2008 NY State Agricultural Experiment Station Research and Cornell University Research and Extension Combined Plan of Work

I. Plan Overview

1. Brief Summary about Plan Of Work

Cornell UniversityFY08-12 Plan of Work for Agricultural Research and Extension Formula Funds
Cornell University Agricultural Experiment Station
NYS Agricultural Experiment Station
Cornell Cooperative Extension
College of Agriculture and Life Sciences
College of Human Ecology
College of Veterinary Medicine

This plan is structured around five broad initiatives: Agriculture and Food Systems Sustainability, Community Economic Vitality, Improved Quality of Life for Individuals and Families, Natural Resources and Environment, and Youth Development.

Agriculture and Food System Sustainability

Agricultural and Horticultural Business Vitality (Plan 1.1)

Agriculture, horticulture, and related business vitality work is critical to the land grant mission. Cornell University has a commitment to the farm and agricultural/horticultural business industries of New York State and to assist key decision makers in making the best choices in managing their farms or agriculturally related businesses. Research and educational programs help business owners improve productivity and sustainability through resource management, adoption of new technologies and practices, improved marketing strategies and business management skills and by looking to alternative enterprises. Farmers and horticulturalists utilize-research based knowledge to continue producing a stable, safe and affordable food supply and horticultural products in economically and environmentally sustainable ways.

Agricultural and food industries contribute an estimated $30 billion a year to New York State's economy. Non-food horticultural businesses contribute a significant amount in addition to the numbers listed. The absolute size of New York State's agriculture, as measured by real sales of agricultural products, has increased modestly over the last 20 years. Declines in meat livestock have been offset by small increases in the dairy industry resulting in relatively constant livestock sales. However, increases in vegetables, oil seed and horticulture crop sales have raised the total level of crop production.

The total number of people employed in agriculture has been relatively stable with some modest increases in recent years. Structural change has resulted in increased numbers of agricultural service jobs as specialized service firms now conduct a number of the functions that used to be done by the farmers themselves. 37,000 farms use almost 25% of the State's land area or 7.6 million acres. The land and farm buildings owned by New York farmers are valued at over $12 billion. Nearly 2,600 horticultural businesses used over 25,800 acres, plus more than 31 million square feet of greenhouse space.

Although there is every reason to believe that the dairy industry, the largest agricultural enterprise, will remain competitive and continue as the dominant industry in New York State, the vegetable and ornamental horticulture industries are expanding, with the horticulture industry showing nearly 50 percent growth since 1985. Nearness to the east coast urban areas provides demand for fresh quality fruits and vegetables and a wide variety of ornamental horticulture products. The structural change taking place in much of New York agriculture, combined with expansion in the vegetable and horticulture businesses, results in a vibrant industry with the potential for a strong future. However, to remain competitive that industry needs highly qualified new employees and research and outreach support on the continuing and emerging issues that rapid change engenders.

Viable and Sustainable Production Practices (Plan 1.2) (shared with Natural Resources and Environment)

Improving production efficiency, quality and safety of plants and animals in agricultural, horticultural, and natural resource production systems is fundamental to improving our ability to compete in a global economy. Managers of New York's more than 40,000 farms and natural resource enterprises face dynamic and complex production environments. Extensive knowledge and skill is needed for identifying, selecting, and adopting principles and practices that optimize production management and improve profitability and sustainability in accordance with business goals. Technologies such as genetic engineering, satellite imagery and GIS, computer aided management decision tools and the like were in exploratory phases a decade or less ago but are readily available today for adoption and use. Technical assistance providers have similar needs to remain up-to-date and able to provide appropriate recommendations for each enterprise.

Production improvements can be accomplished through: 1) incorporating established and new practices and technologies; 2) traditional and modern genetics which select for desired traits (such as yield, flavor and pest resistance) and an understanding of how they can be expressed under different environmental regimes; 3) improving our understanding of the nutritional requirements for plants and animals so that inputs and waste products are minimized; 4) improving our understanding of soils and soil management techniques in order to maintain or improve the health of the soil and reduce losses to the environment; 5) improving our understanding of the impact of environmental conditions on plant and animal production.

Protecting and improving the integrity of our environment and maintaining ecological systems enables human prosperity. Expanding human populations cause growing consumer demands on the agriculture and food system. This magnifies the challenges of balancing food production and processing with land stewardship and protection of the environment. The long-term sustainability of agriculture is inexorably linked to environmental quality.

Specific emphasis is placed on: assessing existing and new production-management practices and techniques; improved product handling and storage to maintain quality and safety; crop choices for sustainability and profitability, and improving production efficiency through adoption of best management practices. We place special emphasis on agricultural environmental management including topics such as: potential environmental impacts of practices; requirements and opportunities of environmental regulations and programs; whole farm systems including integrated nutrient management, integrated pest management and environmental protection; waste management and recycling methods for sustainable agricultural production and environmental protection; water conservation and protection measures; and soil health management and protection. New regulations and guidelines, including the Confined Animal Feeding Operations regulations, have created opportunities for more multi-disciplinary research, for example, precision animal feeding as an aspect of nutrient management on farms and nutrient management as an aspect of watershed management.

Renewable/Alternative Energy and Conservation (Plan 1.3) (shared with Natural Resources and Environment)

With some of the highest energy costs in the nation, New York residents, businesses, and organizations need current information on energy supply alternatives and practical energy conservation and cost-saving measures to maintain financial security and vitality. Producers and community leaders need information on new or renewed energy production alternatives and policies and management alternatives that promote energy conservation to make informed investment and policy decisions.

The Renewable/Alternative Energy and Conservation Program is a multi-emphasis, multi-audience effort addressing agricultural and natural resource producers, community decision makers, and individual consumers. The program addresses USDA priorities related to renewable energy investments in rural areas, its bioenergy programs that encourage increased purchases of eligible commodities for the purpose of expanding production and supporting new production capacity for bioenergy (focused on ethanol and biodiesel), and energy efficiency/conservation initiatives to reduce costs to producers and environmental costs of agricultural/natural resource production. The program also addresses additional energy alternatives such as wood and grass pellet fuel production, recycling of vegetable oils as biodiesel, wind and solar energy production. Lower-income homeowners and renters are particularly hard hit by escalating energy costs and need appropriate alternatives for conserving energy and reducing costs, particularly for housing and transportation. A wide array of energy subsidies and conservation incentives are available to individuals and community organizations, but they are fractionated and unevenly available leading to confusion and inequitable treatment. Community agencies/organizations and local governments need to understand how their policies and practices influence energy use and adopt strategies to promote energy conservation.

The Agriculture/Community Interface (Plan 1.4)

New York is a diverse state with a complex mix of metropolitan, suburban and rural areas. Even in the most rural areas, changing populations and land use patterns often bring agriculture/horticulture/ natural resource enterprises in contact with neighbors or visitors who do not understand or appreciate the nature of their operations and contributions to the community. Local municipal leaders must balance private property rights, community growth, quality of life issues and environmental protection. Often, the land that is most desirable and economical for food production is also the land that is most attractive for development. From the agricultural production perspective, a critical mass of farmland and the right to engage in accepted agricultural practices is imperative to maintain a viable local farm economy. The flexibility to adapt based on the location and evolution of the farm business

to meet the needs of today's society is essential to retain or allow for the expansion of existing farm, horticulture, natural resource, and food industry businesses. Many local residents are two to four generations removed from the farm. In some cases, when they move into more rural areas, issues arise over noise, odors, dust, and slow moving farm vehicles. In other situations, long time residents become engaged in conflicts with their farm neighbors as the farm business changes to remain competitive in a global market or attempts to attract local customers through the production and marketing of a niche product. (Adapted from Harrison, R. 2002. Municipal Reference For Agricultural Land Use Planning, Cornell Cooperative Extension.)

Priority Emphases
Sustainable Agricultural Systems that Minimize Environmental Impact and Maintain Dynamic Farm Profitability
Managing Human Resources Especially Related to Identifying, Hiring, and Retaining New Workers and the Education of Middle Management and Owners
Identifying Value Added Products and Associated Market Channels
Agriculture and Food Systems Responsiveness to Human Health Needs

Community Economic Vitality

Connecting People to the Land and Their Environment (Plan 2.1) (shared with Natural Resources and Environment)
CCE, CUAES, and NYSAES have a commitment to the people of New York to build self-capacity among citizens for solving problems, improving the quality of life, and building strong and vibrant communities. We work to promote active and representative participation of community members to shape their collective future.

Through integrated research and extension agendas, we can help develop effective and collaborative land use/environment/natural resource management approaches and policies that enhance economic, environmental and social connections. This program operates from three basic premises: New York State has a diverse and dynamic landscape; land use policies are among the most important concerns affecting New York State; and, there is a growing interest in communities' relationships with their land use base and natural resources.

There is general awareness that low-density residential development threatens farmland and open space, raises public service costs and taxes, encourages people and wealth to leave central cities, creates serious traffic congestion, and degrades the environment and our quality of life. In response to these trends, public interest groups, citizens and government at all levels have begun to search for solutions for slowing sprawl, preserving open space, and rebuilding our town and village centers, as well as our cities and older suburbs. This has led to a growing movement, often referred to as "smart growth", which represents a serious attempt to reverse the direction of current land use patterns and to enhance citizens' connections to place.

We engage community members in learning about and understanding community issues, and the various impacts associated with alternative courses of action. We work toward the long term sustainability and well being of communities through collaborations and partnerships and therefore are able to add to the "public value." Building local capacity for governance, enhancing local economies, and investing in human capital by providing research-based knowledge, public issues education, and education and training in areas such as community development and environmental management have long been elements of programming within Cornell Cooperative Extension.

The focus here is on community sustainability and the general principles behind the terminology of smart growth, quality communities, sustainability and conservation. Those principles and concepts include: multifunctionality of landscapes; creating a range of housing opportunities and choices; creating walkable and bikable communities; fostering distinctive, attractive communities with a strong sense of place; preserving open space, farmland, natural beauty, and critical environmental areas and resources; protecting public health and quality of life through sound environmental management; strengthening and directing development toward existing communities; making development decisions predictable, fair, and cost-effective; and encouraging community and stakeholder collaboration in development decisions.

Strengthening Community Economic Development (Plan 2.2)

Changes in the economy have left many of New York's cities, towns, and villages in a state of decline, but those same communities can work toward being vital, engaging and attractive by building on their strengths and by educating community members on skills and approaches to address their challenges. There is an educational and networking role based on research that offers models and frameworks. For example, the "layer cake" model offers a total development paradigm that embeds

economic development within community development and highlights the followings layers: human infrastructure, support infrastructure, physical infrastructure and the economic base. There is an emerging framework being adopted nationally with the Cooperative Extension system called the community capitals approach. Research indicates that communities that invest in all seven capitals fare better than those that focus on two or three capitals and have greater success at achieving social equity, a vital economy, and a healthy ecosystem. The capitals are: financial, political, social, human, cultural, natural and built.

There are a multitude of challenges facing communities in New York State – and the nation as well – which result in strong need and priority for our educational programming:

- Loss of traditional economic base and current economic slowdown
- Intense competition for service employment
- Flat tax revenues in the face of increasing local government costs
- Unplanned sprawl threatening municipal tax base and family farms
- Changing face of agriculture
- Increasing residential segregation
- Weakening of traditional community based organizations & decreased civic involvement

Community and economic development needs to be entrepreneurial, community-driven, and anchored in local and regional assets. Practitioners and policymakers alike call for holistic approaches that simultaneously value and invest in economic opportunity, family and human capital, community vitality, infrastructure, and natural resources and environmental stewardship. Solutions share in common the need for good information and data systems, community planning systems, good decision-making processes, effective leadership, broad and inclusive civic engagement, technical assistance, new knowledge, and full communication across jurisdictions, agencies, and localities.

Priority Emphases

Strengthen Community and Economic Development:

Develop Land Use Management Approaches that Promote Sustainable Communities

Improved Quality of Life for Individuals and Families

Nutrition, Food Safety, and Health (Plan 3.1)

Overweight and obesity have reached epidemic proportions in the United States. An estimated 34 percent of U.S. adults, 20-74 years of age, were overweight in 1999-2000, with an additional 31 percent being obese. The Centers for Disease Control and Prevention (CDC) estimates that 40 percent of adults (69 million) will be obese by 2010 if trends go unchanged. Obesity is positively correlated with increased risk of chronic diseases such as cardiovascular disease, diabetes, stroke, hypertension, osteoporosis, and some forms of cancer. Type 2 diabetes, once only found in adults, is now more frequently showing up in children, even pre-adolescent children.

The prevalence of chronic diseases in general is higher in low-income populations and this is exacerbated by increased obesity. Approximately 14 percent of New Yorkers, including 17 percent of children, live below the federal poverty level. Higher rates of obesity have been associated with factors that may discourage walking or healthy eating, such as urban sprawl; living on a highway and/or having no sidewalks, paths, or shops within walking distance; and questionable neighborhood safety. It has also been associated with neighborhood deprivation. Low income is also associated with hunger and food insecurity as well as a myriad of additional health problems including poor pregnancy outcome, infant mortality, anemia, and growth retardation. Food insecurity and obesity or overweight can exist at the same time in a household. With an emphasis on this audience, CCE nutrition and health programs enable participants to improve the diet, health, and well-being of themselves, their families, and their communities.Program goalsfocuson food resource management, nutrition knowledge, food preparationand promotingbreastfeeding.

While consumers report that they are more knowledgeable about and have improved their food safety practices, in reality, some are still unknowingly practicing some unsafe behaviors. The Center for Disease Control estimates that 76 million people get sick, more than 300,000 are hospitalized, and 5,000 Americans die each year from foodborne illness. Preventing foodborne illness and death remains a major public health challenge. Experts have ranked behaviors for the reduction of the risk of illness caused by major foodborne pathogens; this information can enable consumers to make informed choices about food consumption and handling behaviors and can guide food safety educators in prioritizing their educational efforts.

A variety of good agricultural and manufacturing practices can reduce the spread of microbes among animals and prevent the contamination of foods. Careful review of the whole food production process can identify the principal hazards, and the control

points where contamination can be prevented, limited, or eliminated. A formal method for evaluating the control of risk in foods exists is called the Hazard Analysis Critical Control Point, or HACCP system. HACCP safety principles are now being applied to an increasing spectrum of foods and are incorporated in education with targeted food production audiences.

Parenting and Dependent Care (Plan 3.2)

Parenting and care-giving practices, care programs and policies affect the quality of life for children, youth, elders and their families. Cornell Cooperative Extension parenting and dependent care programs are designed to integrate research with community education on parenting and care-giving practices, care-giving program quality principles and standards, and care-related policies. Included in these efforts are training opportunities for workers providing child and elder care and policy makers at the state and local levels.

Good parenting practices differ across several developmental stages of childhood, and include range of outcomes, some of which can be customized to meet special needs, address cultural differences and still be sensitive to the needs of particular family structures. Grandparents, other relatives and kin raising children face major changes and special challenges. Most professionals who serve these grandparents and kin need more information to better address emerging social and educational concerns.

More that 36 million Americans are already over 65 and many are struggling to care for elderly parents. Over the next 10 years the number of direct elder care jobs is projected to increase at a much higher rate than employment in the overall labor market. Elder care issues array across a spectrum of types of care and include in home, in the community and long term nursing care. Therefore, education addressing eldercare issues can be targeted to family members of elders, service workers, institutions, communities and policy-makers.

Young children of working parents are typically in the care of others for a major part of each working day; school-age children are in a variety of care situations including self-care while their parents work. Community needs assessments frequently point to the lack of quality school-age child care programs. Research indicates the quality of child care provided is directly related to the level of education and training of child care providers. There is a continuing need for education on what constitutes high quality child care to parents select and monitor their children’s care, as well as for those providing care and for other stakeholders and decision-makers. The retention of child- and elder-care workers affects the quality and availability of care.

Family Financial Security and Management of Housing and Energy Resources (Plan 3.3)

This program will improve the household financial security of targeted New York populations through money and energy management education and result in benefits to the economic vitality of communities as well. It will empower low and moderate-income households who are especially vulnerable to financial setbacks and have less disposable income to commit to savings. These populations lack access to financial advisors who target higher income individuals. It will assist low-income households who often live in poor-quality housing that has high levels of radon, carbon monoxide, lead, asbestos, and basement mold—adversely affecting residents. In addition, it will enhance older housing that is frequently less energy-efficient than new housing and inform households that have limited access to residential energy-efficient products and services. There are nearly 4 million low- and moderate-income individuals in a number of upstate New York State regions. By focusing on this group we will have a strong impact in a segment of the population that would benefit the most from improved skills in financial literacy, energy and air quality management. Limited and highly neighborhood-specific programming in New York City is a secondary potential priority.

Economic security, financial and other household resource management are educational priorities for Cornell Cooperative Extension in New York State.
Personal income levels in upstate New York increased at half the national rate during the 1990s thus putting a strain on household finances.
The unemployment rate for New York State in 2004 was 5.8%, down from 6.3% in 2003, but higher than the national rate of 5.53%
The average 2003 credit card debt in New York was $5,184, higher than the national average of $4,663.
High energy costs, particularly affecting the Northeast, further impact household budgets.
New York State imports 85 percent of the energy it consumes. Reducing this figure through increased energy efficiency will lead the state toward a more secure energy future with a decreased dependence on imported energy, protection of our environmental

resources, and increased economic development and job growth.
On average, New Yorkers spend $1,724 annually on energy per household. Reducing this figure creates more household disposable income, which, in turn, spurs economic growth.
Priority Emphases
Advancing Healthy Lifestyles, Safety, and Wellness
Improving Food Security
Enhancing Competence in the Practice of Nutrition
Improving Care Giving for Children and Elders
Strengthening Family Support Across the Life Course--Young to Aging Families and Elders
Reducing Stress and Violence
Improving the Quality of Housing, Home, School, and Workplace Environments
Indoor Environmental Quality

Enhancing Personal Skills in Household Economics, Financial Literacy, and Resource Management

Natural Resources and Environment

Connecting People to the Land and Their Environment (Plan 2.1) (shared with Community and Economic Vitality – see description above)
Viable and Sustainable Production Practices (Plans 1.2)
(shared with Agriculture and Food System Sustainability – see description above)

Renewable/Alternative Energy and Conservation (Plan 1.3)
(shared with Agriculture and Food System Sustainability – see description above)

Natural Resource Management (Plan 4.1)

The Natural Resource Management Program is a multi-audience effort addressing agricultural and natural resource producers, community decision makers, businesses, organizations, and individual consumers. Sustainability of natural resources, enhancement of biodiversity and habitat, and natural resources management for economic vitality is critical to residents of New York State, who enjoy and rely on abundant, healthy, and diverse natural resources. Continuing applied research and education on natural resources management, including inventory and mapping methods; habitat; biodiversity; alternative land uses; and economics of sustainable natural resources, a viable local economy, and a healthy environment are critical to protecting, enhancing, and sustaining valuable natural resources.

With natural resources including forested mountains; aquatic environments from wetlands and marshes to estuaries to lakes; and an accompanying diversity of plant and animal species, New York residents rely on these resources for recreation, tourism, raw products such as timber and fish, and related businesses. Agricultural and natural resource producers, community decision makers, businesses, organizations, and individual consumers need current information on good management practices, alternative land uses, protection of open space, and development of environmentally-sustainable natural resource-based businesses. Communities need education targeted to their specific concerns, including the interaction of natural resources, the environment, and the economy.

Water Resources Management (Plan 4.2)

The Water Resource Management Program is a multi-audience effort addressing agricultural and natural resource producers, community decision makers, businesses, organizations, and individual consumers. High quality and readily available water resources are critical not only for drinking and agriculture but for recreation, impacting most New York local economies; industry; and business. Current federal and state regulations place a great deal of emphasis and responsibility on local management of water resources. Continuing applied research and education on non-point source control; stormwater management; watershed management involving interaction of water, soil/land use management, waste management, and air; and resource allocation are critical to protecting, enhancing, and sustaining valuable water resources.

With water quality ranging from one of the most polluted water bodies in the nation, if not the world (Onondaga Lake), to some of the highest quality drinking water supplies (the New York City watershed and Skaneateles Lake); large quantities; flooding to

drought conditions; twenty municipal areas subject to the Phase II Stormwater Regulations; fisheries; prolific sole-source aquifers to thousands of individual wells in fractured bedrock; and groundwater problems ranging from over-demand to industrial pollution to agricultural pollution, New York State residents, local government, agriculture and other businesses, and organizations need current information on groundwater and surface water resources management for both quality and quantity purposes. Communities need education targeted to their specific concerns, including groundwater and surface water, stormwater, non-point source pollution control, water conservation, waste management, and interaction of water resources with other resources and the economy.

Priority Emphases
Improving Watershed and Water Resource Protection and Management, in Agricultural, Rural and Developed Systems
Improving Management Practices for Sustainable and Compatible Agricultural, Natural Resource, and Energy Systems
Improving Policy Makers' and Individual Citizens' Understanding of Different Planning and Management Practices to Make Natural and Agricultural Systems More Sustainable
Waste Management (Plan 4.3)

The Waste Management Program is a multi-disciplinary program that addresses waste management problems and broader issues of waste generation and composition, waste reduction, risk management, environmental equity and public decision-making. Major goals are to improve the ability of local officials, businesses and the public to make informed waste management decisions and to enhance the competency of solid waste professionals through increased training opportunities. Up to date, objective, research-based knowledge is extended to a wide range of audiences, including county solid waste personnel, wastewater treatment plant operators, state and local highway personnel, state agencies, agricultural producers, individual home and landowners, and youth.

