Appendix A
Federal Regulations and HUD Notices

Subpart C—Energy Audits and Energy Conservation Measures

SOURCE: 61 FR 7969, Feb. 29, 1996, unless otherwise noted.

§ 965.301 Purpose and applicability.

(a) *Purpose.* The purpose of this subpart C is to implement HUD policies in support of national energy conservation goals by requiring PHAs to conduct energy audits and undertake certain cost-effective energy conservation measures.

(b) *Applicability.* The provisions of this subpart apply to all PHAs with PHA-owned housing, but they do not apply to Indian Housing Authorities. (For similar provisions applicable to Indian housing, see part 950 of this chapter.) No PHA-leased project or Section 8 Housing Assistance Payments Program project, including a PHA-owned Section 8 project, is covered by this subpart.

§ 965.302 Requirements for energy audits.

All PHAs shall complete an energy audit for each PHA-owned project under management, not less than once every five years. Standards for energy audits shall be equivalent to State standards for energy audits. Energy audits shall analyze all of the energy conservation measures, and the payback period for these measures, that are pertinent to the type of buildings and equipment operated by the PHA.

§ 965.303 [Reserved]

§ 965.304 Order of funding.

Within the funds available to a PHA, energy conservation measures should be accomplished with the shortest payback periods funded first. A PHA may make adjustments to this funding order because of insufficient funds to accomplish high-cost energy conservation measures (ECM) or where an ECM with a longer pay-back period can be more efficiently installed in conjunction with other planned modernization. A PHA may not install individual utility meters that measure the energy or fuel used for space heating in dwelling units that need substantial weatherization, when installation of meters would result in economic hardship for residents. In these cases, the ECMs related to weatherization shall be accomplished before the installation of individual utility meters.

§ 965.305 Funding.

(a) The cost of accomplishing cost-effective energy conservation measures, including the cost of performing energy audits, shall be funded from operating funds of the PHA to the extent feasible. When sufficient operating funds are not available for this purpose, such costs are eligible for inclusion in a modernization program, for funding from any available development funds in the case of projects still in development, or for other available funds that HUD may designate to be used for energy conservation.

(b) If a PHA finances energy conservation measures from sources other than modernization or operating reserves, such as a loan from a utility entity or a guaranteed savings agreement

with a private energy service company, HUD may agree to provide adjustments in its calculation of the PHA's operating subsidy eligibility under the PFS for the project and utility involved based on a determination that payments can be funded from the reasonably anticipated energy cost savings (See § 990.107(g) of this chapter).

§ 965.306 Energy conservation equipment and practices.

In purchasing original or, when needed, replacement equipment, PHAs shall acquire only equipment that meets or exceeds the minimum efficiency requirements established by the U.S. Department of Energy. In the operation of their facilities, PHAs shall follow operating practices directed to maximum energy conservation.

§ 965.307 Compliance schedule.

All energy conservation measures determined by energy audits to be cost effective shall be accomplished as funds are available.

§ 965.308 Energy performance contracts.

(a) *Method of procurement.* Energy performance contracting shall be conducted using one of the following methods of procurement:

(1) Competitive proposals (see 24 CFR 85.36(d)(3)). In identifying the evaluation factors and their relative importance, as required by § 85.36(d)(3)(i) of this title, the solicitation shall state that technical factors are significantly more important than price (of the energy audit); or

(2) If the services are available only from a single source, noncompetitive proposals (see 24 CFR 85.36(d)(4)(i)(A)).

(b) *HUD Review.* Solicitations for energy performance contracting shall be submitted to the HUD Field Office for review and approval prior to issuance. Energy performance contracts shall be submitted to the HUD Field Office for review and approval before award.

Subpart D—Individual Metering of Utilities for Existing PHA-Owned Projects

SOURCE: 61 FR 7970, Feb. 29, 1996, unless otherwise noted.

§ 965.401 Individually metered utilities.

(a) All utility service shall be individually metered to residents, either through provision of retail service to the residents by the utility supplier or through the use of checkmeters, unless:

(1) Individual metering is impractical, such as in the case of a central heating system in an apartment building;

(2) Change from a mastermetering system to individual meters would not be financially justified based upon a benefit/cost analysis; or

(3) Checkmetering is not permissible under State or local law, or under the policies of the particular utility supplier or public service commission.

(b) If checkmetering is not permissible, retail service shall be considered. Where checkmetering is permissible, the type of individual metering offering the most savings to the PHA shall be selected.

§ 965.402 Benefit/cost analysis.

(a) A benefit/cost analysis shall be made to determine whether a change from a mastermetering system to individual meters will be cost effective, except as otherwise provided in § 965.405.

(b) Proposed installation of checkmeters shall be justified on the basis that the cost of debt service (interest and amortization) of the estimated installation costs plus the operating costs of the checkmeters will be more than offset by reduction in future utilities expenditures to the PHA under the mastermeter system.

(c) Proposed conversion to retail service shall be justified on the basis of net savings to the PHA. This determination involves making a comparison between the reduction in utility expense obtained through eliminating the expense to the PHA for PHA-supplied utilities and the resultant allowance for resident-supplied utilities, based on the cost of utility service to the residents after conversion.

§ 965.403 Funding.

The cost to change mastermeter systems to individual metering of resident consumption, including the costs of

benefit/cost analysis and complete installation of checkmeters, shall be funded from operating funds of the PHA to the extent feasible. When sufficient operating funds are not available for this purpose, such costs are eligible for inclusion in a modernization project or for funding from any available development funds.

§ 965.404 Order of conversion.

Conversions to individually metered utility service shall be accomplished in the following order when a PHA has projects of two or more of the designated categories, unless the PHA has a justifiable reason to do otherwise, which shall be documented in its files.

(a) In projects for which retail service is provided by the utility supplier and the PHA is paying all the individual utility bills, no benefit/cost analysis is necessary, and residents shall be billed directly after the PHA adopts revised payment schedules providing appropriate allowances for resident-supplied utilities.

(b) In projects for which checkmeters have been installed but are not being utilized as the basis for determining utility charges to the residents, no benefit/cost analysis is necessary. The checkmeters shall be used as the basis for utility charges, and residents shall be surcharged for excess utility use.

(c) Projects for which meter loops have been installed for utilization of checkmeters shall be analyzed both for the installation of checkmeters and for conversion to retail service.

(d) Low- or medium-rise family units with a mastermeter system should be analyzed for both checkmetering and conversion to retail service, because of their large potential for energy savings.

(e) Low- or medium-rise housing for the elderly should next be analyzed for both checkmetering and conversion to retail service, since the potential for energy saving is less than for family units.

(f) Electric service under mastermeters for high-rise buildings, including projects for the elderly, should be analyzed for both use of retail service and of checkmeters.

§ 965.405 Actions affecting residents.

(a) Before making any conversion to retail service, the PHA shall adopt revised payment schedules, providing appropriate allowances for the resident-supplied utilities resulting from the conversion.

(b) Before implementing any modifications to utility services arrangements with the residents or charges with respect thereto, the PHA shall make the requisite changes in resident dwelling leases in accordance with 24 CFR part 966.

(c) PHAs must work closely with resident organizations, to the extent practicable, in making plans for conversion of utility service to individual metering, explaining the national policy objectives of energy conservation, the changes in charges and rent structure that will result, and the goals of achieving an equitable structure that will be advantageous to residents who conserve energy.

(d) A transition period of at least six months shall be provided in the case of initiation of checkmeters, during which residents will be advised of the charges but during which no surcharge will be made based on the readings. This trial period will afford residents ample notice of the effects the checkmetering system will have on their individual utility charges and also afford a test period for the adequacy of the utility allowances established.

(e) During and after the transition period, PHAs shall advise and assist residents with high utility consumption on methods for reducing their usage. This advice and assistance may include counseling, installation of new energy conserving equipment or appliances, and corrective maintenance.

§ 965.406 Benefit/cost analysis for similar projects.

PHAs with more than one project of similar design and utilities service may prepare a benefit/cost analysis for a representative project. A finding that a change in metering is not cost effective for the representative project is sufficient reason for the PHA not to perform a benefit/cost analysis on the remaining similar projects.

§ 965.407 Reevaluations of mastermeter systems.

Because of changes in the cost of utility services and the periodic changes in utility regulations, PHAs with mastermeter systems are required to reevaluate mastermeter systems without checkmeters by making benefit/cost analyses at least every 5 years. These analyses may be omitted under the conditions specified in § 965.406.

Subpart E—Resident Allowances for Utilities

SOURCE: 61 FR 7971, Feb. 29, 1996, unless otherwise noted.

§ 965.501 Applicability.

(a) This subpart E applies to public housing, including the Turnkey III Homeownership Opportunities program. This subpart E also applies to units assisted under sections 10(c) and 23 of the U. S. Housing Act of 1937 (42 U.S.C. 1437 *et seq.*) as in effect before amendment by the Housing and Community Development Act of 1974 (12 U.S.C. 1706e) and to which 24 CFR part 900 is not applicable. This subpart E does not apply to Indian housing projects (see 24 CFR part 950).

(b) In rental units for which utilities are furnished by the PHA but there are no checkmeters to measure the actual utilities consumption of the individual units, residents shall be subject to charges for consumption by resident-owned major appliances, or for optional functions of PHA-furnished equipment, in accordance with § 965.502(e) and 965.506(b), but no utility allowance will be established.

§ 965.502 Establishment of utility allowances by PHAs.

(a) PHAs shall establish allowances for PHA-furnished utilities for all checkmetered utilities and allowances for resident-purchased utilities for all utilities purchased directly by residents from the utilities suppliers.

(b) The PHA shall maintain a record that documents the basis on which allowances and scheduled surcharges, and revisions thereof, are established and revised. Such record shall be available for inspection by residents.

(c) The PHA shall give notice to all residents of proposed allowances, scheduled surcharges, and revisions thereof. Such notice shall be given, in the manner provided in the lease or homebuyer agreement, not less than 60 days before the proposed effective date of the allowances or scheduled surcharges or revisions; shall describe with reasonable particularity the basis for determination of the allowances, scheduled surcharges, or revisions, including a statement of the specific items of equipment and function whose utility consumption requirements were included in determining the amounts of the allowances or scheduled surcharges; shall notify residents of the place where the PHA's record maintained in accordance with paragraph (b) of this section is available for inspection; and shall provide all residents an opportunity to submit written comments during a period expiring not less than 30 days before the proposed effective date of the allowances or scheduled surcharges or revisions. Such written comments shall be retained by the PHA and shall be available for inspection by residents.

(d) Schedules of allowances and scheduled surcharges shall not be subject to approval by HUD before becoming effective, but will be reviewed in the course of audits or reviews of PHA operations.

(e) The PHA's determinations of allowances, scheduled surcharges, and revisions thereof shall be final and valid unless found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.

§ 965.503 Categories for establishment of allowances.

Separate allowances shall be established for each utility and for each category of dwelling units determined by the PHA to be reasonably comparable as to factors affecting utility usage.

§ 965.504 Period for which allowances are established.

(a) *PHA-furnished utilities.* Allowances will normally be established on a quarterly basis; however, residents may be surcharged on a monthly basis. The allowances established may provide for seasonal variations.

(b) *Resident-purchased utilities.* Monthly allowances shall be established. The allowances established may provide for seasonal variations.

§ 965.505 Standards for allowances for utilities.

(a) The objective of a PHA in designing methods of establishing utility allowances for each dwelling unit category and unit size shall be to approximate a reasonable consumption of utilities by an energy-conservative household of modest circumstances consistent with the requirements of a safe, sanitary, and healthful living environment.

(b) Allowances for both PHA-furnished and resident-purchased utilities shall be designed to include such reasonable consumption for major equipment or for utility functions furnished by the PHA for all residents (e.g., heating furnace, hot water heater), for essential equipment whether or not furnished by the PHA (e.g., range and refrigerator), and for minor items of equipment (such as toasters and radios) furnished by residents.

(c) The complexity and elaborateness of the methods chosen by the PHA, in its discretion, to achieve the foregoing objective will depend upon the nature of the housing stock, data available to the PHA and the extent of the administrative resources reasonably available to the PHA to be devoted to the collection of such data, the formulation of methods of calculation, and actual calculation and monitoring of the allowances.

(d) In establishing allowances, the PHA shall take into account relevant factors affecting consumption requirements, including:

(1) The equipment and functions intended to be covered by the allowance for which the utility will be used. For instance, natural gas may be used for cooking, heating domestic water, or space heating, or any combination of the three;

(2) The climatic location of the housing projects;

(3) The size of the dwelling units and the number of occupants per dwelling unit;

(4) Type of construction and design of the housing project;

(5) The energy efficiency of PHA-supplied appliances and equipment;

(6) The utility consumption requirements of appliances and equipment whose reasonable consumption is intended to be covered by the total resident payment;

(7) The physical condition, including insulation and weatherization, of the housing project;

(8) Temperature levels intended to be maintained in the unit during the day and at night, and in cold and warm weather; and

(9) Temperature of domestic hot water.

(e) If a PHA installs air conditioning, it shall provide, to the maximum extent economically feasible, systems that give residents the option of choosing to use air conditioning in their units. The design of systems that offer each resident the option to choose air conditioning shall include retail meters or checkmeters, and residents shall pay for the energy used in its operation. For systems that offer residents the option to choose air conditioning, the PHA shall not include air conditioning in the utility allowances. For systems that offer residents the option to choose air conditioning but cannot be checkmetered, residents are to be surcharged in accordance with § 965.506. If an air conditioning system does not provide for resident option, residents are not to be charged, and these systems should be avoided whenever possible.

§ 965.506 Surcharges for excess consumption of PHA-furnished utilities.

(a) For dwelling units subject to allowances for PHA-furnished utilities where checkmeters have been installed, the PHA shall establish surcharges for utility consumption in excess of the allowances. Surcharges may be computed on a straight per unit of purchase basis (e.g., cents per kilowatt hour of electricity) or for stated blocks of excess consumption, and shall be based on the PHA's average utility rate. The basis for calculating such surcharges shall be described in the PHA's schedule of allowances. Changes in the dollar amounts of surcharges based directly on changes in the PHA's

average utility rate shall not be subject to the advance notice requirements of this section.

