

**ERRATA SHEET FOR  
ANSI/ASHRAE/IES STANDARD 90.1-2022 (SI Edition)  
Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings**

**February 8, 2024**

The corrections listed in this errata sheet apply to ANSI/ASHRAE/IES Standard 90.1-2022, SI Edition. The first printing is identified on the outside back cover of the standard as “Product code: 86329 12/22”. Shaded items have been added since the previously published errata sheet dated November 14, 2023 was distributed.

**NOTICE:** ASHRAE now has a list server for Standing Standards Project Committee 90.1 (SSPC 90.1). Interested parties can now subscribe and unsubscribe to the list server and be automatically notified via e-mail when activities and information related to the Standard and the User’s Manual is available. To sign up for the list server please visit **Project Committee List Servers for Standard** on the Technology / Standards section of the ASHRAE website at <https://www.ashrae.org/technical-resources/standards-and-guidelines/project-committee-list-servers>.

| <b><u>Page(s)</u></b> | <b><u>Erratum</u></b>  |
|-----------------------|--|
| 2                     | <p><b>Foreword.</b> Make the following change to Building Envelope.<br/><i>(Note: Additions are shown in <u>underline</u> and deletions are shown in <del>strikethrough</del>.)</i></p> <p><b>Building Envelope</b></p> <ul style="list-style-type: none"><li>• <i>A requirement was added to perform whole-building air-leakage testing and measurement on buildings less than <del>2300</del> <u>930</u> m<sup>2</sup>.</i></li></ul>  |
| 71                    | <p><b>6.1.4 Alterations to Heating, Ventilating, Air Conditioning, and Refrigeration in Existing Buildings.</b><br/><i>(Note: Deletions are shown in <del>strikethrough</del>.)</i></p> <p><b>6.1.4 Alterations to Heating, Ventilation, Air Conditioning, and Refrigeration in Existing Buildings</b></p> <p style="padding-left: 40px;">6.1.4.1 New HVACR <i>equipment</i> as a direct replacement of existing HVACR <i>equipment</i> shall comply with the following sections as applicable for the <i>equipment</i> being replaced:<br/>[...]</p> <p style="padding-left: 40px;">6.1.4.5 New and replacement <i>pipng</i> shall comply with Section 6.4.4.1.</p> <p><b>Exceptions to 6.1.4.5:</b> Compliance shall not be required<br/>[...]</p> |
| 78                    | <p><b>6.4.3.4.3 Damper Leakage.</b> Revise Section 6.4.3.4.3 as shown below.<br/><i>(Note: Additions are shown in <u>underline</u> and deletions are shown in <del>strikethrough</del>.)</i></p> <p><b>6.4.3.4.3 Damper Leakage.</b> Where <i>outdoor air</i> supply and exhaust/relief dampers are required by Section 6.4.3.4.6.4.3.4.1, they shall have a maximum leakage rate as indicated in Table 6.4.3.4.3.</p>   |
| 100                   | <b>Table 6.5.6.1.2-2 Exhaust Air Energy Recovery Requirements for Ventilation Systems</b>  |

**Operating Greater than or Equal to 8000 Hours per Year.** Change “≥35” to “≥66” in Table 6.5.6.1.2-2 as shown below.

(Note: Additions are shown in underline and deletions are shown in strikethrough.)

**Table 6.5.6.1.2-2 Exhaust Air Energy Recovery Requirements for Ventilation Systems Operating Greater than or Equal to 8000 Hours per Year**

| Climate Zone           | % Outdoor Air at Full Design Airflow Rate |               |               |               |                           |               |               |      |
|------------------------|---|---------------|---------------|---------------|---------------------------|---------------|---------------|------|
|                        | ≥10% and <20%                             | ≥20% and <30% | ≥30% and <40% | ≥40% and <50% | ≥50% and <60%             | ≥60% and <70% | ≥70% and <80% | ≥80% |
|                        | Design Supply Fan Airflow Rate, L/s       |               |               |               |                           |               |               |      |
| 3C                     | NR  | NR            | NR            | NR            | NR                        | NR            | NR            | NR   |
| 0B, 1B, 2B, 3B, 4C, 5C | NR  | ≥9203         | ≥4248         | ≥2360         | ≥1888                     | ≥1416         | ≥708          | ≥60  |
| 0A, 1A, 2A, 3A, 4B, 5B | ≥1180                                     | ≥944          | ≥472          | ≥236          | ≥ <u>66</u> <del>35</del> | ≥60           | ≥50           | ≥40  |
| 4A, 5A, 6A, 6B, 7, 8   | ≥100                                      | ≥65           | ≥50           | ≥40           | ≥35                       | ≥30           | ≥25           | ≥20  |

NR—Not required

**310 Table G-1 Modeling Requirements for Calculating Proposed Building Performance and Baseline Building Performance (Continued).** Revise Exception to (a) and (b) under 10. HVAC Systems as shown below.

(Note: Additions are shown in underline and deletions are shown in strikethrough.)

**Exception to (a) and (b):** Where part-load performance of chillers in the *proposed design* is not available, and design temperature across the condenser is 5.56°C, the performance curves in Normative Appendix J ~~Appendix L~~, as referenced in Table J-1, shall be modeled for the specified chiller. When using performance curves from Normative Appendix J ~~Appendix L~~, chiller minimum part-load ratio (ratio of load to available capacity at a given simulation time step) and minimum compressor unloading ratio (part-load ratio below which the chiller capacity cannot be reduced by unloading and chiller is false loaded) shall be equal to 0.25. *Simulation programs* that do not use performance curves are permitted to use an alternative simulation method that results in the same performance as the curves described in Normative Appendix J ~~Appendix L~~.

**320 G3.3.2.3 Opaque Assemblies.** Revise Section G3.3.2.3 as shown below.

(Note: Additions are shown in underline and deletions are shown in strikethrough.)

**G3.3.2.3 Opaque Assemblies.** *Opaque* assemblies shall be modeled with *U-factors* meeting the requirements in Section ~~5.1.35.1.4~~.

**320 G3.3.2.4 Fenestration.** Revise Section G3.3.2.4 as shown below.

(Note: Additions are shown in underline and deletions are shown in strikethrough.)

**G3.3.2.4 Fenestration.** *Fenestration U-factor, SHGC, and VT* shall be modeled as meeting the requirements in Section ~~5.1.35.1.4~~.

