

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

**Program # 5**

**1. Name of the Planned Program**

Healthy Living, Nutrition and Food Safety

Reporting on this Program

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
702	Requirements and Function of Nutrients and Other Food Components	10%			
703	Nutrition Education and Behavior	10%			
704	Nutrition and Hunger in the Population	20%			
724	Healthy Lifestyle	20%			
801	Individual and Family Resource Management	10%			
802	Human Development and Family Well-Being	20%			
805	Community Institutions and Social Services	10%			
	<b>Total</b>	100%			

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

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	2.6	0.0	0.0	0.0
<b>Actual Paid</b>	2.9	0.0	0.0	0.0
<b>Actual Volunteer</b>	3.4	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
94345	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
48053	0	0	0

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

**1. Brief description of the Activity**

- 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. Brief description of the target audience**

- Low income adults
- Low income youth
- 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
- Working people
- Elderly and shut-in people
- Reservation populations
- Healthy adults and children
- Unhealthy adults and children

**3. How was eXtension used?**

eXtension was used for newsletters, fact sheets, general resources and evaluation tools and reports.

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

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	4828	57608	6262	24260

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2014	Extension	Research	Total
<b>Actual</b>	6	0	0

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

**Output Target**

**Output #1**

**Output Measure**

- Healthy Lifestyles: Classes and resources, printed and online, are readily available to Montanans to gain knowledge related to physical activities, nutrition and the need for medical testing.

Year Actual  
 2014 3062

**Output #2**

**Output Measure**

- Nutrition: Classes, publications and online resources are utilized to provide current information regarding nutrition, food resource management tools and other dietary needs directly to Montanans wherever they may be.

Year Actual  
 2014 639

**Output #3**

**Output Measure**

- EFNEP/SNAP-Ed: The NEP curriculum is utilized to teach adults and youth who qualify a series of lessons related to nutrition and food resource management.

<b>Year</b>	<b>Actual</b>
2014	6548

**Output #4**

**Output Measure**

- Food Safety: Provide a number of train the trainer sessions for County Agents so they can offer food safety education classes and ServSafe training to local sanitarians school food service personnel, volunteers and others.

<b>Year</b>	<b>Actual</b>
2014	473

**Output #5**

**Output Measure**

- Food preservation: Provide training and updates to County Extension Agents so they can conduct trainings and answer questions for home preservers.

<b>Year</b>	<b>Actual</b>
2014	368

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Healthy Lifestyles: Increased participation in healthy lifestyle programming and health monitoring that leads to increased knowledge and healthy lifestyle choices.
2	Nutrition: Increased participation in nutrition classes and training and use of online and printed resources leading to changes in nutrition habits.
3	EFNEP/SNAP-ed: Increased participation by eligible citizens, particularly the elderly, leading to increased knowledge and use of knowledge related to nutrition and food resource management.
4	Food Safety: Increased participation in food safety classes, trainings and increased knowledge and utilization of concepts learned by participants.
5	Food preservation: Increased participation in food preservation classes and increased knowledge and utilization of concepts learned by participants.

## **Outcome #1**

### **1. Outcome Measures**

Healthy Lifestyles: Increased participation in healthy lifestyle programming and health monitoring that leads to increased knowledge and healthy lifestyle choices.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	3062

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Chronic diseases are Montana's leading cause of death, illness and disability and account for approximately 70 percent of healthcare costs. In Montana, heart disease is the leading cause of death and along with other diseases including diabetes, stroke, osteoporosis and hypertension, significantly impact quality of life. Research shows that healthy food choices, physical activity and early detection of symptoms can prevent or delay these diseases, saving millions in health care costs and preserving quality of life. Utilizing its network across the state and trusting relationships of agents in local communities, MSU Extension works with the Montana Department of Health and Human Services and other agencies to provide educational programming that fits the particular needs of each county.

#### **What has been done**

At least eight counties have active Strong Women Programs which provide structured exercise and nutrition information twice weekly for 10-12 weeks. Extension has partnered with the Montana Office of Rural Health and the MSU College of Nursing on a study that will identify specific value related to rural community health fairs that offer free or reduced-cost screenings, including blood and bone density tests. Many counties currently partner with others in their communities to offer some type of health fair. Extension is a partner in the Montana Arthritis Program (MAP) and numerous counties implement the Arthritis Foundation Exercise Program (AFEP) for their residents. Rural Extension faculty proactively partner to offer healthy living education activities to meet needs that span all generations.