With a wide range of waste producers, including individual, agricultural, industrial, and government, New York residents, agricultural producers, businesses and industry, and government need current information and solutions on techniques for managing waste, reducing waste at the source, managing risk and environmental inequities resulting from waste generation and disposal practices.

Youth Development

Youth Community Action (Plan 5.1)

Purposeful action requires that we design learning experiences for youth to attain a voice; build youth/adult partnerships through staff and volunteer development, and actively engage youth in curriculum and program efforts. In its broadest sense, YCA refers to the authentic and meaningful engagement of young people in programs, organizations, and communities, where they have or share voice, influence, and decision-making authority. Youth-adult partnerships are more than good youth development. Young people's fresh ideas, conviction and willingness to work hard make them ideal partners in community change and social justice initiatives. Real youth-adult partnerships require young people and adults to share both power and responsibility, to listen and really hear one another, and to set aside all the stereotypes that each group represents to the other.
The youth community action movement underscores the importance of young people being engaged in leadership and / or decision-making roles now, not only at some point in the future when they have reached 'adulthood'. Youth-adult partnerships, based on mutual respect and trust, unleash the potential of both young people and adults, and provide a powerful tool to create positive and lasting change for individuals, organizations, and communities.

"Imagine a world where young people are fully engaged in decision-making about the issues that affect them. What challenges might they identify? What solutions might they discover? What would our communities—and nation—look like if youth were a meaningful and vital part of the process? The underlying concept of Youth in Governance [Youth Community Action] regards young people as necessary, fully engaged participants in their communities. Rather than seeing young people as "future citizens" or "future leaders," Youth in Governance [YCA] regards youth as capable individuals who contribute in meaningful, authentic ways to the organizations and communities where they live, learn, work, and play. – Carole MacNeil, Ph.D. Statewide Director, 4-H Youth Development, University of California at Davis Youth in Governance, Youth in Action: A National 4-H Initiative for Systemic Change.

Positive Youth Development/Life Skills Development (Plan 5.2)

Youth development is defined as an ongoing process through which young people meet their needs and develop the competencies they perceive as necessary for survival and transition to adulthood. Youth development refers to the development of the whole person and is not focused on a single attribute, skill, or characteristic, but rather the mastery of competencies needed for happy and productive adulthood. Positive Youth Development is development that is positive and productive for both youth and their communities and occurs form an intentional process that promotes positive outcomes for young people by providing opportunities, choices, relationships, and the support necessary for youth to fully participate. In 4-H we talk about this intentional process in relationship to the essential elements that are necessary to ensure optimum development. Those essential elements that are critical to youth development and central to the 4-H experience are:
The opportunity to experience independence.
The opportunity to experience belonging.
The opportunity to experience generosity.
The opportunity to experience mastery.
The development of life skills through experiential learning is the foundation of 4-H programming. Healthy youth development strives to help young people develop the inner resources and skills they need to cope with pressures that might lead them to unhealthy and antisocial behaviors. To successfully grow into mature, productive, and contributing citizens, young people need to acquire:
Health/physical skills – having the appropriate knowledge, attitudes and behaviors that will ensure current and future health
Personal/social skills – personal skills such as an ability to understand one's emotions and practice self discipline; and interpersonal skills such as working with others and developing and sustaining friendships
Cognitive/creative skills – a broad base of knowledge, knowledge application skills, life long learning skills and an ability to appreciate and demonstrate creative expression.
Vocational skills – understanding and awareness of life options and the steps necessary to accomplish them. Adequate preparation for work and family life.
Citizenship skills: understanding of the history and values of one's nation, community, race, ethnic and cultural heritage. Desire to be ethical and to be involved in contributing to the broader good.
The 4-H youth development program is unique among youth-serving organizations because it combines the strength of community based youth organization with the knowledge gleaned from university research to provide positive youth development opportunities. It is critical that demonstrated elements of positive youth development and building life skills remain the foundation to all 4-H youth development programs (clubs, camp programs, special interest groups, 4-H Afterschool, etc.).

One of the most important issues facing the 4-H youth development program is how to best support youth in becoming productive, contributing individuals of society. Leffert, Saito, Blyth, and Kroenke (1996) found the experiences young people have during early adolescence provide the foundation on which they develop their personalities and life skills. Early adolescence is a time of rapid change in young people, providing an opportune time to make a positive impact on their development.

The importance of reaching youth in early adolescence is well documented in a number of studies. The NYS 4-H Club study results show that the process of youth development is positively influenced in multiple ways by 4-H Club membership. The majority of Club members felt they had gained multiple life skills, including public speaking, problem solving, goal setting, leadership and planning skills, self-confidence, citizenship, communication skills, academic gains, expanded horizons, organizational skills, respect for (and from) others, patience, tolerance, and "real world" experience from hands-on projects.(Mead, June, Hirschl,Thomas, Rodriguez, Eunice, and Goggin, Steve, 1999).

Youth who are unsupervised after school are much more likely to engage in activities that place them at risk (Galambos & Maggs, 1991; Steinberg, 1986). Participation in high quality after-school programs is linked with a lower incidence of problem behaviors, such as decreased academic failure, substance use, and delinquency (Newsome, & Ferrari, 2003). Youth who attend these programs have demonstrated improved academic behaviors (better school attendance, more positive school attitudes, and better grades) and improved personal and social skills (positive relationships with adults, opportunity to make new friends; greater self-concept & self-esteem. (U.S. Department of Education & U.S. Department of Justice, 2000). 52% of teens in a survey conducted by the YMCA say they wish there were more after school activities in their neighborhood or community (YMCA of the USA, 2001). 67% of the teens surveyed in this study also said they would be likely to participate in after school programs that would help them get better grades, develop leadership skills, and be more involved in their community while having fun with other teens.

Science and Technology Literacy (Plan 5.3)

In international comparisons, U.S. student performance in mathematics and science is at or below levels attained by students in other countries in the developed world (Science and Engineering Indicators 2004, National Science Board). The longer students stay in the current system the worse they do. According to the 1995 Third International Mathematics and Science Study, U.S. fourth graders ranked second. By twelfth grade, they fell to 16th, behind nearly every other industrialized rival and ahead of only Cyprus and South Africa. (No Child Left Behind, U.S. DOE) A survey of more than 1700 Science Educators found that 68% of those polled cite science literacy as "essential" for adults (Bayer Corporation, 1999). Hands-on learning has been shown to increasing learning and achievement in science content (Mattheis & Nakayama, 1988; Brooks, 1988; Saunders & Shepardson, 1984; Bredderman, 1982). Research indicates that activity-based science can improve students' attitudes toward science (Rowland, 1990; Kyle, et al., 1988; Jaus, 1977; Kyle et al, 1985). Evidence clearly indicates that hands-on activities increase skill proficiency in processes of science, especially laboratory skills and specific science process skills, such as graphing and interpreting data (Mattheis & Nakayama, 1988). In a 1999 study of NYS 4-H club members, 80.9 percent of members surveyed reported that they prefer hands-on projects and 36.9 percent reported that it was the most important component of their club experience. (Mead et al, 1999).

Research links experiential learning with higher student performance in mathematics and science. 4-H has succeeded in providing such learning opportunities to kids. Approximately 500,000 New York state youth participate in educational 4-H activities centered in environmental education, biological and physical sciences, plant and animal sciences, technology and engineering, food and nutrition, and textiles and apparel. In fact, 77% of all 4-H curriculum has a science and/or technology focus. The strong connection to science and technology exists, in part, because of the connection to Cornell and other land grant universities.

The Science and Technology Program Work Team is working to strengthen the connections between science and technology initiatives at Cornell University, other land grant universities and the Cornell Cooperative Extension Associations. The Science and Technology PWT is working on the NYS 4-H Resource Directory, making additional outreach connections and promoting staff development focused on outreach and science and technology.

Priority Emphases
Develop And Apply Youth Community Action Models And Methods
Advance Life Skill Development
Defining and Applying Principles Of Positive Youth Development
Enhancing Science And Technology Literacy
Notes on FTEs and Targets FTEs included in the plan are those deriving support from the applicable federal formula funds plus associated match. Some outputs and quite a few outcomes lack targets. We included local output indicators that will allow tracking by primary audience but have no reporting experience with this structure upon which to base accuate projections; we have been tracking in aggregate to date. Relative to outcomes, we accepted the suggestion offered in POW Newsletter Vol. 1, No. 6 and have eliminated targets for nearly all near-term outcomes. Relative to "missing" mid-term and longer-term outcomes, the rationale differs by indicator. In some cases, the outcome describes a new dimension of a program with which we do not have adequate experience to quantify longer-term outcomes. In a few others, we have not yet identified appropriate assessment strategies or resources. In a few, we are uncertain of the level of resource support that will be available. Rather than leave these out, we decided to include them to better convey program direction. We anticipate modifying the targets through the annual update process.

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

Year	Extension		Research	
	1862	1890	1862	1890
2008	247.7	0.0	120.5	0.0
2009	247.7	0.0	120.5	0.0
2010	247.7	0.0	120.5	0.0
2011	247.7	0.0	120.5	0.0
2012	247.7	0.0	120.5	0.0

II. Merit Review Process

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

- Combined External and Internal University External Non-University Panel
- Expert Peer Review

2. Brief Explanation

We use one integrated process for merit review for applied research and extension projects, including integrated and multistate activities. Key elements of the process are described here.
Review Process (Research Projects and Extension Projects with Designated Funding)1. Principal investigators are asked to consult program priorities (established as outlined in the stakeholder involvement section) and develop short pre-proposals for new or revised projects funded by Federal Formula Funds.
2. Pre-proposals are reviewed for purpose and relevancy by advisory Program Councils (see stakeholder involvement section) and other external stakeholders, the principal investigator's department chair, Extension Program Associate/Assistant Directors, and the Experiment Station directorates (Ithaca and Geneva). Reviews are submitted via a secure website.
For research proposals:3. Pre-proposals are accepted/rejected; Principal Investigators develop accepted preproposals into full proposals.
4. The Department Chair recommends two or three peer reviewers to the Director's Office.
5. The Director's Office obtains the necessary reviews in accordance with CSREES rules using standard format.
6. Changes suggested by the peer reviewer are conveyed to the Principal Investigator. Peer reviewer names are not revealed to the Principal Investigator.
7. The revised proposal, with required CRIS forms, is submitted to the Director's Office.
8. The Director's Office submits the package to CSREES along with an attached statement certifying the peer review was completed.
9. Reviews are kept on file in the Director's Office.
10. The Director's Office attaches a statement to the proposal and sends this with the proposal and Form 10 to the CALS Research Office.
11. After approval by CSREES, funds are allocated to the appropriate research account.
For extension proposals:3. Extension Program Directors rank/recommend extension preproposals.
4. Extension Program Directors meet with Experiment Station (Ithaca and Geneva) staff to discuss potential R-E linkages among extension preproposals.
5. Extension Program Directors finalize Smith-Lever funding recommendations and communicate decisions and needed modifications.
Cornell Review Criteria1. Anticipated significance of results relative to current priority needs or opportunities2. Scientific merit of objectives3. Clarity of objectives4. Appropriate methodology5. Feasibility of attaining objectives6. Accomplishment during preceding project (for revisions)7. Research performance and competence of investigator(s)8. Relevance of the proposed work to regional or national goals9. Level of research-extension integration
For ongoing extension work not captured in current funded projects, we rely on our structure of Program Councils and Program

Work Teams for input and conduct regular program conferences with academic units to review program progress and direction.

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?

Our multistate, multi-institutional, and integrated activities occur within the same stakeholder involvement and program developments processes as other programs and, as such, are directed to priority needs of priority audiences. Our program development structure for federal formula funds is integrated by definition (see stakeholder involvement and merit review processes). Background information on our program development structure and process is available at: http://hosts.cce.cornell.edu/admin/pwt/

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

In contrast to many other states, the great majority of our integrated and multistate expenditures are in the form of funded projects; only the minor proportion is allocated for FTE support. Because they are incorporated in our ongoing program development structures and processes, integrated and multistate projects abide by and benefit from the stakeholder involvement and audience outreach processes outlined in the following section of this plan. We expect all projects to be grounded in relevant needs as articulated through our extensive stakeholder involvement structures and use a wide variety of methods to reach out to under-served and under-represented audiences (again, see stakeholder involvement section). The specific audiences and needs addressed are determined on a project-by-project basis as well as within the broader umbrella of priorities established through our advisory structures.

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

All projects are expected to outline expected outcomes and impacts and report against them. We require a “statement of relevancy,” specific identification of intended outcomes, and descriptions of multistate and integrated activities in our project pre-proposal process and in final project descriptions. Ability to outline relevancy and specific intended outcomes is a primary determinant of funding decisions. Project leaders report against these outcomes and activities annually and upon project completion.

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

The fundamental purposes of these efforts are to strengthen quality of programming by bringing together required disciplines and to ensure efficient use and maximum leveraging of federal formula funds across institutions. For more than 15 years, we have progressively integrated planning and accountability processes for federal formula fund allocation for research and extension, providing greater focus on priority needs and greater efficiencies in program development.
Decision criteria for Regional Research funds illustrate the intent of greater effectiveness and efficiency. Regional funds are allocated by the Directors of CUAES and NYSAES among the various eligible projects based on the national research priorities plus the following criteria as specified in the USDA CSREES Manual for Cooperative Regional Research:
The problem involves evident cooperation and interdependence of disciplinary skills and insights, and their application to its solution.
Research on the problem requires more scientists, equipment, and facilities than are generally available at one experiment station.
The research approach is adaptable and particularly suitable for interstate and federal-state cooperation, resulting in better use of limited resources and a saving of research funds.
The project attracts additional support for research on the problem that is not likely to occur through other research programs and mechanisms.
The project is sufficiently specific to promise significant accomplishment in a reasonable period of time (five years or less).
The project can provide the solution to a problem of fundamental importance or fill an important gap in our knowledge from the standpoint of the present and future agriculture of the region.
The project can be effectively organized and conducted on a regional level.
The intent for multistate extension and integrated activities is parallel – greater program effectiveness by drawing on the broader expertise base of the land grant system and greater efficiency by eliminating parallel development of curricular resources and/or isolated research efforts. For some projects, efficiency and effectiveness are primary design criteria, such as for the eXtension effort or support for regional community development efforts. In others, those benefits accrue as a secondarily to effective integration and collaboration in program development.

IV. Stakeholder Input

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

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

Brief explanation.

Gaining stakeholder input and encouraging stakeholder participation is a systemwide expectation of all levels and units. Across those levels and units, all of the stakeholder participation methods listed are employed (no single unit uses them all). All programs are advertised in accord with equal program opportunity practices including development of contact lists and formal and informal survey work.

At the state level, membership in our five program councils (Community and Economic Vitality, Quality of Life for Individuals and Families, Natural Resources and Environment, Youth Development, and Agriculture and Food Systems) is intentionally monitored to ensure involvement and ties to tradtional and non-traditional constituents. These councils provide guidance for CCE, CUAES and NYSAES by setting broad priorities for applied research and extension programming.

In addition, we have 38 Program Work Teams comprised of extension educators, faculty, and stakeholders who work together to develop, implement and evaluate priority programs. Since 2001, thirty-eight (38) program work teams have been authorized and supported to develop and deliver integrated applied research and extension programming across the state. All PWTs are self-selected and self-directed affinity groups of external stakeholders, county extension educators, and campus-based researchers and extension specialists. PWTs are required to identify program needs in their selected issue areas and carry forth plans of work to meet those needs. PWTs are expected to nurture research-extension integration, to encourage campus-field interactions and collaborations, to take multi-disciplinary approaches, to evaluate their efforts, and to involve their external members in all aspects of their work. They are also expected to report annually on their accomplishments to an appropriate Program Council. Approximately 750 individuals serve on at least one PWT, including more than 260 external stakeholders. The externals come from the business, banking, local/state/federal government, non-government organization and educational sectors.

By definition, “under-represented or under-served” audiences are unlikely to be strongly represented among existing advisory bodies requiring that additional outreach steps be taken. One of the most effective strategies for gaining input and developing working relationships is by networking and partnering with organizations that do have credible relationships with target groups. Our local boards of directors and advisory committees include at least 300 such representatives statewide. Such organizational ties often lead to creative partnerships to engage under-served groups.

Effective involvement of youth in program determination and implementation is of particular concern. All of our local advisory committees are expected to include youth members as part of the needs assessment and decisionmaking structure. In 2005, more than 3000 youth served in governance and program delivery roles statewide. In addition, one of our four extension signature programs is Youth Community Action which is a coordinated effort to develop active youth voice and meaningful partnerships between youth and adults.

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 External Focus Groups
- Use Advisory Committees
- Open Listening Sessions
- Use Surveys

- Use Internal Focus Groups
- Needs Assessments

Brief explanation.

Again, looking at all levels of the system, all of the techniques listed are used; the mix of methods varies from site to site. All of our units are required to have active and diverse advisory processes. Our state level councils and work teams re described in other questions in this section. Needs assessments, focus groups, and use surveys are conducted at the level of individual program units as well as in our statewide plan of work process. In the latter, local units used a wide array of local surveys and data gathering to feed local needs into a statewide videoconference involving 250 extension educators. That session helped establish the priorities that led to the specific program plans included in this document. Again, partnering is a key strategy. For example, in 2006 we collaborated with the NYS Legislative Commission on Rural Resources to conduct a series of rural New York listening sessions that culminate this summer in a major planning conference.

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 individuals
- Meeting with traditional Stakeholder individuals
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Survey of traditional Stakeholder groups
- Survey of selected individuals from the general public
- Meeting with the general public (open meeting advertised to all)
- Meeting specifically with non-traditional groups
- Meeting with traditional Stakeholder groups
- Meeting with invited selected individuals from the general public

Brief explanation

See response to previous two questions. This is viewed as a responsibility of all parties in the system. Data gathering activities vary by program and locale. Another key technique is representation on local, regional, state and national agency and organization advisory bodies of other organizations. An initial inventory of such roles within the College of Agriculture and Life Sciences indicated over 400 such relationships.

3. A statement of how the input will be considered

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

Brief explanation.

The stakeholder input process for statewide program development jointly utilized by Cornell Cooperative Extension (CCE), the Cornell University Agricultural Experiment Station (CUAES), and the New York State Agricultural Experiment Station (NYSAES) was established in February 2001. The process informs federal formula funding priorities and provides project specific input on relevance and value of proposed work. In other words, our program councils and program work teams worked to improve program focus, relevance, and planning activities. We have reviewed funding decisions versus advisory input and can confidently conclude that stakeholders are having a powerful voice in the direction of our programs. Our program councils also advise the directors of CCE and CUAES on annual statewide program priorities, review Program Work Team performance and identify “gaps” in programmatic coverage.
Priorities are updated annually either through face-to-face meetings or electronic means such as a multi-staged, web-based survey

process to not only revise priorities for research and extension support, but also for incorporation into the foundational phase of the year-long process to develop this plan of work.

Perhaps even more important is the influence of stakeholder input in determining local programming. Our county extension associations and multi-county programs are semi-autonomous, much more so than in many states. The program of work of each unit is established under guidance of stakeholders in local advisory structures and governing boards and through environmental scanning activities conducted as part of our plan of work process. Such input has immediate and specific influence on program direction and strategy.

V. Planned Program Table of Content

V(A). Planned Program (Summary)

1. Name of the Planned Program

1.1 Agricultural and Horticultural Business Vitality

2. Brief summary about Planned Program

Agriculture, horticulture, and related business vitality work is critical to the land grant mission. Cornell University has a commitment to the farm and agricultural/horticultural business industries of New York State and to assist key decision makers in making the best choices in managing their farms or agriculturally related businesses. Research and educational programs help business owners improve productivity and sustainability through resource management, adoption of new technologies and practices, improved marketing strategies and business management skills and by looking to alternative enterprises. Farmers and horticulturalists utilize research-based knowledge to continue producing a stable, safe and affordable food supply and horticultural products in economically and environmentally sustainable ways.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 511 20% New and Improved Non-Food Products and Processes
- 601 7% Economics of Agricultural Production and Farm Management
- 602 10% Business Management, Finance, and Taxation
- 603 5% Market Economics
- 604 8% Marketing and Distribution Practices
- 605 10% Natural Resource and Environmental Economics
- 606 10% International Trade and Development
- 609 15% Economic Theory and Methods
- 610 10% Domestic Policy Analysis
- 611 5% Foreign Policy and Programs

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

1. Situation and priorities

Agricultural and food industries contribute an estimated $30 billion a year to New York State's economy. Non-food horticultural businesses contribute a significant amount in addition to the numbers listed. The absolute size of New York State's agriculture, as measured by real sales of agricultural products, has increased modestly over the last 20 years. Declines in meat livestock have been offset by small increases in the dairy industry resulting in relatively constant livestock sales. However, increases in vegetables, oil seed and horticulture crop sales have raised the total level of crop production.

