

# NxT HORIZON

SUSTAINABILITY - DIVERSITY - INNOVATION - LEADERSHIP: NEW SOLUTIONS FOR A NEW DAY!  
SPECIAL EDITION VOL. 3 No. 2 AUGUST 2011

UNDERWATER? UPSIDEDOWN? CAN'T REFINANCE?

## POWERHOME

TAKE CHARGE OF YOUR HOUSE TO SAVE YOUR HOME!

INSIDE

**\*MANAGING THE MADNESS**

**HARNESSING THE POWER OF SIDE EFFECTS**

**\*COMMUNITY DEVELOPMENT BLOCK GRANTS**



AQUAPONICS, EDWARD Z. FOX, THE TOUR OF SOUTH MOUNTAIN, THE GREATEST RECYCLERS & MORE

[NXTHORIZON.COM](http://NXTHORIZON.COM)



Claude Mattox has produced the kind of visionary results for the City of Phoenix that are increasingly rare these days. And for me, Claude Mattox is the only choice for Mayor of Phoenix.

*Phoenix Businessman and Community Leader Jerry Colangelo*

I was blessed the serve with Claude Mattox on the Phoenix City Council for many years. He has a well deserved reputation as a councilman with a vision who puts neighborhoods first while working tirelessly to promote public safety, jobs, and education for all the people of our community. I know Claude Mattox to be a man of integrity and character who ALWAYS keeps his word. Please join me in voting for councilman Claude Mattox for mayor.

*Former Councilwoman Peggy Bilsten*

Claude is not a typical politician. His strength is his ability to move beyond politics, listen to people, and pull people together for a common end. Claude Mattox has what it takes to be an outstanding Mayor.

*Former Phoenix Mayor Paul Johnson*



Claude Mattox is what every leader should be. His hands-on expertise in public safety, economic development, transportation, environment, and neighborhood revitalization makes him uniquely qualified to be the next Mayor of Phoenix.

*Former Congressman Matt Salmon*

## The Choice for Mayor is Clear...

**CLAUDE MATTOX**

Highly respected Councilman and long time community leader. As Mayor, Claude will continue his tireless work for strong neighborhoods, quality schools and career jobs.

**PEGGY NEELY**

Resigned from the Phoenix City Council to run for Mayor in the midst of controversy and a recall by neighborhood leaders concerned about campaign funding by big developers who benefited from her decisions while on council.

**WES GULLETT**

Is running as an outsider but is the ultimate political insider. Former finance chair to Phil Gordon, Gullett is a career lobbyist.

**GREG STANTON**

Demonstrated weak leadership when he quit the Phoenix City Council in 2009 just before tough budget decisions caused by the recession had to be made. Stanton left the city Council midway through his term for a higher paying job in state government.

**Vote by Mail or on the three Polling Place Days August 27, 29 & 30**

# NxT Horizon

New Solutions for a New Day

## Raison d'Être

(reason to be)

WHEREAS SUSTAINABILITY IS THE EFFORT TO UNDERSTAND AND ADVANCE THE SOCIAL, ENVIRONMENTAL AND ECONOMIC ISSUES INVOLVED IN THE SUCCESSFUL SHORT AND LONG-TERM STEWARDSHIP OF PLANET EARTH. APPLIED SUSTAINABILITY IS THE APPLICATION OF KNOWLEDGE GATHERED FROM THE STUDY OF SUSTAINABILITY TO SOLVE PRACTICAL PROBLEMS AND ADDRESS TODAY'S NEEDS.

WE LIVE IN A NEW DAY OF ECONOMIC UNCERTAINTY, SOCIAL DISRUPTION AND LIKELY PERMANENT RESOURCE SCARCITY. TO THESE CHALLENGES, SUSTAINABILITY OFFERS POWERFUL NEW IDEAS, NEW APPROACHES AND NEW SOLUTIONS. THROUGH THE STORIES WE PRESENT, IT IS THE MISSION OF NxT HORIZON TO HELP YOU PUT THESE NEW CONCEPTS TO WORK.



---

# South Mountain Villager

---

## Who are we?

The South Mountain Villager, a publication for positive news of the South Mountain/Laveen Village can now be read world wide via our own website, just send your friends the website and they can get caught up on what's happening in our Village's. Our website is <http://www.southmountainvillager.net>.

## The paper that gets read

The Villager has been bringing good news to the South Mountain/Laveen area for over Sixteen years. We welcome articles about events happening in your Church, School, Club, Organizations, or someone who deserves recognition.

## 6,000 copies

We distribute more than 6,000 copies of the Villager in the South Mountain/Laveen area monthly. Our distribution area is from 99th Avenue to 48th Street and the South Mountain Park to the Rio Salado. Currently we have 175 locations. We also mail 150 Villagers to the South Mountain/Laveen Chamber of Commerce members and others. A subscription cost \$20 per year for shipping and handling.

## Reasonable Rates

We offer affordable advertising, please compare us to other print media in the Village. Our deadline is the 1st of the month prior to the month your ad or article will appear.

We prefer to have everything on e-mail, either in a Word Document or PDF file. Our monthly issues have 28 to 32 pages and the front & back cover are color ads.

For more information call Verna McClain at 602-276-5925 or e-mail [vernamcclain@cox.net](mailto:vernamcclain@cox.net) or George Young at 602-243-3162 or e-mail at [gayoung@cox.net](mailto:gayoung@cox.net)

Thank you,

Verna McClain/George Young  
Owner/Editor





## NxT Horizon

August 2011  
VOL. 3, NO. 2

### 22 C&H Associates

The architectural partnership C&H Associates has found a way to do good by doing well. By working through the City of Phoenix Development Block Grant (CDBG) process they can provide their services at no costs to clients that normally may not have been able to afford them.

### 26 Thought Leadership

An interview with Edward Z. Fox, thought leader and Chief Sustainability Officer at Arizona Public Service focusing on how his company successfully applies sustainability to increase shareholder value.

### 33 Powerhome

Something unique is happening. By acting to reduce energy and water use while producing food crops through backyard gardening/farming and edible landscaping, homes are beginning to produce more resources than they consume. These are Powerhomes. Up until now, these convergences were happy coincidences. So why not do this on purpose?

# in this edition



## prologue

Raison d'Etre  
Table Of Contents  
Staff  
Index of Advertisers  
Prologue

pg. 3  
pg. 5 - 6  
pg. 7  
pg. 7  
pg. 8

## podcasts & videos

Grandma was Green  
Its time to put green to work  
The Rio Salado Project Update

pg. 9  
pg. 9  
pg. 9

## voices

The Greatest Recyclers

pg. 10

## snapshots

The Tour of South Mountain  
Managing the Madness  
Powerhome: The Pomegranate  
ICARE

pg. 15  
pg. 24  
pg. 39  
pg. 41

## health

Mesquite Beans & Diabetics

pg. 19

## images

Aquaponics  
Green Chamber Mayoral Forum  
Phoenix's New Solar Train Station  
Cold Box Lighting  
Angela Brooks Teaches Sustainability  
Buckeye Az's first Community Garden

pg. 14  
pg. 21  
pg. 25  
pg. 32  
pg. 38  
pg. 43

## epilogue

pg. 44

## resources & terms

pg. 45



# MBDA

Business Center



Contact us for Access to Opportunities; Financing & Bonding

The MBDA Business Center-Arizona (MBC) is focused on securing large public and private contracts & financing transactions, stimulating job creation and retention, and facilitating entry to global markets for eligible minority-owned businesses (MBEs).

**MBC serves eligible MBEs with annual revenues of over \$1,000,000 or, participants in a high-growth industry.**

## Services to Grow your business

Whether it's financing, organizational growth, bonding, certification, access to markets (local or global), referrals, or business-to-business partnering, the MBDA Business Center consultants can determine and provide the right resources for your business' growth goals. Call us today!

We facilitate access to:

Contracts  
Capital  
Bonding  
Teaming  
Markets  
Nationwide Resources

A Federally Funded Program by the Minority Business Development Agency, U.S. Dept. of Commerce. Locally operated by the Arizona Hispanic Chamber of Commerce.

www.mbc-az.com 602-248-0007 255 East Osborn Road, Suite 202, Phoenix AZ 85012

## NxT Horizon

## Staff

**NxT Horizon magazine**  
is published by NxT Horizon Group  
George B. Brooks, Jr., Ph.D  
CEO and Editor

PR/Marketing  
Life Strategies Consulting  
<http://nxthorizon.com>

Graphics/ Art  
Magazine:  
Dr. George Brooks Jr.  
WEB Master  
George B. Brooks, Jr.  
Photography  
Angela Brooks & Dr. George B. Brooks, Jr.

## Contact

Mail: P.O. Box 24982  
Tempe, AZ 85285-4982  
Phone: (602) 363-1677  
Fax: (602) 437-8852

[info@nxthorizon.com](mailto:info@nxthorizon.com)  
Webpage

## Index of Advertisers

|  |        |
|--|--------|
| Bill Clay Design Studio                        | pg. 31 |
| Claude Mattox for Mayor of Phoenix Arizona     | pg. 2  |
| e-Caps   | pg. 24 |
| Fleur-de-Lis Media Consulting                  | pg. 29 |
| Minority Business Development Agency - Arizona | pg. 7  |
| South Mountain Villager                        | pg. 4  |
| Taylor Made Promotions:                        | pg. 18 |



## UPSIDE DOWN & UNDER WATER

By George and Angela Brooks

THERE IS NEVER TIME IN THE  
FUTURE IN WHICH WE WILL WORK  
OUT OUR SALVATION. THE  
CHALLENGE IS IN THE MOMENT;  
THE TIME IS ALWAYS NOW.  
~JAMES A. BALDWIN ~

WHERE THERE IS NO VISION, THE  
PEOPLE PERISH  
~PROVERBS 29:18~

**J**ust under 50% of Arizona mortgages are underwater. Because of the housing crash of a few years ago way too many of our homes are worth less than the balance of the mortgage. This means that if you get lucky and land a new job in say, San Diego, You can't sell your current home here so you probably can't take the job. Lord help you if I loose your employment. Even though there is help available for refinancing, most of us can't access it because the credit requirements are too strict. There is hope however.