The *fenestration area* for an *existing building* shall equal the existing *fenestration area* prior to the proposed work and shall be distributed on each face of the *building* in the same proportions as the *existing building*.

**320**      **G3.3.2.1 General Approach.** Revise Section G3.3.2.1 as shown below.  
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

**G3.3.2.1 General Approach.** *System* and *equipment* included in the scope of retrofit shall be modeled at ~~efficiency~~efficiency levels meeting the mandatory and prescriptive requirements in Sections 5 through 10 and as described in this section. All other baseline *systems* and *equipment* shall be modeled the same as in the *proposed design*.

**320**      **G3.3.2.8 HVAC Systems.** Revise Section G3.3.2.8 as shown below.  
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

**G3.3.2.8 HVAC Systems**

- a. Baseline *HVAC system* types shall be the same as the *proposed design*.  
**Exception to G3.3.2.8(a):** If the *proposed design* includes variable refrigerant flow heat pumps or *single-zone systems* with *electric resistance* heat, then air source heat pumps shall be used in the *baseline design*.
- b. *Baseline systems* shall meet the requirements in Section ~~6.1.3~~6.1.4. Chillers shall meet the *efficiency* requirements in Table 6.8.1-3 using Path A or Path B, the same as the *proposed design*. If the *proposed design* meets both Path A and Path B requirements, Path A shall be used.  
[...]

**393**      **Table M-1 Addenda to ANSI/ASHRAE/IES Standard 90.1-2019.** Add the addenda to Table M-1 as shown in the attached.

**394**      **Table M-1 Addenda to ANSI/ASHRAE/IES Standard 90.1-2019.** Update the Description of Changes for Addendum t as shown in the attached. Change highlighted in yellow.

**395**      **Table M-1 Addenda to ANSI/ASHRAE/IES Standard 90.1-2019.** Revise Table M-1 as shown in the attached, for Addenda ac and ar.  
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

**400-414**      **Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County.** Replace Table Annex1-1 with the attached.

| <b>Table M-1 Addenda to ANSI/ASHRAE/IES Standard 90.1-2019</b> |  |   |   |                                  |   |                      |
|--|--|---|---|----------------------------------|---|----------------------|
| <b>Addendum</b>  | <b>Sections</b>  | <b>Description of Changes<sup>a</sup></b>   | <b>ASHRAE Standard Committee Approval</b> | <b>Co-sponsor Approval (IES)</b> | <b>ASHRAE BOD/Tech Council Approval</b> | <b>ANSI Approval</b> |
| ba   | 9.4.1, Table 9.5.2.1, Appendix E, Table G3.7-1, Table G3.7-2 | Updates the space-by-space LPD values based on efficacy improvements consistent with manufacturer data sheets. Makes various changes to lighting control requirements, including the addition of several new space types and a new requirement for multilevel control with continuous dimming in place of bilevel lighting control. | 7/20/2022                                 | 9/8/2022                         | 8/15/2022                               | 9/9/2022             |
| cc   | 10.5.1.1   | Increases the prescriptive on-site renewable energy requirement added by Addendum by from 0.25 W/ft <sup>2</sup> to 0.5 W/ft <sup>2</sup> .   | 7/20/2022                                 | 9/8/2022                         | 8/15/2022                               | 9/9/2022             |

**Table M-1 Addenda to ANSI/ASHRAE/IES Standard 90.1-2019**

| <b>Addendum</b> | <b>Sections</b>  | <b>Description of Changes<sup>a</sup></b>  | <b>ASHRAE Standard Committee Approval</b> | <b>Cosponsor Approval (IES)</b> | <b>ASHRAE BOD/Tech Council Approval</b> | <b>ANSI Approval</b> |
|-----------------|--|--|---|---------------------------------|---|----------------------|
| t               | 3.2, 4.2.5, 5.1.3, 5.4.3, 5.7.2, 5.7.3.1, 5.8, 5.9.1.2, 6.4.4.2.1, 6.4.5, 6.5.1, Table 12.5.1 (5), 12.5.3, 13, C1.5, C3.5.5.3, C3.6, C3.1.1.4, Table G3.1 (5), Table H-3 | Adds requirement to perform whole-building air leakage testing and measurement on buildings less than <u>2300930</u> m <sup>2</sup> , specifies performance requirements for compliance, references the applicable ASTM standard, and modifies relevant Section 3 terminology. | 6/25/2022                                 | 6/17/2022                       | 6/29/2022                               | 7/29/2022            |

| <b>Table M-1 Addenda to ANSI/ASHRAE/IES Standard 90.1-2019</b> |   |   |   |                                  |   |                      |
|--|---|---|---|----------------------------------|---|----------------------|
| <b>Addendum</b>  | <b>Sections</b>   | <b>Description of Changes<sup>a</sup></b>   | <b>ASHRAE Standard Committee Approval</b> | <b>Co-sponsor Approval (IES)</b> | <b>ASHRAE BOD/Tech Council Approval</b> | <b>ANSI Approval</b> |
| ac   | 3.2, 9.4.1.2, Table <u>9.2.3.19.2.2.1</u> , Table 9.6.1, Appendix E | Updates interior lighting power and minimum control requirements: adds a power exception for the germicidal function in luminaires and sources, removes exceptions for casinos and parking garage daylight transition zone lighting, and provides a definition for the latter item. | 6/25/2022                                 | 6/17/2022                        | 6/29/2022                               | 7/29/2022            |
| ar   | 3.2, Table <u>9.2.3.19.2.2.1</u> , 9.4.4, Appendix E                | Adds requirements for indoor horticultural lighting based on a new metric, photosynthetic photon efficacy (PPE), developed in ANSI/ASABE S640.  | 7/20/2022                                 | 9/8/2022                         | 8/15/2022                               | 9/9/2022             |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County**

