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The Climate of Oregon Climate Zone 3 Southwest Interior

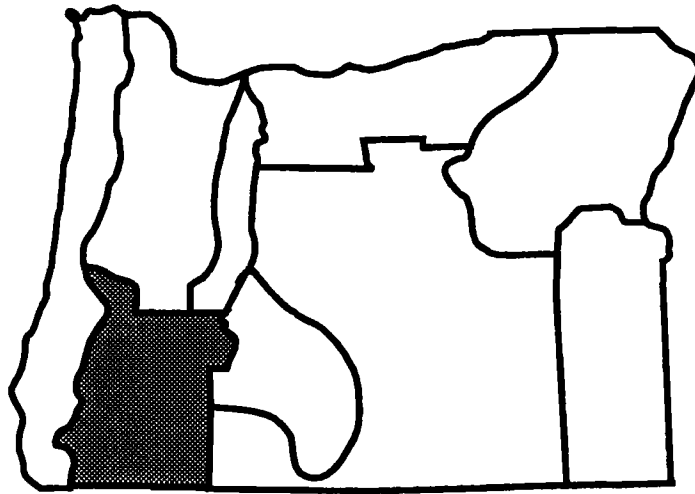
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The Climate of Oregon



Climate Zone 3 Southwestern Interior

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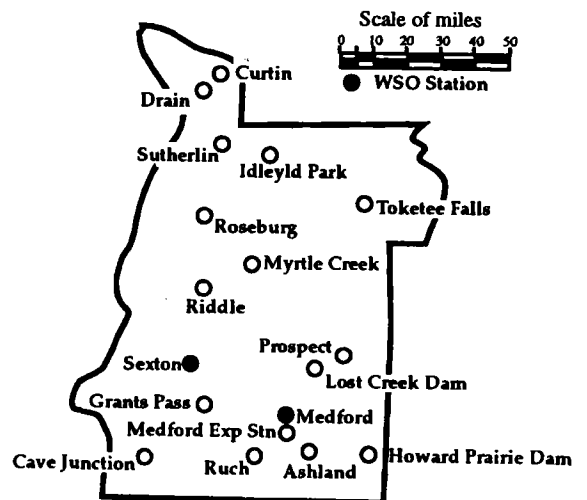
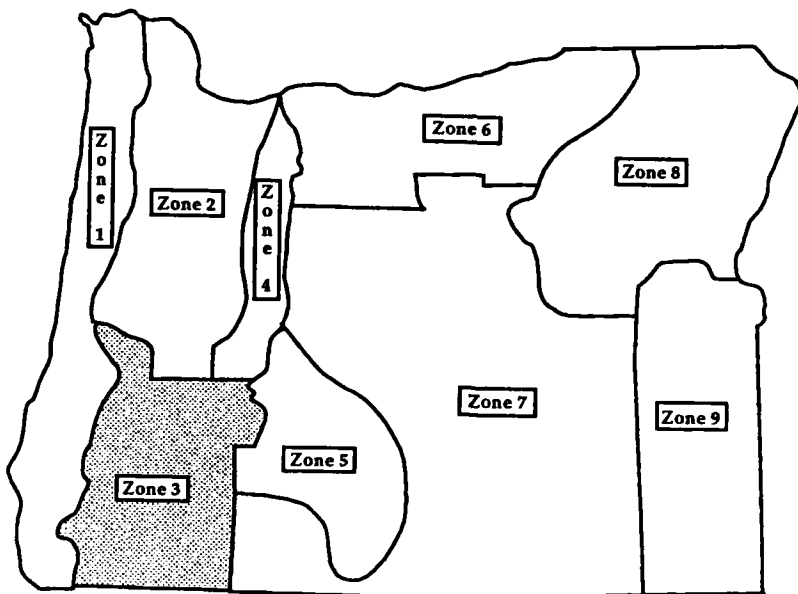
Oregon Climate Zone Summary

Zone 3--Southwestern Interior

The southwestern interior of Oregon is one of the more rugged parts of the state. Mountains and ridges are separated by deeply indented river valleys, with most of the rivers flowing westward towards the Pacific Ocean. Although much of the area lies in somewhat of a rain shadow, sheltered from the Pacific by the Coast Range to the west, many of the higher elevation sites receive abundant precipitation with some locations receiving in excess of 120 inches per year.

Due to the ruggedness of the terrain, much of Zone 3 remains sparsely settled. The only major urban areas lie in the broader valley areas, particularly the Rogue and Umpqua valleys. Ashland, Medford, and Grants Pass are the major cities in the Rogue valley, while Roseburg is the primary urban area in the Umpqua valley.

