



APPENDIX A

**CLIMATE INFORMATION
AND RAINFALL DATA**

Oregon DEQ**Oregon Climate Zones**

The National Climatic Data Center (NCDC) established “Climate Zones” to represent areas with similar precipitation and temperature characteristics. The “Climate Zones” located within Oregon are described below. Selected zone descriptions, figures, and precipitation data are from *The Climate of Oregon*, by Taylor and Hannan (1999).

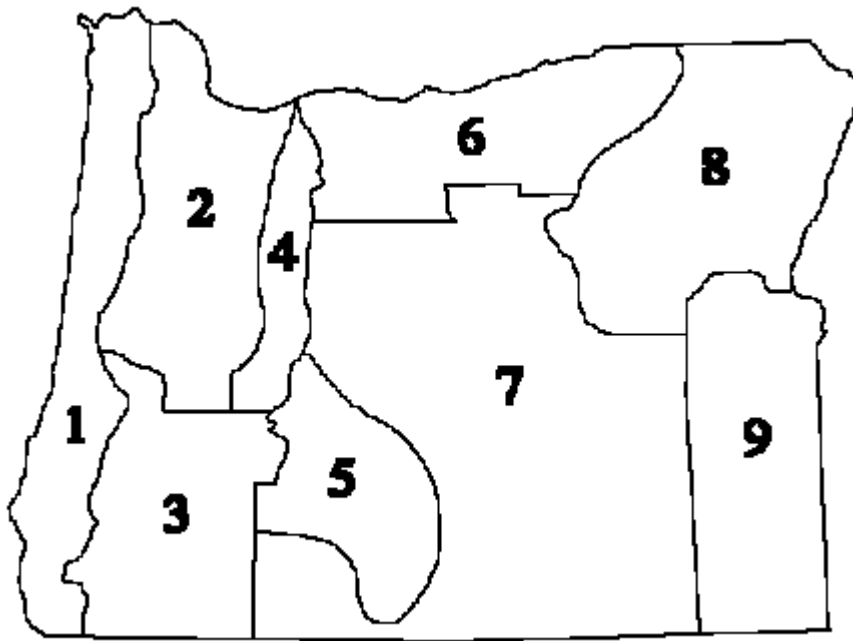


Figure A-1 – NCDC Climate Zones Within Oregon.

Zone 1 – Coastal Area

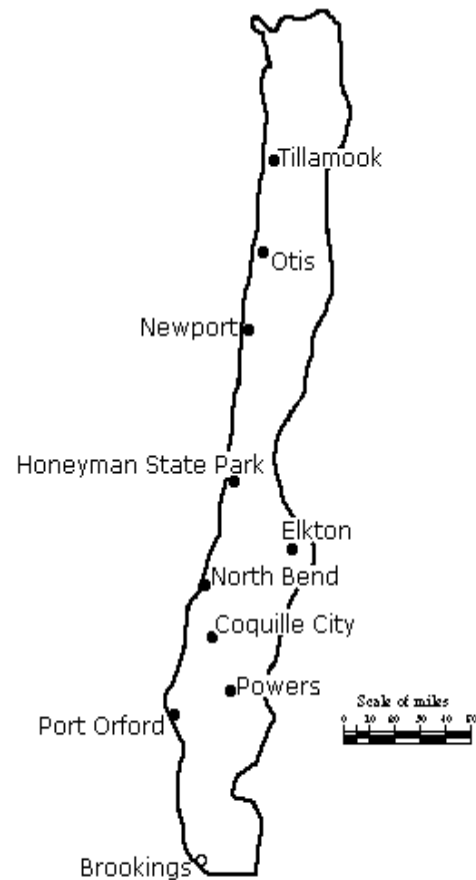
Stretching along Oregon's Pacific border, the coastal zone is characterized by wet winters, relatively dry summers, and mild temperatures throughout the year. Coastal terrain features include a coastal plain (extending from less than a mile to a few tens of miles in width), numerous coastal valleys, and the Coast Range, whose peaks range from 2,000 to 5,500 feet above sea level and extend down the full length of the state. Rivers such as the Coquille, Umpqua, and Yaquina dissect the Coast Range and drain its slopes. The area's heavy precipitation results from moist air masses moving off the Pacific Ocean onto land, especially during winter months.



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Along the lower elevations of the immediate coast, normal annual precipitation is between 65 to 90 inches. However, spots high on the west slopes of the range may get up to 200 inches. Several days of abundant rainfall can cause strong flood events. In some locations, flood control dams have greatly reduced the incidence of damaging floods. As is typical of western Oregon, the highest monthly precipitation values for the coast occur in the winter months of November, December, and January. Table A-1 summarizes the mean monthly and annual precipitation for recording stations in the coastal zone.

Snowfall in the vicinity of the coast is minimal, usually only one to three inches annually. Some of the higher elevations receive significant amounts of snowfall, however. For example, in January of 1982, Laurel Mountain (elevation 3,589') received 55 inches of snow. At Mary's Peak (elevation 4,097'), the highest peak in the Coast Range, snow often lasts into May.



NOAA Climate Stations in Zone 1

Occasional strong winds strike the Oregon coast, usually in advance of winter storms. Wind speeds can exceed hurricane force, and in rare cases have caused significant damage to structures or vegetation.

Zone 2 – The Willamette Valley

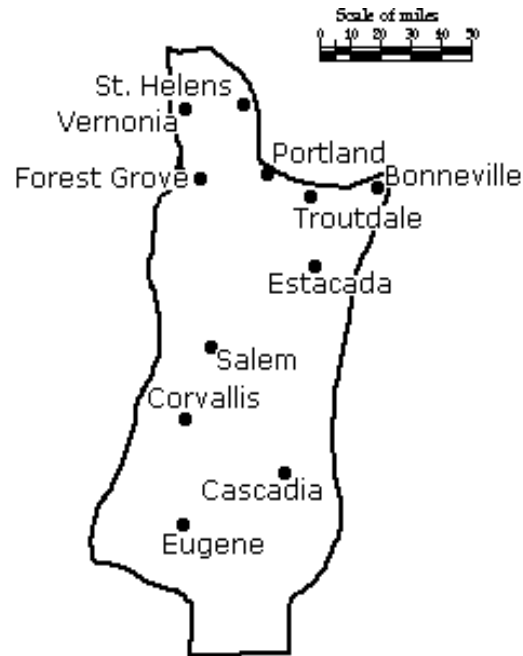
The Willamette Valley is the most diverse agricultural area in the state of Oregon, and also the home of the majority of the population. Oregon's three largest cities, Portland, Salem, and Eugene, are located in the north, central, and south portions of the Valley, respectively, but the urban areas are surrounded by varied and productive ranches, orchards, and farms.



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The climate of the Valley is relatively mild throughout the year, characterized by cool, wet winters and warm, dry summers. The climatic conditions closely resemble the Mediterranean climates that occur in California, although Oregon's winters are somewhat wetter and cooler.

Like the remainder of western Oregon, the Valley has a predominant winter rainfall climate. Typical distribution of precipitation includes about 50 percent of the annual total from December through February, lesser amounts in the spring and fall, and very little during the summer. Rainfall tends to vary inversely with temperatures -- the cooler months are the wettest, the warm summer months are the driest.



NOAA Climate Stations in Zone 2.

There is considerable variation in precipitation in the Valley, ranging from annual totals below 40 inches in the Portland area to upwards of 80 inches in the Cascade and Coast Range foothills. Elevation is the single most important determinant of precipitation totals.

Although snow falls nearly every year, amounts are generally quite low. Valley floor locations average 5-10 inches per year, mostly during December through February, although higher totals are observed at greater elevations in the foothills.

High winds occur several times per year in association with major weather systems.

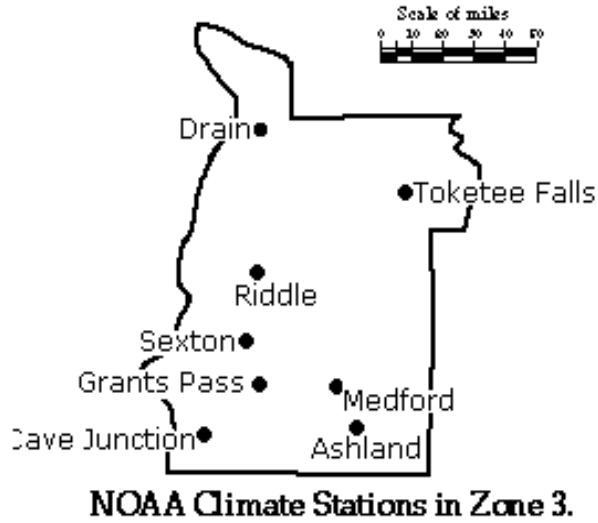
Table A-1 summarizes of average precipitation conditions at selected stations in the Willamette Valley.



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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.



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 A-1 lists monthly and annual precipitation values for several Zone 3 stations.

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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.

Zone 4 – Northern Cascades

The Cascade Mountains, the dominant terrain feature in Oregon, encompass the entire length of the state from the California border to Washington. With average elevations in excess of 4,000 feet, the Cascades are crowned with a number of very high peaks. Mount Hood, near the Washington border, exceeds 11,000 feet, while Mt. Jefferson and the Three Sisters exceed 10,000 feet. Mt. McLoughlin near Medford is approximately 9,500 feet. The Cascades are a higher and more imposing

**NOAA Climate Stations in Zone 4.**

topographic feature in the northern part of Oregon, however. Average elevations and the number of tall peaks (over 9,000 feet) are higher north of about 43.5° N latitude. The region extending from this latitude northward to the Columbia River and encompassing high elevations west of the Cascade crest is the fourth of nine Oregon climatic zones.

