

2010 University of Vermont Combined Research and Extension Plan of Work

Status: Submitted
Date Submitted: 03/30/09

I. Plan Overview

1. Brief Summary about Plan Of Work

Extension Faculty and staff at the University of Vermont Extension and Agricultural Experiment Station (VT-AES) are focused on meeting the needs of the state's citizens. These experienced and innovative professionals continually work to integrate higher education, research and outreach services to protect and enhance a quality of life characterized by a thriving natural environment, a strong sense of community, and a deeply rooted connection to agriculture. Though our research conclusions offer lessons nationwide, even globally, Extension and the VT-AES apply the results closer to home, in our own communities, helping people where they live, cultivating healthy communities.

Today, VT-AES and UVM Extension address issues ranging from farm profitability, water and soil quality, and dairy herd disease resistance and health, to global climate change, renewable energy, youth life skills education, community development and planning, and obesity, nutrition and health. Together we concentrate on relevant research that helps our diverse audience--including farmers, forest and land stewards, children and families, rural community members--improve business profitability, environment, economics, nutrition, food safety, and youth and adult life-skills development.

Our work is guided and evaluated by dedicated citizen advisors with whom we meet regularly to review priorities, spending, and program impact. We seek additional feedback from those attending Extension events, an annual state-wide poll, and we meet with university, local, state and national opinion leaders, and policymakers to review our research and outreach portfolio and direction. Research and outreach efforts are enhanced through active partnerships, and volunteer workers.

The State of Vermont is going through tough economic times which directly affect the University of Vermont and of course, Extensions economic situation. Beginning with the 2010 academic year Extension has cut two faculty positions and has eliminated one half time staff, and reduced time in three more staff positions. Pending the states budget situation more cuts will be necessary. The college of Agriculture and Life Sciences has an MOU with Extension and this is being reviewed. There have been two retirements as well so there will be programming shifts as decisions are made about how to best serve Vermont's citizens. Stakeholder input will be a significant part of that discussion and discussions to come.

The goal of UVM Extension and VT-AES is to put our health, environment, and agricultural research into action resulting in improved agriculture and environmental sustainability, human health, community development and the personal and intellectual development of youth.

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

Year	Extension		Research	
	1862	1890	1862	1890
2010	53.7	0.0	13.8	0.0
2011	53.7	0.0	13.8	0.0
2012	53.7	0.0	13.8	0.0
2013	53.7	0.0	13.8	0.0
2014	53.7	0.0	13.8	0.0

II. Merit Review Process

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

- External University Panel
- Expert Peer Review

2. Brief Explanation

The University of Vermont Extension and AES have entered into a formal agreement with Extension in Maine, New Hampshire, and Massachusetts to develop and implement a four-state planning and reporting system. Working in collaboration with three other states in developing our system has also resulted in discussions around state and regional programs, opportunities for multistate work, sharing staff resources and a much better understanding of how each of our unique programs are similar and different than others in New England.

As a result, the four states have agreed to provide merit review for each state as part of our formal partnership. The new system provides access to each state plan of work for all four states, allowing for easy sharing of ideas and opportunities for further collaboration. Further, we've agreed to set up a rotating system of more comprehensive merit review by selecting a different state plan each year for in-depth review by Extension staff from the other three states. With this system, we will be sharing plans with one another continuously, and every four years every state's plan will go through a more rigorous review process by the other three states.

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?

In Vermont, our issues of strategic importance include agricultural profitability and diversity; developing rural economics, niche product development; environmental quality, and a healthy and productive population.

We work to help people understand the range of programs we provide and our connection to the knowledge-base of UVM faculty. It is a priority to focus on addressing selected critical problems in Vermont, so VT-AES research and UVM Extension programs yield the greatest impact.

Citizens serve in advisory capacities to ensure that educational programming is targeted and relevant to areas that are important to Vermonters. Working collaboratively, and with other departments of the University, UVM Extension and AES strive to strengthen efforts to ensure that research results, and educational resources remain accessible and relevant to the state's citizens. Advisors are the organizations continual check-in to aid us in focusing our work on the relevant problems. Further input is garnered from program participants and other stakeholders giving immediate feedback to a projects focus.

Additionally, UVM's Centers of Excellence help to coordinate, conduct and promote much of the research that is supported by AES funds, competitive private and public grants, sponsorships, and donations. These centers also utilize citizen advisory boards to inform and guide a research and outreach agenda that is responsive to local, state, and national needs and priorities. The Centers of Excellence include:

ull; Center for Sustainable Agriculture—an interdisciplinary approach to integrating university and community expertise to promote sustainable farming systems throughout Vermont and the region.

- Center for Rural Studies—connecting information and technical expertise with communities, businesses and policy makers in researching rural issues and information dissemination.
- Proctor Maple Research Center—applied research in the production of maple sap and syrup.

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

Health: focuses on food security for limited resource children, families and seniors. Examples of programs follow:
ull; **Community Farm Partners:** enhance the amount of locally grown produce that is consumed by Vermonters with limited

resources and sold by small scale Vermont producers

- **EFNEP (Expanded Food and Nutrition Education Program):** no longer included in the federal POW due to no funding from 3b&c dollars.
 - **Growing Connections:** a program for at-risk youth that teaches nutrition, food safety, and food security issues through gardening
 - **Healthy Eating:** targeted at increasing the amount of fruits and vegetable offered to toddlers by parents enrolled in WIC (Women, Infants, Children)
 - **Senior Farm Share Nutrition Programs:** nutrition workshop for low-income seniors to increase their consumption of local, fresh produce by enhancing participants skills to prepare fresh fruits and vegetables and gain nutritional knowledge based on the Dietary Guidelines
- Youth & community development:** addresses community strengths and challenges, focusing programs to build assets through its citizens who may be of limited resources, a community struggling to thrive, migrant workers and disabled workers wanting to stay in the workforce. Program examples follow:
- ull; **Migrant Education Recruitment Program (MEP):** ensure that children of migrant farm workers, and qualifying youth under age 22, are aware of the educational support services available to them
 - ull; **Vermont AgrAbility Project:** make recommendations that can be used by farmers with disabilities to maintain employment, through development of accommodations in support of recommendations made
 - ull; **Rural and Agricultural VocRehab Program:** assist individuals with disabilities living in rural areas and those in agricultural professions or self-employment, by providing them with a variety of services tailored to their needs in order to maintain or obtain their selected employment outcome
 - ull; **4-H:** delivers educational programs to all youth developing life skills, with extra effort in place to target urban cities and activities for the teen audience as well as limited resource families and youth who are at-risk. In January of 2009 an Operation Military Kids (OMK) program coordinator was hired to target youth with parents in the military.

Agriculture & Environmental Sustainability: Agriculture is a struggling industry, its workers are at risk and entering into the business with needed supports can be a challenge especially for some audiences, especially women. Program examples follow:

ull; **Women's Agricultural Network:** provide educational and technical assistance to individuals starting or expanding agricultural businesses; targeted primarily at women

- **Migrant Ed, Vermont AgrAbility, and Rural and Agricultural VocRehab:** while focusing on building community capacity to meet these underserved populations, migrant workers and disabled farmers, they focus on the agriculture community.

In addition scholarships are available to those wishing to participate in Extension programs, but do not have necessary resources.

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

Planned programs are developed using the Logic Model, defining outcomes and impacts and the associated indicators of change. Outcomes are written to reflect the ultimate results desired, are achievable by the program, and will usually require multiple years to come to fruition. Intermediate indicators will serve as benchmarks of progress over the duration of the program, and will be reported annually.

In the ultimate goals section of One Solution lists the outcome statements for the Planned programs. Each of these has outcome indicators defined and associated to outcome statements within the Vermont on-line reporting system, Albert. These outcome indicators are listed as an Outcome Targets in One Solution. In the Albert on-line system each Output (output measure) has outcome indicators associated, tying the activity with the desired measurable results.

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

Beginning with the identification of a situation and the clear articulation of a problem or issue that needs addressing, planned programs set a course of action. Through the use of both process and summative evaluation, the focus shifts from determining activities and inputs, to improving the learning environment and opportunities for our clientele, and measuring actual achievement of impacts. Tracking program costs will provide additional criterion in determining the efficiency of the program, enabling us to further promote programming that works.

Each planned program is built from organizationally defined outcomes and outcome indicators. In the 07-11 submission of the One Solution report, planned programs were completed using group level plans. Group level plans are logic models of the defined problems using the defined outcomes and outcome indicators and draft outlines of individual logic models which address the defined problems or group level plans. In 08-12 submission and subsequent submissions of the One Solution report, planned programs were completed using individual logic models grouped by the problems defined in the group level plans. This results in programming being focused because it is problem driven and results focused as a result of clearly defined outcomes and measurable indicators used by all the individuals as they construct individual logic models.

The One Solution report is reflective of the sum of the actual planned effort of individuals in the organization. This evolution of planning will refine the indicators and outputs, resulting in fewer indicators giving more focus to our evaluation efforts. In the 09-13 planning year, professional development activities focused on evaluation and program development. Outcome indicators at the lowest level, in most cases, have been removed as options for individuals to report to, requiring a higher level of effort to measure program results at the action level and to carefully plan the evaluation efforts as part of their programming.

In the 10-15 planning year, through a facilitated process faculty and key program staff reviewed each of the group plans to "clean them up". Relevancy, accuracy, redundancy, focus and logic were the focus and result of the process. This process reduced the number of group plans from 20 to 8 and reduced the number of outcomes and indicators significantly.

IV. Stakeholder Input

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

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

Brief explanation.

UVM Extension has a new state advisory board with representatives from across the state. The members of this board were drawn from a cross section of disciplines and program areas in which the organization provides educational opportunities. The members of the board have the responsibility to work with the director to review programs, budget decisions and new initiatives within the organization. The board includes at least one youth member, currently the Vermont Agricultural Ambassador for the State of Vermont that is selected annually. The members represent UVM Extension and not the individual disciplines or program areas from which they were selected for board discussions.

The board members are given weekly updates on the actions of the director and are encouraged to provide feedback to the director on an on-going basis. In addition, the board members are contacted on an as needed basis, collectively or individually to help provide feedback to the director. The board has two regularly scheduled business meetings per year and participates in the annual legislative reception.

In addition to the state advisory board, regional and local focus groups, surveys, discussions with associations, agencies and non-governmental organizations by the director, associate directors, faculty and/or program staff are all used to gather information from clientele regarding programmatic needs.

The Center for Rural Studies conducts an annual Vermonter Poll, a phone survey of 600 Vermonters.

Faculty and staff work with many partners and program participants who offer input on present and future programming to

address identified needs.

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 Surveys
- Use External Focus Groups
- Use Advisory Committees
- Use Internal Focus Groups

Brief explanation.

UVM Extension has a state advisory board with representatives from across the state. The members of this board were drawn from a cross section of disciplines and program areas in which the organization provides educational opportunities.

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

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

Brief explanation

{NO DATA ENTERED}

3. A statement of how the input will be considered

- In the Staff Hiring Process
- Redirect Research Programs
- In the Action Plans
- In the Budget Process
- To Set Priorities
- To Identify Emerging Issues
- Redirect Extension Programs

Brief explanation.

{NO DATA ENTERED}

V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Community Development and the Personal and Intellectual Development of Youth
2	Health
3	Agriculture and Environmental Sustainability

V(A). Planned Program (Summary)

Program #1

1. Name of the Planned Program

Community Development and the Personal and Intellectual Development of Youth

2. Brief summary about Planned Program

Extension and AES address community engagement, economic development, the identification of community assets and challenges to create sustainable and viable communities. Programming focuses on engaging youth in communities through service, building skills of business and community leaders, and building supports to meet the needs of the communities underserved or with at-risk populations. AES's work with rural communications, market development and public land management support Extension's programs with research based information. In 2010 staffing changes are occurring that have and will influence program efforts.

The University of Vermont Extension 4-H program has been teaching youth leadership, citizenship and life skills, operating in all fourteen counties in Vermont through a variety of well-tested delivery modes. All programs are based on learning-by-doing approaches--the experiential model--that allow youth to experience mastery in subject matter, a sense of belonging to a group, a sense of generosity to those around them, and a sense of independence, with opportunities to take on leadership and make important decisions. Operation Military Kids (OMK) and the new initiative Science, Education and Technology (SET) are new components.

Projects under this planned program are designed to bring together people with diverse interests to share perceived problems, find common ground, and identify resources and tools for prioritizing and solving those problems through a cooperative, collaborative effort. The 4-H program is project-based curriculum focused on life skills education over 6-8 hours of sequential learning and perhaps years of contact with a trained leader.

