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Here are some interesting facts that you should know about your home:

1. Water:

Older toilets use 3.7-7 gallons per flush

Dishwashers use 8-14 gallons per cycle

Top-loading washers use 45 gallons/load.

A dripping faucet waste 15-21 gallons per day.

US water users withdraw enough water to fill a line of Olympic-size swimming pools reaching around the world EVERY DAY (300 billion gallons)

Although our planet is 71 percent water, humans depend on a mere .65 percent of the water for survival – much of which is polluted.

About a quarter of the nation's largest industrial plants and water treatment facilities are in serious violation of pollution standards at any one time.

An estimated 7 million Americans are made sick annually by contaminated tap water; in some rare cases this results in death.

2. Indoor Air Quality:

US EPA ranks indoor air pollution among top five environmental risks. Unhealthy air is found in up to 30% of new and renovated buildings

W.H.O. reports that indoor air pollution causes 14 times more deaths than outdoor air pollution (2.8 million lives)

Of hundreds of EPA-regulated chemicals, only ozone and sulfur dioxide are more prevalent outdoor than indoors

20 percent of all housing in the US has too much lead dust or chippings (causes kidney and red blood cell damage, impairs mental and physical development, may increase high blood pressure)

3. Wood:

Although the US is home to only 4.5 percent of the global population, it is responsible for over 15 percent of the world's consumption of wood.

4. Chemical Based Products:

The volatile organic compounds (including pesticides) found indoors are believed to cause 3,000 cases of cancer a year in the US.

95 percent of the pesticides used on residential lawns are considered probable carcinogens by the EPA (2,4-D—a component of Agent Orange—is used in about 1,500 lawn care products)

Going Green & Conserving Energy

Are you concerned about conserving energy when you build or remodel? Or perhaps building green to protect the environment, but don't know where to start. Or perhaps you don't know what impact your efforts will have, or how much it will cost. These are all things to consider when deciding to build or remodel your home, and we can help you.

Buildings account for 1/6 of the world's fresh water withdrawals, 1/4 of its wood harvest, and 2/5 of its material and energy flows. Building "green" is an opportunity to use our resources efficiently while creating healthier buildings that improve human health, build a better environment, and provide cost savings. "Building Green" is a design and construction practice that promotes the economic health and well-being of your family, the community and the environment. The green home employs using energy, water, and other resources more efficiently; and reduces the overall impact to the environment. How can you design your remodel to meet the standards of Building Green. Although there is a greater opportunity to incorporate building green techniques when building a new home, it is still possible to convert aspects of an older home to building green concepts when remodeling. Here is a description of how Building Green influences the choices you make when building or remodeling a home.

Site Selection: If building a new home start by selecting a site well suited to take advantage of mass transit. Protect and retain existing landscaping and natural features. Select plants that have low water and pesticide needs, and generate minimum plant trimmings. Use compost and mulches. This will save water and time. Recycled content paving materials, furnishings, and mulches help close the recycling loop.

Home Design: As you're designing your remodel, think about creating spaces that won't have to be remodeled again, thereby saving energy and resources in the future. For example in the kitchen you should be able to easily move around three key cooking areas: the stove, the sink, and the refrigerator. Consider adding features that allow you to do more than just cook and eat like adding a small desk in an unused space or creating an area for entertaining. Also, installing a recycling center

into the cabinetry makes recycling kitchen waste more convenient. Use products that are natural when replacing countertops, cabinets or even floor coverings.

The Attic: Reflect heat away from your home by installing a radiant barrier such as Eagle Shield on the underside of your roof rafters. A radiant barrier is simply a sheet of aluminum foil with paper backing that can reduce heat gains through your ceiling by 95 percent. They are particularly helpful if you have air conditioning ducts running through your attic, because the lower attic temperature keeps the ducts cooler. In fact, some homeowners save more from cooler ducts than from the benefits of keeping the ceiling cool.

Solar: Adding a solar system helps combat the increasing cost of energy, raises the value of your home and is a positive sales feature in the event that you should want to sell your home in the future. If the sun shines on your home for the majority of the day, especially in winter, your home is a good candidate for a solar system. Solar systems available include solar heating systems such as solar hot water fluid collectors that heat a fluid circulated within them or air collectors that distribute heated air in the house with fans. Also available are photovoltaic panels that contain hundreds of small silicon cells that collect the sun's energy and change it into electricity that can be used to power your home. These systems can be installed on a solar bank separate from the home structure or incorporated into the roofing structure.