The northern Cascades exert a profound effect on Oregon climate and weather. Mid-latitude storms approaching from the west are forced to rise as they encounter the Cascades, resulting in large amounts of orographic (terrain-induced) precipitation on the western slopes. So effective are the Cascades in removing moisture from the Pacific air masses, however, that most of Oregon east of the Cascades lies in a "rain shadow," resulting in large areas with annual precipitation less than 12 inches. Most of the northern Cascades, on the other hand, receive an excess of 80 inches per year; the highest peaks collect more than 150 inches per year, most of it in the form of snow. As in the case of the rest of western Oregon, most of the precipitation in the Northern Cascades falls during the winter months with the November through March period accounting for

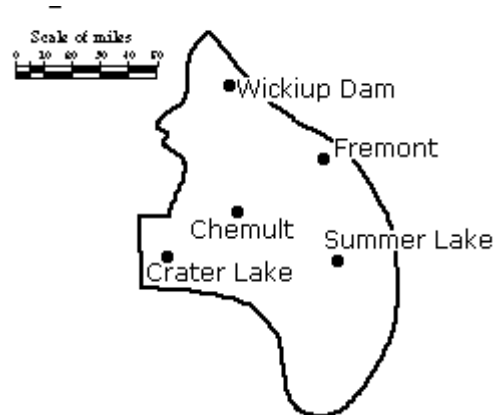
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more than 75 percent of the total annual precipitation. Table A-1 lists mean monthly and annual precipitation for Zone 4.

Monthly mean snowfall totals vary significantly according to elevation. Since precipitation tends to increase with increasing elevation, more potential moisture for snowfall is available at higher elevations. Since temperatures generally decrease with increasing elevation, those high precipitation amounts are more likely to be in the form of snow. As an example, McKenzie Bridge (elevation 1400 feet) receives an average of about 42 inches of snow per year, while Marion Forks (2,500 feet) receives about 150 inches and Government Camp (3,980 feet) about 300 inches per year.

Zone 5 – High Plateau

Oregon's High Plateau, a region bordered by the Cascades on the west and several minor mountain ranges on the south and east, comprises much of Klamath County and parts of Lake and Deschutes Counties. Due to generally high elevations, the Plateau has cool temperatures and receives a significant amount of snow. Its distance from the coast, coupled with its location downwind of the Cascades, causes its annual precipitation to be lower than in the mountainous areas surrounding it.



NOAA Climate Stations in Zone 5.

The Cascade crest, running north-south at a longitude of about 122° W, is lower in elevation in the High Plateau than in most parts of Oregon. Only one peak, Mt. Thielsen, exceeds 9,000 feet. As a result, the “rain shadow” effect produced by the mountains is less dramatic in this zone than in areas to the north. Another notable difference between the High Plateau and the surrounding zones is its average elevation east of the Cascades. Whereas the areas east of the northern and central Oregon Cascade peaks are typically 2,000 - 4,000 feet above sea level, the lower elevations of the High Plateau average about 5,500 feet.

As air moves from west to east over the Cascades in Zone 5, it begins to descend; the greater the descent, the drier the air becomes. While air parcels reaching Bend to the north have descended about 4,000 feet from the crest and are usually quite



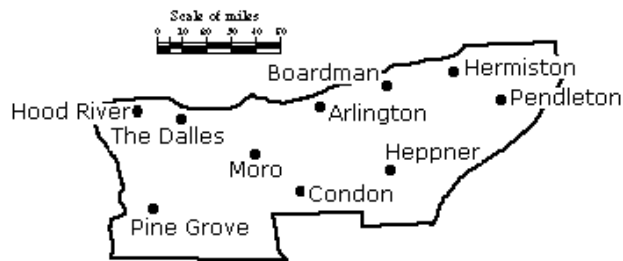
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dry, similar air parcels moving into the High Plateau drop only about 2,000 feet. This difference is reflected in the average annual precipitation total for these two areas. Bend receives only about 12 inches per year, while points in the High Plateau receive more than 20 inches.

Normal precipitation values in Zone 5 are dependent upon west-east orientation and elevation. Crater Lake, in the west, receives an average of more than 65 inches per year, while Fremont and Summer Lake to the east receive about 12 inches. Crater Lake's elevation is about 2,000 feet higher than the latter stations. Table A-1 lists normal monthly and annual precipitation totals at the Zone 5 climate stations.

Zone 6 – North Central Area

North Central Oregon, climatic Zone 6, is a relatively dry region lying east of the Cascade Mountains. The Cascades serve as an effective moisture barrier, causing storms to dump much of their moisture west of the peaks and leaving areas to the east in a "rain shadow." As a result, Zone 6 is generally rather dry. The region extends from the Columbia River southward over hill country to the forested mountain areas that border climate Zone 7.



NOAA Climate Stations in Zone 6.

Just as most of Oregon, this region has a definite winter rainfall climate. The months of November through February generally receive the most precipitation due to winter storms that bring rain to lower elevations and snow to higher ridges and peaks. Annual totals vary greatly and are proportional to elevation; some of the lower elevations receive less than 12 inches per year, while a few of the higher areas receive more than 40 inches. Occasional summer thunderstorms bring localized, occasionally heavy showers.

Table A-1 lists normal monthly and annual precipitation for stations in Zone 6. Locations at the lowest elevations (adjacent to the Columbia River) such as Arlington and Hermiston receive less than 10 inches per year. Precipitation increases steadily with elevation. Highest annual totals are found in the Blue Mountains along the extreme east border of the region, where totals exceeding 50 inches occur.



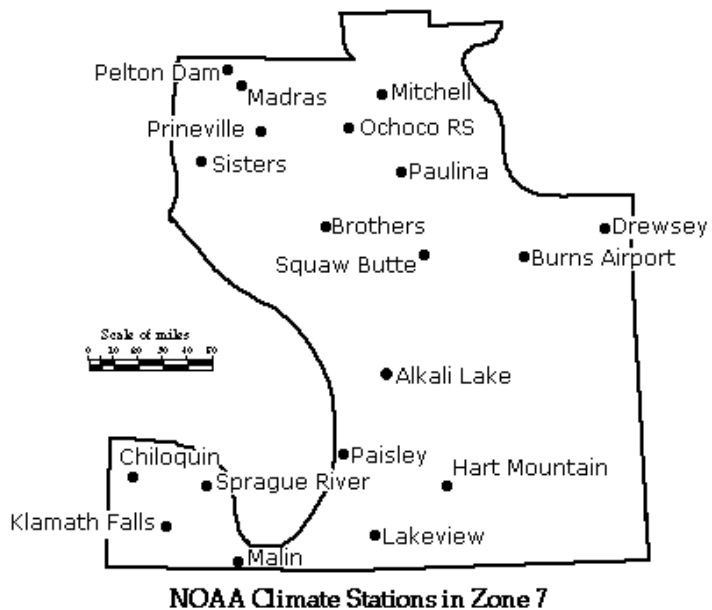
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The Columbia Gorge is a major east-west passageway connecting Zone 6 with the Willamette Valley and Oregon coast. Vigorous winds are common in and around the Gorge. During summer, wind direction is predominantly from the west, causing strong, steady winds within the Gorge and along the northern edge of Zone 6. These winds, in fact, make Hood River a world-renowned wind surfing location. Winter winds can blow from the west or the east and can reach speeds sufficient to cause widespread damage.

Zone 7 – South Central Area

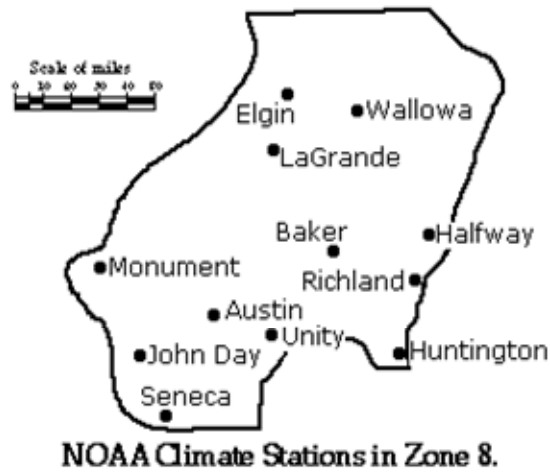
South Central Oregon, the largest of the Oregon climatic divisions, is a vast area of high desert prairie punctuated by a number of mountain ranges and isolated peaks. This region is predominantly livestock country; in addition to beef cattle, there are large numbers of sheep, dairy herds, horses, and swine.

Most of this region receives relatively low amounts of precipitation. As can be seen in Table A-1, most of the stations in Zone 7 receive less than 15 inches per year. However, some of the higher mountain sites receive significantly greater precipitation. Most of the stations in Zone 7 receive their highest monthly precipitation in the winter months with a secondary maximum during late spring and early summer. For other locations, the precipitation is greatest during spring and summer. Stations near the Cascades (such as Sisters, Bend, Chiloquin, Klamath Falls, and Madras) tend to have annual distributions very similar to those in western Oregon: winter maxima are followed by a steady decrease, with lowest monthly averages in midsummer. Farther east, however, spring-summer peaks are much more pronounced. The months of July through September are generally the driest of the year throughout the region. These months are characterized by isolated local thunderstorms. Some months are very wet and others almost completely dry.



