

FALL 2018

A Watershed Moment

A NEWSLETTER OF WATERSHED MANAGEMENT GROUP

watershedmg.org 520-396-3266



WMG
CO-OP

10 years

***CELEBRATING 10 YEARS OF
DIRT-SLINGING,
WATER-COLLECTING,
COMMUNITY-BUILDING CO-OP PROJECTS!***

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GREEN LIVING CO-OP ORIGINS:



Over a decade ago, when rainwater harvesting was just starting to become a Tucson trend and steel rain tanks were all the rage, the idea of creating our Co-op program originated from volunteers during a weekend workshop at the Ward 3 Council Office. We were installing a rainwater harvesting tank, and one volunteer got so jazzed about the workshop, they said they'd like the same thing at their home. Other volunteers perked up and said they too would be interested in hosting a WMG workshop. So we got to brainstorming right away how the program might work for residential properties.

Hence the Co-op was born – and we tested out the model with our first devoted hosts in 2008, including Matt Lowen, Ian Johnson, Megan and Chris Mogan, Charles Swanson, Ron and Marti Kuykendall, Michael Goldman, Richard Roati and Susan Silverman, Martha Retallick, Catlow and Lisa Shipek, and Laura Mays.

We modeled our Co-op program at people's homes in a barn-raising fashion — where people are invited to participate in the construction of a project in a cooperative setting guided by a WMG instructor. Social interaction and skill-building are just as valued as the final product, so we structured the workshops to have time for teaching and discussion as well as enjoying good

BARN-RAISING SONORAN-STYLE!

food together. Co-op hosts are asked to open their home to the workshop participants as well as providing hearty snacks to keep the volunteers energized.

People were hooked! Collaborating with community was good fun and we all felt a sense of accomplishment looking at the rain garden or rain tank we had constructed in a half-day workshop. After running 12 Co-ops the first year, the demand increased, and we now average between 30 and 50 workshops annually.

Co-op members can choose from a variety of project options for their home including: rainwater harvesting tanks, rain gardens, street-side green infrastructure, an array of greywater systems for sinks, showers, and laundry machines, arroyo restoration, along with the ability to create a personalized palette of native and edible landscapes.

Co-op members interested in hosting a workshop are encouraged to volunteer at several workshops before hosting to learn the ropes of the Co-op culture as well as earn a discount on hosting. When Co-op members volunteer 16 hours (usually through four workshops), they get a 30% discount on our project manager labor, making that sweat equity totally worth it!

Over the years, WMG has been able to tap into a variety of grant funds and incentives to make these sustainable landscape projects even more affordable. In 2008, we launched an apprenticeship program in partnership with local organization Tierra y Libertad, and trained a cohort of grassroots water harvesting enthusiasts who then helped install 10 water harvesting Co-op projects with limited income families. Project costs and the apprenticeship were

covered by a grant from the Arizona Community Foundation. From 2010-2012, we partnered with The Sonoran Institute and the fledgling Conserve to Enhance (C2E) program to offer water harvesting grants of \$500 to \$1,000 to 50 households working through the Co-op. Recipients of the grant joined the C2E program, and after two years, participants had tracked two million gallons of water savings and had donated \$2,000 back to fund riparian restoration projects!

WMG co-founder Catlow Shipek helped develop Tucson Water's popular rainwater harvesting rebate back in 2011, which provides up to \$2,000 for rain tanks and \$500 for rain gardens. Now we help Co-op members apply for rebates through the utility, and at the end of 2017, we expanded offerings to include a grant and loan program for limited income families, to further reduce financial barriers. This year, WMG completed water harvesting installations for 11 limited income families and helped them cover the full costs through grants, no-interest loans, and the rebate.

Please join us in the decade to come, as we continue to grow and evolve the Co-op program, a modern barn-raising model that's meeting the social and environmental needs of the 21st Century

Join the Co-op!

Attend one of our workshops and then consider hosting a workshop at your home! Learn more and sign-up at Watershedmg.org/Co-op. Once you sign-up, you'll receive a weekly email bulletin with all upcoming workshops, tours, and social events.



A man with a grey beard and a red and black plaid shirt is smiling and standing next to a large blue metal culvert tank. The tank has a mural of a sun with yellow rays and a dark red center with small white dots. Green leaves are painted around the sun. The man is pointing towards the tank with his right hand.