| <b>State/County</b>             | <b>Zone</b>              | <b>State/County</b>    | <b>Zone</b>              |
|---------------------------------|--------------------------|------------------------|--------------------------|
| <b>Alabama (AL)</b>             |                          | <b>Arkansas (AR)</b>   |                          |
|                                 | <i>Zone 3A except...</i> |                        | <i>Zone 3A except...</i> |
| Baldwin                         | 2A                       | Baxter                 | 4A                       |
| Coffee                          | 2A                       | Benton                 | 4A                       |
| Covington                       | 2A                       | Boone                  | 4A                       |
| Dale                            | 2A                       | Carroll                | 4A                       |
| Escambia                        | 2A                       | Fulton                 | 4A                       |
| Geneva                          | 2A                       | Izard                  | 4A                       |
| Henry                           | 2A                       | Madison                | 4A                       |
| Houston                         | 2A                       | Marion                 | 4A                       |
| Mobile                          | 2A                       | Newton                 | 4A                       |
| <b>Alaska (AK)</b>              |                          | Searcy                 | 4A                       |
|                                 | <i>Zone 7 except...</i>  | Stone                  | 4A                       |
| Ketchikan Gateway               | 5C                       | Washington             | 4A                       |
| Prince of Wales-Outer Ketchikan | 5C                       | <b>California (CA)</b> |                          |
| Sitka                           | 5C                       |                        | <i>Zone 3B except...</i> |
| Haines                          | 6A                       | Imperial               | 2B                       |
| Juneau                          | 6A                       | Alameda                | 3C                       |
| Kodiak Island                   | 6A                       | Marin                  | 3C                       |
| Skagway-Hoonah-Angoon           | 6A                       | Mendocino              | 3C                       |
| Wrangell-Petersburg             | 6A                       | Monterey               | 3C                       |
| Denali                          | 8                        | Napa                   | 3C                       |
| Fairbanks North Star            | 8                        | San Benito             | 3C                       |
| Nome                            | 8                        | San Francisco          | 3C                       |
| North Slope                     | 8                        | San Luis Obispo        | 3C                       |
| Northwest Arctic                | 8                        | San Mateo              | 3C                       |
| Southeast Fairbanks             | 8                        | Santa Barbara          | 3C                       |
| Wade Hampton                    | 8                        | Santa Clara            | 3C                       |
| Yukon-Koyukuk                   | 8                        | Santa Cruz             | 3C                       |
| <b>Arizona (AZ)</b>             |                          | Sonoma                 | 3C                       |
|                                 | <i>Zone 3B except...</i> | Ventura                | 3C                       |
| La Paz                          | 2B                       | Amador                 | 4B                       |
| Maricopa                        | 2B                       | Calaveras              | 4B                       |
| Pima                            | 2B                       | El Dorado              | 4B                       |
| Pinal                           | 2B                       | Inyo                   | 4B                       |
| Yuma                            | 2B                       | Lake                   | 4B                       |
| Gila                            | 4B                       | Mariposa               | 4B                       |
| Yavapai                         | 4B                       | Trinity                | 4B                       |
| Apache                          | 5B                       | Tuolumne               | 4B                       |
| Coconino                        | 5B                       | Del Norte              | 4C                       |
| Navajo                          | 5B                       | Humboldt               | 4C                       |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County         | Zone | State/County                     | Zone |
|----------------------|------|----------------------------------|------|
| Lassen               | 5B   | <b>Connecticut (CT)</b>          |      |
| Modoc                | 5B   | Zone 5A                          |      |
| Nevada               | 5B   | <b>Delaware (DE)</b>             |      |
| Plumas               | 5B   | Zone 4A                          |      |
| Sierra               | 5B   | <b>District of Columbia (DC)</b> |      |
| Siskiyou             | 5B   | Zone 4A                          |      |
| Alpine               | 6B   | <b>Florida (FL)</b>              |      |
| Mono                 | 6B   | Zone 2A except...                |      |
| <b>Colorado (CO)</b> |      | Broward                          | 1A   |
| Zone 5B except...    |      | Miami-Dade                       | 1A   |
| Baca                 | 4B   | Monroe                           | 1A   |
| Bent                 | 4B   | Palm Beach                       | 1A   |
| Las Animas           | 4B   | <b>Georgia (GA)</b>              |      |
| Otero                | 4B   | Zone 3A except...                |      |
| Prowers              | 4B   | Appling                          | 2A   |
| Alamosa              | 6B   | Atkinson                         | 2A   |
| Archuleta            | 6B   | Bacon                            | 2A   |
| Chaffee              | 6B   | Baker                            | 2A   |
| Conejos              | 6B   | Berrien                          | 2A   |
| Costilla             | 6B   | Brantley                         | 2A   |
| Dolores              | 6B   | Brooks                           | 2A   |
| Eagle                | 6B   | Bryan                            | 2A   |
| Moffat               | 6B   | Calhoun                          | 2A   |
| Ouray                | 6B   | Camden                           | 2A   |
| Rio Blanco           | 6B   | Charlton                         | 2A   |
| Saguache             | 6B   | Chatham                          | 2A   |
| San Miguel           | 6B   | Clinch                           | 2A   |
| Clear Creek          | 7    | Coffee                           | 2A   |
| Grand                | 7    | Colquitt                         | 2A   |
| Gunnison             | 7    | Cook                             | 2A   |
| Hinsdale             | 7    | Decatur                          | 2A   |
| Jackson              | 7    | Dougherty                        | 2A   |
| Lake                 | 7    | Early                            | 2A   |
| Mineral              | 7    | Echols                           | 2A   |
| Park                 | 7    | Effingham                        | 2A   |
| Pitkin               | 7    | Evans                            | 2A   |
| Rio Grande           | 7    | Glynn                            | 2A   |
| Routt                | 7    | Grady                            | 2A   |
| San Juan             | 7    | Irwin                            | 2A   |
| Summit               | 7    | Jeff Davis                       | 2A   |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County       | Zone                     | State/County         | Zone                     |
|--------------------|--------------------------|----------------------|--------------------------|
| Lanier             | 2A                       | <b>Illinois (IL)</b> |                          |
| Liberty            | 2A                       |                      | <i>Zone 5A except...</i> |
| Long               | 2A                       | Alexander            | 4A                       |
| Lowndes            | 2A                       | Bond                 | 4A                       |
| McIntosh           | 2A                       | Calhoun              | 4A                       |
| Miller             | 2A                       | Christian            | 4A                       |
| Mitchell           | 2A                       | Clark                | 4A                       |
| Pierce             | 2A                       | Clay                 | 4A                       |
| Seminole           | 2A                       | Clinton              | 4A                       |
| Tattnall           | 2A                       | Coles                | 4A                       |
| Thomas             | 2A                       | Crawford             | 4A                       |
| Tift               | 2A                       | Cumberland           | 4A                       |
| Toombs             | 2A                       | Edwards              | 4A                       |
| Ware               | 2A                       | Effingham            | 4A                       |
| Wayne              | 2A                       | Fayette              | 4A                       |
| Worth              | 2A                       | Franklin             | 4A                       |
| <b>Hawaii (HI)</b> |                          | Gallatin             | 4A                       |
| Zone 1A            |                          | Greene               | 4A                       |
| <b>Idaho (ID)</b>  |                          | Hamilton             | 4A                       |
|                    | <i>Zone 6B except...</i> | Hardin               | 4A                       |
| Ada                | 5B                       | Jackson              | 4A                       |
| Benewah            | 5B                       | Jasper               | 4A                       |
| Canyon             | 5B                       | Jefferson            | 4A                       |
| Cassia             | 5B                       | Jersey               | 4A                       |
| Clearwater         | 5B                       | Johnson              | 4A                       |
| Elmore             | 5B                       | Lawrence             | 4A                       |
| Gem                | 5B                       | Macoupin             | 4A                       |
| Gooding            | 5B                       | Madison              | 4A                       |
| Idaho              | 5B                       | Marion               | 4A                       |
| Jerome             | 5B                       | Massac               | 4A                       |
| Kootenai           | 5B                       | Monroe               | 4A                       |
| Latah              | 5B                       | Montgomery           | 4A                       |
| Lewis              | 5B                       | Perry                | 4A                       |
| Lincoln            | 5B                       | Pope                 | 4A                       |
| Minidoka           | 5B                       | Pulaski              | 4A                       |
| Nez Perce          | 5B                       | Randolph             | 4A                       |
| Owyhee             | 5B                       | Richland             | 4A                       |
| Payette            | 5B                       | Saline               | 4A                       |
| Power              | 5B                       | Shelby               | 4A                       |
| Shoshone           | 5B                       | St. Clair            | 4A                       |
| Twin Falls         | 5B                       | Union                | 4A                       |
| Washington         | 5B                       | Wabash               | 4A                       |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County        | Zone                     | State/County       | Zone                     |
|---------------------|--------------------------|--------------------|--------------------------|
| Washington          | 4A                       | Scott              | 4A                       |
| Wayne               | 4A                       | Shelby             | 4A                       |
| White               | 4A                       | Spencer            | 4A                       |
| Williamson          | 4A                       | Sullivan           | 4A                       |
| <b>Indiana (IN)</b> |                          | Switzerland        | 4A                       |
|                     | <i>Zone 5A except...</i> | Union              | 4A                       |
| Bartholomew         | 4A                       | Vanderburgh        | 4A                       |
| Brown               | 4A                       | Vigo               | 4A                       |
| Clark               | 4A                       | Warrick            | 4A                       |
| Clay                | 4A                       | Washington         | 4A                       |
| Crawford            | 4A                       | <b>Iowa (IA)</b>   |                          |
| Daviess             | 4A                       |                    | <i>Zone 5A except...</i> |
| Dearborn            | 4A                       | Cerro Gordo        | 6A                       |
| Decatur             | 4A                       | Clay               | 6A                       |
| Dubois              | 4A                       | Dickinson          | 6A                       |
| Fayette             | 4A                       | Emmet              | 6A                       |
| Floyd               | 4A                       | Hancock            | 6A                       |
| Franklin            | 4A                       | Kossuth            | 6A                       |
| Gibson              | 4A                       | Lyon               | 6A                       |
| Greene              | 4A                       | Mitchell           | 6A                       |
| Harrison            | 4A                       | O'Brien            | 6A                       |
| Hendricks           | 4A                       | Osceola            | 6A                       |
| Jackson             | 4A                       | Palo Alto          | 6A                       |
| Jefferson           | 4A                       | Sioux              | 6A                       |
| Jennings            | 4A                       | Winnebago          | 6A                       |
| Johnson             | 4A                       | Worth              | 6A                       |
| Knox                | 4A                       | <b>Kansas (KS)</b> |                          |
| Lawrence            | 4A                       |                    | <i>Zone 4A except...</i> |
| Marion              | 4A                       | Cheyenne           | 5A                       |
| Martin              | 4A                       | Decatur            | 5A                       |
| Monroe              | 4A                       | Gove               | 5A                       |
| Morgan              | 4A                       | Greeley            | 5A                       |
| Ohio                | 4A                       | Jewell             | 5A                       |
| Orange              | 4A                       | Logan              | 5A                       |
| Owen                | 4A                       | Norton             | 5A                       |
| Perry               | 4A                       | Phillips           | 5A                       |
| Pike                | 4A                       | Rawlins            | 5A                       |
| Posey               | 4A                       | Republic           | 5A                       |
| Putnam              | 4A                       | Scott              | 5A                       |
| Ripley              | 4A                       | Sheridan           | 5A                       |
| Rush                | 4A                       | Sherman            | 5A                       |