Oregon DEQ**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.



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. Table A-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 9 – Southeast Area

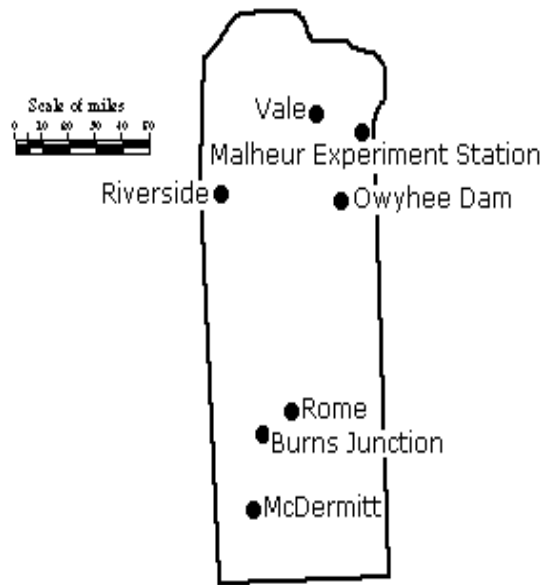
Oregon climate Zone 9 occupies the southeast corner of the state, and is limited to the confines of Malheur County, the state's second largest county. This is a region of high desert, mountain ranges, plateaus, and river valleys, with elevations ranging from slightly above 2,000 feet to nearly 8,000 feet above sea level.

With the exception of a few of the higher mountain areas, Zone 9 receives low amounts of precipitation; most of the region averages less than 15 inches of total precipitation per year. In even the wettest locations, however, annual precipitation is much lower than evaporation. Average annual evaporation at Malheur Experiment Station (west of Ontario) is well above 50 inches per year, most of it coming during the months of April through September.



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Similar to Zone 8, annual precipitation in Zone 9 is distributed rather evenly throughout the year. Table A-1 shows normal monthly and annual precipitation at various locations in the region. Although winter months tend to have the highest total precipitation, the relative contribution of those months to the annual total is much lower than in areas further west. Some locations, such as McDermitt and Rome, report their highest precipitation values during the late spring. Others, such as Danner and Sheaville, have nearly uniform monthly normals for the entire period of October through June. The driest month throughout the region is July.



NOAA Climate Stations in Zone 9.



**Table A-1
Summary of Mean Monthly and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Alea Fall Creek Hatchery	1	230	Depth (in)	14.87	11.8	11.04	6.39	4.03	2.25	0.74	1.31	3.02	6.17	14.15	16.24	92
			% of total	16.2%	12.8%	12.0%	6.9%	4.4%	2.4%	0.8%	1.4%	3.3%	6.7%	15.4%	17.7%	100.0%
Astoria WSO	1	10	Depth (in)	10.01	7.59	7.07	4.61	3.02	2.4	1.16	1.33	2.91	5.73	10.05	10.55	66.42
			% of total	15.1%	11.4%	10.6%	6.9%	4.5%	3.6%	1.7%	2.0%	4.4%	8.6%	15.1%	15.9%	100.0%
Bandon 2 NNE	1	20	Depth (in)	9.29	7.2	7.47	4.36	2.76	1.5	0.4	0.97	1.69	4.11	9.3	9.86	58.91
			% of total	15.8%	12.2%	12.7%	7.4%	4.7%	2.5%	0.7%	1.6%	2.9%	7.0%	15.8%	16.7%	100.0%
Brookings	1	45	Depth (in)	10.85	9.03	9.65	5.3	3.64	1.55	0.53	1.31	2.15	5.84	11.89	12.23	74.78
			% of total	14.5%	12.1%	12.9%	7.1%	4.9%	2.1%	0.7%	1.8%	2.9%	7.8%	15.9%	16.4%	100.0%
Cloverdale	1	20	Depth (in)	12.84	9.38	9.77	5.82	4.28	3.24	1.51	1.65	3.62	6.59	12.24	13.11	84.04
			% of total	15.3%	11.2%	11.6%	6.9%	5.1%	3.9%	1.8%	2.0%	4.3%	7.8%	14.6%	15.6%	100.0%
Elkton 3 SW	1	120	Depth (in)	8.53	6.52	6.29	3.52	1.96	0.99	0.3	0.73	1.44	3.49	8.81	9.71	52.17
			% of total	16.4%	12.5%	12.1%	6.7%	3.8%	1.9%	0.6%	1.4%	2.8%	6.7%	16.9%	18.6%	100.0%
Gold Beach Ranger Station	1	120	Depth (in)	12.02	10.31	10.75	5.98	3.85	1.62	0.47	1.18	2.42	5.73	12.64	13.43	80.4
			% of total	15.0%	12.8%	13.4%	7.4%	4.8%	2.0%	0.6%	1.5%	3.0%	7.1%	15.7%	16.7%	100.0%
Honeyman State Park	1	120	Depth (in)	11.48	9.38	9.23	5.23	3.79	2.37	0.86	1.34	2.49	5.92	11.5	12.41	76.01
			% of total	15.1%	12.3%	12.1%	6.9%	5.0%	3.1%	1.1%	1.8%	3.3%	7.8%	15.1%	16.3%	100.0%
Nehalem 9 NE	1	140	Depth (in)	18.62	15.34	13.49	7.83	5.32	3.85	2.2	1.8	5.48	8.52	18.16	20.54	121.74
			% of total	15.3%	12.6%	11.1%	6.4%	4.4%	3.2%	1.8%	1.5%	4.5%	7.0%	14.9%	16.9%	100.0%
Newport	1	140	Depth (in)	11.11	8.13	8.24	4.84	3.5	2.69	1.04	1.26	2.63	5.36	10.88	12.03	71.72
			% of total	15.5%	11.3%	11.5%	6.7%	4.9%	3.8%	1.5%	1.8%	3.7%	7.5%	15.2%	16.8%	100.0%
North Bend FAA AP	1	10	Depth (in)	9.73	7.76	7.81	4.65	2.89	1.6	0.45	0.96	1.8	4.59	10.27	10.97	63.48
			% of total	15.3%	12.2%	12.3%	7.3%	4.6%	2.5%	0.7%	1.5%	2.8%	7.2%	16.2%	17.3%	100.0%
Otis 2 NE	1	150	Depth (in)	14.88	11.11	11.11	6.77	4.84	3.69	1.68	1.92	3.91	7.58	14.25	15.55	97.27
			% of total	15.3%	11.4%	11.4%	7.0%	5.0%	3.8%	1.7%	2.0%	4.0%	7.8%	14.6%	16.0%	100.0%
Port Orford 2	1	30	Depth (in)	11.72	8.44	9.02	5	3.27	1.95	0.61	1.44	1.96	4.9	11.15	12.36	71.49
			% of total	16.4%	11.8%	12.6%	7.0%	4.6%	2.7%	0.9%	2.0%	2.7%	6.9%	15.6%	17.3%	100.0%
Powers	1	230	Depth (in)	9.67	7.66	7.9	4.74	2.62	1.02	0.3	0.73	1.71	3.82	9.39	10.43	59.99
			% of total	16.1%	12.8%	13.2%	7.9%	4.4%	1.7%	0.5%	1.2%	2.9%	6.4%	15.7%	17.4%	100.0%
Seaside	1	10	Depth (in)	10.88	9.13	8.19	5.11	3.56	2.85	1.55	1.45	3.15	6.17	10.9	11.52	74.46
			% of total	14.6%	12.3%	11.0%	6.9%	4.8%	3.8%	2.1%	1.9%	4.2%	8.3%	14.6%	15.5%	100.0%
Summit	1	750	Depth (in)	10.99	8.54	8.09	4.88	3.17	2.01	0.77	1.04	2.33	4.88	10.33	11.84	68.86
			% of total	16.0%	12.4%	11.7%	7.1%	4.6%	2.9%	1.1%	1.5%	3.4%	7.1%	15.0%	17.2%	100.0%
Tidewater	1	50	Depth (in)	14.81	11.34	11.32	6.67	4.15	2.55	0.83	1.25	2.88	6.24	13.85	15.54	91.42
			% of total	16.2%	12.4%	12.4%	7.3%	4.5%	2.8%	0.9%	1.4%	3.2%	6.8%	15.1%	17.0%	100.0%
Tillamook 1 W	1	10	Depth (in)	13.58	9.94	10.19	6.05	4.45	3.2	1.6	1.75	3.76	7.12	13.08	13.93	88.65
			% of total	15.3%	11.2%	11.5%	6.8%	5.0%	3.6%	1.8%	2.0%	4.2%	8.0%	14.8%	15.7%	100.0%
Willamina 2 S	1	240	Depth (in)	7.93	6.27	6.03	3.15	1.79	1.18	0.5	0.69	1.74	3.65	7.5	9.54	49.96



