

FY2003 Annual Report
University of New Hampshire Cooperative Extension
March 10, 2004

Submitted by: John E. Pike
Dean and Director
59 College Road
Taylor Hall
Durham, NH 03824
603/862-1520
603/862-1585 (fax)
john.pike@unh.edu

Contents

Introduction	2
Section A - Planned Programs	3
Goal 1	3
Goal 2	13
Goal 3	17
Goal 4	20
Goal 5	32
Management Goals	53
Section B - Stakeholder Input Process	54
Section C - Program Review Process	55
Section D - Evaluation of Success of Multi and Joint Activities	55
Section E - Multi-State Extension Activities	56
Section F - Integrated Research and Extension Activities	59

Introduction

The University of New Hampshire Cooperative Extension provides New Hampshire residents with research-based information, enhancing their ability to make informed decisions that strengthen youth, families and communities, sustain natural resources, and improve the economy. As a University outreach program, our network of professional Extension staff resides in all 10 New Hampshire counties. County staff work with local volunteers and specialists on the UNH campus to design and conduct educational programs that meet societal, environmental and economic needs. While many of our programs are conducted locally, we also use current communication technologies including computer networking, computer based courseware, phone and web conferencing and interactive video conferencing. As part of the national land-grant university system, we also access the knowledge and expertise of other state land-grant universities throughout the United States. Cooperative Extension derives its name from the partnership structure that combines federal, state and county funding. This “cooperative” effort ensures all people have local access to a public university and its knowledge and resources to address needs and problems. The University of New Hampshire serves the state as the principle land-grant university charged by Congress to conduct resident instruction, research, and outreach to people beyond the formal classroom.

UNH Cooperative Extension employs approximately 90 Extension Educators and additional program staff who plan, conduct and evaluate educational programs. Programs derive from two broad program areas - Youth, Families and Communities, and Natural Resources. These areas are supported by staff in five program groups: 4-H Youth Development, Family and Community Development, Agricultural Resources, Forestry and Wildlife, and Sea Grant and Water Resources. State Program Leaders manage each program group.

UNH Cooperative Extension commits to increased programming for under-served and under-represented audiences. These individuals participate mainly through program efforts in Nutrition Connections and the Family Lifeskills Programs, part of the state’s welfare reform effort. 4-H camping and after school programs also involve a significant number of under-served families. Staff working in these programs build trust and rapport with under-represented audiences, and help Extension advisory councils understand the audience’s needs and circumstances. Issues for the under-served and under-represented are incorporated into the state’s plan of work and accomplishments during FY2003 are highlighted in this report.

Program accomplishments in this report respond to high priority needs in New Hampshire identified through comprehensive statewide needs assessment conducted in 1999. Extension advisory councils and stakeholders systematically analyzed data collected and identified the highest priority needs. These needs include:

Natural Resources Needs (includes land use, the environment, agriculture, forestry, wildlife, water and marine resources)

1. Land use, land & water conservation, and open space preservation.
2. Sustaining the economic value and impact of natural resources and natural resources-related industries.
3. Increasing the visibility and marketing of Extension’s expertise and assistance to support natural resources and natural resources-related industries.

Family and Youth Needs

1. Strengthening families - balancing work, family and community roles, parent education/pre-parenting education, resiliency, and family functioning.
2. Life skill development for youth - workforce preparation, character education, and social responsibility.
3. Family resource management - time, money, other.
4. Wellness - healthy lifestyles including nutrition, physical activity, food safety.

Broad State Needs

1. Community Involvement/Sustainability - community decision-making, educating elected officials, leadership development, community forums, balanced growth, and user-friendly town government.

Based on the statewide needs assessment, final analysis and ranking by the State Extension Advisory Council, the following goals served as the basis for the FY2000-2004 Plan of Work. These goals provide the framework for the following FY2003 program accomplishments.

A. Planned Programs

Goal 1 - An Agricultural System that is Highly Competitive in the Global Economy

Executive Summary

a. Increased direct-marketing of local products resulted through self-guided evaluations and Farmers market research enhanced agricultural marketing. Farm profitability increased by reducing inputs, using alternative systems, and enhancing management and marketing practices. A statewide consumer survey entitled, "Buying Products Directly from Farmers and Valuing Agriculture: Behavior and Attitude of New Hampshire Food Shoppers" was conducted and distributed to 500 growers. Animal agriculture this year focused on livestock management and reducing disease transfer by maintaining farm bio-security. Extension developed a comprehensive program to increase the adoption of management intensive grazing by the state's dairy and livestock producers. Planned outcomes include reduced soil erosion and soil compaction, more uniform and less costly manure distribution, and less soil and manure runoff in surface water. Preliminary results of joint farmer and university research on culture techniques for rainbow smelt will be feasible in the next year or two for local aquaculture.

b. The increased participation in local farmers markets in New Hampshire results in increased sales of locally produced commodities and promotion of local agriculture. Extension educators explored new agricultural alternatives and farmers adopted several, including growing herbs and specialty greens, using high-tunnel greenhouses, growing kale as a crop, planting warm season grasses and growing oil seed plants for biodiesel. UNH Cooperative Extension met the high demand for GIS, GPS and remote sensing training, helping municipalities and organizations address environmental issues and concerns. This technology was used by teachers for student mapping activities and environmental science curriculum. The GPS loan program supported multiple municipal projects. Risk management programs this year taught risk management tools and techniques for reducing and mitigating the adverse impact of production losses and price drops, along with farm transfers and business planning. New Hampshire farms face many risk factors including weather, unstable markets, cost of borrowing, restrictive legislation and

personnel issues. Over 300 New Hampshire fruit and vegetable growers participated in education about revenue and crop insurance options this year.

a. New Hampshire farmers have access to large numbers of consumers providing substantial opportunities for direct sales of agricultural products and related services and goods. This niche marketing opportunity, along with reducing inputs and cutting costs, help enable many farmers remain in business. In addition to the financial savings, there was an increase in production, customer safety, sales and employee training.

b. In January 2000, Cooperative Extension opened the *Family, Home & Garden Education Center* with trained volunteers who staff a toll-free Info Line and responded to over 7,000 calls in FY2003 from individuals seeking information about insect, disease and wildlife problems, soil testing, food safety water quality and related questions. For 30% of callers seeking chemical recommendations, either no pest control or proper use of environmentally friendly materials were recommended instead. More than 2,000 copies of the UNHCE publication, "The Best Landscape Plants for New Hampshire Gardens and Landscapes" were sold.

e. Extension trained 100 new Master Gardener volunteers in addition to 400 currently active Master Gardener volunteers. These individuals educate New Hampshire's citizens about making decisions that are economically and environmentally sound.

f. Total Expenditures:

Funding: Federal Smith-Lever b&c - \$200,113
State Matching Funds - \$1,052,844
County Funding - \$342,706
Grant & Other External Funding - \$150,648

FTEs - 23

Adding Value to New and Old Agricultural Products - Mike Sciabarrasi

A. Program Description: Proximity of New Hampshire farmers to markets and large numbers of consumers provide substantial opportunities for sales of agricultural products, related goods and services. Adding value to farm products through processing, packaging and services helps growers to improve net income. Consumers benefit in terms of higher quality products when farmers adopt marketing practices that make local farm products available. Marketing efforts focus on helping firms increase profits through greater understanding of local markets and improved marketing strategies. Seminar series and workshops frequently emphasize direct sales of high value, locally grown products to consumers and retail outlets.

In the past, teams incorporating Extension educators and researchers conducted numerous marketing site evaluations for garden centers and farm stands. Teams assisted growers throughout the state with design and evaluation of customer surveys. The current team emphasis includes distributing a self-guided evaluation booklet "The Garden Center Critique and Merchandising Guide" developed by UNH Cooperative Extension. Two farmers market sites were evaluated on merchandising practices and product offerings.

Research conducted in cooperation with the New Hampshire Department of Resource Economics and Development and NHAMF examined consumer-buying habits. A final publication “Buying Products Directly from Farmers and Valuing Agriculture: Behavior and Attitudes of New Hampshire Food Shoppers” was prepared and distributed statewide. The research findings were delivered across the state through nine seminars and presentations.

Other efforts include a New England livestock training program for professionals focused on value added products and a retail garden center seminar addressing new products and merchandising skills.

B. Impacts:

- 376 NH growers and producers gained a better understanding of consumer buying habits and improved their product marketing skills
- 5 NH growers received help developing customer surveys and evaluating results
- 2 NH farmers markets and 6 farm vendors learned more about group merchandising practices
- 30 New England agricultural professionals improved their understanding of livestock value added products and markets
- 75 New England garden center operators improved merchandising and new product valuation skills
- 15 garden centers outside New England requested the self-guided market valuation booklet

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: State specific

Agricultural Profitability - Seth Wilner

A. Program Description: Agricultural producers seek information and resources to improve the profitability of their businesses and farm enterprises. Requests for educational programs pertinent to the topic of agricultural profitability included: marketing skills, newly emerging niche markets and consumer trends, methods to improve the efficiency of farm business, record keeping and data analysis, tax planning, alternative crops and production techniques, whole farm planning, and risk management skills. A variety of educational efforts and methods addressed the topics above. These efforts included written materials such as newsletter articles and fact sheets, workshops, in-services, farm tours, one-on-one meetings and consultations by private sector specialists collaborating with UNH Cooperative Extension staff.

