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The Climate of Oregon Climate Zone 8 Northeast Area

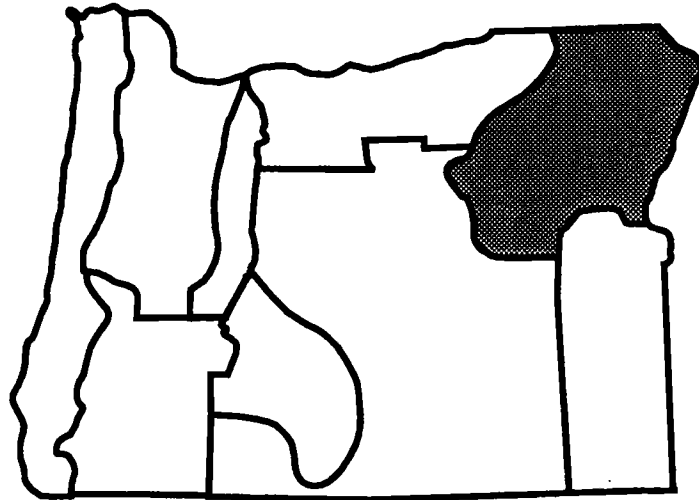
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The Climate of Oregon



Climate Zone 8
Northeast Area

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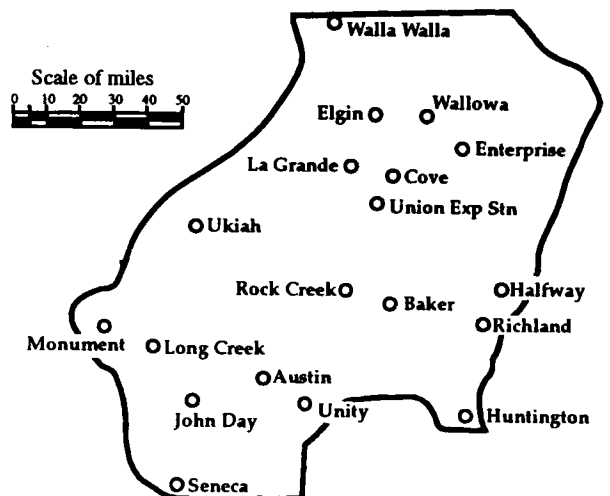
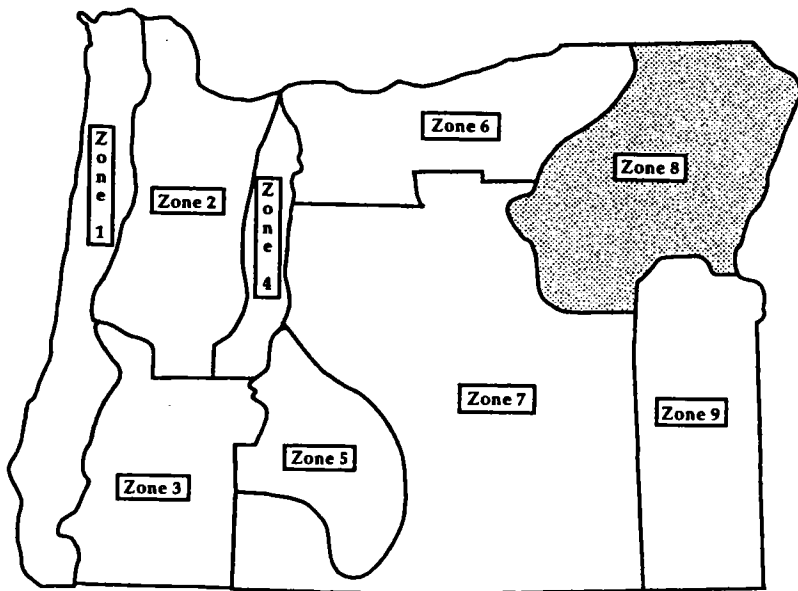
Oregon Climate Zone Summary

Zone 8-- Northeast Area

Climate Zone 8 occupies the northeastern corner of Oregon, occupying all of Wallowa, Baker, and Union Counties as well as portions of Umatilla and Grant. The area includes several sizable mountain ranges with large valleys between them. Among the larger cities are La Grande, Baker City, John Day, and Enterprise, although the biggest of these (La Grande) has a population of only slightly above 10,000 residents.

