

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Natural Resources & the Environment

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	10%		1%	
111	Conservation and Efficient Use of Water	5%		2%	
112	Watershed Protection and Management	40%		10%	
123	Management and Sustainability of Forest Resources	20%		17%	
124	Urban Forestry	0%		4%	
125	Agroforestry	0%		3%	
133	Pollution Prevention and Mitigation	10%		8%	
134	Outdoor Recreation	0%		1%	
135	Aquatic and Terrestrial Wildlife	5%		12%	
215	Biological Control of Pests Affecting Plants	0%		2%	
402	Engineering Systems and Equipment	0%		2%	
403	Waste Disposal, Recycling, and Reuse	5%		12%	
405	Drainage and Irrigation Systems and Facilities	0%		2%	
511	New and Improved Non-Food Products and Processes	0%		6%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%		4%	
604	Marketing and Distribution Practices	0%		4%	
605	Natural Resource and Environmental Economics	5%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890

Plan	20.0	0.0	27.0	0.0
Actual Paid	7.8	0.0	23.4	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
446941	0	608735	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
446941	0	608735	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
814791	0	5313452	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Activities planned include extension outreach using group and individual methods and mass media; social media tools; research experiments; result demonstrations; and field days incorporating the latest technologies. Both commercial and private pesticide applicator certification programs will continue and the Louisiana Master Farmer Program (LMFP) will be expanded with nutrient management as a focus area. Research efforts on the Coastal Plants program will be reduced and coordination of natural resource extension and research activities by the Center for Natural Resource Economics and Policy (CNREP) will continue.

2. Brief description of the target audience

Target audiences include Louisiana farmers and livestock producers, coastal managers, wetlands stakeholders, commercial and recreational fishermen, hunters, forest land owners/managers and youth.

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	8580	246689	1444	0

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

Patent Applications Submitted

Year: 2014
 Actual: 1

Patents listed

Carbon-Encased Metal Nanoparticles, Method of Synthesis, and Methods of Use

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	5	91	96

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Web page visits
 Not reporting on this Output for this Annual Report

Output #2

Output Measure

- Number of Web page views

Year	Actual
2014	1251513

Output #3

Output Measure

- Number of farmers completing the educational phase of the Louisiana Master Farmer program

Year	Actual
2014	450

Output #4

Output Measure

- Number of private pesticide applicators receiving initial certification

Year	Actual
2014	409

Output #5

Output Measure

- Number of commercial pesticide applicators receiving initial certification

Year	Actual
2014	623

Output #6

Output Measure

- Number of private pesticide applicators recertified

Year	Actual
2014	2175

Output #7

Output Measure

- Number of commercial pesticide applicators recertified

Year	Actual
2014	3196

Output #8

Output Measure

- Number of Master Loggers certified
Not reporting on this Output for this Annual Report

Output #9

Output Measure

- Number of new Master Farmers certified

Year	Actual
2014	7

Output #10

Output Measure

- Number of pesticide training sessions conducted

Year	Actual
2014	130

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of forest landowners who adopt recommended practices for profitability and environmental sustainability
2	Adoption of recommended practices by farmers that lead to reduced non-point source pollution in Louisiana waterways.
3	Louisiana residents adopt recommended practices that lead to protection and sustainability of the environment.

Outcome #1

1. Outcome Measures

Percentage of forest landowners who adopt recommended practices for profitability and environmental sustainability

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Adoption of recommended practices by farmers that lead to reduced non-point source pollution in Louisiana waterways.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nutrient loss and erosion continue to challenge the integrity and productivity of our streams, rivers and oceans. Agricultural production is considered to be a primary source resulting dead zones caused by hypoxia. Addressing these issues can be a challenge to producers and other contributing entities because of the need to find solutions that protect water quality and at the same time ensuring the economic viability of agricultural productivity.

