

SEEDS OF PROGRESS

Cultivating Innovation & Growth

Maricopa County
Cooperative Extension

2022 ANNUAL REPORT



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^{*} To quickly navigate to specific sections, click on the page numbers.

NOTES FROM THE INTERIM DIRECTOR | 03



We're fortunate to call Maricopa County home – a place that embraces diversity, celebrates prosperity, and is welcoming to all.

Maricopa County is known for its booming urban population, yet it's also a leader in agricultural production and contributes distinct traits to the economy, society, and environment.

The county houses over 60% of the state's population, mainly in metropolitan areas. Remarkably, the agricultural sector, comprising nearly 2% of the population, plays a vital role in producing milk, alfalfa, cotton, and diverse vegetables. This dynamic fuels our Maricopa County Cooperative Extension (MCCE) team to offer a range of applied research and educational programs that cater to our growing population's needs.

MCCE programs include:

4-H Youth Development	Turfgrass
Early Childhood Development	Smartscape
Nutrition Programming	Project WET
Agricultural Literacy and STEM	Pesticide Safety Education
Field Crops and Integrated Pest Management (IPM)	Urban Horticulture- Maricopa Master Gardeners
Urban Agriculture Production, Small-Scale and Beginning Farmer	Arizona Center for Rural Leadership - Project CENTRL

Our work is made possible through the continued support of the **Maricopa County Board** of **Supervisors**. Their commitment to our programs is vital, and we deeply appreciate this partnership. Our dedicated volunteers contribute countless hours, valued at millions of dollars, offering assistance that extends far beyond any financial measure. We are also grateful to the **UArizona Cooperative Extension Director** whose unwavering support empowers our team to maintain our collaborative efforts across crucial areas that significantly benefit our Maricopa County communities.





NOTES FROM THE INTERIM DIRECTOR | 04

Our programs offer in-person, virtual, and hybrid classes, tailored for Maricopa County residents, offering them access to science-based, unbiased, and up-to-date information. They include the core focal points of the Cooperative Extension: **4-H Youth Development, Family, Consumer, and Health Sciences, Agriculture and Natural Resources.**



Maricopa County Cooperative Extension (MCCE) is home to approximately 70 team members, in both our main building and at remote campuses across the county, such as the <u>Roosevelt Early</u> Childhood Family Resource Center (FRC). Our programs offer a diverse range of applied research and educational opportunities tailored to meet the documented needs of our community.

MCCE Agents and staff actively seek, manage, and execute numerous grants, contracts, and gifts to secure essential resources for their program areas. Nearly 80% of our team is supported through these funding sources, resulting in an impressive return on investment (ROI) of slightly over \$9 for every dollar from our county budget. This exceptional ROI reflects the dedication, commitment, and excellence of our MCCE team as they strive to acquire resources and provide research-based, high-quality educational programs that enhance the lives of youth and adults throughout Maricopa County.

ROI = \$9 FOR EACH \$1 SPENT

I invite you to connect with us on social media, reach out to us through phone, send us an email, and/or visit our office to stay updated on the latest developments at MCCE.

Best Regards,

Ayman Mostafa, PhD

Ayman Mostafa

Interim Director of MCCE, Associate Area Agent, Agriculture Associate Regional Specialist, Entomology





22 CLUBS

enrolled

600+ Youth (5-19) with **60 VOLUNTEERS**

4-H is a positive youth development program providing experiences where youth 'learn by doing' through hands-on projects in one or more 4-H participation pathways of Agriculture, Camping, Civic Engagement, Community Service, Cultural Understanding, Healthy Living, Leadership, and STEM. The 2022-2023 4-H year continued to be a rebuilding year for 4-H, post COVID. Membership dues were reintroduced with clubs reporting strong interest in families wanting to participate in 4-H programs. A total of 22 clubs enrolled 600+ youth members between the ages of 5-19 with 60 certified 4-H adult volunteers supporting learning experiences in the youths' chosen projects.

ADULTS VOLUNTEERED for the 4-H youth program



Youth enrolled for the 2022-23 year, paying \$25 membership fee.

