9	8	14	sw.	M. A. Baker.
Williams	Josephine	1,368	20	65.4[c]	− 0.9	99[b]	16	37[c]	1†	47[c]	0.01	− 0.17	0.01	0	1	19[c]	5[c]	4[c]	n.	Francis J. LeRoy.
Yonna	Klamath	4,146	5	59.5		93	16	26	1	50	0.30		0.27	0	2	2	25	4	w.	Jacob Rueck.

[a], [b], [c], 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.

TABLE 2.—*Daily precipitation for July, 1912. District No. 12, Columbia Valley.*

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	
Montana.																																	
Anaconda	Missoula	.43	.24	.05		.07	.02	.10		T.				T.					.01		.32	.02	.11		.01	T.				T.		.40	1.78
Butte	do	.30	.10	.30		.05	.10	.18			T.	T.		T.		T.			T.		.15	.05	.20									.20	1.63
Columbia Falls	Flathead	.42	.15			T.	.05	.30	.35	.32	.06	.20		.35								.11	.29		.07								2.67
Como	Bitter Root	.20	.05			.07								.07								.39	.02									.06	0.86
Dayton	Flathead	.30	.17			T.			.17			.14			T.						1.39		.50	.10									2.77
East Anaconda ‖	Missoula	*	.94	.28		.31	*	.18		.02				T.	T.				T.	T.		.45		.15		T.	T.					.18	2.51
Fortine	Kootenai	.70	.36		T.	.05	.02	.16	.24	.51	.08	.33		.05	.23		T.				T.	.23	.24	.04	T.		T.				T.		3.24
Hamilton	Bitter Root	.70	T.	.02		.03		T.	T.					.02	T.						.04	.40	.06									.01	1.28
Hat Creek	Missoula	.50	.15	.60	.05	.05		.06	.05					.15	.14						.17		.39		T.	T.	T.					.09	2.40
Haugan	do	.32		.10			.02	.01	.01			.21	T.	.10						T.	.03		.03	.06								T.	0.89
Heron	Columbia	.47				.23	T.	.21	.18			.16		.26	.01					.21		.12	.15	.14	.02								2.16
Kalispell	Flathead	.23	.02	T.		.01		.22	.17	.03		.20		.22						.01		.17	.23	.05		T.						T.	1.56
Libby	Kootenai	.30				.18	.01	T.	.15	.01		.02		.03	.06		T.			T.	T.	T.	.24		.01								1.01
Lost Creek	Missoula	.24	.76	.40			.16														.12		.10									T.	1.78
Missoula	do	.62	.10	.13		.10		.11	.02			.24	.04								.10	.14	.21	.08								.05	1.94
Ophir	do	.85	.26	.83		.16		.02	.03		.13			.13	.16			T.			.33	.18	.15										3.23
Ovando	do	.40	.16	T.				T.				.10	.07	.02						.12		.11	.13	T.								.04	1.15
Philipsburg	do	.82	.21	.21		.14	T.	.07													.20	.17	.48		T.							T.	2.30
Plains	Columbia																																
Pleasant Valley	Kootenai	.31	T.	T.	.15	.02	T.	.22	.29	.01	.02		.22	.26	T.			T.	T.	T.	.02	.17	.16	.04		T.							1.89
Polson	Flathead		.38	.06			.10															.18	.20	.37									1.29
Saint Ignatius	do	.69	.05	.04		.14	T.	.11	.04				T.									.48	.77	.03								.40	2.75
Saltese	Missoula	.52												.40									.25										1.17
Stevensville ‖	Bitter Root	.71	.01			T.		.10	T.			.03			.05						.17	.12	.18									.03	1.40
Thompson Falls	Columbia	.47		.08		.05		.07	.04				T.	.02							.06		.08	.25									1.12
Willow Glen stock farm.	Missoula																																
Wyoming.																																	
Afton	Snake			.28	.08															.66	.04	.10									.10	.95	2.21
Alta	do	.04	.01	.53			.02	.02	.03					.15						.80										.35	.15	.34	2.44
Bechler River	do		.40	.02	1.20		0.38							0.20					.40	.30	.20										.40	.30	3.80
Bedford	do		.08	.08	T.								T.							.75	.16										.12	.78	1.97
Moran	do	.18	.13		.05				.09					.25	.06					.51	.02										.24	.52	2.05
Snake River	do		.40	.40	T.	T.	.06	T.	.14					.08	.73					1.23		.09	T.								.28	.64	4.05
Nevada.																																	
San Jacinto	Snake																				.02											.07	0.09
Utah.																																	
Standrod	Boxelder			.15			T.					.01		.03					.16		.09	.05					.07			T.	.95	.50	2.01
Idaho.																																	
Albion	Snake																																
Almo	do						T.	T.										.25			1.05					.20			1.42	.30		.40	3.62
American Falls	do		.08		.43		.12							.18							.18									.06	.98	.73	2.76
Arrowrock	Boise																					.65								.10	.12		0.87
Blackfoot ‖	Blackfoot		T.	.02			.01					.08		T.					T.	.08	T.									.70	.87	.43	2.19
Blackfoot Dam	do			.50	.05									.12	.05				.06	1.15		.10									.22	.20	2.45
Bogus Creek	Payette																																
Boise	Boise		T.																T.	T.	T.	T.	T.							T.	1.22	.05	1.27
Bonners Ferry	Kootenai	.38			T.	.14		.05	.05			.12										.57	.08	T.	.04	.40							1.83
Boulder Mine	Boise		.23																T.				T.							24.		.60	1.07
Buhl	Snake	T.	.03											.01					T.	T.	.03										.10	.01	0.18
Caldwell	Boise		.02																T.	T.	.04	.03	T.							.01		1.12	1.22
Caldwell Experiment Station.	do		.03																	.12		.06									.58		0.79
Camas	Lost River Region.																																
Cambridge	Weiser		T.	.07								.04							T.	.27												.27	0.65
Cedar Creek Dam	Snake	T.	.01									T.		T.					T.	T.	.12									T.	T.	.01	0.14
Chesterfield	Port Neuf																																
Clarks Fork	Pend Oreille	.50				.12		.37	.14			.09		.18						.01		T.	.13	.18	.08								1.80
Clyde	Lost River Region.																																