Livestock raising is the major industry in this region; several million acres of Federal land are being utilized by ranchers for livestock. Beef cattle raising predominates, but sheep, dairy herds, poultry, and hogs are significant income sources as well. Field crops are also an important farm commodity; important crops include wheat, potatoes, barley, oats, and grass seed. Lumber is also produced in significant quantities from the forested areas in the region.

Annual precipitation totals in Zone 8 valley areas are generally below 20 inches. Some locations surrounded by high mountains, such as Baker City and Unity, barely exceed 10 inches per year. High elevation sites, on the other hand, receive much larger annual totals. Locations near the top of the Wallowa Mountains, for example, may exceed 100 inches precipitation per year, much of it in the form of snow. Table 1 lists monthly and annual



normal precipitation at Zone 8 sites. Highest normal precipitation totals tend to be in winter and late spring. Unlike most of Oregon, Zone 8's monthly distribution in comparison is remarkably uniform throughout the year.

Zone 8's distance from the ocean causes its annual temperature variations to be rather large. Table 2 lists normal monthly precipitation at stations in the area. Mean maximum temperatures are mostly in the 80's in summer months and in the 30's in winter. The dry, clear summer days are usually followed by cool nights; nighttime lows generally average in the 40's. The coldest temperatures in the region (and probably in the state) are observed in Seneca, located in a deep valley surrounded by mountain ridges. January low temperatures in Seneca average a cold 8.4°F. Annually, Seneca experiences an average of 22 days with below-zero temperatures. Seneca is in a tie for the coldest temperature ever recorded in Oregon, -54°F, set in February 1933.

Tables 3 and 4 list median frost dates and mean growing seasons, respectively, for four different temperature thresholds. While some of the lower valley sites have fairly long growing seasons, a few of the colder locations have a very short season. At Seneca, Austin, and Ukiah, the mean length of time between freezing temperatures is less than six weeks.

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**Oregon Climate Zone 8
Northeast Area**

**Table 1. Monthly and Annual Precipitation (inches)
1961-1990 Means**

Name	Elevation (feet)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Austin	4200	2.78	1.94	1.98	1.44	1.47	1.62	.72	1.01	1.06	1.32	2.55	3.08	20.49
Baker	3471	1.03	.62	.84	.82	1.26	1.38	.58	.94	.74	.63	.96	1.07	10.87
Cove	3120	2.53	1.22	2.59	2.61	3.24	2.17	.42	1.52	.69	1.23	2.49	1.27	22.47
Elgin	2660	2.98	2.46	2.27	1.68	1.72	1.46	.65	.86	1.05	1.72	3.13	3.52	23.73
Enterprise	3880	1.44	.76	1.89	1.56	2.09	1.59	1.01	1.76	.52	.55	1.51	.84	15.53
Halfway	2670	3.28	2.31	1.92	1.40	1.37	1.31	.47	.76	.92	1.31	3.02	3.50	21.58
Huntington	2130	1.78	1.36	1.27	.81	.91	.94	.38	.67	.60	.79	1.81	2.06	13.57
John Day	3060	1.15	.82	1.12	1.18	1.56	1.40	.53	.95	.84	.92	1.47	1.40	13.38
La Grande	2760	1.96	1.47	1.48	1.42	1.61	1.43	.63	.92	.97	1.24	1.86	1.86	17.18
Long Creek	3720	1.46	.93	1.42	1.33	1.46	1.24	.61	.86	.84	1.20	1.67	1.58	14.34
Monument	2000	1.48	1.03	1.33	1.31	1.38	1.08	.46	.74	.68	.92	1.51	1.53	13.73
Richland	2220	1.53	.91	.91	.96	1.22	1.02	.63	.85	.57	.71	1.54	1.39	12.59
Rock Creek	7250	2.67	1.89	1.87	1.37	1.65	1.78	.92	.98	.92	1.20	2.54	2.91	20.66
Seneca	4660	1.29	1.03	1.17	.99	1.34	1.11	.55	.87	.66	.88	1.49	1.67	13.12
Ukiah	3360	1.93	1.30	1.42	1.32	1.63	1.21	.63	.85	.88	1.22	2.08	1.99	16.19
Union	2770	1.16	.90	1.18	1.24	1.64	1.56	.61	.94	1.04	1.00	1.32	1.19	13.79
Unity	4030	1.23	.67	.76	.68	1.08	1.14	.44	.92	.54	.57	1.16	1.28	10.91
Walla Walla	2400	6.22	4.20	4.71	3.53	2.70	2.10	.69	1.17	1.86	3.19	5.69	5.26	41.09
Wallowa	2920	1.94	1.34	1.40	1.25	1.69	1.41	.85	.90	1.25	1.43	1.88	2.00	17.15