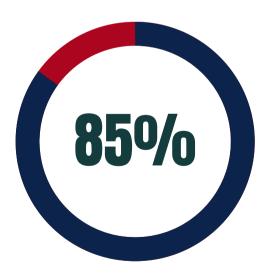
Maricopa County Fair was back in person and Maricopa County 4-H youth showed their animals, whether it was large livestock (beef, dairy cattle, dairy goat, goat, sheep and swine) or small livestock (poultry, pygmy goat, and rabbit). Bidders enthusiastically and generously supported the livestock auction enabling youth to purchase their next animal(s) or adding to their college funds. The 4-H General Exhibit building was filled with projects created by the youth themselves, including photography, sewing, modeling, fine arts, graphic design, cooking, cake decorating, food preservation, woodworking, welding, and much more.



4-H YOUTH DEVELOPMENT | 06

Maricopa County 4-H staff chaperoned and supported youth at statewide and national 4-H events. Thanks to Tractor Supply Company Activity Funds were also able to financially support youth at these prestigious leadership events of **AZ 4-H Summit on the UA Tucson Campus**, **JOLT**, (Journey: Opportunity for Leaders of Tomorrow) at James 4-H camp and 4-H National Congress in Atlanta, Georgia. Additionally, Maricopa County 4-H staff welcomed nearly fifty 9–14-year-old youth to Camp G.R.I.T> a four-night, five-day residential camping experience also at James 4-H Camp on Mingus Mountain between Prescott Valley and Jerome, AZ.

Through the Teen Outreach Program (TOP) approximately 40 at-risk and refugee adolescents from Asia, Turkey, and Central and South America participated in programs focusing on Healthy Living. Lessons addressed making safe choices, bullying, pregnancy prevention, financial literacy, health relationships, and other important themes. The teens also received tools to assist them in areas of self-awareness, social awareness, self-management and responsible decision making. More than 85% of TOP participants completed the program, which was presented in English, Spanish and Turkish.



More than 85% of participants completed the Teen
Outreach Program

CONTACTS

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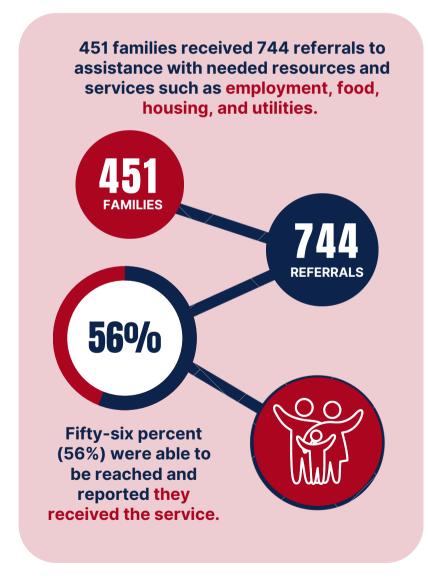
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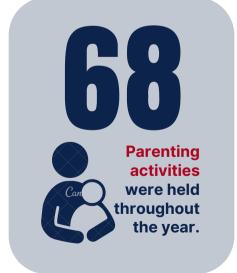


EARLY CHILDHOOD DEVELOPMENT 1 07

The University of Arizona-Roosevelt Early Childhood Family Resource Center provides programs that promote family resilience and engages families with children from birth to age 5. This award-winning family support program features parenting education, child development classes, Ready! For Kindergarten parent program, community resource and referral services, educational workshops, Play and Learn parent-child interaction, group support, and family and community engagement of all types. Educational programs teach, train, model and promote positive family interaction and experiences that help children reach their fullest potential and become ready for school and life and families to thrive.



FAMILIES
(Unduplicated)
with children under 5
participated in the
parenting activities.





EARLY CHILDHOOD DEVELOPMENT I 08

Research shows that programs such as this:



Help children achieve developmental milestones, preventing the need for special education and developmental services.

Increase positive parent and child interactions, which develops social and emotional skills.





Increase school readiness and literacy levels, which prepares children for success in reading by the end of third grade.

Strengthen families through increasing resilience factors and decreasing risk factors.



The Family Resource Center responds to incoming phone calls, texts, emails and social media requests; providing the latest information about resources for jobs, food healthcare, pantries, utility assistance, housing; and helps to address many other needs. A variety of in-person programs, including Car Seat Safety Education, Safe and Healthy Infant Sleep, Ready! For Kindergarten, Play and Learn groups, Family Night, are also provided. All programs and activities are free of charge and supported by funding from First Things First, Molina Complete Healthcare, Charles Schwab and in-kind support from Walmart and other partners. Programs are provided in English, Spanish and Arabic. The center is located at Martin Luther King, Jr. School in South Phoenix and open 40 hours per week.