Council	Weiser		.36								T.									.06	.02										.45		0.89
Culdesac	Clearwater													.10									.44										0.54
Deary	do	.51						.11																									0.62
Dent	do																																
Driggs	Snake	T.	T.	.45		T.		T.						.16						.68										.90	.13	.65	2.97
Emmett ‖	Payette			T.											T.						T.	.05	T.								T.	.84	0.89
Forney	Salmon																																
Garden Valley	Payette			.14										T.						T.	T.	.25										.63	1.02
Garnet	Snake																																
Glenns Ferry	do																				T.											.55	0.55
Gooding	Wood-Malad			T.																.01		.02								T.	.10	.20	0.33
Grand Forks	St. Joe	.48	.16	.07		.05	.04	.20	.06			.01								*	*	*	*	.18								T.	1.25
Grandview	Snake																			.18		.01								.09	.03	.01	0.32
Grimes Pass ‖	Boise		.21												T.				T.	.01		T.								.01	.53		0.76
Guffey	Snake		.01																T.	.02	.23											.47	0.73
Hailey	Wood-Malad	.18																	T.	T.		.03									T.	1.22	1.43
Hollister	Snake		T.											.06					T.	T.	.03								T.	.34	.13	.10	0.66
Hotspring	Bruneau																				.63										T.		0.63
Idaho Falls	Snake	.01		.03			.06												T.	.10											1.07	.33	1.60
Indian Valley ‖	Weiser		T.	.06		.03						.05																				.24	0.38
Irwin	Snake	T.		.20	T.	.12	.30	.38						T.												.15		.16	.20	.07	.14	.29	2.01
Kellogg ‖	C'ur d'Alene	.38	.29	.13	.15				.15						.26								T.	.04									1.40
Kirkham	Payette			.15																	T.	T.								.30			0.45
Kooskia	Clearwater	.35		.20				.10													T.	.45	.10										1.20
Lakeview	Pend Oreille	.70				.05		.03				.23		.36	.15					.14			.40										2.06
Landore	Snake		.04	.37				.05											T.		T.	.18	.29							T.	T.	.40	1.33
Leadore	Salmon	.06				.02	.05	.08											.01	.02	.03	.18	.08							T.		.65	1.18
Lewiston	Clearwater		.12	.02	T.									T.								.07	.03										0.24
Little Camas	Boise	T.	.06																T.	T.	.02								T.		T.	.88	0.96
Loon Creek	Salmon	.70		.08		.06		.06						T.					T.	.07		.25	.01							.07	.07		
Mackay	Lost River Region.																		T.	.10												.64	0.74

TABLE 2.—*Daily precipitation for July, 1912. District No. 12*—Continued.

Stations.	Watershed.	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.
Idaho—Continued.																																	
Meridian	Boise		T.																	T.	.01	.01										.14	0.16
Mesa ‖	Weiser																																
Middle Fork	Clearwater	.35	.05	.30				.04	.03			.09		.04								.02	.46										1.38
Milner	Snake	T.	T.																.06		.04									.04	.29	.06	0.49
Moscow	Palouse			.14											.12									.18									0.44
Mountainhome	Snake																				.15											.52	0.67
Murtaugh ‖	do																				T.										.26		0.26
New Meadows	Salmon																																
Nezperce	Clearwater	.21	.10					.03						.08						.08	.35	.14	.10										1.09
Oakley	Snake																		.30		.20									1.25	.67	.35	2.77
O'Hara Bar	Clearwater							.60														*	*	.25									0.85
Orofino	do	.36	.01	.13		.01		T.															.17										0.68
Payette	Payette		T.																T.	T.	.07									T.	.05	.14	0.26
Pebble	Port Neuf				T.														*	*	1.44											.33	1.77
Pierson	Salmon	.49																											.22		.18		0.89
Pleasant Valley	Boise																				.06									T.	T.	.87	0.93
Pocatello	Port Neuf		T.		.02		T.						T.	.09					T.	.02	T.	.01					T.			.28	.44	.77	1.63
Pocatello Nursery	do		.02		.01		T.							.19						.20	.23	.14					.46			T.	.62	.63	2.50
Poplar	Snake			.05			.05													.12											.65	.14	1.01
Porthill	Kootenai	.40				.40	.04	.09		.33	.06			.60								.07	.13		.22	.10							2.44
Priest River Experiment Station:																																	
No. 1	Pend Oreille	.72	.04		.01	.25	T.	.10	.06			.38	T.	.30	.02					T.	.04	T.	.17	.12	.03	.34	T.						2.58
No. 2	do	.64	.03		.01	.25	T.	.06	.06			.38	T.	.29	.02					.03		T.	.21	.13	.03	.29	T.						2.43
No. 3	do	.69	.04		.01	.25		.08	.06			.46	T.	.29	.02					.04		.01	.18	.13	.03	.28	.01						2.58
Pyle Creek	Payette		.19				.01														.06	.04										.62	0.92
Richfield	Wood-Malad													T.					T.			T.								.06	.04	.44	0.54
Roseberry	Payette	.20	.21	T.		.02	T.					.03										.03									.03	.43	0.95
Roseworth	Snake																		T.	.01	.38								T.				0.39
Rupert	do			.03										.10					.17												.85	.40	1.55
St. Anthony ‖	do																																
St. Maries	St. Joe	.50					.04	.06	T.					.34									.13		.01							T.	1.08
Salmon	Salmon							.04																								.85	0.89
Sandpoint	Pend Oreille	.56					.20	.04	.11			.40							.03			.12	.15			.36							1.97
Sheep Hill	Boise																		T.	T.	.01	T.								.15	.05	1.03	1.24
Shoshone	Wood-Malad	T.	T.											T.					T.		T.										T.	.01	0.01
Silver City	Owyhee		.18																		.36										.38	.12	1.04
Smith Prairie	Boise																																
Soldier Creek	Wood-Malad	.18	.07																												.03	2.79	3.07
Spirit Lake	Pend Oreille	1.08			T.	.05	.17	.03	.20					.26						.03						.33							2.15
Springfield	Snake		T.				.11							T.																T.	1.08	.34	1.53
Sugar ‖	do	.10		T.												.14															.48	1.30	2.02
Sunnyside	do																													.38	.10	1.10	1.58
Tripod Mountain	Payette			.10																											.20	.91	1.21
Twin Falls	Snake													T.					T.		.12	.01								.35			0.48
Vernon	do		T.				.15	.15								T.					.40	T.	T.							.56	.57	1.83
Wallace	Couer d'Alne	.47	T.	.05			.10	.18	.08					.22	.02					.03			T.	.06									1.21
Weiser	Weiser		.05																T.			T.										.04	0.09
Wendell	Wood-Malad	T.	T.																		T.	.04									T.		0.04
Washington.																																	