The total number of people employed in agriculture has been relatively stable with some modest increases in recent years. Structural change has resulted in increased numbers of agricultural service jobs as specialized service firms now conduct a number of the functions that used to be done by the farmers themselves. 37,000 farms use almost 25% of the State's land area or 7.6 million acres. The land and farm buildings owned by New York farmers are valued at over $12 billion. Nearly 2,600 horticultural businesses used over 25,800 acres, plus more than 31 million square feet of greenhouse space.

Although there is every reason to believe that the dairy industry, the largest agricultural enterprise, will remain competitive and continue as the dominant industry in New York State, the vegetable and ornamental horticulture industries are expanding, with the horticulture industry showing nearly 50 percent growth since 1985. Nearness to the east coast urban areas provides demand for fresh quality fruits and vegetables and a wide variety of ornamental horticulture products.

The structural change taking place in much of New York agriculture, combined with expansion in the vegetable and horticulture businesses, results in a vibrant industry with the potential for a strong future. However, to remain competitive that industry needs highly qualified new employees and research and outreach support on the continuing and emerging issues that rapid change engenders.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Producers and horticultural business people often are not fully aware of the programs, contacts, and resources available to them to assist with business management/development needs.

Many agricultural/horticultural business have opportunity to strengthen profitability through improved planning and management.

There is opportunity for growth in the agricultural/horticultural sector through alternative, new, and value added enterprises which may not be apparent to existing business people or potential investors.

The supply and effective management of labor resources is a key to the viability of agricultural and horticultural enterprises.

2. Ultimate goal(s) of this Program

Long-term viability and well being of the agricultural/horticulture industry and rural communities in New York State.
Economically and environmentally sound products and practices, and safer and healthier products.

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
2008	16.7	0.0	5.0	0.0
2009	16.7	0.0	5.0	0.0
2010	16.7	0.0	5.0	0.0
2011	16.7	0.0	5.0	0.0
2012	16.7	0.0	5.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a comprehensive, statewide educational program entailing a wide variety of applied research and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	**Indirect Methods**
• Group Discussion • Workshop • Education Class • Demonstrations • One-on-One Intervention	• TV Media Programs • Newsletters • Public Service Announcement • Web sites

3. Description of targeted audience

Key audiences served, directly and indirectly, in enhancing agricultural and horticultural business viability include: Established producers; new and young producers, consultants and service providers, input suppliers, cooperative directors and managers, marketing firms, governmental agencies, lenders, and local/state/federal governmental leaders.

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
2008	12000	35000	0	0
2009	12000	35000	0	0
2010	12000	35000	0	0
2011	12000	35000	0	0
2012	12000	35000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	85	0
2009	85	0
2010	85	0
2011	85	0
2012	85	0

V(H). State Defined Outputs

1. Output Target

- # persons completing education programs on the labor needs of agriculture/horticulture businesses and and/or the needs of potential employees. (1.1.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # producers/horticulture business persons completing education programs on business management, finance, business planning and marketing, human resource management, risk management, production economics, and business transitions. (1.1.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # producers/horticulture business persons completing programs to expand profitability, develop marketing options, diversify or substitute alternative products or enterprises, and/or increase operational efficiencies. (1.1.2a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of non-credit instructional activity contact hours directed to this plan.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of non-credit instructional activities directed to this plan.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

2008 :16 **2009 :**16 **2010 :** 16 **2011 :**16 **2012 :**16

V(I). State Defined Outcome

1. Outcome Target

participants demonstrating knowledge or skill gains re business management, finance, business planning and marketing, human resource management, risk management, production economics, inter-generational transfer and other business transitions. (1.1.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 511 - New and Improved Non-Food Products and Processes
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics
- 610 - Domestic Policy Analysis

1. Outcome Target

participants demonstrating knowledge or skill gains related to expanding profitability, develop marketing options, diversify or substitute alternative products or enterprises, and/or increase operational efficiencies to solve immediate concerns. (1.1.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 511 - New and Improved Non-Food Products and Processes
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics
- 610 - Domestic Policy Analysis

1. Outcome Target

participants who demonstrate knowledge gains related to needs of potential employees and/or availability of qualified employees. (1.1.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation

1. Outcome Target

participants documented to have applied knowledge or skills gained to strengthen existing business operations. (1.1.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
4000	4000	4000	4000	4000

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics

1. Outcome Target

participants documented to have initiated one or more alternative or expanded ventures. (1.1.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	100	100	100	100

3. Associated Knowledge Area(s)

- 511 - New and Improved Non-Food Products and Processes
- 601 - Economics of Agricultural Production and Farm Management
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics

1. Outcome Target

participants or producer groups who adopt practices of value-added production through retaining control of their product further in the processing chain, starting their own value added business, or forming alliances. (1.1.2d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

- 511 - New and Improved Non-Food Products and Processes
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics

1. Outcome Target

participants documented to have made one or more changes in human resources practices to enhance labor availability or retention. (1.1.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3000	3000	3000	3000	3000

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 605 - Natural Resource and Environmental Economics

1. Outcome Target

participating family-owned agricultural/horticultural businesses that plan for succession, transfer, or sale of their business. (1.1.1d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation

1. Outcome Target

participants reporting improved agricultural/ horticultural business profitability attributed at least in part to program participation. (1.1.1e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2500	2500	2500	2500	2500

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 605 - Natural Resource and Environmental Economics

1. Outcome Target

# of new food, horticultural, and agricultural businesses and/or new enterprises within existing businesses reported by program participants and attributed at least in part to program participation. (1.1.2e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
75	75	75	75	75

3. Associated Knowledge Area(s)

- 511 - New and Improved Non-Food Products and Processes
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics

1. Outcome Target

producers/horticultural businesses reporting improved labor availability, performance, and/or retention of higher skilled and more valuable human resource team members attributed at least in part to program participation. (1.1.3d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2000	2000	2000	2000	2000

3. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation

1. Outcome Target

business owners successfully completing an intergenerational transfer or other desired dispensation of their business attributed at least in part to program participation. (1.1.1d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25	25	25	25	25

3. Associated Knowledge Area(s)

- 602 - Business Management, Finance, and Taxation

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Agricultural/horticultural enterprises operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, competitive land uses and shifting development patterns, evolving consumer demands, and globally influenced markets. Fundamental change is occurring in the state and regional economies within which agricultural and horticultural enterprises operate. The specific implications of these external factors vary greatly by locale and across commodities and business forms.

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

1. Evaluation Studies Planned

- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- During (during program)
- After Only (post program)
- Retrospective (post program)

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

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

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected "success stories."

V(A). Planned Program (Summary)

1. Name of the Planned Program

1.2 Viable and Sustainable Production Practices

2. Brief summary about Planned Program

Cornell University has a commitment to agriculture, horticulture, and natural resources enterprises and assisting them in making the best choices when selecting production principles and practices to enhance economic and environmental sustainability. We provide comprehensive research and education programming focused on assessing existing and new production-management practices and techniques with special emphasis on agricultural environmental management. As part of our strategy, we emphasize integration of research and extension to accelerate: identification of problems, focusing scientific effort to resolving problems, field-testing and evaluation of technology and cultural practices, and implementation of environmentally superior innovations/practices for the agricultural, horticultural, and natural resource communities.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 201 3% Plant Genome, Genetics, and Genetic Mechanisms
- 202 2% Plant Genetic Resources
- 203 5% Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 4% Plant Product Quality and Utility (Preharvest)
- 205 6% Plant Management Systems
- 211 8% Insects, Mites, and Other Arthropods Affecting Plants
- 212 10% Pathogens and Nematodes Affecting Plants
- 213 2% Weeds Affecting Plants
- 215 4% Biological Control of Pests Affecting Plants
- 216 8% Integrated Pest Management Systems
- 301 3% Reproductive Performance of Animals
- 302 14% Nutrient Utilization in Animals
- 303 8% Genetic Improvement of Animals
- 305 9% Animal Physiological Processes
- 306 2% Environmental Stress in Animals
- 307 2% Animal Management Systems
- 308 1% Improved Animal Products (Before Harvest)
- 311 6% Animal Diseases
- 312 2% External Parasites and Pests of Animals
- 313 1% Internal Parasites in Animals

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

1. Situation and priorities

Improving production efficiency, quality and safety of plants and animals in agricultural, horticultural, and natural resource production systems is fundamental to improving our ability to compete in a global economy. Managers of New York's more than 40,000 farms and horticultural producers, and 3,000+ natural resource producers face dynamic and complex production environments. Extensive knowledge and skill is needed for identifying, selecting, and adopting principles and practices that optimize production management and improve profitability and sustainability in accordance with business goals. Technologies

such as genetic engineering, satellite imagery and GIS, computer aided management decision tools and the like were in exploratory phases a decade or less ago but are readily available today for adoption and use. Technical assistance providers have similar needs to remain up-to-date and able to provide appropriate recommendations for each enterprise.

Production improvements can be accomplished through: 1) incorporating established and new practices and technologies; 2) traditional and modern genetics which select for desired traits (such as yield, flavor and pest resistance) and an understanding of how they can be expressed under different environmental regimes; 3) improving our understanding of the nutritional requirements for plants and animals so that inputs and waste products are minimized; 4) improving our understanding of soils and soil management techniques in order to maintain or improve the health of the soil and reduce losses to the environment; 5) improving our understanding of the impact of environmental conditions on plant and animal production.

Protecting and improving the integrity of our environment and maintaining ecological systems enables human prosperity. Expanding human populations cause growing consumer demands on the agriculture and food system. This magnifies the challenges of balancing food production and processing with land stewardship and protection of the environment. The long-term sustainability of agriculture is inexorably linked to environmental quality.

Specific emphasis is placed on: assessing existing and new production-management practices and techniques; improved product handling and storage to maintain quality and safety; crop choices for sustainability and profitability, and improving production efficiency through adoption of best management practices. We place special emphasis on agricultural environmental management including topics such as: potential environmental impacts of practices; requirements and opportunities of environmental regulations and programs; whole farm systems including integrated nutrient management, integrated pest management and environmental protection; waste management and recycling methods for sustainable agricultural production and environmental protection; water conservation and protection measures; and soil health management and protection. New regulations and guidelines, including the Confined Animal Feeding Operations regulations, have created opportunities for more multi-disciplinary research, for example, precision animal feeding as an aspect of nutrient management on farms and nutrient management as an aspect of watershed management.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Producers, horticultural business people, and natural resource managers often are not fully aware of or skillful in managing production principles and practices that may help optimize their operations for economic and environmental sustainability.
Producers, horticultural business people, and natural resource managers often are not fully aware of potential environmental impacts of their operations and/or requirements and opportunities of environmental regulations and programs.
Technical assistance providers relied upon by producers, horticultural business people, and natural resource managers have parallel needs for current information on appropriate production practices.
In most cases, it is possible to simultaneously meet economic and environmental sustainability goals.
Integrated system approaches are needed to expand our understanding of trade-offs and develop BMPs that better address current and future challenges as well as food safety.

2. Ultimate goal(s) of this Program

Agriculture remains an important contributor to the economic and social health of New York communities.
Producers, horticulture businesses, and natural resource managers optimize production management and improve profitability and sustainability in accordance with their goals.
Increased use of sustainable practices results in improved or protected soil, air and water quality and production of high quality and safe food and fiber.
Improved soil health and productivity, resulting in increased farm profitability and improved environmental quality.

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
2008	15.6	0.0	75.0	0.0
2009	15.6	0.0	75.0	0.0
2010	15.6	0.0	75.0	0.0
2011	15.6	0.0	75.0	0.0
2012	15.6	0.0	75.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a comprehensive, statewide educational program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	Indirect Methods
• Workshop • Education Class • Demonstrations • Group Discussion • One-on-One Intervention	• Newsletters • Public Service Announcement • Web sites • TV Media Programs

3. Description of targeted audience

Key audiences served, directly and indirectly include: established producers; new and young producers, consultants and service providers, input suppliers, governmental agencies, and local and state agricultural leaders.

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
2008	5000	10000	0	0
2009	5000	10000	0	0
2010	5000	10000	0	0
2011	5000	10000	0	0
2012	5000	10000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :70 **2009 :**70 **2010 :** 70 **2011 :**70 **2012 :**70

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	785	0
2009	785	0
2010	785	0
2011	785	0
2012	785	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :148 **2009 :**148 **2010 :** 148 **2011 :**148 **2012 :**148

- # producers, horticulture business persons, and/or natural resource managers completing education programs on existing and new production management practices and techniques. (1.2.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # producers, horticulture businesses, and/or natural resource mangers completing education programs on potential environmental impacts of practices; requirements and opportunities of environmental regulations and programs; whole farm systems. (1.2.2a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of producers, horticulture business persons, and/or natural resource managers demonstrating knowledge/skill gains re existing/new practices and techniques; improved product handling and storage to maintain quality and food safety; and/or improving production efficiency through adoption of best management practices. (1.2.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants
- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 312 - External Parasites and Pests of Animals
- 313 - Internal Parasites in Animals

1. Outcome Target

# of producers, horticulture businesses, and/or natural resource managers demononstrating knowledge/skill gains re environmental impacts of practices; environmental regulations and programs; whole farm systems including integrated nutrient management, integrated pest management; waste management; and water protection. (1.2.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems
- 307 - Animal Management Systems

1. Outcome Target

# of producers, horticulture business persons, and/or natural resource managersmodifying existing practices and/or adopted new production management practices to address current issues and improve yield efficiency, consistency and/or quality.

(1.2.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3000	3000	3000	3000	3000

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 312 - External Parasites and Pests of Animals
- 313 - Internal Parasites in Animals

1. Outcome Target

# of producers, horticulture business persons, and/or natural resource managers who report improved ability to anticipate and respond to environmental and market variations variations through alternative production management strategies. (1.2.1d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2000	2000	2000	2000	2000

3. Associated Knowledge Area(s)

- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

1. Outcome Target

technical assistance providers documented to have incorporated current best management practices in their recommendations. (1.2.1e)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	100	100	100	100

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)

- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 312 - External Parasites and Pests of Animals
- 313 - Internal Parasites in Animals

1. Outcome Target

# of producers, horticulture businesses, and/or natural resource managers documented to have assessed potential environmental impacts of their operations and developed and acted on plans to eliminate or minimize those concerns. (1.2.2c)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2000	2000	2000	2000	2000

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems
- 302 - Nutrient Utilization in Animals
- 307 - Animal Management Systems

1. Outcome Target

# of producers, horticulture businesses, and/or natural resource documented to have developed and implement nutrient management and/or waste management plans or modified existing plans to meet production and environmental goals and meet regulations. (1.2.2d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
500	500	500	500	500

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants

- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems
- 302 - Nutrient Utilization in Animals
- 307 - Animal Management Systems

1. Outcome Target

# of producers, horticulture business persons, and/or natural resource managers documented to have improved economic returns to agricultural business profitability and vitality resulting from enhanced production management practices. (1.2.1f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1800	1800	1800	1800	1800

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 303 - Genetic Improvement of Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 312 - External Parasites and Pests of Animals
- 313 - Internal Parasites in Animals

1. Outcome Target

# of producers, horticulture businesses, and/or natural resource documented to meet or exceed current environmental protection standards as a result of participating in relevant educational programs. (1.2.2.e)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
250	250	250	250	250

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems
- 302 - Nutrient Utilization in Animals

- 307 - Animal Management Systems

1. Outcome Target

resource managers reporting reduced environmental concerns for participating enterprises. (1.2.2.f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

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

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Agricultural/horticultural enterprises operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, competitive land uses and shifting development patterns, evolving consumer demands, and globally influenced markets. Fundamental change is occurring in the state and regional economies within which agricultural and horticultural enterprises operate. The specific implications of these external factors vary greatly by locale and across commodities and business forms. Population and land use changes in farming communities can lead to producer/neighbor issues that influence choice of production practices.

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

1. Evaluation Studies Planned

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

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- Telephone
- Whole population
- Observation
- Other (Web survey)
- Sampling
- Mail
- On-Site
- Case Study
- Structured

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

1.3 Renewable/Alternative Energy and Conservation

2. Brief summary about Planned Program

With some of the highest energy costs in the nation, New York residents, businesses, and organizations need current information on energy supply alternatives and practical energy conservation and cost-saving measures to maintain financial security and vitality. Producers and community leaders need information on new or renewed energy production alternatives and policies and management alternatives that promote energy conservation to make informed investment and policy decisions.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 401 6% Structures, Facilities, and General Purpose Farm Supplies
- 402 49% Engineering Systems and Equipment
- 404 45% Instrumentation and Control Systems

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

1. Situation and priorities

The Renewable/Alternative Energy and Conservation Program is a multi-emphasis, multi-audience effort addressing agricultural and natural resource producers, community decision makers, and individual consumers. The program addresses USDA priorities related to renewable energy investments in rural areas, its bioenergy programs that encourage increased purchases of eligible commodities for the purpose of expanding production and supporting new production capacity for bioenergy (focused on ethanol and biodiesel), and energy efficiency/conservation initiatives to reduce costs to producers and environmental costs of agricultural/natural resource production. The program also addresses additional energy alternatives such as wood and grass pellet fuel production, recycling of vegetable oils as biodiesel, wind and solar energy production.

High energy costs, particularly affecting the Northeast, further impact household budgets. New York State imports 85 percent of the energy it consumes. Reducing this figure through increased energy efficiency will lead the state toward a more secure energy future with a decreased dependence on imported energy, protection of our environmental resources, and increased economic development and job growth. On average, New Yorkers spend $1,724 annually on energy per household. Reducing this figure creates more household disposable income which, in turn, spurs economic growth. Lower-income homeowners and renters are particularly hard hit by escalating energy costs and need appropriate alternatives for conserving energy and reducing costs, particularly for housing and transportation. A wide array of energy subsidies and conservation incentives are available to individuals and community organizations, but they are fractionated and unevenly available leading to confusion and inequitable treatment. Community agencies/organizations and local governments need to understand how their policies and practices influence energy use and adopt strategies to promote energy conservation.

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

There are new or renewed opportunities for locally owned energy production, including biofuels.

Energy expenditures on local or in-state owned production alternatives stay in the state and local economies to the betterment of residents.

Reduction of energy use provides cost savings to businesses, individuals, and, local governments and organizations and may retain dollars in the state and local economies.

2. Ultimate goal(s) of this Program

High energy costs will continue to significantly affect NYS residents.

Use of locally produced and owned energy sources and/or lower cost external sources retains energy dollars within the local and state economy providing enhanced economic well being.

The economic vitality of agricultural/horticulture/natural resource and supporting businesses, the financial security of individuals and families are enhanced and local government operations made more sustainable through reduced energy costs.

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
2008	2.5	0.0	3.0	0.0
2009	2.5	0.0	3.0	0.0
2010	2.5	0.0	3.0	0.0
2011	2.5	0.0	3.0	0.0
2012	2.5	0.0	3.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a statewide educational program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	**Indirect Methods**
• Group Discussion • Education Class • Workshop • Demonstrations • One-on-One Intervention	• Web sites • TV Media Programs • Public Service Announcement • Newsletters

3. Description of targeted audience

Agricultural/horticulture/natural resource and supporting businesses are targeted both regarding biofuels production opportunities and information regarding alternative energy sources and conservation. Consumers, property managers, and community leaders are targeted for information regarding energy supply alternatives and energy conservation options for residential, facilities, and transportation needs. Citizens, community agencies and organizations are targeted for energy-related policy education efforts

particularly as related to development of alternative energy sources and the interaction between land use and energy conservation.