(b) For dwelling units served by PHA-furnished utilities where checkmeters have not been installed, the PHA shall establish schedules of surcharges indicating additional dollar amounts residents will be required to pay by reason of estimated utility consumption attributable to resident-owned major appliances or to optional functions of PHA-furnished equipment. Such surcharge schedules shall state the resident-owned equipment (or functions of PHA-furnished equipment) for which surcharges shall be made and the amounts of such charges, which shall be based on the cost to the PHA of the utility consumption estimated to be attributable to reasonable usage of such equipment.

§ 965.507 Review and revision of allowances.

(a) *Annual review.* The PHA shall review at least annually the basis on which utility allowances have been established and, if reasonably required in order to continue adherence to the standards stated in § 965.505, shall establish revised allowances. The review shall include all changes in circumstances (including completion of modernization and/or other energy conservation measures implemented by the PHA) indicating probability of a significant change in reasonable consumption requirements and changes in utility rates.

(b) *Revision as a result of rate changes.* The PHA may revise its allowances for resident-purchased utilities between annual reviews if there is a rate change (including fuel adjustments) and shall be required to do so if such change, by itself or together with prior rate changes not adjusted for, results in a change of 10 percent or more from the rates on which such allowances were based. Adjustments to resident payments as a result of such changes shall be retroactive to the first day of the month following the month in which the last rate change taken into account in such revision became effective. Such rate changes shall not be subject to the 60 day notice requirement of § 965.502(c).

§ 965.508 Individual relief.

Requests for relief from surcharges for excess consumption of PHA-purchased utilities, or from payment of utility supplier billings in excess of the allowances for resident-purchased utilities, may be granted by the PHA on reasonable grounds, such as special needs of elderly, ill or disabled residents, or special factors affecting utility usage not within the control of the resident, as the PHA shall deem appropriate. The PHA's criteria for granting such relief, and procedures for requesting such relief, shall be adopted at the time the PHA adopts the methods and procedures for determining utility allowances. Notice of the availability of such procedures (including identification of the PHA representative with whom initial contact may be made by residents), and the PHA's criteria for granting such relief, shall be included in each notice to residents given in accordance with § 965.502(c) and in the information given to new residents upon admission.

Special Attention of:

Housing Authorities; Resident Management Corporations; Public Housing Directors; Administrators, Offices of Native American Programs

Notice PIH 95-47 (HA)

Issued: July 6, 1995
Expires: July 31, 1996

Cross References:

Subject: Extension of Notice PIH 93-40 (PHA/IHA), Air-Conditioning in Public and Indian Housing

This Notice extends Notice PIH 93-40 (PHA/IHA), dated August 10, 1993, which expired August 31, 1994, until July 31, 1996.

Assistant Secretary for Public and Indian Housing

FH : Distribution: W-3-1, W-2(H), R-3-1(PIH), R-6, R-7, R-9, 138-2, 138-7, RMC-2

Special Attention of:
Public Housing Agencies; Indian Housing Authorities; Regional Administrators; Regional Public Housing Directors; Field Office Managers; Public Housing Division Directors; Housing Development Division Directors; Office of Indian Programs Directors; Resident Management Corporations

Notice PIH 93-40 (PHA/IHA)

Issued: August 10, 1993
Expires: August 31, 1994

Cross References:

Subject: Air-Conditioning in Public and Indian Housing

1. Purpose. The purpose of this Notice is to announce a revision in the Department's existing policy regarding air-conditioning (AC) for the public and Indian housing programs.

2. Background. The Department of Housing and Urban Development (HUD) has historically considered AC to be inconsistent with the modest, non-luxury nature of public housing. As a result, HUD has limited the use of Federal funds for the installation of AC.

   One of the goals of the Secretary is to provide public housing agencies and Indian housing authorities (referred to as HAs) with the flexibility to meet local needs and design public housing that is consistent with community standards and custom. Pursuant to the Secretary's objective, the Department is modifying its policy to permit HAs and residents the choice of including AC in their developments within existing funding as outlined below.

3. Development.

   (a) AC systems are optional eligible costs in development. However, the total development cost (TDC) limits are not and will not be adjusted to reflect the cost of AC. If a HA chooses to include AC, development must be accomplished within the existing TDC limits.

PCM : Distribution: W-3-1, W-2(H), R-1, R-3-1(PIH), R-3-2, R-3-3, R-6, R-6-1, R-6-2 R-7, R-7-1, R-7-2, R-9, R-9-1, 138-2, 138-7, RMC-2

(b) In designing AC systems, HAs are to provide, to the maximum extent economically feasible, systems that give residents the option of choosing to use AC in their units. When a system is designed so that each resident can choose AC, the design shall include individual (retail) meters or checkmeters for electricity and residents shall pay for the energy used in its operation in accordance with 24 CFR 965, Subparts D and E and 24 CFR 905, Subpart K. For systems that provide residents the option to choose AC but cannot be checkmetered, residents are to be surcharged as provided by HUD regulation 24 CFR 965.477(b) and 905.872(b). For AC systems that do not provide for resident option, residents are not to be charged for AC; these types of systems should be avoided whenever possible.

(c) Paragraph 3-147 of the Public Housing Development Handbook 7417.1 REV-1, regarding criteria for installing AC is superseded by this Notice.

4. Modernization.

(a) AC systems are optional eligible physical improvements under either the Comprehensive Improvement Assistance Program (CIAP) or the Comprehensive Grant Program (CGP). If AC is to be included, the same criteria identified in paragraph 3(b) above apply. No additional funds will be provided in CIAP or CGP where the HA and its residents choose AC.

(b) For previously approved CIAP developments where AC is desired but was not discussed at the time of approval, HAs shall consult with residents in the same manner as is required in 24 CFR 968.220 and 24 CFR 905.627. At that time, residents should be fully informed of the ramifications of choosing to have AC, including the degree to which other modernization needs will have to be deferred and the estimated energy costs to the resident associated with AC.

(b) Paragraph 4-19A of the CGP Handbook, 7485.3, regarding the installation of central AC or purchase of window or wall units is superseded by this Notice. The Department intends to issue changes to this Handbook to reflect this policy in the near future.

5. Utility Allowances. 24 CFR 965, Subpart E and 24 CFR 905.885 require the establishment of tenant allowances for utilities as well as surcharges for excess consumption for PHA-furnished utilities. HAs are expected to comply with these requirements. In establishing utility allowances pursuant to 24 CFR 965, Subpart E, it is noted that Section 965.472 defines a surcharge to be the amount charged by the HA to a tenant in addition to tenant rent, for consumption of utilities in excess of the allowances for HA-furnished utilities or for excess consumption attributable to tenant-owned major appliances or to optional functions, such as air conditioning, of HA-furnished equipment (also see Section 965.477(b) and 24 CFR 905.872(b)). These sections have been interpreted as not permitting the inclusion of AC in utility allowances. As a result, HAs choosing to install AC shall assure that the cost of utilities attributable to AC when the use is optional shall be borne by the residents.

6. Costs. As indicated above, the cost of the initial installation and replacement of AC systems must be accomplished within existing funding levels; that is, no additional amendment funds for development programs, or additional modernization funds will be requested or provided by the Department to cover the cost of AC. The cost of maintaining AC systems must be absorbed within a HA's existing Performance Funding System eligibility. Residents shall pay the cost of utility consumption in accordance with the regulations outlined in paragraph 5 above.

Assistant Secretary for Public
and Indian Housing

Appendix B
Additional Resources

Resources

Information on the consumption requirements of appliances may be obtained from the following organizations:

Local utility company

American Council for an Energy-Efficient Economy
1001 Connecticut Avenue, NW
Suite 801
Washington, DC 20036
(202) 429-8873

American Gas Association (AGA)
1515 Wilson Blvd.
Arlington, VA 22209
(703) 841-8660

Association of Home Appliance Manufacturers (AHAM)
20 North Wacker Drive
Chicago, IL 60606
(312) 984-5800

Edison Electric Institute (EEI)
701 Pennsylvania Avenue, NW
Washington, DC 20004-2696
(202) 508-5000

Technical assistance on energy or water conservation may be provided by the following organizations:

Local HUD field office

Local utility company

National Center for Appropriate Technology (NCAT)
Energy Efficiency Clearinghouse for Public Housing
3040 Continental Drive
P. O. Box 3838
Butte, MT 59702
(406) 494-4572
Toll free number: 1-800-Ask-NCAT

Local weather data may be obtained from the following organizations:

Local weather station

Local utility company

National Oceanographic and Atmospheric Administration (NOAA)
U. S. Department of Commerce
National Climatic Data Center
Federal Building
Asheville, NC 28801-2733
(704) 271-4800

Other important resources:

State energy offices

Local weatherization providers

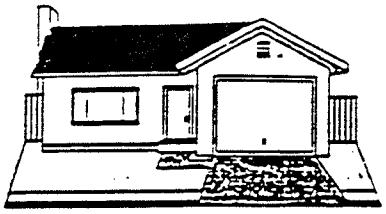
American Society of Heating Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE)
1791 Tullie Circle, NE
Atlanta, GA 30329
(404) 235-0228

Energy Efficiency and Renewable Energy Clearinghouse (EREC)
P. O. Box 3048
Merrifield, VA 22116
(800) 363-3732

National Association of Energy Services Providers

Appendix A

Table of Consumption Levels and Weather Data



ANNUAL ENERGY REQUIREMENTS OF ELECTRIC HOUSEHOLD APPLIANCES

The estimated annual kilowatt-hour consumption of electric appliances listed in this handy reference are based on normal usage. When using these figures for projections, such factors as the size of the specific appliance, the geographical area of use and individual usage should be taken into consideration. Please note that the wattages are not additive since all units are not normally in operation at the same time.

	Average Wattage	Estimated kWh Consumed Annually
Laundry		
Clothes Dryer	5,000	770
Iron(hand)	1,100	50
Washing Machine[1]	-	145
Water Heater	3,800	1,000 - 4,500
-quick recovery	-	350
Comfort Conditioning		
Air Cleaner	45	216
Air Conditioner(room)[2]	670	330 - 1,330
-high efficiency[2]	500	250 - 1,000
Bed Covering	90	80 - 160
Dehumidifier	675	200 - 500
Fan(ceiling)	-	50
Fan(whole house)	-	80
Fan(rollaway)	-	60
Fan(window)	-	10 - 30
Furnace Fan	-	300 - 900
Heater(portable)	800	80 - 240
Heating Pad	70	10
Humidifier	175	50 - 200

[1]Excludes hot water consumption.
[2]Varies widely due to climatic location unit size.
-Amount varies widely.

	Average Wattage	Estimated kWh Consumed Annually
Food Preparation		
Blender	300	1 - 4
Broiler	1,350	33
Carving Knife	90	1
Coffee Maker	-	80
Deep Fryer	1,200	30 - 100
Dishwasher[1]	-	170
Egg Cooker	600	9
Frying Pan	1,100	100
Hot Plate	1,200	62
Mixer	150	1 - 5
Microwave	-	40 - 200
Range		
with oven	-	500 - 700
with self-cleaning	-	600 - 800
Roaster	850	40 - 100
Sandwich Grill	1,200	20 - 50
Toaster	1,200	20 - 50
Trash Compactor	-	6
Waffle Iron	650	10 - 20
Garbage Disposal	850	10
Freezer-manual defrost (20 cu ft)	-	790
-automatic defrost (27 cu ft)	-	990
Refrigerators/Freezers		
-manual defrost (14 cu ft)	-	710
-automatic defrost (20 cu ft)	-	800

	Average Wattage	Estimated kWh Consumed Annually
Health & Beauty		
Hair Dryer	1,200	20 - 70
Heat Lamp(infrared)	250	13
Shaver	15	1
Sun Lamp	800	49
Tooth Brush	10	1
Home Entertainment		
Compact Disc Player	-	24
Home Computer	150	80 - 170
Radio	-	20 - 50
Stereo	90	75
Television- b & w		
-solid state	45	90
Television- color		
-solid state	100	100 - 300
VCR	30	20 - 60
Video Games	-	120
Housewares		
Clock	2	17
Floor Polisher	500	6
Sewing Machine	75	12
Vacuum Cleaner		
-canister	-	20 - 60
-upright	-	15 - 40
Cordless Lawn Mower	-	40