B. Impacts:

- As a result of educational efforts aimed at increasing producers knowledge about the impact of business signs, six farm businesses redesigned their road signs and two added new directional signs.
- Farm businesses in nine New Hampshire towns received garden center and farm stand critiques. These visits resulted in newly developed design plans, customer surveys, rerouted entrance roads, relocated sales buildings and new product displays and arrangements.
- Farmers market workshops (185 people attended five workshops) and farmers market vendor critiques (eight vendors) - increased producers’ knowledge on setting up at a

farmers market, properly storing perishable food and attractively displaying produce for clientele.

- Fifteen garden centers in Michigan, Florida, Ohio, New York and New Hampshire bought, “The Garden Center Critique and Merchandising Guide” was sold to 15 garden centers in Michigan, Florida, Ohio, New York, and New Hampshire. As a result, garden centers conducted a self-critique of their own operations, including customer surveys, to improve customer satisfaction and sales.
- UNH Cooperative Extension educators worked with the Town of Meredith to assist officials with the development of zoning regulations that favored roadside stands and garden centers.
- A statewide consumer survey entitled, “Buying Products Directly from Farmers and Valuing Agriculture: Behavior and Attitude of New Hampshire Food Shoppers” was performed and distributed to 500 growers. This increased producers’ knowledge about the products and services needed for farmers markets, farm stands, and pick your own operations.
- Five farm families participated in estate transfer meetings resulting in the transfer of the farm to the next generation.
- Five whole farm plans were developed with farm families to improve farm profitability.
- Twelve sites in New Hampshire followed recommended dwarf grass recommendations. As a result, mowing time was reduced by 50 percent.
- Education on the results of “no-pinch” mum trials resulted in approximately 60,000 mums grown with the no-pinch system. Savings realized equated to three cents per pinch per plant.
- Sixty-eight livestock producers attended pasture management workshops and pasture walks resulting in a measured increase in skills related to intensive grazing management skills.
- Integrated pest management education resulted in a savings over \$55,000 to nurseries and orchards as a result of lower inputs. Yield and quality were also preserved or improved.
- Risk management workshops and meetings held around the state increased the knowledge of agricultural producers in business planning, marketing plans, crop insurance opportunities and crop diversification options.
- Agricultural engineering visits to 30 farms resulted in \$42,000 of savings from implementing suggested improvements, repairs and construction designs.

B. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

C. Scope of Impact: Multi-state

Animal Health/Animal Production Efficiency - Pete Erickson

A. Program Description: Beginning goat farmers learned about nutrition and breeding of goats. Goat management and poultry management workshops looked at small ruminant nutrition, basic reproductive physiology, and how to become a licensed dairy. Goat dairy farmers learned about basic nutrition and reproduction, including a fundamental description of why goats eat what they do and how to breed goats for future lactations. Dr. Mike Darre, Poultry Specialist from UConn presented a three-hour session on housing requirements, lighting, nutrition, health management and choosing the right flock. The target audience included part-time and beginner farmers.

Three sessions on the impacts of lighting management on dairy production targeted the dairy producer. Approximately five farms were represented from the Connecticut Valley Region. Two calf management sessions took place for dairy producers and dairy farm employees. Approximately 15 farms were present. The discussion covered how dairy producers can improve calf health and decrease production costs through the correct use of colostrums, water and milk replacer. Producers gained knowledge in calf management, that water is critical to calf growth and larger calves can be bred earlier resulting in a decreased cost of rearing.

Independent farm visits were conducted on improving the use of farm grown forages. Discussions included particle size, mixing and additives to improve forage digestibility.

B. Impacts:

- Participants sought more information, along with two more sessions on goat housing, management, health and breeding
- New producers spent less money on veterinary costs and produced a viable food product more economically
- With better understanding of flock management, producers reduced losses due to death and disease
- Proper housing, parasite management and disease prevention increased efficiency and profitability
- Data presented described the benefit of increasing lighting in the dairy barn to 16 hours of light followed by 8 hours of darkness. Results showed an increased production of 5-10 pounds of milk /cow per day. Economically this increases gross margin by \$ 0.5-1.11/cow per day. Producers increased milk production at a low cost by putting barn lights on a timer

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: Multi-state

Aquaculture - J-J Newman

A. Program Description: The UNH Cooperative Extension aquaculture program works with both existing and potential aquatic farmers in an effort to increase family income, increase employment options for struggling commercial fishermen and farm diversity, reduce risk, increase family access to fresh, high-quality fish and shellfish for the table, and find new uses for unproductive land and old buildings. Efforts included:

- Direct assistance to individual farmers in New Hampshire, Maine, Vermont and Massachusetts, in consultation with local Extension personnel
- Educational workshops and tours, for a New England-wide audience, on aquaculture topics
- Demonstration/research projects at university facilities and private farms
- Connecting individuals, state aquaculture associations and a local fisherman's cooperative with university researchers

B. Impacts:

- Four baitfish farmers and dealers from Maine, New Hampshire and New York are helping UNH Cooperative Extension, University of Delaware researchers, state natural resource

agency personnel and Sea Grant and land grant university Extension throughout the Northeast to describe the bait marketing industry in this 12-state region. Results will be used by current and prospective bait farmers to make aquaculture business decisions.

- Twenty people in New Hampshire, Maine, Vermont, Massachusetts and New York attended a workshop on raising fish in small, indoor systems. These new aquaculturists learned the basics of rearing freshwater fish, management of indoor fish culture systems, fish health and construction of small, recirculating aquaculture systems.
- Joint farmer/university research on culture techniques for rainbow smelt continues to make progress. Work on larval feeding and training to artificial feed is nearly complete. This coming year will involve work on commercial-type growout in both pond and tank environments. It appears local production of smelt for sale as bait will be entirely feasible within the next year or two.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

B. Scope of Impact: Multi-state

Bioterrorism/Biosecurity - Pete Erickson

A. Program Description: The program strives to reduce the potential disease transfer in dairy herds from farm to farm and to reduce the potential for ag-terrorism by making dairy producers more aware of potential contamination of the food supply by terrorists. Producers also requested more disease monitoring. Two dinner meetings, with close to 100 people attending, included a discussion about disease transfer with Dr. Cliff McGinnis, state veterinarian and a roundtable discussion about how individual producers can reduce potential problems. The target audience was dairy producers. The Walker Trust funded the event.

B. Impacts:

- Producers now insist people make appointments for visits and wear disposable boots when on the farm
- Implementation of a biosecurity program reduced disease incidence.
- Healthier animals, higher quality milk, less diseased animals and dumped milk

A. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

B. Scope of Impact: State specific

Diversified/Alternative Agriculture - John Porter

A. Program Description: High land prices, rural housing developments, and tight profit margins on commercial farms cause many people to look to non-conventional agricultural enterprises that use less land. New Hampshire farmers operate near population bases and can develop niche markets and sell directly to the consumer. The objectives of the Diversified/Alternative Agriculture Program were to increase the awareness of alternative farming options and provide both technical and marketing information to assist producers with new enterprises. Extension educators keep up-to-date on new agricultural alternatives available to NH farmers. When existing farmers look to augment their income or new farmers are looking for creative ways to generate

income from their land resources, Extension encouraged some of these new alternatives and provided technical, economic and research-based information.

B. Impacts: Over the past year, Extension educators explored new agricultural alternatives and farmers adopted several of them. These include:

- Growing herbs and specialty greens for farmers markets
- Participation in high-tunnel greenhouse short-courses and twilight meeting in the North Country to learn more about extending the season and growing new crops
- Holding kale phytonutrient trials to explore its use for flavor enhancement in greens and consider its value for preventing macular degeneration
- Use of warm season grasses to extend the grazing season on droughty soils and establish grass sod on buffer areas along river banks
- Planting ornamental shrubs along river bank buffer strips for the cut stem decoration market
- A briefing for Extension educators on the environmental benefits of bio-diesel and the use of small tracts of land to grow oil seed plants to supply this market
- Exploring raising meat goats to accommodate dietary needs of ethnic populations

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: Multi-state

GIS/GPS - Nancy Lambert

A. Program Description: New Hampshire organizations, communities and citizens need access to geospatial technologies (GIS, GPS and remote sensing) to expand their capacity to address issues and concerns facing the state. Currently the state faces a shortage of educational opportunities to meet the demand for training in the use of these technologies. UNHCE is among the largest geospatial technology training providers in New Hampshire. The program currently offers both introductory workshops and extensive courses which emphasize the use of GIS/GPS for natural resources applications. Additionally, GPS workshops and a GPS loan program provide mapping quality GPS units for community and school projects. Educational opportunities for geospatial technologies are expanded through collaboration in developing a geospatial technology training and resources center. The mission of this center is to *“enhance and expand access to geospatial technologies, for the benefit of citizens of NH and the larger region.”*

A. Impacts: Programs impact a diverse clientele including state and municipal employees and volunteers, educators, natural resources professionals, university faculty and students. Program participants reported these impacts from their participation in UNHCE GIS programs:

- At least five University of New Hampshire faculty used GIS with their students and/or research
- A Gorham High School teacher reported teaching a nine-week GIS course for 11th and 12th graders. Students mapped community infrastructure, including hydrants and manhole covers and participated in an animal habitat study along the Androscoggin River. One student mapped ice damage and regeneration in the town forest. Students also participated in a 2-day GPS geocaching project on top of Mt. Washington. The teacher reported that she “would have been hard pressed to teach this course successfully” if she hadn’t taken the Community Mapping course

- An Antioch graduate student used GIS for her master's thesis which included mapping social infrastructure
- A Bangor, Maine high school geography teacher made technology and GIS mapping the focus of her Master's degree work
- A Brookline High School teacher developed an Environmental Science curriculum that incorporated GIS

A sampling of projects supported with UNHCE's GPS education and loan program include:

- Tree inventory in Dover
- Stormwater update for Hampton Public Works
- Culvert mapping for Mont Vernon Conservation Commission and Highway Department to create a road maintenance plan and determine seasonal water for the Conservation Commission
- Locate stormwater drain pipes in Kittery, Maine
- Map trails and an excavation pit for the Greenfield Trails Association
- Develop GIS data for Somersworth
- Map trails for Wonalancet Outdoor Club
- Map original schoolhouses in Barnstead
- Map trails on conservation lands in Gilmanton
- Map social infrastructure in Canterbury for Antioch Master's thesis
- Map Canterbury conservation and recreation features including trails, town forests, conservation land and important natural resources.
- Trail designation in Greenfield
- Habitat mapping for the Great Bay National Estuarine Research Reserve
- New England College students collected features for White Park Master Plan in Concord
- New England College students collected environmental impact assessment data, and conservation land boundaries for Henniker and Warner
- Town line perambulation in Belmont

A. Source of Funding: Smith-Lever 3b&c, State matching funds, grant funds

B. Scope of Impact: State specific

Home Lawn and Gardening - Margaret Hagen

A. Program Description: New Hampshire's population now exceeds 1,275,000. Each year UNHCE receives thousands of requests from New Hampshire citizens for education on a wide range of topics including home gardening, wildlife, water quality, household pests, backyard livestock, food preparation and food safety, urban forestry and many others. With few full-time staff to meet the demand, UNHCE developed a variety of methods to meet this need. Each contact with the general public, homeowners, gardeners and municipalities also provides the opportunity to teach people how to make changes to their surroundings that optimize safe practices and environmental protection.

- 100 new volunteer Master Gardeners received 60-78 hours of training
- Over 400 active Master Gardeners contributed 12,000 hours to Cooperative Extension programs in 100 communities

- Master Gardeners responded to 7000-plus requests on the toll-free Info line. Extension educators responded to another 5000 requests in the counties
- 10 Master Gardener volunteers taught 17 public workshops at the Family, Home and Garden Education Center. Master Gardeners and county Extension educators delivered another 130 workshops around the state
- 650 people received identification or diagnosis of an insect, disease or plant sample.
- 52 “Grow It Green” spots aired on Channel 9 (WMUR), Saturday morning and Tuesday noon news shows
- Garden columns were written and distributed weekly, bi-weekly or monthly from most county Extension offices
- A garden calendar, the North Country Calendar, was written and published in partnership with Maine and Vermont
- A book, “The Best Landscape Plants for NH Gardens and Landscapes” was written and published in partnership with the NH Plant Growers Association. More than 2000 copies were sold

B. Impacts:

- Active Master Gardeners worked on projects with schools, communities and prisons, conducted workshops and wrote articles, worked with the elderly and with garden clubs to teach new skills that were applied for economic and aesthetic benefits. More than 5,000 citizens gained skills that improved self-esteem, enabled them to grow and preserve crops, apply pesticides responsibly and/or protect their environment
 - For example, the Veggie Volunteer Program in Carroll County used volunteers to pick vegetables for local food pantries and non-profit kitchens. Volunteers learned about a working farm and local food pantries. Meal programs saved an average of \$430 dollars each week for a total of \$5771
- 90 communities saved money by using Extension staff and volunteers as consultants for town landscapes, parks and athletic fields. In most cases, each community saved several thousand dollars
- Volunteers expanded UNHCE’s staff impact at least 10-fold. This year their 11,000 hours saved Extension \$137,500 (based on \$12.50/hour)
- Environmental research shows homeowners misapply pesticides more often than farmers. In 30% of interactions with clientele staff recommend no pest control or proper use of environmentally friendly materials. In two out of five Info Line contacts (2800) a product recommendation can be purchased from a local business or company
- A survey of businesses involved in “Grow It Green” TV spots showed that 30% gained some business as a result. This year 90% or 2000 of the North Country calendars printed were sold. A second printing of the Best Plants book designed to help New Hampshire gardeners proved necessary

C. Source of funding: Smith-Lever 3bc, State matching funds, County funds

D. Scope of Impact: Multi-state

Niche Markets - David Seavey

A. Program Description: Family-owned garden centers, roadside stands and farmer’s markets have difficulty competing with the superior buying and promotional power of mass merchandisers.

Niche markets often increase sales by providing an added-value product, a special service to customers, superior quality or unique ambiance.

- UNHCE agricultural staff conducted evaluations and helped design plans and/or customer surveys for garden centers, farm stands and farmers markets in Boscawen, Meredith, Bethlehem, Pittsfield, Windham, Wolfeboro and Enfield. Staff provided signage information at the New England Christmas Tree Growers Conference, in the Ornamentals Newsletter and the NH State Traffic Bureau.
- Staff conducted a garden center tour and seminar in Manchester attended by 75, five farmers market workshops and a direct marketing seminar in Lancaster attended by 80 producers.
- Staff conducted 12 food safety visits statewide and critiqued the food safety practices of a New London farm stand.
- Staff held six demonstrations showing “no-pinch mums” have equal or superior quality to those grown using conventional techniques.
- Dairy specialists helped dairy farmers develop alternative value-added markets.
- A vegetable twilight meeting in Dalton introduced kale as a health food for niche markets to both growers and the restaurant trade.
- Staff introduced Community Supported Agriculture to growers as an alternative marketing strategy.
- Staff provided marketing assistance to four organic farms and a roadside market in Rochester raising heirloom vegetables.
- Extension Specialists and the NH Plant Grower’s Association wrote, published and sold more than 2000 copies of “Best Plants for NH Gardens and Landscapes.”

B. Impacts:

- Farm stand evaluations resulted in changes in entrance roads, location of sales buildings, and better-designed displays, improving customer safety and increasing sales
- Twelve growers planted dwarf grasses to provide an attractive floor for PYO customers. Several growers noted an increase in shoppers of 15 percent or more
- Sixteen farm markets either redesigned or constructed new signs; newly designed farm symbol signs await State approval
- Customer demand for organic food increased on at least two farms
- Fifteen garden centers trained employees in customer service
- The Town of Meredith adopted zoning regulations based on Extension taught best management practices
- Wash stations, dog control and other measures averted potential food contamination on 12 farms and five sites at farmer’s markets. Student tours increased and image improved
- One goat farmer developed a market for cheese and one dairy farmer a market for ice cream.
- Producers increased production of no-pinch mums by 50 percent to reduce labor
- 64 percent of garden centers use the “Best Plants” book to market specialty plants
- NH Bureau of Traffic approved two new symbols for tourist-oriented directional signs: farmstand and apple orchard.

A. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

B. Scope of Impact: Multi-state

Risk Management - Mike Sciabarrasi

A. Program Description: Nature, weather conditions, market changes, cost of funds, legislation, legal challenges and personnel issues are among the factors which impact the viability of New Hampshire and Northeast farms. These factors pose considerable risk of economic loss and damage to the farm and family. Using risk management tools and techniques can reduce adverse impacts. Risk management programs center on five themes. Production risk examines the variability associated with yield or output. Marketing risk deals with price fluctuations and target market sales. Financial risk addresses securing business equity while meeting cash flow needs. Human resource risk focuses on the role of family members and employees in the firm. Legal risk considers business agreements and environmental issues. Farm record keeping and information systems provide the basis for assessing risk management strategies.

From the fall of 2002 to the fall of 2003, the risk management program incorporated numerous farmer workshops and seminars, intensive training programs for agricultural professionals, publication and distribution of supporting educational materials and participation in industry trade shows. In New Hampshire, four farmer seminars and one agricultural professional workshop focused on assessing farm risks, improving farm record systems and identifying strategies for reducing production and financial risks. New England workshops took place on estate planning (Transferring the Farm) in five states. In addition, a New England workshop on agricultural labor management was held in Massachusetts. Northeast efforts include participation in five, two-day risk management training workshops (Farm Management and Business Challenges for the Future) for agricultural professionals. These workshops were held in Vermont, New York, West Virginia and Pennsylvania. Efforts included publication and distribution of crop insurance fact sheets, a labor law publication and seminar workbooks.

