CLIMATOLOGICAL DATA FOR JUNE, 1911.

DISTRICT NO. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

GENERAL SUMMARY.

Although the temperature averaged nearly normal and the rainfall but slightly below normal, the month was characterized by great extremes in both temperature and precipitation. In some localities there was a large excess in rainfall and in places not far apart the temperatures differed greatly. This unevenness in conditions was probably due to the sluggish and irregular movements of low-pressure areas, which were generally small and not well defined. The rainfall during the last 10 days was especially beneficial to crops, except in the few places where local storms occurred. The Idaho section director reported no less than five severe local storms, where damage was done either by hail or washouts, and there was one severe local storm in Montana, another in Washington, and a third in Oregon.

The place and date of these storms are as follows: Dayville, Oreg., 13th; Anaconda, Mont., 19th; Roswell Bench, Canyon County, Idaho, 20th; Roswell Bench, Idaho County, north to Parma, Idaho, 21st; Payette Valley, Idaho, 21st; Rupert, Lincoln County, Idaho, 21st; Colville, Wash., 21st; and Pack River, Bonner County, Idaho, 28th. The one at Dayville, Oreg., was the most severe, according to the reports furnished by Cooperative Observer Dr. J. Campbell-Martin, as follows:

A frightful cloud-burst overwhelmed this section of the country on the 13th instant between 4 and 5 p. m. It caused damage to the amount of not less than $25,000. The first ranch struck was Joe Carl's, about 15 miles northwest of Dayville. The storm followed up the John Day River and damaged every ranch on the east side of the river until it got to Cant & Mason's place, where it damaged their property on both sides of the river. Mr. Cant said "there was not enough hay left after the storm to feed a saddle horse." Hail as large as hen's eggs fell several inches deep on the ground, and it did not entirely disappear for two days, although the maximum temperature reached 85° during this time.

Mr. W. R. Mascall, whose ranch lies along the river from the mouth of the gorge (Government proposed dam site), had 8 feet of bowlders piled on his grain, and his crop is a total loss; besides this several acres of his alfalfa meadow are under rocks and mud and his irrigating ditch must have washed away because there is not a trace of it left.

Mr. L. N. Kennedy lost his potato crop, besides other damage. Mr. H. H. Ringsuyer lost, according to his estimate, 100 tons of hay, and it will cost him about $1,000 to clean out his large irrigation ditch and put it in its original condition. In some places the débris is piled 5 feet above the top and sides of this ditch.

Mr. Floyd Officer lost heavily. One of his fields is at the mouth of a gulch, 1½ miles in length, which drains a large area. The county road skirts the field, and when I tell you a cut 30 feet wide by 6 feet deep now occupies the site of the wagon track you can form a faint idea of what the field looks like. That field is totally ruined. His adjoining field received the wash from Pinetree Gulch. It was newly sown to alfalfa and wheat, which is now partially covered with a blanket of mud. Mr. A. P. Snyder was not forgotten, and Mr. J. E. Snow is out from $500 to $1,000 in hay, implements, damage to ditches, etc.

Mr. Mealy and Mr. Wyllie, eyewitnesses to the flood at Mr. Officer's place, say that the waves went higher than the tops of the telephone poles; they and the Lahar's children just saved their lives by a hairbreadth.

A day previous to this cloud-burst a heavy rainstorm did a large amount of damage 10 miles east of Dayville, and on the same day three houses were washed away at Richmond, and some damage was done in Mitchell; both of these towns are in Wheeler County and about 40 miles west of here.

Of the other storms the most noteworthy is the one in Montana reported by Section Director R. F. Young, as follows:

A heavy local rain in the foothills above Anaconda on the 19th caused considerable damage by flood in that city. The high water receded within an hour, but during that time considerable of the business district was overflowed and the basements of stores filled with water. The stock of goods of Mr. D. R. McRae was damaged to the amount of $2,500 and it is estimated that the total damage was above $10,000. Several residence streets were flooded and mud and sand to a considerable depth were left in a number of houses.

The damage done by the five storms in Idaho and the one in Washington was principally due to hail and not to flood waters. In the aggregate the losses were small, but a few individuals suffered heavily.

Frosts occurred on a number of days in elevated places and on one or two days light frost formed in exposed places in the lowlands, but no material damage resulted anywhere in the district from these low temperatures. There were no storms along the coast and the weather on the whole was favorable for crops and outdoor work in general.

TEMPERATURE.

The monthly mean temperature for the western portion of the district was below normal, the deficiency being greatest near the mouth of the Columbia River, in the Sound country, and along the Coast Range in northwestern Oregon. With few exceptions, eastern Oregon, eastern Washington, northern Idaho, and western Montana report temperatures decidedly above normal. The greatest excess was 5° at Vale, Oreg. Southern Idaho averaged about normal. The highest mean temperatures occurred in the lower Yakima Valley and in the Columbia Valley below the mouth of the Yakima River.

The month opened with temperatures about normal west of the Cascade Mountains and in southern Idaho, but over the remainder of the district high temperatures were experienced on the first two days. This was followed by a cool spell over the entire district, the lowest temperature of the month occurring about the 4th at many stations. The warmest weather occurred from the 10th to the 15th. The remainder of the month was unseasonably cool in the western portion of the district, but warm weather continued in the eastern portion until about the 21st, when a cool, rainy period began. The last week was cool and showery in all parts of the district.

The average temperature, as determined from 242 stations, was 60.3°, which is about the district average for June, the deficiency west of the Cascades being about equal to the excess east of the mountains. The mean temperatures ranged between 79.2° at Zindel, Wash., and

41.6° at Pompeii, Oreg. The highest temperature recorded was 106° at Kennewick, Wash., on the 11th, and the lowest 15° on the 4th, at Cliff, Oreg.

PRECIPITATION.

The precipitation was decidedly below the normal in the western portion of the district. A slight deficiency was reported in eastern Washington, extreme northern Idaho, and in northeastern Oregon. In central and southern Idaho and western Montana the precipitation was unusually heavy, in marked contrast with the light rainfall of June, 1910, in this section. Monthly amounts of more than 4 inches were reported from a number of stations.

The precipitation was distributed throughout the month in the form of frequent light showers in Montana and Idaho, there being few days on which some portion of these States received no precipitation. In Oregon and Washington there were no general rains during the first two decades, and showers were infrequent. During the last 10 days, however, general rains occurred over both States. The heaviest 24-hour rainfalls in all parts of the district were recorded during the last week.

The average for the district, as determined from the records for 354 stations, was 1.67 inches, which is 0.20 inch below the normal amount for June. The greatest monthly amount recorded was 5.64 inches, at Middle Fork, in north-central Idaho. At Mountain Ranch, in southwestern Oregon, no precipitation was recorded during the month. The greatest amount in 24 hours was 2 inches, at Columbia Falls, Mont., on the 24th. Other heavy 24-hour falls were: 1.99 inches at Queets River, Wash., on the 26th, and 1.83 inches at Quiniault, Wash., on the 26th.

THE RIVERS.

Excepting the Willamette and its tributaries, the rivers throughout the district were higher than in May, the annual rise which occurred in the Columbia making the increased stage in this stream very pronounced. The Snake River was above the normal for June, but other rivers in the district were below normal.

The Columbia River averaged 22.7 feet, which is 1 foot below the normal for the month, there being no departure at The Dalles and a difference of −3.3 feet at Cascade Locks. The highest stages occurred between the 17th and 22d of the month in a majority of cases, and the lowest on the 1st and 2d. Compared with the mean stage for May the average was 8.7 feet higher.

The Willamette River averaged 6.2 feet, which is 0.5 foot below the June normal; it was 0.5 below the normal at Portland, and 0.7 below at Salem. The mean stage at Portland was 5½ feet higher than in the preceding month, owing to the annual rise in the Columbia and the backwater therefrom in the lower Willamette. The extremes of high and low water occurred generally during the first and last weeks of the month, the highest stage reported being 19.2 feet at Portland on the 20th (this date being the exception for maximum readings on the Willamette) and the lowest 0.3 foot at Harrisburg on the 26th.

The Snake River averaged 12 feet, which is 1.3 feet above the normal. The highest stage reported was 15.6 feet at Lewiston on the 14th, and the lowest 7.8 at Weiser on the 1st.

By loading boats with only moderate cargoes it was found possible to cope with the stronger current attending the June rise in the Columbia, and navigation continued uninterrupted on this stream throughout the month. The Oregon City Transportation Co. stopped operating boats above Salem on June 15, due to falling water in the Willamette. The backwater from the Columbia caused high water in the Willamette River at Portland during the greater part of the month, the flood stage of 15 feet being reached on June 7 and exceeded for the remainder of the month. The lower floors on all the docks had to be vacated, but no damage of any importance was sustained.

MISCELLANEOUS.

Heavy frosts occurred within the State of Oregon on a number of dates, and solar and lunar halos were observed in many places on the 4th, 11th, and 14th.

Thunderstorms and hail were of frequent occurrence throughout practically the entire district. They were particularly general on the 12th, 13th, and 20th.

The prevailing direction of the wind over the greater portion of the district was southwesterly.

DUTY OF WATER INVESTIGATION IN IDAHO.

By DON H. BARK, Irrigation Engineer, in charge United States Irrigation Investigations in Idaho.

Although the development of irrigation has been very rapid in the West during the past decade there are still left millions of acres of arid land that can never produce profitable crops without irrigation. The water supply, though large, is not unlimited, yet it is the one factor that will determine the extent of our ultimate irrigated area. The available supply is now nearly all appropriated, and the only method by which more land can be brought under irrigation in those regions possessing too scanty a rainfall to produce crops by the so-called dry farming methods is by increasing the area which a given quantity of water now serves and by the conservation and utilization of the water that is now wasted.

The allotments of water used for irrigation purposes throughout the West vary considerably. Some allotments call for enough to cover the land 30 feet deep during the season, while others will supply only 1 foot in depth to the land during the same period. These variable allotments have been made without due consideration for the soils in question. Many times as good or better crops could be produced with less than half of the water now used. It is vitally important that our water be put to the best use if we are to secure the best results from the annual flow from our watersheds. The allotments of the past have been based to too great an extent upon the practice of irrigators who were far from careful, hence they are, in many cases, far too large; but as time has passed water has risen in value so rapidly that we are now prone to increase the area very materially that will be supplied by a given quantity. New projects are being opened up from time to time and it is of vital importance that the proper and economic amount of water be allotted for the use of the settlers who secure these lands. If too small an allotment is made maximum crops can not be produced, thousands of settlers will suffer and the land can never reach its highest possible value, while if more than necessary is allotted our ultimate irrigated acreage will be seriously cut down.

Different soils and crops require different amounts of water, but just how much more or less this is has never

