U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH THE DALLES CHAMBER OF COMMERCE
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 — 35

CLIMATOLOGICAL SUMMARY

LATITUDE 45° 36' N
LONGITUDE 121° 12' W
ELEV. (GROUND) 102 Ft.

STATION THE DALLES, OREGON

MEANS AND EXTREMES FOR PERIOD ** 1925 - 1955

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Mean degree days #	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet, Hail: Mean	Maximum monthly	Year	Greatest daily	Year	Mean number of days: Precip. .10 inch or more	Temperatures: Max. 90° and above	Max. 32° and below	Min. 32° and below	Min. 0° and below	Month
(a)	30	30	30	30		30		30	30	30		30	30		30		30	30	30	30	30	
Jan.	40.0	27.3	33.7	65	1945	-25	1930	970	2.60	1.96	1948	12.8	76.0	1950	14.5	1928	7	0	7	20	1	Jan.
Feb.	47.4	30.9	39.2	72	1932	-21	1950	722	1.78	1.84	1928	4.6	20.2	1948	14.5	1948	5	0	2	14	1	Feb.
Mar.	57.4	36.3	46.9	81	1934	21	1945+	561	1.18	1.80	1931	0.5	5.5	1951	4.2	1955	4	0	0	8	0	Mar.
Apr.	66.6	41.8	54.2	95	1926	26	1927	324	0.49	0.63	1943	T	T	1935	T	1935	2	*	0	1	0	Apr.
May	74.1	48.1	61.1	101	1947	32	1954+	126	0.61	0.93	1925	0.0	0.0		0.0		2	2	0	*	0	May
June	80.0	54.3	67.2	105	1926	40	1938	31	0.61	1.11	1948	0.0	0.0		0.0		2	5	0	0	0	June
July	87.8	58.9	73.4	115	1941+	44	1938+	0	0.08	0.30	1947	0.0	0.0		0.0		*	12	0	0	0	July
Aug.	87.4	57.2	72.3	108	1950	41	1936	0	0.14	0.92	1943	0.0	0.0		0.0		*	13	0	0	0	Aug.
Sep.	80.0	50.7	65.4	107	1950	34	1933	74	0.54	1.07	1948	0.0	0.0		0.0		1	5	0	*	0	Sep.
Oct.	66.9	42.7	54.8	91	1952	22	1935	316	1.10	1.23	1943	T	0.5	1935	0.5	1935	3	*	0	2	0	Oct.
Nov.	51.2	34.9	43.1	77	1941	3	1955	657	2.14	1.20	1926	1.4	16.3	1946	11.0	1946	5	0	1	10	0	Nov.
Dec.	43.8	31.6	37.7	74	1933	-1	1926	847	2.43	1.60	1933	4.7	20.0	1931	11.0	1931	6	0	2	16	*	Dec.
Year	65.2	42.9	54.1	115	July 1941+	-25	Jan. 1930	4627	13.70	1.96	Jan. 1948	24.0	76.0	Jan. 1950	14.5	1948+	37	37	12	71	2	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

+ Also earlier dates, months or years.

* Less than one half.

Base 65°

** Year 1944 incomplete and not used in this summary.

CLIMATE OF THE DALLES, OREGON

The city of The Dalles lies along the south bank of the Columbia River near the beginning point of its passage through the east slope foothills of the Cascade Range. The canyon walls are quite broken up here and within another fifteen or twenty miles eastward give way to the plains area of the Columbia Basin. Westward the gorge of the Columbia forms a nearly sea level passageway to the Pacific Ocean. The crest ridge of the Cascades, where cut by the Columbia Gorge some twenty airline miles west of the city, is generally near 5,000 feet in elevation though Mount Hood, the highest peak in this ridge, rises to over 11,000 feet. At points the canyon walls become nearly perpendicular and are only little more than the width of the river apart while at others they break way into a series of rolling terraces devoted to a widely diversified agriculture.