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Beaverton	2	270	% of total	15.9%	12.6%	12.1%	6.3%	3.6%	2.4%	1.0%	1.4%	3.5%	7.3%	15.0%	19.1%	100.0%
			Depth (in)	5.74	4.4	3.9	2.49	2.15	1.57	0.68	1.04	1.85	2.66	6.56	6.72	39.77
Bonneville Dam	2	60	% of total	14.4%	11.1%	9.8%	6.3%	5.4%	3.9%	1.7%	2.6%	4.7%	6.7%	16.5%	16.9%	100.0%
			Depth (in)	11.37	9.17	7.87	5.53	3.66	2.57	0.99	1.58	3.24	5.6	11.07	12.35	74.99
Corvallis	2	230	% of total	15.2%	12.2%	10.5%	7.4%	4.9%	3.4%	1.3%	2.1%	4.3%	7.5%	14.8%	16.5%	100.0%
			Depth (in)	6.82	5.04	4.55	2.56	1.95	1.2	0.55	0.87	1.51	3.11	6.77	7.73	42.67
Corvallis Water Bureau	2	590	% of total	16.0%	11.8%	10.7%	6.0%	4.6%	2.8%	1.3%	2.0%	3.5%	7.3%	15.9%	18.1%	100.0%
			Depth (in)	11.73	8.64	7.87	3.95	2.5	1.38	0.43	0.78	1.76	4.26	10.44	12.39	66.13
Cottage Grove 1 S	2	650	% of total	17.7%	13.1%	11.9%	6.0%	3.8%	2.1%	0.7%	1.2%	2.7%	6.4%	15.8%	18.7%	100.0%
			Depth (in)	6.53	5.09	5.24	3.59	2.43	1.39	0.52	0.97	1.65	3.47	7.46	7.2	45.54
Cottage Grove Dam	2	830	% of total	14.3%	11.2%	11.5%	7.9%	5.3%	3.1%	1.1%	2.1%	3.6%	7.6%	16.4%	15.8%	100.0%
			Depth (in)	6.73	5.35	5.47	3.78	2.71	1.53	0.57	1.09	1.81	3.77	7.56	7.51	47.89
Dallas 2 NE	2	290	% of total	14.1%	11.2%	11.4%	7.9%	5.7%	3.2%	1.2%	2.3%	3.8%	7.9%	15.8%	15.7%	100.0%
			Depth (in)	8.08	6	5.64	2.71	1.98	1.22	0.5	0.7	1.55	3.28	7.65	9.11	48.42
Dilley	2	170	% of total	16.7%	12.4%	11.6%	5.6%	4.1%	2.5%	1.0%	1.4%	3.2%	6.8%	15.8%	18.8%	100.0%
			Depth (in)	7.15	5.43	5.07	2.5	1.76	1.35	0.53	0.9	1.58	3.37	6.87	8.26	44.2
Dorena Dam	2	820	% of total	16.2%	12.3%	11.5%	5.7%	4.0%	3.1%	1.2%	2.0%	3.6%	7.6%	15.5%	18.7%	100.0%
			Depth (in)	6.27	5.02	5.22	3.95	2.8	1.81	0.72	1.14	1.94	3.52	7.31	6.96	46.65
Estacada 2 SE	2	410	% of total	13.4%	10.8%	11.2%	8.5%	6.0%	3.9%	1.5%	2.4%	4.2%	7.5%	15.7%	14.9%	100.0%
			Depth (in)	8.53	6.4	6.23	4.77	3.73	2.58	1.03	1.49	2.63	4.55	8.44	8.9	59.28
Eugene WSO AP	2	360	% of total	14.4%	10.8%	10.5%	8.0%	6.3%	4.4%	1.7%	2.5%	4.4%	7.7%	14.2%	15.0%	100.0%
			Depth (in)	7.91	5.65	5.52	3.11	2.16	1.43	0.52	1.08	1.67	3.3	8.32	8.61	49.25
Fern Ridge	2	490	% of total	16.1%	11.5%	11.2%	6.3%	4.4%	2.9%	1.1%	2.2%	3.4%	6.7%	16.9%	17.5%	100.0%
			Depth (in)	6.45	5.02	4.53	2.63	1.84	1.2	0.39	0.75	1.32	2.94	6.92	7.65	41.63
Forest Grove	2	180	% of total	15.5%	12.1%	10.9%	6.3%	4.4%	2.9%	0.9%	1.8%	3.2%	7.1%	16.6%	18.4%	100.0%
			Depth (in)	7.1	5.26	4.86	2.46	1.7	1.29	0.48	0.93	1.6	3.31	6.91	7.98	43.86
Foster Dam	2	550	% of total	16.2%	12.0%	11.1%	5.6%	3.9%	2.9%	1.1%	2.1%	3.6%	7.5%	15.8%	18.2%	100.0%
			Depth (in)	7.13	5.89	5.42	3.94	3.34	2.38	0.74	1.33	2	3.79	7.95	7.86	51.77
Haskins Dam	2	760	% of total	13.8%	11.4%	10.5%	7.6%	6.5%	4.6%	1.4%	2.6%	3.9%	7.3%	15.4%	15.2%	100.0%
			Depth (in)	12.19	9.53	9.08	4.15	2.72	1.51	0.53	0.91	2.27	5.21	11.85	13.58	73.52
Headworks	2	750	% of total	16.6%	13.0%	12.4%	5.6%	3.7%	2.1%	0.7%	1.2%	3.1%	7.1%	16.1%	18.5%	100.0%
			Depth (in)	11.01	8.74	8.36	6.67	5.04	3.81	1.54	2.18	4.02	6.09	10.49	11.55	79.5
Hillsboro	2	160	% of total	13.8%	11.0%	10.5%	8.4%	6.3%	4.8%	1.9%	2.7%	5.1%	7.7%	13.2%	14.5%	100.0%
			Depth (in)	5.87	4.25	4.02	2.15	1.62	1.39	0.54	1.07	1.51	2.82	5.74	6.59	37.57
			% of total	15.6%	11.3%	10.7%	5.7%	4.3%	3.7%	1.4%	2.8%	4.0%	7.5%	15.3%	17.5%	100.0%



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Lacomb	2	520	Depth (in)	7.4	5.7	6.27	4.52	3.57	2.5	1.06	1.55	2.16	4.34	8.53	8.32	55.93
			% of total	13.2%	10.2%	11.2%	8.1%	6.4%	4.5%	1.9%	2.8%	3.9%	7.8%	15.3%	14.9%	100.0%
Leaburg 1 SW	2	680	Depth (in)	8.86	7.17	7.16	5.11	3.72	2.5	0.78	1.29	2.71	4.99	10.15	9.67	64.11
			% of total	13.8%	11.2%	11.2%	8.0%	5.8%	3.9%	1.2%	2.0%	4.2%	7.8%	15.8%	15.1%	100.0%
N. Willamette Exp. St.	2	150	Depth (in)	5.84	4.34	4.06	2.64	2.28	1.7	0.66	1.02	1.93	2.98	6.39	6.94	40.78
			% of total	14.3%	10.6%	10.0%	6.5%	5.6%	4.2%	1.6%	2.5%	4.7%	7.3%	15.7%	17.0%	100.0%
Noti 1 NW	2	450	Depth (in)	10.18	7.68	7.26	3.93	2.38	1.32	0.39	0.8	1.66	4.06	9.86	11.14	60.65
			% of total	16.8%	12.7%	12.0%	6.5%	3.9%	2.2%	0.6%	1.3%	2.7%	6.7%	16.3%	18.4%	100.0%
Oregon City	2	170	Depth (in)	7.13	5.21	4.78	3.41	2.54	1.91	0.78	1.16	2.05	3.44	6.87	7.79	47.06
			% of total	15.2%	11.1%	10.2%	7.2%	5.4%	4.1%	1.7%	2.5%	4.4%	7.3%	14.6%	16.6%	100.0%
Portland KGW-TV	2	160	Depth (in)	6.66	4.62	4.51	2.89	2.23	1.57	0.69	1.13	2.01	3.2	6.4	7.23	43.15
			% of total	15.4%	10.7%	10.5%	6.7%	5.2%	3.6%	1.6%	2.6%	4.7%	7.4%	14.8%	16.8%	100.0%
Portland WSFO AP	2	20	Depth (in)	5.36	3.85	3.56	2.39	2.06	1.48	0.63	1.09	1.75	2.67	5.34	6.13	36.32
			% of total	14.8%	10.6%	9.8%	6.6%	5.7%	4.1%	1.7%	3.0%	4.8%	7.4%	14.7%	16.9%	100.0%
Rex	2	520	Depth (in)	6.28	4.49	4.21	2.59	2.18	1.56	0.63	1	1.82	3.18	6.41	7.02	41.37
			% of total	15.2%	10.9%	10.2%	6.3%	5.3%	3.8%	1.5%	2.4%	4.4%	7.7%	15.5%	17.0%	100.0%
ST Helens	2	100	Depth (in)	5.91	4.61	4.66	2.53	2.41	1.64	0.7	1.37	1.84	3.45	6.7	6.96	42.76
			% of total	13.8%	10.8%	10.9%	5.9%	5.6%	3.8%	1.6%	3.2%	4.3%	8.1%	15.7%	16.3%	100.0%
Salem WSO AP	2	200	Depth (in)	5.91	4.5	4.17	2.42	1.88	1.34	0.58	0.76	1.56	2.98	6.28	6.87	39.24
			% of total	15.1%	11.5%	10.6%	6.2%	4.8%	3.4%	1.5%	1.9%	4.0%	7.6%	16.0%	17.5%	100.0%
Silver Creek Falls	2	1350	Depth (in)	11.47	9.06	9.1	6.37	4.78	3.21	1.15	1.73	3.12	6.02	11.58	12.09	79.69
			% of total	14.4%	11.4%	11.4%	8.0%	6.0%	4.0%	1.4%	2.2%	3.9%	7.6%	14.5%	15.2%	100.0%
Silverton	2	410	Depth (in)	6.5	4.82	4.85	3.37	2.76	1.9	0.84	1.11	2.05	3.41	6.9	7.35	45.85
			% of total	14.2%	10.5%	10.6%	7.4%	6.0%	4.1%	1.8%	2.4%	4.5%	7.4%	15.0%	16.0%	100.0%
Stayton	2	430	Depth (in)	7.12	5.72	5.31	3.65	2.91	2.16	0.86	1.28	2.22	3.97	8.04	8.23	51.48
			% of total	13.8%	11.1%	10.3%	7.1%	5.7%	4.2%	1.7%	2.5%	4.3%	7.7%	15.6%	16.0%	100.0%
Ashland	3	1750	Depth (in)	2.37	1.72	1.95	1.61	1.29	0.91	0.32	0.58	0.92	1.6	2.82	3.06	19.16
			% of total	12.4%	9.0%	10.2%	8.4%	6.7%	4.7%	1.7%	3.0%	4.8%	8.4%	14.7%	16.0%	100.0%
Cave Junction	3	1280	Depth (in)	10.95	7.94	7.43	3.5	1.79	0.57	0.2	0.67	1.36	4	9.9	11.25	59.84
			% of total	18.3%	13.3%	12.4%	5.8%	3.0%	1.0%	0.3%	1.1%	2.3%	6.7%	16.5%	18.8%	100.0%
Curtin	3	400	Depth (in)	5.74	6.57	4.86	3.88	2.53	1.63	0.84	1.01	1.9	3.31	8.21	7.4	49.82
			% of total	11.5%	13.2%	9.8%	7.8%	5.1%	3.3%	1.7%	2.0%	3.8%	6.6%	16.5%	14.9%	100.0%
Drain	3	292	Depth (in)	7.04	5.5	5.27	3.34	2.14	1.14	0.45	0.87	1.42	3.47	7.76	7.82	46.17
			% of total	15.2%	11.9%	11.4%	7.2%	4.6%	2.5%	1.0%	1.9%	3.1%	7.5%	16.8%	16.9%	100.0%
Grants Pass	3	960	Depth (in)	5.16	3.82	3.52	1.84	1.16	0.49	0.22	0.48	0.9	2.45	5.31	5.69	31.67
			% of total	16.3%	12.1%	11.1%	5.8%	3.7%	1.5%	0.7%	1.5%	2.8%	7.7%	16.8%	18.0%	100.0%



