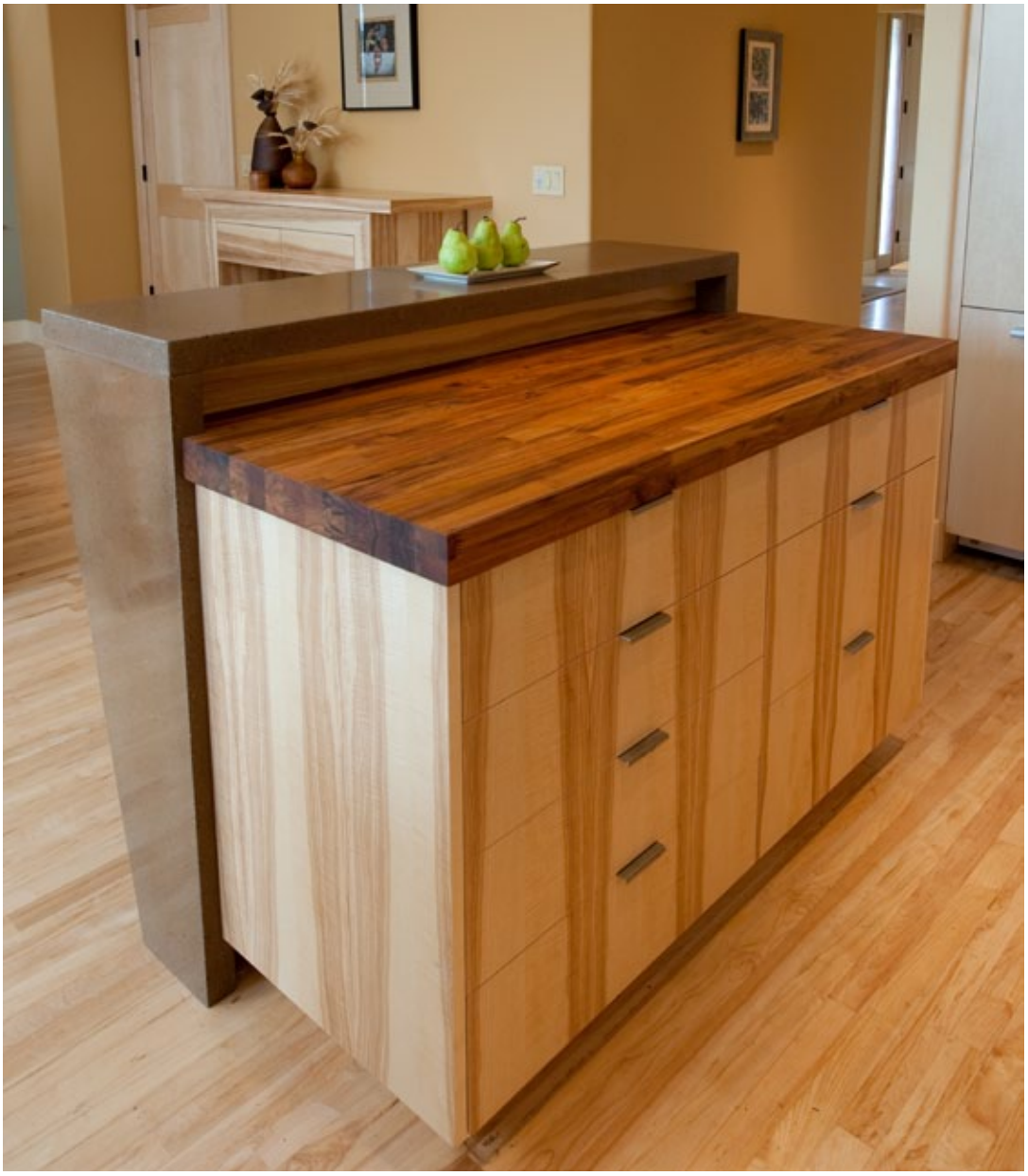