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**Table 2. Monthly Temperatures (°F)
1961-1990 Means**

Station	Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Austin	Mean Maximum	34.6	40.5	45.9	54.3	62.6	72.0	81.6	81.6	71.2	60.2	43.1	34.7	56.1
	Mean Minimum	10.5	14.6	19.5	25.6	30.7	37.1	39.2	38.1	30.5	24.9	20.9	12.1	24.8
	Monthly Mean	22.5	27.6	32.7	40.0	46.5	54.5	60.4	59.9	50.9	42.6	31.9	23.4	40.3
Baker	Mean Maximum	33.7	41.1	50.0	58.8	67.2	75.8	84.9	84.3	74.7	62.5	45.7	35.3	59.5
	Mean Minimum	16.8	22.4	26.9	31.1	38.1	45.0	48.5	47.4	38.9	30.5	25.1	17.7	32.4
	Monthly Mean	25.3	31.8	38.5	45.0	52.6	60.4	66.7	65.8	56.8	46.5	35.4	26.5	45.9
Cove	Mean Maximum	38.0	37.1	51.4	61.2	63.6	74.2	85.2	81.1	77.5	63.6	48.3	36.9	59.6
	Mean Minimum	23.6	16.6	28.1	35.0	37.2	43.9	48.7	46.9	41.0	35.9	30.1	18.8	33.9
	Monthly Mean	30.8	26.9	39.7	48.1	50.4	59.0	67.0	64.0	59.3	49.8	39.2	27.8	46.7
Elgin	Mean Maximum	37.9	44.8	52.0	60.8	69.3	78.3	87.6	87.8	78.1	65.2	47.8	38.6	62.4
	Mean Minimum	21.6	25.4	28.5	32.0	37.5	43.6	46.0	45.1	37.7	31.3	28.3	22.8	33.3
	Monthly Mean	29.7	35.1	40.3	46.4	53.4	61.0	66.8	66.4	57.9	48.3	38.1	30.7	47.9
Enterprise	Mean Maximum	33.2	37.5	47.7	60.0	61.6	70.8	78.3	76.9	73.7	62.1	44.8	33.9	56.7
	Mean Minimum	12.2	13.3	23.4	29.4	33.4	39.8	41.4	39.3	33.3	26.9	22.3	11.9	27.2
	Monthly Mean	22.7	25.4	35.5	44.7	47.5	55.3	59.9	58.1	53.5	44.5	33.5	22.9	42.0
Halfway	Mean Maximum	32.7	40.3	51.0	61.9	70.8	79.2	88.1	87.1	77.3	64.6	46.4	34.5	61.2
	Mean Minimum	14.4	19.0	25.8	30.9	37.0	43.7	47.6	46.5	38.6	30.5	25.3	16.8	31.3
	Monthly Mean	23.6	29.7	38.4	46.4	53.9	61.5	67.8	66.8	58.0	47.6	35.9	25.7	46.3