**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County          | Zone                     | State/County              | Zone                     |
|-----------------------|--------------------------|---------------------------|--------------------------|
| Smith                 | 5A                       | <b>Massachusetts (MA)</b> |                          |
| Thomas                | 5A                       | Zone 5A                   |                          |
| Wallace               | 5A                       | <b>Michigan (MI)</b>      |                          |
| Wichita               | 5A                       |                           | <i>Zone 5A except...</i> |
| <b>Kentucky (KY)</b>  |                          | Alcona                    | 6A                       |
| Zone 4A               |                          | Alger                     | 6A                       |
| <b>Louisiana (LA)</b> |                          | Alpena                    | 6A                       |
|                       | <i>Zone 2A except...</i> | Antrim                    | 6A                       |
| Bienville Parish      | 3A                       | Arenac                    | 6A                       |
| Bossier Parish        | 3A                       | Baraga                    | 6A                       |
| Caddo Parish          | 3A                       | Benzie                    | 6A                       |
| Caldwell Parish       | 3A                       | Charlevoix                | 6A                       |
| Catahoula Parish      | 3A                       | Cheboygan                 | 6A                       |
| Claiborne Parish      | 3A                       | Chippewa                  | 6A                       |
| Concordia Parish      | 3A                       | Clare                     | 6A                       |
| De Soto Parish        | 3A                       | Crawford                  | 6A                       |
| East Carroll Parish   | 3A                       | Delta                     | 6A                       |
| Franklin Parish       | 3A                       | Dickinson                 | 6A                       |
| Grant Parish          | 3A                       | Emmet                     | 6A                       |
| Jackson Parish        | 3A                       | Gladwin                   | 6A                       |
| La Salle Parish       | 3A                       | Gogebic                   | 6A                       |
| Lincoln Parish        | 3A                       | Grand Traverse            | 6A                       |
| Madison Parish        | 3A                       | Houghton                  | 6A                       |
| Morehouse Parish      | 3A                       | Iosco                     | 6A                       |
| Natchitoches Parish   | 3A                       | Iron                      | 6A                       |
| Ouachita Parish       | 3A                       | Isabella                  | 6A                       |
| Red River Parish      | 3A                       | Kalkaska                  | 6A                       |
| Richland Parish       | 3A                       | Lake                      | 6A                       |
| Sabine Parish         | 3A                       | Leelanau                  | 6A                       |
| Tensas Parish         | 3A                       | Luce                      | 6A                       |
| Union Parish          | 3A                       | Mackinac                  | 6A                       |
| Vernon Parish         | 3A                       | Manistee                  | 6A                       |
| Webster Parish        | 3A                       | Mason                     | 6A                       |
| West Carroll Parish   | 3A                       | Mecosta                   | 6A                       |
| Winn Parish           | 3A                       | Menominee                 | 6A                       |
| <b>Maine (ME)</b>     |                          | Missaukee                 | 6A                       |
|                       | <i>Zone 6A except...</i> | Montmorency               | 6A                       |
| Aroostook             | 7                        | Newaygo                   | 6A                       |
| <b>Maryland (MD)</b>  |                          | Oceana                    | 6A                       |
|                       | <i>Zone 4A except...</i> | Ogemaw                    | 6A                       |
| Allegany              | 5A                       | Ontonagon                 | 6A                       |
| Garrett               | 5A                       | Osceola                   | 6A                       |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County             | Zone | State/County             | Zone |
|--------------------------|------|--------------------------|------|
| Oscoda                   | 6A   | Jackson                  | 2A   |
| Otsego                   | 6A   | Pearl River              | 2A   |
| Presque Isle             | 6A   | Stone                    | 2A   |
| Roscommon                | 6A   | <b>Missouri (MO)</b>     |      |
| Schoolcraft              | 6A   | <i>Zone 4A except...</i> |      |
| Wexford                  | 6A   | Dunklin                  | 3A   |
| Keweenaw                 | 7    | Pemiscot                 | 3A   |
| Marquette                | 7    | Adair                    | 5A   |
| <b>Minnesota (MN)</b>    |      | Andrew                   | 5A   |
| <i>Zone 6A except...</i> |      | Atchison                 | 5A   |
| Fillmore                 | 5A   | Clark                    | 5A   |
| Houston                  | 5A   | Daviess                  | 5A   |
| Winona                   | 5A   | DeKalb                   | 5A   |
| Aitkin                   | 7    | Gentry                   | 5A   |
| Beltrami                 | 7    | Grundy                   | 5A   |
| Carlton                  | 7    | Harrison                 | 5A   |
| Cass                     | 7    | Holt                     | 5A   |
| Clearwater               | 7    | Knox                     | 5A   |
| Cook                     | 7    | Lewis                    | 5A   |
| Crow Wing                | 7    | Linn                     | 5A   |
| Hubbard                  | 7    | Livingston               | 5A   |
| Itasca                   | 7    | Macon                    | 5A   |
| Kittson                  | 7    | Marion                   | 5A   |
| Koochiching              | 7    | Mercer                   | 5A   |
| Lake                     | 7    | Nodaway                  | 5A   |
| Lake of the Woods        | 7    | Pike                     | 5A   |
| Mahnomen                 | 7    | Putnam                   | 5A   |
| Marshall                 | 7    | Ralls                    | 5A   |
| Norman                   | 7    | Schuyler                 | 5A   |
| Pennington               | 7    | Scotland                 | 5A   |
| Pine                     | 7    | Shelby                   | 5A   |
| Polk                     | 7    | Sullivan                 | 5A   |
| Red Lake                 | 7    | Worth                    | 5A   |
| Roseau                   | 7    | <b>Montana (MT)</b>      |      |
| St. Louis                | 7    | Zone 6B                  |      |
| Wadena                   | 7    | <b>Nebraska (NE)</b>     |      |
| <b>Mississippi (MS)</b>  |      | Zone 5A                  |      |
| <i>Zone 3A except...</i> |      | <b>Nevada (NV)</b>       |      |
| George                   | 2A   | <i>Zone 5B except...</i> |      |
| Hancock                  | 2A   | Clark                    | 3B   |
| Harrison                 | 2A   | Carson City              | 4B   |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County              | Zone | State/County               | Zone |
|---------------------------|------|----------------------------|------|
| Douglas                   | 4B   | Union                      | 4B   |
| Esmeralda                 | 4B   | Valencia                   | 4B   |
| Lincoln                   | 4B   | <b>New York (NY)</b>       |      |
| Lyon                      | 4B   | <i>Zone 5A except...</i>   |      |
| Mineral                   | 4B   | Bronx                      | 4A   |
| Nye                       | 4B   | Kings                      | 4A   |
| <b>New Hampshire (NH)</b> |      | Nassau                     | 4A   |
| <i>Zone 6A except...</i>  |      | New York                   | 4A   |
| Hillsborough              | 5A   | Queens                     | 4A   |
| Merrimack                 | 5A   | Richmond                   | 4A   |
| Rockingham                | 5A   | Suffolk                    | 4A   |
