

# 2011 Montana State University Extension Plan of Work

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## I. Plan Overview

### 1. Brief Summary about Plan Of Work

A profile of Montana shows trends Extension must consider when developing education offerings. It must also be noted that education is not the answer to all concerns, but it certainly can impact many. Therefore, MSU Extension, with limited resources, has selected six major initiatives around which programming will be designed.

Youth Development &dash will contribute to Montana youth developing the confidence, competence and character to become critical thinkers, active citizens, caring human beings, innately curious, self-sufficient, adaptable to change, and connected to community.

Agriculture Sustainability and Profitability &dash will ensure that Montana farm and ranch owner/operators know how to sustain profitability and maintain land stewardship at a level that provides for continual production and a desirable quality of life.

Natural Resources and Environments &dash will contribute to Montanans supporting and understanding good land and natural resource stewardship.

Family Issues, Resources and Environments &dash will empower Montana individuals/ families so they can manage their finances, build sound relationships and attain a home environment that establishes and maintains strong and healthy families.

Nutrition-Food Safety-Healthy Lifestyles &dash will contribute to all Montanans having access to a safe and adequate food supply, adopting healthy lifestyles, and living in communities that promote good nutrition.

Community and Economic Development &dash will assist Montana communities in using proven economic and community development strategies that will improve the conditions impacting business and family life.

Montana's profile shows a state that is stable in almost all sectors and looking to the future with a slow but continued growth indicated. The 2007 population of the state is 957,861 (44<sup>th</sup> in the nation), an increase of 1% from a year ago. (Montana Department of Commerce). It is interesting to note that these people are:

- 90.8% white; 6.5% Native American
- 23.1% under the age of 18; 76.9% 18 & over; 13.8% are 65 and over
- 50% are male; 50% are female

Further population highlights show:

\$30,886 is the average personal income

13.6% live in poverty

17.1% do not have health insurance coverage

(US Bureau of Economic Analysis)

In 2010, it is predicted that Montana's population will be 968,598 and top 1,000,000 in 2020. The Census Bureau projects that Montana's 65 and older population will increase by 64% between 2005 and 2020. Economic issues associated with the aging population may include increased healthcare costs, increased healthcare jobs, potential reluctance of the aging population to support school funding, and Social Security and Medicare insolvency. (Montana Economy at a Glance) In general, the population is shifting from east to west, impacting both sides of the state.

The economy continues a stable, steady upward growth. In 2005, economic activity increased by 4.6%, earning a rank of ninth in the nation. (Census and Economic Information Center, MT Dept of Commerce)

Agriculture continues as the largest basic industry followed by tourism, mining and gas/oil production. It must be recognized that Montana is a natural resource based state and shares common problems and issues with neighboring states. A snapshot of Montana agriculture reveals what entities make it number one in the state's economy.

#### Top Agriculture Commodities:

Cattle and Calves

Wheat

Barley

Hay

#### Top Livestock Inventory

Cattle and Calves

Layers (20 weeks old +)

Sheep/lambs

Hogs/pigs

Bee Colonies

Top Agricultural Exports  
 Wheat and wheat products  
 Feeds  
 Vegetables  
 Sugar beets (for sugar)  
 Corn for silage

Top Crop Items  
 All Wheat for grain  
 Forage  
 Barley  
 Feed grains and products

According to the Office of Public Instruction, there are 96,938 elementary students, a decrease of about 1.6% reflecting a 10 year trend. The high school numbers have not declined as much, but have dropped about 3,000 in the past six years to a 47,480 enrollment in 2006-07. The state has a 3.9% high school drop out rate, 24<sup>th</sup> in the nation.

**Estimated Number of Professional FTEs/SYs total in the State.**

Year	Extension		Research	
	1862	1890	1862	1890
2011	40.7	0.0	0.0	0.0
2012	40.7	0.0	0.0	0.0
2013	40.7	0.0	0.0	0.0
2014	40.7	0.0	0.0	0.0
2015	40.7	0.0	0.0	0.0

**II. Merit Review Process**

**1. The Merit Review Process that will be Employed during the 5-Year POW Cycle**

- External University Panel
- Expert Peer Review

**2. Brief Explanation**

The Annual Report was reviewed by the Merit Review Committee according to the process outlined in the Plan of Work. The committee, composed of Dr. LeRoy Luft (ID Director of Extension-retired) has served 3 years, Jim DeBree (WY Director of Extension-retired) has served 6 years, and Jim Johannes (MSU Extension Area Supervisor/Director of Programming and FRTEP-retired) has served 2 years on the committee.

The comments made by the committee were used by administration, specialists and county agents in planning and conducting programs. Cross/multi county programming involving state specialists when appropriate are encouraged.

The Merit Review process provided valuable information and suggestions to improve Extension's programs. Their comments include:

We have found the educational programs to be relevant to the needs of the state, timely and successful. We applaud efforts to arrange the state programs under the umbrella of the newly developed national priorities and note significant work is exhibited under each.

The Global Food Security and Hunger&ndashAg Sustainability and Profitability programs are well done and demonstrate their worth for investment made by taxpayer dollars.

Climate Change-Natural Resources and Environment programs are important to a state so dependant on natural resources. Extension is doing a good job working with landowners (small and large) providing management education.

Youth Development remains a flagship program. Evaluation data shows marked results in life skills development: communication skills, problem solving, controlling emotions, handling stress and the value of community

service by creating HERO packs for military youth.

Family Issues, Resources and Environment programs show evidence Extension education is addressing emerging needs with programs that are making a difference. Estate planning, housing and tools for caregivers are important to families.

Community and Economic Development programs help people be prepared to respond to emergencies, serve on public boards and handle conflict resolution effectively. Sustainable Energy is an important area for education in the state. Extension is providing valuable information used for sound decision making.

Childhood Obesity programs center on nutrition and increased exercise. This is a difficult program area, but adopting the health based approach vs. the weight based approach seems to be effective.

Food Safety programs range from production to table and represent education with which Extension has long been associated. There is a renewed interest requiring more educational opportunities.

Nutrition and Healthy Lifestyles provide programs focused on good health. Nutrition, exercise and health care are at the heart of the educational efforts.

The Merit Review comments were largely positive however, they had suggestions to be considered in future programming: expanding public board education to non-profit organizations, developing a Master Food Preserver Program, reaching out to schools and the Office of Public Instruction with childhood obesity programs. The Merit Review feedback continues to provide valuable information for program planning.

### III. Evaluation of Multis & Joint Activities

#### 1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Montana is active in planning and delivering programs in collaboration with other states in the region and nationally. The state is situated among other rural states that share similar issues, so partnering on program development and delivery makes sense. The stakeholder input process used by Montana Extension is not designed to cross state lines, but continual communication by professional faculty in neighboring counties serves as a check point for common program needs and concerns. It is not unusual to find clientele from "across the borders" using the closest county office for a resource; this may not be in their own state.

Additionally, specialists from states around the country form collaborations to address shared concerns. It is a specialist's role to stay abreast of emerging issues and develop educational efforts that address current situations and to apprise county faculty and clientele about these new trends. Specialists also interface with state, regional and national organizations to stay current in their respective fields.

#### 2. How will the planned programs address the needs of under-served and under-represented populations of the

A multi state collaboration can share techniques that have been effective in reaching under served or under represented audiences. These "best practices" are proven techniques that work and armed with these ideas, planned programs can be more targeted to particular audiences. Examples of programs currently targeting an under-served or under-represented audience are the Food Stamp Nutrition education (FSNE) program and Small Acreage Land Owner and American Indian Probate Reform Act (AIPRA) workshops. The new Indian Probate Act will have significant impact on ownership of tribal lands and "kitchen table" discussions (small, more intimate groups) are planned to spread information on that topic. Youth Ag Loans for reservation youth will provide resources to start a heard of cattle or sheep.

#### 3. How will the planned programs describe the expected outcomes and impacts?

Using the "logic model" as the primary planning tool, outcomes and impacts are identified at the beginning of the process. This method is becoming the accepted way of planning Extension programs all across the country, so multi state or joint collaborations start their work with the end result in mind.

Training on the use of effective evaluation tools to determine outcomes and impacts is becoming more common. Again, the "how" to collect the "what", is being established during the planning process. States commonly share successful evaluation techniques and/or replicate studies that describe the impact of program efforts. Montana Extension continues to put a priority on this type of training for both state and county personnel.

#### 4. How will the planned programs result in improved program effectiveness and/or efficiency?

Like Montana, many of its neighboring states have limited resources to apply to any single issue. Past experience has shown that by planning across state lines, it is possible to bring needed expertise to bear on a particular problem. Experience has also shown that this approach is often more comprehensive and thorough in program design and delivery while at the same time, eliminating duplication of time and money.

### IV. Stakeholder Input

#### 1. Actions taken to seek stakeholder input that encourages their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public

##### **Brief explanation.**

The stakeholder input process for MSU Extension gives citizens an opportunity to identify issues and needs that can be addressed through education. In an effort to be thorough in gathering data, both local and state level stakeholders are asked for input.

At the local level, every County and Reservation Extension unit in the state has a process to gather input that involves a cross-section of local leadership and citizens (community and organizational) to:

- Provide advice about current and emerging local issues to ensure continued relevance of Extension programs.
- Assist with identification of program delivery and evaluation methods to ensure effectiveness.
- Identify new partners and strengthen relationships with existing partners.
- Communicate the impact and relevance of MSU Extension's educational programs.

Local stakeholders are chosen because they represent clientele interests within the county/reservation, including the underserved and under-represented, understand Extension and believe education can assist in solving problems and improving the quality of life.

The local stakeholder process uses a variety of formats to gather input including but not limited to advisory committees, focus groups, town hall meetings, on-line survey, strategic planning, consultations with partner organizations' citizen boards, organizational forums. MSU Specialists also provide these groups with information about trends and new developments that may impact Montana. This information drives local Extension programs and determines educational efforts from the County/Reservation Offices.

Information gathered through the local process is combined at each of the three Extension Regions so those issues and needs that are common may be addressed through a collaborative approach. When appropriate, Issue Teams are formed to plan and conduct educational activities that will address concerns.

At the state level, the purpose of the Montana Extension Advisory Council (MEAC) is to assist MSU Extension in developing sound, long-range outreach educational programs based on priority needs of local Montana Communities. Specifically, the Council's charge is to help Extension faculty and administrators to:

- Validate state priorities based on educational needs identified by local communities
- Review on-going

programs in light of identified state priorities •Identify new programs that should be developed to address state priorities •Evaluate the effectiveness and impact of Extension programs, particularly newly developed programs in response to stakeholder input processes. •Stimulate communication and cooperation among county, state and national Extension-advisory committees and all other organizations or groups interested in outreach education. •Foster delivery and acceptance of MSU Extension education and to promote Extension programs throughout Montana. •Inform decision makers about the value of Extension programs.

MEAC members are selected because of their understanding of local and state issues and their interest in education through MSU Extension programs. They are chosen to reflect Montana's economic, geographic and racial diversity to assure a balance of interests and views.

**2(A). A brief statement of the process that will be used by the recipient institution to identify individuals and groups stakeholders and to collect input from them**

**1. Method to identify individuals and groups**

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

**Brief explanation.**

MSU Extension will use each of the methods noted depending on the program area and/or the specific situation. At the county level, faculty and their supervisor will determine the most appropriate way to gather information from residents in the county. They will decide, based on county population and it's diversity, geographic configuration and other such factors, which can best provide useful feedback for program development and priority setting. Selection for participation in the advisory process will be based on the following criteria. A participant must:

- represent clientele interests within the county/reservation
- represent the diversity of the county population including underserved and under-represented.
- have a general understanding of Extension and it's purpose
- believe education can assist in solving problems and improving the quality of life.

**2(B). A brief statement of the process that will be used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them**

**1. Methods for collecting Stakeholder Input**

- Meeting with traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey of selected individuals from the general public

**Brief explanation.**

Those groups with whom Extension traditionally works are asked to identify people who can effectively represent their needs and concerns. The same is true for those groups that Extension can not refer to as "traditional". These individuals are asked to come together to discuss the issues identified and assist in setting priorities for the Extension organization.

### **3. A statement of how the input will be considered**

- To Identify Emerging Issues
- Redirect Extension Programs
- In the Action Plans
- To Set Priorities
- Other (Create a basis for additional resources)

#### **Brief explanation.**

Generally speaking, the MSU Extension program is determined locally. Through the advisory process, Extension faculty learns about the needs Montanans have which can be addressed through education. It is critical then, for Extension to have the flexibility to develop programs that can respond to those needs when they are determined to be a priority. In Montana Extension, this may mean faculty must retool or broaden their scope beyond their immediate discipline. If input is used and programs are delivered that address citizen priorities, a basis for additional resources can be developed.

**V. Planned Program Table of Content**

<b>S. No.</b>	<b>PROGRAM NAME</b>
1	Childhood Obesity, Nutrition and Healthy Lifestyles
2	Youth Development
3	Global Food Security, Hunger, Ag Sustainability and Profitability
4	Family Issues, Resources and Environments
5	Community and Economic Development
6	Climate Change - Natural Resources and Environment
7	Sustainable Energy
8	Food Safety

**V(A). Planned Program (Summary)**

**Program # 1**

**1. Name of the Planned Program**

Childhood Obesity, Nutrition and Healthy Lifestyles

**2. Brief summary about Planned Program**

The Nutrition, Food Safety and Healthy Lifestyle program has been adjusted to emphasize childhood obesity, nutrition and healthy lifestyles. The food safety portion included in this section in previous years has been placed in a planned program area and childhood obesity has been added to nutrition and healthy lifestyles. With national attention on obesity, especially childhood obesity, more emphasis will be placed on programs addressing this issue in the future. There continues to be attention on more exercise and nutrition leading to healthy lifestyles as well. Montana stakeholders agree with the trends and view health as being a major concern for both adults and children. This stakeholder input is substantiated with information from the 2000 census, which indicates there are many health problems that can be attributed to nutritional deficiencies and poor food choices. Through education, MSU Extension has been committed to helping Montanans establish and maintain healthy lifestyles. The focus of these programs has largely been on food, nutrition and related decision making and will remain so for the next 5 years.