TABLE 1.—*Climatological data for June, 1911. 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	57.2	+ 2.3	84	22	31	5	38	5.35	+ 2.84	0.85	T.	19					C. D. Demond.
Bison Mountain	Powell	7,240	2								3.69		0.65	0	17	11	15	4		C. H. Anderson.
Butte	Silver Bow	5,716	17	59.0	+ 3.3	87	12†	30	4†	36	3.30	+ 1.38	0.70	T.	13	4	8	18	nw.	J. R. Wharton.
Columbia Falls	Flathead	3,100	16	59.2	+ 2.2	90	23	29	6	48	4.03	+ 0.93	2.00	0	14				s.	J. M. Grist.
Como **	Ravalli		3	60.0		87	11	35	5	35	3.40		0.52	0	18	9	11	10		Hiram Platt.
East Anaconda	Deer Lodge	5,500	6	56.8		82	22	32	5	35	5.11		1.07	0	20	2	18	10	w.	C. D. Demond.
Fortine	Lincoln	2,975	6	58.2		87	11	28	6	49	4.87		1.18	0	14	8	9	13	sw.	Mike Petery.
Hamilton	Ravalli	3,575	8	61.2		85	11	36	5	36	2.99		0.60	0	14	7	15	8	w.	Bitter Root Valley Irrig. Co
Hat Creek	Powell	6,000	2								5.13		1.10	0.4	18	1	18	11	w.	M. K. Landreth.
Kalispell	Flathead	2,965	13	60.2	+ 1.4	86	23	34	5	35	3.83	+ 2.09	1.76	0	14	5	18	7	nw.	U. S. Weather Bureau.
Lost Creek	Deer Lodge	5,200	2								3.86		0.60	0	13	12	9	9	w.	Frank Henault.
McGinnis Meadows	Lincoln		2			86		25			4.61			0						H. L. Belee.
Missoula	Missoula	3,225	32	61.8	+ 1.9	88	11	30	15	49	3.38	+ 1.10	0.81	0	16				ne.	U. S. Weather Bureau.
Ophir	Powell	8,800	2								5.04		1.00	0	17	10	14	6	w.	E. S. Wilton.
Ovando	do	4,207	12	56.2	+ 2.3	86	13	30	5	45	4.51	+ 2.07	0.76	0	19	0	24	6	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	8																	G. T. Bramble.
Plains	Sanders	2,475	13	61.1	+ 3.1	91	23	32	5	41	2.51	+ 0.82	0.70	0	8	11	0	19	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	4	56.6		84	13	27	5	45	3.45		1.03	0	9					A. D. Stillman.
Polson	do	2,920	4	61.6		81	1	38	5	33	5.11		1.50	0	13					F. P. Brown.
Proctor	do	2,800	7																	C. E. Proctor.
St. Ignatius	Missoula	2,700	6	60.0		82	18†	35	6	39	4.37		1.36	0	15	7	8	15	se.	U. S. Reclamation Service.
St. Regis	do	2,650	4	60.2		91	11	29	5	51	4.11		0.92	0	12	6	19	5	ne.	R. D. Lee.
Saltese	do	3,600	7								2.77		0.65	0	7	21	1	8	w.	E. K. Tarbox.
Troy	Lincoln	1,880	17																	W. E. Milnor.
Willow Glen Stock Farm.	Deer Lodge	5,064	1	57.2		82	13	31	4	35	3.91		1.10	0	14	3	22	5	se.	G. E. Luce.
Wyoming.																				
Afton	Uinta	6,200	7	55.8	+ 0.8	85	12†	31	10†	45	1.37	+ 0.16	0.53	0	9	17	8	5		A. V. Call.
Alta	do	7,000	1	54.0		83	12	26	5	38	3.58		1.16	0	14	10	7	13	sw.	Mrs. Lucy Brown.
Bedford	do	5,900	11	54.6	+ 1.6	82	12†	27	5	46	1.68	+ 0.06	0.65	0	7	19	7	4	w.	C. G. Heiner.
Belcher River	Yellowstone Park.																			U. S. Army.
Moran	Uinta																			U. S. Reclamation Service.
Snake River	Yellowstone Park.	7,000	5	53.4		82	12	26	5	47	3.10		1.10	0	10	7	11	12	w.	U. S. Army.
Nevada.																				
San Jacinto	Elko		6	60.4		94	12	32	5	47	1.71			0	9	10	14	6	sw.	Mose Jones.
Utah.																				
Standrod	Boxelder		6	58.5[a]		87	12	32	15	37[b]	3.50		0.96	0	11	12	9	9	sw.	T. B. Jones.
Idaho.																				
Almo	Cassia		3								4.06		0.90	0	14	10	11	9	s.	W. D. Cahoon.
Alpha	Boise		1	56.8[d]		87	11	28	6	46[d]				0					sw.	J. W. King.
American Falls	Oneida	4,341	20	59.4	− 1.5	94	12	26	25	57	1.82	+ 0.85	0.45	0	13	20	2	8	sw.	H. H. Hall.
Blackfoot	Bingham	4,503	16	61.9	− 0.3	93	12	30	5	45	2.51	+ 1.67	0.66	0	13	11	15	4	sw.	E. A. Dowd.
Blackfoot Dam	Bannock	6,200	2	57.2[e]		84[f]	12	25	5	42[f]	4.06		1.30	0	16	13	3	14	s.	N. W. Irsfield.
Bogus Creek	Boise	4,200	3								3.99		1.02	0	9	7	22	1		F. P. Ingraham.
Boise	Ada	2,739	26	65.5	− 0.5	90	11	41	5	35	2.55	+ 1.67	1.10	0	11	10	11	9	se.	U. S. Weather Bureau.
Bonner's Ferry	Bonner	1,850	5	59.5		92	11	33	5	52	1.51		0.65	0	7	5	23	2	sw.	W. H. Heideman.
Boulder Mine	Boise	4,800	3								5.56		1.30	0	16	14	10	6		P. Moriarty.
Buhl	Twin Falls	3,800	6	64.8		94	11†	40[a]	5	51[a]	2.34		0.63	0	14	11	16	3	s.	Hugh Taylor.
Caldwell	Canyon	2,372	7	65.8		92	11†	36	5	47	1.44		0.50	0	7	7	18	5	w.	W. J. Boone, D. D.
Camas	Fremont	4,815	3	61.0		93	13	30	5	48	1.29		0.64	0	9	12	18	0	sw.	Mrs. E. Faulkner.
Cambridge	Washington	2,651	16	65.1	+ 1.5	91	12	40	6†	43	3.57	+ 2.57	1.32	0	11	13	9	8	sw.	C. H. Shepherd.
Cedar Creek Dam	Twin Falls		2								2.03			0		6	21	3	nw.	Robt. Hoffman.
Chesterfield	Bannock	5,424	15	58.2	+ 2.1	90	12	27	5	50	2.10	+ 1.05	0.47	0	10	9	15	6	w.	C. S. West.
Clyde	Blaine		1	54.2		80	12†	29	5	35	2.25		0.51	0	14	10	10	10	sw.	R. L. Sutcliffe.
Culdesac	Nez Perce	1,520	3	64.0		91	11†	40	8	39	1.28		0.73	0	4	16	12	2		R. R. Richmond.
Deary	Latah		1																	H. P. Henry.
Dent	Clearwater	1,350	6	64.2		96	11	36	6	49	2.74		0.56	0	12	12	13	5		E. Schuessler.
Driggs	Fremont	6,097	5	56.5		85	12	27	5	43	2.80		1.25	0	7	10	7	13	s.	W. H. Durrant.
Edie	do		3	55.2		82	12	28	5	40	5.05		1.08	0	12	11	14	5	s.	Geo. B. Edie.
Emmett	Canyon	2,350	4	66.4		93	11†	39	7	46	2.62		1.07	0	11	15	13	2	nw.	C. P. Kar.
Forney	Lemhi		15					25	5		2.21	+ 0.26	1.01	0	6	1	12	17	sw.	M. B. Merritt.
Garden Valley	Boise	3,600	4								3.43		0.72	0	13				w.	Mrs. Gertrude M. Ross.
Garnet	Elmore	2,575	12	69.2	− 0.7	101	12	39	5	48	2.15	+ 1.33	0.95	0	9	14	12	4	e.	A. A. Kenison.
Glenns Ferry	do	2,569	1	68.1		101	12	34	5	54	1.05		0.30	0	8	13	8	9	nw.	I. E. Perkins.
Gooding	Lincoln	3,572	2	63.6		96	12	32[a]	5	46[a]	1.06		0.40	0	11	13	13	4	w.	J. Krall, jr.
Grand Forks	Shoshone	3,000	3	58.1		89	11	31	5	47[a]	3.20		0.89	0	15				w.	Henry Koitkey.
Grandview	Owyhee		3	66.3		95	11	37	5	47	1.12		0.36	0	10	11	10	9	nw.	N. G. Massey.
Grimes Pass	Boise	5,200	3								5.09		1.30	0	17					J. M. Clarke.
Guffey	Owyhee	2,381	3	69.8		97	12	40	5†	44	1.78		0.46	0	14	16	13	1	e.	Fred Perry.
Hailey	Blaine	5,347	10	60.8	+ 1.5	89	12	34	9	44	1.53	+ 1.00	0.38	0	11	7	18	5	ne.	U. S. Forest Service.
Hotspring	Owyhee	2,752	6	67.1		98	13	40	10	43	1.63		0.30	0	9	13	7	10		J. M. Waterhouse.
Idaho Falls	Bonneville	4,742	17	61.6	+ 2.7	92	12	31	5	49	2.67	+ 1.29	0.65	0	18	14	6	10	ne.	Dr. T. M. Bridges.
Indian Valley	Adams	2,999	3								3.86		0.75	0	12	15	8	7	s.	A. M. Henke.
Irwin	Bonneville	6,500	3	57.4		90	12	29	5	49	3.29		0.95	0	11	10	10	10	e.	Eva Johnston.
Kellogg	Shoshone	2,305	7	61.2		93	11	32	5	45	2.79		0.77	0	14	11	3	16		W. McM. Huff.
Kirkham	Boise		2								3.77		1.00	0	8	13	17	0		Mrs. Josie B. West.
Kooskia	Idaho	1,261	3	65.8		92	11	41	4†	36	6.09		1.40	0	10	4	20	6		U. S. Forest Service.
Lakeview	Bonner	2,250	12	59.9	+ 0.5	84	13†	37	6	34	1.58	− 0.30	0.60	0	5	11	9	10	sw.	E. D. Faust.
Landore	Adams	5,300	8	55.0		81	12	30	5	38	3.62		0.70	0	13	8	20	2		Mrs. Emma Brown.
Lewiston	Nez Perce	757	24	68.0	− 1.1	94	11	46	5	36	1.13	+ 0.09	0.36	0	10	9	10	11	e.	U. S. Weather Bureau.
Long Gulch	Elmore	4,500	3																	Mrs. Elizabeth Hjort.
Loon Creek	Custer	6,000	5	54.2		87	12	24	5	49	4.44		0.90	0	18	4	9	17	sw.	Mrs. Mary Williams.
Mackay	do	5,897	4	58.2		87	17	30	23	42	0.96		0.30	0	6	15	6	9	nw.	U. S. Forest Service.
Meridian	Ada	2,657	1	65.8		92[a]	11	39	8†	41	2.17		0.73	0	8	8	10	12	nw.	A. W. Garrett.
Mesa	Adams	3,275	2																	I. S. Carter.
Middle Fork	Idaho	1,250	2	63.4		91	11	41	5†	38	5.64		1.28	0	12	17	4	9		Jos. McGhee.
Milner	Twin Falls	4,110	8	63.0		91	22	33	5	43	1.10		0.22	0	12				w.	J. K. Young.
Moscow	Latah	2,748	20	60.8	+2.1	90	12	40	5†	35	0.80	−0.56	0.32	0	5	7	16	7	nw.	University of Idaho.
Mountain Home	Elmore	3,150	6	63.8		97	12	29	5	54	1.90		0.61	0	11	8	9	13	nw.	Mrs. Ellen Manion.
Murtaugh	Twin Falls		5	61.1[b]		91	12	35	8	42	1.52		0.52	0	8	7	20	3	w.	J. E. Steinour.

