

# 2013 West Virginia State University Combined Research and Extension Plan of Work

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## I. Plan Overview

### 1. Brief Summary about Plan Of Work

The WVSU Douglass Institute, home to the University's land-grant programs, begins its 12<sup>th</sup> year on March 17, 2012. The Research and Extension programs are working on a unified, seamless programming effort. Beginning with the 2012-2016 Plan of Work, the individual plans were integrated for the first time at WVSU and will continue with this plan.

Also continuing with this POW, WVSU will be using the five NIFA Priority Areas as planned programs, along with two additional programs (Resilient Youth and Families, and Community Vitality) that are in response to expressed needs of the citizens of West Virginia. Aligning our research and extension programs within the priority areas has also provided the opportunity to see where our research and extension programs complement each other and where there is opportunity to build greater collaboration. Having the research and extension efforts laid out side by side in same plan allows the programs to more easily identify pathways for new integrated efforts..

Specifically, WVSU will be building these program efforts through the following activities.

1) Global Food Security and Hunger. WVSU focuses on three major areas: (1) breeding novel vegetable and small fruit morphotypes with enhanced disease resistance and yield using a combination of genomics and field level trials, (2) increasing nutrient utilization of various finfishes, and (3) developing horticultural crop production systems for small farms. To complement these efforts, WVSU faculty and staff will be working with farmers on utilizing new crops and varieties and training communities to make their residents more food secure. These efforts include working with a variety of citizens and group on community gardening, instructing youth on cutting edge hydroponics and aeroponics, doing alternative crop outreach education and completing outreach surveys to help identify food deserts for our urban and rural clientele. WVSU personnel are also training residents, local government members, and municipal employees on best practices in management for small scale plots targeting food security and sustainability in urban settings.

2) Climate Change. A great deal of effort at WVSU is going to help our communities address Climate Change issues. The combined efforts of faculty and staff is helping West Virginia residents and communities address these issues through assisting with green space creation in urban environments, mediating storm water run-off issues, addressing commercial and urban forestry issues, and training municipal employees on best practices in tree selection, care, and management.

3) Sustainable Energy. Using anaerobic digestion as a means to utilize animal waste and produce bionenergy is a long-term initiative at WVSU. Implementing meta-genomics-enabled systems analysis to engineer energy thresholds and resilience in microbial bioenergy communities is an area of emphasis.

4) Childhood Obesity. A national epidemic has been declared in this area and, unfortunately, West Virginia's numbers outstrip even these levels. WVSU has developed a strong portfolio of programs to address this important national issue. Faculty and staff are delivering healthy eating programs to parents and youth, studying ways to get youth active on a regular basis, and working to educate commercial providers regarding healthy foods choices in industrial (school) settings.

5) Food Safety. A broad variety of WVSU programs address Food Safety in our communities. These efforts include hand-washing and food preparation lessons, as well as, food selection, storage, and

utilization. These programs are targeted to youth and adults.

6) Resilient Youth and Families. WVSU will be conducting programs to address the growing needs that youth have in developing life skills and becoming more productive members of society. The WVSU Extension Service faculty and staff will focus on program initiatives that will be concentrated in workforce development, parenting, financial management, promoting healthy lifestyles, literacy, and civic engagement.

7) Community Vitality. As our state, and the nation, continue to recover from major economic collapse, WVSU faculty and staff are working to increase the economic stability of our communities. These efforts focus on revitalization of downtown and blighted areas, regional economic development, and workforce education and individual resource development. Efforts are in place to work with municipalities, regional economic development authorities, and county governments across West Virginia to increase local stability in the their economy.e so that individuals and families are able to make informed, science-based decisions about t

health and well-being.

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

Year	Extension		Research	
	1862	1890	1862	1890
2013	0.0	30.0	0.0	16.0
2014	0.0	30.0	0.0	16.0
2015	0.0	32.0	0.0	16.0
2016	0.0	32.0	0.0	16.0
2017	0.0	34.0	0.0	17.0

**II. Merit Review Process**

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

- Internal University Panel
- External University Panel
- External Non-University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel

**2. Brief Explanation**

WVSU utilizes a multi-faceted merit review process that includes faculty, staff, and stakeholders that are both internal and external to the Gus R. Douglass Land-Grant Institute. Merit review is performed semi-annually by the joint Research and Extension Advisory Council (REAC). This group of stakeholders is comprised of WVSU faculty and staff, external

stakeholders, and administrators and faculty from other land-grant institutions. They meet at least once each year to participate in Plan of Work development with Extension and Research faculty and staff members.

The REAC also conducts the external program evaluations. The Council consists of local stakeholders with a wide variety of backgrounds, business leaders and other community members considered as suitable stakeholders for Extension and Research efforts. The evaluations from all these groups are utilized to help administrators prioritize and allocate funds to specific land-grant programs. Program direction specific to each area is developed through round-table discussions with faculty & staff members alongside the groups of the Council members. Each member of the Council is given background information and provided with the opportunity to assess and provide direct input into program development.

In addition to this formal meeting of the Advisory Council, internal merit review of all programs and personnel occurs on an ongoing basis by the Associate Deans for Extension and Research. This process is accomplished through group and individual meetings with administrative and program staff on a continuing and regular schedule.

### **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?**

Critical strategic issues affecting West Virginia are identified by advisory panels and drive the design of planned extension and research programs. The proposed programs in the new POW have been reviewed by internal and external panels. External stakeholders comprising the advisory panel consist of a group of individuals and professionals from related fields being addressed by the research programs. Each year the programs are fine-tuned according to the stakeholders input so they can be responsive to the relevant issues in the state. Starting in 2011, these programs were shaped in accordance with the five NIFA Challenge Areas. The Challenge Areas were adopted as the basis for our Plan of Work and Report of Accomplishments models.

In addition, research scientists and extension professionals cultivate links to individuals, institutions, and organizations and use feedback to tailor their projects to specific needs expressed by stakeholders. WVSUs planned programs are closely coordinated with WVUs programs so that no duplication of effort occurs and also to take advantage of collaborative opportunities. Regular communication between the two universities fosters this working relationship.

Issues related to the protection of the environment and its natural resources, such as climate change and sustainable bioenergy, are considered critical in West Virginia as the chemical and coal industries have had impacts on water quality, soil conservation, wildlife, and natural resources. Thus, planned programs at WVSU have an environmental component that should provide solutions to these problems, and facilitate better management of the environment and its resources. Additionally, due to generational health problems, a great deal of focus is given to childhood obesity, food security, and food safety. Only by addressing these basic issues can our educational efforts begin to help West Virginians solve their long-term problems.

Specific multi-state and joint activities for each program include: Plant Genomics: US Vegetable Research laboratory USDA /ARS South Carolina, Plant Breeding Coordinating Committee, Alcorn State University, Alabama A&M, Texas A&M, Cornell, Penn State,

University of Florida and Ohio State University. Alternative Agriculture: 1890 Universities Aquaculture Consortium, Mississippi State University, Cold and Cool Water Fish Laboratory, Mississippi State, USDA ARS, University of Minnesota, West Virginia University, Arkansas, Kentucky State, and Cornell University.-Renewable Resources & Environment: University of Chapingo, Mexico, EnviroControl, LTD.

## **2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?**

Historically, West Virginia has been an economically depressed state. As a result, from an income perspective, many of the state's citizens are considered underserved and/or underrepresented. Landowners are a primary focus of extension and research programs, with various agricultural, consumer, environmental, family and business issues being addressed.

Small farms benefit from plant genomics research to improve insect and disease resistance of vegetable crops, potentially reducing cost and improving yield. Agricultural, municipal and industrial processes have significant economic and environmental impact on local communities around the state. The renewable resources and environment program explores value added efforts to address this issues.

Additionally, programs focused on strengthening families, business owners and communities assist our residents in utilizing available resources in an efficient and effective manner.

The planned programs also have a target of addressing long-term health issues in West Virginia, such as childhood obesity, through increasing nutrition education and health awareness programming.

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

The expected impact of Extension and Research programs on the state will be commensurate to the impact of each individual project. The collection of projects results in medium or long term programs, with both short-term and long-term outcomes.

Each program is designed so measurable impacts to the identified stakeholders are quantified. It is important to point out that while some research projects within each program are very fundamental and may only result in advancing research tools or techniques, others have the potential to have an impact on government regulatory agencies, private businesses, and individual citizens within the state and/or region.

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

Extension and research programs at West Virginia State University continue to evolve based on the outputs and outcomes measured from past projects. The respective administrative units continuously review all projects within the program areas. The projects and programs that progress and produce yearly outputs, and demonstrate the potential for longer term outcomes have been selected for further funding in this current plan of work.

Specific benefits to each program through integrated, joint and multi-state cooperation include: competitive and sustainable agricultural and community systems increase intellectual capacity through University and Federal Links; access to novel plants and genetic materials; better opportunity to obtain external grant funding, access to more resources for extension and research activities; access to improved facilities and resources; and increased opportunity to develop novel research proposals and extension program efforts. Sustainable Environment

and Renewable Resources increase access to resources not available at WVSU and increased intellectual capacity.

Additionally, the Extension programs planned for the 2013-2017 Plan of Work cycle are now the result of faculty and staff research derived from the needs of the communities served, thus the planned work schedule is also adjusted accordingly. Also, each of these planned programs has embedded components that will promote staff interactions across the four program areas (Adult and Family Education, Agriculture and Natural Resources, Community and Economic Development, Nutrition and Health, and 4-H Youth Development) and with the Agricultural and Environmental Research Station (as appropriate). It is expected that this planned interconnectivity among Extension programs and with the Research efforts will result in synergies which in turn increase the efficiency of federal base funding and other non-federal resources dedicated to program efforts.

#### **IV. Stakeholder Input**

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

- 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

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

West Virginia State University continues to have a communications entity with a specific Extension and Research focus, located within the land-grant programs area. The purpose of the unit is to increase our capacity for contacting non-traditional stakeholders, informing them of program activity, as well as seeking their direct input on developing activities. The unit coordinates a wide variety of promotional activities to increase non-traditional stakeholder awareness of WVSU Extension Service and Research Station. These efforts are inclusive of a television show and several publications, which have opportunities for feedback and interaction. Additionally, the unit coordinates social media interactions, including Twitter and Facebook, with an idea of making the University more accessible and allow for ease of feedback in addition to program promotion.

Additionally, potential stakeholders (individuals) are invited to participate on a review panel to evaluate the University's land-grant research programs. Research administrators and scientists seek individuals and groups within a specific area of expertise or understanding to provide input and shape the direction of the research programs in order to better address the needs of those individuals or groups. Several collaborations have been formed as a result of these activities. Traditional stakeholder groups include industry, departments of agriculture, and individual farmers. Non-traditional groups include non-profit environmental organizations, alternative energy groups and cooperatives, and under-served landowners who have been impacted by mineral extraction.

Also, town hall meetings have proven essential to identify our community stakeholders and their needs for Extension education. University personnel have held a series of community forums and town hall meetings throughout the year in our servicing areas. Feedback from stakeholders has shown the need for programs that address environmental and natural resources issues, high unemployment, illiteracy among adults, teen pregnancy, inadequate nutrition, lack of activities for children and youth after school and the digital divide. Programmatic efforts were directed toward these issues. Partnerships with community-based organizations have also been useful to retrieve information pertinent to the needs of our stakeholders. Faith based organizations have been useful to affiliate with a community development entity whose interests and accomplishments would

support and further the mission of serving as a resource center and broker for the communities the University

**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 External Focus Groups
- Open Listening Sessions
- Other (Researcher Interactions)

**Brief explanation.**

The joint Research and Extension Advisory Committee (REAC) consists of several individuals representing the different areas addressed by the programs pertinent to extension and research. Target areas are defined based on the extension and research portfolio at the Institution. Within each target area (e.g. farm owners, government agencies, families, small businesses, industry, etc.) individuals are identified and invited to participate.