**3. Program existence :** Mature (More then five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
702	Requirements and Function of Nutrients and Other Food Components	10%			
703	Nutrition Education and Behavior	55%			
724	Healthy Lifestyle	35%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)**

**1. Situation and priorities**

The societal costs of poor health due to lack of good nutrition decisions and lack of physical activity are on the rise. When considering annual obesity, attributable medical expenditures alone, the costs are estimated today at \$125 billion annually in the US. Additional health concerns such as diabetes and heart disease only compound the problems. To help address these issues, Montana Extension continues an educational program that helps youth and adults make well informed decisions about their health as it relates to nutrition. There are three interrelated primary areas of concentration for this education: obesity (childhood and adult), nutrition and food resource management.

Obesity is the most widespread, serous and complex nutrition related health problem facing Americans, including people who live in sparsely populated states like Montana. Through changes in health related attitudes and behaviors, the rising obesity rates can be reversed.

Stretching the food dollar is a challenge for limited resource families and impacts the health and well-being of youth and adults alike. Almost 20% of all Montana children live in poverty. Working low-income families often lack the time, knowledge and skill to prepare and serve family meals, which are tasty, low-cost and healthful. Studies show people who run out of food or miss meals because they cannot afford them are among the most obese.



Nutrition plays a critical role in the ageing process. However, there is a high rate of malnutrition among older adults because they experience a large number of related individual and environmental risk factors. Seventy-three percent of older adults report eating fewer than the recommended daily intake of fruits and vegetables. Sixteen percent report having been told by a doctor that they had diabetes. While all youth and adults need to be concerned about nutrition, those who qualify as seniors are among those most in need.

**2. Scope of the Program**

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Employing a health-centered (rather than a weight-centered) approach to well-being, people can improve their health by developing lifestyle habits rather than by trying to achieve a specific body size, shape or weight. Past programming has resulted in impact data that indicates this is the most acceptable and successful approach.

Based on research, it is known that nutrition is an important component to addressing chronic disease issues as well as achieving a healthy lifestyle.

Funding will remain available for nutrition education for limited resource families. Funding has been available for many years and resulting programs have shown significant impacts.

**2. Ultimate goal(s) of this Program**

To reduce obesity among adults and children by changing attitudes related to food, physical fitness/activity and body image. (To slow and eventually reverse the rising obesity rates and increase the fitness levels through changes in health-related attitudes and behaviors.)

To help limited resource families in acquiring the knowledge, skills, attitudes and changed behavior necessary for nutritionally healthy diets and to contribute to their personal development and the improvement of the total family diet and nutritional well-being. Specifically, low-income families will show measurable improvements in their nutritional intake, knowledge and skills when managing their food budget and resources. Low-income youth will show increased nutrition knowledge and skills. Interagency cooperation will provide more effective nutrition education opportunities for limited income adults and youth.

To raise the ability of youth and adults to make sound decisions related to nutrition, food choices and physical activity to achieve a healthy lifestyle.

To slow the decline of muscle mass in women, especially those over age 30.

To develop programs that focus on healthy living for rural families and concentrate on the topics of nutrition, physical activity, body image and related parenting practices.

To develop and deliver an obesity prevention curriculum that will change the behaviors of parents and children thereby significantly reducing the likelihood of children becoming overweight.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2011	2.6	0.0	0.0	0.0
2012	2.6	0.0	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2013	2.6	0.0	0.0	0.0
2014	2.6	0.0	0.0	0.0
2015	2.6	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

- Conduct train the trainer workshops
- Conduct workshops, seminars, meetings
- Facilitate meetings, discussion groups, focus groups
- Develop local and state partnerships
- Develop MontGuides (fact sheets), publications, website materials, video based materials
- Conduct web based, interactive training/education opportunities

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>• Education Class</li> <li>• Workshop</li> <li>• Group Discussion</li> <li>• One-on-One Intervention</li> <li>• Demonstrations</li> <li>• Other 1 (MontGuides (Fact Sheets))</li> </ul>	<ul style="list-style-type: none"> <li>• Newsletters</li> <li>• Web sites</li> </ul>

**3. Description of targeted audience**

- Low income adults and children under the age of 19
- Low income youth, ages 5-12
- Adults that are FSP eligible
- Youth from FSP eligible households
- Teachers in the Montana School System
- Middle to older aged women, especially those living in rural areas
- Parents and youth living in rural areas

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	10200	9000	500	250
2012	10750	9000	500	250

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2013	10800	9000	500	250
2014	11450	9000	500	250
2015	11500	9000	500	250

**2. (Standard Research Target) Number of Patent Applications Submitted**

2011:0                      2012:0                      2013:0                      2014:0                      2015:0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2011	0	2	2
2012	0	2	2
2013	0	2	2
2014	0	2	2
2015	0	2	2

**V(H). State Defined Outputs****1. Output Target**

- **EFNEP/FSNP:**

The NEP curriculum will be used to teach three series of 8-12 sessions to adults who are enrolled.  
The NEP youth curriculum will be used to teach 6-7 lessons to youth in workshops (after school, in school, summer camps, park programs).

Develop and maintain local and state partnerships and collaborations.

**2011:6750                      2012:7000                      2013:7000                      2014:7500                      2015:7500**

- **Steps to a New You:**

Two train the trainer sessions for County Extension Agents who in turn will implement county Steps to a New You program.

Conduct one 7-week program in each of the counties with trained Extension Agents to deliver Steps to a New You.

**2011:300                      2012:300                      2013:350                      2014:350                      2015:400**

- **Strong Women:**

Certify 10 county agents so they are qualified to conduct strength training classes.

Conduct two 14 week sessions in each county with qualified leaders to deliver the program.

**2011:350                      2012:350                      2013:350                      2014:400                      2015:400**

- **Healthy Lifestyles:**

To reach adult and youth audiences in rural communities with health fairs and school/community based programs that will provide medical screenings and classes.

To track people who follow up with a physician or professional as a result of information gained at the health fair or similar activity.

**2011:2500                      2012:2750                      2013:2800                      2014:2800                      2015:2800**

- **4-Health:**

Design and introduce curriculum targeted at childhood obesity and healthy lifestyles for youth ages 8-12.

Provide training for parents on relevant information, effective parenting skills and strategies and a strong social support network that encourages them to solve everyday problems relating to the health and well-being of their pre-teen children.

**2011:350                      2012:350                      2013:400                      2014:400                      2015:400**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p><b>EFNEP/FSNP:</b>            Number of adults gaining awareness and knowledge regarding the importance of:            Healthy eating (more fruits and vegetables, whole grains)            Increasing physical activity            Food Safety practices            Food resource management practices            Food planning and preparation            Number of youth increasing knowledge regarding the importance of:            Eating a variety of foods            Healthy eating            Increased physical activity            Food safety principles (hand washing)            Number of adults:            Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains).            Improving food safety practices (storing and thawing foods properly)            Improving food resource management practices (meal planning, shopping with list)            Improving nutrition practices (reading food labels)            Participants will:            Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes.            Increase their confidence in the ability to manage food resources as well as other resources.</p>
2	<p><b>STEPS TO A NEW YOU:</b>            Participants will learn about facts, attitudes, behavior change techniques and specific behaviors related to physical activity, nutrition, body image that will allow them to live healthier life styles and prevent or reduce obesity.            Number of children:            Eating a variety of foods            Improving practices of food preparation and food safety            Select low cost nutritious foods</p>
3	<p><b>HEALTHY LIFESTYLES:</b>            As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional.            People will make better nutrition and food choices and engage in regular physical activity.</p>
4	<p><b>STRONG WOMEN:</b>            Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted 2# increasing to 5#).</p>
5	<p><b>4-HEALTH:</b>            Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children.            Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity.            Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health programs.            Rural families will have decreased rates of childhood obesity.</p>

**Outcome # 1**

**1. Outcome Target**

EFNEP/FSNP:

Number of adults gaining awareness and knowledge regarding the importance of:

Healthy eating (more fruits and vegetables, whole grains)

Increasing physical activity

Food Safety practices

Food resource management practices

Food planning and preparation

Number of youth increasing knowledge regarding the importance of:

Eating a variety of foods

Healthy eating

Increased physical activity

Food safety principles (hand washing)

Number of adults:

Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains).

Improving food safety practices (storing and thawing foods properly)

Improving food resource management practices (meal planning, shopping with list)

Improving nutrition practices (reading food labels)

Participants will:

Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes.

Increase their confidence in the ability to manage food resources as well as other resources.

**2. Outcome Type : Change in Condition Outcome Measure**

**2011:6750**

**2012:7000**

**2013:7000**

**2014:7500**

**2015:7500**

**3. Associated Knowledge Area(s)**

- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

STEPS TO A NEW YOU:

Participants will learn about facts, attitudes, behavior change techniques and specific behaviors related to physical activity, nutrition, body image that will allow them to live healthier life styles and prevent or reduce obesity.

Number of children:

Eating a variety of foods

Improving practices of food preparation and food safety

Select low cost nutritious foods

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:300                      2012:300                      2013:350                      2014:350                      2015:400**

**3. Associated Knowledge Area(s)**

- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

**HEALTHY LIFESTYLES:**

As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional.

People will make better nutrition and food choices and engage in regular physical activity.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:2800                      2012:2800                      2013:2900                      2014:2800                      2015:2800**

**3. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 4**

**1. Outcome Target**

**STRONG WOMEN:**

Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted 2# increasing to 5#).

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:100                      2012:100                      2013:150                      2014:150                      2015:150**

**3. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 5**

**1. Outcome Target**

**4-HEALTH:**

Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children.

Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity. Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health programs.

Rural families will have decreased rates of childhood obesity.

**2. Outcome Type : Change in Knowledge Outcome Measure**

<b>2011:350</b>	<b>2012:350</b>	<b>2013:400</b>	<b>2014:400</b>	<b>2015:400</b>
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**3. Associated Knowledge Area(s)**

- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges

**Description**

With a more visible emphasis on childhood obesity, it is likely there will be more interest and resources in addressing overweight and obesity issues in youth.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Other (focus groups and self study)



## **Description**

The Strong Women program is planning an evaluation process using the model developed by Dr. Raidl - ID. The 4-Health program will be using a child self-evaluation process and questionnaire.

## **2. Data Collection Methods**

- Sampling
- Whole population
- Mail
- Telephone
- On-Site
- Structured
- Unstructured
- Observation
- Tests

## **Description**

Data will be collected in a variety of ways-face to face, paper and pencil as well as on-line-web based activities.

**V(A). Planned Program (Summary)**

**Program # 2**

**1. Name of the Planned Program**

Youth Development

**2. Brief summary about Planned Program**

Young people grow up with or without our help. Youth development should be seen as an ongoing, inevitable process in which all youth are engaged and all youth are invested. It includes maturing and developing one's capacities, and it's far too important to be left to chance. Positive youth development occurs from an intentional process that promotes positive outcomes for young people by providing opportunities, choices, relationships, and the support necessary for youth to fully participate. Youth development takes place in families, peer groups, schools and in neighborhoods and communities.

**3. Program existence :** Mature (More than five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
307	Animal Management Systems	5%			
806	Youth Development	95%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)**

**1. Situation and priorities**

During the stakeholder input process, youth issues surfaced to be a priority of Montanans. The 4-H mission mandates of citizenship, healthy living and science, engineering and technology from the programmatic structure of the Montana 4-H program in providing opportunities for life skill development focused on enhancing the development of youth who will be prepared to be contributing members of their families, communities and world. Stakeholders recognize the 4-H program has proven to be an effective venue for youth to learn life skills. They know from personal experience that 4-H teaches youth to be more responsible, get higher grades, speak more articulately to mention a few of the many benefits. A recent research study substantiates these opinions. Additionally, the Positive Development of Youth study conducted by Tufts University (2008), names 4-H as a successful youth development program helping youth become confident, competent, caring and connected and of character.

Leadership, volunteerism and community service surfaced as a high priority as well. Parents know that youth learn how to lead, follow and be a contributing member of a team if they belong to 4-H. They can apply this knowledge to contribute to the community in which they live. Teaching young people the skills to be effective community leaders and develop a sense of volunteerism is important to Montanans.

**2. Scope of the Program**

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

There is a continuing need for youth to learn skills they can use over time. For over 100 years, the 4-H program has been providing positive youth development and teaching life skills to young people. The success 4-H has had is supported by research conducted in Montana and replicated in several other states that have recorded the same results.

Youth learn best by being involved in hand-on experiences. Youth need safe places and relationships with caring adults. The recent economic crisis and worldwide issues like sustainable energy have affected all levels of the systems affecting youth. Parents have less income and are forced to change their lifestyles, communities are challenged to provide for their citizens, future careers and employable skills have changed and new laws are enacted affecting communities, schools and public policy.

