

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Resilient Communities and Economies

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
402	Engineering Systems and Equipment	0%		5%	
601	Economics of Agricultural Production and Farm Management	0%		5%	
602	Business Management, Finance, and Taxation	0%		5%	
607	Consumer Economics	0%		10%	
608	Community Resource Planning and Development	20%		0%	
610	Domestic Policy Analysis	0%		15%	
611	Foreign Policy and Programs	0%		5%	
704	Nutrition and Hunger in the Population	0%		5%	
721	Insects and Other Pests Affecting Humans	10%		10%	
722	Zoonotic Diseases and Parasites Affecting Humans	0%		10%	
723	Hazards to Human Health and Safety	10%		5%	
801	Individual and Family Resource Management	0%		5%	
802	Human Development and Family Well-Being	0%		5%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	50%		5%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	10%		0%	
903	Communication, Education, and Information Delivery	0%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

	Extension		Research
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Year: 2012	1862		1890	
	1862	1890	1862	1890
Plan	4.0	0.0	4.0	0.0
Actual Paid Professional	18.0	0.0	6.7	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
328159	0	91717	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
328159	0	91717	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1155657	0	524351	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Resilient Communities and Economies initiative includes:

- **Economic Development**
 - Agritourism, a program conducted in the north Louisiana Delta region
 - Connect My LA, a program designed to create broadband awareness and increase use in an 18-parish region which includes the Delta region and Florida parishes
- **Disaster Resilience - Place-based**
 - Financial Disaster Resilience for Local Governments
 - Agrosecurity Planning; Hurricane and Nuclear Exercises
- **Disaster Resilience and Sustainability - People-based**
 - Sustainable Housing / LaHouse
 - Disaster Recovery and Mitigation
- **Risk Appreciation (Awareness, Avoidance and Data Enhancement)**
 - Interactive, online hazard maps, building code education
 - Sea Level Rise, Subsidence and Storm Surge
- **The Extension Disaster Education Network (EDEN)**

2. Brief description of the target audience

Target audiences for this initiative include families, elected officials, youth, emergency and floodplain managers, small business owners and governmental and non-governmental agencies.

- Agritourism focuses on agricultural landowners
- Hurricane, storm surge, sea level rise and financial disaster resilience focus on the southern third of the state (hurricane prone region).
- Sustainable housing, flood mitigation, hazard mapping, community resilience and agrosecurity are

statewide.

- Housing and risk awareness programs target building and hazard management industry professionals (and their associations); their clientele and youth.
- Agrosecurity engages producers, processors of food commodities and agribusiness.
- EDEN is a national network. Its primary audience is Extension educators in the 50 states and three territories. It targets consumers through its eXtension communities of practice for disaster issues.
- The flood risk awareness and mitigation programs also have a national audience through service in the Association of State Floodplain Managers and Natural Hazard Mitigation Association.

3. How was eXtension used?

- The Home Energy content in eXtension is used for in-state housing programs.
- Links to eXtension materials are provided to clientele as educational materials in the Agritourism program.
- eXtension is used by EDEN to reach consumers nationally with information on Agrosecurity and Floods (the formal CoP) as well as emerging disaster issues (Avian Influenza, Drought). Louisiana contributes to eXtension in the area of community resilience, providing leadership and input for EDEN's eXtension Flood CoP and the Home Energy CoP.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	34426	528208	7387	0

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

Patent Applications Submitted

Year: 2012
 Actual: 2

Patents listed

Use of Bacillus Thuringiensis as Biological Control Against Subterranean Termites
 Wakeboard Release Mechanism

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	19	10	29

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Web page views

Year	Actual
2012	2117991

Output #2

Output Measure

- Number of Web page visits

Year	Actual
2012	1784254

Output #3

Output Measure

- Number of LaHouse Resource Center visitors

Year	Actual
2012	3220

Output #4

Output Measure

- Number of building professionals who participated in sustainable housing educational activities (seminars, tours, technical assistance)

Year	Actual
2012	1890

Output #5

Output Measure

- Number of consumer contacts in LaHouse sustainable housing and landscaping educational activities

Year	Actual
2012	1910

Output #6

Output Measure

- Number of LaHouse Facebook followers (Likes)