Later in this edition there is an article called **Powerhome**. It describes how you can manage your home to where it produces more resources than it uses. In other words though reducing energy use by going green and the backyard production of highly desired crops such as lettuce, tomatoes and greens, two or three thousand dollars annually can be saved or if you take a more Ben Franklinesque view, earned.

For the sake of argument lets use \$2,400 annually (\$200/month) as our goal. This does not sound like much does it, but lets put it in perspective. The purpose of refinancing your home is to reduce the amount you have to pay in interest over time and the amount of money you are liable for every month. From what I have been able to gather, for those lucky folks who can refinance, the monthly savings is about \$200. In a similar vein, the average Phoenix utility bill is around \$200/month as well. The question is what to do with the \$2,400 of extra income you now have? We will talk more on that next edition.

### GO GREEN FOR JOBS!

Powerhome might be just the right idea for the right time for a frighteningly large number of reasons. For example the Powerhome concept is in part based upon capturing unused renewable natural resources and converting them to value added products in this case food and perhaps electricity. Every dollar that is earned through this goes back into the local economy supporting businesses and creating jobs. Not just so called green jobs but jobs in every field of human endeavor from the hair dresser down the street to the cashier at the local movie theater. If we use the full \$2,400 in our estimates, for every sixteen Powerhomes created, one job is also saved or created. This in addition to helping to economically stabilize those homes as well as adding to their value through improved energy efficiency. With one out of 5 children in Arizona in poverty, every little bit helps. Income yields taxes so the city would also benefit. With somewhere near 300,000 homes underwater in Phoenix alone, the potential for economic benefit is therefor significant not counting the intertwined nutritional and environmental benefits the concept brings.

### NEW SOLUTIONS FOR A NEW DAY!

Sustainability when applied to today's challenges supplies powerful solutions. It is the mission of this periodical to bring them to you. Like Powerhome, it is our desire for these stories to be inspirational and to provide enough information for you to try these ideas as well. So come and join us in this journey and then tell us your story so you may inspire others as well. Enough for now, on with the show. **NxT**



# Podcasts & Videos



## Grandma was Green

Green Phoenix Series: Video - YouTube  
Presented by Angela Brooks  
[Click here to view Pt. 1](#)  
[Click here to view Pt. 2](#)



### The Subject

Going green is nothing new, but a long standing part of American culture. To take care of her family back in 1930 grandma lived by six rules. Do unto others as you would have them do unto you, begin with the end in mind, make the most of what you got, do no harm, always try to make things better and just make it happen. With this Grandma knew how to sustain her family. Grandma was Green. These same rules now work today and guide society. This great video shows how.

### The Speaker

**George B. Brooks, Jr. Ph.D.** is a dynamic transformational leader, public speaker and environmental scientist. The publisher of NxT Horizon he has four daughters: Andrea, Amanda, Haley and Hasina, one grandson Marcus. He is married to Angela Brooks.



## Its Time to Put Green to Work

ASU 10 x 5 Sustainability Showcase  
Presented by Various Authors  
[Click here to view](#)



### The Subject

10 fast-paced talks by School of Sustainability students, alumni, faculty, and members of the community. Speakers take 5 minutes to highlight their sustainability story, focused on sustainable solutions in a local, national, and global context.

### Speakers

- Brad Allenby (School of Sustainable Engineering and the Built Environment)
- Chris Boone (School of Sustainability)
- George Brooks (Southwest Green/NxT Horizon Group)
- Natalie Fleming (Campus Student Sustainability Initiatives/Undergraduate)
- Grady Gammage, Jr. (Morrison Institute/Attorney)
- Jim Mapstead (Local First Arizona)
- Brian McCollow (GlobalResolve/Undergraduate)
- Greg Peterson (The Urban Farm)
- Aaron Redman (School of Sustainability Alumnus)
- Colin Tetrault (School of Sustainability Alumnus)

Date: Wed April 20 2011 :30 - 9:00 p.m. - Wrigley Hall, Room 481



## The Rio Salado and Rio Salado Oeste Projects

South Mountain Laveen Green Lecture at the Farm at South Mountain  
Presented by Karen Williams  
[Click here to listen to podcast](#)  
[Click here to see accompanying powerpoint.](#)



### The Subject

The nearly 300 million dollar Rio Salado project is transforming 13 miles of the desolate and dry Salt River bed into Phoenix's greatest park and wetland.

### The Speaker

Karen Williams has worked with the City of Phoenix for over 15 years. Currently, she is the Deputy Director, city of Phoenix Parks Development & Planning, Downtown Division. Rio Salado is an environmental restoration project of the Salt River that runs through the heart of Phoenix. Karen first started working on Rio Salado in 1996 when she was with the city's Neighborhood Services Department overseeing the public involvement program for Rio Salado.

# voices

## The Greatest Recyclers

A photo essay by Hassan Abdul Kareem

The streets are a lonely place when  
you have no money, no car ,no home,  
no family . Who do you turn to?  
Many find an addiction ! Who  
helps with effort and who  
helps with there mouth ?  
When do you decide to help .. after  
it effects you ?  
We call it Zakat in Islam ..  
But Charity is a well  
known name also ..  
Make sure you teach sharing  
and caring in this  
world of ME ME ME !!!!  
Being Homeless is NO Joke when  
the Temps reach  
125 degrees on the streets of Phoenix.







where do you sleep?

*Copyright Erotha Love Productions*



This is the Soup Kitchen as they called it in the Depression..  
They call it the same thing in 2011.



The homeless ARE the greatest recyclers.





# IMAGES

An almost magical backyard aquaponics garden.





# snapshot

## the tour of south mountain

The revitalization of Phoenix will depend on how well it makes use of its existing its social, environmental and economic assets. The idea is to make the most of what you got to create jobs and a higher quality of life. But first, you must know what assets you have to work with. This was the vision behind the South Mountain Village Planning Committee's 3-hour tour of the South Mountain Village (SMV) on March 29, 2011. The idea behind the tour was simple. "We must know the good and the bad if we are to create something great." said committee member and tour co-organizer Dr. George Brooks.

As displayed on the map ([next page](#)), SMV is vast. Because you can only see so much in 3 hours just two stops were chosen. Joined by City Councilmen Michael Johnson (District 8) and Michael Nowakowski (District 7) and a number of city dignitaries, the first stop was Southminster Presbyterian Church, the home of the nation's first Head Start Center back in the 1960's and currently the center of a flowering urban gardening program. The second stop was the soon to be renovated Cactus Pine Council Girl Scout Camp Sombrero at South Mountain.

The tour went "very well" said South Mountain Village Planning Committee Chairman George Young. "I had the opportunity to talk to Michael Johnson and Michael Nowakowski since then and they were very impressed. As a matter of fact Michael Nowakowski told me he learned things he did not know about the community."

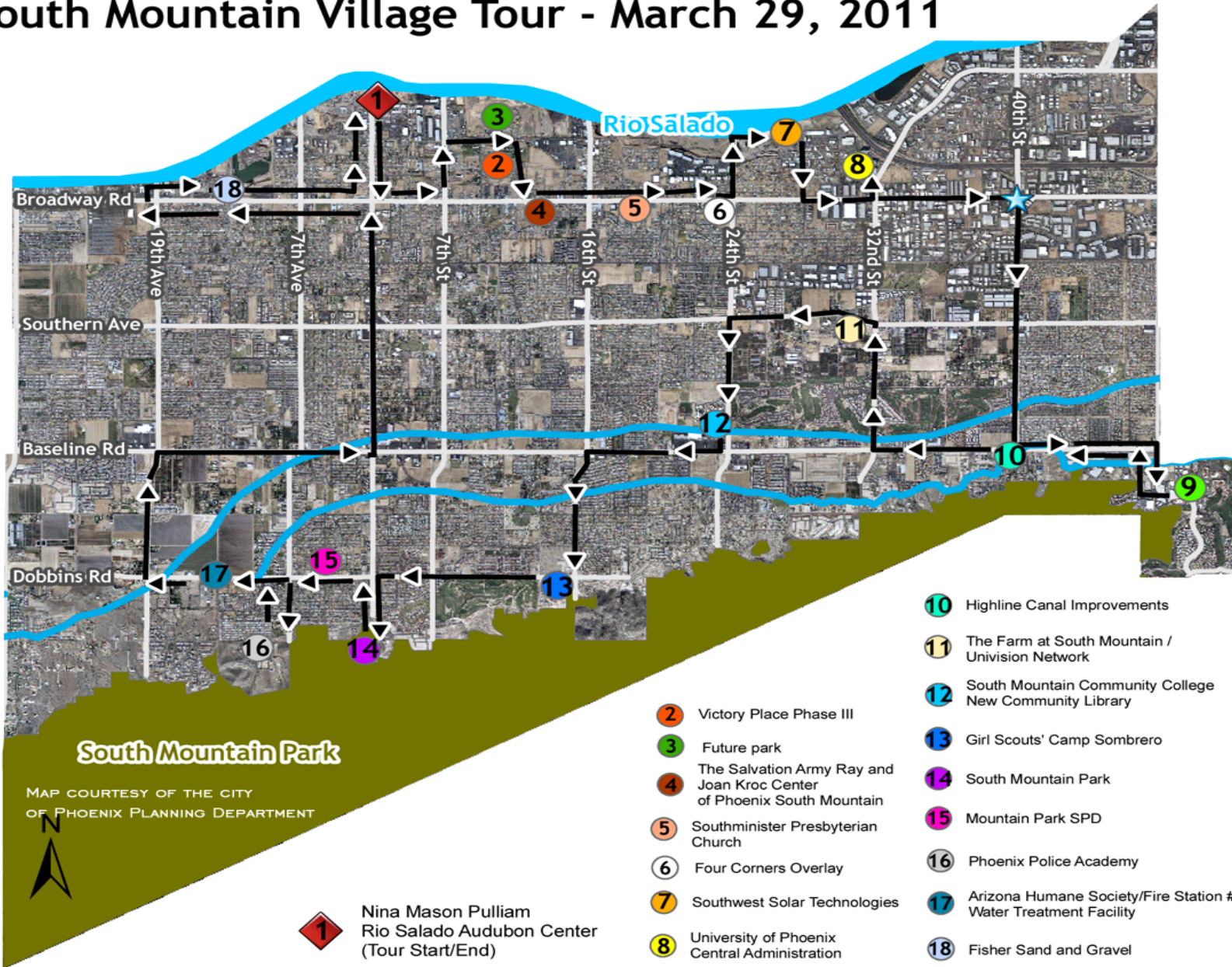
"I have had several people contact me to do another tour." Young continued. "We pulled it off the first time; I think we can do it again. Next time I'd like to focus on what we are doing in transportation. Maybe we look real close at the transportation corridor. Especially since we are having the (transportation) study done in the community. Maybe we can get some idea of what will or will not work. Look at the problems that have been pointed out to us, the bridge, the railroad track, the river and the freeway and then go from there."

