

UA GREEN FUND – 2011 REQUEST

Bringing Sustainability to Arizona's Communities Through Cooperative Extension and "Externships" – a Pilot Program

Project Description

Arizona Cooperative Extension (ACE), an outreach arm of The University of Arizona and a department of the College of Agriculture and Life Sciences (CALs), is "***taking the university to the people.***" Extension serves as a statewide network of knowledgeable faculty and staff that provides lifelong educational programs throughout the state in agriculture, youth development, natural resources, family, consumer and health sciences, community and economic development for all Arizonans. The University of Arizona is part of a nationwide educational network of scientists and educators who help people solve problems and put knowledge to use. Arizona Cooperative Extension provides a crucial link between the University and the citizens of this state.

A mini-summit on bridging the University's sustainability expertise with Extension programming was held on campus in May of 2010, with President Robert Shelton and CALs Dean Eugene Sander providing opening remarks. This mini-summit resulted in the idea of taking the University's sustainability efforts out to Arizona's communities through 'externships.' Cooperative Extension, through a mini-grant process, has awarded Extension's Climate, Natural Resources and Sustainability Signature Program Team \$4,200 to initiate this pilot program.

The Externship Pilot Program proposes to match students with an interest and/or experience in sustainability with Extension agents in up to four counties for the summer of 2011. The qualifying students will work directly with Extension faculty, preferably in their own home communities, to help launch a sustainability project. This request seeks funding to make it feasible to pilot our proposal in up to four counties.

Projects that Extension faculty have identified as Externship opportunities for the summer of 2011 are as follows:

Gila County - Farmers' Market Start-Up Project in Globe:

Under the supervision of the Natural Resources Extension Agent, an extern will work with a farmers' market manager, farmers' market board, and VISTA Volunteer to develop a promotional program for the Globe Farmers' Market. In addition, the extern will organize and coordinate with vendors for the farmers' market as well as assist the market manager with the logistics of opening and operating the weekly market.

Graham County - Rainwater Harvesting Project in Safford:

Discovery Park is an 80-acre campus administered by Eastern Arizona College (EAC) in Safford, Arizona. It has several buildings including an operational observatory, museum and class rooms, two building originally planned to house a mining and agriculture museum and education centers, an amphitheater area, a three acre pond and riparian area. Discovery Park's mission is to serve as a science education center for EAC students and schools

in the surrounding area. Graham County Cooperative Extension has had a three year partnership with EAC to teach a variety of water education subjects.

The Graham County Extension director will oversee an extern to:

- Investigate current water and irrigation systems at the Discovery Park's three-building complex and amphitheater and document findings;
- Plan and coordinate the installation of a water harvesting demonstration on one the buildings;
- Assist in the development of a xeriscape design and plan for the three-building complex and amphitheater;
- Compile information and draft a grant proposal to local funding sources to enhance the amphitheater to make it a useable educational facility and incorporating the water harvesting and xeriscape design as an educational resource.

La Paz County - Community Gardens in Parker:

The town of Parker has two new community gardens. One is located adjacent to an elementary school garden and the other one is a Future Farmers of America (FFA) club/community garden. Under the supervision of the La Paz County Extension Director, an extern will work with Extension instructional specialists in providing nutritional programs at the gardens, as well as develop long term goals for each of the gardens. In addition, the extern will work with Master Gardeners and Tribal Community Gardeners with plans to establish a new farmers' market in the area, where produce from the community gardens may be sold and programs offered.

Cochise County – Teachers' Summer Institute for Sustainability Curriculum:

Working with the county's Youth Development Extension Agent and VISTA Volunteer, an extern will organize and assist with a summer institute for teachers to teach them how to use a sustainability curriculum recently developed by Extension, how to install a rainwater harvesting system, a school garden (with composting), and how to integrate a school's gardening activities with farmers' markets.

Overall Pilot Program Purpose

The overall purpose of this Externship Pilot Program is to create opportunities for University students to bring their experience, skills and enthusiasm to their communities through innovative sustainability projects. At the same time, Arizona's communities will become keenly aware of the University's leadership role in applied research and innovation as it relates to sustainability. Recently, the Eller College of Management's Freshman Honor's Showcase Open House on December 9th, co-sponsored by the University's new Office of Sustainability, highlighted over 30 sustainability ideas from students. Extension agents and staff throughout Arizona are working to implement many similar ideas in their own communities.