Aberdeen	Coast	.17	.07	.05	.09	.11	.07	.16															*	*	*	*	*	*	*	.62			1.34
Anacortes	Puget Sound																																
Baker	do				T.		.26							.15									.21	.37	.28	.09							1.36
Bellingham	do	.58			.08			.25						.10									.03	.04	.25								1.33
Bellingham (near)	do																						.01	.10	.11								
Beverly	Columbia																																
Blaine	Puget Sound	.04	.50		.04	.08		.18						.04										.50	.08	.02	.02						1.50
Blewett	Wenatchee																																
Bremerton	Puget Sound	.41	.40						.03														.25		.08	.03							1.20
Brewster	Columbia	.13			.01	.01		.16														T.	.15	.03	.20	T.						.01	0.70
Bumping Lake	Yakima	.02	T.		T.																		.01									.02	0.05
Cedar River	Puget Sound	.09			.07			.20						.13								.12	.08	.09	.38								1.16
Centralia	Coast	.14	.15		T.	T.		.19														T.	.03	T.	.05	.02						T.	0.58
Cheney	Spokane																																
Cle Elum	Yakima	.38	.04																														0.42
Clearbrook	Puget Sound	.09	.76		.07	.35		.20	.18															.62	.68	.01	.09						3.05
Colfax	Palouse		.06	.05										.15									.03		.05								0.34
Colville	Columbia	.63				.38	.18		.05					.78								.12	.42	.29	.08								2.93
Conconully	Okanogan	.24	.29		.03	.10	.02	.23	.01													.01	.25	.14	.10	.41						.14	1.97
Cowiche	Yakima																																
Crescent	Spokane																																
Darrington	Puget Sound																																
Davenport	Columbia							.12						.21											.16								0.49
Dayton	do		.38	.04			T.	T.						T.							T.	.11	.15	T.							T.		0.68
Deer Park	Spokane	.25			T.			.30	.02			.01		.44						.06					.05								1.13
Detroit	Puget Sound	.45	.44		T.																			T.	.41	.06							1.36
Dixie	Columbia	.20	.46											.01								.93	.02									T.	1.62
Douglas Lake	Puget Sound																																
Dryden	Wenatchee	.52	.02																		.07	T.			.11							.02	0.74
Duckabush	Puget Sound																																
East Sound	do																																
Ellensburg	Yakima	.23	.15																											T.	T.		0.38
Ephrata	Columbia																																
Forks	Coast																																
Fort Simcoe	Yakima																																
Gerome	Columbia	.07				.06							.35									T.	.23	.11	.03							T.	0.85
Goat Lake	Puget Sound	.92	.70			.53		.32	.03					.30	.01								.05	.23	.54	.26							3.89
Gold Basin	do						.36	.42						.20								T.	.10	T.	.30								1.38
Gold Creek	Yakima																																
Goldendale	Columbia	.06	.08																	T.	T.			T.							T.		0.14
Granite Falls	Puget Sound	.30				.56		.28						.12									.39	.19	.21	.03							2.08
Grays River	Coast																																
Hanford	Columbia	.09																					T.										0.09
Hatton	do	.10	.05											.13											.02								0.30
Huntsville	do																																
Irene Mountain	do	.55	.13			.40	.10	.06				.01	.33									T.	.40	.66	.01	.02							2.67
Kennewick	do	T.	.07																	T.	.02			T.	.01								0.10
Kent	Puget Sound	.49	.11		.01									T.									T.	.09	.26	.03							0.99
Kettle Falls	Columbia	.42				.18		.07						.46								.16	.27	.38	.02								1.96
Kiona	Yakima																																

TABLE 2.—*Daily precipitation for July, 1912. District No. 12*—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	
Washington—Con.																																	
Kosmos	Columbia	1.01	.06	T.	T.	.05	T.	.16														.06	.01		.14	T.					.03		1.52
La Center	do	.39			.11	T.	.15	T.													.10	.07		.03	T.							T.	0.85
La Crosse	Palouse	T.	T.	T.				T.	T.					.12						T.			.41	T.	.02							T.	0.55
Lake Clealum	Yakima	.02	.04	.02	T.	T.								T.										.04	.02								0.14
Lake Kachess	do	.14	.04			.05																		.04	.05								0.32
Lake Keechelus	do	.17																						.08	.16								0.41
Lakeside	Columbia	T.						.02	T.															T.	.13							T.	0.15
Laurel	do	.18	.05																					.01	.05								0.29
Laurier	Kettle	.51	.19		.01	.24	.01	.09	.06	.09	.04			.59	T.						.01	T.	.06	.19	T.	.05								2.14
Lester	Puget Sound																																
Lone Tree	Coast	.02	.23		.02	T.	.01	.32				T.	T.	T.							T.			T.	.74	.08		T.				.08	1.50
Longmires Springs	Puget Sound	.30																				.20											0.50
Lost Creek	Columbia	.05	.01			.01		.04	.01	.03				T.									1.06	.03								T.	1.24
McConihe	do	.12	T.																			T.									T.		0.12
McCumbers Ranch	do		.30																														0.30
Moses Lake	do	.04																					T.		T.						T.		0.04
Mottinger	do							T.																	.05							.02	0.07
Mount Pleasant	Coast	.21	.65		.15		.11							.05									T.	.04	.08								1.29
Moxee	Yakima	.16	.09																		T.	T.	T.	T.	T.						T.	.04	0.29
Newport	P'nd Oreille	1.14			T.	.09	.03	.05	.05			T.		.59	.03					T.		.11	.04	.11	.04	.21							2.49
North Head	Coast	.06	.08		.02		.01	.19														.22	.06	.08	.21	.01							0.94
Northport	Columbia	.49			.03		.04	.04	T.				.54	.17								.04	.07	.02	.04							T.	1.48
North Yakima	Yakima	.15	.07																		T.	T.	T.	T.	T.							T.	0.22
Nutland	Columbia	.06	.18																			.12									.03		0.39
Odessa	do	.02	.03						T.					.07							T.		T.	T.	.02							.05	0.19
Olga	Puget Sound	.14	.64		T.			.10						.06									.05		.29								1.28