THE GREEN LIVING CO-OP OPERATES ON PEOPLE POWER!

CELEBRATING 10 YEARS OF LABOR WITH YOUR NEIGHBOR

Richard Roati, a Green Living Co-op member since the beginning of the program 10 years ago, first began water harvesting in 1992 by utilizing laundry water for the fruit trees on his property.

“When I found out about WMG’s Co-op program, I was super excited that water harvesting know-how was becoming accessible to me and to everyone. I remember attending workshops right away. I attended workshops at the park at Broadway and Country Club and several homes. I was so happy when my proposal to construct a cistern in my backyard was accepted in June 2008.” At Richard’s 2008 workshop, led by WMG’s Catlow Shipek and Lincoln Perino, a 1,000 gallon metal rain tank was installed.

“(At the Co-op workshops), everyone is super enthusiastic to work together because they are learning useful skills. Yards are transformed in a few hours into beautiful landscapes. Participants quickly realize if they were to do the work by themselves it would take months to complete the same work.

“The homeowner benefits because they get a group of volunteers and a discount on the price. The volunteers get free hands-on training. Neighbors see how yards are transformed and are interested in getting involved. It’s an amazing example of how a good idea can multiply into a great success. WMG is leading the way to a greener, more sustainable future for the City of Tucson!”

Richard Roati shows off his 1,000 gallon metal culvert tank.

At her house in the El Cortez Heights neighborhood on Seneca Street, one of WMG's most dedicated volunteers has packed quite the water-harvesting punch on her property over the last decade. **Martha Retallick**, a local writer and photographer, became involved with Watershed Management Group with the onset of WMG's Green Living Co-op in 2008.



Martha Retallick

"I got involved because it sounded interesting and I wanted to do my own water harvesting projects," Martha says. "However, I couldn't afford a landscaping company's rates. So, Co-op was the way to go. Co-ops are awesome because the group comes up with solutions that I never would have thought of."

Since 2008, Martha has clocked in almost 200 hours with the Co-op program, and has hosted four workshops at her home; three workshops for earthworks that created rain gardens in her front and backyards, along with a greywater workshop that connected her laundry water to her backyard landscape.

"With the help of the Co-op, I've been able to transform a bare lot into a

food forest with fig, lemon, pomegranate, and mesquite trees."

Angie and Katrina Shah are two of the Green Living Co-op's youngest volunteers, who became involved about three years ago. "We are both part of the NHS (National Honors Society)/NJHS (National Junior Honors Society) at BASIS Oro Valley, and we collect community service hours as a part of this program. Our mom, who got involved with WMG when we were still little, loved the workshops and recommended them to us. These workshops have since become our greatest source of service hours!"



Katrina and Angie Shah

"The WMG Co-ops are a great way to meet lots of new people and gain lots of personal knowledge. Working together with others who care about the same thing you do and getting in touch with the outdoors really help give your work a sense of purpose and connectedness. It is very comforting to know that there are people who really care about the desert and actually seem to acknowledge how much we all rely on water. We would love to see the washes and rivers full of water again!"

For Co-op member **Marty Johnston**, it took him several years of being acquainted with WMG before getting his hands into the dirt. He had taken some WMG water harvesting classes about four years ago, and, he shares, "eventually, after seeing weekly emails that mentioned the Co-op, one week's email had a photo of butterflies, and I have always wanted a yard full of butterflies, so I decided to attend."



Marty Johnston

In addition to the skills he has learned by volunteering over 100 hours at the workshops, Johnston explains how his life has benefited tremendously from the Co-op program. "I joined the program because I wanted to learn how to attract butterflies. And I got so much more.

"Like 42 plus millions of Americans, I have some depression and anxiety issues. Among the things that help are exercise, sunlight, being around people and doing things that have a purpose and give a sense of accomplishment. If the WMG Co-op program had been designed by a psychologist, I doubt that it could be better tailored to help improve people's psyches. Uniting people to

do something good for the world and to accomplish a goal together creates the kind of glue that is so often lacking in contemporary society."

Kathy McDaniel was inspired to join the Co-op about three years ago, after attending several of WMG's Homescape Harvest Tours. "I was motivated to volunteer in order to learn more by volunteering, and also for a cost reduction for my own front and back garden workshops. My garden transformations give me great joy and satisfaction each and every day!"



