FEB 13 1900

### U. S. DEPARTMENT OF AGRICULTURE.

ANNUAL ŞUMMARY 1899.

### OREGON SECTION

OF THE

# CLIMATE AND CROP SERVICE

OF THE

## WEATHER BUREAU.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

UNDER DIRECTION OF

### WILLIS L. MOORE

CHIEF OF WEATHER BUREAU

 $\mathbf{B}\mathbf{Y}$ 

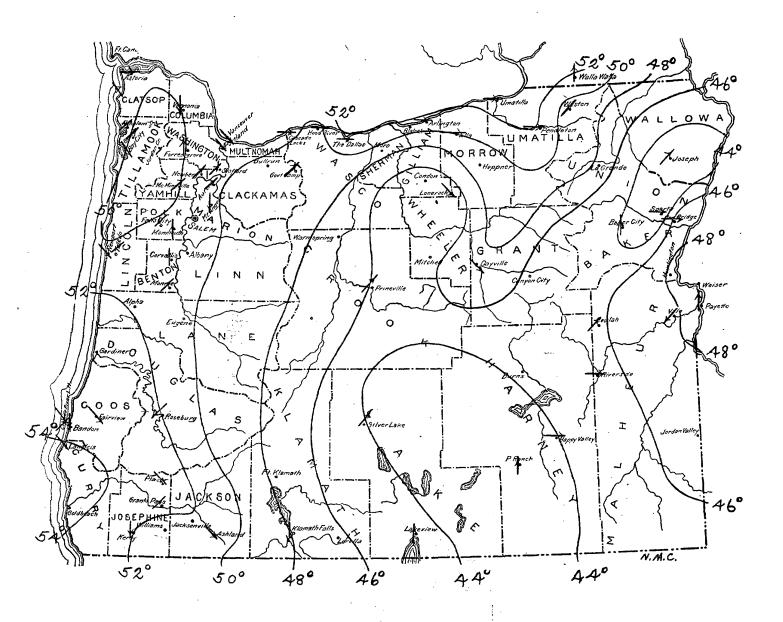
G. N. SALISBURY, SECTION DIRECTOR.



PORTLAND, OREG.:
WEATHER BUREAU OFFICE.
1900.

### Chart I. WIND DIRECTION AND ANNUAL MEAN ISOTHERMS.

YEAR, 1899.



Lines pass through points of equal temperature. Arrows fly with the wind.

U. S. DEPARTMENT OF AGRICULTURE,

### LIMATE AND CROP SERVICE

#### WEATHER BUREAU.

CENTRAL OFFICE: WASHINGTON, D. C.

#### OREGON SECTION,

G. N. SALISBURY, Section Director,

PORTLAND, ORE.

#### OREGON CLIMATIC SUMMARY FOR 1899.

The average temperature for the year over TEMPERATURE. the whole State was 49.5°, which is about 1.0° below the mean annual temperature of Oregon. The highest mean was 54.3°, at Langlois, Curry county, in the extreme southwestern part of the State. The lowest mean was 41.8°, at Joseph, Wallowa county, in the extreme northeastern part of the State. The mean of 40.4°, at Government Camp, Clackamas county, is not considered the lowest in this connection, on account of its being an isolated mountain station. The maximum temperature of the year was 107°, occurring on two different dates—at Pendleton, Umatilla county, on July 13th, and at Vernonia, Columbia county, on July 25th. The minimum temperature for the year was 27° below zero, and occurred at Silver Lake, Lake county, on February 4th. The absolute range for the year was, therefore, 134°, which is not unusual. The mean temperature in the Coast region was 51.3°; Willamette valley, 49.9°; Southern Oregon, 51.8°; Columbia River valley, 50.9°; Plateau district, 45.8°.

The average for the year throughout the PRECIPITATION. State was 49.73 inches. This is about 15.5 inches above the mean annual rainfall of the State, showing the year 1899 to have been a very rainy year. In the Coast district—that is, between the Coast Range of mountains and the ocean—the average rainfall was 102.04 inches for the year; in the Willamette valley, 58.45; in the southern counties, 43.37; in the Columbia River valley, 28.39; in the Plateau region, 15.90 inches. The greatest amount of precipitation at any station during the year was 162.48 inches, or about 13.5 feet, at Glenora, Tillamook county. The least about 13.5 feet, at Glenora, Tillamook county. The reast amount during the year at any station was 8.08 inches, at Prineville, Crook county. The greatest amount in any one month was 35.81 inches, at Glenora, in November; the least fall was phenomenal, the average for the State being four times the usual August amount. The mean temperature was the lowest, 16°; the average pre-

The total snowfall during the year was, west of the Cascades, from about 4 inches on the coast to 477 inches at Government Camp, on the slope of Mount Hood, and, east of the Cascades, from 1 inch to 173 inches. It averaged about 8 inches in the Coast district, 15 inches in the Willamette valley, 7 inches in Southern Oregon, 33 inches in the Columbia River valley, and 50 inches in the Plateau district. The snowfall at Government Camp was greater than any time in recent years, except in 1896, when 483 inches fell. In 1897 there were 290 inches, and in 1898, 381 inches.

Precipitation occurred on an average of 82 days in the Plateau district, 101 in the Columbia River valley, 129 in Southern Oregon, 175 in the Willamette valley, and 192 in the Coast district.

The prevailing direction of the wind was from the southwest, the same as in 1898. South and northwest winds were next in frequency.

#### THE WEATHER BY MONTHS.

JANUARY. The month was mild and wet, being 3.6° above the normal in temperature and 0.36 of an inch above in precipitation. There were a few cold days during the fore part of the month, during which snow occurred in nearly all parts The warmest days were from the 15th to the of the State. 28th; those of the 20th to 25th were especially warm. Much colder weather set in on the 31st. The mean temperature of the month was 38.6°; highest, 78°; lowest, 10° below zero; average precipitation, 6.49 inches.

This was a cold month, particularly in the fore part, when a severe cold spell occurred, during which the thermometer read lower than ever before recorded at several stations in the Plateau district. The mean temperature of the month was 34.8°, which is 1.8° below the normal; the highest temperature was 74°, the lowest 27° below zero; the average precipitation was 5.91 inches, which is 1.24 inches in excess of the normal.

The month was deficient in temperature, and slightly deficient in precipitation, although throughout the Coast district and the Willamette valley rain fell on nearly every day. The mean temperature was 42.9°; the highest was 75°; the lowest, 6°; average precipitation, 4.03 inches.

This was a cool and wet month, the temperature being slightly below the normal, and the precipitation being slightly above. The mean temperature was 47.0°; the highest, 86°; the lowest, 12°; average precipitation, 3.92 inches.

There was slightly above the normal amount of precipitation, and the month was phenomenally cool, the mean temperature, which was the lowest on record for May, being 4.5° below normal. The mean temperature was 49.8°; the highest of the month, 90°; the lowest, 18°; average precipitation, 2.96 inches.

The month had the lowest mean temperature of any June since 1894, and its precipitation was below normal. The mean temperature was 58.1°, which is 1.3° below the normal; highest temperature, 98°; lowest, 17°; average precipitation, 0.99 of an inch.

The month was of about the average July temperatury, and was a comparatively dry month. The mean temperature was 66.1°; the highest was 107°; the lowest, 26°; average precipitation, 0.15 of an inch.

60.6°; the highest was 97°; the lowest, 16°; the average precipitation was 2.42 inches.

SEPTEMBER. The month was quite warm and dry, the temperature being above and the precipitation below the normal. The mean temperature, 61.6°, is the highest on record, and higher than the temperature of the preceding August. The highest temperature was 100°; the lowest was 15°; average precipitation, 1.37 inches.

OCTOBER. The mean temperature was abnormally low, and the precipitation excessive. The mean temperature, 48.7°, was the lowest on record for October. The highest was 93° the lowest was 2° below zero, being the first time on record that zero temperature occurred in October in this State. The average precipitation was 4.42 inches.

NOVEMBER. The month was noteworthy for the abnormally high mean temperature, it being nearly 5° above the normal. It was by far the warmest November on record in Oregon. Cascades. At many stations more than double the usual

The temperature of the State was 0.5 of a degree above the normal. It was above the normal in all districts except the Plateau, where it was nearly 3° below. The precipitation was 0.48 of an inch below normal, being above only in the Plateau district and the high-lying southwest counties. The mean temperature was 38.7°; highest, 68°; lowest 9° below zero; average precipitation, 6.30 inches.

### REVIEW OF WEATHER AND CROP CONDITIONS IN OREGON, 1899.

The crop season of 1899 was throughout a very abnormal Severe cold spells occurred in the winter, notably the one which set in February 1st. After the cold days in the early part of January, the weather turned unusually warm, unduly developing fruit buds and melting the protective snow from many wheat fields. Then came the very severe cold spell, beginning February 1st, which killed out a large amount of winter wheat where the snow was melted off or blown off, and injured fruit buds materially. Owing to dry weather during the preceding fall, much of the wheat was of a weak stand and "spotty," more readily succumbing to the severe freeze; otherwise the damage from freezing out would not have been so great.

March and April were cold and rainy, the wet weather hindering the re-seeding that was necessary, and preventing the usual amount of spring wheat being sown. It was also very late when the latter was put in. Germination was greatly retarded by the lack of warm weather, and the succeeding growth very slow and discouraging for the same reason. Fruit trees came into bloom in April, but the wet and cold were very unfavorable, preventing pollination in the first place, and, probably owing to the failure of sap to rise, caus-

ing the fruit to drop off soon after setting.

May continued unfavorable for growth and for farm work. Except in the more favored sections, plowing and planting were suspended until the latter part of the month. Hops were less injuriously affected than other crops, and were in

satisfactory condition.

