

RECOMMENDED OUTDOOR DESIGN TEMPERATURES

WASHINGTON STATE

- SECOND EDITION -

April, 1986

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Refrigerating and Air-Conditioning Engineers, Inc.

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Vice Chairman.....Roger Wright
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the continuity of this research project.

Donald Owens 1972
Clyde Roodhouse..... 1973
Martin McDougall 1974
Lawrence Humphries 1986

The second edition was prepared by members of the Document Revisions Committee:
Angela B. LaVigne, Richard W. Calvert, and Hossein Khorrarn. Special appreciation is

extended to William A. Holladay, editor of the first edition and past international president of ASHRAE.

PREFACE

These tables present summer and winter design temperatures for approximately 250 localities in the State of Washington. The temperatures presented are percentage levels on an annual basis: summer at the 0.1%, 0.5% and 2.0% levels, winter at the median of the annual lows, 0.2% and 0.6% levels. As an example, the summer dry bulb design temperatures for Sea-Tac Airport (SEA) are:

ANNUAL BASIS		TEMPERATURE
% of Year	Hours	
0.1	9	89 F
0.5	44	83 F
2.0	175	76 F

Suggestions in the first edition of this publication for the use of the summer design temperatures were:

1. The 0.1% 9-hour level should be used only for extremely conservative work: sensitive computer installations, heavy internal loads, etc. - the occasional project that must hold the desired temperature regardless of outside conditions. This column may also be used for the sizing of air cooled condensers.
2. The 0.5% 44-hour column is for the average job.
3. The 2.0% 175-hour column is for the promotional job where every corner must be cut and where equipment cost is more important than exact maintenance of temperature.

Dry bulb and wet bulb temperatures were calculated independently and are on a non-coincident basis.

The winter design temperatures also are shown on an annual percentage basis: 0.2% (18 hours) and 0.6% (53 hours). In the first edition of this publication, it was suggested that the three winter values be used as follows:

Median of Extremes	Residential; large glass areas; light construction
0.2%, 18 hour	Medium construction; daytime use
0.6%, 53 hour	Heavy construction

The Washington State Energy Code effective April 1, 1986 requires the 0.5% column for summer design temperatures and the 0.6% column for winter design temperatures.

Temperatures of 11 localities with "a" beside the name were developed from five to 22 years of hourly data, tabulated by computer. Localities marked "b" record only daily maximum and minimum temperatures, and the design levels were developed from seven to 25 years of records, using the graphical method proposed by Loren W. Crow in ASHRAE Research Project 23. Temperatures for other localities (without Weather Stations) were interpolated using contour lines.

Winter temperatures in Washington are highly variable. Annual minimum temperatures may vary plus or minus 20 degrees from the medians listed. The temperatures listed do not represent the most severe conditions. The temperatures of some metropolitan areas show a gradual increase due to growth in energy output.

The source of the annual heating degree days listed in this document is Appendix A of the Washington State Energy Code Training Manual, 1983 edition, WAOENG-83-14, with permission.

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 Oscar E. Richard, Chairman of ASHRAE TC-4.2, Weather Data and Design Conditions, and Editor of Air Force Manual 88-8, *Engineering Weather Data*.

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ABBREVIATIONS

AFB	Air Force Base	Mtn	Mountain
AP	Airport	Pt	Point

CO	City Office	Res	Reservoir
Exp	Experiment	RS	Ranger Station
Hts	Heights	Sta	Station
JC	Junior or College	Typical:	"4 (miles) NE"