Kathy McDaniel

Through WMG's Co-op, Kathy has hosted three workshops and she is raking in the rain! She has a butterfly garden in her front yard, a greywater system, street-side curb cuts to harvest stormwater, and an earthworks project in the backyard that also includes two 1,500 gallon rain tanks to support a food forest.

"I really like the concept of neighbor helping neighbor and all of us learning best practices for water and habitat conservation," Kathy shares. "One garden at a time practicing water harvesting and native plant and pollinator protection

- it adds up for our whole valley."

In early 2017, **Laura Verdin's** husband Charlie was looking into local non-profits for their employer Fangamer, and he came across Watershed Management Group. "While he was going over the (local non-profit) options with me, the description for what WMG did caught my interest so I did more research. It sounded like something I wanted to be involved in, even in a small way, so I signed up for some co-op workshops." She was motivated to get involved because she enjoys "getting outside, being active, and learning about local plants and landscaping!"



Laura Verdin

Laura volunteered at four workshops in 2017, giving her the hours she needed to host a Co-op at her own house. That same year, WMG launched the Women's Build program as part of our We Are One Watershed resolutions. WMG saw a need to have Co-ops exclusive to females in an encouraging environment to empower women to feel confident using tools and heavy machinery. Laura's Co-op was one of the projects selected for a Women's Build workshop.

"The timing worked out great and I was happy to let my yard be used as a classroom," Laura shares. "It was great knowing that the women volunteering their time weren't just laboring, but they were learning skills which they might not have an opportunity to gain otherwise."

At Laura's workshop, WMG's Emma Stahl-Wert led the female crew that installed a rain harvesting tank and a greywater system, transforming Laura's flat backyard filled with bricks and Bermuda grass to a space that is "textured and colorful. I love walking through and checking on how everything is growing up from the tiny plants that it all started out as."

When asked about her perspective on how WMG has impacted the community, Laura says that "bringing awareness of little things we can do to brighten the landscape without wasting water is so useful! I look at the city differently now, seeing how things could be better or appreciating when something is done in a really efficient way. The more that this happens, the better we can help the city of Tucson save water and still be beautiful and green."

"Co-ops are awesome because the group comes up with solutions that I never would have thought of."
- Martha Retallick

"Uniting people to do something good for the world and to accomplish a goal together creates the kind of glue that is so often lacking in contemporary society."
- Marty Johnston

WVG
CO-OP

10 years

366

**CO-OP WORKSHOPS WITH YOU
IN 10 YEARS!**

ONE BACKYARD

Thanks to you, we're celebrating 10 years of water-harvesting work parties and growing roots in the Sonoran Desert through our Green Living Co-op workshops. Over the last decade, we've led 366 transformative Co-op workshops at people's homes in Tucson and the Phoenix Valley!

AT A TIME

Over 10 years, Co-op members helped install:

- 261 rain gardens with 476,838 gallon capacity to harvest rainwater.
- 92 rain tanks with 143,329 gallons of storage capacity.
- 79 greywater installations resulting in 440,548 gallons of greywater harvested annually.

Through all these projects -

Co-op members are harvesting over 5.1 million gallons of water annually¹!



Co-op members are doing more than harvesting water, they're planting shade trees, growing food, and creating native habitat. Over 10 years, Co-op members have planted 591 native shade trees and 182 fruit trees as well as 4,934 native shrubs, grasses, and wildflowers.

Our volunteers have worked up quite a sweat! Co-op members have volunteered 16,068 hours of time or 670 full days of labor to construct all these sustainable desert landscapes. That is worth \$387,881² of in-kind value to our Green Living Co-op mission.

With over 1,700 members, the Co-op is having a tremendous ripple effect, as each member becomes an ambassador for a new norm – living in harmony with the Sonoran desert by irrigating our landscapes with harvested water, recharging our aquifer, and reconnecting with our local community.

DOES ACTUALLY ADD UP!

¹ Annual stat is based on assumption that rain tanks will fill up three times over one year with winter and monsoon rains and that the rain garden earthworks can capture one inch storms and annual rainfall is nine inches.