With June came more favorable weather. Grain stooled out well and grew rapidly, and by the end of the month fallsown wheat had headed out. Strawberries were a bountiful Willamette River valley, Southern Oregon, the Columbia Crop. Cherries began ripening in June. The rains of the first part of July, followed by cool weather, were of great benefit to growing vegetation. The remainder of the month characteristics briefly described in the Annual Summary for was dry and favorable for all farm work. Hops made a very fine growth. One of the largest hay crops ever secured in the State was harvested without injury from rain. Fall wheat tween the Coast Range of mountains and the Pacific ocean. The climate is a wet one. The Willamette valley lies between the Coast Range of mountains and options of the description. The climate is a wet one. The Willamette valley lies between the Coast Range of mountains and options and options. conditions throughout the month. The yield was excellent, the Coast Range and the Cascade mountains, and extends The spring grain suffered some injury from shriveling by the from the Columbia river southward to the Calipooia mounhot winds which prevailed about the 25th to 28th, and the tains. The altitude is low and the climate is moist. South-grain did not fill well. The straw was short and the heads small. ern Oregon, or the southwest counties, embraces Douglas,

sunshine. Nevertheless, harvesting progressed well until elevation between the Calipooia and the Siskiyou mountains. the 9th, when heavy rain set in, delaying harvesting, but at The climate is of medium dryness. The Columbia River first doing no damage. But rain continued during the third valley, as the expression is here used, refers to those counties week of the month and harvesting came to a standstill, of the State bordering on the Columbia river, from the Cas-Wheat sprouted in the shock in some districts, the greatest damage being in the Willamette valley and in Umatilla and the climate is dry. The Plateau district occupies the country. The rain put the pastures and ranges in excellent condition, and the hop crop also. Corn, potatoes, and root south of the Columbia River, from the Castact of the Castact occupies the remaining part of the State, east of the Castact range and south of the Columbia River valley. It has a high elevation, crops, as well as sugar beets, were greatly benefited.

A change to fair weather in September came very oppor-The precipitation was very heavy, particularly west of the tunely for the finishing of harvesting and for threshing. Warm, dry weather dried out the grain, and even spring-November rainfall occurred. The mean temperature was sown wheat turned out better than was expected, although, 48.2°; the highest was 77°; the lowest was 5°; the average precipitation was 9.08 inches. from the combination of causes before mentioned, the yield was greatly reduced. Hop-picking progressed actively, and a fair yield was secured. Plowing and seeding were actively pushed, the ground being in good condition for working. A small crop of fall fruit was secured; that is, small as compared with the usual crop.

October was a wet and cold month, so unfavorable for plowing and seeding that less than one-half the usual amount was done. The month of November was warm and wet, with no frosts in the western portion of the State. December was also warm, and, at the close of the month, fall-sown wheat, although less was sown than usual, was the finest in appear-

ance it has ever been at that time of the year.

In conclusion, the crops of the season were not up to the average in quantity or quality, excepting the hay crop, which was equal, if not superior, to any ever before secured in the

#### CHANGES IN STATIONS DURING THE YEAR.

Alpha, Lane county, was established in July; C. A. Potterf, Voluntary Observer.

Bull Run, Člackamas county, was established in March; gatekeeper at headworks Portland water system is the Voluntary Observer.

Mitchell, Wheeler county, was established in December.

A. D. Looney is the Voluntary Observer.

The voluntary stations at Fife, Stokes and Canyon City were discontinued at the beginning of the year.

At the Central Office there have been important changes. On December 16th, Mr. B. S. Pague, Forecast Official and Section Director, was succeeded by Mr. G. N. Salisbury, Section Director, previously in charge of the Washington Section, at Seattle, Wash. The change is regarded as temporary, to last a period of about six months. Mr. Pague has gone to Chicago, Ill., where he will be engaged in forecasting for that district. With the exception of one assistant, the entire station force was changed during the year.

It has been found convenient in considering the climate of Oregon, a State so large and of so widely varying topography, to divide the State into five districts, which have been referred to in the foregoing summary, viz.: The Coast, the The month of August began slightly cooler and with less Josephine and Jackson counties, lying at a moderately high as the name suggests, and the climate is semi-arid to arid.

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·			Т	'emper	ature (	(degrees F	ahrenh	eit).		Pı	ecipitat	on (in	ches).					Sky.		o n o
Stations.	Counties.	Elevation, feet.	Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.	Total snowfall.	Number rainy days.	Number clear days.	Number partly cloudy days.	Number cloudy days.	Drowelling direction
COAST DISTRICT.  cha.  ctria  mdon.  y City quille River L. H.  riview  tt Cauby, Wash.  rdiner  mora  mglois  halem  wport  lamook Rock  ledo.  sseent City, Cal.	Lane. Clatsop Coos Tillamook Coos Pacific Douglas Tillamook Carry Tillamook Lincoln Clatsop Lincoln Del Norte	50 55 225 13 72 72 250 69 146 30 50	new 39 27 3 2 11 - 11 8 9 11	51. 2 51. 5 50. 3 52. 6 49. 6 54. 3 49. 8	86 74 82  88 85 80 99 90  82	July 25 Oct. 3 Oct. 4 Sept. 10 Sept. 24 Sept. 10 July 26 Oct. 3 Sept. 24 Sept. 25 Sept. 15	15 18 12  20 16 16 6 16  12	Feb. 3 Feb. 4 Feb. 3 Feb. 4 Feb. 4 Feb. 2 Feb. 4 Feb. 4 Feb. 4	new 39 27 3 2 2 11 11 8 9 6 11 10 11	101. 40 70. 74 127. 99 67. 80 96. 18 162. 48 108. 17 134. 36 90. 19 76. 60 86. 55	18.84 15.81 23.58 14.86 14.24 16.63 20.25 35.81 23.42 24.04 17.49 12.84 14.80 20.15	Jan. Nov. Jan. Nov. Nov. Nov. Nov. Nov. Feb. Nov.	0. 52 0. 10 0. 44 0. 02 T. 0. 52 0. 30 0. 30 0. 24 0. 59 0. 52 T. 0. 09	July July July July July July July July	8. 7 3. 5 8. 5 10. 5 1. 7 6. 0 6. 5	218 181 262 186  172 192 139 212 218  140	82 109 41 58 	48 58 68 174  42  142  94	234 198 256 133 225 149	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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Southern Oregon. shland tokhorn Farm ants Pass cksonville acer seeburg illiams	Jackson Josephine Josephine Jackson Josephine Douglas Josephine	964 1,640	16 1 11 11 23 8	51. 4 51. 6 52. 7 51. 6	96 97 99 99 99  93	July 25 July 25 Sept. 10 Sept. 11 July 25	0 8 10 5 7 4	Feb. 4 Feb. 6 Feb. 4 Feb. 4 Feb. 4	16 1 11 11 23 8	19. 54 73. 41 39. 04 33. 63 57. 99 42. 97 37. 00	2.6 <sub>3</sub> 17.7 <sub>4</sub> 7.9 <sub>8</sub> 6.7 <sub>3</sub> 12.2 <sub>5</sub> 7.3 <sub>1</sub> 7.3 <sub>7</sub>	Jan. Nov. Nov. Dec. Nov. Mch. Nov.	0.00 0.00 0.00 0.09 0.00 0.00	July July July July July July July	7. 0 8. 8 3. 8 2. 7 8. 3 11. 5	111 130 128 128 124 161 123	124 198 152 155 155 107	86 45 49 86 0 106 96	155 122 164 124 210 152 128	
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PLATEAU DISTRICT.  aker City entah urns apyville.  appy Valley seeph almath Falls a Grande akeview one Rock orrella ew Bridge ayyette, ida Ranch rineville tverside liver Lake	Baker Malheur Harney Grant Harney Wallowa Klamath Union Lake Gilliam Klamath Union Canyon Harney Crook Malheur Lake Union	4, 400 4, 200 4, 400 4, 250 2, 784 5, 060 2, 000 1, 900 1, 900 3, 000 4, 300 4, 125	11 10 10 10 10 10 10 10 10 10 10 10 10 1	44-4 43-8 41-8 48-0 43-9 46-6 50-2 46-3 44-4 43-3 47-0	96 104 97 91 98 99 95 97 98 102 104 98 98 106 95	July 17, July 16 July 16 July 16 July 16 July 16 July 17	-20 -23 -24 -10 -12 -24 0 -18 -17 -18 -11 -15 -9 -17 -21 -27 -15 -12	Feb. 4 Feb. 4 Feb. 3 Feb. 4 Feb. 4 Feb. 3 Feb. 3 Feb. 3 Feb. 3 Feb. 3 Feb. 4 Feb. 4 Feb. 4 Feb. 4 Feb. 4 Feb. 4 Feb. 4	11 10 10 5 5 10 11 10 13 17 10 13 14 11 13 3 3 11 1 9 9	15. 11 	2. 08 4. 55 2. 52 2. 79 2. 22 4. 33 2. 60 2. 43 1. 79 2. 99 1. 77 2. 06 2. 53 1. 79 2. 99	May Nov. Jan. Mch. Oct. Jan. Feb. Oct. Dec. Mch. Nov. Jan.	0. 12 0. 11 0. 04 0. 19 0. 00 T. 0. 00 T. 0. 11 0. 00 T. 0. 00 T. 0. 00 T.	Sept.  June July July July July July July July July	39. 0 90. 6  28. 9  37. 5 39. 5  1. 0 42. 5 23. 4	86 94 116 89 70 65 44 51 51	95 249  186 165  177 148 124	162 47 64 91 113 107 105 159	163 58 69 115 109 85 81 112 82	
Miscellaneous.  olice, Ida.  olice, Ida.  olicena, Mont.  dispell, Mont.  oah, Wash.  catello, Ida.  ort Crescent, Wash.  attle, Wash.  okane, Wash.  ccoma, Wash.		2, 964 86 4, 482 256 119	15 19 new 1 new 1 9	50. 4 41. 4  48. 0  46. 4 51. 3 47. 2 50. 3	102 98 89 78 96 89 90 98	July 18 July 18 July 18 July 26 July 26 July 26 July 26 July 16 July 26	9 30  17  10 12 21	Feb. 4 Feb. 3 Feb. 4 Feb. 3 Jan. 4 Feb. 4	15 19 new 1 new 1 9	14.81 11.78 49.51 37.13 20.12 50.88	3. 03 1. 98 29. 87 T. 13. 14 7. 49 3. 85 10. 11	Oct. May Nov. Sept. Nov. Nov. **	0. 01 0. 26 0. 96 0. 33  0. 08 0. 43 0. 30 0. 21	July Nov. Nov. July July July July July	36. I 85. 5 32. 2 46. 4 25. I 52. 2 22. 0	198 181 133	133 91 53 60 59 90 75	116 115 40  144 119 112 70	116 159 272 153 187 163 220	

<sup>\*</sup> July 27 and Sept. 10.

<sup>†</sup> May and July.

<sup>§</sup> June and September.

<sup>|</sup> July and September.

<sup>¶</sup> August and September.

<sup>\*\*</sup> January and November.