B. Impacts:

- 46 NH agricultural industry professionals improved understanding on the use of record keeping systems to assess and manage on farm risks
- 16 NH forage producers improved farm record keeping skills and better understood forage production risk management strategies
- 88 NH fruit and vegetable growers reviewed farm records improving their assessment of risk and identifying risk reducing strategies
- 300 NH fruit and vegetable growers were informed about revenue and crop insurance options
- 228 New England farmers learned techniques to minimize farm business succession risks
- 16 New England farmers improved employee management skills
- 154 Northeast agricultural professionals improved their understanding of production, marketing and human resource risk management strategies for farmers

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grants

D. Scope of Impact: Multi-state

Goal 2 - A safe and secure food and fiber system

Executive Summary

- a. The Safety Awareness in the Food Environment (SAFE) program provided 648 food workers in restaurants, schools, hospitals and nursing homes with education about practices to prevent foodborne illnesses. This 2-hour program includes personal hygiene, cross contamination, and basic food handling principles. Follow-up surveys with food service managers indicated increased hand washing by food workers, disposable glove use, and cleaning and sanitizing of food surfaces. Ninety-seven percent of the 146 food managers participating in eight ServSafe programs received national certification.
- b. Food Safety specialists in the six New England states continued implementation of a 3-year grant to integrate research initiatives with innovative educational approaches to increase adoption of Good Agricultural Practices (GAP) for food safety and sanitation. This year GAP included inservices, educational programs and intensive on-farm food safety audits.
- c. A series of Global Positioning System (GPS) maps were developed to illustrate the poverty levels in the state's municipalities. A database, created using 2000 US Census data and comparative GIS maps of the state, highlighted municipalities with the percentage of people who live 100%, 125% and 185% below the official federal poverty guideline.
- d. Multiple grants were written to extend the reach of UNHCE education of food security, accessibility and affordability for elders and food stamp recipients.
- e. Total Expenditures:
- | | |
|---------------------|----------------------------------|
| Source of Funding - | Smith-Lever 3b&c - \$95,706 |
| | Smith-Lever 3d - \$22,825 |
| | State Matching Funds - \$523,509 |
| | County Funding - \$163,903 |
- FTEs - 11

Food Handling - Catherine Violette

A. Program Description: As consumers increasingly rely on others to prepare food, the importance of a knowledgeable and skilled work force for all food outlets such as restaurants, grocery stores, schools, hospitals and nursing homes is critical in preventing foodborne illnesses. The Safety Awareness in Food Environment (SAFE) program provides food workers with practical information about food safety and sanitation. SAFE, a two-hour program focuses on personal hygiene, cross contamination, and basic food handling principles. For food managers and workers desiring a more in-depth food safety and sanitation certification program, the ServSafe® program sponsored by the National Restaurant Association Educational Foundation was also implemented.

B. Impacts: Twenty-seven SAFE programs were conducted and reached 648 food workers. Six hundred twenty-seven (97%) completed workshop questionnaires. Participants' responses to knowledge and food safety practice questions are highlighted below.

- 95% correctly identified recommended hand washing procedures
- 99% correctly identified recommended cold storage temperatures for perishable foods
- 98% identified the time – temperature danger zone as 41 to 140 degrees F.
- 69% indicated that food should not remain in the danger zone for more than four hours

SAFE participants indicate they carry out the following practices 75% or more of the time include:

- 95% wash hands before and after working with food
- 98% wash hands after touching hair, nose or using restrooms
- 92% report using separate equipment and utensils for meats and vegetables/fruits
- 94% report using gloves, tongs or tissues to serve ready-to-eat foods

There were nine follow-up phone surveys of food managers in food service establishments sponsoring SAFE programs. Food managers reported increased hand washing among food workers and proper disposable glove use. In addition, managers reported employees were more careful to clean and sanitize surfaces between raw and cooked food uses. One food manager described the benefits of the SAFE program as follows: “[SAFE] helped wait staff with hand washing and glove use. I see all staff more aware of their surroundings and the issues of food safety. They pay attention to what they’re doing rather than just rushing to get the job done.”

Eight ServSafe® programs resulted in 146 food managers and workers taking the national certification examination. One hundred forty-one participants passed the examination with a grade of 75% or greater yielding a pass rate of 97%.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Food Safety - Catherine Violette

A. Program Description: As produce consumption increases, so has the number of associated foodborne illnesses. The New England region is characterized by small agribusinesses with a diversity of crop varieties, most of which are marketed locally. Good Agricultural Practices (GAP) are recommended food safety and sanitation practices that, when implemented, can help produce growers minimize foodborne pathogen contamination.

Recognizing the regional similarity of produce production and marketing, Food Safety Specialists from the six New England states developed and submitted a grant application to develop and test innovative educational approaches to enhance the voluntary adoption of GAP recommendations by local growers. USDA/CSREES funded the three-year grant, initiated in October of 2000.

B. Impacts: The following accomplishments took place during the first year of the funding:

- 296 fruit and vegetable producers (47% response rate) completed a survey to assess their awareness of GAP recommendations and current food safety practices
- A mail survey to evaluate consumer food safety concerns and fruit and vegetable purchasing profiles was developed and distributed to 3000 randomly selected households in New England. 742 surveys (24% response rate) were returned. Selected findings include:
 - 85% of consumers shop for fresh fruits and vegetables 1-2 times per week
 - Respondents indicated a strong preference for locally grown produce
 - 64% felt that domestic produce was safer than imported
 - 84% said they were willing to pay more for produce from a GAP certified farm
- Standard New England GAP guidelines/recommendations were developed as the basis for the educational programs

- All New England states collected and analyzed produce samples for pathogen contamination to establish baseline levels prior to implementation of the educational intervention

During the project's second and third year, the following accomplishments took place:

- The New England states collaboratively developed educational material (fact sheets and slide presentations). UNH Cooperative Extension implemented the GAP program through intensive on-farm audits
- NH's internal and external advisory committees continued to meet
- Specialists and educators participate in yearly GAP inservice programs
- Awareness of GAP practices increased as a result of five educational programs conducted during twilight meetings and other educational programs targeting growers
- County educator teams conducted eleven in-depth, on-farm audits
- Six participating farms collected produce samples prior to the GAP audit. Results indicated no detectable pathogens on those samples. Post-GAP audit samples were completed for five of the participating farms

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: Multi-state

Food Security, Accessibility and Affordability - Val Long

A. Program Description: Eighty-nine percent of American households were food secure throughout the entire year 2002, meaning they had access, at all times, to enough food for an active, healthy life for all household members. The remaining households were food insecure at least some time during that year. The prevalence of food insecurity rose from 10.7 percent in 2001 to 11.1 percent in 2002, and the prevalence of food insecurity with hunger rose from 3.3 percent to 3.5 percent. (USDA Economic Research Service). The UNHCE Food Security Coordinator and Nutrition Connections staff worked on a variety of food security issues this past program year. GIS mapping was completed for 2000 US Census state poverty data, consultation was provided to the New Hampshire Food Bank for its strategic planning process, two grant proposals were submitted (one was denied and the other is pending), and nutrition interventions were conducted for low-income families throughout the state.

B. Impacts: A series of newly developed GPS maps illustrated the poverty levels of New Hampshire municipalities. A database using 2000 US Census data and comparative GIS maps of the state, highlighted municipalities with the percentage of people who live 100%, 125% and 185% below the official federal poverty guideline. In addition, the Food Security Coordinator developed a summary of food security status among the low income population in New Hampshire. Included are statistics on statewide poverty and hunger, trends with government food and nutrition assistance programs, community food assistance programs and recommendations, and effective models for improving food security. A grant was written by the Food Security Coordinator for the New Hampshire Food Bank for a Food Stamp social marketing and outreach campaign to elders and will be resubmitted in FY2003-2004. A second grant proposal was submitted to reintroduce Food Stamps into farmers markets in New Hampshire. An initial interview with the grant reviewer was favorable and determination of awards occurs in 2004. The Kraft grant awarded in FY2001-2002 extended its intended reach because the upgraded electrical system for the New Hampshire Food Bank allowed the food bank to use previous unusable space for adoption of Operation Frontline. The Food Security Coordinator established a working

relationship with Operation Frontline and provided Food Stamp outreach materials to their clientele whom are all from low-income populations. The Food Security Coordinator conducted outreach visits to New Hampshire farmers to encourage them to apply to become Food Stamp vendors at farmers markets. The result of the visits is an assessment of farmers' needs and concerns for implementation at their individual market stalls. It culminated in a grant proposal to conduct pilot market projects in the 2004 season. If not funded, at least one market agreed to pilot the project in 2004. The Food Security Coordinator was a speaker at the Welfare Reform Workshop sponsored by UNH Cooperative Extension in January 2003, writes articles for the New Hampshire Food Bank newsletter and submitted one to the New Hampshire Beginner Farmers newsletter. The Food Security Coordinator serves as a resource on food security issues and on committees for the New Hampshire Food Bank, the New Hampshire Coalition for Sustaining Agriculture and the New Hampshire Action for Healthy Kids.

