

Watershed Moment

Spring 2010

What Are Green Jobs?



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Volume 5, Issue 2



Watershed Management Group

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What are Green Jobs?



Dear Readers,

What are green jobs? At first glance this question may seem trivial, however the development of green jobs is one of the keystones to achieving sustainable livelihoods in the 21st century. With this newsletter, we hope to expand the dialog about green jobs—what they are and how they fit into our economy. We believe the basic principles of green jobs can benefit all job sectors.

Other newsletter features include: insights on running green events, a Burkina Faso project update, and a sneak peak on the development and future offerings of the Water Harvesting Certification program.

I hope you are inspired to join the dialogue and incorporate green job concepts into your own career.

-Lisa Shipek
Executive Director



Water Harvesting Certification students install a cistern at Tucson City Council Office

Green Jobs - An Emerging New Industry?



• Lindsay Ignatowski, Outreach Coordinator

"Green-collar job" is a term that came into popular circulation during the 2008 presidential campaign, when Barack Obama pledged to spend \$150 billion over ten years to create 5 million green jobs.

A 2009 study by Pew Charitable Trusts found that although overall employment in the U.S. from 1998 to 2007 only grew 3.7 percent, what it calls the "clean energy economy" grew 9.1 percent during the same period. Though concrete statistics about green jobs are hard to find, owing to their nebulous definition, this will soon change; the U.S. Bureau of Labor Statistics will create definitions for and start tracking data on green jobs starting this year.

(Definition, Continued on page 7)

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Jobs Worth Fighting For:

Green Industries Benefit Environment *and* Economy



◀ **Lon Huber, Guest Writer**

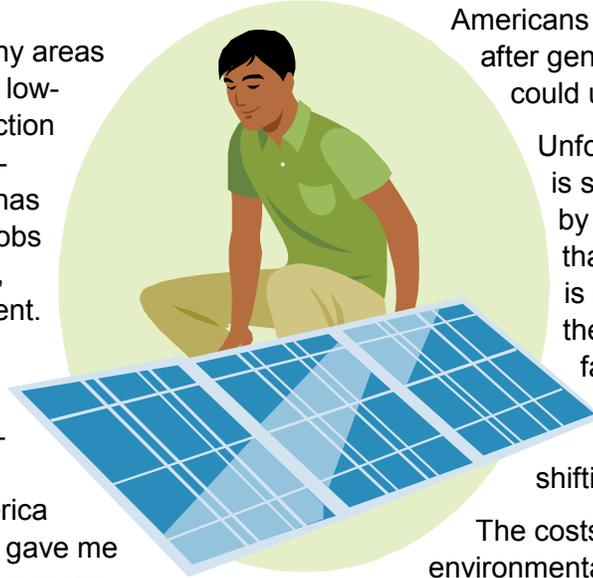
Lon Huber is pursuing a master's degree in business administration at the University of Arizona.

Lon was recently a Solar Energy Fellow in Congresswoman Gifford's office.

The economic foundation of many areas of the United States is based on low-paying service jobs and construction work. Lately, however, the emergence of the green job industry has provided a glimmer of hope for jobs that are good for the community, the economy, and the environment.

On a recent tour of a local solar panel manufacturing plant, the sight of workers and rows of machines filled me with a sense of nostalgia for the time when America produced what it consumed and gave me a sense of what we can gain if we come together to facilitate the growth of green industries.

Activists, thinkers, and policymakers have proposed the development of green jobs as an answer to the deepest economic downturn since the depression, as well as the daunting challenge of environmental sustainability in a rapidly modernizing six-billion-plus



local university, gives local installers discounted panels, and partners in community research projects. Our communities need more such companies that practice local reinvestment. After years of outsourcing, offshoring, and downsizing, Americans need a path back to stability; after generations of neglect, nature could use a break as well.

Unfortunately, the green industry is still fragile. Although a study by Pew Charitable Trusts shows that the green business sector is one of the fastest growing of the economy, it is still in its infancy, dependent on key state and federal policies that could change with the ever-shifting political winds.

The costs associated with the negative environmental and health impacts of fossil fuels are externalized; that is, passed on to society. However, makers of green products, such as solar panels, internalize their costs, making this technology more expensive to the individual buyer, although they are cheaper for society. Policies must be in place to level the playing field and bring the right price signals to consumers.