The individuals advise the extension faculty and staff and the research scientists on possible stakeholders and issues important to those stakeholders. The individual extension faculty and research scientists attend professional seminars, special interest meetings and other relevant conferences and have identified stakeholders through interactions with groups or individuals interested in our areas of expertise.

**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
- Meeting specifically with non-traditional groups

**Brief explanation.**

West Virginia State University employs population appropriate actions to garner and utilize stakeholder input.

The communications unit coordinates a wide variety of promotional activities to increase non-traditional stakeholder awareness of WVSU Extension and Research. These efforts are inclusive of a television show and various publications.

Additionally, inputs are collected during the research and extension advisory review through a specific survey and at the meetings. Minutes and surveys are collected and analyze to guide the programming process of each semester-cycle.

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

- To Identify Emerging Issues
- Redirect Research Programs
- In the Staff Hiring Process
- To Set Priorities

#### **Brief explanation.**

Stakeholder input is necessary to maintain the relevance of the extension and research program. West Virginia State University receives stakeholder input at the programmatic level on a continual basis. Faculty and field staff members use formal and informal methods (including local advisory councils) to evaluate information and utilize it in an efficient and effective manner for program development. At the institutional level, WVSU Extension and Research provide two formal and several informal opportunities for stakeholder feedback.

The information culled from all of these interactions assists the extension and research units in developing plans to meet the needs of the state and expand the knowledge of the scientific community. Emerging issues in a specific field may redirect the program or eliminate the need for a specific project within the program. Programmatic staffing is based in part on the need and importance of that project or program to stakeholders.

Additionally, starting this year, stakeholders will not only be providing feedback on the joint Plan of Work, but will be engaged in shaping the writing of the Plan of Work directly for the first time.

## V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger
2	Climate Change
3	Sustainable Energy
4	Childhood Obesity
5	Food Safety
6	Resilient Youth and Families
7	Community Vitality

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

### **Program # 1**

#### **1. Name of the Planned Program**

Global Food Security and Hunger

#### **2. Brief summary about Planned Program**

WVSU offers a diverse research and extension portfolio related to improving global food security and helping to eliminate hunger. Research scientists, extension programs leaders and specialists work to develop and help implement a variety of initiatives designed to improve management techniques, provide new and more resilient crops through genome analysis, and generally improve the ability of the agriculture industry from small farm to industrial levels to increase production and productivity in an effective and environmentally efficient manner.

Additionally, Extension staff members are working with residents at the community scale to re-engage in agriculture production by working on small community placed gardens. Extension professionals are training residents, local government members, and municipal employees on best practices in management for small scale plots targeting food security and sustainability in urban settings.

**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 :** Yes

**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>
101	Appraisal of Soil Resources		5%		0%
102	Soil, Plant, Water, Nutrient Relationships		10%		0%
111	Conservation and Efficient Use of Water		10%		0%
131	Alternative Uses of Land		10%		0%
201	Plant Genome, Genetics, and Genetic Mechanisms		0%		30%
202	Plant Genetic Resources		0%		26%
204	Plant Product Quality and Utility (Preharvest)		5%		2%
205	Plant Management Systems		5%		11%
206	Basic Plant Biology		10%		2%
302	Nutrient Utilization in Animals		5%		29%
403	Waste Disposal, Recycling, and Reuse		10%		0%
405	Drainage and Irrigation Systems and Facilities		5%		0%
721	Insects and Other Pests Affecting Humans		10%		0%
806	Youth Development		5%		0%
902	Administration of Projects and Programs		5%		0%
903	Communication, Education, and Information Delivery		5%		0%
	<b>Total</b>		100%		100%

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

Landowners in rural and urban settings are dealing with a variety of issues related to the management of agricultural and natural resources in West Virginia. Some of these issues include the fragmentation of farmlands, losses of revenue generating enterprises, sustainable land-management practices in urban and rural settings, and out-sourcing (outside of WV and the US) of agriculture.

Many farmers are turning to WVSU Extension and Research to educate themselves on alternative agricultural endeavors. Our programmatic focus is on plant genetics and genomics, plant breeding, sustainable small farms, aquaculture and specialty crop production, and youth horticulture education as educational endeavors that are helping the citizens of West Virginia.

**2. Scope of the Program**

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

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

**1. Assumptions made for the Program**

1. Participating in training programs will positively affect the probability of success.
2. Demonstrating and mentoring are important components in developing food security and preventing hunger.
3. There are various marketing opportunities that landowners and farmers can learn about.
4. Funding can be identified and secured for the support of these programs.
5. The programs are in-line with the direction being set by local, county, and state stakeholders.
6. There are numerous partners that can assist in the achievement of these programs.
7. Research and assessment will become a greater component of the programs.

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

Rural and urban landowners will utilize agricultural practices and systems that are sustainable, take advantage of the latest agriculture research, minimize impact on the environment, and create the development of alternative agriculture expansion, particularly among minority and previously under-served participants.

**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
2013	0.0	1.5	0.0	7.8
2014	0.0	1.5	0.0	7.8
2015	0.0	1.5	0.0	7.8
2016	0.0	1.5	0.0	7.8
2017	0.0	1.5	0.0	8.0

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

**1. Activity for the Program**

Research program will focus efforts in four areas: aquaculture, genetic mapping, genomics and breeding for selected vegetables, and trialing of vegetables and cut flowers. (1) We will perform analysis of data from feeding trials (effects of protein/high fat diet on feed utilization and mitochondrial function in rainbow trout). (2) We will continue identifying DNA markers and genetic maps for nutraceutical, pest and disease resistance, yield and quality traits will be the goals in melon, watermelon, squash, pumpkin, bitter melon, and peppers. (3) Our goals will be to fill the knowledge gaps to understand molecular networks and

resulting phenotypes in cucurbits. If insights of molecular networks and their expression patterns are revealed, it is very easy to manipulate traits of interest. We aim to understand and isolate all the genes and gene networks involved in fruit development and ripening in cucurbit crops such as watermelon, melon and pumpkin. (4) Identify advanced tomato breeding lines in which late blight resistance genes have been incorporated for use in development of improved cultivars. (5) Variety trials of tomatoes, peppers (sweet and hot), and cut flowers will be evaluated to use in state-wide recommendations. Seed increases of an early dwarf cayenne pepper will be undertaken for release as a variety for pot or field production. (6) Trials with renewable, biodegradable substrate use in vertical hydroponic production

WVSU Extension personnel will assist in the development of alternative agricultural endeavors to assist farmers increasing their revenues. Additionally, there is an emerging interest in the development of green spaces in our urban centers and municipalities. WVSU will work with these entities to maximize utilization of best practices in the field of cultivation, selection, and maintenance. WVSU Extension will continue to target small-scale producers with education to increase knowledge levels in alternative enterprises that may expand profits for small farm operators. Home landscape beautification and vegetable gardening are at the center of this heightened resurgence of interest in horticulture.

Commercial growers in the areas of greenhouse and nursery management, cut flower production, and fruit and vegetable production are also seeking marketing and production related advice in order to satisfy growing consumer demands. Some of the projects that are the most often asked about are the identification and/or eradication of plants and pests, the growing cycles of plants, plant maintenance, and alternative gardening techniques. WVSU will offer youth from pre-k to age 18, a variety of opportunities to be exposed to plant and animal education. Program emphasis will focus on the Junior Master Gardener program.

A Research and Extension integrated goal will be to identify funds to create an Extension position to better support the research efforts in this area.

**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> </ul>	<ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● TV Media Programs</li> <li>● Other 1 (magazine articles)</li> </ul>

**3. Description of targeted audience**

Targeted audience will include:

- Fish feed manufacturers, federal agencies (ARS) involved in rainbow trout breeding, fish farmers
- Horticulturalists, plant breeders, farmers/growers, small-farm operators, minority farmers and landowners, underserved rural communities , state and federal agencies, and students.
- Homeowners, consumers, volunteer organizations, various segments of the youth population, and other agricultural and natural resource focused entities.

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
  - Direct Adult Contacts
  - Indirect Adult Contacts
  - Direct Youth Contacts
  - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

## V(H). State Defined Outputs

### 1. Output Measure

- Identify breed of rainbow trout that has genetic potential for improved nutrient utilization
  - Train undergraduate and graduate students in biotechnology, plant genomics and agricultural related fields
  - Identification of DNA markers, fruit related genes, association panels, and value-added progenies
  - Develop vegetable varieties for small farm production
  - Both urban/rural clientele will receive information on research-based horticultural management.
  - Adult volunteers and youth will receive training in horticulture and agriculture through JMG and other training opportunities.
  - Workshops targeted at alternative agriculture endeavors will be held in targeted counties.
  - WVSU Extension Service staff will generate media articles and stories related to alternative agriculture.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	New diet formulation for rainbow trout
2	Development of improved feed for rainbow trout will lead to reduction in aquaculture pollution
3	Development of value-added, disease resistant cultivars
4	Development of vegetable varieties suitable to small farm environment.
5	Volunteers will exhibit increased knowledge of providing age-appropriate horticulture and agriculture programs to youth.
6	Extension clientele will implement best practices in agriculture and natural resources based on research-based knowledge.
7	Farmers/growers will utilize best practices with alternative agricultural enterprises to diversify their income portfolio.
8	Through the Agritourism initiative participants will create new or develop existing enterprises to increase their sustainability.

**Outcome # 1**

**1. Outcome Target**

New diet formulation for rainbow trout

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

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

- 302 - Nutrient Utilization in Animals

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

- 1890 Research

**Outcome # 2**

**1. Outcome Target**

Development of improved feed for rainbow trout will lead to reduction in aquaculture pollution

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

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

- 302 - Nutrient Utilization in Animals

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

- 1890 Research

**Outcome # 3**

**1. Outcome Target**

Development of value-added, disease resistant cultivars

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

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

- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 202 - Plant Genetic Resources
- 206 - Basic Plant Biology

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

- 1890 Research

#### **Outcome # 4**

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

Development of vegetable varieties suitable to small farm environment.

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

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

- 202 - Plant Genetic Resources

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

- 1890 Extension
- 1890 Research

#### **Outcome # 5**

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

Volunteers will exhibit increased knowledge of providing age-appropriate horticulture and agriculture programs to youth.

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

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

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 206 - Basic Plant Biology
- 403 - Waste Disposal, Recycling, and Reuse
- 721 - Insects and Other Pests Affecting Humans
- 806 - Youth Development
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

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

- 1890 Extension

## **Outcome # 6**

### **1. Outcome Target**

Extension clientele will implement best practices in agriculture and natural resources based on research-based knowledge.

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

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

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 131 - Alternative Uses of Land
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 206 - Basic Plant Biology
- 403 - Waste Disposal, Recycling, and Reuse
- 405 - Drainage and Irrigation Systems and Facilities
- 721 - Insects and Other Pests Affecting Humans
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

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

- 1890 Extension
- 1890 Research

## **Outcome # 7**

### **1. Outcome Target**

Farmers/growers will utilize best practices with alternative agricultural enterprises to diversify their income portfolio.

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

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

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 131 - Alternative Uses of Land
- 205 - Plant Management Systems
- 206 - Basic Plant Biology

- 302 - Nutrient Utilization in Animals
- 403 - Waste Disposal, Recycling, and Reuse
- 405 - Drainage and Irrigation Systems and Facilities
- 721 - Insects and Other Pests Affecting Humans
- 806 - Youth Development
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

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

- 1890 Extension
- 1890 Research

### **Outcome # 8**

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

Through the Agritourism initiative participants will create new or develop existing enterprises to increase their sustainability.

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

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

- 111 - Conservation and Efficient Use of Water
- 131 - Alternative Uses of Land
- 403 - Waste Disposal, Recycling, and Reuse
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

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

- 1890 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
- Populations changes (immigration, new cultural groupings, etc.)

### **Description**

West Virginia, like much of the nation, is in an economic down turn currently and weather conditions will only exacerbate farmer and growers economic viability. Federal and state appropriations are in a decline currently and will likely drop off in the near future, which will cause drastic changes in program delivery. Additionally, farmers/growers continue to deal with rising cost of materials and supplies and have to balance that with market acceptable products on the consumer end.