Children have new car seats fitted for them because of parents completing the

Car Seat Safety Education Program.

CONTACT

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NUTRITION PROGRAMMING I 09

Research shows small positive changes in diet and physical activity are the key to lifelong health current research shows. Living healthy is not always easy, and it takes learning and practicing new, positive behaviors in a person's lifestyle to make them into lifelong habits. Our two long-standing nutrition programs, **Supplemental Nutrition Assistance Program-Education (SNAP-Ed) and Expanded Food and Nutrition Education Program (EFNEP)** reach into local communities and make contacts with youth, adults, and seniors.



EFNEP is active in five counties within the University of Arizona Cooperative Extension system. In Maricopa County, three part-time staff teach direct nutrition and physical activity education to adults in limited income areas.

3 STAFF MEMBERS

teaching in

MARICOPA COUNTY

SNAP-Ed, as part of the University of Arizona, supported by the AZ Health Zone (under the umbrella of the Arizona Department of Health Services), is an active partnership of over 10 Cooperative Extension offices and county health departments across the state. SNAP-Ed works to improve nutrition and feeding practices, reduce hunger, increase physical activity and decrease sedentary behaviors. Maricopa County SNAP-Ed faculty (1) and staff (23 with 1 more to hire this grant year) coordinate efforts throughout Maricopa County, engaging schools, community partners and residents to change PSE to increase access to affordable nutritious food and PA opportunities and in learning healthy habits.



Over 3,300 adults and youth (more than 17,000 face-to-face contacts) participated in SNAP-Ed and EFNEP programs with community partners and collaborators across the county.



PSE reaches areas of Active Living, Childhood Health, Gardens, and Food Systems in combination with Direct Education (e.g., community/school gardens and farmers markets), while keeping three main values and principles at the forefront, including Health Equity, Trauma Aware Approaches, and Community Engagement. Our newest addition in nutrition and healthy lifestyle programming in Maricopa County is the Diabetes Prevention Program (DPP), which started in Fall 2018. This year-long Center for Disease Control (CDC) program that teaches people diagnosed with pre-diabetes to focus on losing at least 5% of their body weight and exercising 150 minutes per week to decrease the risk of type 2 diabetes.

250 SITE LIASONS/ VOLUNTEERS





valued at \$60,000



\$1.9 MIL

\$1.9 million in funding was obtained for the DPP, SNAP-Ed and EFNEP programs for Maricopa County.

CONTACT

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60+ TEACHERS from 11 COUNTIES reaching

8000 STUDENTS

The Agricultural Literacy and STEM (Science, Technology, Engineering, and Mathematics) Education program provides educators with agricultural experiences to learn about the original STEM career: farming. They are able to draw connections to where food and fiber comes from and access school garden curriculum support to engage their students with agriculture. In 2022, the 32nd annual Arizona Agricultural Institute (AAI) provided over 60 teachers, who teach 8,000 students annually, with in-person tours to agricultural production sites and professional development hours. The goal is to showcase the importance of agriculture so educators can communicate the importance of ag to their students through hands-on experiences and to provide scientifically accurate information about agriculture. Participants learned about a variety of topics: wheat, compost, agritourism, growing watermelons and specialty crops, genetically engineered corn, precision agriculture, soil conservation, agricultural careers; and the beef, dairy, and yogurt processing industries.

The Ag Literacy and STEM Education program:

- **Connects STEM with agricultural concepts that** teachers can share with students.
 - Assists K-12 educators with school gardens to engage their students in agriculture.
 - **Educates** consumers about our Arizona agriculture industry and agriculture's impact on their life.



AAI Institute 2022

Provides K-12 educators with professional development opportunities to improve students' knowledge about agriculture, ensuring an agriculturally literate society, and communicating the source and value of agriculture as it affects our quality of life.

The Ag Literacy & STEM newsletter reaches over 900 people each month.

CONTACT

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Our Field Crops & Integrated Pest Management (IPM) continues to serve the diverse agricultural systems we have in Maricopa County and the state of Arizona, through the delivery of various in-person and virtual formats. Our applied research covers a wide range of topics that are both important and relevant for our clientele. Research focuses on reducing the use of broad-spectrum insecticides, minimizing the environmental footprint for our agricultural production, emphasizing practices to enhance soil health, and providing solutions to the many challenges our field crops producers face, especially those growing forage crops and small grains.