Green industries pass their costs onto consumers, while fossil fuel industries pass their costs onto society. Policies must be in place to level the playing field and bring the right price signals to consumers.

world. The realization of this link has made the idea of "good jobs for the good of the environment" into reality.

The solar company I toured spruced up their neighborhood by taking over an abandoned warehouse. The company provides benefits and decent wages to its workers; also, it hires graduates from the

We need to fight to ensure that smart policies are put in place and remain so. In Southern Arizona I am a part of a newly formed Green Chamber of Commerce that aims to ensure the passage of legislation that supports green industries. We will help organize and develop the green business community to diversify the economy, use resources efficiently, keep money in our community, and create jobs for a broad range of citizens.

If communities across the country facilitate green business growth, green jobs and investments won't fluctuate with the election cycle but will instead be indispensable pillars of our local economies. And that is not only critical for jobs - it is critical for the environment as well. 💧

Inside the Industry: Green Job Insights



Watershed Management Group's Co-op Coordinator, Matthew Bertrand, spoke with Tucsonans about green jobs. Below, we share their insights with you.

Q: Define what "Green Jobs" means to you.

Joe Mazzi, Desert Sky Plumbing: Selling or installing environmentally friendly products, or upgrading existing homes to be more energy efficient.

Kevin Koch, Technicians for Sustainability: To me, the movement is transitioning our activities, not just on a labor-basis – electricians and plumbers – but everybody. I don't see why every occupation in society couldn't integrate a pay-as-you-go approach, or, even better, a make-things-better-as-you-go approach. To me, that's what green jobs are.

There's this whole right livelihood movement, to have a job that's fulfilling to you, not just a job that makes you money. The green jobs movement is much more about everyone finding jobs that contribute to society, that make society better, in the process of paying ourselves. That creates satisfaction, a right livelihood, a better future for our children. I'm more concerned about right livelihood than about green jobs.

Emily Brott, Sonoran Institute: Jobs that would have a net benefit for humans and for the environment. When I think about green, I don't just think about nature. It's a business that is working with the community, promoting waste reduction and sustainable use of materials. You don't have to be in the non-profit sector. It's any job that promotes living in harmony with the environment.



Joe Mazzi

Q: Do you consider your job to be a green job?

Joe: Yes, with all the work we're doing with tankless water heaters...the tankless heaters we are installing are most efficient gas water heaters in the world. Everything we're doing plumbing-related has become low flow, with a focus on water conservation.

(Insights, Continued on page 8)

Earth Month: Pushing the Envelope with Green Events

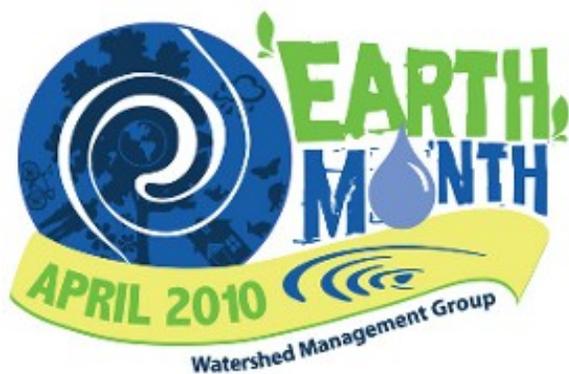
◆ Lindsay Ignatowski & Lisa Shipek

This year, Watershed Management Group celebrated its favorite holiday, Earth Day, by hosting a month filled with events to inspire people to take action. From building cisterns to painting street murals to feasting on local fare, we did everything but blow out the candles on the cake as we commemorated Earth Day's 40th birthday.

WMG kicked off Earth Month

painting an environmental street mural in the Rincon Heights neighborhood as part of our green infrastructure demonstration. Neighbors gathered, paintbrush in hand, to create a water-themed mural flowing around the street corner along the side of the road.

We created a lasting art piece, that creatively communicates how green infrastructure im-



proves water management and promotes native vegetation and wildlife.

(Earth Month, Continued on page 9)

Certification Meets Green Job Training Demands of North America



After running a total of three courses between Tucson and Phoenix this spring, WMG's Water Harvesting Certification is gaining ground as a rigorous and highly effective green job training applicable to a wide range of professionals.

