

# CLEARING THE AIR

*Residential Ventilation Issues by Dara Bowser & Bob Allison*

## "Stale Air Stories"

The following are some "Stale Air Stories" that have arisen over the past year. We hope they inform and/or amuse you!

### **Don't Worry..This HRV is Self-Balancing!**

A certain HRV manufacturer's marketing department has made the statement that their retail HRVs are "self-balancing". This has led to much confusion because as far as we can tell their HRV's are no different than other HRV's which require balancing. In any event, the airflows of the system are required to be measured as per OBC sentence 9.32.3.11.(7).

Some HRV's have built-in airflow measuring ports so that the installer can measure the airflows without installing special air-flow measuring stations, but this does not make the HRV "Self Balancing".

### **Principal Fan Installed in a Basement Not Permitted!**

Neither the OBC section 9.32 nor CSA F326 specify the location of the principal ventilation fan. Of course there are rules which require that some air be withdrawn from the kitchen and water-closet rooms, but this does not mean that the principal fan must withdraw its air from those rooms.

Consider the case of a simplified-system HRV. In this case, the exhaust fan of the HRV is considered to be the principal exhaust fan, but it draws from the return air of the forced air system.

In the case where the principal exhaust fan is located in a basement or other "utility area" the fan is much more likely to be run for extended periods or continuously as originally intended. If the principal fan is installed in an ensuite bathroom, there is very little likelihood that it will be run for extended periods as the noise will be considered "annoying".

If the principal fan is installed in a basement, the argument is made that there will be reduced air circulation in the house. In fact, the exhaust fan cannot be relied upon to provide circulation no matter where it is located. Recirculation and distribution of ventilation air is the function of the central air-handler or furnace fan in an "Exhaust-only" system.

Lastly, it has become common practice in some of the more humid areas of the country to install a basement exhaust fan that essentially runs continuously, exhausting from near the floor level. The theory is that the fan will remove the "humidity" that supposedly comes up from the basement floor. While there is no technical literature which supports this theory

one way or the other, many people are convinced that such fans make a difference.

In summary, the OBC does not disallow it, and there may be significant advantages in home occupant operation and humidity control by locating the principal exhaust fan in the basement.

### **HVI Sone Ratings on fans have changed. Many fans which used to be acceptable no longer meet Sone requirements!**

There is a certain amount of truth to this. Recently, HVI changed the Sone rating procedure. As a result, all of the manufacturers have had their fans re-tested with the result that some fans which used to meet the 2.5 sone requirement no longer do.

Normally, an event such as this would cause much turmoil associated with effective dates and the sale of existing inventory etc, but the Ministry of Housing has issued a Branch Opinion which accepts the old ratings until the next Code Change Cycle. There may be a bit of confusion in the interim however, as fans are produced which are marked with the new sone ratings which may be higher than 2.5 but which could be accepted because their "old" sone rating was 2.5 or less.

### **All New Houses require CO Detectors!**

In fact, this is mostly true. The only new house that will not require a CO Detector is one that is electrically or "back-yard boiler" heated and has no attached garage. (Houses with solid fuel burning appliances have required CO detectors since 1993). Details and effective date of this rule can be found at <http://obc.mah.gov.on.ca/New/Oreg283-2001.html>

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NOTE: The opinions expressed in this column are those of the writers and do not reflect the views of HRAI, OBOA or any other agency, corporation or individual.