



# ADDENDA

**ANSI/ASHRAE Addendum k to  
ANSI/ASHRAE Standard 62.1-2022**

# Ventilation and Acceptable Indoor Air Quality

Approved by the ASHRAE Standards Committee on March 27, 2024, and by the American National Standards Institute on April 22, 2024.

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**Cognizant TC: 4.3, Ventilation Requirements and Infiltration**

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## **FOREWORD**

*The language of Section 5.12 has been further clarified in response to several continuous maintenance proposals. The revised language utilizes ASHRAE terminology to make the requirements succinct and breaks the requirements into clearly defined components for the limit and the controls.*

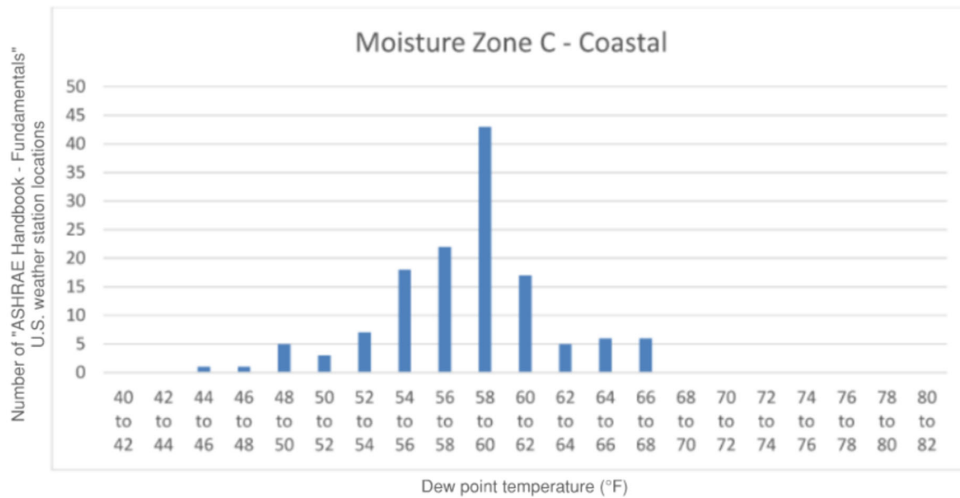
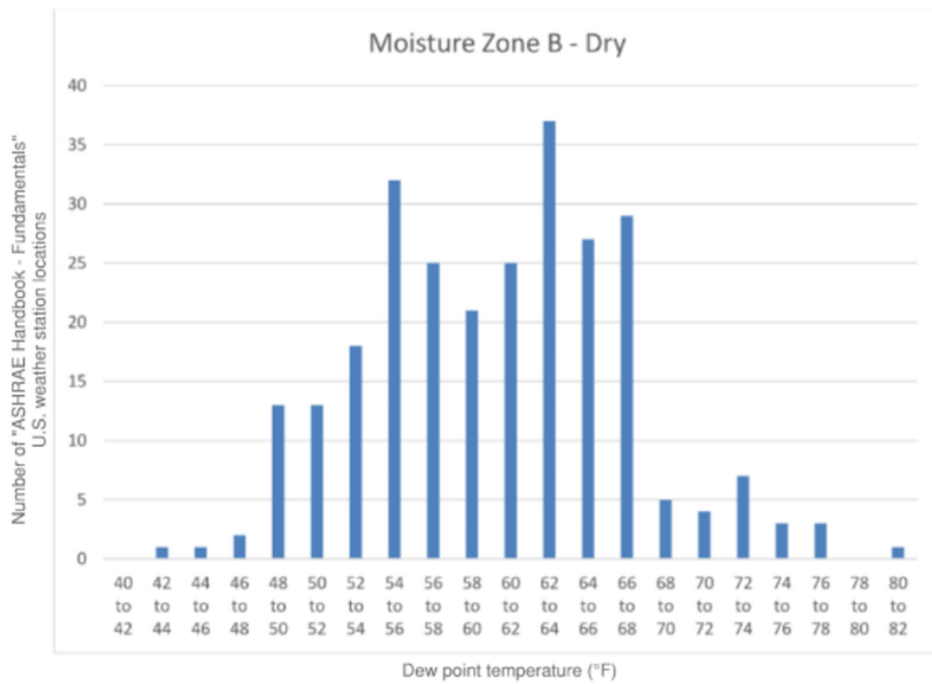
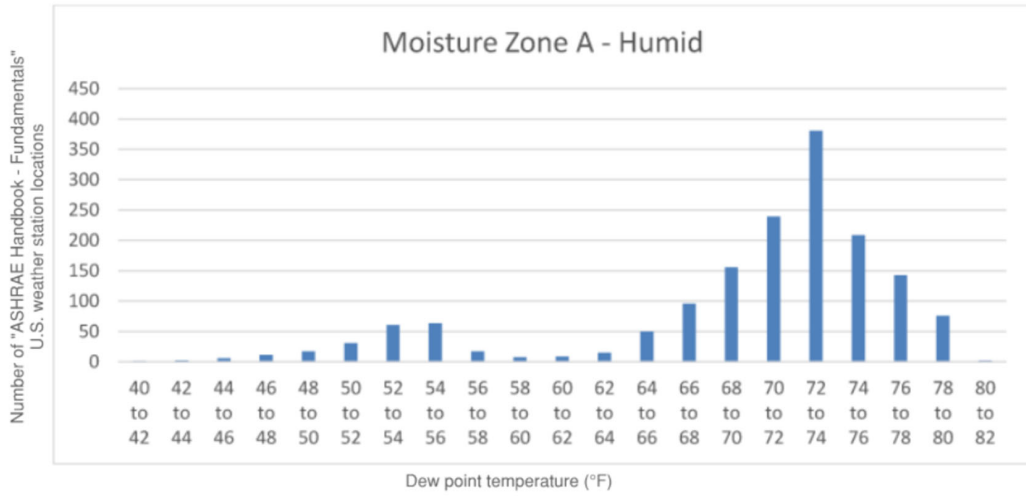
*Because this section now requires humidity control in each zone, the analysis requirements became superfluous and have been removed.*

