

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
 IN COOPERATION WITH SEQUIM CHAMBER OF COMMERCE
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 45

LATITUDE 48° 05'
 LONGITUDE 123° 06'
 ELEV. (GROUND) 180 feet

CLIMATOLOGICAL SUMMARY

STATION Sequim, Washington

MEANS AND EXTREMES FOR PERIOD 1927 - 1956

Month	Temperature (°F)								** Mean degree days #	Precipitation Totals (Inches)						Mean number of days					Month		
	Means			Extremes						Mean	Greatest daily	Year	Snow, Sleet				Precip. .10 inch or more	Temperatures					
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest daily	Year		Precip. 90° and above	Max.			Min.	
																			32° and below	32° and below		0° and below	0° and below
(a)	26	26	26	26		26		26	28	28		28	28	28	28	28	26	26	26	26			
Jan.	44.8	31.0	37.9	60	1941	-3	1935	84.0	2.14	1.24	1939	3.3	16.0	1943	10.0	1943	7	0	2	17	*	Jan.	
Feb.	47.7	31.8	39.8	66	1941	7	1933	71.0	1.68	1.20	1955	1.3	12.7	1936	6.0	1936	5	0	*	16	0	Feb.	
Mar.	51.3	34.2	42.8	69	1928	15	1955	69.0	1.27	.99	1935	.1	2.5	1955	2.5	1955	4	0	0	11	0	Mar.	
Apr.	57.8	37.9	47.9	80	1940	20	1936	51.0	.93	.68	1929	*	.5	1933+	.5	1933+	3	0	0	4	0	Apr.	
May	63.4	42.5	53.0	84	1947+	27	1954	37.0	.93	1.61	1948	0	0	0	0	0	3	0	0	*	0	May	
June	67.2	46.8	57.0	91	1942	30	1929	24.0	1.13	1.95	1946	0	0	0	0	0	3	*	0	*	0	June	
July	71.8	49.0	60.4	99	1941	37	1932	14.0	.50	.87	1932	0	0	0	0	0	2	*	0	0	0	July	
Aug.	72.4	49.3	60.9	94	1939	38	1954	13.0	.55	.67	1945	0	0	0	0	0	2	*	0	0	0	Aug.	
Sept.	67.7	46.5	57.1	87	1955	31	1929	24.0	.97	1.70	1940	0	0	0	0	0	3	0	0	*	0	Sept.	
Oct.	59.9	41.3	50.6	76	1943+	21	1935	45.0	1.59	1.16	1927	0	0	0	0	0	5	0	0	1	0	Oct.	
Nov.	51.1	35.7	43.4	67	1934	9	1955	65.0	2.20	1.41	1933	.7	10.0	1937	10.0	1937	7	0	*	8	0	Nov.	
Dec.	46.6	32.8	39.7	63	1939+	10	1927	78.0	2.53	1.57	1933	.5	7.5	1927	4.0	1950+	7	0	*	15	0	Dec.	
Year	58.5	39.9	49.2	99	July 1941	-3	Jan. 1935	5750	16.42	1.95	June 1946	5.9	16.0	Jan. 1943	10.0	Jan. 1943+	51	*	2	72	*	Year	

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

† Trace, an amount too small to measure.

* Less than one half.

** Base 65°F

Estimated

NARRATIVE CLIMATOLOGICAL SUMMARY

Sequim is located in the northeastern section of the Olympic Peninsula between the Strait of Juan de Fuca on the north and the Olympic Mountains on the south. The Dungeness River, with its headwaters in the higher elevations of the Olympic Mountains, flows northward a short distance west of the city. The Olympic Mountains begin rising a short distance south of the city and reach elevations of 5000 to 6000 feet within 15 or 20 miles. There is a very gradual slope northward from the city to the Strait of Juan de Fuca, a distance of 5 or 6 miles.

Some of the factors which play an important roll in the climate of the area are; the Olympic Mountains, the distance from the Pacific Ocean, the Strait of Juan de Fuca, the mountain ranges on Vancouver Island and the Cascade Mountains.

