ASHRAE Standard 62.2 Today and Tomorrow

"Ventilation and Acceptable Indoor Air Quality"

Agenda

- Brief Intro/Review of Standard 62.2-2007
- Questions for Panelists:
  - Philip Fairey, FL Solar Energy Center
  - Max Sherman, Lawrence Berkeley Lab
  - Don Stevens, Panasonic
  - Aaron Townsend (for Joe), Building Science Corp.
- Your Questions

Standard 62.2 – Is This It?

TABLE 4.1a (I-P)

Ventilation Air Requirements, cfm

Floor Area (ft2)	Bedrooms 0-1	2-3	4-5	6-7	>7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

Standard 62.2 Today

4. Whole-Building Ventilation

4.1 **Qfan = 0.01 cfm/sf + 7.5 cfm (Nbr+1)**

Exceptions: a) zones 3B/C, b) no A/C in 1/2, or c) conditioned <876 hrs/yr.

Table 4.1a =

and if window operation is permissible

4.1.1 +7.5 cfm/person in higher occupancy

4.1.2 Licensed Design Professional

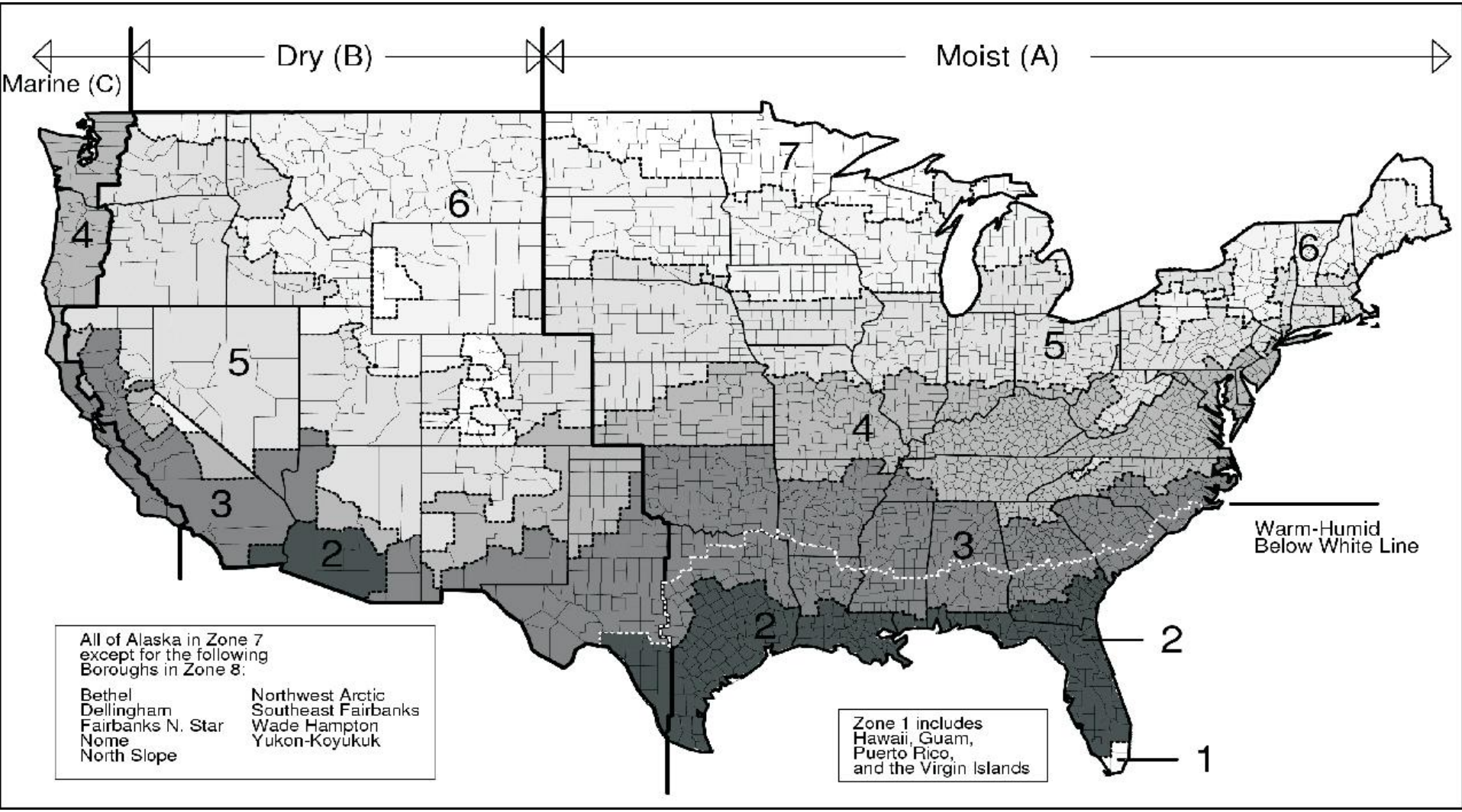
4.1.3 Infiltration Credit (existing bldgs)