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Stations.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Pemperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
COAST DISTRICT.						-				,							.		ا							
Alpha Astoria Bandon Bay City Fairview Fort Canby, Wash Gardiner Glenora Langlois Newport Toledo Crescent City, Cal. WILLAMETTE VALLEY.	47. 4 43.8 45. 6 42. 2 46. 5 40. 8 50. 0 44. 2 45. 2 48. 0	+2.5 +1.2 +2.7 +4.2 +3.1 +0.2 +2.3 +1.4	44. 9 40. 8 44. 0 39. 7 43. 6 37. 0 46. 8 41. 4 41. 4	-0.5	42. 6 43. 1 43. 6 46. 2 42. 0 48. 2 44. 6	-1.8 -0.3 -0.4 -0.5 -1.0 -0.7 +1.2	49.3 47.4 49.1 47.6 50.0 47.0 50.2 47.7 48.6 48.0	-0.5 -1.2 +1.0 +1.9 +0.5 -1.1 +0.8	52. 3 49. 0 48. 9 48. 5 53. 9 49. 6 53. 5 49. 8 50. 7	-1.3 -4.6 0.0 -1.9 -1.5 -3.4 -3.3	54.9 55.5 52.9 56.8 56.4 59.5 52.0	-4.0 -1.2 +1.6 +0.4 -5.7 -2.3	60. 4 60. 6 60. 8 60. 8 60. 1 56. 0 60. 3	-1.0 +0.4 +1.4 -0.5 -3.2 -4.1	60. 0 58. 2 62. 0 56. 8 55. 8	-0.6 -1.1 -1.9 -2.1 -5.6 -1.3 -1.7	56. 6 56. 8 62. 8	+2.7 -0.3  +1.4 +2.2 +7.0 +0.5 -0.6	52. 2 52. 5 47. 9 54. 0	0.0 -2.5  -1.4 -1.6 -2.9 -2.2	55-2 52-6 52-2 51-9 53-8 48-4 55-7 52-4 55-6	+6.0 +6.1 +3.9 +4.2 +6.0 +4.7 +3.2 +6.7	48.6 44.6 49.9 47.0 41.4 48.7 45.5 47.1	+1.3 +2.8 +5 <sub>0</sub> 7	50. 3 52. 6 49. 6 54. 3	-0. 2 -0. 6 -1. 2 -0. 4
Albany Bnil Run Corvallis Eugene Falls City Forest Grove Government Camp Irvington(near Portland) McMinnville Miramonte Farm Monmouth Monroe Mount Angel Newberg Fortland Salem Stafford Vancouver, Wash Vernonia	41. 0 39. 0 31. 6 41. 8 41. 5 42. 9 41. 6 42. 6 43. 2 40. 6 44. 4 40. 4	+4.7 +3.0 +4.5 +3.8 +4.7 +4.5 +2.2 +4.6	38. 0 40. 3 37. 9 35. 8 26. 0 38. 4 38. 0 39. 5 38. 4 39. 3 39. 7 37. 8 38. 8	-1.8 -1.9 -3.2 -1.8 -2.7 -7.4 -3.2 -1.9 -3.3	43. 4 42. 6 41. 4 30. 2 43. 6 43. 2 44. 0 43. 3 43. 5 43. 5 43. 5 43. 6 44. 2 43. 0 44. 0	-0.8 -2.4 2.3 -1.5 -3.0 -2.9 -2.0 -3.4 -1.6	45. 7 48. 0 48. 3 47. 7 47. 2 36. 2 47. 8 47. 7 48. 5 48. 4 47. 2 48. 8 48. 2 47. 4	-1. 2 -2. 7 -1. 7 -0. 5 -2. 8 -0. 8	52. 6 50. 7 50. 6 50. 1 50. 6 51. 5 51. 4 52. 2 51. 5 51. 5 51. 5 51. 5	-6. o -5. 1 -5. 9 -3. 3 -3. 3 -3. 2 -2. 3 -6. 7	58. 5 57. 5 45. 9 58. 2 57. 4 57. 2 57. 8 61. 8 59. 8 59. 0 57. 7 58. 1	-0.9	65. 0 63. 4 55. 9 64. 2 64. 2 65. 0 67. 2 66. 8 67. 2	-0.9 -2.1 -0.3 +0.5 +0.7	61. 4 60. 6 59. 2  48. 6 60. 5  62. 0 61. 5 62. 0 61. 0	-6. 6 -6. 5 -4. 4 -3. 6	62.3 61.6 60.2 56.0 63.0 62.8 65.0 64.1 61.9 61.0	+2.6 +1.1 +4.3 +2.1 +3.4 +2.2	51. 2 51. 4 49. 0 49. 0 40. 2 52. 4 50. 6 50. 2 51. 5 51. 8	-2.8 -2.2 -1.6 -2.5 -1.2 -3.4 -2.5 -2.5 -2.5	50. 8 52. 0 49. 0 49. 8 42. 1 53. 9 50. 4 50. 4 50. 7 50. 8 52. 5 52. 5 51. 0	+5.9 +5.5 +5.6  +5.7 +4.1 +5.0 +6.9 +3.3	41.6 43.4 40.0 40.0 33.6 44.9 42.0 41.7 42.8 42.8 41.7 45.4 43.1 43.3	+1.9 +1.8 +2.1 +1.8 -9.9 +6.3	50. 4 51. 8 51. 9 51. 0	
SOUTHERN OREGON. Ashland Buckhorn Farm Grants Pass Jacksonville Roseburg Williams COLUMBIA RIVER VAL.	41. 2 39. 2 44. 1	+4. 2 +2. 9 -3. 6	40. 4 41. 2 38. 6 42. 0	+0.9 -0.4 -0.3	44.8 45.6 43.4 44.5	+0.3 -2.0 -3.3	50. 2 50. 8 49. 0	+1.2 -0.4	52.8 53.2 51.6	3.7 5.2 4.8	61.6 62.0 61.2	-1.6 -0.3 -0.5 -1.5	67.0 69.6 69.6 66.0	-0.3 +0.5 -0.5	62. 4 64. 1 64. 8 61. 6	4.9 3.5 4.6	62. 2 64. 4 67. 0 64. 2	+5.3 +6.6 +3.1	49.5 51.0 50.6	-2. 4 -1. 8 -0. 6	48.6 49.6 47.6 51.4	+6.4 +3.8 +6.0	38. 7 40. 2 36. 4 42. 4	-0.7 +2.6 -0.6 -0.2 +5.0	51.6 52.7 51.6 52.4	-1.5 +0.7 0.0 -0.4 +0.1
Arlington Blalocks Cascade Locks Heppner Hood River (near) Pendleton The Dalles Walla Walla, Wash Weston PLATEAU DISTRICT.	33.0 35.8 36.2 34.4 35.9 34.6 36.3 33.2	+0.1 +3.6 +1.3 +3.0 +3.8 +5.0	33.6 35.4 32.1 33.3 32.2 35.7 31.4	-3.7 -1.6 -1.3 -4.1 -0.6 -6.2	46. 9 44. 0 40. 0 41. 8 43. 5 44. 1 43. 4	-1.6 +1.0 -0.3 -2.0 -3.1	54.8 50.0 46.6 47.4 51.0 51.4 50.7	-0.6 -1.5 +0.4 +0.5 -2.0 -2.7	53. 0 50. 6 50. 0 55. 6 55. 6 55. 2	-4.4 -5.0 -5.0 -2.0 -5.3 -5.5	68.8 60.0 58.8 58.4 64.2 63.7 63.9	-1.9 -1.6 -2.4 0.0 +1.4 -3.2 -2.3 +2.2	78 0 68 4 68 2 68 2 73 4 72 1	+0. 2 0. 0 +2. 4 +3. 2 -1. 2 +0. 7	61.4 60.8 66.9	6. 1 6. 9 5. 0 2. 9 6. 1 7. 7	70. 5 63. 4 63. 2 62. 8 66. 2 65. 6	+4.5 +6.3 +6.8	53.8 51.6 47.6	-2.3 -2.8 -0.4	48.8 49.3 48.2 47.0 49.2 47.2 49.8	+2. 7 +3. 4 +4. 2 +5. 4 +5. 5 +7. 0	39. 2 40. 6 37. 0 37. 6 38. 0 37. 8 37. 4	-1.2 +7.7 +0.8 +2.7 +1.7 +2.5 +0.4 +0.9	49. 2 52. 3 52. 0 52. 4	-0.4 -0.5 -0.8 +0.5 +1.1 -0.5 -1.1 -0.6
Baker City Benlah Burns Dayville. Happy Valley Joseph Klamath Falls La Grande Lakeview Lone Rock Lorella New Bridge Payette, Ida. P. Ranch Prineville Riverside Silver Lake Sparta Vale.  MISCELLANEOUS.	27.6 32.7 34.5  34.6  32.4 34.0 36.4 36.0	+5.5 +2.8 +7.1 +5.4 +1.4 +5.3 +6.0 +4.5	24. 6 31. 9 28. 0 22. 2 33. 2 28. 4 28. 6 30. 3 	+3. I -2. 0 -1. 2 -1. 4 -2. 1 -0. 7 -0. 7 -5. 5 -6. 3	33. I 40. 6 34. 8 30. 2 38. 6 37. 8 33. 2 32. 0 40. 8 37. 9 37. 1 38. 7 33. 6	-0.9 -3.2 -1.5 -3.1 -4.5 -2.6 -0.3 -2.5 -2.6	48.6 41.9 38.8 46.2 45.2 42.0 41.0 50.6 45.8	+0.4 +1.4 -1.9 -1.8 -3.1 -1.0 -2.6 	51. 2 44. 4 43. 6 48. 8 51. 3 45. 6 43. 8 42. 5 56. 7 49. 8 44. 5	-5. 1 -3. 7 -6. 4 -5. 4 -6. 0 -7. 3 -6. 4 -3. 0 -4. 9 -3. 0 -6. 9	59. 4 54. 6 53. 0 59. 0 58. 6 51. 8 58. 7 61. 4 64. 2 57. 2 54. 0 54. 7	+1.7 -2.2 -1.0 +2.8 -0.4 +0.6 -1.8 -3.9 -3.1	68. 6 63. 6 65. 0 70. 4 67. 6 64. 0 64. 5 69. 6 64. 3 68. 4	+2.9 -1.0 +2.1 +3.6 +1.2 +0.8 +3.5 -4.2 +1.2	61.6 5 56.6 56.9 61.4 63.0 58.8 56.8  61.4 66.0 58.8		61. 8 56. 1 59. 0 65. 6 62. 2 59. 2 56. 6 	+6. 2 +8. 7 +3. 0 +1. 3 +2. 5 -0. 5 +6. 3	50. 6 37. 7	-0.9 +3.4 +1.1 -5.0 -2.8 -3.5 -7.9 -4.4 -7.8 -3.1 -6.8 -3.7 -2.6	49. 1 41. 6 39. 9  45. 6 40. 8 41. 4  45. 2  41. 8 35. 0 41. 0	+4.6 +2.9 +5.3 +4.3 +1.7 +1.4 +4.5 +4.5 +4.3	37. 4 29. 2 24. 6  32. 1 27. 0 32. 7  24. 0 27. 1 31. 6 34. 6 12. 4		49- 4 43- 8 41- 8 	
Boise, Ida. Helena, Mont. Haho Falls, Ida. Kalispell, Mont. Neah, Wash. Pocatello, Ida. Port Crescent. Wash Spokane, Wash Tacoma, Wash	35. 8 22. 4 22. 7 40. 0 37. 1 40. 9 27. 3 40. 4		9.8 15.2  38.4 	-11.9 -4.8	22. 6 32. 4 41. 0	—10.0 +3.4	42.9 45.0 43.6	-2.6 -0.1	47. 6 46. 9		58. 0  55. 4 .51. 6	-2. I -1. 4	64.0 57.0 71.2	—0. 4	56. 2 55. 6 64. 2	<b>—5.8</b>	54·9 55·0 62·4 56·2		48. 0 41. 4 41. 6 49. 4 44. 9 47. 4 51. 8 46. 7 50. 7		40. 2  39. 1 50. 8 42. 3	+8.7	24. 2 40. 8	-0.5 +0.3 	46. 4 51. 3 47. 2	-0. 2 -1. 7 -0. 2 -0. 6 +0. 1
	River Stations.											1			Stor	m Si	gnal	Disp	lay s	Stati	ons.					
Eugene, Ore. Mrs. Salem, Ore. C. T. The Dalles, Ore. S. L.	Core. F. M. French. Core. Mrs. Belle Eastland. Core. C. T. Roberts. Uses, Ore. S. L. Brooks. Weiser, Ida. Wenatchee, Wash				sh.	J. A. W Wm. P. J. W. L. E. L. Ti	Hugh apish. comps	on. ies.		Asto: Fairl Neah New	aven	re Wash .Wash	i. J. 1 i. U. C.	Disp. S. Wea D. Cave S. Wea W. Hen M. Do	ther I naug ther I derso	Bureau b. Bureau	Pos	Sta ort Cre ort Lu ort Tov eattle. acoma	dlow, wnser	ıd ::	U.S. Louis E. Bio U.S.	Weath Poole ondi. Weath Weath	er Bui	rean.		