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
2008	17500	200000	1000	0
2009	17500	200000	1000	0
2010	17500	200000	1000	0
2011	17500	200000	1000	0
2012	17500	200000	1000	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	10	0
2009	10	0
2010	10	0
2011	10	0
2012	10	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :6 **2009 :**6 **2010 :** 6 **2011 :**6 **2012 :**6

- # agricultural producers and agribusiness representatives completing educational programs on the potential for development of biologically-based fuels. (1.3.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # local and state leaders completing educational programs on the potential for development of biologically-based fuels such as biodiesel, ethanol, methane, recycled vegetable oils, space heating fules etc. (1.3.1b)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # agricultural producers and agribusiness, and natural resource business representatives completing educational programs about cropping for biofuels production. 1.3.1c)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # agricultural/horticulture/ natural resource and supporting business representatives completing educational programs about the availability and pros and cons of alternative energy sources and/or about potential energy savings in operations. (1.3.2a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # consumers and community leaders completing educational programs about the availability and pros and cons of alternative energy. (1.3.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # community members, leaders and officials completing education programs about the relationships between development patterns and energy use/costs. (1.3.4a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

agricultural/horticulture/ natural resource and supporting businesses who demonstrate knowledge or skills gains about the availability and pros and cons of alternative energy sources and/or potential energy savings in operations. (1.3.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

consumers and/or community leaders who demonstrate knowledge or skills gains about the availability and pros and cons of alternative energy sources especially related to housing and transportation. (1.3.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of consumers documented to have adopted appropriate alternative energy sources. (1.3.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies

1. Outcome Target

community members, leaders and officials who demonstrate knowledge gains about the relationships between development patterns and energy use/costs. (1.3.4b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of community agencies/organizations documented to have adopted appropriate alternative energy sources. (1.3.3d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
250	250	250	250	250

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 404 - Instrumentation and Control Systems

1. Outcome Target

producers, economic development organizations and other groups collaborate to establish biofuels as a viable alternative crop. (1.3.1f)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
150	150	150	150	150

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of existing or new producers documented to have modified existing practices or technologies and/or adopted new production management practices for biofuels production. (1.3.1g)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of agricultural/horticultural/natural resource businesses documented to have adopted appropriate alternative energy sources and/or energy conservation practices. (1.3.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2500	2500	2500	2500	2500

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of consumers who report savings on energy costs attributable to adopting alternative energy sources. (1.3.3e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of community agencies/organizations reporting savings on energy costs attributable to adopting alternative energy sources. (1.3.3f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	100	100	100	100

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

communities documented to have assessed local energy development proposals and/or the relationships between current policies and regulations and energy conservation. (1.3.4c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
30	30	30	30	30

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies

1. Outcome Target

# of producers, horticulture businesses and/or natural resource managers reporting that cropping for and/or use of biofuels leads to increased economic returns to their enterprises. (1.3.1h)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
35	35	35	35	35

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment

1. Outcome Target

# of producers/horticulture businesses/natural resource managers documented to have improved economic returns to agricultural/ horticultural business profitability and vitality resulting from adopting alternative energy sources and/or energy conservation. (1.3.2d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1800	1800	1800	1800	1800

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of consumers who report savings on energy costs attributable to adopting alternative energy sources and/or energy conservation measures. (1.3.3h)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
5000	5000	5000	5000	5000

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 404 - Instrumentation and Control Systems

1. Outcome Target

# of communities documented to have established or modified land use and development policies to promote energy conservation. (1.3.4d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
5	5	5	5	5

3. Associated Knowledge Area(s)

- 401 - Structures, Facilities, and General Purpose Farm Supplies

1. Outcome Target

agricultural producers, agribusiness, or local and state leaders who demonstrate knowledge gains about the potential for development of biologically-based fuels. (1.3.1d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment

1. Outcome Target

forest owners and purchasers of forest products who demonstrate knowledge or skills gains about current markets for firewood and chips/pellets and associated cropping practices. (1.3.1e)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The interaction between natural disasters, the economy, and energy costs is well documented. Weather in particular has interrupted supplies and dramatically influences heating and cooling costs. Appropriations, public policy, and regulations directly affect ability to pursue energy source alternatives, including biofuels development, and to implement energy conservation alternatives, particularly for low-income households.

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

1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Retrospective (post program)
- Case Study

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- On-Site
- Whole population
- Other (Web Survey)
- Mail
- Observation
- Unstructured
- Case Study
- Sampling
- Structured
- Telephone

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

1.4 The Agriculture/Community Interface

2. Brief summary about Planned Program

By its very nature, this program varies greatly across communities. Typical activities include support of community farmland protection initiatives, public issues education related to specific agriculture/community conflict issues, agricultural awareness programming for adults and youth, and community-based food and agriculture initiatives. Applied research focuses on changing land use patterns and factors that promote or inhibit agriculture/horticulture/ natural resource enterprise development and community-based agriculture.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 315 6% Animal Welfare/Well-Being and Protection
- 803 94% Sociological and Technological Change Affecting Individuals, Families and Communities

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

1. Situation and priorities

New York is a diverse state with a complex mix of metropolitan, suburban and rural areas. Even in the most rural areas, changing populations and land use patterns often bring agriculture/horticulture/natural resource enterprises in contact with neighbors or visitors who do not understand or appreciate the nature of their operations and contributions to the community. Local municipal leaders must balance private property rights, community growth, quality of life issues and environmental protection. Often, the land that is most desirable and economical for food production is also the land that is most attractive for development. From the agricultural production perspective, a critical mass of farmland and the right to engage in accepted agricultural practices is imperative to maintain a viable local farm economy. The flexibility to adapt based on the location and evolution of the farm business to meet the needs of today's society is essential to retain or allow for the expansion of existing farm, horticulture, natural resource, and food industry businesses. Many local residents are two to four generations removed from the farm. In some cases, when they move into more rural areas, issues arise over noise, odors, dust, and slow moving farm vehicles. In other situations, long time residents become engaged in conflicts with their farm neighbors as the farm business changes to remain competitive in a global market or attempts to attract local customers through the production and marketing of a niche product. (Adapted from Harrison, R. 2002. Municipal Reference For Agricultural Land Use Planning, Cornell Cooperative Extension.)

2. Scope of the Program

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

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

1. Assumptions made for the Program

Agriculture/horticulture/natural resource enterprise managers often are not fully aware of how their operations impact or are viewed by community members and leaders.

Community members and leaders often lack understanding of the nature and values of agriculture/horticulture/ natural resource enterprise operations, their constraints, and how local policy affects business viability.

Consumers lack knowledge of the food and agriculture system, its benefits and limitations.

Collaboration between agriculture/horticulture/natural resource enterprises, community leaders and members can lead to identification of mutual interests and minimization or resolution of conflicts.

2. Ultimate goal(s) of this Program

Conflicts between agriculture/horticulture/natural resource enterprises and community members are avoided or minimized and resolved within communities when they occur.

Agriculture/horticulture/natural resource enterprises are viewed as contributing and positive elements in the community.

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
2008	6.3	0.0	2.0	0.0
2009	6.3	0.0	2.0	0.0
2010	6.3	0.0	2.0	0.0
2011	6.3	0.0	2.0	0.0
2012	6.3	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Program activities/outputs are situation-specific but typically involve the full range of public issues education roles and methods and more general individual, group and media approaches directed to promoting awareness of issues and opportunities.

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

Extension	
Direct Methods	Indirect Methods
• Group Discussion • One-on-One Intervention • Education Class • Workshop • Demonstrations	• Public Service Announcement • TV Media Programs • Newsletters • Web sites

3. Description of targeted audience

Agriculture/horticulture/natural resource enterprise managers, community residents and visitors, youth, local media, local officials, and local planning and economic development staff.

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
2008	3500	150000	5000	30000
2009	3500	150000	5000	30000
2010	3500	150000	5000	30000
2011	3500	150000	5000	30000
2012	3500	150000	5000	30000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	20	0
2009	20	0
2010	20	0
2011	20	0
2012	20	0

V(H). State Defined Outputs

1. Output Target

- # of agriculture/ horticulture/natural resource business persons participating in education programs on potential environmental, health, social, and cultural impacts of their operations from the perspective of the community. (1.4.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of community members participating in education programs on the roles of agriculture/horticulture/ natural resource enterprises in the local community, tax base, and environment. (1.4.2a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of local leaders participating in education programs on the roles of agriculture/horticulture/ natural resource enterprises in the local community and how they are affected by local policy. (1.4.2b)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of local community members and leaders participating in programs on the potential benefits of community-based agriculture and opportunities for promoting same. (1.4.2c)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth participating in education programs on the agriculture and food system and/or natural resource enterprises. (1.4.3a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of adults participating in education programs on the agriculture and food system and/or natural resource enterprises. (1.4.3b)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activities directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

2008 :10 **2009 :**10 **2010 :** 10 **2011 :**10 **2012 :**10

V(I). State Defined Outcome

1. Outcome Target

# of communities that initiate specific plans to address agriculture/ horticulture/natural resource enterprise related issues or capitalize on new opportunities including community agriculture initiatives. (1.4.2h)

2. Outcome Type : Change in Action Outcome Measure

2008 :75 **2009 :** 75 **2010 :** 75 **2011 :**75 **2012 :** 75

3. Associated Knowledge Area(s)

- 315 - Animal Welfare/Well-Being and Protection
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

documented instances in which agricutlure/community onflicts are resolved locally. (1.4.1d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :20 **2009 :** 20 **2010 :** 20 **2011 :**20 **2012 :** 20

3. Associated Knowledge Area(s)

- 315 - Animal Welfare/Well-Being and Protection
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

communities documented to adopt, maintain, or expand policies supportive of appropriate agriculture/horticulture/ natural resource enterprise development and/or community agriculture. (1.4.2i)

2. Outcome Type : Change in Condition Outcome Measure

2008 :50 **2009 :** 50 **2010 :** 50 **2011 :**50 **2012 :** 50

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of agriculture/horticulture/natural resource business persons demonstrating knowledge or skill gains related to potential environmental, health, social, and cultural impacts of their operations from the perspective of the community. (1.4.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of community members demonstrating knowledge or skill gains related to the roles of agriculture/horticulture/natural resource enterprises in the local community, tax base, and environment. (1.4.2d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of local leaders demonstrating knowledge or skill gains related to the roles of agriculture/horticulture/natural resource enterprises in the local community and how they are affected by local policy. (1.4.2e)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of local community members and leaders demonstrating knowledge or skill gains related to the potential benefits of community-based agriculture and opportunities for promoting same. (1.4.2f)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of youth demonstrating knowledge or skill gains related to the agriculture and food system and/or natural resource enterprises. (1.4.3c)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
5500	5500	5500	5500	5500

3. Associated Knowledge Area(s)

- 315 - Animal Welfare/Well-Being and Protection
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

# of adults demonstrating knowledge or skill gains related to the agriculture and food system and/or natural resource enterprises. (1.4.3d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
2500	2500	2500	2500	2500

3. Associated Knowledge Area(s)

- 315 - Animal Welfare/Well-Being and Protection
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

# of instances in which producers/horticulture businesses/natural resource enterprises, residents and community leaders work together to address issues. (1.4.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
30	30	30	30	30

3. Associated Knowledge Area(s)

- 315 - Animal Welfare/Well-Being and Protection
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities

1. Outcome Target

# of communities that assess how current policies and infrastructures sustain or impede agriculture/ horticulture/natural resource enterprises (such as farmland protection or including such enterprises in economic development planning). (1.4.2g)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
200	200	200	200	200

3. Associated Knowledge Area(s)

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

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Changing populations and land use patterns directly influence the relationships between agriculture/horticulture/ natural resource enterprises and their neighbors and communities. Land use policies, regulations, public priorities, and current economic conditions frame the options available for enterprises and communities to deal with real or potential conflicts or capitalize on opportunities for community-based agriculture initiatives.

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

1. Evaluation Studies Planned

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

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide

comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- Telephone
- Sampling
- On-Site
- Observation
- Mail
- Structured
- Whole population
- Case Study
- Unstructured

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

2.1 Connecting People to the Land and Their Environment

2. Brief summary about Planned Program

CCE, CUAES and NYSAES have a commitment to the people of New York to build self-capacity among citizens so they can solve problems, improve quality of life, and build strong and vibrant communities. Through integrated research and extension agendas, we can help develop effective and collaborative land use/natural resource management approaches and policies that enhance economic, environmental and social connections.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 131 100% Alternative Uses of Land

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

1. Situation and priorities

Three basic premises:

- New York State has a diverse and dynamic landscape.
- Land use policies are among the most important concerns affecting New York State.
- There is a growing interest in communities' relationships with their land use base and natural resources.

There is a general awareness that low-density residential development threatens farmland and open space, raises public service costs and taxes, encourages people and wealth to leave central cities, creates serious traffic congestion, and degrades the environment and our quality of life. In response to these trends, public interest groups, citizens and government at all levels have begun to search for solutions for slowing sprawl, preserving open space, and rebuilding our town and village centers, as well as our cities and older suburbs. This has led to a growing movement, often referred to as "smart growth", which represents a serious attempt to reverse the direction of current land use patterns.

Cornell Cooperative Extension's Responsibility: CCE has a commitment to the people of New York to build self-capacity among citizens so they can solve problems, improve quality of life, and build strong and vibrant communities. CCE, through integrated research and extension agendas, can help develop effective and collaborative land use/natural resource management approaches and policies that enhance economic, environmental and social connections.

CCE's programming and work topromote active and representative participation toward enabling all community members to shape their collective future has both direct and indirect impacts on all of the principles named above. We engage community members in learning about and understanding community issues, and the various impacts associated with alternative courses of action. We work toward the long term sustainability and well being of communities through collaborations and partnerships and therefore are able to add to the "public value."

Building local capacity for governance, enhancing local economies, and investing in human capital by providing research-based knowledge, public issues education, and education and training in areas such as community development and environmental management have long been elements of programming within Cornell Cooperative Extension.

The focus here is on community sustainability and the general principles behind the terminology of smart growth, quality communities, sustainability and conservation. Those principles and concepts include: multifunctionality of landscapes; creating a range of housing opportunities and choices; creating walkable and bikable communities; fostering distinctive, attractive communities with a strong sense of place; preserving open space, farmland, natural beauty, and critical environmental areas and

resources; protecting public health and quality of life through sound environmental management; strengthening and directing development toward existing communities; making development decisions predictable, fair, and cost-effective; and encouraging community and stakeholder collaboration in development decisions.

2. Scope of the Program

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

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

1. Assumptions made for the Program

The key assumption is that an increasing segment of the population is concerned about being connected in healthy ways to their place – their communities and landscapes; that citizens are concerned about the impacts of a variety of decisions on the environment and to quality of life issues; and that citizens want to pay attention to the connection between work, civic life, and residential patterns.
A second major assumption is that knowledge of the interactions of environmental resources, quality of life, and local economies will lead to a involved, proactive citizenry.

2. Ultimate goal(s) of this Program

Better utilization of community resources to improve and sustain quality of life.
Increased local capacity for management and protection of local environmental resources.
Community resolution of agricultural-environmental conflicts and other land use issues.
Increased open space in preservation or protection programs (based on sound community values and effective planning).
Diversified local economies.
Strong community networks that link diverse sub-groups.
Communities actively manage their environments protecting and enhancing financial, infrastructure, human, environmental, and social capitals.

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
2008	10.0	0.0	1.0	0.0
2009	10.0	0.0	1.0	0.0
2010	10.0	0.0	1.0	0.0
2011	10.0	0.0	1.0	0.0
2012	10.0	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Cornell Cooperative Extension faculty, extension and research associates and educators partner with community leaders and elected officials to promote educational strategies which lead to informed land use and natural resource decisions in the context of balanced long-term outcomes. Training, research and resources focus on a number of issues including land use education, land use impacts, rural-urban interface, farmland preservation, community based agricultural economic development, involving youth in community mapping, place based education, pedestrian friendly communities, affordable housing, use of open spaces, leadership development and community decision-making, residential and community horticultural education, and integrated pest management. Yet another approach to connecting people to their environments is fostering locally relevant economic development

that builds on local resources, including people, capital, access to markets and natural resources, in a way that strengthens community and environmental assets.

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

Extension	
Direct Methods	**Indirect Methods**
• Education Class • Group Discussion • Workshop • One-on-One Intervention	• TV Media Programs • Web sites • Public Service Announcement • Newsletters

3. Description of targeted audience

Targeted groups include local elected officials and engaged community citizens. There is interest in developing a land use education curriculum for general citizens.

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
2008	10000	75000	0	0
2009	10000	75000	0	0
2010	10000	75000	0	0
2011	10000	75000	0	0
2012	10000	75000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	20	0
2009	20	0
2010	20	0
2011	20	0
2012	20	0

V(H). State Defined Outputs

1. Output Target

- # of residents and community leaders participating in programs on community assets, citizen involvement, property rights, land use, conservation, interaction between environmental, economic, issues, quality of life issues. (2.1.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of non-credit instructional activities directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of non-credit instructional hours directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of funded applied research projects directed to this program.

2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

V(I). State Defined Outcome

1. Outcome Target

# of residents and/or community leaders demonstrating knowledge or skill gains related to community assets, property rights, land use, environmental conservation, interaction between environmental, economic issues, quality of life indicators. (2.1.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of community leaders documented to apply community economic development and quality of life indicators to support decision-making. (2.1.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :1500 **2009 :** 1500 **2010 :** 1500 **2011 :**1500 **2012 :** 1500

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of communities implementing projects that protect public health through sound environmental management. (2.1.1e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :75 **2009 :** 75 **2010 :** 75 **2011 :**75 **2012 :** 75

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of municipalities adopting land use planning tools that incorporate environmental dimensions and/or develop new institutional arrangements to support land use planning and environmental management. (2.1.2a)

2. Outcome Type : Change in Action Outcome Measure

2008 :125 **2009 :** 125 **2010 :** 125 **2011 :**125 **2012 :** 125

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of communities adopting or updating farmland preservation and/or agricultural economic development plans. (2.1.1b)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
75	75	75	75	75

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

Increase in number of organizations and number of public/private partnerships with educational focus on environmental conservation (land, water, other natural resources). (2.1.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of communities that plan for development directed toward existing communities re broader range of housing types including affordable housing, focus on bikable and walkable communities, and/or a variety of transportation choices. (2.1.3a)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25	25	25	25	25

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of communities that have taken steps to foster a sense of place. (2.1.3b)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

instances in which communities are documented to have resolved agricultural-environmental conflicts and/or other land use/natural resource issues at least in part due to participation in the program. (2.1.1d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

documented initiatives to increase public health and community well-being that take into account connections between work, civic life and residential patterns. (2.1.1f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of additional acres covered by open space preservation, environmental conservation and/or protection programs attributable at least in part to participation in the program. (2.1.2d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

Increase in percentage of food produced locally and regionally that is consumed locally or regionally. (2.1.2e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of instances in which communities institute changes leading to one of following: development directed toward existing communities, range of housing types, more bikable and/or walkable community, variety of transportation choices. (2.1.3c)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25	25	25	25	25

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of new or enhanced community organizations or networks linking diverse sub-groups and focused on enhancing community sustainability. (2.1.3d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of communities demonstrating greater balance of population across the age spectrum. (2.1.3e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

# of communities marketing what is distinct and unique about themselves. (2.1.3f)

2. Outcome Type : Change in Condition Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

1. Outcome Target

communities/regions adopting buy local campaigns. (2.1.3g)

2. Outcome Type : Change in Condition Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 131 - Alternative Uses of Land

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Communities operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, land uses demands and shifting development patterns, evolving consumer demands, and globalization related economic factors. Fundamental change is occurring in the state and regional economies. The specific implications of these external factors vary greatly by locale and across regions.

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

1. Evaluation Studies Planned

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

Description

Researchers attempt to measure impacts by long-term monitoring and by establishing control and treatment situations in their experiments. For some work that is done in environmental issues, for example, we have some data that indicates that certain practices protect or improve environmental quality in certain places under conditions. One of the problems is that responses to actions can be very long term (improvements in water quality, for example) and we don't always have the ability to wait until we can measure the impacts. So we generalize specific results and assume that we can use those practices everywhere. Or we learn that there are intermediate indicators of improvement and we use those instead of measuring the final impact that we are hoping to achieve.

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide

comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

In addition to these routine documentation and assessment measures, targeted studies are planned in the areas of residential preferences and sprawl, and land use patterns that contribute to stormwater run-off. Further survey work is expected on citizens' attitudes to land use changes as well as survey work targeted at municipal planning board members and whether they have the training, resources and tools they need to make wise land use decisions.

2. Data Collection Methods

- Sampling
- On-Site
- Observation
- Unstructured
- Telephone
- Whole population
- Mail
- Structured
- Case Study

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected "success stories."

V(A). Planned Program (Summary)

1. Name of the Planned Program

2.2 Strengthening Community Economic Development

2. Brief summary about Planned Program

Changes in the economy have left many of New York's cities, towns, and villages in a state of decline, but those same communities can work toward being vital, engaging and attractive by building on their strengths and by educating community members on skills and approaches to address their challenges. There is an educational and networking role based on research that offers models and frameworks. For example, the "layer cake" model offers a total development paradigm that embeds economic development within community development and highlights the followings layers: human infrastructure, support infrastructure, physical infrastructure and the economic base. There is an emerging framework being adopted nationally with the Cooperative Extension system called the community capitals approach. Research indicates that communities that invest in all seven capitals fare better than those that focus on two or three capitals and have greater success at achieving social equity, a vital economy, and a healthy ecosystem. The capitals are: financial, political, social, human, cultural, natural and built.

Many local government partners look to Cornell local government programming for perspective and policy knowledge that is supplemented with applied research. Our work has focused on conducting applied research and developing/facilitating approaches for local governments to address public sector problems. University resources in agriculture, environment, and land use have led to focus on local land-use planning and some other areas of local government environmental management.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 608 40% Community Resource Planning and Development
- 805 25% Community Institutions, Health, and Social Services
- 903 35% Communication, Education, and Information Delivery

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

1. Situation and priorities

There are a multitude of challenges facing communities in New York State – and the nation as well – which result in strong need and priority for our educational programming:

- Loss of traditional economic base and current economic slowdown
- Intense competition for service employment
- Flat tax revenues in the face of increasing local government costs
- Unplanned sprawl threatening municipal tax base and family farms
- Changing face of agriculture
- Increasing residential segregation
- Weakening of traditional community based organizations & decreased civic involvement

A broad range of cooperating providers serve local government officials in New York State. Cornell professionals have been working with these groups for over 50 years and continue to coordinate with their efforts. The network of organizations includes: other SUNY units and community colleges, county extension associations, statewide municipal associations, regional and county associations of local officials, regional planning and technical assistance organizations, and state agencies. Many local government partners look to Cornell local government programming for policy knowledge that is supplemented with applied research.

2. Scope of the Program

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

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

1. Assumptions made for the Program

The foundation for working with communities points to the following commonalities of successful communities: a well articulated vision; looks for opportunities; risk taking; holistic perspective; a belief in “doing”; find ways for ALL to participate; develop PEOPLE first; builds upon community resources; nothings succeeds like success; good use of knowledge; and trust.