² Stat is based on volunteer time being valued at \$24.69/hour from the Independent Sector: <https://independentsector.org/value-of-volunteer-time-2018/>

THE SANTA CRUZ RIVER FLOWS AT MARTINEZ HILL!

Historically, the Santa Cruz River had several sections of perennial (year-round) flows throughout the Tucson Basin, and was a lush marsh at the base of Sentinel peak. Due to massive groundwater pumping, groundwater levels plummeted to 150 to 250 feet below surface level, and we dried up the Santa Cruz River in the early to mid-1900s. Today there are various efforts to reverse that trend thanks to large-scale projects to ensure treated effluent water is released in the river; manage

stormwater flows to infiltrate and recharge in the floodplain; and recharge imported Colorado River water near the river. Next time you're driving on I-19, and crossing the river near Martinez Hill (San Xavier Road), notice if the river is flowing. Surface flows are becoming a much more common occurrence – let the river flow!

WMG's River Restoration Vision for the Santa Cruz River from Martinez Hill to Downtown

In the future, the Santa Cruz River's shallow, meandering flow has sections of year-round and seasonal flow from Martinez Hill (near San Xavier Road) to downtown Tucson. This flow is groundwater supported, running subsurface from the Great Mesquite Forest that has been restored on the San Xavier District lands of the Tohono O'odham Nation. The Great Mesquite Forest, once the largest mesquite bosque in the United States, has recovered most of its historic territory and supports over 80 summer bird species, thanks to the rich habitat provided by mesquite trees reaching up to 60 feet tall. Native fish are thriving with year-round flows,

with restored populations of Longfin dace, Gila chub, Sonora Sucker, Desert Sucker, and the Gila Topminnow. Small, family farms, found throughout the floodplain, provide fresh food to local markets while preserving open space with practices that protect precious groundwater and top-soil. The river is a cherished natural area for Tucson-area residents to walk, bike, and enjoy family gatherings along the river bank.

You can help make this vision a reality by joining the River Run Network and taking action at your home and in your neighborhood. Join today at: Watershedmg.org/RRN



FLOW365 VOLUNTEER JEN THORN HELPS WMG TRACK THE RILLITO'S FLOW

Jen Thorn, who has been a Flow365 monitor since early 2017, tracks the Rillito's flow at the Swan Road bridge. Through her community science work with WMG, she is now deeply connected to the local environment. "I've become much more conscious of when it rains and how much rain falls, because I record it each time. I have learned much more about native desert plants, watching them coming to life and going dormant during different seasons."

Jen is part of WMG's Flow365 monitoring team, one of 51 volunteers who helps track progress towards our goal of restoring groundwater aquifers and returning flow to our creeks. Monitoring includes recording status of flow and number of days of flow in our creeks by making regular visits, especially during the rainy season. Monitoring can also include checking groundwater levels in accessible wells and observing the plants and animals that depend on the riparian systems.

She appreciates being involved in the monitoring program because she can do it on her own schedule, with her husband and children joining her when time permits. Being a part of the organization is important to her and her family, she says, because "WMG's mission and plan is so exciting that we have wanted to stay involved."

Flow365 Monitors are now using a customized app on their phones, called Water Reporter, to record their monitoring data. The app feels like Facebook for water lovers. Monitors can check their feed to see what creeks are flowing around town thanks to posts from other Flow365 monitors, as well as share their own posts and comments.

Jen is an active poster on Water Reporter. She says, "I would love to see the historic flows restored to our rivers and streams. I hope to see the native plants and animals returning to these areas and people able to enjoy spending time there."

"Since moving to Tucson in 2006 from California, I have an appreciation for water that I never had before," shares Jen. "I see how life in the desert comes and goes with the presence or absence of water. Here, it is so easy to see the importance of water to life as well as how water enhances our lives."



Jen Thorn and her daughter at WMG's annual Tanque Verde Flow and Feast event.

SPRING 2019



Tucson CSA at the Living Lab! Pick up your share of local, organically grown veggies at the Living Lab on Wednesday afternoons. Sign up through Tucson Community Supported Agriculture (TucsonCSA.org) and add on extras like Barrio Bread, goat cheese, and sprout shares.



Field Studies Class: Composting Toilets Don't poop in potable water! Join the humanure revolution and stop flushing drinking water. Learn how on **January 24**.