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
				Depth (in)	% of total	Depth (in)	% of total	Depth (in)	% of total	Depth (in)	% of total	Depth (in)	% of total	Depth (in)	% of total	Depth (in)
Idleyld Park	3	1080	Depth (in)	9.24	7.2	7.12	4.61	2.96	1.72	0.61	0.97	2.34	4.88	10.78	10.47	63.54
			% of total	14.5%	11.3%	11.2%	7.3%	4.7%	2.7%	1.0%	1.5%	3.7%	7.7%	17.0%	16.5%	100.0%
Lost Creek Dam	3	1580	Depth (in)	4.4	4.11	4.1	2.18	1.81	0.82	0.36	0.77	1.3	2.45	5.56	5.44	33.04
			% of total	13.3%	12.4%	12.4%	6.6%	5.5%	2.5%	1.1%	2.3%	3.9%	7.4%	16.8%	16.5%	100.0%
Medford Exp. St.	3	1457	Depth (in)	2.87	2.05	2.07	1.38	1.11	0.75	0.29	0.61	1.03	1.68	3.34	3.64	21.45
			% of total	13.4%	9.6%	9.7%	6.4%	5.2%	3.5%	1.4%	2.8%	4.8%	7.8%	15.6%	17.0%	100.0%
Medford WSO	3	1300	Depth (in)	2.69	1.93	1.82	1.16	1	0.58	0.26	0.52	0.86	1.49	3.23	3.32	18.85
			% of total	14.3%	10.2%	9.7%	6.2%	5.3%	3.1%	1.4%	2.8%	4.6%	7.9%	17.1%	17.6%	100.0%
Prospect	3	2482	Depth (in)	5.98	4.67	4.62	2.75	2.21	1.03	0.38	0.99	1.44	3.31	6.84	6.83	41.16
			% of total	14.5%	11.3%	11.2%	6.7%	5.4%	2.5%	0.9%	2.4%	3.5%	8.0%	16.6%	16.6%	100.0%
Riddle	3	680	Depth (in)	4.78	3.42	3.46	1.99	1.24	0.64	0.29	0.63	1.1	2.14	5.36	5.56	30.11
			% of total	15.9%	11.4%	11.5%	6.6%	4.1%	2.1%	1.0%	2.1%	3.7%	7.1%	17.8%	18.5%	100.0%
Roseburg KQEN	3	465	Depth (in)	5.13	3.7	3.56	2.24	1.43	0.83	0.43	0.73	1.24	2.23	5.36	5.47	32.44
			% of total	15.8%	11.4%	11.0%	6.9%	4.4%	2.6%	1.3%	2.3%	3.8%	6.9%	16.5%	16.9%	100.0%
Ruch	3	1550	Depth (in)	4.27	2.79	2.89	1.59	1.04	0.77	0.37	0.58	1.05	1.73	4.19	4.73	26.01
			% of total	16.4%	10.7%	11.1%	6.1%	4.0%	3.0%	1.4%	2.2%	4.0%	6.7%	16.1%	18.2%	100.0%
Sutherlin	3	600	Depth (in)	4.8	5.75	4.08	3.26	2.25	1.27	0.71	0.91	1.76	2.86	6.31	5.89	41.13
			% of total	11.7%	14.0%	9.9%	7.9%	5.5%	3.1%	1.7%	2.2%	4.3%	7.0%	15.3%	14.3%	100.0%
Toketee Falls	3	2060	Depth (in)	6.71	5.25	5.42	3.58	2.64	1.51	0.57	1.16	1.74	3.65	7.77	7.47	48.17
			% of total	13.9%	10.9%	11.3%	7.4%	5.5%	3.1%	1.2%	2.4%	3.6%	7.6%	16.1%	15.5%	100.0%
Belknap Springs	4	2150	Depth (in)	11.18	9.22	8.02	4.97	3.55	2.29	0.9	1.19	2.55	5.8	11.89	12.98	73.39
			% of total	15.2%	12.6%	10.9%	6.8%	4.8%	3.1%	1.2%	1.6%	3.5%	7.9%	16.2%	17.7%	100.0%
Detroit Dam	4	1220	Depth (in)	12.79	10.24	9.42	6.39	4.87	3.27	0.9	1.61	3.56	6.42	13.21	13.98	87.1
			% of total	14.7%	11.8%	10.8%	7.3%	5.6%	3.8%	1.0%	1.8%	4.1%	7.4%	15.2%	16.1%	100.0%
Government Camp	4	3980	Depth (in)	13.65	10.01	8.92	7.15	4.75	3.42	1.13	1.83	3.9	6.13	11.92	14.01	86.03
			% of total	15.9%	11.6%	10.4%	8.3%	5.5%	4.0%	1.3%	2.1%	4.5%	7.1%	13.9%	16.3%	100.0%
Marion Forks	4	2480	Depth (in)	10.7	8.24	7.3	4.3	3.31	2.14	0.91	1.27	2.4	4.91	10.62	11.4	68.06
			% of total	15.7%	12.1%	10.7%	6.3%	4.9%	3.1%	1.3%	1.9%	3.5%	7.2%	15.6%	16.7%	100.0%
McKenzie Bridge	4	1480	Depth (in)	9.88	7.33	7.03	5.02	3.58	2.59	0.85	1.36	2.93	5.26	10.01	10.76	67.88
			% of total	14.6%	10.8%	10.4%	7.4%	5.3%	3.8%	1.3%	2.0%	4.3%	7.7%	14.7%	15.9%	100.0%
Oakridge	4	1280	Depth (in)	6.49	4.86	4.84	3.62	2.61	1.68	0.53	1.18	1.74	3.33	7.18	7.12	45.18
			% of total	14.4%	10.8%	10.7%	8.0%	5.8%	3.7%	1.2%	2.6%	3.9%	7.4%	15.9%	15.8%	100.0%
Santiam Junction	4	3750	Depth (in)	7.85	5.89	7.23	4.7	3.51	2.23	1.45	1.6	0.74	2.74	11.63	7.98	54.32
			% of total	14.5%	10.8%	13.3%	8.7%	6.5%	4.1%	2.7%	2.9%	1.4%	5.0%	21.4%	14.7%	100.0%