C. Source of Funding: Smith-Lever 3b,c&d State matching funds, County funds, grant funds

D. Scope of impact: State specific

Goal 3 - A healthy, well-nourished population

Executive Summary

a. The goal this year was to optimize health by reducing risk factors through education to improve physical exercise and lifestyle choices. Activities targeted physical activity, educational sessions and strength training. Statewide, 3,126 low-income youth and 730 low-income adults participated in a series of programs including fitness activities. Most incorporated walking into the program with some providing pedometers and logbooks. The Nutrition Connections program is a major initiative in New Hampshire targeted to limited income families. It includes the Expanded Food and Nutrition Education Program and the Food Stamp Education Program. It's based on the revised Dietary Guidelines 2000 and the Food Guide Pyramid. This year 550 families graduated from the Nutrition Connections program with 90.5% making a positive change at the end of the program.

b. Tufts University's *Strong Living Program*, a research-based strength training program for older adults and the developmentally disabled, was introduced this year to help these individuals live more healthy, independent lives. Most of the 78 seniors and developmentally disabled individuals involved increased their physical activity.

a. A successful statewide social marketing campaign targeting food stamp recipients was conducted this year. It included a mailing of three newsletters to 22,000 households. Nutrition commercials developed as part of the social marketing campaign reached an estimated 1,959,800 households.

d. The Nutrition Connections program involved 374 volunteers this year who helped with nutrition education programs. It's calculated this equals 2.2 FTE's valued at \$53,592.

c. Total Expenditures:

Funding - Smith-Lever 3b&c funds - \$182,712

Smith-Lever 3d - \$205,421
State matching funds - \$961,293
County funding - \$312,906
Grants, Contracts, Other - \$682,684

FTEs - 21

Human Health – Val Long & Colette Janson-Sand

A. **Program Description**: The health of many New Hampshire citizens continues to be effected by preventable deaths, disease, disability and disparities in health status. Many of these causes of death are potentially preventable through nutrition and exercise. Socioeconomic status is an important predictor of health that deserves particular focus. In New Hampshire, the top one-fifth of the population has experienced a 50% increase in income over the last 20 years, while the poorest one-fifth experienced a 4% decrease in income widening the gap between the rich and the poor. The goal of human health activities is to optimize the health of consumers by reducing health risk factors through non-formal educational programs to improve physical exercise practices and lifestyle choices. Currently, human health programming in New Hampshire focuses on providing education and information about the incorporation of physical activity into the daily lives of adults and youth. Core programs include the Smart Steps program and the Strong Living program. Each program promotes permanent behavior change.

B. **Impacts**: State-wide, 3,126 low-income youth and 730 low-income adults participated in a series of four or more programs, which included fitness activities as an integral part of the program. Most incorporated walking into their programming because it's free and can take place at any time. Many programs, which consisted of week-long interventions, included physical activity three times per week. Instructors in the Nutrition Connections Program and the Family Lifeskills Program modeled lifestyle behavior for their clients. Another successful program initiated by UNH Cooperative Extension is the Tufts University *Strong Living Program*. The *Strong Living Program* is a research-based strength training program for older adults and the developmentally disabled to help these populations live healthy, independent lives. Strength and balance training improves fitness, mobility, strength, balance, emotional well-being, bone health, and helps reduce falls. Nutrition Connections Program staff conducted four 12-week *Strong Living Programs* reaching 78 senior citizens. Evaluations revealed that participants averaged a 24% improvement in lower body strength. Additional fitness activities included the *Walk-Fit* program and *Smart Steps* program. Both programs provide participants with pedometers, logbooks, and educational materials in the form of weekly tips. Participants set personal walking goals, log their progress and evaluate their level of physical activity at the beginning and end of this eight-week program. Two hundred fifty-four adults completed these programs. Evaluations revealed a 30% increase in participant activity level at the program's end, 31% of participants lost weight, 97% of participants will be more consistent with exercise as a result of these programs. Additional health-related educational efforts included: 31 people reached with the *Making Lifestyle Changes and Healthier Choices* program. Some outcomes for this program included eating smaller servings, reducing simple carbohydrates, increasing fruit and vegetable intake, trying different foods, walking and starting an exercise program, and portion control. Another program developed to accommodate residents who would like to learn about nutrition and fitness in the comfort of their home is the *Eat Healthy, Stay Fit* home study course. This six-lesson course includes nutrition, fitness and food safety. This past year, 157 residents graduated from this course. The outcome data

reveal that 78% of participants showed improvement in one or more food resource management practices, 84% in one or more nutrition practices, 58% in one or more of the food safety practices.

C. Source of Funding: Smith-Lever 3b,c&d State matching funds, County funds, grant funds

D. Scope of impact: State specific

Human Nutrition – Val Long & Colette Janson-Sand

A. Program Description: In ways often interrelated with patterns of physical inactivity, dietary factors are associated with five of the 10 leading causes of death in the United States. Excesses and imbalances of some food components in the diet replaced once-prevalent nutrient deficiencies as the principal concern. In general, four categories of factors influence food consumption: (1) consumers' income, (2) food prices and the prices of other products and services, (3) consumers' knowledge of health and nutrition and (4) consumers' tastes and preferences. To change consumption, one of these influences must change. Using a multilevel ecological perspective, the assumption is that behavior is affected by and affects multiple levels of influence. Nutrition intervention in the community includes not only institutional activities directed to individuals and groups, but also organizational efforts, community-level programs and policy directives. The development, maintenance and change of eating patterns are determined not only by individual factors, but also by many social, cultural and environmental influences. The idea that individuals are singularly responsible for their dietary choices ignores the many influences that affect an individual's diet. Behavioral choices are influenced by multiple factors that create a web of influence on the individual. Nutrition programming in New Hampshire is primarily implemented by the Nutrition Connections Program which encompasses both EFNEP and FSNEP. Additional programming in nutrition is provided by the Family Lifeskills Program, Family Development Educators and 4-H Youth Development Educators. Curricula approved by Nutrition Specialists and appropriate Educators, are identified and adopted for use in New Hampshire. Examples include: Eating Right Is Basic, Building a Healthy Diet, UNHCE Home Study and USDA educational materials. Each intervention tracks knowledge and behavior change.

B. Impacts: 550 families graduated from the Nutrition Connections Program. 90.5% graduated with a positive change in any food group. 82% of graduates showed improvement in one or more nutrition practices (plans meals, makes healthy food choices, prepares foods without adding salt, reads nutrition labels or has children eat breakfast). 51% showed improvement in two or more nutrition practices. 25% showed improvement in three or more nutrition practices. 6% of graduates showed improvement in four or more nutrition practices. And, 2% showed improvement in all five nutrition practices. 71% showed improvement in one or more food resource practices (plan meals, compares prices, does not run out of food or uses grocery lists). 35% showed improvement in two or more food resource practices. 15% showed improvement in three or more food resource practices. And, 3% of graduates showed improvement in all four food resource practices. Additional activities included nutrition education provided by the Food Stamp Nutrition Education program (FSNE). A statewide initiative of the FSNE involved a social marketing campaign targeting the food stamp audience. Funded by USDA Food and Nutrition Service, this nutrition campaign included mailing three newsletters to each food stamp household (over 22,000 households each time) for a total of 66,000 contacts. More than 850 food stamp recipients returned the self-mailing evaluation card. Evaluations were extremely positive, with 35% self-referring to the Nutrition Connections Program. This social marketing campaign also included

development of three 30-second TV commercials which were focus-group tested by 25 low-income clients, and aired on cable and commercial channels in May/June and August/September 2003. Four cable television stations and the statewide broadcast TV station aired the three commercials a total of 24,970 times during two six-week intervals for an estimated 1,959,800 households with the opportunity to view the commercials. In addition, 3,126 youth participated in a series of nutrition interventions resulting in 70% of 1,981 youth from 101 groups now eating a variety of foods; 88% of 1,869 youth from 94 groups increased knowledge of the essentials of human nutrition; 83% of 1,022 youth from 57 groups increased their ability to select low-cost, nutritious foods, and; 87% of 1,359 youth from 76 groups improved practices in food preparation and safety. Revenue generation for nutrition education activities included \$780,976 in FSNE grant dollars to New Hampshire this year, as well as \$57,645 contributed for programming. Nutrition Connections had a total of 374 volunteers who assisted with nutrition programming which accounted for 2.2 FTE at a value of \$53,592. Another program provided by Family Development Educators was *Soy Delicious*, a program to increase knowledge about the nutritional benefits of soy beans/soy foods. A total of 39 adults participated in this program with the following outcomes: increased knowledge of the nutritional benefits of soy beans/soy foods, and increased knowledge about how to purchase and how to prepare soy foods. Other results included behavioral intent to purchase, prepare and read educational materials on soy products. Another major focus in New Hampshire is an obesity prevention initiative. As part of a statewide coalition, a pediatric tool kit was developed and distributed to 300 pediatric offices to help guide health care professionals in the prevention and treatment of childhood obesity. Additionally, four presentations given to 600 health care personnel introduced the kit. Other activities related to this initiative are development of an interdisciplinary Extension team to work on the development of a website to provide needed information about healthy eating and physical activity, and an alliance to coordinate nutrition initiatives taking place throughout the state. Finally, in a separate initiative, school nurses are being recruited to implement USDA's *Changing the Scene*. Eighty-four school nurses now know about the materials and at least 50% plan to initiate action plans.