		Monthly					imuı	n Ter	npera	tures	for	the Y	ear 1	899,	with	Date	s.							
•	Jan	uary.	Febr	uary.	Ma	reh.	Ap	ril.	Mε	ıy.	Jui	ıe.	Ju	ly.	Aug	ust.	Septe	nber.	Octo	ber.	Nove	aber.	Decen	iber.
Stations.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Sate.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
COAST DISTRICT.  Alpha Astoria Bundon Bay City Fairview Fort Canby, Wash Gardiner Glenora Langlois Newport Toledo Crescent City, Cal WILLAMETTE VALLEY.	56 57 55 61 50 58 59 78 55 61 67	 17 22 17 27 17 25 25 25 27 26	52 56 54 59 56 57 62 54 58	15 13 11 11 16 17 14 10 13 18	58 60 57 56 56 62 65 70 59 66 64	16 19 16 12 16 26 27 7 5 5	66 64 65 73 63 67 76 76 63 79 64	7 8 24 7 24 14 7 20 23 7	60 64 62 70 58 63 73 68 61 69	31 21 4 9 31 21 7 8 3 15	75 65 75 80 62 73 85 78 63 78	19 19 18 15 22 14 16 10 27 18 9	 86 72 77 86 77 78 99 81 68 85 68	25 29 11 24 25 28 26 24 11 25 22	87 72 66 75 83 72 90 80 67 78	3 3 18 3 4 30 2 2 2 1 5 3	92 81 68 79 88 85 80 95 84 82 91	10 24 24 24 10 24 10 19 9 24 25	82 80 74 82  77 74 81 90 80 80 87	4 4 3 4 3 4 5 3	68 63 63 64 68 62 64 63 72 69 70 65	14 9 8 1 28 1 9 1 1 1 27 25	59 58 58 58 60  66 57 65 58 68 66	22 21 20 23 22  10 25 22 24 25 23
Albany Bull Run Corvallis Eugene Falls City Forest Grove Government Camp Irvington (near Portland) McMinaville Miramonte Farm Monmouth Monnoe Mount Angel Newberg Portland Salem Stafford Vancouver, Wash Veronia Southern Oregon.	55 58 59 56 58 58 58 58 58 58 58 56 60 59	20  17 15 25 15 17 20 20 17 25 15 18 25 15 26	63 60 60 59 46 60 59 59 59 60 58 59 64 57 60	18 19 18 18 14 18 18 18 18 18 18 18 19 19 19	62 64 60 61 62 51 60 62 61 62 60 61 68 62 61	3127 227 227 188 6 17 27 18 27 27 5 5 27 6 6 27 5	68 75 76 71 74 60 74 73 74 74 76 78 74 73 75 74 78 86	78887777887778887	72 72 74 72 759 65 70 77 73 68 74 69 68 73	22 7 10 10 7 22 4 7 7 22 10 7 7 7 8 8 8 7 22	78 85 83 76 82 86 84 83 90 88 81 84 86 81	16 16 16 16 16 16 16 16 16 16 17 16 18	94 94 95 94 95 94 95 96 97 93 96 97	25 25 25 26 27 26 26 26 28 27 26 26 26 26 26 26 25 25	77 89 85 88 87 85 87 81 84 88 87 85 87	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	82 89 88 85  90 89  89 92 92 92 92 94 86 94 83 106	10 10 11 10 25 24 11 10 24 11 10 10	66 82 79 71 81 69 78 81 78 82 79 81 82 77 73 83 78	5 4 4 4 5 4 4 4 4 3 5 4 4 4 4 3 5 4 4 4	57 69 65 63 67 54 68 67 68 70 64 66 66 67 68	14 18 14 14 14 14 14 14 14 14 14	55 59 59 59 59 59 58 58 58 58 58	23 23 22 21 23 23 23 21 21 21 22 21 21 22 21 23 23 22 21 22 21 22 21 22 21 22 21 22 21 22 21 22 21 22 21 22 21 22 21 22 21 22 21 21
Ashland Buckhorn Farm Grants Pass Jacksonville Roseburg Williams Columbia River Val.	56 62 58 53 62 57	28 20 18 24 20 24	59 64 65 58 61 68	14 18 18 19 18	63 71 68 61 65 69	5 6 6 5 6	78 83 81 77 78 77	8 8 8 8 8	82 81 85 80 78 83	10 10 10	93 93 93 89 88 91	16 16 16 16 16	96 97 99 95 92 93	27 25 25 27 27 27 25	91 89 94 94 85 89	3 30 30 4 29	96 93 96 99 93 92	11 10 10 11	88 81 88 90 86 84	3 4 4 4 4 4	69 64 65 68 66 67	3 13 12 13 14	59 55 56 51 59 59	29 11 7 6 21 12
Arlington Blalocks Cascade Locks Heppner Hood River (near) Pendleton The Dalles Walla Walla, Wash Weston PLATEAU DISTRICT.	54 58 55 62 62 60 55	25 25 26 27 28 26 20 20	64 64 54 60 56 62 62 59	18 19 18 18 18 18 18 18	64 64 63 61 64 66 60 64	6 27 6 27 30 27 5	75 77 72 72 71 79 74 76 75	19 16 8 8 8 8 8 15	82 79 72 76 74 83 82 80 78	22 8 21 22 24 22 22 22 22 22	91 85 88 85 95 90 90 87	16 16 16 18 23 16 17	102 104 96 99 98 107 99 102	15 15 26 15 27 13 27 15	93 95 84 90 89 97 92 93 93	4 4 3 3 3 4 3 4 5	94 97 86 94 100 93 94 90	26 26 19 11 11 11 11	81 83 74 81 -76 86 78 83 85	5 5 5 5 4 5 5 5 5	63 61 60 65 64 72 58 72 74	17 19 14 7 6 14 4 14	59 59 56 62 60 62 59 63 63	25 23 23 23 23 23 1 24 23 23
Baker City Beulah Burns Dayville Happy Valley Joseph Klamath Falls La Grande Lakeview Lone Rock Lorella	51 52 48 61 55 51 52 58	26 26 18 26 26 27 30 25	49 51 50 60 55 46 56 54 51 60	19 17 19 14 19 17 13 19 12	52 55 50 65 65 49 63 54 56 57	7 30 17 5 6 7 6 18 5 27	68 73 71 84 76 66 79 78 74 76	15 8 15 8 15 8 15 20 8	72 81 76 79 77 71 87 89 77 73	23 10 10 23 10 23 10 7 10 29 30	90 98 94 93 84 94 91 90 87	16 15  16 16 24 15 16 16 16	96 104 96 97 91 98 99 95 97 98	17 17  16 16 16 16 17 18 15 31	86 95 89 85 85 94 89 87 90	5 5 4 3 5 30 3 3 2	91  93 89 90 94 93 88 94	25 11 11 12 26 10 26	76 80 79 87 78 74  80 72 82	5 5 5 5 5 5 5	59 75 62 77 63 64  65 58 65	2 12 2 14 2 14  14 2 13	50 42 58 55 50 49 50 61	30 28 1 1 1  1 25
New Bridge Payette, Ida P. Ranch Prineville Riverside Silver Lake Sparta Vale Miscellaneous.	50 52 60 57 53 60 48 49	17 30 27 27 26 28 21 28	50 56 54 60 63 62 46 53	17 21 11 22 18 19 19	60 60 66 59 61 63 47 60	9 8 5 1 6 6 17 24	78 80 78 63 81 76 63 79	14 15 7 24 14 9 15	90 82 78 78 81 78 71 83	26 23 11 12 10 11 23 10	95 99 90 96  94 85 96	7 17 15 22  18 17 18	102 104 98 98 106 95 94	17 18 22 6 17 17 17	92 98 90 83 97 88 87 94	4 5 1 31 4 3 5 5	93 100 91 93 94 93 89 91	12 10 8 11 12 26 12	78 82 81 79 80 76 75	7 6 6 8 7	66 62 67 61 66 60 60	19 2 3 4 4	47 58 54 56 54 50 45 50	1 7 1 1 1 2 1
Boise, Ida. Helena, Mont. Idaho Falis, Ida. Kalispell, Mont. Neah, Wash. Pocatello, Ida. Port Crescent, Wash. Seattle, Wash. Spokane, Wash. Tacoma, Wash.	49 40	27 21 31  20 17 27 17	53 51 41  50  51 55 50 55	10 18 19  14  15 14 19 18	58 55 54  52  52 58 54 57	24 7 24  16  6 5 7	76 70 72  66  69 71 72 71	15 9 9  24  24 8 15 8	77 76 75 78 59  70 68 79 68	23 24 23 24 22 22 22 22 23 22	98 87 83 60 70 76 86 76	16 24 8  18 15 24 9	102 98  89 78 96 89 90 98 89	18 18 26 19 26 26 26 16 26	92 86 81 67 90 69 79 89 77	5 31 6 31 30 5 5	95 86 77 69 90 82 79 89 81	12 11 26 27 12 11 11 11	80 75 64 65 77 70 81 79 80	5 5 4 5 4 4 5	64 65 58 59 62 58 64 65 64	14 13 8 26 2 14	53 54 50 59 52 60 58 50 56	24 6 1 22 23 23 23