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Three Lynx	4	1120	Depth (in)	11.37	8.31	7.85	5.36	3.95	2.67	0.9	1.33	2.99	5.32	10.58	11.82	72.43
			% of total	15.7%	11.5%	10.8%	7.4%	5.5%	3.7%	1.2%	1.8%	4.1%	7.3%	14.6%	16.3%	100.0%
Crater Lake	5	6480	Depth (in)	9.66	7.78	8.09	4.6	3.01	2.01	0.68	1.29	2.38	4.75	10.56	10.84	66.28
			% of total	14.6%	11.7%	12.2%	6.9%	4.5%	3.0%	1.0%	1.9%	3.6%	7.2%	15.9%	16.4%	100.0%
Fremont	5	4510	Depth (in)	1.63	0.92	1.17	0.62	0.78	1.01	0.43	0.61	0.38	0.76	1.63	1.81	11.67
			% of total	14.0%	7.9%	10.0%	5.3%	6.7%	8.7%	3.7%	5.2%	3.3%	6.5%	14.0%	15.5%	100.0%
Odell Lake E	5	4800	Depth (in)	4.2	3.54	3.48	1.78	1.37	1.33	0.39	1.01	0.93	1.5	4.3	5.44	33.35
			% of total	12.6%	10.6%	10.4%	5.3%	4.1%	4.0%	1.2%	3.0%	2.8%	4.5%	12.9%	16.3%	100.0%
Summer Lake	5	4190	Depth (in)	1.43	1.06	1.02	0.7	0.98	0.99	0.48	0.6	0.58	0.98	1.65	1.89	12.4
			% of total	11.5%	8.5%	8.2%	5.6%	7.9%	8.0%	3.9%	4.8%	4.7%	7.9%	13.3%	15.2%	100.0%
Wickiup Dam	5	4360	Depth (in)	3.39	2.41	1.95	1.09	0.93	1	0.65	0.79	0.8	1.38	3.13	3.68	21.23
			% of total	16.0%	11.4%	9.2%	5.1%	4.4%	4.7%	3.1%	3.7%	3.8%	6.5%	14.7%	17.3%	100.0%
Antelope	6	2841	Depth (in)	1.58	1.1	0.95	1.16	1.11	1.02	0.4	0.7	0.81	0.89	1.86	1.74	13.41
			% of total	11.8%	8.2%	8.7%	7.1%	8.3%	7.6%	3.0%	5.2%	6.0%	6.6%	13.9%	13.0%	100.0%
Arlington	6	285	Depth (in)	1.31	0.88	0.75	0.64	0.56	0.38	0.22	0.32	0.38	0.56	1.29	1.62	8.83
			% of total	14.8%	10.0%	8.5%	7.2%	6.3%	4.3%	2.5%	3.6%	4.3%	6.3%	14.6%	18.3%	100.0%
Condon	6	2861	Depth (in)	1.54	1.24	1.22	1.23	1.2	1.04	0.44	0.71	0.75	1	1.9	1.85	14.1
			% of total	10.9%	8.8%	8.7%	8.7%	8.5%	7.4%	3.1%	5.0%	5.3%	7.1%	13.5%	13.1%	100.0%
Dufur	6	1330	Depth (in)	1.92	1.28	1.21	0.77	0.71	0.59	0.27	0.5	0.55	0.81	1.76	2.18	12.5
			% of total	15.4%	10.2%	9.7%	6.2%	5.7%	4.7%	2.2%	4.0%	4.4%	6.5%	14.1%	17.4%	100.0%
Heppner	6	1883	Depth (in)	1.53	1.12	1.49	1.32	1.42	0.92	0.35	0.69	0.8	1.04	1.73	1.56	14.04
			% of total	10.9%	8.0%	10.6%	9.4%	10.1%	6.6%	2.5%	4.9%	5.7%	7.4%	12.3%	11.1%	100.0%
Hermiston	6	620	Depth (in)	1.21	0.84	0.78	0.71	0.67	0.46	0.22	0.4	0.44	0.62	1.28	1.37	9.06
			% of total	13.4%	9.3%	8.6%	7.8%	7.4%	5.1%	2.4%	4.4%	4.9%	6.8%	14.1%	15.1%	100.0%
Hood River	6	500	Depth (in)	5.36	3.91	2.93	1.63	0.95	0.69	0.25	0.59	1.14	2.2	5.11	6	31.05
			% of total	17.3%	12.6%	9.4%	5.2%	3.1%	2.2%	0.8%	1.9%	3.7%	7.1%	16.5%	19.3%	100.0%
Kent	6	2723	Depth (in)	1.34	1	1.02	0.96	0.92	0.72	0.46	0.58	0.61	0.78	1.65	1.72	11.77
			% of total	11.4%	8.5%	8.7%	8.2%	7.8%	6.1%	3.9%	4.9%	5.2%	6.6%	14.0%	14.6%	100.0%
Milton-Freewater	6	971	Depth (in)	1.71	1.17	1.52	1.2	1.27	0.94	0.46	0.65	0.77	1.08	1.84	1.71	14.43
			% of total	11.9%	8.1%	10.5%	8.3%	8.8%	6.5%	3.2%	4.5%	5.3%	7.5%	12.8%	11.9%	100.0%
Moro	6	1870	Depth (in)	1.6	0.89	0.98	0.8	0.75	0.56	0.27	0.54	0.42	0.69	1.6	1.71	10.81
			% of total	14.8%	8.2%	9.1%	7.4%	6.9%	5.2%	2.5%	5.0%	3.9%	6.4%	14.8%	15.8%	100.0%
Pendleton WSO	6	1482	Depth (in)	1.51	1.14	1.16	1.04	0.99	0.64	0.35	0.53	0.59	0.86	1.58	1.63	12.02
			% of total	12.6%	9.5%	9.7%	8.7%	8.2%	5.3%	2.9%	4.4%	4.9%	7.2%	13.1%	13.6%	100.0%
The Dalles	6	102	Depth (in)	2.24	1.81	1.22	0.77	0.48	0.43	0.2	0.49	0.5	0.88	2.07	2.9	13.97
			% of total	16.0%	13.0%	8.7%	5.5%	3.4%	3.1%	1.4%	3.5%	3.6%	6.3%	14.8%	20.8%	100.0%
Adel Lake	7	4580	Depth (in)	1.11	0.98	0.93	0.87	0.82	1.01	0.42	0.59	0.58	0.46	1.13	1.09	9.79
			% of total	11.3%	10.0%	9.5%	8.9%	8.4%	10.3%	4.3%	6.0%	5.9%	4.7%	11.5%	11.1%	100.0%
Alkali Lake	7	4330	Depth (in)	0.64	0.52	0.73	0.79	1.1	1.14	0.57	0.75	0.57	0.7	0.78	0.7	9.11
			% of total	7.0%	5.7%	8.0%	8.7%	12.1%	12.5%	6.3%	8.2%	6.3%	7.7%	8.6%	7.7%	100.0%