Long an important forestry area, southwestern Oregon is perhaps best known for its fruit crops, particularly the Rogue River pear industry which covers more than 10,000 acres. Additional agricultural and livestock commodities of importance include hay, grain, seed crops, beef cattle, poultry, sheep, and the dairy industry.



As in the case of the rest of western Oregon, most precipitation in Zone 3 falls during the months of November through March. Of Medford's average annual precipitation of 18.8 inches, about 75 percent falls during that five month period. Occasional summer thunderstorms cause precipitation during the warmer months, but average monthly totals during summer are quite low.

Total precipitation in a given area is strongly influenced by elevation, and Zone 3 is no exception. In general, the driest areas are those at the lowest valley locations, while precipitation increases steadily at higher elevations. The driest area in Zone 3 extends from Central Point through Medford and nearly to Ashland, all of which receive less than 20 inches per year. Not far south of Ashland, however, is Mount Ashland at 7,500 feet, which receives an excess of 50 inches per year. Perhaps the wettest area in Zone 3 is in the remote, mountainous area east of Roseburg near Quartz Mountain. Although precipitation data in that area is scarce, it has been estimated that some of the higher peaks receive an excess of 120 inches of rain per year. Another very wet area lies in the Klamath Mountains near Cave Junction in the southwestern part of Zone 3. Some of the higher peaks, such as Onion Mountain and Squaw Mountain, probably receive more than 120 inches per year, although lack of precipitation measurement stations makes this somewhat uncertain. Table 1 lists monthly and annual precipitation values for several Zone 3 stations.

Snow falls nearly every winter in southwestern Oregon. In the valleys, the annual total is about 20 to 30 inches per year, although snow on the ground seldom lasts more than a few days at a time. At higher elevations, a great deal more snow is reported. At Sexton Summit (3,836 feet), for example, the average annual snowfall is about 100 inches. The frequency of snowstorms also varies widely with elevation differences. Medford, for example, has an average of 3 days per year with at least one inch of snow while Sexton Summit averages 30 inches.

Due to its separation from the coast, Zone 3 has greater temperature extremes than the remainder of western Oregon. During summer, it is generally the warmest part of the state. Medford, for example, averages about 55 days per year with maximum temperatures of 90°F or above; in fact, the average daily maximum for July is above 90°F. Winter temperatures can be quite cold. The average extreme low temperature in Medford during December and January is about 18°F, and an average of twenty days in January have low temperatures of 32°F or below. Medford's monthly mean temperature ranges from 72.5°F in July to 37.7°F in December, a range greater than most other stations west of the Cascades. Table 2 lists mean maximum, mean minimum, and mean average temperatures for each month at several stations in the area.

Table 3 lists median dates of the last occurrence in spring and first occurrence in fall of four low temperature thresholds. Table 4 lists the average number of days between occurrences of those same four temperatures. Valley locations such as Riddle, Drain, and Grants pass have longer growing seasons than such higher elevation sites such as Howard Prairie Dam and Prospect. Most of the valley locations have at least 140 days between spring and fall 32°F temperatures. Length of time between 28°F temperatures is generally more than 200 days.

Cloud cover is greatest during the winter months, averaging more than 80 percent of total potential cloud cover during December and January. Mid-latitude storms generally produce extensive middle and high clouds, while fair weather periods between storms often produce extensive valley fog, sometimes lasting for many days. Summers, however, are mostly cloud-free, averaging only about 20 percent mean sky cover.

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Southwestern Interior**

**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
Ashland	1750	2.37	1.72	1.95	1.61	1.29	.91	.32	.58	.92	1.60	2.82	3.06	19.16
Cave Junction	1280	10.95	7.94	7.43	3.50	1.79	.57	.20	.67	1.36	4.00	9.90	11.25	59.84
Curtin	400	5.74	6.57	4.86	3.88	2.53	1.63	.84	1.01	1.90	3.31	8.21	7.40	49.82
Drain	292	7.04	5.50	5.27	3.34	2.14	1.14	.45	.87	1.42	3.47	7.76	7.82	46.17
Grants Pass	960	5.16	3.82	3.52	1.84	1.16	.49	.22	.48	.90	2.45	5.31	5.69	31.67
Idelyld Park	1080	9.24	7.20	7.12	4.61	2.96	1.72	.61	.97	2.34	4.88	10.78	10.47	63.54
Lost Creek Dam	1580	4.40	4.11	4.10	2.18	1.81	.82	.36	.77	1.30	2.45	5.56	5.44	33.04
Medford Exp. St.	1457	2.87	2.05	2.07	1.38	1.11	.75	.29	.61	1.03	1.68	3.34	3.64	21.45
Medford WSO	1300	2.69	1.93	1.82	1.16	1.00	.58	.26	.52	.86	1.49	3.23	3.32	18.85
Prospect	2482	5.98	4.67	4.62	2.75	2.21	1.03	.38	.99	1.44	3.31	6.84	6.83	41.16
Riddle	680	4.78	3.42	3.46	1.99	1.24	.64	.29	.63	1.10	2.14	5.36	5.56	30.11
Roseburg KQEN	465	5.13	3.70	3.56	2.24	1.43	.83	.43	.73	1.24	2.23	5.36	5.47	32.44
Ruch	1550	4.27	2.79	2.89	1.59	1.04	.77	.37	.58	1.05	1.73	4.19	4.73	26.01
Sutherlin	600	4.80	5.75	4.08	3.26	2.25	1.27	.71	.91	1.76	2.86	6.31	5.89	41.13
Toketee Falls	2060	6.71	5.25	5.42	3.58	2.64	1.51	.57	1.16	1.74	3.65	7.77	7.47	48.17