Two-thirds of participants live in towns with fewer than 10,000 people, and an additional 12% live on farms, reflecting the rural and small-town audiences primarily served. Over half of all youth served live in racially and ethnically mixed communities. 4-H serves youth in both traditional 4-H subjects and in new and growing area of interests, such as technology as outlined with the S.E.T. initiative, through 4-H clubs, afterschool programs and other innovative venues. Capacity for communities to serve families at risk are served through the Coping with Separation and Divorce (COPE) through family courts and migrant families with Migrant Education programs.

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
124	Urban Forestry	4%		4%	
601	Economics of Agricultural Production and Farm Management	0%		1%	
603	Market Economics	0%		1%	
604	Marketing and Distribution Practices	0%		1%	
605	Natural Resource and Environmental Economics	0%		1%	
608	Community Resource Planning and Development	13%		5%	
609	Economic Theory and Methods	0%		1%	
723	Hazards to Human Health and Safety	7%		9%	
724	Healthy Lifestyle	0%		9%	
801	Individual and Family Resource Management	0%		1%	
802	Human Development and Family Well-Being	20%		0%	
805	Community Institutions, Health, and Social Services	10%		15%	
806	Youth Development	46%		50%	
903	Communication, Education, and Information Delivery	0%		2%	
	Total	100%		100%	

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

1. Situation and priorities

Situation and priorities from each of the Parent plans (problem driven logic models) as follows:

From Farm and rural residents with disabilities face challenges group plan:

Farm and rural residents with disabilities face challenges maintaining and securing employment. Agriculture, related industries, and rural residents of Vermont have a high rate of injuries and other disabling conditions. Individuals with disabilities experience a high rate of unemployment; however, individuals with disabilities can and want to work.

Farmers in Northern New England have a high rate of injuries and other disabling conditions. Individuals with disabilities experience a high rate of unemployment; however, individuals with disabilities can and want to work.

From Provide opportunities for positive youth and family development group plan:

4-H programming combines the experiential learning model with project-based education, both key strategies for Positive Youth Development identified in Critical Hours (Miller, 2003). Project-based curriculum is focused on life skills education over 6-8 hours of sequential learning and perhaps years of contact with a trained volunteer leader. Through these opportunities, youth gain a sense of belonging, sense of mastery, sense of independence, and an opportunity to help others (sense of generosity). Effects of the programming are stronger "for those individuals who need the help most and have the fewest options (Miller, 2003 p.59)." The greatest benefit is for those who attend the most hours over the most years. This is even more important for older youth. The Tufts Study on Positive Youth Development indicates that "combining sports and youth development programs such as 4-H, Boys and Girls Clubs, YMCA, Big Brothers/Big Sisters, Scouting, etc..., was one of the most effective ways to promote positive youth development and to prevent problems (Lerner, p9, 2008) .

Personal mastery of Life Skills (Targeting Life Skills Model, 1998) is important for both Positive Youth and Family Development. Life Skills are abilities individuals can learn that will help them to be successful in living a productive and satisfying life. The goal is to provide developmentally appropriate opportunities for youth and adults to experience life skills, to practice them until they are learned, and be able to use them as necessary throughout a lifetime. Through the experiential learning process, youth and adults internalize the knowledge and gain the ability to apply the skills appropriately. Our programming will focus on eight of these Life Skills including: Decision Making; Wise Use of Resources; Communication; Accepting Differences; Leadership; Useful/Marketable Skills; Healthy Lifestyle Choices and Self-Responsibility.

Science, Engineering and Technology (SET) focus:

American Youth are losing ground in SET compared to peers in other nations. Although the United States is currently the world's economic and military leader, too many young Americans do not have the science, engineering and technology career skills necessary to succeed and meet our country's needs in the future. A recent report of the National Academy of Sciences (2006), *Rising Above the Gathering Storm*, speaks to the urgent need to enhance academic and vocational experiences in science, engineering, and technology. American inventiveness and competitiveness in the global marketplace are at risk as student interest and performance in SET disciplines declines at the same time that SET literacy and mastery expectations rise (Business Roundtable, 2005).

With 4-H and the Cooperative Extension System's direct connection to the research and resources of the nation's 106 land-grant universities (LGU) and colleges, the 4-H Science, Engineering and Technology (SET) program has become a 5-year national priority of the 4-H Youth Development Program. 4-H SET will begin to show how science and engineering issues affect youths' lives and prepare a future generation of scientists and engineers. The 4-H SET program will present 4-H with a new opportunity to connect to the LGU's SET research community and integrate with current youth workforce development initiatives.

When families under-go major transitions such as separation and divorce, parents benefit from ideas and strategies to lessen the impact of the changes on their children.

From Provide positive community engagement opportunities for youth and adults group plan:

Studies indicate a number of problems ranging from declining levels of voter participation and public apathy toward elections to decreasing interest in volunteer activities and community groups. They also document the younger generation's apparent disinterest in public affairs and lack of knowledge about our political system. Robert Putnam has quantified this civic disengagement, documenting a 25-30 year decline in membership in civic-oriented organizations. *Bowling Alone* he states that, "Americans' affiliations with civic institutions with a face-to-face quality - from churches to service groups like Kiwanis and PTAs - have declined over the last generation."

Youth in Decision-Making: A study on the impacts of youth on adults and organizations (Zeldin, McDaniel, Topitzes, and Calvert, 2000) states, "Expanding community capacity means that a variety of organizations and agencies have to involve young people in decision-making. This has not yet happened ... As more organizations adopt youth governance into their operating

philosophy in the future, a critical mass of expertise will grow." In addition, The connection of youth development to community development is critical; by integrating youth into their communities, they feel empowered, relevant and valued. In return, the community benefits from vital services provided by the youth.

Paul Woodruff in *First Democracy: The challenge of an ancient idea* (2005) presents significant challenges for our current educational system, which focuses on preparing our young people for the job market, but fails in teaching good citizenship. Citizenship education is a mission mandate area for 4-H Youth Development programming (4-H National Headquarters).

The Migrant Education Recruitment Program (MEP) serves children and youth who move with family member(s) or guardian(s) to obtain or in search of temporary or seasonal work in agriculture or logging. MEP recognizes that a positive relationship between parents and school is essential to the success of their children's academic life. In order to further and support this positive relationship, MEP offers statewide support to migrant families.

The Vermont military community is geographically dispersed and needs community support as the role of National Guardsmen and women has changed over recent years. The Operation: Military Kid (OMK) program supports military youth and families by establishing community partnerships that will connect and educate people by creating community support; delivering opportunities to youth and families; supporting military kids; collaborating with community partners; educating the public, including the education community; and incorporating military families into existing community resources.

Urban and community forests provide ecological services that benefit the environmental, economic and social conditions of Vermont communities. This resource, which includes trees in our backyards, along our streets, in parks and town greens and in municipal forests can directly enhance the atmosphere and transform the surrounding environment through atmospheric carbon dioxide (CO₂) reduction and energy conservation, airborne pollutant absorption and interception, and microclimate modifications. They protect and enhance water quality and supply by filtering out pollutants, controlling stormwater runoff, enabling water infiltration and reducing erosion. They can help offset the high costs of fossil fuel consumption by reducing dependence on summer air conditioning and winter heating. They improve the economic development through increases in property values, rental occupancy rates, consumer patronage and expenditure, and job market. When urban and community forests are well planned and managed, communities can begin to reap the many benefits they provide. These benefits may not seem important to a state that is approximately 78% forested, however, with 38% of Vermont's residents living in urban areas the need to better advocate for this public resource is becoming increasingly evident. Furthermore, with the increasing urbanization of Vermont, up 22% from 1990, the canopy cover over Vermont communities is decreasing and in many cases the resource is in poor health. As the state continues to develop and we strive to keep our downtowns vibrant our urban and community forests become more important. We have identified two issues that hinder the effective planning and management of Vermont's urban and community forest

2. Scope of the Program

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

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

1. Assumptions made for the Program

Bold header is group plan name (issue or problem being addressed) with assumption(s) listed below:

From Farm and rural residents with disabilities face challenges:

Individuals living in rural areas have difficulty accessing services

From Provide opportunities for positive youth and family development:

Materials included in the 4-H National Curriculum Collection address Life Skills education; more hours of programming with a caring adult carries a greater benefit; youth in limited resources families have fewer options for opportunities to gain mastery of life skills.

S.E.T.: Much of the success will depend upon partnering and pooling resources with businesses and colleagues in SET related organizations.

Coping with Separation and Divorce (COPE): The program will be mandated by the court system.

From Provide positive community engagement opportunities for youth and adults:

Community Organizations and Agencies collaborate with UVM Extension to enhance programming for youth. Volunteers are

available to assist in program delivery for community youth. Youth want to engage with community organizations and agencies to address issues of the youth population. It is believed that participants will gain leadership skills and develop successful projects that will enable them to move their communities forward.

2. Ultimate goal(s) of this Program

(condition)

- Improve community collaboration to address issues and build community assets
- Improve personal and intellectual development of Vermont youth

(Action)

- Farm and rural residents with disabilities secure and maintain gainful employment
- A Larger and more diverse pool of youth are pursuing SET careers through post secondary education and improved SET literacy in the general population.
- Families under transition lessen the impact of changes on their children
- Youth and adults gain mastery of life skills
- Youth apply SET learning in their lives and demonstrate interests and aspirations toward SET careers

- Citizens of target communities actively participate in local government and/or community groups where policy decisions are made.
- Community members will mobilize more effectively to better understand and solve community problems
- Informed decision making by community, business and organizational decision makers
- Youth are involved in communities as active, productive citizens (learning)

- Increased literacy and interest (awareness, attitudes, understanding and aspirations) in science, engineering and technology (SET) among youth and improved related knowledge, skills, and abilities for use in their lives and future

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
2010	26.3	0.0	1.6	0.0
2011	26.3	0.0	1.6	0.0
2012	26.3	0.0	1.6	0.0
2013	26.3	0.0	1.6	0.0
2014	26.3	0.0	1.6	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

•4-H Lifeskills Development Program: Help youth acquire Life Skills in the following areas: Decision Making; Critical Thinking; Problem-Solving; Communication; Goal-Setting; and Skills for Everyday Living to succeed as adults. Delivery Methods: 6-8 sequential learning hours using experiential learning techniques for in- school, afterschool, or out-of-school settings.

•S.E.T. Activities: 4-H SET will begin to show how science and engineering issues affect youths' lives and prepare a future generation of scientists and engineers. The 4-H SET program will present 4-H with a new opportunity to connect to the LGU's SET research community and integrate with current youth workforce development initiatives.

•Downtown Business District Analysis: This program provides the community with analytical techniques that can be put to work immediately in economic revitalization efforts. The process requires input from local residents so that recommendations reflect both market conditions as well as the preferences of the community.

Delivery Methods: Group meetings and discussion groups in community.

- Community Leadership: Assessing, addressing and expanding community capacity through leadership and public policy education efforts including building--and education members and clientele of--coalitions and collaboratives.

- Coping with Separation and Divorce (COPE): Parent education for parents of minor children who have filed for separation, divorce, dissolving of a civil union, parentage, changes in rights and responsibilities concerning their children. This is a court mandated program.

- EnviroQuest: Help youth acquire Life Skills in the following areas: Decision Making; Critical Thinking; Problem-Solving; Communication; Goal-Setting; and Skills for Everyday Living to succeed as adults.

Delivery Methods: 6-8 sequential learning hours using experiential learning techniques for in-school, afterschool, or out-of-school settings.

- Migrant Education Recruitment Program (MEP): To ensure that children of migrant farm workers, and qualifying youth under age 22, are aware of the educational support services available to them.

Delivery Methods: Outreach to schools, agricultural employers, and social service agencies throughout the state.

- Vermont AgrAbility Project: To make recommendations that can be used by farmers with disabilities to maintain employment, through development of accommodations.

Delivery Methods: Process involves recruitment of eligible individuals through referrals. Intake information is recorded on farms provided by the National AgrAbility Project. Site visits are the primary means of contact.

- Rural and Agricultural VocRehab Program: To assist individuals with disabilities living in rural areas and those in agricultural professions or self-employed by providing them with a variety of services tailored to their needs in order to maintain or obtain their selected employment outcome.

Delivery Methods: Process involves recruitment of eligible individuals through referrals, assessment, writing up a plan of action, and providing services for eligible individuals. Printed materials and individual technical assistance are offered to strengthen the capacity of individuals to maintain or to prepare for meaningful work.

- Take Charge (TC/RC): Helping community adult members to gain the skills necessary to be confident enough to take part in town government by ultimately competing for town government leadership positions.

Delivery Methods: Meetings, discussion groups.

- Town Officers Education Conference & Municipal Officers Management (TOEC/MOMS): Local town officers, decisionmakers and officials receive education and tools to improve job performance and management, addressing topics from new legislation to handling difficult customers.

Delivery methods: Each one-day conference is held annually, at multiple sites.

- Vermont Urban and Community Forestry program :A joint initiative between the University of Vermont Extension and the Department of Forests, Parks and Recreation. The mission of the program is to promote the stewardship of the urban and rural landscapes to enhance the quality of life in Vermont communities. The program provides educational, technical and financial assistance in the management of trees and forests, in and around the built landscape.