### **V(K). Planned Program - Planned Evaluation Studies**

#### **Description of Planned Evaluation Studies**

Program, workshop, and training events will utilize evaluation questionnaires at the end of each session. Semester reports, publications, professional society participation, student involvement and annual CRIS reports are used to provide continual evaluation, assessment and feedback.

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

### **Program # 2**

#### **1. Name of the Planned Program**

Climate Change

#### **2. Brief summary about Planned Program**

WVSU offers a diverse extension and research portfolio related to climate change. Extension programs leaders, specialists, and research scientists work to develop and help implement a variety of initiatives designed to develop environmentally sound management techniques for urban and commercial forestry, educate communities, homeowners, and businesses about their ability to minimize adverse effect on the environment, stabilize storm-water run-off in the residential and municipal settings, and generally improve the ability of the agriculture industry from small farm to industrial levels to increase production in an effective and environmentally efficient manner.

Additionally, Extension staff members are working with residents at the community scale to re-engage in green space creation and management by working on small community placed gardens and parks. Extension professionals are training residents, local government members, and municipal employees on best practices in selection and management of trees and their sustainability in urban settings.

**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 :** Yes

**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>
101	Appraisal of Soil Resources		10%		10%
102	Soil, Plant, Water, Nutrient Relationships		10%		5%
111	Conservation and Efficient Use of Water		10%		0%
124	Urban Forestry		10%		0%
131	Alternative Uses of Land		10%		5%
211	Insects, Mites, and Other Arthropods Affecting Plants		10%		35%
212	Pathogens and Nematodes Affecting Plants		10%		25%
403	Waste Disposal, Recycling, and Reuse		10%		20%
721	Insects and Other Pests Affecting Humans		10%		0%
902	Administration of Projects and Programs		5%		0%
903	Communication, Education, and Information Delivery		5%		0%
	<b>Total</b>		100%		100%

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

As noted on the NIFA website, "One of the most pressing issues faced by plant and animal producers across the country and in West Virginia is to adapt to the ever-changing conditions and impacts of global change and climate on their crops or animals. Another critical issue is the need for scientific information that producers can use to plan and make decisions to ensure economic viability."

West Virginia continues to deal with a changing ecological system due to the impacts of extractive industries and non-point sources of pollution. There is a great need throughout the state to develop management strategies based on scientific research that will ameliorate these conditions and repair environmental incurred as a part of these processes.

Additionally, communities across the state continue to expand through urban sprawl which has the deleterious combined effect of decreasing forests, fields, and arable land while simultaneously increasing carbon emissions through commuting and additional storm water due to poor or mismanaged drainage.

**2. Scope of the Program**

- Integrated Research and Extension

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

**1. Assumptions made for the Program**

1. Participating in training programs will positively affect the probability of success;
2. Demonstrating and mentoring are important components in Climate Change education
3. There are various marketing opportunities that landowners and farmers can learn about;
4. Funding can be identified and secured for the support of these programs;
5. The programs are in-line with the direction being set by local, county, and state stakeholders;
6. There are numerous partners that can assist in the achievement of these programs;

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

Rural and urban landowners, municipalities, and agri-business will utilize agricultural practices and systems that are sustainable, minimize impact on the environment.

**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
2013	0.0	1.5	0.0	0.5
2014	0.0	1.5	0.0	0.5
2015	0.0	1.5	0.0	0.5
2016	0.0	1.5	0.0	0.5
2017	0.0	1.5	0.0	0.5

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

**1. Activity for the Program**

WVSU research scientists will continue efforts in the area of climate change by planning to develop innovative drainage systems; (2) Evaluate vegetable, fruit and ornamental varieties for small farm production under changing environmental conditions; (3) Investigate the use of high tunnels to ameliorate changing environmental conditions; and (4) Develop rating method for soil-based runoff mitigation practices.

WVSU Extension Service will continue to target small-scale producers with education to increase knowledge levels in alternative enterprises that may expand profits for small farm operations in open cropland and forested urban acreage . Home landscape beautification and vegetable gardening are at the center of this heightened resurgence of interest in horticulture.

Commercial growers in the areas of greenhouse and nursery management, cut flower production,

and fruit and vegetable production are also seeking marketing and production related advice in order to satisfy growing consumer demands. Some of the projects that are the most often asked about are the identification and/or eradication of plants and pests, the growing cycles of plants, plant maintenance, and alternative gardening techniques.

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

<b>Extension</b>	
<b>Direct Methods</b>	<b>Indirect Methods</b>
<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> </ul>	<ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● TV Media Programs</li> <li>● Other 1 (magazine articles)</li> </ul>

**3. Description of targeted audience**

Targeted audience will include: homeowners, small-farm operators, volunteer organizations, various city, county and municipalities, state government, underserved and minority farmers/landowners, WVDA staff, USDA staff and other agricultural and natural resource focused agencies, undergraduate and graduate students, MS4's municipalities, contractors and landscape architects and designers, private land owners.

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
  - Direct Adult Contacts
  - Indirect Adult Contacts
  - Direct Youth Contacts
  - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

### **1. Output Measure**

- Workshops on new varieties and growing techniques for small farmers to adapt to changing environmental conditions
- Workshops targeted at alternative agriculture endeavors will be held in targeted counties.
- WVSU Extension staff will generate media articles and stories related to alternative agriculture.
- Urban clientele, municipalities and government organizations will receive information on the Urban Forestry initiative.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	Number of small farmers adopting new varieties and growing techniques to adapt to changing environmental conditions
2	Extension clientele will implement best practices in agriculture and natural resources based on research-based knowledge.
3	Farmers/growers will utilize best practices with alternative agricultural enterprises to diversify their income portfolio.
4	Develop soil rating for soil-based runoff mitigation practices.

**Outcome # 1**

**1. Outcome Target**

Number of small farmers adopting new varieties and growing techniques to adapt to changing environmental conditions

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

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

- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants

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

- 1890 Extension
- 1890 Research

**Outcome # 2**

**1. Outcome Target**

Extension clientele will implement best practices in agriculture and natural resources based on research-based knowledge.

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

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

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 124 - Urban Forestry
- 131 - Alternative Uses of Land
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 403 - Waste Disposal, Recycling, and Reuse
- 721 - Insects and Other Pests Affecting Humans
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

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

- 1890 Extension
- 1890 Research

### **Outcome # 3**

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

Farmers/growers will utilize best practices with alternative agricultural enterprises to diversify their income portfolio.

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

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

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 124 - Urban Forestry
- 131 - Alternative Uses of Land
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 403 - Waste Disposal, Recycling, and Reuse
- 721 - Insects and Other Pests Affecting Humans
- 902 - Administration of Projects and Programs
- 903 - Communication, Education, and Information Delivery

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

- 1890 Extension

### **Outcome # 4**

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

Develop soil rating for soil-based runoff mitigation practices.

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

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

- 101 - Appraisal of Soil Resources
- 111 - Conservation and Efficient Use of Water

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

- 1890 Research

## **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.)

**Description**

West Virginia continues to be affected by the continued economic climate of the nation. Adverse weather conditions will only exacerbate the economic viability of farmers and growers. Federal and state appropriations are currently in a decline and will likely drop off in the near future, which will cause drastic changes in program delivery.

**V(K). Planned Program - Planned Evaluation Studies**

**Description of Planned Evaluation Studies**

Program, workshop, and training events will utilize evaluation questionnaires at the end of each session. Semester reports, publications, professional society participation, student involvement and annual CRIS reports are used to provide continual evaluation, assessment and feedback.

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

### **Program # 3**

#### **1. Name of the Planned Program**

Sustainable Energy

#### **2. Brief summary about Planned Program**

Tremendous amounts of agricultural and industrial wastes are generated each year, causing detrimental effects on human health and the environment. Anaerobic digestion is a technological innovation that takes advantage of naturally occurring microbial anaerobic metabolism to reduce organic waste pollution.

Past research utilizing the pilot-scale thermophilic anaerobic digester on the WVSU campus has provided scientists with valuable knowledge in process engineering and microbiology regarding the utilization of agricultural wastes for the production of bioenergy, which is a valuable product of the anaerobic digestion process.

Researchers are also using replicate experimental digesters to examine process thresholds with the goal of better predicting the transitions between stable system performance and system failure. We are incorporating both microbial ecology and chemical performance variables in this analysis, as well as developing alternative uses for waste and byproducts.

**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 :** Yes

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
403	Waste Disposal, Recycling, and Reuse		0%		100%
	<b>Total</b>		0%		100%

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

**1. Situation and priorities**

Agricultural, municipal and industrial processes produce large quantities of organic wastes that have significant economic and environmental impact on surrounding municipal and rural communities. However, this waste represents a resource that can be utilized for bioenergy production and building a bio-economy. Anaerobic digesters are under-utilized and our studies will further demonstrate the applications of this technology. An important limitation of the process is its sensitivity to disturbances such as variations in temperature and feed (composition and overloading) which can cause digester failure.

In addition, organic wastes and byproducts can prove to be cost-effective components for reducing adverse impacts of pollution and extractive industries and help in restoring soil quality in impacted lands

**2. Scope of the Program**

- Multistate Research

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

**1. Assumptions made for the Program**

(1) The microbial ecology of digesters is critically important for stable, efficient operation, but is usually under-appreciated when developing and operating digester systems.

(2) Understanding the microbial processes will allow greater control and optimization of anaerobic digestion and microbial energy conversion.

(3) Anaerobic digestion can benefit poultry farms (and other animal farms) and help to improve the economy of West Virginia and the Appalachian region.

(4) Lessons learned from the microbial energy conversion processes in digesters can be transferred to other bioenergy-producing processes.

(5) Stringent regulations by state and federal agencies on anthropogenic activities impact on soil and water quality require the development of cost-effective technologies and practices for reducing adverse impacts and restoring soil quality in impacted land.

(6) Local, state, and federal groups and agencies may be able to use the findings of this research to maintain current production levels while restoring soil quality and function to pre-disturbance state.

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

- (1) Create a more stable and efficient digester for the conversion of organic waste to bioenergy.
- (2) Greater adoption of anaerobic digestion technology among farmers and industries that produce organic waste.
- (3) Evaluate the effect of poultry litter anaerobically digestion products in combination of different seed mixes on plant establishment and soil productivity in reclaimed mine site.
- (4) Repair soil quality and vegetative growth of mined soils by utilizing treated solid waste to alleviate pollution and contamination, as well as improve productivity, and develop innovative drainage systems.

**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
2013	0.0	1.0	0.0	7.3
2014	0.0	1.0	0.0	7.3
2015	0.0	1.0	0.0	7.3
2016	0.0	1.0	0.0	7.3
2017	0.0	1.0	0.0	7.3

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

**1. Activity for the Program**

The research program will consist of the following studies:

- (1) Test the efficacy of codigestion of plant biomass and poultry litter in the WV SU pilot plant thermophilic anaerobic digester.
- (2) Test the process thresholds and ecological resilience of thermophilic digesters using replicate experimental reactors.
- (3) Develop methods of repairing soil quality and vegetative growth of mined soils by utilizing treated solid waste to alleviate pollution and contamination, as well as improve productivity, and develop innovative drainage systems.
- (4) Evaluate the use of anaerobically digested poultry litter as a soil amendment at a local mountaintop removal site. Provide mine operators with novel management practices for the development of healthy and productive soil that will economically benefit the local communities.

**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>● Public Service Announcement</li> <li>● TV Media Programs</li> </ul>

**3. Description of targeted audience**

Digester manufacturers and users, poultry farmers, other agricultural waste producers, environmentally concerned citizens, undergraduate and graduate students, engineers and scientists who study bioreactors and anaerobic microbial processes. Mine operators, mine reclamation contractors, land owners

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
  - Direct Adult Contacts
  - Indirect Adult Contacts
  - Direct Youth Contacts
  - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

### **1. Output Measure**

- Train students in digester operation, biochemical analysis, microbial analysis [Huber]
  - Improve the operation of thermophilic poultrywaste digesters. [Huber]
  - Add an extension component to the digester program
  - Evaluate the feasibility of adopting anaerobic digestion on poultry farms in WV through extension outreach to farmers [Huber]
  - Develop novel technique for soil remediation on reclaimed mine lands. [Hass]
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	Improve the operational parameters ththat have beensed to contreermophilic poultry waste digester.
2	New knowledge concerning how microbial diversity gives rise to anaerobic microbial energy conversion and anaerobic digestion.
3	Increase awareness of soil remediation technology among mining operators and agencies.