The Dalles, lying as it does on the east side of the Cascades, has predominately the continental climate of the Intermountain Region. The Columbia Gorge, however, is a natural passageway through the mountains for the normal eastward migration of ocean conditioned air masses from the Pacific. Much of the time these serve to substantially modify extreme temperatures of both summer and winter. As a result, rarely do the abnormally hot or abnormally cool spells persist for more than a few days at a time. The absolute range during the seventy-five years for which temperature records are available is from 30 degrees below zero to 115 degrees above. Temperatures of 100° or more have been reached 83% of those years and those of 0° or lower 43%. A more detailed graph of annual temperature extremes is shown on the reverse. During the warm summer months daytime humidities are low, generally ranging between 35 and 45 percent, thus materially reducing discomfort that might otherwise be associated with the occasional high temperatures. On the average, freezing temperatures do not occur between April 3rd in the spring and October 23rd in the fall providing a growing season of 181 days. In the table below are shown the average and extreme dates of last occurrence in spring and first in fall of selected temperatures:

	DATE OF LAST SPRING MINIMUM OF: 16°	20°	24°	28°	32°	DATE OF FIRST FALL MINIMUM OF: 32°	28°	24°	20°	16°
Average	Jan.21	Jan.26	Feb.15	Mar.12	Apr. 3	Oct.23	Nov. 7	Nov.30	Dec.16	Dec.21
Earliest	**	**	**	Feb. 2	Feb.25	Sep.24	Sep.25	Oct.30	Nov. 2	Nov. 2
Latest	Feb.18	Mar. 1	Mar.18	Apr.20	Apr.28	Nov.21	Dec. 7	**	**	**

** Years when this temperature never occurred after Jan. 1 in spring or before Dec. 31 in fall.

While the low annual rainfall total for The Dalles is characteristic of the Intermountain Region, the fact that approximately two-thirds of it occurs during the four months of November through February reflects the strong influence of the marine air masses moving in from the Pacific. Annual totals in the last eighty-one years, for which continuous records are available, have varied between 26.42 inches in 1875 and 6.37 inches in 1939. Occasionally fairly heavy winter snows result when strong outbreaks of very cold polar continental air masses push down from Canada into the Columbia Gorge mixing with much warmer and relatively moist marine air moving through it. In the winter of 1880-1881 a seasonal total of 134.8 inches was recorded. In contrast in 1953 no snow at all occurred during the entire year. Storms of more than a few inches of snow in a twenty-four hour period are very rare, and the annual average total snowfall is only 24 inches. Most of the precipitation here, even in the winter months, is in the form of rain.

The comparatively long growing season permits raising a wide variety of crops. In many areas the low summer rainfall is supplemented by an increasing use of irrigation, though primarily crops are raised that are either mature before the beginning of the dry season or are not materially affected by it. The average annual farm income of Wasco County, for which The Dalles is the county seat, is approximately $6,500,000. In the immediate area of the city the major crop is sweet cherries with sour cherries, peaches, prunes, apricots, apples and pears also grown on a commercial scale. For the county as a whole both grain and livestock products lead fruit in the average annual total cash return to growers. Much of the economy of The Dalles is centered in the production and processing of these crops. The Columbia River itself is one of the major resources of this area. Not only does it offer much in the way of recreational opportunities, boating, fishing, etc., but it offers a much used direct water route to numerous other areas in the state including, of course, Portland and to the Pacific Ocean as well. Also, The Dalles dam, one of the major developments in the Columbia for production of hydro-electric power, is to be completed here by 1958.

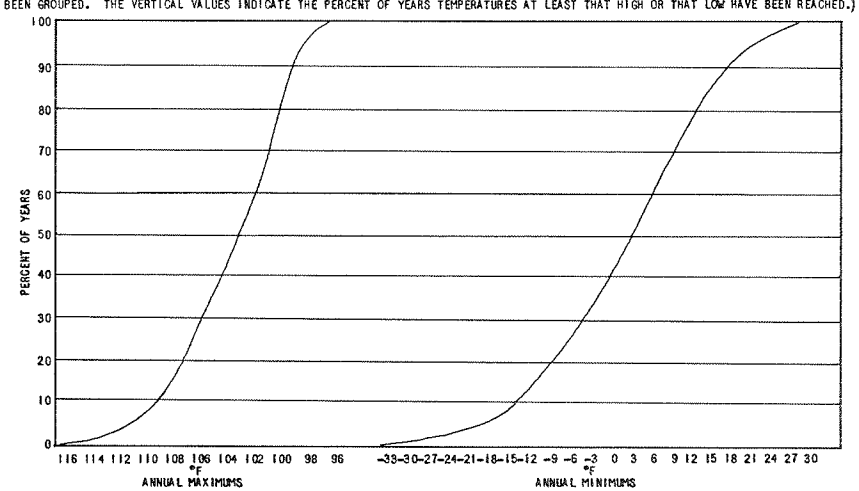
Gilbert L. Sternes, State Climatologist
Weather Bureau Office, Portland, Oregon