By teaching the basic principles and techniques of water harvesting, the course is drawing participants from a wide geographic area. The upcoming July Certification course in Tucson has more out-of-state participants than in-state participants. Partici-

pants hail from states throughout the Northwest, Midwest, and Southwest US, along with participants from Canada and Mexico.

Tucson is a fertile ground for training, with a wide range of water harvesting demonstrations and examples of innovative work, at the grassroots, municipal, and university level.

Bringing the Certification to Phoenix

This spring we ran the Certification course in Phoenix, after a short six months of planning. To

ensure its success, WMG partnered with a Phoenix organization called Arizona Homegrown Solutions, and we had a Phoenix-based program coordinator. Arizona Homegrown Solutions provided assistance publicizing the program and finding suitable sites for water harvesting installations. The coordinator, Nick Irvine, completed the Water Harvesting Certification last summer. Nick's intimate knowledge of the course allowed him to successfully coordinate the program, workshop sites, and materials needed for

(Certification, Continued on page 7)

WMG Donors Help Provide Families with Clean Water

Jared Buono, Senior Hydrology Scientist

WMG has partnered with a community in Burkina Faso, Africa, to help solve a water crisis by training farmers in watershed management and sanitation practices.

We are very happy to report that we reached, and exceeded, our fundraising goal for the Deou water project. Our goal was to raise \$5000 to send two WMG staff trainers to West Africa for a few weeks. However, when we started talking in detail to the

community and our local partner agency, it became clear that WMG could accomplish much

more than our original goal to help develop a basic watershed plan. We could train a core group of farmers to become watershed stewards, we could build all manner of demonstration structures in the watershed, and we could conduct a sanitation cam-



A woman at the market in Burkina Faso.

paign. It wasn't long before 'a few weeks' in Deou became a 6 week major project.

And luckily, our donors were interested in seeing the project expand as well. As word of the pro-

ject spread, contributors seemed genuinely moved by the project—moved not just by the plight of the community and the determination of the people, but also by the realization that they themselves could have a direct impact in Deou. In increments of \$10 and \$20, individual donors across three continents pitched in to help Deou build a better future one tippy-tap at a time.

Thanks to generous donors and interested parties such as you, we have raised over \$10,000 and are now on the ground in Deou.

While you can visit WMG's Twitter and Facebook for brief blurbs on our work, the closest internet to Deou is 75 miles away, so we will be saving the full update until we return in mid-June. Stay tuned for our next newsletter, which will be full of pictures and stories from the project. 💧

Co-op Member Makes Desert Growing Look “Pretty” Easy

◀ **Rhiwena Slack**, *Co-op Intern*

Richard Roati has his own recipe for horticultural success in the desert. And he makes it look good, too.

A longtime Tucsonan and organic gardener, Roati has volunteered at 18 Co-op workshops since 2007, and has hosted two workshops at his own home. One of those, his 1000-gallon cistern, is arguably the finest-looking steel rainwater-capturing device in Tucson, featuring a colorful mural by local artist Michael Schwartz depicting the fruits and flowers in his garden.

Roati's three-fold formula for growing edibles year-round in the desert is to "plant the rain" (create earthworks), then "build the soil" (using compost), and to plant the tree or garden last. Following this method, "you will have to get out of the way, because (the garden) will grow that fast!" he says.

When the Roati family moved into their mid-town Tucson abode in the 1980s, their landscaping goal was that "at any time of the year we could walk out into the yard and find something good to eat." Three simple steps and twenty years later, they have a small organic garden that provides salads in the winter, and tomatoes,

“It’s like adding a work of art to your backyard”

jalapenos and basil in the summer. Fourteen food-bearing trees produce shade, as

well as fresh year-round fruit.

To "plant his rain," Roati has been using greywater and capturing roof rainwater runoff for 16 years. But he says it was after his 2008 Co-op workshops to install a 1000-gallon cistern and approximately 4000

-gallon earthworks that his trees "grew like crazy." Most of Roati's landscape watering needs are now supplied by rainfall and greywater.

To implement the second part of the recipe, composting, the Roati family found help with Miles Elementary Garden and Growing Connections at the Tucson Botanical Gardens, who introduced him to effective microorganisms (E.M Bokashi) and earthworms to break down kitchen scraps.