Local governments in NYS have access to numerous sources of technical assistance for dealing with their fiscal and regulatory environments but lack assistance that requires a base of applied research and identifies policy alternatives. By partnering with local governments in conducting applied research and developing policy strategy, we can enhance capacity of local governments to address public sector problems.

Local government is an audience or key institution for many faculty that work in other substantive areas. This would include: natural resources, communications, etc. Our approach needs to provide the necessary resources to help the work of these faculty both in the substantive issues of local government and in providing outreach to the municipal audience.

Local Government and governance extension and applied research is a highly interdisciplinary area of work involving: economics, evaluation, demography, social organization, public administration, human resources, and a variety of other fields of study.

The institutional capacity and needs of New York’s smaller and rural local governments are far different than is often defined by larger municipal and state government organizations. These smaller organizations are the majority of New York’s local governments and addressing their unique needs is an important dimension in our applied research and extension work.

Management Capacity: When a number of communities have a common goal, but each is unable to pursue it separately, collaboration may be a possible solution. Collaboration provides a critical mass of resources or helps access needed resources.

Governance Capacity: New perspectives gained through interaction with officials of other local governments often helps all concerned see new alternatives for action. Local governments experience a "boundary problem" when each community operating alone can not see the problem nor identify what needs to be done because the problem has a multi-jurisdictional nature.

2. Ultimate goal(s) of this Program

Leaders are faced with the task of improving the community and economic vitality of their communities and finding viable options for community sustainability in a changing world. An increasing number of citizens and communities are seeking environmental health, quality of life, and a sense of community. Community goals can be articulated as: high quality of life; social cohesion; ecological integrity; effective decision making; and new economic opportunities.

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
2008	13.6	0.0	5.0	0.0
2009	13.6	0.0	5.0	0.0
2010	13.6	0.0	5.0	0.0
2011	13.6	0.0	5.0	0.0
2012	13.6	0.0	5.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Cornell Cooperative Extension Associations are uniquely positioned to provide unbiased assistance and education to communities in order for them to pursue their goals. Educators can provide the kind of initial facilitation and organizational skills necessary for successful visioning and action planning processes thereby assisting communities to improve or enhance their quality of life. Specific approaches for which we have resources: main street revitalization; community based entrepreneurial development; and strategic planning and visioning; technology-led economic development (via the EDA University Center).

Program staff work with a variety of state and local groups to tackle projects that that vary in nature from applied research to pilot projects or case studies. These activities, which are demand driven (locally or regionally initiated usually with sponsored or self-financing), provide valuable insights, resources and materials for extension education. This project work also provides innovative local government practitioners, professionals who work with local governments, and practitioner-professionals all of whom serve as a resource for our training and educational outreach. A variety of Cornell faculty, instructors and other professionals also serve as instructors, provide existing written and web resources and help develop needed resources for local government extension education. We utilize a number of strategies in conducting local government education.

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

Extension	
Direct Methods	Indirect Methods
• Workshop • Group Discussion	• TV Media Programs • Newsletters • Web sites

3. Description of targeted audience

The educational approach to community and economic renewal suggest multiple audiences and stakeholders working in a partnership mode (elected officials, community leaders, business leaders, not-for-profit agencies, youth serving agencies, schools, environmental groups, agribusiness leaders, etc.).

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
2008	15000	0	50000	0
2009	15000	0	50000	0
2010	15000	0	50000	0
2011	15000	0	50000	0
2012	15000	0	50000	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	80	0
2009	80	0
2010	80	0
2011	80	0
2012	80	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :12 **2009 :**12 **2010 :** 12 **2011 :**12 **2012 :**12

- # of residents, community leaders, entrepreneurs, econ. devel. professionals participating in programs re: workforce, entrepreneurial climate, diversification, economic impact analysis, e-commerce, market devel., business planning, partnerships. (2.2.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of community members participating in educational programs related to community decision-making, public participation, planning and monitoring processes, and collaborative approaches. (2.2.3a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of economic developers and/or entrepreneurs participating in educational programs on “green” business opportunities. (2.2.4a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of residents, community leaders, entrepreneurs, econ. devel. professionals demon. knowledge/skill gains re: workforce, entrepreneurial climate, diversification, econ. impact analysis, e-commerce, market devel., business planning, partnerships. (2.2.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of community members demonstrating knowledge or skills gains related to community decision-making, public participation, planning and monitoring processes, collaborative approaches, and/or emergency preparedness. (2.2.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of economic developers and/or entrepreneurs demonstrating knowledge gains related to “green” business opportunities. (2.2.4b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

1. Outcome Target

# of communities who plan for and implement initiatives re community based agric. econ. devel., main street revitalization, workforce development, business devel. and assistance, non-profit sector devel. and/or other elements of sustainable growth. (2.2.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :50 **2009 :** 50 **2010 :** 50 **2011 :**50 **2012 :** 50

3. Associated Knowledge Area(s)

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

- 903 - Communication, Education, and Information Delivery

1. Outcome Target

# of businesses initiated, retained, or expanded in a sustainable manner based on individual and community goals. (2.2.1a)

2. Outcome Type : Change in Action Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

1. Outcome Target

# of employers establishing or contributing to community-based workforce development approaches. (2.2.2a)

2. Outcome Type : Change in Action Outcome Measure

2008 : 50	**2009 :** 50	**2010 :** 50	**2011 :** 50	**2012 :** 50

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of communities instituting new or enhanced participatory processes related to economic development. (2.2.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 : 50	**2009 :** 50	**2010 :** 50	**2011 :** 50	**2012 :** 50

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of communities developing vision statements and strategic plans and implement steps toward achieving their plans. (2.2.3d)

2. Outcome Type : Change in Action Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of collaborative partnerships established within and across communities for issue resolution and collective action and/or to improve community services. (2.2.3e)

2. Outcome Type : Change in Action Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

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

- 903 - Communication, Education, and Information Delivery

1. Outcome Target

# of new “green” businesses established at least in part due to participation in the program. (2.2.4c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

1. Outcome Target

# of communities establishing an infrastructure and climate to support entrepreneurs, local farms and agribusinesses attributable at least in part to initiatives of the program. (2.2.1e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
15	15	15	15	15

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of communities reporting that their local economies are increasingly diverse and developing in a sustainable manner attributable at least in part to participating in the program. (2.2.1f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

1. Outcome Target

# of employers reporting enhanced workforce availability attributable at least in part to participation in the program. (2.2.2b)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of communities reporting increased retention or return of youth in their communities due to meaningful employment opportunities attributable at least in part to initiatives of the program. (2.2.2c)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of documented instances in which a community effectively resolves a need or strengthens community assets attributable at least in part to participation in the program. (2.2.3f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
35	35	35	35	35

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of communities that report increased diversification of their local economies attributable at least in part to participation in the program. (2.2.4d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Weather related disasters can greatly impact communities in terms of infrastructure damage and direct costs. The global, statewide, and regional economies directly impact local economies. Changing federal and state policies and changing availability of external funding enhance or impede the ability of local communities to determine their own futures.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)
- After Only (post program)
- Case Study

Description

Researchers attempt to measure impacts by long-term monitoring and by establishing control and treatment situations in their experiments. For some work that is done in environmental issues, for example, we have some data that indicates that certain practices protect or improve environmental quality in certain places under conditions. One of the problems is that responses to actions can be very long term (improvements in water quality, for example) and we don't always have the ability to wait until we can measure the impacts. So we generalize specific results and assume that we can use those practices everywhere. Or we learn that there are intermediate indicators of improvement and we use those instead of measuring the final impact that we are hoping to achieve.

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

In addition to these routine documentation and assessment measures, there will be a research effort to identify patterns of success among downtown shopping districts (Warren Brown, CISER). Within the Rural Visioning Project there will be an evaluation component that will address current rural programs and policies.

2. Data Collection Methods

- Whole population
- On-Site
- Case Study
- Unstructured
- Sampling
- Structured
- Mail
- Telephone
- Observation

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected "success stories."

V(A). Planned Program (Summary)

1. Name of the Planned Program

3.1 Nutrition, Food Safety and Health

2. Brief summary about Planned Program

A healthy, well-nourished population depends on well informed consumers making wise health-promoting choices supported by strong research and education programs in human nutrition, health, food systems and food safety. The Cooperative State Research, Education, and Extension Service (CSREES), in partnership with Cooperative Extension, delivers community-based nutrition education programs that help individuals, families, and communities make informed choices about food and lifestyles that support their health along with their economic and social well-being. Nutrition and health programs within CCE are designed to 1) connect research and practice, 2) result in behavior change, 3) build on the strengths of families and youth, and 4) develop strong collaborations resulting in community changes for optimal health promotion and provide policymakers with the knowledge to develop appropriate policies for citizens.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 501 16% New and Improved Food Processing Technologies
- 502 15% New and Improved Food Products
- 503 13% Quality Maintenance in Storing and Marketing Food Products
- 701 2% Nutrient Composition of Food
- 702 2% Requirements and Function of Nutrients and Other Food Components
- 703 4% Nutrition Education and Behavior
- 704 5% Nutrition and Hunger in the Population
- 711 7% Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 712 14% Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins
- 722 7% Zoonotic Diseases and Parasites Affecting Humans
- 723 7% Hazards to Human Health and Safety
- 724 8% Healthy Lifestyle

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

1. Situation and priorities

Overweight and obesity have reached epidemic proportions in the United States. An estimated 34 percent of U.S. adults, 20-74 years of age, were overweight in 1999-2000, with an additional 31 percent being obese. The Centers for Disease Control and Prevention (CDC) estimates that 40 percent of adults (69 million) will be obese by 2010 if trends go unchanged. Obesity is positively correlated with increased risk of chronic diseases such as cardiovascular disease, diabetes, stroke, hypertension, osteoporosis, and some forms of cancer. Type 2 diabetes, once only found in adults, is now more frequently showing up in children, even pre-adolescent children.

The prevalence of chronic diseases in general is higher in low-income populations and this is exacerbated by increased obesity. Approximately 14 percent of New Yorkers, including 17 percent of children, live below the federal poverty level. Higher rates of obesity have been associated with factors that may discourage walking or healthy eating, such as urban sprawl; living on a highway and/or having no sidewalks, paths, or shops within walking distance; and questionable neighborhood safety. It has also been associated with neighborhood deprivation. Low income is also associated with hunger and food insecurity as well as a myriad of additional health problems including poor pregnancy outcome, infant mortality, anemia, and growth retardation. Food insecurity and obesity or overweight can exist at the same time in a household. With emphasis on low and moderate income audiences, CCE nutrition and health programs enable participants to improve the diet, health, and well-being of themselves, their families, and

their communities. Program goals focus on food resource management, nutrition and health knowledge, food preparation and promoting breastfeeding.

While consumers report that they are more knowledgeable about and have improved their food safety practices, in reality, some are still unknowingly practicing some unsafe behaviors. The Center for Disease Control estimates that 76 million people get sick, more than 300,000 are hospitalized, and 5,000 Americans die each year from foodborne illness. Preventing foodborne illness and death remains a major public health challenge. Food thermometer use, safely handling leftovers, safely defrosting meat and poultry, immediately discarding food that may be unsafe and hand washing are important practices in preventing illness along with avoiding food cross-contamination. Experts have ranked behaviors for the reduction of the risk of illness caused by major foodborne pathogens; this information can enable consumers to make informed choices about food consumption and handling behaviors and can guide food safety educators in prioritizing their educational efforts.

A variety of good agricultural and manufacturing practices can reduce the spread of microbes among animals and prevent the contamination of foods. Careful review of the whole food production process can identify the principal hazards, and the control points where contamination can be prevented, limited, or eliminated. A formal method for evaluating the control of risk in foods exists is called the Hazard Analysis Critical Control Point, or HACCP system. HACCP safety principles are now being applied to an increasing spectrum of foods, including meat, poultry, and seafood and are incorporated in education with targeted food production audiences.

2. Scope of the Program

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

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

1. Assumptions made for the Program

The CSREES National Research Initiative on human nutrition and obesity addresses critical factors related to obesity prevention so that resulting knowledge can be applied to the development and evaluation of effective interventions. Likewise, in New York State, research on the etiology of obesity and chronic disease is applied by Cornell Cooperative Extension (CCE) to locally based nutrition and wellness education developed in partnership with families, youth, health and wellness professionals, and other community-minded individuals and groups.

Cornell and other academic research is applied to CCE programs promoting secure and safe community food systems to guard against food insecurity and help ensure a safe food supply. Neighborhood and community resources complement federal, state, and local government support to implement this outreach.

2. Ultimate goal(s) of this Program

Better diets, more healthy food choices, increased physical activity, and, improved overall health including reduction of chronic disease among priority groups.
Improved food security, food-choice options, and food-handling practices throughout community food systems.

V(E). Planned Program (Inputs)

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

Year	Extension		Research	
	1862	1890	1862	1890
2008	71.0	0.0	16.0	0.0
2009	71.0	0.0	16.0	0.0
2010	71.0	0.0	16.0	0.0
2011	71.0	0.0	16.0	0.0
2012	71.0	0.0	16.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a comprehensive, statewide educational program entailing multiple education methods depending on local context and need. Campus-based faculty and extension associates and county-based educators are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	Indirect Methods
• Demonstrations • Group Discussion • Workshop • Education Class	• Public Service Announcement • Newsletters • Web sites

3. Description of targeted audience

Audiences reached include: moderate and low income families; 4-H youth; nutrition, health, and family professionals; front-line family workers; food service and food production staff and their managers and directors; and government and agency leaders at the local, state, and federal level.

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
2008	55000	250000	20000	100000
2009	55000	250000	20000	100000
2010	55000	250000	20000	100000
2011	55000	250000	20000	100000
2012	55000	250000	20000	100000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :8 **2009 :**8 **2010 :**8 **2011 :**8 **2012 :**8

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	290	0
2009	290	0
2010	290	0
2011	290	0
2012	290	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # non-credit instructional hours directed to this program.

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # funded applied applied research projects directed to this program.

  2008 :35 **2009 :**35 **2010 :**35 **2011 :**35 **2012 :**35

- # of children, youth, and adults completing education programs on: food, nutrition and health topics including attitudes about healthy eating, food choices, selection of healthy foods, preparation of healthy foods, and active living. (3.1.1a)

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # of women and health providers completing education programs addressing healthy weight gain during pregnancy and breastfeeding. (3.1.1b)

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # of community members completing educational programs on issues that influence food and health behavior and associated appropriate actions including obesity prevention programs and policy. (3.1.1c)

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # of children, youth, and adults completing education programs on: identifying food insecurity, obtaining food assistance, balancing available resources by planning food choices, and lack of sufficient quality food/ hunger. (3.1.2a)

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # of policy makers and citizens participating in education programs on status of food security in their communities and possible actions to promote increased food security. (3.1.2b)

  2008 :0 **2009 :**0 **2010 :**0 **2011 :**0 **2012 :**0

- # of participants in programs on: reducing food safety and/or food borne risks and illnesses including recommended food purchase, storage, handling, and preparation practices. (3.1.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of program participants who demonstrate knowledge or skill gains related to food, nutrition and health topics including: attitudes about healthy eating, healthy food choices, selection of healthy foods, preparation of healthy foods, and benefits of healthy living. (3.1.1d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior

1. Outcome Target

# of program participants who demonstrate knowledge or skill gains related to healthy weight gain during pregnancy and breast feeding. (3.1.1e)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior

1. Outcome Target

# of program participants who demonstrate knowledge or skill gains related to issues that influence food and health behavior and associated appropriate school/public/community actions, programs, and policy. (3.1.1f)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of program participants who demonstrate knowledge or skill gains related to status of food security in their communities and possible actions to promote increased food security. (3.1.2c)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

- 704 - Nutrition and Hunger in the Population

1. Outcome Target

# of program participants who know what to do related to food insecurity problems such as actions to obtain food assistance, balance available resources by planning food choices, and lack sufficient quality food/hunger. (3.1.2d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

1. Outcome Target

# of program participants who demonstrate knowledge or skill gains related to reducing food safety and/or food borne risks and illnesses including recommended food purchase, storage, handling, and preparation practices. (3.1.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 503 - Quality Maintenance in Storing and Marketing Food Products
- 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
- 722 - Zoonotic Diseases and Parasites Affecting Humans
- 723 - Hazards to Human Health and Safety

1. Outcome Target

# of program participants documented to have applied healthy eating, active living, and/or food safety recommendations. (3.1.1g)

2. Outcome Type : Change in Action Outcome Measure

2008 : 32000	**2009 :** 32000	**2010 :** 32000	**2011 :** 32000	**2012 :** 32000

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 723 - Hazards to Human Health and Safety

1. Outcome Target

# of program participants documented to have managed food budgets and related resources to meet family needs. (3.1.1h)

2. Outcome Type : Change in Action Outcome Measure

2008 : 15000	**2009 :** 15000	**2010 :** 15000	**2011 :** 15000	**2012 :** 15000

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

1. Outcome Target

# of program participants documented to have increased participation in public/community health-related programs. (3.1.1i)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1500	1500	1500	1500	1500

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of program participants documented to have reduced one or more chronic disease indicators. (3.1.1j)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of participating schools and/or communities documented to have made practice and policy changes to promote healthy eating and active living. (3.1.1k)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of program participants who have acted to improve their food security status. (3.1.2e)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
7500	7500	7500	7500	7500

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 704 - Nutrition and Hunger in the Population

1. Outcome Target

# of participating communities that assess food insecurity and develop appropriate action plans. (3.1.2f)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25	25	25	25	0

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

1. Outcome Target

# of household and food handler participants documented to have increased application of safe food preparation practices (storage, preparation, and serving, i.e, HACCP standards. (3.1.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
15000	15000	15000	15000	15000

3. Associated Knowledge Area(s)

- 501 - New and Improved Food Processing Technologies
- 503 - Quality Maintenance in Storing and Marketing Food Products
- 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
- 722 - Zoonotic Diseases and Parasites Affecting Humans
- 723 - Hazards to Human Health and Safety

1. Outcome Target

# of vulnerable children, youth and members of other priority groups documented to have reduced incidence of overweight and obesity as a result of participating in relevant educational programs. (3.1.1l)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior

1. Outcome Target

# of participating schools and/or communities reporting decline in incidence of overweight and/or indicators of chronic diseases associated with obesity. (3.1.1m)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

1. Outcome Target

# of individuals or households documented to have improved food security status. (3.1.2h)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
5200	5200	5200	5200	5200

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food

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

1. Outcome Target

# of participating communities reporting declines in food insecurity indicators. (3.1.2i)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of communities/firms/or organizations documented to have implemented improved practices or food safety policies as a result of participating in relevant educational programs. (3.1.3d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
350	350	350	350	0

3. Associated Knowledge Area(s)

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

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The context within which the food system exists affects the quality and availability of nutritious and safe foods. Policy changes impact food production, can impact food safety and availability. Demographic shifts can translate into changing demands for foods that can impact nutritional status and the supply of nutritious and safe foods.

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

1. Evaluation Studies Planned

- During (during program)
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- After Only (post program)
- Retrospective (post program)

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied

research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use. We are currently looking at best practice models for breastfeeding, obesity prevention, FMNP delivery, and training of frontline staff. There are other locally generated projects as well.

2. Data Collection Methods

- Structured
- Whole population
- Sampling
- On-Site
- Telephone
- Mail
- Observation
- Case Study

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”
In addition, we will be doing targeted studies in these areas:
Evaluation Guide for Nutrition Education with Groups
Regional training for staff on writing success stories for required quarterly state reporting
ERS reporting system

V(A). Planned Program (Summary)

1. Name of the Planned Program

3.2 Parenting and Dependant Care

2. Brief summary about Planned Program

Parenting and care giving practices, care programs and policies affect the quality of life for children, youth, elders and their families. CSREES provides resources and national leadership to the Land-Grant University System to conduct research, education, and extension programs that will improve parenting knowledge, skills and practices and increase the quantity and improve the quality of child care (early care and education), school-age care (after-school), teen out-of-school programs and elder care. Cornell Cooperative Extension parenting and dependent care programs are designed to integrate research with community education on parenting and care-giving practices, care-giving program quality principles and standards, and care-related policies. Included in these efforts are training opportunities for workers providing child and elder care and policy makers at the state and local levels.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 802 100% Human Development and Family Well-Being

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

1. Situation and priorities

Good parenting practices differ across several developmental stages of childhood, and include range of outcomes, some of which can be customized to meet special needs, address cultural differences and still be sensitive to the needs of particular family structures. Grandparents, other relatives and kin raising children face major changes and special challenges. Most professionals who serve these grandparents and kin need more information to better address emerging social and educational concerns.

More that 36 million Americans are already over 65 and many are struggling to care for elderly parents. Over the next 10 years the number of direct elder care jobs is projected to increase at a much higher rate than employment in the overall labor market. Elder care issues array across a spectrum of types of care and include in home, in the community and long term nursing care. Therefore, education addressing eldercare issues can be targeted to family members of elders, service workers, institutions, communities and policy-makers.