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Station	SUMMER								WINTER			Annual Heating Degree Days
	Elev. Ft.		Design Dry Bulb			Design Wet Bulb			Median Of Extremes	Design Dry Bulb		
			0.1%	0.5%	2.0%	0.1 %	0.5%	2.0%		0.2%	0.6%	
Aberdeen	12	b	87	81	76	64	62	60	20	24	28	5316
Aberdeen 20 NNE	435	b	89	83	78	65	63	61	17	21	25	5539*
Anacortes	30	b	78	72	67	63	61	59	15	20	24	5168
Anatone	3570	b	94	89	84	66	63	61	-16	-12	-4	7345*
Appleton	2336	b	97	92	86	68	65	62	1	6	11	
Alder Dam												5820
Auburn	80		90	84	78	70	67	64	11	17	25	
Battleground	295	b	96	91	84	71	68	65	11	15	19	5263
Bellevue	200		89	83	76	69	67	64	14	20	24	
Bellingham AP	150	b	82	76	70	69	66	63	9	14	19	
2 N	140	b	84	78	72	70	67	64	7	12	17	5738
Benton City 2 NW	680	b	102	98	93	72	69	66	0	6	11	5245*
Bickleton	3000	b	97	92	86	68	65	62	-6	-1	4	6859
Blaine	80	b	79	73	67	69	66	63	9	13	17	5724
Bothell 2 N	100	b	89	83	76	69	66	63	7	12	17	5540*
Bremerton	162	b	89	83	76	70	67	64	17	23	29	
Brier	440		88	82	76	69	67	64	14	19	24	
Buckley 1 NE	685	b	89	83	77	69	66	63	10	16	26	5501
Bumping Lake	3440	b	89	83	78	66	63	60	-16	-10	-5	
Burlington	28		83	77	72	69	66	63	10	15	19	
Camas	48		93	87	80	71	68	65	13	17	21	
Castle Rock	50		92	87	82	70	67	64	13	18	23	
Cedar Lake	1560	b	87	80	74	67	64	61	9	15	20	6525
Centralia	185	b	92	87	81	70	67	64	11	16	21	4982
Central Park	20		87	81	76	64	62	60	19	23	27	
Chehalis	178		92	87	81	70	67	64	11	16	21	
Chelan	1120	b	95	89	82	70	67	64	0	5	10	6151
Cheney	2400	b	99	94	88	69	66	63	-9	-3	4	6606*
Chesaw	3960	b	87	81	74	64	61	59	-21	-16	-11	8459*
Chewalah 2 S	1675	b	98	93	87	70	67	64	-21	-15	-9	7188
Chief Joseph Dam	810	b	100	95	89	71	68	65	-4	1	6	6174*
Clallam Bay 1 NNE	30	b	79	74	68	63	61	59	21	25	28	6332
Clarkston	1186	b	100	94	88	70	67	64	-2	2	10	
Clearbrook	64	b	86	80	74	69	66	63	9	14	19	5807

Clearwater	75	b	86	80	75	65	62	60	18	22	26	5835
Cle Elum	1930	b	97	91	86	69	66	63	-11	-5	1	7020
Clyde Hill	150		89	83	76	69	67	64	14	20	24	
Colfax 1 NW	1955	b	99	94	88	69	66	63	-8	-3	2	6319
College Place	800		101	96	90	71	68	65	-6	-2	6	
Colville AP	1874	b	97	92	86	69	66	63	-12	-7	-2	7097
Conconully	2275	b	91	86	80	67	64	61	-17	-12	-7	7521
Concrete	195	b	89	83	78	70	67	64	10	15	19	5162
Connell 4 NNW	1020	b	104	100	95	72	69	66	-5	1	6	