Since then, Roati has found that working with others is a great way to gain knowledge and skills for his green infrastructure projects. He said, "It was the first time I knew that someone was providing this kind of workshop and allowing anyone to get involved without having to pay a big fee, so I signed up". As well as learning from others, "meeting some amazing people", and

saving time, he points out that the advantage of the Co-op's barn-raising model is that many hands make difficult jobs possible. "Installing rock work or a cistern is really helped by a group," he said. Roati encourages others to join WMG's Co-op. "If you would like to see Tucson become a cooler, shady, greener place, if you like working with other people outdoors, then sign up" he said.

Roati is certainly glad that he installed his colorful backyard cistern through the Co-op workshop. He compares the installation cost of the cistern with that of a big-screen television, but with the result of healthier trees and reduced water bills, the long-term payback makes his cistern the better investment. His cistern is also more visually appealing. Roati hopes more people will consider having a mural painted on their cistern. "It's like adding a work of art to your backyard," he said. 💧



(Definition, Continued from page 2)

Green jobs are commonly defined as professions that install energy efficiency features, such as weatherizing homes or installing solar panels.

But is this common definition accurate—or is it a very narrow interpretation of green jobs?

While we can't all spend our careers weatherizing homes and installing solar panels, can we all use our respective skills to benefit the environment through "green jobs"? Well, that depends on how we define this new job sector.

I spend the vast majority of my work time in an office, writing articles, networking, and recording data — yet I have a green job because my outreach work helps promote WMG, an environmental non-profit organization. One of our other employees is an engineer who puts her knowledge to work teaching sanitation education and designing simple water systems in impoverished countries. A friend has a green job as a clerk at a bicycle shop, promoting sustainable transportation. A teacher may have a green job

because he educates his students about conservation; an organic farmer contributes by growing her produce without pesticides and by providing a source of local produce.

In fact, it may not be fair to call "green jobs" a new sector at all, but simply one that is just now being recognized.

Lisa Shipek, WMG's Executive Director defines green jobs as, "professions that understand and respect humankind's integral relationship with their environment and promote sustainable resource management, conservation, low-impact technologies, and the protection of environmental services."

As humankind moves toward sustainable societies, the inextricable link between our livelihoods and our environment will become more apparent, and interest in green jobs will continue to increase. If we look beyond a narrow definition of what a green job is, it's possible we can all put our abilities and knowledge to use to benefit the environment and our community; we can all make our jobs a green job. 💧

(Certification, Continued from page 5)

workshops. In addition, we obtained grant funds to reduce the additional costs of the program, such as paying for the travel time of instructors coming from Tucson. We also utilized several Phoenix instructors to incorporate local knowledge into various sessions including native plants, landscape design, food production, and policy sessions.

Upcoming Programs

- October-November 2010: Weekend course in Phoenix
- February 2011: Intensive 9-day course in Tucson
- May 2011: Intensive 9-day course in Tucson

Details on the programs will be announced in August.



Participants in WMG's Water Harvesting Certification Course learn skills through hands-on training.

For more information or to apply, visit watershedmg.org/certification.

Watershed Technical Trainings

If you have been closely following the Certification program, you have probably noticed that we have not offered our Level 2 training since last summer. We are restructuring our advanced trainings into a different format, known as Watershed Technical

Trainings. WMG will start offering the following specialized trainings in the fall of 2010:

- Green Infrastructure
- Advanced Cistern Applications
- Advanced Greywater Applications
- Small-scale erosion control and riparian restoration. 💧

Kevin: There are ways in which we operate as sustainably as we can. We have a solar hot water supplement to our office heating. Staff get at-cost and free labor for implementation of systems on their own, for solar or rainwater harvesting systems. We try to source from companies that are local or closer to us. We source our paper locally and try to get soy-based ink. These are all ways we're green, but the issue to me is more right livelihood. Everyone who works here feels satisfied with their work on a deep level; we have a phenomenal community of staff who are inspired about what they're doing, and believe in what they're doing... When you wake up in the morning, you want to go to work.



To me, the green jobs movement is about everyone finding jobs that make society better in the process of paying ourselves.

- Kevin Koch, Technicians for Sustainability



Kevin Koch

Emily: Yes – everything I do is about how we can live better in our space. Everything I do is about improving our relationships with our surroundings.

Q: What motivates you to do the work you do?

Joe: In our industry we see an enormous amount of waste. People buy a new house and want brand new fixtures. We have to throw a lot of new stuff away. The conservation projects help me find a balance.