Young children of working parents are typically in the care of others for a major part of each working day; school-age children are in a variety of care situations including self-care while their parents work. Community needs assessments frequently point to the lack of quality school-age child care programs. Research indicates the quality of child care provided is directly related to the level of education and training of child care providers. There is a continuing need for education on what constitutes high quality child care to parents select and monitor their children’s care, as well as for those providing care and for other stakeholders and decision-makers. The retention of child- and elder-care workers affects the quality and availability of care.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Most parents and relative caregivers want to do they best they can for their children. Targeted parent populations will seek out and participate in parenting education if the programs are designed to address their immediate needs, are affordable, and are conveniently available. Parenting and child development knowledge and skills taught are applicable to many family situations and can improve parent-child interactions and child nurturance over time.

Child care quality can be improved through education. Registered child caregivers and programs will continue to be required to have continuing education by the state. New York family child-caregivers exempt from state registration requirements will also need assistance and seek opportunities to learn what can be applied to their chosen self-employment. Parents searching for child care will access child care quality information and educational programs once they know what to look for. Child care is recognized as a community and economic resource and opportunities to increase availability, access and affordability are one purpose of CCE programming in this area.

Elder care demand will continue to grow, preferences for a variety of care provision will build and result in continuing need for education with care givers, family members seeking elder care and research and education on retention of elder caregivers.

Cornell University and other academic research will build knowledge about effective parenting practices targeting different parent populations and quality child and elder care that can be applied to educational practice and policy development.

2. Ultimate goal(s) of this Program

Improved parenting practices that result in better child and youth outcomes.
High quality, accessible and affordable child and elder care are available for those who seek it.
Improved parent/caregiving practices result in parents and caregivers reporting increased confidence in their roles.

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
2008	18.2	0.0	1.0	0.0
2009	18.2	0.0	1.0	0.0
2010	18.2	0.0	1.0	0.0
2011	18.2	0.0	1.0	0.0
2012	18.0	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a comprehensive, statewide educational program entailing multiple education methods depending on local context and need. Campus-based faculty and extension associates and county-based educators are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Demonstrations • Education Class • Group Discussion	• Web sites • Public Service Announcement • Newsletters

3. Description of targeted audience

Key audiences served, directly and indirectly, include: parents, grandparents and other relative caregivers who are parenting children; child and elder care workers and their supervisors and program directors; community stakeholders such as employers, leaders and policy makers at the local and state levels.

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
2008	7500	100000	0	0
2009	7500	100000	0	0
2010	7500	100000	0	0
2011	7500	100000	0	0
2012	7500	100000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	10	0
2009	10	0
2010	10	0
2011	10	0
2012	10	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional hours directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

2008 :8 **2009 :**8 **2010 :** 8 **2011 :**8 **2012 :**8

- # of care-giving professionals who complete non-formal education programs about quality dependant care giving. (3.2.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of persons with care-requiring dependants completing non-formal education programs on selection of care-giving individuals and facilities. (3.2.1b)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of organizations, agencies, and institutions participating in non-formal educational programs about social and public policy issues to enhance opportunities for safe, economical, and developmentally appropriate care-giving programs for infants, children, youth, and older adults. (3.2.2a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of persons completing complete non-formal education programs about parenting. (3.2.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of participating care-giving professionals who demonstrate knowledge or skill gains related to quality care-giving practices. (3.2.1c)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of participating persons with care-requiring dependents who demonstrate ability to evaluate the quality of care programs to determine appropriate placement for their family members or others. (3.2.1d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of program participants who demonstrate knowledge or skills gains regarding community approaches to family care. (3.2.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

parents, grandparents and other adults providing parental care gaining who demonstrate knowledge or skills gains regarding developmentally appropriate and effective parenting methods. (3.2.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of participating care-giving professionals reporting to have applied positive care-giving practices. (3.2.1e)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
500	500	500	500	500

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

participating persons with care-requiring dependents reporting to have used child care quality characteristics in their care selection. (3.2.1f)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
4000	4000	4000	4000	4000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of program participants reporting to have been involved in community level assessments of family care needs. (3.2.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
500	500	500	500	500

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

parents and other adults providing parental care adopting developmentally appropriate and effective parenting methods. (3.2.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
7000	7000	7000	7000	7000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of care-giving providers reporting improved dependant care as a result of participating in educational programs. (3.2.1g)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
350	350	350	350	350

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

participating persons with care-requiring dependents reporting positive change in dependant care as a result of participating in educational programs. (3.2.1h)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
4000	4000	4000	4000	4000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of communities documented to have taken action to family needs that can be related to educational programs and/or critical community collaborations provided. (3.2.2d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	100	100	100	100

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

1. Outcome Target

# of parents/relative caregivers reporting to have experienced positive change in parent-child relationships and child nurturance that they attribute to implementing new parenting behaviors learned in educational programs. (3.2.3d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
4000	4000	4000	4000	4000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The economic, political and governmental sectors affect the quality, availability and accessibility of child and elder care. An increasing elderly population results in increased demand for elder care services. The growth of minority populations in the US means more diverse cultures and values related to parenting, child and elder care.

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

1. Evaluation Studies Planned

- During (during program)
- After Only (post program)
- Other (Control Study Group)

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use. Control Study Group assessment of Relatives as Primary Parents [RAPP] in Orange, Ulster and Dutchess Counties.

2. Data Collection Methods

- Telephone
- Case Study
- Sampling
- Mail
- Structured

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected "success stories."

V(A). Planned Program (Summary)

1. Name of the Planned Program

3.3 Family Financial Security and Management of Housing Resources

2. Brief summary about Planned Program

This program will improve the household financial security of targeted New York populations through money management education and result in benefits to the economic vitality of communities as well. It will empower low and moderate-income households who are especially vulnerable to financial setbacks and have less disposable income to commit to savings. These populations lack access to financial advisors who target higher income individuals. It will assist low-income households who often live in poor-quality housing that has high levels of radon, carbon monoxide, lead, asbestos, and basement mold—adversely affecting residents. In addition, it will enhance older housing that is frequently less energy-efficient than new housing and inform households that have limited access to residential energy-efficient products and services. There are nearly 4 million low- and moderate-income individuals in a number of upstate New York State regions. By focusing on this group we will have a strong impact in a segment of the population that would benefit the most from improved skills in financial literacy, energy and air quality management. Limited and highly neighborhood-specific programming in New York City is a secondary potential priority.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 607 50% Consumer Economics
- 801 25% Individual and Family Resource Management
- 804 25% Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

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

1. Situation and priorities

Economic security, financial and other household resource management are educational priorities for Cornell Cooperative Extension in New York State.
Personal income levels in upstate New York increased at half the national rate during the 1990s thus putting a strain on household finances.
The unemployment rate for New York State in 2004 was 5.8%, down from 6.3% in 2003, but higher than the national rate of 5.53%
National 2004 data indicate households have financially insecure positions.
Forty-five percent of all workers had total household assets, excluding the home, of less than $25,000.
The US personal savings rate was only 1 percent.
The average 2003 credit card debt in New York was $5,184, higher than the national average of $4,663.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Low income and many moderate income households have limited or no access to financial advice and non-biased financial and other resource management information.

Financial and other resource management education leading to improved management practices will result in increased household

disposable income and lessened financial set-backs.

Lower income households can institute practices that improve the indoor environmental quality of their residences.

Increased household disposable income and improved indoor environments will result in improved quality of life for individuals, more prosperous communities and overall improvement in the NYS economy.

2. Ultimate goal(s) of this Program

Improved financial status of targeted NYS residents.
Increased energy conservation and control of energy costs.
Improved indoor air quality in low income households resulting in better health outcome

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
2008	8.1	0.0	1.0	0.0
2009	8.1	0.0	1.0	0.0
2010	8.1	0.0	1.0	0.0
2011	8.1	0.0	1.0	0.0
2012	8.1	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a comprehensive, statewide educational program entailing multiple education methods depending on local context and need. Campus-based faculty and extension associates and county-based educators are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	Indirect Methods
• Workshop • Demonstrations • Group Discussion • Education Class • One-on-One Intervention	• Public Service Announcement • TV Media Programs • Web sites • Newsletters

3. Description of targeted audience

Low and moderate-income households who are especially vulnerable to financial setbacks and have less disposable income to commit to savings.
Low-income households living in poor-quality housing.

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
2008	15000	125000	5500	30000
2009	15000	125000	5500	30000
2010	15000	125000	5500	30000
2011	15000	125000	5500	30000
2012	15000	125000	5500	30000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	10	0
2009	10	0
2010	10	0
2011	10	0
2012	10	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :3 **2009 :**3 **2010 :** 3 **2011 :**3 **2012 :**0

- # of persons completing education programs on age-appropriate topics like spending and saving concepts, appropriate use of money, financial goals, tracking expenses, budgeting, credit management, financial planning, and/or wealth generation strategies. (3.3.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of consumers and property managers completing programs on indoor air quality issues. (3.3.2a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # consumers, property managers, and/or housing officials completing educational programs about potential energy cost savings, including selecting energy providers, and energy conservation strategies and measures especially related to housing and transportation. (3.3.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

participants who demonstrate knowledge or skill gains and/or can articulate specific actions they will take related to spending and saving concepts, appropriate use of money, setting financial goals, tracking expenses, budgeting, credit management, financial planning, and/or wealth generation strategies. (3.3.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 607 - Consumer Economics
- 801 - Individual and Family Resource Management

1. Outcome Target

# of consumers and property managers gaining awareness and knowledge of indoor air quality issues and remediation options. (3.3.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

# of program participants reporting they are practicing wise money management skills such as comparison shopping, paying bills on time, paying more than minimum payment, checking credit report, and reviewing and understanding bills/statements as a means to meeting financial goals. (3.3.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :6000 **2009 :** 6000 **2010 :** 6000 **2011 :**6000 **2012 :** 6000

3. Associated Knowledge Area(s)

- 607 - Consumer Economics
- 801 - Individual and Family Resource Management

1. Outcome Target

# of program participants documented to have used standard practices such as timely bill payment to meet financial life planning goals. (3.3.1e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :3500 **2009 :** 3500 **2010 :** 3500 **2011 :**3500 **2012 :** 3500

3. Associated Knowledge Area(s)

- 607 - Consumer Economics

- 801 - Individual and Family Resource Management

1. Outcome Target

# of program participants documented to have taken measures to prevent or remediate indoor air quality issues. (3.3.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
6200	6200	6200	6200	6200

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

# of program participants documented to have reduced short-term health effects of indoor air pollutants (such as irritation of the eyes, nose, and throat, headaches, dizziness, and fatigue) as a result of participating in educational programs. (3.3.2d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

# of program participants reporting to have met day-to-day financial obligations while also progressing on future goals for homeownership, savings, retirement accounts, etc. (3.3.1d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
4500	4500	4500	4500	4500

3. Associated Knowledge Area(s)

- 607 - Consumer Economics
- 801 - Individual and Family Resource Management

1. Outcome Target

# of participants reducing risks of respiratory diseases, heart disease, and cancer by impl. measures such as radon remediation, controlling indoor triggers of asthma: secondhand smoke, dust mites, pet dander, and pests. (3.3.2e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

consumers, property managers, and/or housing officials who demonstrate knowledge or skills gains and/or can articulate specific actions they will take related to energy cost controls and conservation measures especially related to housing and transportation. (3.3.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 607 - Consumer Economics
- 801 - Individual and Family Resource Management

1. Outcome Target

# of consumers reporting to have adopted appropriate energy cost control and/or conservation practices. (3.3.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
8500	8500	8500	8500	8500

3. Associated Knowledge Area(s)

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

1. Outcome Target

# of property managers, and/or housing officials documented to have taken measures to improve energy cost control or efficiency of existing and new buildings. (3.3.3d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
500	500	500	500	500

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

# of consumers who report savings on energy costs attributable to adopting alternative energy sources and/or energy conservation measures. (3.3.3e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
5000	5000	5000	5000	5000

3. Associated Knowledge Area(s)

- 607 - Consumer Economics
- 801 - Individual and Family Resource Management

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters and the economy affect household financial status and impact energy issues. They also affect the quality of the indoor air environment. Government regulation and policies driven by public priorities can change the circumstances of personal finances, the energy market and the quality of the indoor household environment. Public and private funders and CCE may have fewer fiscal resources and other resources to devote to the quality of life in financial, energy and indoor air quality matters.

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

1. Evaluation Studies Planned

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

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- Whole population
- Case Study
- Telephone
- On-Site
- Mail
- Structured
- Sampling

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected "success stories."

V(A). Planned Program (Summary)

1. Name of the Planned Program

4.1 Natural Resource Management

2. Brief summary about Planned Program

The Natural Resource Management Program is a multi-audience effort addressing agricultural and natural resource producers, community decision makers, businesses, organizations, and individual consumers. Sustainability of natural resources, enhancement of biodiversity and habitat, and natural resources management for economic vitality is critical to residents of New York State, who enjoy and rely on abundant, healthy, and diverse natural resources. Continuing applied research and education on natural resources management, including inventory and mapping methods; habitat; biodiversity; invasive species; alternative land uses; and economics of sustainable natural resources, a viable local economy, and a healthy environment are critical to protecting, enhancing, and sustaining valuable natural resources.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 101 7% Appraisal of Soil Resources
- 102 45% Soil, Plant, Water, Nutrient Relationships
- 104 4% Protect Soil from Harmful Effects of Natural Elements
- 123 5% Management and Sustainability of Forest Resources
- 124 6% Urban Forestry
- 125 5% Agroforestry
- 132 2% Weather and Climate
- 134 5% Outdoor Recreation
- 135 11% Aquatic and Terrestrial Wildlife
- 136 5% Conservation of Biological Diversity
- 214 5% Vertebrates, Mollusks, and Other Pests Affecting Plants

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

1. Situation and priorities

With natural resources including forested mountains; aquatic environments from wetlands and marshes to estuaries to lakes; and an accompanying diversity of plant and animal species, New York residents rely on these resources for recreation, tourism, raw products such as timber and fish, and related businesses. Agricultural and natural resource producers, community decision makers, businesses, organizations, and individual consumers need current information on good management practices, alternative land uses, protection of open space, and development of environmentally-sustainable natural resource-based businesses. Communities need education targeted to their specific concerns, including the interaction of natural resources, the environment, and the economy.

Invasive species affect every region of New York State. Across the U.S., more than 4,500 non-indigenous species have established self-sustaining populations and pose a serious threat to agriculture, human health and the ecological integrity of our lands and waters. The economic and ecological impacts of invasive species are enormous. According to the New York State Invasive Species Task Force (2005), a coordinated statewide effort will be essential if New York is to meet the challenge. Cornell researchers and extension educators are conducting considerable invasive species research and educational programming.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Producers, local government, individuals, organizations, and businesses often are not fully aware of potential environmental impacts of their operations and/or requirements and opportunities of environmental regulations and programs.

Technical assistance providers relied upon by producers, local government, individuals, organizations, and businesses have parallel needs for current information on appropriate production practices.

Knowledge of the interactions of environmental resources, public health, quality of life, and local economies will lead to an involved, proactive citizenry.

It is possible to simultaneously meet economic and environmental sustainability goals; a sustainable, healthy economy depends on a healthy environment.

2. Ultimate goal(s) of this Program

Improved natural resources management efforts will result in enhanced and protected natural resources for multiple uses, including agroforestry, fishing, recreation, agriculture, recreation, tourism, and other businesses/industry.

The economic vitality of agricultural/natural resources and other businesses is improved, the health of individuals and families are enhanced, and local government operations are made more sustainable through the availability of high quality natural resources.

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
2008	9.9	0.0	6.0	0.0
2009	9.9	0.0	6.0	0.0
2010	9.9	0.0	6.0	0.0
2011	9.9	0.0	6.0	0.0
2012	9.9	0.0	6.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a statewide educational program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Demonstrations • Education Class • One-on-One Intervention • Group Discussion	• Public Service Announcement • Web sites • Newsletters • TV Media Programs

3. Description of targeted audience

Residents and property owners are targeted with stewardship and natural resources protection for their properties. Businesses, organizations, and producers are targeted with information improved management practices and alternative land uses, such as agroforestry. Local government and community leaders are targeted with information related to governmental management of natural resources, such as land use planning and open space preservation. Environmental planners and managers and technical assistance providers, such as foresters, are targeted with in-depth information related to their audiences/constituents.

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
2008	12000	100000	25000	35000
2009	12000	100000	25000	35000
2010	12000	100000	25000	35000
2011	12000	100000	25000	35000
2012	12000	100000	25000	35000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	290	0
2009	290	0
2010	290	0
2011	290	0
2012	290	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

2008 :25 **2009 :**25 **2010 :** 25 **2011 :**25 **2012 :**25

- # of agricultural/ natural resources producers and business representatives completing educational programs on managing natural resources, invasive species, and/or biodiversity. (4.1.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of organization and business representatives completing educational programs on managing natural resources, invasive species, and/or biodiversity. (4.1.2a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of local government officials and community leaders completing educational programs on managing natural resources, invasive species, open space preservation, alternative land uses and/or biodiversity. (4.1.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of consumers, residents, and landowners completing educational programs on natural resources protection, invasive species, and/or biodiversity. (4.1.4a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of teachers and youth professionals and volunteers completing educational programs on natural resources protection, invasive species, and/or biodiversity. (4.1.5a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth completing educational programs on natural resources protection, invasive species, and/or biodiversity. (4.1.6a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

Documented instances in which impleemtation of natural resources management. practices and/or land use policies lead to increased open space preservation, enhanced or protected natural resources, enhanced biodiversity, and/or increases in alternative land use. (4.1.3f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :75 **2009 :** 75 **2010 :** 75 **2011 :**75 **2012 :** 75

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships

- 104 - Protect Soil from Harmful Effects of Natural Elements
- 123 - Management and Sustainability of Forest Resources
- 124 - Urban Forestry
- 125 - Agroforestry
- 132 - Weather and Climate
- 134 - Outdoor Recreation
- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants

1. Outcome Target

Increased local economic activities attributable at least in part to enhanced natural resources management and/or increased alternative land uses. (4.1.3g)

2. Outcome Type : Change in Condition Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 125 - Agroforestry
- 134 - Outdoor Recreation

1. Outcome Target

Documented instances in which implementation of natural resources management practices by individual consumers, residents, and/or private landowners lead to increased open space preservation, enhanced or protected natural resources, enhanced biodiversity. (4.1.4d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :2500 **2009 :** 2500 **2010 :** 2500 **2011 :**2500 **2012 :** 2500

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 123 - Management and Sustainability of Forest Resources
- 124 - Urban Forestry
- 125 - Agroforestry
- 132 - Weather and Climate
- 134 - Outdoor Recreation
- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants

1. Outcome Target

# of youth documented to have chosen natural resources-related careers. (4.1.6e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 125 - Agroforestry
- 134 - Outdoor Recreation
- 136 - Conservation of Biological Diversity

1. Outcome Target

Documented instances in which implementation of natural resources management practices by agricultural/natural resources producers or other businsess persons lead to increased open space preservation, enhanced/protected natural resources, biodiversity and/or land use. (4.1.1d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 125 - Agroforestry
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of agricultural/natural resources producers and business representatives who demonstrate knowledge gains about managing natural resources, invasive species, and/or biodiversity. (4.1.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 123 - Management and Sustainability of Forest Resources
- 124 - Urban Forestry
- 125 - Agroforestry
- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants

1. Outcome Target

# of organization and business representatives who demonstrate knowledge gains about managing natural resources, invasive species, and/or biodiversity. (4.1.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources

- 136 - Conservation of Biological Diversity

1. Outcome Target

# of local government officials and community leaders who demonstrate knowledge gains about managing natural resources, invasive species, open space preservation, alternative land uses and/or biodiversity. (4.1.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of consumers, residents, and landowners who demonstrate knowledge gains about natural resources management, invasive species, and/or biodiversity. (4.1.4b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of teachers and youth professionals and volunteers who demonstrate knowledge gains about natural resources management, invasive species and/or biodiversity. (4.1.5b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of youth who demonstrate knowledge gains about natural resources management, invasive species and/or biodiversity. (4.1.6b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 134 - Outdoor Recreation
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of agricultural/natural resources producers and business representatives documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance natural resources and/or enhance biodiversity. (4.1.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2000	2000	2000	2000	0

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 125 - Agroforestry
- 132 - Weather and Climate
- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants

1. Outcome Target

# of organization and business representatives documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance natural resources and/or enhance biodiversity. (4.1.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
200	200	200	200	0

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 123 - Management and Sustainability of Forest Resources
- 125 - Agroforestry
- 132 - Weather and Climate
- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants

1. Outcome Target

# of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance natural resources and/or enhance biodiversity. (4.1.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
200	200	200	200	200

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants

1. Outcome Target

# of communities documented to have thoroughly assessed the status of their natural resources. (4.1.3d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	0

3. Associated Knowledge Area(s)

- 124 - Urban Forestry
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of producers, businesses, local governments, organizations, landowners, and individuals collaborate to develop and implement natural resources management strategies. (4.1.3e)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of consumers, residents, and landowners documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance natural resources and/or enhance biodiversity. (4.1.4c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3500	3500	3500	3500	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of teachers and youth professionals and volunteers who incorporate natural resources management and/or biodiversity knowledge into curriculum. (4.1.5c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
750	750	750	750	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 136 - Conservation of Biological Diversity

1. Outcome Target

# of youth documented to have modified existing practices and/or adopted new practices to protect/enhance natural resources and/or enhance biodiversity. (4.1.6c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1250	1250	1250	1250	1250

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources

- 136 - Conservation of Biological Diversity

1. Outcome Target

# of youth introduced to variety of environmental and natural resources career options. (4.1.6d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20000	20000	20000	20000	0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 134 - Outdoor Recreation
- 136 - Conservation of Biological Diversity

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters such as ice storms that damage large areas of forest can prompt action related to natural resources management. However, natural disasters can adversely affect the economy, limiting the ability to take action. Economic impacts of natural resources also can prompt action related to natural resources management, including willingness to spend money to make improvements. Appropriations, public policy, and regulations directly affect ability to pursue natural resources management practices.