The high pressure area over the Pacific Ocean spreads northward during the summer and retreats southward in the winter. The northerly extension of this high pressure area during the summer brings a flow of air from over the North Pacific Ocean and Gulf of Alaska into Western Washington. This air is cooler than the land surface during the summer, thus resulting in cool and dry weather. The southward migration of this high pressure area during the winter permits storms originating in the low pressure area in the Gulf of Alaska to travel southeastward. The position of these two pressure areas during the late fall and winter brings a southwesterly flow of warm and moist air from over the Pacific Ocean into Western Washington. This air is warmer than the land surface and has a moderating effect on the climate. The air cools and loses a large amount of moisture as it rises along the southwestern slope of the Olympic Mountains. As the air flows over the summit of the Olympic Mountains and down the northeastern slope into the Sequim area, it is warming and becomes drier. This results in the low valleys along the northeastern slope of the Olympic Mountains receiving the least amount of precipitation in Western Washington. This dry belt extends several miles east and west of Sequim and northeast into Whidbey Island and the San Juan Island. Precipitation gradually increases in an easterly, westerly and northerly direction from the low valleys

in the Sequim area. The driest section of this area may change slightly from year to year, depending upon slight variations in the southwesterly winds from over the Pacific Ocean during the rainy season of the year. The average annual rainfall in this dry area along the northeastern slope of the Olympic Mountains ranges from 16 to 20 inches. There is a pronounced, though not sharply defined, rainy season and considerable cloudiness during the winter.

The average temperature of the water in the Strait of Juan de Fuca is in the middle 40's during the winter and lower 50's in the summer. This, along with the nearness to the Pacific Ocean, has a definite influence on the temperature in the area. The average daily range in temperature is about 14 degrees in the winter and 20 degrees in the summer. The afternoon temperature in the summer is usually in the lower 70's and the night time temperature in the coldest month of the winter is in the lower 30's. The Cascade Mountains form a north-south barrier across the State, thus protecting this area of the State from the colder weather experienced at similar latitudes, east of the Cascades. Occasionally, cold air will move southwestward through the Fraser River Canyon in Canada and spread out over the northern Puget Sound region, thus, usually, causing the lowest temperatures recorded during the winter. The hot and dry air from Eastern Washington will occasionally move west over the Cascades and out through the Strait of Juan de Fuca during the summer. Such conditions usually produce the highest temperatures, however, they occur infrequently and are of short duration.

Mountain ranges on both sides of the Strait of Juan de Fuca form a natural channel for an easterly or westerly flow of air. These mountain ranges also protect the area from the main force of storms off the Pacific Ocean.