Field Studies Class: Rain Garden Care Learn the nuances of rain garden care and how to keep your landscape happy, healthy, and long lasting on **April 18**.



Field Studies Class: Water Harvesting Irrigation Systems Learn the fundamentals of planning and installing irrigation systems compatible with rain tanks as well as your city water supply. Make the most of your precious water resources on **May 9**.

LIVING LAB & LEARNING CENTER EVENT CALENDAR

JANUARY

Rainwater Harvesting Class (Tucson Water Rebate)	Thu, Jan 10: 4 p.m.—7 p.m.
Living Lab & Learning Center Tour	Sat, Jan 12: 10 a.m.—11:30 a.m.
Greywater Harvesting Class (Tucson Water Rebate)	Thu, Jan 17: 4 p.m.—6 p.m.
Rainwater Harvesting Class (Tucson Water Rebate)	Sat, Jan 19: 9 a.m.—12 p.m.
*Field Studies Class: Composting Toilets	Thu, Jan 24: 5 p.m.—7:30 p.m.
Living Lab & Learning Center Tour	Wed, Jan 30: 10 a.m.—11:30 a.m.
Tucson CSA Pick-up	Every Wednesday, 4 p.m.—7 p.m.

FEBRUARY

Rainwater Harvesting Class (Tucson Water Rebate)	Sat, Feb 9: 9 a.m.—12 p.m.
Living Lab & Learning Center Tour	Sun, Feb 10: 10 a.m.—11:30 a.m.
Flow365 Training	Sat, Feb 16: 9 a.m.—11 a.m.
Rainwater Harvesting Class (Tucson Water Rebate)	Thu, Feb 21: 4 p.m.—7 p.m.
Living Lab & Learning Center Tour - Bilingual	Sat, Feb 23: 10 a.m.—11:30 a.m.
Tucson CSA Pick-up	Every Wednesday, 4 p.m.—7 p.m.

MARCH

*Water Harvesting Design Certification	Sun, March 3—Sun, March 10
Rainwater Harvesting Class (Tucson Water Rebate)	Thu, March 14: 4:30 p.m.—7:30 p.m.
Living Lab & Learning Center Tour	Sat, March 16: 9 a.m.—10:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate) Bilingual	Sat, March 23: 9 a.m.—12 p.m.
Living Lab & Learning Center Tour	Wed, March 27: 5:30 p.m.—7 p.m.
Greywater Harvesting Class (Tucson Water Rebate)	Thu, March 28: 5 p.m.—7 p.m.
*Field Studies Class: Pruning Native Shade Trees	Sat, March 30: 8 a.m.—11 a.m.
Tucson CSA Pick-up	Every Wednesday, 4 p.m.—7 p.m.

APRIL

Living Lab & Learning Center Tour	Sat, April 6: 9 a.m.—10:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate)	Sat, April 13: 9 a.m.—12 p.m.
*Field Studies Class: Rain Garden Care	Thu, April 18: 5 p.m.—7:30 p.m.
Living Lab & Learning Center Tour	Wed, April 24: 5:30 p.m.—7 p.m.
Rainwater Harvesting Class (Tucson Water Rebate)	Thu, April 25: 4:30 p.m.—7:30 p.m.
Tucson CSA Pick-up	Every Wednesday, 4 p.m.—7 p.m.

MAY

*Field Studies Class: Water Harvesting Irrigation Systems	Thu, May 9: 5 p.m.—7:30 p.m.
Rainwater Harvesting Class (Tucson Water Rebate)	Sat, May 11: 8 a.m.—11 a.m.
Greywater Harvesting Class (Tucson Water Rebate)	Thu, May 16: 5 p.m.—7 p.m.
Living Lab & Learning Center Tour - Bilingual	Sat, May 18: 8 a.m.—9:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate)	Thu, May 23: 4:30 p.m.—7:30 p.m.
Living Lab & Learning Center Tour	Wed, May 29: 6 p.m.—7:30 p.m.
Tucson CSA Pick-up	Every Wednesday, 4 p.m.—7 p.m.

Offerings are FREE unless denoted by an asterisk (*). See the website for costs. Please register online at Watershedmg.org/event/Tucson or call (520) 396-3266 x22.



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