The Field Crops & IPM program introduces new selective chemistries, biological control approaches, and nutrient recommendations that optimize crop yields, and protect the environment, animals, and human health. For example, our previous applied research established an economic threshold level for alfalfa weevil. We are currently collaborating nationally with scientists from neighboring states to address issues related to the management of alfalfa pests by involving in a national grant to assess, conserve and promote the roles and use of biological control of various alfalfa pests.

2700 GROWERS & AGRICULTURAL PROFESSIONALS

in Arizona and neighboring states were contacted or attended the Program's events in-state and neighboring regions, which provided more than 110 Continuing Education Units.





Over 68% of surveyed Pest Control Advisors (PCAs) and growers adopted the use of more selective insecticides that are safer for the environment and human health. There was no use of these selective insecticides before being tested through the Program's relevant applied research. The Program's recommendations for alfalfa nutrient recommendations were established based on long-term research at Maricopa Agricultural Center (MAC) and commercial fields.



FIELD CROPS & IPM | 13

We continue to monitor new alfalfa pests, such as the alfalfa leaftier and the dot lined angle moth that started making yield destruction during the last year. We are conducting our research and collaborating with colleagues in neighboring states to bring solutions to mange these new pests.

The multi-year trials in sorghum conducted at MAC helped establish new recommendations regarding sugarcane aphid management. These results were illustrated in a **NEW Extension publication.**



Sugarcane Aphid, Melanaphis sacchari (Zehntner), (Hemiptera: Aphididae) in Arizona Sorghum

In 2016, the sugarcane aphid, Melanaphis sacchari Zehntner) (Hemiphera: Aphididae), was first detected and confirmed as a new pest of sorghum species in Artona, t Scientists first confirmed this invasive species or cophum in the USA in 2013 and since in nineteer states see well as in all soophum production regions of Melanaphic see well as in all soophum production regions of Melanaphic see well as in all strength of the second of the seco

A NEW Extension publication describes our multi-year study of alfalfa nutrient recommendations.



Effects of the Application of Balanced Phosphorus and Potassium Fertilizers on Alfalfa Yield and Yield Components

Ayman M. Mostafa, Worku Burayu and Kyle Harrin

Background

Background

Affalfa (Medicage sativa L.) stands normally provide the highest yield in their first two or three production years, and then start to decline thereafter, where sometimes re-establishing the stand becomes necessary. As re-establishing the stand becomes necessary. As re-establishing the stand becomes necessary. As re-establishing of stand is costly, it may be more profitable improve management practices that will keep stands high yielding for more years. Towards that end, several seesarch projects have been conducted in the low desert of Arizona. An on-farm study at Buckeye, Arizona indicated that application of phosphorus (P) fertilizer at 104 in P₂O₂ are significantly increased (6.7%) hay yield (Qitman et al. 2015). Other research has revealed that various phosphorus fertilizer sources had equal effect on affalfa forage at equivalent rates of application (Barayus tal 2016)



CONTACTS

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THE UNIVERSITY

OF ARIZONA

Solicited, secured, and received national and state grants; support from the **UArizona Cooperative Extension**; contracts; and gift funding totaling approximately \$1 million.

MILLION

The Urban Agriculture Production, Small-Scale and Beginning Farmer Program started in 2021, with initial support from Maricopa County and UArizona Cooperative Extension. The Program expanded its collaboration from the community, growers, and agriculture professionals to state and federal stakeholders. The Program is leading national, and state grant projects from the USDA-NRCE (Natural Resources Conservation Service) and USDA-FSA (Farm Service Agency) and the State of Arizona SCBG (AZ Specialty Crop Block Grant Program) to study better practices to manage resources of beginning and small-scale agricultural production that can significantly increase profitability, with sustaining the whole environmental system.

3500
GROWERS & AGRICULTURAL PROFESSIONALS

were contacted or attended the Program's events state-wide.



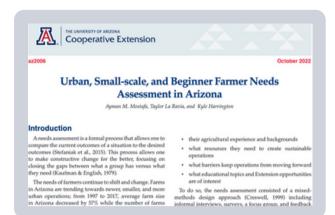
\$2.5 MIL

The program secured and received national and state grants, as well as financial support from the UArizona Cooperative Extension, and Maricopa County totaling approximately \$2,500,000 in 2022

The Program's active listserv used for monthly newsletters and updates, currently has over 800 subscribers, which is double the number of subscribers from the previous year. The Program held regular Urban Ag/Beginner Farmer field Days, seminars, workshops, and monthly virtual Urban Ag Hour and developed future plans for an interactive map on the website. The demonstration farm site at the Maricopa County Cooperative Extension Office is near completion, with outside production demonstration, outdoor classroom, various applied research trials and educational activities.



