

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Sustainable Energy and Integrated 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
104	Protect Soil from Harmful Effects of Natural Elements		10%		
111	Conservation and Efficient Use of Water		10%		
112	Watershed Protection and Management		10%		
123	Management and Sustainability of Forest Resources		15%		
125	Agroforestry		10%		
131	Alternative Uses of Land		10%		
132	Weather and Climate		15%		
133	Pollution Prevention and Mitigation		10%		
141	Air Resource Protection and Management		10%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	2.5	0.0	0.0
Actual Paid Professional	0.0	4.2	0.0	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
0	321786	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	213369	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	100000	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This program area involved training and technical assistance primarily related to adoption of improved land, water, energy and environmental protection practices. It included:

- The Water Quality Education Program
- Energy Audits and Alternative Energy Education
- Water Festivals
- Other natural resource education opportunities for youth
- Annual Alabama Forestry Camp
- Technical Assistance to landowners, hunters and the general public regarding the control of persistent nuisance wildlife

2. Brief description of the target audience

The target audience consisted of youths and adults, rural and urban agriculture clientele with needs in the areas of natural resources, water quality and environmental management, including environmental health and justice issues, as well as issues in climate change and sustainable energy.

3. How was eXtension used?

eXtension was used as general source of educational materials.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2622	2730	958	737

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Underserved Black Belt area grade school students will be exposed to specific age appropriate educational activities designed to reinforce current classroom instructional curriculums. While targeting the youth, parents, volunteers and community leaders will also be provided necessary instructions in responsible environmental stewardship practices and principles, including information on climate change and sustainable energy.

Year	Actual
2013	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Youth participants will acquire knowledge, skills and awareness regarding well head protection, point/non-point source pollution, environmental stewardship, management of natural resources and water conservation,as well as climate change and sustainable energy. Adult participants will incorporate skills/knowledge and change behavior related to: pollution prevention, management of water resources, litter disposal and waste management, conservation and recycling of natural resources and safe and effective use of fertilizers and pesticides. Awareness will be acquired in climate change and sustainable energy.

Outcome #1

1. Outcome Measures

Youth participants will acquire knowledge, skills and awareness regarding well head protection, point/non-point source pollution, environmental stewardship, management of natural resources and water conservation, as well as climate change and sustainable energy. Adult participants will incorporate skills/knowledge and change behavior related to: pollution prevention, management of water resources, litter disposal and waste management, conservation and recycling of natural resources and safe and effective use of fertilizers and pesticides. Awareness will be acquired in climate change and sustainable energy.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Annually TUCE County Agents along with the Alabama Cooperative System, various Alabama public agencies, and private entities including landowners join County Public School Systems to provide natural resource educational opportunities to youth in various middle and high school grades. In two counties, course and curriculum training were provided to educate fifth grade students and their teachers about multiple use management of Alabama's forest, water, soil and wildlife.

What has been done

Youth educational meetings concerning forestry for 4th grade students served more than 158 students, and 30 adults comprising teachers, instructors, volunteers and presenters. In Sumter and Marengo Counties, ten (10) different elementary schools introduced nearly 400 students to the many lifelong lessons of natural resources and environmental education. Students were exposed to topics such as the importance of forestry thinning, disease identification, role of forest as a provider of food, water and shelter for wildlife. Students also learned the importance of healthy soils to all living things. Other meetings in Lowndes County prepared twenty-one (21) youths and eight (8) adults for tree identification programs that will help them to place ID tags on trees along walking trails in a local park.

Results

Teachers and group leaders indicated that 86 percent of students increased their knowledge on the discussed topics. More than 73 percent of students increased knowledge of forestry through

participation in the outdoor class learning activity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
125	Agroforestry
131	Alternative Uses of Land
132	Weather and Climate
133	Pollution Prevention and Mitigation
141	Air Resource Protection and Management

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 Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Activities scheduled for this program area were affected by extreme weather conditions causing some field activities to be cancelled and competing programmatic challenges which led to lower participation rates for some workshops.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Teachers and group leaders of students who attended the water festivals and other youth education workshops indicated that most of the students increased their knowledge on the discussed topics. More than 75% of students increased knowledge of forestry information through participation in the outdoor class learning activity. Ten property owners were also assisted with one-on-one visits to provide assistance on managing and controlling nuisance wildlife such as Wild Hogs, Beavers, and Coyotes for landowners, hunters, and the general public.

A number of energy audits, site evaluations, and renewable energy workshops have been conducted throughout the state of Alabama including 6 workshops on the economic benefit of bio-energy, and 12 energy audits, site evaluations and feasibility studies.

Key Items of Evaluation

As much as efforts in forestry and other natural resources management education continue, more emphasis is being laid on renewable energy and energy audit education, water quality education and environmental protection for youth and adults.