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City of Scottsdale

GREEN BUILDING LECTURE SERIES

Fall/Winter/Spring – 2006/2007

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Green building advocates responsible use of our natural resources in the design and construction of our built environment. Each lecture will address one of the many green building topics that demonstrate energy/resource efficient, healthy, and environmentally responsible building practices. Each of the following lectures will take place on the **1st Thursday** of the month from **7 to 9 PM** at the City of Scottsdale.

September 7, 2006	Easy Being Green: Intro to Scottsdale's NEW Green Home Rating Standard An overview of the new green building checklist requirements including incentives, benefits, strategies, and materials compatible with our Sonoran Desert environment.
October 5, 2006	Using Reclaimed Building Materials Capturing treasures—Learn about opportunities to reuse quality materials that support resource efficiency and divert valuable resources from the landfill.
November 2, 2006	Alternative Wall & Roof Systems Resource efficient building systems that conserve energy and preserve our natural resources.-
December 7, 2006	Natural Building Materials Regional materials that are compatible with our harsh desert environment, abundant, rapidly renewable, and support the local economy.
January 4, 2007	Home Improvements and Green Remodeling An introduction of the newly published green remodeling guidelines. Learn about environmentally responsible and healthy remodeling practices that support sustainable desert living.
February 1, 2007	Building Science: The system approach to Energy Efficiency Learn about the principles of heat flow to create an energy-efficient, safe, comfortable and healthy home. Hear about diagnostic tests used to locate energy performance problems.
March 1, 2007	Interiors & Indoor Environmental Quality Indoor air pollutants can be six times higher than outdoor air. This lecture will address strategies for minimizing indoor pollutants including material selection, ventilation and filtration.
April 5, 2007	Water Efficiency in the Sonoran Desert An overview of water efficiency practices, including indoor plumbing fixtures, xeriscape, gray water and rainwater harvesting.
May 3, 2007	Innovative Green Built Projects in the Phoenix/Scottsdale Area Learn about local innovative projects that excel from the synergistic benefits of energy efficiency, renewable resources, water efficiency, and climatic responsive design.
June 7, 2007	GREEN Feng Shui With growing interest in Feng Shui and Green Design knowing about a new approach that blends all of them is very appealing to design enthusiasts. This lecture will highlight design strategies and info incorporating feng shui basics and green design.

SUBSCRIBE TO GREEN BUILDING EVENTS – Go to www.scottsdaleaz.gov/listserve
Visit the Green Building Web Site – www.Scottsdale.Az.gov/greenbuilding

9th Annual Green Building Expo October 6-7, 2006 Scottsdale Center for the Performing Arts

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'Just Say No' to a Toxic Home

Breathing can be hazardous to your health. Even inside your home.

Especially inside your home, according to the EPA. The agency names indoor air pollution as one of the most serious potential risks to human health.

Paula Baker-LaPorte found it out the hard way when she became chronically ill from the "sick air" in her home. LaPorte didn't just leave the house and put it all behind her. She also took action by co-authoring *Prescriptions for a Healthy House* and dedicating her architecture practice to creating buildings that are friendly to human health and the environment.

LaPorte is the Expo's Saturday keynote speaker, with her husband, Robert LaPorte (12:30 pm, main auditorium). She is author of books and articles on green living and co-owner of Eco Nest, an ecological design, building and educational company based in New Mexico. She and other speakers and exhibitors at the Expo hope to raise awareness about healthier, greener alternatives to the methods and materials commonly used in construction, remodeling and landscaping.

Before World War I, La Porte explains on her Web site (www.econest.com), the world was largely free of man-made chemicals. Now more than four million chemicals are registered, 80,000 of them are in common use, and each year, 250,000 new ones are introduced. Less than 1,000 have ever been tested for their effects on the human nervous system. And many of these chemicals are prolific in our homes and office buildings.

The effects are becoming too obvious to ignore. Childhood asthma has increased 70% over the last 20 years. Asthma, severe allergies, chronic sinusitis, chemical sensitivities, chronic fatigue syndrome, fibromyalgia, migraines, immune disorders, depression and a host of other illnesses on the rise have been linked to toxins in the home.

Common culprits include volatile organic compounds found in paints; formaldehyde found in particle board cabinetry and furniture; chemical glues used to affix flooring; tracked-in lawn chemicals, which contain human carcinogens; and various sources of cyanide, acetone, ethylene glycol and crystalline silica, to name a few. The chemicals "off-gas" from their sources, meaning they escape into the air that we breathe.

The good news is, plenty of practical and affordable alternatives now exist. And Valley homeowners and builders can check them out, first-hand, at the Expo.

More than 85 exhibitors at this year's Expo will demo healthy, environmentally friendly building and landscaping products, services and technologies, and several speakers will address health concerns.

Saturday's keynote by Paula Baker-LaPorte and Robert LaPorte, at 12:30 pm, in the main auditorium, discusses

"EcoNests," homes which embody the principles of sustainable building, health and beauty.

Mick Dalrymple, owner of "aka Green," and co-owner Jeffrey Frost will deliver a workshop at 2 pm on Saturday, titled, "Enter the Green Stream and Breathe Easier," at Stage 2.

Greg Peterson, owner of The Urban Farm, and Don Titmus, of the Phoenix Permaculture Guild, will present a workshop on permaculture design, which includes healthy outdoor living, at 3 p.m. on Saturday, in the Upstairs Gallery.

Exhibitors Eco-Clean, The Arizona Green Team and Champion Indoor Environmental Services will deliver a workshop titled, "Healthy Homes, Healthy Workplace," on Saturday at 4 p.m., at the Main Floor Gallery.

See schedule for locations.

The Biggest Health Bang for Your Green Building Buck

Contributed by Kevin Edwards of Edwards Design Group and Mick Dalrymple of aka Green

1. Use natural flooring instead of carpet, and if you must use carpet, use natural fibers and low-VOC or water-based adhesive.
2. Include fresh air intake in the design of your home and the air conditioning system.
3. Make sure gas water heaters and clothes driers are sealed combustion, gas fireplaces are direct-vent, and gas stoves have an effective vent hood.
4. Install a carbon monoxide monitor in your home. Use an air filtration system but take care to avoid those that generate ozone. Stick to whole-house HEPA, ionic or ultraviolet systems.
5. Use low-VOC or no-VOC paints for only \$3-\$5 more per gallon or natural wall covering such as clay paints and earth plasters. Avoid wallpaper, which emits VOC's.
6. Avoid chipboard cabinets, furniture and countertops; their glues release formaldehyde. Use natural materials instead, and if you've already used chipboard, seal the chemicals inside with water-based varnish or paints.
7. Buy furniture made from natural, nontoxic, organic materials, especially beds, where we spend 1/3 of our time.
8. Have a radon test conducted and if there is a problem, install a radon barrier and venting system under the house to vent radioactivity released as granite gravel decomposes.
9. Avoid lawn chemicals which can get tracked indoors – use native landscaping, organic fertilizers and pest control, and other natural growing methods, rather than chemical ones that are a danger to kids and pets.
10. Use organic cleaning, laundry and indoor pest control products and eliminate all chemicals and chlorine from your living environment.

Welcome

Dear *Green Building Expo* Attendees,

Welcome to the 9th annual *Green Building Expo*.

On behalf of the *Green Building Expo* Committee, the City of Scottsdale, the City of Phoenix and the City of Tempe let me congratulate you for becoming part of the green building explosion. Like never before, people, timing and technologies are coming together to enable us all to fully enjoy living while protecting our environment.

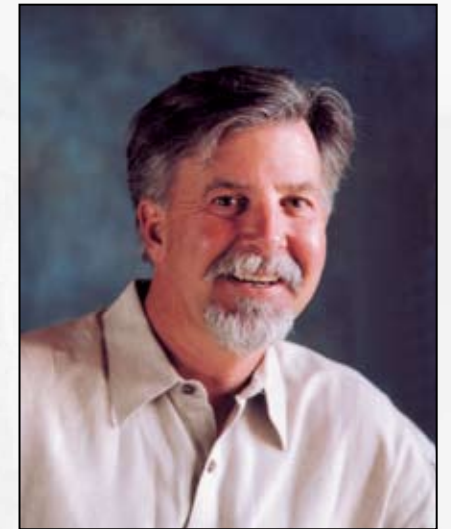
Each of you can make a difference in the direction of growth and development in our shared neighborhoods. By using, supporting and promoting these innovative, green building methods you can help protect and preserve our beautiful desert valley's future environment. Your support is the key to implementing industry-wide change that can improve the health, quality of life and home environments for all of our families, here in the Valley of the Sun and globally.