Kevin: What really keeps me going in my work is how many people feel touched and grateful for their experience working with us, who recognize that this is a social movement, not a business.

Emily: Fun. I want to make the world a better place. It's that simple, it sounds ridiculous. Also, I want to put my life's energy into something I'm passionate about.



Emily Brott

Q: Do you think green jobs such as yours pay competitive salaries?

Joe: They pay a little better (compared to other plumbing jobs). In my industry, you have to be a little more specialized to work with the green side of plumbing. It's nice that being green has become more profitable.

Kevin: What's a competitive salary? I struggle significantly with that. I don't know what a competitive salary is... I've had people on our staff offered jobs for 80,000 dollars a year. I can tell you that they aren't making any where near that here. In that sense, I'm not competitive. But, it just depends on what people think is competitive. Do I feel people are being paid what their worth? No, I think they're worth a lot more. But I think we'd all rather be contributing as we're contributing than be paid a higher wage.

Emily: Yes, if you take into account that you are enjoying your job. It's not the place to make big bucks, at least not in the non-profit world. It's worth it to be fully satisfied with your work every day. I'd add that it gives me the opportunity to constantly learn about the things I'm most passionate about – I get to learn on the job. 💧

How WMG Provides Green Job Training

- Water Harvesting Certification Program and apprenticeships train professionals
- Schoolyard Program teaches children about resource sustainability
- Green Streets — Green Neighborhoods provides training to government and neighborhood leaders
- Co-op Program teaches residential green technologies



WMG's Green Streets Workshop at Salpointe High School

(Earth Month, Continued from page 4)

Following the street painting, WMG hosted a Green Streets Block Party fundraiser.

Our Green Streets Block Party not only taught people about green infrastructure, it also featured local and organic foods, local musicians, demonstrated a composting toilet and tippy tap, and utilized reusable dinner ware.

Although this event was a fundraiser, it was not about the bottom line. While we could have saved costs with disposable plates, forks, and table cloths and served cheap burgers from a grocery chain – this would not have the long term impact or community-based approach our mission strives for.

WMG organized the first Tucson

green infrastructure bike tour, to teach people while promoting alternative transportation and exercise. The tour showcased neighborhood storm water harvesting, cisterns, solar technology, and sustainable landscaping. Amazingly, the tour was mostly on roads closed to car traffic, because it coincided with Tucson's first *Cyclovia*, a 4 hour event that closed off city streets to promote walking and biking as viable and enjoyable forms of transportation.

Per tradition, we also organized two hands-on workshops for Earth Day. We transformed a neighborhood street into a green street with 50 volunteers in front of Salpointe High School— building stormwater harvesting earthworks and planting a series of native shade trees.

Green Event Checklist:

- **Reduce Waste:** use reusable plates/forks/cups – if too expensive, have people bring their own. Have recycling bins and compost bins at events.
- **Promote Alternative Transportation:** encourage walking, biking, bus riding, and carpooling to your event. Give perks to those that utilize alternative modes.
- **Go Local:** support the local economy by utilizing locally owned businesses and locally-produced products for food, party supplies, and entertainment.
- **Stack Functions:** make green practices a fun part of your event and use it as a teaching tool or demonstration.



We finished Earth Month with a large Co-op workshop building a cistern and earthworks.

April sure was a productive Month! 💧

Community members paint an environmental mural in the street around the Feld Davis park in Rincon Heights.

Green Infrastructure Training Draws Professionals from Southwest



What started three years ago as a project to enhance neighborhood tree plantings in a central Tucson neighborhood has transformed into a demonstration site and learning lab for neighborhood activists, city officials, and professionals from throughout Arizona and New Mexico. WMG's vision of creating a neighborhood-scale green infrastructure demonstra-

tion site has come to fruition, and WMG has been sharing the demonstration site through block parties, walking tours, and workshops.