Delivery Methods: Classes, meetings, various media, community volunteer projects.

AES efforts:

- Community Development and planning
- On farm/community energy generation and secondary revenue generation
- Community and technology for rural community development
- Community market development and local foods distribution
- Communication methods and research studies for non-profit and profit organizations
- Agritourism
- Public land management
- Development of environmentally safe, non food product development (adhesives, plastics and road deicer) from whey
- Development of Artisan cheese markets
- Distinctiveness/marketing of regional foods
- Food by-product development
- Transportation initiatives

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"> ● Other 2 (4-H Afterschool, club) ● Other 1 (Train the Trainer) ● One-on-One Intervention ● Workshop ● Group Discussion 	<ul style="list-style-type: none"> ● Web sites ● Other 2 (radio ed. spots) ● TV Media Programs ● Other 1 (school enrichment) ● Newsletters

3. Description of targeted audience

•4-H: Adult Volunteers •4-H: Youth Volunteers •Adults •Age 19 - 24 Young Adult •Age 25 - 60 Adult •Agriculture: Farmers •Communities: Educators •Communities: Local Officials/Leaders •Communities: Non-Governmental Organizations •Community leaders and citizens •Extension: Faculty/Staff •Public: Families •Public: General •Public: Nonprofit Organizations •4-H: Youth •Age 13 - 18 Youth •Age 8 - 18 Youth •Youth

V(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	2700	0	2500	0
2011	2700	0	2500	0
2012	2700	0	2500	0
2013	2700	0	2500	0
2014	2700	0	2500	0

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

Expected Patent Applications

2010 :3 2011 :3 2012 :3 2013 :3 2014 :3

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	5	1	6
2011	5	1	6
2012	5	1	6
2013	5	1	6
2014	5	1	6

V(H). State Defined Outputs

1. Output Target

- 4-H Afterschool

2010 :1 2011 :1 2012 :1 2013 :1 2014 :1

- 4-H Club

2010 :155 2011 :155 2012 :155 2013 :155 2014 :155

- 4-H Day Camp

2010 :11 2011 :11 2012 :11 2013 :11 2014 :11

- 4-H Overnight camp

2010 :3 2011 :3 2012 :3 2013 :3 2014 :3

- 4-H School enrichment

	2010 :22	2011 :22	2012 :22	2013 :22	2014 :22
● 4-H Short-term/special interest					
	2010 :47	2011 :47	2012 :47	2013 :47	2014 :47
● Class/course					
	2010 :9	2011 :8	2012 :8	2013 :8	2014 :8
● Conference					
	2010 :3	2011 :3	2012 :3	2013 :3	2014 :3
● Consultations					
	2010 :450	2011 :450	2012 :450	2013 :450	2014 :450
● Discussion group					
	2010 :75	2011 :75	2012 :75	2013 :75	2014 :75
● Field site visit					
	2010 :30	2011 :30	2012 :30	2013 :30	2014 :30
● Funding request					
	2010 :1	2011 :1	2012 :1	2013 :1	2014 :0
● Presentations					
	2010 :50	2011 :50	2012 :50	2013 :50	2014 :50
● Publication - fact sheet					
	2010 :1	2011 :1	2012 :1	2013 :1	2014 :1
● Publication - newsletter					
	2010 :90	2011 :90	2012 :90	2013 :90	2014 :90
● Publication - newsprint article					
	2010 :15	2011 :15	2012 :15	2013 :15	2014 :15
● Radio Spots/program (educational)					
	2010 :6	2011 :6	2012 :6	2013 :6	2014 :10
● TV segment/ATF					
	2010 :12	2011 :12	2012 :12	2013 :12	2014 :12
● Train the Trainer sessions					

	2010 :6	2011 :6	2012 :6	2013 :6	2014 :6
● Web Page					
	2010 :1	2011 :1	2012 :1	2013 :1	2014 :0
● Workshop - series					
	2010 :3	2011 :3	2012 :3	2013 :3	2014 :3
● Workshop - single session					
	2010 :75	2011 :75	2012 :75	2013 :75	2014 :75
● Trainee delivered programming					
	2010 :120	2011 :120	2012 :120	2013 :120	2014 :120

V(I). State Defined Outcome

O. No	Outcome Name
1	85% of Certificate of Eligibility reviewed by the Dept. of Education will be 100% accurate and reflect eligible migrant students
2	Increase number of programs led or supported by trained volunteer Staff
3	Increase number of youth serving as Foundation trustees who indicate a positive experience
4	increase number of Take Charge/ReCharge participants are satisfied with the process used as a means meeting community planning needs
5	Increase number of communities establishing or expanding community tree program
6	increase in number of farm and rural residents with disabilities successfully served (ie case is closed) which is defined as having increased satisfaction with actual or potential employment and maintained or increased income
7	Increase number of 4-H club members who participate as pages in state level government, as a result of their 4-H experiences.
8	Increase in number of TOEC participants who report increased skills in leadership and decision making.
9	Increase number of 4-H staff self-reporting an increase in their ability to work with youth and adults to implement 4-H lifeskill development opportunities
10	Number of Migrant Education eligible students enrolled
11	Increase the number of committee members implementing or enhancing broad-based decision-making skills
12	Increase the number of program participants serving as leaders on Committees
13	Increase the number of schools that offer financial literacy education
14	Increase the number of volunteers self reporting an increase in their ability to implement a 4-H lifeskill development for youth
15	Increase the number of youth who set and reach goals identified at the beginning of the 4-H year
16	Increase the number of clubs doing at least 6 hours of community service
17	Youth have greater opportunities to access and learn financial planning skills
18	increase in number of youth reached with positive youth development programming self reporting an increase in mastery for targeted life skills, including: Decision making; wise use of resources; communication; accepting differences; leadership; useful/marketable skills; healthy lifestyle choices; and/or self-responsibility
19	Increase in number of youths involved in Urban Community Forestry
20	Increase number of clubs with SET related projects
21	Number of individuals (youth and volunteers) increasing knowledge and/or skills in content and careers (across subject areas ranging from animal science to environmental science to technology)
22	Increase the number of apprentices who achieve preset professional development goals within 3 years
23	Increase the number of apprentices who plan and implement a program evaluation.
24	Increase the number of apprentices who report the results of their program evaluation.
25	Number of individuals applying science process skills, including incorporation of science learning in community service, enrollment in SET-related post-secondary education, and/or entrepreneurship/career success
26	Number of individuals demonstrating improved behavior in science learning, such as effective participation in school classes, independent study, career exploration, or volunteer experiences
27	increase the number of participants who self report increase of skills in leadership and decision making.
28	increasing number of elected/appointed village, town or city officials that use information gained at TOEC in leadership and decision making
29	Increase the number of parents understanding family transition through parentage, divorce or separation who understand the impact of these changes on their children.
30	Number of dollars of in-kind and cash contributions in support of programming
31	Number of participants report using skills learned in community setting

Outcome #1

1. Outcome Target

85% of Certificate of Eligibility reviewed by the Dept. of Education will be 100% accurate and reflect eligible migrant students

2. Outcome Type : Change in Action Outcome Measure

2010 :255 2011 : 255 2012 : 255 2013 :255 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development

Outcome #2

1. Outcome Target

Increase number of programs led or supported by trained volunteer Staff

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :20 2011 : 20 2012 : 20 2013 :20 2014 : 20

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #3

1. Outcome Target

Increase number of youth serving as Foundation trustees who indicate a positive experience

2. Outcome Type : Change in Action Outcome Measure

2010 :30 2011 : 30 2012 : 30 2013 :30 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #4

1. Outcome Target

increase number of Take Charge/ReCharge participants are satisfied with the process used as a means meeting community planning needs

2. Outcome Type : Change in Action Outcome Measure

2010 :54 2011 : 54 2012 : 54 2013 :54 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

Outcome #5

1. Outcome Target

Increase number of communities establishing or expanding community tree program

2. Outcome Type : Change in Action Outcome Measure

2010 :10 2011 : 10 2012 : 10 2013 :10 2014 : 10

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 124 - Urban Forestry

Outcome #6

1. Outcome Target

increase in number of farm and rural residents with disabilities successfully served (ie case is closed) which is defined as having increased satisfaction with actual or potential employment and maintained or increased income

2. Outcome Type : Change in Action Outcome Measure

2010 :55 2011 : 55 2012 : 55 2013 :55 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 723 - Hazards to Human Health and Safety
- 802 - Human Development and Family Well-Being
- 805 - Community Institutions, Health, and Social Services

Outcome #7

1. Outcome Target

Increase number of 4-H club members who participate as pages in state level government, as a result of their 4-H experiences.

2. Outcome Type : Change in Action Outcome Measure

2010 :3 2011 : 5 2012 : 5 2013 :5 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #8

1. Outcome Target

Increase in number of TOEC participants who report increased skills in leadership and decision making.

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :400 **2011** : 400 **2012** : 400 **2013** :400 **2014** : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services
- 903 - Communication, Education, and Information Delivery

Outcome #9

1. Outcome Target

Increase number of 4-H staff self-reporting an increase in their ability to work with youth and adults to implement 4-H lifeskill development opportunities

2. Outcome Type : Change in Action Outcome Measure

2010 :11 **2011** : 11 **2012** : 11 **2013** :11 **2014** : 13

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #10

1. Outcome Target

Number of Migrant Education eligible students enrolled

2. Outcome Type : Change in Action Outcome Measure

2010 :150 **2011** : 150 **2012** : 150 **2013** :150 **2014** : 150

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development

Outcome #11

1. Outcome Target

Increase the number of committee members implementing or enhancing broad-based decision-making skills

2. Outcome Type : Change in Action Outcome Measure

2010 :27 **2011** : 27 **2012** : 27 **2013** :27 **2014** : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

- 903 - Communication, Education, and Information Delivery

Outcome #12

1. Outcome Target

Increase the number of program participants serving as leaders on Committees

2. Outcome Type : Change in Action Outcome Measure

2010 :2 2011 : 2 2012 : 2 2013 :2 2014 : 2

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

Outcome #13

1. Outcome Target

Increase the number of schools that offer financial literacy education

2. Outcome Type : Change in Action Outcome Measure

2010 :25 2011 : 25 2012 : 25 2013 :25 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 805 - Community Institutions, Health, and Social Services
- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

Outcome #14

1. Outcome Target

Increase the number of volunteers self reporting an increase in their ability to implement a 4-H lifeskill development for youth

2. Outcome Type : Change in Action Outcome Measure

2010 :540 2011 : 540 2012 : 540 2013 :540 2014 : 540

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #15

1. Outcome Target

Increase the number of youth who set and reach goals identified at the beginning of the 4-H year

2. Outcome Type : Change in Action Outcome Measure

2010 :900 **2011 :** 900 **2012 :** 900 **2013 :**900 **2014 :** 900

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #16

1. Outcome Target

Increase the number of clubs doing at least 6 hours of community service

2. Outcome Type : Change in Action Outcome Measure

2010 :125 **2011 :** 125 **2012 :** 125 **2013 :**125 **2014 :** 125

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #17

1. Outcome Target

Youth have greater opportunities to access and learn financial planning skills

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :1000 **2011 :** 1000 **2012 :** 1000 **2013 :**1000 **2014 :** 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 806 - Youth Development

Outcome #18

1. Outcome Target

increase in number of youth reached with positive youth development programming self reporting an increase in mastery for targeted life skills, including: Decision making; wise use of resources; communication; accepting differences; leadership; useful/marketable skills; healthy lifestyle choices; and/or self-responsibility

2. Outcome Type : Change in Action Outcome Measure

2010 :3800 **2011 :** 3800 **2012 :** 3800 **2013 :**3800 **2014 :** 3800

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #19

1. Outcome Target

Increase in number of youths involved in Urban Community Forestry

2. Outcome Type : Change in Action Outcome Measure

2010 :10 2011 : 10 2012 : 10 2013 :10 2014 : 10

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 124 - Urban Forestry
- 605 - Natural Resource and Environmental Economics
- 806 - Youth Development

Outcome #20

1. Outcome Target

Increase number of clubs with SET related projects

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :56 2011 : 56 2012 : 56 2013 :56 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #21

1. Outcome Target

Number of individuals (youth and volunteers) increasing knowledge and/or skills in content and careers (across subject areas ranging from animal science to environmental science to technology)

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :2400 2011 : 2400 2012 : 2400 2013 :2400 2014 : 2400

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #22

1. Outcome Target

Increase the number of apprentices who achieve preset professional development goals within 3 years

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :4 2011 : 1 2012 : 0 2013 :0 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

Outcome #23

1. Outcome Target

Increase the number of apprentices who plan and implement a program evaluation.