We should all give special thanks to the cities of Scottsdale, Phoenix and Tempe for their continuing efforts supporting these important *environmentally progressive* technologies. Their combined vision recognizing the tremendous benefits achieved by sharing the knowledge of these important products and processes will bestow long lasting returns. By providing the critical personnel and resources, they open a valuable pathway to a more sustainable future.

Thank you for joining us in our celebration of a sustainable way of life – and enjoy our show!

Sincerely,

Kevin Edwards, Chairman
Edwards Design Group, Inc.
Green Building Expo, 2006



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“Okay, okay. I can’t concentrate with you pacing on my head like that! It’s like Green Day performing acupuncture.” With one flutter of his wings, he jumped down onto my chest and stared me down, using his plume feather as an index finger for effect.

“You’ve got ten years to reverse this. Your own scientists have been warning you for at least the last twenty years. I want to make sure you listen. This isn’t a game. Just ask Fluffy out there by the pool.”

“What do you want me to do?”

“Anything. Everything. Insulate. Reuse. Recycle. Use less. Use shade. We do. Use solar power. Listen to nature and to your common sense and stop listening to consumer society trying to sell you useless, unnecessary stuff that just ends up in a landfill. Buy useful stuff. Shop local. Shop natural. Vote with your wallet. Get a hybrid. Walk. Replace your AC with something efficient. Change your paving materials to something that doesn’t retain the heat. Plant a tree. Xeriscape. Use Energy Star appliances. Change a light to a CFL. Turn things off or unplug them when you aren’t using them. Get away from the TV and go out into nature some time. Buy quality instead of disposability. Leave subliminal messages for Cousin Fred just before he goes on his annual quail hunt that eating vegetarian is the new Atkins. Fix problems instead of treating symptoms. Find peace within yourself rather than looking to buy it.”

“...Wow. I should have kept that pencil and journal on my nightstand.”

“Don’t worry about it. We tattooed it into your imported rainforest wood dining table.”

“Really?”

“We don’t practice all that pecking for nothing. Ten years!”

“What happens if we don’t?”

“You ever see that film clip with the bridge that starts vibrating and then starts twisting and turning in bigger and bigger waves until it collapses? Positive feedback loops. More and more extreme weather. Habitats changed. Coastlines shrunk. Flooding. General destruction. Nature will eventually win in the end. She always does, but things will look very different. Your kids will be pretty ticked off at what your generation left them.”

“Well, we certainly don’t want a ticked off wife AND ticked off kids. I’ll be a messenger. I’ll do what I can. I’ll try not to be hypocritical. But I need help.”

“Don’t worry. We’ve got Mrs. Rodriguez tied down with her Denise Austin exercise rubber strap. She’s next up. Don’t try to call the police. We have ways to get to you. We have Mother Nature on our side.”

I didn’t know that quail could squint, but I know what I saw.

He flew out of the room and I heard the doggy door flap. I lay there awake, thinking about this quail... so certain, so confident, such sharp toes. The doggy door flapped again and my dog wandered into the room with a whimper... and a piece of kite string wrapped around one paw.

Mick Dalrymple is a partner in a.k.a Green environmental building supplies in Scottsdale, produces Build It Green! for PBS, is trying to reduce his ecological footprint and has recently developed a fear of quail. www.akagreen.com.

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Sustainable Building in the Sonoran Desert

Why Green Building?

The City of Scottsdale Green Building Program is designed to encourage sustainable and healthy building in homes, businesses, and institutional buildings while informing the general public of the environmental quality of the built environment. The program reflects a concern for natural resources and environmental quality in our local and mutually dependent global environment. The goal of the Green Building Program is to shift both residential and commercial building practices toward sustainable approaches that conserve not only energy, water and other natural resources, but also preserve our environment, strengthen our local economy and promote a quality of life that is enduring over time.

What is Green Building?

A green building is a whole-systems approach utilizing design and building techniques to reduce energy consumption and minimize the environmental impact of building while contributing to the health of its occupants. A green building ideally would:

- Make appropriate use of land,
- Preserve plants, animals, endangered species, and natural habitats,
- Make efficient use of limited natural resources and materials,
- Reduce indoor and outdoor water use through use of drought resistant landscaping, efficient irrigation, rain water harvesting, gray water recycling, and high-efficiency plumbing fixtures and appliances,
- Reduce total lifetime energy usage through passive design strategies and energy efficient materials, lighting, appliances and equipment,
- Utilize renewable energy to reduce reliance on fossil fuels and non-renewable resources,
- Make use of regional materials and consider products that have low environmental impacts during it’s extraction and manufacturing process,
- Use non-toxic, rapidly renewable and recycled-content materials,
- Enhance the indoor environmental quality and human health for workers and homeowners,
- Have a positive effect and increased productivity on occupants at work and home,
- Be economical to build and operate,
- Demonstrate recyclability for the end of the building’s useful life.

For more information, visit the Scottsdale Green Building web site
www.scottsdaleaz.gov/greenbuilding

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When Quail Go Postal

I've had trouble sleeping lately. Sometimes I wake up suddenly, remembering something I forgot to do at the office. Sometimes I panic because my alarm clock only goes off every other day.

Sometimes it's actual nightmares:

Tickle. Peck. Tickle. Peck. Ouch! I opened my eyes to see a small plume feather framed by two beady, little eyes staring down at me.

"Don't move. I can scratch out your eyes with one little hop." The Gambel's quail stood on my forehead, pressing little sharp claws into my scalp for emphasis.

"What do you want?" My voice cracked but I told myself it was just my morning voice.

"More than you can deliver, but you're going to be the messenger." I didn't realize quail practiced game theory.

"What's to stop me from just closing my eyes, swinging my arms and grabbing you, faster than you can make your move?"

"Not smart. We've got your little dog tied up by the pool with your kid's kite string. If I don't bob and weave out of here in two minutes, the dog sleeps with the swim rings."

Darn! Advanced contingency planning. And I can't get my daughter past, "put your toys away."

"Alright, alright. You win. What's the message? Not enough tunnel holes through the backyard wall?"

☐ "Hey. Don't get smart. We can fly. We just don't like to. It's an image thing."

"Well, your image issues are hurting my forehead. What's up?"

"It's hot! And we're tired of it."

I laughed. "It's Phoenix. It's September. Of course it's hot!"

"No. It's hot NOW. Do you know what time it is?"

"Uh... no. And I'm afraid that if I turn my head..."

"It's FOUR AM! This is crazy! We're quail, right? We're smart. Desert animals. We go out early in the morning for food and general wandering around because that's when it's supposed to be cool, right? But you HUMANS don't get this Nature thing, do you? You want to conquer nature and, in the process, you've raised the overnight temperature in MY BACKYARD by ten degrees. What's that about?"

"Uh. Didn't realize. It feels hotter, but I thought it was psychological. Sorry."

"That's not good enough. You're gonna take us all down with you. I don't care about the snakes, but we've got some important dealings with the cottontails and the ravens and don't want to see them fall apart on account of global warming. You need to get the wagon turned around, if you know what I mean, because you're pullin' us all into the forest fire."

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Continued on page 36

Scottsdale Develops New Green Home Standards New process reflects increased demand for green home construction

On September 1, 2006, the City of Scottsdale began to implement a new green building rating system to reflect industry changes in the home building market. The new rating checklist addresses regional issues by rating the environmental impact and health of a home in the categories of site, energy, water, indoor environmental quality, and material resources.

The new green building process still requires a green plan review/qualification meeting with building plan review. This engages the incentive for expedited plan review. The green building inspection process has been streamlined by eliminating separate inspection requests. Builders are now required to post a green building inspection card on the job site that is issued at time of permit issuance. City building inspectors will inspect for green building items and sign off on the inspection card as part of their regular inspection process. Self-certified checklist items have been identified and accountability will be placed with the builder who will be required to sign a green Certificate of Compliance form upon final inspection for those items not inspected by the city. The green Certificate of Compliance will become a permanent city record along with the Certificate of Occupancy.