Huntington	Mean Maximum	35.6	44.1	55.1	64.7	74.2	84.1	93.6	92.0	80.1	66.5	48.8	37.6	64.7
	Mean Minimum	19.8	25.3	31.6	38.3	46.8	55.9	63.8	61.4	49.8	38.0	29.2	21.6	40.1
	Monthly Mean	27.7	34.7	43.3	51.5	60.5	70.0	78.7	76.7	65.0	52.2	39.0	29.6	52.4
John Day	Mean Maximum	40.4	47.0	52.7	59.8	68.8	78.2	87.9	87.2	77.6	66.1	50.1	41.8	63.0
	Mean Minimum	21.0	25.0	28.4	32.2	38.6	45.2	48.6	47.9	40.4	33.2	28.2	22.1	34.2
	Monthly Mean	30.7	36.0	40.6	46.0	53.7	61.7	68.3	67.5	59.0	49.6	39.1	32.0	48.6
La Grande	Mean Maximum	37.6	43.3	51.1	58.7	67.7	76.8	86.2	86.1	76.0	63.0	46.8	38.5	60.9
	Mean Minimum	23.6	27.0	30.4	34.6	41.3	48.4	52.5	51.4	43.2	35.1	30.3	24.4	36.6
	Monthly Mean	30.6	35.1	40.8	46.6	54.5	62.6	69.3	68.7	59.6	49.0	38.6	31.5	48.5
Long Creek	Mean Maximum	38.8	45.0	50.2	56.7	64.7	74.2	82.7	82.2	73.1	62.6	47.8	39.8	59.5
	Mean Minimum	20.8	24.2	26.3	29.3	35.0	40.7	44.4	43.8	37.7	32.6	27.1	21.2	31.7
	Monthly Mean	29.8	34.7	38.2	43.0	49.8	57.5	63.5	63.0	55.6	47.6	37.4	30.6	45.6
Monument	Mean Maximum	41.6	49.4	56.2	63.4	71.7	81.5	90.1	89.7	79.9	67.9	52.0	43.0	65.4
	Mean Minimum	21.4	25.9	29.4	33.4	39.7	46.6	49.5	48.5	40.7	32.2	28.4	22.6	34.8
	Monthly Mean	31.5	37.7	42.8	48.4	55.7	64.1	69.7	69.1	60.3	50.1	40.2	32.8	50.1
Richland	Mean Maximum	39.1	46.7	56.5	67.7	75.9	84.2	91.9	91.1	81.8	69.4	52.2	40.5	67.3
	Mean Minimum	20.8	24.7	29.6	34.9	41.8	49.7	54.9	54.8	43.7	33.9	27.4	21.9	37.2
	Monthly Mean	29.9	35.7	43.1	51.3	58.8	67.1	73.4	72.9	62.8	51.7	39.8	31.2	52.2
Seneca	Mean Maximum	33.2	38.8	44.3	53.1	61.2	70.6	80.4	80.2	70.1	59.6	43.6	34.3	55.8
	Mean Minimum	8.4	13.4	19.8	25.0	30.9	36.5	37.6	35.6	27.8	21.3	19.5	11.5	23.8
	Monthly Mean	20.8	26.1	32.0	39.0	46.0	53.5	59.0	57.9	48.9	40.4	31.5	22.9	39.9

