

## APPENDIX D

### DEGREE DAY AND DESIGN TEMPERATURES<sup>a</sup> FOR CITIES IN THE UNITED STATES

STATE	STATION <sup>b</sup>	HEATING DEGREE DAYS (yearly total)	DESIGN TEMPERATURES			DEGREES NORTH LATITUDE <sup>c</sup>
			Winter	Summer		
			97 <sup>1</sup> /2%	Dry bulb 2 <sup>1</sup> /2%	Wet bulb 2 <sup>1</sup> /2%	
AL	Birmingham	2,551	21	94	77	33°3'
	Huntsville	3,070	16	93	77	34°4'
	Mobile	1,560	29	93	79	30°4'
	Montgomery	2,291	25	95	79	32°2'
AK	Anchorage	10,864	-18	68	59	61°1'
	Fairbanks	14,279	-47	78	62	64°5'
	Juneau	9,075	1	70	59	58°2'
	Nome	14,171	-27	62	56	64°3'
AZ	Flagstaff	7,152	4	82	60	35°1'
	Phoenix	1,765	34	107	75	33°3'
	Tucson	1,800	32	102	71	33°1'
	Yuma	974	39	109	78	32°4'
AR	Fort Smith	3,292	17	98	79	35°2'
	Little Rock	3,219	20	96	79	34°4'
	Texarkana	2,533	23	96	79	33°3'
CA	Fresno	2,611	30	100	71	36°5'
	Long Beach	1,803	43	80	69	33°5'
	Los Angeles	2,061	43	80	69	34°0'
	Los Angeles <sup>d</sup>	1,349	40	89	71	34°0'
	Oakland	2,870	36	80	64	37°4'
	Sacramento	2,502	32	98	71	38°3'
	San Diego	1,458	44	80	70	32°4'
	San Francisco	3,015	38	77	64	37°4'
	San Francisco	3,001	40	71	62	37°5'
CO	Alamosa	8,529	-16	82	61	37°3'
	Colorado Springs	6,423	2	88	62	38°5'
	Denver	6,283	1	91	63	39°5'
	Grand Junction	5,641	7	94	63	39°1'
	Pueblo	5,462	0	95	66	38°2'
CT	Bridgeport	5,617	9	84	74	41°1'
	Hartford	6,235	7	88	75	41°5'
	New Haven	5,897	7	84	75	41°2'
DE	Wilmington	4,930	14	89	76	39°4'
DC	Washington	4,224	17	91	77	38°5'
FL	Dayton	879	35	90	79	29°1'
	Fort Myers	442	44	92	79	26°4'
	Jacksonville	1,239	32	94	79	30°3'
	Key West	108	57	90	79	24°3'
	Miami	214	47	90	79	25°5'
	Orlando	766	38	93	78	28°3'
	Pensacola	1,463	29	93	79	30°3'
	Tallahassee	1,485	30	92	78	30°2'
	Tampa	683	40	91	79	28°0'
	West Palm Beach	253	45	91	79	26°4'
GA	Athens	2,929	22	92	77	34°0'
	Atlanta	2,961	22	92	76	33°4'
	Augusta	2,397	23	95	79	33°2'
	Columbus	2,383	24	93	78	32°3'
	Macon	2,136	25	93	78	32°4'
	Rome	3,326	22	93	78	34°2'
	Savannah	1,819	27	93	79	32°1'
HI	Hilo	0	62	83	74	19°4'
	Honolulu	0	63	86	75	21°2'

(Continued)

APPENDIX D

DEGREE DAY AND DESIGN TEMPERATURES<sup>a</sup> FOR CITIES IN THE UNITED STATES—(Continued)