The following regional and national changes in the building and environmental arena are moving the building industry towards environmentally responsible practices and have guided the Scottsdale checklist update:

- Energy code changes in the 2006 International Residential Code (IRC) and International Energy Conservation Codes (IECC).
- Energy Policy Act of 2005 tax incentives (effective 1/1/06) for homes utilizing solar technologies and/or designed to use 50% less energy than outlined by the International Energy Conservation Code (IECC).
- Regional issues and practices associated with the desert urban environment including water, solar energy, and the heat island effect.
- Improved building practices for constructing energy efficient homes as a result of building science training programs supported by third-party energy certification organizations, local Utility Companies, and State Energy Office initiatives.
- Environmental Protection Agency (EPA) guidelines, standards and programs including Energy Star and Water Sense.
- New green building materials and products that improve energy efficiency (e.g., insulation, radiant barriers, shading devices), indoor environmental quality (e.g., reduced off-gassing), material resource efficiency (e.g., recycled content, waste reduction), and water efficiency (e.g., plumbing, irrigation).
- Improved green product labeling programs including Energy Star, Green Seal, GreenGuard, FloorScore (Resilient Flooring Council), Green Label Plus (Carpet and Rug Institute), Forest Stewardship Council (FSC), and Sustainable Forest Initiative (SFI).
- National Association of Home Builders Model Green Home Building Guidelines
- U.S. Green Building Council pilot LEED for Homes program.
- More informed general public on indoor health, energy and environmental issues.

Scottsdale's Green Building Program was established in 1998 as a voluntary program to reduce the environmental impact of building. The program rates buildings in the areas of site use, energy efficiency, resource-efficient building materials, indoor environmental quality, water, and waste reduction. The program offers plan review incentives to encourage participation.

For more information on the Scottsdale's new green building rating checklist and plan review/inspection process, please call 480-312-4202 or visit www.scottsdaleaz.gov/greenbuilding

Green Building Tipping Point

A newly released *SmartMarket Report* on residential green building published by McGraw-Hill Construction provides a positive outlook for the residential green building marketplace.

Residential green building will escalate in the next year, making what is considered a green home today the industry standard in the future. The study analyzed a representative sample of more than 75,000 builders with findings that indicate green building will reach its "tipping point" in late 2006 / early 2007.

Harvey Bernstein, Vice President of Industry Analytics & Alliances for McGraw-Hill Construction, reports that, as any industry crosses from being "less involved" to "more involved," the rest of the industry will be forced to follow, and the green homes of today will become the standard homes of tomorrow.

In 2006, the growth in green home building is expected to rise by 20% over 2005, and in 2007, there is a projected a growth of 30% over 2006. More than two-thirds of builders will be building green homes (more than 15% of their projects), with only one-third not yet engaged in the marketplace. Beyond 2007, the sheer number of participants in the green home building market will pull the rest of the market up to green standards in order to remain competitive.

Green Home Market Indicators:

- Home builders are adopting green practices at a faster rate compared to their counterparts in commercial construction.
- More builders are becoming involved in voluntary green building programs at the local and national levels.
- 90% of home builders report some level of participation in green building activities.
- The most important motivators for builders when considering building green homes are "doing the right thing" and "lowering lifecycle costs."
- The most-cited triggers to increased residential green building are:
 - Rising energy costs
 - Increasing consumer demand
 - Superior building performance
 - Codes and regulations (depending on local jurisdiction)
 - Competitive advantage
- The most-cited obstacles to increased residential green building are:
 - Higher perceived first costs
 - Consumer willingness to pay
 - Lack of consumer education on green building
 - Codes and regulations (depending on local jurisdiction)
 - Lack of awareness about products

Continued on page 8

- The top green building practices are:
 - Energy efficient techniques – 82%
 - Indoor air quality – 66%
 - Water conservation – 59% (varies by region)
 - Green site (minimizing site disturbance, preserving open spaces, natural water drainage, pedestrian-oriented communities) – 58%
 - Materials and resources – 57%
- Customer Willingness to pay
 - More than half of builders claim buyers are willing to pay more for green building
 - Perceptions of increased costs vary from 2% to 11% among builders
- Green Home Certification
 - Strong builder interest in voluntary green building certification programs (80% of small builders and 71% of medium to large builders)
 - Emergence of local green home certification programs accelerate adoption of green building practices due to local community connections
 - National Association of Home Builders (NAHB) produced its Model Green Home Building Guidelines as a response to the growing number of builders around the country adopting green building practices.

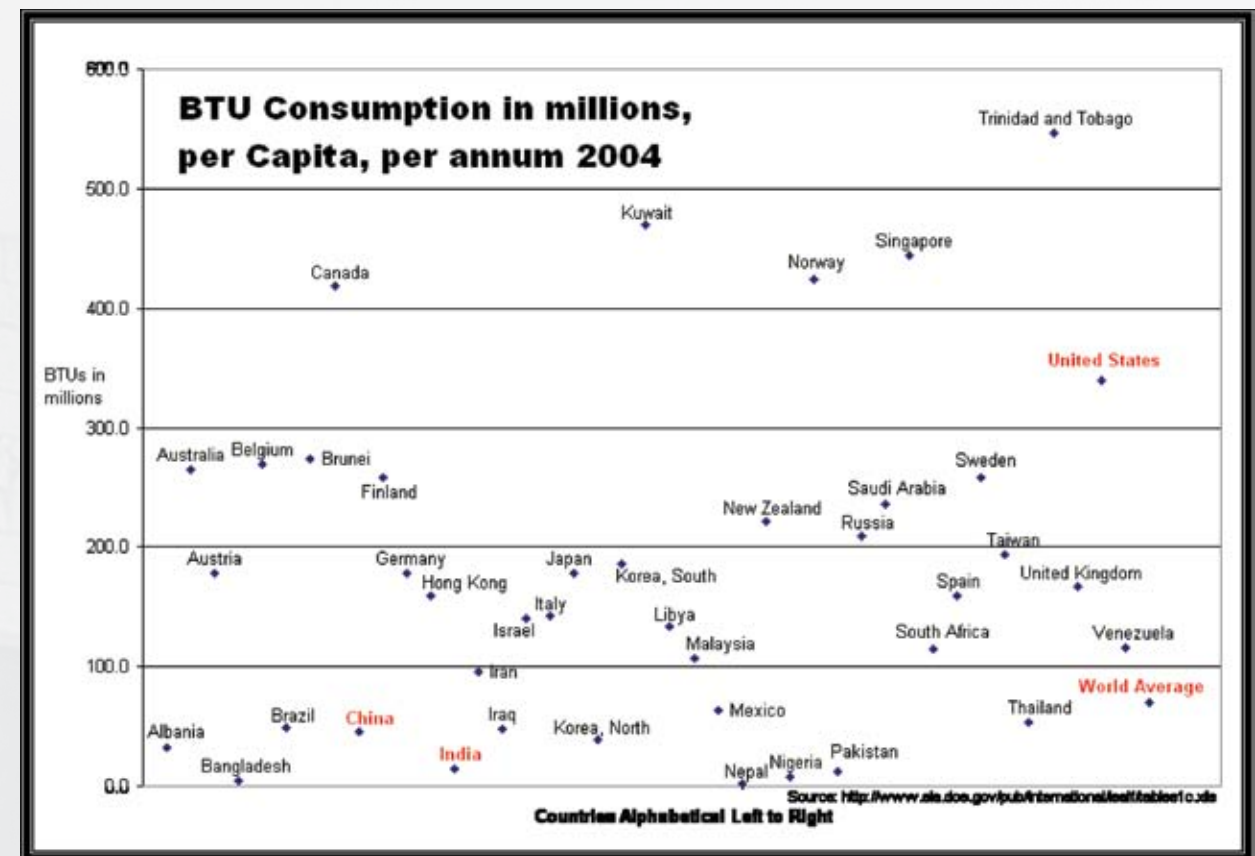
Recommendations

With green building as an established, emerging market with rapid growth, McGraw-Hill Construction proposes the following recommendations to the industry to be successful in this marketplace:

- For builders to gain competitive advantage, they should become familiar with use of green building practices in the next two years.
- The homebuyer and homeowner will continue to demand more green homes. Builders should be able to speak to homeowners about the advantages – not merely costs, but also performance and health benefits.
- Voluntary green building programs will speed green building adoption; builders must participate in the formation of these programs to make them successful.
- Manufacturers must establish credibility of products as “green” and market them appropriately.
- Builders should work with suppliers and product manufacturers to encourage adoption of new technologies to meet future demand.
- Green home building supporters should work with realtors, appraisers and other financing institutions to accelerate market penetration of green homes.
- Builders and policy makers should work together to establish common-sense ways to build sustainable communities.