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	41.6	45.8	48.4	56.2	64.0	67.0	76.8	71.8	65.5	54.8	43.0	42.0	56.4
1926	39.2	47.5	51.3	59.7	61.2	71.6	76.6	73.6	60.6	56.2	44.5	34.8	56.4
1927	31.6	42.1	46.0	53.0	57.4	67.7	72.8	73.1	62.8	54.8	48.0	34.8	53.7
1928	32.2	38.9	48.4	51.1	65.4	66.0	75.3	72.1	64.4	53.4	44.6	35.4	53.9
1929	29.6	26.9	48.4	52.2	61.1	67.0	70.1	74.0	62.5	56.0	41.3	39.0	52.3
1930	16.8	43.2	49.2	55.6	57.8	64.4	74.2	74.0	66.0	51.0	43.1	36.6	52.7
1931	38.6	40.6	45.5	52.4	63.2	64.8	72.4	71.8	64.0	52.8	38.9	29.2	52.8
1932	35.0	35.4	47.4	52.7	59.2	69.8	69.8	70.0	64.4	56.1	44.9	31.1	53.0
1933	34.7	32.8	45.4	52.8	55.8	67.2	72.8	73.2	59.9	55.9	45.3	43.3	53.3
1934	42.2	45.2	51.8	59.4	61.8	67.8	71.2	72.8	63.0	55.4	46.4	40.3	56.4
1935	32.4	41.9	42.8	51.4	59.8	67.1	72.4	70.5	67.8	51.6	37.6	36.4	52.6
1936	39.2	26.8	45.6	56.8	63.4	68.8	72.0	71.8	63.5	55.2	36.3	40.4	53.3
1937	18.4	33.1	47.4	50.8	61.2	66.6	72.8	69.2	65.4	57.4	45.6	39.8	52.3
1938	37.0	37.3	44.6	54.3	60.0	69.0	73.7	69.6	68.6	54.2	41.1	39.0	54.0
1939	40.5	38.8	48.8	56.6	62.4	64.7	74.6	73.0	66.2	56.6	43.2	40.4	55.5
1940	33.4	42.2	50.8	54.8	65.0	71.4	73.0	72.5	67.3	57.4	40.1	35.9	55.3
1941	35.4	42.0	51.0	57.1	60.6	68.3	79.0	73.2	62.6	55.0	45.4	38.5	55.7
1942	27.0	39.7	46.0	54.8	59.4	65.4	74.8	74.8	67.8	57.2	41.4	39.4	54.0
1943	26.7	40.5	45.4	56.0	57.8	64.3	72.2	69.1	67.6	54.9	42.4	36.4	53.6
1945	40.2	42.3	45.2	53.2	62.6	67.3	76.7	75.6	64.0	57.0	42.4	36.0	55.2
1946	39.4	41.9	47.2	54.6	63.8	66.0	74.1	74.0	64.3	51.6	40.4	40.4	54.8
1947	34.4	43.5	50.6	57.0	67.4	65.4	72.4	71.0	66.3	55.2	46.8	39.7	55.8
1948	37.5	36.0	43.7	50.4	59.4	71.2	71.5	70.4	62.4	50.7	41.7	33.8	52.4
1949	23.1	36.3	46.2	56.8	64.0	68.5	73.0	73.1	67.6	50.5	47.9	40.1	53.9
1950	21.7	31.1	44.6	51.4	58.6	67.1	73.3	74.8	68.7	53.2	44.8	40.9	52.5
1951	36.8	39.3	43.8	56.6	61.3	69.9	74.7	72.5	68.0	54.1	42.7	35.2	54.6
1952	28.9	39.4	45.5	55.1	62.1	65.4	74.9	73.3	69.4	61.1	38.3	37.5	54.3
1953	45.2	44.3	48.0	52.0	58.3	62.3	73.6	72.2	67.6	56.7	46.8	42.6	55.8
1954	33.9	40.5	44.4	53.2	61.4	63.7	69.9	68.5	65.4	52.6	49.1	36.6	53.3
1955	37.8	40.5	42.2	48.5	58.5	67.7	69.7	73.7	66.4	55.4	37.6	35.6	52.8

BELOW IS SHOWN GRAPHICALLY THE PERCENT OF YEARS MAXIMUM TEMPERATURES WITHIN RANGES OF TWO DEGREES AND MINIMUMS WITHIN RANGES OF THREE DEGREES HAVE BEEN REACHED DURING THE PERIOD 1875-1955.