C. Source of Funding: Smith-Lever 3b,c&d State matching funds, County funds, grant funds

D. Scope of Impact: State specific

Goal 4 - Greater harmony between agriculture and the environment

Executive Summary

a. This goal encompassed a large part of the UNH Cooperative Extension program in FY2003. The natural environment and the state's natural resources are highly valued by New Hampshire residents. Protecting and preserving the environment is among Extension's highest priorities. This includes the preservation of land and open space, and minimizing the impact of chemicals, erosion and pollution. Programs also focus on land and forest management and stewardship to help maintain the environment and quality of life for all residents. Concern is growing about manure storage and nutrient management resulting from federal legislation and pressure from neighbors and town officials about handling and disposal of animal wastes. The economic impact of proper manure management is reduced fertilizer purchased for crops, reduced litigation from pollution problems and less money spent to clean up streams and treat water for public consumption.

b. Extension's many accomplishments and successes under this goal are reflected in the areas of forest management and harvesting, Integrated Pest Management, management of a broad range of natural resources, sustainable agriculture, water quality, and wildlife habitat. Cooperative Extension is well-known in New Hampshire for its expertise and educational programs in these areas. An advantage, too, is the close working cooperation and partnerships between Cooperative Extension, state and federal agencies, and public and private organizations all concerned with natural resources-related industries and protecting the environment. Cooperative Extension's Forestry & Wildlife program focuses on sustaining forests that support the state's \$1.7 billion forest products industry. It educates citizens to make informed natural resources decisions by providing technical assistance, promoting forest stewardship and increasing knowledge and skills in natural resources protection and management. The Community Conservation Assistance Program assists communities and conservation commissions with land and water conservation planning projects. In 2003, New Hampshire communities approved \$35.5 million for land conservation measures. This year, 49 towns and conservation groups involving 1775 participants received help in developing natural resource inventories, conservation planning and land acquisition.

c. The Integrated Pest Management program helps growers handle pest problems while reducing dependency on chemical insecticides, and maintaining or improving crop profitability. Primary focus of this program is commercial crop production with efforts this year involving apples, greenhouse crops, forage and other crops. Nutrient management is another major NH effort as it can have possible negative effects on both the environment and profitability. The state has about 102,000 acres in cropland with most receiving some type of nutrient application. Educational programs include soil testing and nutrient recommendations, use of cover crops and composts, application of organic residues and phosphorus management. Cooperative Extension also conducts the Pesticide Applicator Program responsible for training commercial and private pesticide applicators to be certified and recertified by the state. In FY2003, 150 applicators were certified and 600 applicators recertified.

b. New Hampshire is home to 15,000 species of plants and animals. The *Living Legacy Project*, coordinated by UNHCE, is a partnership of public and private agencies working together to guide the protection of critical wildlife habitats, outstanding natural plant communities, lakes and ponds, rare plants and animals, and other ecologically significant lands and waters. The goal is to integrate these ecological values into land and water conservation, land use planning, and resource management decisions. In 2003 the group began developing a statewide wildlife plan and initiated the Important Bird Area program.

c. Total Expenditures:

Funding - Smith-Lever 3b&c - \$295,819
Smith-Lever 3d - \$130,619
State matching funds - \$1,556,379
County funding - \$506,610
Grants, Contracts, Other - \$1,849,991
FTEs - 34

Agricultural Waste Management - John Porter

A. Program Description: A focus on water quality and Federal legislation dealing with feedlot run-off causes commercial farmers to be concerned about manure storage and nutrient management plans. Backyard operations with horses, sheep, goats and other livestock are under pressure by neighbors and town officials to properly handle animal wastes. In New Hampshire, Cooperative Extension teamed up with the Natural Resources Conservation Service (NRCS) in working with farmers to design manure storage units to prevent run-off. Grant funds made it possible to hire a consulting engineer to help plan these systems. A team consisting of the local Extension educator, Extension Dairy Specialist, a consultant and area NRCS technician conducted the waste management program primarily through individual visits to farms requesting help. Commercial dairy farms were the target audience. Key program elements were on-farm discussions exploring options, the consultant's input on technology available and the NRCS agency supplying plans, surveys and cost share information.

B. Impacts: The economic impacts of proper manure management are reduced fertilizer purchased for crops, reduced litigation from pollution problems, less money spent to clean up streams and treat water for public consumption, and the reduced expense involved in storing manure versus handling it on a daily basis.

The cost of consultant visits were covered by a \$9,500 grant, part of a statewide agricultural engineering program dealing with structural design. Five producers were given advice on manure storage systems and saved over \$15,000 in construction errors. One producer installed mechanical alley scrapers in a free-stall barn and reduced his labor requirements by over one hour per day and eliminated the need for part-time help on weekends. Several part-time farmers were given information on composting to improve the handling of animal wastes near urban settings.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: Multi-state

Biodiversity - Ellen Snyder

A. Program Description: New Hampshire is the fastest growing state in New England. The impacts on quality of life, drinking water, working farms and forests, wildlife habitat and ecological health from this land use change have galvanized New Hampshire citizens and communities to support land conservation programs and funding. In 2003, New Hampshire communities approved \$35.5 million for land conservation measures. A recent survey of the state's land conservation community identified one of the greatest needs as better guidance on which lands were specifically most important for biodiversity and wildlife habitat.

UNH Cooperative Extension coordinates the NH Living Legacy Project (NHLLP). The NHLLP is a public-private partnership working with land trusts, communities, landowners, researchers, agencies and organizations to guide protection of critical wildlife habitats, outstanding natural plant communities, lakes and ponds, rare plants and animals, and other ecologically significant lands and waters. The goal is to integrate ecological values into land and water conservation, land use planning, and resource management decisions at the state, regional and community level.

B. Impacts: A proposal, “A Comprehensive Conservation Plan for Wildlife, Plants and Ecological Systems in New Hampshire”, was developed that includes a detailed framework and budget estimates for identifying ecologically significant areas, determining what lands have been protected, and what lands are still vulnerable.

UNH Cooperative Extension, NH Fish and Game Department and other partners are currently involved in a two-year planning effort to develop a statewide Comprehensive Wildlife Plan.

In 2003, project partners including Audubon Society of NH, NH Fish and Game Department, and UNH Cooperative Extension officially launched the NH Important Bird Area (IBA) Program. The goals of this program are to identify and conserve areas that are critical to one or more bird species for breeding, feeding, migrating or to avert population declines of common and uncommon birds. Pondicherry and Umbagog Wildlife Refuges were officially recognized as IBA’s in 2003.

UNH Cooperative Extension is working on a grant project with the Piscataquog Watershed Association and the Ammonoosuc Conservation Trust to identify and map ecologically significant areas in their watersheds. Once key features are identified and mapped, a conservation plan for each watershed will be developed.

Extension held over 20 educational programs and reached more than 750 foresters, natural resource scientists, landowners, natural resource volunteers, conservation commissions, garden clubs, land trusts and the general public with biodiversity programming during 2003. Additional people received information through the NHLLP website, electronic newsletters and publications.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: Integrated Extension and Research

Forest Resource Management - Karen Bennett

A. Program Description: Since 1925, the University of New Hampshire Cooperative Extension Forestry & Wildlife Program has been caring for New Hampshire’s forests. The mission includes educating New Hampshire’s citizens about rural and urban forest environments, enhancing their ability to make informed natural resource decisions.

Ten Forest Resources Extension Educators, three statewide Extension Specialists (Forestry, Forest Industry, and Wildlife), a Land and Water Conservation Educator, and a Community Forestry Volunteer Coordinator provide technical expertise and information about managing forest and community resources to people in each county across the state. Target audiences include forest landowners, natural resource professionals, communities, volunteers, NH forest-based industries, and the public. Extension provides technical and educational assistance to these audiences through site visits, publications, workshops and seminars.

B. Impacts:

Provided technical assistance to encourage landowners to adopt environmentally sound practices and to improve management

- Extension provided on-site assistance to 1,700 forest landowners influencing approximately 110,000 acres

Increased the level of sustainable forest stewardship activities occurring in NH

- Over 2,200 forest stewardship plans were written for NH landowners by public and private sector foresters since 1990. These plans cover over 570,000 acres or approximately 15% of the private forestland in the state
- Extension Educators encouraged over 350 landowners (owning approximately 35,600 acres) to continue or expand their management using the expertise of a private licensed forester

Increased participant's knowledge and skills regarding natural resource management and protection

- Extension provided over 340 natural resource related seminars, workshops and programs throughout the state – *the equivalent of nearly one program every day of the year* – reaching nearly 12,000 participants
- Over 60 of these programs were offered to natural resource professionals reached approximately 2,300 participants

Increased public awareness about New Hampshire's forest resources

- Extension's *Habitats* newsletter reached over 4,500 natural resource professionals, landowners, volunteers and educators
- Natural resource information distributed through statewide and county Extension newsletters collectively targeted 35,000 to 40,000 people

C. Source of Funding: Smith-Lever 3b,c&d State matching funds, County funds, grant funds

D. Scope of Impact: State specific

Global Change and Climate Change - Sharon Meeker

A. Program Description: Global Climate Change is a topic that affects everyone and the need for literacy on the subject among adults, and in particular, educators, is well-established. Achieving literacy is often difficult due to conflicting information in the media. Sea Grant and Extension work nationally, regionally and state-wide to help educators expected to teach some elements of the topic (as mandated by state and national education standards) to their students.

A "Change Gang" of five docents met at least monthly to study documents including the national and northeast editions of *Preparing for a Changing Climate*, a report of the New England Regional Assessment Group for the U.S. Global Change Research Program, August 2001. The group contacted several UNH professors from the Climate Change Research Center to assist them and the chair of the group took a course on climate from the University. The group also attended three meetings of the New England Consortium of Interpretive Centers which made global climate change a focus of its activities. In addition, the group visited the Cold Regions Environmental Lab sponsored by the US Army in Hanover, New Hampshire.

