U.S. DEPARTMENT OF COMMERCE, WEATHER BUREAU IN COOPERATION WITH
THE WASHINGTON STATE DEPARTMENT OF COMMERCE AND ECONOMIC DEVELOPMENT
CLIMATOGRAPHY OF THE UNITED STATES 20-45

LATITUDE 46°00'
LONGITUDE 121°32'
ELEV. (GROUND) 1960 ft.

CLIMATOLOGICAL SUMMARY

STATION MT. ADAMS RANGER STATION
TROUTLAKE, WASHINGTON

MEANS AND EXTREMES FOR PERIOD 1931-1960

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: 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	35.7	21.1	28.4	58	1934	-24	1957	1135	8.49	3.52	1950	45.1	143.7	1950	26.0	1932	13	0	9	29	2	JAN
FEB	41.0	23.9	32.5	63	1934	-24	1950	910	6.05	3.21	1949	24.5	83.0	1949	21.0	1946	10	0	3	25	1	FEB
MAR	48.4	27.6	38.0	79	1939	-7	1955	837	5.07	3.17	1931	9.5	35.5	1938	20.0	1938	9	0	*	24	0	MAR
APR	59.2	31.5	45.4	89	1939	13	1936	588	2.45	1.98	1937	1.2	10.0	1945	7.6	1960	6	0	0	16	0	APR
MAY	68.0	37.8	52.9	93	1936	20	1954	375	1.67	1.89	1949						4	*	0	7	0	MAY
JUN	74.4	42.9	58.7	97	1958+	28	1939	192	1.29	2.00	1931						3	2	0	1	0	JUN
JUL	83.2	47.2	65.2	108	1939	31	1954	50	.19	.84	1946						1	8	0	*	0	JUL
AUG	81.7	45.1	63.4	102	1938	30	1947+	81	.42	1.17	1956						1	6	0	*	0	AUG
SEP	74.4	40.3	57.4	96	1950+	24	1954	237	1.26	1.65	1951						3	1	0	3	0	SEP
OCT	60.2	34.8	47.5	86	1935	10	1935	543	4.14	2.94	1955	.1	2.0	1946	2.0	1946	7	0	0	11	0	OCT
NOV	44.6	28.6	36.6	65	1933	-8	1955	852	7.25	2.38	1946	9.5	61.5	1950	24.0	1948	11	0	1	20	*	NOV
DEC	38.3	25.9	32.1	57	1939	-5	1948+	1020	9.14	3.90	1933	27.7	84.5	1931	20.0	1942	13	0	5	27	*	DEC
Year	59.1	33.9	46.5	108	1939	-24	1957+	6820	47.42	3.90	1933	117.6	143.7	1950	26.0	1932	81	17	18	163	3	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

NARRATIVE CLIMATOLOGICAL SUMMARY

Mt. Adams Ranger Station, located near Troutlake in northwestern Klickitat County, is 15 miles south of Mt. Adams. The terrain is rough in this forested section along the eastern slope of the Cascade Range. In a westerly direction, roads and trails through the Gifford Pinchot National Forest reach the Cascade Crest Trail and Twin Buttes area. In a northerly direction, a road leads into the scenic Bird Creek Meadows along the southern slope of the mountain. Beyond the meadows, trails enter the Mt. Adams Wild Area surrounding the glacier and snowcapped peak, elevation 12,307 feet.

Deer, elk, black bear and scattered herds of mountain goats, along with numerous smaller animals, roam the forest and higher ridges. Lakes, streams and the National Forest offer many opportunities for outdoor recreational activities.

The climate, influenced by the terrain, prevailing westerly winds, distance and direction from the ocean, has both continental and marine characteristics. In a westerly direction, the crest of the Cascade Range forms a barrier to the easterly movement of comparatively mild, moist air in winter and cool marine air in summer. However, the Columbia River Gorge permits some exhange of air at lower levels between the eastern and western sides of the Cascades. Summers are characterized by warm sunny days and cool nights, while winters are cloudy, wet and mild for this latitude.