Earl L. Phillips
 Weather Bureau
 State Climatologist
 Seattle, Washington

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1927	38.2	41.3	41.8	44.9	49.4	57.6	60.6	60.4	55.8	50.1	40.4	33.2	47.8
1928	39.6	40.5	43.8	45.7	50.0	55.6	59.6	58.8	56.9	47.7	40.0	38.5	47.1
1929	33.8	35.2	42.8	43.8	50.3	56.2	59.6	58.8	56.9	47.7	40.0	38.5	47.1
1930	28.0	31.5	41.2	48.9	48.9	51.8	57.0	58.8	56.0	47.0	41.9	39.2	46.9
1931	41.2	38.9	43.8	49.2	53.7	56.2	60.8	58.5	55.2	49.6	39.1	37.8	48.8
1932	35.6	38.9	43.8	47.6	50.3	54.6	56.2	62.4	55.2	49.6	46.1	35.6	48.2
1933	36.8	41.4	41.4	45.6	49.8	54.6	59.6	61.6	55.8	50.0	44.2	40.5	47.7
1934	41.6	42.6	46.3	52.0	53.4	56.6	58.2	61.0	55.8	50.8	45.9	39.9	50.3
1935	36.2	40.4	40.4	45.2	50.8	57.2	59.8	60.2	57.8	47.4	40.6	40.6	48.1
1936	39.6	31.6	40.4	48.2	51.6	58.5	60.2	61.5	54.8	52.6	43.3	39.8	48.8
1937	28.6	36.9	40.4	44.2	48.2	52.8	56.0	61.5	54.8	52.6	43.3	39.8	48.8
1938	40.2	40.4	43.4	49.4	51.0	56.0	60.1	61.8	56.8	52.2	43.4	42.2	50.8
1939	43.8	39.4	43.6	49.8	54.1	56.7	60.1	65.4	61.8	52.2	43.4	42.2	51.4
1940	41.8	43.8	47.0	51.9	56.4	59.7	61.4	63.4	60.2	53.5	42.0	43.6	52.1
1941	41.7	45.0	48.0	51.8	54.8	58.6	65.4	62.2	58.0	51.5	45.8	40.7	51.8
1942	39.5	41.8	43.4	49.5	51.6	56.4	63.4	63.6	59.0	51.6	41.9	40.6	50.5
1943	33.9	38.2	42.8	50.3	51.6	56.4	59.4	63.6	59.0	51.6	45.2	49.4	50.1
1944	40.2	40.8	42.4	48.0	53.2	57.0	61.6	60.0	59.1	51.2	45.6	39.0	50.1
1945	41.6	41.9	42.6	46.0	54.8	56.4	59.6	59.5	56.4	52.0	41.6	40.1	49.4
1946	40.6	41.2	42.8	46.8	55.2	56.1	60.6	60.1	56.2	48.0	40.7	38.8	49.4
1947	35.4	43.2	45.0	48.5	57.5	57.5	60.3	60.0	57.4	49.6	42.6	49.6	48.6
1948	38.6	38.2	41.2	44.6	51.8	60.1	60.0	59.2	56.7	48.6	42.3	35.2	48.0
1949	31.3	36.1	44.0	47.7	54.9	55.8	58.3	60.7	58.2	46.8	46.9	38.0	48.2
1950	25.0	30.1	40.4	48.3	49.6	58.2	59.2	60.4	57.1	47.7	41.8	42.5	48.5
1951	37.1	39.1	39.2	45.2	53.1	58.9	60.4	60.1	56.6	49.1	43.3	36.5	48.5
1952	35.3	39.3	41.8	46.7	51.6	54.2	59.4	60.7	57.8	45.2	41.6	40.1	48.5
1953	41.5	40.3	41.8	46.0	51.9	54.5	59.9	61.8	57.8	45.7	46.7	41.5	49.6
1954	35.7	41.5	40.6	44.3	51.5	53.4	57.7	58.0	58.2	48.7	48.1	42.1	49.6
1955	36.3	35.4	39.6	44.7	49.6	56.1	57.5	59.3	57.8	47.9	36.3	35.5	48.9
1956	36.3	35.4	39.7	48.1	55.2	53.9	51.5	60.7	51.7	45.7	45.7	42.1	48.9

STANTON HISTORY

The first cooperative weather station was established in Sequim on February 17, 1916. The station has been relocated several times, however, it has remained within approximately one-half mile of the Post Office. The elevation of the station has ranged from 180 to 200 feet. There are several short breaks in the records. The following have been cooperative weather observers at Sequim since the station was established:

- Thomas G. Mortland
- A. B. Probst
- R. W. Scott
- Wm. L. Herrill
- Carl Osterhiser
- Otto Laverdier
- William Urtich
- J. N. Orte
- John B. Legum
- Lewis Aas
- Mrs. Laura V. Moore
- City of Sequim

- June 1, 1916
- February 2, 1919
- February 24, 1930
- April 15, 1930
- April 23, 1930
- August 31, 1931
- June 15, 1931
- June 31, 1931
- November 1, 1937
- December 12, 1939
- January 23, 1939
- January 24, 1947
- June 3, 1953
- February 1, 1955
- September 19, 1955
- September 20, 1955
- To date