**2. Ultimate goal(s) of this Program**

\* Competence-learning advance skills in some important subjects of interest; \* Character-learning clear consistent moral precepts that effectively guide behavior; \* Caring-possessing a willingness to respond to the needs and concerns of others; \* Confidence-possessing a willingness to take on new challenges and expect success; \* Contribution- a willingness to give back to self, family, community and the institutions of a civil society; Connections: making a difference in the lives of others through service

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2011	12.0	0.0	0.0	0.0
2012	12.0	0.0	0.0	0.0
2013	12.0	0.0	0.0	0.0
2014	12.0	0.0	0.0	0.0
2015	12.0	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

- Conduct Workshops, Clinics that provide active learning in subject matter related to projects
- Conduct/facilitate Meetings that focus on facilitation and leadership skills
- Develop Curriculum and supporting Teaching Tools for volunteers to use
- Provide training for youth and adult volunteers
- Partner with youth serving groups on state and local levels
- Provide/develop web based education and information access

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Education Class</li> <li>● Workshop</li> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> <li>● Other 1 (Field trips)</li> <li>● Other 2 (Camps)</li> </ul>	<ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● Newsletters</li> <li>● Web sites</li> </ul>

**3. Description of targeted audience**

Youth ages 5-19  
 Parents of youth involved in 4-H  
 Adult volunteers involved in Youth Development Work: 4-H program and other group volunteers.  
 Professionals involved in Youth Development Work: 4-H program and other agencies, schools and organization professionals  
 School administration and teachers  
 Individuals who have access to property where meth can be made  
 Youth who live on reservations and are between the ages of 9-21.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	4000	2500	13000	9000
2012	4000	2500	13000	9000
2013	4200	2500	13000	9000
2014	4200	2500	13000	9000
2015	4200	2500	13000	9000

**2. (Standard Research Target) Number of Patent Applications Submitted**

2011:0                      2012:0                      2013:0                      2014:0                      2015:0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2011	0	2	2

Year	Research Target	Extension Target	Total
2012	0	2	2
2013	0	2	2
2014	0	2	2
2015	0	2	2

## V(H). State Defined Outputs

### 1. Output Target

- Life Skill Development:

Statewide, 10,000 youth will be involved in 300 experiential learning activities including workshops, clinics, seminars and club meetings.

**2011:20000                      2012:20000                      2013:20000                      2014:20000                      2015:20000**

- Leadership/Volunteer Development:

An estimated 250 youth and 450 adults will be able to apply leadership skills and positive youth development practices in their roles of organizational, project or other leadership positions.

Professional and volunteer staff in a majority of the counties will follow and adhere to established financial and audit guidelines.

Teenage youth will exhibit leadership and communications skills within the 4-H program and at other times outside 4-H program.

**2011:3500                      2012:3500                      2013:3500                      2014:3500                      2015:3500**

- JUNIOR AGRICULTURE LOAN PROGRAM:

Approximately 8 reservation youth will apply for the Montana Department of Agriculture - Junior Ag Loan Program to borrow money to purchase livestock to start their own herd. They will receive the necessary training to complete the process.

**2011:10                      2012:10                      2013:10                      2014:10                      2015:10**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p><b>LIFE SKILL DEVELOPMENT</b></p> <p>100% of 4-H members will show an increase in knowledge and skills  100% of 4-H members will report improved practices learned  50% of 4-H members will re-enroll  85% of the youth involved in the experiential learning activities through 4-H will gain knowledge and skills about the topic they have selected. (Example: plants, animals/quality assurance, aerospace, vet science, foods, public speaking, leadership, etc.)  200 youth select new project literature or participate in new educational programs.  80% of the youth involved in the experiential learning activities thought the 4-H program will show improvement in life skills.  75% of youth selecting new project literature or participating in new programs successfully complete project records or program requirements.  50% of agents and leaders will promote and market new curriculum and program initiative  Youth involved in 4-H will make contributions to their communities, be less likely to ve involved in illegal activity and be more likely to perform better in school.  Youth involved in 4-H will exhibit having more confidence, feeling more competent and self-assured and feeling more connected to their families and communities.</p> <p>In agreement with results of the Tufts Study of Positive Youth Development, Montana 4-H youth will be more likely than other youth to show the highest positive youth development, more than twice as likely to contribute to their communities, show the lowest levels of depression, be 41% less likely to exhibit/problem behavior and have better grades and be more engaged in school and more likely to see themselves going to college.</p>
2	<p><b>LEADERSHIP/VOLUNTEER DEVELOPMENT</b></p> <p>Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management.  Sixty percent (60%) of the 4-H volunteers participating in trainings will learn the duties of an organizational leaders, project leader and other leadership positions within the program so 4-H clubs and activities will use positive youth development practices.  Sixty percent (60%) of the county 4-H Councils will learn and use the established financial management and review guidelines for handling public money.  Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills.  Fifty percent (50%) of Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation.  Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements on 4-H education programs.  Fifty percent (50%) of 4-H councils in Montana will adopt the financial management and review guidelines.  Fifty percent (50%) of participating youth will apply developed practices of leadership.  Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs.  Montana's will have a more accurate and positive impression of the 4-H Youth Development Program.</p>
3	<p><b>JUNIOR AGRICULTURE LOAN PROGRAM</b></p> <p>Youth will complete the finance and beef management trainings needed to complete the application. Youth making application to borrow money will use it for the purchase of livestock so they can start or expand their herd.</p>

**Outcome # 1**

**1. Outcome Target**

LIFE SKILL DEVELOPMENT

100% of 4-H members will show an increase in knowledge and skills

100% of 4-H members will report improved practices learned

50% of 4-H members will re-enroll

85% of the youth involved in the experiential learning activities through 4-H will gain knowledge and skills about the topic they have selected. (Example: plants, animals/quality assurance, aerospace, vet science, foods, public speaking, leadership, etc.)

200 youth select new project literature or participate in new educational programs.

80% of the youth involved in the experiential learning activities thought the 4-H program will show improvement in life skills.

75% of youth selecting new project literature or participating in new programs successfully complete project records or program requirements.

50% of agents and leaders will promote and market new curriculum and program initiative

Youth involved in 4-H will make contributions to their communities, be less likely to ve involved in illegal activity and be more likely to perform better in school.

Youth involved in 4-H will exhibit having more confidence, feeling more competent and self-assured and feeling more connected to their families and communities.

In agreement with results of the Tufts Study of Positive Youth Development, Montana 4-H youth will be more likely than other youth to show the highest positive youth development, more than twice as likely to contribute to their communities, show the lowest levels of depression, be 41% less likely to exhibit/problem behavior and have better grades and be more engaged in school and more likely to see themselves going to college.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:20000**

**2012:20000**

**2013:20000**

**2014:20000**

**2015:20000**

**3. Associated Knowledge Area(s)**

- 806 - Youth Development

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

LEADERSHIP/VOLUNTEER DEVELOPMENT

Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management.

Sixty percent (60%) of the 4-H volunteers participating in trainings will learn the duties of an organizational leaders, project leader and other leadership positions within the program so 4-H clubs and activities will use positive youth development practices.

Sixty percent (60%) of the county 4-H Councils will learn and use the established financial management and review guidelines for handling public money.

Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills.

Fifty percent (50%) of Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation.

Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements

on 4-H education programs.

Fifty percent (50%) of 4-H councils in Montana will adopt the financial management and review guidelines.

Fifty percent (50%) of participating youth will apply developed practices of leadership.

Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs.

Montana's will have a more accurate and positive impression of the 4-H Youth Development Program.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:2250                      2012:2500                      2013:3000                      2014:3000                      2015:3000**

**3. Associated Knowledge Area(s)**

- 806 - Youth Development

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

**JUNIOR AGRICULTURE LOAN PROGRAM**

Youth will complete the finance and beef management trainings needed to complete the application. Youth making application to borrow money will use it for the purchase of livestock so they can start or expand their herd.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:10                      2012:10                      2013:10                      2014:10                      2015:10**

**3. Associated Knowledge Area(s)**

- 307 - Animal Management Systems
- 806 - Youth Development

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

**Description**

Montana youth are leaving the state to find employment opportunities. Volunteer time is spread thin as parent's work requires time and energy.



## **V(K). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals, group, organizations) and non-participants

#### **Description**

Among other techniques, Montana 4-H is using the Life Skills Evaluation System to collect and compile data from participants involved in activities focused on life skill development. This is a statewide, electronic system that allows information to be gathered locally and then compiled at the state level.

In addition, 4-H members are required to keep a 4-H Record Book (journal), which describes their involvement from beginning to end. They record the things they learn from the activities in which they have participated. These records are a source of information about the knowledge youth have gained, what behaviors they have learned and what changes they have made over time.

A national study on The Positive Development of Youth has been conducted by Tufts University. It has data that indicates the 4-H programs help youth.

### **2. Data Collection Methods**

- Mail
- Telephone
- On-Site
- Structured
- Unstructured
- Observation
- Portfolio Reviews
- Tests
- Journals

#### **Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)****Program # 3****1. Name of the Planned Program**

Global Food Security, Hunger, Ag Sustainability and Profitability

**2. Brief summary about Planned Program**

The economic and cultural changes in the country and Montana are making it more difficult for families involved in production agriculture to keep their businesses profitable, yet agriculture remains the most significant economic basis in the state with a net farm income of over \$720 million dollars annually. Producers have become increasingly aware of the need to analyze their individual situations so they can make decisions that keep their operations viable. The fluctuation in costs to do business as well as the market place keeps farmers/ranchers in a constant state of change. Planning for the future is becoming more stressful each year. Progressive producers have learned that education is one of the most important elements they can turn to for help in making wise decisions and Extension is the best source of that information.

**3. Program existence :** Mature (More than five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

<b>KA Code</b>	<b>Knowledge Area</b>	<b>%1862 Extension</b>	<b>%1890 Extension</b>	<b>%1862 Research</b>	<b>%1890 Research</b>
112	Watershed Protection and Management	5%			
205	Plant Management Systems	20%			
213	Weeds Affecting Plants	20%			
216	Integrated Pest Management Systems	20%			
301	Reproductive Performance of Animals	5%			
307	Animal Management Systems	10%			
311	Animal Diseases	5%			
601	Economics of Agricultural Production and Farm Management	10%			
603	Market Economics	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

Montana production agriculture is largely dependent on small grains and livestock. Small grain producers face challenges with higher input costs (fuel, fertilizer, equipment), pest control and damage and increased irrigation costs. Producers know profit margins fluctuate as they face roller coaster income and expenses over the years. Operators

must gain proficiency not only at producing a commodity, but also at marketing systems, environmental regulations, market quality requirements and financial/business management.

The beef industry has become more consumer-focused and as a result, specific quality and consistency targets have been established in all segments of the industry. To meet consumer expectations for safe beef and return additional revenue to cattle producers, a systems network is necessary to ensure that a quality and consistent product is being produced. Central to this networking approach is the exchange of information from the producer to the end consumer.

Most land managers agree the spread of invasive plants is the primary environmental threat to western wildlands/ranges. Noxious weed invasion reduces the ecological integrity of land and water, alters ecosystems, impacts wildlife habitat and threatens survival of native plants. Small ruminant production can provide land managers an alternate tool to eliminate invasive plants that is more economically feasible and environmentally sensitive compared to traditional weed control methods. Currently, sheep grazing represents the only economically and environmentally sound alternative to address large infestations of invasive plants, however, availability of sheep has limited their use.

Plant management, whether for weed control in crops or range lands, or for family or commercial gardens and yards, is important to land owners. Management plans assist owners in determining best practices to enhance production while addressing other issues specific to their property. The largest expense for ranchers in this region is the winter feeding program. Perennial forages such as alfalfa provide advantages for nutrient recycling and disrupting pest cycles in crop rotations. Growing annual crops for pasture or hay provides excellent opportunities for low-cost forage production, weed control and water conservation in dry land systems. In irrigated forage systems, there continues to be a need for efficient forage rotations that reduce fuel, fertilizer or other inputs.

Chemicals are used to control pests of all kinds but to be safe and effective, application procedures and protocols must be followed. Diagnosing the problem and making recommendations to address it are important first steps in pesticide education.

## **2. Scope of the Program**

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

## **V(D). Planned Program (Assumptions and Goals)**

### **1. Assumptions made for the Program**

The spread of weeds on public land will continue without intervention efforts.

Many public agencies are underfunded in the area of noxious weed control.

As the cost of agricultural inputs increases, many may choose to ignore, rather than manage, noxious weeds.

If demonstrations can prove recommended changes are economically worthwhile, producers will adopt the suggested practices.

### **2. Ultimate goal(s) of this Program**

The Montana Beef Network has three primary goals: 1) to provide educational programs aimed at promoting beef quality assurance standards, production and marketing goals; 2) to certify feeder calves that have met defined health management protocols in an attempt to reduce sickness; and 3) to provide information feedback from the feedlot and/or packing plant to the cow-calf producer showing if the feeder calves met industry requirements for quality grade, safety and red meat yield.

The goals of the Montana Sheep Institute are: 1) to incorporate controlled sheep grazing as a tool in integrated natural resource management, specifically in controlling established infestations of non-native/noxious weeds; 2) to create an educational environment that facilitates improved lamb and wool quality so they are products that will directly enter the marketplace; and 3) to develop selection, nutritional and marketing management strategies that maximize production efficiencies.

For the area of weeds, the goals are: 1) to evaluate new and existing technologies for weed control and crop

safety; 2) to raise the capacity of producers/crop advisors to identify and control crop weeds; and 3) to prevent new invasive plants from establishing in the state and containing invasive plants that are not currently widespread across the state.

The area of crops includes goals: Producers will: 1) develop long range plans that include a cropping system for farm profitability, pest management, soil fertility, residue and moisture management; 2) develop specific crop management plans that include major production components, e.g., performance and characteristics of small grain varieties and other rotation crops; and 3) use detailed field records to track field operations and associated inputs to make production decisions.