TABLE 1.—*Climatological data for June, 1911. 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.																				
Nez Perce	Lewis	3,082	2	58.6		88	11	37	5	36	3.72		0.63	0	10	10	12	8		P. Mitchell.
Oakley	Cassia	4,700	18	63.1	+0.7	94	13	24	5	50	2.76	+1.84	0.64	0	10	7	21	2	s.	John Adams.
O'Hara Bar	Idaho	1,400	2																	J. D. Agnew.
Orofino	Clearwater	1,027	7	64.7		95	11	39	5	45	4.26		1.40	0	12	5	22	3		Geo. Alteneder.
Payette	Canyon	2,159	19	67.2	+1.2	94	11	34	5	46	1.17	+0.49	0.32	0	11	13	10	7	s.	E. F. Allen.
Peaceful Valley	Ada	2,325	1					35	5		1.38		0.37	0	6	17	9	4	sw.	J. W. Newton.
Pebble	Bannock	5,277	3	57.9		88	12	28	5	47	1.86		0.84	0	8	10	11	9	sw.	Mrs. Fannie Say.
Pierson	Custer	7,000	3	55.0		83	15	30	12	46	2.63		0.86	0	6	12	6	12	s.	D. P. Clarke.
Pleasant Valley	Ada	3,000	4	63.8		91	21	35	9	53	2.55		0.67	0	9	13	11	6	se.	C. E. Friedrich.
Pocatello	Bannock	4,483	12	62.9	−1.3	92	12	34	5	39	3.13	+2.14	0.90	0	14	9	16	5	se.	U. S. Weather Bureau.
Pocatello-Nursery	do	5,396	5	56.0		83	11†	25	5	52	2.86		0.61	0	14	12	13	5	sw.	Mrs. Anna B. Wrensted.
Porthill	Bonner	1,665	22	58.9	−0.8	81	1†	36	6	40	1.46	−0.20	0.35	0	7	16	9	5	sw.	H. A. French.
Pyle Creek	Boise	3,100	2								3.69		0.68	0	14	12	10	8	s.	P. V. Smith.
Richfield	Lincoln		2	62.9		94	12	31	5	43	1.30		0.42	0	12	12	16	2	w.	Idaho Irrigation Co.
Roseberry	Boise		1	55.7		82	11	28	5	39	4.93		0.70	0	16					Rev. H. F. Barstow.
Roseworth	Twin Falls		2								1.44		0.26	0	12	0	26	4	sw.	D. B. Hartwell.
Rupert	Lincoln	4,204	5	62.6		94	12	32	5	45	1.30		0.25	0	12	18	3	9	sw.	Will Parry.
St. Maries	Kootenai	2,263	15	61.4	+1.3	92	11	37	5	41	2.47	+0.72	0.66	0	10	10	9	11	nw.	J. S. Turnbull.
Salmon	Lemhi	4,040	6	60.7		87	13†	34	5	38	3.29		0.67	0	16	8	19	3	w.	B. C. d'Easum.
Salmon River Dam	Twin Falls		4	62.3[a]		97	17	35	5	42	1.89		0.37	0	14				s.	A. M. Gilbert.
Sandpoint	Bonner	2,086	1	58.8		85	1†	31	5†	43	0.83		0.43	0	4	3	18	9	s.	J. H. Edgerton.
Sheep Hill	Boise	5,000	2								2.89		0.96	0	14					C. M. Gardner.
Shoshone	Lincoln		4	61.6		87	12	34	5	37	0.84		0.25	0	8	6	23	1	w.	O. A. Truman.
Silver City	Owyhee	6,280	4								2.95		0.71	T.	11	10	13	7	s.	A. D. Bradfield.
Smith Ranger Station	Bonner	1,900	1																	T. D. Crittenden.
Soldier Creek	Blaine		2	57.0		84	12	30	24	41	2.37		0.45	0	12	13	10	7	w.	J. E. Minear.
Spirit Lake	Kootenai		2																	M. C. Krause.
Springfield	Bingham	4,420	3	63.1		95	12	28	5	47	2.32		0.50	0	12	10	11	9	sw.	Mrs. W. A. Edwards.
Sugar	Fremont		4	59.6		87	11	31	4	42	2.72		0.63	0	9	10	8	12	sw.	Utah-Idaho Sugar Co.
Sunnyside	Elmore		3	63.8		92	18†	34	5	43	2.34		1.00	0	7				nw.	E. A. Wilmot.
Tripod Mountain	Boise	4,300	2								4.16		1.06	0	11	12	11	7		Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	6	62.7		94	12	30	5	51	0.83		0.34	0	8	3	24	3	w.	J. A. Waters.
Vernon	Fremont		14	58.4	+1.7	85	12†	30	5	44	3.02	+1.68	0.61	0	12	9	16	5	sw.	A. M. Slatery.
Wallace	Shoshone	2,728	4	60.3		92	11	34	5	38	3.58		0.93		15				e.	U. S. Weather Bureau.
Wendell	Lincoln	3,400	3	65.0		97	12	34	5	53	1.95		0.70	0	9	12	9	9	w.	C. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	20	54.9	− 1.7	78	10	32	5	29	1.41	− 2.21	0.82	0	5	12	16	2	w.	C. S. Weatherwax.
Anacortes	Skagit	60	17	56.0		75	14	39	16†	33	0.81	− 0.56	0.44	0	5	21	7	2		Douglas Allmond.
Baker	do	200	5	59.2		86	11	38	3	36	0.81		0.33	0	6	13	3	14		R. M. White.
Bellingham	Whatcom	60	16	57.1	− 1.2	77	10†	30	19	41	1.26	− 0.46	0.36	0	6	18	10	2		S. B. Mayhew.
Bellingham (near)	do	107		55.2		75	25	35	19	36	0.92		0.40	0	6	16	11	3	se.	U. S. Bur. of Plant Industry.
Beverly	Grant	545																		
Blaine	Whatcom	57	14	55.4	− 2.3	76	13	34	20†	33	1.56	− 0.82	0.73	0	7	7	19	4	sw.	John W. Sheets.
Blewett	Chelan	2,200	1																	John Burmeister.
Bremerton	Kitsap	30									0.54		0.52	0	2					U. S. Navy Yard.
Brewster	Okanogan	1,620	1	65.2		92	12	43	3	34	1.24		0.46	0	7	16	11	3	sw.	Mrs. H. F. Bertram.
Bumping Lake	Yakima	3,400																		U. S. Reclamation Service.
Cedar River	King	535	4								0.96		0.63	0	5	13	6	11		George Landsburg.
Centralia	Lewis	212	18	56.3[d]	− 3.2	89[g]	11	32	5†	53[g]	0.87	− 1.43	0.69	0	3	14	16	0	w.	I. S. Turner.
Cheney	Spokane	2,351	12	64.5		93	14	37	3†	47	0.54	− 0.40	0.17	0	8	13[g]	3[g]	7[g]	sw.	State Normal School.
Cle Elum	Kittitas	1,930	12	56.8	+ 0.7	88	11	34	25	45	0.58	− 0.40	0.33	0	2	22	6	2	sw.	J. A. Balmer.
Clearbrook	Whatcom	140	8	54.4		81	12	28	19†	45	2.43		0.82	0	10	7	14	9	s.	George Gibbs.
Colfax	Whitman	2,300	22	61.6	+ 2.7	94	11	33	6	43	0.70	− 0.34	0.50	0	4					I. B. Doolittle.
Colville	Stevens	1,635	11	62.9	+ 0.7	95	11	36	3†	45	1.44	− 0.07	0.54	0	5	15	5	10	sw.	W. L. Sax.
Conconully	Okanogan	2,300	11	60.9	+ 1.3	90	12	33	3	41	1.95	+ 0.41	0.85	0	10	14	9	7		William Baines.
Cowiche	Yakima	1,874		63.3		93	12	39	3†	34[a]	0.43		0.27	0	4	17	11	2	nw.	U. S. Reclamation Service.
Crescent	Lincoln	2,250	11																	Otto Wollweber.
Davenport	do	2,450	2	60.2[b]		89	11	33[d]	3	38[d]	0.75		0.41	0	9	22	2	6	sw.	James L. Thayer.
Dayton	Columbia	1,700	25	62.5	+ 0.2	93	11	39	6	36	1.00	− 0.19	0.51	0	7	13	14	3		W. W. Hendron.
Deer Park	Spokane	2,050		60.4		93	11†	31	6	50	1.27		0.60	0	4	11	12	7	sw.	James Mills.
Detroit	Mason	30	3	58.2		85	12	37	19	40	1.15		.80	0	3	18	9	3	s.	Walter O. Eckert.
Dixie	Walla Walla	5,000	2								2.60		.64	0	11	11	4	15	sw.	T. Z. Andrews.
Dryden	Chelan	960									0.61		.40	0	6	23	5	2	nw.	Valley Power Co.
Duckabush	Jefferson	380	3	56.6[c]		83	13	34	20	38[c]	2.29		1.15	0	7	8[c]	12[c]	7[c]	sw.	E. G. Newman.
East Sound	San Juan	500	16																	B. E. Harrison.
Ellensburg	Kittitas	1,571	23	61.8	+1.5	94	11	35	3	43	0.59	− 0.09	0.35	0	4	23	5	2	nw.	R. L. Barnes.
Ephrata	Grant	1,265	8	68.0		96	11†	40	3	37			0.25	0		19[h]	3[h]	0[h]		T. J. Cook.
Forks	Clallam	480	2																	
Fort Simcoe	Yakima	1,427	17	61.7	−2.9	97	11	30	3†	48	0.25	− 0.25	0.20	0	4	20	8	2	sw.	Dr. F. H. Monk.
Gerome	Stevens																			
Goat Lake	Snohomish	2,900	2								2.00		0.85	0	11					C. M. Mackintosh.
Gold Basin	do	1,360		56.7		85	11	32	4†	44	2.23		1.10	0	8				sw.	U. S. Forest Service.
Gold Creek	Yakima	2,600	2								0.30		0.20	0	2	26	1	3	w.	U. S. Reclamation Service.
Goldendale	Klickitat	1,600	5	61.8		93	12	37	3†	43	0.30	− 0.09	0.18	0	3	19	9	2	w.	Klickitat County Abstract C
Granite Falls	Snohomish	397	8								1.35		0.56	0	8	15	7	8	nw.	C. H. Cleaver.
Gray's River	Wahkiakum																			A. B. Marlin.
Hatton	Adams	1,100	6	65.0		99	11	29	3	45	0.72		0.28	0	5	15	3	12	sw.	Dr. A. V. Marion.
Huntsville	Columbia	1,400	3								0.96		0.62	0	5					Mrs. S. J. Hill.
Irene Mountain	Okanogan	3,015	2								1.78		0.53	0	7	8	16	6	sw.	Mrs. Manda S. Shain.
Kennewick	Benton	368	16	71.0	+1.9	106	11	41	2	44	0.63	+ 0.35	0.30	0	4					R. E. Reed.
Kettle Falls	Stevens	1,265	2	64.2		95	11†	40	3†	48	2.28		0.72	0	7	14	11	5		Harry A. Cole.
Kiona	Benton	430	6	69.4		98	11	42	4†	38	0.61		0.25	0	5	16	13	1	sw.	Dr. F. S. Hedger.
Kosmos	Lewis	775	5	56.8		92	9	32	20	43	1.10		0.77	0	5	2	27	1	ne.	J. A. Ulsh.
La Center	Clarke	250	14	55.5	− 4.2	84	10	33	3†	40	1.18	− 1.15	0.65	0	4	12	12	6	sw.	Joseph Brothers.
Lacrosse	Whitman	1,400	2	63.2		96	11	33	6	50	0.68		0.50	0	4	15	8	7	w.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	2								0.55		0.24	0	6	12	8	10	nw.	U. S. Reclamation Service.
Lake Kachess	do	2,235	3	56.1		87	11	35	6†	43	0.56		0.35	0	3	18	6	6	s.	Do.
Lake Keechelus	do	2,479	3								0.43		0.40	0	2	15	4	11	w.	Do.
Lakeside	Chelan	1,116	20	66.7	+ 1.5	90	12	45	3	34	0.49	− 0.40	0.34	0	4	8	19	3	w.	W. H. Van Meter.
Laurel	Klickitat	1,900	2								0.30		0.28	0	2	13	15	2	w.	Mrs. Minnie E. Strout.
Laurier	Ferry	1,644	1	64.4		95	12	37	20	51	2.26		1.11	0	12	6	6	18	w.	Mrs. J. S. Myers.
Lester	King	1,614	7	54.8		92	11	29	17†	52	0.65		0.30	0	4	14	4	12	w.	W. W. Clabough.
Lone Tree	Chehalis	14	2	52.8		65	10	44	5†	14	1.83		1.36	0	5	5	5	20	nw.	U. S. Engineer Corps.
Longmires Springs	Pierce	2,800	2																	National Park Ranger.

TABLE 1.—*Climatological data for June, 1911. 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.																				
Lost Creek	Okanogan	3,125	2								1.90		0.60	0	7	7	16	7	sw.	P. H. Leese.
Lucerne	Chelan	1,100	4																	Mrs. Barbara Schearer.
McConihe	Grant	1,072		69.6		97	11†	44	5	38	0.38		0.26	0	5	16	8	6	w.	Paul M. McConihe.
McCumber's ranch	Yakima	2,182	2								0.10		0.10	0	1	8	20	2	sw.	Mrs. Mary McCumber.
Mottinger	Benton	307	11	70.0	+ 1.0	100	11	45	3†	36	0.74	+ 0.25	0.33	0	5	23	5	2	w.	G. H. Mottinger.
Mount Pleasant	Clallam	500		51.4		76	11	34	4	27	1.09		0.47	0	5	8	14	8	nw.	Wm. M. Dorr.
Moxee	Yakima	1,000	19	66.8	+ 2.2	96	11†	35	3	45[a]	0.55	− 0.10	0.29	0	6	17	8	5		H. B. Scudder.
Newport	Stevens	2,400	1	60.0		90	13	32	5†	41	0.79		0.44	0	6	14	12	4	sw.	C. M. Talmage.
North Head	Pacific	211	9	51.2	− 3.8	60	25	46	5	10	0.83	− 0.94	0.44	0	8	6	9	15	nw.	U. S. Weather Bureau.
Northport	Stevens	1,350	12	63.4		94	12	40	2†	44	2.10	+ 0.09	0.51	0	10	16	6	8		Frank Janneck.
North Yakima	Yakima	1,070	2	68.4		97	12	42	5	38	0.32		0.21	0	3	19	9	2	nw.	Albert Bender.
Nutland	Klickitat		2	65.4		96	11	42	3	44	0.49		0.28	0	4					Miss Ruth J. Shepard.
Odessa	Lincoln	1,540	8	64.6		99	7†	33	24	51	0.88		0.42	0	4	5	23	2	sw.	Wm. U. Neeley.
Olga	San Juan	50	21	55.7	− 1.1	70	10†	40	5	19	0.99	− 0.43	0.52	0	4	14	14	2	sw.	Cecil S. Willis.
Olympia	Thurston	200	33	57.1	− 2.1	88	11	33	20	41	0.70	− 1.07	0.60	0	2	19	2	9	nw.	M. O'Connor.
Omak	Okanogan	852	2																	Wm. G. Tait.
Oroville	do	922	2	67.2		95	1†	37	5	39	1.74		1.10	0	7	13	15	2	n.	Elizabeth M. Stansbury.
Peola	Garfield	5,000	2								1.15		0.41	0	9	28	0	2	nw.	Samuel Gruell, sr.
Pomeroy	do	1,500	19	64.0	− 0.1	96	12	40	5†	40	0.61	− 0.28	0.47	0	2	14	13	3		Peter McClung.
Port Crescent	Clallam	259	16	49.6	− 3.8	70	11	35	25	29	1.07	− 0.76	0.49	0	9	6	19	5	w.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	21	55.4	− 3.1	72	11	43	5	24	0.10	− 1.44	0.08	0	2	14	8	8	nw.	Frank Plummer.
Pullman	Whitman	2,550	19	61.6	+ 2.4	91	11	41	4†	34	0.91	− 0.46	0.38	0	5	15	12	3	sw.	State Agricultural College.
Quiets River	Chehalis			55.4		77	11†	34	20	38[a]	3.60		1.99	0	1	9	3	18	w.	C. A. Bullard.
Quinlault	do	300	4	57.6		90	10	33	4†	47	2.78		1.83	0	8	9	15	6	sw.	A. V. Higley.
Republic	Ferry	2,628	11	58.6	+ 0.3	87	1†	30	3†	51	2.90		1.05	0	10	17	3	10	s.	G. B. Stocking.
Rex Creek	Chelan	1,135	4	62.8		87	13	43	3	39	1.29		0.68	0	4	10	9	11	nw.	James W. Nicol.
Ritzville	Adams	1,825	12								0.82	+ 0.34	0.27	0	8					Agent, Northern Pacific R
Rock Lake	Whitman	1,910	5	65.4		99	11	36	6	48	0.81		0.46	0	4	14	5	11	sw.	P. M. Ramsey.
Rosalia	do	2,425	19	61.2	+ 3.5	91	11	40	5	36	0.64	− 0.42	0.33	0	5	15	8	7	sw.	Hans Mumm.
Russell's ranch	Yakima	2,870	2								0.23		0.12	0	2	23	3	4	w.	Miss Maggie M. Russell.
Seattle	King	123	20	57.0	− 3.1	77	11	45	20	28	0.44	− 1.28	0.27	0	6	8	10	12	s.	U. S. Weather Bureau.
Sedro-Woolley	Skagit	38	14	57.7	− 1.7	87	10	32	19†	45	1.29	− 1.61	0.79	0	6	17	9	4		Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	4	67.8		98	11†	37	3	38	0.69		0.33	0	5	13	11	6	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom	510	1																	Skagit Power Co.
Snohomish	Snohomish	100	17	57.0	− 2.3	81	11†	34	20	43	0.67	− 1.70	0.25	0	7	14	8	8	nw.	Warren Hodge.
Snoqualmie Falls	King	667	12	59.2	− 0.2	88	10	37	20	36	0.83	− 2.04	0.48	0	6	16	1	13		O. N. Wiswell.
Snyder's ranch	Okanogan	2,200	2	59.8		91	12	30	20	50	1.29		0.64	0	5	17	9	4	nw.	G. M. Snyder.
South Bend	Pacific		16	54.6	− 2.9	83	10	34	5	36	1.24	− 2.57	0.70	0	10	8	12	10	w.	Miss Winifred Eichner.
Spokane	Spokane	1,943	30	64.0	+ 0.6	92	11	44	25	34	0.75	− 0.86	0.47	0	8	8	8	14	sw.	U. S. Weather Bureau.
State University	King	170	2	56.7		77	11	41	4†	31	0.57		0.26	0	6	13	4	13		University of Washington.
Stoke's ranch	Okanogan	2,670	2								1.34		0.51	0	7	18	7	5	sw.	Charles N. Gunn
Sumner	Pierce	77	3	55.4		80	10†	30[a]	20	43[a]	0.73		0.64	0	3	13	6	11	sw.	H. E. Thompson.
Sunnyside	Yakima	740	16	65.4	+ 0.1	94	11	36	4	48	0.82	+ 0.46	0.44	0	6	15	12	3	nw.	U. S. Reclamation Service.
Tacoma	Pierce	213	25	56.7	− 2.7	79	11	42	17	30	0.59	− 1.54	0.47	0	3	8	9	13	n.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	26	50.1	− 2.9	59	25	44	19	13	2.05	− 2.13	1.08	0	12	4	9	17	s.	Do.
Tieton	Yakima	2,000	2	58.4		88	11	35	5	40	1.05		0.64	0	6	15	13	2	w.	U. S. Reclamation Service.
Tonasket	Okanogan	945		68.0		96	13	43	3	39	0.85		0.35	0	4	10	16	4	n.	E. H. Twight.
Touchet	Walla Walla	556	4	66.6		99	11	39	3	43	0.78		0.25	0	7	15	9	6	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	2								1.93		0.60	0	5	4	24	2	sw.	R. H. King.
Trinidad	Douglas	900	7	70.0		95	11†	41	30	35	0.81		0.45	0	3	24	4	2	nw.	J. C. Wheeler.
Vancouver	Clarke	100	36	60.3	− 2.0	88	10	41	3	38	1.07	− 0.82	0.52	0	6	6	19	5	nw.	A. A. Quarnberg.
Vashon Island	King	40	22	56.2	− 2.2	74	11†	40	17†	32	0.74	− 1.13	0.55	0	5	15	5	10	n.	Miss Gertrude McClintock.
Wahluke	Grant	410	7	70.6		99	11	44	3	41	0.57		0.19	0	5	19	5	6		F. C. Koppen.
Wallace	Okanogan	4,000	2								1.54		0.42	0	11	10	14	6	s.	G. A. Wallace.
Walla Walla	Walla Walla	1,000	27	66.6	− 1.6	97	11	45	4	35	1.22	+ 0.03	0.63	0	9	14	12	4	s.	U. S. Weather Bureau.
Washougal	Skamania	650	11	57.5	− 2.2	85	10	36	3	36	1.62	− 0.87	0.77	0	7	13	9	8	w.	F. M. Grout.
Waterville	Douglas	2,624	21	60.6	+ 1.2	91	12	33	5	44[a]	0.67	− 0.29	0.40	0	4	24[a]	1[a]	4[a]	w.	O. R. Hopewell.
Wenatchee (near)	Chelan	1,169	12	62.7	+ 0.8	88	12†	39	3	30	0.55	− 0.39	0.31	0	5	19	9	2	w.	G. A. Pitcher.
White Salmon	Klickitat	325		61.4		92	10	42	23	39	0.33		0.26	0	5	16	12	2	w.	C. W. J. Reckers.
Wilbur	Lincoln	2,203	12	62.2	+ 3.8	97	13	27	3	56	1.15	+ 0.08	0.51	0	4	13	9	8	sw.	R. J. Reeves.
Wind River	Skamania	1,300		58.6		89	10	33	3†	49	0.50		0.35	0	2	18	4	8	nw.	U. S. Forest Service.
Winthrop	Okanogan	1,765									1.10		0.52	0	5	22[a]	4[a]	3[a]		Methow Trading Co.
Yale	Cowlitz	375	4	57.4		94	9	32	4	41	1.75		0.90	0	4	14	10	6		L. F. Williams.
Zillah	Yakima	800		68.0		96	12	35	4	43	0.41		0.28	0	2	24	6	0	w.	Clarence G. Ware.
Zindel	Asotin	715	9	79.2		103	10	52	1	41	2.66		1.03	0	5	18	6	6	n.	M. W. Zindel.
Oregon.																				
Albany	Linn	212	30	58.1	− 3.4	88	10	35	24	46	0.77	− 0.58	0.60	0	4	12	11	7	n.	F. M. French.
Ashland	Jackson	1,963	28	61.8	− 0.6	95	10	37	5	44	1.00	− 0.07	0.60	0	5	7	15	8	w.	G. G. Eubanks.
Astoria	Clatsop	16	51	54.4	− 3.6	74	10	40	5	23	1.25	− 1.85	0.72	0	8	13	6	11	nw.	Irving Club.
Baker	Baker	3,466	21	59.2	+ 0.4	86	11	35	9	39	1.93	+ 0.72	0.80	0	13	9	14	7	nw.	U. S. Weather Bureau.
Bay City	Tillamook	14	17	53.2	− 2.9	72	10	36	5†	28	1.48	− 3.34	1.00	0	5	12	5	13	nw.	John O. Bozorth.
Beech Creek	Grant	4,500		57.1		94	11†	24	4	48	3.91		1.22	0	10	16	11	3	n.	G. G. Carson.
Bend	Crook	3,629	29																	Bend Bulletin.
Black Butte	Lane	1,200	10	51.2		83	10	30	4	45	1.25		0.70	0	4	19	6	5	nw.	Wm. Harris.
Blalock	Gilliam	237	13																	Geo. W. Long.
Brogan	Malheur	2,600		69.5		93	12	43	24	40	0.97		0.58	0	3	20	6	4	w.	A. B. Cox.
Burns	Harney	4,157	20																	J. C. Welcome, jr.
Cascade Locks	Hood River	100	21	59.8	− 2.3	90	10	41	3	40	0.74	− 1.83	0.42	0	5	21	2	7	w.	Val W. Tomkins.
Cazadero	Clackamas	503	2	58.2		89	10	37	19	43	2.40		1.07	0	8	13	8	9	nw.	Alf. Drill.
Cliff	Lake	4,300	4	55.1		89	11	15	4	53	1.78		1.13	0	7	6	16	8	n.	John C. Green.
Condon	Gilliam	2,884	4																	C. H. Williams.
Corvallis	Benton	266	23	56.5	− 3.3	84	10	32	24	41	1.05	− 0.14	0.48	0	4	15	8	7	w.	Oregon Agricultural College.
Dayville	Grant	2,200	17	62.8	+ 0.9	96	11	35	4†	51	1.42	+ 0.67	0.50	0	7	16	9	5	nw.	Dr. J. Campbell Martin.
Deadwood	Lane	350	1	57.0		93	10	35	4†	48	0.84		0.52	0	6	16	4	10	nw.	Jos. Slemmons.
Doraville	Columbia	600	10	54.8		83	10	35	5	37	1.55		0.74	0	7	7	10	13	nw.	Jos. Hackenberg.
Drain	Douglas	300	9	58.8		90	10	32	4	56	0.82		0.77	0	2	14	7	9	nw.	Ira Wimberly.
Echo	Umatilla	625	7	68.8		101	11	39	4	44	1.11		0.31	0	5	21	5	4	w.	R. B. Stanfield.
Ella	Morrow	830	7	67.2		100	11	38	3	43	0.70	+ 0.10	0.35	0	3	21	5	4	sw.	Carl F. Troedson.
Eugene	Lane	449	21	58.0	− 1.5	83	10†	37	4†	37	1.12	− 0.36	0.80	0	3	9	14	7	n.	F. L. Barker.
Fairview	Coos	142	15	54.3	− 3.1	89	10	33	11	43	1.07	− 0.56	0.45	0	4	24	0	6	nw.	Wm. Bettys.
Falls City	Polk	355	14	56.0	− 2.3	88	10	32	4†	43	0.66	− 0.95	0.53	0	5	20	5	5	e.	Chas. F. Vick.
Forest Grove	Washington	220	22																	Pacific University.
Gardiner	Douglas	72	21	56.9	− 0.6	78	9	40	5	29	1.04	− 1.35	0.52	0	4	17	8	5		J. S. Gray.