Year	Actual
2012	260

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Entrepreneurs and community leaders gain knowledge of sustainable economic development strategies in relationship to operating an e-business and leadership.
2	Outcome: Local governments seek understanding of threats from sea level rise combined with land subsidence. Indicator: Number of parish governments engaged in Sea Level Rise/Subsidence studies and data acquisition
3	Outcome: Youth/Faculty create benchmarks to support continued SLR/Subsidence education. Indicator: Number of school and community resilience program benchmarks established
4	Outcome: Adoption of high performance building and retrofitting practices by consumers. Indicator: Percent of visitors who built, bought, developed plans or remodeled after participation that adopted an average of 13 high-performance building or retrofit practices based on their educational experience.
5	Outcome: Specification or recommendation of high performance building and retrofitting practices by professionals Indicator: Percent of professionals who specified or recommended an average of 12 high performance building or retrofitting practices based on their educational experience
6	Agricultural landowners gain knowledge of sustainable economic development strategies in agritourism.
7	Extension educators use the Extension Disaster Education Network (EDEN) Intranet to enhance disaster education programming.
8	Outcome: Flood map portal service is used routinely by clientele. Indicator: Percent of visits made by return visitors
9	Outcome: Local officials and stakeholders in Louisiana coastal parishes have better understanding of their financial vulnerability to future tropical natural disasters and their resources to become more resilient. Indicator: Number of local officials and stakeholders engaged in the case study workshops
10	Outcome: Communities are better prepared to defend and protect food and agriculture assets. Indicator: Number of communities trained in agricultural disaster preparedness.
11	Outcome: Individuals, families, small businesses and agricultural producers gain knowledge of the threat of disasters, how to prepare themselves and their property to minimize damage, recover from disaster impacts, and rebuild hazard-resistant homes. Indicator: Percent increase in Web visits through electronic billboard advertising.
12	Outcome: Working with voluntary organizations extends reach of Extension research-based information. Indicator: Percent of participants indicating increase in capacity to help disaster victims cope with disaster impacts.

Outcome #1

1. Outcome Measures

Entrepreneurs and community leaders gain knowledge of sustainable economic development strategies in relationship to operating an e-business and leadership.

2. Associated Institution Types

- 1862 Extension

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)

Access to reliable high-speed internet affects the ability of individuals and businesses in many ways. Gathering information, buying and selling products, banking, paying bills, and job searching make broadband connectivity a necessity for any entity desiring to function efficiently and with the most recent information. Research shows that rural communities, such as in the Louisiana Delta and Florida parishes often lag behind the national average for both broadband accessibility and adoption. More than 1/3 of rural Louisiana residents do not have internet at home and another 10% have only dial-up. The Connect My LA Rural Broadband Initiative was designed to educate residents, business owners and local government representatives and promote the economic and social importance of broadband adoption.

What has been done

Eight modules have been developed for this project: What is Broadband, Introduction to Online Business, Introduction to Selling Online, Introduction to Tablets, Introduction to Twitter, iNutrition-MyPlate, Louisiana Market Maker, and Using Social Media for Business and Personal Life. During this reporting period, 63 workshops (1,062 participants) delivered information in the project area.

Results

The overall evaluation for this project is scheduled for next year to gauge whether learning about broadband technology in this program created a greater demand for access or increased use of available broadband. Following a recent broadband education multi-parish event, 90.5% of participants indicated they had a better understanding of the importance of broadband education and 81% indicated their personal knowledge had been increased. Most participants (90.5%) indicated a greater awareness of the available Web tools and would access one or more of these new tools.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Outcome: Local governments seek understanding of threats from sea level rise combined with land subsidence. Indicator: Number of parish governments engaged in Sea Level Rise/Subsidence studies and data acquisition

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	3

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Louisiana communities are affected by flooding from rain, rising rivers and hurricane storm surge. Vulnerability increases as sea level rises, the ground subsides and coastal marshes disappear. Models used in managing threats through regulation, insurance and education too often rely on inadequate ground elevation data, particularly in areas where federal levees have subsided and non-federal levees have been built. Locals are aware of the inconsistency in flood impact model outputs and thus question the viability of management systems based on their results.

What has been done

Extension specialists collected survey data for levees in three parishes. The LSU AgCenter also managed a "proof of concept" project that resulted in USGS collecting high resolution LIDAR data for levees using low-level flights. The data was offered to parish managers for future planning and resource evaluation.