The goal for the Master Gardener program is to increase the knowledge of skilled and unskilled individuals in the areas of botany, soils, plant nutrition, turfgrass management and vegetable and fruit production as well as basic instruction in entomology and plant problem diagnosis.

The major goal of those programs targeted at profitability is for farm managers to use guidelines and management tools that will assist them in the evaluation of farm records, enterprise analysis, lease arrangements, machinery ownership and operating costs, as well as expansion opportunities and consequences. This includes producers keeping detailed farm/ranch records to track such items as income, expenses, assets, liabilities and inventories. These practices lead to better decision making associated with business performance, profitability of enterprises, marketing decisions and implications of expansion plans for land and/or machinery.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2011	8.8	0.0	0.0	0.0
2012	8.8	0.0	0.0	0.0
2013	8.8	0.0	0.0	0.0
2014	8.8	0.0	0.0	0.0
2015	8.8	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

The Montana Beef Network uses a variety of delivery methods to reach producers including interactive video conferencing, workshops, newsletters, seminars and interactive TV that addresses nutrition, production, marketing and other topics important to the clientele. The Montana Sheep Institute uses demonstration sites associated with grazing of noxious weeds (leafy spurge and spotted knapweed) by small ruminants, provides workshops and seminars for producers on best practices for effective/efficient production and marketing strategies and clinics for people interested in learning to shear their sheep or hire out to shear others animals. The weed issue is addressed by landowners learning to monitor their property for weed infestations and then knowing when and how to address the problems. Workshops, tours and field days are used to raise the ability of the landowners to curtail weed infestations. The crops area use workshops and seminars to help producers with keeping records, decision making aids, leasing alternatives/marketing, computer applications as well as test plots, tours and other demonstration strategies that provide information on varieties, fertilizer and soils. Master Gardener programs are delivered both live and by internet as well as printed resources to use in answering questions. Workshops on financial management, developing business plans, analyzing individual enterprise techniques are all associated with helping producers make decisions that will result in making a profit/staying in business.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
----------------	------------------

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>● Education Class</li> <li>● Workshop</li> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> <li>● Other 1 (Field trials/tours)</li> </ul> | <ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● Newsletters</li> <li>● TV Media Programs</li> <li>● Web sites</li> <li>● Other 1 (Publications)</li> </ul> |
|--|--|

**3. Description of targeted audience**

Livestock Producers, especially beef, swine and sheep  
 Commodity Associations  
 Land Managers/Owners (small and large)  
 Weed Control Professionals  
 Gardening Club members/people interested in gardening  
 Small Grain Producers (Dry Land and Irrigated)

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	15000	10000	800	1000
2012	15100	12000	800	1000
2013	15200	12000	800	1000
2014	15300	12000	800	1000
2015	15300	12000	800	1000

**2. (Standard Research Target) Number of Patent Applications Submitted**

2011:0                      2012:0                      2013:0                      2014:0                      2015:0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2011	0	3	3
2012	0	3	3
2013	0	3	3
2014	0	3	3
2015	0	3	3

**V(H). State Defined Outputs****1. Output Target**

- Montana Beef Network: Number of people participating in demonstration/tour opportunities.  
Number of producers attending workshops on disease mitigation and prevention.  
Number of producers attending presentations on "best practices" in beef cattle production and marketing.

**2011:3500                      2012:3500                      2013:4000                      2014:4000                      2015:4000**

- Montana Sheep Institute:  
Number of people attending workshops teaching innovative ways to using sheep.  
Number of projects being conducted with sheep grazing invasive plants  
Number of sheep producers involved with sheep grazing projects  
Number of landowners involved in sheep grazing projects  
Number of acres where weeds were controlled and documentation of vegetative composition trends.  
Number of wool growers involved in developing larger, more marketable clips  
Number of people attending workshop related to using "best practices" in sheep production and marketing of wool  
Number of people trained as shearing instructors.  
Number of people shearing their own sheep or being hired to shear for others.

**2011:5000                      2012:5000                      2013:5000                      2014:5000                      2015:5000**

- Weed Control: Number of producers participating in workshops on weed control. Number of producers and landowners attending tours. Number of people attending meetings on pesticide control and applicator training.  
Number of people being recertified for pesticide use.

**2011:4000                      2012:4000                      2013:4000                      2014:4000                      2015:4000**

- Crops: Number of producers attending cropping systems workshops  
Number of producers adopting soil moisture conservation practices  
Number of producers adopting an annual crop rotation focused on profitability and soil health.  
Number of producers attending workshops on fertilization, reading soil test reports, pest management programs and field records.  
Number of people accessing web site for information on fertilizer and soils.  
Number of people attending field days, crop guides, research plot sites, and research center summaries.  
Number of people using pulse crops in the cropping rotation.

**2011:2500                      2012:2500                      2013:2500                      2014:2500                      2015:2500**

- Master Gardener: Number of people who become certified Master Gardeners.

**2011:200                      2012:200                      2013:200                      2014:200                      2015:200**

- Profitability:  
Number of producers attending farm management workshops including financial record guidelines

and computer applications.

Number of management plans developed including costs of production worksheets and summaries.

**2011:150**

**2012:150**

**2013:150**

**2014:150**

**2015:150**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p>Montana Beef Network:</p> <p>Number of people learning about new practices in livestock production.</p> <p>The percent of increase in the value of calves sold at weaning.</p> <p>Number of people who made changes in the way records are kept on ranches.</p> <p>Percent of breeding programs that are meeting the needs of the consumer in terms of quality and yield grade of calves.</p> <p>Add value to weaned calves</p>
2	<p>Montana Sheep Institute:</p> <p>Number of people who learned about using sheep to control invasive plants.</p> <p>Increased number of grazing management programs initiated and monitoring programs developed.</p> <p>Increase in the number of Wool Pools organized and wool delivery and marketing of consolidated pools implemented.</p> <p>Number of producers who developed plans to implement technology in their own production unit. (Ribeye program)</p> <p>Acres of infested landscape controlled by small ruminant grazing.</p> <p>Wool from smaller growers prepared and marketed on the national/international market.</p> <p>Producers improving production efficiency of their sheep enterprise.</p> <p>Number of people involved with shearing their own or others sheep.</p>
3	<p>Weed Control:</p> <p>Producers participating in workshops will be able to identify weeds and know how to control them.</p> <p>People attending meetings will understand pesticide control and appropriate applicator training.</p> <p>People will be recertified for pesticide use.</p>
4	<p>Master Gardener:</p> <p>Participants learn about plants and how to grow them successfully.</p> <p>Participants' volunteer hours of service to their communities in answering questions about horticultural issues.</p>
5	<p>Crops:</p> <p>Producers improve their understanding of nutrient cycling, weed control, variety selection and alternative crop possibilities.</p> <p>Producers will plant short water varieties when moisture conditions are low, plant sawfly resistant varieties to minimize losses, and forage varieties that will improve production.</p> <p>Pounds of fertilizer used in farming systems will be reduced.</p> <p>Producers will adopt weed, crop and forage management strategies that sustain agricultural crop production and lessen environmental damage.</p> <p>Farm operators who implement best practices will increase their profitability and enhance long-term sustainability.</p>

O. No.	Outcome Name
6	<p>Profitability:                      Ag producers gain knowledge associated with development of standard financial statements, and track machinery costs as well as fixed and variable costs associated with crop enterprises.                      Producers will adopt financial management programs that will provide financial statements for business analysis and bank lending requirements.                      Producers will analyze enterprise cost of production that will aid in cropping decisions, marketing, leasing, machinery and land purchases.                      Successful farm and ranch businesses provide stability and continuity for local communities, businesses and schools.</p>

**Outcome # 1**

**1. Outcome Target**

Montana Beef Network:

Number of people learning about new practices in livestock production.

The percent of increase in the value of calves sold at weaning.

Number of people who made changes in the way records are kept on ranches.

Percent of breeding programs that are meeting the needs of the consumer in terms of quality and yield grade of calves.

Add value to weaned calves

**2. Outcome Type : Change in Condition Outcome Measure**

**2011:3500**

**2012:4000**

**2013:4000**

**2014:4000**

**2015:4000**

**3. Associated Knowledge Area(s)**

- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases
- 601 - Economics of Agricultural Production and Farm Management

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

Montana Sheep Institute:

Number of people who learned about using sheep to control invasive plants.

Increased number of grazing management programs initiated and monitoring programs developed.

Increase in the number of Wool Pools organized and wool delivery and marketing of consolidated pools implemented.

Number of producers who developed plans to implement technology in their own production unit. (Ribeye program)

Acres of infested landscape controlled by small ruminant grazing.

Wool from smaller growers prepared and marketed on the national/international market.

Producers improving production efficiency of their sheep enterprise.

Number of people involved with shearing their own or others sheep.



**2. Outcome Type : Change in Action Outcome Measure**

**2011:5000                      2012:5000                      2013:5000                      2014:5000                      2015:5000**

**3. Associated Knowledge Area(s)**

- 213 - Weeds Affecting Plants
- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 603 - Market Economics

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

Weed Control:

Producers participating in workshops will be able to identify weeds and know how to control them.  
People attending meetings will understand pesticide control and appropriate applicator training.  
People will be recertified for pesticide use.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:4000                      2012:4000                      2013:4000                      2014:4000                      2015:4000**

**3. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems
- 307 - Animal Management Systems

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 4**

**1. Outcome Target**

Master Gardener:

Participants learn about plants and how to grow them successfully.  
Participants' volunteer hours of service to their communities in answering questions about horticultural issues.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:200                      2012:200                      2013:200                      2014:200                      2015:200**

**3. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 5**

**1. Outcome Target**

Crops:

Producers improve their understanding of nutrient cycling, weed control, variety selection and alternative crop possibilities.

Producers will plant short water varieties when moisture conditions are low, plant sawfly resistant varieties to minimize losses, and forage varieties that will improve production.

Pounds of fertilizer used in farming systems will be reduced.

Producers will adopt weed, crop and forage management strategies that sustain agricultural crop production and lessen environmental damage.

Farm operators who implement best practices will increase their profitability and enhance long-term sustainability.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:2300                      2012:2400                      2013:2500                      2014:2500                      2015:2500**

**3. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 6**

**1. Outcome Target**

Profitability:

Ag producers gain knowledge associated with development of standard financial statements, and track machinery costs as well as fixed and variable costs associated with crop enterprises.

Producers will adopt financial management programs that will provide financial statements for business analysis and bank lending requirements.

Producers will analyze enterprise cost of production that will aid in cropping decisions, marketing, leasing, machinery and land purchases.

Successful farm and ranch businesses provide stability and continuity for local communities, businesses and schools.

**2. Outcome Type :** Change in Action Outcome Measure

**2011:**150                      **2012:**150                      **2013:**150                      **2014:**150                      **2015:**150

**3. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)
- Other (High cost of fuel, fertilizer)

**Description**

The weather will always be a factor over which producers have no control yet it effects their business greatly. In some parts of the state drought has caused ranchers to sell livestock and farmers to decide when, what and if to plant. Both are addressing weed and other pest issues brought on by stressed plants. Like other business entities, the economy has been difficult for agriculture producers to negotiate as well.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

**Description**

Many of the programs in this area are connected to research efforts which have specific and expected outcomes. This is especially true for the Montana Beef Network, The Sheep Institute, and cereal forage efforts.

**2. Data Collection Methods**

- Mail
- Telephone
- On-Site
- Structured
- Unstructured
- Case Study
- Observation

- Journals

**Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)****Program # 4****1. Name of the Planned Program**

Family Issues, Resources and Environments

**2. Brief summary about Planned Program**

Regardless of the community, families are concerned about economic development, better paying jobs, business opportunities and health care. They are concerned about giving their youth the skills necessary to become competent, contributing and caring members of the community in which they live. They are concerned about being good parents/grandparents who know how to guide their youth through the challenges of being a young person today. They are concerned about the elderly and having adequate health care, housing and other infrastructure necessities to accommodate a shift in population. They are concerned about having adequate resources to maintain a desirable quality of life and they are interested in how they can pass their accumulated holdings on to future generations, which most recently has become an urgent issue for tribal members.

In short, Montana citizens are concerned about the quality of life for their families and look to Extension for education and help so they can make wise decisions and choices.

**3. Program existence :** Mature (More than five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

<b>KA Code</b>	<b>Knowledge Area</b>	<b>%1862 Extension</b>	<b>%1890 Extension</b>	<b>%1862 Research</b>	<b>%1890 Research</b>
801	Individual and Family Resource Management	40%			
802	Human Development and Family Well-Being	40%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	20%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

The baby boom generation is aging and our population is aging. The fastest growing age group is those individuals over 85. Along with extended life expectancy comes a variety of chronic illnesses. Most older individuals live on their own or with a spouse yet they often require a certain level of care giving, either direct care or managed care.

Between 1990-2000, the state has seen a 53% increase in the number of grandparents responsible for caring for their grandchildren (9<sup>th</sup> nationally). The US Census (2000) reported 6,053 grandparents hold the primary responsibility for the basic needs of their grandchildren, while 11,098 grandparents live in households with one or more grandchildren under the age of 18. In the more recent census, these figures are likely to increase. Grandparents are faced with this responsibility for a variety of reasons: death of the parent, parental child abuse, neglect, abandonment, teen pregnancy, issues of divorcing parents, parental issues with alcohol/drugs, financial difficulties, illness and military deployment.

The two-parent nuclear family structure is no longer the majority of families. More women today are experiencing incarceration. Teen pregnancy has risen. More grandparents, aunts and uncles are being asked to care for relative children. Parents who are stressed or do not have good parenting skills are at risk of abuse and neglect of their children.

