

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

**Program # 7**

**1. Name of the Planned Program**

4-H Youth Development

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
724	Healthy Lifestyle	25%	25%	0%	0%
802	Human Development and Family Well-Being	25%	25%	0%	0%
806	Youth Development	50%	50%	0%	0%
	<b>Total</b>	100%	100%	0%	0%

**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>	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
<b>Actual Paid</b>	17.0	0.0	0.0	0.0
<b>Actual Volunteer</b>	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
511910	203484	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
511910	203484	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
438305	0	0	0

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

**1. Brief description of the Activity**

1. 4-H community clubs will be conducted focusing on activities that support youth learning science and technology, healthy living, and citizenship
2. 4-H school enrichment programs
3. 4-H Operation Military Kids programs
4. Camping programs
5. State and county fairs
6. Demonstrations
7. Other special interest clubs and activities, such as Health Rocks!

**2. Brief description of the target audience**

- All youth in the State of Maryland
- All youth who are children of military parents
- All adults with an interest in becoming 4-H volunteers
- Businesses who would be interested in financially supporting 4-H programs
- Community partners

**3. How was eXtension used?**

eXtension was not used in this program

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

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	5970	200654	72004	76225

**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>	0	0	0

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

## **Output Target**

### **Output #1**

#### **Output Measure**

- Number of community club programs offered

<b>Year</b>	<b>Actual</b>
2014	380

### **Output #2**

#### **Output Measure**

- Number of members enrolled in school-based clubs, community clubs, 4-H military programs, and camps

<b>Year</b>	<b>Actual</b>
2014	78874

### **Output #3**

#### **Output Measure**

- Number of youth engaged in Science, Engineering, and Technology

<b>Year</b>	<b>Actual</b>
2014	61471

### **Output #4**

#### **Output Measure**

- Number of youth engaged in building citizenship skills

<b>Year</b>	<b>Actual</b>
2014	20793

### **Output #5**

#### **Output Measure**

- Number of youth involved in healthy lifestyles

<b>Year</b>	<b>Actual</b>
2014	31051

**Output #6**

**Output Measure**

- Number of adult 4-H leaders

<b>Year</b>	<b>Actual</b>
2014	5970

**Output #7**

**Output Measure**

- Number of youth enrolled through the Health Rocks program

<b>Year</b>	<b>Actual</b>
2014	14000

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

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

O. No.	OUTCOME NAME
1	Increase in youth reporting adoption of healthy eating behaviors
2	Increase in youth who intend to engage in community projects and community leadership positions
3	Increase in the number of youth and adults adopting animal science practices that demonstrate increased knowledge of raising animals in a responsible, ethical, and ecologically viable manner
4	Increase in youth who intend to pursue science-related careers
5	Increase in youth who practice environmentally responsible behaviors
6	Increase in youth and families who report becoming more literate in concerns surrounding global hunger and its relationship with agriculture, understanding of food systems, and the relationship of agriculture, food, nutrition, and the economy.
7	Volunteer Development: The number of UME trained 4-H volunteers who provide leadership and guidance for 4-H youth development programs.

## **Outcome #1**

### **1. Outcome Measures**

Increase in youth reporting adoption of healthy eating behaviors

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

- 1862 Extension
- 1890 Extension

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2014	18981

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

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

Recent studies have found that lifestyle choices and physical activity practices are established very early in life and have an impact on future health and well-being. According to the CDC, childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years.

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

Maryland 4-H now has over 70 new 4-H Youth Healthy Living (HL) Ambassadors. These 4-H HL Ambassadors have been trained and have resources to provide healthy living activities for their clubs and counties to promote healthier lifestyles across Maryland. Using the Up For the Challenge and Health Rocks! curricula, these ambassadors are helping to create a healthier world by encouraging other youth and adults to eat healthier, live active lifestyles, and stay away from drugs and alcohol.

#### **Results**

The 4-H Nutrition Program provides innovative ways to help young people learn how to make wise choices that will prove beneficial to their overall health. They gain nutrition and health knowledge, develop physical fitness skills and some food safety. In the City of Baltimore, for example, the 2014 Summer Nutrition Program served 454 youth at 13 various community organization summer camps. Twenty-one staff from these organizations were trained to deliver nutrition lessons and received research based nutrition materials.

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

<b>KA Code</b>	<b>Knowledge Area</b>
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

## **Outcome #2**

### **1. Outcome Measures**

Increase in youth who intend to engage in community projects and community leadership positions

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

- 1862 Extension
- 1890 Extension

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2014	20793

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

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

Research shows service matters in many ways and volunteering is associated with stronger communities. Civic engagement is a heightened sense of responsibility to one's community that includes a wide range of activities, including developing civic sensitivity, Participation in building civic society, and benefiting the common good. Equipping young people with the skills and knowledge to lead helps form the basis of being contributing citizens of communities.