Thanks to the office of Councilman Nowakowski the tour bus was donated by Greg Torrez, Veolia Transportation. The tour was organized by City of Phoenix Village Planner Joshua Bednarek.

Images top to bottom: Tour Bus, Southminster, Girl Scouts Pine Council



# South Mountain Village Tour - March 29, 2011



MAP COURTESY OF THE CITY OF PHOENIX PLANNING DEPARTMENT



The South Mountain Village Planning Committee and dignitaries including City Councilmen Michael Nowakowski and Michael Johnson Assistant Planning and Development Director Derek Horn and Deputy City Manager David Krietor on the tour of South Mountain.





# Taylor Made promotions

www.taylormadepromotions.com  
480.786.0773





MONIKA M. WOOLSEY, MS, RD

## Mesquite Tree's Uncommonly Flavored Beans Hold Promise for Diabetics

## Health

**D**id you know, the golden bean pods crunching under your feet may help your diabetes? That's right, the ubiquitous mesquite bean, valued for centuries as a health food, has gained scientific respect. Researchers reported in the May 2011 Journal of Ethnopharmacology that diabetics given mesquite flour reduced their fasting blood glucose, and improved glucose tolerance and improved insulin sensitivity. High in protein, gluten-free, and low-glycemic, mesquite beans were a staple of the Native Americans who first occupied the Southwest. It is thought that one reason diabetes has risen so sharply in Native tribes is that staples such as mesquite beans have been replaced with refined, processed foods.

Thanks to its popularity with raw foodists and gluten-free eaters, native "tree beans" are enjoying a resurgence. Valued for its exotic, smoky flavor, enthusiastic chefs are incorporating mesquite flour into everything from pancakes to crepes, cornbread, and tortillas.

If you'd like to put your mesquite beans to use, now is the time to gather them. They need a couple of months to dry before milling, so place them in a protected place where they can dehydrate. When they "snap" in half when bent, they are ready. Desert Harvesters is a local organization that will, for a fee, mill your mesquite beans into flour. Their website, [www.desertharvesters.org](http://www.desertharvesters.org), provides detailed instructions for milling preparation, as well as a schedule of locations, such as the Downtown Phoenix Public Market, where their milling machine will be available to local harvesters.

[Continued on the next page](#)



Monika M. Woolsey, MS, RD, is a registered dietitian and exercise physiologist specializing in stress related illness and hormone health. She is CEO of the inCYST Institute for Hormone Research, a nonprofit organization raising money to support research about natural solutions for hormone-related problems. She hosts the Blogtalk Radio Show "Healthy Planet, Healthy Hormones" and authors the popular blog, "inCYST on the Best". Monika holds a bachelor's degree in nutrition from Cornell University and a master's degree in Kinesiology from the University of Colorado. She can be contacted at [monika@afterthediet.com](mailto:monika@afterthediet.com)



An easier way to experiment is to buy the Arizona Mesquite Company's pre-milled flour at the Downtown Phoenix Public Market. Remember, this flour is gluten-free; if you're not familiar with gluten-free baking, try tested recipes first to ensure success with your project. Here is a dinner idea to get you started.

## MESQUITE ALMOND SHRIMP

- 1 1/2 pounds cleaned, tail-on large shrimp (15-20 per pound)
  - 1/4 cup tangerine juice plus 1 tablespoon grated zest, divided
  - 2 tablespoons Barbados rum, such as Mount Gay
  - 2 dashes bitters
  - Salt
  - Freshly ground black pepper
  - 1/2 teaspoon sugar
  - 1 1/2 cups chopped sliced almonds
  - 1 tablespoon plus 1 teaspoon mesquite flour
  - 1/4 teaspoon cayenne or habanero powder
  - 2 eggs
  - Canola or vegetable oil for frying
1. In a large bowl, toss shrimp with tangerine juice, rum, bitters, a pinch of salt, a couple grinds pepper, and sugar. Cover and refrigerate for 1 hour.
  2. In a medium bowl, toss almonds with the mesquite flour, chili powder,  $\frac{1}{2}$  tsp salt, and zest. Set aside. In a separate bowl, whisk eggs with 1 Tbsp. water.
  3. Remove shrimp from refrigerator and take them out of the marinade, one at a time, shaking off the excess. Holding the tail, dip the shrimp into the egg wash, then shake off excess and place in the breading. Press breading onto both sides of the shrimp (do not coat the tail), then place shrimp on a parchment-lined baking sheet. Repeat with the remaining shrimp.
  4. In a large sauté pan, add enough oil to fill the pan 1 inch from the bottom. Heat oil until a thermometer inserted reads 350 degrees. Gently place several shrimp in the oil, making sure they do not touch. Fry 1 to 2 minutes, until breading is golden brown. Flip shrimp over and cook about a minute, until shrimp is firm and breading is golden brown. Remove and drain on a paper-towel-lined baking sheet. Repeat with remaining shrimp.

George C, Lochner A, Huisamen B. The efficacy of *Prosopis glandulosa* as antidiabetic treatment in rat models of diabetes and insulin resistance. J Ethnopharmacol 2011 May 30. [Epub ahead of print]

<http://www.desertharvesters.org>







Candidates for mayor of Phoenix Arizona debate the role of Sustainability in the future of the city at the August 3, 2011 Phoenix Green Chamber Mayoral Forum.

Pictured L to Right:

- Wes Gullett
- Claude Mattox
- Peggy Neely
- Greg Stanton
- Jennifer Wright

Not pictured: Anna Brennan  
Thane Eichenauer (Write in)

feature

# Doing Well By Doing Good

C&H ASSOCIATES AND CDBG



C&H ASSOCIATES LLC  
ARCHITECTURE PLANNING AND DEVELOPMENT  
3625 N. 16TH ST.  
PHOENIX ARIZONA 85016  
602.265.0660

Patrick Hallman, Abraham James and Walden Alexander are architects on a mission. Professionally, C&H associates as they are called, is a consortium of architects who help people create a vision of what they would like to see in their habitable environment. According to Abraham James, "For us it speaks a lot about environmental quality, energy efficiency and improving our clients environment and life style within their budget. A big part of that is about listening and helping them to achieve their vision with the tools we have gained as architects. We are orchestrators in a lot of ways. We deal with the client, the builder and a budget that the client provides. Putting all those focuses together we create an end product that our client can use."

Very much engaged with their community, they recently saw an important opportunity. By working through the City's Community Development Block Grant process, they could provide architectural services to clients who without assistance could perhaps not afford it. According to Patrick "The thing that links us all together and that the City found very attractive about us with this Community Development Block Grant, is that all three of us have worked with the City and the community in a multitude of ways. Non-profits have used our skills to help them with their missions. We are constantly meeting with various types of clients of low to moderate income and this is very much what the CDBG grant was specific in pursuing. All three of us have the knowledge of dealing with someone who is trying to start a business or put an addition to his or her house and don't know how to do it or how to maneuver the challenges in development in city building departments in Maricopa County or the state of Arizona."

[CONTINUED ON THE NEXT PAGE](#)



## LEED

With the advent of the new green building regulations in Phoenix, energy and water conservation are top issues these days. Patrick is a LEED (Leadership in Energy and Environmental Design) Accredited Professional allowing C&H to apply the principles of LEED to all of their projects. However, many clients can't afford the paperwork to push LEED forward in their agenda. So they apply the best practices but don't necessarily go all the way to the certifications.

"Of course we do deal with clients who want sustainable design" said Abraham. "Long before the city jumped on Sustainability and early on in our education, it was very much drummed into our heads that this is what we should do if you are going to design buildings."

## COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

"The idea came to us to compete for the CDBG after I saw the RFP and specifications and thought to myself that Patrick, Walden and I could do this and for the most part already are." Said Abraham. "What the RFP presented was an opportunity to work with low to moderate-income clients within the city of Phoenix to do architectural services. Wow, this is what we do. We have done this before, who better to do this than us. This is our clientele."

It seems the city agreed. Despite the fact that there were 8 other firms that were pursuing this particular project C&H won and are the only architectural firm in the program.

## WHAT DOES A CLIENT LOOK LIKE?

At the moment they are working with an adult home, an assistant living facility that provides a good metaphor on

what a CDBG client would look like, Vista South. Owned by Don and Salida Thomas at 1010 East Southern, they want to expand their business and by doing so, they would be able to hire additional people. With the goal of stimulating the economy, this is one of the requirements of the CDBG, that businesses helped must be able to hire one or two additional employees within their company.

"The owners have been working very hard to create this assistant living home. It is predominantly African American clientele and a home that is provided for folks when they have come to a point in their lives where they need some type of help and services. I have known Don and Salida for so long and I know the type of people that they are and believed that the City of Phoenix would see them as a prime example of what the CDBG is all about." Said Abraham. "And they did."



**City of Phoenix**

**Community Development Block Grant Program**

## WHAT ARE THE STEPS?

To take advantage of the service that C&H offers, the first stage would be to contact them as a small business person. The program is not set up to help non-profits or churches. It is essentially a mom and pop assistance program to help small businesses expand and help the economy.

The preference is for businesses located in a HUD (U.S. Department of Housing and Urban Development) red zone and there are a number of those around the city. However, there are also opportunities for those who are not in those areas. They just have to provide more background material to prove they have hired people. The program is flexible and is looking for folks who really need the help.

When you come to C&H they need some sort of verification that you have an established business. That is easy to prove. C&H will then do the background check of your zip code to see if you are in a HUD red zone. They will provide you with the CDBG application. Once it is filled out they will submit it to the city of Phoenix Neighborhood Service department and they give ultimate approval.