| Strafford                 | 5A   | Chenango                   | 6A   |
| <b>New Jersey (NJ)</b>    |      | Clinton                    | 6A   |
| <i>Zone 4A except...</i>  |      | Delaware                   | 6A   |
| Bergen                    | 5A   | Essex                      | 6A   |
| Hunterdon                 | 5A   | Franklin                   | 6A   |
| Morris                    | 5A   | Fulton                     | 6A   |
| Passaic                   | 5A   | Hamilton                   | 6A   |
| Somerset                  | 5A   | Herkimer                   | 6A   |
| Sussex                    | 5A   | Jefferson                  | 6A   |
| Warren                    | 5A   | Lewis                      | 6A   |
| <b>New Mexico (NM)</b>    |      | Madison                    | 6A   |
| <i>Zone 5B except...</i>  |      | Montgomery                 | 6A   |
| Chaves                    | 3B   | Oneida                     | 6A   |
| Dona Ana                  | 3B   | Otsego                     | 6A   |
| Eddy                      | 3B   | St. Lawrence               | 6A   |
| Hidalgo                   | 3B   | Sullivan                   | 6A   |
| Lea                       | 3B   | Ulster                     | 6A   |
| Luna                      | 3B   | Warren                     | 6A   |
| Otero                     | 3B   | <b>North Carolina (NC)</b> |      |
| Sierra                    | 3B   | <i>Zone 3A except...</i>   |      |
| Bernalillo                | 4B   | Alleghany                  | 5A   |
| Catron                    | 4B   | Ashe                       | 5A   |
| Curry                     | 4B   | Avery                      | 5A   |
| DeBaca                    | 4B   | Buncombe                   | 4A   |
| Grant                     | 4B   | Burke                      | 4A   |
| Guadalupe                 | 4B   | Caldwell                   | 4A   |
| Lincoln                   | 4B   | Graham                     | 4A   |
| Quay                      | 4B   | Haywood                    | 4A   |
| Roosevelt                 | 4B   | Henderson                  | 4A   |
| Socorro                   | 4B   | Jackson                    | 4A   |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County             | Zone                     | State/County         | Zone                     |
|--------------------------|--------------------------|----------------------|--------------------------|
| Macon                    | 4A                       | Greene               | 4A                       |
| Madison                  | 4A                       | Hamilton             | 4A                       |
| McDowell                 | 4A                       | Highland             | 4A                       |
| Mitchell                 | 4A                       | Hocking              | 4A                       |
| Stokes                   | 4A                       | Jackson              | 4A                       |
| Surry                    | 4A                       | Lawrence             | 4A                       |
| Swain                    | 4A                       | Madison              | 4A                       |
| Transylvania             | 4A                       | Meigs                | 4A                       |
| Watauga                  | 5A                       | Pickaway             | 4A                       |
| Wilkes                   | 5A                       | Pike                 | 4A                       |
| Yadkin                   | 4A                       | Ross                 | 4A                       |
| Yancy                    | 5A                       | Scioto               | 4A                       |
| <b>North Dakota (ND)</b> |                          | Vinton               | 4A                       |
|                          | <i>Zone 6A except...</i> | Warren               | 4A                       |
| Benson                   | 7                        | Washington           | 4A                       |
| Bottineau                | 7                        | <b>Oklahoma (OK)</b> |                          |
| Burke                    | 7                        |                      | <i>Zone 3A except...</i> |
| Cavalier                 | 7                        | Alfalfa              | 4A                       |
| Divide                   | 7                        | Craig                | 4A                       |
| Grand Forks              | 7                        | Delaware             | 4A                       |
| McHenry                  | 7                        | Ellis                | 4A                       |
| Nelson                   | 7                        | Garfield             | 4A                       |
| Pembina                  | 7                        | Grant                | 4A                       |
| Pierce                   | 7                        | Harper               | 4A                       |
| Ramsey                   | 7                        | Kay                  | 4A                       |
| Renville                 | 7                        | Major                | 4A                       |
| Rolette                  | 7                        | Nowata               | 4A                       |
| Towner                   | 7                        | Osage                | 4A                       |
| Walsh                    | 7                        | Ottawa               | 4A                       |
| Ward                     | 7                        | Washington           | 4A                       |
| <b>Ohio (OH)</b>         |                          | Woods                | 4A                       |
|                          | <i>Zone 5A except...</i> | Woodward             | 4A                       |
| Adams                    | 4A                       | Beaver               | 4B                       |
| Athens                   | 4A                       | Cimarron             | 4B                       |
| Brown                    | 4A                       | Texas                | 4B                       |
| Butler                   | 4A                       | <b>Oregon (OR)</b>   |                          |
| Clermont                 | 4A                       |                      | <i>Zone 4C except...</i> |
| Clinton                  | 4A                       | Baker                | 5B                       |
| Fayette                  | 4A                       | Crook                | 5B                       |
| Franklin                 | 4A                       | Deschutes            | 5B                       |
| Gallia                   | 4A                       | Gilliam              | 5B                       |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County               | Zone | State/County             | Zone |
|----------------------------|------|--------------------------|------|
| Grant                      | 5B   | Charles Mix              | 5A   |
| Harney                     | 5B   | Clay                     | 5A   |
| Hood River                 | 5B   | Douglas                  | 5A   |
| Jefferson                  | 5B   | Gregory                  | 5A   |
| Klamath                    | 5B   | Haakon                   | 5A   |
| Lake                       | 5B   | Hutchinson               | 5A   |
| Malheur                    | 5B   | Jackson                  | 5A   |
| Morrow                     | 5B   | Jones                    | 5A   |
| Sherman                    | 5B   | Lyman                    | 5A   |
| Umatilla                   | 5B   | Mellette                 | 5A   |
| Union                      | 5B   | Stanley                  | 5A   |
| Wallowa                    | 5B   | Todd                     | 5A   |
| Wasco                      | 5B   | Tripp                    | 5A   |
| Wheeler                    | 5B   | Union                    | 5A   |
| <b>Pennsylvania (PA)</b>   |      | Yankton                  | 5A   |
| <i>Zone 5A except...</i>   |      | <b>Tennessee (TN)</b>    |      |
|                            |      | <i>Zone 4A except...</i> |      |
| Adams                      | 4A   | Bedford                  | 3A   |
| Berks                      | 4A   | Chester                  | 3A   |
| Bucks                      | 4A   | Coffee                   | 3A   |
| Chester                    | 4A   | Crockett                 | 3A   |
| Cumberland                 | 4A   | Davidson                 | 3A   |
| Dauphin                    | 4A   | Decatur                  | 3A   |
| Delaware                   | 4A   | Dyer                     | 3A   |
| Franklin                   | 4A   | Fayette                  | 3A   |
| Lancaster                  | 4A   | Franklin                 | 3A   |