				M	onth	ly Mi	nimu	m Te	mper	ature	s for	the ?	Zear	1899,	with	Dat	es.							
	Jan	uary.	Febr	uary.	Ms	rch.	A	ril.	м	ay.	Jı	ıne.	Ju	ıly.	Aug	ust.	Septe	mber.	Octo	ber.	Nove	mber.	Decer	n <b>ber</b> .
Stations.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
COAST DISTRICT.	İ	ļ	İ			<u> </u>			<u></u>				<u> </u>				<u> </u>							
Alpha Astoria Bandon Bay City Fairview Fort Canby, Wash Gardiner Glenora Langlois Newport Toledo Crescent City, Cal WILLAMETTE VALLEY.	29 36 28 32 30 36 28 34 22 30 33	3 8 3 14 3 3 4 8 1 2	15 18 12 20 16 16 6 16 16 23	3 4 3 3 4 3 4 2 4	33 32 28 29 33 31 25 31 25 31 31 25	22 5 23 22 14 21 25 10 23 25 10	33 36 31 31 38 34 28 34 29 29	26 5 23 13 27 13 7 23 27 13 27	38 38 31 33 40 36 32 35 37 34 33	13 2 15 14 11 14 1 2 10 14 12	42 45 35 34 45 38 35 36 40 36	7 15 7 .7 7 6 7 5 7 6	48 43 43 40 51 45 40 42 42 37 39	5 9 28 4 8 22 9 1 1 4	45 47 43 42 41 51 47 38 44 44 40 41	28 27 28 10 28 29 11 26 28 10 25	40 46 46 42 43 48 47 38 34 42 40	24 23 7 17 4 30 27 17 30 18 3	29 36 33 29  41 35 22 33 27 26 32	14 14 14 15 13 13 19 14	34 42 37 39 43 42 41 34 36 21 37 39	5 17 17 5 19 29 17 1 17 30 16	28 33 30 30 36  28 29 20 28 32	19 19 19 15 17 2 19 19
Albany Bull Run Corvallis Engene Falls City Forest Grove Government Camp Irvington (near Portland) McMinnville Miramonte Farm Monmouth Monroe Mount Augel Newberg Portland Salem Salem Southern Wash Veronia Southern Oregon.	29 	7 6 3 31 7 7 7 7 7 7 3 3 22 6 7 7 7 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	2	4 4 4 4 4 4 4 4 4 3 3 3 3	28 29 29 24 12 30 27 25 28 27 28 26 31 25 27 26 24	15 	32 28 31 29 29 14 30 29 28 29 28 30 27 31 28 29 31 28	23 12 13 13 27 13 13 13 13 13 13 13 13 13 13 7	38 35 331 30 26 32 32 32 336 331 338 34 35 35	1 1 14 2 15 14 14 2 15 15 15 2 1 15 15 15 16 17 10 10 10 10 10 10 10 10 10 10 10 10 10	35 	76666666666630	32 50 40 41 39 42 46 51 35 44 45	2 7 8 6 9 23 6 8 8 10	44 41 41 41 31 48 32 40 40 46 40 46 40 44 42 40	28 27 22 28  29 17 21 28 11 28 28 11 28 30 13	44 41 43 43 40 41 40 41 40 41 40 41 40 40 40 40 40 40 40 40 40 40 40 40 40	18 22 13 2 2 6 8 1 7 7 8 2 14 8 7 17	30 25 26 28 25 18 25 29 27 29 28 26 34 23 29 26 25	13 13 14 14 12 14 14 14 14 14 14 14	37 35 36 33 27 42 36 35 35 35 36 38 35 38 35 34	5 16 5 1 1 5 2 2 1 1 5 2 2 1 1 2 2 1 1 2 2	31 29 28 29 27 16 29 30 29 28 27 28 27 26 27 26 27	 19 29 28 19 27 3 19 27 3 19 28 17 3 19 29 17 3 19 29 20 20 20 20 20 20 20 20 20 20
Ashland Buckhorn Farm Grants Pass Jacksonville Roseburg Williams COLUMBIA RIVER VAL.	27 26 26 27 32 27	14 3 1 3 3 26	0 8 10 5 7 4	4 4 6 4 4 4	28 25 28 27 28 26	10 13 26 10 22 26	28 26 30 30 31 27	13 22 13 22 13 23	29 27 29 30 32 29	12 2 2 1 2 2	32 36 36 35 36 31	. 6 20 6 6 6 6	40 36 40 43 44 38	4 9 22 22 22 8	40 37 39 41 43 36	28 22 22 22 23 27	36 35 38 37 43 35	6 2 14 5 14 14	26 23 25 28 29 22	15 14 14 13 14 14	31 34 34 -33 35 29	2 20 1 22 17 1	24 25 22 24 27 21	27 19 19 29 19
Arlington Blalocks Cascade Locks Heppner Hood River (near) Pendleton The Dalles Walla Walla Wash Weston PLATEAU DISTRICT.	15 4 8 - 6 9 - 4 - 10		- 3 3 4 -13 - 6 - 8 - 1 - 6 - 15	4 4 3 3 4 3 5 4	28 31 30 22 26 20 28 28 28	17 17 25 17 23 16 17 26 25	29 33 32 25 29 27 31 32 26	5 13 13 23 13 25 13 22	36 38 40 29 32 32 34 37 30	2 2 1 2 3 15 1 1	43 45 42 34 38 37 40 42 34	96 76 76 6 5 5	42 50 48 40 42 42 45 47 42	4 1 21 23 1 1 1 4	48 50 45 39 39 42 45 47 40	30 12 29 28 14 29 12 29	45 49 45 39 40 40 42 46 38	7 6 14 7 8 8 8 8	28 36 30 20 24 22 29 30 20	13 14 13 14 13 14 13 14 14	33 36 39 30 33 31 34 31	16 17 5 2 17 4 22 3	18 21 26 12 21 14 22 9	19 18 19 20 19 19 18 19
Baker City Beulah Burns Dayville Happy Valley Joseph Klamath Falls La Grande Lakeview Lone Rock Lorella New Bridge Payette, Ida. P. Ranch Prineville Riverside Silver Lake Sparta Vale  Miscellaneous.	5 1 - 4 15 3 - 3 13 4  15 10 15 18 3 10 9 4	4 5 11 7 9 3 22 3 8 8 4 3 13 12 3 2	2023241022241817181591713271512	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	14 15 14 21 13 6 18 16 11 8 19 25 18 16 16 10 15	14 22 20 10 27 14 10 13 9 .17  14 12 9 6 21 10 12 27	23 19 20 28 18 20 22 27, 18 17 21 25 22 16 18 12 20	28 5 12 5 13 28 28 12 30 23 28 24 30 12 20 27 19 4	25 19 22 30 21 20 22 32 18 21 19 22 25 26 23 19 18	1 1 16 14 1 1 2 1 1 1 19 1 2 1 6 2 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 1 2 1	31 28 30 23 26 32 36 29 22 26 29 30 27 24	6 6 5 6 4 4 5 6 5 6 5 6 8 5 6 6	41 36 30 37 36 41 35 31 30 37 46 38 32 28 28 26 39	5 1 1 21 22 22 22 3 6 7 23 22 4 18 4 18 4 12 22 23	37 28 37 28 33 32 41 28 31 32 35 32 30 16 26 33 30	15 15 15 15 15 14 21 11 15 14 14 14 14 14 15 14 15 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	33 35 23 36 35 28 29 31 36 28 31 36 28 31 32 32 32 33 32 32 33 32 32 32 32 32 32	8 24 6 7 6 30 30 6 7 5 7 6 7	18 18 17 18 9 19 23 22 5 16 20 	11 2 2 11 11 11 11 11 11 11 11 11 11 11	26 18 10 25 19 23 27 22 18 17 25 	17 23 . 5 22 5 17 16 4 2 23 22  16 4 5 21  23  23 	6 0 10 1 3 3 15 6 	14 
Boise, Ids. Helens, Mont. Idsho Falls, Ida Kalispell, Mont. Nesh, Wash. Pocatello, Ida Port Crescent, Wash. Spokane, Wash. Tacoma, Wash.	17 18 19 	5 4 5 4 4 4 4	- 9 -30 -29 17 10 12 -12 9	4 5 3 4 3 4 4	22 - 7 11 31 26 31 18 28	14 21 27  21  25 26 22 14	29 14 17 34 30 35 28 32	5 1 29 13 30 13 5	28 24 20 17 35 31 38 32 36	1 3 1 14 14 14 3 14	34 34 35 40 35 42 42 40	6 7 8 22 6 5 7 6	47 43 41 45 44 39 50 45 47	23 28 6 7 23 1 7 5	39 41 38 46 33 39 46 43 45	24 28 22 21 23 22 21 28 22	40 35 36 42 32 39 47 40 44	6 16 29 30 8 18 7 28	28 12  19 35 23 27 33 21 32	13 14 14 10 14 14 14 14	29 21 22 40 19 37 41 28 38	25 25 25 29 24 17 1 25 1	7 -10 31 - 2 27 31 13 28	20 16  18 17 21 16 19 16