Once approved, C&H will then develop a proposal for you for the other consultants that will be involved in the project. This program provides the architectural services. But the other services such as engineering and construction are to be paid by the client.

The program is set up for someone who is moving forward but is struggling with the 5% to 10% that the architectural fees can amount to in an overall project. In a small job, sometime the architectural fees may be a higher percentage. That could be \$10,000 to \$20,000 for a \$200,000 project.

## HOW MANY SLOTS ARE AVAILABLE?

According to Abraham, "We expect to help 3 to 4 firms with the funds we have been provided. If we get smaller jobs perhaps we can help as many as 10. Right now we have 3 in the pipeline. One in Sunnyslope, one in South Phoenix and one on Van Buren. It's a diverse group of clients. Vista is one. We also have an auto body shop and an electrician's office."

Once a client is approved and a contact developed, C&H reviews a host of design services to help assess their needs and give you a clear vision of what those needs are. This includes an understanding of what the client can afford and the options them to you to cut down on your energy bills. "We have 18 months from this past January 2011 to execute this grant. With smaller projects it can take 2 to 3 months to get all the permits and then another 3 to 4 months to build. So people need to speak with us as soon as they can." " Said Patrick.

# Managing the Madness


## HARNESSING THE POWER OF SIDE-EFFECTS


My sister once told me you've got to "manage your madness." What she meant was that you have got to take control of all the craziness around you, often side effects of your own actions that can get in your way. She was correct and when you do, amazing things can happen.

Like ripples in a pond, side effects are powerful forces that can combine and synergize to create great benefit or do great harm. Sustainable thinking lets us see what those side effects are, capture the benefits from the positive ones and minimize the impact of the negative ones. Another name for side effects is "externalities."

According to Webster's online dictionary, externalities are the side effects or consequences of an activity that affects other parties without being reflected in the cost of the goods or services involved. Second hand smoke is a good example of a negative externality. It does not cost the smoker anything but directly affects those around him or her.

Conversely, positive externalities can create significant benefits. For example, back in 2006 United Parcel Services (UPS) set up new daily delivery routes to favor right hand turns where possible. This simple change had a significant effect. The intended target of the action was to reduce running time and fuel consumption. The action however, also reduced wear and tear on the vehicles, which reduced the need for maintenance. It also reduced labor cost and improved safety and decreased vehicle and medical insurance costs by reducing time on the road and the number of accidents resulting from the increased risk associated with making left hand turns. Negative externalities including risk to public health, CO<sub>2</sub> production and used tire disposal were also decreased. The concept reportedly saves UPS \$600 million annually.

Professor Yann Moulrier-Boutang stated that like the tip of an iceberg, "Externalities are the visible manifestation of untapped potential and herald rich seams of value." We see this when often the additive or synergistic benefits gained from the externalities can be greater than the intended target of the original action. The effect is further enhanced when the once accidental benefits are now created on-purpose and this creating a whole new set of externalities to be explored and harnessed. As reflected by the APS and Powerhome articles however, there is no one-way of doing it. In later editions we will explore the process of how we see and capture the benefits from positive side effects. It is called the "Cycle of Sustainability." In the mean time we encourage you to send in your stories of how you have made side effects work for you. 




### Energy Conservation Analysis Preservation System

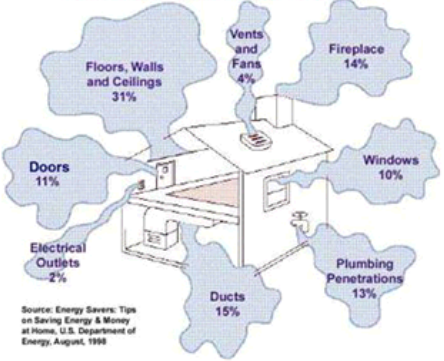
#### HOME ENERGY AUDIT

**\$99**

We conduct a comprehensive home assessment to determine your home's performance! Audit includes SRP, APS Rebate Program with a \$1500 tax credit for home efficiency improvements!






#### Where Air Escapes From a House



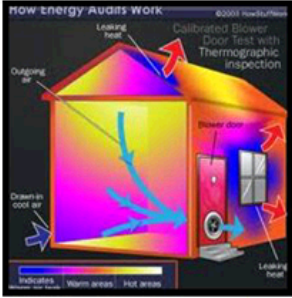
Source: Energy Savers: Tips on Saving Energy & Money at Home, U.S. Department of Energy, August, 1998

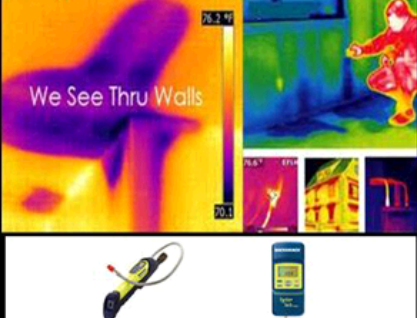
### Improve your home Today!

- [www.e-Caps.biz](http://www.e-Caps.biz)
- Call today to start saving on your bills.
- Ray & CJ 877.278.1108
- Licensed Bonded and Insured!
- Call or E-Mail: [raywms@e-caps.biz](mailto:raywms@e-caps.biz)
- [cjgracia@e-caps.biz](mailto:cjgracia@e-caps.biz)

#### LUXURY







# IMAGES

The new solar powered train station in downtown Phoenix Az.



# thought leadership

At Arizona Public Service, sustainability builds shareholder value

by George B. Brooks, Jr.

A few years back it seemed to me that something was missing. The world was filled with the promise of going green, natural resource conservation, reducing of externalities and the evils of global warming. However, I believed that we could do more with sustainability to achieve goals. Then I happened to sit through a presentation at the Arizona Chamber of Commerce by Ed Fox Vice President and Sustainability officer for Arizona Public Service on how he had applied this concept to his company. Recently Mr. Fox and I sat down to go over what he said then. I think you will find it enlightening.

## WHO IS EDWARD Z. FOX?

You know I have been working on that for 58 years. I'm just a guy who has been blessed to have a family that cared about education and wanted to support me and my three older brothers in our careers. My undergrad degree is in Chinese studies. However, somewhere in my senior year I got interested in environmental stuff. I studied at the Chinese university in Singapore for a while. I came back and decided that was not what I wanted to do with my life. So I went to law school to study environmental law. I have to say Ed Fox is the product of the fact that I got abroad educational background. It is not specialized in any one area. History, Asian studies and Chinese studies were all included along with lots of philosophical readings that help me combine my upbringing in an orthodox Jewish home with a worldview. I think that this broad education really was formative to who I am.



EDWARD Z. FOX  
VICE PRESIDENT AND CHIEF SUSTAINABILITY  
OFFICER  
ARIZONA PUBLIC SERVICE COMPANY  
PHOENIX ARIZONA  
[APS.COM](http://APS.COM)

[CONTINUED ON THE NEXT PAGE](#)



# CREATING VALUE

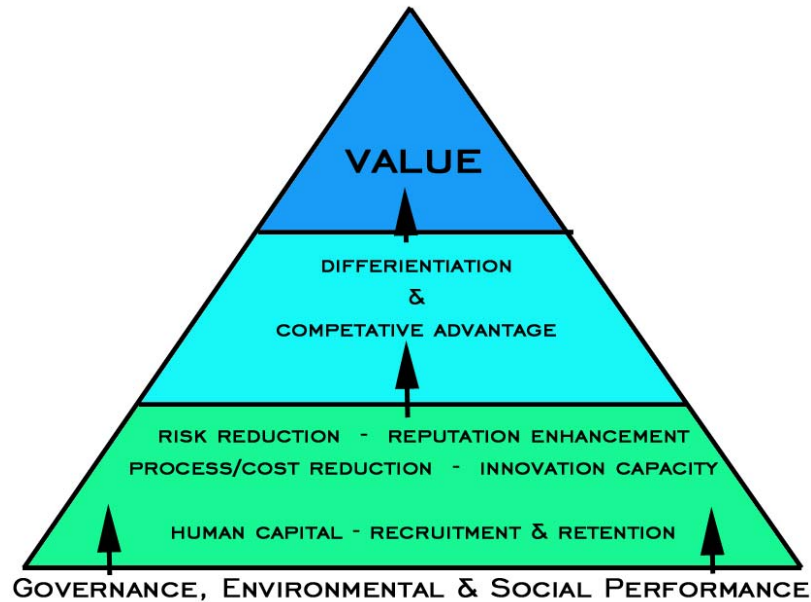


Figure 1. The Triangle of compliance, differentiation and shareholder value

“THE MINUTE YOU START THINKING ABOUT YOUR BUSINESS DIFFERENTLY THEN YOU START REALIZING YOU CAN DIFFERENTIATE YOURSELF FROM YOUR COMPETITORS. THE MINUTE YOU DIFFERENTIATE YOURSELF FROM YOUR COMPETITORS YOU HAVE CREATED VALUE.”

I prosecuted environmental crimes for a couple of years in West Virginia. Then I came out here to Arizona where they needed environmental lawyers and one thing led to another. I met then Governor Fife Symington and became the only Democrat in his administration because we agreed that environmental issues were important. He was an excellent person to work with. We agreed on what needed to be done and he let me go do it. That was a real lesson in leadership to me.

When I left as the head of the Az. Department of Environmental quality, I got a call from then CEO of APS Mark DeMichele who said "We'd really like you to come over here and bring the 'stuff' that you are doing in thinking about the future to our company."

## WHAT IS YOUR VISION OF SUSTAINABLE VALUE?

The Triangle of Compliance ([see figure 1](#)) is based on the concept that there are certain things that you have to do to be successful. There is a price of admission to be in business. So there are things you have to comply with within the law. You have to provide a good work environment and certain benefits that are part of productivity in supporting your employees. So compliance is the base of the pyramid. There are things you have to do. If you are not prepared to do them, then there is nothing else. This is because you will always be struggling with regulations, law enforcement and permits. So you must take these things as givens and must have the structures and systems in place to do them. This however, is not where you should be focusing your time. This is in the 80% of what you need to do. It is not the future it is the present. Above that you can start thinking about things like, "I can either pay my energy bill or spend some time analyzing how I use energy and how to reduce it." Just paying your bill is compliance and a lot of people for many years did just that. They were busy about selling the next product as opposed to making themselves more efficient.

