

U. S. DEPARTMENT OF COMMERCE
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 IN COOPERATION WITH Seaside Chamber of Commerce
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 35

LATITUDE 45° 59' N
 LONGITUDE 123° 55' W
 ELEVATION (GROUND) 10 Ft.

CLIMATOLOGICAL SUMMARY

STATION Seaside, Oregon

MEANS AND EXTREMES FOR PERIOD 1936-1965

Month	Temperature (°F)							** Mean degree days	Precipitation Totals (Inches)							Mean number of days					Month		
	Means			Extremes					Mean	Greatest daily	Year	Snow, Sleet					Temperatures						
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year					Precip. .10 inch or more	90° and above	32° and below	32° and below	0° and below	Max.		Min.				
																	0° and below	32° and below	32° and below	0° and below			
(a)	30	30	30	30		30		30	30			30	30				30	30	30	30			
Jan.	50.3	35.9	43.1	73	1940	12	1950+	677	11.45	3.41	1953	1.5	11.0	1943	4.5	1943	17	0	*	16	0	0	Jan.
Feb.	52.3	37.8	45.1	74	1943	13	1950	557	10.36	4.21	1936	0.4	4.0	1939	2.0	1949+	16	0	0	6	0	0	Feb.
Mar.	54.0	37.7	45.9	78	1947	23	1960	592	8.26	3.40	1950	0.8	12.8	1951	3.0	1951	15	0	0	6	0	0	Mar.
Apr.	57.0	41.0	49.0	89	1947	28	1955	480	5.56	2.70	1938	T	T	1955+	T	1955+	12	0	0	2	0	0	Apr.
May	61.2	44.8	53.0	93	1947	29	1954	372	3.23	1.77	1941	T	T	1955+	T	1955+	8	*	0	*	0	0	May
June	64.0	49.3	56.7	97	1955	37	1955+	249	2.93	2.03	1939	0.0	0.0		0.0		8	*	0	0	0	0	June
July	67.1	51.8	59.5	105	1961	35	1940	171	1.31	1.37	1955	0.0	0.0		0.0		3	*	0	0	0	0	July
Aug.	67.9	52.3	60.1	100	1942	38	1945	152	1.67	1.57	1941	0.0	0.0		0.0		4	*	0	0	0	0	Aug.
Sep.	68.3	48.9	58.6	97	1955+	31	1936	192	2.63	2.66	1937	0.0	0.0		0.0		6	1	0	*	0	0	Sep.
Oct.	63.7	45.4	54.6	92	1936	28	1949+	322	7.24	4.02	1942	T	T	1955+	T	1955+	12	*	0	1	0	0	Oct.
Nov.	56.4	40.0	48.2	79	1962	14	1955	504	10.67	4.19	1960	0.1	3.0	1955	2.0	1955	16	0	*	5	0	0	Nov.
Dec.	52.4	38.0	45.2	79	1960	12	1948	614	12.06	3.80	1943	0.4	6.0	1964	4.0	1964	18	0	*	7	0	0	Dec.
Year	60.0	43.6	51.8	105	July 1961	12	Jan. 1950+	4882	77.37	4.21	Feb. 1936	3.2	12.8	Mar. 1951	4.5	Jan. 1943	135	1	*	37	0	0	Year

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

T Trace, an amount too small to measure.

* Less than one half.

** Base 65°F

CLIMATE OF SEASIDE, OREGON

Seaside is located near the northern end of Oregon's coast on a narrow band of coastal plain bounded by the Pacific Ocean to the west and Coast Range on the east. The latter begins its sharp ascent at Seaside's eastern city limits, and rises to a crest ridge here of between 1500 and 2000 feet with an occasional peak over 3000 feet above sea level. The weather station has been located in downtown Seaside at an elevation of about 10 feet above sea level, and only a few blocks from the ocean's edge during the entire period of its existence.

The air conditioning effect of the Pacific Ocean produces very mild temperatures. There is only 17 degrees difference between the mean temperatures of January, the coldest month and August, the warmest. In the more than 35 years records have been maintained at Seaside, temperatures have gone above 100 in only 2 of them, while the lowest ever recorded was 12 degrees above zero. The graph on the reverse side shows in some detail the annual extremes that have occurred during Seaside's period of record.