On a typical summer day, the range in temperature is from the mid-40's near sunrise to the lower 80's in mid-afternoon. Maximum temperatures exceed 90° on 25 to 35 days in the warmer and on less than 5 days in cooler summers. Temperatures reach 100° on one or more days in approximately two out of ten summers. In late afternoon, a cool mountain breeze causes a rapid decrease in temperature thus the evenings and nights are cool. Extremes in both summer and winter temperatures frequently occur during periods of easterly winds or when this area is under the influence of air from over the continent. Occasionally, in midsummer, minimum temperatures drop to near or slightly below freezing. In an average winter, afternoon temperatures range from 30° to 40° and nighttime readings from 15° to 25°. Occasional outbreaks of cold air from Canada will result in minimum temperatures dropping to near or below zero and maximum temperatures from 15° to 25°. Clear skies usually prevail during the coldest weather. In one of the colder winters in recent years (1949-50), minimum temperatures dropped to zero or lower on 15 nights; -10° on 6 nights and -20° on 4 nights. Below freezing temperatures are recorded on most nights between mid-October and mid-April.

Temperatures along the mountain slopes can be expected to decrease approximately 3°F with each 1000 feet increase in elevation.

Precipitation is light in summer, increasing in the fall, reaching a peak in winter then gradually decreasing in the spring and early summer with a sharp drop near the first of July. The driest period is usually between mid-July and mid-August. In one summer out of ten, no precipitation is recorded in July or August; also in one summer out of ten, the total rainfall for July exceeds .70 of an inch and in August, 1.60 inches.

Winter precipitation may fall as either rain or snow. The total precipitation for January is less than 3.20 inches in one winter out of ten; also, it exceeds 17.00 inches in one winter out of ten. Winter season snowfall has ranged from 30 to 221 inches. Snow has fallen in October; however, it is generally late November or early December before snow begins to accumulate on the ground. Snow cover remains on the ground most of the time from mid-December until March, reaching depths of 20 to 30 inches almost every winter and 50 to 70 inches in the heavier snowfall seasons. In the higher elevations, snow can be expected after mid-October and to remain on the ground until June. In elevations above 10,000 feet on Mt. Adams, a midsummer snowstorm is not unusual.

The approximately times of sunrise and sunset in mid-June are 4 a.m. and 8 p.m. and in mid-December, 8 a.m. and 4 p.m.