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Andrew Weston Mine	7	4780	Depth (in)	2.13	1.79	2.14	1.52	1.12	0.9	0.53	0.79	0.96	1	2.38	2.55	17.86
			% of total	11.9%	10.0%	12.0%	8.5%	6.3%	5.0%	3.0%	4.4%	5.4%	5.6%	13.3%	14.3%	100.0%
Barnes	7	3970	Depth (in)	1.22	0.88	0.97	0.79	1.11	1.06	0.71	0.89	0.6	0.79	1.62	1.52	12.19
			% of total	10.0%	7.2%	8.0%	6.5%	9.1%	8.7%	5.8%	7.3%	4.9%	6.5%	13.3%	12.5%	100.0%
Bend	7	3650	Depth (in)	1.83	0.97	0.92	0.6	0.77	0.86	0.49	0.58	0.47	0.65	1.57	1.99	11.7
			% of total	15.6%	8.3%	7.9%	5.1%	6.6%	7.4%	4.2%	5.0%	4.0%	5.6%	13.4%	17.0%	100.0%
Brothers	7	4640	Depth (in)	1.06	0.49	0.64	0.64	1.05	0.95	0.52	0.72	0.49	0.67	1.21	1.1	9.31
			% of total	11.4%	5.3%	6.9%	6.9%	11.3%	10.2%	5.6%	7.7%	5.3%	7.2%	13.0%	11.8%	100.0%
Burns	7	4140	Depth (in)	0.99	0.76	1.01	0.65	0.98	0.83	0.4	0.66	0.56	0.72	1.25	1.15	9.96
			% of total	9.9%	7.6%	10.1%	6.5%	9.8%	8.3%	4.0%	6.6%	5.6%	7.2%	12.6%	11.5%	100.0%
Chiloquin	7	4160	Depth (in)	2.19	2.83	2.47	1.3	1.29	0.65	0.61	0.57	0.82	1.23	3.18	3.59	22.28
			% of total	9.8%	12.7%	11.1%	5.8%	5.8%	2.9%	2.7%	2.6%	3.7%	5.5%	14.3%	16.1%	100.0%
Dayville	7	2260	Depth (in)	0.77	0.74	1.39	1.24	1.82	1.07	0.52	0.94	0.48	0.7	1.09	0.83	11.8
			% of total	6.5%	6.3%	11.8%	10.5%	15.4%	9.1%	4.4%	8.0%	4.1%	5.9%	9.2%	7.0%	100.0%
Double O	7	4140	Depth (in)	1.03	0.69	0.84	0.68	1.17	0.98	0.39	0.84	0.56	0.78	1.09	1.1	10.98
			% of total	9.4%	6.3%	7.7%	6.2%	10.7%	8.9%	3.6%	7.7%	5.1%	7.1%	9.9%	10.0%	100.0%
Drewsey	7	3520	Depth (in)	1.09	0.94	1.12	0.69	0.84	0.51	0.31	0.52	0.51	0.54	1.29	1.28	9.53
			% of total	11.4%	9.9%	11.8%	7.2%	8.8%	5.4%	3.3%	5.5%	5.4%	5.7%	13.5%	13.4%	100.0%
Fossil	7	2650	Depth (in)	1.66	1.23	1.34	1.41	1.27	1.03	0.49	0.8	0.84	1.16	1.92	1.8	15.11
			% of total	11.0%	8.1%	8.9%	9.3%	8.4%	6.8%	3.2%	5.3%	5.6%	7.7%	12.7%	11.9%	100.0%
Grizzly	7	3640	Depth (in)	1.54	1	1.09	0.97	1.23	1.04	0.42	0.77	0.71	0.88	1.79	1.36	12.4
			% of total	12.4%	8.1%	8.8%	7.8%	9.9%	8.4%	3.4%	6.2%	5.7%	7.1%	14.4%	11.0%	100.0%
Hart Mountain Refuge	7	5620	Depth (in)	0.87	0.74	1.22	1.33	1.43	1.34	0.43	0.61	0.82	0.97	1.16	1.13	12.21
			% of total	7.1%	6.1%	10.0%	10.9%	11.7%	11.0%	3.5%	5.0%	6.7%	7.9%	9.5%	9.3%	100.0%
Keno	7	4120	Depth (in)	2.66	1.95	2.07	1.11	1.15	0.97	0.36	0.67	0.73	1.54	2.88	3.21	19.31
			% of total	13.8%	10.1%	10.7%	5.7%	6.0%	5.0%	1.9%	3.5%	3.8%	8.0%	14.9%	16.6%	100.0%
Klamath Falls	7	4100	Depth (in)	1.81	1.28	1.35	0.75	0.85	0.69	0.35	0.62	0.55	1.07	1.97	2.23	13.47
			% of total	13.4%	9.5%	10.0%	5.6%	6.3%	5.1%	2.6%	4.6%	4.1%	7.9%	14.6%	16.6%	100.0%
Madras	7	2230	Depth (in)	1.33	0.88	0.84	0.71	0.79	0.78	0.44	0.54	0.54	0.7	1.49	1.48	10.9
			% of total	12.2%	8.1%	7.7%	6.5%	7.2%	7.2%	4.0%	5.0%	5.0%	6.4%	13.7%	13.6%	100.0%
Malheur	7	2230	Depth (in)	0.89	0.57	1	0.71	1.06	0.91	0.4	0.74	0.51	0.79	1.18	1.04	10.47
			% of total	8.5%	5.4%	9.6%	6.8%	10.1%	8.7%	3.8%	7.1%	4.9%	7.5%	11.3%	9.9%	100.0%
Malin	7	4630	Depth (in)	1.5	1.18	1.6	1.02	1.14	0.85	0.38	0.75	0.79	1.15	1.6	1.5	13.59
			% of total	11.0%	8.7%	11.8%	7.5%	8.4%	6.3%	2.8%	5.5%	5.8%	8.5%	11.8%	11.0%	100.0%
Metolius	7	2500	Depth (in)	1.32	0.86	0.86	0.68	0.76	0.76	0.38	0.6	0.47	0.66	1.54	1.41	9.96
			% of total	13.3%	8.6%	8.6%	6.8%	7.6%	7.6%	3.8%	6.0%	4.7%	6.6%	15.5%	14.2%	100.0%
Mitchell	7	2650	Depth (in)	0.86	0.65	1.04	1.13	1.55	1.25	0.57	0.78	0.74	0.75	1.23	0.99	11.57
			% of total	7.4%	5.6%	9.0%	9.8%	13.4%	10.8%	4.9%	6.7%	6.4%	6.5%	10.6%	8.6%	100.0%
Ochoco Ranch	7	3980	Depth (in)	2.13	1.55	1.37	1.13	1.24	1.29	0.7	0.88	0.94	1.25	2.49	2.38	17.1
			% of total	12.5%	9.1%	8.0%	6.6%	7.3%	7.5%	4.1%	5.1%	5.5%	7.3%	14.6%	13.9%	100.0%



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
P Ranch Refuge	7	4200	Depth (in)	1.05	0.84	1.18	1.08	1.27	1.18	0.39	0.74	0.76	0.9	1.36	1.14	11.69
			% of total	9.0%	7.2%	10.1%	9.2%	10.9%	10.1%	3.3%	6.3%	6.5%	7.7%	11.6%	9.8%	100.0%
Paisley	7	4360	Depth (in)	1.4	0.84	0.97	0.75	0.96	1.08	0.39	0.64	0.5	0.79	1.18	1.52	11.05
			% of total	12.7%	7.6%	8.8%	6.8%	8.7%	9.8%	3.5%	5.8%	4.5%	7.1%	10.7%	13.8%	100.0%
Paulina	7	3680	Depth (in)	1.33	0.88	1.03	0.81	1.08	1.08	0.61	0.67	0.53	0.83	1.44	1.39	12.49
			% of total	10.6%	7.0%	8.2%	6.5%	8.6%	4.9%	5.4%	4.2%	6.6%	11.5%	11.1%	100.0%	
Pelton Dam	7	1410	Depth (in)	1.52	0.93	0.85	0.67	0.67	0.57	0.29	0.46	0.47	0.61	1.5	1.54	10.01
			% of total	15.2%	9.3%	8.5%	6.7%	6.7%	5.7%	2.9%	4.6%	4.7%	6.1%	15.0%	15.4%	100.0%
Prineville	7	2840	Depth (in)	1.01	1.15	0.99	0.9	0.98	0.83	0.76	0.33	0.62	0.76	1.2	1.35	10.74
			% of total	9.4%	10.7%	9.2%	8.4%	9.1%	7.7%	7.1%	3.1%	5.8%	7.1%	11.2%	12.6%	100.0%
Redmond	7	3060	Depth (in)	1.06	0.6	0.69	0.58	0.71	0.73	0.45	0.54	0.41	0.54	1.16	1.09	8.62
			% of total	12.3%	7.0%	8.0%	6.7%	8.2%	8.5%	5.2%	6.3%	4.8%	6.3%	13.5%	12.6%	100.0%
Sisters	7	3180	Depth (in)	2.55	1.66	1.23	0.74	0.55	0.53	0.41	0.45	0.49	0.9	2.2	2.45	14.18
			% of total	18.0%	11.7%	8.7%	5.2%	3.9%	3.7%	2.9%	3.2%	3.5%	6.3%	15.5%	17.3%	100.0%
Sprague River	7	4360	Depth (in)	2.45	1.52	1.81	0.9	0.99	0.84	0.34	0.69	0.68	1.33	2.24	2.34	16.97
			% of total	14.4%	9.0%	10.7%	5.3%	5.8%	4.9%	2.0%	4.1%	4.0%	7.8%	13.2%	13.8%	100.0%
Squaw Butte	7	4660	Depth (in)	1.27	0.72	0.86	0.73	1.13	0.94	0.36	0.73	0.52	0.71	1.23	1.22	10.55
			% of total	12.0%	6.8%	8.2%	6.9%	10.7%	8.9%	3.4%	6.9%	4.9%	6.7%	11.7%	11.6%	100.0%
Whitehorse Ranch	7	4200	Depth (in)	0.59	0.63	0.83	0.97	0.77	0.61	0.24	0.84	0.59	0.55	0.82	0.63	8.61
			% of total	6.9%	7.3%	9.6%	11.3%	8.9%	7.1%	2.8%	9.8%	6.9%	6.4%	9.5%	7.3%	100.0%
Austin	8	4200	Depth (in)	2.78	1.94	1.98	1.44	1.47	1.62	0.72	1.01	1.06	1.32	2.55	3.08	20.49
			% of total	13.6%	9.5%	9.7%	7.0%	7.2%	7.9%	3.5%	4.9%	5.2%	6.4%	12.4%	15.0%	100.0%
Baker	8	3471	Depth (in)	1.03	0.62	0.84	0.82	1.26	1.38	0.58	0.94	0.74	0.63	0.96	1.07	10.87
			% of total	9.5%	5.7%	7.7%	7.5%	11.6%	12.7%	5.3%	8.6%	6.8%	5.8%	8.8%	9.8%	100.0%
Cove	8	3120	Depth (in)	2.53	1.22	2.59	2.61	3.24	2.17	0.42	1.52	0.69	1.23	2.49	1.27	22.47
			% of total	11.3%	5.4%	11.5%	11.6%	14.4%	9.7%	1.9%	6.8%	3.1%	5.5%	11.1%	5.7%	100.0%
Elgin	8	2660	Depth (in)	2.98	2.46	2.27	1.68	1.72	1.46	0.65	0.86	1.05	1.72	3.13	3.52	23.73
			% of total	12.6%	10.4%	9.6%	7.1%	7.2%	6.2%	2.7%	3.6%	4.4%	7.2%	13.2%	14.8%	100.0%
Enterprise	8	3880	Depth (in)	1.44	0.76	1.89	1.56	2.09	1.59	1.01	1.76	0.52	0.55	1.51	0.84	15.53
			% of total	9.3%	4.9%	12.2%	10.0%	13.5%	10.2%	6.5%	11.3%	3.3%	3.5%	9.7%	5.4%	100.0%
Halfway	8	2670	Depth (in)	3.28	2.31	1.92	1.4	1.37	1.31	0.47	0.76	0.92	1.31	3.02	3.5	21.58
			% of total	15.2%	10.7%	8.9%	6.5%	6.3%	6.1%	2.2%	3.5%	4.3%	6.1%	14.0%	16.2%	100.0%
Huntington	8	2130	Depth (in)	1.78	1.36	1.27	0.81	0.91	0.94	0.38	0.67	0.6	0.79	1.81	2.06	13.57
			% of total	13.1%	10.0%	9.4%	6.0%	6.7%	6.9%	2.8%	4.9%	4.4%	5.8%	13.3%	15.2%	100.0%
John Day	8	3060	Depth (in)	1.15	0.82	1.12	1.18	1.56	1.4	0.53	0.95	0.84	0.92	1.47	1.4	13.38
			% of total	8.6%	6.1%	8.4%	8.8%	11.7%	10.5%	4.0%	7.1%	6.3%	6.9%	11.0%	10.5%	100.0%
La Grande	8	2760	Depth (in)	1.96	1.47	1.48	1.42	1.61	1.43	0.63	0.92	0.97	1.24	1.86	1.86	17.18
			% of total	11.4%	8.6%	8.6%	8.3%	9.4%	8.3%	3.7%	5.4%	5.6%	7.2%	10.8%	10.8%	100.0%
Long Creek	8	3720	Depth (in)	1.46	0.93	1.42	1.33	1.46	1.24	0.61	0.86	0.84	1.2	1.67	1.58	14.34