**Outcome # 1**

**1. Outcome Target**

Improve the operational parameters that have been used to control thermophilic poultry waste digester.

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

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

- 403 - Waste Disposal, Recycling, and Reuse

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

- 1890 Research

**Outcome # 2**

**1. Outcome Target**

New knowledge concerning how microbial diversity gives rise to anaerobic microbial energy conversion and anaerobic digestion.

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

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

- 403 - Waste Disposal, Recycling, and Reuse

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

- 1890 Research

**Outcome # 3**

**1. Outcome Target**

Increase awareness of soil remediation technology among mining operators and agencies.

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

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

- 403 - Waste Disposal, Recycling, and Reuse

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

- 1890 Research

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

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

- Economy
- Appropriations changes

##### **Description**

The termination of an USDA Special Grant for Agricultural Waste Utilization has directly impact this program.

#### **V(K). Planned Program - Planned Evaluation Studies**

##### **Description of Planned Evaluation Studies**

Semester reports, publications, professional society participation, student involvement and annual CRIS reports are used to provide continual evaluation, assessment and feedback.

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

### **Program # 4**

#### **1. Name of the Planned Program**

Childhood Obesity

#### **2. Brief summary about Planned Program**

The USDA has developed five national priority areas to tightly focus NIFA and other USDA science funds on solving specific problems and demonstrating results. One of these priority areas in particular, childhood obesity, NIFA supports programs that ensure access to affordable nutritious foods and provide guidance so that individuals and families are able to make informed, science-based decisions about their health and well-being.

In Kanawha County, a partnership began meeting in December 2008 to create a plan that would enable Kanawha County to bring policy and environmental approaches to positively impact the high rates of childhood obesity. The partnership was formed around an opportunity that was made available through the Robert Wood Johnson Foundation. Healthy Kids, Healthy Communities (HKHC) is a national program of the Robert Wood Johnson Foundation (RWJF), designed to help dozens of communities across the country reshape their environments to support healthy living and prevent childhood obesity.

Based on a rigorous selection process that drew more than 500 proposals from across the country, Kanawha County is one of 41 selected sites for the HKHC initiative. Our project is called KEYS 4 HealthyKids: Unlocking the Doors to a Better Tomorrow and is focused on improving opportunities for physical activity and access to affordable, healthy foods for children and families in Kanawha County.

KEYS is an acronym that represents the four keys necessary for "Unlocking" the barriers/doors that children and families face with adhering to a nutritious healthful diet and engaging in regular activity (K-Knowledge, E-Eating Healthy, Y-Youth Being Active, S-Safety and Empowerment).

To further combat the NIFA priority area, childhood obesity, the Children Youth and Families at Risk (CYFAR) funded Fast Track program was designed. Fast Track is a five year funded program that equips Middle School and underrepresented youth in the Charleston area on how to safely prepare healthier meals and snacks with little or no supervision. The program is also designed to show exciting and innovative ways to incorporate and increase levels of physical activity.

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

**4. Program duration :** Medium Term (One to five years)

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

**6. Expending other than formula funds or state-matching funds :** Yes

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
701	Nutrient Composition of Food		30%		30%
703	Nutrition Education and Behavior		0%		20%
724	Healthy Lifestyle		20%		20%
802	Human Development and Family Well-Being		30%		30%
806	Youth Development		20%		0%
	<b>Total</b>		100%		100%

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

**1. Situation and priorities**

Access to quality nutrition and health education programs is limited to many West Virginians due to the rural nature of the state, insufficient public transportation, lack of insurance reimbursement, and the limited availability of such programs. There is great need for such programs. In 2003, West Virginia ranked worse than the nation with regard to incidence of chronic disease.

According to "America's Health: State Health Rankings," released by the United Health Foundation, the American Public Health Association and the Partnership for Prevention, West Virginia has had one of the worst total mortality rate among states for several years.

Huntington, WV was named the nation's most obese city in a 2008 study and, obviously, these issues begin for many residents with childhood obesity problems. The city is a national "leader" in proportion of people who don't exercise (31 percent), have heart disease (22 percent) and diabetes (13 percent).

The CDC (2010) cites the need for better youth health education to address problems related to childhood obesity in West Virginia.

It is also a priority of the programs to educate the parents and caregivers of youth in order to assist them in making healthier decisions for our children.

The Research program plans to add a position in the area of childhood obesity to complement and integrate with the existing Extension program.

**2. Scope of the Program**

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

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

**1. Assumptions made for the Program**

1. Participating in educational outreach programs will help enhance the cycle of human development;
2. Serving as community resource will effectively provide opportunities to develop healthier practices in the home;
3. There are many people that suffer from inefficient opportunities or knowledge in gaining more productive skill sets related to nutrition;
4. The state of WV falls well below the national average for active lifestyle practices or family resource management tools being prevalent throughout the counties or local communities;
5. There is a major movement across the state to increase individual knowledge levels and behavior based restructuring for individuals and families;
6. Funding priorities are becoming more prevalent in the areas of healthy lifestyle and promotion of a better food management system;
7. The partnerships for strengthening individual and family practices are becoming a main priority at the national, state, and local, levels;

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

The ultimate goal of WVSVU efforts in this area is to reverse the trends of childhood obesity through eliciting environmental changes for more sustainable efforts as well as action change of the participants engaged in the educational process.

**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
2013	0.0	6.0	0.0	1.0
2014	0.0	6.0	0.0	1.0
2015	0.0	8.0	0.0	1.0
2016	0.0	8.0	0.0	1.0
2017	0.0	8.0	0.0	1.0

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

**1. Activity for the Program**

The steering committee members (each is in charge of one of the KEYS) are working on projects at three specific champion sites that are incorporating all of the keys at their sites.

KEYS is an acronym that represents the four keys necessary for "Unlocking" the barriers/doors that children and families face with adhering to a nutritious healthful diet and engaging in regular activity (K-Knowledge, E-Eating Healthy, Y-Youth Being Active, S-Safety and Empowerment).

The Key to Knowledge will emphasize the importance of eating adequate fruits and vegetables, limiting screen time, engaging in regular physical activity, and eliminating sugar-sweetened beverages through the 5-2-1-0 social marketing campaign.

The Key to Eating Healthy will engage community members in gardening projects, and help day-cares and after-school programs provide nutritious snacks and beverages by providing policy development training.

The Key to Youth Being Active will help revitalize community parks and greenspace and conduct walkability and bikeability audits to ensure safe access to and from the parks.

The Key to Safety and Empowerment will address residents' concerns and enlist them in efforts to help make their communities safer places to walk and play outdoors through development of resident youth council. Joint use agreements between communities and schools will also be established so residents can utilize these facilities outside of normal operational hours.

The Fast Track program will address key issues in childhood obesity such as lack of knowledge, interest, and skill to incorporate health and nutrition practices in daily life activity.

Fast Track participants will learn about kitchen and food safety, food preparation, healthy food selection, economical ways to practice healthy and nutrition, and engage in physical activities. Community organizations such as local recreation centers will assist in the engagement of physical activity. Parental involvement will be encouraged and requested throughout the program in order to educate the caregivers on the issues being addressed with their youth during the implementation of the program.

**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>● TV Media Programs</li> <li>● Web sites other than eXtension</li> </ul>

**3. Description of targeted audience**

The target audience for the first year and a half of the grant is the City of Charleston where there is a higher minority population (17% vs 3% for the state), food deserts, higher crime rates, extreme poverty, and higher rates of childhood obesity.

The target audience for the Fast Track program is underrepresented middle school aged youth in the

Charleston area who display an interest in any component of the program.

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
  - Direct Adult Contacts
  - Indirect Adult Contacts
  - Direct Youth Contacts
  - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

#### **1. Output Measure**

- Number of youth will participate in various workshops.
- News articles will be generated around childhood obesity and specific to these efforts.
- Number of adults will participate in educational sessions.
- New shopping venues will be available in food desserts.
- Safe new green spaces will be created to encourage community active lifestyle activities.
- Number of youth will participate in the Fast Track health and nutrition program.
- Middle School youth in the Fast Track program will demonstrate improved safety and food preparation skills.
- Fast Track participants will report an increased knowledge and practice of healthier food consumption.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	Youth and Families will increase knowledge and awareness of nutrition
2	Youth and Families will increase knowledge of physical fitness activities
3	Youth, Families and Communities will increase social competency through community sustainable gardening
4	Youth Families and communities will increase demand for healthy food options in their communities
5	Youth will make positive health choices including selection of healthy foods and increasing active lifestyle activities
6	Families will make positive health choices including selection of healthy foods and increasing active lifestyle activities

**Outcome # 1**

**1. Outcome Target**

Youth and Families will increase knowledge and awareness of nutrition

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

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

- 701 - Nutrient Composition of Food
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 2**

**1. Outcome Target**

Youth and Families will increase knowledge of physical fitness activities

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

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

- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 3**

**1. Outcome Target**

Youth, Families and Communities will increase social competency through community sustainable gardening

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

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

- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 4**

**1. Outcome Target**

Youth Families and communities will increase demand for healthy food options in their communities

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

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

- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 5**

**1. Outcome Target**

Youth will make positive health choices including selection of healthy foods and increasing active lifestyle activities

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

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

- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 6**

**1. Outcome Target**

Families will make positive health choices including selection of healthy foods and increasing active lifestyle activities

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

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

- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

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

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

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

#### **Description**

The economy could potentially impact this program's ability to achieve the intended outcomes because the majority of the program is funded externally through grants and donations. We typically have more difficulty finding external funding when the economy is in a downturn. Youth focused initiatives have been changing regularly depending on the current societal priorities. Many new national organizational mission mandates may also effect public priority especially within the context of evidence based initiatives. Typically, participants receiving services through this programs represent the low income population. One of the largest challenges with collecting long term data is individuals living in these communities are frequently transitory.

## **V(K). Planned Program - Planned Evaluation Studies**

### **Description of Planned Evaluation Studies**

Healthy Kids, Healthy Communities (HKHC) is a national program of the Robert Wood Johnson Foundation (RWJF) whose primary goal is to implement healthy eating and active living policy- and environmental-change initiatives that can support healthier communities for children and families across the United States. HKHC places special emphasis on reaching children who are at highest risk for obesity on the basis of race/ethnicity, income and/or geographic location.

The HKHC national program is the largest Robert Wood Johnson Foundation (RWJF) investment to date in community-level strategies to prevent childhood obesity. HKHC consists of two rounds of funding: (1) nine leading communities funded for five years, where significant progress is expected on policy and environmental changes to prevent childhood obesity; and (2) 41 communities funded for three years, where community leaders and advocates are poised for change, but have less experience in undertaking these changes.

#### **About the Evaluation**

There is very limited evaluation information about policy and environmental changes at the community level to prevent childhood obesity. This evaluation will ensure that systematic information about these issues will become available from HKHC. Plans for the evaluation consist of two parts: intensive evaluation of policy and environmental changes in at least 10 selected communities, and participatory evaluation of the remaining 41 communities, to mark milestones for accomplishment.

The participatory evaluation will be accomplished in collaboration with the National Program

Office (NPO) through the use of an interactive web space that allows grantees, NPO and evaluators to track progress in real time. This web-based tool was a joint effort of the evaluation and the program staff. Community evaluation liaisons will input community-defined milestones for accomplishment with coaching and prompting from the program and evaluation staff.