TABLE 1.—*Climatological data for June, 1911. 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.																				
Glendale	Douglas	1,441	7	58.0	.....	95	10	32	4	50	0.15	.....	0.15	0	1	22	7	1	nw.	B. J. Simpson.
Glenora	Tillamook	575	20	54.5	− 2.7	89	10	32	19†	47	1.28	− 2.56	1.16	0	4	19	0	11	n.	Mrs. Jennie A. Reeher.
Gold Beach	Curry	40	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. Dewey.
Granite	Grant	2,680	6	54.0	.....	83	12	28	5†	48	3.18	.....	1.10	0	8	2	19	9	nw.	L. N. Ford.
Grants Pass	Josephine	956	23	61.0	− 1.3	96	10	31	29	53	0.32	− 0.62	0.30	0	2	17	6	7	sw.	John B. Paddock.
Grass Valley	Sherman	2,381	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent O. W. R. & N. Co.
Headworks	Clackamas	719	9	56.1	.....	85	10	42	3	28	2.33	− 1.29	0.78	0	6	14	6	10	sw.	Portland Waterworks.
Heppner	Morrow	1,950	21	61.4	+ 0.8	94	11	34	3	38	1.41	+ 0.37	0.54	0	6	12	8	10	nw.	Ralph M. Kenton.
Hermiston	Umatilla	451	4	67.5	.....	102	11	36	4	52	0.63	.....	0.32	0	4	22	5	3	.....	C. W. Kellogg.
Hermoso Rio[c]	Crook	.....	.....	58.2[e]	.....	91	11	29	4	55	0.70	.....	0.56	0	3	.....	.....	.....	w.	Carl T. Hubbard.
Hood River	Hood River	300	21	60.3	− 0.5	91	10	38	5†	35	0.35	− 0.63	0.30	0	2	19	8	3	w.	H. L. Hasbrouck.
Huntington	Baker	2,165	10	.....	.....	94	14	.....	.....	.....	0.12	.....	0.02	0	8	14	16	0	e.	L. Connell.
Jacksonville	Jackson	1,640	23	62.9	+ 0.4	95	10	36	4	46	0.43	− 0.59	0.25	0	3	19	6	5	.....	E. Britt.
Joseph	Wallowa	4,400	22	57.6	+ 3.3	87	11	30	1	43	3.18	+ 1.36	0.45	0	15	11	13	6	s.	F. F. McCully.
Klamath Agency	Klamath	4,169	3	53.8	.....	78	13	30	24	42	0.75	.....	0.75	0	1	18	8	4	s.	Edson C. Watson.
Klamath Falls	do	4,100	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Heileman.
LaGrande	Union	2,784	24	61.6	+ 2.1	89	12†	35	25	45	1.53	+ 0.03	0.55	0	8	17	9	4	nw.	W. A. Worstell.
McKenzie Bridge	Lane	1,400	10	57.3	− 1.8	100	10	27	14	64	0.89	− 1.65	0.37	0	8	16	1	13	sw.	Geo. Frissell.
McMinnville	Yamhill	182	24	57.1	− 2.6	90	10	34	19†	48	0.88	− 0.66	0.70	0	3	15	8	7	sw.	J. H. Prugett.
Marshfield	Coos	34	10	52.8	.....	72	10	34	4	32	1.21	.....	0.59	0	7	.....	.....	.....	nw.	U. S. Weather Bureau.
Medford	Jackson	.....	.....	64.1	.....	98	10	35	4	52	0.71	.....	0.61	0	5	14	11	2	nw.	Mrs. Belle O'Gara.
Merrill	Klamath	4,070	5	58.4	.....	87	11†	31	30	44	1.39	.....	0.50	0	4	19	7	4	.....	Mrs. Agnes Ritchson.
Metolius	Crook	.....	.....	59.0	.....	94	11	24	4	50	0.63	.....	0.47	0	2	21	5	4	.....	W. E. Lottman.
Mikkalo	Gilliam	1,400	5	64.2	.....	97	11	41	19	41	0.62	.....	0.38	0	2	27	1	2	w.	Frank Little.
Miramonte Farm	Clackamas	195	23	58.6	− 1.8	90	10	36	4	41	1.39	− 0.06	1.00	0	5	12	9	9	n.	G. Muecke.
Monroe	Benton	350	14	56.8	− 2.7	84	10	36	24	37	0.57	− 0.55	0.47	0	4	19	6	5	nw.	L. A. Peek.
Mount Angel	Marion	485	25	59.3	− 2.3	85	10†	41	4	32	1.50	− 0.56	1.15	0	4	15	6	9	n.	Dr. Urban Fisher.
Mount Hood	Hood River	1,650	1	58.2	.....	87	10	32	3	42	0.23	.....	0.20	0	2	23	4	3	w.	S. G. Babson.
Musick	Douglas	5,000	2	48.8	.....	83	10	28	4	37	4.13	.....	1.16	0	9	15	4	11	sw.	Alex. Lundberg.
Newport	Lincoln	69	24	53.2	− 2.6	69	10	39	17	25	1.24	− 1.61	0.76	0	6	14	6	10	nw.	Wm. Matthews.
North Bend	Coos	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	High School.
Paisley	Lake	4,500	8	61.4	.....	89	11	33	4†	37	1.83	.....	0.55	0	9	19	10	1	w.	E. C. Woodward.
Paulina	Crook	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Orrin C. Mills.
Pendleton	Umatilla	1,070	22	65.0	+ 0.8	100	11	36	3	51	1.29	+ 0.35	0.50	0	8	15	15	0	sw.	E. F. Averill.
Pilot Rock	do	1,817	3	65.4	.....	100	11	34	3	47	1.61	.....	0.42	0	8	15	12	3	sw.	John P. McManus.
Pompeii	Clackamas	3,879	16	41.6	− 7.5	59	1	30	3†	19	2.03	− 1.77	0.52	0	7	14	12	4	sw.	E. Coalman.
Portland	Multnomah	57	41	59.6	− 1.7	87	10	43	3	44	0.87	− 0.91	0.60	0	6	5	12	13	nw.	U. S. Weather Bureau.
Port Orford	Curry	80	6	53.8	.....	75	10	40	22†	23	1.17	.....	0.77	0	3	18	7	5	n.	J. D. Loucks.
Prairie City	Grant	3,425	.....	61.9	.....	92	11	34	9	51	1.06	.....	0.47	0	10	12	10	8	w.	A. M. F. Kircheiner.
Prineville	Crook	2,864	15	59.3	+ 1.1	88	11	31	24	44	1.05	+ 0.25	0.53	0	4	17	9	4	n.	George Summers.
Prospect	Jackson	2,800	5	58.3	.....	94	10	28	4†	52	0.52	.....	0.20	0	4	7	19	4	w.	E. F. Graham.
Ramsey	Wasco	1,350	10	57.8	.....	87	10†	29	4	42	0.49	.....	0.43	0	3	22	3	5	w.	Mrs. Iva B. Collins.
Range	Grant	3,500	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Emma Arbuckle.
Redmond	Crook	.....	.....	59.8	.....	93	11	26	4	54	.....	.....	.....	0	.....	26	2	2	w.	E. E. Foote.
Richland	Baker	2,350	10	64.6	.....	92	11	34	5	43	1.01	.....	0.34	0	7	12	10	8	sw.	L. G. Morgan.
Riverside	Malheur	3,000	12	65.4	+ 3.0	98	12†	28	3†	55	1.54	+ 0.71	0.25	0	12	13	14	3	w.	Mrs. Leah Fairman.
Roseburg	Douglas	510	33	59.8	− 1.1	91	10	37	4	42	0.59	− 0.48	0.52	0	4	17	8	5	nw.	U. S. Weather Bureau.
Salem	Marion	120	21	59.8	− 1.4	86	10	43	3†	27	0.85	− 0.43	0.74	0	4	14	0	16	nw.	M. P. Baldwin.
Silver Lake	Lake	4,700	14	57.4	+ 1.8	89	11	20	4	51	1.04	+ 0.05	0.35	0	8	4	25	1	n.	L. W. Charles.
Siskiyou	Douglas	4,115	3	55.0	.....	86	10	31	4	34	1.29	.....	0.78	0	4	8	9	13	n.	U. S. Weather Bureau.
Sparta	Baker	4,150	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. A. Wright.
Stafford	Clackamas	400	15	57.3	− 2.6	88	10	36	3†	38	1.61	− 0.18	0.97	0	7	.....	.....	.....	ne.	John P. Gage.
The Dalles	Wasco	112	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. L. Brooks.
Toledo	Lincoln	75	21	53.8	− 2.6	83	10	36	23	42	1.60	− 1.56	0.80	0	4	20	5	5	nw.	C. B. Crosno.
Umatilla	Umatilla	340	23	70.4	+ 1.7	102	11	40	7	37	1.11	+ 0.79	0.73	0	2	20	5	5	sw.	Mrs. Helen T. Duncan.
Vale	Malheur	2,242	19	68.4	+ 5.0	96	11	34	5	48	1.61	+.0.90	0.41	0	12	12	17	1	nw.	H. P. Osborne.
Van	Harney	3,506	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Howe.
Wallace Orchard	Polk	170	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. A. Park.
Wallowa	Wallowa	2,935	8	59.7	.....	89	11	33	9†	47	1.77	.....	0.36	0	13	6	8	16	nw.	L. J. Coverstone.
Wamic	Wasco	1,500	10	59.1[d]	.....	96	12	29	19	53[d]	0.30	.....	0.30	0	1	4	0	22	w.	A. J. Swift.
Warmspring	Crook	1,500	19	62.3	.....	95	11	33	3	49	0.63	.....	0.35	0	3	20	8	2	nw.	Claude C. Covey.
Wasco	Sherman	1,263	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. R. Howell.
Westfall	Malheur	3,000	.....	65.6	.....	91	13	32	3†	34	0.86	.....	0.47	0	5	17	4	9	w.	H. M. Gilliam.
Weston	Umatilla	1,800	19	62.8	+ 2.2	100	12	33	3	42	1.23	− 0.09	0.40	0	9	6	11	13	sw.	M. A. Baker.
Williams	Josephine	1,368	19	58.8	− 2.1	94	10	30	2†	54	0.35	− 0.48	0.30	0	2	17	9	4	n.	Francis J. Leroy.
Yonna	Klamath	4,146	4	56.4	.....	86	11	27	24	48	0.76	.....	0.22	0	9	11	14	5	s.	Jacob Ruecke.