(FIGURES ACROSS THE BOTTOM OF THE GRAPH INDICATE THE RANGE OF VALUES INTO WHICH THE HIGHEST AND LOWEST ANNUAL TEMPERATURES HAVE BEEN GROUPED. THE VERTICAL VALUES INDICATE THE PERCENT OF YEARS TEMPERATURES AT LEAST THAT HIGH OR THAT LOW HAVE BEEN REACHED.)



Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	4.04	2.49	0.52	0.80	1.47	T	T	0.01	0.81	0.03	1.94	1.11	13.22
1926	1.71	3.06	T	0.18	0.62	0.00	T	0.23	0.44	0.75	5.50	1.42	13.91
1927	4.19	3.35	0.45	T	0.40	0.30	T	T	2.51	0.81	3.02	0.87	15.90
1928	3.50	0.23	2.92	1.04	T	0.54	0.12	0.00	0.09	0.15	1.81	2.61	13.01
1929	2.24	0.02	T	0.40	T	0.55	0.00	T	0.13	0.23	0.02	4.96	8.55
1930	2.18	1.85	0.88	0.20	0.12	0.12	0.00	0.03	0.21	1.06	1.60	0.75	9.00
1931	1.26	0.38	3.25	0.50	T	1.35	0.00	T	0.85	0.80	1.83	1.38	11.60
1932	1.82	1.72	1.42	0.68	1.62	T	T	T	0.00	1.01	2.28	2.19	12.74
1933	1.52	1.07	0.99	T	1.34	0.45	0.00	T	0.84	1.04	1.07	4.79	13.11
1934	2.15	0.38	1.72	0.59	0.28	0.05	T	0.23	0.88	1.80	3.08	2.85	14.01
1935	0.73	0.52	1.03	0.48	0.03	0.14	0.11	0.02	0.44	0.56	0.69	2.11	6.86
1936	5.07	1.90	0.63	0.19	0.90	1.57	0.04	0.00	0.08	0.08	0.05	2.39	12.90
1937	2.62	2.49	1.28	1.09	0.09	2.19	0.29	0.71	0.25	0.58	3.11	4.56	19.26
1938	1.71	2.69	2.30	0.40	0.09	0.37	0.16	T	T	1.10	1.59	1.46	11.87
1939	0.66	1.35	1.18	T	0.28	0.33	0.02	0.09	0.11	0.13	0.09	2.13	6.37
1940	1.95	4.79	1.27	1.01	0.20	0.24	0.14	0.00	1.38	1.43	1.76	1.33	15.50
1941	2.31	0.81	0.32	0.39	0.86	0.08	0.00	0.33	0.56	0.82	2.48	2.69	11.65
1942	1.53	2.80	0.09	0.26	1.25	0.30	0.02	0.08	0.00	0.26	5.10	3.96	15.65
1943	3.39	1.57	1.53	1.48	0.30	0.87	0.10	0.95	T	3.84	1.49	0.65	16.17
1945	1.43	1.72	0.61	0.57	2.05	T	T	0.03	0.22	0.65	3.33	3.91	14.52
1946	2.13	1.81	1.39	T	0.32	0.80	0.31	0.06	0.24	1.50	2.11	0.92	11.59
1947	1.45	0.99	1.07	0.95	0.03	2.81	0.41	0.01	1.14	3.15	1.60	0.76	14.37
1948	3.31	2.80	1.67	0.59	1.04	1.53	0.30	0.20	1.60	0.46	3.15	3.88	20.53
1949	0.43	3.45	1.27	0.03	0.57	0.17	0.03	T	0.27	0.49	2.48	0.93	10.12
1950	5.57	1.79	2.03	0.51	0.12	0.40	T	0.02	0.70	3.98	3.28	3.42	21.82
1951	4.05	2.39	2.10	0.22	0.90	0.43	0.03	0.41	0.35	2.45	1.80	2.87	18.00
1952	2.65	1.90	0.35	0.05	0.78	1.21	0.00	0.00	0.17	0.01	0.39	2.81	10.32
1953	6.18	1.98	0.62	0.63	1.59	0.50	0.00	0.71	0.02	0.58	2.68	3.47	18.96
1954	5.59	0.60	0.65	0.28	0.63	0.58	0.10	0.08	0.47	0.84	1.36	0.88	12.06
1955	0.57	0.43	1.92	1.26	0.37	0.38	0.21	0.00	0.64	2.39	3.58	4.72	16.47