SUMMER

WINTER

Station	Elev. Ft.		Design Dry Bulb			Design Wet Bulb			Median Of Extremes	Design Dry Bulb		Annual Heating Degree Days
			0.1%	0.5%	2.0%	0.1 %	0.5%	2.0%		0.2%	0.6%	
Cougar 5 E	520	b	97	93	87	71	68	65	15	20	25	
Coulee Dam 1 SW	1700	b	99	94	88	70	67	64	-2	3	9	5964*
Coupeville 1 S	50	b	81	76	71	64	62	60	13	18	21	5609
Cushman Dam	760	b	90	85	79	69	66	63	13	18	22	5426
Dallesport AP	222	b	104	99	92	72	70	67	4	9	14	4978
Darrington RS	550	b	91	85	79	70	67	64	3	8	13	5740*
Davenport	2460	b	97	92	86	68	65	62	-8	-2	5	7129
Dayton 1 WSW	1557	b	102	97	91	70	67	64	-6	-2	5	5628
Deer Park 2 E	2130	b	97	92	86	69	66	63	-18	-12	-5	7347
Des Moines	50		89	83	76	70	67	64	14	20	25	
Diablo Dam	891	b	93	87	-82	69	66	63	5	10	15	6214
Dishman	1950		101	96	90	69	67	64	-4	2	9	
East Bremerton	100		89	83	76	70	67	64	17	23	29	
Edmonds	9		88	82	76	69	67	64	14	19	24	
Electron Headwks	1730	b	88	84	77	68	65	62	6	12	16	
Ellensburg AP	1627	b	95	90	85	68	66	63	-10	-4	2	
CO	1572	b	95	90	85	68	66	63	-8	-2	4	
Elma	68	b	94	88	83	67	64	61	15	20	24	5203
Eltopia 6 W	895	b	102	98	93	71	68	65	-2	4	9	
Elwha RS	360	b	86	81	75	64	62	60	15	20	24	5945*
Enumclaw	742		89	83	77	69	66	63	10	1.6	26	
Ephrata AP	1259	b	102	97	90	69	67	65	-5	0	7	5603
CO	1250	b	101	96	89	69	67	65	0	5	12	
Everett JC	60	b	85	79	73	69	66	63	13	18	23	5347
Paine AFB	598	a	85	79	73	69	66	63	11	16	21	
Fircrest	300		88	82	75	68	66	63	17	23	29	
Forks I E	350	b	86	81	75	69	66	63	15	19	23	5816
Fort Lewis	66	a	90	85	78	70	67	64	12	18	24	
Friday Harbor												5440*
Fruitvale	150		98	94	88	71	68	65	-1	5	1.1	

Glacier RS	935	b	88	82	76	68	65	62	3	8	13	6510*
Glenoma (Kosmos)	870	b	93	89	83	70	67	64	8	14	18	5678
Goldendale	1650	b	99	94	88	70	67	64	-3	2	7	6284
Grandview	811		101	97	92	72	69	66	0	6	12	
Grapeview	30	b	89	83	77	66	63	60	18	24	30	4873
Grayland 2 S	15	b	80	74	69	63	61	59	20	24	28	5291*
Grays River Hatchery	100	b	91	86	80	70	67	64	16	20	24	
Greenwater	1730	b	89	84	78	68	65	62	3	9	1.4	
Grotto	849	b	90	84	78	69	66	63	11	1.6	21	5735*
Harrington 2 S	2260	b	99	94	68	69	66	63	-10	-4	3	
Hartline	1910	b	101	96	90	70	67	64	-4	1	7	6519*
Hatton 8 E	1430	b	103	99	93	71	68	65	-10	-4	1	6035
Holden Village	3220	b	88	81	76	64	62	60	-6	-1	4	8380*