2. Outcome Type : Change in Action Outcome Measure

2010 :2 2011 : 0 2012 : 0 2013 :0 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

Outcome #24

1. Outcome Target

Increase the number of apprentices who report the results of their program evaluation.

2. Outcome Type : Change in Action Outcome Measure

2010 :2 2011 : 0 2012 : 0 2013 :0 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

Outcome #25

1. Outcome Target

Number of individuals applying science process skills, including incorporation of science learning in community service, enrollment in SET-related post-secondary education, and/or entrepreneurship/career success

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :2880 2011 : 2880 2012 : 2880 2013 :2880 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #26

1. Outcome Target

Number of individuals demonstrating improved behavior in science learning, such as effective participation in school classes, independent study, career exploration, or volunteer experiences

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :2880 **2011 :** 2880 **2012 :** 2880 **2013 :**2880 **2014 :** 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #27

1. Outcome Target

increase the number of participants who self report increase of skills in leadership and decision making.

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :200 **2011 :** 200 **2012 :** 200 **2013 :**200 **2014 :** 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #28

1. Outcome Target

increasing number of elected/appointed village, town or city officials that use information gained at TOEC in leadership and decision making

2. Outcome Type : Change in Action Outcome Measure

2010 :5 **2011 :** 5 **2012 :** 5 **2013 :**5 **2014 :** 5

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

Outcome #29

1. Outcome Target

Increase the number of parents understanding family transition through parentage, divorce or separation who understand the impact of these changes on their children.

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :2000 **2011 :** 2000 **2012 :** 2000 **2013 :**2000 **2014 :** 2000

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

Outcome #30

1. Outcome Target

Number of dollars of in-kind and cash contributions in support of programming

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :1000 **2011 :** 2500 **2012 :** 3500 **2013 :**4000 **2014 :** 4500

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 806 - Youth Development

Outcome #31

1. Outcome Target

Number of participants report using skills learned in community setting

2. Outcome Type : Change in Action Outcome Measure

2010 :750 **2011 :** 750 **2012 :** 750 **2013 :**750 **2014 :** 750

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 124 - Urban Forestry
- 608 - Community Resource Planning and Development
- 806 - Youth Development
- 903 - Communication, Education, and Information Delivery

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Programatic Challenges
- Appropriations changes
- Competing Public priorities
- Economy
- Public Policy changes

Description

•Transportation is often an issue for rural youth to participate in out of school hours programming •Apathy is learned from community environment •Transportation, time off from work for medical appointments, minimal to no services offered in rural areas, and lack of health insurance are some of the many barriers to employment that individuals with disabilities face every day •Lack of expertise and experience in New England by public and private agencies to make site visits and recommendations of accommodations to continue employment of farmers with disabilities, represents major barriers for farmers in achieving vocational goals •Youth financial literacy is not a required curriculum in Vermont public schools

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

1. Evaluation Studies Planned

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

Description

Evaluation Studies Planned per outcome indicator:

- increased knowledge of forest ecosystems and initiation of management opportunities related to small acreage woodlands: End of session evaluation and follow-up mailed evaluation in six months.
85% of Certificate of Eligibility reviewed by the Dept. of Education will be 100% accurate and reflect eligible migrant students: Program review by Dept. of Education
Increase in number of MOMS participants who report increased skills in leadership and decision making.: Post conference evaluations
Increase in number of TOEC participants who report increased skills in leadership and decision making.: Post conference evaluations
Increase number of 4-H club members who participate as pages in state level government, as a result of their 4-H experiences.: Record books
Increase number of 4-H staff self-reporting an increase in their ability to work with youth and adults to implement 4-H lifeskill development opportunities.: interviews and survey
Increase student enrollment in the Vermont Migrant Education Program: Annual review of total student enrollment June 30th.
Increase the number of committee members implementing or enhancing broad-based decision-making skills.: Interviews with program committee members will take place at the end of the project (1 year)
Increase the number of hours contributed by trained adult volunteers Site Staff: Site records keep for Annual reporting of this indicator
Increase the number of program participants serving as leaders on Committees: Interviews with program committee members will take place at the end of the project (1 year) and reported by William McMaster at the end of the program year
Increase the number of programs led or supported by trained volunteers Site Staff: Site record keep for Annual reporting of this indicator
Increase the number of schools that offer financial literacy education.: Collecting data with the National Foundation for Financial Education (NEFE)
Increase the number of volunteers self reporting an increase in their ability to implement a 4-H lifeskill development opportunity for youth: End of event surveys will be used to collect feedback in ability increase or decrease
Increase the number of youth serving as Foundation trustees indicating a positive experience: Interviews and record books
Increase the number of youth who set and reach goals identified at the beginning of the 4-H year: Record books or recognition application.
Increase the number of 4-H club youth doing at least 6 hours of community service: Record books and club reports
Trainers self report increased confidence and efficacy in setting and achieving personal goals for health and financial security.: Pre-test and post test during course

2. Data Collection Methods

- Unstructured
- Sampling
- Structured
- Portfolio Reviews
- Observation
- Journals
- Other (record books, recognition applic)

Description

{NO DATA ENTERED}

V(A). Planned Program (Summary)

Program #2

1. Name of the Planned Program

Health

2. Brief summary about Planned Program

The subject of health covers a myriad of topics from food and nutrition, physical activity, mental and emotional wellbeing, to interpersonal relationships, and social skills and responsibility. While all of these are valid areas for research and outreach, in Vermont we have chosen to focus our programming efforts around nutrition, obesity prevention, food safety, and health management. In 2010 staffing changes are occurring that have influenced 2010 outcome targets especially in the food safety area.

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
501	New and Improved Food Processing Technologies	0%		1%	
502	New and Improved Food Products	0%		1%	
503	Quality Maintenance in Storing and Marketing Food Products	0%		3%	
511	New and Improved Non-Food Products and Processes	0%		2%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%		1%	
703	Nutrition Education and Behavior	62%		46%	
704	Nutrition and Hunger in the Population	0%		39%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.	2%		1%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins	6%		1%	
802	Human Development and Family Well-Being	0%		4%	
806	Youth Development	30%		0%	
903	Communication, Education, and Information Delivery	0%		1%	
	Total	100%		100%	

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

1. Situation and priorities

Preventing or managing chronic diseases can lower health care costs. Most chronic diseases can be prevented through better lifestyle choices. Individuals practicing positive lifestyle changes will feel better about themselves, their families, and their communities and to improve the quality of lives of Vermonters.

Overweight and sedentary lifestyles lead to or exacerbate many chronic diseases including cardiovascular disease, hypertension, diabetes, asthma, cancer, liver disease, and osteoporosis.¹ The number of Vermont adults reporting chronic conditions increases with age; in a recent survey, 88 percent of those age 65 and older reported having one or more chronic conditions and 20 percent reported having four or more. One out of four Vermonters is believed to have diabetes or pre-diabetes. Many cases of diabetes remain undiagnosed. Type 2 diabetes is increasing considerably in children and adolescents. Currently 56 percent of Vermont adults are overweight or obese with an increase in the rate of obesity among Vermont adults of 77 percent from 1990 to 2002. The prevalence of obesity among youth is high as well with 24 percent of Vermont students in grades 8 - 12 overweight or at risk of becoming overweight as measured by age and gender specific body mass index. Overweight among young children is increasing at an alarming rate, more than doubling in the last 20 years. Currently 29 percent of low-income children between two and five years of age in Vermont who are part of the Women Infants and Children (WIC) program are overweight or at risk of becoming overweight. By being overweight, children are at risk for chronic conditions at an earlier age.

Lifestyle changes that include more healthful eating (encourage consumption of whole grains, vegetables, and fruits - especially those locally grown; portion control, fewer sweetened beverages), practicing good food safety skills, and increasing physical activity while reducing sedentary time can have a positive influence on reducing and managing chronic conditions to increase their chances for a longer life.

Poverty, hunger, and food insecurity are all factors that contribute to poor health and poor nutrition. Limited resource individuals and families, faced with the loss of jobs, lack of transportation, less affordable housing, and rising fuel and food costs, may be forced to choose the purchase of essentials like heat and electricity over food. Often times it is the quality of food that is sacrificed in an effort to make ends meet, and caretakers often resort to buying calorie rich, nutrient poor foods because they are less expensive. This pattern of eating exacerbates the obesity epidemic, denies children optimal growth, and has an overall negative impact on the physical, emotional, and financial health of our communities.

Hunger and food insecurity are real and growing concerns in Vermont. In 2007, approximately 71,000 Vermonters, 19,000 of which were children, had a gross annual income at or below 100% of the federal poverty level. The same year an additional 109,000 Vermonters had a gross annual income between 100-199% of the federal poverty level. These two subgroups combined represent the approximately 30% of our population who are at risk for hunger and food insecurity and the detrimental health effects associated with these conditions. Preliminary data indicates that 61,267 Vermonters (30,194 households) received an average of \$200 per month in benefits from the Supplemental Nutrition Assistance Program: 3SquaresVT in November 2008, an increase of 13.9% over the previous year. Even with increasing eligibility and participation, it is estimated that only 68% of eligible Vermonters receive these benefits.

According to studies conducted by USDA, FDA and the CDC, consumer food safety practices have improved since 1998. Although the self-reported use of some safe handling practices has increased, many consumers report in surveys and focus groups not following some recommended safe handling practices, such as using a food thermometer, safely handling leftovers, safely defrosting meat and poultry, and immediately discarding food that may be unsafe. Food thermometer use has increased since 1998, but additional improvements are needed. Many consumers do not use a food thermometer.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Preventing or managing chronic diseases can lower health care costs. Most chronic diseases can be prevented through better lifestyle choices. Individuals practicing positive lifestyle changes will feel better about themselves, their families, and their communities and to improve the quality of lives of Vermonters.

Food borne illness can compromise an individual's health. Consumers can lower the risk of foodborne illness by practicing food safety skills and safe food preservation practices. Increasingly, foodborne illness outbreaks are being traced to fresh produce. As harmful microorganisms are part of the gardening environment, Home gardens need to follow good agricultural practices to reduce the risk of contamination.

Vermont School Food Service operations vary considerably in size and sophistication. Production methods vary from "conventional" where ingredients are purchased fresh and products are made from scratch to "assembly" where products are purchased already prepared. The physical plants range from full service commercial kitchens to very small kitchens that might lack commercial dishwashers, hand washing sinks, adequate storage areas, or commercial ovens. The educational level of staff ranges from college level to less than grade 8. Turnover is high amongst employees

2. Ultimate goal(s) of this Program

The goals are outlined in our outcomes. Below is the condition level and associated action level outcomes.

(Condition)

Improve individual and family health.

(Action)

- Individuals will choose healthful eating practices and/or physical activity
- Increase production and/or access to safe, nutritious
- Food safety 'best practices' are implemented by food service workers

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
2010	2.4	0.0	2.0	0.0
2011	2.4	0.0	2.0	0.0
2012	2.4	0.0	2.0	0.0
2013	2.4	0.0	0.0	0.0
2014	2.4	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Due to retirement and position reductions shifts in programming are expected but not determined at this time for 2010 and beyond for Extension, AES projects listed are determined for 2010.

ull;4-H Positive Youth Development Program: Purpose: Help youth acquire Life Skills in the following areas: Decision Making; Critical Thinking; Problem-Solving; Communication; Goal-Setting; and Skills for Everyday Living

to succeed as adults.

Delivery Methods: 6-8 sequential learning hours using experiential learning techniques for in-

school, afterschool, or out-of-school settings.

Audience: Youth, age 5-19

ull;Diabetes Education: Dining with Diabetes (DWD) This class, designed for diabetics or those preparing food for diabetics, provides practical nutrition information and skills development on how to prepare healthy foods.

Delivery methods: four-part series of classes

- Community Farm Partners: To enhance the amount of locally grown produce that is consumed by Vermonters with limited resources and sold by small scale Vermont producers.

- EFNEP(Expanded Food and Nutrition Education Program): has been removed from our plan here because it is not supported by federal 3b&c dollars.

- Food Safety and Sanitation Certification Program: Food safety and sanitation course targeted at institutional food service managers and workers with the goal to increase knowledge of food safety and improve food handling practices in school foodservice operations. This course is a prerequisite for Hazard Analysis Critical Control Point (HACCP) program implementation.

Delivery methods: Ten hour course with certification exam.

- Food, Culture, and Reading (FCR): A train-the-trainer session for volunteers/teachers to implement the 6 lesson curriculum for pre-kindergarten through grade 2.

Delivery methods: 1 3 hour class.

- Growing Connections: A program for youth that teaches nutrition, food safety, and food security issues through gardening.

Delivery methods: group workshops, individual instruction, various media, demonstrations, experiential learning.

- GAP: Home owners good agricultural practices

- Hazard Analysis Critical Control Point (HACCP): Training and Implementation Pilot, for Vermont School Food Service, statewide: Determine "best practices" and implementation strategies for successful HACCP programs used in school foodservice operations.