EDISON ELECTRIC INSTITUTE

07-94-58

30-Year Average Monthly Heating Degree Days at Base 65 Deg F.
(1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Heating Deg Day Total	Outdoor 99% Design Temperature Degree F
ALABAMA														
BIRMINGHAM FAA AP	654	517	389	116	20	0	0	0	6	137	391	614	2,844	17
HUNTSVILLE WSO AP	747	605	461	145	32	0	0	0	11	159	441	701	3,302	11
MOBILE WSO AP	451	337	221	40	0	0	0	0	0	39	211	385	1,684	25
MONTGOMERY WSO AP	556	419	299	76	8	0	0	0	0	93	306	512	2,269	22
MUSCLE SHOALS FAA AP	735	582	447	138	27	0	0	0	8	148	435	679	3,199	
TUSCALOOSA FAA AP	629	484	346	88	11	0	0	0	0	116	366	586	2,626	20
ALASKA														
ANCHORAGE WSCMO AP	1,649	1,322	1,280	891	583	312	220	282	507	936	1,317	1,612	10,911	-23
ANNETTE WSO AP	977	792	828	666	484	318	231	211	330	561	753	902	7,053	
BARROW WSO AP	2,471	2,341	2,486	1,977	1,423	960	815	849	1,041	1,541	1,965	2,396	20,265	-45
BETHEL WSO AP	1,857	1,590	1,662	1,215	772	402	319	394	600	1,079	1,434	1,879	13,203	
BETTLES FAA AP	2,424	2,038	1,969	1,335	722	270	231	406	750	1,395	1,992	2,393	15,925	
BIG DELTA FAA/AMOS AP	2,167	1,725	1,634	1,068	580	257	181	322	642	1,234	1,743	2,145	13,698	
COLD BAY WSO AP	1,141	1,030	1,116	957	791	588	462	425	531	787	921	1,116	9,865	
CORDOVA FAA FSS AP	1,302	1,072	1,110	870	660	438	360	372	510	787	1,032	1,252	9,765	
FAIRBANKS WSFO AP	2,384	1,890	1,721	1,083	549	211	148	304	618	1,234	1,866	2,337	14,345	-51
GULKANA FSS/AMOS	2,241	1,711	1,566	1,044	657	333	254	366	642	1,184	1,767	2,173	13,938	
HOMER WSO AP	1,352	1,123	1,159	900	704	489	394	391	540	856	1,104	1,352	10,364	
JUNEAU AP	1,287	1,036	1,026	783	564	354	288	332	474	719	975	1,169	9,007	-4
KETCHIKAN	955	773	812	654	468	303	217	205	321	552	738	887	6,885	
KING SALMON WSO AP	1,600	1,355	1,383	1,005	694	429	326	347	531	973	1,287	1,652	11,582	
KOTZEBUE WSO AP	2,130	1,940	2,031	1,560	1,060	645	375	443	717	1,283	1,719	2,136	16,039	
MC GRATH WSO AP	2,291	1,826	1,739	1,155	648	285	219	357	636	1,231	1,800	2,300	14,487	
NOME WSO AP	1,829	1,674	1,786	1,383	936	585	462	490	687	1,132	1,482	1,879	14,325	-31
NORTHWAY FAA AP	2,595	2,036	1,810	1,140	639	286	207	353	696	1,339	2,022	2,511	15,634	
ST PAUL ISLAND WSO AP	1,206	1,176	1,277	1,095	933	723	598	543	618	843	954	1,153	11,119	
TALKEETNA WSCMO AP	1,724	1,392	1,395	972	629	306	220	322	567	1,020	1,425	1,736	11,708	
TANANA FAA AP	2,356	1,954	1,845	1,218	645	258	203	372	702	1,302	1,908	2,353	15,116	
UNALAKLEET WSO AP	1,910	1,691	1,724	1,287	843	495	341	406	645	1,169	1,551	1,965	14,027	
VALDEZ WSO	1,463	1,193	1,184	882	657	414	363	403	555	853	1,167	1,411	10,545	
WRANGELL AIRPORT	1,138	913	905	702	505	325	264	290	417	645	861	1,045	8,010	
YAKUTAT WSO AP	1,265	1,036	1,076	867	673	459	360	375	498	753	984	1,187	9,533	
ARIZONA														
FLAGSTAFF WSO AP	1,150	966	955	687	462	219	52	93	231	558	858	1,091	7,322	-2
PHOENIX WSFO AP	428	292	185	60	0	0	0	0	0	17	182	388	1,552	31
TUCSON WSO AP	436	328	235	76	0	0	0	0	0	26	209	397	1,707	28
WINSLOW WSO AP	1,004	725	626	348	124	14	0	0	19	252	654	967	4,733	5
YUMA WSO AP	308	192	97	24	0	0	0	0	0	0	108	276	1,005	36
ARKANSAS														
EL DORADO FAA AP	636	488	361	98	11	0	0	0	0	117	351	583	2,645	18
FAYETTEVILLE EXP STN	865	669	559	203	63	0	0	0	16	182	504	778	3,839	7
FORT SMITH WSO AP	806	608	471	132	17	0	0	0	0	135	438	729	3,336	12
LITTLE ROCK FAA AP	791	619	470	139	21	0	0	0	5	143	441	725	3,354	15
CALIFORNIA														
BAKERSFIELD WSO AP	543	353	266	140	22	0	0	0	0	55	276	530	2,185	30
BISHOP WSO AP	865	655	580	337	145	38	0	5	44	256	579	809	4,313	
BLYTHE FAA AIRPORT	363	215	106	33	0	0	0	0	0	9	122	336	1,184	30
BURBANK VALLEY PMP PLT	356	273	247	159	80	36	0	0	9	53	168	320	1,701	37

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DAGGETT FAA AIRPORT	549	371	271	118	14	0	0	0	0	57	296	527	2,203	
FRESNO WSO AP	611	423	344	182	51	9	0	0	0	90	345	595	2,650	28
IMPERIAL	325	195	105	23	0	0	0	0	0	6	118	288	1,060	
LONG BEACH WSO AP	339	273	247	148	71	23	0	0	7	48	155	295	1,606	41
LOS ANGELES WSO AP	331	270	267	195	114	71	19	15	23	77	158	279	1,819	41
LOS ANGELES CIVIC CTR	268	207	190	124	60	25	0	0	5	35	113	218	1,245	37
MODESTO	617	423	350	202	75	17	0	0	6	104	372	601	2,767	28
MOUNT SHASTA WSO CI	973	762	763	561	371	178	37	64	145	422	699	915	5,890	
NEEDLES FAA AIRPORT	421	261	150	42	0	0	0	0	0	10	163	381	1,428	30
OXNARD	351	297	304	242	180	116	68	51	56	109	202	310	2,286	34
PALM SPRINGS	341	224	141	51	0	0	0	0	0	12	161	310	1,240	33
RED BLUFF	614	420	366	218	64	8	0	0	0	82	339	577	2,688	
SACRAMENTO FAA AP	617	426	372	227	120	20	0	0	5	101	360	595	2,843	30
SALINAS FAA AP	465	364	372	296	214	139	102	96	72	136	275	428	2,959	30
SANDBERG WSMO	769	638	663	474	288	116	7	10	33	212	501	716	4,427	
SAN DIEGO WSO AP	314	237	219	144	79	52	6	0	16	43	140	257	1,507	42
SAN FRANCISCO WSO AP	518	386	372	291	210	120	93	84	66	137	291	474	3,042	35
SAN FRAN MISSION DOLORES	437	325	332	291	257	194	202	177	102	127	233	403	3,080	
SANTA BARBARA FAA AP	415	328	319	233	168	102	61	43	55	128	240	378	2,470	34
SANTA MARIA WSO AP	450	364	378	303	245	167	112	102	94	159	270	409	3,053	31
STOCKTON WSO AP	632	445	381	214	67	15	0	0	0	88	363	601	2,806	28
WATSONVILLE WATERWORKS	515	400	403	315	251	170	138	137	112	182	318	477	3,418	
COLORADO														
AKRON FAA AP	1,203	983	942	558	286	93	0	6	143	446	846	1,119	6,625	
ALAMOSA WSO AP	1,482	1,182	1,054	714	440	171	55	96	294	648	1,053	1,420	8,609	-21
BURLINGTON	1,085	882	828	462	210	54	0	0	102	363	741	1,011	5,738	
COLORADO SPRGS WSO AP	1,128	944	921	564	301	103	9	13	155	456	825	1,054	6,473	-3
DENVER WSFO AP	1,088	902	868	525	253	80	0	0	120	408	768	1,004	6,016	-5
EAGLE FAA AP	1,457	1,168	1,051	693	425	190	43	79	285	626	1,023	1,386	8,426	
GRAND JUNCTION WSO AP	1,190	879	738	404	133	20	0	0	60	324	756	1,101	5,605	2
PUEBLO WSO AP	1,082	848	775	405	148	28	0	0	55	335	726	992	5,394	-7
TRINIDAD FAA AP	1,054	868	822	471	212	58	0	0	81	364	732	980	5,642	-2
CONNECTICUT														
BRIDGEPORT WSO AP	1,079	955	840	498	225	24	0	0	42	261	570	967	5,461	6
HARTFORD WSO AP	1,246	1,070	911	519	226	24	0	12	106	384	711	1,141	6,350	3
DELAWARE														
WILMINGTON WSO AP	1,023	879	725	381	128	0	0	0	32	254	579	939	4,940	10
DISTRICT OF COLUMBIA														
WASH DULLES WSO AP	1,020	874	719	357	131	5	0	0	43	291	609	961	5,010	
WASH NATL WSCMO AP	911	776	617	265	72	0	0	0	14	190	510	856	4,211	14
FLORIDA														F
APALACHICOLA WSO AP	368	290	175	30	0	0	0	0	0	22	158	318	1,361	
DAYTONA BEACH WSO AP	241	210	120	17	0	0	0	0	0	0	97	212	897	32
FORT LAUDERDALE	69	79	24	0	0	0	0	0	0	0	13	59	244	42
FORT MYERS FAA AP	128	125	48	0	0	0	0	0	0	0	44	112	457	41
JACKSONVILLE WSO AP	348	282	176	24	0	0	0	0	0	19	161	317	1,327	29
KEY WEST WSO AP	16	25	5	0	0	0	0	0	0	0	0	18	64	55
MELBOURNE	161	163	80	8	0	0	0	0	0	0	56	143	611	
MIAMI WSCMO AP	53	67	17	0	0	0	0	0	0	0	13	56	206	44

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PENSACOLA FAA AP	427	323	211	37	0	0	0	0	0	32	189	359	1,578	25
TALLAHASSEE WSO AP	408	323	187	34	0	0	0	0	0	31	204	376	1,563	27
TAMPA WSCMO AP	203	176	90	9	0	0	0	0	0	0	71	169	718	36
WEST PALM BEACH WSO AP	83	91	25	0	0	0	0	0	0	0	22	78	299	41
GEORGIA														
ALBANY 3 SE	468	371	243	42	0	0	0	0	0	54	247	447	1,872	25
ALMA FAA AP	467	367	245	58	0	0	0	0	0	61	255	447	1,900	
ATHENS WSO AP	670	543	423	131	20	0	0	0	6	132	402	648	2,975	18
ATLANTA WSO AP	701	560	443	144	27	0	0	0	8	137	408	667	3,095	17
AUGUSTA WSO AP	601	475	346	90	10	0	0	0	0	104	344	577	2,547	20
COLUMBUS WSO AP	571	448	323	89	6	0	0	0	0	81	324	536	2,378	21
MACON WSO AP	543	423	298	66	6	0	0	0	0	82	304	518	2,240	21
SAVANNAH WSO AP	483	379	256	63	0	0	0	0	0	60	253	458	1,952	24
HAWAII														
HILO WSO AP 87	0	0	0	0	0	0	0	0	0	0	0	0	0	61
HONOLULU WSFO AP 703	0	0	0	0	0	0	0	0	0	0	0	0	0	62
KAHULUI WSO 398 AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
LIHUE WSO AP 1020.1	0	0	0	0	0	0	0	0	0	0	0	0	0	
IDAHO														
BOISE WSFO AP	1,116	826	741	480	252	97	0	12	127	406	756	1,020	5,833	3
BURLEY FAA AP	1,221	927	859	573	331	141	0	29	204	505	834	1,107	6,731	-3
IDAHO FALLS FAA AP	1,429	1,117	1,008	633	371	176	10	47	252	580	963	1,302	7,888	-11
LEWISTON WSO AP	1,048	753	685	441	232	84	0	17	124	409	735	936	5,464	-1
POCATELLO WSO AP	1,296	997	918	591	336	138	0	20	192	515	879	1,181	7,063	-8
ILLINOIS														
CHICAGO O'HARE WSO AP	1,305	1,089	908	486	240	45	7	18	90	360	774	1,175	6,497	-8
CHICAGO MIDWAY AP 3 SW	1,262	1,053	874	453	208	26	0	8	57	316	738	1,132	6,127	-5
MOLINE WSO AP	1,349	1,100	908	436	184	20	0	11	79	344	774	1,190	6,395	-9
MT VERNON 3 NE	1,020	823	661	264	93	0	0	0	32	222	597	930	4,642	0
PEORIA WSO AP	1,277	1,044	859	416	180	17	0	8	70	327	753	1,147	6,098	-8
ROCKFORD WSO AP	1,389	1,148	958	504	233	35	6	16	99	392	822	1,243	6,845	-9
SPRINGFIELD WSO AP	1,187	969	794	363	132	12	0	8	48	282	693	1,070	5,558	-3
INDIAN														
EVA[illegible]VILLE WSO AP	1,004	815	653	263	95	0	0	0	34	236	603	921	4,624	4
FORT WAYNE WSO AP	1,231	1,047	884	471	216	23	0	12	90	363	744	1,128	6,209	-4
INDIANAPOLIS WSFO	1,150	960	784	387	159	11	0	5	63	302	699	1,057	5,577	-2
SOUTH BEND WSO AP	1,271	1,084	921	507	245	35	6	24	98	368	762	1,141	6,462	-3
IOWA														
BURLINGTON RADIO KBUR	1,305	1,056	871	416	172	16	0	8	70	320	756	1,159	6,149	-7
DES MOINES WSFO AP	1,414	1,142	964	465	186	26	0	13	94	350	816	1,240	6,710	-10
DUBUQUE WSO AP	1,466	1,204	1,017	525	247	49	11	27	134	422	873	1,302	7,277	-12
MARSHALLTOWN	1,432	1,159	964	476	199	32	7	18	112	383	834	1,259	6,875	-12
MASON CITY FAA AP	1,575	1,302	1,116	579	265	64	13	31	165	457	942	1,392	7,901	-15
SIOUX CITY WSO AP	1,457	1,165	986	474	189	33	0	10	113	378	861	1,287	6,953	-11
SPENCER 1 N	1,559	1,274	1,085	564	251	59	11	25	161	453	945	1,383	7,770	
WATERLOO WSO AP	1,510	1,238	1,039	528	229	39	7	26	137	426	897	1,339	7,415	-15
KANSAS														
CHANUTE FAA AIRPORT	1,039	787	656	258	88	7	0	0	27	204	579	921	4,566	3
CONCORDIA WSO AP	1,197	938	803	379	152	22	0	5	68	275	708	1,076	5,623	