On April 17th, professionals from throughout Arizona and New Mexico came to Tucson to participate in a one-day green infrastructure workshop focusing on urban retrofits for arid cities. The

workshop included a tour and presentation, and attendees were able to participate in a retrofit installation along one neighborhood block. Participants included representatives from the following groups: Prescott Creeks, Fort Huachuca, Gila Watershed Partnership, Cochise County Water-Wise, Gila Resources Information Partnership, Dowl-HKM engineers, and the City of Phoenix. ♠

Special Thanks

Earth Month

- **Jessica Castillo**, for designing the Earth Month logo, flyers, and t-shirt.
- **KXCI Community Radio**, for donating a public service announcement to publicize Earth Month.
- **Spirit Familia, Nameless Saints, and Way Out West**, for performing at our Earth Month events.
- **Henry Jacobson**, for helping to organize our Green Streets Block Party and Samos Neighborhood workshop.
- **Chef Steven Gendel, Jonathan Elliot, and Chef Elizabeth Miksell**, for preparing our local foods feast for the Green Streets Block Party.
- Local bar **The Rock**, for donating a stage for our Green Streets Block Party.
- **Stacey and Joe Plassman, Ken Bolten, and Chris Wilke**, for helping make the Green Streets Block Party a success.
- **Ace Hardware**, for providing discounted paint for our Street Painting event.

Wil Schaefer and Mai Ho

Thanks for always being on call for our workshops, and for over 247 workshop volunteer hours to date!

- **Rocky Martinez**, for designing and leading the mural street painting at Feld David Park.

Supplies

- **Donna Lines**, for donating a commercial filing cabinet.
- **Richard Humphrey**, for building an A-frame sign.
- **Nelly Zapata**, for donation of workshop tools.

Workshops and Trainings

- **Stan Lowery**, for leading a tree pruning workshop.
- **Stuart Wood**, for leading a healthy movement workshop for WMG staff.

Thanks to our Corporate Sponsors

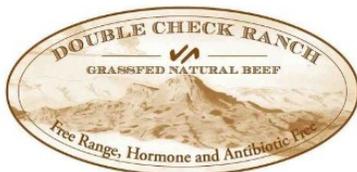
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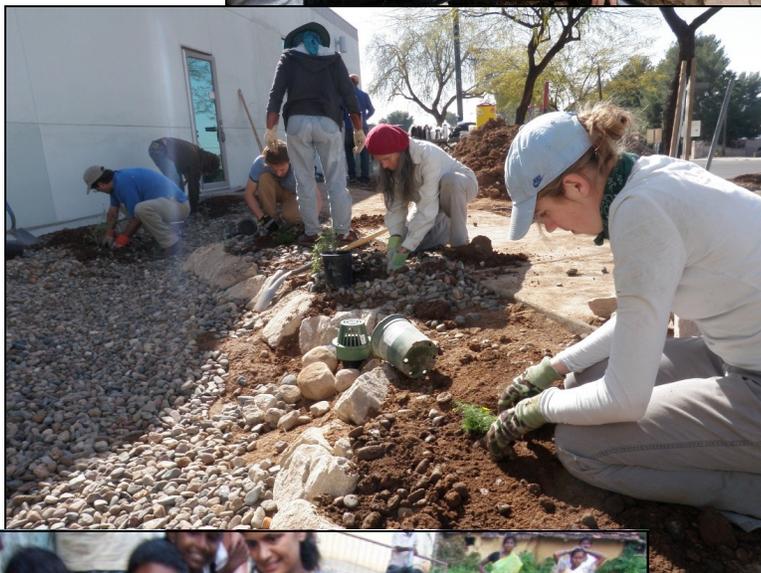
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By donating today, you can support efforts like these:

- Developing cutting-edge green job trainings to benefit professionals all across the globe
- Providing technical resources and educational programs to communities in India, Africa, and Latin America for improved water management and sanitation practices
- Developing Co-op programs in other Southwest communities providing social forums for affordable green practices
- Piloting the Conserve to Enhance program - a unique mechanism to designate conserved water to enhance riparian areas

You may make your tax deductible donation online at <http://www.watershedmg.org/contribute> or send a check to: Watershed Management Group, PO Box 65953, Tucson, AZ 85728.



WMG Wishlist

- Laptop & desktop computers
- Office desks and shelves
- Digital cameras
- Garden tools (shovels, pick axes, hand trowels, etc.)



Watershed Moment is a quarterly newsletter written by WMG staff and guest contributors, graphic layout by Lindsay Ignatowski and final editing by Lisa Shipek. If you are interested in submitting to The Watershed Moment, please contact Lindsay at lindsay@watershedmg.org or at 520-396-3266.

The mission of Watershed Management Group is to develop community-based solutions to ensure the long-term prosperity of people and health of the environment. We provide people with the knowledge, skills, and resources for sustainable livelihoods.