

# Your home as an ecosystem

Seven characteristics of green and healthy homes



Homeowners often take health and wellness for granted. Though the healthiness of a home may seem all bright and shiny on the outside, hidden problems can cause serious damage to the building and to occupant health. Rick Bayless

By Rick Bayless

The right balance of green initiatives with environmental home health standards sets the stage for Western North Carolina families to thrive, both in lifestyle and wellness. Not only do we live in our homes, but our homes function in much the same way as living organisms. Balancing the characteristics of green homes with those of healthy homes makes it possible to create and maintain

home ecosystems that support the well being of each person who lives there.

As the home is an ecosystem, it may be referred to as a "living building." If the ecosystem of the home is out of balance, this can affect the aspects of the home which ensure human wellness. If you or family members don't feel well when at home, then it's very possible one or more of the systems of your home need your attention.

A good foundation for understanding the ecosystem of homes may be found in the seven characteristics set forth by the National Center for Healthy Housing. These guidelines are foundational to the knowledge the indoor air quality industry is built on. Professionals within the industry may walk through these seven key steps with homeowners to demonstrate the considerations needed to ensure their green home environment is

also healthy, and vice versa.

The seven characteristics, or steps, of a green and healthy home are as follows:

**Safe**

Safety is number one when an environmental investigator considers the home environment. We consider the obvious hazards, such as loose steps or weak railings, as well as the subtle ones, such as disconnected flue pipes leaking carbon monoxide into the home. Detection and repair are critical. Safety overrules everything else.

**Dry**

Dryness isn't restricted to rain water, plumbing leaks and runoff. In the southern Appalachians, humidity, condensation, air conditioning zones, and the ensuing mold and mildew issue also need to be considered. When older homes are upgraded to green homes, for example, these weren't built to handle cooling. When air conditioning chills the air, and ducts become cold, then beads of condensation may form on those surfaces. When that water drips onto surrounding areas or into walls, problems such as stains, warping, mold, rot, and damage may occur. This is also true in new, energy efficient homes with specific ventilation requirements.

**Clean**

Clean has a lot to do with the simplicity of the indoor space. First, keep the space clear of obvious

dust, debris, soil, spills, stains and soiling. Believe it or not, that's where problems can begin. The second level is not as obvious. Look behind, under and over furniture and appliances to remove buildup. Third, clearing clutter and removing layers, stacks, and piles of items stored around the house reduces dampness, insects, and allergen. To maintain a clean house, watch for those things that need to be addressed.

**Maintained**

Green homes are smart homes. Homeowners choose green homes for their wonderful systems: recovery ventilators, dehumidifiers, radiant floor heating systems, and more. However, maintaining specialized equipment can be complicated for the average homeowner. Learning to operate and maintain the parts of a home ensures the health of its ecosystem.

Though seasonal maintenance, like cleaning gutters, remains important, a better choice is a monthly maintenance schedule. Repairs from lack of upkeep cost a lot more than maintenance.

**Ventilated**

Consider ventilation the lungs of the house. Think "out with the bad and in with the good." From the bath exhaust to the kitchen stove and the ducts that run through the house and behind the walls or floors, ventilation must be more than a haphazard mix.

The HVAC, or heating, ventilation, and air conditioning system, could be its own category. Essentially, it maintains the weather conditions inside the house. The more tightly we build houses, the more important it is that the HVAC system is smarter than that of the standard house. A smart HVAC system has multiple outputs, multiple zones, variable speed fans, and great air filtration. Dehumidifying needs to be addressed separately and directly. If fully understood, it's a health asset; if not, it can be a liability and a source of wellness issues for the homeowner.

**Pest Free**

The wild creatures of the field and forest are wonderful, so long as they don't take up residence in our homes. Chipmunks, squirrels, possums, bears, birds, wasps, frogs, snakes, insects ... and right on down to bacterium and molds ... form quite an array of unwelcome guests. Believe it or not, the nests, droppings and diseases are both health and safety issues.

My best advice is to think like a

mouse. In other words, work with the ecology, biology, and habitual behaviors of a mouse to stop problems at the source. Close, screen, or seal mouse-sized holes. Move the firewood pile away from the house. Investigate under the house, among the eaves, and in shrubbery to deter nesting spots. This approach works for other creatures too.

Good practitioners embrace integrated pest management, or IPM, and consider holistic approaches to pest control. Chemical control is a last line of defense to be used as sparingly as possible and with the guidance of a health-oriented pest control expert.

**Toxin Free**

Simply, any substance that's natural or manmade in liquid, solid, or gas, that can jeopardize wellness, is a problem. Fluoride, iron, silt, bacteria, mosquitoes, chemical spills, solvents, paints, smoke and soot, asbestos, fiberglass, molds, black widow spiders, noxious plants, and more, make the list in Western North Carolina. Even simple linseed oil or furniture polish could send a person who has a heightened, adverse sensitivity to such materials into respiratory distress, also called "multiple channel afflictions." To ensure your house is toxin free (for you, not a previous resident), you may choose to enlist the assistance of an environmental home health specialist who knows how to assess the house according to your needs and concerns.

Whether old or new, green or standard, existing or planned, consider it a wise investment to conduct a holistic assessment of the healthiness conditions of your unique home ecosystem. When making decisions about any built environment, confirm that the seven healthy home characteristics are in order. If not, identify which of the seven may need an environmental intervention. You'll find that when cost-effective corrections are applied early, the risks associated with house or occupant healthiness decline are radically reduced. If green and healthy priorities are a conscious, cultivated part of your lifestyle, I recommend you get the guidance you need to ensure that home health basics are a solid part of your plans.

With more than 35 years of award-winning experience, environmental home health specialist Rick Bayless owns and operates A Healthier Home™ and EnviroVent™, offering friendly, accessible health and safety investigations in the southern Appalachians. Currently, Rick hosts "Break the Mold," a regional complimentary community education series about home ecosystems. Visit [www.ahhealthierhomenc.com](http://www.ahhealthierhomenc.com).

### Connect with us today.

Solar electric, radiant heating, & battery back-up

## SUGAR HOLLOW SOLAR

### SERVICE

### RESIDENTIAL COMMERCIAL

We design, install, and maintain renewable energy systems. Our team has over 45 years of combined experience helping residences, businesses, and government go solar.

ask us how 828.776.9161

[sugarhollowsolar.com](http://sugarhollowsolar.com)

## LIVING DESIGN CONSULTANTS

environmental energy balancing services

harmonizing electro & geopathic stress

architecture for well-being | 985.630.9370

[www.livingdesignconsultants.com](http://www.livingdesignconsultants.com)

## Coleman Waterproofing

EnviroDri WEATHER-RESISTANT BARRIER

North America's GUARANTEED TUFF-N-DRI #1 Brand

A More Effective Alternative to HOUSEWRAPS

828.299.8506

Call us to see how your house can be protected from moisture intrusion from the footer to the rafters

## SMOKY MOUNTAIN LOG & TIMBER HOMES

828-435-2680

[smokymtnloghomes.com](http://smokymtnloghomes.com)