Results

The data and new mass-collection systems will have significant impacts on improving storm threat forecasts and pre/post management in coastal communities. These improvements will help build credibility for the tools and information created using the tools, which leads to more informed

participation by residents and reduced community vulnerability.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Outcome: Youth/Faculty create benchmarks to support continued SLR/Subsidence education.
Indicator: Number of school and community resilience program benchmarks established

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	28

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Half of Vermilion parish flooded during Hurricanes Rita (2005) and Ike (2008) due to storm surge. Most of Vermilion's communities are 25-30 miles inland, but less than 15 feet above sea level. Erosion, subsidence and land loss will lead to higher future flood risk. Understanding these threats and initiating measures to cope with the risks will enable people and communities to be resilient in the aftermath of future storms. Community resilience is ideally introduced to middle and high school students who will be the future planners for living in our coastal communities.

What has been done

The LSU AgCenter, in partnership with Louisiana Sea Grant and local jurisdictions, developed and delivered a resilience program to 1200 students in 23 schools (grades 4-12) in Vermilion Parish. Students learned about storm surge, subsidence, sea level rise and protecting their homes from future storms. They also learned how to use the LSU AgCenter Floodmaps portal to find the ground elevation and flood threat where they live, and installed educational benchmarks in 23 schools and five public facilities around the parish.

Results

The 4-H programs leave behind energetic students and faculty across Vermilion Parish who appreciate the impact that coastal erosion, subsidence and sea level rise will have on their communities. Elevation benchmarks that students installed at their schools will continue to remind students, faculty and families that the Gulf is only 5 -12 feet away (vertically), not the 25-30 miles measured as horizontal distance from open water. Agents involved received the Excellence in Teamwork Award in 4-H for 2012, thus drawing more attention to the subject matter. Programs have been requested by two additional coastal parishes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
903	Communication, Education, and Information Delivery

Outcome #4

1. Outcome Measures

Outcome: Adoption of high performance building and retrofitting practices by consumers. Indicator: Percent of visitors who built, bought, developed plans or remodeled after participation that adopted an average of 13 high-performance building or retrofit practices based on their educational experience.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	93

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

High performance, sustainable housing addresses national, state and household needs for increased energy and water efficiency; environmental protection; disaster mitigation; human health; household economic stability, and state and national economic recovery. Progress in this area depends on an educated public.

What has been done

Consumers continue to learn more about sustainable housing and building science through the tours, demonstrations and other educational opportunities conducted by LSU AgCenter faculty and volunteers at the LaHouse Resource Center. Additional LCES outreach included websites (www.lsuagcenter.com/LaHouse), a Facebook page, publication distribution, mass media releases and consumer healthy home awareness outreach activities. LaHouse faculty worked with a student team to design and build LaHouse Mobile, a traveling exhibit featuring both new construction and home improvement best practices.

Results

The consumer population who renovated existing homes or developed plans for new home construction adopted an average of 13 recommended best practices, including nine (9) energy-saving home improvements. These 2012 consumer audience energy practice adoptions have the potential to save an estimated \$1.76 million and 82,792 million BTUs per year, and reduce emissions of 12,782 tons of CO₂/year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #5

1. Outcome Measures

Outcome: Specification or recommendation of high performance building and retrofitting practices by professionals
Indicator: Percent of professionals who specified or recommended an average of 12 high performance building or retrofitting practices based on their educational experience

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

High performance, sustainable housing addresses national, state and household needs for increased energy and water efficiency; environmental protection; disaster mitigation; human

health; household economic stability, and state and national economic recovery. In order to respond to consumer demands, building professionals must be knowledgeable on these topics.

What has been done

LCES outreach included 65 educational seminars and events. These seminars and events included technical tours for students and professional groups, technical assistance to individuals, training classes for weatherization providers (WAP), seminars for contractors and other housing professionals, and Healthy Home courses for health and housing professionals.

Results

The housing industry professional audience adopted an average of 12 practices, most commonly energy saving, high-wind design and lead-safe renovation methods. It is projected that the 2012 professional audience energy practices adopted by the builders, developers and designers save an estimated \$1.51 million and 62,258 million BTUs per year and reduce annual CO2 emissions by 7875 tons.

Additionally, trained specialists in home weatherization are improving efficiency in hundreds of low-income resident homes; builders and designers learned regionally appropriate green and hazard resistant building best practices that reduce disaster costs and environmental impacts; 90 additional lead-certified contractors protect children and workers from lead poisoning; and, health and housing professionals learned principles of healthy housing to improve environmental health of families and children.

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #6

1. Outcome Measures

Agricultural landowners gain knowledge of sustainable economic development strategies in agritourism.