[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 June, 1911. District No. 12, Columbia Valley, Montana.*

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	
Montana.																																	
Anaconda	Missoula	.44		.05	.13			.50	.58				.08	.26	.30	T.	.06	.04		.81	.24	.46	T.	.10	.01		T.	.06	.10	.28	.85	5.35
Bison Mountain	do	.10	T.	.22	.45			.15	.30				.22	.05			T.		.12	.55	.65	.45			.05	.08		.05	.02	.15	.08	3.69
Butte	do	.70	T.	.40	.35		T.	.30	.35	T.	T.	T.	T.	.05	T.	T.	T.	T.	.10	T.	.30	.10			.10		T.	.10	T.	.35	.10	3.30
Columbia Falls	Flathead		.05		.12				.37			.04									.04	.16	.06	.09	2.00	.18	.01	.36	.08		.47	4.03
Como	Bitter Root	.22		.35	.07		.20	.41	.01							.09	.10		.04	.03	.03	.40		.52	.02			.30	.05	.14	.42	3.40
East Anaconda‖	Missoula	.26	T.	.40	.24		.05	.55	.36				.07	.17	.24	T.	.13	.01	T.	.39	.16	.04	T.	.05	.02			.14	.11	.65	1.07	5.11
Fortine	Flathead		.10	T.	.03			.05	.26				T.		T.	T.					.12	.08	.20	1.00	1.18	.25	.08	.66	.06	T.	.80	4.87
Hamilton	Bitter Root	.05		.19	.60	.03		.47	.09					.04							.16	.05	.21		.45				.31	.22	.12	2.99
Hat Creek	Missoula		.34		.06	1.10		T.	.25	.10			T.	.25				.11	.06	.36	.90	.28	.12		.30	.06		.12	.18	.21	.33	5.13
Kalispell	Flathead	T.	T.	T.	.14			.09	.15				.14	T.	.02	.09					.06	.20		.14	1.74	.06	.10	.27		T.	.63	3.83
Lost Creek	Missoula	.33	.12		.40			.32	.37					.50	.12			.10		.60	.30				.32			.08	T.	.30	T.	3.86
McGinnis Meadows	Kootenai											*	*	.81	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	3.80	4.61
Missoula	Missoula	.13	.01	.18	.77			.16	.20	.01				.08							.02	T.	.09		.81	.08	T.	.31	.22	.09	.22	3.38
Ophir	do	.10	.04	T.	.57			.47	.55				.12	.25			.27		1.00	.05	.12	.30	.10		.30				.30	.28	.22	5.04
Ovando	do	.01	.10	.43	.46			.70	.08	T.	T.		.03			T.		.02	.03	T.		.03	.02	.06	.76	.16	.44	.41	.37	.25	.15	4.51
Philipsburg	do	.12	.20	T.	.60			.63	.40				.28	T.	T.	T.																
Plains	Columbia	.35			T.			T.	.25					.30	T.							T.	.32	.12	.70	.12			.35			2.51
Pleasant Valley	Kootenai	T.	T.		T.			.03					.12	1.00	.12						T.	.40	T.	.50		T.	T.	T.	.20	1.03	.05	3.45
Polson	Flathead		.15		.43				.37	.35					.52	.22						.25	.10		1.50	.49		.36	.08		.29	5.11
Proctor	do																															
St. Ignatius	do	T.	T.	.18	.51	T.		.35	.32	.01					.08		.17				T.	.03	.19	.04	1.36	.48	T.	.39	.17	T.	.09	4.37
St. Regis	Missoula	.48						.20	.11												.08	.77	.10	.47	.92	.11		.38		.41	.08	4.11
Saltese	do				.27									.37						.27				.65	.52			.52		.17		2.77
Troy	Kootenai																															
Willow Glen Stock Farm.	Missoula	.50	.01	.22	.37			.43	.35				T.	.13	.06		.03		T.	.09	.20	T.						.12	T.	.30	1.10	3.91
Wyoming.																																	
Afton	Snake									.30				.10	.04	.53	.03					.20							.10	.05	.02	1.37
Alta	do	.27	.18		.05			.09	.28	.31						.50				.14	.02	.26							.20	1.16	.10	3.58
Bedford	do									.44				.10	T.	.65					.02	.28							.16	.03		1.68
Belcher River	do																															
Moran	do																															
Snake River	do	.30	.20	T.	.20		T.	.20	.20	.20					T.	.40	.20	T.		T.	T.				T.			T.	T.	1.10	.10	3.10
Nevada.																																	
San Jacinto	Snake	*	.59	.04	T.				.18					T.		T.	T.	T.	.16	.05	T.							.19		.23	.27	1.71
Utah.																																	
Standrod	Raft		.10		T.				.10						.71	.33		.22	.02	.05	.14							.35		.52	.96	3.50
Idaho.																																	
Almo	Snake	T.	.13	.02	.03			.23	.37						.51	.23	T	.02		.43	.45	T.						.04	.01	.69	.90	4.06
Alpha	Payette	.02	.03	.01	.30			1.07	.39												.09	.19		.10	.29							
American Falls	Snake		.10	.08	.04										.07	.15		.04	.11	.02	.14		.07					.13		.42	.45	1.82
Blackfoot ‖	Blackfoot		T.	.08	T.		T.	.01	.03					T.	.25	.06		.66		.19	.21	.06						.11	.31	.37	.17	2.51
Blackfoot Dam	do	.01	.05	.02	.06				.14	.12				.28	.08	.42	1.30			.06	.22	.20							.15	.85	.10	4.06
Bogus Creek	Payette	T.	.04	.78	.31		.02	.54	.02				T.	T.	T.			T	T.	T.	T.	T.		T.				.34	T.	.61	.33	3.99
Boise	Boise	T.		.22	.36		.02	.41	.77				.02		T				T.	T.	.01	T.		T.			T.	.18	.09	.23	.24	2.55
Bonner's Ferry	Kootenai				.10								.23		.07	T.								T.	.65	.03		.28			.15	1.51
Boulder Mine	Boise	.07	.06	.05	.46			1.01	1.30	.04				.03	.43						.01	.13		.16				.29	.16	.63	.73	5.56
Buhl	Snake		.12	.32	.05			.02	.03	T.		.01	T.	T.	.03	.13	.12	.35		.01								.42		.63	.07	2.34
Caldwell	Boise	T.	.05	.23	.05			.06	.35						T.					T.		T.						.50			.20	1.44
Camas	Lost River Region.	T.	.01	T.				T.	.14	.08					.04	.16				.03	.64								.15	.04		1.29
Cambridge	Weiser	T.	.14	.05				1.32	.35					.15								.13			.45			.24	.02	.57	.21	3.57
Cedar Creek Dam	Snake	*	.59	.03	.09		.02	.10								.52		.09		.05	.07							.29		.13	.05	2.03
Chesterfield	Port Neuf								.11	.02				.09	T.	.16			.43	.33	.38							.06		.47	.11	2.16
Clyde	Lost River Region.	.15	.51	.15	.06		.02	T.	.07					.06		.25		.10		T.	.05	.05						T.	.21	.49	.08	2.25
Culdesac	Clearwater								.73	.05															1.25			.54	.55	.40	.80	6.09
Deary	do																															
Dent	do	.34			.12			.06	.32	.07											.13		.08	.16	.48			.56		.34	.08	2.74
Driggs	Snake	T.	.16		T.			T.	.15	.23					T.	.66				T.	T.	.27								1.25	.08	2.80
Edie	Lost River Region.	.12	.51		.26									T.	.10	.15		.95		T.	.54	.09	.13						.38	1.08	.74	5.05
Emmett	Payette	.03		1.07	.13			.55	.09										.03	.04		.05						.14		.30	.19	2.62
Forney	Salmon				.07					.02				1.01								1.01			.06							2.21
Garden Valley	Payette	T.	.22	.15	.46		.04	.50	.72							.13							.03	T.	.14			.46	.06	.25	.27	3.43
Garnet	Snake		.10	.15	.07			.22	.22									.02		.27								.95		.15		2.15
Glenns Ferry	do		.21	.05				.09	.07				.15							.08								.10		.30		1.05
Gooding	Wood-Malad		.40	.02	.01			.08	.02									.01		.22	.03							.17	.07	.03		1.06
Grand Forks	St. Joe	.04	.14	.10	.10			.04	.20			.09									.22		.20	.16	.89			.48	.25	.14	.15	3.20
Grandview	Snake	T.	.05	T.	.01			.14	.20			.08	T.	.04						T.				.06				.36	.03	.15	T.	1.12
Grimes Pass ‖	Boise	.03	.23	.70	.12		.08		1.30	.40			T.		.03	T.		.02			.01	.11		.26			.12	.39	.41	.02	.86	5.09
Guffey	Snake		.13	.01	.11		.01	.10	.23				T.		.41			.04		.02	.01	T.		T.	T.			.19	.02	.46	.04	1.78
Hailey	Wood-Malad		.17	.17	.04			.10	.06					T.							.24	.01						.08	.38	.23	.05	1.53
Hotspring	Bruneau	T.	.25	T.					.11	.30				.20	.12					.18	T.			T.				.21	.12	.14		1.63
Idaho Falls	Snake	.01	.03		.08		.01		.02	.22	.01			.04	.02	.26	.02	.65		.02	.31	.03						T.	.05	.50	.39	2.67
Indian Valley ‖	Weiser		.17	.12	.29	.01		.29	.68												.11		.52		.22				.75	.25	.45	3.86
Irwin	Snake	.35	.18	T.	T.			T.	.07	.14					.23	.49			.09	.04	.70									.95	.05	3.29
Kellogg ‖	Coeur d'Alene		.12			.02			.15	.14			.11								.23		.28	.02	.77	.18		.18	.49	.08	.02	2.79
Kirkham	Payette			.10				1.00	.45							.81											.54	.07	.20	.60		3.77
Kooskia	Clearwater																															
Lakeview	Pend d'Oreille								.20														T.	.05	.60			.49	.24			1.58
Landore	Snake	.10	.11	.34	.22			.48	.57				T.						.07		T.	.14	.04	.25			T.	.70		.25	.55	3.62
Lewiston	Clearwater	.01		T.				T.	.24					T.						T.	.04	.15		.30	.09		.03	.15	.11		.01	1.13
Long Gulch	Boise		.25		.30			.40	.65	.06			.03		.05	.10				T.				.05				.65	.30	.60	.05	3.55
Loon Creek	Salmon	.08	.23	.08	.46	.01		.30	.40	.01				.01	.20	.18				.20	.55	T.			.03			.48	.12	.20	.90	4.44
Mackay ‖	Lost River region.																			.27	.30	.10							.09	.12	.08	0.96
Meridian	Boise	T.	T.	.46			.32	.73	.01				T.		T.				T.		T.	.01		T.				.25	T.	.26	.13	2.17
Mesa	Weiser																															
Middle Fork	Clearwater	.05		.30	.38			.28	.85										.05				.13	T.	1.28			.60	.30	1.00	.42	5.64
Milner	Snake	.07	.07	.08	T.			.02	.02					.15		.09					.22	.03						.15		.13	.07	1.10
Moscow	Palouse	T.							.10	.08											T.			.12	.18	.32						0.80
Mountainhome	Snake		.16	.05	.08			.17	.29					T.	T.		.02	.05		.09	.02	T.		T.				.61	T.	.36		1.90
Murtaugh ‖	do		.07											.38	.05		.15				.09	.52							.13	.13		1.52
Nez Perce	Clearwater	.05			.30			.60	.63													.11		.50	.39			.61		.41	.12	3.72

