

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

ENVIRONMENT, WATER, LAND AND NATURAL RESOURCES

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	35%		44%	
111	Conservation and Efficient Use of Water	30%		25%	
112	Watershed Protection and Management	15%		10%	
121	Management of Range Resources	20%		21%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	11.0	0.0	21.0	0.0
Actual Paid Professional	9.4	0.0	1.6	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
230261	0	105161	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
230261	0	105161	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

ForestHealth and Wildfire Risk Reduction and Education

Issue

All forested communities in the White Mountains Zone of Arizona's Navajo, Apache and Greenlee counties are listed as "at risk communities" in the Federal Register with respect to catastrophic wildfire. The National Institute of Food and Agriculture (NIFA) and the University of Arizona have adopted Firewise USA as an applicable community and property owner education and implementation tool for comprehensively addressing wildland fire community risk. Local governments throughout the area determined that effectively addressing the risk to local communities was a priority and requested Cooperative Extension to provide leadership, on-the-ground development and programming facilitation. Working cooperatively, to provide intensive educational programming for local governments and community property associations, a Community Forest Health and Wildfire action team was initiated formed and trained by Cooperative Extension. Their mandate is to evaluate risk within the entire area on a landscape basis. After the evaluation they make recommendations on where to best focus resources that will most effectively mitigate risk.

What has been done

As part of an ongoing effort that continued in 2011, Arizona Cooperative Extension in Navajo County increased fire mitigation awareness by conducting a comprehensive program that includes education guides, training, assessments and a highly visible demonstration area in cooperation with local communities. The Navajo County Extension director was a co-author on the NRCD's national publication, NACD Community Wildfire Desk Guide, published in June 2009.

The handbook addresses how to prepare for, respond to and recover from a catastrophic wildfire in and around rural communities. The 2009 Sitgreaves Community Wildfire Protection Plan Report was developed and published through the Navajo County Cooperative Extension office. Five property associations and three local governments provided 27 individuals for a year-long training cycle in 2012.

Impacts reported in Report Overview

"Reading the Range"--Facilitating Range Monitoring in Arizona

Issue

Before 2000, range monitoring workshops had been offered for several years by the University of Arizona, yet range monitoring as a standard operating procedure on Arizona ranches had been sporadically adopted. In 2000, a USDA grant "Reading the Range" was obtained and demonstration ranches for range monitoring were established with technical assistance provided. It was hoped that this practice would encourage neighboring ranches to consider implementing similar practices on their ranches. With continued funding and agency collaboration on workshops, equipment and other needs, the practice of range monitoring has steadily gained more active participants within the ranching community over the past 12 years.

What has been done

In an effort organized through the Gila County Extension director, Reading the Range monitoring data was collected collaboratively by the NRCS, US Forest Service, ranchers and their employees and family members, private consultants, and other interested parties from August to December of 2012 on 152 key areas from 43 grazing allotments on the Tonto National Forest. Twenty Extension reports (9,402 pages total) were completed in 2012 for monitoring conducted in 2009 to 2012. A series of talks on various critical aspects of range management were presented at conferences and workshops for ranchers across the state in 2012, and a NEPA (National Environmental Policy Act) for Ranchers handbook was completed and published with input and sponsorship from industry commodity groups.

Impacts reported in Report Overview

Water Wise: Water Conservation in Cochise County

Issue

Arizona's increasing population has an enormous impact on vast tracts of public and private land. Between 2000 and 2010, Arizona's population increased by just under 25 percent (US Census Bureau). This rapid urbanization permanently alters natural watershed characteristics. According to the United States Geological Survey (2005), the average American uses between 80 and 100 gallons of water daily. Nationally, residential outdoor water use is about 30 percent, but in Arizona due to high temperatures and evaporation rates it is estimated that on average, outdoor water use in Arizona accounts for over 50 percent of a residence's total water consumption. One of the most significant perennial desert river reaches in the United States is the San Pedro River which lies within the Sierra Vista sub-watershed of Cochise County. Balancing the needs of the San Pedro River with the water needs of current and future residents is a top priority for the Cochise County Board of Supervisors, City of Sierra Vista officials, and numerous other government entities and residents.