Delivery methods: Course, consultation.

- Healthy Eating: Nutrition classes designed for a wide range of people, with an emphasis on national Dietary Guidelines. Participants learn the latest information about how to choose a healthy diet, practice food safety and incorporate physical activity into their day.

Delivery methods: Classes, ranging from one to six sessions.

- Restaurant Food Labeling :To test the effect of labeling food (with nutrient analysis) in a dining hall on the choices of consumers (in this case, students)

•Senior Farm Share Nutrition : Nutrition education for low-income Senior Farm Share participants aimed at increasing their consumption of local, fresh produce by enhancing participants skills to prepare fresh fruits and vegetables and gain nutritional knowledge based on the Dietary Guidelines.

Delivey methods: Single or multi-session workshop.

•Food Safety and Sanitation Certification: Food Safety and Sanitation Certification Program - A ten-hour food safety and sanitation course targeted to institutional food service managers and workers with the goal to increase knowledge of food safety and improve food handling practices in school foodservice operations. This course is a prerequisite for Hazard Analysis Critical Control Point (HACCP) program implementation.

AES efforts:

ull;Internet based and telecommunication methods for weight control

- Development and evaluation of web-based instructional material for college-level teaching and delivery of such for nutritional education/management

•Nutritional management: increasing fruit/vegetable consumption and enhancing understanding of consumer food choices

- Childhood nutrition and obesity control research

- Detection and elimination of Listeria monocytogenes, E. coli and other pathogens in dairy products including raw milk cheeses

- Production methods to eliminate pathogen risk in raw milk cheeses

- Elimination of lactate crystals and other flaws from cheese production

- Elimination of pathogens in food production systems

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"> ● Other 1 (Train the Trainer) ● Workshop ● Demonstrations ● One-on-One Intervention 	<ul style="list-style-type: none"> ● TV Media Programs ● Other 1 (radio - educational) ● Newsletters ● Other 2 (professional pubs) ● Web sites

3. Description of targeted audience

- 4-H: Adult Volunteers

- 4-H: Camp Board Directors

- 4-H: Youth Volunteers

- Adults

- Age 25 - 60 Adult
- Age 46 - 65 Adult
- Age 60 - Senior
- Community leaders and citizens
- Extension: Faculty/Staff
- Public: Adult Caregivers
- Public: Childcare Workers
- Public: Daycare Providers
- Public: Families
- Public: Families with Limited Resources
- Public: General
- Public: Nonprofit Organizations
- Public: People with Limited Resources
- Train-the-Trainer recipients:adults
- 4-H Youth
- Youth

V(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	600	0	100	0
2011	600	0	100	0
2012	600	0	100	0
2013	600	0	100	0
2014	600	0	100	0

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

Expected Patent Applications

2010 :3 2011 :3 2012 :3 2013 :3 2014 :3

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	5	1	6
2011	5	1	6
2012	5	1	6
2013	5	1	6
2014	5	1	6

V(H). State Defined Outputs

1. Output Target

- Class/course

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

- Consultations

2010 :50 2011 :50 2012 :50 2013 :50 2014 :50

- Consumer Publication

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

- Educational/evaluation instrument

2010 :1 2011 :1 2012 :1 2013 :1 2014 :1

- Field day/fair

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

- Field site visit

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

- Funding request

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

- Presentations

2010 :0 2011 :0 2012 :0 2013 :0 2014 :0

- Publication - curriculum

2010 :1 2011 :1 2012 :1 2013 :1 2014 :1

- Publication - newsprint article

2010 :15 2011 :15 2012 :15 2013 :15 2014 :15

- Radio Spots/program (educational)

2010 :2 2011 :2 2012 :2 2013 :2 2014 :0

- Train the Trainer

2010 :3 2011 :3 2012 :3 2013 :3 2014 :3

- Workshop - series

2010 :2 2011 :2 2012 :2 2013 :2 2014 :2

- Workshop - single session

2010 :15 2011 :15 2012 :15 2013 :15 2014 :15

- Conference

2010 :1 2011 :1 2012 :1 2013 :1 2014 :1

- Web Page

2010 :1 2011 :0 2012 :0 2013 :0 2014 :0

V(I). State Defined Outcome

O. No	Outcome Name
1	Increase the number of participants who increase the quality and/or quantity of fruits and vegetables
2	Increase in number of people who expand or change their preferences for or attitudes about healthy foods
3	Increase in number of people who improve food planning and shopping behaviors.
4	Increase in number of food managers certified in food safety and sanitation (Action)
5	Increase in number of school food service workers using food safety 'best practices' when receiving, storing, handling, preparing and serving food
6	Increase in number of schools implementing Hazard Analysis Critical Control Point based food safety programs
7	Increase in number of people who show an improvement in healthful eating practices.
8	Increase the number of people who show improvement in food safety and preservation practices.
9	A greater variety of produce available at home.
10	An increased preference for at least one fruit or vegetable
11	increase in number of food service workers using food safety 'best practices' when receiving, storing, handling, preparing and serving food
12	increase in number of food managers certified in food safety and sanitation
13	Number of people who develop a plan to improve dietary practices
14	Number of people who show improvement in food safety and preservation practices
15	Number of youth or adults who self report an increase in mastery of the life skills Healthy Lifestyle Choices and Decision Making

Outcome #1

1. Outcome Target

Increase the number of participants who increase the quality and/or quantity of fruits and vegetables

2. Outcome Type : Change in Action Outcome Measure

2010 :0 2011 : 560 2012 : 560 2013 :560 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

Outcome #2

1. Outcome Target

Increase in number of people who expand or change their preferences for or attitudes about healthy foods

2. Outcome Type : Change in Action Outcome Measure

2010 :0 2011 : 50 2012 : 50 2013 :50 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

Outcome #3

1. Outcome Target

Increase in number of people who improve food planning and shopping behaviors.

2. Outcome Type : Change in Action Outcome Measure

2010 :0 2011 : 57 2012 : 57 2013 :57 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

Outcome #4

1. Outcome Target

Increase in number of food managers certified in food safety and sanitation (Action)

2. Outcome Type : Change in Action Outcome Measure

2010 :0 **2011 : 75** **2012 : 75** **2013 :75** **2014 : 0**

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #5

1. Outcome Target

Increase in number of school food service workers using food safety 'best practices' when receiving, storing, handling, preparing and serving food

2. Outcome Type : Change in Action Outcome Measure

2010 :0 **2011 : 50** **2012 : 50** **2013 :50** **2014 : 0**

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #6

1. Outcome Target

Increase in number of schools implementing Hazard Analysis Critical Control Point based food safety programs

2. Outcome Type : Change in Action Outcome Measure

2010 :0 **2011 : 2** **2012 : 2** **2013 :2** **2014 : 0**

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #7

1. Outcome Target

Increase in number of people who show an improvement in healthful eating practices.

2. Outcome Type : Change in Action Outcome Measure

2010 :55 **2011 : 55** **2012 : 55** **2013 :55** **2014 : 55**

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

- 704 - Nutrition and Hunger in the Population

Outcome #8

1. Outcome Target

Increase the number of people who show improvement in food safety and preservation practices.

2. Outcome Type : Change in Action Outcome Measure

2010 :75 2011 : 75 2012 : 75 2013 :75 2014 : 75

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population
- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #9

1. Outcome Target

A greater variety of produce available at home.

2. Outcome Type : Change in Action Outcome Measure

2010 :0 2011 : 450 2012 : 450 2013 :450 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

Outcome #10

1. Outcome Target

An increased preference for at least one fruit or vegetable

2. Outcome Type : Change in Action Outcome Measure

2010 :0 2011 : 400 2012 : 400 2013 :400 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

Outcome #11

1. Outcome Target

increase in number of food service workers using food safety 'best practices' when receiving, storing, handling, preparing and serving food

2. Outcome Type : Change in Action Outcome Measure

2010 :0 **2011 :** 50 **2012 :** 50 **2013 :**50 **2014 :** 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #12

1. Outcome Target

increase in number of food managers certified in food safety and sanitation

2. Outcome Type : Change in Action Outcome Measure

2010 :0 **2011 :** 50 **2012 :** 50 **2013 :**50 **2014 :** 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #13

1. Outcome Target

Number of people who develop a plan to improve dietary practices

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :75 **2011 :** 75 **2012 :** 75 **2013 :**75 **2014 :** 75

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

Outcome #14

1. Outcome Target

Number of people who show improvement in food safety and preservation practices

2. Outcome Type : Change in Action Outcome Measure

2010 :75 **2011 :** 75 **2012 :** 75 **2013 :**75 **2014 :** 75

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

Outcome #15

1. Outcome Target

Number of youth or adults who self report an increase in mastery of the life skills Healthy Lifestyle Choices and Decision

Making

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :260 **2011 :** 260 **2012 :** 260 **2013 :**260 **2014 :** 260

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Overweight and sedentary lifestyles lead to or exacerbate many chronic diseases including cardiovascular disease, hypertension, diabetes, asthma, cancer, liver disease, and osteoporosis.¹ The number of Vermont adults reporting chronic conditions increases with age; in a recent survey, 88 percent of those age 65 and older reported having one or more chronic conditions and 20 percent reported having four or more. One out of four Vermonters is believed to have diabetes or pre-diabetes. Many cases of diabetes remain undiagnosed. Type 2 diabetes is increasing considerably in children and adolescents. Currently 56 percent of Vermont adults are overweight or obese with an increase in the rate of obesity among Vermont adults of 77 percent from 1990 to 2002. The prevalence of obesity among youth is high as well with 24 percent of Vermont students in grades 8 - 12 overweight or at risk of becoming overweight as measured by age and gender specific body mass index. Overweight among young children is increasing at an alarming rate, more than doubling in the last 20 years. Currently 29 percent of low-income children between two and five years of age in Vermont who are part of the Women Infants and Children (WIC) program are overweight or at risk of becoming overweight. By being overweight, children are at risk for chronic conditions at an earlier age.

Poverty is the number one predictor of hunger and food insecurity. Recent data indicates that approximately 71,000 Vermonters (12% of the total population), of which approximately 19,000 are children live in poverty. An additional 109,000 (18% of the total population) have a gross annual income between 100-199% of the federal poverty level and are considered low-income. Lack of affordable housing, jobs, and transportation coupled with the rising costs of food and fuel may force many Vermont families to further sacrifice the quantity or quality of foods they eat in exchange for other necessities.

Although food safety awareness and practices have improved since 1990, many consumers still report(in surveys and focus groups conducted (by USDA-CSREES, CDC, FDA) not following some recommended safe handling practices, such as using a food thermometer, safely handling leftovers, safely defrosting meat and poultry, and immediately discarding food that may be unsafe. Food thermometer use has increased since 1998, but additional improvements are needed. Many consumers do not use a food thermometer.

Consumers Vermont School Food Service operations vary considerably in size and sophistication. Production methods vary from "conventional" where ingredients are purchased fresh and products are made from scratch to "assembly" where products are purchased already prepared. The physical plants range from full service commercial kitchens to very small kitchens that might lack commercial dishwashers, hand washing sinks, adequate storage areas, or commercial ovens. The educational level of staff ranges from college level to less than grade 8. Turnover is high amongst employees.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Time series (multiple points before and after program)

Description

{NO DATA ENTERED}

2. Data Collection Methods

- Sampling
- Tests
- Observation
- Other (records)
- Structured

Description

{NO DATA ENTERED}

V(A). Planned Program (Summary)

Program #3

1. Name of the Planned Program

Agriculture and Environmental Sustainability

2. Brief summary about Planned Program

Agriculture and Environmental Sustainability is a broad programmatic area which addresses various problems focusing on agricultural profitability; marketing and tourism opportunities; knowledge and skills to raise healthy animals; biosecurity issues; energy costs and stewardship of the environment. Identified by Extension and AES faculty, with stakeholder input, as basic to our research and outreach, it is the largest program area being addressed. In 2010 staffing changes are occurring that will influence 2010 program efforts.