Unlike the self-report of community accomplishments in the participatory evaluation, the in-depth evaluation of sample community efforts will require systematic observation, reliable recording and statistical analysis of changes. Consistent with evaluation resources, the evaluation team will study at least 10 communities for at least one audit of the food environment and one for physical activity. For example, the evaluation team might measure the safety, accessibility, quality and cultural relevance of park and playground facilities and the accessibility of outlets for healthy food. The choice of communities will depend on: (a) capacity and willingness to assist the evaluation team in carrying out the measurements; (b) variation in ethnicity and geographic location; (c) focus on features of the environment that are common among the 50 grantees; (d) the focus is guided by our best information to date on what works; (e) there is a good measurement tool to assess the results.

#### **Products and Dissemination**

The deliverables will include:

- A progress reporting system (PRS) that integrates intervention planning, evaluation and reporting to support HKHC grantees;
- A toolkit of assessment and evaluation resources recommending a range of methods, measures and data sources that can be tailored to the environment and policy strategies that HKHC grantees will plan and implement; and
- A training manual and associated tools or resources (e.g., skill-building activities, links to Web sites) to support the use of the PRS and the toolkit.

Both the participatory evaluation and the in-depth assessment of change will be provided as soon as information becomes available to inform the field.

The Fast Track program will use four evaluation tools as pre and post surveys including the Student Background Questionnaire, Student Survey, 14-Item Resilience Scale (RS-14), and YAR-PET (Youth at Risk - Program Effectiveness Tool). The evaluations are adapted and provided by a professor in the social work department of West Virginia State University. From our pre and post surveys, we hope to find that the Fast Track participants have reported an increased knowledge and interest in consuming healthier food choices, an increased knowledge of how to shop at a grocery store in the most economically efficient way necessary for their family budget, a decrease in consumption of drinks high in sugar and high calorie fast food items.

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

### **Program # 5**

#### **1. Name of the Planned Program**

Food Safety

#### **2. Brief summary about Planned Program**

Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent foodborne illness; simple steps need to be followed to avoid potentially severe health hazards. Foods can transmit disease from person to person as well as serve as a growth medium for bacteria that can cause food poisoning.

At West Virginia State University Extension Service, the Family and Consumer Sciences and 4-H Youth Development Program Areas both have programs that emphasize and integrate safe food handling practices (clean, separate, cook, chill) within their curricula.

##### **Germ City -**

Germ City is an integrated education, Extension and research program. Our program consists of activities conducted at fairs, festivals, schools, and community events focused on hand washing behavior change related to safe food handling and health. The focal point of the program is a large, walk-through tunnel equipped with black lights. Youth and adults apply a black light sensitive lotion and enter the tunnel, seeing pretend germs on their hands. After initial observation, participants are asked to wash their hands normally, re-visit Germ City, and assess their effectiveness. It's a hands-on experience, which teaches the importance of frequent, effective hand washing.

##### **Expanded Food and Nutrition Education Program (EFNEP) -**

The Expanded Food and Nutrition Education Program (EFNEP) is a federally funded educational program designed to assist limited resource children and families with children in improving the total family's nutritional well-being and health through a series of practical lessons on basic nutrition and healthy lifestyles, resource management, and food safety.

A unique feature of EFNEP is in its method of program delivery. Series of lessons are taught through Extension Associates or paraprofessionals who are from the areas in which they work. Adults are taught in small groups or individually and are able to complete the EFNEP curriculum in less than 12 months. The youth curriculum focuses on providing food and nutrition education to contribute to the personal development of middle-school age youth. This age group is taught during the school day in order to strengthen existing educational standards, in after-school enrichment programs, and summer camps.

##### **Summer Food Service Program (SFSP) -**

Good nutrition is essential for effective learning every day, all year long. Learning does not end when schools let out; therefore, neither does the need for well-balanced nutrition. The Summer Food Service Program (SFSP) helps children get at least one well-balanced, nutritious meal needed to learn, play, and grow through the summer months. WVSU Extension Service provides free lunches through the SFSP to eligible children in low-income housing complexes in Charleston, South Charleston, and St. Albans.

Food safety is critical in the preparation, storage, and transportation of the Summer Foods lunches. All of those who participate in this program through WVSU are trained in proper food safety procedures, including temperature control of lunch during preparation and transport.

##### **Healthy Cooking Schools -**

Diabetes is a chronic health condition that affected 12.3% of West Virginians in 2009. Those afflicted with this disease must consistently focus on controlling blood sugar levels and preventing complications. The WVSU Diabetes Cooking School teaches meal planning and food preparation skills that reduce calories, control carbohydrates, modify fats and increase fiber of familiar food recipes.

**Fast Track Health and Nutrition**

At least 100 youth will receive 36 hours of lessons related to health and wellness including food and kitchen safety components which will enhance their ability to prevent illness from food spoilage and food borne disease, and cross contamination. They will also learn proper methods for using potentially dangerous appliances and utensil when preparing meals.

**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 :** Yes

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior		25%		0%
724	Healthy Lifestyle		25%		0%
802	Human Development and Family Well-Being		25%		0%
806	Youth Development		25%		0%
	<b>Total</b>		100%		0%

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

**1. Situation and priorities**

More steps are being taken to improve U.S. food safety. Despite the added measures by the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA), millions of people suffer illness from foodborne illness and thousand die from complications secondary to infection. Extension is an excellent vehicle for food safety education as it can be incorporated into a multitude of food and nutrition and health curricula. In fact, One of WVSU Extension Services goals is to provide the public with the tools they need to minimize their risk of encountering foodborne illness.

Current priorities within the food safety realm are:

1. Incorporate safe food handling practices and messages in cooking and food demonstrations

2. Train all Summer Foods staff in how to properly take temperatures to ensure lunches stay out of danger zone.
3. Use the Germ City tunnel to physically show participants the importance of proper and frequent hand washing
4. Teaching the public through Extension programs the importance of following proper safe food handling practices - cleaning, washing hands; separating foods to avoid cross-contamination; cooking foods to proper internal temperatures to kill bacteria; and store leftovers quickly and properly

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

- In-State Extension
- In-State Research

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

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

1. Participating in educational outreach programs will help participants acquire the skills, attitudes, and behaviors to improve lifestyle habits, including safe food handling;
2. Serving as community resource will effectively provide opportunities to develop healthier practices in the home;
3. There are many people that suffer from inefficient opportunities or knowledge in gaining more productive skill sets;
4. There is a major movement across the state to increase individual knowledge levels and behavior based restructuring for individuals and families;
5. Funding priorities are becoming more prevalent in the areas of family resource management, healthy lifestyles, and promotion of a better food management system;
6. The partnerships for strengthening individual and family practices are becoming a main priority at the national, state, and local, levels;
7. Research and assessment will become a greater component of the programs
8. Many youth and their families are not aware of proper food handling recommendations
9. Many youth and their families are not aware of the prevalence of cross contamination and how to prevent it.
- 10 Many youth and their families are not aware of the guidelines they should use to prevent food borne illnesses.

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

The ultimate goal for the participants is to develop better skills necessary to enhance or improve the everyday lifestyle practices. This goal will be evident through health and wellness practices evidenced by program participants. Food Food

Food safety education through hands-on, experiential learning techniques and other educational venues will help participants improve food handling practices thereby decreasing their risk of developing foodborne illness.

We expect to see appreciable short-term gains in youth self confidence, skill mastery which can ultimately effect their academic achievement and social competence which will improve family and community dynamics.

**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
2013	0.0	5.0	0.0	0.0
2014	0.0	5.0	0.0	0.0
2015	0.0	6.0	0.0	0.0
2016	0.0	6.0	0.0	0.0
2017	0.0	6.0	0.0	0.0

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

**1. Activity for the Program**

The services being offered by the WVSU Extension Service are comprehensive and impacting initiatives to promote a better sense of overall health and well-being. When introducing positive skills into a person's daily regiment, eventually they should begin to develop skills to enable their self sufficiency. Through the Families and Consumer Sciences Program Area, programs being offered that enforce food safety practices are as follows:

Dining with Diabetes: The "Dining with Diabetes" program is designed to educate individuals with diabetes, those who have been diagnosed with pre-diabetes and family members about the fundamentals of nutrition; how to prepare foods by reducing carbohydrates, sugar, and salts; and how to be more aware of proper serving sizes. Additionally, food safety practices are consistently interwoven into each lesson as food demonstrations are a part of each class. Following basic precautions, such as thorough hand-washing, avoiding cross-contamination, cooking thoroughly, and properly storing leftovers, are habits commonly not followed by most Americans. Those with diabetes are at higher risk for foodborne illness secondary to compromised immune systems.

Summer Food Service Program for Children (SFSP): The Summer Food Service Program (SFSP) is a federally funded program designed to provide children in low-income communities with nutritious and well-balanced lunches during the summer months when they are out of school. West Virginia State

University Extension is one sponsor of SFSP. WVSUE currently partners with AVI Food Systems, Inc. to distribute reimbursable lunches to at least 12 different Summer Food sites. The SFSP is another program which strictly enforced food safety practices, such as ensuring prepared foods are stored and transported to supervised sites at proper temperatures, WVSUE works closely with the Office of Child Nutrition and WV Department of Agriculture representatives to ensure sites and the foodservice sites are running up to code.

EFNEP: West Virginia State University Extension Service's EFNEP program offers two curricula: "Cent\$ible Nutrition," for adults and "Show Me Nutrition" for youth. "Cent\$ible Nutrition" was developed by the University of Wyoming and "Show Me Nutrition" was developed by the University of Missouri. Both curricula consist of a variety of lessons focused on nutrition, health, food safety, food resource management, and/or physical activity. Food demonstrations are conducted during each lesson so that participants can try new and more healthful foods.

Fast Track Health and Nutrition will allow at least 100 youth will receive 36 hours of lessons related to health and wellness including food and kitchen safety components which will enhance their ability to prevent illness from food spoilage and food borne disease, and cross contamination. They will also learn proper methods for using potentially dangerous appliances and utensil when preparing meals.

Germ City is an integrated education, Extension and research program. Our program consists of activities conducted at fairs, festivals, schools, and community events focused on hand washing behavior change related to safe food handling and health. The focal point of the program is a large, walk-through tunnel equipped with black lights. Youth and adults apply a black light sensitive lotion and enter the tunnel, seeing pretend germs on their hands. After initial observation, participants are asked to wash their hands normally, re-visit Germ City, and assess their effectiveness. It's a hands-on experience, which teaches the importance of frequent, effective hand washing.

**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> </ul>	<ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● Newsletters</li> <li>● TV Media Programs</li> <li>● Web sites other than eXtension</li> <li>● Other 1 (flyers)</li> <li>● Other 2 (brochures)</li> </ul>

**3. Description of targeted audience**

The population that will be in receipt of these programs will be residents from low to moderate income level communities. Individuals experiencing difficulty with family resource management practices, health or nutrition issues, or any other at risk factors related to the family unit will be permitted to participate in the extension programs. The target age for this population will be adults of any particular range and youth in middle to high school.