4.2 **No real restrictions on system type**

4.3 Override control required (On/Off)

4.4 Itermittent operations (increase rates)

4.5 System limitations in severe climates (7.5 cfm/100 sf)


Marine (C)
Dry (B)
Moist (A)
4
6
7
6
5
5
4
3
2
3
2
2
1
Warm-Humid
Below White Line
All of Alaska in Zone 7
except for the following
Boroughs in Zone 8:
Bethel
Dellingham
Fairbanks N. Star
Nome
North Slope
Northwest Arctic
Southeast Fairbanks
Wade Hampton
Yukon-Koyukuk
Zone 1 includes
Hawaii, Guam,
Puerto Rico,
and the Virgin Islands

Standard 62.2 Today (cont'd)

5. Local Exhaust

5.2 Rates required for Intermittent ops:

- Kitchens: 100 cfm
- Bathrooms: 50 cfm

5.3 Rates required for Continuous ops:

- Kitchens: 5 ach (of kitchen volume)
- Bathrooms: 20 cfm

Standard 62.2 Today (cont'd)

6. Other Requirements
   - 6.1 No Transfer Air (only OA counts)
   - 6.2 Labeling & operating instructions
   - 6.3 Dryers vented outside
   - 6.4 Adequate Combustion & Ventilation air, AND 2 largest exhaust fans ≤ 15cfm/100sf total
   - 6.5 Garages sealed and ducts tight (≤ 6% fan)
   - 6.6 Ventilation openings ≥ 4% floor area
   - 6.7 Filters ≥ MERV 6 (systems w/ ≥ 10ft ducting)
   - 6.8 Air Inlets ≥ 10 ft contaminant sources

Standard 62.2 Today (cont'd)

7. Air-Moving Equipment
   - 7.1 HVI Standards & Manuf. requirements
   - 7.2 Sound Ratings:
     - Continuous: 1 Sone max
     - Intermittent: 3 Sone max (except >400 cfm fans)
   - 7.3 Airflow Tested OR Ducting Sized per Table 7.1 @ 0.25"
   - 7.4 Multi-Branch Exhaust Ducting:

     Back-draft dampers or continuous fan

Let the Debate Begin …

1. What changes do you expect in 2010?

2. Ventilation system types are treated equally in 62.2; should they be differentiated?

Why?

How?

Ventilation System Types

- Balanced (both Supply & Exhaust)
- Balanced with Heat/Energy Recovery
- Unbalanced – Exhaust only
- Unbalanced – Supply only

All these can be Continuous or Intermittent

3. Should ventilation rates be determined separately for different climates? (i.e. hot/humid climates)

Why?

How?

4. “Too much”, “Just right”, or “Not enough”?

What is the right ventilation rate for acceptable IAQ?

5. What is the “infiltration credit” and should it stay or go?

Infiltration Credit (paraphrased)

Section 4.1 includes a default infiltration credit for ventilation provided by infiltration of 2 cfm/100 sf of occupiable space. For buildings built prior to the application of this standard, when excess infiltration has been measured using ASHRAE Standard 136, the rates in section 4.1 may be decreased by half the excess of the rate calculated from Standard 136 that is above the default rate.

Your Questions