The "Change Gang" developed a CD on climate change in the Northeast and presented the program twice to the New Hampshire Science Teachers Association conferences. They also presented a teacher workshop for the Lebanon schools, at the request of the curriculum supervisor who attended a group workshop. In addition, the program has been presented to the Association of Retired Adults in Durham and to adults at Riverwoods in Exeter.

B. Impacts: The "Change Gang" became more knowledgeable about how climate works,

the effect climate change is predicted to have on New Hampshire and how it will affect people's lives in the areas of work, recreation and population. Group members became lay experts on the subject and are ready to present their information to a wide variety of audiences.

One teacher at the NHSTA workshop was so impressed with the information, she offered it as a part of a series of workshops for teachers in her district. Two of the teachers at the workshop worked a climate change component into their science program.

B. Source of Funding: Grant funds

D. Scope of Impact: Multi-state

Integrated Pest Management – Alan Eaton

A. Program Description: Agricultural producers face significant challenges in handling problems caused by weeds, pathogens, insects and other pests. These challenges can cause major reductions in crop yield and/or quality. Regular reliance on chemical pesticides appears to offer quick and easy fixes to pest problems, but further problems can result. High cost, pest resistance, environmental contamination and toxicological risk are serious potential results of reliance on chemical pesticides. For growers who retail their produce, customer concerns about pesticide use are especially important. Growers are caught in the middle between customer demand for blemish-free, pest-free products and customer expectations that pesticides (especially chemicals) should not be employed. The IPM program helps growers with this balancing act, helping them manage pest problems appropriately, while minimizing costs, risks, and crop injury. In most cases, pesticide use is reduced from "conventional" patterns. By reducing their reliance on chemical controls, growers become better stewards of the land, and farms often become more sustainable.

This year the IPM program focused on commercial apple and greenhouse growers. Staff also worked some with forage, other crops and consumers. To help growers in pest management decisions, newsletters (web and hard copy) were written, 13 fact sheets revised and two regional New England pest management guides (apples, small fruit) revised. Weekly fruit pest update (three-minute) messages are available 24 hrs/day from April 1 through mid-September. Pest management was included in approximately 20 grower meetings and workshops, in nine counties. Crop quality was evaluated at 25 orchards. Two biological control agents were spread for a parasite of European apple sawfly and a mite that eats leaf-attacking mites.

B. Impacts: Apple acreage continued to decline in 2003, but crop volume increased 30% from last year, to 810,000 bu. Despite rainy weather that created problems controlling curculio and "summer diseases," growers reduced spraying (compared to pre-IPM records) by \$100/acre, for a \$250,000 statewide savings. Fruit quality was high, with only 4.23% of apples showing pest injury at harvest. Compared to pre-IPM figures of 10% injury, that represents a reduction in injured fruit of 46,000 bu. statewide.

Lathrolestes ensator was successfully introduced to one Concord orchard. This is the first record of this European wasp (parasite of European apple sawfly) in the United States. With more work over the next several years, the insect will spread and start controlling the sawfly. A predator mite

from Geneva, New York was introduced to another New Hampshire orchard, bringing the total to eight New Hampshire sites with this mite (*Typhlodromus pyri*).

Greenhouse work included five workshops (145 people), and more research on using barriers to control fungus gnats in potted plants. The barrier work replaces some insecticide use in greenhouse crops.

In Cheshire County, Extension staff monitored insect pests of alfalfa and silage corn. One producer saved \$500-600 by avoiding unnecessary insecticide treatment for rootworms, which are still at sub-economic levels in NH. Staff helped growers better understand weed problems and herbicide use decisions. Approximately 100 producers (statewide) improved their understanding and management of weed problems. At least one producer (90 acres) significantly reduced herbicide-resistant weed problems by rotation, after receiving training.

Consumers and backyard gardeners benefited through fact sheet revision, training of master gardeners, article posting on websites and giving lectures and radio shows in four counties. One effort involved teaching all 5th graders in Brentwood Elementary School about IPM at a local orchard.

C. Source of Funding: Smith-Lever 3b,c&d State matching funds, County funds

D. Scope of Impact: Multi-state

Land Use - Frank Mitchell

A. Program Description: New Hampshire farm, forest and other open space land conversion is threatened by the rapid loss of land to development. According to New Hampshire's Changing Landscape, a 1999 study released by the Society for the Protection of NH Forests and the NH Chapter of the Nature Conservancy, New Hampshire is losing critical forest and agriculture lands to development. New Hampshire, the fastest growing state in New England for the past two decades, currently loses about 15,000 acres per year to development. Farm land declined by 83,800 acres, or 20%, from 1974 to 1997. Long-term protection of farm and forest land prevents the conversion to uses that can lead to degradation of land and water quality. The following priority problems identified by the NH Comparative Risk Project, a public/private partnership established to study and rank environmental risks, can be reduced through land and water conservation, particularly if thoughtfully planned using scientifically derived resource information: degradation of surface water habitat, loss of land habitat from development, physical alteration of water and shore land habitat, loss of water habitat (filling, draining) and degradation of forest habitat by fragmentation. Communities that protect open space benefit through a heightened sense of community character, water quality and habitat protection, reduced service costs and scenic values.

Extension staff working with Community Conservation Assistance Program helped 49 towns and conservation groups with natural resources inventories, conservation planning and land acquisition. Direct assistance to communities, workshops and courses involved 1,775 participants. A brief summary of community accomplishments follows: Approximately 220 people participated in a New Hampshire land conservation conference (Land & People, Conservation Tools for a Growing State) co-sponsored by the Center for Land Conservation Assistance and UNH

Cooperative Extension; three communities involving 133 participants started working towards comprehensive natural resource and land conservation strategies following the Dealing with Growth presentation by the Natural Resources Outreach Coalition, of which UNH Cooperative Extension is the coordinating partner. (Candia, Nottingham and Somersworth), four communities involving 23 participants worked on developing education and outreach programs to educate the public and develop stronger community support for open space and natural resource protection. (Deerfield, Exeter, Newfields, Goffstown; seven communities involving 116 people received assistance with open space protection/land conservation projects (Auburn, Barrington, Bradford, Brentwood, Danville, Goffstown, Greenland, Hancock)

Six communities established open space groups (involving 51 people) to work on land conservation issues (Northwood, Bradford, Goffstown, Hancock, Brentwood, Exeter); Five communities, 72 participants, received training in natural resources inventories and conservation planning (Tamworth, Wakefield, New Durham, Pembroke and Wakefield); 425 participants from 14 communities and groups participated in 12 workshops on land conservation and estate planning for communities, (attended by Auburn, Belmont, Candia, Kensington, Newmarket, Raymond, Stratham, Newfields, Dover, maple syrup producers, Concord Farmers and Realtors workshop in Windham); four communities and watershed groups involving 40 participants received training in wildlife habitat issues (Kensington, North Haverhill, Piscassic, Lower and Upper Lamprey watersheds); 220 people attended the Saving Special Places Conference, an annual event cosponsored by UNH Cooperative Extension and the Center for Land Conservation Assistance; four regional/watershed groups involving a total of 65 participants developed or began developing conservation plans, water supply protection measures and greenway proposals (Piscataquog Watershed, Squam Lake Watershed, Bellamy & Oyster River Watershed Protection Partnership, Oyster River Watershed Association); 85 people in 11 communities and groups conducted conservation projects with the assistance of 55 students in the UNH Senior projects course (Auburn, Candia CC, Alstead, New Boston, Somersworth, Eastman (Grantham), Raymond, Kingston, Bow, Milford and Kennebunk, ME).

B. Impacts:

Economic:

Both communities and landowners benefit economically from conserved farm and forest land. Several studies in New Hampshire, including “cost of community services” reported by UNH Cooperative Extension in *Does Open Space Pay?*, demonstrate that open space land uses such as agriculture have a positive revenue to community service cost ratio, whereas residential land uses cost communities more than the property taxes generate. Fiscal impact studies conducted by community groups demonstrate this phenomenon. There is also a correlation in the state between higher property taxes and commercial and industrial development. Land conservation can also be economically advantageous for landowners, primarily through federal income tax deductions or by selling development rights. Permanently protected land also qualifies for reduced property taxes. Conserved land also supports continuation of natural resource-based industries such as forestry, agriculture and tourism, as well as contributing to the maintenance of “community character,” including scenic qualities.

Environmental:

Research on development and water quality reported by the Center for Watershed Protection in Maryland, appearing in “The Economics of Urban Sprawl,” indicates that “subtle and profound changes in stream quality have been reported to occur when impervious cover exceeds 10%.” This information reinforces the concept that protecting farm and forest land from development has

direct and substantial water quality benefits. Conserved land also provides habitats to maintain the state's biodiversity.