The next level on the pyramid and there are only three levels, are those things beyond compliance. The place where you consider, "what are those things I can do to make my operation more efficient?" Not just in terms of quality management systems such as reduced process time, but also in terms of "can I do things that allow me to be more efficient and cleaner?" For example, are there better feed-stocks for my products? Say I make a widget and I must buy an expensive and regulated chemical to make this widget. I must also train my employees to properly handle this chemical because it has some dangerous components. Finally at the end there is a waste product so I have an end of the pipeline disposal cost. Many companies just buy the chemical because that is what they use to do and what they have always done. The issue is getting above the compliance. Now if you can think forward and consider if there is something else that I can use for my feed-stock that is not as toxic, that is not as dangerous and that will still do the job. If I spend some time analyzing, I can find that cleaner smarter feedstock. Though it may cost less or even more, employee safety is improved and I don't have a toxic waste product so I am not dealing with the end of the pipeline problems.

[CONTINUED ON THE NEXT PAGE](#)

This requires you to get beyond the compliance piece so you are able to think forward to the question of what is it that I want to do? I want to make a cost effective product that my customers want. But if I can do it cleaner, cheaper, smarter, faster aren't I better off? Is not the planet better off? Aren't my workers better off? Is not my community better off? And the answer to all of those questions is yes! The minute you start thinking about your business differently then you start realizing you can differentiate yourself from your competitors. The minute you differentiate yourself from your competitors you have created value. That value either translates to larger market segment or higher price. Then you have created shareholder value.

So this takes you back to a really simple question, "what business am I in?" Am I in the business just a making a widget? Or I am in the business of making the best most profitable, safest and most reliable widget I can? That requires continued thinking because the world changes around us. If we keep doing what we have always done then we will get what we have always gotten. We have a need to change with the world so there is a lot of opportunity to change how we process issues.

## HOW DID THAT VISION BECOME THE STRATEGIC FRAMEWORK?

When I came to APS, the triangle of compliance, differentiation and shareholder value was something I talked about a lot. As we talked about how to apply that model to APS, we had probably about 6 or 7 months of discussion internally. So, how does this fit within the company's business plan? The one thing I am a broken record on is that sustainability is not something that's different from the business. It is not an overlay. It is the business. We are talking about efficiency measures for the most part, including energy, water and chemical. So I articulated this vision though many suggested that the company needed a separate sustainability metric or measure. My response was that it is all one thing. What is it that we want to do for Arizona? Everybody agreed that our vision was to create a sustainable energy environment for our customers. Something that improves their lives, improves the environment in Arizona and provides economic development opportunities. My response was "fine, this is the only place we need to say the word sustainability." If we implement our business model with the right focus, we will take care of the environment. We will take care of our employees. We will take care of the community. Because the environment, employees and the community are critical to creating a sustainable future, they need to be part of the overall metric. We took this and created a new single framework for our business model. So that people may stay aligned with this vision, the framework that is manifested by this graphic series of concentric circles ([figure 2](#)) hangs in every conference room in the company.

## Strategic Framework



Figure 2

“SUSTAINABILITY IS NOT SOMETHING THAT'S DIFFERENT FROM THE BUSINESS. IT IS NOT AN OVERLAY. IT IS THE BUSINESS. “

CONTINUED ON THE NEXT PAGE



**It is what you say**



**and how you say it.**

**Fleur-de-Lis Media Consulting, LLC**

**602.349.5474**

**info@fleur-de-lis-media.com**

**www.fleur-de-lis-media.com**

**Concise communication strategies for politicians and nonprofits.**

So we took people, place and profit and forged them into this model. The model does a couple of things. It articulates that a sustainable future is our vision. It also articulates that we are a values driven company. The outside circle reflects our values of accountability, respect, safety and integrity. The reason why they are on the outside of the circle is because we want our employees to understand that if you are doing something and you can't do it safely, if you can't do it with integrity, if you are not willing to be accountable for it, then don't do it! Values are not situational. You get a choice about a lot of things but not that. If you can ignore your values in a situation, then they are probably not real.

We tell our people if you can't be accountable for what you do, you need to stop and ask somebody about why you are doing it. If you can't do it safely with respect for other people, why are you doing it? That decision to be a values driven company is still somewhat unique in the business world. But within those values, there are millions of different options you can pick. What guides your decision making within those values? For every strategic and tactical decision you make, you need to analyze it through the following lenses that include considerations of profitability, what we call shareholder

value. Is it a good economic and business decision? What is its environmental impact? What are the impacts on the community? This is our place when you think people, place and profit. Then for us, there are two more things. What are the employee impacts? Does it lead to operational excellence? So for the 3Ps, Profit is our shareholder value, Place is the environmental stewardship and People is community. So we have put the triple bottom line into our concentric circles. Which means that when decisions are made, they must be analyzed within these considerations. It does not mean we will always make the right decision. It does not mean we will always make the most sustainable decision. What it means is we will never make a decision without consideration of the impacts with hopefully leads to better decision-making.

At the end of the day, I don't think the three legs of the stool are always even nor can they be. For example if you are in a central African village where no one is over the age of 40 because of deaths from HIV, you are not thinking about sustainability, you are thinking about health care. So there sustainability looks different because basic needs are not being met. If you are hungry you are hungry, if you are sick you are sick. Here in America we also have poor and hungry, situations that we need to correct. But overall we are a nation of abundance so we can think broadly and holistically and our failure to do so is a true failure.

Our framework is designed to be forward looking and to force us to make better decisions but not to dictate those decisions. The world is changing too much to dictate decisions for the future.

## WHAT HAVE BEEN SOME OF THE RESULTS FROM APS IMPLEMENTING THIS POLICY?

I have to say the implementation of this framework has allowed us to move forward in rapidly fulfilling some of the new policies that came out of the Arizona Corporation Commission on renewable energy efficiency. Now because of this framework people sit down in a room and ask what are the economic benefits, what are the environmental benefits, what are the social benefits? So everybody is now analyzing issues through this lens, which allow us to reach a decision much faster on if this is a good thing for the future and our sustainable vision for the company. It has facilitated better decision-making.

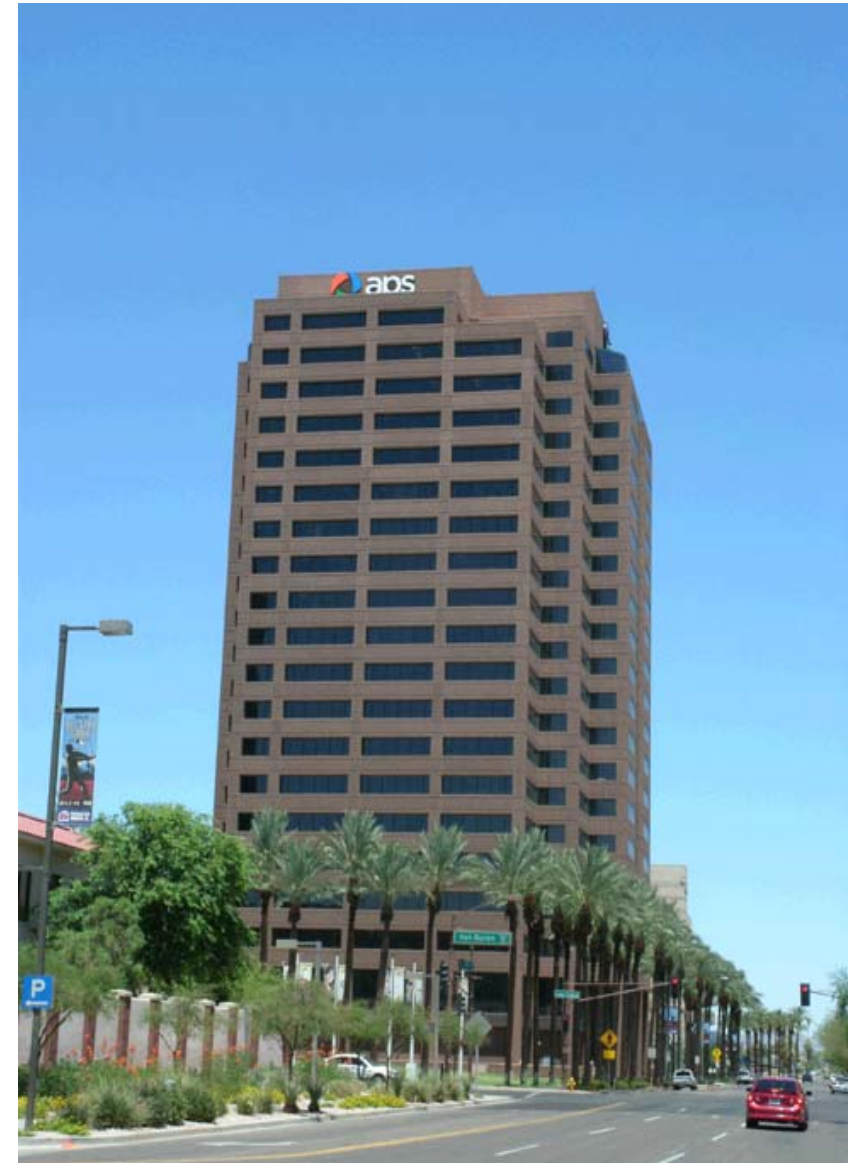
**CONTINUED ON THE NEXT PAGE**

## AS A SMALL BUSINESS PERSON, HOW DO I IMPLEMENT THESE CONCEPTS?

In some cases it is easier for large businesses to move down the sustainability road because they have the resources to do it. Not everybody can hire a sustainability manager charged with thinking through these issues and articulating them to the other officers. Small businesses are charged with compliance, the bottom end of the pyramid because often they work on very short profit margins. The challenge for small business as I see it is how do they know what to do? Who can help them think through these issues? Who can bring them proposed solutions? These businesses often don't have time particularly sole practitioners. I think it is a real challenge. There are some organizations that have been formed to help do this such as the Arizona Businesses for Advancing Sustainability which is a group that is made up of a number of large companies who are all committed to mentoring and working with small businesses to help them think through this stuff. Intel, APS, Hinkle-Dial, Sundt. These are large companies where my counterparts and I are committed to try to reach out to small businesses. To groups like the Phoenix Green Chamber who have formed to have a larger dialog, and through that dialog to help broaden peoples horizons about what is possible as opposed to just complying.