What has been done?

Cochise County, the City of Sierra Vista, and Fort Huachuca have funded the Water Wise Youth, Water Wise Community Education (Sierra Vista Sub-watershed) and Water Wise & Energy Smart (Ft. Huachuca) programs since 1999. These extensive and comprehensive programs are developed and implemented as a team effort, with Cochise County Cooperative Extension responsible for overall program direction, curriculum, and communication with funding partners. Additional funding is provided by the Upper San Pedro Partnership.

Highlights: Water Wise Youth classroom presentations and after school programming activities reached 2,943 students during 2012. The Water Wise Community Education residential program included 45 on-site visits, 22 information racks, 36 workshops/events with 1,025 direct contacts, two xeriscape tours in cooperation with Master Gardeners (140 attendees), and two rainwater harvesting tours (84 attendees). The commercial program conducted eight Industrial, Commercial and Institutional (ICI) building audits. All Cochise County building permit applicants and Sierra Vista newcomers receive Water Wise materials. The Water Wise & Energy Smart program supports U.S. Army Fort Huachuca's water and energy conservation efforts through outreach and education to military personnel, their families, and all who work on post. In 2012, 43 energy audits were conducted, encompassing 432,472 square feet, and 49 school classes reached 1,105 students. The program's website had over 300 visitors from 33 states and 23 foreign countries, reflecting in part the wide geographical territory of its military customers.

Impacts reported in Report Overview

2. Brief description of the target audience

Natural resource managers, Governor's Office and state agencies, municipal organizations and leaders, households, consumers, youth, master gardener and master watershed programs

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	25742	30000	4376	5000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	50	227	277

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Effectiveness of the research program will be used to reach direct and indirect contacts

Year	Actual
2012	3

Output #2

Output Measure

- Number of individuals participating in educational programs

Year	Actual
2012	25742

Output #3

Output Measure

- Number of individuals adopting new technology

Year	Actual
2012	2731

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Effectiveness of research programs will be based on publications, external grant support, and integration into existing extension programs
2	Number of individuals gaining knowledge by participating in educational programs
3	Volunteers completing Master Gardening training
4	Create awareness and increase knowledge

Outcome #1

1. Outcome Measures

Effectiveness of research programs will be based on publications, external grant support, and integration into existing extension programs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

All participants in the research and extension programs and the respective clientele for these programs care.

What has been done

Arizona has a fully integrated research and extension program and all faculty strongly pursue competitive grants.

Results

More than \$1.5 million dollars in non USDA grants were obtained to support this program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #2

1. Outcome Measures

Number of individuals gaining knowledge by participating in educational programs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	25000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #3

1. Outcome Measures

Volunteers completing Master Gardening training

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	952

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Master Gardener program is an important component of our Cooperative Extension program.

What has been done

952 volunteers donated their time teaching others.

Results

Volunteers donated over 29,000 hours in 2012, which @\$21/hr is valued at over \$630,000

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #4

1. Outcome Measures

Create awareness and increase knowledge

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

All recipients of our programs care about increasing their knowledge.

What has been done

Materials were distributed to more than 250,000 adults and youth in the state.

Results

The majority [est 75%] of the recipients indicated a change in behavior resulting from our programs and materials.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
121	Management of Range Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

All programs are currently still in the process of being evaluated internally for existing areas to preserve, protect, or enhance, as well as areas to discontinue or modify. We are planning to seek further input from stakeholders, advisory committees, and focus groups utilizing needs assessments with the assistance and expertise of an Evaluation Specialist [to be hired]. See State DefinedOutcomes.

Key Items of Evaluation