SUMMER

WINTER

Station	Elev. Ft.		Design Dry Bulb			Design Wet Bulb			Median Of Extremes	Design Dry Bulb		Annual Heating Degree Days
			0.1%	0.5%	2.0%	0.1 %	0.5%	2.0%		0.2%	0.6%	
Hoquiam AP	14	b	85	79	74	64	62	60	18	22	26	5085*
Ice Harbor Dam	368	b	104	100	95	72	69	66	6	12	17	
Inchelium 2 NW	1685	b	97	92	86	69	66	63	-10	-5	0	7035*
Issaquah	97		89	83	77	69	67	64	13	19	23	
John Day Dam	186	b	105	100	92	73	70	67	9	14	19	
Kelso AP	26		92	87	82	70	67	64	14	19	24	
Kennewick 10 SW	392	b	101	97	92	71	69	66	2	8	13	4892
Kent	32	b	91	85	78	69	66	63	11	17	21	
Kid Valley	690	b	91	86	80	70	67	64	10	15	20	5769
Kirkland	177		89	83	76	69	67	64	7	12	17	
Lacey	184		90	85	79	68	66	63	7	12	17	
La Center												5480*
Lacrosse 3 ESE	1546	b	103	98	92	70	67	64	-13	-8	-3	5979
La Grande	960	b	93	88	82	70	67	64	13	19	23	
Lake Cle Elum	2255	b	93	87	82	68	65	62	-10	-4	1	7539
Lake Forest Park	30		89	83	76	69	67	64	14	20	24	
Lake Kachess	2270	b	92	86	81	67	64	61	-8	-2	3	7687
Lake Keechelus	2475	b	88	82	77	66	63	60	-6	0	5	8279
Lakewood Center	-		88	82	75	68	66	63	17	23	29	
Landsburg	535	b	90	84	77	69	66	63	10	14	18	5854
Larson AFB	1183	a	100	96	90	70	67	64	-6	-1	6	
Laurier	1644	b	98	93	77	70	67	64	-18	-13	-8	7241
Leavenworth	1128	b	99	93	88	70	67	64	-14	-8	-3	6309*
Lemanasky Lake	3500	b	83	78	72	63	61	59	-17	-12	-7	
Lind 3 NE	1630	b	104	100	94	71	68	65	-6	-1	6	6037
Linwood	1900		101	96	90	69	67	64	-3	3	10	

Little Goose Dam	700	b	106	101	95	72	69	66	11	16	22	
Long Beach 3 NNE	25	b	83	77	72	63	61	59	17	21	25	5332
Longmire RS												7253*
Longview	12	b	92	87	82	70	67	64	14	19	24	5064
Lower Granite Dam	640	b	103	98	92	72	69	66	4	9	14	4575*
Lower Monument Dam	460	b	108	103	98	73	70	67	7	13	18	
Lynden	95		80	74	68	69	67	64	9	13	18	
Lynnwood	340		88	82	76	69	67	64	14	19	24	
Maloft	815	b	101	96	90	71	68	65	-6	-1	4	
Marietta 3 NNW	10	b	80	74	68	63	61	59	8	13	18	5435*
Marysville	15		85	79	73	69	66	63	13	18	23	
McMillin Res.	579	b	88	83	77	69	66	63	11	17	21	5550
McNary Dam	361	b	104	100	95	72	69	66	0	5	11	
Medical Lake	2350		95	90	84	67	65	62	-9	-3	4	
Medina	26		89	83	76	69	67	64	14	20	24	
Mercer Island	40		89	83	76	68	66	63	15	21	25	
Metaline Falls	2107	b	94	89	83	68	65	62	-11	-6	-1	7325*
Methow 2 W	1165	b	100	94	89	70	67	64	-9	-4	1	6700*

SUMMER

WINTER

Station	Elev. Ft.		Design Dry Bulb			Design Wet Bulb			Median Of Extremes	Design Dry Bulb		Annual Heating Degree Days
			0.1%	0.5%	2.0%	0.1 %	0.5%	2.0%		0.2%	0.6%	
Milton	250		88	82	75	68	66	63	17	23	29	
Monroe	120	b	89	83	77	70	67	64	11	16	21	5133
Montesano 3 NW	40		90	84	79	64	62	60	18	22	26	
Moses Lake 3 E	1208	b	100	96	90	70	67	64	-6	-1	6	6404*
Mt. Adams RS	1960	b	94	89	82	68	65	62	-5	0	6	6973
Mt. Baker Lodge												9060*
Mountlake Terrace	440		89	83	76	69	67	64	12	17	22	
Mt. Pleasant												4960*
Mt. Spokane Summit	5890	b	79	74	68	60	58	56	-15	-9	-2	
Mount Vernon 3 WNW	14	b	83	77	71	69	66	63	11	16	20	
Moxee City 10 E	1550	b	97	93	87	70	67	64	-4	2	8	
Mud Mtn. Dam	1308	b	87	82	76	68	65	62	12	18	23	6067
Nespelem 2 S	1890	b	98	93	87	69	66	63	-14	-9	-4	6899
Newhalem	525	b	95	89	84	70	67	64	9	14	19	5754
Newport	2135	b	97	92	86	69	66	63	-15	-10	-5	7406
Normandy Park	200		89	83	76	68	65	62	14	20	24	
North Head												5205*
Northport	1350	b	97	92	86	70	67	64	-8	-3	2	6588
Oak Harbor	10		79	74	69	64	62	60	8	13	16	
Oakville	85	b	90	85	79	66	63	60	11	16	20	5380