TABLE 2.—*Daily precipitation for June, 1911. 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		
Idaho—Continued.																																	
Oakley	Snake		.45					.40	.12					.05	.30					.15	.30							.15		.20	.64		2.76
O'Hara Bar	Clearwater																																
Orofino	do	T.		T.	.21			.13	.82	.03				.07							.06	.07	T.	.14	.67	T.	T.	1.40	T.	.56	.10		1.26
Payette	Payette	.09	.02	.02	.12		T.	.20	.09							.01					T.	.06		T.	T.			.18		.32	.06		1.17
Peaceful Valley	Snake		T.		T.			.34	.35						.03					T.		T.		T.				.37	T.	.17	.12		1.38
Pebble	Port Neuf		T.		T.		.10		.02	.13				.06	T.	.15			T.		.20	T.						T.	.11	.84	.35		1.86
Pierson	Salmon				.64			.16	.86	.13											.43												2.63
Pleasant Valley	Boise			.03	.67		T.	.43	.48	.04						T.												.45	.15	.28	.02		2.55
Pocatello	Port Neuf	.03	.06	T.	.03			.03	.10	.02				T.	.12	.34		.16		T.	.90							.16	.07	.70	.41		3.13
Pocatello Nursery	do			.12				.04		.26					.15	.12	.11	.42	.07	.03	.41							.03	.19	.30	.61		2.86
Porthill	Kootenai								.20				.07										.15		.24			.35	.15		.30		1.46
Pyle Creek	Payette	.02	.16	.04	.38			.68	.44							.38					.35	.10		.10				.36	.06	.28	.34		3.69
Richfield	Wood-Malad		.42	.08	.06		.01	T.	T.					T.	T.	.01		T.		.01	.08	.18	.18					.11	.01	.15	T.		1.30
Roseberry	Payette	.19	.26	.40	.30			.66	.70	.01						.01					.20	.16		.05	.42			.69	.17	.45	.26		4.93
Roseworth	Snake	.23	.26	.02	.03			T.	.15							.04		.04		.20	.05							.20		.20	.02		1.44
Rupert	do	T.	.25	T.	.09	T.	T.	.02	.03				T.	.15		.02	.23			.01	.03							.09	T.	.17	.21		1.30
St. Maries	St. Joe		T.	T.	.08				.28				.16								.07	T.	.06	.12	.46			.66	.55	.03	T.		2.47
Salmon	Salmon	.18	.37		.45		.15	.23	.15				T.		.04	T.	T.	.22	.03	.08	.36				.05			.05	.11	.15	.67		3.29
Salmon River Dam	Snake	.35	.37	.03	.10			T.	.13	T.					.02	.05		.15	.06	.17	.02							.15	T.	.17	.12		1.89
Sandpoint	Pend d'Oreille								.05															.01	.43			.34					0.83
Sheep Hill	Boise		T.	.02	.27		T.	.38	.06	.10				.10	.01						.01	.01		.03	T.			.29	.16	.47	.08		2.89
Shoshone	Wood-Malad	T.	.25	T.	.02		T.	.06	T.				T.	T.	T.	T.	T.	.03	T.	.12								.20	.09	.07			0.84
Silver City	Owyhee	T.	.21		.13		.09	.71	.69						.16			.05		.03	T.				T.			.41	T.	.35	.12		2.95
Smith Ranger Station.	Kootenai																																
Soldier Creek	Wood-Malad		.35	.08	.02			.35	.20							.10	.02			.10	.27							.25	.18	.45			2.37
Spirit Lake	Pend d'Oreille																																
Springfield	Snake		.11		T.			T.	.11	.10				.17		.28		.50		.21	.09	.06							.15	.27	.27		2.32
Sugar ‖	do		T.		.19			T.	.04				T.	.43		.35		T.		.05	.63								.45	.31	.27		2.72
Sunnyside	do			.20	.03		T.	.26	.42	T.			.07	T.				T.		T.				T.				1.00	T.	.36	T.		2.34
Tripod Mountain	Payette	.65	T.	.11	.46			.76	.43											.02	.02		.22				.22	1.06	.21				4.16
Twin Falls	Snake		.02	.07									T.	.04		.05					.06							.34		.22	.03		0.83
Vernon	do	.03	.10		.40				.21	.09						.40				.05	.61	.30							.05	.48	.30		3.02
Wallace	Coeur d'Alene	.14	.93	T.	.04			.15	.35	.01			.10								.17	.03	.15	T.	.75			.56	.10	.08	.02		3.58
Wendell	Wood-Malad		.16	.70	.07			T.	.04									T.		.30								.12	.25	.19	.12		1.95
Washington.																																	
Aberdeen	Coast																						12				.82	.10	.22		.15		1.41
Anacortes	Puget Sound									.20	.01												.05				.44		.11				0.81
Baker	do				T.			T.		.11		.11															.33	.08	.08		.10		0.81
Bellingham	do									.25													.36				.30		.17	.12	.06		1.26
Bellingham, near	do									.25	.06											T.	.05	T.			.40	T.	.15	T.	.01		0.92
Beverly	Columbia																																
Blaine	Puget Sound			.17						.34	.08											T.	.10				.73		.13	.01	T.		1.56
Blewett	Wenatchee																																
Bremerton	Puget Sound		.02																								.52		T.				0.54
Brewster	Columbia							T.		T.			.46									.10	.12	.24			.04	.20	T.		.08		1.24
Bumping Lake	Yakima																																
Cedar River	Puget Sound		.08																				.05				.63		.13	.07			0.96
Centralia	Coast																									T.	.69		.08	.10			0.87
Cheney	Spokane								.17				.10										.04	.03	.15			.03		.01	.01		0.54
Cle Elum	Yakima																						.25				.33						0.58
Clearbrook	Puget Sound			.24	.04					.37	.20								.02				.09				.82	.24	.40	.01			2.43
Colfax	Palouse								.10			.05									.05							.50					0.70
Colville	Columbia				.05																	.54					.04	.39			.42		1.44
Conconully	Okanogan							T.				T.	.85	.04								.04	.27	.29	.05	T.	.19	.16		.03	.03		1.95
Cowiche	Yakima								T.				.08	T.									.01	.07			.27		T.	T.			0.43
Crescent	Spokane																																
Davenport	Columbia	.01						.01					.04		.06							.01		.02	.05		T.	.41			.14		0.75
Dayton	do	.09							.09					.02							.04	T.		.19	.06			.51	T.		T.		1.00
Deer Park	Spokane							T.																.07	.10			.50			.60		1.27
Detroit	Puget Sound				.12																	T.				T.	.80		.23				1.15
Dixie	Columbia	.04							.33					.25							.10	.02		.23	.60		.20	.64	.02		.17		2.60
Dryden	Wenatchee											.01	T.	T.								T.	.40	.12	.01		.06	.01	T.		T.		0.61
Duckabush	Puget Sound			.50	.02																	.20					1.15	.30	.10	.02			2.29
East Sound	do																																
Ellensburg	Yakima																						.07	.35			.06	.11					0.59
Ephrata	Columbia						.25																	.25									
Forks	Coast																																
Fort Simcoe	Yakima																						.01	.20		T.				.03	.01		0.25
Gerome	Columbia																																
Goat Lake	Puget Sound		.01						.10		.23	.03											.22		.08		.20	.85	.03	.13	.12		2.00
Gold Basin	do						T.	T.		.15	.70	T.										T.	T.	T.	.11	1.10		.08	.02	.05	.02		2.23
Gold Creek	Yakima												.10									.20											0.30
Goldendale	Columbia																								.02		.18			.10			0.30
Granite Falls	Puget Sound		.02							.15		.19															.50	.14	.05	.02	.22		1.35
Grays River	Columbia																																
Hatton	do								.08				.06									T.		.10			.38	T.	T.		.20		0.72
Huntsville	do								.07						.05										.10		.62				.12		0.96
Irene Mountain	do												.04									T.	.50	.06	T.		.10	.27	T.	.28	.53		1.78
Kennewick	do							.18														.04		.11			.30	T.	T.		T.		0.63
Kettle Falls	do				.09								.21		.21							.55			.18			.32			.72		2.28
Kiona	Yakima						.02																	.25			.24	.09			.01		0.61
Kosmos	Columbia																							T.			.77	.07	.05	.16	.05		1.10
La Center	do	.01																				T.				.27	.65		.25		T.		1.18
La Crosse	Palouse								T.				.06	T.							T.	T.		.06	.06		T.	.50	T.	T.	T.		0.68
Lake Clealum	Yakima											.02	T.									.21	T.	T.	T.		.24	.04	.02	.02	T.		0.55
Lake Kachess	do									T.												T.	.20		.01		.35						0.56
Lake Keechelus	do									T.	.03											T.					.40	T.					0.43
Lakeside	Columbia									T.		T.	T.									.10		.34			.03	.02		T.	T.		0.49
Laurel	do																					.02					.28						0.30
Laurier	Kettle				.02			.04	.01						.04							.14	.20		.01		.09	.58	.01	.01	1.11		2.26
Lester	Puget Sound																					.15					.30			.15	.05		0.65
Lone Tree	Coast		T.						T.	.03			T.	T.													1.36	.12	.19	.13	T.		1.83
Longmires Springs	Puget Sound																																
Lost Creek	Columbia								.03														.27		.10		.34	.22	.34		.60		1.90
Lucerne	do																																
McConibe	do							.02					.02									T.		.26			.04			T.	.04		0.38
McCumber's ranch	do																										.10						0.10
Mottinger	do													T.								.05		.20	.05		.33	.11			T.		0.74
Mount Pleasant	Coast									.17													.47					.12	.06	.27			1.09

TABLE 2.—*Daily precipitation for June, 1911. 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	
Washington—Con.																																
Moxee	Yakima												T.	.06								T.	T.	.29	.01		.12	.01	T.	.06		0.55
Newport	Pend Oreille							T.	.04				T.											.02	.22			.44	.01	T.	.06	0.79
North Head	Coast															.01	.02									.21	.23	.01	.26	.05	.04	0.83
Northport	Columbia				.07	T.		.08		T.		T.	.02	.25								.13	T.	.25		T.	.29	.01		.51	.49	2.10
North Yakima	Yakima												T.	T.									T.	.21	.01		.10	T.	T.	T.		0.32
Nutland	Columbia																							.14	.02		.28	.05				0.49
Odessa	do								.02				.16									T.	T.	T.			.28	.42				0.88
Olga	Puget Sound									.26												T.	.16				.52		.05			0.99
Olympia	do																									T.	.60		.10			0.70
Omak	Okanogan																															
Oroville	do											.04		.15								.03	.21	.17			.04	1.10	T.			1.74
Parker	Yakima																															
Peola	Snake	.18		.03					.20					.05							.19	T.		.01	.03			.41	.05		T.	1.15
Pomeroy	Snake	T.							T.				T.									.14	T.		T.				.47			0.61
Port Crescent	Coast								.01	.17								.01				.14	.06				.18	.01	.43	.06		1.07
Port Townsend	Puget Sound										T.											.08							.02			0.10
Pullman	Palouse								.11												.11	T.		.27	.04		T.	.38				0.91
Queets River	Coast		.04	.04						.35	.37		.02		T.		.05		.02			T.	T.			.01	1.99	.10	.45	.07	.09	3.60
Quinlault	do						.01			.40	.08												.04				1.83	.04	.27	.11		2.78
Republic	Kettle													.06								.14	.46	.09	.07		.10	1.05	.03	.05	.85	2.90
Rex Creek	Columbia											T.	.68									T.	.53	.02			.06		T.	T.		1.29
Ritzville	do							.05				.11	.07									.05		.09			.27			.06	.12	0.82
Rock Lake	Palouse				.05				.03				.27									T.		T.	T.		T.	.46				0.81
Rosalia	do				T.				T.				.15											.06	.05			.33			.05	0.64
Russel's ranch	Yakima												T.										.11	T.			.12	T.	T.	T.		0.23
Seattle	Puget Sound		.02	T.	T.					T.		.08										T.	T.			T.	.27	.01	.05	.01	T.	0.44
Sedro Woolley	do									.12		.01															.79		.11	.08	.18	1.29
Sixprong	Columbia																							.33	.03		.30	.02	T.	.01		0.69
Skagit Power Dam	Puget Sound																															
Snohomish	do		.12		.01					.03		.10															.25		.06		.10	0.67
Snoqualmia Falls	do		.04																								.48	.02	.01	.22	.06	0.83
Snyder's ranch	Columbia							T.				T.	.05									T.	.40	.17			.03			.64		1.29
South Bend	Coast		.03							.01		.01										.02	.06	.07	.06		.70	.03	.25			1.24
Spokane	Spokane							T.	.01			.01	T.								T.	.04		.09	.07		.12	.10	T.	T.	.31	0.75
State University	Puget Sound		.16									.06										T.	T.				.26	.02	.04	.03		0.57
Stokes Ranch	Columbia						.07						.16										.51	.23			.04			.15	.18	1.34
Sumner	Puget Sound																									T.	.64		.06	.03		0.73
Sunnyside	Yakima												.02	.04										.43	.01		.10	.22	T.			0.82
Tacoma	Puget Sound			T.					T.	T.		T.					T.					.02				T.	.47	T.	.10			0.59
Tatoosh Island	Coast		.01		T.	T.			.02	.34	.03		T.		T.	.07	T.	.10	.01			.01	T.			.06	1.02	T.	.34		.04	2.05
Tieton	Yakima											.01	.64									.01	.18	T.			.18			.03		1.05
Tonasket	Okanogan													T.									.25	.15			.10	.35			T.	0.85
Touchet	Columbia	T.							.14					.06							T.	T.		.10	.06		.25	.15	T.	T.	.02	.78
Touchet Ridge	do	T.							.60											T.		.20		.36				.60			.17	1.93
Trinidad	do												.33											.45			.03					0.81
Vancouver	Columbia																						.08			.10	.52	.01	.14	.22		1.07
Vashon Island	Puget Sound			T.	T.							T.															.55	.02	.15	.01	.01	0.74
Wahluke	Columbia													.06								.05		.19			.12	.15				0.57
Wallace	Okanogan										T.	.02	.01	T.								.04	.42	.30	.05		.23	.29	.02	.04	.12	1.54
Walla Walla	Columbia	.01							.12				.13	T.						.01	T.	.01		.15	.05		.62	T.	T.	T.	.12	1.22
Washougal	do		.04																				.25				.77	.25	.18	.12	.01	1.62
Waterville	do								T.			T.										T.	.13	.40			.10	.04				0.67
Wenatchee (near)	do											.06										.09	.04	.31			.05		T.		T.	0.55
White Salmon	do																					.02	.02	.02			.26			.01		0.33
Wilbur	do			T.				.22																.27	T.			.15			.51	1.15
Wind River	do																					T.					.35		.15			0.50
Winthrop	do																				T.		.52	.33			.02			.20	.03	1.10
Yale	do																										.90	.10	.55	.20		1.75
Zillah	Yakima																							.28		T.	.13	T.	T.			0.41
Zindel	Snake	.56																								1.03	T.	.17	.80	.10	T.	2.66
Oregon.																																
Adel	SE. Drainage																															
Albany	Willamette																										.10	.60		.01	.06	0.77
Allingham	Deschutes											.61										.04		.07			.08	.03				0.83
Ana River	SE. Drainage			.10											T.									.18		T.		.26		T.		0.54
Ashland	Rogue						.08															.11		.60			.15	.06		T.		1.00
Astoria	Columbia		.03		T.				T.			.06					.01					T.				.01	.72		.12	.17	.13	1.25
Bagley's Ranch	Snake		.05	.27					.21					.12							.71			.05	.02			.58	.09			2.10
Baker	do	.06		.10	T.		.01	.05	.10				.32	T.	T.					.02	.13	T.		.20			.10	.71	.12	T.	.01	1.93
Bay City	Coast		.04																								1.00		.22	.16	.06	1.48
Bear Creek	Deschutes							.05																.23			.42	.54		.07		1.31
Bear Valley	SE. Drainage		T.		T.												.10	T.							.05	.25	T.		.05	.30	.20	0.95
Beech Creek	John Day												.27	T.							.19	.03	.05	1.22	.15		.80	.75	.15	.30		3.91
Bellefountain	Willamette																									T.	.61	T.	.01	.03		0.65
Bend	Deschutes																															
Big Basin	John Day												.50	.50										.80			.50	.10	.30	.10	.20	3.00
Black Butte	Willamette																							.05			.70		.20	.30		1.25
Blalock	Columbia																															
Blue Mountain Sawmill.	Umatilla								.25					.80						.06		.02		.40				.86				2.39
Brogan	Malheur							.58	T.						.19	T.						T.									.20	0.97
Buena Vista	Snake													.02							.03			.04			.02	.03	.01			0.15
Burns	SE. Drainage																															
Burns Mill	do				.11		.04		.06			T.	.02				.01		T.		.03	T.		.04			T.	.33				0.64
Butte Falls	Rogue																						.02	.45	T.		.36	.02		.14	.01	1.00
California Gulch	Umatilla												.13							.08			1.00				.98		.03	.12		2.34
Canyon City	John Day			.10			.02	T.				T.			T.					T.	.01	.19		.34		T.	.30	1.09	T.	.38		2.43
Cascade Locks	Columbia																						.03				.42	.09	.12	.08	T.	0.74
Cascadia	Willamette																							.04			.35	.19	.36	.28	.07	1.29
Cazadero	do	.02			T.																		.04	.02		T.	.70	1.07	.02	.40	.13	2.40
Christmas Lake	SE. Drainage			.07				.04						T.	T.									.20			T.	.85		.10	.04	1.30
Cliff	do	T.		.02				.20							.05									.27			.06	1.13		.05		1.78
Columbia Mine	Snake							.20	.05					.81	.04						.12	.22	.06	.26	.18			.58	.06	.04		2.62
Condon	John Day																															
Coquille River L. H.	Coast																										.49	.04	T.	.09	.02	0.64
Cornucopia	Snake	.03	T.	.25	.10			.21	.60							T.			T.		.34	.21		.06				.64	.14	.51	.15	3.24
Corvallis	Willamette																									.30	.48		.03	.24		1.05
Cracker Creek	Snake						T.	.01	.01				T.	.05						.03	.03	T.		.06			.03	.05		.02		0.29
Crescent	Deschutes	.07					.21	.09					.11	.14	.05	.03				T.	T.			T.		T.	.23	.01				0.94