STATE	STATION <sup>b</sup>	HEATING DEGREE DAYS (yearly total)	DESIGN TEMPERATURES			DEGREES NORTH LATITUDE <sup>c</sup>
			Winter	Summer		
			97 <sup>1</sup> / <sub>2</sub> %	Dry bulb 2 <sup>1</sup> / <sub>2</sub> %	Wet bulb 2 <sup>1</sup> / <sub>2</sub> %	
ID	Boise	5,809	10	94	66	43°3'
	Lewiston	5,542	6	93	66	46°2'
	Pocatello	7,033	-1	91	63	43°0'
IL	Chicago (Midway)	6,155	0	91	75	41°5'
	Chicago (O'Hare)	6,639	-4	89	76	42°0'
	Chicago <sup>d</sup>	5,882	2	91	77	41°5'
	Moline	6,408	-4	91	77	41°3'
	Peoria	6,025	-4	89	76	40°4'
	Rockford	6,830	-4	89	76	42°1'
	Springfield	5,429	2	92	77	39°5'
IN	Evansville	4,435	9	93	78	38°0'
	Fort Wayne	6,205	1	89	75	41°0'
	Indianapolis	5,699	2	90	76	39°4'
	South Bend	6,439	1	89	75	41°4'
IA	Burlington	6,114	-3	91	77	40°5'
	Des Moines	6,588	-5	91	77	41°3'
	Dubuque	7,376	-7	88	75	42°2'
	Sioux City	6,951	-7	92	77	42°2'
	Waterloo	7,320	-10	89	77	42°3'
KS	Dodge City	4,986	5	97	73	37°5'
	Goodland	6,141	0	96	70	39°2'
	Topeka	5,182	4	96	78	39°0'
	Wichita	4,620	7	98	76	37°4'
KY	Covington	5,265	6	90	75	39°0'
	Lexington	4,683	8	91	76	38°0'
	Louisville	4,660	10	93	77	38°1'
LA	Alexandria	1,921	27	94	79	31°2'
	Baton Rouge	1,560	29	93	80	30°3'
	Lake Charles	1,459	31	93	79	30°1'
	New Orleans	1,385	33	92	80	30°0'
	Shreveport	2,184	25	96	79	32°3'
ME	Caribou	9,767	-13	81	69	46°5'
	Portland	7,511	-1	84	72	43°4'
MD	Baltimore	4,654	13	91	77	39°1'
	Baltimore <sup>d</sup>	4,111	17	89	78	39°2'
	Frederick	5,087	12	91	77	39°2'
MA	Boston	5,634	9	88	74	42°2'
	Pittsfield	7,578	-3	84	72	42°3'
	Worcester	6,969	4	84	72	42°2'
MI	Alpena	8,506	-6	85	72	45°0'
	Detroit (City)	6,232	6	88	74	42°2'
	Escanaba <sup>d</sup>	8,481	-7	83	71	45°4'
	Flint	7,377	1	87	74	43°0'
	Grand Rapids	6,894	5	88	74	42°5'
	Lansing	6,909	1	87	74	42°5'
	Marquette <sup>d</sup>	8,393	-8	81	70	46°3'
	Muskegon	6,696	6	84	73	43°1'
Sault Ste. Marie	9,048	-8	81	70	46°3'	
MN	Duluth	10,000	-16	82	70	46°5'
	Minneapolis	8,382	-12	89	75	44°5'
	Rochester	8,295	-12	87	75	44°0'
MS	Jackson	2,239	25	95	78	32°2'
	Meridian	2,289	23	95	79	32°2'
	Vicksburg <sup>d</sup>	2,041	26	95	80	32°2'

(Continued)

DEGREE DAY AND DESIGN TEMPERATURES<sup>a</sup> FOR CITIES IN THE UNITED STATES—(Continued)