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
102	Soil, Plant, Water, Nutrient Relationships	1%		4%	
104	Protect Soil from Harmful Effects of Natural Elements	2%		2%	
112	Watershed Protection and Management	15%		10%	
133	Pollution Prevention and Mitigation	7%		6%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		2%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		1%	
204	Plant Product Quality and Utility (Preharvest)	0%		4%	
205	Plant Management Systems	3%		2%	
206	Basic Plant Biology	0%		2%	
216	Integrated Pest Management Systems	8%		8%	
301	Reproductive Performance of Animals	0%		2%	
302	Nutrient Utilization in Animals	0%		2%	
305	Animal Physiological Processes	0%		2%	
307	Animal Management Systems	1%		7%	
315	Animal Welfare/Well-Being and Protection	3%		3%	

601	Economics of Agricultural Production and Farm Management	33%		18%	
602	Business Management, Finance, and Taxation	16%		14%	
605	Natural Resource and Environmental Economics	5%		3%	
723	Hazards to Human Health and Safety	6%		4%	
801	Individual and Family Resource Management	0%		4%	
	Total	100%		100%	

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

1. Situation and priorities

Situation and priorities from each of the Parent plans (problem driven logic models) as follows:

From Communities, business including agricultural and forest landowners and operators, and homeowners protect the environment:

Agriculture in Vermont is becoming more highly diversified and represents a critical component of this state's revenue. The fundamental character of Vermont is reflected in its agricultural working landscape which symbolizes a way of life strongly cherished by its citizens. The stakeholders of Vermont's agriculture encompass all the state's citizens, including the general public and a diverse group of growers, farmers, landscapers and practitioners involved with working on or for the land. Extension programs and personnel address critical stakeholder issues by disseminating essential current science-based information to a broad range of audiences to increase their knowledge and skills and encourage implementation of cost-effective, environmentally sound sustainable agricultural practices.

Improved knowledge and skills required to ensure sustainability of farms, landscapes and communities include;

- Pest management practices including pest identification and pest management using a variety of tools employing least toxic practices (IPM).
- Safe and judicious use of pesticides
- Urban Watershed & Water Quality Education
- Nutrient Management Program
- Invasive pest identification and awareness
- Organic management concepts, strategies and practices

From Economic sustainability of farms, forests, and other enterprises:

Both the economy and the environment consistently top the list of Vermonters' concerns, according to the annual Vermonter Poll (2008). These findings correspond with a recent survey undertaken as part of the Council on the Future of Vermont, a project of the Vermont Council on Rural Development with the goal of promoting public dialogue on values, challenges, opportunities, priorities and visions for Vermont. Survey findings include rankings of the top seven highest rated values and challenges (Center for

Rural Studies, August 2008, http://crs.uvm.edu/survey/futureofvermont/CFV_Summary_Report.pdf). Respondents placed the greatest value overall on "the state's working landscape and heritage." The greatest challenges were "the increasing costs of living, such as transportation, heating and electricity" followed closely by "the health and viability of Vermont farms and the agricultural sector."

The Vermont Sustainable Agriculture Council's 2009 Annual Report and Recommendations (<http://www.uvm.edu/sustainableagriculture/Documents/CouncilReport09.pdf>) focus on two primary areas: strengthening Vermont's local food system and enhancing on-farm energy alternatives. Improved knowledge and skills leading to adoption of new practices can promote economic sustainability of farms, forests, natural-resource based enterprises, and communities. Specific problems that need to be addressed include:

- Lack of adequate business planning by farm and forest land owners threatens their future financial security and business viability.
- Ag producers and other enterprises are not reaching their profit potential through marketing and management practices.
- Lack of production education and research can decrease profitability of enterprises (e.g., organic dairy farms).
- Price and supply of fuel poses economic risk to farmers and rural communities.
- Tax preparers are challenged to maintain competency with tax laws.
- Equine Operators are not aware of or able to take full advantage of agricultural benefits that currently exist in Vermont (e.g. Current Use).

From Insufficient community and youth education, technical assistance and information are constraints to NPS pollution especially in urban areas:

A key value to UVM Extension is dedication to the stewardship of Vermont's natural resources and natural environment.

Knowledge about the condition of our environment including water resources is constantly changing, as are the landscapes in which we live. One result of this trend is the variability of relevant water resource education in Vermont that can create informed citizens prepared to make decisions that benefit watersheds and water quality. Moreover, many science educators do not have the current knowledge, resources or support to integrate appropriate watershed education into their curricula.

The University of Vermont Watershed Alliance (WA) supports environmental education by making hands-on, up-to-date, inquiry-based, scientific watershed and water quality education available to Vermonters including educators, students, and the general public. UVM WA provides equipment, curricula, technical support and human resources for those participating in our programs.

Storm water and NPS pollution. - While advances have been made in methods of treating stormwater pollution, it still remains the fastest growing threat to Vermont's water quality. There are 15 lakes and ponds and 98 state stream and river waters that do not meet Vermont Water Quality Standards (the 2008 303 (d) list). NPS related sources of impairment are storm water, land development and urban runoff related (13), urban/septic associated e. coli (20), and sediment or erosion (24). All of the waterways in heavily developed Chittenden County in northwestern Vermont are impaired by stormwater runoff.

Lake Champlain Sea Grant activities contribute to improved water quality in Vermont waterways and local communities by reducing non-point source pollution through education, public awareness and community action involving residents, municipal governments, and business and institutional landowners in impaired watersheds.

Vermont Natural Resources Council, <http://www.vnrc.org/article/articleview/5641/1/653/> , accessed 2/2/09

State of Vermont 303(d) list of waters. Part A - impaired surface waters in need of TMDL. October 2008

Stormwater and water quality in Chittenden County, Chittenden Co. Regional Planning Commission, March 2002

Troy A., D. Wang and D. Capen. 2007. Updating the Lake Champlain Basin Land Use Data to Improve Prediction of Phosphorus Loading. LCBP Technical Report #54. 121p.

From Understanding of, and preparedness for, natural, accidental and intentional disasters:

Situation:

The lack of understanding of, and preparedness for, natural, accidental, and intentional disasters –including bio-security issues related to human and animal health and safety, severe storms, floods, drought, fires, pandemic flu, etc.- creates environmental, economic, social and health risks for people, animals, communities and businesses in Vermont. "There is a growing body of scientific literature that addresses the need for disaster mitigation, as experts predict that the United States will continue to experience an increase in the severity, and perhaps number of, critical incidents (Cutter, 2006; IPCC 2007.)

When a community is truly resilient, it should be able to avoid the cascading system failures to help minimize any disaster's disruption to everyday life and the local economy. A resilient community is not only prepared to help prevent or minimize the loss or damage to life, property and the environment, but also it has the ability to quickly return citizens to work, reopen businesses, and restore other essential services needed for a full and swift economic recovery. (source: www.resilientus.org) Extension is likely to be most effective in the area of preparation and mitigation.

2. Scope of the Program

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

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

1. Assumptions made for the Program

From Communities, business including agricultural and forest landowners and operators, and homeowners protect the environment:

- Growers will choose to learn about IPM vs standard pest management practices. Growers want to use pesticides safely, wisely and as a last resort.
- Farmers will choose to learn about soil building vs. standard soil practices
- Schools will have enough time and funding to pursue IPM options.
- Growers want to decrease use of chemical pesticides and believe IPM will help them.
- Growers will invest time and money in IPM and want to learn more about how to use it effectively.
- IPM tactics exist to address the pest management problems in Vermont.

From Economic sustainability of farms, forests, and other enterprises:

- Farmers will choose to learn about soil building vs. standard soil practices
- Differences between low-yielding and high-yielding sap collection systems can often be attributed to education, as the maple producer who may have purchased the necessary equipment often does not understand the steps necessary for its proper installation and maintenance. In addition, the latest research on a variety of topics related to sap collection, may not be known by the producer. Many producers have not yet adopted fuel efficient syrup making technology. Proper education in boiling techniques also can contribute significantly to efficient syrup making. The inability to meet quality standards in maple production is rarely caused by a failure to use new technology or failure to adopt the latest sap collection or boiling methods; instead, it is directly

related to lack of education about producing quality syrup. Most of the equipment necessary for proper grading is relatively inexpensive; however this equipment requires proper knowledge for correct usage. Additionally, there are many practices which can lead to off flavored and these are discouraged only through education.

- The character of Vermont makes an ideal location to raise sheep. There is much land available and with the development of two lamb marketing organizations, there is now a reliable market available in which to sell lamb. Each year, there is a new wave of people that are interested in raising sheep. For the most part, these people have no farming experience.
- Although it has slowed down, there still is a trend and place in Vermont for large dairy farm operations, therefore continuing the need for an annual conference. Environmental regulations are only getting tighter, therefore making it increasingly difficult for all dairy operations. These educational programs will help address this need. There are still approximately 1,200 dairy farms in Vermont. Due to niche marketing, value added products, the organic market, and Vermont's proximity to large markets, there should always be dairy farms in Vermont, therefore justifying the need for producer education. The Dairy Stewardship Alliance project will identify key areas that we need to be addressing in the arena of education for dairy producers.
- Education & research in organics will help farmers improve profitability. Organic dairy farmers will be able to add another enterprise to farm.
- Price of fuel will remain unstable in the future. Price of fuel will continue to pose an economic risk to farmers. Economic advantages of on-farm biodiesel production will increase.
- The rate of adoption of dairy farm practice changes are influenced by farm profitability and personal beliefs in the value of any proposed changes in farm management.
- State and federal tax laws and regulations will continue to change, and that practitioners will continue to need good information that is reasonably-priced.
- Usually farmers start-up with no business plan, sometimes they expand from a hobby, or take-over the family farm, then find themselves needing to borrow money or make a large change and find themselves with no real plan.
- The travel and tourism industry in Vermont is growing rapidly and may soon become the largest industry in Vermont if trends continue. This rapid growth provides both challenges and opportunities for Vermont's working landscape and rural communities.

From Understanding of, and preparedness for, natural, accidental and intentional disasters:

- Many groups, organizations and agencies are addressing the many topics associated with critical incidents/disaster, but these groups are not necessarily working together.
- The general public is confused, and does not have a good grasp of how to be prepared for emergencies and disasters that affect their community.
- Extension is addressing some areas associated with disaster prevention, management and mitigation, but not in a coordinated manner.
- Extension personnel are generally not trained in community resilience; they may not have the necessary knowledge, and/or skills.
- Funding is available, but likely attained through cooperative efforts.
- Some agencies, notably the USDA, have required training. Most others, including UVM Extension and the VT Agency of Ag,

have few people trained in emergency response.

- Fairs and field days provide an ideal environment for transmission of disease from animal to human and animal-to-animal, either directly or indirectly via a human. Humans, particularly youth, can develop life-threatening illness from bacterial contamination.

2. Ultimate goal(s) of this Program

(condition outcomes)

- Improve agricultural and environmental sustainability
- Improve community collaboration to address issues and build community assets.

(Action outcomes)

- Farm and forest landowners/operators implement management practices that comply with environmental water quality laws and/or protect water resources
- Farms address their contribution to surface water pollution through NMP without decreasing profitability
- Homeowners will protect natural resources through improved gardening practices.
- Increase the number of growers, facility managers and home gardeners who implement IPM strategies
- Increase economic sustainability of farms, forests, and other enterprises that contribute to Vermont's working landscape
- Decrease in urban storm water runoff and associated non-point source pollution
- Improve community readiness for, and mitigation of, natural, accidental and intentional disasters.

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
2010	25.0	0.0	10.0	0.0
2011	25.0	0.0	10.0	0.0
2012	25.0	0.0	10.0	0.0
2013	25.0	0.0	10.0	0.0
2014	25.0	0.0	10.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Project listed in bold followed by delivery methods:

- **Beginning Farmers.** Focus groups, learning circles, workshops, mini-courses and publications
- **Ag Business Management.** Conferences, courses, consultations and farm visits.

- **Agricultural safety.** Courses, consultations and farm visits.
- **Apples and Grapes,** consultations, research and field visits.
- Non-dairy livestock** Conferences, workshops, discussion groups, individual consultations, articles, web site.
- Community Preparedness.** Workshops, discussion groups.
- Calf and heifer program.** Workshops, discussion groups.
- Dairy Management.** Conference.
- Equine program.** Annual equine event, publications, workshops.
- Farm and Forest Transfers.** Workshops, consultations, farm visits
- Farm Viability.** Farm visits, consultations.
- Farming Alternatives.** Workshops, consultations, farm visits.
- Forage and Pasture Management Education.** Conference, farm visits, consultations.
- Germ City.** Demonstration.
- Maple Program.** Conference, workshops, newsletter.
- Nutrient Management Program.** Farm visits, consultations.
- Addison County Agriculture Legislative Farm Tour.** Tour.
- Farm Assessments.** Develop assessments.
- P-Reducing Slag Barriers.** Publications, demonstrations.
- Growing by Design.** On-farm research and demonstration.
- Nutrient Management Program.** Training for dairy farmers, consultations.
- On-farm vegetable and biodiesel.** On farm demonstration sites.
- Organic Grain Project.** Demonstrations, data gathering.
- Pest Management Education.** IPM and Pesticide Education and Safety Program (PESP) training.
- Pesticide Education and Safety.** Course, consultations.
- Sheep program.** Hands-on workshop, applied research, newsletter.
- Healthy soil.** Workshops and various media.
- UVM Extension emergency management plan.** Personnel training via workshops, mock disaster drill.

