

ANSI/RESNET/ICC 850—2025  
Standard for the Calculation and Labeling of the Water Use Performance  
of Dwelling and Sleeping Units Using a Water Rating Index

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This is the second edition of the standard, which is under continuous maintenance in accordance with Section 10.9 of the *RESNET Standard Development Policy and Procedures Manual*. Continuous maintenance proposals should be submitted to the Manager of Standards via the online form on the RESNET website. The procedures manual and online forms for submitting continuous maintenance proposals and requests for interpretation can be accessed from the website at <https://www.resnet.us/about/standards/resnet-ansi> on the page titled "RESNET®-ANSI AMERICAN NATIONAL STANDARDS."

The Manager of Standards should be contacted for:

1. Interpretation of the contents of this standard.
2. Participation in the next review of this standard.
3. Offering constructive criticism for improving this standard.
4. Permission to reprint portions of this standard.

## FOREWORD (INFORMATIVE)

This standard provides a consistent, uniform methodology for evaluating, quantifying and labeling the water use performance of *dwelling units* and *sleeping units* in *residential* and *commercial buildings*, excluding hotels and motels. The methodology compares the water use performance of an actual home (*rated home*) with the water use performance of a *reference home* of the same geometry, resulting in a relative water use rating, otherwise known as the *water rating index* (WRI). Where the water use performance of the actual home and the *reference home* are equal, the WRI is 100.

The *reference home* used for this comparative analysis has the attributes of a standard home built circa 2006. The underpinnings of the indoor *reference home* model are based on ANSI/RESNET/ICC 301. The outdoor *reference home* model is adapted using data from the Water Research Foundation's *Residential End Uses of Water, Version 2*. Both the indoor and outdoor calculation models are grounded in actual field water use data. It is the opinion of the Standard Development Committee that alternatives not included in the calculation of the *water rating index* did not have sufficient data to develop an equation (on par with the existing indoor and outdoor model) to confidently and accurately predict their water consumption.

This second edition of Standard 850 includes additions for multiple-family *dwelling units* and *sleeping units*, *gray water* reuse for toilet flushing, and revisions to *outdoor water use*.

A WRI includes water use for: toilets, kitchen faucets, lavatory faucets, showerheads, clothes washers, dishwashers, water softeners, outdoor/landscape irrigation systems and pools/spas. There are additional factors that also influence the rating, including: excess water pressure, house size, geographic location, number of *bedrooms*, lot and landscape size, and hot water distribution layout. The following components are not included in the standard, due to a lack of data: whole house humidifiers, water filtration systems and rainwater harvesting systems.

This standard contains both normative and informative material. The body of the standard is normative and must be complied with to conform to the standard. Informative materials are not mandatory and are limited to this forward, footnotes, references and annexes, all of which are clearly marked as informative.