Olympia	do	.70	.31		.01			T.																T.	.44	.17							1.63
Omak	Okanogan	.27				T.		.16															.38	.28	.68							.13	1.90
Oroville	do	.75																				.13	.03	.20	.15							.11	1.37
Parker	Yakima																																
Peola	Snake	.72	.23	.15			.20							T.						T.	T.	.61	.05	.01									1.97
Pomeroy	do																																
Port Crescent	Coast	.02	.47		.01																		.01	.41	.38	.02						.03	1.35
Port Townsend	Puget Sound	.11	.55		T.		T.	.15															.01	.05	.06								0.93
Pullman	Palouse	.05	.07					.03						.10									.03										0.28
Prosser	Yakima																																
Queets River	Coast	.17	.14	T.	.09	.08	T.	.05			T.	T.		.04							.03	.04	.39	.36	.91	.37	T.	T.	T.	T.	T.	.10	2.77
Quiniault	do	.10	.40		.05			.20	T.														.50	.68	.20	.65						.03	2.81
Republic	Kettle	.26	.20			.28	.03	.13	.09	.07				.22								.02	.58	.33	.03	.05							2.29
Rex Creek	Columbia	.12	.14																					T.	.40							.06	0.72
Ritzville	do	.09																															0.09
Robertsville	do	.05	.25																	T.		T.		T.	T.							T.	0.30
Rock Lake	Palouse							T.						.16								.08		.13		.10							0.47
Rosalia	do	.06						.09						.65								.05	.12		.03								1.00
Russells Ranch	Yakima	.02	.02																		.32	.09											0.45
Seattle	Puget Sound	.27	.25		.03		.01	.03			T.			.05						T.		.04	.06	.06	.28							.07	1.15
Sedro Woolley	do	.22			.02	.11		.17															.37	.25	.04								1.18
Sixprong	Columbia	.05	.03																													.16	0.24
Skagit Power Dam	Puget Sound	.30	.64			.03		.13						.24									.07	.14	.35	.26							2.16
Snohomish	do	.60				.80		.30															.25	.10	.10								2.15
Snoqualmie Falls	do	.30	.12	T.	.05	.01	T.	.04						.22									T.	.12	.10	.03							0.99
Snoqualmie Pass	do																																
Snyders Ranch	Columbia		.33					.04																.08									0.45
South Bend	Coast	.16	.31		.06	.02	.03	.06															.07	.19	.11								1.01
Spokane	Spokane	.09				.01	.06	.15						.45						T.	.13	.04	.19	T.	.02	.16							1.30
State University	Puget Sound																																
Stokes Ranch	Columbia	.15	.40		.04																	T.	T.	.19	.24								1.02
Sumner	Puget Sound	.56	.04		.12			.02														T.	.01	.16	.53	.06							1.50
Sunnyside	Yakima	.04	.07																			.27	.07	T.									0.45
Tacoma	Puget Sound	.33	.27		T.	T.		T.						T.							T.	T.	.03	.06	.49	T.						.03	1.21
Tatoosh Island	Coast	.04	T.		.05		.03	.02					.01	.01								.03	.08	.13	.82	.22						.04	1.48
Tieton	Yakima	.32	.09	T.				T.													T.	.12											0.53
Touchet	Columbia		.02					T.												T.	.03	T.	T.	T.	T.						T.	T.	0.05
Touchet Ridge	do	.25	.65	.80										.20								1.20											3.10
Trinidad	do	.31																														.31	0.62
Vancouver	do	.12	.02																			.48	.14		.09							.03	0.88
Vashon Island	Puget Sound	.16	.22	T.	T.			.01	T.					.02									.03	.05	.47	.02	T.						0.98
Wahluke	Columbia	T.																			T.	T.	.12	T.	T.							T.	0.12
Wallace	Okanogan	.49	.14		.04	T.		T.	.25	.36													.36	.98	.72							.25	3.59
Walla Walla	Columbia	T.	.28	T.				T.						T.						.05	.25	.01		T.							T.		0.59
Washougal	do	.35						.04																.04	.06								0.49
Waterville	do	.42	T.																				T.	T.	.20							.05	0.67
Wenatchee	do	.35	.15																		.02	T.	T.		.01								0.53
Wenatchee (near)	do	.31	.03																		.19	T.	T.	T.	.06						T.	.11	0.70
White Salmon	do	.03	.03																	T.		T.		T.	.03						T.		0.09
Wilbur	do												.05	.22							.08	.55	.09	T.								.04	1.03
Wind River	do	.29	.14			.02																									.11		0.56
Winthrop	do	.22	.40		T.			.12													.06		.03	.10	.27								1.20
Yacolt	do	.35	.04					.08																	.01								0.48
Yale	do	.36	.01					.03														.02	T.		.15						T.		0.57
Zillah	Yakima																																
Oregon.																																	
Albany	Willamette	.03	.24	.08					.01													.02			.04	.13						.03	0.58
Allingham	Deschutes	T.	.17																	.09													0.26
Ana River	SE. drainage																		.07	.09			.04							T.		T.	0.20
Ashland	Rogue																			.25	.50											.11	0.86
Astoria	Columbia	.39	.20		.01			.22														.25	T.	.08	.06							.02	1.23
Austin	John Day	.02	.26	.11															T.	T.	T.	.15	.19										0.73
Avalon Orchard	Columbia					.10														.02		.03		.02	.09								0.26
Baker	Snake	.04	.02		T.			T.	T.										.05	.07	.21	T.	.46								.80	T.	1.65
Bay City	Coast	.06	.08			.04		.10														.02		.03	.40	T.						.08	0.81
Bear Creek	Deschutes	T.	.03																	.30												.09	0.42
Bear Valley	SE. drainage		.14	.18																	T.												0.32
Beech Creek	John Day	.16	.11	.20																T.												.18	0.65
Bellfountain	Willamette	.02	.85																			T.			.10							.05	1.02
Bend	Deschutes	.04																	.07	.30	.40	.26									.04		1.11
Big Basin	John Day	.03	.02						T.	T.																						.07	0.12
Black Butte	Willamette		.15																						.15							.10	0.40
Blalock	Columbia	T.	T.																		T.											T.	T.

TABLE 2.—*Daily precipitation for July, 1912. District No. 12*—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	
Oregon—Continued.																																	