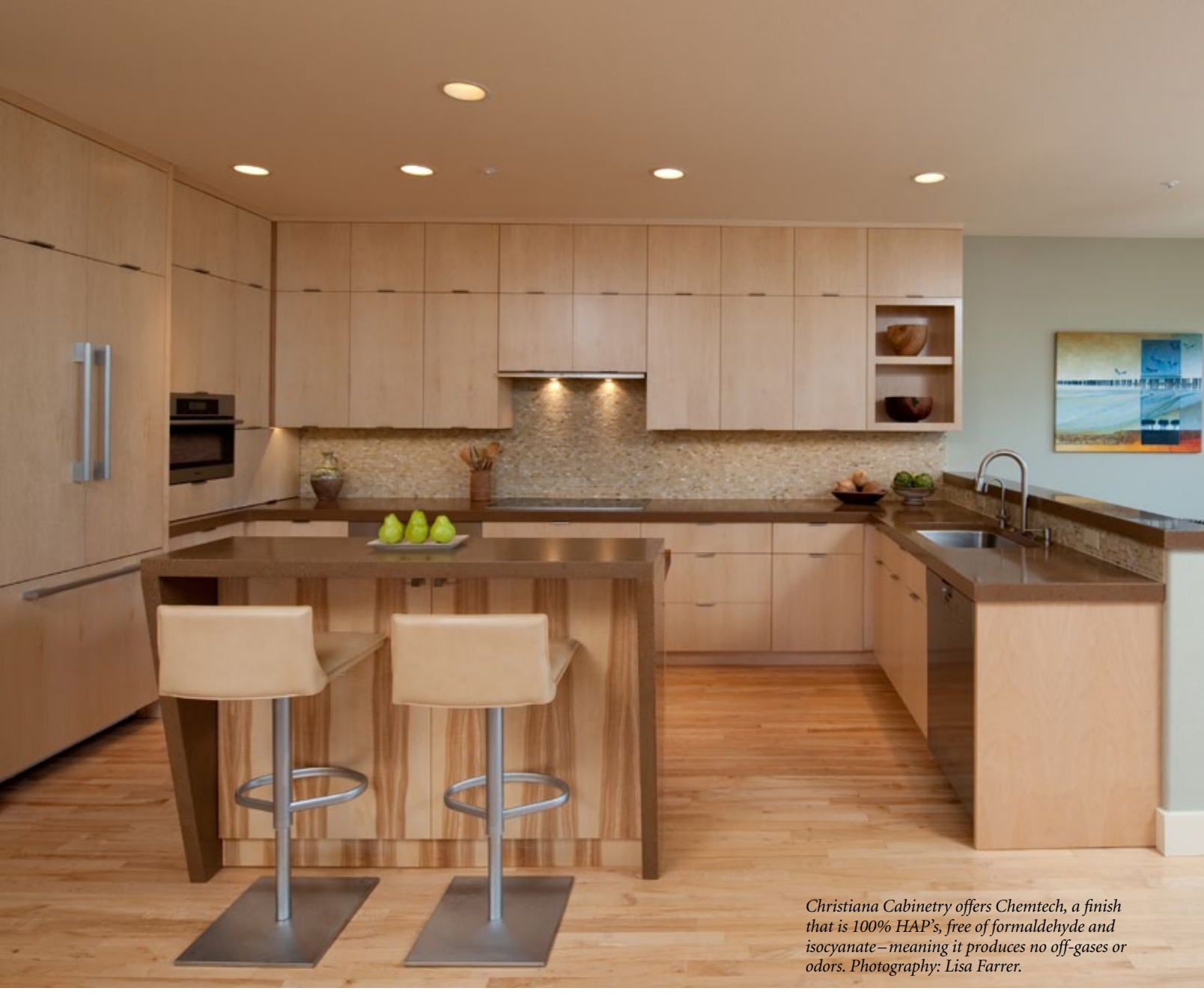
GREEN FOOTPRINTS