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DODGE CITY WSO AP	1,060	834	738	344	115	21	0	0	41	247	666	980	5,046	0
GARDEN CITY FAA AP	1,066	840	753	357	116	22	0	0	41	270	690	992	5,147	-1
GOODLAND WSO AP	1,159	938	890	489	216	55	0	0	108	387	795	1,082	6,119	-5
RUSSELL FAA AP	1,122	879	772	356	127	22	0	0	50	262	687	1,035	5,312	0
SALINA FAA AP	1,097	851	718	313	110	9	0	0	38	228	636	992	4,992	0
TOPEKA WSFO AP	1,147	885	745	329	118	13	0	0	55	259	663	1,029	5,243	0
WICHITA WSO AP	1,045	804	671	275	90	7	0	0	32	211	606	946	4,687	3
KENTUCKY														
BOWLING GREEN FAA AP	911	745	592	238	82	6	0	0	23	218	558	846	4,219	4
COVINGTON WSO AP	1,051	888	722	341	138	9	0	0	44	271	636	970	5,070	1
FRANKFORT LOCK 4	980	829	688	325	119	12	0	0	37	259	597	908	4,754	
HENDERSON 7 SSW	942	764	604	228	80	5	0	0	28	200	549	868	4,268	
LEXINGTON WSO AP	995	832	673	302	106	8	0	0	40	246	612	915	4,729	3
LOUISVILLE WSFO AP	983	818	661	286	105	0	0	0	35	241	600	911	4,640	5
LOUISIANA														
BATON ROUGE WSO AP	451	335	208	33	0	0	0	0	0	54	208	381	1,670	25
LAFAYETTE FAA AP	428	318	201	28	0	0	0	0	0	39	188	349	1,551	26
LAKE CHARLES WSO AP	415	306	200	26	0	0	0	0	0	36	177	338	1,498	27
MONROE FAA AP	574	434	311	71	6	0	0	0	0	90	307	518	2,311	20
NEW ORLEANS WSCMO AP	403	299	188	29	0	0	0	0	0	40	179	327	1,465	29
SHREVEPORT WSO AP	552	416	291	65	5	0	0	0	0	70	278	490	2,167	20
MAINE														
CARIBOU WSO AP	1,683	1,459	1,283	849	474	170	84	122	327	657	1,008	1,516	9,632	-18
PORTLAND WSMO AP	1,349	1,179	1,029	669	381	106	27	55	200	493	792	1,218	7,498	-6
WATERVILLE PMP STN	1,417	1,224	1,039	642	319	75	20	32	181	477	810	1,277	7,513	-8
MARYLAND														
BALTIMORE WSO AP	980	846	688	340	110	0	0	0	27	250	567	921	4,729	10
BALTIMORE WSO CI	896	773	617	270	71	0	0	0	16	162	474	822	4,101	14
MASSACHUSETTS														
BLUE HILL	1,203	1,050	924	561	271	54	6	14	111	366	681	1,094	6,335	
BOSTON WSO AP	1,110	969	834	492	218	27	0	8	76	301	594	992	5,621	6
NANTUCKET FAA AP	1,029	935	871	621	378	126	24	30	108	326	573	908	5,929	
WORCESTER WSO AP	1,283	1,117	983	591	295	61	10	24	144	415	753	1,172	6,848	0
MICHIGAN														
ALPENA WSO AP	1,463	1,308	1,203	747	455	150	75	110	265	549	903	1,290	8,518	-11
BENTON HARBOR AP	1,212	1,047	911	513	272	48	6	22	99	355	723	1,088	6,296	1
DETROIT METRO WSO AP	1,252	1,075	921	519	244	36	5	16	95	377	747	1,132	6,419	3
FLINT WSO AP	1,324	1,154	1,004	573	306	65	14	36	147	433	801	1,184	7,041	-4
GRAND RAPIDS WSO AP	1,296	1,134	989	555	270	44	8	27	114	409	789	1,166	6,801	1
HOLLAND	1,228	1,078	936	525	259	59	12	41	107	367	732	1,101	6,445	2
HOUGHTON LAKE WSO AP	1,476	1,310	1,187	693	389	120	59	94	248	539	918	1,314	8,347	
IRON MTN-KINGSFORD WWT	1,569	1,350	1,194	705	384	121	50	83	267	549	984	1,407	8,663	
JACKSON FAA AP	1,302	1,120	967	537	264	46	9	24	115	404	792	1,175	6,755	1
KALAMAZOO STATE HOSP	1,246	1,070	911	483	218	35	0	12	79	355	747	1,125	6,281	1
LANSING WSO AP	1,314	1,148	995	555	280	48	9	27	133	422	798	1,175	6,904	-3
MUSKEGON WSO AP	1,271	1,131	1,001	591	316	64	15	37	137	421	774	1,132	6,890	2
PELLSTON FAA AP	1,504	1,369	1,252	756	452	144	79	111	274	561	918	1,314	8,734	
SAGINAW FAA AP	1,352	1,184	1,029	588	303	52	10	36	143	436	810	1,200	7,143	0
SAULT STE MARIE WSO	1,575	1,394	1,271	804	496	200	96	125	291	583	966	1,392	9,193	-12

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TRAVERSE CITY FAA AP	1,370	1,240	1,125	669	387	104	33	66	178	471	843	1,212	7,698	-3
MINNESOTA														
ALEXANDRIA FAA AP	1,795	1,498	1,274	705	345	101	20	35	240	558	1,086	1,578	9,235	-22
DULUTH WSO AP	1,752	1,481	1,287	792	484	194	67	104	318	611	1,098	1,569	9,757	-21
GRAND RAPIDS FORESTRY	1,798	1,495	1,271	735	403	138	46	85	301	601	1,107	1,606	9,586	
INTERNL FALLS WSO AP	1,956	1,624	1,376	804	462	168	66	112	364	667	1,203	1,745	10,547	-29
MARSHALL	1,615	1,327	1,135	594	262	62	8	16	164	457	969	1,423	8,032	
MINN-ST PAUL WSO AP	1,649	1,366	1,147	612	286	75	14	26	195	496	993	1,451	8,310	-16
ROCHESTER WSO AP	1,615	1,347	1,153	615	292	78	21	35	185	485	972	1,429	8,227	-17
ST CLOUD WSO AP	1,739	1,448	1,212	663	324	85	18	37	228	539	1,050	1,525	8,868	-15
MISSISSIPPI														
GREENWOOD FAA AP	632	489	353	77	9	0	0	0	0	109	349	580	2,598	15
JACKSON WSFO AP	569	442	313	74	6	0	0	0	0	91	301	504	2,300	21
MERIDIAN WSO AP	575	443	312	79	7	0	0	0	0	111	331	530	2,388	19
TUPELO WSO AP	694	540	409	109	19	0	0	0	5	132	396	642	2,946	14
UNIVERSITY	719	570	432	120	26	0	0	0	11	154	399	654	3,085	
MISSOURI														
COLUMBIA WSO AP	1,107	879	730	314	117	11	0	0	42	247	633	998	5,078	-1
JOPLIN FAA AP	949	739	610	230	73	8	0	0	25	183	528	843	4,188	6
KANSAS CITY WSO AP	1,153	893	745	314	111	12	0	0	42	235	642	1,014	5,161	2
ST LOUIS WSCMO AP	1,045	837	682	272	103	10	0	0	35	224	600	942	4,750	2
SEDALIA WATER PLANT	1,039	812	666	262	94	8	0	0	26	203	579	924	4,613	-1
SPRINGFIELD WSO AP	995	784	660	275	94	10	0	6	35	227	585	899	4,570	3
MONTANA														
BILLINGS WSO AP	1,336	1,053	1,004	612	333	131	10	15	221	487	879	1,184	7,265	-15
BUTTE FAA AP	1,547	1,235	1,221	819	564	337	119	166	437	741	1,113	1,420	9,719	-24
CUT BANK FAA AP	1,513	1,193	1,184	765	477	267	82	125	368	648	1,059	1,352	9,033	-25
GLASGOW WSO AP	1,730	1,394	1,234	666	344	151	15	30	263	577	1,080	1,485	8,969	-22
GREAT FALLS WSCMO AP	1,380	1,075	1,070	648	367	162	18	42	260	524	912	1,194	7,652	-21
HAVRE WSO AP	1,646	1,316	1,197	675	358	168	21	47	292	608	1,077	1,448	8,853	-18
HELENA WSO AP	1,454	1,109	1,066	669	401	194	33	57	304	611	999	1,293	8,190	-21
KALISPELL WSO AP	1,423	1,120	1,070	690	437	249	72	126	360	698	1,029	1,280	8,554	-14
LEWISTOWN FAA AP	1,423	1,154	1,163	747	477	265	70	94	348	605	984	1,256	8,586	-22
LIVINGSTON FAA AP	1,246	1,019	1,042	681	432	215	40	53	301	551	894	1,119	7,593	-20
MILES CITY FAA AP	1,538	1,215	1,079	591	288	117	9	16	217	508	978	1,333	7,889	-20
MISSOULA WSO AP	1,370	1,058	983	633	397	201	39	71	301	648	981	1,249	7,931	-13
NEBRASKA														
CHADRON FAA AP	1,302	1,042	983	570	297	100	9	10	165	477	882	1,194	7,031	-8
GRAND ISLAND WSO AP	1,324	1,044	915	461	184	35	6	0	107	362	804	1,178	6,420	-8
LINCOLN WSO AP	1,327	1,039	884	419	166	22	0	0	83	329	780	1,169	6,218	-5
MC COOK	1,163	913	815	392	170	44	0	0	86	330	744	1,057	5,714	-6
NORFOLK WSO AP	1,429	1,151	998	500	203	37	6	11	123	397	861	1,265	6,981	-8
NORTH PLATTE WSO AP	1,290	1,033	952	522	238	65	7	8	141	439	864	1,184	6,743	-8
OMAHA (EPPLEY FIELD)	1,314	1,036	865	391	148	20	0	6	71	301	750	1,147	6,049	-8
OMAHA (NORTH) WSFO	1,389	1,106	942	456	186	33	7	10	99	342	813	1,218	6,601	
SCOTTSBLUFF WSO AP	1,243	994	952	564	280	91	0	8	160	459	864	1,159	6,774	-8
VALENTINE WSO AP	1,383	1,134	1,048	576	273	73	8	10	154	470	912	1,259	7,300	
NEVADA														
ELKO FAA AP	1,296	1,002	930	645	406	190	27	60	248	561	906	1,212	7,483	-8

30-Year Average Monthly Heating Degree Days at Base 65 Deg F. (1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Heating Deg Day Total	Outdoor 99% Design Temperature Degree F
ELY WSO AP	1,283	1,039	998	711	470	241	23	62	265	589	930	1,203	7,814	-10
LAS VEGAS WSO AP	645	451	324	126	10	0	0	0	0	74	357	614	2,601	25
LOVELOCK FAA AP	1,119	834	772	495	255	86	0	17	126	428	798	1,060	5,990	8
RENO WSFO AP	1,026	781	766	546	328	145	17	50	168	456	747	992	6,022	5
TONOPAH AP	1,079	851	787	512	269	92	0	13	108	407	756	1,026	5,900	5
WINNEMUCCA WSO AP	1,141	865	849	597	359	149	6	42	199	518	831	1,073	6,629	-1
NEW HAMPSHIRE														
CONCORD WSO AP	1,376	1,187	1,014	624	315	58	16	45	182	487	810	1,246	7,360	-8
MOUNT WASHINGTON	1,838	1,680	1,649	1,269	949	609	502	558	714	1,039	1,332	1,739	13,878	
NEW JERSEY														
ATLANTIC CITY WSO AP	1,001	871	741	399	131	9	0	0	35	262	570	927	4,946	10
NEWARK WSO AP	1,042	907	756	399	143	0	0	0	34	243	564	946	5,034	10
NEW MEXICO														
ALBUQUERQUE WSFO AP	924	700	595	282	58	0	0	0	7	218	615	893	4,292	12
CLAYTON WSO AP	989	809	763	431	172	38	0	0	73	324	681	927	5,207	
LAS VEGAS FAA AP	1,048	871	843	537	279	76	19	30	138	434	756	989	6,020	
TUCUMCARI 4 NE	825	650	549	242	46	0	0	0	10	177	525	784	3,808	8
NEW YORK														
ALBANY WSFO AP	1,349	1,162	980	543	253	39	9	22	135	422	762	1,212	6,888	-6
BINGHAMTON WSO AP	1,333	1,182	1,045	609	320	75	21	40	172	456	804	1,228	7,285	-2
BUFFALO WSCMO AP	1,280	1,137	1,020	603	321	58	12	33	138	419	756	1,150	6,927	2
MASSENA FAA AP	1,566	1,352	1,159	684	350	78	22	57	192	512	873	1,392	8,237	-13
N Y CENTRAL PK WSO CI	1,017	885	741	387	137	0	0	0	29	209	528	915	4,848	11
N Y KENNEDY WSO AP	1,042	918	797	453	188	9	0	0	42	247	555	933	5,184	12
N Y LAGUARDIA WSO AP	1,020	893	756	399	145	0	0	0	30	224	531	911	4,909	11
ROCHESTER WSO AP	1,271	1,126	992	567	285	46	9	26	126	398	735	1,138	6,719	1
SYRACUSE WSO AP	1,283	1,131	986	555	272	46	11	18	120	392	720	1,144	6,678	-3
NORTH CAROLINA														
ASHEVILLE WSO AP	840	717	592	279	100	14	0	0	50	269	561	815	4,237	10
CAPE HATTERAS WSO	611	538	458	188	47	0	0	0	0	76	277	536	2,731	
CHARLOTTE WSO AP	710	588	461	145	34	0	0	0	10	152	420	698	3,218	18
GREENSBORO WSO AP	815	683	544	203	59	0	0	0	24	209	501	787	3,825	14
RALEIGH-DURHAM WSFO AP	760	638	502	180	48	0	0	0	12	186	450	738	3,514	16
WILMINGTON WSO AP	586	478	354	97	7	0	0	0	0	80	288	543	2,433	23
NORTH DAKOTA														
BISMARCK WSFO AP	1,761	1,442	1,237	660	339	122	18	35	252	564	1,083	1,531	9,044	-23
DEVILS LAKE	1,885	1,565	1,345	747	396	134	22	56	291	614	1,167	1,668	9,890	-25
DICKINSON FAA AP	1,640	1,350	1,231	714	394	167	29	41	274	586	1,074	1,442	8,942	-21
FARGO WSO AP	1,832	1,520	1,265	681	334	97	13	33	234	558	1,092	1,612	9,271	-22
GRAND FORKS FAA AP	1,907	1,590	1,339	735	382	134	29	51	275	611	1,143	1,680	9,876	-26
JAMESTOWN FAA AP	1,810	1,492	1,274	711	378	127	21	39	272	589	1,116	1,593	9,422	-22
MINOT FAA AP	1,770	1,462	1,283	717	384	150	27	70	286	586	1,113	1,559	9,407	-24
WILLISTON WSO AP	1,758	1,422	1,249	678	345	135	22	35	274	598	1,107	1,538	9,161	-25
OHIO														
AKRON-CANTON WSO AP	1,200	1,044	893	495	231	33	9	16	101	369	729	1,104	6,224	1
CINCINNATI-ABBE WSO	1,020	857	692	307	118	7	0	0	37	245	612	949	4,844	1
CLEVELAND WSFO AP	1,181	1,039	896	501	244	40	9	17	95	354	702	1,076	6,154	1
COLUMBUS WSO AP	1,135	972	800	418	176	13	0	8	76	342	699	1,063	5,702	0
DAYTON WSCMO AP	1,144	969	806	413	166	13	0	7	63	307	696	1,057	5,641	1