Earl L. Phillips
State Climatologist
U.S. Weather Bureau
Seattle, Washington

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	32.2	33.8	39.2	46.6	56.9	58.1	70.2	63.9	55.8	46.0	33.8	25.7	46.8
1932	29.5	29.6	38.4	45.6	51.7	60.5	61.0	62.0	57.6	49.3	39.8	28.8	46.2
1933	31.4	28.4	36.5	45.8	47.8	57.8	64.0	63.2	52.2	48.0	40.0	39.6	46.2
1934	38.1	42.0	47.0	54.8	56.0	60.1	63.9	65.2	56.2	49.8	40.4	34.4	50.7
1935	29.4	34.3	35.8	43.5	52.4	59.6	63.9	62.0	60.4	47.4	34.4	31.0	46.2
1936	32.2	20.1	37.0	47.2	55.9	60.3	64.6	64.0	56.6	50.9	35.6	35.4	46.6
1937	18.2	30.9	39.0	42.6	53.6	59.6	66.4	61.8	58.4	50.2	39.6	34.7	46.2
1938	32.0	32.2	37.6	45.8	52.6	63.4	68.5	64.6	63.2	47.6	34.2	33.2	47.9
1939	34.4	31.2	41.6	48.4	54.4	57.9	67.8	65.2	58.6	48.0	40.5	36.8	48.7
1940	30.6	35.4	42.2	46.8	56.8	62.9	65.4	65.3	59.2	50.0	33.0	31.9	48.3
1941	30.8	35.8	43.4	48.4	52.0	57.6	69.6	65.1	54.0	46.1	39.0	33.2	47.9
1942	22.9	33.2	39.0	47.6	50.4	57.3	65.9	67.2	60.2	50.0	35.0	33.0	46.8
1943	22.6	33.2	35.4	46.4	49.5	55.6	66.6	61.7	61.4	47.6	37.7	30.3	45.7
1944	28.4	33.8	38.8	44.8	52.3	58.4	65.8	62.6	58.6	51.4	35.6	28.0	46.5
1945	33.1	35.0	36.7	43.3	52.8	57.2	66.4	65.5	55.3	48.5	33.4	28.0	46.3
1946	31.6	33.5	38.0	46.3	55.6	55.3	62.7	64.2	54.0	41.8	31.8	32.8	45.6
1947	26.4	34.6	41.2	45.9	56.0	55.8	62.6	59.8	57.4	46.6	38.4	33.6	46.5
1948	29.6	32.3	36.3	41.4	50.8	63.6	61.8	60.8	53.6	44.4	35.5	26.0	44.7
1949	14.7	28.5	36.3	47.0	54.7	58.1	63.3	63.0	57.7	42.3	41.4	32.0	44.9
1950	15.7	28.5	35.2	39.8	50.0	57.6	65.5	65.2	58.1	45.4	36.5	35.0	44.4
1951	28.7	30.8	33.5	46.1	55.5	60.0	65.1	63.4	59.1	45.4	35.8	29.4	46.1
1952	25.0	32.5	36.5	47.8	53.5	57.8	65.8	64.3	59.2	52.0	31.8	31.3	46.5
1953	36.4	36.0	39.8	42.7	49.4	53.0	64.3	62.9	58.0	48.5	39.8	36.1	47.2
1954	30.3	32.3	34.5	43.0	52.7	54.4	60.8	60.1	54.6	43.6	43.0	-	-
1955	30.4	32.3	32.8	38.9	49.3	59.2	60.9	63.5	56.5	45.8	32.1	28.6	44.2
1956	29.1	26.0	33.4	45.3	55.3	55.5	66.8	63.4	56.6	44.1	-	32.0	-
1957	18.1	31.7	37.1	46.4	55.4	60.1	61.4	58.9	60.3	-	-	-	-
1958	32.9	39.0	-	43.3	-	64.5	69.2	68.6	57.1	49.0	36.4	34.8	-
1959	31.8	33.6	39.0	45.0	47.1	58.3	67.0	61.9	54.8	47.7	35.8	31.8	46.2
1960	26.6	33.1	37.9	45.0	49.1	60.4	67.8	62.5	58.1	49.9	38.0	28.7	46.4
1961	32.5	37.2	39.1	45.6	52.3	64.5	67.9	69.9	54.7	-	33.4	31.8	-
1962	30.9	33.6	35.3	47.2	48.3	58.4	63.0	60.8	58.0	46.6	38.0	34.2	46.2
1963	27.3	39.2	38.9	42.5	52.4	58.6	62.1	63.9	62.7	50.6	38.4	29.2	47.2
1964	33.6	36.3	36.8	42.9	50.3	56.6	64.2	60.1	54.4	47.7	34.5	28.3	45.5