#### **Results**

One hundred percent of participants who complete Strong Women or AFEP programs report reduced pain and stiffness, increased range of motion and balance and improved sleep. Eighty-

five percent report a comprehensive understanding of nutrition that supports protecting and improving bone density. Qualitative improvements include: being able to open a jar, having strength to climb stairs, ability to lift bag into overhead compartment on a plane, more comfort in living alone, improved dexa-scan readings that doctor attributed partially to classes and weight loss. Participants at one health fair reported an average savings of \$300/each in medical costs. Sixty percent said they learned at least one healthy lifestyle change that they intended to implement. One office where healthy-living program participants could receive free blood-pressure readings any time, reported a cumulative drop in blood pressure of 10 points through the year. Cumulative, quantitative data is not available at this time though efforts to improve data collection are under way.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
805	Community Institutions and Social Services

#### Outcome #2

##### 1. Outcome Measures

Nutrition: Increased participation in nutrition classes and training and use of online and printed resources leading to changes in nutrition habits.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	639

##### 3c. Qualitative Outcome or Impact Statement

**Issue (Who cares and Why)**

The USDA Map the Meal Gap report states that 20.9 percent of Montana's children struggle with hunger, meaning they regularly have concern over whether they will have enough to eat. Fifty-seven percent of Montana's children participated in the National School Lunch program and 13 percent receive SNAP benefits. However, the number of eligible families is much higher. The Montana Food Security Council and the Montana Food Bank Network recognize that access to enough food, and to healthy food in particular, is complicated by great distances between grocery stores and the availability of fresh, healthy foods at many locations. Extension Nutrition Education Programs help Montana learn how to stretch their food dollars while meeting USDA dietary guidelines.

#### **What has been done**

Putting skills for meal planning, meal preparation and food safety into as many hands as possible is a critically important goal of Extension faculty throughout the state. Extension programming aims to ward off costly disease processes by improving nutrition, increasing activity and reducing negative behaviors (smoking, binge drinking) through community-wide health promotion. Through a variety of classes, Extension teaches all citizens (not only low-income) skills such as food preparation; meal planning; grocery shopping; knife handling; slow-cooker cooking; hazards of energy drinks and soda; utilizing lower-cost meat cuts; recipes for homegrown fruits and vegetables and more. Faculty teach concessionaires ways to provide more nutritional options during sporting and other events.

#### **Results**

Extension Nutrition Education programs created a comprehensive website to share resources with all Montanans. BuyEatLiveBetter.org is a one-stop shop that is being increasingly utilized and promoted. Many of the activities in this area are individual events that make up part of larger county plans. This makes it difficult to quantify outcomes from a statewide perspective. As an example, in 2014 in Teton County, 241 youth and adults directly participated in activities. Of those reporting, 88 percent ranked 5 on a 1-5 scale with 5 as high, that the skills gained were useful and that the classes increased confidence in being able to prepare nutritious and economical meals. Sixteen percent could list 10 tips for saving money in the family food budget and 41 percent had increased knowledge about proper temperature for storing and cooking meat products. In Cascade County, 160 City of Great Falls employees learned the importance of not skipping meals. They reported they were more likely to prepare snacks and have ready-to-go healthy foods for busy days. These things add up, and in Montana, Extension is working to quantify them through better evaluation and reporting.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
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801	Individual and Family Resource Management
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805	Community Institutions and Social Services

### **Outcome #3**

#### **1. Outcome Measures**

EFNEP/SNAP-ed: Increased participation by eligible citizens, particularly the elderly, leading to increased knowledge and use of knowledge related to nutrition and food resource management.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	6548

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Food insecurity and hunger is prevalent in Montana. One in four individuals qualify for Supplemental Nutrition Assistance Program (SNAP) benefits. Seventy-six percent of rural households with children under 18 live in poverty. With great distances between rural communities, more than half the counties have food deserts, meaning residents must travel more than 10 miles to the nearest super market. Accessing affordable, healthy foods is a challenge and can result in obesity and health issues. Nutrition education helps Montanans learn how to stretch their food dollars while meeting USDA dietary guidelines.

##### **What has been done**

SNAP Education (SNAP-Ed) programs provide hands-on nutrition and physical activities designed to reduce food insecurity and help families lead a healthier lifestyle. Fifty adult nutrition series were offered, along with 100 classes for youth in Title One schools. Each series includes six classes for adults and 1st, 3rd and 5th grade children in 14 counties and six reservations. Fifty-five demonstrations were given through local agencies that support low-income residents. The Expanded Food and Nutrition Education Program (EFNEP) serves the very poor within Montana's three largest cities: Billings, Missoula and Great Falls. Eighty-one classes were provided at schools, and 553 adults received direct EFNEP training. Nutrition educators coordinate with other community resources to provide holistic support.

##### **Results**

SNAP-Ed post-series surveys indicated: 93% of adults made at least one positive change to improve their health; 39% were planning their meals ahead and 33% were comparison shopping for reported savings averaging \$28.90/month; 33% of youth increased their physical activity; 31% of 3rd and 5th graders switched to low-fat from whole milk; and 29% more children were eating

breakfast daily. EFNEP post series surveys indicated: 94% of adults had made at least one positive lifestyle change; 32% were thoughtful about making healthier food choices for their family; 79% were more careful about recommended hand-washing; 31% demonstrated improved ability to not run out of food before the end of the month (average savings from Extension training was \$21.10/month). Overall, 19% of EFNEP adults reported that they had adopted long-term healthy behaviors learned through the course of the program. 42% of EFNEP youth improved physical activity.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
805	Community Institutions and Social Services

#### Outcome #4

##### 1. Outcome Measures

Food Safety: Increased participation in food safety classes, trainings and increased knowledge and utilization of concepts learned by participants.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

<b>Year</b>	<b>Actual</b>
2014	473

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Each year in America there are over 48 million documented cases of food-borne illness. The financial cost of food-borne illness is tremendous, including lost wages, health care and investigative costs. Basic food safety training on controlling time and temperature when handling food, and ensuring proper cleaning and sanitizing reduces the incidence of food-borne illness.