URBAN AG PRODUCTION | 15



The Urban Ag Program is set to deliver more educational training to our diverse and increasing clientele. Click the photo (left) to read the published results of its need assessment survey. These results captured the diverse needs of our clientele and opportunities for education and applied research in different areas of urban agricultural production.

The Program is expanding collaboration with national, state, and local stakeholders, including **USDA-NRCS & FSA**; the Cities of Phoenix, Tempe, Mesa and Avondale; and various stakeholders and partners.

The Urban Agriculture Program aims to:

Reduce impacts of agriculture on the environment and improve yield, quality, and economic returns for growers, especially historically underserved and economically challenged small-scale growers in the state.

Develop environment-friendly, and socio-economic options for beginning, urban and small-scale agriculture production in arid and semi-arid environments of Arizona.



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URBAN HORTICULTURE | 16



500 VOLUNTEERS Worked

21,370 HOURS valued at \$679,566

The Master Gardener (MG) Program within the Urban Horticulture Program of Maricopa County Cooperative Extension includes approximately 500 Certified Master Gardener volunteers. The Master Gardener Program teaches efficient and productive garden practices specific to the Sonoran Desert, with an emphasis on the latest research-based science provided by the University of Arizona. Public education areas include proper plant selection, placement, care and watering, plant problem diagnostics, and the identification and control of weeds and pests. Master Gardeners and University staff operate a Plant Help Desk which answered over 1100 garden and landscape questions from the public in 2022. The Urban Horticulture Program also supports the horticulture industry in Maricopa County through plant problem diagnosis and research-based outreach to nurseries, landscape managers, and arborists.

Our Horticulture and Master Gardener Program:

- Diagnoses plant problems and address issues of emerging pests and weeds.
 - Promotes and creates a community of Demonstration, Community, and School gardens.
- Creates a network of trained volunteers to answer garden and landscape questions from residents of Maricopa County.
- Educates the residents of Maricopa County on more efficient and effective gardening practices in the Sonoran Desert.



Over 1100 plant and landscape questions/calls were answered through the Master Gardener Plant Help Desk.

Over 7404 people had direct **contact** with our Horticulture and Master Gardener Programs.

CONTACT

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PESTICIDE SAFETY EDUCATION | 17

The Pesticide Safety Education Program (PSEP) is a statewide program designed to provide pesticide safety information and resources for people working in agricultural and structural pest control. PSEP offers programs in English and Spanish to better serve the linguistic needs of its clientele and coordinates outreach efforts with colleagues involved in state, county, and tribal pesticide programs.

The Pesticide Safety Education Program:



Provides pest management professionals with information and tools to protect themselves, other people, and the environment when handling pesticides or working in pesticide treated areas



Prepares individuals for state-mandated pesticide applicator certification exams.



Updates clientele on pesticide-related regulations, issues, and solutions, so they can make informed decisions when using pest control products.

In 2022, PSEP developed new training and outreach materials focusing on math for mixing, measuring, and applying pesticides. A hands-on workshop containing realistic pesticide application site measurement scenarios was piloted in December and was well received by attendees. Popular resources created through this project include a bilingual English/Spanish pocket-sized math and measurements conversion tool and interactive lesson plans for pesticide safety educators.







2484

GROWERS

TRIBAL PARTNERS

CERTIFIED APPLICATORS
AGRICULTURAL TEACHERS
PEST CONTROL ADVISORS
PESTICIDE SAFETY TRAINERS

RECEIVED BI-MONTHLY NOTICES ABOUT PESTICIDE COURSES AND RESOURCES THROUGH THE PSEP LISTSERV.



PSEP partners with the Arizona Department of Agriculture to ensure certified applicators receive training and informational resources to help them work safely and effectively with restricted-use pesticides.

agricultural pesticide handlers,
landscape professionals, and arborists received information about pesticide regulations, application technologies, general pesticide safety measures, emerging pesticiderelated concerns, and/or compliance issues during 18 pesticide safety sessions and continuing education events.