2. Associated Institution Types

- 1862 Extension

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)

Agricultural landowners increased interest in agritourism after passage of the 2008 agritourism limited liability legislation. A 40% growth in outdoor related recreation was reported in the 2012 U.S. Fish and Wildlife Survey. The 2007 Agricultural Census reported that 170 Louisiana farms engaged in agritourism enterprises. Agritourism adds to the sustainability of the family farm and rural economies by inclusion in the tourism sector.

What has been done

Five educational workshops addressing revenue potential and best management practices in agritourism have been hosted around the state in partnership with Mississippi State University's Natural Resource Enterprise program and the National Agricultural Law Center to encourage development of agritourism enterprises. The Miss-Lou Rural Tourism Association convenes an annual summit to promote the tourism cluster in parishes along the Louisiana and Mississippi borders. Information on how to start, grow or sustain agritourism ventures has also been delivered by mail, e-mail, website, blog site, Twitter and Facebook. Approximately, \$350,000 in grant dollars has been designated to develop an agritourism infrastructure in one of the poorest regions of Louisiana, the Delta.

Results

Participants attending workshops believed they could earn approximately \$16,500 in additional income by implementing enterprise development and conservation regimes on personal properties based on information delivered at the workshop. A report issued by the Stennis Institute revealed that the growth rate in the tourism sector of the geographic area defined by the Miss Lou Rural Tourism Association gained over 15% from 2007 until 2010 which was ten percentage points above the national growth rate. Participants (100%) who attended the Miss-Lou Rural Tourism Summit reported that information from the workshop would improve tourism in their respective communities. Development of paddling/canoe trails throughout the Delta region in Louisiana was included in the application materials submitted by Poverty Point State Historic Site which received the United States' nomination for the World Heritage List. Development of four paddling/canoeing trails within the Tensas River National Wildlife Refuge provides more opportunities for visitors and assisted in helping the refuge be recognized at the federal level. Travelers who visit refuges must find lodging and meals outside those federal areas.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development
903	Communication, Education, and Information Delivery

Outcome #7

1. Outcome Measures

Extension educators use the Extension Disaster Education Network (EDEN) Intranet to enhance disaster education programming.

2. Associated Institution Types

- 1862 Extension

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)

Disaster education, including food and agricultural defense, touches all Extension program areas but is not an identified USDA Extension program. Prior to the emergence of Extension Disaster Education Network (EDEN), states responded in isolation to disasters in their states, duplicating efforts and materials. Disaster education attained a higher profile with the September 11, 2001 terrorist attacks and the subsequent recognition of the vulnerability of the nation's food supply to threats from disease and extreme events, whether of natural or terrorist origin.

What has been done

The LSU AgCenter hosts, develops and maintains a public-facing website authored through a password-protected national authoring content-managed system. Interconnected with the public and public-authoring sites is the EDEN virtual workplace. A primary feature of the "office" space is individual collaboration sites for program area work groups, leadership teams, and special project groups such as Invasive Species and multi-state response to major disasters. The project directors represented EDEN at four national forums: Tri-State Voluntary Organizations Active in Disasters (VOAD), NIFA Public Issues Leadership, American Association of Flood Plain Manager's National Floodproofing Conference and the Natural Hazards Research and Applications Workshops, while participating also in Executive and Standing Committee meetings and conference calls.

Results

With the national EDEN Website, www.EDEN.lsu.edu, linked to dozens of state-Extension Websites, EDEN information easily reaches millions across the U.S. As an example, for the 2012 drought, 29,000 people used information from a single EDEN-based state website over two weeks during July. Public and password-protected sites supported collaborative efforts to explore EDEN's becoming an international network. EDEN enhances disaster education programming by fostering interagency collaboration and partnerships. A partnership with LSU's National Center for

Biomedical Research and Training was supported and reflected on the public site. EDEN's Strengthening Community Agrosecurity Preparedness (S-CAP) program, supported by the EDEN website, has been delivered to more than 19 states supporting community leaders who are interested in improving food and agricultural defense. Although EDEN's impact has not been evaluated recently, EDEN is improving and reducing redundancy in Extension's disaster programming nationally.