30-Year Average Monthly Heating Degree Days at Base 65 Deg F. (1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Heating Deg Day Total	Outdoor 99% Design Temperature Degree F
MANSFIELD WSO AP	1,147	991	834	450	201	24	0	10	79	332	690	1,060	5,818	0
TOLEDO EXPRESS WSO AP	1,246	1,061	905	498	229	32	5	18	99	379	762	1,147	6,381	-3
YOUNGSTOWN WSO AP	1,218	1,072	921	519	258	42	9	22	118	384	741	1,122	6,426	-1
OKLAHOMA														
HOBART FAA AP	859	647	521	175	33	0	0	0	6	141	480	772	3,634	
MC ALESTER FAA AP	797	591	455	140	22	0	0	0	7	125	414	704	3,255	14
OKLAHOMA CITY WSFO AP	874	664	532	180	36	0	0	0	12	148	474	775	3,695	9
STILLWATER 2 W	865	644	517	174	38	0	0	0	10	146	465	772	3,631	8
TULSA WSO AP	880	666	528	176	28	0	0	0	10	143	468	781	3,680	8
OREGON														
ASTORIA WSO AP	756	599	639	516	394	255	163	151	201	378	555	688	5,295	25
EUGENE WSO AP	794	602	592	441	289	133	41	51	119	366	582	729	4,739	17
KLAMATH FALLS 2 SSW	1,094	846	812	591	386	187	42	67	186	484	789	1,032	6,516	4
MEDFORD WSO AP	880	664	626	444	250	94	11	21	89	360	645	846	4,930	19
NORTH BEND FAA AP	632	515	561	477	369	243	188	168	201	313	447	574	4,688	
PENDLETON WSO AP	1,023	731	657	423	220	70	6	13	97	384	708	908	5,240	-2
PORTLAND WSFO AP	834	622	598	432	264	128	48	56	119	347	591	753	4,792	17
REDMOND FAA AP	1,079	818	818	618	425	220	55	102	233	515	780	980	6,643	
ROSEBURG KQEN	747	571	561	411	256	115	31	33	100	319	543	698	4,385	18
SALEM WSO AP	812	619	614	456	295	133	43	53	120	366	594	747	4,852	18
SEXTON SUMMIT WSMO	946	776	843	666	481	292	97	115	179	450	714	871	6,430	
PENNSYLVANIA														
ALLENTOWN WSO AP	1,153	997	834	453	190	21	0	6	85	344	681	1,063	5,827	4
BRADFORD FAA AP	1,345	1,196	1,066	660	380	126	61	101	235	530	864	1,240	7,804	
ERIE WSO AP	1,237	1,114	995	606	336	80	24	43	141	415	747	1,113	6,851	4
HARRISBURG FAA AP	1,082	916	744	370	128	0	0	0	51	293	636	1,004	5,224	7
PHILADELPHIA WSCMO AP	1,014	871	716	367	122	0	0	0	38	249	564	924	4,865	10
PITTSBURGH WSCMO2 AP	1,144	1,000	834	444	208	26	7	16	98	372	711	1,070	5,930	1
WIL-BARRE-SRAN WSO AP	1,209	1,056	899	495	219	28	7	18	116	391	726	1,113	6,277	
WILLIAMSPORT WSO AP	1,172	1,019	853	456	195	23	0	14	96	369	705	1,079	5,981	2
RHODE ISLAND														
BLOCK ISLAND STATE AP	1,042	944	871	591	347	82	9	11	79	301	570	924	5,771	
PROVIDENCE WSO AP	1,135	997	871	531	259	36	0	10	93	350	651	1,039	5,972	5
SOUTH CAROLINA														
CHARLESTON WSO AP	521	419	300	69	5	0	0	0	0	74	271	487	2,146	24
CHARLESTON WSO CI	481	393	282	52	0	0	0	0	0	50	211	435	1,904	25
COLUMBIA WSFO AP	608	493	360	83	12	0	0	0	0	112	341	589	2,598	20
FLORENCE FAA AP	608	493	359	91	11	0	0	0	0	101	326	577	2,566	22
GRNVLE-SPARTBG WSO AP	704	577	450	144	29	0	0	0	9	145	420	685	3,163	18
SOUTH DAKOTA														
ABERDEEN WSO AP	1,721	1,397	1,172	624	303	93	12	21	202	530	1,038	1,504	8,617	-19
HURON WSO AP	1,628	1,319	1,116	576	273	72	9	13	169	482	978	1,420	8,055	-18
PIERRE FAA AP	1,531	1,249	1,091	561	267	74	6	10	152	451	936	1,349	7,677	-15
RAPID CITY WSO AP	1,336	1,098	1,048	612	319	134	13	17	191	474	888	1,194	7,324	-11
SIOUX FALLS WSFO AP	1,575	1,277	1,085	567	259	65	10	18	165	465	957	1,395	7,838	-15
WATERTOWN FAA AP	1,714	1,406	1,200	669	332	96	17	28	229	549	1,056	1,500	8,796	-19
TENNESSEE														
BRISTOL WSO AP	887	736	604	270	90	8	0	0	37	249	579	846	4,306	9
CHATTANOOGA WSO AP	769	625	483	165	51	0	0	0	9	182	483	738	3,505	13

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Heating Deg Day Total	Outdoor 99% Design Temperature Degree F
30-Year Average Monthly Heating Degree Days at Base 65 Deg F. (1941 - 1970)														
KNOXVILLE WSO AP	756	630	484	173	47	0	0	0	10	175	474	729	3,478	13
MEMPHIS FAA AP	760	594	457	131	22	0	0	0	7	142	423	691	3,227	13
NASHVILLE WSO AP	828	672	524	176	45	0	0	0	10	180	498	763	3,696	9
OAK RIDGE ATDL	834	689	551	220	77	0	0	0	20	216	537	800	3,944	
TEXAS														
ABILENE WSO AP	660	479	354	104	11	0	0	0	0	89	336	577	2,610	15
ALICE	319	199	121	7	0	0	0	0	0	11	100	252	1,009	31
AMARILLO WSO AP	899	708	601	275	81	10	0	0	20	206	561	822	4,183	6
AUSTIN WSO AP	483	344	223	44	0	0	0	0	0	39	205	399	1,737	24
BROWNSVILLE WSO AP	225	151	89	0	0	0	0	0	0	5	35	145	650	35
CHILDRESS FAA AP	784	591	474	155	28	0	0	0	5	120	426	704	3,287	
COLLEGE STATION FAA AP	467	326	223	29	0	0	0	0	0	31	197	385	1,658	
CORPUS CHRISTI WSO AP	304	199	120	0	0	0	0	0	0	7	81	219	930	31
DALHART FAA AP	967	767	685	332	101	13	0	0	31	269	645	899	4,709	
DALLAS FAA AP	608	437	314	71	0	0	0	0	0	55	284	521	2,290	18
DEL RIO WSO AP	449	283	163	16	0	0	0	0	0	34	184	394	1,523	26
EL PASO WSO AP	663	465	328	89	0	0	0	0	0	92	402	639	2,678	20
GALVESTON WSO CI	365	273	187	20	0	0	0	0	0	12	105	262	1,224	31
HOUSTON WSCMO AP	416	294	189	23	0	0	0	0	0	24	155	333	1,434	27
LAREDO 2	299	177	87	0	0	0	0	0	0	8	74	231	876	32
LUBBOCK WSFO AP	803	624	508	190	29	0	0	0	8	162	486	735	3,545	10
LUFKIN FAA AP	509	371	256	56	0	0	0	0	0	52	256	440	1,940	25
LULING	482	334	215	38	0	0	0	0	0	36	189	395	1,689	
MIDLAND-ODESSA WSO AP	663	482	349	98	0	0	0	0	0	81	356	592	2,621	16
PORT ARTHUR WSO AP	420	302	202	33	0	0	0	0	0	35	184	342	1,518	27
SAN ANGELO WSO AP	577	413	287	74	0	0	0	0	0	73	298	518	2,240	18
SAN ANTONIO WSFO AP	451	310	194	31	0	0	0	0	0	32	179	373	1,570	25
VICTORIA WSO AP	372	258	159	15	0	0	0	0	0	15	123	285	1,227	29
WACO WSO AP	558	401	280	56	0	0	0	0	0	51	241	471	2,058	21
WICHITA FALLS WSO AP	729	535	409	112	13	0	0	0	0	92	369	645	2,904	14
UTAH														
CEDAR CITY FAA AP	1,125	893	825	537	281	86	0	6	114	424	786	1,060	6,137	-2
LOGAN UTAH STATE UNIV	1,271	1,011	896	543	283	114	0	8	146	449	849	1,163	6,733	-3
MILFORD WSMO	1,218	941	834	534	274	82	0	7	120	443	831	1,128	6,412	
SALT LAKE CITY NWSFO AP	1,147	885	787	474	237	88	0	5	105	402	777	1,076	5,983	3
VERNAL AIRPORT	1,516	1,168	958	585	319	136	12	33	199	546	957	1,358	7,787	-5
WENDOVER	1,166	862	741	431	168	36	0	0	86	384	792	1,094	5,760	
VERMONT														
BURLINGTON WSO AP	1,494	1,299	1,113	660	331	63	20	49	191	502	840	1,314	7,876	-12
VIRGINIA														
LYNCHBURG WSO AP	880	753	605	260	85	0	0	0	33	234	540	843	4,233	12
NORFOLK WSO AP	760	661	532	226	53	0	0	0	9	141	402	704	3,488	20
RICHMOND WSO AP	853	717	569	226	64	0	0	0	21	203	480	806	3,939	14
ROANOKE WSO AP	887	753	611	283	101	0	0	0	32	235	549	856	4,307	12
WASHINGTON														
DALLESPORT FAA AP	998	708	614	381	193	68	8	19	78	353	678	880	4,978	
OLYMPIA WSO AP	862	672	676	504	341	197	89	103	198	446	651	791	5,530	16
QUILLAYUTE WSCMO AP	815	661	710	576	434	294	194	195	246	443	627	756	5,951	
SEATTLE-TAC WSCMO AP	831	636	648	489	313	167	80	82	170	397	612	760	5,185	21

30-Year Average Monthly Heating Degree Days at Base 65 Deg F. (1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Heating Deg Day Total	Outdoor 99% Design Temperature Degree F
SPOKANE WSO AP	1,228	918	853	567	327	144	21	47	196	533	885	1,116	6,835	-6
YAKIMA WSO AP	1,163	820	719	465	239	94	20	37	147	462	798	1,045	6,009	-2
WEST VIRGINIA														
BECKLEY WSO AP	1,042	907	769	406	226	39	11	17	117	381	696	1,004	5,615	-2
CHARLESTON WSFO AP	946	798	642	287	113	10	0	0	46	267	588	893	4,590	7
ELKINS WSO AP	1,085	941	812	459	236	63	20	36	139	420	729	1,035	5,975	1
HUNTINGTON WSO AP	952	809	649	293	115	11	0	0	46	265	585	899	4,624	5
KEARNEYSVILLE WSO	1,020	868	710	358	142	11	0	0	58	307	618	967	5,059	
MARTINSBURG FAA AP	1,048	896	741	376	149	14	0	0	65	314	642	986	5,231	6
MORGANTOWN FAA AP	1,039	899	738	373	155	20	0	9	76	308	645	973	5,235	4
WISCONSIN														
ASHLAND EXP FARM	1,640	1,406	1,228	759	453	163	48	81	262	558	1,011	1,454	9,063	-21
EAU CLAIRE FAA AP	1,652	1,389	1,169	615	293	65	14	37	202	505	990	1,457	8,388	-15
FOND DU LAC	1,466	1,238	1,057	564	275	61	12	32	139	433	870	1,314	7,461	-12
GREEN BAY WSO AP	1,538	1,316	1,128	636	338	91	22	54	191	490	927	1,367	8,098	-13
LA CROSSE FAA AP	1,516	1,260	1,051	522	224	39	10	17	130	421	888	1,339	7,417	-13
MADISON WSO AP	1,494	1,252	1,079	591	297	72	14	39	173	474	909	1,336	7,730	-11
MANITOWOC	1,389	1,187	1,045	627	352	90	18	30	137	431	834	1,237	7,377	-11
MARSHFIELD EXP FARM	1,612	1,352	1,169	642	326	101	31	69	228	524	993	1,435	8,482	
MILWAUKEE WSO AP	1,414	1,190	1,042	609	348	90	15	36	140	440	855	1,265	7,444	-8
OSHKOSH	1,488	1,263	1,085	594	285	58	10	26	135	440	888	1,330	7,602	
WAUSAU FAA AP	1,631	1,392	1,190	660	333	95	22	56	227	533	996	1,451	8,586	-16
WEST BEND	1,426	1,207	1,042	585	306	70	13	33	130	425	852	1,280	7,369	
WISCONSIN RAPIDS	1,575	1,330	1,135	621	308	82	21	46	200	509	963	1,411	8,201	
WYOMING														
BIG PINEY	1,733	1,439	1,333	894	611	369	185	267	522	862	1,245	1,631	11,091	
CASPER WSO AP	1,296	1,070	1,054	669	388	147	13	17	229	536	933	1,203	7,555	-11
CHEYENNE WSFO AP	1,190	1,008	1,035	669	394	156	22	31	225	530	885	1,110	7,255	-9
CODY	1,259	1,011	995	633	378	186	32	47	269	517	906	1,153	7,386	-19
LANDER WSO AP	1,407	1,106	1,042	663	382	150	9	14	225	564	1,005	1,302	7,869	-16
LARAMIE FAA AP	1,373	1,170	1,175	816	533	258	71	100	345	673	1,038	1,287	8,839	-14
ROCK SPRINGS FAA AP	1,420	1,165	1,119	747	453	198	18	49	269	629	1,029	1,314	8,410	-9
SHERIDAN WSO AP	1,364	1,095	1,054	642	375	168	28	31	245	533	948	1,225	7,708	-14
WORLAND FAA AP	1,429	1,168	1,187	825	558	333	99	147	394	691	1,065	1,330	9,226	
US TERRITORIES														
SAN JUAN WSFO	0	0	0	0	0	0	0	0	0	0	0	0	0	
GUAM WSMO	0	0	0	0	0	0	0	0	0	0	0	0	0	
KOROR WSO	0	0	0	0	0	0	0	0	0	0	0	0	0	
KWAJALEIN MISSILE RNG	0	0	0	0	0	0	0	0	0	0	0	0	0	
MAJURO WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
PAGO PAGO WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
PONAPE WSO	0	0	0	0	0	0	0	0	0	0	0	0	0	
TRUK MOEN IS WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
WAKE ISLAND WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
YAP WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	