Montanans are interested in the wise use and handling of their financial resources. Statistics reveal that 70% of Montanan's die without a will. The state legislature continues to change the intestate succession (dying without a will law) and contract laws that impact beneficiaries of real and personal property., Montana farmers/ranchers/owners of closely held businesses continue to be interested in intergenerational transfers. Congress has made changes in the federal estate and gift tax laws that are being phased in through 2010. Education is needed to provide families, including those living on reservations, with information about the impact of state and federal laws.

The personal savings rate for October 2005 was a negative 0.8%, the lowest rate since the depression. (Commerce Depart, Bureau of Economic Analysis) The 2005 Retirement Confidence Survey found most workers say they are behind schedule in saving for retirement. Montanans need information on why and how to save for their futures while paying for increased utility costs and other bills.

Consumers, real estate professionals, county health officers and others report alarming incidences and health effects related to home environmental issues. The state's radon level ranks 3<sup>rd</sup> highest in the US, asthma has increased due to poor home environments, molds have forced homeowners from their homes. Home environmental issues also include asbestos in vermiculate insulation, drinking water contamination, improperly installed and maintained septic systems, carbon monoxide from faculty heating systems and lead based paint.

**2. Scope of the Program**

- In-State Extension
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Families have continuing concerns about having enough money for their families to live comfortably through retirement years. Estate planning is difficult for many and is likely avoided by some, yet is so important. Taking care of aging or aligning family members will likely increase over time, so finding resources is amust. The number of grandparents serving in the primary responsible role for their grandchildren is most likely going to increase or, at best, remain stable. Health issues related to home environments will continue to result from mold, radon, asbestos and a variety of other problems. Many people are unaware of the health hazards brought about by these factors.

**2. Ultimate goal(s) of this Program**

To assist care givers of patients with chronic illnesses in learning about the various diseases, planning for the future as the disease progresses and learning how to care for themselves as they care for their loved one. Montana farmers/ranchers/owners will develop a transfer plan for passing their operation to the next generation. Montana families will write a will to name guardianship and conservatorship for their children. Montana families will take advantage of contract laws such as beneficiary designations, payable on death designations and transfer on death designations when appropriate. Tribal members will develop a transfer plan for passing their operation to the next generation. Individuals will develop a savings plan and save for their financial goals of higher education, retirement and long term care. To provide education, support and resources to grandparents who are raising grandchildren. To assist Montanans in reducing their home energy bills. To increase the number of homes tested/assessed and mitigated for household molds and excessive moisture, radon, asbestos containing materials, drinking water quality, carbon monoxide and other combustion gases related to home fossil fuel appliances, furnaces and water heaters, lead-based paint. To reduce home asthma triggers.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890

Year	Extension		Research	
	1862	1890	1862	1890
2011	2.8	0.0	0.0	0.0
2012	2.8	0.0	0.0	0.0
2013	2.8	0.0	0.0	0.0
2014	2.8	0.0	0.0	0.0
2015	2.8	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

- Conduct workshops in all areas
- Develop support groups where and when necessary
- Partner with agencies, associations, organizations, real estate personnel, county health officials, Montana Building Industry Association.
- Conduct Seminars on Estate Planning Healthy Indoor Environments
- Revise MontGuides (fact sheets) to reflect the changes in state and federal laws related to estate planning.
- Develop publications on asthma awareness, lead-based paint and other home environment issues.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>• Education Class</li> <li>• Workshop</li> <li>• Group Discussion</li> <li>• One-on-One Intervention</li> <li>• Other 1 (MontGuides (Fact Sheets))</li> </ul>	<ul style="list-style-type: none"> <li>• Newsletters</li> <li>• TV Media Programs</li> <li>• Web sites</li> </ul>

**3. Description of targeted audience**

- Care givers of people with chronic illness
- Home health care providers
- Certified nursing assistants
- Tribal members
- Farmers/Ranchers
- Montana Financial Educational Coalition Partners
- 4-H Leaders
- State Agency Employees
- Home Builders, housing authorities, real estate professionals
- Remodeling Contractors
- Weatherization Contractors
- Homeowners
- Senior Citizens
- Parents/Grandparents
- Montana Department of Family Services

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	3800	3600	30	100
2012	3800	3600	30	100
2013	3800	3600	30	100
2014	4000	3800	30	100
2015	4000	3800	30	100

**2. (Standard Research Target) Number of Patent Applications Submitted**

2011:0                      2012:0                      2013:0                      2014:0                      2015:0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2011	0	2	2
2012	0	2	2
2013	0	2	2
2014	0	2	2
2015	0	2	2



**V(H). State Defined Outputs****1. Output Target**

- Estate Planning

An estimated 1000 people will attend an in-depth seminar on estate planning and promotion and will begin to make plans for distribution of their estates.

Distribute MontGuides on state and federal law changes to 1400 people who have purchased Estate Planning: The Basics Packet

Train/distribute the curriculum: Track'n Your Saving Goals Register and associated MontGuides

Distribute materials/fact sheets on AIPRA on reservations - estimated 100.

**2011:1000****2012:1000****2013:1000****2014:1000****2015:1000**

- Grandparents Raising Grandchildren:

Produce and distribute a bimonthly newsletter to all Extension Offices, grandparents, and others on the mailing list; currently 150 names.

Provide support and assistance to start educational/support groups in local communities for grandparents who are parenting children. Currently, there are 15 in the state.

**2011:250****2012:250****2013:275****2014:275****2015:250**

- Housing and Environmental Quality

Number of publications/fact sheets distributed.

Number of participants attending home environmental workshops/programs.

Number of people testing their wells, doing radon tests.

**2011:1000****2012:1025****2013:1050****2014:1050****2015:1050**

- Home Energy Costs: Number of people learning methods to save home energy, including purchasing Energy Star products. Number of people using energy saving practices in new and remodel construction. Number of people practicing weatherization techniques.

**2011:1000****2012:1000****2013:1000****2014:1000****2015:1000**

- Powerful Care Givers

People who are giving care to a victim of chronic illness attend a six week Powerful Tools for Caregivers workshop.

Ten new class leaders will be trained to be able to conduct the Powerful Tools for Caregivers workshops.

Two county agents will reach Master Trainers in Powerful Tools for Caregivers programs.

**2011:100****2012:125****2013:125****2014:125****2015:100**

- Parenting Piece by Piece

Train 3 county Extension agents in a train-the-trainer model for delivering a 6 week workshop to parents.

Conduct 3 six week workshops in the state for parents who have limited parenting skills, are at risk for child abuse and neglect or are mandated by the Montana Department of Family Services.

**2011:100****2012:125****2013:125****2014:150****2015:150**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p><b>Powerful Tools for Care Givers:</b>            An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care.            Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.</p>
2	<p><b>Grandparents Raising Grandchildren:</b>            Grandparents will become aware of services available to support them as they raise their grandchildren.            Grandparents will use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren.            Grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment to which to grow.</p>
3	<p><b>Home Energy Costs:</b>            Participants will apply common methods to save home energy to new or existing homes. Participants will use high performance, resource efficient building materials and construction techniques in remodeling and new construction.            Participants will increase their purchase of Energy Star products and appliances resulting in an energy saving of at least 30% annually per appliance.            Participants will experience an energy savings due to weatherizing and remodeling existing homes (13-65% energy savings per household).</p>
4	<p><b>Housing and Environmental Quality:</b>            Participants will learn about an environmental health concerns common to new and existing homes e.g., molds, water quality, lead-based paint, radon, etc. Homes will routinely be tested/assessed and mitigated for environmental health issues such as molds, radon, asbestos, drinking water, carbon monoxide</p>
5	<p><b>Parenting Piece by Piece:</b>            An estimated 100 participants will apply current parenting strategies.            An estimated 100 participants will be able to prepare nutritious meals, plan for financial security and access services that can assist them be successful in parenting their children.</p>

**Outcome # 1****1. Outcome Target**

Powerful Tools for Care Givers:

An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care.

Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.

**2. Outcome Type : Change in Action Outcome Measure****2011:100****2012:125****2013:125****2014:125****2015:100****3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2****1. Outcome Target**

Grandparents Raising Grandchildren:

Grandparents will become aware of services available to support them as they raise their grandchildren.

Grandparents will use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren.

Grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment to which to grow.

**2. Outcome Type : Change in Action Outcome Measure****2011:250****2012:250****2013:275****2014:275****2015:250****3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3****1. Outcome Target**

Home Energy Costs:

Participants will apply common methods to save home energy to new or existing homes. Participants will use high performance, resource efficient building materials and construction techniques in remodeling and new construction.

Participants will increase their purchase of Energy Star products and appliances resulting in an energy saving of at least 30% annually per appliance.

Participants will experience an energy savings due to weatherizing and remodeling existing homes (13-65% energy savings per household).

**2. Outcome Type : Change in Action Outcome Measure**

**2011:1000                      2012:1000                      2013:1000                      2014:1000                      2015:1000**

**3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 4**

**1. Outcome Target**

Housing and Environmental Quality:

Participants will learn about an environmental health concerns common to new and existing homes e.g., molds, water quality, lead-based paint, radon, etc. Homes will routinely be tested/assessed and mitigated for environmental health issues such as molds, radon, asbestos, drinking water, carbon monoxide

**2. Outcome Type : Change in Action Outcome Measure**

**2011:1000                      2012:1000                      2013:1000                      2014:1000                      2015:1000**

**3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 5**

**1. Outcome Target**

Parenting Piece by Piece:

An estimated 100 participants will apply current parenting strategies.

An estimated 100 participants will be able to prepare nutritious meals, plan for financial security and access services that can assist them be successful in parenting their children.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:100                      2012:125                      2013:125                      2014:150                      2015:150**

**3. Associated Knowledge Area(s)**

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

#### **4. Associated Institute Type(s)**

- 1862 Extension

#### **V(J). Planned Program (External Factors)**

##### **1. External Factors which may affect Outcomes**

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

##### **Description**

{NO DATA ENTERED}

#### **V(K). Planned Program (Evaluation Studies and Data Collection)**

##### **1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Other (Surveys)

##### **Description**

Each program has designed evaluation tools to gather data indicating outcome/impacts. Many have 3-6 year follow-up strategies to track the actions of participants.

##### **2. Data Collection Methods**

- Mail
- Telephone
- On-Site
- Observation
- Tests
- Other (FCS Evaluation System)

##### **Description**

The Family Consumer Science and Youth Evaluation System is a computer based data collection and analysis process that has been implemented in the state. Programs have been using this system for 3 years with some degree of success at identifying program impacts.

Computer/web based systems have been or are being developed to gather data for some programs.

**V(A). Planned Program (Summary)**

**Program # 5**

**1. Name of the Planned Program**

Community and Economic Development

**2. Brief summary about Planned Program**

Montana people have indicated they want to improve conditions for their families and communities, but this is not easy in a state that is so large and diverse. The major initiatives for this planned program are business retention/expansion, tourism, adult education, leadership development, community planning, effective service on boards, councils and committees. Agent and specialist developed programs provide both technical support and leadership in helping communities identify, set and achieve their goals. Extension is viewed as a resource by decision makers and community leaders for unbiased education on issues impacting their communities and the people who live there.

**3. Program existence :** Mature (More then five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	60%			
723	Hazards to Human Health and Safety	10%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
805	Community Institutions, Health, and Social Services	20%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)**

**1. Situation and priorities**

Depending on the area of the state, issues facing families and communities differ. The eastern part of Montana must address problems related to declining populations and shrinking communities. On the other hand, people who live in the western section of the state are working hard to plan for fast growth and an increasing and changing population. Extension programs are helping families and communities address needs brought on by these changes.

Business acquisition, retention and/or expansion are all important to community well being. A viable business community provides work for families and keeps a community sustained.

Adult education activities, such as leadership development, in rural communities provide an opportunity for people to learn new skills or just gain new information. Extension provides a link to the University which can assist in acquiring classes and instructors.

Serving on public boards, whether at the county or municipal level, is a critical component of good governance. Training for the people who serve on boards is critical to the success of any board.

Citizens need to be aware of local/community emergency plans and services available if a disaster should occur. How to access those services and become part of the solution is key for individuals and communities to survive a disaster.

## 2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Extension
- Integrated Research and Extension

### V(D). Planned Program (Assumptions and Goals)

#### 1. Assumptions made for the Program

There is evidence that communities can develop leadership and take control of their future by setting goals and developing strategic plans to accomplish a vision. Adults are interested in continuing education. Adult Education activities have been well attended in many communities across the state. Training for people serving on boards, councils and committees can lead to better local governance.

#### 2. Ultimate goal(s) of this Program

- To maximize community and economic development efforts, matching local needs, attributes, goals with business needs, resulting in effective development strategies including success with targeted industry efforts.
- To engage entities within a community in identifying community values and assets and to create a long range community vision which will become a guiding document for addressing issues facing the community.
- To provide a way for adults in rural settings to continue to expand their knowledge and skills without leaving their jobs, homes and families. Adult education opportunities can offer a variety of classes from the most technical to recreational.
- To reduce accidents and loss of property and human life due to disasters.
- To improve leadership systems and reduce poverty in small rural communities of less than 5,000 population.
- To train people serving on local boards so they can be effective in executing the responsibilities of the board.

### V(E). Planned Program (Inputs)

#### 1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2011	5.2	0.0	0.0	0.0
2012	5.2	0.0	0.0	0.0
2013	5.2	0.0	0.0	0.0
2014	5.2	0.0	0.0	0.0
2015	5.2	0.0	0.0	0.0

### V(F). Planned Program (Activity)

#### 1. Activity for the Program

Community meetings will be held to determine community values, attitudes and vision on which to develop strategies and action plans.