Table 2. Cont.
Northeast Area

Station	Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Ukiah	Mean Maximum	36.1	43.0	49.0	56.3	64.1	73.4	82.6	82.5	73.8	62.9	46.5	37.1	58.8
	Mean Minimum	14.5	19.4	23.4	27.7	32.7	38.1	39.9	39.2	31.9	26.0	23.5	16.4	27.6
	Monthly Mean	25.3	31.2	36.2	42.0	48.4	55.8	61.3	60.9	52.8	44.5	35.0	26.7	43.2
Union	Mean Maximum	36.5	43.0	50.4	57.9	65.6	74.1	83.4	83.7	73.8	62.4	47.3	38.1	59.7
	Mean Minimum	23.5	27.4	29.9	33.8	39.4	45.9	49.5	48.7	41.0	34.0	30.6	24.8	35.7
	Monthly Mean	30.0	35.2	40.2	45.9	52.5	60.0	66.5	66.2	57.4	48.2	39.0	31.5	47.7
Unity	Mean Maximum	33.8	40.9	49.0	57.6	67.8	76.3	86.0	85.0	74.8	62.8	44.2	33.7	61.9
	Mean Minimum	13.5	18.4	23.4	27.2	34.1	39.7	43.4	42.9	34.9	27.3	22.0	13.5	29.7
	Monthly Mean	23.6	29.6	36.2	42.1	50.9	58.0	64.7	63.9	54.9	45.3	33.0	23.5	45.8
Walla Walla	Mean Maximum	35.5	41.6	49.8	58.4	67.0	75.4	83.5	82.6	72.7	58.9	42.9	36.3	59.3
	Mean Minimum	24.5	27.7	30.5	34.0	38.8	44.6	46.7	46.7	41.7	36.0	30.9	25.8	35.9
	Monthly Mean	30.0	34.6	40.1	46.2	52.9	60.0	65.1	64.7	57.2	47.4	37.1	31.1	47.6
Wallowa	Mean Maximum	34.5	41.9	50.4	59.2	67.3	76.0	84.5	84.1	74.9	62.3	45.2	35.3	59.4
	Mean Minimum	18.3	22.5	26.4	30.9	36.8	42.8	45.1	44.2	37.2	30.1	26.0	19.0	31.5
	Monthly Mean	26.4	32.2	38.4	45.0	52.0	59.4	64.8	64.2	56.1	46.2	35.6	27.1	45.4

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**Oregon Climate Zone 8
Northeast Area**

**Table 3. Median Frost Dates
1961-1990 Means**

Station	Median Dates of Last Occurrence in Spring of				Median Dates of First Occurrence in Fall of			
	24° F	28° F	32° F	36° F	24° F	28° F	32° F	36° F
Austin	17-May	30-Jun	19-Jul	28-Jul	14-Sep	31-Aug	13-Aug	2-Aug
Elgin	20-Apr	14-May	5-Jun	8-Jul	3-Oct	19-Sep	3-Sep	23-Aug
Halfway	4-May	17-May	8-Jun	30-Jun	7-Oct	25-Sep	12-Sep	1-Sep
Huntington	24-Mar	12-Apr	1-May	12-May	1-Nov	22-Oct	9-Oct	29-Sep
John Day	20-Apr	4-May	20-May	4-Jun	20-Oct	6-Oct	17-Sep	8-Sep
La Grande	13-Apr	28-Apr	16-May	2-Jun	22-Oct	6-Oct	22-Sep	14-Sep
Mason Dam	2-May	28-May	25-Jun	13-Jul	6-Oct	17-Sep	9-Sep	17-Aug
Monument	13-Apr	1-May	21-May	3-Jun	16-Oct	5-Oct	20-Sep	11-Sep
Richland	18-Apr	4-May	16-May	2-Jun	17-Oct	11-Oct	30-Sep	14-Sep
Seneca	27-May	7-Jul	24-Jul	29-Jul	1-Sep	19-Aug	4-Aug	1-Aug
Ukiah	14-May	25-Jun	19-Jul	28-Jul	11-Sep	30-Aug	15-Aug	3-Aug
Union Exp. Stn.	12-Apr	5-May	21-May	24-Jun	17-Oct	4-Oct	17-Sep	8-Sep
Unity	18-May	3-Jun	2-Jul	20-Jul	21-Sep	13-Sep	31-Aug	15-Aug
Walla Walla	19-Mar	19-Apr	19-May	8-Jun	16-Nov	17-Oct	2-Oct	12-Sep
Wallowa	1-May	20-May	17-Jun	7-Jul	2-Oct	13-Sep	3-Sep	19-Aug

**Table 4. Growing Season
1961-1990 Means**

Station	Average Days Between Occurrences of			
	24° F	28° F	32° F	36° F
Austin	119	61	29	10
Elgin	166	130	87	45
Halfway	158	132	95	62
Huntington	222	192	160	140
John Day	180	154	119	86
La Grande	198	162	129	98
Mason Dam	157	112	75	36
Monument	187	158	122	93
Richland	190	154	132	106
Seneca	89	46	16	7
Ukiah	117	69	31	10
Union Exp. Stn.	188	153	121	81
Unity	128	102	54	30
Walla Walla	243	183	141	100
Wallowa	158	121	83	46