Arizona Cooperative Extension, the UA Office of Sustainability, the Green Fund Committee and the University of Arizona's students are well positioned to help the state's residents create more sustainable households and communities. Students returning from their externship will do so with a better understanding of the University's outreach efforts through Cooperative Extension as well as renewed enthusiasm and knowledge about building sustainable

communities one project at a time. Because Cooperative Extension maintains working relationships with the major stakeholders across Arizona, the knowledge and products produced from this proposed pilot program are of particular importance for the viability of future sustainability outreach projects throughout the state.

Project Leaders:

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Cooperative Extension County Faculty

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Supporting Team Members

Cooperative Extension Climate, Natural Resources and Sustainability Signature Program Team

Mark Apel, co-Chair
Christopher Jones, co-Chair
Gregg Garfin, Deputy Director, Institute for Environment & Society
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Erik Glenn, Area Assistant Agent, Yavapai County
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Soyeon Shim, Director, Norton School of Family and Consumer Sciences

Collaborators

Joe Abraham, Director, UA Office of Sustainability

Aspects of Environmental Sustainability Addressed

Farmers' markets and community gardens are a vehicle to enhance the sustainability of rural areas. Farmers' markets return a higher percentage of our food expenditures to the local economy than buying from retail outlets that source abroad. Decreasing the distance that our food travels can reduce greenhouse gases generated from fossil-fuel driven transportation.

Communities benefit from an abundance of fresh and nutritious fruits and vegetables which promote healthy individuals and keeps health care costs down. The University's Farm Directory internet project (<http://www.localfresh.info/>) is a great resource for consumers, producers and farmers' market managers in Arizona.

Rainwater harvesting systems preclude the need to use potable water resources. If these systems are installed with solar panels and pumps, then they replace the need to use fossil fuel generated electricity.

Extension's sustainability curriculum is being designed for 3rd and 4th grade levels. This curriculum will be aligned with state educational standards, making it easier for teachers to use in their classrooms, and includes activities around gardening and rainwater harvesting. The goal is for 3rd and 4th grade children throughout the state to be introduced to environmental sustainability concepts, by incorporating science standards with interesting and fun activities.

Involvement with UA Students

The proposed Externship Pilot Program, if adequately funded, will place up to four students in four Arizona counties for the summer of 2011. Working with Extension professionals in communities preferably familiar to the UA student externs will foster a 'real world' experience that will further fine tune the students' academic and career aspirations. It will also provide them an opportunity to apply their own knowledge, organizational skills and problem-solving acumen acquired during their studies as students.

Project Timeline

Upon funding, the Externship Pilot Program team will begin actively recruiting qualified, potential student externs for the summer program. This will occur approximately from March 1 through May 1.

The proposed timeframe for the Externship Pilot Program coincides with the Summer Semester – approximately eight to ten weeks between the end of May and the beginning of August, 2011. The qualifying students will have time on either end of the Externship for travel and lodging arrangements in the community where they will be executing their project. Actual tasks and timelines will vary county by county, but will be generally include the following:

Week 1: Orientation to project and community by Lead Extension Agent.

Week 2: Organization and purchase of necessary materials.

Weeks 3-7: Implementation of project.

Weeks 8-9: Showcase and marketing of project at an organized community event.

Week 10: Wrap-up and reporting of project results.

Metrics

The Project Leaders and Support Team will develop specific qualitative and quantitative metrics to measure the impacts of each county Externship project, in terms of the increase of each participating community's knowledge and awareness about UA's commitment to

environmental sustainability. Outreach activities will be undertaken by each qualified extern and county Extension Agent for their project to promote the University's expertise in sustainability as it relates to rainwater harvesting, developing curricula, and resources for farmers' markets.

Quantitative metrics, which will be developed by each extern and Extension Agent, will track tangible *outcomes* related to the externship projects, such as:

- Gallons of water saved
- Numbers of participants
- Numbers of teachers adopting sustainability curricula, and students reached through their efforts

Each project team will also establish protocols for follow-up monitoring, which will be carried out by the Extension Agent, one year from the externship end date. This will allow us to measure the lasting impacts of the externship project. Another quantitative project metric is in the form of tangible *outputs*, such as project reports, photo documentation of the project (to be displayed on the Arizona Cooperative Extension sustainability web pages), and other documentation produced at the discretion of the extern (e.g., podcast, recorded webinar).

We will also develop qualitative metrics that will help us learn about the efficacy of outreach and Extension efforts. This will help improve our chances of ensuring continuation of the externship projects, by providing information that is valued by other funding sources, such as the USDA, NSF, charitable foundations, and so on. Qualitative metrics will include measures of extern and community learning and participant satisfaction with sustainability projects. Learning metrics, the specifics of which will be developed by the extern and Extension Agent, will provide evidence that participants acquired particular skills and knowledge over the course of their externship.