- Vegetable and Berry Growers.** Consultations, farm visits, meetings, various media, presentations, website.
- Vermont New Farmer Network.** Conference, networking, consultations.
- Vermont Pasture Network.** Pasture walks, demonstrations and trials, conference, consultations, various media.
- Vermont Tourism and Recreation.** Research, conference.
- Women’s Agricultural Network.** Newsletters, website, classes, workshops, individual and small group consultations.
- Master Gardener.** Course, train the trainer
- Private/commercial Landowner and Industry Professional Education:** Consultations, media
- Sustainable Forests.** Workshops, newsletter, consultations
- Urban Watershed and Water Quality. Presentations,** demonstrations, media, in-school program
- Emergency Management Plan.** Workshops, mock drill
- UVM Tax School.** conference, tax book
- Watershed & Water Quality Education.** In-school program, curriculum development, presentations

AES efforts.

- Animal Manure Treatment Systems
- Storm and Wastewater Management Systems
- Perturbation of soil ecosystems by anthropomorphic interventions
- Soil nutrient effect on forest ecosystem productivity and lake water quality
- Soil fertility/chemistry/physical problems associated with waste disposal and bioremod faction
- Economics of organic dairy, crop management and alternative energy
- Heifer nutrition, rearing and management
- Dairy nutritional immunology
- Small ruminant production and management systems
- Development of strategies to address applied equine issues

- Biofuels from coconuts and other energy sources
- Identification of genetic traits that make species invasive
- Surveillance and prevention of spread of Asian Longhorned Beetle
- Management of thrips pests in forests and greenhouses
- Identification/control of fungal propagation
- Fungal biological plant protection, collection and management
- Explore microbial pesticides and fungal components as IPM strategies
- Innate immunity, DNA-based vaccines and mastitis prevention
- Hormonal regulation of glucose synthesis and milk production
- Functional genomics and photoperiod effects on hormonal cycles/milk production
- Explore ruminant lipid metabolism
- Impact of global climate change on forest species diversity
- Genetic diversity among new world ferns and geographic distribution
- Cold hardiness of horticultural perennials

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"> ● Education Class ● Other 2 (Presentation/field days) ● Workshop ● Demonstrations ● Group Discussion ● Other 1 (Train the Trainer) ● One-on-One Intervention 	<ul style="list-style-type: none"> ● Newsletters ● TV Media Programs ● Web sites ● Other 1 (Publication- professional/peer)

3. Description of targeted audience

- 4-H: Adult Volunteers
- Adults
- Age 19 - 24 Young Adult

- Age 25 - 60 Adult
- Agriculture/Natural Resources: Watershed Based Organizations
- Agriculture: Beef Producers
- Agriculture: CCA & Crop Consultants
- Agriculture: Crop Producers
- Agriculture: Dairy Producers
- Agriculture: Equine Producers/Owners
- Agriculture: Farm Families
- Agriculture: Farm Managers
- Agriculture: Farmers
- Agriculture: Goat & Sheep Producers
- Agriculture: Greenhouse Ornamental Growers
- Agriculture: Home Gardeners
- Agriculture: Industry Professionals
- Agriculture: Livestock producers
- Agriculture: Maple Industry
- Agriculture: Maple Sugar Producers
- Agriculture: Non-Dairy Producers
- Agriculture: Ornamentals Industry Professionals
- Agriculture: Service Providers
- Agriculture: Small Fruit & Vegetable Growers
- Agriculture: Veterinarians
- Agriculture:Dairy Goat, Meat Goat and Dairy Sheep Producers
- Agriculture:Government Agency Personnel
- Communities: Cities and Towns
- Communities: Educators
- Communities: Local Officials/Leaders

- Communities: Non-Governmental Organizations
- Communities: Schools
- Communities: Town Health Officers
- Community leaders and citizens
- Environmental Professionals: Environmental Managers
- Extension: Faculty/Staff
- Forestry: Woodland Owners
- Public: College Students
- Public: Families
- Public: General
- Public: Homeowners
- Public: Master Gardeners
- Public: Media Outlets
- Public: Small Business Owners/Entrepreneurs
- Train-the-Trainer recipients:adults
- 4-H: Youth
- Age 13 - 18 Youth
- Age 6 - 12 School Age
- Age 8 - 18 Youth
- Public: Age 13-18 (Youth)
- School Grade: 5
- Train-the-Trainer recipients:youth
- Youth

V(G). Planned Program (Outputs)

1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	30000	0	1500	0
2011	30000	0	1500	0
2012	30000	0	1500	0
2013	30000	0	1500	0
2014	30000	0	1500	0

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

Expected Patent Applications

2010 :3 2011 :3 2012 :3 2013 :3 2014 :3

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	5	3	8
2011	5	3	8
2012	5	3	8
2013	5	3	8
2014	5	3	8

V(H). State Defined Outputs

1. Output Target

- Class/course

2010 :8 2011 :8 2012 :8 2013 :8 2014 :10

- Conference

2010 :7 2011 :7 2012 :7 2013 :7 2014 :7

- Consultation

2010 :1100 2011 :1100 2012 :1100 2013 :1100 2014 :1100

- Consumer Publication

2010 :15 2011 :15 2012 :15 2013 :15 2014 :15

- Demonstration

2010 :20 2011 :20 2012 :20 2013 :20 2014 :20

- Discussion group

2010 :5	2011 :5	2012 :5	2013 :5	2014 :5
● Educational/evaluation instrument				
2010 :2	2011 :2	2012 :2	2013 :2	2014 :2
● Electronic Communication/phone				
2010 :500	2011 :500	2012 :500	2013 :500	2014 :500
● Field day/fair				
2010 :2	2011 :2	2012 :2	2013 :2	2014 :4
● Field site visit				
2010 :230	2011 :230	2012 :230	2013 :230	2014 :230
● Funding request				
2010 :2	2011 :2	2012 :2	2013 :2	2014 :3
● Presentation				
2010 :90	2011 :90	2012 :90	2013 :90	2014 :90
● Publication - Peer Reviewed				
2010 :1	2011 :1	2012 :1	2013 :1	2014 :1
● Publication - curriculum				
2010 :2	2011 :2	2012 :2	2013 :2	2014 :1
● Publication - fact sheet				
2010 :30	2011 :30	2012 :30	2013 :30	2014 :30
● Publication - magazine article				
2010 :5	2011 :5	2012 :5	2013 :5	2014 :5
● Publication - manual				
2010 :1	2011 :1	2012 :1	2013 :1	2014 :1
● Publication - newsletter				
2010 :25	2011 :25	2012 :25	2013 :25	2014 :30
● Publication - newsprint article				
2010 :10	2011 :10	2012 :10	2013 :10	2014 :10
● Research project				

2010 :5	2011 :5	2012 :5	2013 :5	2014 :5
● TV segment/ATF				
2010 :3	2011 :3	2012 :3	2013 :3	2014 :3
● Technical Publication				
2010 :20	2011 :20	2012 :20	2013 :20	2014 :20
● Tour(s)				
2010 :2	2011 :2	2012 :2	2013 :2	2014 :2
● Train the Trainer trainings				
2010 :5	2011 :5	2012 :5	2013 :5	2014 :5
● Website development and updates				
2010 :30	2011 :30	2012 :30	2013 :30	2014 :30
● Workshop - series				
2010 :50	2011 :50	2012 :50	2013 :50	2014 :50
● Workshop - single session				
2010 :70	2011 :70	2012 :70	2013 :70	2014 :70

V(I). State Defined Outcome

O. No	Outcome Name
1	Increase the number of farmers who implement at least one cropping practice to improve crop and soil productivity and water quality
2	Increase the number of participants passing the required applicators licensing test
3	Increase the number of forest owners who plan for woodlands in their estates
4	Increase in collaboration with agency and industry personnel to address farm safety
5	Increase in number of program participants who make informed decisions about crop insurance
6	Increase in number of tax school participants stating improved accuracy of tax reporting for their clients
7	Increase in number of tax schools participants understanding federal and state tax laws and requirements
8	Increase in number of farmers that develop a nutrient management plan for their farm
9	Increase the number of farmers who implement at least one change in nutrient management plan practices
10	Increase the number of legislators and key decision makers who increase understanding of current local agricultural issues
11	Decrease in number of beach pilot areas who reduce the number of days of beach closures
12	Increased delivery of organic dairy information to dairy farmers across the nation that is accessible, reliable, credible and up-to-date.
13	Number of retail lawn and garden centers providing information on low input/no phosphorous lawn care options to customers
14	Increase in number of Master Gardener participants earning certification
15	Increase in number of educators demonstrating knowledge of watersheds and new teaching tools and techniques
16	Number of residential households adopting low input/no phosphorus lawn/garden care practices
17	increase in the number of farmers who improve pasture management practices
18	Increase the number of student interns teaching backyard composting
19	Increase in number of equine owners who use information to change behaviors in land and manure management of business practices to improve safety, animal health, and/or profitability of equine businesses and clientele
20	Increase in number of forest owners, managers and users who make better decisions about forests using stumpage data
21	Increase in the number of forest owners saving money through use of written contracts for timber sales
22	Number of enterprises (already using recommended practices)that use Extension consultation to assess/inform business decisions
23	Decrease in number of households using lawn care inputs in designated no-input buffer zones
24	Increase the number of farmers who will make a change by learning how to: grow and produce energy crops and transform into energy products
25	Increase the number of farmers who will produce energy crops and/or implement the use of renewable energy
26	Number of bioengineering for erosion control demonstration sites
27	Number of clientele who have adopted one or more IPM practices that increase environmental sustainability
28	Number of commercial lawn care firms using low input/ no phosphorous lawn care practices
29	Number of enterprises that adopt a recommended practice resulting in increased revenues and/or reduced costs
30	Number of individuals who change their gardening practices to protect natural resources (e.g. water, air, soil)
31	Number of individuals who change their gardening practices to reduce gardening inputs
32	Number of lakeshore residential properties planting buffer strips or maintaining native vegetation as a buffer to decrease erosion and sedimentation
33	Number of lakeshore residents changing residential practices to reduce impact on water quality
34	Number of middle and high school youth demonstrating knowledge of watersheds and their role as watershed stewards
35	Number of municipal officials have an increased understanding of and need for natural resource based planning and stormwater management at the municipal level

36	Number of municipalities integrating natural resource protection and Low Impact Development strategies in town plans and ordinances
37	Number of non-residential properties (business, institutional residential commons) under one or more low input/ no phosphorous lawn care practices
38	Requests for technical assistance for educational watershed stewardship projects or implementation of water quality improvement projects increase due to increased awareness of benefits
39	Number of schools that demonstrate an increase in, or institutionalization of, integrated watershed education into returning educators curriculum
40	Number of service learning high school or undergraduate college students conducting or participating in watershed stewardship projects
41	Number of sites using Low Impact Development practices to decrease stormwater runoff
42	Number of towns/municipalities and watershed organizations conducting outreach activities and participating in outcome oriented water quality education
43	Number of towns/municipalities using one or more bioengineering methods for shoreline stabilization to decrease erosion and sedimentation
44	Number of undergraduate students in the development, planning, and implementation of middle and high school watershed education programs
45	Participants will have gained knowledge on how to grow organic crops (e.g. apples, grains)
46	increase in the number of farmers who implement at least one change as outlined in the water quality protection plan

Outcome #1

1. Outcome Target

Increase the number of farmers who implement at least one cropping practice to improve crop and soil productivity and water quality

2. Outcome Type : Change in Action Outcome Measure

2010 :50 2011 : 50 2012 : 50 2013 :50 2014 : 50

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 112 - Watershed Protection and Management

Outcome #2

1. Outcome Target

Increase the number of participants passing the required applicators licensing test

2. Outcome Type : Change in Action Outcome Measure

2010 :40 2011 : 40 2012 : 40 2013 :40 2014 : 40

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 216 - Integrated Pest Management Systems

Outcome #3

1. Outcome Target

Increase the number of forest owners who plan for woodlands in their estates

2. Outcome Type : Change in Action Outcome Measure

2010 :2000 2011 : 0 2012 : 0 2013 :0 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

Outcome #4

1. Outcome Target

Increase in collaboration with agency and industry personnel to address farm safety

2. Outcome Type : Change in Action Outcome Measure

2010 :10 **2011 :** 10 **2012 :** 10 **2013 :**10 **2014 :** 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 723 - Hazards to Human Health and Safety

Outcome #5

1. Outcome Target

Increase in number of program participants who make informed decisions about crop insurance

2. Outcome Type : Change in Action Outcome Measure

2010 :1700 **2011 :** 1700 **2012 :** 1700 **2013 :**1700 **2014 :** 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 801 - Individual and Family Resource Management

Outcome #6

1. Outcome Target

Increase in number of tax school participants stating improved accuracy of tax reporting for their clients

2. Outcome Type : Change in Action Outcome Measure

2010 :300 **2011 :** 300 **2012 :** 300 **2013 :**300 **2014 :** 300

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation

Outcome #7

1. Outcome Target

Increase in number of tax schools participants understanding federal and state tax laws and requirements

2. Outcome Type : Change in Action Outcome Measure

2010 :350 **2011 :** 350 **2012 :** 350 **2013 :**350 **2014 :** 350

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation

Outcome #8

1. Outcome Target

Increase in number of farmers that develop a nutrient management plan for their farm

2. Outcome Type : Change in Action Outcome Measure

2010 :25 2011 : 25 2012 : 25 2013 :25 2014 : 25

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation

Outcome #9

1. Outcome Target

Increase the number of farmers who implement at least one change in nutrient management plan practices

2. Outcome Type : Change in Action Outcome Measure

2010 :95 2011 : 95 2012 : 95 2013 :96 2014 : 95

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

Outcome #10

1. Outcome Target

Increase the number of legislators and key decision makers who increase understanding of current local agricultural issues

2. Outcome Type : Change in Action Outcome Measure

2010 :10 2011 : 10 2012 : 10 2013 :10 2014 : 10

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

Outcome #11

1. Outcome Target

Decrease in number of beach pilot areas who reduce the number of days of beach closures

2. Outcome Type : Change in Action Outcome Measure

2010 :3 2011 : 2 2012 : 2 2013 :2 2014 : 1

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #12

1. Outcome Target

Increased delivery of organic dairy information to dairy farmers across the nation that is accessible, reliable, credible and up-to-date.