| Lebanon                    | 4A   | Gibson                   | 3A   |
| Montgomery                 | 4A   | Giles                    | 3A   |
| Perry                      | 4A   | Grundy                   | 3A   |
| Philadelphia               | 4A   | Hamilton                 | 3A   |
| York                       | 4A   | Hardeman                 | 3A   |
| <b>Rhode Island (RH)</b>   |      | Hardin                   | 3A   |
| Zone 5A                    |      | Haywood                  | 3A   |
| <b>South Carolina (SC)</b> |      | Henderson                | 3A   |
| <i>Zone 3A except...</i>   |      | Hickman                  | 3A   |
| Beaufort                   | 2A   | Lauderdale               | 3A   |
| Jasper                     | 2A   | Lawrence                 | 3A   |
| <b>South Dakota (SD)</b>   |      | Lewis                    | 3A   |
| <i>Zone 6A except...</i>   |      | Lincoln                  | 3A   |
| Bennett                    | 5A   | Madison                  | 3A   |
| Bon Homme                  | 5A   | Marion                   | 3A   |
| Brule                      | 5A   |                          |      |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County      | Zone                     | State/County | Zone |
|-------------------|--------------------------|--------------|------|
| Marshall          | 3A                       | Fayette      | 2A   |
| Maury             | 3A                       | Fort Bend    | 2A   |
| McNairy           | 3A                       | Freestone    | 2A   |
| Moore             | 3A                       | Galveston    | 2A   |
| Perry             | 3A                       | Goliad       | 2A   |
| Rutherford        | 3A                       | Gonzales     | 2A   |
| Shelby            | 3A                       | Grimes       | 2A   |
| Tipton            | 3A                       | Guadalupe    | 2A   |
| Wayne             | 3A                       | Hardin       | 2A   |
| Williamson        | 3A                       | Harris       | 2A   |
| <b>Texas (TX)</b> |                          | Hays         | 2A   |
|                   | <i>Zone 3A except...</i> | Hill         | 2A   |
| Cameron           | 1A                       | Houston      | 2A   |
| Hidalgo           | 1A                       | Jackson      | 2A   |
| Willacy           | 1A                       | Jasper       | 2A   |
| Anderson          | 2A                       | Jefferson    | 2A   |
| Angelina          | 2A                       | Jim Hogg     | 2A   |
| Aransas           | 2A                       | Jim Wells    | 2A   |
| Atascosa          | 2A                       | Johnson      | 2A   |
| Austin            | 2A                       | Karnes       | 2A   |
| Bastrop           | 2A                       | Kenedy       | 2A   |
| Bee               | 2A                       | Kleberg      | 2A   |
| Bell              | 2A                       | Lavaca       | 2A   |
| Bexar             | 2A                       | Lee          | 2A   |
| Bosque            | 2A                       | Leon         | 2A   |
| Brazoria          | 2A                       | Liberty      | 2A   |
| Brazos            | 2A                       | Limestone    | 2A   |
| Brooks            | 2A                       | Live Oak     | 2A   |
| Burleson          | 2A                       | Madison      | 2A   |
| Caldwell          | 2A                       | Matagorda    | 2A   |
| Calhoun           | 2A                       | McLennan     | 2A   |
| Chambers          | 2A                       | McMullen     | 2A   |
| Cherokee          | 2A                       | Milam        | 2A   |
| Colorado          | 2A                       | Montgomery   | 2A   |
| Comal             | 2A                       | Navarro      | 2A   |
| Coryell           | 2A                       | Newton       | 2A   |
| Dallas            | 2A                       | Nueces       | 2A   |
| DeWitt            | 2A                       | Orange       | 2A   |
| Duval             | 2A                       | Polk         | 2A   |
| Ellis             | 2A                       | Refugio      | 2A   |
| Falls             | 2A                       | Robertson    | 2A   |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County  | Zone | State/County | Zone |
|---------------|------|--------------|------|
| San Jacinto   | 2A   | Crosby       | 3B   |
| San Patricio  | 2A   | Culberson    | 3B   |
| Starr         | 2A   | Dawson       | 3B   |
| Tarrant       | 2A   | Dickens      | 3B   |
| Travis        | 2A   | Ector        | 3B   |
| Trinity       | 2A   | El Paso      | 3B   |
| Tyler         | 2A   | Fisher       | 3B   |
| Victoria      | 2A   | Foard        | 3B   |
| Walker        | 2A   | Gaines       | 3B   |
| Waller        | 2A   | Garza        | 3B   |
| Washington    | 2A   | Glasscock    | 3B   |
| Wharton       | 2A   | Hall         | 3B   |
| Williamson    | 2A   | Hardeman     | 3B   |
| Wilson        | 2A   | Haskell      | 3B   |
| Bandera       | 2B   | Hemphill     | 3B   |
| Dimmit        | 2B   | Howard       | 3B   |
| Edwards       | 2B   | Hudspeth     | 3B   |
| Frio          | 2B   | Irion        | 3B   |
| Kinney        | 2B   | Jeff Davis   | 3B   |
| La Salle      | 2B   | Jones        | 3B   |
| Maverick      | 2B   | Kent         | 3B   |
| Medina        | 2B   | Kerr         | 3B   |
| Real          | 2B   | Kimble       | 3B   |
| Uvalde        | 2B   | King         | 3B   |
| Val Verde     | 2B   | Knox         | 3B   |
| Webb          | 2B   | Loving       | 3B   |
| Zapata        | 2B   | Lubbock      | 3B   |
| Zavala        | 2B   | Lynn         | 3B   |
| Andrews       | 3B   | Martin       | 3B   |
| Baylor        | 3B   | Mason        | 3B   |
| Borden        | 3B   | McCulloch    | 3B   |
| Brewster      | 3B   | Menard       | 3B   |
| Callahan      | 3B   | Midland      | 3B   |
| Childress     | 3B   | Mitchell     | 3B   |
| Coke          | 3B   | Motley       | 3B   |
| Coleman       | 3B   | Nolan        | 3B   |
| Collingsworth | 3B   | Pecos        | 3B   |
| Concho        | 3B   | Presidio     | 3B   |
| Cottle        | 3B   | Reagan       | 3B   |
| Crane         | 3B   | Reeves       | 3B   |
| Crockett      | 3B   | Runnels      | 3B   |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County | Zone | State/County             | Zone |
|--------------|------|--------------------------|------|
| Schleicher   | 3B   | Sherman                  | 4B   |
| Scurry       | 3B   | Swisher                  | 4B   |
| Shackelford  | 3B   | Yoakum                   | 4B   |
| Sterling     | 3B   | <b>Utah (UT)</b>         |      |
| Stonewall    | 3B   | <i>Zone 5B except...</i> |      |
| Sutton       | 3B   | Washington               | 3B   |
| Taylor       | 3B   | Daggett                  | 6B   |
| Terrell      | 3B   | Duchesne                 | 6B   |
| Terry        | 3B   | Morgan                   | 6B   |
| Throckmorton | 3B   | Rich                     | 6B   |
| Tom Green    | 3B   | Summit                   | 6B   |
| Upton        | 3B   | Uintah                   | 6B   |
| Ward         | 3B   | Wasatch                  | 6B   |
| Wheeler      | 3B   | <b>Vermont (VT)</b>      |      |
| Wilbarger    | 3B   | Zone 6A                  |      |
| Winkler      | 3B   | <b>Virginia (VA)</b>     |      |
| Armstrong    | 4B   | <i>Zone 4A except...</i> |      |
| Bailey       | 4B   | Alleghany                | 5A   |
| Briscoe      | 4B   | Bath                     | 5A   |
| Carson       | 4B   | Brunswick                | 3A   |
| Castro       | 4B   | Chesapeake city          | 3A   |
| Cochran      | 4B   | Clifton Forge city       | 5A   |
| Dallam       | 4B   | Covington city           | 5A   |
| Deaf Smith   | 4B   | Emporia city             | 3A   |
| Donley       | 4B   | Franklin city            | 3A   |
| Floyd        | 4B   | Greensville              | 3A   |
| Gray         | 4B   | Halifax                  | 3A   |
| Hale         | 4B   | Hampton city             | 3A   |
| Hansford     | 4B   | Highland                 | 5A   |
| Hartley      | 4B   | Isle of Wight            | 3A   |
| Hockley      | 4B   | Mecklenburg              | 3A   |
| Hutchinson   | 4B   | Newport News city        | 3A   |
| Lamb         | 4B   | Norfolk city             | 3A   |
| Lipscomb     | 4B   | Pittsylvania             | 3A   |
| Moore        | 4B   | Portsmouth city          | 3A   |
| Ochiltree    | 4B   | South Boston             | 3A   |
| Oldham       | 4B   | Southampton              | 3A   |
| Parmer       | 4B   | Suffolk city             | 3A   |
| Potter       | 4B   | Surry                    | 3A   |
| Randall      | 4B   | Sussex                   | 3A   |
| Roberts      | 4B   | Virginia Beach city      | 3A   |