For complete copy of the Residential Green Building SmartMarket Report, please visit McGraw-Hill Construction at www.construction.com

Anthony Floyd is manager of the Scottsdale Green Building Program, registered Architect and a LEED-Accredited Professional.



Geoff Sutton is a Scottsdale resident and an expert in sustainability, with a focus on solar electric. He lectures throughout Arizona, to universities, expos and corporations. He is a member of ASEA and Nature Conservancy and holds a law degree from Sheridan College in Ontario.

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The Time is Now

Human population growth is taxing Earth's resources to an ever higher degree. Global consumption is at record levels and continues to increase, as seen with commodities like copper, silver, and nickel, and energy sources like coals, oil and natural gas. Even speeding our pace on this treadmill of extraction does not guarantee to meet the needs of an expanding population.

In the U.S., the average person consumes around 340 million BTUs of energy, in all its forms, over the course of a year. A BTU is the amount of heat energy needed to raise the temperature of one pound of water by one degree Fahrenheit. The average person will use approximately 9,800 BTU's in the course of a day, or 340 million in a year, at a cost of around \$5,000, to stay warm in the winter and cool in the summer; drive or fly to destinations; and pay for the energy used in making products we consume.

This nearly free (.000015 cents per BTU) resource has allowed American society to build itself into what it is today, but that holds open the question of what will happen tomorrow. As BTUs become scarce or prohibitively expensive to extract or acquire, we will have to learn to make a smaller "BTU footprint."

The American BTU footprint, in human energy terms, is the equivalent of a year round fulltime staff of 95 people; they can be imagined metaphorically as BTU people.

The World is entering into an era of BTU shocks. We are living in a time when third-world countries are striving to achieve the same standard of living that Americans enjoy. Americans also have found themselves buying more of these BTUs from nations that do not look favorably upon American society. Other nations have started to see the true value of a BTU and plan to conserve their energy for their own citizens and extend its use over a longer period of time.

If we again imagine energy as the metaphoric BTU people powering America, we can see that they will eventually start migrating to other countries, become prohibitively expensive to hire, remain in their own countries, or be lost forever through depletion.

The time is now to wean America from its BTU addiction and head down a more sustainable path – of conservation, alternative energy, and green building – while the opportunity exists.

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(See Chart)

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The Green Building Pipe Dream Goes Mainstream

They used to say it was a pipe dream.

Now it's on the cover of Time Magazine, Vanity Fair, Newsweek, USA Today, BizAz, and all over the Internet. It has garnered its own dedicated eight-page section in the New York Times, and it's even covered in The Economist and Fortune.

The era of green building is here.

The baby boomer generation that launched the environmental movement has grown up to become the developer, homeowner, business owner, agency head and politician of today. And green building is on the agenda.

With the sun scorching the Phoenix area to its hottest June on record, energy prices skyrocketing, and former Vice President Al Gore's global warming movie warning of worse to come, boomers couldn't have come into their full power at a more important moment.

Though they're leading the charge, boomers are just one segment of a public increasingly focused on health, longevity, comfort and giving back to the world. They want their buildings and landscapes to be better places to live. And work. And play. They are savvy about indoor air quality and toxic lawn chemicals, especially if they have chemical sensitivities, asthma, migraines and allergies.

Here in the Valley of the Sun, we hold in our hands a special opportunity to turn environmental lemons into lemonade, literally and figuratively.

The rising cost of fresh produce, due to the new energy crisis, can be offset by growing edible landscapes, almost year-round, at home. The desert's abundant summer sun can generate solar power through rooftop and backyard panels. Water scarcity and water quality problems can be eased through rainwater harvesting, gray water irrigation, conservation measures and avoiding the lawn chemicals that end up in aquifers. Construction materials with toxic out-gassing can be replaced by natural versions that have minimal environmental and health impacts.

One of our best opportunities is in the model provided by the Scottsdale Green Building Program. Scottsdale Green Building Manager, Anthony Floyd, says 30% of new residential development in Scottsdale conformed to the City's green building standards in 2005, up from 21% the year before.

Green building is taking place in Phoenix, Tempe, Mesa and other cities, as well, but incentives from the Scottsdale Green Building Program make the conversion more affordable, and therefore, more popular. The good news for green builders and homeowners in other cities is about state and federal incentives.

Christian Nys, owner of Planet Harmony Homes and co-founder of the Pierson Street EcoHood in Phoenix, says his total output for a \$4,700 solar hot water system, including solar panels, was \$983 after incentives and rebates. He'll quickly make up the cost in energy savings.

Nys is part of a growing wave of Valley residents and business owners who are going green as they discover incentives, see prices for green products drop, find builders more willing to adapt, and realize they don't have to sacrifice comfort and aesthetics.

"But it's not all about the cost," says Nys. "It's about the bigger picture. People of conscience need to start creating models for the shift from consumerism and materialism to deeper values of health, community and family."

He adds, "Can I really say I have family values if I'm building a house that compromises my children's health and future?"

Amy J. Belanger is this year's Expo publicist. She specializes in publicity and copywriting for green and socially responsible businesses, nonprofits, government agencies and political candidates. www.AmyBelanger.com.



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Home Energy Audits

A home energy audit is the first step to assess how much energy your home consumes, and to evaluate what measures you can take to make your home more energy efficient. An audit will show you problems that may, when corrected, save you significant amounts of money over time. During the audit, you can pinpoint where your house is losing energy. Audits also determine the efficiency of your home's heating and cooling systems. An audit may also show you ways to conserve hot water and electricity. You can perform a simple energy audit yourself, or have a professional energy auditor carry out a more thorough audit.

A professional auditor uses a variety of techniques and equipment to determine the energy efficiency of a structure. Thorough audits often use equipment such as blower doors test, which measure the extent of leaks in the building envelope, and infrared cameras, which reveal hard-to-detect areas of air infiltration and missing insulation.

Do-It Yourself Home Energy Audits

You can easily conduct a home energy audit yourself. With a simple but diligent walk-through, you can spot many problems in any type of house. When auditing your home, keep a checklist of areas you have inspected and problems you found. Look for air leaks, and inspect the condition of wall and attic insulation, heating/cooling equipment, and type of lighting. Keep a list to help you prioritize your energy efficiency upgrades.

Professional Home Energy Audits

Professional energy audits generally go into great detail. The energy auditor should do a room-by-room examination of the residence, as well as a thorough examination of past utility bills. Many professional energy audits will include a blower door test. Most will also include a thermographic scan.

Before the energy auditor visits your house, make a list of any existing problems such as condensation and uncomfortable or drafty rooms. Have copies or a summary of the home's yearly energy bills. Auditors use this information to establish what to look for during the audit. The auditor first examines the outside of the home to determine the size of the house and its features (i.e., wall area, number and size of windows). The auditor then will analyze the residents' behavior including the number of residents, hours spent at home, average thermostat setting, and number rooms not in use.

Your answers may help uncover some simple ways to reduce your household's energy consumption. Walk through your home with the auditors as they work, and ask questions. They may use equipment to detect sources of energy loss, such as blower doors, infrared cameras, furnace efficiency meters, and surface thermometers.


Selecting an Energy Auditor

There are several places where you can locate professional energy auditing services. Your state or local government energy or weatherization office may help you identify a local company or organization that performs audits. They may also have information on how to do your own audit. Your electric or gas utility may conduct residential energy audits or recommend local auditors. Also check your telephone directory under headings beginning with the word "Energy" for companies that perform residential energy audits.

Source: U.S. Department of Energy, EERE Consumer's Guide to Home Energy Audits. For more information visit www.eere.energy.gov/consumer/your_home/energy_audits

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CONNECTING OUR HISTORIC PAST TO OUR GREEN FUTURE

The City of Scottsdale has been engaged since 1997 in identifying and protecting significant historic resources within its boundaries. Once a property or district receives historical designation, the homeowners can apply for funds through the Rehabilitation Program for Historic Districts, which addresses funding for exterior renovations.

Residential and commercial properties in Scottsdale that have received the Historic designation include Town and Country Scottsdale (featuring Haver architecture) and Village Grove 1-6; several others have been identified and are under consideration by the City.

Maintaining the character of historic neighborhoods is important, as property owners plan additions and exterior rehabilitation. One of the Historic Preservation directives is to integrate remodeling product choices with the City of Scottsdale's Green Building Program's recommended practices.

The Green Building Program promotes incorporating healthy, resource efficient materials and methods, making it a perfect guide to help homeowners make wise renovation choices. The recently published Green Building Program Remodeling Guidelines Workbook is an excellent tool for making responsible remodeling choices while preserving a neighborhood's historical character.