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
    - Direct Adult Contacts
    - Indirect Adult Contacts
    - Direct Youth Contacts
    - Indirect Youth Contact
  - Number of patents submitted
  - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

## V(H). State Defined Outputs

### 1. Output Measure

- After completing the healthy lifestyles education workshop, participants will be able to prepare, cook, and store food safely.
- Number of participants that report an increased knowledge level about managing blood sugars through diabetes education.
- Number of participants report; they had an opportunity to learn effective meal techniques through healthy lifestyles education programs.
- Number of individuals will be provided with more tools for making better decisions about the dietary choices through the healthy lifestyles education programs.
- Participants 18 years and under or 21 years of age with a disability, will receive one nutritious lunch per day through the Summer Food Service Program. Federal food guidelines will be followed in meal preparation. Appropriate temperature time and preparing of meals will be ensured prior to delivery. Meals will be served in an adequate time frame following delivery. Site staff will ensure that appropriate meal counts are received and ordered daily. Program administrators will conduct site and process training for site supervisors.
- Number of participants graduating from EFNEP programming.
- After completing the EFNEP program, participants will report having a better understanding of food handling practices.
- Participants completing the EFNEP program, will report an increased knowledge about cooking appropriate times and temperatures.
- Number of youth participants learned kitchen safety techniques, including using cooking appliances and knives
- Number of youth participants learned safe practices to prevent food spoilage
- Number of youth participants learned safe guidelines to prevent food borne illness
- Number of youth participants learned practices to prevent cross contamination of raw and fresh foods
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	After completing the healthy lifestyles education workshop, participants will be able to prepare, cook, and store food safely.
2	Individual's participating in diabetes education workshops, will monitor and record blood sugars regularly. This will be indicated through Pre/Post test, to determine that they are keeping adequate account of blood sugar levels.
3	As a result of the healthy lifestyles program; participants will report incorporating at least one effective meal planning technique in their daily lives.
4	After completing the healthy lifestyles programs; participants will report adopting of one or more tools for making better decisions about making dietary choices.
5	Participants engaging in healthy lifestyles programs will report using between one to two new food handling practices.
6	Youth will practice and decimate information about kitchen safety, especially safe operation of stoves, blenders and cooking appliances, and proper handling of knives
7	Youth will practice and decimate information to their families about food storage temperatures to prevent spoilage
8	Youth will practice and decimate information to their families about preventing food bourne illnesses from consumption of uncooked or spoiled food
9	Youth will practice and decimate information to their families about the prevention of cross contamination between raw and fresh food in cooking and during preparation.
10	Youth participating in the SFSP will receive one balanced, nutritionally correct meal per day that is prepared and held at safe temperatures.
11	Site supervisors operating the SFSP; will report having a complete understanding about, appropriate temperture times and preparation of meals; the adequate time frame for serving meals and appropriate methods for counting, ordering, and storing meals daily. This information will be monitored by Pre/Post testing at the conclusion of the site supervisor training.
12	By attending the EFNEP, participants will be able to choose adequate portion sizes of foods, according to the MyPlate recommendations.
13	By completing EFNEP, participants will be able to explain safe food handling practices.
14	After completeing the EFNEP program, participants will demonstrate their ability to prepare safe, nutritious, and affordable meals.

### **Outcome # 1**

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

After completing the healthy lifestyles education workshop, participants will be able to prepare, cook, and store food safely.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

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

- 1890 Extension

### **Outcome # 2**

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

Individuals participating in diabetes education workshops, will monitor and record blood sugars regularly. This will be indicated through Pre/Post test, to determine that they are keeping adequate account of blood sugar levels.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

### **Outcome # 3**

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

As a result of the healthy lifestyles program; participants will report incorporating at least one effective meal planning technique in their daily lives.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 4**

**1. Outcome Target**

After completing the healthy lifestyles programs; participants will report adopting of one or more tools for making better decisions about making dietary choices.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 5**

**1. Outcome Target**

Participants engaging in healthy lifestyles programs will report using between one to two new food handling practices.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

#### **Outcome # 6**

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

Youth will practice and decimate information about kitchen safety, especially safe operation of stoves, blenders and cooking appliances, and proper handling of knives

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

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

- 802 - Human Development and Family Well-Being
- 806 - Youth Development

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

- 1890 Extension

#### **Outcome # 7**

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

Youth will practice and decimate information to their families about food storage temperatures to prevent spoilage

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

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

- 703 - Nutrition Education and Behavior
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

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

- 1890 Extension

#### **Outcome # 8**

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

Youth will practice and decimate information to their families about preventing food borne illnesses from consumption of uncooked or spoiled food

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

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

- 1890 Extension

**Outcome # 9**

**1. Outcome Target**

Youth will practice and decimate information to their families about the prevention of cross contamination between raw and fresh food in cooking and during preparation.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

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

- 1890 Extension

**Outcome # 10**

**1. Outcome Target**

Youth participating in the SFSP will receive one balanced, nutritionally correct meal per day that is prepared and held at safe temperatures.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

#### **Outcome # 11**

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

Site supervisors operating the SFSP; will report having a complete understanding about, appropriate temperature times and preparation of meals; the adequate time frame for serving meals and appropriate methods for counting, ordering, and storing meals daily. This information will be monitored by Pre/Post testing at the conclusion of the site supervisor training.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

#### **Outcome # 12**

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

By attending the EFNEP, participants will be able to choose adequate portion sizes of foods, according to the MyPlate recommendations.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 13**

**1. Outcome Target**

By completing EFNEP, participants will be able to explain safe food handling practices.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 Extension

**Outcome # 14**

**1. Outcome Target**

After completing the EFNEP program, participants will demonstrate their ability to prepare safe, nutritious, and affordable meals.

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

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

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle
- 802 - Human Development and Family Well-Being

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

- 1890 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
- Populations changes (immigration, new cultural groupings, etc.)

**Description**

The economy could potentially impact this program's ability to achieve the intended outcomes because the majority of the program is funded externally through grants and donations. We typically have more difficulty finding external funding when the economy is in a downturn.

Population changes could impact positively or negatively the number of people who participate in the food and nutrition programs.

Media and public events may increase the numbers of families receiving the information.

**V(K). Planned Program - Planned Evaluation Studies**

**Description of Planned Evaluation Studies**

Surveys, questionnaires, interviews, and testimonials will also be used to collect pertinent information.

Qualitative and ethnographic questions will be embedded in webcasts, podcasts and facebook correspondences.

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

### **Program # 6**

#### **1. Name of the Planned Program**

Resilient Youth and Families

#### **2. Brief summary about Planned Program**

Basic life skills are fundamental assets necessary for many youth and their family members to maintain a sense of self reliance. Programs are also being provided to promote good health and well being among the citizens of WV by increasing their health literacy. Currently our state ranks first in having the most people in the nation that have been diagnosed with diabetes and is number two in the nation for obesity among children and adults.

Programming will include after-school, in-school, and summer based enrichment opportunities. Focused programs will be held to address the growing needs that youth have in developing life skills and becoming more productive members of society. The WVSU Extension Service staff will focus on program initiatives that will be concentrated in workforce development, promoting healthy lifestyles, health literacy enrichment, civic engagement, strengthening financial education skills and money management .

West Virginia State University Extension Service will address the needs of youth and families by providing an array of services and programs utilizing existing programs and creating new curricula. Implementation will involve addressing the needs of youth and families through integrated approaches that will include staff working with their counter parts in other areas of the extension service, across campus, and with our 1862 counterpart, West Virginia University Extension Service.

**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 :** Yes

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management		25%		0%
802	Human Development and Family Well-Being		25%		0%
803	Sociological and Technological Change Affecting Individuals, Families, and Communities		25%		0%
806	Youth Development		25%		0%
	<b>Total</b>		100%		0%

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

1. Situation and priorities

The urban centers of West Virginia, like many urban locations throughout the country, are experiencing high unemployment, illiteracy among adults and youth, teen pregnancy, inadequate nutrition, lack of activities for children and youth after school hours, and the digital divide. Programmatic efforts are directed toward these issues.

West Virginia has an estimated minority youth population of 4% African-American and 1% other racial groups. According to [The Human Rights Watch Press Backgrounder](#), African Americans constitute approximately 30% of incarcerated youth, and Latino juvenile arrests, with a youth population of less than 1%, account for another approximately 30%. In 2000, African-American youth constituted 22% of Charleston's youth population, but 52% of youth arrested in the city.

Specifically, the minority youth on the West Side and East End of Charleston, WV are some of the poorest in the city. They live in the most urban area of the state and are not only subject to statewide risk factors, but others that many children throughout the state do not face, like random acts of violence that occur frequently in their neighborhoods. Among these youth, 70% are African-American in a state in which African-Americans comprise only 3.2% of the overall population. Families residing in West Virginia averaged a lower family income than any other state in the nation in 2003, with an average family earning \$38, 568 annually. According to the 2000 census, 13.9% of West Virginia families lived in poverty; but the areas surrounding the designated sites for the project experienced more than double that percentage, indicating that 27.9% of these families lived in poverty. West Virginia leads the nation in childhood obesity indicating the potential for significant health problems, such as diabetes, high blood pressure and heart disease.

The high school drop out rate among the youth in the state of West Virginia has increased dramatically over the past six years. Kanawha County, the institution's home county and a major service area for WVSU Extension Service, has consistently ranked in the bottom portion of counties within the state with regards to teens dropping out of high school. Many of these children have a very low level of literacy skills and sense of accomplishment. For some of these children, family support is stagnated and often times extinct. Some of these youth are basically heading their homes because they are tasked with

major responsibilities including caring for a younger sibling.

## 2. Scope of the Program

- In-State Extension
- Multistate Extension

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

### 1. Assumptions made for the Program

Family and Consumer Science:

1. Participating in educational outreach programs will help enhance the cycle of human development;
2. Participating in family enrichment opportunities will promote more family time together.
3. Enhancing life skills for adults will better allow them to become more effective parents to their children.
4. Families lack opportunity to spend quality time with one another.
5. Adults/ families need better methods for budgeting and saving money.
6. Increase programming is necessary to help teens/adults become more health oriented, through the addition of more physical activity in their daily lives.
7. Research and assessment will become a greater component of programming;
8. Parents and families need more motivation to support their children;
9. Overall health practices is not a very priority for adults, due to working long hours and being out of the home for most of the day;
10. Funding priorities are constantly shifting with issues regarding youth programs and initiatives;
11. There are a substantial number of families that require assistance through Family Resource management programs.

4-H Youth Development:

1. Participating in positive youth development programs will promote young people to become productive adults;
2. Increasing youth awareness about using good personal health practices will be effective throughout their lives;

3. There is a substantial number of children that are unaware of how to make good choices relating to healthy lifestyles;
4. Youth are not informed about participating in good economic growth practices;
5. There is a major movement across the state to increase individual knowledge levels and evidence based programming for youth;
6. Funding priorities are constantly shifting with issues regarding youth programs and initiatives;
7. Most youth residing in the service county are unaware of youth opportunities provided by the 4-H communities;
8. Research and assessment will become a greater component of the programs;
9. Youth can become good citizens with a variety of civic engagement opportunities.
10. Youth seeking careers in STEM fields are dramatically decreasing.
11. The public school system is a natural ally for providing comprehensive programs and identifying underserved youth.
12. Students of higher education are poised to transfer expertise and guidance to youth.
13. Retired Senior citizen involvement in youth development broadens the base of delivery providers .

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

To enhance and strengthen skill sets for adults and families throughout the state. Through the FCS and 4-H Program Areas, WVSUES will provide programs that encompass a broad range of components to increase life skill development, relationship enrichment, the promotion of physical activities, healthy lifestyles and a variety of other methods to promote the developmental growth of adults and family units.

Youth who are emotionally and physically safe and live in an environment in which they develop positive relationships with responsible adults, like minded peers and a true sense of skill development .

Global competitiveness involving enhanced abilities to critically think and problem solve to contribute to the sustained technologies and agricultural ,healthy living, innovations in art and science and addressing global problems.

Additionally, through various SET and STEM initiatives, WVSU will increase the number of youth, especially underrepresented minorities, enrolling in STEM majors and pursuing careers with the STEM fields. These career fields will provide more opportunity for a better than subsistence living wage and create economic stability in their lives

## **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
2013	0.0	9.0	0.0	0.0
2014	0.0	10.0	0.0	0.0
2015	0.0	10.0	0.0	0.0
2016	0.0	11.0	0.0	0.0
2017	0.0	12.0	0.0	0.0

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

**1. Activity for the Program**

The services being offered by the WVSU Extension Service are comprehensive initiatives to promote a better sense of overall health and well-being. When introducing positive skills into a person's daily regimen, eventually they should begin to develop skills to enable their self sufficiency.

*Helping Our Undergraduates Succeed in Education (H.O.U.S.E.) /Phase II:* The West Virginia State University H.O.U.S.E. program is the only program of its kind in the nation. The H.O.U.S.E. program is composed of two initiatives. The first component assists six at-risk 17-24 year olds with transition into college life, by providing for them with a residence in a small family home setting for their first four semesters. The second component assists three female victims of domestic violence or homelessness, who wish to succeed by graduating from college. Residents of the H.O.U.S.E. program are referred from local and state agencies as well as departments within the university.