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	8.79	2.97	8.52	1.70	.52	3.54	T	.00	1.31	5.69	5.31	13.67	
1932	7.92	4.44	7.90	4.24	1.24	.75	.50	.14	.01	3.04	11.48	6.16	
1933	10.56	6.00	7.06	.13	3.65	2.09	.02	.39	3.42	6.03	2.06	27.37	68.78
1934	11.22	1.80	5.92	1.20	.77	.11	T	.75	1.37	9.55	12.75	11.88	57.32
1935	6.83	2.92	4.09	1.74	.18	.47	.01	.03	.21	1.21	4.17	7.38	29.24
1936	12.60	6.92	3.97	.13	2.76	3.17	.24	.60	.64	.08	.46	8.69	40.26
1937	2.61	10.58	3.29	6.56	1.56	5.61	.27	.71	.96	1.29	11.50	14.55	59.49
1938	6.12	6.96	8.92	1.55	.20	.27	.00	.00	.43	3.31	4.18	6.05	37.99
1939	7.86	5.70	3.24	.09	1.59	.12	.13	.82	.20	1.64	.80	13.69	35.88
1940	4.17	14.62	5.88	3.72	1.57	.00	.22	.07	1.74	5.60	5.31	5.94	48.84
1941	7.76	2.59	1.76	2.97	4.63	1.11	.00	1.93	1.81	2.41	6.95	13.61	47.53
1942	4.24	5.96	1.11	1.82	2.06	1.88	.30	.13	.00	1.86	17.40	12.17	48.93
1943	7.16	5.53	6.44	4.12	.54	.88	.11	.10	.00	5.40	4.23	2.56	37.07
1944	4.64	3.48	1.83	1.33	.81	.27	.33	.34	1.57	.53	6.70	1.57	23.40
1945	5.22	7.84	7.79	3.56	4.77	.08	.01	.01	1.59	1.39	12.21	11.66	56.13
1946	9.31	7.59	4.10	1.72	.71	2.62	.84	.00	.53	5.41	9.50	9.69	52.02
1947	6.30	5.19	4.69	2.05	.00	2.24	.09	.22	2.99	10.96	2.38	4.23	41.34
1948	10.10	8.60	2.88	3.53	4.27	2.83	.51	.54	2.49	2.91	9.33	10.90	58.89
1949	1.07	17.18	3.71	.76	1.97	.30	.10	.07	1.80	2.34	9.96	7.02	46.28
1950	20.78	8.47	8.79	2.63	.31	.59	.36	.21	1.13	12.65	10.77	8.95	75.64
1951	12.82	7.74	5.87	1.00	1.93	.39	.00	.40	2.11	8.15	11.75	10.01	62.17
1952	9.58	4.75	2.73	.62	.55	1.27	.00	.07	.19	.15	1.97	12.01	33.89
1953	23.30	4.07	4.15	2.94	2.49	.78	.02	1.63	1.03	1.82	7.88	9.43	59.54
1954	16.94	7.62	3.79	4.21	.90	1.97	.68	.31	1.03	3.58	7.34	6.59	54.96
1955	3.19	3.80	5.61	3.84	.46	.45	.70	.00	3.31	9.72	13.07	14.40	58.55
1956	15.09	5.45	8.37	.19	.90	1.12	.01	1.82	.86	3.98	1.43	4.39	43.61
1957	3.20	3.08	4.38	3.54	3.74	.12	.22	.47	.85	3.60	2.21	6.71	32.12
1958	4.30	3.01	3.25	5.22	1.28	1.77	.00	.00	.44	2.70	8.00	6.46	36.43
1959	7.21	3.31	4.43	1.27	.55	1.52	.05	.00	3.38	4.88	2.96	2.38	31.94
1960	3.93	3.18	7.61	5.04	3.07	.34	T	.95	.30	2.40	13.47	3.95	44.24
1961	8.05	14.21	9.87	2.05	1.84	.59	.28	.98	1.41	4.08	7.36	10.25	60.97
1962	1.76	4.09	7.37	4.02	3.29	.19	T	1.10	2.80	6.77	14.56	2.34	48.29
1963	1.81	7.55	5.35	2.86	1.74	.22	.12	.19	.10	4.00	8.82	4.79	37.55
1964	14.05	.48	2.94	.61	.20	2.20	.55	1.09	.78	1.08	7.90	14.88	46.76