The quest for a more sustainable lifestyle is growing every day and in many ways.

By Susan Lund, CID, AKBD, CGBP
Spacial Design, San Anselmo, California



Certified Green Building Professional (CGBP) Susan Lund of Spacial Design collaborated with her client to create as close to a 100% green kitchen as possible. For this "smart" design, Susan incorporated recycled materials, formaldehyde-free products, and energy-efficient appliances. The result is a spectacular looking space that meets the homeowner's desire to live within a conscientious footprint. Products include Christiana Cabinetry with concrete and teak wood countertops.



Christiana Cabinetry offers Chemtech, a finish that is 100% HAP's, free of formaldehyde and isocyanate–meaning it produces no off-gases or odors. Photography: Lisa Farrer.

One of the planet's most easily renewable resources, bamboo can grow several feet per day.

Many people are confused by what "Green" truly means when it comes to kitchen and bath design and construction. Typically, the term refers to how friendly a product is to the environment. This can encompass everything from the amount of energy used to manufacture, how much virgin (vs. recycled) material is consumed, and what the resulting waste stream contains. A product can be green because it is healthier for consumers, or because it has a low impact on the environment, or because it is simply more durable. The quality of a product is critical to how long it will last and therefore how long before it would need to be replaced.

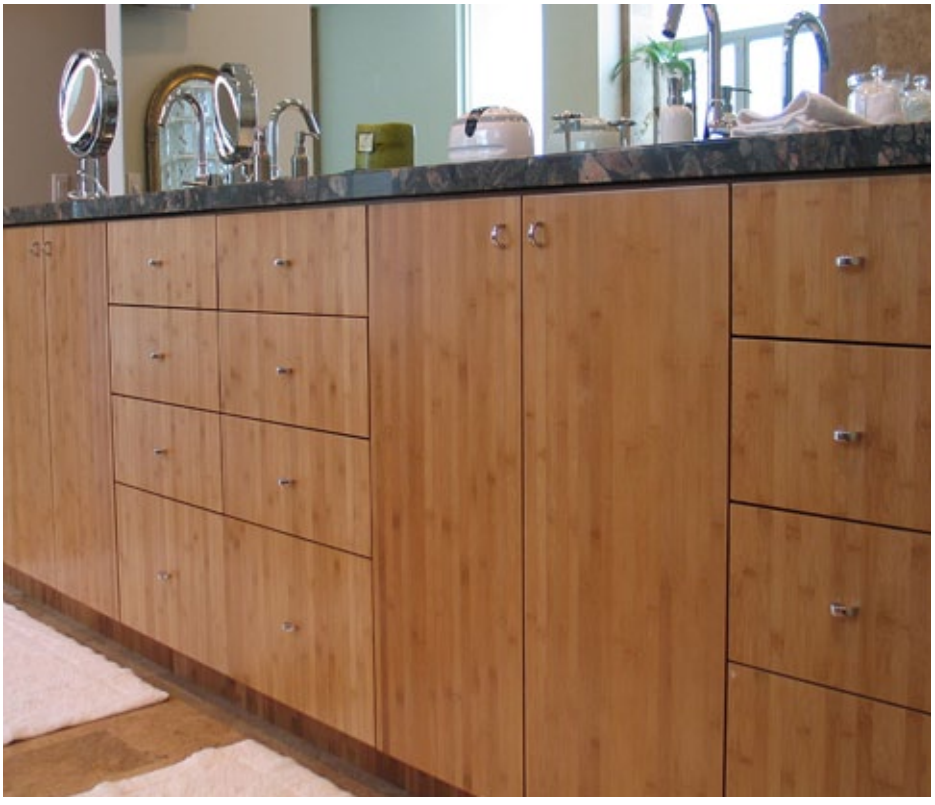
As a CGBP (Certified Green Building Professional), I believe it is my responsibility to educate and provide my clients with their options when it comes to selecting green products and materials for their kitchen or bathroom remodel.

CABINETRY

The consumer has several options when it comes to selecting cabinetry, including the actual case and drawer box construction.

They include the following:

- **Plywood** cabinet boxes constructed with no added urea formaldehyde plywood. "Pure Bond," manufactured by Columbia is the only product that is completely formaldehyde free.
- **MDF**: (Medium density fiberboard) MDF is consistently flat with very little variance in thickness across the panel. It is also relatively inexpensive in comparison with other cores; however it does not have the same screw strength holding capabilities that a veneer ply core would have.
- **Particle Board**: Particle Board also lies quite flat and is even more inexpensive than MDF, but it has less screw strength holding capabilities than MDF.
- **"SkyBlend"** is constructed with SCS certified 100% pre-consumer recycled wood fiber particleboard with no added urea formaldehyde. It combines low emission standards and certified recycled content. SkyBlend can contribute to achieving Leadership in Energy and Environmental Design (LEED) credits.
- **Wheat Board** is a relatively new product that is engineered using straw fibers and non-toxic resins. It combines good screw strength hold with a flat surface and it is between particle board and plywood in weight.



Laguna Bamboo creates cabinetry and surfaces for consumers who wish to integrate green principles into their living spaces.

Consumers should also look for a manufacturer that constructs their drawer boxes and pullouts with formaldehyde-free (water based) glues that are completely safe for health and the environment.