I think the small business piece may be the hardest particularly for the small business stuck in that compliance mode because they are busy paying the bills. When you are busy paying the bills, it is hard to think about anything else. It's like being hungry. When you are really hungry, it is hard to think about anything else beyond being hungry. For those of us who have the capacity, we have the obligation to reach out and help them to think differently. You remember the old 1960" adage "think globally act locally?" It is hard to imagine we as individuals can address the global challenges we face like climate change and soon 9 billion people in the world and the consumption that will cause. But the truth is that is if we can act individually and help others individually act collectively it makes a big difference. And you have to hope that is the case. For those of us who work on the local, state and regional basis you hope to do that. So we make ourselves better. We make ourselves more sustainable. We make our selves more profitable and more environmentally sensitive and collectively we go out and save the world.

I believe in technology, but I don't always believe that technology is the answer to the problems that we have. But when I think about the sustainable world, the ability to do more with less. I think that technology is going to have to play a very significant role. For example today we think about all of the precious metals we put into our computers and that everyone must have a CPU under their desk and how much "stuff" is in that. But the future of the computer is in your cell phone and how much less "stuff" is in that phone than that big tower. The future that I have seen is that when you are at your desk, you plug your phone into a dock and it is everything. So if we are migrating toward that model, there are whole product and resource efficiencies associated with that future. And the same is going to be true in a lot of areas including energy. New technologies are allowing us to change our vision of the future and that vision is cleaner, faster and smarter. So I think that we are going to see a lot more regional development, distributed energy generation on households and in communities.



[CONTINUED ON THE NEXT PAGE](#)



# WHO ARE THE UNSUNG HEROES?

My parents. Their emphasis on a broad based education has allowed me to be who I am. Not just being a specialist in "something" allows me to achieve insights on an issue from a variety of directions. Not because I have some special vision, but because I have a wide range of experiences. This is hugely important. I wish we would get back to this kind of broader education for our undergraduates and particularly for our high school kids.

I have been honored to work for a number of business leaders who cared about the future. Because they cared about the future they were willing to listen. So despite the criticism, Fife Symington was a smart critical thinking forward-looking guy. Mark DeMichele, Bill Post and Don Brant, the three CEOs that I have been lucky to work for here at APS understand that we have to be more than just a moneymaker.

Milton Friedman said "the only social responsibility a business has is to make money for its owners." Yes, we have to make money for our investors and our owners, but there are a lot of ways to make money and part of making money requires you to reinvest.

So what do you reinvest in? The answer is your communities and your customers who buy your product. You reinvest in your environmental performance because that makes you more efficient which makes you more competitive in the future. So you take the Milton Friedman idea away from just measures of dollars, and measure it in more than just quarter-to-quarter profitability. Then look at what you are doing as if you want to be in business not just next quarter, but next year, five years from now and ten years from now. You start thinking about where do I invest to insure this future? This starts you really thinking about what systems do I need, what thinking must I have. This requires more than just your chief sustainability officer. It requires your chief financial officer and your CEO to say yes, we are concerned about this long-term success. So how you take these issues in sustainability and make them part of our business so that the decisions we are making are also investing in those needs for the future. *NxZ*







These cold boxes in a local food store have sectional motion sensors that only turn on the LED lighting when a customer is near the sensors proximity.

IMAGES



# POWERHOME

PRIMARY PRODUCTION: TAKE CHARGE OF YOUR HOUSE TO SAVE YOUR HOME!

By Dr. George B. Brooks, Jr.

## SOMETHING SPECIAL IS HAPPENING!

BY SAVING ENERGY AND BACKYARD FARMING, SOME HOMES IN PHOENIX ARE BEGINNING TO PRODUCE MORE MONEY THAN THEIR UTILITIES COST. SO FAR A HAPPY COINCIDENCE, WHY NOT DO IT ON PURPOSE?

**M**y wife has returned to her roots. From a 4-year-old child working the cotton fields in Mississippi to transforming our home to an agricultural wonder, our world is changing. Encourage by our friend Abraham James ([See article on page 22](#)), Angela began her urban farming journey almost four years ago with a 10 by 10 foot plot in the back yard of our South Mountain Village home. I quite frankly was not paying attention. I was far too focused on seeing that as many as possible understood the benefits of going green and Triple Bottom Line sustainability. We had already changed out our light bulbs to CFLs, tried to insulate the water heaters, added a smart meter and changed all the showers to low flow and switched to a solar clothes dryer (clothes line). Anyway my training and background is working with farms of thousands of acres so her little plot was way under my radar. My mistake.

[Continued on the next page](#)



Then I started to notice the sinks full of vegetables she was producing on a weekly basis, added up the numbers and also noted the resulting positive change in my health. That was when I realized that she was on to something that worked in synergy with what I was doing but with far more potential. Eyes now open, I began to look around and saw that like the community garden efforts along Broadway road at **Tanner Gardens** and **Southminster Presbyterian Church** her efforts were inspiring people up and down our street to do the same.

The more we learned, the better it got. As with the community gardens this was something that everyone across race, creed and color understood, could get with and share the benefits. Most importantly the numbers added up. If you want sustainability to be sustainable make it useful. Angela's efforts were

already yielding nearly \$1,000 in product annually if we had purchased it from the local food store. With about 50% operating costs, we would have cleared about \$500. Add that to the amount of energy saved by going green and that approximately \$1000 is about one third of our annual power bill. The cool thing was we had a guaranteed market, ourselves.

Since then Angela is changing our landscaping to edible forms and a few conversations with Greg Peterson at the **Urban Farm** and the **Rare Fruit Growers** has convinced us to add fruit trees in the front as a hedge and as additional shading along the house to reduce heat loading. Our pallet of plants includes watermelon, greens, lettuce, peas, beans, loofah, carrots, onions, lemon cucumbers, traditional cucumbers, pomegranates, bananas (yes really, bananas), black berries, cantaloupe, grapefruit, okra, squash, numerous herbs and in our floating farm aquaponics unit, tilapia and giant freshwater prawns. Our goal is for our home to produce more resources than it uses by the end of 2012.

## POWERHOME

We are not alone. Across the valley, people are putting their homes to work and actually doing this. By acting to both reduce energy and water use while producing food crops through backyard gardening/farming and edible landscaping, homes are beginning to produce more resources than they consume. We call these Powerhomes.

Defined by Webster, a Powerhouse is a person or thing of great energy, strength, or power. Power is the ability to do work. Work is an Activity involving mental or physical effort done in order to achieve a purpose or result. So a powerhome is a place of great energy working to actively create a better quality of life for the owner.

Before the recession people had jobs, credit was available to start a business and buy or to refinance a home. Many even had enough equity in their homes to put their child through college. Today, things are dramatically different. With the economy bouncing along the bottom the salad days of easy credit, low unemployment and inexpensive food may be gone forever.

For many today, maintaining and keeping our homes is a primary concern. In that problem though is the solution. To survive and prosper in today's new economy people are doing things differently. As did our grandparents and great grandparents during the Great Recession, by focusing on making the most of what they have they are building the new future they want. This means no longer seeing their homes as a passive investment but instead as active ones. Energy saving, water conservation and backyard farming work perfectly into these new/old ideals.

[Continued on the next page](#)



WHEN YOU COMBINE  
THE CONCEPTS OF  
WORKING TO REDUCE  
ENERGY USE WHILE  
CONVERTING SUNLIGHT  
AND OTHER RESOURCES  
TO BENEFICIAL USE, YOU  
GET A POWERHOME THAT  
CAN POTENTIALLY  
CREATE MORE BENEFITS  
THAN IT USES ALLOWING  
IT TO PAY ITS OWN  
OPERATIONS AND  
MAINTENANCE COSTS  
WITH MONEY TO SPARE  
TO WORK ON THE  
MORTGAGE.

## PRIMARY PRODUCTION:

Plants are expert in making the most of what they got. Because most can't move, they expertly use the renewable resources around them including sunlight, water, air and minerals, to manufacture the products they need to survive and a great deal extra that they invest in growth and reproduction. This process is called primary production and it is the source of energy for 99% of life on Earth including you. A Powerhome does much the same.

We hear a lot about how much money can be saved by going green. These are called Triple Bottom Line savings where you make decisions and take actions that create benefits by reducing the amount of social, economic and environmental damage you do. For example a CFL light bulb uses much less electricity. Buy doing so less damage is done to the environment by reducing the amount of coal needed to create power thus reducing the amount of pollution that process creates. You are economically and socially benefitted by clean air and the money you would have normally spent on lighting is now available for other needs or desires. There are thousands of iterations of this scenario including energy efficient cars, low VOC (Volatile Organic Compound) house paints and just turning off the lights in your home when you are done with them.

As great as all of this is, you can't save yourself into prosperity. After a while, you run out of places to cut. However, there is another option. The top line of a profit and loss statement is where you talk about your revenues, which is how much money you bring in. The more energy and wisdom you put in, the bigger the paycheck. With that in mind, like a growing plant, Triple Top Line best practices capture unused renewable natural resources and convert them to value added products with demonstrable social, environmental and economic benefits. A Powerhome combines these concepts by working to reduce energy and water consumption, while converting sunlight and other resources to beneficial use potentially allowing it to pay its own operations and maintenance costs with the possibility of money to spare to work on the mortgage.

[Continued on the next page](#)



## EVERYONE MUST EAT!

To make the most of the sunlight, water, air and land you have, there are many possibilities. Solar Panels are of course the best known and sexiest. They are also the most costly and regulated option at the moment. Others include swimming pool covers to capture heat and prevent evaporation, solar water heaters, even redirecting the surprising amount of water captured by your Air Conditioning unit's dehumidifier to irrigate your landscaping. All of these are good. But the option that is closest to the human heart and addresses the most immediate needs across all economic strata today is food.