Seaside has a typical marine climate. With the prevailing air flow from the west, most air masses arrive on the coast after several days' travel over the ocean. During that time their temperatures, at least in the lower levels, have become very near that of the water and their moisture content has approached the saturation point. From late October to late March or early April is the season of the major storms. At this time, also, the land masses cool much more rapidly than the adjacent Pacific Ocean. Incoming air masses, once they reach land, are cooled both by their passage over the colder land surface and by the lifting as they move eastward up the slopes of the Coast Range. These cooling processes cause large quantities of moisture to be condensed making very substantial contributions to the precipitation totals of these fall, winter and early spring storms. Nearly 70% of the annual 77.37 inch total falls during the five months of November through March. Practically all precipitation here, even in the coldest months, occurs in the form of rain. The total snowfall for an entire season is seldom more than 2 or 3 inches with the greatest seasonal total of record 18.5 inches. This snow usually melts immediately, at most rarely lasts more than a few hours.

Despite the many cloudy days, rather frequent rains and seasonal foggy periods common to all coastal areas, the Seaside climate has many desirable features. In addition to mild, fairly uniform year-around temperatures, there are many clear, sunny days -- particularly during the spring and fall months, but a long period record at North Head, Washington -- a fairly comparable coastal station approximately 20 miles north of Seaside -- the sun shines on an average 44% of the time possible during the year. Also, at that location, heavy fog occurs on an average of 44 days annually and thunderstorms on 3.

In the warmer months as the land temperatures increase a monsoon circulation is initiated when air over the land is heated and rises, being replaced at the surface by cooler air moving in from the ocean. This often brings with it low stratus clouds or fog. Fog, however, persists only a short distance inland until the incoming air, too, is heated and its relative humidity thus reduced beyond a point where fog can occur. This time of year few storms move across the Pacific Ocean and local thunderstorms seldom develop. Consequently, the total average precipitation for the three summer months, June through August, is less than 8% of the annual total.

The climate of Seaside, and its immediately adjacent areas, is one of the regions most important assets. In the near-by valleys of the several coastal streams, large dairy herds graze on lush meadows produced by the moderate temperatures and abundance of rainfall. These same conditions contribute to substantial yields of hay for market and certain specialty grass seed crops. Rainfall increases rapidly with elevation in the Coast Range with average totals of 150 to 200 inches a year at some of the higher points. As a result, this is one of the most rapid tree growing areas in the United States. Millions of board feet of Douglas fir and hemlock are harvested annually. The cool, relatively dry summers, combined with the exceptional beauty of the entire Oregon coastline and the great number of recreational opportunities to be found on the beaches, in the inflowing coastal streams and the many wooded state parks, attract hundreds of thousands of vacationers each year.

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Total Precipitation (Inches)