Pesticide applicator precertification and safety training was provided to 315 agricultural and structural pest management professionals during 8 inperson and virtual courses.

CONTACT

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Turfgrass field trials and in-person educational events were resumed in 2022, following lifting of pandemic restrictions. Turf weed control field trials examined the use of methiozolin herbicide for *Poa annua* control, goosegrass control with preemergence and postemergence herbicides, dallisgrass postemergence control, and native grasses weed control postemergence herbicides. Investigations on native grasses and alternative groundcovers (Kurapia) were continued. Studies on drip irrigation rates in Kurapia and comparisons with bermudagrass; and interplanting Kentucky bluegrass as overseeding into bermudagrass yielded interesting and useful results. The team hosted the National Turf Entomology Workshop at MCCE in April 2022. Participants from around the country shared their research findings and joined a field visit to the Statefarm Stadium, home of the Cardinals.

Kai Umeda, Area Agent: ANR/Turfgrass retired in June 2022. Since July 2022, Shaku Nair, Associate in Extension oversees the turfgrass science program, providing technical advice on various aspects of turfgrass management and organizing educational events.





Our Turfgrass Extension Program:



Improves turfgrass management strategies and practices for schools, cities, and professional turf facilities by conducting research and introducing innovative technologies to optimize water use and manage pests and weeds.



Provides educational opportunities for turf managers to learn how to decrease or improve inputs and improve turf quality with techniques that conserve water resources, implement integrated pest management, and reduce their environmental footprint.





Graduate student research investigated turfgrass beetle species infesting Arizona turf. Adults were identified with dichotomous keys and using DNA sequence data to molecularly confirm species identifications using the Barcode of Life Database. Four species were identified: *Cyclocephala pasadenae*, *Hybosorus illigeri*, *Aphodius sp.*, and *Strigoderma pimalis*. Peak flight activity of these species varied but all occurred between June 26 to August 10. This research provides crucial resources to inform best practices management strategies for turfgrass managers in Arizona.

A needs assessment conducted over the reporting period indicates that:



100% of respondents found value in the turfgrass program and its offerings.

Estimates of dollar amounts of annual savings to turf operations as a result of guidance or resources provided by the UA Turfgrass program ranged from

\$2,000 to \$200,000.

96% of respondents agreed the turfgrass program should be continued.



Among activities and services provided by the turfgrass program that respondents found especially useful were:





Access to turf experts & specialists (23%)



Educational events (e.g., seminars, field days, etc.) (23%)



Site visits by experts to provide technical advice (15%)



Publications (16%)



Applied problemsolving research (18%)



Undefined

Over 100 client queries specific to turf were resolved.

Over 300 turf and landscape personnel were trained in various aspects of turf management dueducational events presented inperson and online.

We provided **over 1,600 hours of continuing education.**

CONTACT

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Smartscape delivers landscape courses featuring information and hands-on experience focused on techniques of wise water-use appropriate for our region. The program serves a wide range of individuals associated with the landscape industry across Maricopa County. Smartscape offers research-based practices for design, installation, and care of water-efficient landscapes in an effort to help professionals promote attractive, yet sensible, landscapes for our desert environment.

114 VOLUNTEERS



WOLUNTEER HOURS WORKED



148 Participants

The program plans to implement an additional Advanced Smartscape course in 2023, to continue with its goal of offering educational opportunities to those who help make urban landscapes water efficient to ensure a sustainable for communities environment throughout Maricopa County.





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16 PARTICIPANTS from 12 AZ COUNTIES selected for

CLASS 32

While the Arizona Center for Rural Leadership serves the entire state of Arizona, we want to start by thanking retiring and long-serving volunteer board members of our partner 501c-3 and Maricopa County residents: Cheryl Goar Koury (Class 9, Arizona Nursery Association); Brett Cameron (Class 16 retired Arizona Department of Agriculture; & Doug Norton (Class 18, AgWest Farm Credit).







Collectively they have over 66 years dedicated to equipping and empowering leaders to meet the needs of Rural Arizona so that it is healthy vibrant and sustainable

Cheryl Goar Koury

Brett Cameron

Doug Norton

Class 31 brought a diverse group of backgrounds together as they traveled to Arizona, Sonora, MX, Gettysburg, PA and Washington, D.C. They represented production agriculture, public safety, conservation, local municipalities, government, livestock, education, public health, and water resources.