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1927	1.80	1.61	1.53	.97	.38	.76	.10	.93	1.10	2.78	2.65	2.11	16.72
1928	1.81	1.16	2.11	1.06	.05	.88	.25	.62	.27	2.04	.69	1.85	13.49
1929	1.81	1.12	1.11	2.10	.74	.46	.25	.62	.27	1.42	1.42	3.17	13.49
1930	1.36	1.60	1.15	1.00	.55	.81	.02	.02	1.12	1.82	1.41	.72	11.66
1931	2.06	1.65	1.83	.81	.17	3.66	.13	.30	1.81	.82	3.11	1.87	17.53
1932	2.74	1.61	1.91	1.11	.15	.22	1.26	.30	1.45	1.59	3.19	1.39	18.40
1933	3.26	1.06	1.97	1.03	2.13	.60	.88	.55	1.45	2.99	2.65	4.72	25.75
1934	3.16	.91	1.77	.70	1.34	.91	.88	.55	.92	2.57	3.17	3.25	19.32
1935	3.45	.73	2.20	.12	.27	.24	1.26	.32	.75	1.20	.71	1.24	12.49
1936	2.08	2.70	1.08	.35	2.33	2.18	1.01	.09	.88	2.07	2.02	3.98	18.42
1937	2.21	1.42	1.73	.81	.46	2.20	.35	.34	.96	1.56	1.68	6.67	12.71
1938	1.19	1.42	1.08	.49	.80	1.62	.68	.12	.75	1.68	1.68	2.27	15.08
1939	3.86	2.40	.89	.49	.80	1.62	.68	.12	.75	1.68	1.68	2.27	15.08
1940	1.11	1.87	2.34	1.12	1.27	.02	.68	.37	3.08	1.46	2.96	1.24	17.82
1941	1.55	1.16	.17	1.08	.48	.83	.23	.57	1.40	1.33	1.13	4.24	14.51
1942	1.92	1.53	.80	1.40	.49	1.43	.45	.75	.02	1.36	2.69	2.02	14.08
1943	1.17	.68	1.91	1.23	.66	.55	.23	.75	.22	1.73	.33	.51	10.27
1944	1.84	1.06	.37	.84	1.01	1.02	.10	.36	2.00	.55	1.93	.53	11.61
1945	1.06	1.98	1.18	1.62	.42	.11	.07	.67	1.73	1.98	3.45	2.47	17.04
1946	1.21	1.31	1.18	.86	.27	3.10	.57	.80	1.40	1.36	3.33	2.42	14.94
1947	2.17	1.22	1.13	.67	.21	1.70	.40	.41	.56	2.42	2.48	2.08	15.45
1948	1.95	3.19	1.22	.72	3.38	1.45	1.15	1.72	1.35	1.57	2.53	2.84	23.38
1949	.66	3.70	.50	.65	.43	.41	.65	.65	.78	1.10	3.37	4.42	16.93
1950	1.68	2.50	1.97	.62	.69	.47	.78	.85	.12	2.27	3.03	1.23	16.21
1951	3.06	1.84	.24	.23	1.52	.18	.99	.90	.90	1.88	2.87	4.51	16.04
1952	1.82	1.83	1.55	.66	.66	1.12	.14	.12	.24	1.68	1.98	1.71	16.63
1953	4.97	1.18	.03	1.60	.45	1.87	.77	.72	1.10	1.01	2.08	2.09	18.94
1954	4.58	2.49	.53	.69	.45	1.44	.17	1.61	1.47	1.34	2.18	1.90	19.55
1955	.89	2.60	1.26	1.33	.79	2.45	1.10	.03	.23	1.30	5.07	3.57	20.62
1956	2.21	1.16	2.12	.09	.32	2.42	.03	.81	1.58	4.81	4.67	2.29	18.51

PROBABILITY OF 32°, 28° AND 24° OCCURRING AS LATE IN THE SPRING OR AS EARLY IN THE FALL AS THE DATES LISTED IN THE FOLLOWING TABLES.

Year	PROBABILITY - SPRING MONTHS					PROBABILITY - FALL MONTHS				
	75%	50%	30%	10%	75%	50%	30%	10%	75%	
32°	Apr. 8	Apr. 25	May 8	May 26	Sept. 30	Oct. 15	Oct. 26	Nov. 9	Nov. 20	
28°	Mar. 10	Mar. 27	Apr. 8	Apr. 27	Sept. 30	Oct. 15	Oct. 26	Nov. 9	Nov. 20	
24°	Jan. 30	Feb. 15	Mar. 1	Mar. 19	Nov. 16	Dec. 2	Dec. 12	Dec. 25	Dec. 25	

In the above table, the 50 percent point is the same as the average for each freeze category.

From a statistical viewpoint based on past data, the probabilities could be considered as follows when converted into the number of occurrences to expect in a 40-year period:

- 75% - 30 years in 40
- 50% - 20 years in 40
- 30% - 12 years in 40
- 10% - 4 years in 40