TABLE 2.—*Daily precipitation for June, 1911. 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	
Oregon—Continued.																																
Dayville	John Day			T.				T.						.50						T.		T.			.20		.09	.48	.01	.13	.01	1.42
Deadwood	Coast																									.07	.52	.04	.05	.10	.06	0.84
Diamond	SE. Drainage		.14		.24				.11						T.	.05				.09	T.	T.				.11	T.			T.		0.74
Doraville	Columbia		.02						T.			.01														.06	.74	T.	.51	.15	.06	1.55
Drain	Umpqua																										.77	T.	T.	.05	T.	0.82
Dufur	Columbia																															
Duncan	Umatilla																						.55				1.10				.10	1.75
Echo	do													.19								.23		.28	.10			.31	T.		T.	1.11
Ella	Columbia																							.30	T.	T.	.35	.05				0.70
Embody	SE. Drainage						.02	.01						T.	.45					T.				.24			.20			.03		0.95
Eugene	Willamette																										.80		.28	.04		1.12
Fairview	Coast																T.	T.								.04	.45	.36	.22			1.07
Falls City	Willamette																					T.				.03	.53	.05	.04	.01		0.66
Fir Glen	Coast																									.45			.21			0.66
Florence	do																										.79	.05	.03	.27	.04	1.18
Forest Grove	Willamette																															
Fort Rock	SE. Drainage						.13								.82									.15			.30			T.		1.40
Galice	Rogue																							.10						.01		0.11
Gardiner	Umpqua																										.52	.05	.07	.40		1.04
Glencoe	Columbia												.27											.65			.39					1.31
Gibbon	Umatilla								.20					.05										.48				1.40				2.13
Glendale	Umpqua																						.15				T.					0.15
Glenora	Coast											.02														1.16	.02	.08				1.28
Gold Beach	Rogue																															
Golden Falls	Coast																					T.				T.	.58	.14	.08	.55	.08	1.43
Grande Ronde	do																										.50					0.50
Granite	John Day			T.				T.	T.					1.10							T.	.20		.30	.58			.50	.10	.30	.10	3.18
Grants Pass	Rogue																							.30				T.		.02		0.32
Grass Valley	John Day																															
Greenhorn	Snake	.02		.04			T.	.07	.10			T.	.07	T.						*	.05	.05		.43	.08		.24	.29	.13	.16	.01	1.74
Gumboot	do	.08		.28	.25			.29	.83	T.					.90	T.						.50	.06		.38			.40	.09	.08	.19	4.33
Gurdane	Columbia													.04							T.			.32	.23		.40	.06	T.	.07	T.	1.12
Happy Home	Umpqua																									*	.27	.10	.05	.65	.14	1.21
Hay Creek	Deschutes																							.48			1.19	.13				1.80
Hazeldell	Willamette																							T.		T.	.54		T.	.12		0.66
Headworks	do	.20																									.78	.56	.20	.36	.23	2.33
Heppner	Columbia													.14					T.			T.		.54	.25	T.	.42	.05	T.		.01	1.41
Hermiston	Umatilla								.01											T.		T.			.21	.09		T.	.32		T.	0.63
Hermoso Rio	Deschutes												.04											.10	T.			.56				0.70
Hilgard	Grande Ronde	.10							.15				.05							.20	.10	T.		.20	.40		1.50	T.	.10	T.	.10	2.90
Hood River	Columbia																				T.			.05			.30			T.	T.	0.35
Hoover	Willamette																						.10	.11	.07	T.	.36	.21	.04	.15	.12	1.16
Howardville	Grande Ronde	.11			.04			.06	.22					.03							.21	T.		.02	.08		.09	.20	.05	.02	.00	1.19
Huntington	Snake	T.													.02	.01					.02						.01	.02	.01	.02	.01	0.12
Ibex Mine	John Day	T.						.14	.09					1.71							.27	.03		.22	.32			.65	.06	.06	T.	3.55
Ironside	Snake							.40	.05						.41	.10					.48	.05	.03			.13	.13			.45		2.23
Jacksonville	Rogue																					T.		.25			.04	.14				0.43
Joseph	Grande Ronde	.25			.28			.18	.37	.10			.03	.04							.33	.32			.45		.10	.28	.15	.20	.10	3.18
Klamath Agency	Klamath																										.75					0.75
Klamath Falls	do																															
La Grande	Grande Ronde	.08						T.	.14												.24	.02			.37			.55	.08		.05	1.53
Lilyglen	Rogue						.25	.21																.69		T.	.58	.49		.20	.02	2.44
Long Creek	John Day	T.						T.				T.	.32	T.							.10	.22	.30	.83		.20	.46	.27	.15	.50		3.25
Long Valley	Pitt	T.	.24	T.	.29		.04	.60	.03															T.				T.		T.	.01	1.21
McKenzie Bridge	Willamette																						.04	.09	.02		.37	.04	.05	.26	.02	0.89
McMinnville	do																									T.	.70		.14	.04		0.88
Marshfield	Coast												.02	.02								T.				T.	.53	.02	.01	.59	.02	1.21
Maury	Deschutes	.07					T.	.02					T.									T.		.12				.52		.05		0.78
Meacham	Umatilla																															
Medford	Rogue	.01						T.														.01	.01	.61		T.	T.	.07		T.		0.71
Merrill	Int. Drainage			.20				.21							.50												.42					1.39
Metolius	Deschutes																						T.		.16		T.	.47	T.	T.		0.63
Mikkalo	John Day																							.24			.38					0.62
Miller Prairie	Columbia													.15										.70				.06	.10			1.61
Miramonte Farm	Willamette																									.02	1.00	.23	.06	.08		1.39
Monroe	do																									T.	.47	.02	.01	.07		0.57
Mountain Home	Columbia		T.																							.04	.61	T.	.34	.14	.02	1.15
Mount Angel	Willamette																										1.15	.20	.05	.10		1.50
Mount Hood	Columbia																							.03			.20					0.23
Mountain Ranch	Rogue																															0.00
Musick	Umpqua																						.20	.10	.05	.80	.66	.76	.20	1.16	.20	4.13
Newport	Coast																						.04			.04	.76	.08		.26	.06	1.24
Ochoco	Deschutes			T.				T.																.28			.38	.27		.18	.01	1.12
Ochoco Creek	do												.10											.37			.60	.52		.06		1.65
Owyhee	Owyhee		.12	.06				.04	.24											.05	.06	.12						.52		.17		1.38
Paisley	SE. Drainage	T.		.18				.10						.05	.55	.22				.07				.12			T.	.52		.02		1.83
Paulina	Deschutes																															
Pendleton	Umatilla									.13				.32								.02		.16	.14		.50		.01		.01	1.29
Persist	Rogue																							.15		T.	.20			.17		0.52
Pilot Rock	Umatilla								T.					.42							.07	T.		.13	.13			.66	.01	.09	.10	1.61
Pompeii	Columbia				.04																	.06					.45	.26	.52	.30	.40	2.03
Portland	Willamette																						.04			.02	.59	.11	.07	.04		0.87
Port Orford	Coast																									T.	.77	T.	.09	.31		1.17
Post	Deschutes							T.					.39											.11				1.02	.09			1.61
Power House	Walla Walla																															
Prairie City	John Day	T.		.05					.03												.02			.11	.03	T.	.06	.47	.11	.15	.03	1.06
Prineville	Deschutes																							.10	.06		.53	T.	.36	T.		1.05
Prospect	Rogue																						.05	.20			.12			.15		0.52
Ramsey	Columbia																							.05			.43	.01				0.49
Range	John Day																							.05	.44			.04		.03		0.56
Ray Creek	Columbia												.04								T.		T.	.62		T.	.35				T.	1.01
Redmond	Deschutes																															
Reston	Umpqua																										.45		.01	.05		0.51
Richland	Snake			.12				.14	.34							T.					.15	T.		T.				.10	.08		.08	1.01
Riverdale	Deschutes													.04	.08							T.	T.					.69	.04	.12		0.97
Riverside	Malheur	.08						.25						.25	.12	.05				.08		.08		.10			.10	.15	.08	.20		1.54
Rock Creek	Willamette																					T.					.44	.07	T.			0.51
Roseburg	Umpqua																				T.			T.		.02	.50	.01		.06		0.59
Rosland	Deschutes	.15				.09	.04					.04	.41	.54									.15			.19	.17			.08		1.86
Salem	Willamette																				T.					T.	.74	.05	.02	.04		0.85
Seneca	SE. Drainage			.14					.11					.93	.46										.08		.20	.60			.53	3.05
Silver Lake	do	T.						.05						.03	.18					.06				.18			.08	.35		.11		1.04

TABLE 2.—*Daily precipitation for June, 1911. 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	
Oregon—Continued.																																
Siskiyou	Rogue							.18																.78				.11		.22		1.29
Sisters	Deschutes												.15									.01		.06			.38	.04				0.64
Sparta	Snake																															
Stafford	Willamette																						.06			.05	.97	.24	.18	.08	.03	1.61
Starkey	Grande Ronde								.05															.34	.28		.96	.27	.10			2.00
Sugar Creek	Deschutes																															
Summit	Willamette																					.01			T.	T.	.54	T.	.09	.17	T.	0.81
Summit Prairie	Deschutes							T.					.08									T.		.28	.02		.31	.32		.08	.04	1.13
Susanville	John Day			T.				T.	.05				.05	.10							.05	10		.25			.44	.52	.06	.40	.05	2.07
Tamarack	do												T.											.71	.08		.95	.15	.03	.01		1.93
Telocaset	Snake				.01		.01	.25	.10				.01							.01	.07			.20	.05		.30	.20	.02		.01	1.24
The Dalles	Columbia																															
Tinroof Cabin	Umatilla							.16	.03			T.		.09							.03	.03		.30	.49		.01	.63		.04	.01	1.82
Toledo	Coast																									.40	.80		.15	.25		1.60
Trail	Rogue							T.														.03		.37			.01			.14		0.55
Trask	Coast																										.44	.55	.09	.19	.02	1.29
Umatilla	Columbia																							.78			.33			T.	T.	1.11
Unity	Snake	.15		.04				.07	.02					.02	.03	.96					.12	.04		.16				.49	.26	.25	.02	2.63
Vale	Malheur	.03	.03	.11	.10			.12	.21												.04	.05		T.	.02			.41		.20	.29	1.61
Valley Falls	SE. Drainage			.18				.10						.11		.13								T.	.02		.17			.02	.16	0.89
Van	Malheur																															
Wallace Orchard	Willamette																					T.				T.	.81	T.	T.	.03		0.84
Walloupa	Grande Ronde	.08		T.				.06	.11					.31							.17	.03		T.	.07			.39		.52	T.	1.74
Wallowa	do	.21		.01				.27	.06					.02							.24	.17		.01			.17	.36	.20	.02	.03	1.77
Wamic	Deschutes																							T.			30					
Warmspring	do												T.									T.		.15			.35	.13				0.63
Wasco	Columbia																							.13			.42		.03	.16		0.74
Welches	do			T.																		T.	.04	.02		T.	.40	.52	.01	.20	.10	1.29
Westfall	Malheur			.09			.47									.07										.14	.09					0.86
Weston	Walla Walla	T.							.25	.05		T.		.10							.03	T.	T.	.23	.10		.02	.40	T.	T.	.05	1.23
Williams	Rogue																							.30				.05				0.35
Yonna	Int. Drainage	.01		.18			.02	.22							.01									.06			.06	.10		.10		0.76