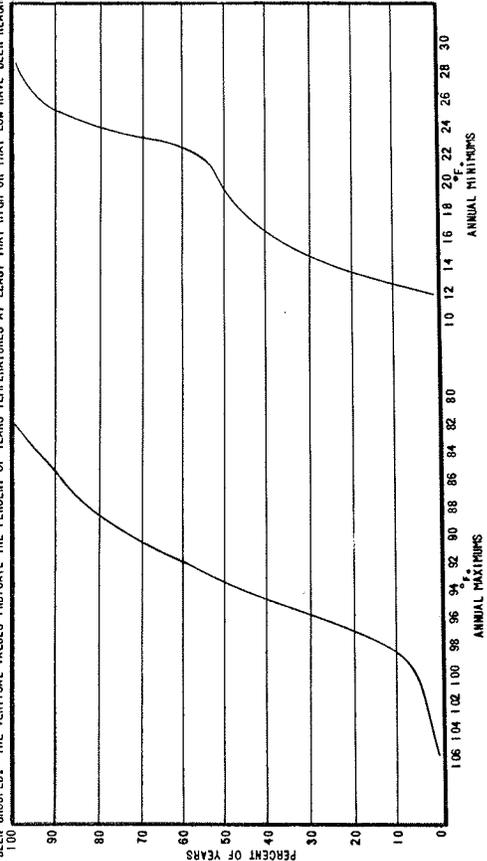
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1936	15.98	12.40	7.30	1.51	5.92	4.72	2.66	0.53	1.88	1.43	0.95	13.95	69.23
1937	6.93	13.15	5.86	10.16	3.15	5.85	0.49	4.16	3.54	5.33	23.80	15.62	98.04
1938	7.74	8.00	10.05	7.45	2.38	0.84	0.49	0.45	1.80	9.30	9.80	9.32	67.62
1939	11.40	15.23	5.82	3.11	2.81	5.11	2.50	0.41	1.11	7.42	5.61	17.35	77.88
1940	5.19	16.67	9.59	6.35	3.06	0.56	1.11	0.89	1.67	10.68	7.28	8.37	71.42
1941	10.35	4.19	3.03	2.70	7.33	2.51	0.32	4.67	5.95	5.12	8.30	16.64	70.91
1942	7.28	7.24	7.03	5.09	5.93	5.28	1.85	0.65	0.48	7.84	16.28	12.70	75.65
1943	8.62	10.70	8.22	6.25	4.08	2.48	1.50	3.59	0.87	9.55	4.13	8.46	67.72
1944	7.87	6.30	7.70	7.23	2.46	2.25	0.55	0.55	3.08	5.01	9.30	5.07	58.12
1945	11.29	9.68	11.82	5.81	4.40	0.68	1.13	0.34	4.50	2.58	13.23	12.02	77.48
1946	10.98	13.71	8.34	6.72	1.72	7.88	1.97	0.55	2.24	7.53	12.52	12.21	86.37
1947	9.18	5.94	4.12	4.34	0.56	4.58	2.05	0.89	1.71	13.35	7.41	10.46	64.59
1948	7.56	10.47	7.19	7.86	6.56	0.88	1.42	3.52	5.06	5.21	10.51	14.69	80.93
1949	1.60	15.37	7.27	1.74	2.94	1.41	0.81	0.92	1.59	5.84	11.14	11.75	94.79
1950	13.87	16.54	15.70	7.34	1.90	1.54	1.85	1.75	3.24	14.85	12.26	17.78	108.60
1951	15.64	14.52	8.34	2.86	2.32	0.45	0.60	0.79	3.73	9.49	9.95	9.77	78.46
1952	14.06	8.52	9.26	3.39	2.51	3.23	0.69	1.93	0.72	2.28	2.60	13.24	62.23
1953	28.81	5.20	8.57	4.35	5.37	3.87	0.97	2.51	3.96	4.72	13.43	13.01	80.93
1954	20.69	12.25	5.39	6.77	1.81	4.93	1.77	2.55	3.01	4.59	11.63	11.75	94.79
1955	6.25	7.70	9.07	9.91	1.50	2.98	3.66	0.36	5.82	14.32	14.75	18.34	92.66
1956	18.38	9.63	14.77	2.21	1.68	5.08	0.26	2.23	3.38	12.83	2.95	12.26	85.66
1957	5.94	8.09	11.28	4.73	3.57	1.80	1.82	1.21	0.74	4.63	6.31	16.21	66.13
1958	13.02	13.11	5.84	8.63	1.12	3.48	0.18	0.32	2.20	6.80	16.54	11.12	82.36
1959	15.37	6.71	10.85	6.75	3.48	3.97	1.45	0.71	6.72	7.17	11.05	9.23	83.46
1960	9.67	10.19	8.41	6.11	6.15	1.87	0.07	3.27	1.26	8.63	15.57	5.45	76.65
1961	11.62	23.00	12.09	5.36	3.43	1.30	0.87	1.43	1.39	7.11	6.53	13.14	87.27
1962	6.50	6.04	6.77	6.82	3.73	2.62	0.53	2.91	3.66	7.82	15.82	6.42	69.64
1963	4.45	8.84	7.84	7.84	2.09	1.88	2.37	1.63	2.55	9.79	14.89	7.60	71.12
1964	18.22	4.48	8.93	5.56	2.40	2.91	2.85	2.55	2.77	2.43	13.10	14.90	79.10
1965	19.11	6.42	1.22	4.49	2.91	1.18	0.41	1.85	0.49	3.75	12.53	12.89	67.25