**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| State/County              | Zone                     | State/County          | Zone                     |
|---------------------------|--------------------------|-----------------------|--------------------------|
| <b>Washington (WA)</b>    |                          | Mason                 | 4A                       |
|                           | <i>Zone 5B except...</i> | McDowell              | 4A                       |
| Clark                     | 4C                       | Mercer                | 4A                       |
| Cowlitz                   | 4C                       | Mingo                 | 4A                       |
| Grays Harbor              | 4C                       | Monroe                | 4A                       |
| Jefferson                 | 4C                       | Morgan                | 4A                       |
| King                      | 4C                       | Nicholas              | 4A                       |
| Lewis                     | 4C                       | Pleasants             | 4A                       |
| Mason                     | 4C                       | Putnam                | 4A                       |
| Pacific                   | 4C                       | Raleigh               | 4A                       |
| Pierce                    | 4C                       | Ritchie               | 4A                       |
| Skagit                    | 4C                       | Roane                 | 4A                       |
| Snohomish                 | 4C                       | Summers               | 4A                       |
| Thurston                  | 4C                       | Tyler                 | 4A                       |
| Wahkiakum                 | 4C                       | Upshur                | 4A                       |
| Whatcom                   | 4C                       | Wayne                 | 4A                       |
| Clallam                   | 5C                       | Webster               | 4A                       |
| Island                    | 5C                       | Wirt                  | 4A                       |
| Kitsap                    | 5C                       | Wood                  | 4A                       |
| San Juan                  | 5C                       | Wyoming               | 4A                       |
| Ferry                     | 6B                       | <b>Wisconsin (WI)</b> |                          |
| Pend Oreille              | 6B                       |                       | <i>Zone 6A except...</i> |
| Stevens                   | 6B                       | Adams                 | 5A                       |
| <b>West Virginia (WV)</b> |                          | Calumet               | 5A                       |
|                           | <i>Zone 5A except...</i> | Columbia              | 5A                       |
| Berkeley                  | 4A                       | Crawford              | 5A                       |
| Boone                     | 4A                       | Dane                  | 5A                       |
| Braxton                   | 4A                       | Dodge                 | 5A                       |
| Cabell                    | 4A                       | Fond du Lac           | 5A                       |
| Calhoun                   | 4A                       | Grant                 | 5A                       |
| Clay                      | 4A                       | Green                 | 5A                       |
| Doddridge                 | 4A                       | Green Lake            | 5A                       |
| Fayette                   | 4A                       | Iowa                  | 5A                       |
| Gilmer                    | 4A                       | Jefferson             | 5A                       |
| Greenbrier                | 4A                       | Juneau                | 5A                       |
| Jackson                   | 4A                       | Kenosha               | 5A                       |
| Jefferson                 | 4A                       | La Crosse             | 5A                       |
| Kanawha                   | 4A                       | Lafayette             | 5A                       |
| Lewis                     | 4A                       | Milwaukee             | 5A                       |
| Lincoln                   | 4A                       | Monroe                | 5A                       |
| Logan                     | 4A                       | Outagamie             | 5A                       |