STATION HISTORY

OFFICIAL WEATHER RECORDS FOR THE DALLES WERE BEGUN IN JULY 1850, THOUGH ORIGINALS ON FILE AT THE STATE CLIMATOLOGIST'S OFFICE IN PORTLAND GO BACK ONLY TO 1887. FROM THEIR BEGINNING UNTIL MARCH 1866 OBSERVATIONS WERE TAKEN BY THE SURGEON GENERAL'S OFFICE OF THE UNITED STATES ARMY AT OLD FORT DALLES. THERE WERE FREQUENT BREAKS IN THE RECORDS OF FROM ONE TO SEVERAL MONTHS UNTIL 1866 WHEN THEY CEASED ALTOGETHER. MR. SAMUEL L. BROOKS, A PRIVATE CITIZEN, USING HIS OWN INSTRUMENTS REOPENED THE STATION WITH A COMPLETE CLIMATOLOGICAL OBSERVING PROGRAM AT HIS HOME IN THE DOWNTOWN AREA IN DECEMBER 1874. HE CONTINUED AS THE OBSERVER FOR THE NEXT THIRTY-SIX YEARS WITHOUT A SIGNIFICANT BREAK TO PROVIDE ONE OF THE STATE'S BEST KEPT SET OF RECORDS. IN 1887 THE READING OF DAILY RIVER STAGES WERE ADDED TO HIS OBSERVING PROGRAM. IN FEBRUARY 1911 MR. GEORGE JOLES TOOK OVER THE RIVER READING PART OF THE WORK. HE WAS FOLLOWED IN QUICK SUCCESSION BY MR. F. SCHOLATER, MR. W. A. SIMPSON AND IN FEBRUARY 1913 BY MR. W. L. CRICHTEN WHO CARRIED IT ON UNTIL DECEMBER 1939. IN MARCH 1941 THE DUTIES OF BOTH WEATHER AND RIVER OBSERVING WERE AGAIN COMBINED AND HAVE REMAINED SO EVER SINCE. THE WEATHER OBSERVERS WHO FOLLOWED MR. BROOKS TOGETHER WITH THEIR PERIODS OF SERVICE ARE LISTED BELOW:

NAME	PERIOD OF SERVICE
MR. JUDD S. FISH	MARCH 1913-MARCH 1914
MR. T. B. PHILLIPS	OCTOBER 1914-JULY 1916
MR. J. M. BREWER	JULY 1916-OCTOBER 1917
THE DALLES CHAMBER OF COMMERCE	NOVEMBER 1917-FEBRUARY 1941
PORT OF THE DALLES	MARCH 1941-FEBRUARY 1943
MR. JOHN ALDEN	FEBRUARY 1943-NOVEMBER 1943
MR. CHARLES ROTH, JR.	FEBRUARY 1944-PRESENT TIME

IN ORDER TO COMPLETE FULL YEARS OF RECORDS DURING BRIEF PERIODS OF INOPERATION OF THE REGULAR CLIMATOLOGICAL STATION, RECORDS FROM THE DALLESPORT AIRPORT, JUST ACROSS THE COLUMBIA RIVER FROM THE DALLES, WERE USED FOR SEPTEMBER 1942 AND DECEMBER 1943 IN PREPARING THE CLIMATOLOGICAL SUMMARY TABLE ON THE REVERSE.

DURING THE PERIOD, AT LEAST FROM 1874 ON, OBSERVATIONS HAVE ALL BEEN MADE IN THE DOWNTOWN AREA WITHIN A HALF MILE RADIUS OF THE PRESENT SITE AND WITH LESS THAN 30 FEET VARIATION IN ELEVATION. IN GENERAL, THE OBSERVERS HAVE BEEN EXCEPTIONALLY ACCURATE AND THOROUGH AND THESE RECORDS ARE VERY DEPENDABLE.