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

The Teen Corps Program targets, youth, ages 12-18 from communities throughout Baltimore City and adults who work with the youth as mentors. The 4-H Teen Corps Leadership Program (Teen Corps) employs the best practices of youth and community development. It enables Extension to engage youth and adults in community development opportunities for the purpose of creating community change.

#### **Results**

Members of Teen Corps established community garden projects, started entrepreneurial ventures in their communities, and implemented feed the hungry projects. They have participated and co-facilitated community-wide Master Plan meetings to promote revitalization efforts, collected and distributed holiday gifts for needy children and, established inter-generational programs with

seniors. They have co-lead the Baltimore City 4-H Youth Expo; which showcases the talents of youth from Baltimore City Public Schools and after school programs. Several thousand Baltimore City residents have been reached through this citywide initiative.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

#### Outcome #3

##### 1. Outcome Measures

Increase in the number of youth and adults adopting animal science practices that demonstrate increased knowledge of raising animals in a responsible, ethical, and ecologically viable manner

##### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	4577

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

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

It is critically important that we teach 4-H youth in 4-H Animal Projects proper management practices to ensure not only the health and safety of their animals, but also to ensure the health and safety of the 4-H member and the general public. It is also important for 4-H members to learn to treat animals in an ethical manner, as they produce wholesome products and promote a positive image for animal industries. Youth must understand the visible and important roles they have as representatives of animal agriculture and the 4-H and FFA youth programs.

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

To address the challenges associated with offering important livestock quality assurance training for thousands of 4-H animal science project members on a continual and widespread basis, a team from Maryland developed a new statewide on-line training program called the Maryland 4-H Animal Husbandry and Quality Assurance Program (AH&QA). The online program is updated and offered annually between March and July.

### Results

Through 2014, AH&QA had been completed by 4,577 youth, each completing Part 2 of the program for an average of 1.7 species. Program outcomes include improved knowledge and understanding in the areas of: Important role youth have in animal agriculture, public concerns about animal welfare and animal product safety, proper handling of animals, proper use of animal medications, importance of ethical behavior, animal care, common animal diseases, animal health, and animal nutrition by Maryland 4-H Members enrolled in and exhibiting in animal projects.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

### Outcome #4

#### 1. Outcome Measures

Increase in youth who intend to pursue science-related careers

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Actual
2014	9114

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

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

Maryland's population mass is largely located in Urban and Suburban areas that are isolated from agriculture science with several generations being removed from farm life. It is imperative to educate youth about Maryland's agricultural heritage and importance to keep agriculture a viable and successful industry. Teaching youth agriculture through science, technology, engineering, and math-related curriculum increases interest and success at completing post-secondary agriculture science degrees and gaining careers within agro-science fields.

##### What has been done

The University of Maryland Extension AGsploration program uses hands on experiential learning lessons to teach participants about science and agriculture in the hopes of increasing their awareness and appreciation of MD agriculture. It also strives to increase the amount of youth pursuing post-secondary degrees and careers in agriculture and science related fields.

**Results**

In 2014, two hundred individuals utilized the AGsploration curriculum in 26 states and territories. In Maryland ninety-two AGsploration lessons were taught to 6,192 program participants and 7 trainings were held to certify 168 new curriculum teachers. On pre/post tests of students all indicated gaining more knowledge in the topics covered on agriculture and one in four participants indicated wanting to pursue a degree or occupation in agriculture science. The AGsploration program has increased the knowledge and appreciation of agriculture in Maryland and created a network of trained individuals to more effectively continue the educational cycle.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #5**

**1. Outcome Measures**

Increase in youth who practice environmentally responsible behaviors

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	3624

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

**Issue (Who cares and Why)**

The Chesapeake Bay is Maryland's most prominent natural feature. The Bay and its watershed provide Maryland residents with a wide variety of resources. There is a need for environmental education programs that help youth and families understand ecological interactions in Maryland and adopt practices that can help to improve environmental water quality.

**What has been done**

The 4-H Environmental Science Action Team developed a series of entomology lessons to be used as school enrichment in any county to address Maryland environmental literacy standards. Talbot and Caroline County 4-H collaborated with University of Maryland Eastern Shore and taught water quality monitoring through the AgDiscovery Program that serves diverse teens from across the country. Middle School teachers were trained to teach recycling lessons as school enrichment to incorporate Maryland environmental literacy standards.

**Results**

These efforts contribute to increased recycling rates and conservation of resources. 4-H environmental programs can help youth learn about the interactions between people and the environment. Performance assessments of 853 youth and adults showed that 97% of participants learned to identify at least three hazards to the Bay and could identify three strategies for improving water quality.