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1936	45.4	40.5	43.8	50.3	54.5	59.1	61.0	62.3	55.6	54.2	47.1	44.9	51.6
1937	34.1	42.2	47.4	47.1	51.6	56.8	58.2	59.0	58.3	58.0	50.2	46.0	50.7
1938	45.0	44.2	45.8	50.2	51.0	54.8	57.2	57.8	59.0	54.6	47.0	44.6	50.9
1939	44.0	41.2	45.1	49.0	52.2	55.0	57.6	60.9	57.1	53.4	50.7	48.4	51.2
1940	46.3	47.6	48.6	51.3	54.2	56.7	59.7	61.2	60.6	56.8	46.0	46.9	53.0
1941	47.0	49.7	51.2	51.8	55.3	59.0	62.6	63.8	58.4	54.8	50.4	45.6	55.8
1942	44.2	44.8	45.8	50.4	53.4	57.2	64.8	65.3	59.4	57.7	48.4	46.4	52.8
1943	40.2	48.3	46.0	50.6	51.4	56.4	58.8	60.2	55.1	55.1	49.8	45.4	51.8
1944	45.6	45.0	45.3	49.4	53.6	56.0	59.2	60.6	58.4	56.8	49.0	45.0	52.0
1945	46.0	45.9	44.7	47.7	53.8	55.2	58.4	57.9	56.9	52.6	46.4	45.0	50.9
1946	45.1	44.6	45.3	47.3	54.6	56.0	60.7	59.0	59.0	50.7	46.6	45.2	51.2
1947	41.4	48.0	49.5	52.0	55.0	58.2	61.2	60.8	59.7	55.0	49.0	48.2	53.2
1948	45.3	42.6	45.8	46.8	53.8	59.8	62.8	61.3	59.6	55.6	42.3	36.6	50.8
1949	35.3	41.9	47.2	50.5	54.5	54.8	57.9	60.8	60.7	50.7	53.3	44.1	51.0
1950	35.0	43.9	45.3	47.9	50.3	58.2	58.8	60.8	57.2	52.1	48.7	50.0	50.7
1951	43.2	44.8	43.6	48.9	53.0	57.1	60.3	59.2	58.1	54.3	49.8	42.6	51.3
1952	41.5	43.8	43.4	47.8	52.3	55.2	58.8	59.5	58.3	56.8	46.1	44.9	50.7
1953	47.8	44.9	45.9	48.1	52.5	54.5	58.9	60.5	59.5	55.0	50.6	46.7	52.1
1954	40.9	46.0	43.0	47.0	51.0	54.1	56.7	58.4	57.8	53.1	51.7	45.3	50.5
1955	43.1	42.9	41.9	44.6	50.5	56.0	58.2	58.1	57.3	53.1	44.9	43.3	49.5
1956	43.8	40.3	43.9	49.1	53.9	56.0	60.4	60.5	58.6	52.6	47.1	44.4	50.9
1957	38.1	44.6	47.6	49.8	54.8	58.6	59.8	60.8	63.0	55.2	48.8	46.7	52.3
1958	48.3	51.2	45.9	50.3	55.8	61.7	62.4	61.3	60.0	55.8	47.6	50.4	54.2
1959	45.6	44.3	46.8	51.3	54.0	58.3	59.8	59.2	57.4	55.0	47.8	43.9	51.9
1960	42.6	44.7	45.9	49.5	51.9	56.1	56.8	59.5	57.6	55.0	47.6	45.6	51.1
1961	48.5	47.9	46.5	48.1	52.5	57.5	61.7	60.2	57.0	53.0	44.9	43.3	51.7
1962	42.1	45.2	44.3	48.9	51.0	54.7	57.7	60.5	58.4	54.2	49.1	46.2	51.0
1963	39.5	51.4	45.3	48.2	54.9	56.2	59.7	60.0	61.2	54.7	49.0	47.1	52.3
1964	44.9	43.9	45.1	47.0	50.8	56.2	59.2	59.4	57.3	56.3	45.6	41.8	50.6
1965	43.5	45.3	48.4	49.6	51.0	54.9	59.2	61.5	58.2	56.4	51.4	43.0	51.9

BELOW IS SHOWN GRAPHICALLY THE PERCENT OF YEARS MAXIMUM AND MINIMUM TEMPERATURES WITHIN RANGES OF TWO DEGREES

(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.)



STATION HISTORY

The first weather records began in Seaside in January 1930 when

standard temperature and precipitation measuring instruments were installed at the home of Mr. R. S. Beckman, the first observer.

This was within the city limits and only a short distance from the beach. In September 1933, the station was moved to the police station and the Chief of Police was the designated observer with various officers assigned the responsibility for making the daily observations. It has remained at this location ever since that time. In

December 1952, a recording rain gage was added to the station's

equipment. Throughout its entire history the station has been moved only once and that a short distance with almost no change in elevation.

Observations appear to have been carefully made and the records accurately and completely maintained.