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :1100 **2011 :** 1100 **2012 :** 1100 **2013 :**1100 **2014 :** 1100

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management

Outcome #13

1. Outcome Target

Number of retail lawn and garden centers providing information on low input/no phosphorous lawn care options to customers

2. Outcome Type : Change in Action Outcome Measure

2010 :60 **2011 :** 60 **2012 :** 70 **2013 :**75 **2014 :** 75

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #14

1. Outcome Target

Increase in number of Master Gardener participants earning certification

2. Outcome Type : Change in Action Outcome Measure

2010 :100 **2011 :** 100 **2012 :** 100 **2013 :**100 **2014 :** 100

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 216 - Integrated Pest Management Systems

Outcome #15

1. Outcome Target

Increase in number of educators demonstrating knowledge of watersheds and new teaching tools and techniques

2. Outcome Type : Change in Action Outcome Measure

2010 :15 2011 : 15 2012 : 15 2013 :15 2014 : 15

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #16

1. Outcome Target

Number of residential households adopting low input/no phosphorus lawn/garden care practices

2. Outcome Type : Change in Action Outcome Measure

2010 :60 2011 : 60 2012 : 60 2013 :60 2014 : 60

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation

Outcome #17

1. Outcome Target

increase in the number of farmers who improve pasture management practices

2. Outcome Type : Change in Action Outcome Measure

2010 :130 2011 : 130 2012 : 130 2013 :130 2014 : 130

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 601 - Economics of Agricultural Production and Farm Management

Outcome #18

1. Outcome Target

Increase the number of student interns teaching backyard composting

2. Outcome Type : Change in Action Outcome Measure

2010 :0 2011 : 20 2012 : 20 2013 :20 2014 : 0

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships

- 204 - Plant Product Quality and Utility (Preharvest)
- 216 - Integrated Pest Management Systems

Outcome #19

1. Outcome Target

Increase in number of equine owners who use information to change behaviors in land and manure management of business practices to improve safety, animal health, and/or profitability of equine businesses and clientele

2. Outcome Type : Change in Action Outcome Measure

2010 :50 **2011 :** 55 **2012 :** 55 **2013 :**55 **2014 :** 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 307 - Animal Management Systems
- 602 - Business Management, Finance, and Taxation

Outcome #20

1. Outcome Target

Increase in number of forest owners, managers and users who make better decisions about forests using stumpage data

2. Outcome Type : Change in Action Outcome Measure

2010 :2000 **2011 :** 0 **2012 :** 0 **2013 :** 0 **2014 :** 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 602 - Business Management, Finance, and Taxation

Outcome #21

1. Outcome Target

Increase in the number of forest owners saving money through use of written contracts for timber sales

2. Outcome Type : Change in Action Outcome Measure

2010 :0 **2011 :** 1200 **2012 :** 1200 **2013 :**1200 **2014 :** 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 605 - Natural Resource and Environmental Economics

Outcome #22

1. Outcome Target

Number of enterprises (already using recommended practices)that use Extension consultation to assess/inform business decisions

2. Outcome Type : Change in Action Outcome Measure

2010 :175 **2011** : 175 **2012** : 175 **2013** :175 **2014** : 175

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

Outcome #23

1. Outcome Target

Decrease in number of households using lawn care inputs in designated no-input buffer zones

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :20 **2011** : 20 **2012** : 20 **2013** :20 **2014** : 20

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #24

1. Outcome Target

Increase the number of farmers who will make a change by learning how to: grow and produce energy crops and transform into energy products

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :75 **2011** : 75 **2012** : 75 **2013** :75 **2014** : 75

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management

Outcome #25

1. Outcome Target

Increase the number of farmers who will produce energy crops and/or implement the use of renewable energy

2. Outcome Type : Change in Action Outcome Measure

2010 :25 **2011** : 50 **2012** : 75 **2013** :75 **2014** : 100

3. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management

Outcome #26

1. Outcome Target

Number of bioengineering for erosion control demonstration sites

2. Outcome Type : Change in Action Outcome Measure

2010 :1 2011 : 1 2012 : 2 2013 :0 2014 : 0

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #27

1. Outcome Target

Number of clientele who have adopted one or more IPM practices that increase environmental sustainability

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :650 2011 : 650 2012 : 650 2013 :650 2014 : 650

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 216 - Integrated Pest Management Systems

Outcome #28

1. Outcome Target

Number of commercial lawn care firms using low input/ no phosphorous lawn care practices

2. Outcome Type : Change in Action Outcome Measure

2010 :20 2011 : 20 2012 : 20 2013 :15 2014 : 15

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #29

1. Outcome Target

Number of enterprises that adopt a recommended practice resulting in increased revenues and/or reduced costs

2. Outcome Type : Change in Action Outcome Measure

2010 :775 2011 : 775 2012 : 775 2013 :775 2014 : 775

3. Associated Institute Type(s)

•1862 Extension

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

- 307 - Animal Management Systems
- 315 - Animal Welfare/Well-Being and Protection
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 605 - Natural Resource and Environmental Economics

Outcome #30

1. Outcome Target

Number of individuals who change their gardening practices to protect natural resources (e.g. water, air, soil)

2. Outcome Type : Change in Action Outcome Measure

2010 :300 **2011 :** 300 **2012 :** 300 **2013 :**300 **2014 :** 300

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems

Outcome #31

1. Outcome Target

Number of individuals who change their gardening practices to reduce gardening inputs

2. Outcome Type : Change in Action Outcome Measure

2010 :300 **2011 :** 300 **2012 :** 300 **2013 :**300 **2014 :** 300

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 205 - Plant Management Systems

Outcome #32

1. Outcome Target

Number of lakeshore residential properties planting buffer strips or maintaining native vegetation as a buffer to decrease erosion and sedimentation

2. Outcome Type : Change in Action Outcome Measure

2010 :10 **2011 :** 20 **2012 :** 20 **2013 :**25 **2014 :** 25

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #33

1. Outcome Target

Number of lakeshore residents changing residential practices to reduce impact on water quality

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :15 **2011** : 15 **2012** : 15 **2013** :15 **2014** : 15

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #34

1. Outcome Target

Number of middle and high school youth demonstrating knowledge of watersheds and their role as watershed stewards

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :900 **2011** : 900 **2012** : 900 **2013** :900 **2014** : 900

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #35

1. Outcome Target

Number of municipal officials have an increased understanding of and need for natural resource based planning and stormwater management at the municipal level

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :3 **2011** : 3 **2012** : 3 **2013** :3 **2014** : 3

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #36

1. Outcome Target

Number of municipalities integrating natural resource protection and Low Impact Development strategies in town plans and ordinances

2. Outcome Type : Change in Action Outcome Measure

2010 :2 **2011** : 2 **2012** : 2 **2013** :2 **2014** : 2

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #37

1. Outcome Target

Number of non-residential properties (business, institutional residential commons) under one or more low input/ no phosphorous lawn care practices

2. Outcome Type : Change in Action Outcome Measure

2010 :20 2011 : 20 2012 : 20 2013 :20 2014 : 20

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #38

1. Outcome Target

Requests for technical assistance for educational watershed stewardship projects or implementation of water quality improvement projects increase due to increased awareness of benefits

2. Outcome Type : Change in Action Outcome Measure

2010 :20 2011 : 20 2012 : 20 2013 :20 2014 : 20

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #39

1. Outcome Target

Number of schools that demonstrate an increase in, or institutionalization of, integrated watershed education into returning educators curriculum

2. Outcome Type : Change in Action Outcome Measure

2010 :15 2011 : 15 2012 : 15 2013 :15 2014 : 15

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #40

1. Outcome Target

Number of service learning high school or undergraduate college students conducting or participating in watershed stewardship projects

2. Outcome Type : Change in Action Outcome Measure

2010 :2 2011 : 2 2012 : 2 2013 :2 2014 : 2

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #41

1. Outcome Target

Number of sites using Low Impact Development practices to decrease stormwater runoff

2. Outcome Type : Change in Action Outcome Measure

2010 :25 2011 : 25 2012 : 25 2013 :25 2014 : 25

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #42

1. Outcome Target

Number of towns/municipalities and watershed organizations conducting outreach activities and participating in outcome oriented water quality education

2. Outcome Type : Change in Action Outcome Measure

2010 :15 2011 : 15 2012 : 15 2013 :15 2014 : 15

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #43

1. Outcome Target

Number of towns/municipalities using one or more bioengineering methods for shoreline stabilization to decrease erosion and sedimentation

2. Outcome Type : Change in Action Outcome Measure

2010 :2 2011 : 3 2012 : 7 2013 :10 2014 : 10

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #44

1. Outcome Target

Number of undergraduate students in the development, planning, and implementation of middle and high school watershed education programs

2. Outcome Type : Change in Action Outcome Measure

2010 :12 2011 : 12 2012 : 12 2013 :12 2014 : 12

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management

Outcome #45

1. Outcome Target

Participants will have gained knowledge on how to grow organic crops (e.g. apples, grains)

2. Outcome Type : Change in Knowledge Outcome Measure

2010 :150 2011 : 150 2012 : 150 2013 :150 2014 : 150

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management

Outcome #46

1. Outcome Target

increase in the number of farmers who implement at least one change as outlined in the water quality protection plan

2. Outcome Type : Change in Action Outcome Measure

2010 :25 2011 : 25 2012 : 25 2013 :25 2014 : 25

3. Associated Institute Type(s)

- 1862 Extension

4. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

From Communities, business including agricultural and forest landowners and operators, and homeowners protect the environment:

-
- Soil building takes time and on some farms, investments in soil quality will take more than the duration of the project to show results.
- Schools may lack personnel or funding to dedicate time and energy to IPM practices.
- Growers are receptive to expand their use of IPM, but make changes in their production practices slowly to reduce

negative impacts.

- New pesticides, biological controls and other effective IPM tactics are still being tested, and need to be assessed under field conditions before they are broadly adopted.
- The costs of some IPM practices are considerably higher than chemical pesticides which reduce adoption by growers.
- Customers in general have limited knowledge of IPM, though they are willing to pay more for IPM produced products when informed of the benefits of this production approach.

From Economic sustainability of farms, forests, and other enterprises:

- Weather
- Costs of production inputs
- Prices received for products sold
- Federal, state, and local regulations
- Vermont Farm Bureau has targeted equal treatment of equine agricultural operations in Vermont as a legislative priority (2009)

From Insufficient community and youth education, technical assistance and information are constraints to NPS pollution especially in urban areas:

Principal external factors that can constrain planned goals, objectives and activities include - limited resources (staff, time and funding), physical limits on staff to travel and deliver programs, other programs with similar goals and objectives (duplication of effort), and available technology that may limit access to certain areas and audiences.

From Understanding of, and preparedness for, natural, accidental and intentional disasters:

New laws and regulations are being introduced, and enforced almost constantly. The time has come when compliance is no longer voluntary but necessary. The level of threats from natural and manmade causes is ever-present, but not always predictable and dealing with them creates resource crises. Fairs are beginning to recognize the need for controlling flow of traffic with respect to animals and food vendors, and for educating the public about how best to minimize the risks. Sponsors of on-farm field days have become lax about practicing biosecurity, and many agricultural service providers bend to the culture of not inconveniencing hosts and attendees

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

1. Evaluation Studies Planned

- Case Study
- Retrospective (post program)
- After Only (post program)
- Before-After (before and after program)
- Other (other data sources)

Description

{NO DATA ENTERED}

2. Data Collection Methods

- Mail
- Case Study
- Unstructured
- Observation
- Portfolio Reviews
- Sampling
- Telephone
- Structured

Description

{NO DATA ENTERED}