Partner with local economic development entities, agencies, businesses/industry and organizations to implement goals and plans of action.

Partner with local adult education entities to identify class offerings.

Work to plan for potential disasters that may occur in a community, e.g., EDEN.

Training opportunities will be available for people serving on boards, councils and committees in both the public and private sectors.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>• Education Class</li> <li>• Workshop</li> <li>• Group Discussion</li> <li>• Other 1 (MontGuides (Fact Sheets))</li> </ul>	<ul style="list-style-type: none"> <li>• Public Service Announcement</li> <li>• Newsletters</li> <li>• Web sites</li> <li>• Other 1 (Publications)</li> </ul>

**3. Description of targeted audience**

- Adults interested in education
- Business and Community Leaders
- Local Development Entities
- Local Economic Development Entities
- Chamber of Commerce Members
- Tourism Leadership &ndash local/state
- County and City Government
- Individuals interested in start-up and expansion or business
- County DES, Law Enforcement Emergency Response Coordinators
- Current community leadership/potential community leaders
- Landowners
- Adults/Youth serving on Boards

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	14000	15000	100	50
2012	14450	15000	100	50
2013	15000	17000	100	50
2014	15500	17000	100	50
2015	15600	17000	100	50

**2. (Standard Research Target) Number of Patent Applications Submitted**



**2011:0****2012:0****2013:0****2014:0****2015:0****3. Expected Peer Review Publications**

<b>Year</b>	<b>Research Target</b>	<b>Extension Target</b>	<b>Total</b>
2011	0	2	2
2012	0	2	2
2013	0	2	2
2014	0	2	2
2015	0	2	2

**V(H). State Defined Outputs**

**1. Output Target**

- **Community Resource Development:**  
 Number of Extension lead activities such as facilitation services, assistance in feasibility studies, strategic planning processes, development of business retention and expansion plans/programs.  
 Number of partnerships and existing relationships utilized to strengthen sustainability of county and private efforts in community and economic development.

<b>2011:7000</b>	<b>2012:7150</b>	<b>2013:7200</b>	<b>2014:7250</b>	<b>2015:7250</b>
------------------	------------------	------------------	------------------	------------------
  
- **Adult and Community Education**  
 Number of collaborations with community organizations to identify and establish classes to be offered in adult educational settings.  
 Number of adult education classes offered during the year.

<b>2011:2000</b>	<b>2012:2000</b>	<b>2013:2100</b>	<b>2014:2100</b>	<b>2015:2100</b>
------------------	------------------	------------------	------------------	------------------
  
- **EDEN (Extension Disaster Emergency Network):**  
 Number of workshops/presentations/activities focused on disaster mitigation.  
 Number of responses from PSA's, web site, etc. for emergency service entities.

<b>2011:3000</b>	<b>2012:3200</b>	<b>2013:3500</b>	<b>2014:4000</b>	<b>2015:4000</b>
------------------	------------------	------------------	------------------	------------------
  
- **Horizons Program:**  
 Number of Study Circle and Leadership Plenty meetings conducted.  
 Number of people who have not been involved in community problem solving activities in the past.  
 Number of community members trained and serving as facilitators for programs.  
 Number of community members involved in Study circles and Leadership Plenty process.

<b>2011:1000</b>	<b>2012:1100</b>	<b>2013:1200</b>	<b>2014:1250</b>	<b>2015:1250</b>
------------------	------------------	------------------	------------------	------------------
  
- **CITIZEN LEADERSHIP AND GOOD GOVERNANCE:** Number of people attending workshops/presentations focused on board responsibilities and authorities.

<b>2011:1000</b>	<b>2012:1000</b>	<b>2013:1000</b>	<b>2014:1000</b>	<b>2015:1000</b>
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**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p>EDEN: The public will understand how they access local emergency services and take steps to prepare for a disaster. Reduction of accidents, loss of property and human life due to disasters.</p>
2	<p>COMMUNITY RESOURCE DEVELOPMENT: Community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan. Community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Communities that will utilize an inclusive process to establish goals and action plans. Counties will establish and maintain a sustainable population with a viable and diversified economy. Communities will be prepared and able to deal with and direct change so it will reflect its goals, values and vision.</p>
3	<p>ADULT/COMMUNITY EDUCATION Participants will gain new knowledge leading them to try a new activity or making an informed decision as result of attending an adult education class. Participants will use a new skill, practice or technique as a result of attending a class.</p>
4	<p>HORIZONS: Communities demonstrate awareness and interest in poverty reduction. Community members become aware of opportunities, tools and techniques available to engage in poverty reduction. Communities begin to recognize and own poverty as a community issue about which they can take action. Communities begin to recognize and own leadership as a community issue about which they can take action. Communities demonstrate an interest in poverty reduction and begin the process of learning to recruit and mobilize others. Communities are mobilized to create and adopt a shared vision for poverty reduction. Communities will directly engage people living in poverty in leadership training and action planning. Communities will define leadership for poverty reduction as collective, rather than individual actions. Communities will implement inclusive processes and decision-making methods. Leadership base of communities will mirror the demographics of their community. Communities have a commitment to poverty reduction. Communities will implement and sustain changes that contribute to poverty reduction in the community. Communities will be able to demonstrate progress toward reducing poverty. Communities will conduct Study Circles and Leadership Plenty activities and involve people new to the community problem solving. People trained as facilitators for the Study Circle and Leadership Plenty process are able to assist community groups. People who have developed or enhanced their leadership skills are able to apply those newly acquired skills and techniques.</p>
5	<p>CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of people serving on boards, councils and/or committees who are prepared for the responsibilities/authorities of the entity. Number of boards, councils or committees that are successful in conducting the responsibilities/authorities of the group.</p>

**Outcome # 1**

**1. Outcome Target**

EDEN:

The public will understand how they access local emergency services and take steps to prepare for a disaster.  
Reduction of accidents, loss of property and human life due to disasters.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:3000                      2012:3000                      2013:3500                      2014:4000                      2015:4000**

**3. Associated Knowledge Area(s)**

- 723 - Hazards to Human Health and Safety

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

COMMUNITY RESOURCE DEVELOPMENT:

Community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan.

Community leaders, agency personnel, organization membership that will collaborate on economic development strategies.

Communities that will utilize an inclusive process to establish goals and action plans.

Counties will establish and maintain a sustainable population with a viable and diversified economy.

Communities will be prepared and able to deal with and direct change so it will reflect its goals, values and vision.

**2. Outcome Type : Change in Condition Outcome Measure**

**2011:7000                      2012:7150                      2013:7200                      2014:7250                      2015:7250**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

ADULT/COMMUNITY EDUCATION

Participants will gain new knowledge leading them to try a new activity or making an informed decision as result of attending an adult education class.

Participants will use a new skill, practice or technique as a result of attending a class.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:2000                      2012:2000                      2013:2100                      2014:2100                      2015:2100**

**3. Associated Knowledge Area(s)**

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 4**

**1. Outcome Target**

**HORIZONS:**

Communities demonstrate awareness and interest in poverty reduction. Community members become aware of opportunities, tools and techniques available to engage in poverty reduction.  
 Communities begin to recognize and own poverty as a community issue about which they can take action.  
 Communities begin to recognize and own leadership as a community issue about which they can take action.  
 Communities demonstrate an interest in poverty reduction and begin the process of learning to recruit and mobilize others.  
 Communities are mobilized to create and adopt a shared vision for poverty reduction.  
 Communities will directly engage people living in poverty in leadership training and action planning.  
 Communities will define leadership for poverty reduction as collective, rather than individual actions.  
 Communities will implement inclusive processes and decision-making methods.  
 Leadership base of communities will mirror the demographics of their community.  
 Communities have a commitment to poverty reduction.  
 Communities will implement and sustain changes that contribute to poverty reduction in the community.  
 Communities will be able to demonstrate progress toward reducing poverty.  
 Communities will conduct Study Circles and Leadership Plenty activities and involve people new to the community problem solving.  
 People trained as facilitators for the Study Circle and Leadership Plenty process are able to assist community groups.  
 People who have developed or enhanced their leadership skills are able to apply those newly acquired skills and techniques.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:1000                      2012:1100                      2013:1200                      2014:1250                      2015:1250**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 5**

**1. Outcome Target**

**CITIZEN LEADERSHIP AND GOOD GOVERNANCE:**

Number of people serving on boards, councils and/or committees who are prepared for the responsibilities/authorities of the entity.

Number of boards, councils or committees that are successful in conducting the responsibilities/authorities of the group.

**2. Outcome Type : Change in Action Outcome Measure**

**2011:1000                      2012:1000                      2013:1000                      2014:1000                      2015:1000**

**3. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

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

**Description**

There will be a continual decline in populations in Eastern Montana resulting in a more depressed atmosphere for families and communities. Growth in Western Montana will continue with absentee land owners being the largest increase in population. Leadership systems in small rural communities need to be revitalized. People who live in rural Montana will continue to seek opportunities to enhance and develop skills and knowledge in many areas.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)

**Description**

Several of the programs in this area are in the process of designing appropriate tools to gather impact data.

**2. Data Collection Methods**

- Mail
- Telephone
- On-Site
- Structured
- Unstructured
- Observation

**Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)****Program # 6****1. Name of the Planned Program**

Climate Change - Natural Resources and Environment

**2. Brief summary about Planned Program**

For decades, Montana landowners have made use of abundant natural resources in order to make a living and survive on the land. Today, society desires to preserve and protect these same resources that have made Montana a unique and thriving state. However, the majority of the state's citizens lack knowledge of how agriculture works to ensure the sustainability of natural resources even though their livelihood depends on it. For example, many livestock operations and other industries have chosen locations to build based on the proximity to nearby water sources which was the most economical and efficient. However there have been examples where the locations of these facilities have been devastating to the environmental quality. As a result, management techniques have been devised to make these industries compatible with their locations.

Forests and rangelands are also an important natural resource in Montana because they contribute to the economic base of the state. Both require continual management and stewardship to maximize their potential outputs. Additionally, wildlife habitat and its interface with agriculture and non-agricultural entities are critical components to the state's natural resource and environmental issues. Water quality cuts across all entities and is an extremely important resource requiring intentional management.

**3. Program existence :** Mature (More than five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

<b>KA Code</b>	<b>Knowledge Area</b>	<b>%1862 Extension</b>	<b>%1890 Extension</b>	<b>%1862 Research</b>	<b>%1890 Research</b>
102	Soil, Plant, Water, Nutrient Relationships	10%			
121	Management of Range Resources	20%			
123	Management and Sustainability of Forest Resources	20%			
135	Aquatic and Terrestrial Wildlife	10%			
136	Conservation of Biological Diversity	20%			
605	Natural Resource and Environmental Economics	20%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)****1. Situation and priorities**

All of the natural resources in the Montana are being impacted by the changing climate. Good management will be required to keep pace with the challenges brought on by different climate conditions.

Forests are an important resource in the state because they provide clean water, timber products, recreation and wildlife habitat. To be able to reach the highest potential of this resource however, appropriate management systems need to be in



place. Private forest landowners need to understand the intricacies of timber sales so they can capitalize on this resource.

Publicity has raised the awareness of and concerns about water quality. Specifically, arsenic and nitrates have been noted as being at potentially dangerous levels in some wells. People need to feel comfortable that their drinking water is safe for their families and regularly test their wells to obtain this assurance. There are several aspects of water quality that require attention and understanding and some of them are controversial in nature.

Small acreages are being purchased by people who are unfamiliar with appropriate stewardship practices for the land. These people need to gain an understanding of weed and pest controls as well as establishing a plan for appropriate and effective use of their property. Similarly, agricultural enterprises also need to develop environmentally friendly practices while making their business sustainable and profitable.

Rangeland covers the majority of the landscape in Montana. The prevention of the spread of noxious weeds and/or the control of noxious weeds continues to be the greatest concern for landowners and managers on both private and public lands. Use of controlled grazing strategies and integrated weed control techniques will help producers most efficiently use their range resources.

## **2. Scope of the Program**

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

## **V(D). Planned Program (Assumptions and Goals)**

### **1. Assumptions made for the Program**

Based on the demographics of Montana, no one argues the background and values of citizens are changing. Development of rural areas poses growth challenges. Increasing influence of environmental groups are changing policy and land use philosophies and perspectives. Environmental restrictions related to water, air and pesticides are increasing. There is evidence that the climate is changing making the use and management of natural resources challenging. Natural Resources and Environmental issues will continue to be a strong influence on the economic development, and social and political decisions in the state. Most Montanans are strongly opinioned about environmental issues. Extension Natural Resource and Environmental programs must continue to use scientific information to help the general public and decision makers understand the complex interrelationships and consequences of natural resource and environmental management. As Extension audiences continue to expand beyond traditional clientele, we will be challenged to be an unbiased source of information for all citizens while continuing to address the needs of traditional clientele.

### **2. Ultimate goal(s) of this Program**

To educate non-industrial private forest landowners in how they can implement the stewardship plans for their forested property.

To provide private forest landowners with the necessary knowledge to conduct a successful timber sale, which in turn supports the sustainability of managed forests.

To provide managers with the necessary tools and knowledge to effectively manage resources for economic and ecologic benefit.

To educate rural Montanan's about testing their well water and increase the number of well tests done along with the interpretations and recommendations.

To decrease the number of acres infested with noxious weeds or other pests and improve range land conditions.