* 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 at selected stations for June, 1911. District No. 12, Columbia Valley.*

Date.	Montana.						Idaho.																					
	Kalispell.		Missoula.		Afton, Wyo.		Boise.		Bonners Ferry.		Hot Spring.		Lewiston.		Mackay.§§		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....	82	50	80	50	68	40	77	51	86	34	83	58	86	62	75	46	.....	.....	70	54	65	48	70	46	68	50	81	43
2....	72	50	75	47	64	32	76	54	76	46	77	51	78	61	70	43	.....	.....	61	49	70	47	65	50	60	40	71	54
3....	68	44	70	40	70	42	79	52	66	41	80	48	68	53	69	45	.....	.....	76	49	75	43	71	46	70	45	65	39
4....	54	43	60	45	73	37	65	47	66	40	76	44	66	48	71	46	.....	.....	69	46	62	45	63	51	65	50	55	43
5....	68	34	71	34	71	28	76	41	70	33	78	41	80	46	76	40	.....	.....	73	34	65	34	71	34	66	30	70	34
6....	72	37	80	35	78	33	73	52	74	34	77	47	80	46	70	44	.....	.....	82	47	71	43	76	46	76	36	74	37
7....	64	50	61	52	73	43	66	51	67	40	80	55	74	56	72	47	.....	.....	74	50	65	47	69	50	72	48	62	48
8....	61	46	60	46	72	33	60	48	64	39	75	43	65	50	55	33	.....	.....	66	44	57	48	61	40	66	38	57	45
9....	68	38	69	45	57	35	70	43	68	42	66	46	78	48	60	41	.....	.....	66	43	61	47	67	38	61	40	69	40
10....	75	53	79	45	71	31	80	49	77	43	73	40	86	58	79	42	.....	.....	79	43	76	46	77	41	75	36	87	52
11....	84	49	88	47	82	38	90	65	92	45	83	48	94	58	84	42	.....	.....	89	50	84	49	86	50	85	47	92	54
12....	75	58	82	52	85	40	88	62	85	45	96	53	93	66	85	51	.....	.....	92	56	85	51	87	56	85	41	88	62
13....	83	52	86	56	83	41	80	62	85	47	98	58	91	66	81	52	.....	.....	88	60	87	53	81	62	85	56	87	54
14....	76	56	82	56	68	49	85	57	86	48	88	63	90	63	74	50	.....	.....	72	60	79	58	76	60	73	53	83	56
15....	76	54	79	30	65	51	83	61	84	47	89	56	88	62	76	46	.....	.....	70	55	74	56	75	55	62	51	82	51
16....	82	50	86	50	70	49	85	59	80	45	90	55	86	55	73	46	.....	.....	81	49	81	46	80	53	80	42	76	47
17....	79	50	87	46	75	44	87	60	85	35	91	56	84	55	87	47	.....	.....	79	59	81	56	70	56	78	50	78	46
18....	80	56	84	47	79	42	85	59	87	40	92	58	83	50	75	50	.....	.....	87	53	87	50	81	54	81	45	76	46
19....	80	48	86	50	77	42	81	61	91	41	92	56	81	53	66	49	.....	.....	79	60	79	53	85	59	78	58	78	43
20....	74	53	78	53	80	43	83	62	81	40	83	62	83	56	72	50	.....	.....	76	55	66	50	81	52	74	40	77	46
21....	84	54	86	51	80	40	86	62	89	50	92	62	88	62	77	46	.....	.....	81	55	78	48	64	45	76	45	82	55
22....	85	52	84	50	78	42	82	55	84	47	90	61	78	60	75	48	.....	.....	86	58	87	49	84	55	82	50	74	54
23....	86	56	84	53	76	41	73	54	85	45	92	54	71	57	67	30	.....	.....	83	53	85	48	83	54	80	54	82	49
24....	56	41	69	46	63	33	69	49	64	42	73	44	70	52	71	40	.....	.....	67	47	74	47	90	55	62	46	54	43
25....	62	41	72	44	68	31	78	45	78	37	82	42	82	48	71	44	.....	.....	73	43	74	40	70	40	70	33	75	41
26....	71	42	78	43	75	33	84	55	70	43	88	48	81	57	73	42	.....	.....	78	45	79	44	78	42	75	41	74	45
27....	59	50	70	52	77	35	71	56	65	33	88	52	77	61	73	46	.....	.....	76	51	71	43	71	54	75	44	62	55
28....	66	49	70	52	69	37	72	50	64	49	76	48	84	57	68	40	.....	.....	74	45	68	52	68	46	67	44	62	50
29....	59	42	68	46	60	45	65	51	75	37	70	45	72	55	58	48	.....	.....	63	50	62	48	60	50	56	44	57	48
30....	60	51	67	49	70	39	61	47	68	48	68	44	72	57	52	42	.....	.....	56	45	60	46	59	45	57	43	57	50
Mns..	72.0	48.3	76.4	47.1	72.6	39.0	77.0	54.0	77.1	41.9	82.9	51.3	80.0	55.9	71.8	44.5	.....	.....	75.5	50.3	73.6	47.8	73.6	49.5	72.0	44.7	72.9	47.7

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....	59	49	72	42	91	46	67	47	89	65	53	48	90	64	90	45	57	41	64	50	89	63	85	58	65	48	52	46
2....	60	41	69	47	83	41	62	35	78	57	50	46	85	56	73	44	55	44	54	46	78	51	74	52	58	47	52	46
3....	63	37	61	44	78	36	61	38	69	45	50	46	72	44	64	40	53	44	56	45	72	37	63	45	56	44	54	46
4....	58	34	61	38	71	41	64	42	69	46	50	46	71	45	68	42	54	36	58	45	71	41	60	45	60	43	50	46
5....	60	32	60	40	77	37	68	36	77	47	51	46	80	42	71	44	55	40	64	45	80	45	70	44	64	44	51	45
6....	64	40	63	38	80	37	67	34	78	49	54	47	80	49	80	47	54	39	65	48	82	51	73	44	65	47	56	45
7....	62	44	64	39	74	38	67	39	79	52	51	48	76	48	99	48	57	37	65	47	75	65	67	48	65	44	52	46
8....	61	43	62	46	76	45	76	40	80	53	53	48	80	53	99	50	55	37	57	47	76	47	64	51	58	46	49	46
9....	64	47	59	48	73	46	92	52	74	57	54	48	80	55	84	53	52	46	62	47	82	48	73	51	65	47	50	46
10....	78	50	74	51	87	48	87	51	83	55	57	51	93	54	89	56	66	49	72	51	93	55	80	56	75	54	58	48
11....	68	49	71	50	95	55	85	52	85	58	57	51	95	62	98	61	70	49	77	56	98	74	92	61	79	56	59	47
12....	64	48	72	49	93	57	80	50	90	58	51	48	97	67	94	65	56	46	75	55	98	70	83	66	76	55	50	46
13....	62	47	76	44	92	52	79	45	88	59	50	48	94	60	95	65	56	47	74	52	95	67	90	61	75	49	50	47
14....	55	47	69	40	88	54	71	43	89	61	50	48	94	56	92	54	56	46	70	49	92	57	87	62	70	47	50	47
15....	60	51	66	40	87	50	74	48	85	61	56	48	94	61	88	54	57	43	64	48	91	55	83	61	67	47	51	47
16....	63	57	66	51	85	54	72	51	83	58	53	48	86	55	86	53	55	47	66	51	91	54	80	58	66	49	53	46
17....	68	59	66	45	82	40	73	35	81	51	58	48	86	48	84	48	57	35	67	45	84	48	78	56	66	42	52	46
18....	64	54	64	50	82	46	70	46	80	65	53	50	85	49	83	46	57	39	64	50	83	48	76	56	66	48	56	45
19....	67	57	64	39	84	36	72	36	79	51	53	48	84	49	86	43	56	35	63	47	81	48	78	53	63	46	55	44
20....	67	38	67	34	87	36	75	32	82	48	52	48	86	49	90	41	57	35	65	45	86	53	80	52	65	42	56	48
21....	64	44	68	39	89	45	75	43	77	51	54	48	89	60	89	40	63	36	67	52	91	54	83	58	67	50	56	46
22....	65	39	67	50	78	44	64	49	68	50	55	50	87	56	82	37	57	42	64	51	80	53	76	56	64	51	57	47
23....	68	42	63	34	72	46	55	38	66	50	54	50	74	51	77	34	56	35	60	48	69	52	67	52	63	46	53	46
24....	66	44	63	48	65	50	69	44	79	54	57	50	78	50	79	33	57	39	61	49	76	46	62	45	61	47	57	46
25....	67	47	70	37	71	45	77	34	82	50	60	52	84	49	86	36	64	35	75	47	84	47	78	44	74	44	59	46
26....	69	48	70	57	68	47	67	36	79	61	56	53	81	61	81	40	63	49	67	55	80	62	72	56	65	55	56	50
27....	62	47	66	54	76	56	63	50	80	54	57	51	78	54	82	40	56	48	62	53	76	55	71	58	62	52	54	50
28....	59	49	60	50	70	48	61	49	75	52	53	50	73	49	80	38	53	47	62	51	71	55	64	49	62	51	53	48
29....	62	48	66	44	72	48	61	47	75	50	55	50	74	51	78	37	56	48	60	50	73	50	69	52	61	49	54	47
30....	64	49	66	52	71	52	62	49	77	57	55	50	75	54	80	39	56	48	60	52	73	48	60	51	60	51	53	49
Mns..	63.8	46.0	66.2	44.7	79.9	45.9	70.5	43.0	79.2	54.2	53.7	48.8	83.4	53.4	84.2	45.0	57.2	42.1	64.7	49.2	82.3	53.3	74.6	53.4	65.4	48.0	53.6	46.6

TABLE 3.—*Maximum and minimum temperatures at selected stations for June, 1911. 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.	Min.
1	83	61[a]	76	43	74	54	65	45	.....	.....	91	64	59	48	65	50	72	40	73	51	.....	.....	84	52
2	74	50	75	43	68	46	68	40	.....	.....	86	54	58	49	59	47	60	45	71	46	.....	.....	85	56
3	63	45	70	42	63	43	62	42	.....	.....	82	45	56	41	59	43	65	45	67	44	.....	.....	79	46
4	68	45	77	42	58	39	62	37	.....	.....	80	36	58	34	59	44	66	46	70	37	.....	.....	72	48
5	77	48	74	37	72	35	68	43	.....	.....	82	44	58	38	70	45	68	40	74	40	.....	.....	80	34
6	78	51	71	46	78	44	69	42	.....	.....	79	43	57	38	67	47	66	60	73	42	.....	.....	83	41
7	72	57	72	54	58	48	68	45	.....	.....	84	47	55	47	63	46	64	55	65	47	.....	.....	74	53
8	70	48	73	41	58	41	65	47	.....	.....	80	50	59	48	63	47	64	45	71	47	.....	.....	71	48
9	81	53	82	42	74	35	75	41	.....	.....	82	46	66	42	74	47	78	55	81	42	.....	.....	86	38
10	88	59	95	51	81	45	83	46	.....	.....	93	51	72	43	87	56	77	50	91	49	.....	.....	95	50
11	97	62	91	51	86	52	83	57	.....	.....	102	50	66	52	85	63	88	52	83	58	.....	.....	96	57
12	95	65	86	50	82	54	80	53	.....	.....	99	47	59	51	82	58	79	50	84	53	.....	.....	94	62
13	89	62	82	55	82	54	77	47	.....	.....	99	61	58	48	77	53	84	50	83	48	.....	.....	95	50
14	87	61	81	53	80	53	75	43	.....	.....	94	63	58	49	70	50	84	42	77	47	.....	.....	90	60
15	87	61	80	47	81	54	72	43	.....	.....	94	62	61	49	74	51	86	44	78	47	.....	.....	94	59
16	82	56	81	50	78	46	76	44	.....	.....	85	50	59	45	68	52	80	52	73	46	.....	.....	94	56
17	82	57	80	49	78	47	75	38	.....	.....	88	49	61	36	70	46	76	42	77	41	.....	.....	95	58
18	80	55	79	46	77	49	73	39	.....	.....	87	45	61	36	68	52	71	33	74	39	.....	.....	94	61
19	78	51	80	46	77	47	70	40	.....	.....	87	48	58	37	70	48	79	35	75	41	.....	.....	94	62
20	83	55	78	45	80	47	71	40	.....	.....	85	43	59	39	72	46	78	40	74	42	.....	.....	92	63
21	90	59	72	48	73	51	71	48	.....	.....	87	53	55	49	71	54	78	37	57	50	.....	.....	88	59
22	77	55	66	47	72	48	64	48	.....	.....	80	45	59	45	63	51	80	51	64	48	.....	.....	91	52
23	59	49	77	48	61	46	63	50	.....	.....	70	42	61	47	63	51	70	42	59	43	.....	.....	78	59
24	73	49	70	44	67	43	73	37	.....	.....	84	45	68	36	67	50	68	31	76	38	.....	.....	76	45
25	84	52	76	50	75	39	77	48	.....	.....	87	48	69	48	71	51	74	42	80	50	.....	.....	86	39
26	82	60	75	51	79	51	72	57	.....	.....	85	47	59	54	68	57	77	50	70	58	.....	.....	86	45
27	75	56	71	54	60	51	66	53	.....	.....	79	49	63	52	62	55	70	40	66	54	.....	.....	82	59
28	68	55	70	48	66	46	63	51	.....	.....	80	51	62	50	62	53	67	40	58	52	.....	.....	78	49
29	71	52	62	48	55	44	62	49	.....	.....	78	52	60	50	67	51	71	39	62	52	.....	.....	70	47
30	66	53	66	49	59	46	69	51	.....	.....	76	54	62	51	62	53	80	45	70	53	.....	.....	68	50
Means	78.6	54.7	76.3	47.3	71.8	46.6	70.6	45.5	.....	.....	85.5	49.5	60.5	45.1	68.6	50.6	74.0	44.6	72.9	46.8	.....	.....	85.0	51.9

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.