Odessa	1540	b	104	100	94	71	68	65	-5	0	7	6148
Olga 2 SE	80	b	77	71	65	63	61	59	15	20	24	5721
Olympia, Priest Pt.	40	b	90	85	79	68	66	63	12	17	22	5530
AP	195	b	90	85	79	68	66	63	7	12	17	5236
Omak 2 NW	1228	b	95	90	84	70	67	64	-7	-2	3	6806*
Opportunity	1975		101	96	90	69	67	64	-5	1	8	
Oroville	1060	b	98	93	87	70	67	64	-5	0	5	6055*
Othello	1190	b	102	98	92	71	68	65	-3	2	9	5858
Packwood	1060	b	96	90	85	70	67	64	5	11	16	5740*
Palmer 3 SE	920	b	90	84	77	69	66	63	12	18	22	5761
Parkland	301		90	84	77	69	67	64	9	15	20	
Pasco	360		102	98	93	71	69	66	2	8	13	
Plain	1940	b	95	89	84	68	65	62	-14	-9	-3	7424
Pleasant View	1665	b	103	98	92	70	67	64	5	10	16	
Pt. Grenville	100	b	74	68	63	62	60	58	19	23	27	5743*
Pomeroy	1810	b	100	95	89	70	67	64	-9	-5	3	5767
Port Angeles	99	b	80	75	69	62	59	56	19	24	28	5842
Port Orchard	10		89	83	76	70	67	64	17	23	29	
Pon Townsend	100	b	81	76	71	63	60	57	17	22	25	5284
Priest Rapids Dam	460	b	106	102	97	73	70	67	2	8	14	
Prosser	675	b	101	97	92	72	69	66	1	7	12	5570
4NE	903	b	100	96	91	71	68	65	0	6	1.1	5181*
Prindle												4600*
Pullman Exp. Sta.	2545	b	96	91	85	68	65	62	-9	-4	1	6624
Puyallup	50	b	92	86	79	70	67	64	9	1.5	1.9	5173

SUMMER

WINTER

Station	Elev. Ft.		Design Dry Bulb			Design Wet Bulb			Median Of Extremes	Design Dry Bulb		Annual Heating Degree Days
			0.1%	0.5%	2.0%	0.1 %	0.5%	2.0%		0.2%	0.6%	
Quilcene 2 SW	123	b	89	83	76	66	63	60	12	18	23	5581
Quillayute AP	179	b	86	81	75	66	63	60	15	19	23	5951
Quinault RS	220	b	90	84	79	66	63	60	17	21	25	5145*
Quincy 1 NE	1274	b	99	94	88	70	67	64	-8	-3	4	6227
Rainier:												
Carbon River	1735	b	84	78	73	67	64	61	12	18	23	
Longmire	2762	b	91	85	80	67	64	61	4	10	15	7344
Paradise RS	5427	b	77	71	56	60	58	56	-3	3	8	9560*
Raymond	11		87	81	76	64	62	60	20	24	28	
Redmond	53		89	83	76	69	67	64	7	12	17	
Renton	40		89	83	76	69	67	64	14	20	24	
Republic	2610	b	92	87	81	67	64	61	-19	-14	-9	7835*
Richland	357	b	105	101	96	71	69	66	0	6	11	5346*
Rimrock Tieton Dam	2730	b	92	86	82	67	64	61	-8	-2	4	7681
Ritzville	1830	b	103	99	93	70	67	64	-6	-1	6	6386