4. Associated Knowledge Areas

KA Code	Knowledge Area
903	Communication, Education, and Information Delivery

Outcome #8

1. Outcome Measures

Outcome: Flood map portal service is used routinely by clientele. Indicator: Percent of visits made by return visitors

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	61

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Following the 2005 hurricanes, Louisiana adopted a statewide residential building code, which includes design criteria based on flood and wind hazards. The building requirements at a specified geographic location depend on the threat of flood and wind damage as defined in Flood Insurance Rate Maps (FIRMs) and Basic Wind Speed (BWS), from the International Residential Code. Flood maps were already in use, but were being re-evaluated and improved with massive updates. At the same time, the state did not have a simple method for officials and consumers to determine the Basic Wind Speed.

What has been done

As part of its hurricane recovery and rebuilding education program, the LSU AgCenter created an online, interactive mapping system that consumers, local officials and industry professionals can use to determine Basic Wind Speed (for building code), Flood Zone (from the FIRM, including archived, current, preliminary and future map versions), and the elevation at any point within

Louisiana. The site is publicized when disasters are pending and when communities are receiving new flood maps.

Results

While jurisdictions must confirm zones and elevations with engineering surveys, the information on the portal provides all users close approximations for site-specific development and property purchases. The site also is used by the public to learn how proposed changes to the FIRMs will affect them personally. Usage patterns show that the Flood Map Portal system is being used for routine flood zone determinations in support of real estate, mortgages, construction and in monitoring Katrina/Rita recovery and mitigation projects. The savings in time and money have not been estimated, but the value of the system is indicated by the large number of views by return visitors and the speed at which users let us know that something is amiss with the site. The state floodplain coordinator has informed FEMA that floodplain officials value the LSU AgCenter site over the FEMA region site, and that she would like FEMA to continue to support the LSU AgCenter site.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
903	Communication, Education, and Information Delivery

Outcome #9

1. Outcome Measures

Outcome: Local officials and stakeholders in Louisiana coastal parishes have better understanding of their financial vulnerability to future tropical natural disasters and their resources to become more resilient. Indicator: Number of local officials and stakeholders engaged in the case study workshops

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Preparedness for a community's local government for a tropical storm includes more than a debris removal contract and a levee system that can withstand a Category 5 hurricane. Unfortunately, many local governments are not prepared with financial resources required to manage immediate and long-term issues of recovery and reconstruction. Regrettably, this fact did not become evident until many local governments in South Louisiana attempted to recover from Hurricane Gustav in 2008. Cost of debris removal and emergency operations for some parishes (counties) were so high, many local governments did not have the finances to cover a 25 percent cost-share requirement imposed by the federal government.

What has been done

Researchers and Extension specialists conducted case studies with local parish governments in Louisiana to assess the financial vulnerability of these governments to a future tropical natural disaster. By combining the probability of a future storm occurring in a community with historical costs of cleanup and emergency activities, researchers identified risk-adjusted costs to these governments and recommended alternative policy options to assist these local governments in being financially prepared for the next tropical natural disaster.

Results

An action manual was developed for Extension specialists to deliver this program among vulnerable communities who may be financially unprepared. A USDA Special Needs Grant was sought and received, with endorsement by the Extension Disaster Education Network (EDEN). The Special Needs funds will support training exercises for approximately 100 Extension specialists in the Western, Eastern and Central Gulf of Mexico regions. This information will summarize the local government financial disaster preparation extension program and help officials modify the local government financial tropical storm preparation extension program with respect to other types of natural disasters. It will also be used to develop a self-study course for the generalized local government financial disaster program to be delivered through the EDEN website and eXtension Community of Practice. The impacts are expected to include financial savings to local governments (specifically interest savings) by reducing or eliminating the need for loans to fund natural disaster expenses.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
903	Communication, Education, and Information Delivery

Outcome #10

1. Outcome Measures

Outcome: Communities are better prepared to defend and protect food and agriculture assets.
Indicator: Number of communities trained in agricultural disaster preparedness.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	17

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Louisiana agriculture is vulnerable to threats from floods due to local rain, rising Mississippi, Red and Atchafalaya Rivers, and hurricane storm surge. Louisiana producers, agribusiness and consumers also face the possibility of crop contamination from three nuclear electrical generation plants--two in-state and one in Mississippi, which has 10- and 50-mile protection zones in north Louisiana. Producers also need to know how to protect their crops and agribusiness facilities from agroterrorism. The primary responsibility for planning lies with the emergency management community (state and local), the Louisiana Department of Agriculture and Forestry, the Louisiana Department of Environmental Quality (nuclear) and the owners of the nuclear plants.