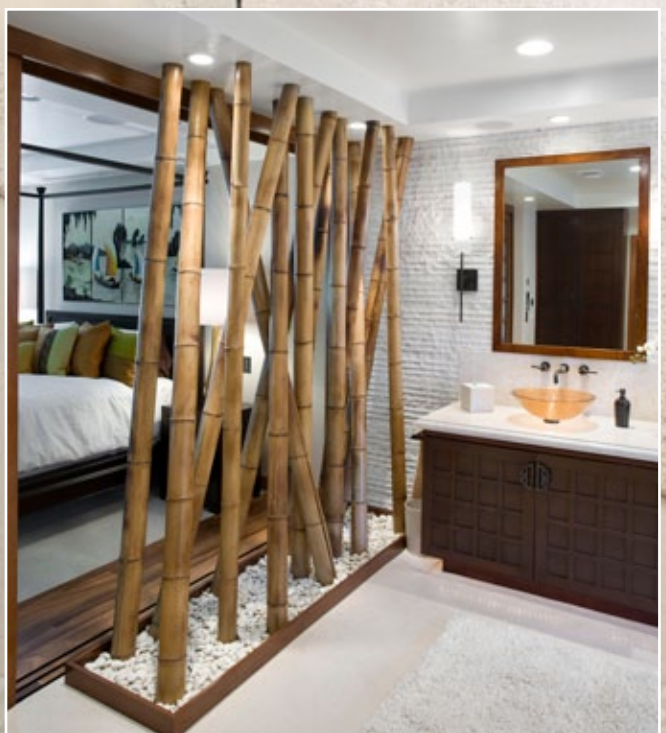
Environmentally friendly door and wood species options include: Bamboo, Lyptus, Brookside (reconstituted veneers) and FSC lumber in Beech, Cherry, Maple, Pine, Poplar and Red and White Oaks.

The most important decision the client needs to make is the finish, whether using a local cabinetry finisher, hand-rubbed oil finish (linseed oil is 100% earth friendly), or a factory finish. A (factory) conversion varnish (which does not emit any fumes or gases once it has cured) is often considered the best option in terms of durability and longevity. With any manufacturer, going with a natural finish you are using less VOC's since you are eliminating the staining process.

*(**Right**) California-based interior designer, Christopher Grubb of Arch Interiors, completely reworked a master suite, turning it into a zen, spa-like sanctuary worthy of the world's finest five-star hotel. Amber glass vessel sinks sit atop the Chinese-inspired custom vanity. "Green" elements include:*

- *Mosaic in shower and water feature is a combination of glass and stone.*
- *Glass sinks and lower vanity top.*
- *FSC certified Alder cabinetry with low VOC stain.*
- *Wood and glass sliding "shoji screens" doors between the rooms.*
- *Recycled white river rock was used for the perimeter border.*
- *Bamboo "sculpture" with recycled loose pebble base.*
- *Cotton area rug; ceiling is covered in grass cloth; ceiling fan blades of woven grasses.*
- *All lighting utilizes dimmers for energy conservation.*

www.archinteriors.com
Photography by Scott Mayoral.



COUNTERTOPS

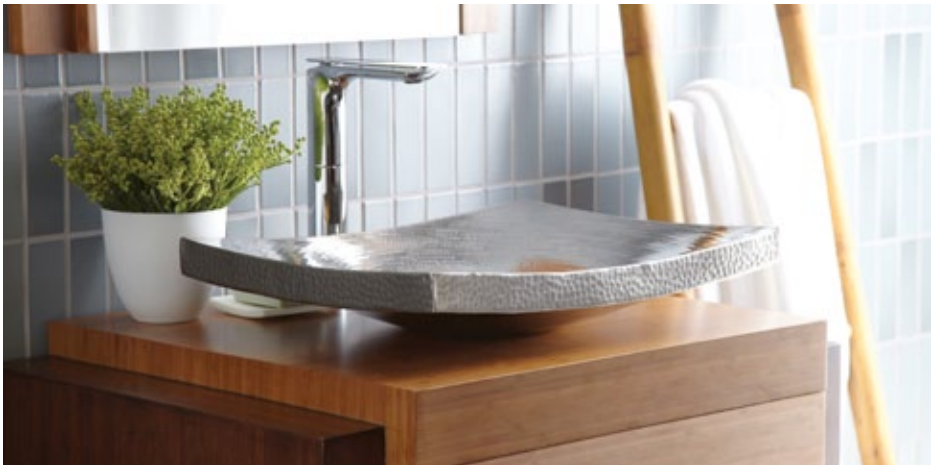
There is an endless selection of green countertop materials on the market today, many of which are made from recycled materials or using green practices in their business. But, take note that all products should not be considered equal. These materials should, ideally, be sampled before you make your final decision and purchase.

It may seem counterintuitive to use paper for a countertop, but when you bind paper fibers with resin, it makes a surface that's tough as nails. What's more, they tend to be easy to install. Since installation can equal 80% of your total cost, expect to save on labor.