		Mo	nthl	y and	d An	nual	Prec	ipita	tion	for t	he Y	ear I	899	, with	Depa	ırtu	res f	rom	the 1	Norm	al.					
-	Jan	uary.	Febr	ruary.	Ма	rch.	Aŗ	ril.	М	ay.	Ju	ne.	Ju	ıly.	Augu	st.	Septe	mber.	Octo	ber.	Nove	mber.	Dece	mber.	Ant	nual.
Stations.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
COAST DISTRICT.	-				<u></u>	<u> </u>				<u> </u>					-=-											
lpha	8 84	16.82	 T2 52			66	8 84	 -La as		 -L-v 80	2 60		0.52		3.32	2 45	2. 95		8.50	 4 02	22.92	-1-7 47	13.68		**	 <del>1</del> 26.04
storia r andon 2	7.45	-5. I2	7.50	-1.18	6.91	o. 83	5.01	-0.83	4.58	+0.74	1.57	_0. 18	0. 10	-0.44	2. 25	1.79	1.71	-1.00	6.98	+1.61	15.81	+9. 13	10. 87	-1. 55	70. 74	2. 14
oquille River L. H	3· 55 5· 57		7.88		6.62		4.34		4.53		0.61		0.02		1.97		1.58		6. 24		14.86		13.58		67. 80	
oquille River L. H. airview I ort Canby, Wash. I ardiner I lenora 3 ugglois I ehalem 2 ewport I oldon Kock. I oldo I orescent City, Cal. I	2. 30 5. 48	+5.91	11.83	+3.82	10. 35 2. 84	-4. 8 <sub>4</sub>	7.08	+1.88	3.97 5.50	+2.31	2. 26	-0.44	0.52	-1. OI	2.57	1.90	3.19	+0.07	8.00	+2.43	16.63	+7.17	14. 24			
enora	3. o6 o. o8	+1.01	11.74	+2.27 +7.87	7. 23 12. 57	-1. 24 -0. 49	7.65 16.81	—0.39° +1.96	5. 70 6. 94	+0.44 -0.63	2. 18	+0.34 0.88	0.20	-1. 11 -0. 69	4. 22 5. 89	3. 57 5. II	3.02	└─1.22	7. 39 10. 75	+1.32 +4.74	20. 25 35. 81	†12.98 †13.93	14. 45 18. 48	-0. 36 -2. 97	56. ±8 ∰	+17.61 ; +33.92
nglois i	2. 31	-5.73	9.91	+1.01	6.30	-1.85 -6.36	7.30	<b>—5.</b> 65	6.91 8.07	-0.45	2. 12	+0.59	0.00	-0. 50	3.02	2. 67	3.87	-0. 15	9.61	+3.02	23.42	111.32	18. 15	+2.07	SS*	+ 6.35
wport	3. 24	+2.69	12.59	<del>+</del> 7. 09	4.90	-1.88	8.61	+1.37	4.64	0.12	1.44	—1.75	0.59	+0.01	4. 21	3.68	2.94	-0.03	7.87	+3.48	17.49	+8.70	11.67	0.67	90. 19	+22.57
oledoı	3.80	1.89	14.80	T4. 51	7. 20	+0.36	9.85	十2.47	5.45	-0.97	2. 15	0. 28	T.	-0.04	2.80	2.69	2.60	+0.23	2.95	-3. 31	10. 35	+0.62	4.65	-4.70	76.60	+ 5.41
VILLAMETTE VALLEY.	1.05	+0.69	10.95	-0. 23	11.02	+1.01	3. 20	-4. 20	4.40	+0.33	1.30	-0. 18	0.09	-0, 25	1.53	1.30	2.01	+0.00	8.30	+4. 29	20. 15	†12. 19	11.25	+0.39	80. 55	+10.00
lbany	5. 8o	2. 36	5.94	+o. 13	5. 54	+o. 92					ļ										.,				l	
lbany (river station)	5. 56		5.37		5.74		2.08	!	2.66		2.60		0.03		3. 20 · · · 6. 05 · ·		I. 30 2. 77		3. 17 8. 08		8.89		7·45 8.70		46. 99	
orvallis	6. 26	0.33	5.6r	+0.76	5. 16	<del>+</del> o. 68	3.64	-o. 28	2. 26	-0.40	0.42	-0.74	0.07	-o. o8	2.76	-2.48	1.04	-0.33	3.97	+1. IO	10.93	6. 72	7 - 57	+o.58	49.69	+10.16
ugene (river station).	5.32		6.76		5.64		2.54		3. 23		1.05					••••	1						5.08			
orest Grove	5. 69 8. 58	+0.74	7.08	+2. 15	3.58	-0.73	4.47	+1.05	2.79	+0.47	0.9/				2.92		2.04		5.53	+ı. 86	14. 22	+8.04	5.73	<b>—0.0</b> 9	91.33	
alls City	o. 79 5- 55	+0. 15	22. 22 4. I3	+o. 38	13. 28 2. 37	o. 13	12. 70 2. 18	 0. 36	8.47 3.50	十1.71	3.68 1.00	 0.65	0. 52		7.50 2.60	2. 38	3. 20 1. 25	-0.09	10. 23 3. 73		8. 19	+4.55	5. 58	—о. 86	40.40	+ 7·93
cMinnvillei	8. 26 6. 45	十o.66	6.06	+1.31	3.39	-1.14 -2.52	5.00	+1.21 +0.60	2.89	+0.66	0. 70	—1. 29 —0. 51	0.50	+0. 17 +0. 16	3.71	3·34	2. 56	+0.79 +0.25	5. 23 3. 67	+1.57 -0.48	12.00 8.12	+6.76	6. 38 6. 30	-1. 29 -0. 64	56. 68 49. 09	+12.75
onmouth	4.02		4.45		4.01		4.91		2. 28		0.86		0.31		2. 20				4. 16		10.93		7.33			
ount Angel	5. 38	-2. 34	5.31	+1.52	5.01	+0.07	4.90	+o. 53	3.83	+o. 83			0.03	-0.70	2. 20	- 0-	0.82	-2.04	3.73	<b>−</b> 0. 35	10. 35	+5.87	5.80	-2. 22	03.90	
ortland	6.86 6.42	—1.08 —3.71	5. 18 4. 20	十1.57 一1.92	3. 20 2. 30	-1.03 -3.24	4.81 3.73	+0.02 +0.43	3. 21 3. 16	+0. 24 +0. 77	0.76	0. bi 1. 23	0.22	-0.08	2. 44	1.95	2.0b	+0.11 −0.38	4.40 3.97	+0.50 -0.09	7. 56	+3.99 +1.78	5.50	-2.76 -1.87	48. 75 42. 21	+ 3.17 - 4.62
afford	5.76 8.06	—2. 21 	6. 35 6. 39	+2.99	4. 13 4. 22	—o. 84	3. 72 5. 65	—3. 16	3.90	+0.01	o. 25 1. 63	—1. 24 	0.00	-0.24	2.91	-2. 58	1. 35 2. 07	o. 8o	3.95 4.90	0.01	9.22	+4.04	6. 58 7. 65	+0.07	48. 12 58. 72	+ 3.18
ancouver, Wash	6. 46 8. 65	+0.42	4.39 6.81	+0.80	2. 46 5. 18	-0. 16 1. 06	3· 75 5. 78	+0. 16 0. 34	4.00	+1.64 +2.31	1.20	-0.73	0. 10	0.99	3.03	2.38 2.36	1.83	+0. 15 -0. 71	5. 05 5. 61	+2. 10 +0. 62	9.07 10.96	+4. 15 +2. 67	5.86	0.91 4.10	47. 20 59. 17	+ 8.62 - 2.93
onroe ount Angel ewberg ortland dem afford ancouver, Wash ernonia		6.45		6.16				,								•		•			_					
hland	2. 63 2. 49	-0.49	I. 77 7. 14	-0.41	3·54 9·55	+1.63	1.07	—o. 68	1.30 1.80	-0. 42	0.32	o. 78	0.00	—о. 59	0.61	0.44	0.32	0. 41	2. 38 7. 07	+0.94	2.46 17.74	+0. 59	3. 14	-0.45	19. 54 73. 41	— o. 63
acer	8. 11		7.00	 -t. 48	6.82	+2 74	1.51	0 24	3.53	+0.67	0.66		0.00		I. 34	1 07	1. 11	 —0. 28	6. 04	+1.10	12. 25	-t-1.04	9.62	+0.47	57. 99	1 7 88
illiams	5. 59	-1.41	4.05	-0.03	5. 18	+1.02	0.93	I. 56	1.70	0.66	0. 55	+0.48	0.00	-0. 10	0. 76	0.68	0.70	-0.37	3. 17	+1.37	7.37	+3.80	7.00	-0.01	37.00	+ 3.21
OLUMBIA RIVER VAL	.														١.							١.				
dington	2. 31	+0, 46	I. 23 I. 48	+o. 58	0.23	0. 67	0. 27	-0. 39	o. 58 T.	-0. 27	0.09	0.30	0.00 T.	-0. 24 	0.59	0.51	0.49	+0. 10	1.51	+0. 45	1. 52 2. 58	0. 59	I. 29 I. 12	0. 23	10. 11	+ o. 59
1136	1.52		1.32		IO. 20		0.331	1	O. 40		െ വര്		1 O. OI		0. 92		0.41		1.00	. <i></i>	1.00		0.91	1	Q. 741	
eppner ood River (near) endleton he Dalles matilla 'alla Walla, Wash eston	1. 78	0.14	1.89	+0.81	1.80	+0. 27	1.62	+0.57	1.66	+0.19	0.63	-1.36	0.03	-0.58	2. 10	1.89	1.84	+1.23	2. 22	-1. 22	2. 25	1.38	2. 26	+0.80	20. 08	+ 6.28
matilla	1. 53	+0.05	1.00	0.00	0.35	-0. 39	0.40	-0.38	0.43	-0.13	0.20	-0. 10	0.02	-0. 15	1.89	1. 55	0.38	-0. 22	1.82	+o. 98	1. 12	-0.30	0. 99	-0.20	10. 36	1.43
eston	2.30 4.15	+0. 12 +0. 44	2.75 5.61	+0.94 +3.71	2. 25 3. 27	+0.98 +0.87	2.78	+0.05 +0.39	1.53 3.03	-0. 51 -0. 86	0.66	0. 01 0. 28	O. 04	-0.41 -0.75	3. 26	1.85 2.87	1. 24	+0. 28	3.07 2.91	+1.48 +1.07	3.62	十1. 04 十1. 59	2. 51	+0.03	22. 99 33. 75	+ 5. 14 +11. 83
PLATEAU DISTRICT.			1	1	10	عسراح	me	eu;	1011	anyo	į.		1								ļ		i			
ker City	1, 46 1, 55	—ი. ვნ —ი. 22	1.96	+0.46	1. 24	-0.35 +0.34	0.69	+0. 25 -0. 03	2.08 1.15	+0, 20	0.51	-0.81	0.38	-0. 21 +0. 13	0. 10	0. 79	0. 12	о. 68	1.75 1.60	+0.80 +1.29	I. 70		1, 64	0. 07	15. 11	+ o. 87
urns	1.90 2.52	+0.71	0.80	+0.07	0.61	-0. 15	0.57	+0. 10	0, 10	о. 8о	0.11		0. 12		T. 24		0.32		1.32	+0.60	4.55 1.30	+0.78	1.80	+1.13	15. 45	
eulah urns ayville. appy Valley Dseph lamath Falls	1.39	+0.32	1.57	±0.39	2. 79	+1.37	1.62	0. 03	2. 15	+0.16	0.42	-0. 75	0.04	-0.50	1.05	0.71	0.05	-1.01 -0.82	1.74	+1.10	2.08	+1.11	1.72	+0.53	16.62	+ 3.40
lamath Falls	3, 22	+0.96	1.67	0.36	3.43	+1.86	0. 25	—I. 16	0. 10	-1.51	0.02	-0.02 -2.04	0.00	-0.44	0.08	0. 10	0. 10	-0.28								- 1.94
a Grande	2. 64	+0. 58	0.80	-1.80	2. 25	+0. 50 +0. 26	1.18	-0. 38	0.49 1.10	—2. 03 —0. 88	0.59	1. 04 1. 25	T.	-0.01 -0.37	0.50	0. 20	0.40	-0. 41 -0. 85	2.60	+1.24	2. 15	+0.56	1. 38	-0.11 -1.16	23.57	+ 4.53
one Rock	2. 43	+1.17	1.98	+0.71	0.58	+0. 21	0.11	-0.08	I. 32 T.	-0.74	0.31	—1. 29 	0.00	0. 54 	2. 01	1.72	1.02	+0. 29	2.01	+0.98	1.48	+0.51	0.42	0. 05	16. 87	+ 2.89
ew Bridge	I. 73 I. 90	+0.03 +0.26	I. 79 I. 22	+0. 29	0.45	-0. 18	I. 29 I. 00	+0.78 -0.06	o. 88	-0. 19	0.88	+0. 20 0. 00	T.	-0. 11 -0. 35	0.74	1. 12 0. 52	0.07	—0. 12 —č₹57	1. 38 -2. 99	+0.85 +2.27	1. 21 1. 44	+0. 44 -0. 07	1.71	-0. 36 +0. 48	12. 53 14. 01	+ 2.75 + 2.34
Ranch			0.01		1.34		0. 02		1. 17		0.00		T.		0.87		0.00						2. 61		8 .0	+ 4.53 + 2.89 + 2.75 + 2.34
iverside	1.68	 	1.25	<u> </u>	1.95		0.82		1.38		©: 17		0. 15		T	2 22	Ť.		1.67		1.21		2.06		12: 34	
parta	5. 17	+1.41	3.80	-1.27 +1.84	3.10	1. 32	2. 20	+0.42	2.70	-1.73 -0.21	1.80	-0. 96 +0. 96	0.17	0. 16	2. 58	2. 15	T. 37	—1. 45	3.00	-0.05 +1.42	5.30	+3.33	3.95	+0.30	33. 77	-2.00
. (Ancch. rineville. verside lver Lake parta ale MISCELLANEOUS. oise. Ida. elena. Mont. laho Fal'is, Ida. alispell. Mont.	1.92	+0.48	1. 10	+o. 53	0.79	+0.14	0. 52	-0 63	1.39	-0.07	0.31	0. 36ء سامی	0.02 Fle	E 18	0.55	0. 17	0. 15	0. 72	1.31	+o. 85	1.30	+0.61	1.36	+0.21	10. 72	+ 1.03
pise. Ida.	1.89	_o. 23	1.91	+o. 35	1.42	+0.08	1.50	+0.37	1.34	+0. 13	0. 57	-o. 48	0.01	-0. 20	0.44	0. 28	0. 28	-о. 13	3. 03	+1.76	1.60	+o. 81	0.82	1. 31	14. 81	+ r.43
aho Falis, Ida	1.60 0.70	+0.25 -1.34	o. 53 o. 53	-0. 22 -1. 32	I. 27 I. 07	+0.68	0.70	-0.42 -1.07	1.98 1.50	+0.39 +0.33	0.84	-1.59	0. 63	0.49	1.26	0.63	0.64	-o. 51	1.45	+0.59	0. 26	-0.42	0.62	-0. 29	11.78	— I.40
alispell, Mont	1.62		16.22		5. 75	[ <u>.</u>	11.27		2. II 7.60		1.94		0. 33		2.08		2.75		I. I3 II. 22		0.96		1.75		***	
	]		·:		2.00		3, 52		2. 16		0.67		0. 15		0. 29		T.		2. 65		0.78		6.11		40.57	
ort Crescent. Wash	გ, ⊿61		5. 17						*** +3						401		/7		3.07				, + 1		177 34	
ah, Wash 2 catello, Ida. 7 rt Crescent, Wash attle, Wash okane, Wash coma, Wash	8. 46 6. 10	+1. 58	3. 20	-0.42	1.80	—1. I7	3.50	+0. 10	2.09	-0. 13	1.26	0. 21	0.43	-0. 23	2. 50	1.93	1. 52	—o. 38i	3.34	10.50	7.49	+1.83	3.90	2. 49	37. 13	— 0. I4 — 1 87