Rosalia	2400	b	97	92	86	68	65	62	-5	0	6	6818
Ross Dam	1236	b	92	86	81	69	66	63	4	9	14	
Ruff 3 SW												6040*
St. John	1945	b	100	95	89	69	66	63	4	9	15	
Sappho 8 E	760	b	88	83	77	64	62	60	15	19	23	6009*
Satus Pass	2630	b	94	90	84	68	65	62	-1	4	10	
Seattle: Boeing	14	b	89	83	76	68	66	63	15	21	25	
Sea-Tac AP	385	a	89	83	76	68	65	62	14	20	24	5145
CO	19	b	88	82	75	68	66	63	20	26	30	4424*
Jackson Park	335	b	88	82	75	68	66	63	15	21	25	
Maple Leaf	420	b	88	82	75	68	66	63	13	19	23	
U. of Wash.	96	b	90	84	77	69	67	64	16	22	26	4695
Sedro Woolley 1 E	50	b	84	78	73	69	66	63	9	14	19	5356
Selah	1108		98	94	88	71	68	65	-1	5	11	
Sequim	180	b	83	78	72	64	62	60	15	20	23	5645
Shelton	22	b	90	85	79	66	63	60	13	18	23	5241
Shoultes	150		85	79	73	69	66	63	13	18	23	
Skamania Fish Hatch.	440	b	99	93	86	71	68	65	15	19	24	
Smyrna	560	b	106	102	96	72	69	66	-4	1	8	5860*
Skykomish												5255*
Snohomish	92		87	81	78	69	66	63	11	16	21	5487
Snoqualmie Falls	440	b	89	83	77	69	66	63	12	18	22	
Pass	3020	b	86	80	74	64	62	60	-5	1	6	
South Broadway	1000		98	94	88	71	68	65	-1	5	11	
So. Olympic Tree Farm	580	b	90	84	79	64	62	60	15	20	24	
Spanaway	329		91	85	78	69	67	64	10	16	20	
Spirit Lake												8395*
Spokane AP	2364	a	97	92	86	67	65	62	-9	-3	4	6835
CO	1875	a	101	96	90	69	67	64	-3	3	10	

SUMMER

WINTER

Station	Elev. Ft.		Design Dry Bulb			Design Wet Bulb			Median Of Extremes	Design Dry Bulb		Annual Heating Degree Days
			0.1%	0.5%	2.0%	0.1 %	0.5%	2.0%		0.2%	0.6%	
Fairchild AFB	2437	a	95	90	84	67	65	62	-9	-3	4	
Sprague	1930	b	101	96	90	70	67	64	-8	-2	4	6536
Stampede Pass	3958	b	82	76	71	63	61	59	-4	2	7	9400*
Startup 1 E	170	b	91	85	79	70	67	64	10	15	20	5181
Stehekin 3 NW	1150	b	91	85	80	69	66	63	2	7	12	6795
Steilacoom	50		90	84	77	69	67	64	9	15	21	
Stevens Pass	4070	b	83	77	72	63	61	59	-4	1	6	9307*
Stevenson												5335*
Stockdill Ranch	2200	b	93	88	83	68	65	62	-24	-19	-14	8497
Sumner	72		92	86	79	70	67	64	9	15	19	
.Sunnyside	747	b	101	97	91	71	68	65	0	6	12	5361