*Tax Preparation:* The federal Earned Income Tax Credit (EITC) is the nation's largest cash program directed at low-income families. It reduces the amount of income tax low- to moderate-income working families (with annual incomes of up to roughly \$35,000) are required to pay, and provides a wage supplement to some families. Free tax preparation is available to help workers fill out their tax returns.

*Within My Reach:* PREP Couple Workshops are typically 6 to 12 hour classes. The class may be conducted all on one day (such as a Saturday Workshop) or it may be offered over a period of weeks, such as 6 weeks for 2 hours per week. There will be one or more leader and a number of couples in the group. There is time for practical exercises. There is no sharing of personal problems with the group. PREP Workshops are designed to be fun and educational, they are not therapy sessions.

*Parenting Education:* Parenting education classes were offered on topics such as discipline, cooperative parenting during divorce, how to address your child's diagnosis, interacting with the school, and other topics as they are deemed necessary. Classes will be offered weekly for 4-8 weeks, depending on the audience and topic.

*Adult Literacy:* The goal of "More Than Words" Adult Literacy Program is to provide opportunities for adult learners to transition to a better place in their family, work and community life by getting a high school credential or diploma, preparing for college, or sharpening skills for current or advanced employment. Hours will be flexible and students will meet approximately twice a week at a location of their choosing. These sessions are designed to provide intensive skill instructions in order to help raise their reading levels.

*Adult Basic Education/GED Preparation:* The General Educational Development (GED) Test is composed of five (5) tests designed to help adults to get a diploma that have not graduated from high school. The sessions are designated to provide participants with intensive instruction in order to help raise their skill levels. The workshops will include print and non-print resources that complement instruction to extend learning. Currently there are two GED programs located in low income areas in Charleston.

Health Literacy is a program that teaches adult and youth participants how to open the lines of communication with their health care provider(s). Participants are supplied with a Health History Journal to take with them to doctor's appointments, which includes individual sections on family and personal health history, medications, insurance, etc.

*Diabetes and Heart Healthy Education Programs:* The "Diabetes and Heart Health" programs are designed to educate individuals with diabetes and those who have been diagnosed cardiac health issues and family members learn about the fundamentals of nutrition; how to prepare foods by reducing carbohydrates, sugar, and salts; and how to be more aware of proper serving sizes.

Active Lifestyles for Adults and Seniors: Programs developed to enhance gross motor enrichment, improved wellness and healthier lifestyle choices for adults/seniors. Active living is provided through experiential, motivational, and competitive programs to promote physical activity and positive cognitive selection. The program participants represent a host of clientele; from resident nursing home, active living facilities, individuals with limited mobility and even suffering from general medical condition. These programs may be continuous or episodic.

4-H Youth Development programming will include after-school, in-school, and summer based enrichment opportunities across the spectrum of mission mandates of 4-H (STEM, Healthy Living, and Citizenship). These efforts will focus on literacy, the arts, and be delivered through a variety of modalities.

4-H Family Growth will include in school enrichment as well as after school activities engaging youth in literacy activities bridged with gardening activities using the Junior Master Gardener curriculum.

Mind, Body and Goals is a leadership, citizenship, and physical fitness program engaging youth in various activities that are aimed to increase their knowledge and competence in the above areas.

4-H Science programs are designed to to increase youth participants' knowledge and interest in the STEM fields, with a major goal aimed to provide information and instruct activities related to the scientific method. The CASTEM programs will further increase youth participants interest and knowledge in science through the NASA/SEMAA program initiatives.

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

**Extension**

Direct Methods	Indirect Methods
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<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></ul>	<ul style="list-style-type: none"><li>● Public Service Announcement</li><li>● Newsletters</li><li>● TV Media Programs</li><li>● Web sites other than eXtension</li><li>● Other 1 (Schools)</li></ul>
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### 3. Description of targeted audience

The population that will be in receipt of these programs will be residents from low to moderate income level communities. Individuals experiencing difficulty with family resource management practices, health or nutrition issues, or any other at risk factors related to the family unit will be permitted to participate in the extension programs. The target age for this population will be adults of any particular range and youth in middle to high school.

On the youth side, the target recipients of these programs will be mostly youth 4th through 12th Grades in our service areas of central and southern West Virginia.

Additional programs will focus on youth in the pre-school through Kindergarten range.

Frequent events will also be provided to promote parent and child enrichment opportunities. Volunteer and adult workers will be the focus group of professional development and program sustainability.

Will also expand to teacher training and other after school provider training on innovations in engaging hard to reach youth.

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
  - Direct Adult Contacts
  - Indirect Adult Contacts
  - Direct Youth Contacts
  - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

### **1. Output Measure**

- Number of students that will be served by H.O.U.S.E and Phase II programming.
- Number of contact hours for case management and skill development received by students in the H.O.U.S.E./Phase II programs.
- Number of households being served by the Bounce Back Tax Program.
- Number of participants served through Strengthening Families programs.
- Number of individuals being served by the parenting education program.
- Number of individuals being served through relationship enhancement programs.
- Number of participants served with individual literacy and technology programming over a one year period.
- Number of individuals participating in workshops to better enhance financial management at home.
- Number of clients receiving an adult health history journal.
- Number of participants receiving a youth health history journal.
- Number of senior citizens participating in six to eight weeks of active lifestyles programs.
- Number of participants (youth and adult) being served by physical activity or programs to promote a more active lifestyle.
- Through creative arts programming, youth will receive 8 hours per month of art enrichment.
- Number of youth receiving ongoing exposure to adult service providers around a variety of educational topics including expressive arts, media literacy, 4-H SET, and STEM pipeline programs.
- Students will participate in laboratory activities in the following topics: Blood typing and DNA analysis; handwriting analysis and thin layer chromatography; drug toxin identification; and fingerprint identification for a total of twenty hours per week.
- Youth attending CASTEM camps receiving life skill, math and science skills over a two week period.
- New adult volunteers recruited and retained.
- Youth attending the expressive arts camp to be instructed in various aspects of expressive arts.
- K-12 youth receiving STEM-related education through NASA-centered programming
- K-12 educators receiving STEM-related training.

- Number of individuals reporting, they developed better money mangement and spending practices, over the past year.
  - Number of individuals reporting they developed better ways to save money over the past year.
  - Number of middle/high school youth participating in finacial management programs.
  - Youth participating in the 4-H Family Growth program.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	Students who are able to maintain a 2.0 will be considered successful through participation in the H.O.U.S.E. and Phase II program.
2	Students attending the H.O.U.S.E./Phase II programs will indicate an increased knowledge on the Daniel Memorial Assessment.
3	Teens/Adults participating in the financial literacy programs indicate an increased knowledge of their personal financial management strategies.
4	Adults receiving relationship enhancement instruction, demonstrate harmful behavior avoidance.
5	Participants completing parenting education programs will indicate an increase in knowledge about beneficial parenting techniques.
6	Participants completing financial education programs, will use proper spending habits.
7	After completing financial management programs; participants will be able to save more finances in the next fiscal year.
8	After completing the health literacy workshop, participants will continue to use the personal health history journals and demonstrate improved patient physician interaction.
9	After completing the active lifestyle programs, participants will report the addition of better health management practices, including additional physical activity.
10	Youth attending expressive arts programs will demonstrate mastery of their creative art.
11	Youth will demonstrate financial literacy skills including budgeting, fiscal record keeping, and understanding financial management principles.
12	Youth will report making better choices about spending habits at the grocery store.
13	Youth will report an interest in pursuing a health, science, or technology-related career.
14	Youth will demonstrate knowledge of the scientific method.
15	Youth attending CASTEM camps will exhibit increased knowledge of math, science, and life-skills.
16	K-12 teachers trained by the program will incorporate more experiential STEM-learning activities for students.
17	Youth completing the 4-H Family Growth program will report an increased interest in reading and gardening activities.

**Outcome # 1**

**1. Outcome Target**

Students who are able to maintain a 2.0 will be considered successful through participation in the H.O.U.S.E. and Phase II program.

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

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

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

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

- 1890 Extension

**Outcome # 2**

**1. Outcome Target**

Students attending the H.O.U.S.E./Phase II programs will indicate an increased knowledge on the Daniel Memorial Assessment.

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

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

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

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

- 1890 Extension

**Outcome # 3**

**1. Outcome Target**

Teens/Adults participating in the financial literacy programs indicate an increased knowledge of their personal financial management strategies.

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

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

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

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

- 1890 Extension

#### **Outcome # 4**

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

Adults receiving relationship enhancement instruction, demonstrate harmful behavior avoidance.

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

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

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

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

- 1890 Extension

#### **Outcome # 5**

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

Participants completing parenting education programs will indicate an increase in knowledge about beneficial parenting techniques.

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

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

- 802 - Human Development and Family Well-Being

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

- 1890 Extension

#### **Outcome # 6**

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

Participants completing financial education programs, will use proper spending habits.

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

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

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

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

- 1890 Extension

**Outcome # 7**

**1. Outcome Target**

After completing financial management programs; participants will be able to save more finances in the next fiscal year.

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

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

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

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

- 1890 Extension

**Outcome # 8**

**1. Outcome Target**

After completing the health literacy workshop, participants will continue to use the personal health history journals and demonstrate improved patient physician interaction.

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

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

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

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

- 1890 Extension

**Outcome # 9**

**1. Outcome Target**

After completing the active lifestyle programs, participants will report the addition of better health management practices, including additional physical activity.

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

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

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

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

- 1890 Extension

**Outcome # 10**

**1. Outcome Target**

Youth attending expressive arts programs will demonstrate mastery of their creative art.

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

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

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 806 - Youth Development

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

- 1890 Extension

**Outcome # 11**

**1. Outcome Target**

Youth will demonstrate financial literacy skills including budgeting, fiscal record keeping, and understanding financial management principles.

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

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

- 801 - Individual and Family Resource Management
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

- 806 - Youth Development

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

- 1890 Extension

**Outcome # 12**

**1. Outcome Target**

Youth will report making better choices about spending habits at the grocery store.

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

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

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

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

- 1890 Extension

**Outcome # 13**

**1. Outcome Target**

Youth will report an interest in pursuing a health, science, or technology-related career.

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

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

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 806 - Youth Development

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

- 1890 Extension

**Outcome # 14**

**1. Outcome Target**

Youth will demonstrate knowledge of the scientific method.

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

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

- 806 - Youth Development

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

- 1890 Extension

**Outcome # 15**

**1. Outcome Target**

Youth attending CASTEM camps will exhibit increased knowledge of math, science, and life-skills.

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

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

- 806 - Youth Development

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

- 1890 Extension

**Outcome # 16**

**1. Outcome Target**

K-12 teachers trained by the program will incorporate more experiential STEM-learning activities for students.

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

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

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

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

- 1890 Extension

### **Outcome # 17**

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

Youth completing the 4-H Family Growth program will report an increased interest in reading and gardening activities.

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

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

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

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

- 1890 Extension

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

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

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

#### **Description**

The economy could potentially impact this program's ability to achieve the intended outcomes because the majority of the program is funded externally through grants and donations. We typically have more difficulty finding external funding when the economy is in a downturn. Youth focused initiatives have been changing regularly depending on the current societal priorities. Many new national organizational mission mandates may also effect public priority especially within the context of evidence based initiatives. Typically, participants receiving services through this programs represent the low income population. One of the largest challenges with collecting long term data is individuals living in these communities are frequently transitory. On a positive note, our programming traditionally is very well received from all mass media outlets. We can anticipate a surge in interest based on coverage by local news programs, newspapers, our e-extension network and our 4-H and FCS newsletters, social medias and national websites.