What has been done

The LMFP has continued to have increased participation each year with more producer participation in all three Phases of the program. The Phase 1 environmental education provides an awareness of state and federal regulations, water and soil conservation issues, point and nonpoint source pollution, coastal zone issues and conservation planning to document stewardship of the on-farm natural resources. Phase 2 requires a producer to attend a conservation-based field day or workshop where specific best management practices (BMPs) are demonstrated and discussed. This also may include pasture walks, soil quality workshops and

other commodity-specific demonstrations that are approved by LMFP faculty and partners. In phase 3 the producer must request a farm-specific Resource Management System (RMS) level conservation plan on their entire farming operation with NRCS. A resource inventory of the farming operation is done and the RMS plan is written on the acreage within a sub-watershed (12 digit HUC). This process may take a lengthy amount of time depending on acreage, goals of the producer, financial capabilities and overall resource concerns on the selected property. Once the plan is developed and fully implemented, this phase is considered to be complete. The AgCenter confirms that Phase 1 & 2 are completed, NRCS state conservationist confirms the RMS is fully implemented and recommends that the producer is granted certification. Certification is granted by the Commissioner of the LA Department of Agriculture and Forestry allowed by ACT 145 passed by the Louisiana Legislature.

Results

In 2014 over 450 new participants attended phase 1 and 2 resulting in a total of 2,496 farmers completing phase 1 and 2,239 completing phase 2 of the LMFP to date. Participants in the LMFP have over 1.7 million acres that currently have some implemented BMPs and are participating in current Farm Bill conservation programs. Currently there are 206 Certified LMFs that have completed all program requirements and are "presumed" to be in compliance with Louisiana's soil and water conservation requirements.

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
133	Pollution Prevention and Mitigation
403	Waste Disposal, Recycling, and Reuse

Outcome #3

1. Outcome Measures

Louisiana residents adopt recommended practices that lead to protection and sustainability of the environment.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Gulf hypoxic-zone is significantly influenced by both coastal waterways and inland streams. Hypoxia reduction is widely recognized as a significant issue for economic and environmental sustainability. Although Louisiana's contribution to GOM hypoxia may be considered relatively small when compared to other locations in the Mississippi Valley, Louisiana does contribute through its smaller coastal waterways. The AgCenter recognizes that in order for educational efforts to be successful in mitigating water quality impairments in estuarine and near-coastal water bodies, and to address the Gulf Hypoxia issue, efforts must address the sources of these pollutants regardless of their geographical location in the state. For that reason much of the work has been directed towards non-traditional audiences such as youth, homeowners, and other land uses. Additionally, 2014 saw an increase in regulatory concern regarding dairy lagoon wastewater.

What has been done

To improve citizen and youth pro-action and awareness about these important dynamics, the AgCenter developed several programs to educate and encourage land-owners about the impacts of runoff from various sources. Sources include marinas activities, urban/suburban lawn care, individualized sewage treatment, management of aquaculture ponds, effects of oil and fuel spills, and diminishing healthy coastal ecosystems. Youth in various coastal communities are often engaged as a part of these various outreach strategies. Much of the agricultural sector is targeted by the AgCenter's Master Farmer Program which is reported in a separate state-defined program outcome in this Planned Program Area. The coastal zone non-agricultural sector, which is the focus of this assessment, has significant activities and land-use that influence ecosystem health. Response to the BP oil spill is also a continuing part of efforts.

Results

By following research-based extension recommendations, animal producers managed wastewater lagoons, stored manure and litter according to recommendations, and reestablished riparian zones. Water quality programs educated students, teachers, and volunteers. Teacher workshops and field trips have provided classroom teachers with knowledge and techniques that significantly enhance their teaching on water quality, and Louisiana ecosystem topics. Marina managers have used extension recommendations to prevent fuel and oil spills in coastal Louisiana. Trained teachers have reached about 20,000 students in the classroom. Local parish governments have restored water quality by adopting recommendations based on on-site research to improve hydrology and recreational opportunities. These efforts have resulted in improved water quality and enhanced recreation. Educational efforts with suburban audiences have led to another stream (Bogue Falaya River) being delisted from the impaired stream list by state officials.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

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

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}