4 ALUMNI SERVING ON ARIZONA'S 56th LEGISLATURE











TIM DUNN (CLASS 12)

SINE KERR (CLASS 22)

representing portions of Maricopa County

Sixteen out of thirty-two applications from 12 Arizona counties were selected for Class 32, starting their tuition-free, learning experiential leadership development curriculum on June 1, 2023.





ARIZONA CENTER FOR RURAL LEADERSHIP | 23



We experienced record engagement with **over 700 Alumni in Action** across the state from the Grand Canyon to Nogales, Kingman to Duncan, St. Johns to Parker. Our first-ever Alumni Retreat informed the board about programmatic strategic roadmaps for the future. Alumni want greater connection to each other and to the organization through local, rural, short-term training opportunities for any leader in rural Arizona.



The application deadline for the next class is the fifteenth of March (3/15) annually. Interviews are in April, notifications sent in May and seminars are from June – June each year.

CONTACT

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As an extension program, Arizona Project WET (Water Education for Teachers) aims to bring the water knowledge of experts in the field from industry and academia into the K-12 education system by using the best educational techniques and inspiring students and teachers to explore our state's water resources. In 2022, APW continued its mission of building water literate leaders, educators, professionals, and community stewards by:

Deepening water related content knowledge for 159 teachers through professional development workshops.

Inspiring 5,875 students with <u>real-life water content in classroom and field programs</u> as well as **11,538 students at Arizona Water Festivals in 28 communities** around the state.

Bringing the expertise of <u>water professionals</u> to the K-12 classroom through engagement with over 30 cities, water companies, and partners statewide who supported our programs by volunteering at events, sponsorship, and sharing their content expertise in support of curriculum development.



CONTACT

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Lance Tubinaghtewa (Instructional Specialist) tubinaghtewa@arizona.edu



MISSION

To engage with people through applied research and education to improve lives, families, communities, the environment, and economies in Arizona and beyond.

VISION

To be a vital national leader in creating and applying knowledge to help people build thriving, sustainable lives, communities, and economies.

- We **empower people** to expand their capabilities to improve their lives.
- We develop capable leaders in all communities.
- We are a **trusted partner** in communities for leadership education.
- We are a well-known, effective, and accessible educational resource for all communities.
- We are recognized experts for developing and disseminating research-based information.

MARICOPA COUNTY COOPERATIVE EXTENSION 2022 ADVISORY BOARD

Cheryl Goar Koury: Executive Director, Arizona Nursery Association (District 1)
Jon Wootten: Chairman, Roots N Boots Queen Creek Pro Rodeo Committee; President,
Friends of Horseshoe Park; Staff Systems/Software Engineer, General Dynamics (District 1)
Sam Draper. Program Manager, Arizona Municipal Water Users Association (District 2)
John Augustine: Owner, Desert Tree Farms. Representing (District 3)

Tracy Johnson: Mill Manager, Lakin Cattle Company. Representing (District 4)

Tamara Ridge (Board Secretary): Office Manager, Paul Rovey Dairy (District 4)

Keyin Department Congress Manager, Department Desire (District 5)

Kevin Danzeisen: General Manager, Danzeisen Dairy (District 5)

MARICOPA COUNTY BOARD OF SUPERVISORS

Jack Sellers, District 1
Thomas Galvin, District 2
Bill Gates, District 3
Clint Hickman, District 4
Steve Gallardo, District 5





PROGRAM ACRONYM KEY

ANR - Agriculture and Natural Resources

DPP - Diabetes Prevention Program

EFNEP – Expanded Food and Nutrition

Education Program

FCHS - Family, Consumer and

Health Sciences

FRC - Family Resource Center

IPM – Integrated Pest Management

SNAP-Ed – Supplemental Nutrition

Assistance Program-Education

TOP - Teen Outreach Program

WET - Water Education for Teachers

YD - Youth Development

CENTRL - Center for Rural Leadership

*Click employee's name to visit their University of Arizona Profile Page.

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Maricopa County Cooperative Extension's journey over the past year has been marked by dedication, collaboration, and unwavering commitment to the betterment of our communities. As we reflect on the milestones achieved and challenges overcome, we are reminded of the profound impact that emerges when knowledge, innovation, and compassion intersect. Together, we have sowed the seeds of progress, cultivating a future where innovations, growth, and sustainability flourish. With renewed dedication, we look forward to the opportunities that lie ahead and remain committed to empowering Maricopa County residents with the tools and information they need to thrive.