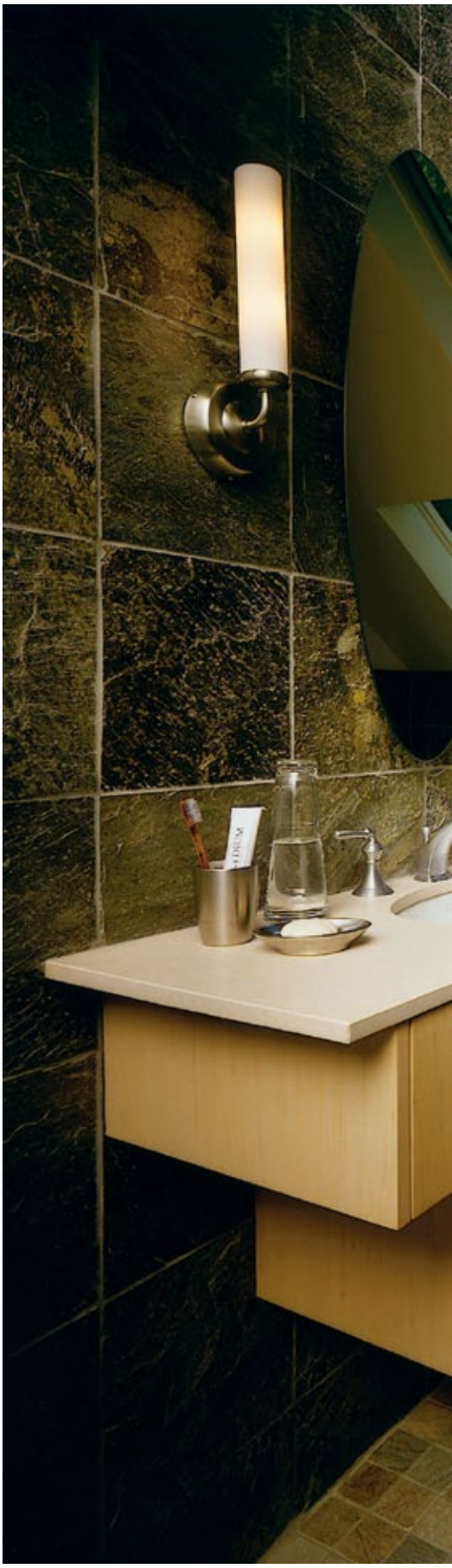
> "(Stone) Mother Nature's original green building material."– Marble Institute of America.

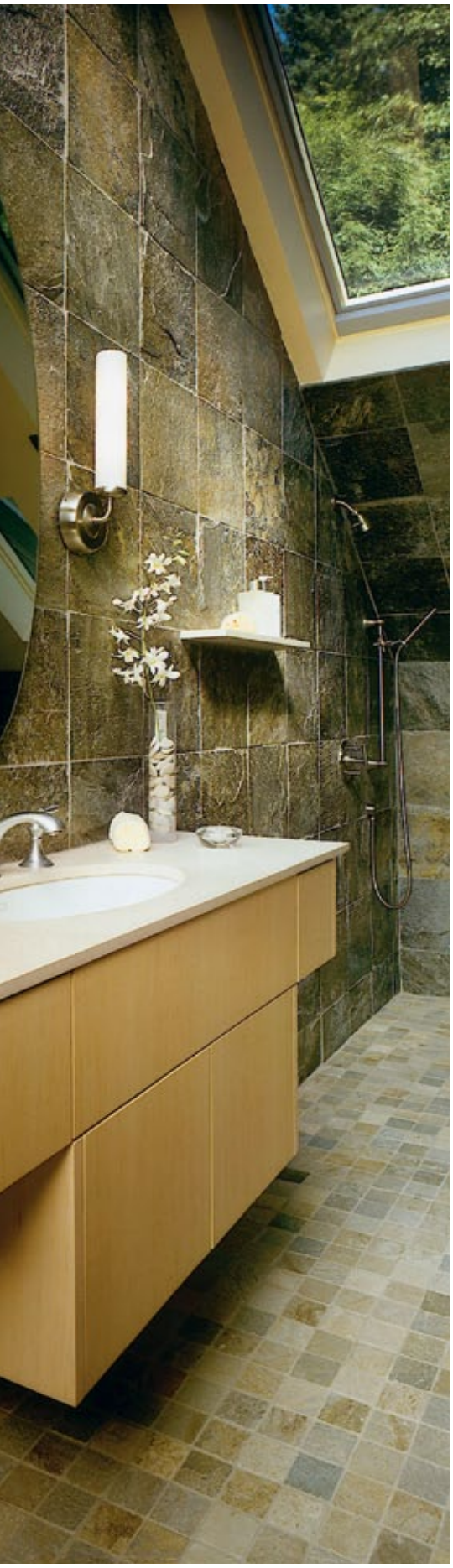
Recycled glass is gorgeous and tough (you can actually set hot pots directly on it) —but the pricing will be comparable to slab granite.