As with most institutions in this current climate, the most impactful external factor affecting the FCS and 4-H Youth Development Program Areas, is funding. As a system, we rely on the extramural funds to help support the basic operational needs. Within the units, there is a demand for additional

staff members to provide services to a larger clientele. This past year has been very rewarding with expanding the geographical locations and program services for our participants. The challenge in doing so creates overwhelming situations for staff members as we receive referrals daily to further our partner base. We will continue to seek funding support by external means through establishing further partnerships, and exercising our abilities to save staffing costs by incorporating time and effort of staff into those external proposals.

Lack of volunteers is another major external factor affecting both program areas. Having non paid members of the community who donate their time to FCS and 4-H programming would help alleviate some of the funding issues we are, and will be, facing. Being equipped with trained and willing volunteers to lead 4-H clubs and activities, or provide assistance to FCS programming initiatives, would give our staff more freedom to focus on additional tasks such as research and curricula development.

Youth focused initiatives having been changing regularly depending on the current societal priorities. Many new national organizational mission mandates may also effect public priority especially within the context of evidence based initiatives. Typically, participants receiving services through this programs represent the low income population. One of the largest challenges with collecting long term data is individuals living in these communities are frequently transitory. Youth focused initiatives having been changing regularly depending on the current societal priorities. Many new national organizational mission mandates may also effect public priority especially within the context of evidence based initiatives. Typically, participants receiving services through this programs represent the low income population. One of the largest challenges with collecting long term data is individuals living in these communities are frequently transitory.

## **V(K). Planned Program - Planned Evaluation Studies**

### **Description of Planned Evaluation Studies**

Program, workshop, and training events will utilize evaluation questionnaires at the end of each session and longitudinally throughout the program.

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

### **Program # 7**

#### **1. Name of the Planned Program**

Community Vitality

#### **2. Brief summary about Planned Program**

WVSU Extension Service will continue to leverage the educational resources of the university to provide programs that assist our small towns, communities and cities identify and capitalize upon regional economies and other emerging growth opportunities as well as support their stabilization in a sustainable and healthy manner. This will be accomplished by addressing four areas:

**1. Community Development and Revitalization:** Work with blighted communities to revitalize their downtown and other core areas to assist with improving their vitality; facilitate community needs assessments, strategic planning efforts, workshops, meetings, etc. with elected officials, community members, business owners and others on various topics including structural revitalization, dilapidated buildings, community clean-ups, accessing funding for efforts, property re-development uses, etc.; Continue to deliver and expand efforts to address preparedness for the man-made and natural disasters that impact our region with programs to educate and prepare individuals, community groups, small businesses and agricultural entities. Collaborators include: FEMA, Citizen Corps, VolunteerWV, WV VOAD, EDEN, eXtension and other local organizations.

**2. Regional and Local Economic Development:** Work with partners such as the USDA Rural Development office, the Northeast Center for Rural Development, and local Economic Development authorities to develop strategic plans for regional economic projects; work with local communities and area businesses to determine leakages and development strategies for stabilizing existing market share or develop growth opportunities; and work with specific industries, agencies and other partners on implementation of regional projects including the Great Eastern Trail under current development.

**3. Micro-Enterprise and Small Business Development:** Continue to support micro-enterprise and small business development, retention and expansion efforts with an emphasis on sustainable agriculture, wood products, tourism, specialty foods, artisan and the creative economy sectors; Provide incubation and mentoring services, access to capital assistance, and training for entrepreneurs on management strategies, marketing, new markets for product and integration of technology; Provide counseling on collaborative development; assessments of current business plans, strategies and expansion possibilities; Partnering with various agencies including USDA, West Virginia Development Office, WVU Extension Services and the local Economic Development Authorities.

**4. Workforce Education and Individual Resource Development:** utilize the Economic Development Center to partner in the delivery of training programs that will assist in the development of a skilled workforce in the construction and creative economy sectors that will result in low-to-mod income participants increasing their ability to obtain employment with a livable wage.

**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 :** Yes

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
403	Waste Disposal, Recycling, and Reuse		5%		5%
502	New and Improved Food Products		5%		5%
602	Business Management, Finance, and Taxation		30%		30%
604	Marketing and Distribution Practices		10%		10%
605	Natural Resource and Environmental Economics		10%		10%
608	Community Resource Planning and Development		40%		40%
	<b>Total</b>		100%		100%

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

**1. Situation and priorities**

For the past several decades, the communities being served by WVSU Extension Service (WVSUES) have been severely affected by a declining economy. The communities served have largely been affected by the loss of jobs in the extractive industries of coal, timber and natural gas. Additionally, de-industrialization has continued in the chemical and manufacturing sectors. The results are shattering in the rural small towns in which these industries were the back-bone employer. As a result, the skilled workforce has left, leaving an aged population. The communities themselves are physically blighted, with empty or out-dated facades and are often lacking in green-space and other amenities that would make them attractive to prospective new businesses and citizenry. The families and youth are being forced to re-locate in search of employment, or are working at lower paying wages.

In collaboration with the national and state USDA office of Rural Development, the Northeast Center and Southern Center for Rural Development, the WV Department of Agriculture, the WV Development office, area economic development authorities, local government and community members, WVSUES is taking a leadership role in helping the communities identify new markets, revitalize their affected buildings, attract or stabilize the local businesses, and enhance the workforce in targeted industries.

Specifically, to offset the job losses in the traditional sectors, faculty and staff worked on numerous efforts focused on the introduction of new clusters such as tourism, specialty foods, agriculture, creative economy and timber hardwoods into these local and regional economies. The development of these industries is complimentary to programmatic efforts undertaken to revitalize the downtowns, where now empty small store-fronts and other amenities are suitable for small business development and re-

use.

**2. Scope of the Program**

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

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

**1. Assumptions made for the Program**

1. Participating in effective training programs will positively affect the success of the projects and will improve the knowledge base of the participants;
2. There are new markets and opportunities that the businesses and communities can address;
3. There is a desire among community leaders and community members to re-develop and they will participate to ensure outcomes;
4. Partners and funding opportunities will be critical to the success of the program and will affect the outcomes;
5. Research and assessment is an important role in effective program efforts; and.
6. Regional, national and international economics will have a larger impact than in previous decades.

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

The ultimate goal for the program is the provision of research based best practices in the area of economic vitality so that the service communities can become viable and sustainable again. This will be accomplished through first teaching the communities (1) how to organize and implement strategic planning processes, (2) access funding sources, (3) develop and implement re-use practices, (4) identify and maximize business opportunities, and (5) re-develop their workforce and physical structures to operate in new economies.

**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
2013	0.0	12.0	0.0	1.0
2014	0.0	12.0	0.0	1.0
2015	0.0	12.0	0.0	1.0

Year	Extension		Research	
	1862	1890	1862	1890
2016	0.0	12.0	0.0	1.0
2017	0.0	12.0	0.0	1.0

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

**1. Activity for the Program**

The office of Community and Economic Development of the WVSU Extension Service will work collaboratively with various partners including the WVSU Research component, WVU Extension, local non-profits, government agencies, community members, local businesses, etc. to address community vitality for targeted urban and rural distressed communities.

Several integrated approaches, to include economic viability targeting the macro level (the community) and the micro (the individual), will be employed. Specifically, at the macro level, a focus on sustainable communities utilizing proven strategies such as the national Mainstreet® model will be continued and additional communities will be targeted for service. Coupled with this effort is a focus on green development, to include community gardens, farmers markets, pocket parks, walking trails, etc. There will also be an expansion of the community development work focused on disaster preparedness at the statewide level, with a primary emphasis on our Southern WV region.

Also at the macro level, regional economic analysis and development of new regional clusters for business expansion will continue to be a focus area for both the CED research and extension efforts. The third year of the Stronger Economies Together national USDA Rural Development initiative effort piloted by WVSUES will be addressed. This program helped counties form regional economic partnerships that were provided with extensive economic analysis followed by the development of deployment strategies so that they may more fully develop their market share and enhance probabilities of economic growth or stability.

Business development will be the third component of the CED program area and will work largely at the micro (individual) level. CED staff will work extensively with clients who want to start a business, providing training and other services. We will continue the previous focus on specialty foods with the annual Recipe Challenge, artisans with the WV Made co-operative, and agri-toursim with the Heritage Farm efforts but will fully execute a new component launched last year that focuses on the digital and social media cluster. An incubator and production facility was developed and is in the early stages of usage to assist in growing new businesses in this area as well as address the need for expanded workforce skills in existing jobs within this industry. Fully developed programming is scheduled in partnership with university academic units and numerous community partners.

Workforce development efforts will also continue to focus on the low-income clients targeted for the construction and highway related fields, with a particular emphasis on minority and women workforce growth.

**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> </ul>	<ul style="list-style-type: none"> <li>● Public Service Announcement</li> <li>● Newsletters</li> <li>● TV Media Programs</li> <li>● eXtension web sites</li> <li>● Web sites other than eXtension</li> </ul>

**3. Description of targeted audience**

The target audience will include community leaders, government officials and agencies, community members, small business owners, potential business start-ups, un-employed and under-employed workforce members (with focus on low-to-mod income) and regional economic development authorities.

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

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
    - Direct Adult Contacts
    - Indirect Adult Contacts
    - Direct Youth Contacts
    - Indirect Youth Contact
  - Number of patents submitted
  - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

### **1. Output Measure**

- WVSUES will provide technical assistance with various community planning, disaster preparedness and/or re-development efforts.
  - Number of potential, start-up and existing small business owners served with training, mentoring and other assistance programs.
  - Educational programs and initiatives related to community revitalization including green projects, will be provided and/or supported.
  - Workforce development participants receiving necessary training and placement assistance for targeted industries.
  - Grants, financial awards or new partnerships to support initiatives will be developed, received and utilized.
  - Number of regional and local economic development initiatives initiated, led, and supported by faculty and staff members.
  - Number of volunteers, community members, and stakeholders actively involved in initiatives.
  - Number of small business owners working on facade renovations.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

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

O. No	Outcome Name
1	Communities will implement components of their strategic action plans or regional economic development plans.
2	Potential business owners or existing small businesses received financial assistance, obtained a business licenses or reported an increased knowledge of relevant business issues as a result of participation in CED programs.
3	Participants of workforce training programs successfully complete training programs resulting in certification for job placement, enhanced industry skills or employment.
4	Grants, financial awards or partnerships will be awarded or developed for use to support CED initiatives.
5	Participants report increased comprehension of revitalization or green development principles.

**Outcome # 1**

**1. Outcome Target**

Communities will implement components of their strategic action plans or regional economic development plans.

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

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

- 403 - Waste Disposal, Recycling, and Reuse
- 608 - Community Resource Planning and Development

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

- 1890 Extension

**Outcome # 2**

**1. Outcome Target**

Potential business owners or existing small businesses received financial assistance, obtained a business licenses or reported an increased knowledge of relevant business issues as a result of participation in CED programs.

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

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

- 502 - New and Improved Food Products
- 602 - Business Management, Finance, and Taxation
- 604 - Marketing and Distribution Practices

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

- 1890 Extension

**Outcome # 3**

**1. Outcome Target**

Participants of workforce training programs successfully complete training programs resulting in certification for job placement, enhanced industry skills or employment.

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

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

- 608 - Community Resource Planning and Development

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

- 1890 Extension

#### **Outcome # 4**

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

Grants, financial awards or partnerships will be awarded or developed for use to support CED initiatives.

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

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

- 608 - Community Resource Planning and Development

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

- 1890 Extension

#### **Outcome # 5**

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

Participants report increased comprehension of revitalization or green development principles.

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

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

- 403 - Waste Disposal, Recycling, and Reuse
- 605 - Natural Resource and Environmental Economics
- 608 - Community Resource Planning and Development

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

- 1890 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
- Competing Public priorities

**Description**

The budget cuts may affect the hiring or maintenance of current staffing levels. If lowered, the new efforts envisioned and the new service counties may be cancelled. In addition, the service area is a significant distance from campus, with budget cuts, the travel of additional campus based staff may be affected, which would diminish the planned collaborative efforts.

**V(K). Planned Program - Planned Evaluation Studies**

**Description of Planned Evaluation Studies**

Program, workshop, and training events will utilize evaluation questionnaires at the end of each session and longitudinally throughout the program.