 $\dagger$  indicates + in Departure column.

**\*\* 101. 40.** 

†† 127.99.

‡**‡** 162. 48.

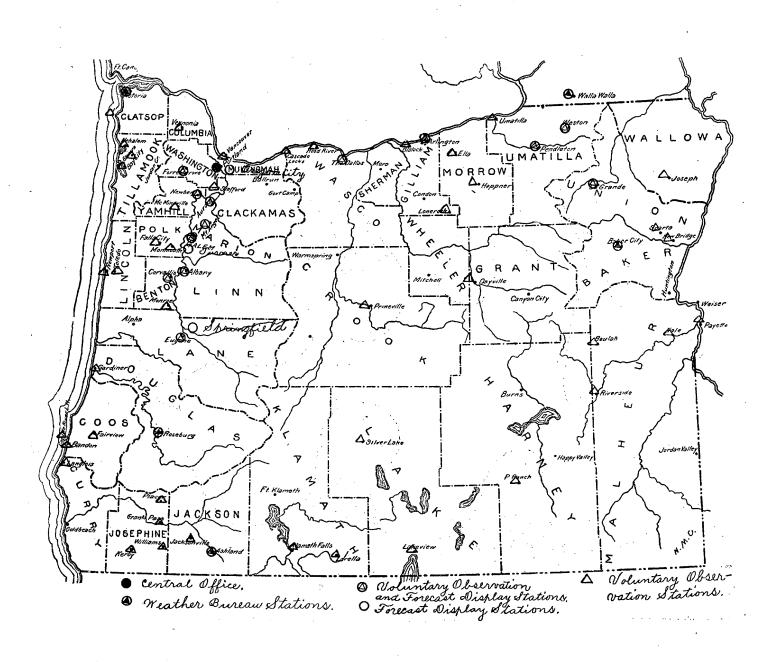
§§ 108. 17.

∥∥ r34. 36.

¶¶ 124. 35.

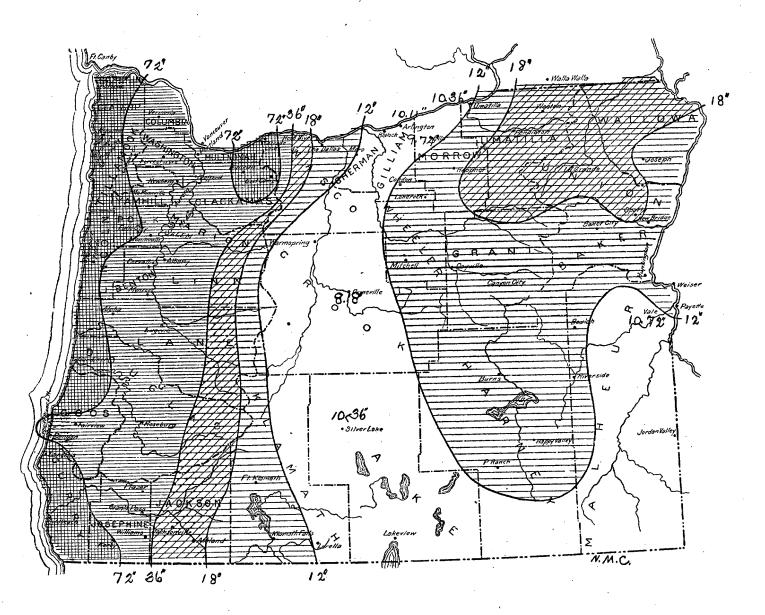
\*\*\* 126. 96.

Chart II. LOCATION OF OBSERVING AND FORECAST DISPLAY STATIONS.

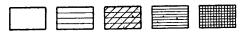


## Chart III. TOTAL ANNUAL PRECIPITATION.

YEAR, 1899.



SCALE OF SHADES (IN INCHES).



8 to 12 12 to 18 18 to 36 36 to 72 OVER 72

#### Daily Forecast and Frost Display Stations.

Stations.	Displaymen.	Stations.	Displaymen.	Stations.	Displaymen.	Stations,	Displaymen.
Albany Arlington Ashland Aurora Baker City	C. A. Shurte. F. H. Carter.	Eugene	Prof. A. R. Sweetser. J. H. Robbins.	Pendleton Portland Roseburg	Wm. R. Logus. Prof. H. L. Talkington. U. S. Weather Bureau. U. S. Weather Bureau. Secretary of State.	Springfield Stayton The Dalles Turner Weston	Athletic Club. G. F. Robertson.