Weather Station	30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970) Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
ALABAMA														
BIRMINGHAM FAA AP	9	10	26	62	190	372	462	440	273	84	0	0	1,928	94/75
HUNTSVILLE WSO AP	0	6	21	46	174	357	450	434	248	72	0	0	1,808	93/74
MOBILE WSO AP	23	29	47	127	304	459	515	512	375	160	16	10	2,577	93/77
MONTGOMERY WSO AP	14	16	35	82	237	417	496	487	330	118	6	0	2,238	95/76
MUSCLE SHOALS FAA AP	0	0	20	51	176	372	468	440	245	62	0	0	1,834	
TUSCALOOSA FAA AP	9	10	24	70	225	414	502	484	306	94	0	0	2,138	96/76
ALASKA														
ANCHORAGE WSCMO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	68/58
ANNETTE WSO AP	0	0	0	0	0	6	8	0	0	0	0	0	14	
BARROW WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	53/50
BETHEL WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
BETTLES FAA AP	0	0	0	0	0	6	11	0	0	0	0	0	17	
BIG DELTA FAA/AMOS AP	0	0	0	0	0	20	8	6	0	0	0	0	34	
COLD BAY WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
CORDOVA FAA FSS AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
FAIRBANKS WSFO AP	0	0	0	0	0	31	15	6	0	0	0	0	52	78/60
GULKANA FSS/AMOS	0	0	0	0	0	9	0	0	0	0	0	0	9	
HOMER WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
JUNEAU AP	0	0	0	0	0	0	0	0	0	0	0	0	0	70/58
KETCHIKAN	0	0	0	0	0	6	10	6	0	0	0	0	22	
KING SALMON WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
KOTZEBUE WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
MC GRATH WSO AP	0	0	0	0	0	6	8	0	0	0	0	0	14	
NOME WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	62/55
NORTHWAY FAA AP	0	0	0	0	0	13	6	0	0	0	0	0	19	
ST PAUL ISLAND WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
TALKEETNA WSCMO AP	0	0	0	0	0	6	0	0	0	0	0	0	6	
TANANA FAA AP	0	0	0	0	0	12	8	0	0	0	0	0	20	
UNALAKLEET WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
VALDEZ WSO	0	0	0	0	0	0	0	0	0	0	0	0	0	
WRANGELL AIRPORT	0	0	0	0	0	0	7	0	0	0	0	0	7	
YAKUTAT WSO AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
ARIZONA														
FLAGSTAFF WSO AP	0	0	0	0	0	15	70	49	6	0	0	0	140	82/55
PHOENIX WSFO AP	0	14	21	141	355	588	812	747	564	240	26	0	3,508	107/71
TUCSON WSO AP	0	11	15	100	281	528	667	595	471	199	29	0	2,896	102/66
WINSLOW WSO AP	0	0	0	9	52	218	412	344	154	14	0	0	1,203	95/60
YUMA WSO AP	10	36	63	210	425	624	890	862	663	343	63	6	4,195	109/72
ARKANSAS														
EL DORADO FAA AP	0	6	27	80	219	420	530	505	306	105	6	0	2,204	96/76
FAYETTEVILLE EXP STN	0	0	13	35	110	287	422	394	181	45	0	0	1,487	94/73
FORT SMITH WSO AP	0	0	15	48	175	390	533	508	274	79	0	0	2,022	98/76
LITTLE ROCK FAA AP	0	0	14	40	169	393	508	484	254	63	0	0	1,925	96/77
CALIFORNIA														
BAKERSFIELD WSO AP	0	0	6	71	171	362	586	515	348	114	6	0	2,179	101/69
BISHOP WSO AP	0	0	0	19	58	179	360	287	119	15	0	0	1,037	
BLYTHE FAA AIRPORT	6	33	62	231	450	672	921	877	678	341	44	0	4,315	110/71
BURBANK VALLEY PMP PLT	5	10	12	30	52	123	289	301	240	99	18	0	1,179	91/68

30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
DAGGETT FAA AIRPORT	0	7	14	97	241	453	691	636	426	153	11	0	2,729	
FRESNO WSO AP	0	0	0	41	125	276	484	412	267	66	0	0	1,671	100/69
IMPERIAL	9	27	52	185	388	594	825	806	633	326	64	0	3,909	
LONG BEACH WSO AP	0	7	0	16	43	92	226	260	211	107	23	0	985	80/68
LOS ANGELES WSO AP	5	7	0	9	17	56	127	154	134	83	23	0	615	80/68
LOS ANGELES CIVIC CTR	10	14	10	25	51	115	258	282	236	140	44	0	1,185	89/70
MODESTO	0	0	0	28	78	197	350	296	186	36	0	0	1,171	98/68
MOUNT SHASTA WSO CI	0	0	0	0	8	28	124	95	31	0	0	0	286	
NEEDLES FAA AIRPORT	5	23	44	204	453	699	942	877	657	299	34	0	4,237	110/71
OXNARD	0	6	0	0	0	14	74	69	53	38	10	0	264	80/64
PALM SPRINGS	10	39	54	180	338	537	800	760	576	301	86	0	3,681	110/70
RED BLUFF	0	0	0	53	139	323	536	462	309	82	0	0	1,904	
SACRAMENTO FAA AP	0	0	0	26	98	185	316	286	200	48	0	0	1,159	98/70
SALINAS FAA AP	0	0	0	0	0	7	6	16	30	15	0	0	74	70/60
SANDBERG WSMO	0	0	0	0	0	86	286	258	150	20	0	0	800	
SAN DIEGO WSO AP	10	0	0	15	26	67	149	201	163	77	14	0	722	80/69
SAN FRANCISCO WSO AP	0	0	0	0	0	18	16	22	39	13	0	0	108	77/63
SAN FRAN MISSION DOLORES	0	0	0	0	0	5	0	0	18	16	0	0	39	
SANTA BARBARA FAA AP	0	0	0	0	0	12	64	65	55	22	0	0	218	77/66
SANTA MARIA WSO AP	0	0	0	0	0	5	22	18	22	17	0	0	84	76/63
STOCKTON WSO AP	0	0	0	22	73	219	363	323	217	42	0	0	1,259	97/68
WATSONVILLE WATERWORKS	0	0	0	0	0	5	0	7	13	0	0	0	25	
COLORADO														
AKRON FAA AP	0	0	0	0	16	123	258	217	56	9	0	0	679	
ALAMOSA WSO AP	0	0	0	0	0	9	55	24	0	0	0	0	88	82/57
BURLINGTON	0	0	0	6	27	168	315	259	90	13	0	0	878	
COLORADO SPRGS WSO AP	0	0	0	0	6	91	186	140	32	6	0	0	461	88/57
DENVER WSFO AP	0	0	0	0	0	110	248	208	54	5	0	0	625	91/59
EAGLE FAA AP	0	0	0	0	0	7	71	39	0	0	0	0	117	
GRAND JUNCTION WSO AP	0	0	0	0	47	209	425	322	126	11	0	0	1,140	94/59
PUEBLO WSO AP	0	0	0	6	27	199	353	295	91	10	0	0	981	95/61
TRINIDAD FAA AP	0	0	0	0	14	145	263	213	63	7	0	0	705	91/61
CONNECTICUT														
BRIDGEPORT WSO AP	0	0	0	0	17	111	273	241	87	6	0	0	735	84/71
HARTFORD WSO AP	0	0	0	0	18	108	239	179	40	0	0	0	584	88/73
DELAWARE														
WILMINGTON WSO AP	0	0	0	0	48	196	335	282	119	12	0	0	992	89/74
DISTRICT OF COLUMBIA														
WASH DULLES WSO AP	0	0	0	0	57	188	319	267	100	9	0	0	940	
WASH NATL WSCMO AP	0	0	0	7	109	288	425	375	182	29	0	0	1,415	91/74
Florida														
APALACHICOLA WSO AP	18	32	42	129	307	450	508	512	408	202	41	14	2,663	
DAYTONA BEACH WSO AP	37	59	86	158	310	432	496	499	435	262	100	45	2,919	90/77
FORT LAUDERDALE	124	155	201	288	388	466	533	549	495	391	229	149	3,967	91/78
FORT MYERS FAA AP	81	116	156	253	394	483	543	552	498	353	176	106	3,711	92/78
JACKSONVILLE WSO AP	25	38	58	117	288	426	496	496	396	190	47	19	2,596	94/77
KEY WEST WSO AP	193	210	303	393	493	555	608	611	546	453	303	220	4,888	90/78
MELBOURNE	62	99	127	203	329	432	502	512	459	313	143	84	3,265	
MIAMI WSCMO AP	121	145	212	300	403	480	536	555	501	397	229	159	4,038	90/77

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)														
PENSACOLA FAA AP	27	37	53	130	316	468	521	521	399	187	24	12	2,695	93/77
TALLAHASSEE WSO AP	23	38	41	121	304	450	499	499	393	164	21	10	2,563	92/76
TAMPA WSCMO AP	60	87	121	219	378	480	524	533	474	301	125	64	3,366	91/77
WEST PALM BEACH WSO AP	98	122	174	270	388	465	524	536	495	378	202	134	3,786	91/78
GEORGIA														
ALBANY 3 SE	25	38	54	114	302	459	521	515	375	147	22	10	2,582	95/76
ALMA FAA AP	11	17	38	97	254	411	487	477	339	126	15	7	2,279	
ATHENS WSO AP	0	0	14	35	175	354	437	415	234	58	0	0	1,722	92/74
ATLANTA WSO AP	0	0	12	27	154	321	403	388	227	57	0	0	1,589	92/74
AUGUSTA WSO AP	6	8	23	54	218	396	477	453	279	76	5	0	1,995	95/76
COLUMBUS WSO AP	10	12	25	77	236	411	484	474	315	93	6	0	2,143	93/76
MACON WSO AP	10	14	35	90	269	438	508	493	324	103	10	0	2,294	93/76
SAVANNAH WSO AP	15	18	39	96	260	423	499	484	336	125	16	6	2,317	93/77
HAWAII														
HILO WSO AP 87	192	170	191	216	264	288	319	338	318	310	255	205	3,066	83/72
HONOLULU WSFO AP 703	226	204	248	294	369	417	468	487	462	431	345	270	4,221	86/73
KAHULUI WSO 398 AP	208	187	223	264	322	363	409	428	402	381	309	236	3,732	
LIHUE WSO AP 1020.1	196	176	211	249	326	375	415	437	414	381	306	233	3,719	
IDAHO														
BOISE WSFO AP	0	0	0	0	17	91	295	235	70	6	0	0	714	94/64
BURLEY FAA AP	0	0	0	0	9	42	187	134	27	0	0	0	399	95/61
IDAHO FALLS FAA AP	0	0	0	0	6	26	131	102	21	0	0	0	286	87/61
LEWISTON WSO AP	0	0	0	0	18	84	264	218	73	0	0	0	657	93/64
POCATELLO WSO AP	0	0	0	0	7	42	205	159	24	0	0	0	437	91/60
ILLINOIS														
CHICAGO O'HARE WSO AP	0	0	0	0	35	138	221	207	51	12	0	0	664	89/74
CHICAGO MIDWAY AP 3 SW	0	0	0	0	53	191	301	277	84	19	0	0	925	91/73
MOLINE WSO AP	0	0	0	0	63	194	298	255	67	16	0	0	893	91/75
MT VERNON 3 NE	0	0	10	15	118	295	403	360	167	30	0	0	1,398	92/75
PEORIA WSO AP	0	0	0	5	71	206	313	271	85	17	0	0	968	89/74
ROCKFORD WSO AP	0	0	0	0	41	149	247	218	48	11	0	0	714	89/73
SPRINGFIELD WSO AP	0	0	0	6	82	249	344	300	114	21	0	0	1,116	92/74
INDIANA														
EVANSVILLE WSO AP	0	0	11	14	117	296	397	347	157	25	0	0	1,364	93/75
FORT WAYNE WSO AP	0	0	0	0	48	158	251	207	75	9	0	0	748	89/72
INDIANAPOLIS WSFO	0	0	0	6	72	212	310	259	102	13	0	0	974	90/74
SOUTH BEND WSO AP	0	0	0	0	40	143	232	210	62	8	0	0	696	89/73
IOWA														
BURLINGTON RADIO KBUR	0	0	0	5	73	208	322	284	82	20	0	0	994	91/75
DES MOINES WSFO AP	0	0	0	0	59	191	317	270	73	18	0	0	928	91/74
DUBUQUE WSO AP	0	0	0	0	30	124	219	191	32	10	0	0	606	88/73
MARSHALLTOWN	0	0	0	0	56	173	280	238	46	14	0	0	807	90/75
MASON CITY FAA AP	0	0	0	0	30	130	208	183	21	8	0	0	580	88/74
SIOUX CITY WSO AP	0	0	0	6	62	192	324	274	65	9	0	0	932	92/74
SPENCER 1 N	0	0	0	0	37	143	234	198	23	6	0	0	641	
WATERLOO WSO AP	0	0	0	0	37	144	243	206	35	10	0	0	675	89/75
KANSAS														
CHANUTE FAA AIRPORT	0	0	8	24	125	307	456	434	192	49	0	0	1,595	97/74
CONCORDIA WSO AP	0	0	0	10	84	250	405	383	143	27	0	0	1,302	