STATE	STATION <sup>b</sup>	HEATING DEGREE DAYS (yearly total)	DESIGN TEMPERATURES			DEGREES NORTH LATITUDE <sup>c</sup>
			Winter	Summer		
			97 <sup>1</sup> /2%	Dry bulb 2 <sup>1</sup> /2%	Wet bulb 2 <sup>1</sup> /2%	
MO	Columbia	5,046	4	94	77	39°0'
	Kansas City	4,711	6	96	77	39°1'
	St. Joseph	5,484	2	93	79	39°5'
	St. Louis	4,900	6	94	77	38°5'
	St. Louis <sup>d</sup>	4,484	8	94	77	38°4'
	Springfield	4,900	9	93	77	37°1'
MT	Billings	7,049	-10	91	66	45°5'
	Great Falls	7,750	-15	88	62	47°3'
	Helena	8,129	-16	88	62	46°4'
	Missoula	8,125	-6	88	63	46°5'
NE	Grand Island	6,530	-3	94	74	41°0'
	Lincoln <sup>d</sup>	5,864	-2	95	77	40°5'
	Norfolk	6,979	-4	93	77	42°0'
	North Platte	6,684	-4	94	72	41°1'
	Omaha	6,612	-3	91	77	41°2'
	Scottsbluff	6,673	-3	92	68	41°5'
	NV	Elko	7,433	-2	92	62
Ely		7,733	-4	87	59	39°1'
Las Vegas		2,709	28	106	70	36°1'
Reno		6,332	10	92	62	39°3'
Winnemucca		6,761	3	94	62	40°5'
NH	Concord	7,383	-3	87	73	43°1'
NJ	Atlantic City	4,812	13	89	77	39°3'
	Newark	4,589	14	91	76	40°4'
	Trenton <sup>d</sup>	4,980	14	88	76	40°1'
NM	Albuquerque	4,348	16	94	65	35°0'
	Raton	6,228	1	89	64	36°5'
	Roswell	3,793	18	98	70	33°2'
	Silver City	3,705	10	94	64	32°4'
NY	Albany	6,875	-1	88	74	42°5'
	Albany <sup>d</sup>	6,201	1	88	74	42°5'
	Binghamton	7,286	1	83	72	42°1'
	Buffalo	7,062	6	85	73	43°0'
	NY (Cent. Park) <sup>d</sup>	4,871	15	89	75	40°5'
	NY (Kennedy)	5,219	15	87	75	40°4'
	NY (LaGuardia)	4,811	15	89	75	40°5'
	Rochester	6,748	5	88	73	43°1'
	Schenetady <sup>d</sup>	6,650	1	87	74	42°5'
Syracuse	6,756	2	87	73	43°1'	
NC	Charlotte	3,181	22	93	76	35°1'
	Greensboro	3,805	18	91	76	36°1'
	Raleigh	3,393	20	92	77	35°5'
	Winston-Salem	3,595	20	91	75	36°1'
ND	Bismarck	8,851	-19	91	71	46°5'
	Devils Lake <sup>d</sup>	9,901	-21	88	71	48°1'
	Fargo	9,226	-18	89	74	46°5'
	Williston	9,243	-21	88	70	48°1'
OH	Akron-Canton	6,037	6	86	73	41°0'
	Cincinnati <sup>d</sup>	4,410	6	90	75	39°1'
	Cleveland	6,351	5	88	74	41°2'
	Columbus	5,660	5	90	75	40°0'
	Dayton	5,622	4	89	75	39°5'
	Mansfield	6,403	5	87	74	40°5'
	Sandusky <sup>d</sup>	5,796	6	91	74	41°3'
	Toledo	6,494	1	88	75	41°4'
	Youngstown	6,417	4	86	73	41°2'

(Continued)

APPENDIX D

DEGREE DAY AND DESIGN TEMPERATURES<sup>a</sup> FOR CITIES IN THE UNITED STATES—(Continued)

