New Climate Zones for 24 Jurisdictions
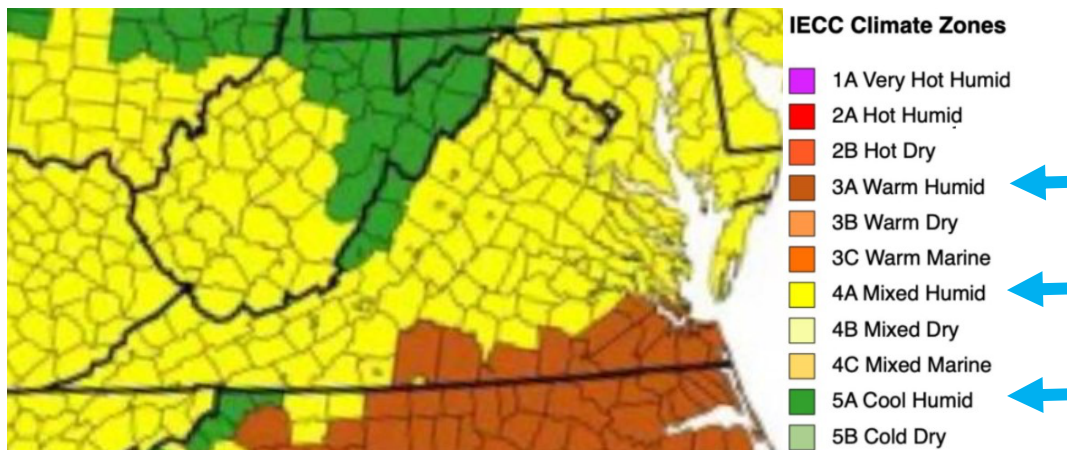
2021 VRC/VECC Update Guide

Changes to IECC Climate Zone Designations for Virginia Localities:

Summary: Virginia is no longer entirely within the 4A Mixed Humid zone. Nineteen Cities and Counties along the southern and eastern edge of the Commonwealth are now 3A Warm Humid, and five Cities and Counties on the northwest edge of the Commonwealth are now 5A Cool Humid.

This designation drives thermal performance requirements for different building elements in the code's U-Factor and R-Value tables. While window and skylight U-Factors and wood frame wall R-Values are consistent across all 3 Virginia climate zones, the values for other components will vary climate zone to climate zone. Code compliance reviewers should also be sure to take note of changing heating degree days (HDDs) and cooling degree days (CDD) listed for their locations – which are used in the load calculations for heating and cooling equipment.

Source: https://basc.pnnl.gov/images/climate-zone-map-iecc-2021

Why: The climate zones used by the IECC are developed and published by the American Society of Heating, Refrigeration, and Air-Conditioning Engineer (ASHRAE) in response to historical average temperature and humidity.

Additional Resources:

- www.ashrae.org

2021 VRC/VECC Code References:

TABLE N1101.7 (R301.1) CLIMATE ZONES, MOISTURE REGIMES, AND WARM HUMID DESIGNATIONS BY STATE, COUNTY AND TERRITORY

Virginia cities and counties now 5A (Cool Humid):

Alleghany	Clifton Forge	Highland
Bath	Covington	

Virginia cities and counties now 3A (Warm Humid):

Brunswick	Isle of Wight	South Boston
Chesapeake	Mecklenburg	Southampton
Emporia	Newport News	Suffolk
Franklin	Norfolk	Surry
Greensville	Pittsylvania	Sussex
Halifax	Portsmouth	Virginia Beach
Hampton		

All other Jurisdictions remain 4A (Mixed Humid)

For the purposes of climate zone designations, towns are considered part of the counties in which they lie.

Definitions:

CLIMATE ZONE. A geographical region based on climatic criteria as specified in this code.