By choosing to use green building products and strategies when renovating historic properties, we can build a future that is both sustainable and respectful of our unique local heritage.

To find out more about the City's historic preservation process and available funding go to: www.scottsdaleaz.gov/historiczoning

The City of Scottsdale's Green Building Programs Remodeling Workbook is available on the web at: www.scottsdaleaz.gov/greenbuilding/Manuals/GBRemodelingWorkbook.pdf

DeeJaye Lockwood is The Arizona Queen of Green, a real estate professional and member of the Arizona Board of Realtors, a City of Scottsdale Historic Preservation Commissioner, and an appointed member-Scottsdale Green Building Advisory Committee

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Buildings Tax Credits

Credit for Business Installation of Solar Technologies - Provides a 30% credit for qualifying solar energy equipment. Effective January 1, 2006 through December 31, 2007.

Business Credit of Energy-efficient New Homes - Provides tax credits to eligible contractors for the construction of a qualified new energy-efficient home. Credit applies to manufactured homes meeting Energy Star criteria and other homes, saving 50% of the energy compared to the EPACT standard. Effective January 1, 2006 through December 31, 2007.

Energy-Efficient Commercial Building Deduction – Provides a tax deduction for energy-efficient commercial buildings that reduce annual energy and power consumption by 50% compared to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) 2001 standard. The deduction equals the cost of energy-efficient property installed during construction, with a maximum deduction of \$1.80 per square foot of the building. Additionally, a partial deduction of 60 cents per square foot is provided for building subsystems.

Energy-Efficient Appliances – Provides a tax credit for the manufacturer of energy-efficient dishwashers, clothes washers, and refrigerators. Credits vary depending on the efficiency of the unit. Effective for appliances manufactured in 2006 and 2007.

Home Energy Efficiency Improvement Tax Credits

Consumers who purchase and install specific products, such as energy-efficient windows, insulation, doors, roofs, and heating and cooling equipment in the home can receive a tax credit of up to \$500.

- EPACT also provides a credit equal to 30% of qualifying expenditures for purchase for qualified photovoltaic (solar electric) systems and for solar water heating systems used exclusively for purposes other than heating swimming pools and hot tubs. The maximum credit is \$2000.

Improvements must be installed in or on the taxpayer's principal residence in the United States. Home improvement tax credits apply for improvements made between January 1, 2006 and December 31, 2007.

For further information on the Energy Policy Act, energy efficiency incentives and renewable energy resources:

- Energy Policy Act of 2005 -- www.doe.gov/taxbreaks
- Database for Federal and State Incentives -- www.dsireusa.org
- US DOE Office for Energy Efficiency and Renewable Energy -- www.eere.energy.gov
- National Renewable Energy Lab -- www.nrel.gov
- High Performance Building Database -- www.eere.energy.gov/buildings/highperformance
- Building Integrated Photovoltaic Reading List from US DOE -- www.eere.energy.gov/consumerinfo/reading_resources/v135.html
- International Energy Agency PVPS Project Database -- www.pvdatabase.com/search_form.cfm
- Performance Calculator for Grid-Connected PV Systems -- <http://rredc.nrel.gov/solar/calculators/PVWATTS/version2/>

Green Building, Greenbacks and the Energy Crisis

In the face of rising gasoline prices and global warming, our nation's attention is increasingly focused on greenhouse gas emissions, vehicle fuel standards and the U.S. dependence on foreign oil.

What does this have to do with green building?

Buildings account for 39% of the nation's total annual energy consumption, whereas transportation (including cars) comprises only 27%, according to the U.S. Department of Energy and Department of Transportation. Buildings consume more energy, by far, and contribute more environmental impacts than transportation.

The Energy Policy Act of 2005 (EPACT) is an incentive-based program for builders, businesses and consumers to address energy and interrelated environmental and energy security issues. The Act (effective on January 1, 2006), provides tax credits for homes and businesses using solar technologies and/or designed to use 50% less energy as compared to what would be prescribed under the International Energy Conservation Code (IECC).

The Energy Policy Act

Besides offering tax credits for purchasing fuel-efficient hybrid-electric vehicles, EPACT offers federal tax credits for purchasing energy-efficient appliances and products. Most of these tax credits will remain in effect through 2007. Purchasing and installing energy-efficient appliances and products reduces emissions, energy bills, and air pollution, and improves indoor comfort.

Most consumers and businesses are also eligible for state tax credits and utility rebates for energy-efficient homes and equipment. Each state's energy office web site includes more specific state tax credit information.

About Tax Credits

A tax credit is generally more valuable than an equivalent tax deduction, because it reduces taxes dollar-for-dollar, while a deduction only removes a percentage of the tax that is owed. Beginning in tax year 2006, consumers will be able to itemize purchases on their federal income tax form, which will lower the taxes owed.

Business Tax Credits

Businesses are eligible for tax credits for buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings (as outlined in the Energy Policy Act of 2005).

Automobile Tax Credits

Individuals and businesses who buy or lease a new hybrid gas-electric car or truck are eligible for an income tax credit of \$250-\$3,400 – depending on the fuel economy and the weight of the vehicle. Hybrid vehicles that use less gasoline than a vehicle of similar weight, and that meet an emissions standard, qualify for the credit. There is a similar credit for alternative-fuel vehicles and for fuel-cell vehicles. Additional vehicle purchases are subject to tax credits.

Those who buy more than one vehicle are eligible to receive a tax credit for each. If a tax-exempt organization buys such a vehicle, the retailer is eligible to receive another credit. Companies that buy heavy-duty hybrid trucks are also eligible for a larger tax credit.



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Green Roofs in the Desert

A green roof is a roof planted with vegetation and can be traced back thousands of years throughout the world. With the advent of tall buildings in the late 19th century, garden roofs appeared on such buildings as New York City's Waldorf-Astoria hotel. In the 1940s, Union Square in San Francisco became the first of many roof gardens to be created above underground parking garages. Even in the Phoenix area, there are several vegetated roofs over underground parking garages and vehicular underpasses. Pedestrians are often unaware that these applications exist.

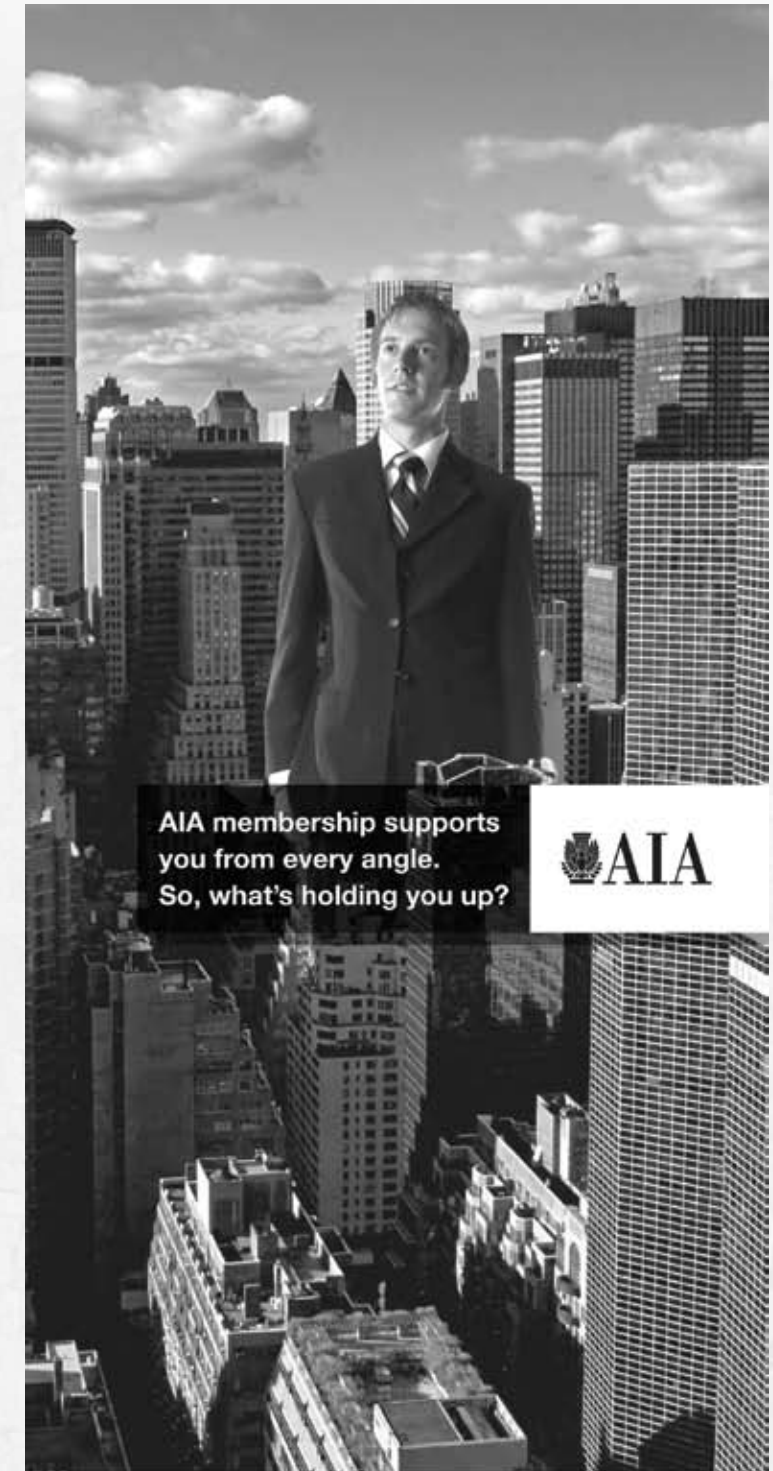
Optima, Inc., Arizona's largest developer of new luxury condominiums, has built green roof developments for years in the Chicago area before bringing their insightful designs to the Valley of the Sun. Optima incorporates sustainable techniques into their architectural designs for environmental responsibility, energy efficiency and structural beauty. Green roofs lower surrounding ambient air temperature (urban heat island effect), cleansing of airborne pollutants, noise reduction and storm water management. Optima residents benefit from cooler homes in the summer and warmer homes in the winter because the green roof technology helps to balance extreme outside temperatures.