STATE	STATION <sup>b</sup>	HEATING DEGREE DAYS (yearly total)	DESIGN TEMPERATURES			DEGREES NORTH LATITUDE <sup>c</sup>
			Winter	Summer		
			97 <sup>1</sup> /2%	Dry bulb 2 <sup>1</sup> /2%	Wet bulb 2 <sup>1</sup> /2%	
OK	Oklahoma City	3,725	13	97	77	35°2'
	Tulsa	3,860	13	98	78	36°1'
OR	Eugene	4,726	22	89	67	44°1'
	Medford	5,008	23	94	68	42°2'
	Portland	4,635	23	85	67	45°4'
	Portland <sup>d</sup>	4,109	24	86	67	45°3'
	Salem	4,754	23	88	68	45°0'
PA	Allentown	5,810	9	88	75	40°4'
	Erie	6,451	9	85	74	42°1'
	Harrisburg	5,251	11	91	76	40°1'
	Philadelphia	5,144	14	90	76	39°5'
	Pittsburgh	5,987	5	86	73	40°3'
	Pittsburgh <sup>d</sup>	5,053	7	88	73	40°3'
	Reading <sup>d</sup>	4,945	13	89	75	40°2'
	Scranton	6,254	5	87	73	41°2'
Williamsport	5,934	7	89	74	41°1'	
RI	Providence	5,954	9	86	74	41°4'
SC	Charleston	2,033	27	91	80	32°5'
	Charleston <sup>d</sup>	1,794	28	92	80	32°5'
	Columbia	2,484	24	95	78	34°0'
SD	Huron	8,223	-14	93	75	44°3'
	Rapid City	7,345	-7	92	69	44°0'
	Sioux Falls	7,839	-11	91	75	43°4'
TN	Bristol	4,143	14	89	75	36°3'
	Chattanooga	3,254	18	93	77	35°0'
	Knoxville	3,494	19	92	76	35°5'
	Memphis	3,232	18	95	79	35°0'
	Nashville	3,578	14	94	77	36°1'
TX	Abilene	2,624	20	99	74	32°3'
	Austin	1,711	28	98	77	30°2'
	Dallas	2,363	22	100	78	32°5'
	El Paso	2,700	24	98	68	31°5'
	Houston	1,396	32	94	79	29°4'
	Midland	2,591	21	98	72	32°0'
	San Angelo	2,255	22	99	74	31°2'
	San Antonio	1,546	30	97	76	29°3'
	Waco	2,030	26	99	78	31°4'
	Wichita Falls	2,832	18	101	76	34°0'
UT	Salt Lake City	6,052	8	95	65	40°5'
VT	Burlington	8,269	-7	85	72	44°3'
VA	Lynchburg	4,166	16	90	76	37°2'
	Norfolk	3,421	22	91	78	36°5'
	Richmond	3,865	17	92	78	37°3'
	Roanoke	4,150	16	91	74	37°2'
WA	Olympia	5,236	22	83	66	47°0'
	Seattle-Tacoma	5,145	26	80	64	47°3'
	Seattle <sup>d</sup>	4,424	27	82	67	47°4'
	Spokane	6,655	2	90	64	47°4'
WV	Charleston	4,476	11	90	75	38°2'
	Elkins	5,675	6	84	72	38°5'
	Huntington	4,446	10	91	77	38°2'
	Parkersburg <sup>d</sup>	4,754	11	90	76	39°2'

(Continued)

DEGREE DAY AND DESIGN TEMPERATURES<sup>a</sup> FOR CITIES IN THE UNITED STATES—(Continued)

STATE	STATION <sup>b</sup>	HEATING DEGREE DAYS (yearly total)	DESIGN TEMPERATURES			DEGREES NORTH LATITUDE <sup>c</sup>
			Winter	Summer		
			97 <sup>1</sup> / <sub>2</sub> %	Dry bulb 2 <sup>1</sup> / <sub>2</sub> %	Wet bulb 2 <sup>1</sup> / <sub>2</sub> %	
WI	Green Bay	8,029	-9	85	74	44°3'
	LaCrosse	7,589	-9	88	75	43°5'
	Madison	7,863	-7	88	75	43°1'
	Milwaukee	7,635	-4	87	74	43°0'
WY	Casper	7,410	-5	90	61	42°5'
	Cheyenne	7,381	-1	86	62	41°1'
	Lander	7,870	-11	88	63	42°5'
	Sheridan	7,680	-8	91	65	44°5'

a All data was extracted from the 1985 ASHRAE Handbook, Fundamentals Volume.

b Design data developed from airport temperature observations unless noted.

c Latitude is given to the nearest 10 minutes. For example, the latitude for Miami, Florida, is given as 25°5', or 14 degrees 50 minutes.

d Design data developed from office locations within an urban area, not from airport temperature observations.

