

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change - Preserving Water Quality of North Florida Watersheds

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%
111	Conservation and Efficient Use of Water				35%
133	Pollution Prevention and Mitigation				30%
	Total				100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	5.0
Actual Paid	0.0	0.0	0.0	4.7
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	0	0	517740
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	258870
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

The activities in the planned program include: Evaluation of runoff soil erosion using Mesh Pad method, determination of spatial soil redeposition pattern of irrigation boom path, recording inventory of aquatic biota information.

2. Brief description of the target audience

The target audience for the planned program include: crop producers in the Apalachicola River Basin, small and limited resource farmers, extension personnel, environmental personnel and local, state and federal agencies.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	2	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Inventory of land use/land cover patterns in the Apalachicola River Basin.

Year	Actual
2014	0

Output #2

Output Measure

- Data on soil erosion and nutrient loss under irrigated and non irrigated conditions.

Year	Actual
2014	0

Output #3

Output Measure

- Baseline aquatic insects data on two major water streams in the basin.

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Information on changing land-use patterns in the Apalachicola River Watershed.
2	Comparison of soil erosion measurements by the Mesh-bag method and the simulation results of RUSLE (the Universal Soil Loss Equation).
3	Identification of best management practices for efficient management of soil, water and nutrients.
4	Improvements of stream ecosystems.

Outcome #1

1. Outcome Measures

Information on changing land-use patterns in the Apalachicola River Watershed.

2. Associated Institution Types

- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Citizens of Florida and other stakeholders care to protect the water quality

What has been done

The effect of various land use practices on water quality and soil loss was determined in North Florida Watershed.

Results

The information obtained in this work was used to validate the water assessment model.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water

Outcome #2

1. Outcome Measures

Comparison of soil erosion measurements by the Mesh-bag method and the simulation results of RUSLE (the Universal Soil Loss Equation).

2. Associated Institution Types

- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers and extension service, state officials care to protect the water quality

What has been done

Runoff soil erosion was determined using mesh-pad method on a 7.3 ha farm in North Florida.

Results

The results indicate that the mesh pad method can detect <0.1 ton/h of erosion soil loss and can also determine spatial soil redeposition pattern of irrigation path.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #3

1. Outcome Measures

Identification of best management practices for efficient management of soil, water and nutrients.

2. Associated Institution Types

- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Policy makers, State government officials, and farmers care to protect water and soil quality

What has been done

The recommendations have been made with respect to timing and management activities.

Results

The research allowed better timing of field activities

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation

Outcome #4

1. Outcome Measures

Improvements of stream ecosystems.

2. Associated Institution Types

- 1890 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Policy makers, State government officials, NRCS, Environmentalists, Ecologist care to preserve biodiversities.

What has been done

The work was done on aquatic insect surveys of North Florida Watershed.

Results

A number of new state records and species new to science were discovered. Caddisfly species records were inputted into a relational database and the specimens were incorporated in the aquatic insect research collection.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Public Policy changes
- Government Regulations
- Other (Suitable study site)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Soil erosion loss less than 0.1 ton/h can be more accurately determined using mesh-bag method as compared to run off plot method. New Caddisfly species were determined in North Florida Watershed.

Key Items of Evaluation

Validation of mesh bag field technology for measuring soil erosion and new caddisfly species.