Best of all, the technology provides a usable living space with a therapeutic and peaceful environment. A layered green roof approach transforms an ordinary roof into a garden. From the bottom working up, it includes a roofing membrane, a root barrier, an air barrier, a moisture retention mat for water retention, a drainage system, filter fabric, soil and finally vegetation.

Currently under construction, Optima Camelview Village in downtown Scottsdale is a mixed-use development of 11 buildings up to seven-stories high. Nearly 15 acres of the 18-acre site will feature green roofs. Each of the more than 700 luxury condominiums will feature cantilevered outdoor living spaces with up to 75% landscaping. Desert appropriate plantings include rosemary, pigmy date palms and three-foot honey mesquite trees that will grow up to 20 feet tall.

Optima Biltmore Towers in Phoenix features varying upper levels with landscaped green roofs. The towers are connected by a sky-bridge with a rooftop pool, spa and outdoor living space. Optima's use of photovoltaic panels at Biltmore Towers earned the company praise for being the first multi-family building in Arizona to implement such sustainable techniques.

For more information about Optima, Inc., visit www.optimaweb.com.



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Scottsdale Granite Reef Senior Center



Photo's Courtesy of Karen Shell

The 37,500 square foot Granite Reef Senior Center is a showcase of sustainable design in the context of our Sonoran Desert urban environment. It is the first green city facility under the City of Scottsdale Green Building Policy and will be the first green certified Senior Center in the State of Arizona. The building was designed by Gabor Lorant Architects and constructed by Cal Wadsworth Construction. SRP EarthWise Energy partnered with the city for the building integrated solar electric system. Green building certification is being completed by Green Ideas, Inc.

Gold level certification is being acquired through the LEED® (Leadership in Energy and Environmental Design) green building rating program under the auspices of the U.S. Green Building Council.

A Magical Green Mystery Tour

On some rare day, you may meet an artist whose soul seems to speak the language of everything she touches. That was my experience one afternoon in September, when I was invited by artist Joan Baron to tour her Edible Landscape Project.

As Joan welcomed me into her home, all of my senses were swept up in the wall-to-wall, floor-to-ceiling, art forms that fill her space. Cobalt blue mosaic tiles snaked across the floors. An amber resin sculpture filtered the sunlight penetrating the window. Kite-like canvas forms flew just below the ceiling. And exquisitely troweled walls revealed the hand of an artist.

We left Joan's home studio to tour the Edible Landscape Project just up the street, created on a property she bought in 2004.

"I wanted a place to create an 'Earthwork,' where I could implement all of the things I had studied and continue to learn about the environment, global issues, Feng Shui, permaculture, art and my place in the world," she said.

As we approached the Edible Landscape Project, a grouping of Octopus agaves swayed in aesthetic balance above golden barrel cacti, on a rolling ground of rich, warm, reddish-colored stones. Beyond them, stood a living fence made of woven Ocotillo cacti.

"The shape of the fence follows the arc of the sun over the landscape," Joan explained. "Its materials let it suggest privacy, but because we can be seen, it's also possible to relate to what's on the other side, and that supports two competing needs – privacy and community."

The driveway sits beyond the house and front landscape, so that neither it nor the car interferes with the view of the garden. Above it grows a large pine tree, left in place for shade. A younger, jacaranda tree protected in its shadow will soon provide additional shade and will display a blue-violet flower, a delightful welcome at the end of the day.

We walk inside the Ocotillo fence, where three C-shaped benches made of "urbanite" – recycled concrete pieces – define a circular social area inside the garden. Native medicinal plants thrive all around them, including senna for use as a laxative, brittlebush to purify the air, and creosote bush for sore throats.

A "medicine wheel" is formed by up-ended logs that serve as seats for a feature that is at once art form, fire pit and sacred ground. Its round shape is a symbol of wholeness and connectedness to nature.

East of the medicine wheel is a "salad spiral," an urbanite planter about 3-feet tall and 3-feet around, planted with Armenian cucumbers, lemongrass and squash.

"People may neglect a garden that feels overwhelming," Joan explains. "But smaller ones like this feel welcoming."

The circle and spiral show up everywhere in nature, from the solar system to planets to seedpods to atoms. And meanings show up everywhere in Joan's space.

Just outside the front door, is another small garden, lush with edible and medicinal flowers and herbs. It is both a welcoming bouquet of color and scent, and an easy reach for a quick salad harvest, on the way inside.

Camouflaged with foliage, there stands beyond the door, a 10-ft. tall water cistern collecting rainwater from the roof via a fabricated stainless steel gutter. This water, and the grey water from the washing machine, reduce waste and utility bills. And "swales" – contoured depressions in the ground – provide additional water storage when it rains.

"Not everyone can create a home like this one, or afford a hybrid car or convert a diesel vehicle to run on soybean oil. But we each have to ask, 'how can I, in some small way, be the change that I want for the world?'"

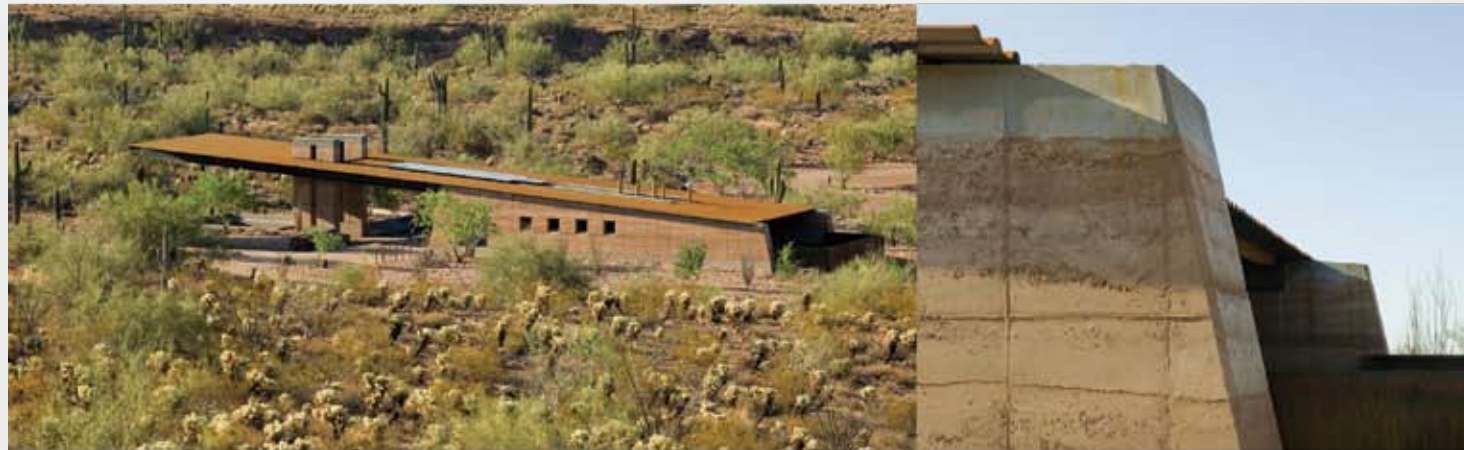
I drove home knowing that Joan had gathered up more than her fair share of the tiny pieces of everything our culture has broken, and artfully put them back together into grand mosaics, making them a spectacular part of our built environment.