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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
Ashland	Mean Maximum	46.3	52.3	56.2	62.1	70.0	78.7	86.8	85.7	78.6	66.6	52.3	45.4	65.0
	Mean Minimum	29.6	31.9	33.7	36.2	41.6	48.0	51.7	51.6	45.7	39.1	34.1	30.0	39.4
	Monthly Mean	38.0	42.1	45.0	49.1	55.8	63.4	69.3	68.7	62.2	52.8	43.2	37.7	52.2
Cave Junction	Mean Maximum	46.7	53.3	58.0	64.0	72.7	80.7	88.5	87.9	81.5	69.0	52.7	46.0	66.8
	Mean Minimum	31.9	33.1	34.3	36.0	40.6	46.5	49.7	49.0	44.1	39.1	36.7	32.7	39.5
	Monthly Mean	39.3	43.2	46.1	50.0	56.7	63.6	69.1	68.5	62.8	54.0	44.7	39.3	53.1
Drain	Mean Maximum	47.9	53.3	57.6	62.5	69.2	75.9	83.0	83.2	78.0	66.9	53.9	47.5	64.8
	Mean Minimum	33.7	35.5	36.7	38.8	42.8	48.0	49.9	50.1	46.0	42.3	39.1	34.9	41.4
	Monthly Mean	40.8	44.4	47.2	50.6	56.0	62.0	66.4	66.7	62.0	54.6	46.5	41.2	53.1
Grants Pass	Mean Maximum	47.6	54.9	60.5	66.8	74.7	83.0	90.1	89.8	83.1	70.0	53.8	46.3	68.4
	Mean Minimum	32.6	34.4	36.0	38.3	43.6	49.8	53.1	52.7	46.7	41.2	37.9	33.6	41.7
	Monthly Mean	40.1	44.6	48.3	52.5	59.1	66.4	71.6	71.3	64.9	55.6	45.9	39.9	55.1
Idelyld Park	Mean Maximum	46.4	52.4	56.4	62.0	69.0	75.8	82.6	82.4	76.6	65.5	52.0	45.7	63.6
	Mean Minimum	31.9	33.6	35.0	37.0	41.0	46.4	48.4	48.1	44.5	40.0	36.9	32.7	39.5
	Monthly Mean	39.2	43.0	45.7	49.5	55.0	61.1	65.5	65.3	60.5	52.8	44.5	39.2	51.6
Lost Creek Dam	Mean Maximum	47.4	52.5	57.0	63.3	71.3	80.1	88.9	88.9	81.4	70.4	52.6	46.0	66.6
	Mean Minimum	28.2	30.1	33.0	36.1	40.5	46.4	50.0	49.4	43.1	36.7	33.1	29.1	38.0
	Monthly Mean	37.8	41.3	45.0	49.7	55.9	63.2	69.5	69.1	62.3	53.6	42.9	37.5	52.3
Medford Exp. St.	Mean Maximum	46.2	53.6	58.5	65.0	73.0	81.5	88.8	88.3	81.5	68.3	52.6	45.1	66.7
	Mean Minimum	30.1	32.0	34.3	36.5	41.3	47.7	50.6	50.7	44.2	37.7	34.6	30.9	39.1
	Monthly Mean	38.2	42.8	46.4	50.8	57.1	64.6	69.7	69.5	62.9	53.0	43.6	38.0	52.9
Medford WSO	Mean Maximum	45.7	53.3	58.1	64.1	72.5	82.1	90.5	89.9	82.5	69.1	52.3	44.3	67.0
	Mean Minimum	30.1	32.0	34.8	37.5	42.8	49.9	54.3	54.3	47.5	39.8	34.8	31.0	40.7
	Monthly Mean	37.9	42.7	46.4	50.8	57.6	66.0	72.4	72.1	65.0	54.4	43.5	37.7	53.9
Prospect	Mean Maximum	46.7	51.9	55.4	61.7	70.0	78.3	86.8	86.9	80.7	68.6	52.0	45.6	65.2
	Mean Minimum	27.6	29.6	31.1	33.2	38.1	44.1	47.4	46.9	41.8	36.5	32.6	28.6	36.4
	Monthly Mean	37.2	40.7	43.2	47.4	54.0	61.2	67.1	66.9	61.3	52.5	42.3	37.1	50.8
Riddle	Mean Maximum	49.0	54.8	58.7	63.4	69.6	76.8	83.4	83.7	78.7	68.6	54.7	48.3	65.8
	Mean Minimum	33.9	35.7	37.1	39.1	43.7	49.5	52.6	52.5	47.0	42.3	39.3	34.9	42.3
	Monthly Mean	41.4	45.2	47.9	51.3	56.6	63.1	68.0	68.1	62.9	55.4	47.0	41.6	54.0
Roseburg KQEN	Mean Maximum	48.5	53.4	57.8	62.9	69.3	76.5	83.6	84.1	78.1	67.0	54.3	48.0	65.3
	Mean Minimum	33.9	35.8	37.7	39.7	44.5	50.3	53.5	54.3	49.3	43.8	39.3	34.8	43.1
	Monthly Mean	41.2	44.6	47.8	51.3	56.9	63.4	68.6	69.2	63.7	55.4	46.8	41.4	54.2
Ruch	Mean Maximum	48.6	54.9	59.4	65.3	74.1	81.9	89.3	88.8	82.3	70.4	54.3	47.0	68.2
	Mean Minimum	29.7	30.8	33.1	35.4	40.6	46.8	49.9	49.7	44.5	38.6	34.1	30.3	38.7
	Monthly Mean	39.1	42.8	46.2	50.3	57.3	64.3	69.6	69.4	63.4	54.5	44.2	38.7	53.4
Toketee Falls	Mean Maximum	42.5	48.5	53.7	61.1	69.9	78.3	86.0	85.7	77.5	63.3	48.1	41.8	63.0
	Mean Minimum	29.0	30.8	32.6	35.5	40.6	46.9	49.9	49.3	44.1	38.1	33.7	29.8	38.3
	Monthly Mean	35.7	39.6	43.2	48.3	55.2	62.6	68.0	67.5	60.8	50.7	40.9	35.8	50.7