- **PaperStone** meets Forest Stewardship Council certification requirements for materials made with sustainable forest management practices and is VOC-free.
- **Squak Mountain Stone** is a fibrous-cement material comprised of recycled paper, recycled glass, coal fly-ash and Portland cement. The material is hand-cast into "slabs" as an alternative to natural or quarried stone. It resembles soapstone or limestone
- **EcoTop** countertops consist of renewable bamboo fiber, post-consumer recycled paper, and water-based resin glue.
- **Shetkastone** is a revolutionary product that has a 100% sustainable life cycle. Products produced are manufactured from pre- and post-consumer waste paper and rely on using none of the Earth's over-tapped resources. All by-products (waste created in the manufacturing process) can be recycled back into the manufacturing process.



Native Trails Renewal Series relies exclusively on Moso Bamboo as the collection's primary material for vanities and accessories along with the brand's tried and true material of recycled, hand hammered copper made by artisans for the lavatory basins.





- **Vetrazzo** – all of the glass used is recycled, and it makes up about 85% of the total material. Most of the glass comes from curbside recycling programs. Other glass comes from windows, dishware, stemware, windshields, stained glass, laboratory glass, and reclaimed glass from building demolition, traffic lights and other unusual sources.
- **IceStone** is 100% recycled glass in a cement substrate, products contain no problematic chemicals, the materials can be reutilized, and 50% of manufacturing was done with reusable energy.
- **Quartz** is also a non-porous material, which means it will not promote the growth of mold, mildew or bacteria.
- **Silestone** quartz, is taking bacteria protection one-step further as the only quartz countertop available to offer built-in Microban (pesticide) antimicrobial protection.
- **Caesarstone** is the first quartz surfacing company to receive ISO 14001 certification- a global standard specifically for environmental protection. From recycling 97% of the water used in manufacturing, to collecting dust from shipping, handling, production and processing.
- **Cambria** quartz product is primarily mined in North America, meaning lower transportation requirements than other quartz surfacing products produced outside the US. 100%of the water used in Cambria's plant and fabrication facilities is recycled through a series of advanced settling and filtering techniques. All diamond-metal tooling is retooled and re-used. Scrap material is collected and used as road base material on local construction projects.

Recycled backsplashes

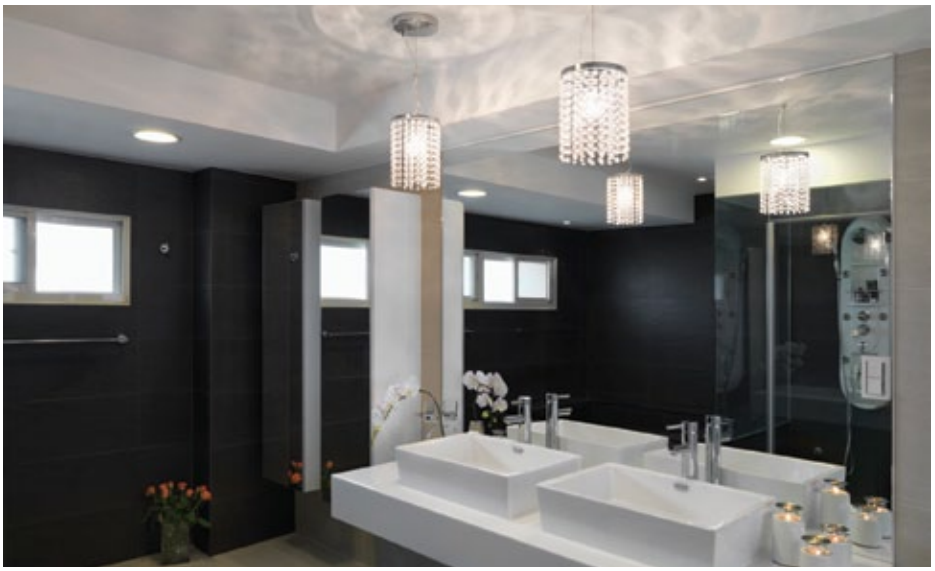
You have endless options when it comes to selecting a kitchen backsplash material. Manufacturers offer specialty (recycled) glass, ceramic, porcelain, natural stone and metal, just to name a few.

Recycled glass tile is a favorite "green" material to use for a kitchen or bath backsplash. This "fashion forward" surface is available in bright or subtle colors, iridescent, clear or matte finishes. The best part is that manufacturers have really stepped up and recognized the need for recycled materials; offering square, rectangular and oval tiles in varying sizes and textures.

Not only are you adding a focal point to your kitchen, but you are also making the load on our landfills a little lighter!