Everyone must eat. But factors including increasing cost of energy, biofuel production, climate change, oil spills and just plain more and more people in the world competing for food and resources are forcing the prices of everything including food, up. According to the Arizona Republic and East Valley Tribune, the Arizona Farm Bureau confirms that "higher fuel and commodity prices helped push the price of a basket of 16 food staples up 5 percent in Arizona during the first three months of the year." Logically if this rate of increase continues we could see a 10% to 12% increase in food cost this year (2011).

The questions of food safety and nutritional value are also heard more and more. In this down economy these issues are increasingly impacting the poor and middle classes. Because of this almost instinctively, more and more people are now turning to urban farming to mitigate food costs, improve their nutrition, save energy and make money. Consider Jim and Norma Munoz as an example.

Long time South Mountain community leaders and entrepreneurs, Jim and Norma live in a warm comfortable home on South Central Avenue. Their front and back yards however are wonderlands of peppers, squashes, tomatoes fruit trees and watermelons. Jim claims "These Black Night peppers will untie your shoes." Though still a hobby, they indicate that if they were to sell what they grow, they produce nearly \$6,000 in produce annually. The Munoz's believe South Phoenix is the perfect place for Urban Farming. "Many folks here come from farming backgrounds" said Jim. "The area is zoned for it, many still have SRP flood irrigation rights and even modest homes tend to have large lots."

Our friend architect Abraham James agrees. Like the Munoz's he is a part time Urban Farmer. He however has taken it to the next level. With a pallet that includes carrots, lemons, garlic, lemon grass, grapes and much more, every open space, nook and or cranny in Abraham's central Phoenix yard is growing something. At last count he estimates if he wished, he could be earning between \$8,000 and \$20,000 annually from his yard. "Enough to pay the taxes" he says.



JIM AND NORMA MUNOZ



[Continued on the next page](#)



THE RARE  
FRUIT GROWERS  
LEAD THE FIRST  
POWERHOME  
TOUR AT MARI-  
COPA COUNTY  
COOPERATIVE  
EXTENSION JULY 9,  
2011



## AN ECONOMIC BOOM

The local foods movement and farmer's markets are what have truly made Powerhomes possible. This is where the individual can sell his or her product and they are springing up everywhere from Scottsdale to South Phoenix. These markets make it possible for the gardener to actually begin to see a monetary return for their families. Restaurants and chefs have caught on to this and are now searching the markets for unusual and high quality product.

As the idea catches on, Powerhomes will be a boom to small business whose expertise is needed to help owners put things in place. For example, according to Larry Clifton owner of Home Grown Hydroponics, interest in home hydroponics (growing plants without soil) has increased so much that he has had to open a new larger store in Tempe. Fry's Supermarkets and the Home Depot are also catering to this new market. Other businesses that will also benefit include:


|                         |                |
|-------------------------|----------------|
| Architects              | Bankers        |
| Financial Consultants   |                |
| Lighting                | Weatherization |
| Urban Farming/Gardening |                |

|                  |                 |
|------------------|-----------------|
| Home economics   | Interior design |
| Landscaping      | Plumbers        |
| Electricians     | Business        |
| Roofing          | Solar Power     |
| Solar Heating    | Construction    |
| Pool maintenance | Painters        |
| Farmers Markets, | Transportation  |
| Real Estate      | Etc.            |

## SEEING IS BELIEVING

There is nothing new about Urban Farming and there is nothing new about going green to save energy and improve health. What is new is looking at these concepts as a complete and synergistic whole focused on making life better. Up until now, these convergences were happy coincidences. However, what if we were to encourage Valley dwellers to do this on purpose? To begin this process, a series of tours have been initiated to let people see how this is really being done and that they can do it too. Just imagine the benefit to the economy, the ecology and the social well being of the nation if homes were paying for themselves, reducing foreclosure rates, reducing poverty, improving family health, stabilizing neighborhoods, reducing energy and water use and contributing billions of dollars back to the economy? What a concept.

The first Powerhome tour was Saturday July 9th, 2011 at the University of Arizona Maricopa County Cooperative Extension office at 4341 East Broadway Road. Hosted by Arizona Rare Fruit Growers they shared their rare and subtropical demonstration garden, where they annually harvest mangos, longan, guava, white sapote, banana, and other rare fruits that can grow here with a little extra attention and care. They also led a tour of their propagation and growing area, where they grow thousands of rare plants from successful specimens in the Phoenix area and around the world including certain strains of guava, low chill blackberries, and over 70 different types of pomegranates!

A full schedule of Powerhome tours will be available shortly. 





# IMAGES



green concepts to remember

ANGELA BROOKS TEACHES A CLASS IN HOW APPLY GREEN BEST PRACTICES TO BENEFIT THE WELL BEING OF FOSTER CHILDREN.





Snapshot

## The Pomegranate

by patrick hallman



POMEGRANATES HAVE BEEN GROWING IN ARIZONA FOR THE PAST THREE HUNDRED YEARS. WITH OVER 60 VARIETIES NOW AVAILABLE, THEY PROVIDE AN EXCELLENT SOURCE OF EDIBLE FRUIT AND ENERGY SAVING SHADE

**A**s a member of the Arizona Rare Fruit Growers, a 501 3(C) non profit organization, finding the opportunity to educate the public about the cultivation of pomegranates is never hard. With attractive flowers, heat tolerance, fresh fruit and health benefits, there are many reasons people are choosing this heirloom fruit for the yards of Arizona. Though common in our grand parent's yard, the pomegranate became unpopular and forgotten for many decades. Today however, the pomegranate has once again found favor as a dooryard fruit. The enthusiasm for pomegranates in Arizona continues to build momentum and is a logical choice for the sustainable home of today.



Patrick Hallman, A Registered Architect and Principle of C&H Associates LLC, practices and promotes the development of environments which help foster sustainable living. As a Chapter Board member and Program Chair of the Arizona Rare Fruit Growers, he promotes the responsible cultivation of fruit trees and personally grows 36 different varieties of Pomegranates at his residence. He may be reached at P\_Hallman05@hotmail.com .

### VARIETIES OF POMEGRANATE IN ARIZONA

Pomegranates have been growing in Arizona for the past three hundred years. Some of these trees were introduced through Mexico via Spain, or came later as settlers arrived to mine, ranch, or farm. This hardy old stock still exists, even though only two common varieties of pomegranates are stocked at local nurseries. The most popular is the Wonderful, which has large red skinned fruit and dark pink seeds. The green skinned Sweet Variety, with its non-staining, soft white seeds and refreshing sweet taste, ripens as early as August. Both varieties are recommended and have been grown here for many years.

In the last five years, the Arizona Rare Fruit Growers have introduced over 60 different pomegranate varieties to the State of Arizona. These varieties from a far have been selected for color, early and late maturation, soft seeds, and tree size. Could you imagine harvesting large pomegranates off a three foot bush, eating pomegranates in Mid-July or as late as January, or tasting a pomegranate with is infused with a natural flavor of raspberry or citrus? A trial planting has been established at the Maricopa County Agricultural Extension Office to evaluate their characteristics in our climate. Results to date have been favorable.


[Continued on the next page](#)



## CULTIVATION NOTES, PESTS, AND OBSERVATIONS

Pomegranates thrive in Maricopa County and contribute to the sustainability of a home in many ways. A mature bush can provide up to one hundred pounds of fruit per season! The multi caned shrubs prefer full sun and make an excellent solar screen on the south or west side of one's house. A well planned planting can reduce indoor residential summer temperatures by as much as 20 degrees and play a large part in reducing electric consumption. In winter, their deciduous leaves drop just in time to allow a south facing wall to receive welcome sunlight. Envision for a moment the combined effect on our Valley's heat island if living, edible, solar screens were planted in mass? They thrive in our alkaline soil, and with proper irrigation on a bi-monthly basis will develop quality fruit. A deep mulch of tree shavings or compost will keep the soil moisture in balance and prevent fruit cracking. Rather than using chemical fertilizers, an annual application of composted manures and compost is more sustainable and as effective. Trees can be planted up to four feet apart to create a dense thicket, or as far apart as 15 feet to optimize fruit production. Typically no taller than 15 feet, pomegranate canes should be removed every few years to keep new fruiting wood and to control height. For larger fruit, it is recommended to thin young fruit to a distance of twelve inches apart in late April.

The main obstacle to attaining a good harvest in Arizona is the Leaf Footed Bug (*Leptoglossus phyllopus*). The insect will become quite numerous without controls. They bore holes into the fruit skin, allowing bacteria to spoil the fruit. Maintenance practices include spraying the younger insects with soapy water, protecting the fruit with paper or cotton bags, squashing the mature insects upon observation, and spraying horticultural oils during dormancy. We recommend this over the use of pesticides to protect bees, hummingbirds, and the consumers health. The bagging of fruit also extends the harvest and can eliminate sunscald, which can be another significant problem with our relentless sunshine and heat!

The health benefits of pomegranate consumption are well documented, as is reduced energy consumption and comfort which a homeowner can create with the planting of just one tree. We recommend that every yard in Maricopa County have a pomegranate bush to help create a more sustainable community and improved outdoor lifestyle. Should you have additional questions about the cultivation of pomegranates and sustainable living, please feel free to Contact the Arizona Rare Fruit Growers at [AZRFG.org](http://AZRFG.org), and post questions at our forum. You may also attend one of our Monthly Chapter meetings, where on an annual basis we discuss not only the pomegranate, but other fruit trees which help sustain health and green living. 





# SNAPSHOT

# ICARE

**O**ut of sight and out of mind. This is the fate of many children in Arizona. Often the victims of dysfunctional families, these children need everyone to care about them not just the authorities. This vision of Deacon Angela Brooks is the mission of the Southminster Presbyterian Church's ICARE program.



Angela Brooks is a dynamic global community and business leader. A Human Resource professional, Angela has an undergraduate degree from Ottawa University with nearly twenty years of experience that include a mixture of supervision and administration in business and education. She is the owner of Life Strategies Consulting specializing in: Human Resource, Human Service, Public Relations and Marketing. She is also the Publisher/ CEO of The Ebony Cactus magazine. She may be reached at: [info@lscphx.com](mailto:info@lscphx.com) <http://lscphx.com>

## HOW SOUTHMINSTER ICARE GOT STARTED

The Southminster Presbyterian Church ICARE project began as part of a Church Sunday School program in the fall of 2010. During a lesson describing God's care for children and the questions was asked, "How could you care about people like God." One student answered that the church youth could do something for children in their South Mountain Village community. When asked to elaborate, the student gave examples of helping other children in need such as telling them the importance of going to school or in taking care of their hygiene. From that simple suggestion of hygiene care, ICARE was born. Eventually, a church youth volunteers expanded on the idea and received help from other youth volunteers and elders.