30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
DODGE CITY WSO AP	0	0	0	14	84	282	440	406	158	27	0	0	1,411	97/69
GARDEN CITY FAA AP	0	0	0	15	76	280	440	394	146	19	0	0	1,370	96/69
GOODLAND WSO AP	0	0	0	0	27	178	338	286	87	9	0	0	925	96/65
RUSSELL FAA AP	0	0	9	17	90	295	453	422	167	32	0	0	1,485	98/73
SALINA FAA AP	0	0	9	22	114	315	484	456	185	42	0	0	1,627	100/74
TOPEKA WSFO AP	0	0	8	14	103	268	409	378	151	30	0	0	1,361	96/75
WICHITA WSO AP	0	0	8	23	124	331	487	456	200	44	0	0	1,673	98/73
KENTUCKY														
BOWLING GREEN FAA AP	0	0	13	22	134	306	406	369	182	35	0	0	1,467	92/75
COVINGTON WSO AP	0	0	0	8	82	222	329	294	128	17	0	0	1,080	90/72
FRANKFORT LOCK 4	0	0	9	10	88	240	344	310	139	20	0	0	1,160	
HENDERSON 7 SSW	0	0	12	15	123	296	391	347	169	30	0	0	1,383	
LEXINGTON WSO AP	0	0	10	11	97	248	347	313	148	23	0	0	1,197	91/73
LOUISVILLE WSFO AP	0	0	10	13	99	254	369	338	158	27	0	0	1,268	93/74
LOUISIANA														
BATON ROUGE WSO AP	17	24	44	135	304	459	527	515	375	163	16	6	2,585	93/77
LAFAYETTE FAA AP	22	30	49	142	310	466	524	521	381	163	17	8	2,632	94/78
LAKE CHARLES WSO AP	21	29	54	143	316	471	539	533	402	191	33	7	2,739	93/77
MONROE FAA AP	6	9	35	98	263	453	536	518	327	115	7	0	2,367	96/76
NEW ORLEANS WSCMO AP	28	35	55	137	313	462	524	524	396	189	32	11	2,706	92/78
SHREVEPORT WSO AP	0	10	37	107	266	456	564	564	372	148	14	0	2,538	96/76
MAINE														
CARIBOU WSO AP	0	0	0	0	0	8	81	39	0	0	0	0	128	81/67
PORTLAND WSMO AP	0	0	0	0	0	22	120	99	11	0	0	0	252	84/71
WATERVILLE PMP STN	0	0	0	0	9	54	162	119	22	0	0	0	366	84/69
MARYLAND														
BALTIMORE WSO AP	0	0	0	0	70	225	360	307	132	14	0	0	1,108	91/75
BALTIMORE WSO CI	0	0	0	12	112	303	446	391	199	28	0	0	1,491	89/76
MASSACHUSETTS														
BLUE HILL	0	0	0	0	10	69	195	150	33	0	0	0	457	
BOSTON WSO AP	0	0	0	0	20	117	260	203	61	0	0	0	661	88/71
NANTUCKET FAA AP	0	0	0	0	0	21	117	113	33	0	0	0	284	
WORCESTER WSO AP	0	0	0	0	10	64	168	121	24	0	0	0	387	84/70
MICHIGAN														
ALPENA WSO AP	0	0	0	0	6	27	90	85	0	0	0	0	208	85/70
BENTON HARBOR AP	0	0	0	0	43	129	204	180	72	10	0	0	638	88/72
DETROIT METRO WSO AP	0	0	0	0	30	135	232	196	53	8	0	0	654	88/72
FLINT WSO AP	0	0	0	0	21	89	160	135	27	6	0	0	438	87/72
GRAND RAPIDS WSO AP	0	0	0	0	25	116	210	182	36	6	0	0	575	88/72
HOLLAND	0	0	0	0	32	128	210	199	59	8	0	0	636	86/71
HOUGHTON LAKE WSO AP	0	0	0	0	11	48	96	87	8	0	0	0	250	
IRON MTN-KINGSFORD WWT	0	0	0	0	9	49	109	83	0	0	0	0	250	
JACKSON FAA AP	0	0	0	0	34	127	217	186	43	7	0	0	614	88/72
KALAMAZOO STATE HOSP	0	0	0	0	50	158	249	223	64	11	0	0	755	88/72
LANSING WSO AP	0	0	0	0	26	111	192	166	34	6	0	0	535	87/72
MUSKEGON WSO AP	0	0	0	0	18	82	170	161	32	6	0	0	469	84/70
PELLSTON FAA AP	0	0	0	0	5	21	94	83	0	0	0	0	203	
SAGINAW FAA AP	0	0	0	0	17	100	184	157	29	0	0	0	487	87/72
SAULT STE MARIE WSO	0	0	0	0	0	11	59	69	0	0	0	0	139	81/69

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)														
TRAVERSE CITY FAA AP	0	0	0	0	9	65	148	144	10	0	0	0	376	86/71
MINNESOTA														
ALEXANDRIA FAA AP	0	0	0	0	10	77	175	141	15	0	0	0	418	88/72
DULUTH WSO AP	0	0	0	0	0	14	86	76	0	0	0	0	176	82/68
GRAND RAPIDS FORESTRY	0	0	0	0	6	39	102	82	0	0	0	0	229	
INTERNL FALLS WSO AP	0	0	0	0	0	30	90	56	0	0	0	0	176	83/68
MARSHALL	0	0	0	0	27	137	247	202	35	8	0	0	656	
MINN-ST PAUL WSO AP	0	0	0	0	23	111	206	163	18	6	0	0	527	89/73
ROCHESTER WSO AP	0	0	0	0	19	108	179	147	14	7	0	0	474	87/72
ST CLOUD WSO AP	0	0	0	0	14	79	179	142	12	0	0	0	426	88/72
MISSISSIPPI														
GREENWOOD FAA AP	0	8	28	80	251	447	527	502	306	103	0	0	2,252	93/77
JACKSON WSFO AP	14	17	37	95	245	432	518	502	330	116	10	5	2,321	95/76
MERIDIAN WSO AP	14	17	37	91	236	426	502	487	309	105	7	0	2,231	95/76
TUPELO WSO AP	0	0	22	64	217	414	508	487	281	85	0	0	2,078	94/77
UNIVERSITY	0	10	29	63	184	372	471	450	266	98	0	0	1,943	
MISSOURI														
COLUMBIA WSO AP	0	0	8	14	98	251	381	346	141	30	0	0	1,269	94/74
JOPLIN FAA AP	0	0	12	35	129	323	462	439	208	62	0	0	1,670	97/73
KANSAS CITY WSO AP	0	0	7	14	111	279	428	388	156	37	0	0	1,420	96/74
ST LOUIS WSCMO AP	0	0	9	17	128	307	422	378	173	41	0	0	1,475	94/75
SEDALIA WATER PLANT	0	0	12	22	128	293	428	391	173	45	0	0	1,492	92/76
SPRINGFIELD WSO AP	0	0	9	20	98	268	401	381	164	41	0	0	1,382	93/74
MONTANA														
BILLINGS WSO AP	0	0	0	0	8	59	220	173	38	0	0	0	498	91/64
BUTTE FAA AP	0	0	0	0	0	0	32	21	5	0	0	0	58	83/56
CUT BANK FAA AP	0	0	0	0	0	12	64	50	14	0	0	0	140	85/61
GLASGOW WSO AP	0	0	0	0	9	61	185	154	29	0	0	0	438	89/63
GREAT FALLS WSCMO AP	0	0	0	0	0	36	151	116	29	7	0	0	339	88/60
HAVRE WSO AP	0	0	0	0	0	45	158	121	22	0	0	0	346	90/64
HELENA WSO AP	0	0	0	0	0	20	123	94	19	0	0	0	256	88/60
KALISPELL WSO AP	0	0	0	0	0	9	51	48	9	0	0	0	117	87/61
LEWISTOWN FAA AP	0	0	0	0	0	13	86	75	18	0	0	0	192	87/61
LIVINGSTON FAA AP	0	0	0	0	7	17	120	87	25	6	0	0	255	87/60
MILES CITY FAA AP	0	0	0	0	19	114	301	248	64	6	0	0	752	95/66
MISSOULA WSO AP	0	0	0	0	0	18	89	71	10	0	0	0	188	88/61
NEBRASKA														
CHADRON FAA AP	0	0	0	0	15	112	288	252	54	5	0	0	726	94/65
GRAND ISLAND WSO AP	0	0	0	8	51	206	356	315	89	11	0	0	1,036	94/71
LINCOLN WSO AP	0	0	0	8	73	232	386	333	101	15	0	0	1,148	95/74
MC COOK	0	0	0	11	77	230	382	335	122	20	0	0	1,177	95/69
NORFOLK WSO AP	0	0	0	0	48	184	331	283	69	10	0	0	925	93/74
NORTH PLATTE WSO AP	0	0	0	6	30	155	295	256	60	0	0	0	802	94/69
OMAHA (EPPLEY FIELD)	0	0	0	10	86	236	378	334	110	19	0	0	1,173	91/75
OMAHA (NORTH) WSFO	0	0	0	6	59	189	320	280	81	14	0	0	949	
SCOTTSBLUFF WSO AP	0	0	0	0	16	118	273	213	46	0	0	0	666	92/65
VALENTINE WSO AP	0	0	0	0	22	130	291	242	46	5	0	0	736	
NEVADA														
ELKO FAA AP	0	0	0	0	0	28	166	122	26	0	0	0	342	92/59

30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
ELY WSO AP	0	0	0	0	0	22	92	77	16	0	0	0	207	87/56
LAS VEGAS WSO AP	0	6	8	90	268	519	763	694	453	139	6	0	2,946	106/65
LOVELOCK FAA AP	0	0	0	0	23	104	288	212	57	0	0	0	684	96/63
RENO WSFO AP	0	0	0	0	6	40	150	109	24	0	0	0	329	92/60
TONOPAH AP	0	0	0	0	18	101	251	190	63	8	0	0	631	92/59
WINNEMUCCA WSO AP	0	0	0	0	11	50	192	129	25	0	0	0	407	94/60
NEW HAMPSHIRE														
CONCORD WSO AP	0	0	0	0	8	49	162	113	17	0	0	0	349	87/70
MOUNT WASHINGTON	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEW JERSEY														
ATLANTIC CITY WSO AP	0	0	0	0	25	168	313	260	98	0	0	0	864	89/74
NEWARK WSO AP	0	0	0	0	47	197	353	298	118	11	0	0	1,024	91/73
NEW MEXICO														
ALBUQUERQUE WSFO AP	0	0	0	6	67	291	425	360	160	7	0	0	1,316	94/61
CLAYTON WSO AP	0	0	0	0	17	164	271	234	73	8	0	0	767	
LAS VEGAS FAA AP	0	0	0	0	0	64	121	86	12	0	0	0	283	
TUCUMCARI 4 NE	0	0	0	20	84	313	425	378	172	22	0	0	1,414	97/66
NEW YORK														
ALBANY WSFO AP	0	0	0	0	27	114	226	165	42	0	0	0	574	88/72
BINGHAMTON WSO AP	0	0	0	0	13	69	148	111	28	0	0	0	369	83/69
BUFFALO WSCMO AP	0	0	0	0	14	79	170	138	36	0	0	0	437	85/70
MASSENA FAA AP	0	0	0	0	12	57	146	110	18	0	0	0	343	83/69
N Y CENTRAL PK WSO CI	0	0	0	0	54	202	360	307	131	14	0	0	1,068	89/73
N Y KENNEDY WSO AP	0	0	0	0	27	144	313	267	102	8	0	0	861	87/72
N Y LAGUARDIA WSO AP	0	0	0	0	46	199	363	307	123	10	0	0	1,048	89/73
ROCHESTER WSO AP	0	0	0	0	22	103	202	159	45	0	0	0	531	88/71
SYRACUSE WSO AP	0	0	0	0	18	103	212	164	54	0	0	0	551	87/71
NORTH CAROLINA														
ASHEVILLE WSO AP	0	0	0	6	60	182	264	244	101	15	0	0	872	87/72
CAPE HATTERAS WSO	0	0	12	5	109	283	403	388	261	82	7	0	1,550	
CHARLOTTE WSO AP	0	0	15	19	152	327	419	394	220	50	0	0	1,596	93/74
GREENSBORO WSO AP	0	0	11	11	124	282	378	341	165	29	0	0	1,341	91/73
RALEIGH-DURHAM WSFO AP	0	0	12	15	123	282	388	357	180	37	0	0	1,394	92/75
WILMINGTON WSO AP	9	0	22	46	199	375	477	450	291	89	6	0	1,964	91/78
NORTH DAKOTA														
BISMARCK WSFO AP	0	0	0	0	11	86	198	165	27	0	0	0	487	91/68
DEVILS LAKE	0	0	0	0	5	59	143	128	15	0	0	0	350	88/68
DICKINSON FAA AP	0	0	0	0	7	62	162	140	22	6	0	0	399	90/66
FARGO WSO AP	0	0	0	0	11	88	190	163	21	0	0	0	473	89/71
GRAND FORKS FAA AP	0	0	0	0	10	80	157	126	11	0	0	0	384	87/70
JAMESTOWN FAA AP	0	0	0	0	6	67	154	132	17	0	0	0	376	90/69
MINOT FAA AP	0	0	0	0	6	60	144	138	22	0	0	0	370	89/67
WILLISTON WSO AP	0	0	0	0	7	66	180	144	25	0	0	0	422	88/67
OHIO														
AKRON-CANTON WSO AP	0	0	0	0	36	132	217	181	62	6	0	0	634	86/71
CINCINNATI-ABBE WSO	0	0	7	10	100	250	347	313	139	22	0	0	1,188	90/72
CLEVELAND WSFO AP	0	0	0	0	37	127	208	172	62	7	0	0	613	88/72
COLUMBUS WSO AP	0	0	0	0	55	175	267	222	82	8	0	0	809	90/73
DAYTON WSCMO AP	0	0	0	5	61	202	298	255	102	13	0	0	936	89/72