To enhance effective resource stewardship of private landowners who own small acreages or who are new-to-the-land.

To increase awareness of management techniques that can be used by small acreage landowners to maintain or improve their crops, lawns and animals, while protecting their natural resources such as water, soil and plants.

To educate new landowners to natural resources and threats to them from plant, animal and insect pests.

To increase implementation of water quality best management practices related to livestock production and animal agriculture across the state.

To increase the level of non-point source pollution awareness and knowledge for livestock orientated small acreage land owners.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2011	3.4	0.0	0.0	0.0
2012	3.4	0.0	0.0	0.0
2013	3.4	0.0	0.0	0.0
2014	3.4	0.0	0.0	0.0
2015	3.4	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Conduct workshops that will address specific topics such as forest stewardship and controlling pests for Extension Professionals and clientele.

Conduct workshop/clinics on calibrating spray equipment and making plans for weed/pest control.

Partner with local and state associations and organizations that are concerned about natural resource issues.

Prepare MontGuides (fact sheets) and information for web sites on natural resource topics (water, range, forest, etc.)

Conduct workshops on water quality and quantity.

Develop Range Monitoring systems, conduct the Rangeland Institute and design range management seminars.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Education Class</li> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> <li>● Other 1 (Field Days)</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Other 1 (Newspaper articles, MontGuides )</li> <li>● Other 2 (Websites)</li> </ul>

**3. Description of targeted audience**

- Private Forest Land Owners
- Graduates of the Forest Stewardship Program
- County Weed Boards
- Farmers/Ranchers/Ag Producers
- Private Land Owners
- Small Acreage Land Owners
- Producers who operate Animal Feeding Operations
- Professional loggers/foresters
- Tribal Members and Tribal Colleges

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	<b>Direct Contact Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
2011	2700	3500	50	100
2012	2750	3500	50	100
2013	2850	3600	50	100
2014	2950	3700	50	100
2015	3050	4000	50	100

**2. (Standard Research Target) Number of Patent Applications Submitted**

**2011:0                      2012:0                      2013:0                      2014:0                      2015:0**

**3. Expected Peer Review Publications**

<b>Year</b>	<b>Research Target</b>	<b>Extension Target</b>	<b>Total</b>
2011	0	2	2
2012	0	2	2
2013	0	2	2
2014	0	2	2
2015	0	2	2

## V(H). State Defined Outputs

### 1. Output Target

- Forestry:

Number of private forest owners who attend one/two workshops to understand the timber sale process allowing them to complete a successful timber sale.

Number of people attending the forestry mini-college, a one-day educational program that includes 10 forestry related courses that provide knowledge or sources of assistance necessary to implement their forest stewardship plans.

Number of people completing a forest stewardship plan.

Number of people attending Forest Stewardship programs.

**2011:350**

**2012:350**

**2013:350**

**2014:350**

**2015:350**

- Small Acreage Lands:

Number of people attending workshops or participating in private consultations about pest control, weed management and other related/management topics.

Number of people who participate in field days and demonstration opportunities for land owners to observe techniques and best practices for land stewardship.

Number of subscribers to Big Sky Small Acres publication.

**2011:500**

**2012:500**

**2013:500**

**2014:500**

**2015:500**

- Environmentally Sensitive Management Systems:

Number of people attending workshops or requesting private consultation for developing a management plan. (forestry, animal feeding operations, small acreages, etc)

Number of demonstrations of sprayer calibrations, GPS usage and other technical practices that provide environmental protection.

To provide up-to-date guidance for operators through an AFO/CAFO website and electronic library, MontGuide fact sheets and field days.

**2011:100**

**2012:100**

**2013:100**

**2014:100**

**2015:100**

- WATER QUALITY:

Number of people attending Well Educated programs, starting a file to track water quality, regularly testing their wells and receiving materials for interpreting results and gaining insight on ways to help protect ground water resources.

Number of people attending water quality workshops that specifically address issues related to reservations.

Number of people viewing the documentary "Tribal Waters: The Clean Water Act in Indian Country".

Number of people viewing the video series for well and septic owners - 8 part educational video.

Number of people attending the watershed - citizen water quality monitoring workshops.

**2011:500**

**2012:500**

**2013:550**

**2014:550**

**2015:600**

- Range:

Number of people participating in Range Monitoring programs.

Number of people attending the Range Management Institute.

Number of requests to identify new weeds found, GPS assistance, use of sprayers for small weed infestation control.

Number of producers working through the Livestock Environmental Management Systems self assessment for their operation.

**2011:1250**

**2012:1300**

**2013:1350**

**2014:1400**

**2015:1500**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p><b>Forestry:</b>                      Participants will be able to sell their timber because of information learned in Extension workshops.                      Landowners will develop plans and implement activities that will enhance the sustainability of their forest lands and meet their individual forest stewardship objectives.                      Private forest landowners will manage their forests lands so they will continue to provide environmental, economic and social benefits to Montana citizens.</p>
2	<p><b>Small Acreages:</b>                      Producers and small acreage landowners will be aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner.                      Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemicals appropriately.                      Small landowners will develop a plan and take action steps to manage their property to meet their individual stewardship objectives.</p>
3	<p><b>Environmentally Sensitive Management Systems:</b>                      Producers will understand the current rules and regulations for animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation.                      Landowners will implement best practices in adopting weed, crop, pest and forage management strategies.                      Landowners will be more profitable while protecting the environment.                      All operations that develop and implement a Comprehensive Nutrient Management Plan (CNMP) to protect ground and surface water, apply manure at agronomic rates and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.</p>
4	<p><b>Water Quality:</b>                      Participants will learn the importance of and steps to do well testing, and will follow recommendations resulting from tests.                      Forage producers/participants will learn proper timing and implementation of control techniques and methods appropriate to their operations.                      Participants will understand the importance of water and related issues as a result of information from water projects such as Water Monitoring Activities, Well and Septic Programs and video, film and website materials.</p>

O. No.	Outcome Name
5	<p>Range:</p> <p>As a result of participating in Range Monitoring programs, ranch managers/producers will learn to identify plants, determine phenologic stage of plant growth, determine monitoring site location and determine appropriate time for monitoring activities which leads to improvement in resource management strategies.</p> <p>As a result of attending the Extension Range Management Institute, participants will be able to apply basic principles of range management and related topics determined at the planning stage.</p> <p>People will request information on identifying new weeds found, GPS assistance and use of sprayers for small weed infestation control.</p> <p>Producers will work through the Livestock Environmental Management Systems self assessment to understand how their operation affects the environment and to prioritize and develop action plans for addressing any environmental risks.</p>

**Outcome # 1**

**1. Outcome Target**

Forestry:

Participants will be able to sell their timber because of information learned in Extension workshops.

Landowners will develop plans and implement activities that will enhance the sustainability of their forest lands and meet their individual forest stewardship objectives.

Private forest landowners will manage their forests lands so they will continue to provide environmental, economic and social benefits to Montana citizens.

**2. Outcome Type : Change in Condition Outcome Measure**

2011:350

2012:350

2013:350

2014:350

2015:350

**3. Associated Knowledge Area(s)**

- 123 - Management and Sustainability of Forest Resources
- 605 - Natural Resource and Environmental Economics

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

Small Acreages:

Producers and small acreage landowners will be aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner.

Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemicals appropriately.

Small landowners will develop a plan and take action steps to manage their property to meet their individual stewardship objectives.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:500                      2012:500                      2013:500                      2014:500                      2015:500**

**3. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships
- 136 - Conservation of Biological Diversity
- 605 - Natural Resource and Environmental Economics

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

Environmentally Sensitive Management Systems:

Producers will understand the current rules and regulations for animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation.

Landowners will implement best practices in adopting weed, crop, pest and forage management strategies.

Landowners will be more profitable while protecting the environment.

All operations that develop and implement a Comprehensive Nutrient Management Plan (CNMP) to protect ground and surface water, apply manure at agronomic rates and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:100                      2012:100                      2013:100                      2014:100                      2015:100**

**3. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships
- 136 - Conservation of Biological Diversity
- 605 - Natural Resource and Environmental Economics

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 4**

**1. Outcome Target**

Water Quality:

Participants will learn the importance of and steps to do well testing, and will follow recommendations resulting from tests.

Forage producers/participants will learn proper timing and implementation of control techniques and methods appropriate to their operations.

Participants will understand the importance of water and related issues as a result of information from water projects such as Water Monitoring Activities, Well and Septic Programs and video, film and website materials.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:500                      2012:500                      2013:550                      2014:550                      2015:600**

**3. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships
- 136 - Conservation of Biological Diversity

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 5**

**1. Outcome Target**

Range:

As a result of participating in Range Monitoring programs, ranch managers/producers will learn to identify plants, determine phenologic stage of plant growth, determine monitoring site location and determine appropriate time for monitoring activities which leads to improvement in resource management strategies.

As a result of attending the Extension Range Management Institute, participants will be able to apply basic principles of range management and related topics determined at the planning stage.

People will request information on identifying new weeds found, GPS assistance and use of sprayers for small weed infestation control.

Producers will work through the Livestock Environmental Management Systems self assessment to understand how their operation affects the environment and to prioritize and develop action plans for addressing any environmental risks.

**2. Outcome Type : Change in Condition Outcome Measure**

**2011:1250                      2012:1300                      2013:1350                      2014:1400                      2015:1500**

**3. Associated Knowledge Area(s)**

- 121 - Management of Range Resources
- 135 - Aquatic and Terrestrial Wildlife
- 605 - Natural Resource and Environmental Economics

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

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



## **Description**

Probably the greatest of all the factors over which landowners have no control is the change in climate patterns. Some of them might reach the disaster level, but many are gradual. The natural resources are greatly impacted by the things over which we have little or no control leaving those who depend on the resources challenged to develop flexible management plans that ensure viability and profitability.

### **V(K). Planned Program (Evaluation Studies and Data Collection)**

#### **1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparison between locales where the program operates and sites without program intervention

## **Description**

Some programs in this area are connected to research projects that have specific targets established and strategies outlined for collecting data. Water quality and environmentally sensitive management reflect this approach.

#### **2. Data Collection Methods**

- Mail
- Telephone
- On-Site
- Unstructured
- Case Study
- Observation
- Tests
- Journals

## **Description**

Because of the close relationship established in these programs, data collection can often be less formal in nature.

**V(A). Planned Program (Summary)**

**Program # 7**

**1. Name of the Planned Program**

Sustainable Energy

**2. Brief summary about Planned Program**

For several years, Extension has been providing education in the area of energy conservation. It has however, begun to work in renewable and sustainable energy projects during the past 3-5 years. According to the Montana Department of Commerce, Montana has more potential for energy development from existing and untapped diversified sources than any state in the nation. For example, it is #1 in US coal deposits, #1 in wind potential class 3 and above and has seen a 40% increase in oil production during the last decade. There are over 50 wind farms in various levels of production and more than 15 locations for potential geothermal energy. Biomass/biofuels have also seen an increase in interest and production. Education is needed for good decision making as it relates to energy and Extension is in a position to assist with that need.

**3. Program existence :** Intermediate (One to five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

<b>KA Code</b>	<b>Knowledge Area</b>	<b>%1862 Extension</b>	<b>%1890 Extension</b>	<b>%1862 Research</b>	<b>%1890 Research</b>
111	Conservation and Efficient Use of Water	10%			
131	Alternative Uses of Land	10%			
402	Engineering Systems and Equipment	10%			
605	Natural Resource and Environmental Economics	20%			
608	Community Resource Planning and Development	20%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	15%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	15%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)**

**1. Situation and priorities**

Energy is a significant expense for nearly all Montanans and a sizeable input cost for agricultural producers. Energy prices have been volatile in recent years. Environmental concerns are growing due in part to concern about greenhouse gas levels. Both of these factors have encouraged Montanans to utilize energy more effectively. Unfortunately, many Montanans do not have quality information about benefits and costs associated with alternative energy. Resources developed in other parts of the country may not be accurate for the state.

Additionally, the increasing energy costs and a national economic slow down are negatively impacting Montana

businesses' ability to finance projects. Montana's small businesses can no longer pass on to consumers higher costs driven by escalating energy costs. A recent study by the Small Business Administration found that small businesses pay 30% more for electricity than large businesses. In order for Montana businesses to compete in the national market, flexible and innovative tools to reduce energy costs are necessary.

**2. Scope of the Program**

- In-State Extension
- In-State Research
- Multistate Extension
- Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

It can be assumed that there will be continued interest in sustainable energy among Montanans and the rest of the nation; that it will be possible to find and use new forms of energy in homes and businesses that are economical, clean and renewable; that people will use alternative energy and would be willing to pay a little more to do so; that some funding will be available to pursue alternative and sustainable energy.

**2. Ultimate goal(s) of this Program**

To provide Montanans with an economic framework to evaluate alternative energy opportunities.

To provide quality and relevant resources on wind, solar and other renewable energy industries at local and regional levels.

To provide reliable information that can be used for decision making by agriculture and business entities.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2011	2.3	0.0	0.0	0.0
2012	2.3	0.0	0.0	0.0
2013	2.3	0.0	0.0	0.0
2014	2.3	0.0	0.0	0.0
2015	2.3	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Produce guides on current energy topics.

Conduct community meetings on energy topics

Conduct meetings for agriculture and other landowners on alternative energy topics.