IceStone is a durable surface made of 100% recycled glass in a cement matrix. Each slab is VOC-free, made in the USA.

*(**Left**) Locally constructed custom maple wood cabinetry by Christine S. Suzuki, ASID with plywood boxes, heated floors on a timer, and skylights to provide natural light resulting in reduced energy use. Toto water-saving toilet. An open shower was created including niches for soaps and a cantilevered shelf for toiletries. Design by Christine S. Suzuki, ASID, LEED AP, Christine Suzuki & Associates. Photography: Sam Van Fleet.*



New Panasonic combination fan/light provides benefits of ventilation with the look of an architectural grade recessed light.

ENERGY EFFICIENT KITCHEN APPLIANCES

There can be a significant difference in the energy consumption of kitchen appliances these days. Energy Guide labels are present on all major appliances to help consumers select the most efficient models. However, this information does not indicate whether one has selected the most efficient appliance. The most efficient appliance will have certain features that should guide the purchaser to selecting the most efficient model with those features.

Refrigerators have different efficiencies according to features such as defrosting characteristics (manual, partial automatic, automatic), door style, and size. The top freezer models outperform the side-by-side models and partial automatic or manual defrost models are the most efficient.

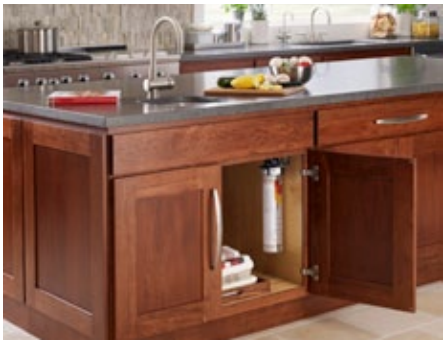
Induction cooktops are considered to be much more energy efficient than gas or electric because they cook food faster and lose less heat in the process. An induction cooktop can be 73% to 90% more efficient than gas.

Induction cooktops also have smooth glass surfaces, and rely on electromagnetic technology to heat iron or steel cookware directly rather than transferring heat from a radiant burner. The benefits of induction cooking include greater heat consistency; giving the user more precise control (similar to gas), a safer "stay-cool" cooking surface and quicker, more efficient heating. Induction cooktops can bring a pot of water rapidly to a boil and perfectly hold a precise simmer.

Induction cooking has been around for decades, but only recently has the demand driven prices down and manufacturers to step up. In recent years price has been less of an obstacle. Although a high-end induction cooktop can cost the consumer upwards of $6,000.00, some entry-level models can cost as little as $1,500.

Many dishwashers offer special features that improve energy efficiency. Booster heaters and no-heat drying are two helpful features. It is also important to know how much water the various models require and select those that can accomplish the cleaning with the least amount of water.

"Health for the environment does NOT always correspond with the health of people. For instance, you may select bathroom cabinets that feature bamboo doors. Bamboo is an extremely sustainable material; however, most cabinets have box structures that are made with particleboard that contain formaldehyde. Cabinets can off-gas formaldehyde for up to five years. Formaldehyde can cause nausea and difficulty in breathing, and has been shown to cause cancer in animals and possibly humans. Ask for a cabinet box that is made with materials that have zero formaldehyde such as formaldehyde free plywood."-- Christine S. Suzuki, Christine Suzuki & Associates, is a professional member of the American Society of Interior Designers and LEED Accredited Professional with the US Green Building Council.



Everpure® filtration systems improve taste, safeguard against unwanted contaminants and produce crystal-clear drinking water. As compact as it is powerful, the PBS-400 mounts under virtually any countertop and plumbs to existing faucets.

The Zuvo Water Filtration System is a low-pressure system that uses less energy and is compatible with most faucets. Its small footprint requires minimal space under the sink.

Zuvo's new Bright Line faucets feature a light that indicates when it is time to change the filter. Shown: Bright Line Tri Flow Bamboo faucet & Beverage Faucet.

CLEANING UP

We'll finish up with the logical place—cleaning up in the kitchen, bath and laundry room.

Bathroom

Low flow toilets, showers, and faucets are (or should be) the obvious choice for consumers looking to "go green." Most faucets can be adapted to low flow by installing a simple aerator.

Many manufacturers are offering low flow or dual-flush toilets and low flow shower systems.

"Ventilation and lighting are key components of the bath," says Bill Feinberg, Allied Kitchen & Bath, Ft. Lauderdale, FL. "Installing an efficient ventilation system is a necessity because proper ventilation lessens the chance of water damage, mildew buildup and overall bathroom humidity."