What has been done

Louisiana hosted its first EDEN Strengthening Community Agrosecurity Planning workshop. Extension (14 specialists and agents) hosted 25 representatives of Farm Service Agency, public health, parish emergency managers, cattle, seafood, poultry and sugar industries in planning for threats to agriculture, representing nine communities. County agents representing six communities joined representatives of multiple state agencies in the La. Army National Guard's annual hurricane exercise, practicing air reconnaissance of stranded cattle. La. Extension and State Veterinarians conducted a pilot test in two communities of an emergency alert system designed to support rapid communication of plant/animal threats to owners of small farms and backyard flocks, through feed stores.

Results

The most tangible impact of the agrosecurity work is associated with consumer education and participation in the Ingestion Pathway graded exercises for nuclear power plants. Failure of the plants on these exercises can result in suspension of their operating licenses. While planning, preparedness and interagency communication before events happen has value, it is much more

difficult to quantify the benefits of preventing contamination or national spread of contamination, or the benefit on knowing you and the guys with the choppers can work together to save livestock during floods. We are working with our national network (EDEN) to develop impact measures for these activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
903	Communication, Education, and Information Delivery

Outcome #11

1. Outcome Measures

Outcome: Individuals, families, small businesses and agricultural producers gain knowledge of the threat of disasters, how to prepare themselves and their property to minimize damage, recover from disaster impacts, and rebuild hazard-resistant homes. Indicator: Percent increase in Web visits through electronic billboard advertising.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	22

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Yearly weather events threaten the emotional and economic stability of individuals, families, agricultural producers and communities most vulnerable to flooding (disasters). Resources are needed to help those affected understand and become aware of issues related to flood effects (disasters), best practices when preparing for a flood, recover from the impacts and how best to mitigate future damage.

What has been done

Through print and online resources, news media and social media, impacted individuals, families, and agricultural producers were provided current and research-based information addressing preparation and recovery needs. Electronic Billboard advertising was purchased to increase awareness of the resources.

Results

The LSU AgCenter flood website had 22,000 visits during the spring 2012 flood event (February-April), representing a 56% increase in new visits. Specific disaster related web pages advertised by electronic billboards in four south Louisiana markets yielded a 22% increase of page views within the disaster preparedness channel during the time the billboards were displayed compared to 90 days prior. Sites saw increase activity in the Hurricane Isaac response as well.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
903	Communication, Education, and Information Delivery

Outcome #12

1. Outcome Measures

Outcome: Working with voluntary organizations extends reach of Extension research-based information. Indicator: Percent of participants indicating increase in capacity to help disaster victims cope with disaster impacts.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	90

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Yearly weather events threaten the emotional and economic stability of individuals, families, agricultural producers and communities most vulnerable to flooding (disasters). The mental health effects of such events need to be addressed in addition to the physical impacts, and voluntary workers need to be prepared to face these challenges.

What has been done

LSU AgCenter coordinated efforts and extended outreach through Louisiana VOAD. Strategic faculty and nonprofit agencies were trained and provided tools to faculty and community partners in community resilience strategies.

Results

Following a workshop on resilient communities involving representatives from 18 state and nonprofit agencies 90% of participants felt prepared to address post-disaster stress reactions in their community, 20% higher than prior to the training. Further, 90% of participants felt they possessed skills for engaging in supportive communications with people who have experienced a disaster, 10% above the prior to training number.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The LSU AgCenter's Sustainable Housing program was evaluated using electronic survey method with consumer and professional program participants from 2009-2012.

Consumer participants' survey results revealed:

- 25% adopted 20 recommended sustainable housing practices
- 50% adopted 9 recommended sustainable housing practices
- 40% were willing to invest up to 20% more in verified high-performance home features
- Their self-rated knowledge level increased from an average of 2.3 to 4.0 on a 5-point scale
- They shared what they learned with an average of 24 others

Professional participants' survey results revealed:

- 25% adopted 25 recommended sustainable housing practices
- Two thirds of the builders/designers indicated they would be building high performance new homes
- Their self-rated knowledge level increased from an average of 2.8 to 4.1 on a 5-point scale

- They shared what they learned with an average of 40 others

This evaluation was used to provide a basis for estimating potential impact via modeled annual energy savings, energy cost savings and reduction in pollution emissions. Impact was determined for those consumers who remodeled, bought, built or developed specific plans and professionals who build or design homes. The energy, cost and pollution emissions savings were derived from the Energy Gauge models of the effect of each specific energy-saving improvement compared to a typical existing inefficient benchmark home in Louisiana.

Key Items of Evaluation