"Our challenge is how to return to these simple truths in a culture that is pushing us away from them at such an accelerated speed," Joan says. "It's time we return home, before we lose it all forever."

View the artists' portfolio at www.joanbaron.com.

Amy Belanger is a publicist for socially responsible and green businesses, nonprofits, entrepreneurs, media and political candidates. On the Web: www.AmyBelanger.com.

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The Arizona Environmental Strategic Alliance (the Alliance) helps green-thinking businesses and homeowners reuse materials that might otherwise end up as waste in a landfill.

As part of its commitment to sustainability, the Alliance established the Arizona Resource Exchange project and Web-based exchange service to benefit our economy and our environment by connecting those with reusable and surplus materials to those who need them.

Now with funds provided through the Department of Environmental Quality, these services have been expanded. A “matchmaker” service helps identify and facilitate material transfers between donors and users. A multi-category web based listing service (www.azrex.org) has been added, along with expanded user support.

The Alliance’s matching service is free of charge to all participants – and staff can assist users by offering connections, quantifying and listing materials on the exchange web site, providing on-site or telephone waste-stream/production assessments to determine potentially reusable products, and following the process to help find end-users both within and outside of Arizona. However, the Arizona Resource Exchange acts as facilitator only and does not physically handle the exchanged materials.

Whether you are an individual, a business or a nonprofit organization, let our materials exchange service connect you to excess and reusable materials or users for your materials. Contact the Arizona Resource Exchange project at 602-325-4705 or the Arizona Environmental Strategic Alliance at 480-422-7392.

Beverly Westgaard is Advisory Council Chairperson for the Arizona Environmental Strategic Alliance and a member of the Green Building Expo Planning Committee.



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Program Schedule

Friday Films

10:00am • design e2 - Deeper Shades of Green

- Producer - KontentReal, Karina Albers, Elizabeth Westrate
- www.design-e2.com • Length - 24 Minutes
- design e2 dives into the minds of leading green thinkers and designers including Ken Yeang, Werner Sobek and William McDonough as they challenge society and environmental design philosophically, psychologically, technically, aesthetically, politically, and culturally.

10:30am • Raw For 30 Days

- Producer - Mark Perlmutter
- www.rawfor30days.com • Length - 20 Minutes
- A film about live food and the intention of healing, six junk food addicts go cold turkey and eat raw, organic food for thirty days. Raw for 30 Days tells the extraordinary journey of six people who choose life over diabetes.

11:00am • KiloWatt Ours

- Producer - Jeff Barrie
- www.kilowattours.org • Length - 34 Minutes
- Filmmaker Jeff Barrie takes viewers on a journey from the coal mines of West Virginia to the solar panel fields of Florida, as he discovers solutions to America's energy related problems. After tracing where his energy comes from, Barrie tackles the challenge of removing his dependence on fossil fuels for energy.

1:30pm • Papercrete: An Overview & How To

- Producer - Barry Fuller
- www.livinginpaper.com • Length - 35 Minutes
- Junk mail finds a home! The Center for Alternative Building Studies presents an overview of the environmental benefits and alternative building methodology used to construct homes from waste paper.

2:30pm • Living Green

- Producer/Director Rees Candee
- Length - 15 Minutes • www.candeeproductions.com
- Candee brings us green living ideas we can consider incorporating into our every day lives. This mini-episode explains photovoltaic solar power and weighs the pros and cons for the homeowner considering this renewable energy option.

3:00pm • Build It Green! Zero Energy Remodel: The Energy Audit

- Producer - Mick Dalrymple
- www.builditgreen.tv • Length - 34 Minutes
- Hosts Jill and Charlie team up with experts from the Arizona energy Office to determine the sources of energy waste in a 1975 block home that is about to be remodeled to achieve net zero energy usage.

4:00pm • Beyond Organic

- Producer - John de Graaf
- www.bullfrogfilms.com • Length - 33 Minutes
- A half-hour documentary narrated by actress Meryl Streep, tells the story of an amazing 12-acre, organic urban farm in the middle of some of the most expensive real estate in the U.S. and its battle to survive in the face of rapid suburban development.

5:00pm • design e2 - The Green Apple

- Producer - KontentReal, Karina Albers, Elizabeth Westrate
- www.design-e2.com • Length - 24 Minutes
- design e2 explores New York City in its charge to green its industrial skyline with advanced green building projects such as the Solaire and One Bryant Park. As the densest city in America, NYC takes green a step further by going very vertical.

Saturday Films

10:00am • Build It Green! Zero Energy Remodel: HVAC

- Producer - Mick Dalrymple
- www.builditgreen.tv • Length - 11 Minutes
- In the first step of remodeling a 1975 Phoenix home toward zero energy, hosts Charlie and Jill work with an HVAC expert to replace an old, inefficient system with a state-of-the-art energy miser that will also make the home more comfortable.

10:30am • Build It Green! Zero Energy Remodel: Roof's That Cool

- Producer - Mick Dalrymple
- www.builditgreen.tv • Length - 13 Minutes
- A Phoenix homeowner overcomes multiple hurdles in securing an energy-efficient new roof as part of a quest for an energy-independent remodeled home. This episode explores the critical role roofs play in an extreme climate for both comfort and energy efficiency.

11:00am • Build It Green! Zero Energy Remodel: Windows & Doors

- Producer - Mick Dalrymple
- www.builditgreen.tv • Length - 17 Minutes
- Charlie and Jill get involved as window expert Chip Marvin replaces windows and doors and explains the mysteries behind energy-efficient window systems in a Phoenix homeowner's quest toward energy independence.

11:30pm • KiloWatt Ours

- Producer - Jeff Barrie
- www.kilowattours.org • Length - 34 Minutes
- Filmmaker Jeff Barrie takes viewers on a journey from the coal mines of West Virginia to the solar panel fields of Florida, as he discovers solutions to America's energy related problems. After tracing where his energy comes from, Barrie tackles the challenge of removing his dependence on fossil fuels for energy.

1:45pm • Blue Vinyl - Full Length Film

- Producer - Judith Helfand and Daniel P. Gold
- www.bluevinyl.org • Length - 97 Minutes
- Skeptical of her parents' decision to re-side their Long Island home with polyvinyl chloride (PVC), Peabody Award-winning filmmaker Judith Helfand sets out with co-director Dan Gold and co-producer Julie Parker to discover the toxic truth behind the plastic.

3:45pm • Smart Spaces: Inside & Out

- Producer - Kristin Atwell
- www.SmartSpacesTV.com • Length - 14 Minutes
- How can your everyday choices benefit both you and the environment? Smart Spaces: Inside & Out addresses this question through the concept of sustainability. The show is designed to inspire mainstream viewers to make different choices that create a positive change in the world.

4:45pm • design e2 - Green For All

- Producer KontentReal, Karina Albers, Elizabeth Westrate
- www.design-e2.com • Length - 24 Minutes
- design e2 follows architect and activist Sergio Palleroni as he continues his mission to provide architectural and design solutions to regions in social and humanitarian crisis. This episode finds him in Austin, TX and in Mexico, as he and his team of students help threatened communities build thousands of low-cost, local-material homes.

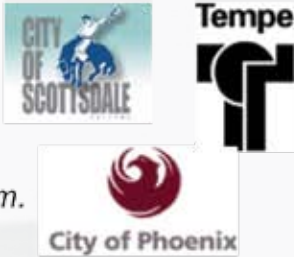


GREEN BUILDING EXPO

Scottsdale Center for the Performing Arts

Friday Speaker Schedule

Show hours, Friday, October 6, 2006, 10:00 a.m. – 7:00 p.m.