Blue Mountain Sawmill.	Umatilla		.21	.20			.10														.14	.08							.03				0.76
Brogan	Malheur																															.54	0.54
Buena Vista	Snake	.05	.03			T.														1.05			.04								.03		1.20
Burns	SE. drainage										.11											.10						.20			.50		0.91
Burns Mill	do													.27							T.												0.27
Butte Falls	Rogue																			.90	.02												0.92
California Gulch	Umatilla	.25	.09	.23																	.17		.09										0.83
Canyon City	John Day	.04	.07	.18																					.02	.02					.04		0.37
Cascade Locks	Columbia	.18	.07																			.06		T.							.16		0.47
Cascadia	Willamette	.06	.07	.02		.05		T.														.25			.12						.52		1.09
Cazadero	do		.04			.23		.07	.07													.18			.04	.01							0.64
Christmas Lake	SE. drainage		.21																.88	.06	.04									T.	T.	.03	1.22
Cliff	do	.08																		.33											.05	.13	0.59
Columbia Mine	Snake	.02	.16	.01				.04	.04											T.	T.	.19	.70								T.	.12	1.28
Condon	John Day	.10	.12	.12																	.43	.07		T.	.01						.04	.01	0.90
Coquille River Lighthouse.	Coast					.07														.04												.06	0.17
Cornucopia	Snake		.28	.21			T.												.05	.60		.23	.11							T.		.73	2.21
Corvallis	Willamette	.02						T.														T.			.15							T.	0.17
Cracker Creek	Snake	.02	.01	T.				T.	T.												.04	T.	.05							T.	T.	.02	0.14
Crescent	Deschutes		.07	.02														T.	.06	.05	.03	.03									T.		0.26
Dayville	John Day	.13	T.	.12				T.	.12											.03	.06		T.								.02	.04	0.52
Deadwood	Coast		.19																						.15						T.		0.34
Diamond	SE. drainage		.06																	.07	T.	.06									.08	T.	0.27
Doraville	Columbia	.20	.15		.06	.04	T.	.25	.03				.01	.01							T.	.37	.02	.32	.27	.02					T.	T.	1.75
Drain	Umpqua	.12																							.02							.06	0.20
Dufur	Columbia	.26	.02					.03												.02	T.			T.	.03						T.	T.	0.36
Duncan	Umatilla	.30		.60		.01	.01											.01		.01			.01							.01			0.96
Echo	do							.04												.28			T.		.03								0.35
Ella	Columbia																																
Embody	SE. drainage		.35																.07	.20	.50										.30		1.42
Eugene	Willamette	.36			.06																	.09		.06							T.	T.	0.57
Fairview	Coast																																
Falls City	Willamette																																
Fir Glen	Coast		.01																T.	.06												.09	0.16
Florence	do		.07																						.77							.05	0.89
Forest Grove	Willamette																																
Fort Rock	SE. drainage	.30																T.	T.	.12	T.	.18								T.	.03	T.	0.63
Galice	Rogue																		.29														0.29
Gardiner	Umpqua																																
Gibbon	Umatilla																																
Glencoe	Columbia	.04						.07																.10									0.21
Glendale	Umpqua																	.12		T.												.04	0.16
Glenora	Coast	.30	.08			.04		.07														T.		.12	.24							.64	1.49
Gold Beach	Rogue																									.20							0.20
Golden Falls	Coast		.12															.17	T.						.10						T.	.05	0.44
Granderonde	do																				T.	T.								T.	.90		0.90
Grants Pass	Rogue																		T.														T.
Grass Valley	John Day	.12																													.02		0.14
Greenhorn	Snake	.04	.07	.20				.01	.03	.01									.02	.02	T.	.13	.18			.02				T.	T.	T.	0.73
Gumboot	do		.27	.37	T.		T.	.03											.03	.30	T.		.18									.55	1.73
Gurdane	Columbia			.07				T.												T.	.16	.06											0.29
Hampton	Deschutes	.05	.06	T.																.05											T.	.13	0.29
Happy Home	Umpqua																																
Harbor	Columbia											T.			T.													T.	T.		T.	.13	0.13
Hay Creek	Deschutes		.10																	.19	.06	.03											0.38
Hazeldell	Willamette		.33	.14																	.07												0.54
Headworks	do	.30				.28								.14								.14	.02		.04								0.92
Heppner	Columbia	.35	.03	.03				.07												T.	.08	.11			.05						T.		0.72
Hermiston	Umatilla																								.03								0.03
Hermoso Rio	Deschutes	.02	.05																			.04											0.11
Hilgard	Grnd Ronde		.10	.40				.10													.20	.50	.05									.05	1.40
Hood River	Columbia	T.																		T.					T.								T.
Hood River No. 2	do	T.	.02																												T.		0.02
Hood River No. 3	do	.09	T.																	T.		T.		T.	.10						T.		0.19
Hood River No. 4	do	.04	T.																	.01		T.		T.	.19								0.24
Hoover	Willamette	.06	.25			.07			.04												.17				.02						.04		0.65
Howardville	Grnd Ronde		.20	.18		.03		.01														.16	.06									.07	0.71
Huntington	Snake																															.25	0.25
Ibex Mine	John Day	.01	.08	.02	T.				.04	T.										.02			.32								.04		0.53
Ironside	Snake	.04	.40																	.35		.22										.45	1.46
Jacksonville	Rogue																		T.	T.												.03	0.03
Joseph	Grnd Ronde	.15	.72	.28				.05											.06	.04		.06	.54	.32								.14	2.36
Klamath Agency	Klamath																				.80												0.80
Klamath Falls	do																		.03	.05		.07	.03										0.18
La Grande	Grnd. Ronde	.08	.07	.28				.07	.02												.20	.27	.27	T.								.10	1.36
Lakeview	Pitt																																
Lilyglen	Rogue																	T.	T.	.61	T.	T.										.02	0.63
Long Creek	John Day	.29	.18	.09				.31												.02	.01	.01	.01									.03	0.95
Long Valley	Pitt		.04															T.	.01	T.			.14										0.19
McKenzie Bridge	Willamette	.04	.10	.03																	.03	.40			.05						.27		0.92
McMinnville	do	.09	.02					T.														.10			.10						T.	.03	0.34
Marshfield	Coast					.04													T.						T.				T.			.06	0.10
Maury	Deschutes	.11	.16																		.20		T.						T.	.26		.08	0.81
Meacham	Umatilla																																
Meadow Brook Rch.	Columbia	.05																							.03								0.08
Medford	Rogue		T.															T.	T.	T.	T.	.20	T.									T.	0.20
Merrill	Int. drainage																							.25									0.25
Metolius	Deschutes																																
Mikkalo	John Day	.10																															0.10
Miller Prairie	do																					.33			.10								0.43
Miramonte Farm	Willamette	.09	.41					.05														.21			.14							.03	0.93
Monroe	do	.10	.72					T.																	.14						T.	.10	1.06
Mountain Home	Columbia	.21	.24		.06	.12	.01	.22	T.		T.			T.							.05	.36	.01	.12	.81	.02					.10	T.	2.33
Mount Angel	Willamette	.10	.27																			.14			.17							.04	0.72
Mountain Ranch	Rogue																																0.00
Musick	Umpqua	.10	.70	.10																		.15	.05										1.10
Newport	Coast		.09			.02																		.06	.50								0.67

TABLE 2.—*Daily precipitation for July, 1912. District No. 12*—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	
Oregon—Continued.																																	