MONTHLY AND SEASONAL SNOWFALL

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1931-32					21.0	84.5	64.0	23.5	1.5	1.0			195.5
1932-33						39.0	100.5	51.0	12.0				202.5
1933-34						26.7	3.0	T					29.7
1934-35					6.0	43.3	42.7	8.5	14.0	1.0			115.5
1935-36				.5	T	9.5	31.0	47.2	8.0				96.2
1936-37						6.5	39.5	58.0	2.0				106.0
1937-38					2.0	43.5	31.5	61.0	35.5				173.5
1938-39					4.0	14.0	15.0	32.5	14.5				80.0
1939-40						5.9	18.4	35.0		T			59.3
1940-41					8.0	5.0	28.0	1.0					42.0
1941-42						24.2	25.0	17.0	T				66.2
1942-43					34.5	78.4	77.0	12.0	9.0				210.9
1943-44					2.0	3.0	18.0	3.9	T	1.0			27.9
1944-45					8.5	7.2	11.8	15.4	4.6	10.0			57.5
1945-46					35.0	23.0	26.5	32.0	2.0				118.5
1946-47				2.0	31.0	2.1	28.5	3.0	1.5				68.1
1947-48					5.0	8.0	31.0	28.0	3.0	4.0			79.0
1948-49					17.7	78.8	17.0	83.0	1.0				197.5
1949-50						39.0	143.7	31.3	14.4	T			228.4
1950-51				T	61.5	19.0	-	-	-				-
1951-52					11.0	55.0	87.5	10.8	11.0				175.3
1952-53					-	59.0	20.0	3.5	8.0	6.0			96.5
1953-54						4.0	127.0	6.0	2.0				139.0
1954-55						25.0	32.0	17.1	25.0	4.0			103.1
1955-56				T	-	50.0	86.5	53.3	31.0				-
1956-57				T	-	12.5	37.7	26.3	21.8	T			-
1957-58					-	-	-	T	-	.5			-
1958-59						6.3	-	36.4	-				-
1959-60					-	3.1	34.1	2.0	27.4	8.1			-
1960-61					-	-	6.8	-	26.7	2.0			-
1961-62					-	21.5	-	16.8	-				-
1962-63							9.4	2.3	-				-
1963-64						-	40.8	6.6	12.0				-

SNOW DEPTH

1st MONTH

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1931-32						2	48	48	31				
1932-33							20	51	45	18			
1933-34							6						
1934-35						4	30	21	10				
1935-36							3	20	27	4			
1936-37							3	45	31				
1937-38							11	30	30	23			
1938-39								7	6				
1939-40							3	9	12				
1940-41							T	7	3				
1941-42							8	25	19				
1942-43						18	46	65	48	32			
1943-44							10	11	6				
1944-45						6	5	12					
1945-46						15	19	33	35	10			
1946-47						5		10					
1947-48							4	10	10				
1948-49						1	45	39	49	28			
1949-50							19	54	40	33			
1950-51						17	9	39	38	35			
1951-52						2	35	50	40	19			
1952-53						2	33	13	5				
1953-54								45	26	11			
1954-55							10	16	27	12			
1955-56						12	40	59	68	50			
1956-57								17	15	9			
1957-58							-	-					
1958-59							T		7				
1959-60					1		2	11	4				

15th MONTH

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1931-32						23	35	49	20				
1932-33							15	56	37				
1933-34						3	1						
1934-35							30	25	2				
1935-36						T	20	33	9				
1936-37							14	42	18				
1937-38						2	2	44	15	T			
1938-39							T	10	12				
1939-40							4	12	1				
1940-41					T		11	4					
1941-42						3	15	17	12				
1942-43						22	35	54	42				
1943-44							11	7					
1944-45							6	1	3				
1945-46					5	15	25	46	26				
1946-47						1	5	3					
1947-48							20	16	9				
1948-49						28	36	63	41				
1949-50							75	56	34	18			
1950-51					18	20	29	37	52				
1951-52					1	13	58	40	37				
1952-53						20	22	7	2				
1953-54							6	42	23				
1954-55						8	18	12	22	1			
1955-56					1	18	53	53	70	24			
1956-57							13	17	21				
1957-58							10	4					
1958-59							3	18					
1959-60							16	6	11	5			

STATION HISTORY

The climatological station was established at the U.S. Forest Service Ranger Station on May 1, 1924. This location, surrounded by wooded foothills, is 1000 feet west of the Post Office in Troutlake. U.S. Forest Service personnel at the Ranger Station have served as the cooperative observers.