Pre-/Post-assessments of 450 participants documented that mean self-rated high or very high knowledge of Chesapeake Bay ecology, water quality, and conservation techniques increased 47%, from 41% to 88%.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #6**

**1. Outcome Measures**

Increase in youth and families who report becoming more literate in concerns surrounding global hunger and its relationship with agriculture, understanding of food systems, and the relationship of agriculture, food, nutrition, and the economy.

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	18981

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

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

Agriculture continues to be the largest commercial industry in the state of Maryland. However every year the population of Maryland becomes more urban, leaving youth with less of a connection to where their food comes from. When asking youth about where their food comes from at the beginning of classes a common response is "the grocery store". This lack of connection to the farms producing their food goes beyond not understanding what it takes to produce the food but also leads to a lack of understanding about the nutritional value of fresh produce and whole grains.

### **What has been done**

Maryland 4-H offers a variety of classes, workshops, and programs focused on educating youth and their families about agriculture and food systems. These programs have been offered in urban schools, through week long camps, at community libraries, and at farms and/or farm parks. Through these agricultural education programs students have been able to better understand where their food comes from, what it takes to produce it, and have studied the nutritional value of fresh produce and whole grains.

### **Results**

A better understanding of the agricultural industry benefits all Maryland residents by fostering an appreciation for the largest industry in the state. Educating urban youth and families about the benefits of local agriculture helps lead to an increased consumption of local produce, thereby leading to higher sales at farmers markets. Understanding the benefits of fresh produce and whole grains in a balanced diet will lead to better eating choices and leads to a positive impact on childhood obesity.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

## **Outcome #7**

### **1. Outcome Measures**

Volunteer Development: The number of UME trained 4-H volunteers who provide leadership and guidance for 4-H youth development programs.

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

- 1862 Extension

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

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	9994

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

With the typical busy lifestyle of Americans, it is important that organizations effectively recruit volunteers to support their ability to deliver programs to the community. In order to maintain enough adult volunteers to meet the needs of the many young people across the state, UME must continually recruit new individuals to serve as volunteers. Volunteer recruitment has become a necessary driving force behind all successful volunteer-based organizations and is thus being emphasized by UME leadership.

#### What has been done

The Maryland 4-H Volunteer Association develops and supports volunteers to serve the needs of 4-H volunteers and members throughout the state. The Association supports the delivery of information, service, and human and economic resources available to volunteers as provided by the 4-H program; provides means for Maryland 4-H volunteers to exchange mutually beneficial 4-H experiences and ideas; assists in providing training opportunities for Maryland 4-H volunteers; and serve as mentors to new 4-H volunteers and/or new clubs.

#### Results

The long-term impact of the program is that: 1) volunteers will have increased skills and knowledge to provide extraordinary learning experiences for youth; 2) there will be increased awareness of 4-H program as a provider of youth development programs for youth; and 3) it will increase the skills and knowledge of Extension professionals in delivering and managing volunteer programming.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

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

### **External factors which affected 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.)

### **Brief Explanation**

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

### **Evaluation Results**

491 youth participated in the 4-H Nutrition and Fitness Education program in Baltimore City this year. 305 youth took the pre and post-test during the 6 week Summer Program. Results were that (1) 83% of youth gained knowledge and skills about My Plate; (2) 87% of youth gained knowledge and skills about eating healthy snacks; and (3) 84% of youth gained knowledge and skills about the important of eating breakfast. There were 15 volunteers trained from 9 city sites for the summer program and 4 volunteers trained for the fall afterschool program and community organizations to teach Up for the Challenge curriculum.

### **Key Items of Evaluation**

For the past seven years, robotics teams from Garrett County have qualified to represent the state of Maryland at the FIRST world championship events. In 2014, the FIRST Tech Challenge (FTC) World Championship took place in St. Louis, Missouri with 100 teams from all over the United States in the competition and 28 teams from foreign countries. These represented the top 3% of all the FTC teams in the world. The 4-H-sponsored team, Techno Clovers, was a member of the first place alliance from among the more than 3,000 teams competing from around the world.

Brandeis University conducted an evaluation of the impact of participation in robotics competitive teams. Their research shows gains on key outcomes, including a better understanding of the use of science and technology in the real world; increased interest in STEM-related careers; increased interest in school success and college; and gains in life and workplace skills, such as, critical thinking, problem-solving, communications, and teamwork. In Garrett County, follow-up with 30 youth who completed two or more years on 4-H sponsored FTC robotics teams shows that of 88% are enrolled in college and 81% have selected a STEM- related major.

Regular participation in high quality afterschool programs is linked to significant gains in test scores, academic achievement and class participation as well as reductions in negative

behaviors. The Baltimore County 4-H annual after-school participation has increased 2,246% from 15 in 2006 to 379 in 2014. Between 2006-2014, evaluations indicated that youth increased knowledge and skills in community engagement, workforce readiness and awareness, and science, engineering and technology.