

The Basic 10 of Green Construction – Part IV

The 6 aspects of good green construction that we've discussed so far all have a direct affect on energy conservation, a large part of green building. These next two components address building a healthy home and reducing the usage and subsequent cost of water.

7 – Water. Water conservation is another integral part of green construction. Only 3 percent of all water on earth is fresh, and 2 percent of that is frozen in icecaps and glaciers. Selecting low-flow fixtures, low-flush commodes, and installing low-volume irrigation all contribute to preserving one of the earth's most precious resources.

Low-flow fixtures, defined as those that supply less than the standard 2.2 gpm (for a sink faucet), 2.5 gpm (for a showerhead, and less than 1.6 gpf for the toilets, are now offered by many companies.

Advances in technology have made significant improvements in the performance of these products. To make it easy to find and select water-efficient products with good performance, the EPA (Environmental Protection Agency) has introduced its WaterSense® program, a label that's backed by independent testing and certification. For a list of qualified low-flow products visit <http://www.epa.gov/watersense/>.

Irrigation is listed as number one for household water usage. Green construction considers either eliminating the need for irrigation through the use of drought-tolerant turf, plants, and trees, or utilizing low-volume irrigation and efficient design to drastically reduce water usage. Professional irrigation designers and installers can be found through the Florida Irrigation Society, <http://www.fisstate.org/>.

As discussed in last month's article, Energy Star® dishwashers and washing machines also contribute to water conservation.

Rain harvesting through the use of cisterns is growing across the United States. Massive amounts of water can be captured from roof runoff, stored in cisterns, and utilized for irrigation, clothes washing, or flushing toilets. For more information visit The American Rainwater Catchment Systems Association, www.arsca.org or The Rainwater Harvesting Community, www.harvesth2o.com

8 – Indoor Air Quality (IAQ). According to the EPA, indoor air quality is three to five times worse than outdoor air quality. The

American Lung Association says that an estimated 34.1 million Americans have been diagnosed with asthma in their lifetime by a health professional. In 2006, over 6.8 million children under age 18 had asthma making it the leading chronic illness of children in the United States. Both asthma and allergies are exacerbated by poor indoor air quality.

Selecting products and features that contribute to indoor air quality (IAQ) is an important part of creating a green home. There are several components in this area from which to choose. The following are just a few:

Central vacuum system. Research at the University of California, Davis, showed that a prominent brand central vacuum removed allergens and reduced allergy symptoms by 47 percent for nasal, 48 percent for non-nasal, 61 percent for eye, and 44 percent for sleep. The EPA has acknowledged this product as an indoor-air-quality enhancer.

Low-VOC (volatile organic compounds) products. Many products such as flooring, paint, countertops, cabinetry, caulks, sealants, adhesives, and some insulation emit chemicals into the air in the form of gases. These chemicals, such as formaldehyde (a classified carcinogen), are known as VOCs. The good news is that low- or no-VOC options for all of these products are readily available.

Sealing the HVAC registers upon completion of the ductwork installation is a very simple, inexpensive procedure that contributes to improved IAQ. By preventing construction dust and debris from settling in the ductwork, the homeowner won't be breathing in this mess.