*The newly added controls section stipulates that the HVAC system must be able to limit the humidity but does not stipulate specific means, equipment, or sensors to do so.*

*An exception has been added to exclude buildings in zones where the local climate does not regularly exceed dew-point temperatures above 68°F (20°C) and thus are unlikely to cause mold growth within building materials as a result of condensation due to cycling or intermittent cooling system operation. The 68°F (20°C) criteria excludes much of ASHRAE Climate Zone B (dry) and all of Climate Zone C (marine) from the humidity limit requirement. See the charts on the following page.*

*Because mold growth occurs when the average surface relative humidity is high for a period of time, the humidity limit exception that includes time components has been revised. The 60-hour time component allows the cooling/dehumidification system to be disabled for a weekend. The 30-day average time component helps ensure the zones will spend more time at or below the humidity limit than above it. The 2019 ASHRAE Handbook—HVAC Applications, Chapter 64 notes that a risk factor for dampness-related problems is “failing to ensure that system operation during unoccupied periods keeps the indoor dew point low enough to maintain a water activity below 0.8 in building materials and furnishings (30-day average surface relative humidity below 80% in surfaces cooled by air conditioning systems)”. The same chapter recommends, “Ensure that indoor surfaces of both occupied and unoccupied spaces are not cooled to temperatures so low as to create an average surface relative humidity of over 80% lasting for more than 30 days, or surfaces cold enough to allow condensation (ASHRAE Standard 160).”*

**Informative Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.



## Addendum k to Standard 62.1-2022

### Revise Section 5.12 as shown.

**5.12 Mechanically ~~and/or Indirectly~~ Evaporatively Cooled Buildings Cooling Systems.** Systems that cool by mechanical means or indirect evaporation shall be designed in accordance with Sections 5.12.1 and 5.12.2.

#### **Exceptions to 5.12:**

1. Systems in locations where the outdoor dew-point temperature is below 68°F (20°C) at the ASHRAE 2% annual dehumidification design condition.
- ~~12. Spaces~~Zones equipped with materials, assemblies, coatings, and furnishings that resist microbial growth and that are not damaged by continuously high indoor air humidity.
- ~~2. During overnight unoccupied periods not exceeding 12 hours, the 60°F (15°C) dew-point limit shall not apply, provided that indoor relative humidity does not exceed 65% at any time during those hours.~~
3. Indoor humidity shall be allowed to exceed the Section 5.12.1 humidity limit continuously for a period of up to 60 hours provided the 30-day average humidity remains below the limit.

#### **Informative Notes:**

1. ASHRAE publishes design dehumidification conditions in the “Climatic Design Information” chapter of ASHRAE Handbook—Fundamentals.
- ~~12. Examples of spaces that are potentially zones~~ exempted by Exception 12 are include shower rooms, swimming pool enclosures, kitchens, spa rooms, or semicooled warehouse spaces that contain stored contents that are not damaged by continuously high indoor air humidity or microbial growth.
- ~~2. This requirement reduces the risk of microbial growth in buildings and their interstitial spaces, because it limits the mass of indoor water vapor that can condense or be absorbed into mechanically cooled surfaces. The dew-point limit is explicitly extended to unoccupied hours because of the extensive public record of mold growth in schools, apartments, dormitories, and public buildings that are intermittently cooled during unoccupied hours when the outdoor air dew point is above 60°F (15°C).~~

**5.12.1 Humidity Limit.** ~~to limit the~~ The indoor humidity shall not exceed a to a maximum dew-point temperature of 60°F (15°C) during both occupied and unoccupied hours in any zone, whenever the outdoor air dew point is above 60°F (15°C). The dew-point limit shall not be exceeded when system performance is analyzed with outdoor air at the dehumidification design condition (that is, design dew point and mean coincident dry-bulb temperatures) and with the space interior loads (both sensible and latent) at cooling design values and space solar loads at zero.

**5.12.2 Controls.** Devices and controls shall be provided to maintain the humidity at or below the limit defined in Section 5.12.1.

## **POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES**

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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