**Oregon Climate Zone 3
Southwestern Interior**

**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
Ashland	13-Mar	19-Apr	11-May	27-May	24-Nov	5-Nov	12-Oct	27-Sep
Cave Junction	3-Mar	19-Apr	12-May	1-Jun	12-Dec	18-Nov	12-Oct	14-Sep
Drain	1-Feb	9-Mar	26-Apr	16-May	26-Dec	4-Dec	18-Oct	2-Oct
Grants Pass	11-Feb	24-Mar	29-Apr	20-May	15-Dec	27-Nov	15-Oct	3-Oct
Howard Prairie Dam	25-Apr	22-May	17-Jun	12-Jul	1-Nov	10-Oct	13-Sep	24-Aug
Idleyld Park 4 NE	12-Feb	5-Apr	16-May	5-Jun	11-Dec	10-Nov	4-Oct	13-Sep
Lost Creek Dam	3-Mar	13-Apr	16-May	28-May	18-Nov	2-Nov	6-Oct	19-Sep
Medford Experiment Station	1-Mar	31-Mar	17-May	30-May	23-Nov	27-Oct	4-Oct	15-Sep
Medford WSO Airport	27-Feb	5-Apr	3-May	20-May	28-Nov	6-Nov	15-Oct	4-Oct
Prospect 2 SW	9-Apr	9-May	1-Jun	1-Jul	23-Nov	13-Oct	20-Sep	5-Sep
Riddle	19-Jan	6-Mar	20-Apr	13-May	28-Dec	11-Dec	20-Oct	5-Oct
Ruch	22-Mar	30-Apr	20-May	7-Jun	25-Nov	27-Oct	4-Oct	13-Sep
Toketee Falls	2-Mar	14-Apr	14-May	1-Jun	2-Dec	30-Oct	1-Oct	13-Sep

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

Station	Average Days Between Occurrences of			
	24° F	28° F	32° F	36° F
Ashland	257	201	154	124
Cave Junction	284	213	153	105
Drain	329	270	175	140
Grants Pass	308	248	169	137
Howard Prairie Dam	190	141	88	43
Idleyld Park 4 NE	303	219	141	100
Lost Creek Dam	260	203	143	114
Medford Experiment Station	267	210	140	109
Medford WSO Airport	276	216	166	137
Prospect 2 SW	228	158	111	66
Riddle	344	281	183	146
Ruch	248	181	137	98
Toketee Falls	275	200	141	104