Natural disasters such as floods and droughts can adversely affect the economy, limiting the ability to take action. Public health impacts of waste management can prompt action, including willingness to spend money to make improvements. Appropriations, public policy, and regulations directly affect ability to pursue waste management practices. Available markets for recycling and waste products can vary according to perceived risk factors.

Natural disasters such as floods and droughts can prompt action related to water resources management. However, natural disasters can adversely affect the economy, limiting the ability to take action. Public health impacts of water resources also can prompt action related to water resources management, including willingness to spend money to make improvements. Appropriations, public policy, and regulations directly affect ability to pursue water resources management practices.

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

1. Evaluation Studies Planned

- Case Study
- During (during program)
- Retrospective (post program)
- After Only (post program)

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using

methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- Unstructured
- Structured
- Case Study
- On-Site
- Sampling
- Mail
- Whole population
- Observation

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

4.2 Water Resources Management

2. Brief summary about Planned Program

The Water Resource Management Program is a multi-audience effort addressing agricultural and natural resource producers, community decision makers, businesses, organizations, and individual consumers. High quality and readily available water resources are critical not only for drinking and agriculture but for recreation, impacting most New York local economies; industry; and business. Current federal and state regulations place a great deal of emphasis and responsibility on local management of water resources. Continuing applied research and education on non-point source control; stormwater management; watershed management involving interaction of water, soil/land use management, waste management, and air; and resource allocation are critical to protecting, enhancing, and sustaining valuable water resources.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 111 30% Conservation and Efficient Use of Water
- 112 70% Watershed Protection and Management

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

1. Situation and priorities

With water quality ranging from one of the most polluted water bodies in the nation, if not the world (Onondaga Lake), to some of the highest quality drinking water supplies (the New York City watershed and Skaneateles Lake); large quantities; flooding to drought conditions; twenty municipal areas subject to the Phase II Stormwater Regulations; fisheries; prolific sole-source aquifers to thousands of individual wells in fractured bedrock; and groundwater problems ranging from over-demand to industrial pollution to agricultural pollution, New York State residents, local government, agriculture and other businesses, and organizations need current information on groundwater and surface water resources management for both quality and quantity purposes. Communities need education targeted to their specific concerns, including groundwater and surface water, stormwater, non-point source pollution control, water conservation, waste management, and interaction of water resources with other resources and the economy.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Producers, local government, individuals, organizations, and businesses often are not fully aware of potential environmental impacts of their operations and/or requirements and opportunities of environmental regulations and programs.

Technical assistance providers relied upon by producers, local government, individuals, organizations, and businesses have parallel needs for current information on appropriate production practices.

Knowledge of the interactions of environmental resources, public health, quality of life, and local economies will lead to an involved,

proactive citizenry.

It is possible to simultaneously meet economic and environmental sustainability goals.

2. Ultimate goal(s) of this Program

Improved water resources management efforts will result in enhanced and protected water resources for multiple uses, including drinking, fishing, recreation, agriculture, and industry.

The economic vitality of agricultural/natural resources and other businesses is improved, the health of individuals and families are enhanced, and local government operations are made more sustainable through availability of reliable quantities of high quality water.

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
2008	4.6	0.0	1.0	0.0
2009	4.6	0.0	1.0	0.0
2010	4.6	0.0	1.0	0.0
2011	4.6	0.0	1.0	0.0
2012	4.6	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a statewide educational program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Education Class • Group Discussion • Demonstrations • One-on-One Intervention	• TV Media Programs • Public Service Announcement • Web sites • Newsletters

3. Description of targeted audience

Residents and property owners are targeted with stewardship and water resources protection in their homes and on their properties. Businesses, organizations, and producers are targeted with information about reducing impacts of their operations. Local government and community leaders are targeted with information related to governmental management of water resources, such as land use planning. Environmental planners and managers and technical assistance providers are targeted with in-depth information related to their audiences/constituents. Teachers, youth professionals and volunteers are targeted with in-depth knowledge relevant to youth. Youth of all ages are provided with age and grade appropriate knowledge about water resources; activities to increase stewardship; and information about career opportunities.

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
2008	30000	250000	10000	15000
2009	30000	250000	10000	15000
2010	30000	250000	10000	15000
2011	30000	250000	10000	15000
2012	30000	250000	10000	15000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	40	0
2009	40	0
2010	40	0
2011	40	0
2012	40	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :2 **2009 :**2 **2010 :** 2 **2011 :**2 **2012 :**2

- # of agricultural/natural resources producers and business representatives completing educational programs on managing water resources. (4.2.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of organization and business representatives completing educational programs on managing water resources. (4.2.2a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of local government officials and community leaders completing educational programs on managing water resources and the relationship between water resources and land use management. (4.2.3a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of consumers, residents, and landowners completing educational programs on water resources protection. (4.2.4a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of teachers and youth professionals and volunteers completing educational programs on water resources. (4.2.5a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth completing educational programs on water resources protection. (4.2.6a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of agricultural/natural resources producers and business representatives who demonstrate knowledge gains about managing water resources. (4.2.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of organization and business representatives who demonstrate knowledge gains about managing water resources. (4.2.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of local government officials and community leaders who demonstrate knowledge gains about managing water resources and the relationship between water resources and land use management. (4.2.3b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of consumers, residents, and landowners who demonstrate knowledge gains about water resources protection. (4.2.4b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of teachers and youth professionals and volunteers who demonstrate knowledge gains about water resources protection. (4.2.5b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of youth who demonstrate knowledge gains about water resources protection. (4.2.6b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of agricultural/natural resources producers and business representatives documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance water resources. (4.2.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 : 3500	**2009 :** 3500	**2010 :** 3500	**2011 :** 3500	**2012 :** 3500

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of organization and business representatives documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance water resources. (4.2.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 : 750	**2009 :** 750	**2010 :** 750	**2011 :** 750	**2012 :** 750

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance water resources. (4.2.3c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
175	175	175	175	175

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of communities documented to have thoroughly assessed the status of their water resources. (4.2.3d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25	25	25	25	25

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of producers, businesses, local governments, organizations, landowners, and individuals that collaborate to develop and implement water resources management strategies. (4.2.3e)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of consumers, residents, and landowners documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance water resources. (4.2.4c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
7500	7500	7500	7500	7500

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of teachers and youth professionals and volunteers who incorporate water resources management knowledge into curriculum. (4.2.5c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
200	200	200	200	200

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of youth documented to have modified existing practices and/or adopted new practices to protect/enhance water resources. (4.2.6c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2000	2000	2000	2000	2000

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of youth introduced to variety of environmental and natural resources career options. (4.2.6d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25000	25000	25000	25000	25000

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of agricultural/natural resources producers and business representatives documented to have improved and/or protected water resources. (4.2.1d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1750	1750	1750	1750	1750

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

Documented instances in which resource managers credit Implementation of improved water resources management practices for lower costs for remediation. (4.2.2d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
15	15	15	15	15

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

# of communities documented to have established or modified land use and development policies to enhance and protect water resources. (4.2.3f)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20	20	20	20	20

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water

- 112 - Watershed Protection and Management

1. Outcome Target

# of youth documented to have chosen water resources-related careers. (4.2.6e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

Documented instances in which resource managers credit improved groundwater and surface water quality, decreased flooding, and/or decreased over-use of water supplies to implementation of improved water resources management practices. (4.2.7a)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

Documented instances in which public health officials credit decreased public health risks to implementation of improved water resources management practices. (4.2.7b)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

1. Outcome Target

consumers, residents, and landowners documented to have modified existing practices or technologies and/or adopted new management practices to protect/enhance water resources. (4.2.4d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3500	3500	3500	3500	3500

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 112 - Watershed Protection and Management

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters such as floods and droughts can prompt action related to water resources management. However, natural disasters can adversely affect the economy, limiting the ability to take action. Public health impacts of water resources also can prompt action related to water resources management, including willingness to spend money to make improvements. Appropriations, public policy, and regulations directly affect ability to pursue water resources management practices.

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

1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Retrospective (post program)
- Case Study

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- On-Site
- Other (Web Survey)
- Whole population
- Sampling
- Unstructured
- Observation
- Mail
- Structured
- Case Study
- Telephone

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

4.3 Waste Management and Prevention

2. Brief summary about Planned Program

The Waste Management Program is a multi-disciplinary program that addresses waste management problems and broader issues of waste generation and composition, waste reduction, risk management, environmental equity and public decision-making. Major goals are to improve the ability of local officials, businesses and the public to make informed waste management decisions and to enhance the competency of solid waste professionals through increased training opportunities. Up to date, objective, research-based knowledge is extended to a wide range of audiences, including county solid waste personnel, wastewater treatment plant operators, state and local highway personnel, state agencies, agricultural producers, individual home and landowners, and youth.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 133 86% Pollution Prevention and Mitigation
- 403 14% Waste Disposal, Recycling, and Reuse

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

1. Situation and priorities

With a wide range of waste producers, including individual, agricultural, industrial, and government, New York residents, agricultural producers, businesses and industry, and government need current information and solutions on techniques for managing waste, reducing waste at the source, managing risk and environmental inequities resulting from waste generation and disposal practices.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Producers, local government, individuals, organizations, and businesses and industry often are not fully aware of potential environmental impacts of their operations and/or requirements and opportunities of environmental regulations and programs.

Technical assistance providers relied upon by producers, local government, individuals, organizations, and businesses and industry have parallel needs for current information on appropriate waste management and reduction practices.

Knowledge of the interactions of environmental resources, public health, quality of life, and local economies will lead to an involved, proactive citizenry.

It is possible to simultaneously meet economic and environmental sustainability goals.

2. Ultimate goal(s) of this Program

Improved waste management and waste reduction efforts will result in an enhanced and protected environment, including soil, air, and water, and reduced risk for individuals and families.

The economic vitality of agricultural/natural resources and other businesses is improved, the health of individuals and families are enhanced, and local government operations are made more sustainable through waste reduction and economical and safe management of waste.

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
2008	2.4	0.0	0.5	0.0
2009	2.4	0.0	0.5	0.0
2010	2.4	0.0	0.5	0.0
2011	2.4	0.0	0.5	0.0
2012	2.4	0.0	0.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a statewide educational program entailing a wide range of applied research activities and multiple education methods depending on local context and need. Campus-based faculty and extension associates, regional specialists and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

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

Extension	
Direct Methods	Indirect Methods
• Group Discussion • Workshop • One-on-One Intervention • Education Class • Demonstrations	• Public Service Announcement • TV Media Programs • Web sites • Newsletters

3. Description of targeted audience

Residents and property owners are targeted with stewardship and waste reduction and management in their homes and on their properties. Businesses, organizations, and producers are targeted with information about reducing impacts of their operations. Local government and community leaders are targeted with information related to governmental management of waste, such as relationship between waste management and land use, effective recycling programs, and roadkill management. Environmental planners and managers and technical assistance providers are targeted with in-depth information related to their audiences/constituents. Teachers and youth professionals and volunteers are provided with curriculum and training. Youth are targeted with age appropriate education.

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
2008	5500	50000	2500	15000
2009	5500	50000	2500	15000
2010	5500	50000	2500	15000
2011	5500	50000	2500	15000
2012	5500	50000	2500	15000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	2	0
2009	2	0
2010	2	0
2011	2	0
2012	2	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- # of agricultural/natural resources producers and business representatives completing educational programs on managing and reducing waste. (4.3.1a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of organization and business representatives completing educational programs on managing and reducing waste. (4.3.2a)

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of local government officials and community leaders completing educational programs on managing and reducing waste and the relationship between waste and land use management. (4.3.4a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of consumers, residents, and landowners completing educational programs on waste reduction and management. (4.3.5a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth completing educational programs on waste management and reduction. (4.3.6a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of teachers and youth professionals and volunteers completing educational programs on waste management and reduction. (4.3.7a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of agricultural/natural resources producers and business representatives who demonstrate knowledge gains about waste management and reduction. (4.3.1b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of organization and business representatives who demonstrate knowledge gains about waste management and reduction. (4.3.2b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of local government officials and community leaders who demonstrate knowledge gains about waste management and reduction and the relationship between waste and land use management. (4.3.4b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of consumers, residents, and landowners who demonstrate knowledge gains about waste management and reduction. (4.3.5b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of youth who demonstrate knowledge gains about waste management and reduction. (4.3.6b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of teachers and youth professionals and volunteers who demonstrate knowledge gains about waste management and reduction. (4.3.7b)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of agricultural/natural resources producers and business representatives documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste. (4.3.1c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
2500	2500	2500	2500	2500

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of organization and business representatives documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste. (4.3.2c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	2009 :	2010 :	2011 :	2012 :
750	750	750	750	750

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of producers, businesses, local governments, organizations, landowners, and individuals who collaborate to develop and

implement waste reduction and management strategies. (4.3.3a)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of local government officials and community leaders documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste. (4.3.4c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
175	175	175	175	175

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of consumers, residents, and landowners documented to have modified existing practices or technologies and/or adopted new practices to manage and reduce waste. (4.3.5c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
3500	3500	3500	3500	3500

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of youth documented to have modified existing practices and/or adopted new practices to manage and reduce waste. (4.3.6c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
1250	1250	1250	1250	1250

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of youth introduced to variety of environmental and natural resources career options. (4.3.6d)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
20000	20000	20000	20000	20000

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of teachers and youth professionals and volunteers who incorporate waste reduction and management knowledge into curriculum. (4.3.7c)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
100	100	100	100	100

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of agricultural/natural resources producers and business representatives documented to have improved waste management practices. (4.3.1d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of organizations and businesses documented to have established or modified waste management policies to enhance and protect land and water resources. (4.3.2d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
750	750	750	750	750

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

Documented instances in which resource managers credit reduced risk from waste handling and disposal; decreased waste volume; and improved environmental equity to implementation of improved waste management practices. (4.3.3b)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
50	50	50	50	50

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of local government officials and community leaders documented to have established or modified waste management policies to enhance and protect land and water resources. (4.3.4d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
25	25	25	25	25

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation

- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of consumers, residents, and/or landowners, documented to have improved waste management practices. (4.3.5d)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2500	2500	2500	2500	2500

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

# of youth documented to have chosen waste management-related careers. (4.3.6e)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

Documented instances in which public health officials credit decreased public health risks to implementation of improved waste management practices. (4.3.8a)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

Documented instances in which resource managers credit lower costs for remediation to implementation of improved waste management practices. (4.3.8b)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
0	0	0	0	0

3. Associated Knowledge Area(s)

- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters such as floods and droughts can adversely affect the economy, limiting the ability to take action. Public health impacts of waste management can prompt action, including willingness to spend money to make improvements. Appropriations, public policy, and regulations directly affect ability to pursue waste management practices. Available markets for recycling and waste products can vary according to perceived risk factors.

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

1. Evaluation Studies Planned

- During (during program)
- Case Study
- Retrospective (post program)
- After Only (post program)

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

2. Data Collection Methods

- Whole population
- Case Study
- Sampling
- Telephone
- Mail
- Unstructured
- Observation
- Structured
- On-Site

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected "success stories."

V(A). Planned Program (Summary)

1. Name of the Planned Program

5.1 Youth in Action

2. Brief summary about Planned Program

contributions to strengthen or enhance NY communities. These efforts have many different foci including preventing youth tobacco use, promoting youth employment, creating youth-friendly spaces, establishing healthy environments, and increasing community safety. Participating youth gain in six competency domains: cultural, personal, civic, political, cognitive, and social skills. Intended outcomes are that youth are respected as learners and teachers, that specific knowledge and skill gains are made, that youth gain positive attitudes about their ability to create desirable change, that participants aspire to continued civic and service activities, that lasting contributions are made to communities, and that adults and communities recognize youth as valued partners.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 806 100% Youth Development

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

1. Situation and priorities

Purposeful action requires that we design learning experiences for youth to attain a voice; build youth/adult partnerships through staff and volunteer development, and actively engage youth in curriculum and program efforts.

In its broadest sense, YCA refers to the authentic and meaningful engagement of young people in programs, organizations, and communities, where they have or share voice, influence, and decision-making authority. Youth-adult partnerships are more than good youth development. Young people's fresh ideas, conviction and willingness to work hard make them ideal partners in community change and social justice initiatives. Real youth-adult partnerships require young people and adults to share both power and responsibility, to listen and really hear one another, and to set aside all the stereotypes that each group represents to the other.

The youth community action movement underscores the importance of young people being engaged in leadership and / or decision-making roles now, not only at some point in the future when they have reached 'adulthood'. Youth-adult partnerships, based on mutual respect and trust, unleash the potential of both young people and adults, and provide a powerful tool to create positive and lasting change for individuals, organizations, and communities.

"Imagine a world where young people are fully engaged in decision-making about the issues that affect them. What challenges might they identify? What solutions might they discover? What would our communities—and nation—look like if youth were a meaningful and vital part of the process? The underlying concept of Youth in Governance [Youth Community Action] regards young people as necessary, fully engaged participants in their communities. Rather than seeing young people as "future citizens" or "future leaders," Youth in Governance [YCA] regards youth as capable individuals who contribute in meaningful, authentic ways to the organizations and communities where they live, learn, work, and play. – Carole MacNeil, Ph.D. Statewide Director, 4-H Youth Development, University of California at Davis Youth in Governance, Youth in Action: A National 4-H Initiative for Systemic Change.

2. Scope of the Program

- Multistate Extension
- In-State Extension

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

1. Assumptions made for the Program

Positive - Youth Community Action (YCA) empowers youth and adults by building life skills through experiential learning. YCA initiatives support 4-H Youth Development mission to create supportive learning environments in which diverse youth and adults reach their fullest potential as capable, competent and caring citizens.

Negative - People wrongly assumed that YCA was a new program. Adults held the misconception that educators need to be 'experts' or 'in control' of the program. Educators found it hard to 'visualize' YCA contexts.

2. Ultimate goal(s) of this Program

Youth are community leaders making decisions and taking action on issues of public/community concern that impact their lives.

Diversity of community is reflected within and engaged as key stakeholders.

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
2008	12.8	0.0	0.0	0.0
2009	12.8	0.0	0.0	0.0
2010	12.8	0.0	0.0	0.0
2011	12.8	0.0	0.0	0.0
2012	12.8	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

A variety of educational strategies will be used to help county educators gain the skills and knowledge necessary to fully understand and differentiate between the range of possibilities that exist within the YCA initiative. As a result, youth development professionals will be able to identify what they are already doing well, notice if there are any gaps within their programs, and enhance existing programs. Provided with evaluation 'tools' they will be able to evaluate organizational readiness to embrace the YCA concept, and measure their success in working with groups

Guided trainings and successful implementation of the process at the county level will increase the numbers of Youth /Adult partnerships; will result in the development of strong community action initiatives, and ultimately policy changes within communities. Provided such a diverse range of educationalstrategies, educators will be able to select those methods that work best for them, and realize the benefits and value in establishing youth/adult partnerships.

County, District and Statewide workshops; news articles; web page trainings; spotlighting successful programs, and critical evaluation offer opportunities for skills development and sharing of work being done. Good evaluation data provides a powerful reporting mechanism that can be used to persuade members of the legislature to provide funding to county and state programs. It can also generate scholarly publications and reviews.

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

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Group Discussion • Education Class	• Web sites

3. Description of targeted audience

Youth 5 – 21 years of age and adults.
Youth, 5- 19 year of age are the targeted 4-H / non 4-H youth audiences
19 – 21 year olds are college students who work well with younger youth and serve as mentors and role models. They will gain personally and professionally from YCA efforts.
Adults (21+), of any age, ethnicity, religion, etc. They choose to serve as guides for the process, and are a very important part of any youth/adult driven project.
Communities as whole: educating / informing youth and adults organizations, businesses, schools, and other institutions, to create the paradigm shift necessary to realize the value of youth and adults working together to build 'community'.