Partner with agencies, local and tribal government, organizations and industry

Conduct meetings and seminars on methods for evaluating alternative energy opportunities.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Education Class</li> <li>● Workshop</li> <li>● Group Discussion</li> <li>● Demonstrations</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 1 (Publications)</li> </ul>

**3. Description of targeted audience**

- Farmers and Ranchers
- Non-farm or ranch energy users
- Landowners
- Local Government
- Current Community Leadership
- Local Development Entities
- Local Economic Development Entities
- Chamber of Commerce Members
- People interested in becoming involved with creating alternative energy opportunities
- Small businesses by SBA definition

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	875	1200	100	200
2012	875	1200	100	200
2013	900	1250	100	200
2014	900	1250	100	200
2015	950	1250	100	200

**2. (Standard Research Target) Number of Patent Applications Submitted**

2011:0                      2012:0                      2013:0                      2014:0                      2015:0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2011	0	2	2
2012	0	2	2

Year	Research Target	Extension Target	Total
2013	0	2	2
2014	0	2	2
2015	0	2	2

## V(H). State Defined Outputs

### 1. Output Target

- Sustainable Energy:

Number of people attending workshop/presentations and/or accessing the web site for information about wind energy.

Number of people attending workshops/presentations on the pros and cons of various types of bio-fuels or alternative energy sources.

Development of educational guides/publications on current energy issues.

Workshops/seminars on quantifying the impact of energy generation or savings as it relates to the bottom line of their primary business function.

Number of people gathering information from the Extension Energy web site.

**2011:875**

**2012:875**

**2013:875**

**2014:875**

**2015:875**

- Energy and Agriculture:

Number of people attending workshops/presentations or using the website for information about energy alternative and what criteria to use for decision making on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.)

Number of producers attending seminars/demonstrations on using energy saving tillage system practices.

**2011:275**

**2012:275**

**2013:275**

**2014:275**

**2015:275**

- Energy and Community:

Number of people attending workshops/presentations or using the web site on public policy issues related to energy generation and transmission.

Number of people participating in workshops/presentations on land leasing issues related to energy generation.

**2011:150**

**2012:150**

**2013:150**

**2014:150**

**2015:150**

- Residential Energy:

Number of homeowners and builders who attend workshops/seminars or accessing the web site on home energy saving/conservation practices.

Number of home builders, contractors and crews attending workshops on weatherization techniques in construction of homes.

Number of people who gain information about the Camelina Composite Pellet Fuels for home stoves.

**2011:400**

**2012:400**

**2013:400**

**2014:400**

**2015:400**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	Energy and Agriculture (reservation and non-reservation) Participants will understand energy alternatives and how to use a framework to evaluate energy opportunities Participants will be able to make a sound decision on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.) Participants will use energy saving tillage system practices.
2	Energy and Community (reservation and non-reservation) Participants will understand the public policy issues related to wind and other alternative energy generation and transmission. Participants will understand land leasing issues related to wind and other alternative energy generation and transmission.
3	Residential Energy: Homeowners will apply home energy savings/conservation practices. Home builders, contractors and crews will use weatherization techniques in constructing homes. Participants will become aware of the Camelina Composite Pellet Fuels for home stoves.

**Outcome # 1**

**1. Outcome Target**

Energy and Agriculture (reservation and non-reservation)

Participants will understand energy alternatives and how to use a framework to evaluate energy opportunities

Participants will be able to make a sound decision on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.)

Participants will use energy saving tillage system practices.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:275                      2012:275                      2013:275                      2014:275                      2015:275**

**3. Associated Knowledge Area(s)**

- 111 - Conservation and Efficient Use of Water
- 131 - Alternative Uses of Land
- 605 - Natural Resource and Environmental Economics

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

Energy and Community (reservation and non-reservation)

Participants will understand the public policy issues related to wind and other alternative energy generation and transmission.

Participants will understand land leasing issues related to wind and other alternative energy generation and transmission.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:150                      2012:150                      2013:150                      2014:150                      2015:150**

**3. Associated Knowledge Area(s)**

- 402 - Engineering Systems and Equipment
- 605 - Natural Resource and Environmental Economics
- 608 - Community Resource Planning and Development

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

Residential Energy:

Homeowners will apply home energy savings/conservation practices.

Home builders, contractors and crews will use weatherization techniques in constructing homes.

Participants will become aware of the Camelina Composite Pellet Fuels for home stoves.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2011:400**

**2012:400**

**2013:400**

**2014:400**

**2015:400**

**3. Associated Knowledge Area(s)**

- 402 - Engineering Systems and Equipment
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

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

**Description**

The need to determine alternative energy sources will continue to be a priority for the national government on through to local entities. Costs of energy will continue to fluctuate making it difficult for planning. There are renewable energy sources that are dependant on weather conditions.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)

**Description**

Some of these programs are in the beginning stages and are in the process of designing appropriate tools to gather impact data.

**2. Data Collection Methods**

- Mail
- Telephone
- On-Site
- Structured
- Unstructured



- Observation
- Tests

**Description**

{NO DATA ENTERED}

**V(A). Planned Program (Summary)**

**Program # 8**

**1. Name of the Planned Program**

Food Safety

**2. Brief summary about Planned Program**

Programs delivered under this planned program category focus on safe food; from gate to plate. It involves food handling practices and protocols by food service managers/employees, food preservation techniques generally used at home and on farms, and animal practices that lead products into the food chain. Extension has long been recognized as one of the best sources of reliable information related to food safety, so it is appropriate to maintain a strong presence in this educational effort.

**3. Program existence :** Mature (More than five years)

**4. Program duration :** Long-Term (More than five years)

**5. Expending formula funds or state-matching funds :** Yes

**6. Expending other than formula funds or state-matching funds :** No

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	50%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	50%			
	<b>Total</b>	100%			

**V(C). Planned Program (Situation and Scope)**

**1. Situation and priorities**

One out of 65 Montanans experience an illness related to unsafe food handling practices. To address this concern, there are three major efforts underway: Basic Food safety training for food service employees, ServSafe Food Protection Manager Certification Courses and Hazard Analysis and Critical Control (HACCP) training for the Food Industry. Food safety is a growing concern for the food service industry, public and private agencies. Many food service groups require food safety training including the Montana school systems that must comply with the mandatory USDA policy to implement a School Food Safety Plan.

Montana has an abundance of nutritious seasonal, wild and homegrown foods appropriate for home preservation. It is critical that those who practice preserving and processing foods at home have access to the most reliable information available concerning food safety and food quality. A study done by CSREES-USDA in 2000, revealed a high percentage of home food processors are using practices that put them at risk for food borne illness and economic losses due to food spoilage. As a result of this study and more recent updates to the study, there is a renewed need to provide programming for home food preservers. The sustainable food trends and current economic downfall have also contributed to a renewed interest in home food preservation.

Producing safe and high quality beef that is desirable for the consumer is important to Montana ranchers and consumers alike. The "produce then sell" mentality of ranchers is being replaced by the strategy of asking consumers what they want in their beef products, then creating it. Consumers are looking for attributes such as tenderness, flavor and portion size while producers are interested in performance, health and predictability throughout the system. Age and source verification, animal

health and bio-security are also part of that comprehensive system. Consumers want to know they are buying safe and high quality products when they go to the market. Beef Quality Assurance and Biosecurity Education ensure the domestic and international beef consumers enjoy ready access to a safe and wholesome beef supply.

**2. Scope of the Program**

- In-State Extension
- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

**V(D). Planned Program (Assumptions and Goals)**

**1. Assumptions made for the Program**

Food borne illnesses are a substantial health burden in the US and will remain so into the near future.

Food preservation will continue to be of interest as long as the economy is slow.

Consumers/ranchers/producers are concerned about the safety of their food supply and are motivated to address related issues. The motivations may be different, but none-the-less are present.

**2. Ultimate goal(s) of this Program**

To reduce the incidence of food borne illness through education within the foods service operations. (targeted audience includes: Food service employees, managers and professionals.)

To provide information, training and support to home food preservers so they will practice safe food preservation practices.

To ensure consumers have ready access to a safe and wholesome beef supply.

**V(E). Planned Program (Inputs)**

**1. Estimated Number of professional FTE/SYs to be budgeted for this Program**

Year	Extension		Research	
	1862	1890	1862	1890
2011	3.6	0.0	0.0	0.0
2012	3.6	0.0	0.0	0.0
2013	3.6	0.0	0.0	0.0
2014	3.6	0.0	0.0	0.0
2015	3.6	0.0	0.0	0.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Conduct train the trainer workshops, clientele workshops/clinics aimed at food safety, food preservation and meeting beef quality assurance standards

Facilitate meetings with partners organizations and agencies (local and state)

Conduct interactive video conferences, web based deliveries etc.

**2. Type(s) of methods to be used to reach direct and indirect contacts**

**Extension**

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> <li>● Education Class</li> <li>● Workshop</li> <li>● Group Discussion</li> <li>● One-on-One Intervention</li> <li>● Demonstrations</li> <li>● Other 1 (Interactive Video)</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 1 (MontGuides (Fact sheets))</li> </ul>

**3. Description of targeted audience**

Restaurant and other Food Service Managers/Employees; volunteers at food serve operations.  
 Home food preservers and people involved with food preparation  
 Livestock producers  
 Commodity Associations

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons(contacts) to be reached through direct and indirect contact methods**

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	4100	1300	500	200
2012	4250	1400	500	200
2013	4300	1400	500	200
2014	4450	1500	500	200
2015	4450	1500	500	200

**2. (Standard Research Target) Number of Patent Applications Submitted**

**2011:0                      2012:0                      2013:0                      2014:0                      2015:0**

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2011	0	2	2
2012	0	2	2
2013	0	2	2
2014	0	2	2

Year	Research Target	Extension Target	Total
2015	0	2	2

## V(H). State Defined Outputs

### 1. Output Target

- Food Safety:

Provide 3 train the trainer sessions for County Extension Agents so they can conduct 25 food safety education classes for audiences such as county sanitarians, school food service personnel, volunteers, food banks etc. (Number of people attending)

Make resources available for individual study - web, publications etc.. (Number distributed.)

**2011:1300**

**2012:1400**

**2013:1400**

**2014:1500**

**2015:1500**

- Food Preservation:

Provide training and updates to County Extension Agents so they can conduct training/education on food preservation to home food preservers. (number of people attending)

Prepare publications/MontGuides on Food Preservation practices and number distributed.

People using canners will have the pressure gauges tested. (number being tested)

**2011:1300**

**2012:1350**

**2013:1400**

**2014:1450**

**2015:1450**

- Montana Beef Network - Beef Quality Assurance (BQA)

Number of people attending beef quality assurance, production and marketing programs.

Number of classes, demonstrations and tours provided related to BQA.

Number of people participating on interactive video programs, hits on the web site, publications distributed etc.

**2011:1500**

**2012:1500**

**2013:1500**

**2014:1500**

**2015:1500**

**V(I). State Defined Outcome**

O. No.	Outcome Name
1	<p>Food Safety</p> <p>People working in the food industry will use accepted food safety practices as they handle food, e.g., storing and thawing foods properly, hand washing, controlling time and temperature, ensuring proper personal hygiene, prevent cross-contamination, proper cleaning and sanitizing, etc.</p> <p>There will be a decline in the economic and health consequences of food borne illnesses</p>
2	<p>Food Preservation:</p> <p>Home food preservers will use accepted preservation practices in their home processes.</p> <p>There will be a decline in the economic and health consequences of food borne illnesses and spoilage.</p>
3	<p>Montana Beef Network-Beef Quality Assurance (BQA)</p> <p>Ranchers/producers will adhere to BQA protocols for raising beef.</p> <p>Ranchers/producers will become BQA certified.</p> <p>Consumers are assured of a readily available and wholesome supply of beef.</p>

**Outcome # 1**

**1. Outcome Target**

Food Safety

People working in the food industry will use accepted food safety practices as they handle food, e.g., storing and thawing foods properly, hand washing, controlling time and temperature, ensuring proper personal hygiene, prevent cross-contamination, proper cleaning and sanitizing, etc.

There will be a decline in the economic and health consequences of food borne illnesses

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:1300                      2012:1400                      2013:1400                      2014:1500                      2015:1500**

**3. Associated Knowledge Area(s)**

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 2**

**1. Outcome Target**

Food Preservation:

Home food preservers will use accepted preservation practices in their home processes.

There will be a decline in the economic and health consequences of food borne illnesses and spoilage.

**2. Outcome Type : Change in Knowledge Outcome Measure**

**2011:1300                      2012:1350                      2013:1400                      2014:1450                      2015:1450**

**3. Associated Knowledge Area(s)**

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**4. Associated Institute Type(s)**

- 1862 Extension

**Outcome # 3**

**1. Outcome Target**

Montana Beef Network-Beef Quality Assurance (BQA)

Ranchers/producers will adhere to BQA protocols for raising beef.

Ranchers/producers will become BQA certified.

Consumers are assured of a readily available and wholesome supply of beef.

**2. Outcome Type :** Change in Condition Outcome Measure

**2011:**1300

**2012:**1350

**2013:**1400

**2014:**1450

**2015:**1450

**3. Associated Knowledge Area(s)**

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

**4. Associated Institute Type(s)**

- 1862 Extension

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

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

**Description**

The safe and secure food supply will continue to be of concern for consumers. Recent illnesses from food have heightened the interest of safe food for producers, food handlers/processors, markets and others involved with the food chain.

**V(K). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Other (focus groups )

**Description**

The Montana Beef Network has an on-going evaluation focused on benefits of being involved with BQA. Additionally, the food safety programs have follow up activities indicating their impact.

**2. Data Collection Methods**

- Sampling
- Whole population
- Mail
- On-Site
- Structured
- Unstructured



- Observation

### **Description**

The data collection methods will depend on the program and the point of delivery. Some of the statewide programs have the evaluation process defined so all involved in the program use the same protocol.