Oochco	Deschutes	.09	.07																T.	.18					.11						.05	.55	1.05
Ochoco Creek	do	.05	.30																	.09				.03							T.	.35	0.82
Odel	Columbia		.07																						.10								0.17
Ortley	do	.10																				.10									T.		0.20
Owyhee	Owyhee						T.													.20	.03											T.	0.23
Paisley	SE. drainage																																
Parkdale	Columbia																								.14								0.14
Pendleton	Umatilla	.11		.03																		.25											0.39
Persist	Rogue	T.															T.		.20	.12	.10												0.42
Pilot Rock	Umatilla	.20	.03	.11	T.																	.70	.24										1.28
Pompeii	Columbia																																
Portland	Willamette	.18	T.		.01			.01														.23		T.	.05						T.	T.	0.48
Port Orford	Coast																																
Post	Deschutes	.03	.29																	.03											.20	.08	0.63
Prairie City	John Day	.06	.05	.03															.03	.02		.04	.12	T.								T.	0.35
Prineville	Deschutes																																
Prospect	Rogue		.03																	.12	.19	.03											0.37
Rager Creek	Deschutes	.23	.24																	.16											.09	T.	0.72
Ramsey	Columbia	.10						.05											T.		T.				.06								0.21
Range	John Day	.25	.30	.30				.10														T.	T.										0.95
Ray Creek	Columbia	.27	.80																	T.	T.	.08			T.								1.15
Redmond	Deschutes																			.12		.03											0.15
Reston	Umpqua		T.																													.02	0.02
Richland	Snake			.20															T.	T.			.20									.95	1.35
Riverdale	Deschutes	.03	.04															.10	.03											T.	.17	.22	0.59
Riverside	Malheur																																
Rock Creek	Willamette		.81					.01															.10								T.	.02	0.94
Roseburg	Umpqua		.16			T.												T.				.04			T.						T.		0.20
Rosland	Deschutes		.10															T.	.04	.11											.45		0.70
Salem	Willamette	T.	.12					.08														T.		T.	.10							.02	0.32
Seneca	SE. drainage	T.																			.30		.40									.09	0.79
Silver Lake	do		.21																.21	.08		.11	.05									.10	0.76
Siskiyou	Rogue																				.07	.12											0.19
Sisters	Deschutes	.01	.25																	.24	.06	.18									.05	.23	1.02
Sparta	Snake	.15	.30		.05			T.										.10	.05	.25			.15								.95	.15	2.15
Stafford	Willamette	.05	.20	T.		.02		.04	.01													.27			.31						T.	.04	0.94
Starkey	Gnd. Ronde			.55			.15														.50	.59		T.									1.79
Summit	Willamette	.02	.37					.08																.03	.12							.07	0.69
Summit Prairie	Deschutes																																
Susanville	John Day	.01	.10					.05	.01											.37	.10		.35								T.		0.99
Tamarack	do	.90	T.																				.10	.12	.32							.50	1.94
Telocaset	Snake		.32				.01														.35		.15		.01						.28		1.12
The Dalles	Columbia	.01	.01																						T.								0.02
Tin Roof	Umatilla	.29	.21	.25				.08												T.	.46	.06		T.							T.		1.35
Toledo	Coast							.10																	.30								0.40
Trail	Rogue																		T.	.03	.10											T.	0.13
Trask	Coast																																
Umatilla	Columbia																			T.	.06	T.		T.							T.		0.06
Union	Gnd. Ronde	.04	.12	.21				.01												.05	.20	.39	.20	.01								.27	1.50
Vale	Malheur		.01																	.10	T.											.03	0.14
Valley Falls	SE. drainage	.15																T.	.10	.28			.29								.01	.09	0.92
Van	Malheur																																
Vida	Willamette	.10	.15																			.16			.07							.01	0.49
Waldo	do																	T.	T.													T.	T.
Wallace Orchard	do	.02	.12					.04														.04			.12							.03	0.37
Walloupa	Gnd. Ronde	T.	.61	.18				T.	T.													.03	.35										1.17
Wallowa	do	.14		.56				.02													.11	.32	.15										1.30
Wamic	Deschutes																																
Warmspring	do																																
Wasco	Columbia																				.08			T.							T.		0.08
Welches	do																																
Westfall	Malheur																																
Weston	Walla Walla	.01	.02																		.01	T.	T.	T.						T.	T.	T.	0.04
Williams	Rogue																		.01														0.01
Yonna	Int. drainage		.03																	.27													0.30

* 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.

TABLE 3.—*Maximum and minimum temperatures for July, 1912. District No. 12.*

Date.	Montana.						Idaho.																					
	Kalispell.		Missoula.		Afton, Wyo.		Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.		New Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.	