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Monument	8	2000	% of total	10.2%	6.5%	9.9%	9.3%	10.2%	8.6%	4.3%	6.0%	5.9%	8.4%	11.6%	11.0%	100.0%
			Depth (in)	1.48	1.03	1.33	1.31	1.38	1.08	0.46	0.74	0.68	0.92	1.51	1.53	13.73
			% of total	10.8%	7.5%	9.7%	9.5%	10.1%	7.9%	3.4%	5.4%	5.0%	6.7%	11.0%	11.1%	100.0%
Richland	8	2220	Depth (in)	1.53	0.91	0.91	0.96	1.22	1.02	0.63	0.85	0.57	0.71	1.54	1.39	12.59
			% of total	12.2%	7.2%	7.2%	7.6%	9.7%	8.1%	5.0%	6.8%	4.5%	5.6%	12.2%	11.0%	100.0%
			Depth (in)	2.67	1.89	1.87	1.37	1.65	1.78	0.92	0.98	0.92	1.2	2.54	2.91	20.66
Rock Creek	8	7250	% of total	12.9%	9.1%	9.1%	6.6%	8.0%	8.6%	4.5%	4.7%	4.5%	5.8%	12.3%	14.1%	100.0%
			Depth (in)	1.29	1.03	1.17	0.99	1.34	1.11	0.55	0.87	0.66	0.88	1.49	1.67	13.12
			% of total	9.8%	7.9%	8.9%	7.5%	10.2%	8.5%	4.2%	6.6%	5.0%	6.7%	11.4%	12.7%	100.0%
Ukiah	8	3360	Depth (in)	1.93	1.3	1.42	1.32	1.63	1.21	0.63	0.85	0.88	1.22	2.08	1.99	16.19
			% of total	11.9%	8.0%	8.8%	8.2%	10.1%	7.5%	3.9%	5.3%	5.4%	7.5%	12.8%	12.3%	100.0%
			Depth (in)	1.16	0.9	1.18	1.24	1.64	1.56	0.61	0.94	1.04	1	1.32	1.19	13.79
Union	8	2770	% of total	8.4%	6.5%	8.6%	9.0%	11.9%	11.3%	4.4%	6.8%	7.5%	7.3%	9.6%	8.6%	100.0%
			Depth (in)	1.23	0.67	0.76	0.68	1.08	1.14	0.44	0.92	0.54	0.57	1.16	1.28	10.91
			% of total	11.3%	6.1%	7.0%	6.2%	9.9%	10.4%	4.0%	8.4%	4.9%	5.2%	10.6%	11.7%	100.0%
Walla Walla	8	2400	Depth (in)	6.22	4.2	4.71	3.53	2.7	2.1	0.69	1.17	1.86	3.19	5.69	5.26	41.09
			% of total	15.1%	10.2%	11.5%	8.6%	6.6%	5.1%	1.7%	2.8%	4.5%	7.8%	13.8%	12.8%	100.0%
			Depth (in)	1.94	1.34	1.4	1.25	1.69	1.41	0.85	0.9	1.25	1.43	1.88	2	17.15
Wallowa	8	2920	% of total	11.3%	7.8%	8.2%	7.3%	9.9%	8.2%	5.0%	5.2%	7.3%	8.3%	11.0%	11.7%	100.0%
			Depth (in)	1.42	0.96	1.08	0.72	0.98	0.91	0.37	0.57	0.55	0.67	1.56	1.64	11.5
			% of total	12.3%	8.3%	9.4%	6.3%	8.5%	7.9%	3.2%	5.0%	4.8%	5.8%	13.6%	14.3%	100.0%
Burns Junction	9	3930	Depth (in)	0.71	0.83	0.97	0.91	0.84	0.59	0.57	0.57	0.54	0.48	0.81	0.63	8.04
			% of total	8.8%	10.3%	12.1%	11.3%	10.4%	7.3%	7.1%	7.1%	6.7%	6.0%	10.1%	7.8%	100.0%
			Depth (in)	1.35	0.92	1.17	1.17	1.09	1.19	0.44	0.61	0.78	0.93	1.26	1.16	12.57
Danner	9	4230	% of total	10.7%	7.3%	9.3%	9.3%	8.7%	9.5%	3.5%	4.9%	6.2%	7.4%	10.0%	9.2%	100.0%
			Depth (in)	1.33	0.98	0.93	0.74	1.04	0.98	0.44	0.77	0.57	0.61	1.36	1.7	11.31
			% of total	11.8%	8.7%	8.2%	6.5%	9.2%	8.7%	3.9%	6.8%	5.0%	5.4%	12.0%	15.0%	100.0%
Juntura	9	2830	Depth (in)	1.24	0.83	0.92	0.8	0.96	1.05	0.43	0.55	0.53	0.66	1.32	1.54	11.1
			% of total	11.2%	7.5%	8.3%	7.2%	8.6%	9.5%	3.9%	5.0%	4.8%	5.9%	11.9%	13.9%	100.0%
			Depth (in)	1.27	0.94	0.98	0.73	0.82	0.79	0.24	0.52	0.54	0.64	1.26	1.39	10.13
Malheur Exp St	9	2230	% of total	12.5%	9.3%	9.7%	7.2%	8.1%	7.8%	2.4%	5.1%	5.3%	6.3%	12.4%	13.7%	100.0%
			Depth (in)	0.76	0.58	0.9	0.91	1.29	1.08	0.39	0.57	0.56	0.62	0.96	0.87	9.35
			% of total	8.1%	6.2%	9.6%	9.7%	13.8%	11.6%	4.2%	6.1%	6.0%	6.6%	10.3%	9.3%	100.0%
Nyssa	9	2180	Depth (in)	1.25	1.02	0.91	0.81	0.8	0.89	0.25	0.49	0.62	0.67	1.25	1.42	10.4
			% of total	12.0%	9.8%	8.8%	7.8%	7.7%	8.6%	2.4%	4.7%	6.0%	6.4%	12.0%	13.7%	100.0%
			Depth (in)	1.33	0.87	0.82	0.63	0.73	0.72	0.2	0.44	0.53	0.61	1.3	1.5	9.68
Ontario	9	2150	% of total	13.7%	9.0%	8.5%	6.5%	7.5%	7.4%	2.1%	4.5%	5.5%	6.3%	13.4%	15.5%	100.0%
			Depth (in)	0.98	0.75	0.83	0.85	0.91	1.19	0.34	0.54	0.54	0.57	0.92	1.08	9.48
			% of total	10.3%	7.9%	8.8%	9.0%	9.6%	12.6%	3.6%	5.7%	5.7%	6.0%	9.7%	11.4%	100.0%
Riverside	9	3330	Depth (in)	1.08	0.83	1.05	0.71	0.89	0.85	0.48	0.57	0.51	0.61	1.06	1.18	9.76
			% of total	11.1%	8.5%	10.8%	7.3%	9.1%	8.7%	4.9%	5.8%	5.2%	6.3%	10.9%	12.1%	100.0%



**Table A-1 (cont.)
Summary of Mean and Annual Precipitation for Recording Stations for Oregon**

NOAA Station Name	NCDC Zone Number	Elevation (feet)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rome	9	3380	Depth (in)	0.58	0.5	0.83	0.69	1.01	1.05	0.36	0.46	0.58	0.55	0.82	0.63	7.62
			% of total	7.6%	6.6%	10.9%	9.1%	13.3%	13.8%	4.7%	6.0%	7.6%	7.2%	10.8%	8.3%	100.0%
Sheaville	9	4620	Depth (in)	1.64	1.21	1.27	1.22	1.26	1.24	0.46	0.65	0.65	0.99	1.62	1.56	12.48
			% of total	13.1%	9.7%	10.2%	9.8%	10.1%	9.9%	3.7%	5.2%	5.2%	7.9%	13.0%	12.5%	100.0%
Vale	9	2220	Depth (in)	1.17	0.83	0.89	0.71	0.79	0.81	0.35	0.51	0.56	0.64	1.16	1.35	9.77
			% of total	12.0%	8.5%	9.1%	7.3%	8.1%	8.3%	3.6%	5.2%	5.7%	6.6%	11.9%	13.8%	100.0%
Westfall	9	3140	Depth (in)	1.31	0.83	0.81	0.78	0.97	1.08	0.35	0.71	0.52	0.53	1.33	1.35	11.83
			% of total	11.1%	7.0%	6.8%	6.6%	8.2%	9.1%	3.0%	6.0%	4.4%	4.5%	11.2%	11.4%	100.0%