



# Home Air Quality

WASHINGTON STATE  
ENERGY OFFICE

Washington Energy  
Extension Service

*Wise Use of Resources Through Education*

## *Using Dehumidifiers in the Pacific Northwest*

The first step in controlling an interior moisture problem should be source control (see WEES *Reducing Moisture Problems*, FS1802). Once source control measures have been taken, some houses may still experience relative humidity (RH) levels above the recommended 30 to 60 percent. In these cases, the next step might be mechanical dehumidification. Before recommending or purchasing a dehumidifier for use in a Pacific Northwest home, it's important to understand the special circumstances that exist.

Dehumidifiers have been marketed mainly for warm, humid climates. For example, when they are tested for their performance ratings, the tests are conducted at 80°F and 60 percent RH. These are not typical conditions for homes in the Pacific Northwest. In fact, conditions for Northwest homes are more likely to be 55° to 60°F and 70 percent RH. A good example of this might be a house in day or night set-back during the winter (windows sweating). To handle this situation, it is important to use a low temperature or defrost equipped dehumidifier. If not, the unit will ice up and become ineffective. If a dehumidifier is not marked "low temperature" or "defrost", it cannot be expected to operate effectively in temperatures below 65°F.

Finally, since a dehumidifier removes moisture by creating a cold coil for condensation, the by-product will then be warm air. Under Northwest conditions, this by-product will benefit the home by assisting with space heating. Therefore, the dehumidifier should not be viewed as having an energy penalty like it would have in warm, humid climates. This also means that the best location for a dehumidifier would be in an area of the house that has both moisture problems and can utilize the heat.

*Written by Edwin Valbert*

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