	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....	66	51	60	49	73	.....	66	45	58	45	72	52	65	50	64	45	.....	.....	65	48	74	45	63	48	66	42	48	45
2....	63	48	71	43	71	.....	59	43	65	40	69	42	71	48	65	35	.....	.....	73	42	73	44	66	39	70	36	68	38
3....	62	47	69	50	69	.....	72	40	75	38	75	42	76	55	72	35	.....	.....	68	49	72	42	67	36	70	45	64	46
4....	67	44	74	42	64	.....	77	46	76	47	80	47	84	51	74	46	.....	.....	73	53	76	44	73	46	72	44	72	42
5....	69	49	70	45	74	.....	76	55	67	47	82	50	83	59	69	45	.....	.....	78	52	70	41	73	43	72	42	68	51
6....	66	44	67	40	83	.....	73	51	67	38	81	50	76	54	76	43	.....	.....	78	49	71	43	76	45	72	44	65	38
7....	59	48	61	45	78	.....	72	49	64	47	82	50	69	53	79	43	.....	.....	77	50	67	40	74	50	68	41	54	44
8....	58	46	62	44	71	.....	71	44	65	46	77	47	74	53	65	35	.....	.....	71	49	66	41	70	45	68	35	60	47
9....	67	49	75	46	79	.....	80	47	76	45	82	46	83	48	73	37	.....	.....	78	42	75	39	75	39	70	34	75	40
10....	74	45	82	42	83	.....	90	54	65	45	95	50	92	53	83	41	.....	.....	87	48	82	43	84	47	78	36	81	44
11....	67	50	78	51	73	.....	84	57	65	50	90	57	84	60	83	51	.....	.....	81	63	84	50	79	56	78	47	73	50
12....	74	47	81	43	78	.....	83	52	74	40	88	52	90	55	80	47	.....	.....	83	59	83	45	81	52	78	42	79	43
13....	65	46	80	45	79	.....	90	58	74	37	96	53	78	57	.....	.....	.....	.....	83	54	85	43	85	49	74	40	67	46
14....	66	40	78	49	77	.....	80	49	84	50	84	50	87	54	.....	.....	.....	.....	78	54	86	45	78	51	72	42	76	47
15....	82	48	86	45	79	.....	87	54	78	48	90	52	92	56	83	43	.....	.....	84	47	87	46	81	45	64	58	83	46
16....	65	54	86	48	83	.....	94	60	78	42	96	55	98	60	84	44	.....	.....	89	51	89	45	86	49	79	42	88	50
17....	68	53	73	55	86	.....	97	64	82	42	100	56	97	62	90	54	.....	.....	91	54	88	45	90	53	82	46	80	54
18....	74	45	78	54	82	.....	81	66	88	48	88	72	92	64	89	57	.....	.....	82	63	76	50	87	66	86	47	83	52
19....	78	48	86	47	67	.....	86	60	82	49	90	64	89	63	77	47	.....	.....	81	62	80	56	82	60	79	54	86	49
20....	74	55	76	57	76	.....	86	56	86	50	86	55	89	68	.....	.....	.....	.....	85	55	85	54	81	51	67	57	89	57
21....	77	55	82	59	92	.....	86	59	85	48	90	61	89	66	.....	.....	.....	.....	89	59	84	52	83	60	78	49	84	56
22....	74	50	82	48	83	.....	76	58	71	47	84	55	73	56	82	50	.....	.....	82	55	86	50	80	52	82	51	67	51
23....	69	51	76	47	80	.....	86	51	75	43	87	50	77	52	80	45	.....	.....	83	50	87	48	79	46	77	54	74	48
24....	80	49	92	48	84	.....	91	58	74	47	92	52	87	59	85	46	.....	.....	88	58	86	47	85	53	82	50	80	48
25....	76	54	88	50	85	.....	87	55	75	42	91	58	86	63	86	49	.....	.....	90	59	90	46	85	52	83	42	76	49
26....	78	50	92	49	85	.....	88	58	75	44	92	56	86	57	89	50	.....	.....	87	59	93	52	86	50	84	46	76	48
27....	75	47	86	47	86	.....	91	56	78	41	94	56	93	53	.....	.....	.....	.....	90	53	93	55	86	51	84	44	82	42
28....	81	46	91	45	83	.....	94	63	86	42	95	58	97	57	.....	.....	.....	.....	93	55	97	54	89	56	89	47	87	44
29....	86	46	94	48	79	.....	91	62	91	44	96	67	101	52	.....	.....	.....	.....	83	60	92	56	81	62	81	48	92	46
30....	90	52	96	50	80	.....	89	64	93	47	90	63	100	61	90	50	.....	.....	67	60	93	55	77	63	68	56	96	48
31....	89	57	76	57	80	.....	83	64	82	56	85	65	92	71	92	48	.....	.....	70	61	81	60	73	63	72	56	75	56
Mns..	72.2	48.8	79.0	47.8	78.5	.....	82.8	54.8	75.9	44.8	87.1	54.3	85.5	57.3	79.6[6]	45.2[8]	.....	.....	80.9	54.0	82.3	47.6	79.2	50.9	75.6	45.7	75.7	47.3

Date.	Washington.																											
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	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....	62	50	65	51	68	50	56	48	69	51	56	53	66	50	60	46	59	49	60	50	60	46	54	47	60	50	59	50
2....	67	48	66	53	72	43	69	50	74	49	60	53	69	52	69	41	59	47	67	52	65	46	67	43	68	51	59	50
3....	61	49	72	45	72	40	70	46	87	50	60	54	80	48	79	39	60	43	74	52	80	50	74	47	74	50	59	51
4....	63	48	67	52	84	46	71	46	82	55	58	53	82	54	79	50	63	49	63	53	82	54	77	51	68	53	55	50
5....	60	47	64	52	80	50	63	50	78	50	56	52	76	48	76	50	58	48	61	51	80	51	72	54	64	52	55	50
6....	62	45	64	45	75	43	64	49	81	53	56	52	78	49	76	43	58	44	62	50	78	49	70	48	63	49	55	49
7....	67	48	62	49	68	51	67	49	75	52	59	52	76	53	71	52	59	42	64	50	84	60	60	49	64	51	59	49
8....	62	45	70	43	71	52	74	48	83	53	56	53	82	48	76	43	58	40	67	50	79	57	69	52	69	47	56	49
9....	67	48	69	43	82	53	83	44	88	56	55	52	87	55	85	52	58	49	73	52	85	49	80	50	76	51	55	51
10....	62	47	72	44	85	49	80	45	86	56	60	53	89	58	88	52	62	50	73	55	90	58	84	55	75	52	57	51
11....	65	50	71	46	82	49	78	52	86	61	58	52	87	58	83	56	59	49	70	55	85	63	79	57	73	53	54	50
12....	68	46	72	46	85	43	86	46	89	58	54	51	91	58	88	46	61	48	78	54	90	65	84	52	80	53	53	50
13....	70	49	71	57	85	54	74	54	84	58	61	52	90	62	86	55	62	48	69	54	85	62	68	53	70	54	56	49