**Table Annex1-1 ASHRAE Standard 169-2013, Table B-1: U.S. Climate Zones by State and County (Continued)**

| <b>State/County</b> | <b>Zone</b>              | <b>State/County</b>              | <b>Zone</b> |
|---------------------|--------------------------|----------------------------------|-------------|
| Ozaukee             | 5A                       | Platte                           | 5B          |
| Racine              | 5A                       | Lincoln                          | 7           |
| Richland            | 5A                       | Sublette                         | 7           |
| Rock                | 5A                       | Teton                            | 7           |
| Sauk                | 5A                       | <b>Commonwealth/Municipality</b> | <b>Zone</b> |
| Vernon              | 5A                       | <b>Puerto Rico (PR)</b>          |             |
| Walworth            | 5A                       | <i>Zone 1A except...</i>         |             |
| Washington          | 5A                       | Barraquitas                      | 2B          |
| Waukesha            | 5A                       | Cayey                            | 2B          |
| Waushara            | 5A                       | Other                            | Zone        |
| Winnebago           | 5A                       | <b>Pacific Islands (PI)</b>      |             |
| <b>Wyoming (WY)</b> |                          | <i>Zone 1A except...</i>         |             |
|                     | <i>Zone 6B except...</i> | Midway Sand Island               | 2A          |
| Goshen              | 5B                       | <b>Virgin Islands (VI)</b>       |             |
| Laramie             | 5B                       | Zone 1A                          |             |