Exterior: A home's exterior wall surface is one of its most visible and defining features. Choose an aesthetically appealing siding material that can withstand years of harsh weather such fiber cement siding, that will require minimal repainting and waterproofing, and that will optimize or avoid the use of wood. Wrapping the house with rigid foam to increase the wall insulation cuts down on heat or cooling loss thus reducing the use of energy for air conditioning and heating. Replacing windows with new Low E 4 high efficiency windows will reduce costs for heating and air conditioning by reducing heat loss or gain.



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899 Embarcadero Drive Suite #1
El Dorado Hills, CA 95762
Phone: (916) 939-5323
Fax: (916) 939-5368
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Ventilation: Provide adequate ventilation and a high-efficiency, in-duct filtration system. Heating and cooling systems that ensure adequate ventilation and proper filtration can have a dramatic and positive impact on indoor air quality. Prevent indoor microbial contamination through selection of materials resistant to microbial growth, provide effective drainage from the roof and surrounding landscape, install adequate ventilation in bathrooms, allow proper drainage of air-conditioning coils, and design other building systems to control humidity.

Water Usage: In the U.S., showers account for 18 % of indoor water usage and 37 percent of a home's hot water use. A family of four each showering five minutes a day will use about 700 gallons per week. This is equivalent to a three year drinking supply for one person in the U.S. Minimize wastewater by using ultra low-flush toilets, low-flow shower heads, and other water conserving fixtures. Selecting high performance showerheads reduces water usage to 1-1.5 gallons per minute, 60 percent less water than a traditional showerhead, and will pay for itself in months from water-heating energy savings alone. Install point-of-use hot water heating systems for more distant locations as well as replacing an older tank type of whole house hot water heater with a highly efficient tankless model. Design for dual plumbing to use recycled water for toilet flushing or a gray water system that recovers rainwater or other non-potable water for site irrigation. Meter the landscape separately from the home and use micro-irrigation (drip or low flow spray heads) to supply water in non-turf areas.

Energy Efficiency: Most new buildings can reach energy efficiency levels far beyond California Title 24 standards, but when remodeling efforts need to be made to upgrade an existing house to improve energy usage. To remodel with Building Green in mind, the following strategies should be considered:

1. Passive design strategies including building shape and orientation, passive solar design, and the use of natural lighting.
2. Develop strategies to provide natural lighting such as installing sky lights or "Solartube" natural lighting.
3. Install high-efficiency lighting systems with advanced lighting controls and include low voltage lighting systems, motion sensors tied to dimmable lighting controls, task lighting to reduce general overhead light levels.
4. Install a properly sized and energy-efficient heat/cooling system in conjunction with a thermally efficient building shell. Maximize light colors for roofing and wall finish materials; install high R-value wall and ceiling insulation; and use minimal glass on east and west exposures.
5. Minimize the electric loads by installing new higher efficiency appliances.

Consider incorporating alternative energy sources such as photovoltaic and fuel cells that are now available for energy production.

Non Toxic Materials: Over the past 60 years, at least 75,000 new synthetic compounds have been developed and released into the environment. Less than half of these have been tested for potential toxicity to humans. The use of safer products with zero or low "off gassing" and low toxicity such as no-VOC paint, solid wood flooring, products that are formaldehyde-free and the use of natural materials such as stone will make the home safer for your family. Select products which promote resource conservation and efficiency such as reused or recycled materials. Consider sustainably harvested materials, high recyclability, durability, longevity, and local production. Use demolition materials as fill rather than removing it to a waste disposal center. Use dimensional planning. For example, design rooms on 4-foot multiples to conform to standard-sized wallboard and plywood sheets thus resulting in minimal waste.

What Are the Economic Benefits of Green Buildings? A green building may cost more up front, but saves through lower operating costs over the life of the building. Consider setting aside a small portion of the building budget to cover differential costs associated with less tangible green building benefits or to cover the cost of researching and analyzing green building options. But even with a tight budget, many green building measures can be incorporated with minimal or zero increased up-front costs and they can yield enormous savings.



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