14....	81	56	72	46	86	43	89	42	91	54	63	53	90	54	87	44	68	43	80	55	96	65	80	52	78	53	62	50
15....	86	54	79	49	90	52	91	47	96	62	74	55	95	54	94	50	78	49	81	61	98	68	90	54	81	56	65	52
16....	92	50	84	49	88	46	95	49	88	64	70	54	98	62	96	58	83	50	79	62	101	68	89	60	77	59	68	52
17....	96	54	90	52	86	48	98	52	89	60	75	55	96	67	87	64	84	58	85	67	92	64	81	61	83	58	82	53
18....	77	54	83	50	89	46	96	55	94	61	61	51	94	58	92	61	67	52	87	62	90	58	86	62	92	63	63	49
19....	74	57	81	50	92	54	84	54	93	62	60	56	91	67	92	58	67	49	74	59	87	53	90	60	78	59	59	47
20....	73	58	77	53	95	52	73	58	90	68	60	56	92	62	91	59	67	56	68	59	89	60	89	60	68	58	59	55
21....	68	56	71	56	86	49	67	55	91	65	58	56	85	60	86	60	64	55	63	58	93	64	84	61	66	57	63	55
22....	.....	.....	68	57	73	52	66	55	86	62	58	56	80	54	82	54	60	54	66	55	86	62	67	55	66	57	58	53
23....	.....	.....	70	57	60	45	71	54	76	59	59	56	78	55	74	54	62	53	68	57	94	71	73	54	68	57	59	53
24....	.....	.....	71	57	72	53	69	55	76	58	59	56	82	55	78	59	62	49	67	57	92	68	73	57	67	56	60	53
25....	.....	.....	68	47	77	51	73	54	78	56	61	56	82	53	78	58	62	49	69	57	102	71	77	59	69	56	62	54
26....	.....	.....	70	54	82	43	78	45	81	55	63	57	85	53	83	46	64	48	71	53	96	74	78	55	72	54	66	54
27....	.....	.....	72	44	86	42	81	43	88	55	59	55	88	55	88	44	62	43	73	54	91	70	84	49	73	52	62	52
28....	.....	.....	70	44	90	43	84	44	90	59	58	55	92	57	92	49	61	47	76	54	95	69	89	53	75	52	62	53
29....	72	47	77	42	94	43	89	45	93	58	58	53	96	60	99	49	59	42	77	54	100	78	92	54	78	53	62	52
30....	71	49	77	43	92	54	76	46	99	61	58	53	94	66	99	58	63	41	77	55	92	62	94	57	75	53	60	50
31....	70	50	76	52	82	55	80	58	93	74	56	51	95	62	89	71	61	50	74	58	95	72	86	70	75	58	57	53
Mns..	70.7[6]	50.2[8]	72.3	49.3	81.6	48.2	77.3	49.6	85.6	57.9	60.0	53.7	86.0	56.4	84.0	52.3	63.5	48.2	71.5	55.3	88.1	61.5	78.7	54.5	72.4	54.1	60.0	51.3

TABLE 3.—*Maximum and minimum temperatures for July, 1912. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
1	60	51	67	43	57	38	63	46	65	45	64	48	66	44	59	53	.....	.....	68	47	66	53	73	44
2	65	49	70	43	53	42	62	47	66	50	72	48	64	54	68	54	.....	.....	63	51	73	47	65	48
3	77	56	76	43	66	43	70	50	69	50	80	54	64	49	75	53	.....	.....	79	49	82	48	78	35
4	82	56	80	50	73	42	69	52	68	49	85	52	63	51	72	56	.....	.....	81	50	81	54	81	40
5	75	57	71	56	71	50	67	51	64	53	77	58	62	53	64	55	.....	.....	69	55	75	58	87	43
6	76	55	71	48	67	48	68	50	61	50	78	56	60	51	63	55	.....	.....	70	52	71	56	81	50
7	71	54	73	45	60	47	70	53	68	49	75	55	70	45	64	54	.....	.....	75	50	74	54	76	45
8	78	53	78	47	67	40	72	49	66	54	81	50	64	51	71	55	.....	.....	74	57	81	50	78	41
9	85	59	85	50	77	42	79	52	69	50	88	48	62	50	83	56	.....	.....	86	50	90	53	86	43
10	89	63	87	59	85	47	82	53	61	46	91	58	63	50	79	55	.....	.....	86	54	89	58	96	43
11	82	62	84	69	73	48	80	51	66	46	89	59	66	52	75	54	.....	.....	77	54	84	60	90	57
12	90	62	87	52	81	48	79	52	65	49	92	52	64	50	84	57	.....	.....	87	51	91	57	92	48
13	80	64	86	58	77	48	77	51	70	50	91	52	62	51	72	59	.....	.....	81	53	89	62	94	44
14	87	57	90	55	76	46	87	54	60	47	89	52	68	44	88	58	.....	.....	89	49	93	64	88	47
15	95	58	95	60	84	48	90	54	72	47	95	50	78	46	93	65	.....	.....	99	56	98	60	95	46
16	99	69	98	63	89	49	95	60	70	50	101	52	77	48	95	62	.....	.....	100	58	100	60	99	52
17	95	63	86	67	89	55	91	65	66	51	101	67	75	51	96	65	.....	.....	91	62	98	62	101	52
18	95	65	90	64	77	58	91	57	66	52	95	65	66	55	96	68	.....	.....	93	66	98	68	98	73
19	92	70	86	60	80	55	79	56	64	54	94	63	69	51	87	62	.....	.....	79	58	95	72	90	51
20	94	61	77	57	82	52	77	55	66	55	94	62	66	51	71	59	.....	.....	64	58	91	67	93	59
21	85	62	69	54	76	51	79	49	68	50	87	60	71	54	66	56	.....	.....	70	57	99	62	92	52
22	75	60	77	53	62	47	74	57	67	52	84	58	72	51	69	59	.....	.....	75	56	75	60	90	49
23	76	60	72	50	74	41	73	58	67	50	78	56	70	52	70	60	.....	.....	76	59	76	61	87	39
24	83	61	76	54	81	50	70	56	67	51	83	60	64	51	66	59	.....	.....	72	56	80	63	94	46
25	84	60	72	51	77	49	74	58	69	59	86	60	66	49	77	56	.....	.....	75	53	79	58	93	52
26	84	60	83	52	78	49	75	50	69	51	85	54	65	48	77	54	.....	.....	80	50	84	51	94	51
27	91	59	87	55	82	48	79	51	68	52	92	48	68	55	82	56	.....	.....	85	52	90	53	98	51
28	94	67	91	57	85	51	82	52	68	52	94	50	63	53	85	58	.....	.....	88	53	92	58	101	55
29	100	61	93	59	87	58	87	56	60	53	100	50	68	53	88	61	.....	.....	92	54	98	59	99	59
30	88	71	89	62	81	59	85	60	62	53	97	62	62	54	79	62	.....	.....	84	58	92	59	96	68
31	91	74	82	62	78	56	71	56	66	54	95	68	64	55	70	58	.....	.....	74	57	87	62	91	62
Means	84.5	60.6	81.5	54.8	75.6	48.5	77.3	53.6	66.2	50.8	87.4	55.7	66.5	50.7	76.9	57.8	.....	.....	80.1	54.4	85.5	58.2	89.5	49.8

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.