#### Voluntary Observers.

Stations.	Observers.	Stations.	Observers.	Statious.	Observers.	Stations.	Observers.
Bandon. G Bay City C Beulah W Blalocks C. Buckhorn Farm E Bull Run. Pc Burns W Coquille River L H. Corvallis O	. H. Shurte H. Carter S. Weather Bureau S. Weather Bureau S. Weather Bureau S. Cooley R. Smead F. Meissner ortland Water Works . C. Byrd G. Brown S. L. H. Keeper regon Agri, College S. Sartwell Campbell-Martin,	Fairview Falls City Forest Grove Gardiner Glenora Government Camp Grants Pass Happy Valley Heppner Hood River Irvington Jacksonville Joseph Klamatt Falls	Frank Butler. Pacific University. J. S. Gray. Mrs. Jennie A. Reeher. O. C. Yocam. J. B. Paddock. J. H. Neal. Arthur Smith. Dr. P. G. Barrett. Dr. Geo. Wigg. E. Britt. J. D. McCully. Otto Heidrich. J. H. Robbins.	Lone Rock Lorella McMinnville Miramonte Farm Monmouth Monroe Mount Angel Nehalem Newberg New Bridge New Bridge Newport Payette Ida Pendleton Placer Portland	A. R. Campbell. Prof. A. M. Brumback. G. Meucke. State Normal School. J. H. Starr. Rev. Dr. U. F. Fisher. J. M. Alley. O. M. Coffin. Frank Craig. Capt. J. E. Mathews. Dr. F. B. Delano. W. H. Hampton. U. S. Weather Bureau.	Prineville Riverside Riverside Roseburg Salem Silver Lake Spurta Stafford The Dulles Tillamook Rock Toledo Umatilla Vale Vancouver, Wash Verronia Walla Walla, Wn. Weston Williams	J. D. Fairman. U. S. Weather Bureau. C. T. Roberts. G. B. Wardell. Hon. J. A. Wright. J. P. Gage. S. L. Brooks. U. S. L. H. Keeper. Otto O. Krogstad. J. W. Duncan. Finley McDonald. A. A. Quarnberg. L. W. Van Dyke. U. S. Weather Burean.

#### Special Wheat Reporters.

Reporters.	Stations.	Reporters.	Stations.	Reporters.	Stations.	Reporters.	Stations.
	Pullman, Wash, Weston, Ore. Rockford, Wash, Sprague, Wash.		Colfax, Wash. Roseburg, Ore. Eureka, Wash. Pendleton, Ore.	Newman, F	Kendrick, Ida. Walla Walla. Wn. Oakesdale, Wash. Grants Pass, Ore.		La Grande, Ore. Ritzville, Wash. Heppner, Ore.

#### Crop Correspondents.

Correspondents.	Stations.	Correspondents.	Stations.	Correspondents.	Stations.	Correspondents.	Stations.
Ainsworthy, J. W	Wasco.	Dixon, W. F.	Woodburn.	Kimberland, G. H	Mount Vernon.	Robinson, F. M	Beaverton.
Atkinson, Eugene	Sand Lake.	Dodd, E. J	Springfield.	King, J. R	Weston.	Robinson, Miss Grace	Clackamas.
Austin, Lincoln	Flora.	Ebersole, J. F	Macleay.	Kirkwood, James	Farmington.	Rouse, L. J.	Enterprise.
Baker, Clyde	Graeme.	Eddy, Perry	Hoskins.	Kliensmith, Henry	Clarkes.	Ruble, David	Waldport.
Baker, C. H	Walterville.	Egli, John	Dundee.	Kloestch, Jacob	Sublimity.	Schmitt, Henry	Athena.
Baker, H. J	Pine.	Evans, N. C Farnsworth, F. P	Hood River.	Knowles, J. B	Rickreall.	Scott, Henry	Melrose.
Baker, Maude M	Weston.	Farnsworth, F. P	Hardman.	Krogstad, Otto O	Toledo.	Scott, J. H.	Tangent.
Baldwin, L. D	Buena Vista.	Fisher, J. K	Haines.	Kruse, J. L	Stafford.	Severy, D. E	Silıtz.
Barnett. W. M	Wasco.	Fleck, Peter	Grant.	Lamb, F. M	Tillamook.	Shanks, F. H	Mount Angel.
Beach, Edwin R	Lexington.	Flett, W. G	Olex.	Lumbert, Nick	Sublimity.	Shanno, Emile	The Dalles.
Beaty, F. J.	Chemawa.	Fligg, George W	Eudersly.	Lawton, D. T.	Medford.	Shives. Cruden	Buena Vista.
Billings, A. B	Mount Hood.	Forbes, S. W.	Browntown.	Loggan, R. O	Philomath.	Sizemore, J. A	Juntura.
Bock, G. A	Aurora.	Fullerton, C. P.	Alsea.	McCall, J. M.	Island City.	Soggan, R. O	Philomath.
Boles, W. H	Philomath.	Funk, Louis	Logan.	McCloskey, Sol. J	Norway.	Smith, A. W	Oakville.
Bonney, A. A	Tygh Valley.	Ganet, D. M. C.	Hillsboro.	McKee, D. A.	McKee.	Smith, E. F	Cottage Grove.
Boyd, W. H.	Beaverton.	Garrigus, J.	Greenville.	McMahon, O. A.	Thurston.	Smith, J. W.	Macksburg.
Bradford, I. N.	Union.	Giethens, L. A.	Athena.	Macpherson, A. E	Sumpter.	Smith, M. F.	Hubbard.
Brattain, J. E	Springfield.	Glassford, H. H	Wren.	Magness, A. P.	Wheatland.	Smith, R. M	Monmouth.
Bristo, H. T.	Dusty.	Gooley, Ed	Mount Augel.	Massie, W. A	Merlin.	Smith T. W. B	Corvallis.
Buckman, Fred	Damascus.	Goulding, H	Graeme.	Mayer, A. J.	Gravelford.	Starr. Miles	Monroe.
Buckner, W. F	Sidney. Hopewell.	Gourley, James G	Lutgens.	Mayfield, G. E.	Elgin:	Steiner, J.	Wolf Creek.
Bull, W. E		Hackenberg, Jos	Rainier.	Menefee, W. R	Dunfur.	Stevenson, J. G	Eugene.
Burilligh, J. A	Enterprise. Buxton.	Haley, W. T. Hall, E.	Parker.	Merrin, U.S.	Merrill. Wisonville.	Stewart, G. D.	Gərvais.
Buxton, H. T.	Olalla.	Hall T W	Prairie.	Miley, Henry		Stites, W. E.	Williams.
Byron, James		Hall, J. W	Myrtle Point.	Miller, Julius J	Aurora.	Stockwell, Lena	Creswell.
Callahan, M. F	Wardton. Lorella.	Hames, C. A	Narrows.	Miller, Wm. R	Wedderburn,	Stoddard, H. C.	Hubbard,
Cambell, A. R	Tule Lake.	Hammio O D	Eskley. Belvan.	Miller, Mrs. Fannie Mills, C	Glandale. Beaver.	Stuhluecker, Dan	Graeme.
Cates, John A.	Telocaset.	Hammie, O. P Hammond, E. P	Medford.	Mills Poth A	Newberg.	Swan, G. G	Dora.
Churchill, J. L.	Coles Valley.	Hanson, J. A.	Oakland.	Mills, Seth A Minnick, John W	Union.	Taylor, H. J.	Wapinitia, Pendleton.
Churchill, J. S.	Springfield.	Harbison Bros	Hood River.	Moore, W. A.	Myrtle Creek.	Thiessen, H.	Milwaukie.
Clark, F. P.	Zena.	Harlan, J. R.	Harlan.	Morelock, J. P.	Wallowa.	Thompson, L. T.	Coles Valley.
Clark, O. D	Seal Rock.	Harrington, Marie	Highland.	Morris, D. M.	Turner.	Underwood, A. V.	Biglow.
Clarke, Wm. B.	Millwood.	Hayes, T. F.	Woodburn.	Morrison, G. M.	Adams.	Vidito, Willis	Alsea.
Clarke, William J	Gervais.	Henry, John	Beaverton.	Morrison, Mrs. A	Kerby.	Vincent, T. T.	Wren.
Coleman, Harry	Beaverton.	Hiatt, J. G.	Selma.	Mosher, D. H.	Redland.	Wagner, I. M.	Turner.
Colt, J. A.	Summerville.	Hibbard, K. L.	Willard.	Nealon, S. M.	Table Rock.	Wakefield, Ira	Phoenix.
Comehl, E. W	Wilsonville.	Hilleary, W. M	Turner.	Newell A E	Damascus.	Walker, S. T.	Forest Grove.
Covert, Dr. D. A	Logan.	Hillegas, M. J.	Springfield.	Newell, W. K.	Dilley.	Ward, F	Wardton.
Covum, H. T	Wapinitia.	Hindman, J.L	Elgin.	Oakerman, Paul L	Reedville.	Watson, A. Lyon	Springbrook.
Crabtree, Newton	Scio.	Hindman, W. B	Elgin.	O'Bryant, J. F.	Hames.	Weaver, E. L.	Liberty.
Crabtree, Newton Cray, A. E	Lestine.	Hinrichs, P. D	Hood River.	Overton, Dell	Westfall.	Weaver, J. W.	Myrtle Creek.
Crow, W. M	Merlin.	Holden, C. H	Florence.	Paisley. S	Buxton.	Webber, Morris	Yones Valley.
Crowley, R. E	Lorella.	Homes, F. C.	Ashland.	Parsons, W. B	Ella.	Welch, John R	Sunnyside.
Cummings, William L.	Shaw.	Howard, Mary S	Mulins.	Patrick, W. H.	Central Point.	Westerfield, W. I	Grass Valley.
Cunningham, B	Liberty.	Howe, J	Perrydale.	Patton, T. B.	Macleay.	Wheeler, J. W	Newberg.
Dalaba, S. H	Salado.	Hoxie, J. M	Wilderville.	Payne, S. L.	Westfall.	White, F. M	Gales Creek.
Davis, A. I	Crabtree.	Hug, Henry	Elgin.	Peacock, William P	Parker.	White, W. L	Aurora.
Davis, E. W	Union.	Hunt, James L	Oakland	Penne, Peter	Farmington.	Whitten, John D	Kingsley.
Davis, G. E.	Lorella.	Ingles, William E	Manning.	Pound, F. L. Powell, J. S. S.	Aumsville.	Wigant, W. A.	Rural.
Davis, Watson	Roseburg.	Jack, Henry	Farmington.	Powell, J. S. S	Buena Vista.	Wilson, E. D. F.	Aurora.
Davidson, T. C.	Liberty.	Johnson, J. C.	Scappose.	Price, E. H	Illahe.	Wilson, F. P.	Logan.
Dextor, Robert	Heppner.	Johnson, Free	Roseburg.	Rees, J. H.	Springbrook.	Wolf, Henry	Beaverton.
Dillard, John	Olete.	Jones, Buford	Brooks.	Richards, E. L.	Stephens.	Wood, John T.	Amity.
Diller, Edward W	Melrose.	Jones, C. E.	Eight Mile.	Riddle, J. A.	Monmouth.	Woodruff, E.T	Cleveland.
Dilley, E. J.	Wren.	Jory, John W	Salem.	Rietmann, Paul	Ione.	Wright, S.	Liberal.
Dimmick, A. R	Scotts Mills.	Kennedy, J. M	Glendale.	Roberts, L. O	Noble.	Yates, Chris, P.	Sheridan.