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)														
MANSFIELD WSO AP	0	0	0	0	52	168	267	230	91	10	0	0	818	87/72
TOLEDO EXPRESS WSO AP	0	0	0	0	37	149	231	198	63	7	0	0	685	88/73
YOUNGSTOWN WSO AP	0	0	0	0	29	102	185	153	49	0	0	0	518	86/71
OKLAHOMA														
HOBART FAA AP	0	0	9	43	161	411	564	546	270	70	0	0	2,074	
MC ALESTER FAA AP	0	0	15	65	171	393	543	533	289	97	0	0	2,106	96/74
OKLAHOMA CITY WSFO AP	0	0	11	42	138	354	512	499	252	68	0	0	1,876	97/74
STILLWATER 2 W	0	0	15	57	149	363	521	505	256	81	0	0	1,947	96/74
TULSA WSO AP	0	0	10	50	145	369	530	508	259	78	0	0	1,949	98/75
OREGON														
ASTORIA WSO AP	0	0	0	0	0	0	8	5	0	0	0	0	13	71/62
EUGENE WSO AP	0	0	0	0	0	25	100	85	29	0	0	0	239	89/66
KLAMATH FALLS 2 SSW	0	0	0	0	7	22	132	95	30	0	0	0	286	87/60
MEDFORD WSO AP	0	0	0	0	11	73	218	189	71	0	0	0	562	94/67
NORTH BEND FAA AP	0	0	0	0	0	0	0	0	0	0	0	0	0	
PENDLETON WSO AP	0	0	0	0	18	88	269	214	67	0	0	0	656	93/64
PORTLAND WSFO AP	0	0	0	0	7	38	114	106	35	0	0	0	300	85/67
REDMOND FAA AP	0	0	0	0	0	16	76	64	14	0	0	0	170	
ROSEBURG KQEN	0	0	0	0	0	37	130	123	52	0	0	0	342	90/66
SALEM WSO AP	0	0	0	0	7	19	92	87	27	0	0	0	232	88/66
SEXTON SUMMIT WSMO	0	0	0	0	0	7	53	57	20	0	0	0	137	
PENNSYLVANIA														
ALLENTOWN WSO AP	0	0	0	0	38	156	282	214	76	6	0	0	772	88/72
BRADFORD FAA AP	0	0	0	0	8	30	64	58	10	0	0	0	170	
ERIE WSO AP	0	0	0	0	13	68	139	120	33	0	0	0	373	85/72
HARRISBURG FAA AP	0	0	0	0	69	214	344	279	111	8	0	0	1,025	91/74
PHILADELPHIA WSCMO AP	0	0	0	0	67	223	366	304	131	13	0	0	1,104	90/74
PITTSBURGH WSCMO2 AP	0	0	0	0	46	134	221	177	62	7	0	0	647	86/71
WIL-BARRE-SRAN WSO AP	0	0	0	0	30	115	230	173	53	7	0	0	608	
WILLIAMSPORT WSO AP	0	0	0	0	43	137	249	197	66	6	0	0	698	89/72
RHODE ISLAND														
BLOCK ISLAND STATE AP	0	0	0	0	0	25	149	142	43	0	0	0	359	
PROVIDENCE WSO AP	0	0	0	0	8	78	224	177	45	0	0	0	532	86/72
SOUTH CAROLINA														
CHARLESTON WSO AP	12	13	36	57	225	387	471	453	306	108	10	0	2,078	91/78
CHARLESTON WSO CI	16	15	37	76	263	426	508	493	348	143	22	7	2,354	92/78
COLUMBIA WSFO AP	0	5	25	56	233	414	502	471	289	87	5	0	2,087	95/75
FLORENCE FAA AP	7	6	25	49	212	384	474	443	273	79	0	0	1,952	92/77
GRNVLE-SPARTBG WSO AP	0	0	13	24	156	327	412	388	210	43	0	0	1,573	91/74
SOUTH DAKOTA														
ABERDEEN WSO AP	0	0	0	0	15	105	223	195	28	0	0	0	566	91/72
HURON WSO AP	0	0	0	0	25	135	278	233	40	5	0	0	716	93/72
PIERRE FAA AP	0	0	0	0	31	146	322	286	65	8	0	0	858	95/71
RAPID CITY WSO AP	0	0	0	0	15	110	249	222	56	9	0	0	661	92/65
SIOUX FALLS WSFO AP	0	0	0	0	32	143	267	229	42	6	0	0	719	91/72
WATERTOWN FAA AP	0	0	0	0	13	87	194	161	22	0	0	0	477	91/72
TENNESSEE														
BRISTOL WSO AP	0	0	9	9	87	230	316	285	142	29	0	0	1,107	89/72
CHATTANOOGA WSO AP	0	6	12	30	159	330	428	403	216	52	0	0	1,636	93/74

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)														
KNOXVILLE WSO AP	0	8	16	32	152	315	409	381	208	48	0	0	1,569	92/73
MEMPHIS FAA AP	0	0	23	56	205	408	515	477	265	80	0	0	2,029	95/76
NASHVILLE WSO AP	0	0	19	29	153	348	453	419	220	53	0	0	1,694	94/74
OAK RIDGE ATDL	0	0	12	22	129	281	372	344	173	34	0	0	1,367	
TEXAS														
ABILENE WSO AP	0	0	29	110	240	459	586	577	333	123	9	0	2,466	99/71
ALICE	31	47	121	265	422	552	639	642	492	284	88	38	3,621	98/77
AMARILLO WSO AP	0	0	0	20	99	298	425	391	164	36	0	0	1,433	98/67
AUSTIN WSO AP	8	16	52	152	316	498	608	611	417	197	28	5	2,908	98/74
BROWNSVILLE WSO AP	79	106	173	297	443	534	601	601	498	337	128	77	3,874	93/77
CHILDRESS FAA AP	0	0	16	65	192	426	564	549	284	77	0	0	2,173	
COLLEGE STATION FAA AP	9	15	53	137	316	492	601	611	417	189	29	7	2,876	
CORPUS CHRISTI WSO AP	34	48	117	238	400	522	614	623	480	283	78	37	3,474	94/78
DALHART FAA AP	0	0	0	8	55	253	384	338	121	14	0	0	1,173	
DALLAS FAA AP	0	0	29	113	273	498	642	645	396	148	11	0	2,755	100/75
DEL RIO WSO AP	8	22	88	226	409	579	673	654	456	226	22	0	3,363	98/73
EL PASO WSO AP	0	0	6	56	223	459	536	481	276	61	0	0	2,098	98/64
GALVESTON WSO CI	20	27	63	146	338	489	564	567	450	263	60	17	3,004	89/79
HOUSTON WSCMO AP	16	22	59	155	335	483	567	570	426	207	38	11	2,889	94/77
LAREDO 2	36	62	168	339	505	630	710	704	537	334	80	32	4,137	101/73
LUBBOCK WSFO AP	0	0	9	40	138	363	456	415	188	38	0	0	1,647	96/69
LUFKIN FAA AP	7	13	39	125	282	459	558	561	375	151	22	0	2,592	97/76
LULING	7	12	51	152	326	501	598	614	426	198	21	7	2,913	
MIDLAND-ODESSA WSO AP	0	0	17	77	230	447	536	521	312	105	5	0	2,250	98/69
PORT ARTHUR WSO AP	17	25	51	150	310	474	558	561	417	187	40	8	2,798	93/78
SAN ANGELO WSO AP	0	0	42	140	298	498	611	605	354	141	13	0	2,702	99/71
SAN ANTONIO WSFO AP	8	16	64	169	341	516	611	611	429	202	20	7	2,994	97/73
VICTORIA WSO AP	16	28	76	186	360	510	601	605	453	239	51	15	3,140	96/77
WACO WSO AP	0	6	38	125	295	507	639	642	417	178	16	0	2,863	99/75
WICHITA FALLS WSO AP	0	0	22	91	239	489	645	636	360	123	6	0	2,611	101/73
UTAH														
CEDAR CITY FAA AP	0	0	0	0	8	66	254	201	60	6	0	0	615	91/60
LOGAN UTAH STATE UNIV	0	0	0	0	13	57	245	207	56	6	0	0	584	91/61
MILFORD WSMO	0	0	0	0	10	88	288	242	60	0	0	0	688	
SALT LAKE CITY NWSFO AP	0	0	0	0	30	124	363	300	99	11	0	0	927	95/62
VERNAL AIRPORT	0	0	0	0	6	52	155	113	16	0	0	0	342	89/60
WENDOVER	0	0	0	5	37	162	443	363	122	5	0	0	1,137	
VERMONT														
BURLINGTON WSO AP	0	0	0	0	15	69	169	123	20	0	0	0	396	85/70
VIRGINIA														
LYNCHBURG WSO AP	0	0	0	8	91	232	335	291	126	17	0	0	1,100	90/74
NORFOLK WSO AP	0	0	8	10	106	285	412	369	213	38	0	0	1,441	91/76
RICHMOND WSO AP	0	0	8	10	111	276	400	350	171	27	0	0	1,353	92/76
ROANOKE WSO AP	0	0	0	10	83	205	316	282	122	12	0	0	1,030	91/72
WASHINGTON														
DALLESPORT FAA AP	0	0	0	0	35	104	237	224	87	0	0	0	687	
OLYMPIA WSO AP	0	0	0	0	0	14	46	35	6	0	0	0	101	83/65
QUILLAYUTE WSCMO AP	0	0	0	0	0	0	8	0	0	0	0	0	8	
SEATTLE-TAC WSCMO AP	0	0	0	0	0	11	65	45	8	0	0	0	129	80/64

Weather Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Cooling Deg Day Total	Coincident Wet Bulb Temperature Degree F
30-Year Average Monthly Cooling Degree Days at Base 65 Deg F. (1941 - 1970)														
SPOKANE WSO AP	0	0	0	0	8	39	167	140	34	0	0	0	388	90/63
YAKIMA WSO AP	0	0	0	0	19	79	197	148	36	0	0	0	479	93/65
WEST VIRGINIA														
BECKLEY WSO AP	0	0	0	0	24	108	166	135	51	6	0	0	490	81/69
CHARLESTON WSFO AP	0	0	7	14	97	220	310	267	121	19	0	0	1,055	90/73
ELKINS WSO AP	0	0	0	0	25	84	135	111	34	0	0	0	389	84/70
HUNTINGTON WSO AP	0	0	7	14	99	233	319	279	127	20	0	0	1,098	91/74
KEARNEYSVILLE WSO	0	0	0	0	66	182	304	250	94	10	0	0	906	
MARTINSBURG FAA AP	0	0	0	0	66	188	310	257	95	7	0	0	922	90/74
MORGANTOWN FAA AP	0	0	0	7	68	179	255	217	94	13	0	0	833	87/73
WISCONSIN														
ASHLAND EXP FARM	0	0	0	0	0	25	107	93	0	0	0	0	225	82/68
EAU CLAIRE FAA AP	0	0	0	0	20	98	185	143	13	0	0	0	459	89/73
FOND DU LAC	0	0	0	0	24	109	195	171	19	8	0	0	526	86/72
GREEN BAY WSO AP	0	0	0	0	12	76	152	138	8	0	0	0	386	85/72
LA CROSSE FAA AP	0	0	0	0	38	144	252	215	34	12	0	0	695	88/73
MADISON WSO AP	0	0	0	0	18	96	172	154	14	6	0	0	460	88/73
MANITOWOC	0	0	0	0	0	63	173	166	14	0	0	0	416	86/72
MARSHFIELD EXP FARM	0	0	0	0	13	71	130	116	6	0	0	0	336	
MILWAUKEE WSO AP	0	0	0	0	13	75	167	166	23	6	0	0	450	87/73
OSHKOSH	0	0	0	0	22	109	205	181	21	9	0	0	547	
WAUSAU FAA AP	0	0	0	0	11	80	143	121	0	0	0	0	355	88/72
WEST BEND	0	0	0	0	21	97	184	175	25	7	0	0	509	
WISCONSIN RAPIDS	0	0	0	0	20	97	170	146	11	7	0	0	451	
WYOMING														
BIG PINEY	0	0	0	0	0	0	9	0	0	0	0	0	9	
CASPER WSO AP	0	0	0	0	6	54	199	159	40	0	0	0	458	90/57
CHEYENNE WSFO AP	0	0	0	0	0	45	149	112	21	0	0	0	327	86/58
CODY	0	0	0	0	9	57	168	134	35	5	0	0	408	86/60
LANDER WSO AP	0	0	0	0	0	36	182	138	27	0	0	0	383	88/61
LARAMIE FAA AP	0	0	0	0	0	9	49	26	6	0	0	0	90	81/56
ROCK SPRINGS FAA AP	0	0	0	0	0	15	117	84	11	0	0	0	227	84/55
SHERIDAN WSO AP	0	0	0	0	7	51	195	161	32	0	0	0	446	91/62
WORLAND FAA AP	0	0	0	0	0	6	34	29	7	0	0	0	76	
US TERRITORIES														
SAN JUAN WSFO	322	288	350	375	440	466	493	505	483	484	411	366	4,982	
GUAM WSMO	381	344	394	420	446	444	446	437	423	431	426	419	5,011	
KOROR WSO	502	440	499	507	527	498	499	502	498	524	507	505	6,008	
KWAJALEIN MISSILE RNG	502	459	518	504	521	507	530	543	525	539	501	515	6,164	
MAJURO WSO AP	490	454	502	483	505	480	496	512	492	505	486	499	5,904	
PAGO PAGO WSO AP	474	434	477	468	450	423	412	409	420	446	447	465	5,325	
PONAPE WSO	484	440	490	471	487	465	465	468	468	471	459	484	5,652	
TRUK MOEN IS WSO AP	496	451	505	489	505	489	487	493	480	499	489	505	5,888	
WAKE ISLAND WSO AP	372	336	394	399	459	495	527	546	528	515	462	422	5,455	
YAP WSO AP	477	434	496	501	521	501	502	496	489	508	495	496	5,916	