11:00AM – 11:45AM Lunch Sponsored by		
12 Noon – 12:55PM Main Auditorium "Environmental Alchemy" - Randall Stout, Architect Author of <i>Environmental Alchemy</i> , Directing numerous design projects in the U.S. and Germany, Randall's design experience encompasses museum, civic, public safety, office, commercial, institutional, industrial, recreational, entertainment, and residential facilities. Across this broad spectrum of project types, his buildings are known for dynamic forms, state of the art technology and environmental sustainability. He spent seven years with Frank O. Gehry & Associates where he worked on artistically expressive, award winning projects of various scales. In 1992, Randall was named a Senior Associate and subsequently led FOG/A efforts on projects in Frankfurt, Hanover, and Bad Oeynhausen, Germany and Cincinnati, Ohio. He also designed and installed the American Pavilion exhibition for the 1991 Venice Biennale. This experience complemented his tenure at Skidmore Owings & Merrill. He developed a proficiency in building technology and detailed their international legacy. In his four years there, Randall worked on buildings in Texas, Florida and Illinois representing over two million square feet of completed construction and several master plans.		
Main Floor Gallery	Up-stairs Gallery	Stage 2
1:30PM – 2:15PM "Green Buildings and Municipal Policy: What's happening in Phoenix, Scottsdale and Tempe" Bonnie Richardson, AIA, LEED AP Principal Planner/Architect, Transit/Public Works Dept., City of Tempe www.tempe.gov/greenbuildings ; Larry Person, Environmental Planner, City of Scottsdale, www.scottsdaleaz.gov ; Wylie Bearup, City Engineer, City of Phoenix www.phoenix.gov	1:30PM – 2:15PM "National Green Home Rating Systems & Standards: An overview of LEED for Homes and National Association of Home Builders Green Home Guidelines" Anthony Floyd, AIA, City of Scottsdale Ron Hand, AIA, CSI, Sonoran LEED for Homes Richard Zimmerman, Sonoran LEED for Homes www.USGBC.org www.nahbr.org/greenguidelines	1:30PM – 2:15PM "Creating Sustainable Sanctuaries of Clay, Straw and Timber" Paula Baker LaPorte, AIA, and Robert LaPorte, owners EcoNest, an Architect and Builder Company P.O. Box 864, Tesuque, NM 87574, www.econest.com
2:30PM - 3:15 PM "Sustainability Overview - where we are, where we are going and where we might go instead" David Eisenberg, Director and co-founder of the Development Center for Appropriate Technology, Tucson, Arizona PO Box 27513, Tucson, AZ 85726, www.dcat.net	2:30PM - 3:15 PM "Current state energy codes and policy incentives...what you should know about energy efficiency and renewable-energy usage" Charlie Gohman, Arizona Department of Commerce, Manager, Energy Office, Building Science & Efficiency, 1700 W. Washington Ave, Suite 220, Phoenix, AZ 85007 http://www.azcommerce.com/energy/	2:30PM - 3:15 PM "Greening Multi-family Developments" Designing for Sustainability in the new Sunnyslope Affordable Multi-Family Housing project. Antony Brown, Director & Founder, Ecosa Institute 212 B South Marina St, Prescott, AZ 86303 www.ecosainstitute.org
3:30PM – 4:15PM "Green Roof Technology" Examine the application of green roofs for sustainable storm water management, heat island mitigation, thermal protection and clean air strategies Michael D'Andrea, Optima Development, 2375 E. Camelback Rd, Phoenix, AZ 85016 www.optimaweb.com	3:30PM – 4:15PM "Energy Modeling: Designing high performance buildings with advanced energy analysis programs" Henny van Lambalgen, Quest Energy Group, LLC, 4324 E. Pearce Rd, Phoenix, AZ 85044 www.questenergy.com	
4:30PM – 5:15PM "USGBC LEED: Why it is important and relevant to the desert environment" Mark Wilhelm, M.E. P., LEED-AP, Principal Green Ideas Inc, 1400 E. Indian School Rd, Phoenix, AZ 85014, www.egreenideas.com	4:30PM – 5:15PM "A Solar discussion" Passive and active innovations for commercial and residential projects with an update on current. Dan Aiello, Principle Architect, Janus II Environmental Architects	



GREEN BUILDING EXPO

Scottsdale Center for the Performing Arts

Saturday Speaker Schedule

Show hours, Saturday, October 7, 2006, 9:00 a.m. – 5:00 p.m.



Main Floor Gallery	Up-stairs Gallery	Stage 2
10:30AM – 11:15 AM "Exciting new residential zoning concepts for older neighborhoods and green city planning updates" Frank Gray, General Manager, Scottsdale Planning and Development, City of Scottsdale www.scottsdaleaz.gov	10:30AM – 11:15 AM "The Hydrogen House...one year later" Hear the successes and challenges faced by these pioneers in Arizona's first Green/Solar/Hydrogen house. Learn about the roof gardens, photo-voltaic, water walls, indoor air quality, clay walls and much more. Bryan Beaulieu, Engineer & Inventor www.clean-air.org	10:30AM – 11:15 AM "Green Feng Shui: Improve your home and workspace using ancient principles of energy flow and floor plan design" John dennis Govert, Principle Govert Zengo Design, Phoenix, AZ john.dennis@govort.us John dennis will be available to sign his book <i>Feng Shui: Art & Harmony of Place</i>
11:30AM – 12:15PM "Renovation and Remodeling for a Sustainable Future: Practical strategies for green remodeling in the Sonoran Desert" Ron Hand, President, E/FECT, Sustainable Design Solutions, AIA, CSI, LEED, utilizing the City of Scottsdale's recently published, <i>Green Building-Home Remodeling Guidelines</i>	11:30AM – 12:15PM "Smart Controllers: Advances in irrigation technology, evaporative transpiration, and ways to conserve water and use it more effectively" Robert Reaves, The Toro Company Karen Warner, Water Conservation Specialists, City of Scottsdale www.wateruseitwisely.com	11:30AM – 12:15PM "Practical information about solar electricity for your home and business. Review current incentives offered at state and federal levels" Lee Feliciano www.valleyofthesunsolar.com Jesse Wolf Corsi Henson, AIA, LEED AP www.kyocerasolar.com
12:30PM – 1:30PM Main Auditorium "EcoNest - Creating Living Sanctuaries of clay, straw and timber" Paula Baker-LaPorte & Robert LaPorte, The EcoNest Building Company, located in Tesuque, New Mexico (near Santa Fe), is owned and managed by Robert Laporte and Paula Baker-Laporte. Robert Laporte is a timber framer and natural house building pioneer and teacher. Paula Baker-Laporte is an architect, baubiologist and author specializing in healthy and ecological design. Since 1994, Robert and Paula have been co-creating EcoNests - homes which embody the principles of sustainable building, health and beauty. www.econest.com , book signing to follow		
Main Floor Gallery	Up-stairs Gallery	Stage 2
2:00PM – 2:45PM "Rating Green Homes in the Sonoran Desert: An overview of Scottsdale's new Green Home Rating Checklist" Anthony Floyd, AIA, LEED- AP, City of Scottsdale www.scottsdaleaz.gov Chris Harrison, Project Manager, Grayhawk Development www.grayhawk.com	2:00PM – 2:45PM "Rainwater Harvesting-Lessons from Africa: Eight basic principles of water harvesting, exploring how to plant water not just plants, reduce the cost of living & gain self-reliance" Brad Lancaster, permaculture designer and educator, www.harvestingrainwater.com	2:00PM – 2:45PM "Enter the green stream and breathe easier" Learn about the variety of earth friendly home improvement green products for your next project. Paints, clay plasters, tile, cork and bamboo flooring, lighting, recycled materials, adhesives, and much more. Mick Dalrymple & Jeffrey Frost, owners, a.k.a. Green, the Eco-Friendly Building Center, www.akagreen.com
3:00PM – 3:45PM "Cost Effective Green Building: Learn the top ten tips for energy efficient new homes" Kevin Edwards, Principal, Edwards Design Group, Inc, custom home builders, www.edwardsdesigngroup.com	3:00PM – 3:45PM "Permaculture design meets human needs, turning gardens and communities into fully functioning ecosystems" Greg Peterson, owner, The Urban Farm, www.urbanfarm.org Don Titmus, Phoenix Permaculture Guild, educator and bee keeper, www.4dirs.com/fdpc	
4:00PM – 4:45PM "Healthy Homes, Healthy Workplace" Three experts explain solutions to the challenges of molds and allergies. Learn root causes of many irritants in our environment. Andrea Tintle, Consultant Syndee Jones, Owner, Eco-cleaning Services, and Stacey Champion, owner, consultant, Champion Indoor Environmental Services, LLC www.ecoclean-az.com www.thecleangreenteam.com www.championindoors.com		