Kitchen

The same tips for bathroom faucets apply to the kitchen—go low flow.

Choose the best energy efficient models for all of your kitchen appliances including the hard working dishwasher. Get into the habit of choosing the eco drying option each time you run a load.

Laundry Room

According to The Green Guide, "The U.S. Department of Energy estimates that 12% of the average home utility bill—and carbon footprint—comes from heating water." Learn how to save with Green Guide's Water Heater Buying Guide. http://environment.nationalgeographic.com/environment/green-guide/home/garden

"Installing an energy-efficient water-heating system can greatly reduce a home's carbon footprint, and its utility bills. Both solar water heaters and demand water heaters are energy efficient, but both have advantages and disadvantages to consider."-The Green Guide.

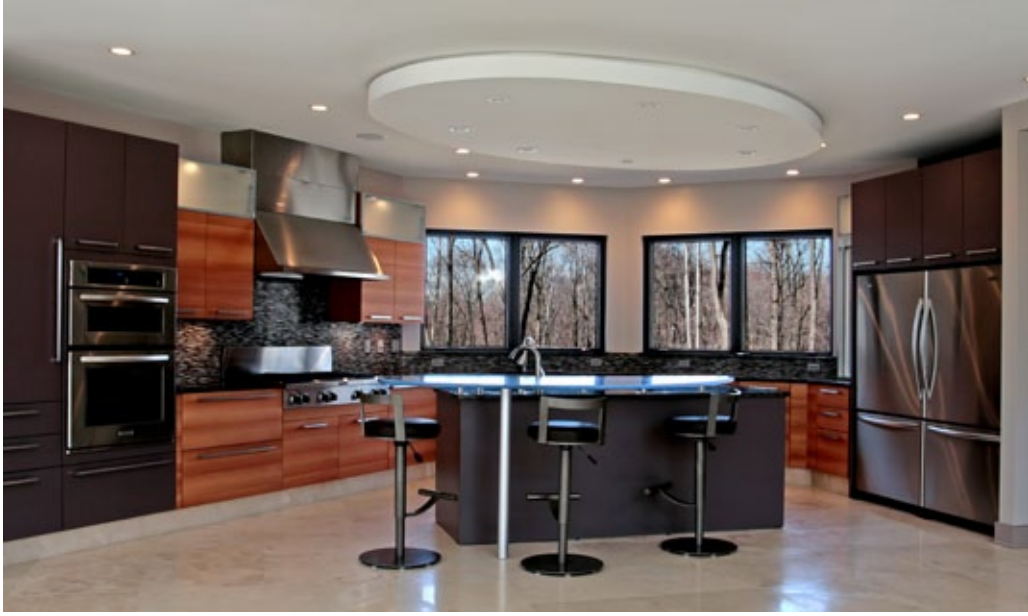
Solar heating—not all are alike. Do your homework to learn the facts before you invest in this sustainable option.

Reduce energy use by selecting the most efficient washer and dryer for your home. See the Green Guide for more information.

You are not alone in your quest for a more sustainable home. It is a movement that is growing every day and in many ways. We encourage consumers to obtain additional information on creating green footprints by visiting the following web sites, explore resources, and consider working with a professional designer that is trained in Green Building.

Terms:

- *VOCs: Volatile Organic Compounds*
- *LEED–Leadership in Energy and Environmental Design Green Building Rating System™*



A green kitchen offers beauty and purpose for a young family. The home reflects the responsible attitude of the owners. Several "green" construction elements were used throughout the entire home, including heated floors, advanced air filtering systems, top-of-the-line insulation and non-toxic paint. Products include Aster Cucine Cabinetry; KitchenAid appliances; 3form recycled plastic island top; Ann Sacks recycled glass backsplash, Erin Adams series; granite countertops; travertine flooring. Designer: Ruthann Capozzi of Capozzi Design Group, Chagrin Falls, OH. Architect: Peninsula Architects. Builder: Payne & Payne Builders.

Susan Lund, CID, AKBD, CGBP, is an accredited member of the NKBA, California Legislation Coalition for Interior Designers, North Bay NARI Board Member, a Certified Green Building Professional and a Certified Interior Designer.

Helpful Resources:

- ***The Green Guide www.thegreenguide.com***
- ***Marble Institute of America www.marble-institute.com/consumers/sustainable_natural_stone.cfm***
- ***Energy Star program www.energystar.gov***
- ***Cradle-to-Cradle Certification program (www.mbdc.com) is the industry's most rigorous review of a material and a company's human and environmental health impacts. The program involves evaluating energy-use quantity and quality, water-use quantity, water-effluent quality, and workplace ethics associated with manufacturing.***