The project officially kicked off in October of that year. Several hygiene packets were assembled and distributed to South Mountain Village area youth in CPS (Arizona Child Protection System) custody, their families and generally

children in the community who were in need of a few basics. A hygiene kit consists of a bar or bottle of soap, oral care items, deodorant, a washcloth and in some case gender specific items such as hair bows for little girls. When the kits are given, they are always accompanied with a little hand made note with the first name of the child who made the kit and the words I CARE. Sometimes, kits were created by adult volunteers on behalf of a child from the Sunday school program. ICARE, although not exclusively, is primarily geared toward children in the Arizona Child Protection System.

## CONNECTING THE ITEMS WITH THE NEED?

Every month the church and its youth collect items. ICARE has provided children and youth with movie tickets, summer clothing, new born, toddler and

school aged youth clothing, swim out fits, scrapbooks, bibles, safe swimming gear and even prom accessories. The ICARE program is a beneficial in many ways. It meets the many well being needs of children it seeks to help. Cold bottled water is also collected and given to area bus riders and pedestrians. The overall goal of the program is to educate church youth in the act of giving, discipleship and in understanding that they can be advocates for the less fortunate or the voiceless.


**Continued on the next page**



## RESULTS?

The program has touched close to 200 youth and adults in the community. Southminster is a "little church with a big heart" and is beginning to be seen again as a beacon of light in the community. Through the program, church youth are learning that they don't have to become an adult to be an advocate. They are learning that they can make an impact on the lives of others.

The rate of children going to foster care in Arizona is high. About 14% of the children in foster care are African Americans. Of this percentage, many children are from the South Mountain Village area. Foster and Adoptive parents are needed in this area so that children won't be taken out of their community. Although Southminster is primarily an African American congregation, ICARE's focus is not specific to African American children.

Sustainability is about more than CFL light bulbs. It is also about making the most of what you have by investing in your most important local resource, children. To learn more about the ICARE program, contact Deacon Angela Brooks or Southminster Presbyterian Church Administrator Vikki Green 602 276- 2582 or visit <http://southminpc.org> 



## DEFINITIONS:

### Synergy

Derived from the Greek words for "cooperation" and "working together," synergy is the result of two or more people or companies working together to produce an effect that is greater than the sum of their individual efforts. In business, synergy is often a stated benefit of a merger or acquisition.

### Adaptive Management

In ecology, a method for managing land flexibly based on what methods of management obtain the best results. The process of **adaptive management** is based on monitoring the results of management actions as part of a feedback loop to determine if management actions have been successful at achieving the desired result.

A key concept of **adaptive management** is that management decisions and objectives must be allowed to remain flexible to adapt to changes that may occur from unforeseen circumstances resulting from a changing and uncertain environment.

### Efficiency

The relation of outcomes, measured in a variety of ways, to the inputs required for that level of production. In business, efficiency of materials, energy, personnel, investment, and processes are commonly measured in order to measure performance and prioritize expenditures and projects. In sustainable business, a systems perspective requires addressing untraditional economic effects (such as lost energy through waste, lifecycle analysis of materials, toxicity of materials, and subsidies) as well as social and environmental effects in order to assess actual efficiency.

SOURCE: <http://www.sustainabilitydictionary.com/>

### Sustainable Solution

A Sustainable Solution is a simultaneously socially, environmentally and economically sound means of solving a problem or achieving a goal.

SOURCE: <http://nxthorizon.com>







Buckeye Arizona's first urban garden at the Buckeye Outreach for Social Services (B.O.S.S.) Center, ([click here for more information](#))



# EPILOGUE

IT'S ABOUT TIME!



I've been growing fish and shrimp now since about 1980. I was attracted to the idealistic concept that ocean fisheries are non-sustainable and that aquaculture if done right could feed the world. Now 31 years later with 85% of America's fish and shrimp lost to overseas producers, Time Magazine agrees with us ([click here to read article](#)). So what does this have to do with Arizona or more importantly with you?

During the 1980's and 90's Arizona attempted to produce fish using technology invented by ingenious local land farmers with help from the University of Arizona Cooperative Extension. Farms near the towns of Blue, Safford, Gila Bend, Hyder and on the Gila River and Ak Chin Indian Communities often made double use of their irrigation water to first grow fish, then cotton, alfalfa and citrus. Crops included trout, tilapia, catfish, striped bass, and marine and freshwater shrimp. At one time, Arizona produced more than 1 million pounds of seafood a year. Not much compared to some states, but nothing to sneeze at either. Regrettably, lack of support, inconsistent production, poor marketing and overseas competition put most of our farmers out of business.

Now is the time to rebuild and compete! Time and our growing knowledge of sustainability has re-taught us that there is a great value to local production. We now have new techniques, technologies, processes and procedures to improve our cost effectiveness, water use efficiency and thus sustainability. We must use this opportunity to make the most of what we have and begin to feed ourselves once again.

In the next edition we will cover this opportunity in more detail including the technique called aquaponics, the combination of aquaculture (fish farming) and hydroponics (the production of plants without soil). Using this and related sustainable techniques there are more and more people producing high quality catfish, tilapia, trout and even freshwater prawns as well as melons, chard, cucumbers, even summer lettuce locally, many in their backyards. Join us next time for Aquaculture on NxT Horizon. **NxT**



# Resources



[www.sustainabletucson.org](http://www.sustainabletucson.org)

The purpose of Sustainable Tucson is to facilitate an inclusive, dynamic community building process that ensures economic prosperity, social vibrancy, and ecological health. We fulfill this purpose by:

1. community building through facilitating, networking and convening
2. advocating for action. We are:
  - An emerging network of networks to facilitate and accelerate Tucson's transition to sustainability through community-wide education and action.
  - A community resource, connect everyone to Tucson's sustainable assets, resources and best practices.
  - An all-volunteer initiative relying on the efforts of many people.



[www.thegreenchamber.org/](http://www.thegreenchamber.org/)

Founded in 2008, the Phoenix Green Chamber provides a central, non-biased community of environmental-minded individuals and businesses. Promote and provide a local resource of sustainable businesses for the public. Offer business-to-business networking events and mixers. Educate businesses, organizations and individuals on sustainability. Collaborate with other complementary organizations in our community to advance sustainability. Reach out to area businesses to encourage green, sustainable business models. Increase the influence of green businesses in the community. Provide an independent voice in advancing local environmental public policy.

The chapter webpage information on upcoming chapter events, green resources, and the chamber's mission and objectives.



[www.valleyforward.org/](http://www.valleyforward.org/)

Valley Forward is an advocate for a balance between economic development and environmental quality in the Phoenix Arizona metro area, and convenes business, community and civic leaders in thoughtful public dialogue on critical sustainability issues. A unique public interest organization, the Association is a blend of members including large and small businesses, government jurisdictions, the education and non-profit communities, as well as others that share a goal of promoting cooperation to improve the environment and quality of life in our region.

Over its 40 year history, this public interest organization has influenced decisions in our Phoenix including Rio Salado and Metro Light Rail. . It was formed as a non-profit group merging the Phoenix Development Association, Mid-Town Improvement Association, Valley Beautiful Citizens Council and Maricopa County Taxpayers Association.

## TERMS OF USE

The various incarnations of the internet are new and exciting vehicles for the distribution of information. Regrettably, they are still far less than perfect and not fully controlled or secure. NxT Horizon magazine is distributed only by the website, by e-mail subscription or by direct e-mail request. NxT Horizon Magazine (SWG) therefore cannot warrant that the function or operation of NxT Horizon magazine Electronic Document, autoresponder, NxT Horizon website or linked websites will be free of defects, that defects will be corrected, or that they will be free of viruses or other harmful elements.

As a visitor to and a user of NxT Horizon magazine or Website, you, in effect, agree that your access will be subject to the terms and conditions set forth in this legal notice and that access is undertaken at your own risk. As a visitor to and user of NxT Horizon Website or Electronic Magazine, you must assume full responsibility for any costs associated with servicing of equipment used in connection with use of our site or documents. NxT Horizon magazine shall not be liable for damages of any kind related to your use of or inability to access the website or opening the NXT HORIZON magazine electronic file.

We endeavor to present the most recent, most accurate, and most reliable information on our E-magazine and Website at all times. However, there may be occasions when some of the information featured in NxT Horizon magazine or at <http://www.nxthorizon.com> may contain incomplete data, typographical errors, or inaccuracies. Any errors are wholly unintentional. In addition, the opinions of guest writers are their own and may not reflect the views of NXT HORIZON and thus NXT HORIZON or any of its affiliates or associates can not be held liable. Please be aware that we present our content "as is" and make no claims to its accuracy, either expressed or implied. We reserve the right to amend errors, make changes to our Website, or to update our magazine at any time without prior notice. To the fullest extent permitted by law, NxT Horizon magazine disclaims all warranties, expressed or implied.

No part of this magazine may be used for business or promotional use without a written request and permission from the Publisher or the Editor. This magazine in its entirety or parts may NOT be electronically copied, or duplicated for distribution through email, posting to web pages or any other manner without express permission from the Publisher or the Editor. Printing is allowed for personal use or quotation with proper reference. To read the complete Terms of Sales and Service Click [here](#).

## HOW TO RECEIVE NXT HORIZON

Published every two months, NxT Horizon (SWG) is a 100% electronic magazine, no hard copies will be available. To receive it, you need a recent model P.C. or Macintosh computer equipped with highspeed internet and Adobe Acrobat Reader 5.0 or greater. (The magazine may be read also through the "Preview" program on Macintoshes though some functionality may be lost.) Copies of NxT Horizon may be accessed through the website @ <http://nxthorizon.com>







NxT HORIZON

[www.NxTHORIZON.COM](http://www.NxTHORIZON.COM)

YOUR LIGHT IN THE DARKNESS