Tacoma McChord	332	a	90	84	77	69	67	64	9	15	21	4835
CO	267	b	88	82	75	68	66	63	17	23	29	
Tatoosh Island	101	b	68	63	59	61	59	58	24	28	31	5719*
Thompson Place	200		90	85	79	68	66	63	10	15	20	7332
Tietort Intake	2280	b	94	88	83	68	65	62	-6	0	6	
Toledo AP	351	b	89	84	79	69	66	63	7	12	17	
Toppenish	756		100	96	90	71	68	65	-1	5	11	
Trinidad 2 SSE	555	b	104	99	93	72	69	66	1	7	13	5268*
Tukwila	50		89	83	76	69	67	64	14	20	24	
Tumwater	87		90	85	79	68	66	63	7	12	17	
University Place	250		88	82	75	68	66	63	17	23	29	
Upper Baker Dam	690	b	89	83	78	69	66	63	4	9	14	
Vancouver	210	b	94	88	82	70	67	64	14	18	22	4667
Vashon Island	231	b	84	78	71	64	62	60	17	23	28	
Walla Walla AP	1170	a	101	96	90	71	68	65	-6	-2	6	4835
CO	949	b	100	95	89	70	67	64	1	5	13	4805
3 W	800	b	101	96	90	71	68	65	-6	-2	6	5040*
Wapato	850	b	99	95	89	71	68	65	-2	4	10	5239
Washougal 8 ENE	760	b	95	89	82	70	67	64	12	16	21	5225*
Waterville	2620	b	94	88	83	67	64	61	-9	-4	1	7517
Wawawai 2 NW	640	b	103	98	92	72	69	66	4	9	14	
Wellpinit	2450	b	98	93	87	68	65	62	-11	-5	1	
Wenatchee AP	1229	b	100	94	89	70	67	64	1	7	13	5799
CO	634	b	98	92	87	69	66	63	-2	4	10	
West Clarkston	825		100	94	88	70	67	64	-2	2	10	
Whidbey Island	32	a	76	71	66	64	62	59	3	8	11	
White River RS	3500	b	87	81	76	64	62	59	1	7	12	
White Swan RS	970	b	100	95	90	71	68	65	-4	2	8	
Whitman Mission	632	b	102	97	91	71	68	65	0	4	11	
Wilbur	2160	b	96	91	85	69	66	63	-7	-2	4	6950
Willapa Harbor	10	b	87	81	76	66	63	60	18	22	26	5078
Wilson Creek	1276	b	101	96	90	71	68	65	-9	-4	3	6232
Wind River	1145	b	96	91	85	70	67	64	5	10	15	6312*
Winthrop 1 WSW	1755	b	96	91	85	69	66	63	-22	-17	-12	7708
Yakima AP	1064	a	98	94	88	71	68	65	-1	5	11	5941

* These entries are 30 year data to 1960. All others are 30 year data to 1970.

TABLE 1**

Average Dewpoint Temperatures (OF)
(A reference for Table 4-16 of the 1986 Washington State Energy Code)

Weather Station	July		August		September		3-Month Average Dewpt.
	Dewpt.	Years*	Dewpt.	Years*	Dewpt.	Years*	
Olympia AP	52	10	53	10	50	9	52
Quillayute AP	52	8	53	8	50	9	52

Seattle - Tacoma AP	51	4	51	4	48	4	50
Seattle - 2725 Montlake Blvd. East	51	5	53	5	50	5	51
Spokane AP	45	9	45	9	41	9	44
Stampede Pass	44	9	45	9	44	9	45
Walla Walla	No dewpoint data available, 1975 - 1985						
Yakima AP	47	8	47	10	43	8	46

**Data based on Local Climatological Data, Monthly Summaries, National Oceanic and Atmospheric Administration, Environmental Data and Information Service, National Climatic Center, Asheville, North Carolina.

* Number of Years of Data, 1975 - 1985.

NOTE: the map of Washington State showing weather stations upon which the data in this report are based is located in a separate file called "ASHTEMP.BMP". This is a Windows 3.x bitmap file approximately 315k in size.