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
2008	750	4500	5000	45000
2009	750	4500	5000	45000
2010	750	4500	5000	45000
2011	750	4500	5000	45000
2012	750	4500	5000	45000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :** 0 **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth participating in education programs leading to youth community action intitiatives. (5.1.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth participating in train-the-trainer programs related to youth community action. (5.1.1b)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of adults participating train-the-trainer programs related to youth community action. (5.1.1c)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of communities participating in youth community action initiatives. (5.1.1d)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of youth and adults demonstrating knowledge gains related to Youth/Adult Partnerships and Youth Community Action Initiatives. (5.1.1d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth documented to have practiced life skills necessary to meet challenges of adolescence and adulthood in authentic decision-making partnerships with adults as a result of participating in the program. (5.1.1e)

2. Outcome Type : Change in Action Outcome Measure

2008 :4500 **2009 :** 4500 **2010 :** 4500 **2011 :**4500 **2012 :** 4500

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of adults documented to have knowledge, skills and abilities and behaviors necessary to assist youth developing into productive community members as a result of participating in the program. (5.1.1f)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
650	650	650	650	650

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of documented instances in which youth and adults partner to improve quality of life within a community as a result of participating in the program. (5.1.1g)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
500	500	500	500	500

3. Associated Knowledge Area(s)

- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Programatic Challenges
- Competing Public priorities

Description

Moving individuals and systems to do things differently, is often difficult. The Youth in Action initiative requires a shift in how things are done. How do adults go from 'doing' for youth to 'working together to accomplish goals'. Often youth are the 'doers' and the 'receivers'. Youth are picking up the trash, collecting the food items; raking the leaves/ being told what to do and when. Youth may not believe that they are capable of doing anything more than what is asked of them. Many adults and youth have never learned how to work together/ or partner successfully with youth. Youth may never have been asked their thoughts on an issue. It's a whole new way of doing things and it takes time to make it happen. Education and acceptance is going to take time.

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

1. Evaluation Studies Planned

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

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation "system" rather than as bounded "studies" or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use. In addition, we will be creating measurement instruments and an overall framework of evaluation relevant to youth community action during the planning period.

2. Data Collection Methods

- Telephone
- Unstructured
- Structured
- Whole population
- Sampling
- Mail
- Observation
- On-Site
- Case Study

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

5.2 Positive Youth Development/Life Skill Development

2. Brief summary about Planned Program

Youth development is defined as an ongoing process through which young people meet their needs and develop the competencies they perceive as necessary for survival and transition to adulthood. Youth development refers to the development of the whole person and is not focused on a single attribute, skill, or characteristic, but rather the mastery of competencies needed for happy and productive adulthood. Positive
Youth Development is development that is positive and productive for both youth and their communities and occurs form an intentional process that promotes positive outcomes for young people by providing opportunities, choices, relationships, and the support necessary for youth to fully participate. In 4-H we talk about this intentional process in relationship to the essential elements that are necessary to ensure optimum development. Those essential elements that are critical to youth development and central to the 4-H experience are:
The opportunity to experience independence.
The opportunity to experience belonging.
The opportunity to experience generosity.
The opportunity to experience mastery.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 806 100% Youth Development

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

1. Situation and priorities

Youth development is defined as an ongoing process through which young people meet their needs and develop the competencies they perceive as necessary for survival and transition to adulthood. Youth development refers to the development of the whole person and is not focused on a single attribute, skill, or characteristic, but rather the mastery of competencies needed for happy and productive adulthood. Positive
Youth Development is development that is positive and productive for both youth and their communities and occurs form an intentional process that promotes positive outcomes for young people by providing opportunities, choices, relationships, and the support necessary for youth to fully participate. In 4-H we talk about this intentional process in relationship to the essential elements that are necessary to ensure optimum development. Those essential elements that are critical to youth development and central to the 4-H experience are:
1) The opportunity to experience independence.
2) The opportunity to experience belonging.
3) The opportunity to experience generosity.
4) The opportunity to experience mastery.

The development of life skills through experiential learning is the foundation of 4-H programming. Healthy youth development strives to help young people develop the inner resources and skills they need to cope with pressures that might lead them to unhealthy and antisocial behaviors. To successfully grow into mature, productive, and contributing citizens, young people need to acquire:
Health/physical skills – having the appropriate knowledge, attitudes and behaviors that will ensure current and future health
Personal/social skills – personal skills such as an ability to understand one's emotions and practice self discipline; and interpersonal skills such as working with others and developing and sustaining friendships
Cognitive/creative skills – a broad base of knowledge, knowledge application skills, life long learning skills and an ability to appreciate and demonstrate creative expression.

Vocational skills – understanding and awareness of life options and the steps necessary to accomplish them. Adequate preparation for work and family life.
Citizenship skills: understanding of the history and values of one's nation, community, race, ethnic and cultural heritage. Desire to be ethical and to be involved in contributing to the broader good. One of the most important issues facing the 4-H youth development program is how to best support youth in becoming productive, contributing individuals of society.
The importance of reaching youth in early adolescence is well documented in a number of studies. The NYS 4-H Club study results show that the process of youth development is positively influenced in multiple ways by 4-H Club membership. The majority of Club members felt they had gained multiple life skills, including public speaking, problem solving, goal setting, leadership and planning skills, self-confidence, citizenship, communication skills, academic gains, expanded horizons, organizational skills, respect for (and from) others, patience, tolerance, and "real world" experience from hands-on projects.
Youth who are unsupervised after school are much more likely to engage in activities that place them at risk (Galambos & Maggs, 1991; Steinberg, 1986). Participation in high quality after-school programs is linked with a lower incidence of problem behaviors, such as decreased academic failure, substance use, and delinquency (Newsome, & Ferrari, 2003). Youth who attend these programs have demonstrated improved academic behaviors (better school attendance, more positive school attitudes, and better grades) and improved personal and social skills (positive relationships with adults, opportunity to make new friends; greater self-concept & self-esteem.

2. Scope of the Program

- In-State Extension
- Multistate Extension

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

1. Assumptions made for the Program

Program educators and volunteers who work with youth need training and support in how to incorporate research findings and process into program design at the local level with a focus on how to meet the needs of youth at various stages of their development.

Opportunities are needed for youth that focus on specific aspects of life skill development.

Curriculum design should incorporate best practices for building life skill competencies and recognize how different delivery methods may impact life skill development.

Youth have different interests and needs and therefore respond differently to the same opportunities. They should have choices about which activities they participate in and they should have a chance to help shape those activities.

2. Ultimate goal(s) of this Program

Youth lead healthy, satisfying, productive lives.

Youth become caring and contributing members of society enhancing the quality of life for themselves, their families, and their communities.

Youth become life-long learners.

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
2008	46.5	0.0	0.5	0.0
2009	46.5	0.0	0.5	0.0
2010	46.5	0.0	0.5	0.0
2011	46.5	0.0	0.5	0.0
2012	46.5	0.0	0.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

4-H Youth Development Staff are recruited with Youth Development experience including an understanding in helping youth develop competencies or life skills. New professionals are introduced to 4-H youth development's system of developing life skills in youth through professional development opportunities using resources such as 4-H 101 and Advancing Youth Development. Staff and volunteers are trained in the use of the NYS 4-H Resource Directory to acquire approved curriculum throughout the nation to teach life skills to 4-H members based on their subject matter interests.

Volunteers in 4-H Youth Development are carefully recruited, screened and selected based on roles needed to promote life skill development in youth. Volunteers, including professional staff from other community agencies and schools, are trained, supported and evaluated to ensure understanding and ability to develop youth and life skills.

Trained 4-H Staff, teachers, community agency staff, volunteers, and teens lead youth in 4-H projects, which are a planned series of learning experiences through which youth develop knowledge, practical skills (woodworking, gardening, cooking, etc.) and life skills (decision-making, self-discipline, leadership, etc.) in a variety of settings. The development of life skills builds assets that promote positive learning and prepare young people for work and adult responsibilities. Statewide, regional, and county events are structured to showcase 4-H project work, to recognize 4-H youths accomplishments and to allow 4-H participants opportunities for developing mastery, independence, generosity and belonging.

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

Extension	
Direct Methods	Indirect Methods
• Workshop • One-on-One Intervention • Demonstrations • Group Discussion • Education Class	• Web sites • Billboards • Public Service Announcement

3. Description of targeted audience

There are four distinct audiences. The youth development educator is professional or paraprofessional staff employed by Cornell Cooperative Extension. The adult volunteer / leader accepts a role defined by a written volunteer position, does not receive compensation for work, and works directly with young people. The 4-H participant is a young person between the ages of 5 and 19 who chooses to participate in the program. The youth development educator / worker within the community works directly with young people and may or may not have formal training in the area of education or youth development.

Youth development educators must understand and be able to apply the intentional process that promotes positive outcomes for young people by providing support, relationships, and opportunities. Additionally, it is necessary for educators to have training and support in how to incorporate research findings process into program design. The adult volunteer leader must be trained in youth

development principles and practices to ensure that the program creates positive opportunities for young people to reach their full potential. Young people must have an active voice in program determination, implementation, evaluation, and policy development. The front line youth worker is provided training in the core concepts of a youth development approach and its implications for youth work practice.

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
2008	12000	60000	65000	90000
2009	12000	60000	65000	90000
2010	12000	60000	65000	90000
2011	12000	60000	65000	90000
2012	12000	60000	65000	90000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	2	0
2009	2	0
2010	2	0
2011	2	0
2012	2	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

  2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

  2008 :1 **2009 :**1 **2010 :** 1 **2011 :**1 **2012 :**1

- # of youth program educators and adult volunteers participating in programs on positive youth development. (5.2.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth participating in projects related to vocational skills and/or citizenship. (5.2.1b)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of youth participants who demonstrate gains in vocational/citizenship skills – knowledge, attitudes, and/or behaviors. (5.2.1c)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth participants who learn to set goals, make plans and identify resources to achieve goals. (5.2.1d)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth program educators and adult volunteers who demonstrate knowledge and/or skill gains in meeting the needs of youth at various stages of development. (5.2.1e)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth participants who demonstrate ability to express their ideas confidently and competently. (5.2.1f)

2. Outcome Type : Change in Action Outcome Measure

2008 :30000 **2009 :** 30000 **2010 :** 30000 **2011 :**30000 **2012 :** 30000

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of adult volunteers documented to mentor and advise youth and other adult volunteers in an effective and positive manner. (5.2.1g)

2. Outcome Type : Change in Action Outcome Measure

2008 :16000 **2009 :** 16000 **2010 :** 16000 **2011 :**16000 **2012 :** 16000

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth participants documented as serving in age-appropriate leadership roles. (5.2.1h)

2. Outcome Type : Change in Action Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
2500	2500	2500	2500	2500

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth organizations/programs documented as reflecting youth needs, interests, and excitement for learning. (5.2.1i)

2. Outcome Type : Change in Condition Outcome Measure

2008 :	**2009 :**	**2010 :**	**2011 :**	**2012 :**
450	450	450	450	450

3. Associated Knowledge Area(s)

- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Populations changes (immigration,new cultural groupings,etc.)
- Economy
- Competing Programatic Challenges

Description

Fiscal pressures internal to Extension and among community organizations influence the scope and quality of programming available to youth. Increasing diversity of our populations creates need for a broader array of program materials and strategies and for a focus on multicultural competencies.

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

1. Evaluation Studies Planned

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

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

Targeted studies are planned in the areas of youth participation, youth success stories, and program development. Evaluation will monitor youth over a period of time to determine the impact that 4-H participation has on the development of life skills with particular emphasis on the acquisition of vocational/citizenship skills, communication skills, leadership skills and goal setting. The most simple evaluation study will be gathered from the annual ES-327 Blue Ribbon Youth Enrollment data. The ES-237 collects

data from what programs and projects were participated in throughout the 4-H calendar year. Evaluation studies that allow data to be analyzed from a Before-After aspect will be conducted at various events on Campus like Career Exploration and Public Presentations. Other evaluation studies will focus on how well educator staff and volunteers incorporate best practices of positive youth development and life skill development into 4-H youth development programming.

2. Data Collection Methods

- Sampling
- Observation
- Mail
- Unstructured
- Whole population
- On-Site
- Case Study
- Telephone
- Structured

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”

V(A). Planned Program (Summary)

1. Name of the Planned Program

5.3 Science and Technology Literacy

2. Brief summary about Planned Program

Youth participate in educational 4-H activities centered in environmental education, biological and physical sciences, plant and animal sciences, technology and engineering, food and nutrition, and textiles and apparel.

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

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

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

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

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 806 100% Youth Development

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

1. Situation and priorities

In international comparisons, U.S. student performance in mathematics and science is at or below levels attained by students in other countries in the developed world (Science and Engineering Indicators 2004, National Science Board). The longer students stay in the current system the worse they do. According to the 1995 Third International Mathematics and Science Study, U.S. fourth graders ranked second. By twelfth grade, they fell to 16th, behind nearly every other industrialized rival and ahead of only Cyprus and South Africa. (No Child Left Behind, U.S. DOE)
A survey of more than 1700 Science Educators found that 68% of those polled cite science literacy as "essential" for adults (Bayer Corporation, 1999). Hands-on learning has been shown to increasing learning and achievement in science content (Mattheis & Nakayama, 1988; Brooks, 1988; Saunders & Shepardson, 1984; Bredderman, 1982). Research indicates that activity-based science can improve students' attitudes toward science (Rowland, 1990; Kyle, et al., 1988; Jaus, 1977; Kyle et al, 1985). Evidence clearly indicates that hands-on activities increase skill proficiency in processes of science, especially laboratory skills and specific science process skills, such as graphing and interpreting data (Mattheis & Nakayama, 1988). In a 1999 study of NYS 4-H club members, 80.9 percent of members surveyed reported that they prefer hands-on projects and 36.9 percent reported that it was the most important component of their club experience. (Mead et al, 1999).

Research links experiential learning with higher student performance in mathematics and science. 4-H has succeeded in providing such learning opportunities to kids. Approximately 500,000 New York state youth participate in educational 4-H activities centered in environmental education, biological and physical sciences, plant and animal sciences, technology and engineering, food and nutrition, and textiles and apparel. In fact, 77% of all 4-H curriculum has a science and/or technology focus. The strong connection to science and technology exists, in part, because of the connection to Cornell and other land grant universities.

The Science and Technology Program Work Team is working to strengthen the connections between science and technology initiatives at Cornell University, other land grant universities and the Cornell Cooperative Extension Associations. The Science and Technology PWT is working on the NYS 4-H Resource Directory, making additional outreach connections and promoting staff development focused on outreach and science and technology.

2. Scope of the Program

- In-State Extension
- Multistate Extension

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

1. Assumptions made for the Program

Many 4-H educators and 4-H volunteers are not aware of the many different resources or opportunities that are available to them to

enhance science and technology learning in their 4-H programs.

Curriculum and program design should incorporate best practices for building life skill competencies and recognize how different delivery methods may impact learning.

Youth have different interests and needs and therefore respond differently to the same opportunities. They should have choices about which activities they participate in and they should have a chance to help shape those activities.

The uniqueness of 4-H is its connection to the land grant university system.

Many opportunities exist to connect youth to the educational resources of Cornell University in the area of science and technology.

2. Ultimate goal(s) of this Program

Youth become knowledgeable, contributing participants in science and technology-related issues in their communities and chosen professions.

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
2008	9.7	0.0	0.0	0.0
2009	9.7	0.0	0.0	0.0
2010	9.7	0.0	0.0	0.0
2011	9.7	0.0	0.0	0.0
2012	9.7	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This is a comprehensive, statewide educational program entailing a wide variety of applied research and multiple education methods depending on local context and need. Campus-based faculty and extension associates, the science and technology program work team, the NYSACCE4-HE professional development committee and county-based educators all are involved in designing, implementing, and evaluating tailored educational efforts depending on the focus and scope of their role.

Activities will include:
Connecting kids to science and technology at Cornell University through programs at local Cornell Cooperative Extension associations, educational events at Cornell and by building relationships with Cornell Departments, faculty, staff and students.
Enhancing and maintaining accessibility to hands-on science and technology curriculum that has a youth development basis and a connection to land grant universities through the NYS 4-H Resource Directory.

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

Extension	
Direct Methods	Indirect Methods
• One-on-One Intervention • Workshop • Other 1 (Provide Curricula) • Education Class	• Web sites

3. Description of targeted audience

The target audiences for 4-H Science and Technology programming and curricula are youth in grades K-12 and adults who work with youth. These include, but are not exclusive of 4-H Leaders, 4-H Junior Leaders, and 4-H youth members, parents of 4-H members, adult leaders and the youth involved in after school and out-of-school-time programs, summer camp staff and youth campers, classroom teachers and their students in grades K-12, and leaders and youth in other youth serving organizations such as Scouts. Training one adult leader will result in a significant multiplier of youth who will participate in the activity from which their adult leader received training. This audience is reached directly though educational classes and workshops, individual consultations, group consultations and hands-on-curricula. These may be provided to youth or to their adult leaders. Additional contacts are made through newsletter articles highlighting curricula and curriculum reviews. The New York State 4-H Curriculum Resource Directory website provides and opportunity for any person to search for approved curricula in any Science and Technology topic, read a description of the curricula and then purchase it.

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
2008	750	24000	35000	50000
2009	750	24000	35000	50000
2010	750	24000	35000	50000
2011	750	24000	35000	50000
2012	750	24000	35000	50000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- # non-credit instructional activities directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # non-credit instructional activity contact hours directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # funded applied research projects directed to this program.

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of 4-H members enrolled in Science and Technology project areas (as reported on ES-237). (5.3.1a)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

- # of youth reached through school enrichment and special interest programs coded as science and technology related (as reported on ES-237). (5.3.1b)

2008 :0 **2009 :**0 **2010 :** 0 **2011 :**0 **2012 :**0

V(I). State Defined Outcome

1. Outcome Target

# of members/participants who choose science/technology related college majors/careers. (5.3.1g)

2. Outcome Type : Change in Condition Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of participants demonstrating knowledge or skill gains related to science and technology. (5.3.1c)

2. Outcome Type : Change in Knowledge Outcome Measure

2008 :0 **2009 :** 0 **2010 :** 0 **2011 :**0 **2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of participants that report improved success in school science and/or increased interest in science and technology. (5.3.1d)

2. Outcome Type : Change in Action Outcome Measure

2008 :12000 **2009 :** 12000 **2010 :** 12000 **2011 :**12000 **2012 :** 12000

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of members/participants who report participating in new science/technology related activities (Career Exploration workshops, Special Interest offerings, school science clubs, etc.). (5.3.1e)

2. Outcome Type : Change in Action Outcome Measure

2008 :7500 **2009 :** 7500 **2010 :** 7500 **2011 :**7500 **2012 :** 7500

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

# of youth documented to become contributing participants in sci/tech related issues in their communities and/or choose

sci/tech related professions and who attribute same at least in part to involvement with the program. (5.3.1f)

2. Outcome Type : Change in Condition Outcome Measure

2008 : 0	**2009 :** 0	**2010 :** 0	**2011 :** 0	**2012 :** 0

3. Associated Knowledge Area(s)

- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Programatic Challenges
- Public Policy changes
- Populations changes (immigration,new cultural groupings,etc.)

Description

Changing educational standards influence acceptability of existing curricula. Regional demographic differences and differences across communities influence both needs and program strategy.

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

1. Evaluation Studies Planned

- Comparison between locales where the program operates and sites without program intervention
- During (during program)
- Before-After (before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Time series (multiple points before and after program)

Description

The evaluation approach for this and all other logic models included in our plan is more accurately described as an evaluation “system” rather than as bounded “studies” or investigations. Because each of the plans addresses a broad combination of applied research and extension initiatives spanning multiple audiences, methods, and intended outcomes, a combination of routine program monitoring and documentation, near-term outcome assessment, and targeted follow-up activities is required to provide comprehensive assessment. In addition, specialized data needs of funding partners must be addressed, sometimes using methods and/or accountability structures required by the funders. In support of each of the logic models, we provide educators with recommended evaluation strategies and, where available, recommended standard instruments for their use.

Targeted studies are planned in the areas of youth participation, youth success stories, and program development with the focus of developing scientifically literate youth through connections to Cornell resources. The Science and Technology Program Work Team will conduct a variety of evaluation studies that will allow for monitoring of youth involvement in programs with a science and technology focus. The most simple evaluation study will be gathered from the annual ES-327 Blue Ribbon Youth Enrollment data. The ES-237 collects data from what programs and projects were participated in throughout the 4-H calendar year. Evaluation studies that allow data to be analyzed from a Before-After aspect will be conducted at various events on Campus like Career Exploration and Animal Crackers. Other evaluation studies will focus on programs offered at the county level, and how they correlate to youth involvement to programs at Cornell.

2. Data Collection Methods

- Other (e-mail survey)
- Whole population
- Mail

Description

Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. Each local site uses a different mix of these methods appropriate to their level of investment in the program. (The mix of Cornell Cooperative

Extension programs in local extension units largely is determined by that unit.) Each local extension unit annually provides via a web-based reporting system program participation data, reports against an output/outcome template derived from the approved Federal plan of work, and selected “success stories.”
The benefit of collecting success stories is that it allows for a qualitative base to the Sci-Tech program. While the data collection from the ES-237 will be helpful, it won't tell us the specific experiences and knowledge that youth are gaining from being involved in Sci-Tech projects and programs. Basic program documentation and monitoring activities include simple logging of program outputs and participation, including required equal program opportunity data. Program outcome data is collected through direct observation, participant feedback before, during, and after programs, systematic collection of anecdotal information, and delayed follow-up surveys. The Sci-Tech Program Work Team will collect data from the whole population of youth through surveys done by mail, email, and on-site at state-wide and county events. Youth will be encouraged to report success stories through their county educators and program coordinators. Such success stories will allow the Sci-Tech PWT to monitor improved success in academics and interest in new science and technology related activities.