Many food service groups, including school systems, Head Start and food banks, now require food safety training. Montanans have identified food safety training as having an important role in value added agriculture, community and economic development, workforce preparation, youth development, safe food operations for tourism, trade and health promotion.

#### **What has been done**

Three levels of training are provided. Level 1 training provides food service workers with the basic knowledge and skills to earn a certificate of completion for Basic Food Safety. Participants learn about safe food handling, controlling time and temperature, proper personal hygiene, preventing cross contamination and proper cleaning and sanitizing. Level 2 training provides a manager certification and uses an activity-based approach that covers the impact of safety on an operation, the flow of food through the operation and managing a food-safe operation. Level 3 Training provides train-the-trainer and other updates for agents, registered sanitarians and other food safety professional who are interested in providing food safety training.

#### **Results**

One hundred percent of those in Level 1 classes (316) passed the exam and received their Basic Food Safety certificate. One hundred percent demonstrated increased knowledge in understanding how to reduce food-borne illness incidences through safe food handling. Managers of school food banks toured the Cascade County Food Bank and learned how to better manage their school pantries. They went through their school shelves and removed outdated and dented cans and replaced them with new, acceptable cans donated by the main food bank. The school pantries are designed to alleviate child hunger through the provision of food to children and their families at school. Students manage the school pantries, learning valuable skills.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
805	Community Institutions and Social Services

#### **Outcome #5**

##### **1. Outcome Measures**

Food preservation: Increased participation in food preservation classes and increased knowledge and utilization of concepts learned by participants.

##### **2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	368

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Montana has an abundance of nutritious, seasonal, wild and homegrown foods. Sustainable food trends, the slow economy, and presence of food deserts across Montana have all increased interest in home food preservation as an important and popular activity. Recent national surveys reveal that a high percentage of home food processors are using practices that put them at high risk for food-borne illness and economic loss due to food spoilage. MSU Extension has long been recognized as a credible source for science-based recommendations for home food preservation. These trends bring renewed effort to provide enhanced programming opportunities.

**What has been done**

Extension utilizes many strategies for educating the public about safe food preservation. Every office responds to drop-in visitors, phone calls and emails asking individual questions. MontGuides, fact sheets and other resources are distributed during county fairs, farmers' markets, community events and during trainings. Classes covering topics such as canning; water bath canning; meat preserving and canning; pickling, freezing; drying and the science of food-borne illnesses and how to prevent them, are offered in communities all across the state. Extension faculty share information through newspaper articles, blogs, listservs, newsletters, radio spots, and social media and pressure-gauge testing at local hardware and grocery stores.

**Results**

Pre- and post- surveys are regularly completed during formal presentations. Of those completing surveys, 100 percent said they gained knowledge and resources; feel more confident in being able to safely preserve food than before the class; and recognize potential dangers from failure to use proper techniques. Sixty percent indicated they would use water bathing, jelly making and drying learned during class over the next year. Overall, classes received a rating of 4.86 on a scale of 5.0 with 5 being excellent and 1 being poor.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

724	Healthy Lifestyle
801	Individual and Family Resource Management
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#### **V(H). Planned Program (External Factors)**

##### **External factors which affected outcomes**

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

##### **Brief Explanation**

MSU Extension utilizes train-the-trainer methods to reach more people with limited resources. Data from classes taught by Extension volunteers is not always easy to access, though is clearly an impact of Extension work. MSU Extension is continuing to work with faculty on creating effective evaluation tools and improving methods for gathering qualitative outcomes.

#### **V(I). Planned Program (Evaluation Studies)**

##### **Evaluation Results**

Evaluation tools most utilized were pre- and post-test surveys. MSU Extension continues to work on improving the skills of faculty related to conducting needs assessments, improving strategic planning, developing stronger evaluation tools, and maximizing data collection.

##### **Key Items of Evaluation**

- 100% of Strong Women and Arthritis Fitness Education Programs report reduced pain and stiffness and increased range of motion and balance
- 60% of health fair participants indicated that they would make at least one healthy lifestyle change as a result of the fair
- \$300/participant savings was recognized by using free screenings at a health fair
- 93% of SNAP-Ed adult participants made at least one positive change to improve their health
- SNAP-Ed families saved an average of \$28.90/month on groceries
- 94% of EFNEP adults reported making at least one positive lifestyle change
- EFNEP adults were more careful about hand-washing (79%), better at not running out of food before the end of the month (31%) and were intentionally making healthier food choices (32%)
- 100% of level 1 food safety participants (316) passed the test and received Basic Food

Safety certificates

- 100% of participants who reported indicated they gained knowledge and resources from Extension programs to more confidently and safely preserve food