Societal:

Agricultural and forest land conservation has important positive impacts for society. For farm and other rural families, it can improve the ability to pass land to subsequent generations by reducing the value of the land to reflect only agricultural and forestry uses rather than highest development value. Farm and forest land conservation also ensures that these activities will be able to continue on the property as it passes from generation to generation. It assures a land base from which agriculture and forestry can operate indefinitely, supporting local economies.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Nutrient Management – Tom Buob

A. Program Description: Nutrient management issues extend across all commodities from field corn to greenhouse tomatoes. Since situations vary by commodity, the approaches employed to address a specific concern vary. Dairy, livestock and vegetable enterprises face the challenge of managing large amounts of manure and compost, while greenhouse tomato and bedding plant growers need to calibrate and understand nutrient injection equipment for proper fertilizer applications. The expanded use of mycorrhizae fungi in shade tree installations will result in better phosphorous (P) availability and lower application rates. The continued support and improvement of the current Soil Testing Program is essential for this effort to proceed, and research in this area needs to be expanded and financially supported.

The complexity of this issue and the current situation in NH require an effort in both research (on-farm, lab and greenhouse, and collaborations with others) and education (farm visits and small workshops). Increasing the expertise of the UNHCE Ag staff and producers in different commodity areas is the first step in a long-term educational program. Establishing research locations and links with other states and organizations provides a basis for future expansion. The attempt to address the risk of nitrate leaching to groundwater includes the use of PSNT and a nutrient credit system. The issues of P movement to surface water are addressed through the development of a more accurate P Site Index for New Hampshire.

B. Impacts:

- Continuation of collaborative relationship with ARS researchers and staff
- Research to identify the soil test factors most closely related to offsite P movement in New Hampshire soils has been expanded
- Enhanced multi-state collaborative efforts continue
- Established demonstration sites for on farm research efforts
- Established buffers to observe and monitor effects on sediment and nutrient transport; mixes of shrubs and sod were established to observe their ability to trap sediments and nutrients; ongoing monitoring and maintenance continues
- Expanded nutrient credit research was established
- Complete revision and updating of a soil test recommendation system; staff trained on its use
- Data collection effort shows over-feeding of P (dairy cows) ranges from 5-50% above new NRC recommendations; efforts were made to adjust for overfeeding

- 15 workshops provided education and training on nutrient management plans and issues to more than 250 farmers/producers/growers around the state
- The lack of funding required a major effort in grant writing for this program to continue
- Nutrient monitoring with 24 growers (six greenhouse tomato and 18 bedding plants) resulted in improved fertilizer practices, improved plant quality and reduced costs
- Installation of drip irrigation systems by four vegetable and small fruit growers resulted in a reduced risk of nitrate leaching; use of shade trees inoculated with mycorrhizae resulted in increased P availability and lower application rates
- Completion of the Quality Assurance Project Protocol for the expansion of research sites submitted for EPA approval
- Another nutrient management grant award from the New Hampshire AES
- Additional grants sought

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: Multi-state Extension and Integrated Research and Extension

Pesticide Application – Stan Swier

A. Program Description: The Pesticide Applicator Training Program (PAT) trains commercial and private applicators for certification and recertification by the NH Division of Pesticide Control. Without certification and recertification, farmers, landscapers and pest control operators cannot apply pesticides.

Certification requires passing a test covering pesticide safety, IPM, regulations, worker protections standards, pesticide storage, environmental protection, calibration, labeling, and knowledge of the target pest. Recertification for private applicators requires 15 hours of updated additional education every five years to maintain certification. Commercial applicators require 12 hours of additional education for every category every five years. To meet the need of certification and recertification, training manuals are produced and sold to the applicators. The county Extension educators teach classes or help tutor private applicators. In FY2003, over 150 applicators received certification and at least 25 meetings held to help recertify over 600 applicators.

B. Impacts: Without the PAT program, our 500 certified farmers could not apply any pesticides for pest control, losing millions of dollars from crop losses. One thousand commercial applicators need the PAT program to prevent millions of dollars in losses from landscape and structural pests. The PAT program also improves human health by reducing the risk of exposure to disease vectors, as well as to the pesticides themselves. The PAT program also saves millions of dollars in environmental damage from the misuse of pesticides by teaching applicators how to safely use them.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State Specific

Water Quality – Julia Peterson

A. **Program Description:** Water is essential for life and its protection is critical. Stormwater runoff carries pollution from homes, neighborhoods, roads, farms, and logging areas into local waterbodies. This pollution is difficult to regulate because it does not come from a single, identifiable source. The control of nonpoint source pollution depends on education and behavior changes that put water quality protection at the forefront of home, farm, workplace and municipal practices.

The Water Resources programs of the University of New Hampshire Cooperative Extension work at the grass roots level with the backing of science-based information to gradually change practices affecting water quality. Results contribute to the scientific knowledge base on the state's water resources and/or the education and empowerment of its citizens to reduce pollution and protect natural resources.

B. Impacts:

Increased audience knowledge:

- Greater individual knowledge in water quality monitoring concepts, pond care, land protection for water quality benefits, riparian buffer guidelines, home and farm assessment, nonpoint source pollution, estuarine characteristics, estuarine research and phytoplankton identification
- Greater youth knowledge about watersheds, nonpoint source pollution, groundwater basics and stormwater pollution prevention

Changes in audience attitude

- Increased willingness to adopt water quality friendly home, yard and farm care practices.
- Increased interest and concern for protection of coastal environments

Increase in individuals' skills

- An increase in the number and skills of trained water quality monitoring volunteers in both fresh and salt water systems contributing to an 8-10% increase in sampling statewide and a 25% increase in the Lakes Region. New skills for coastal monitors include phytoplankton monitoring and instream habitat assessment

Increase in community capacity

- Greater capacity of municipal officials to conceptually connect land use and water quality and communicate natural resource protection goals to others
- Continued expansion of "neighbor to neighbor" effect of monitoring programs in which trained volunteers educate other members of their associations, commissions and towns
- Greater capacity of New England wide monitoring collaborative through NH participation.
- Greater capacity of other New England states to expand training opportunities for watershed stewardship collaboratively
- Adoption of NH monitoring program's approach and methods by other states and countries.

Improved decision-maker capacity

- Improvements to NH source water protection program and regional TMDL model by incorporation of research results on statewide nutrient coefficients
- Increased capacity of NH Department of Environmental Services to detect harmful algal toxins and use screening tools
- Increased natural resource scientist, educator and decision maker awareness nationally of integrated GIS watershed analysis approach
- Anticipated improvement in decision making about riparian buffers based on applied research of water quality benefits

Changes in policy/decision making

- Volunteer-collected data used by state/fed agencies helps determine shellfish bed openings and closures, coastal restoration project budgeting and included in the 305B report to Congress
- Additional state and federal funding for volunteer monitoring programs to assist with local habitat restoration, stormwater management, and baseline data collection

Changes in economic conditions

- Savings to communities in water quality sampling costs (over \$9000)
- Additional earnings to local environmental consulting firms and labs by providing low cost technical and laboratory assistance (\$150,000 - \$250,000)
- Potential increases in property values (and tax revenues) around lakes due to improved water quality associated with WQ assessments and education on preventing degradation

Changes in water quality

- Building on prior years 80-95% reduction in nutrient load and nutrient concentrations (in Chocorua Lake) during 2003, there was further documentation of the affect of roadside BMPs (berms, swales, and diversions) and natural peripheral wetlands in reducing nutrient loads

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: Multi-state and integrated research and Extension

Wildlife Management - Darrel Covell

A. Program Description: New Hampshire is home to more than 10,000 species of wildlife including mammals, birds, reptiles, amphibians, fish, insects and other invertebrates. This rich biological diversity depends on New Hampshire's forest, field and wetland habitats for survival.

New Hampshire's human population has nearly doubled in the last 30 years. This growth and associated development placed increasing pressures on the landscape. Studies estimate that approximately 13,000 acres of habitat are lost to development each year in NH. In addition to the direct loss of habitat, continued land development leads to greater fragmentation of natural habitats with resulting adverse impacts to fish and wildlife populations. The protection and enhancement of essential habitats is central to sustaining New Hampshire's fish and wildlife populations. With a majority of the state's land in private ownership, the collective decisions of private landowners and community decision-makers have a major impact on wildlife and their habitats.

Since 1985, NH Fish & Game and UNH Cooperative Extension worked together to provide a Wildlife Habitat Conservation Program. Through this program, an Extension Assistant Professor and Specialist in Wildlife provides technical information and assistance to landowners, natural resource professionals, community leaders, land use planners, and conservation groups to help them identify, manage and protect critical and significant fish and wildlife habitats.

B. Impacts:

Land Management Assistance: This year, the Wildlife Specialist provided on-the-ground habitat management recommendations on 16 properties totaling nearly 32,000 acres. By providing assistance to landowners and others who influence land use decisions, this program helps participants make more informed decisions regarding protecting and maintaining wildlife habitat and increases the amount of land managed with good stewardship practices.

Training for Natural Resource Professionals and Land Managers: During 2003, workshops reached over 600 resource professionals. Workshop topics included managing early successional habitat, beavers and habitat management, forest fragmentation, identifying and protecting significant wildlife habitats and mapping wildlife habitat using GIS data.

Community Conservation Planning: In addition to providing training to natural resource professionals and land managers, the Wildlife Specialist presented a series of programs on *Identifying and Protecting Significant Wildlife Habitats* and *Mapping Wildlife Habitats Using NH GIS Data* to town conservation commission members, local and regional planners and conservation group members.

Information and Education: UNH Cooperative Extension's "Habitats" newsletter reaches over 4,500 natural resource professionals, teachers, landowners and practitioners in the natural resources field. Wildlife habitat management information is also presented to landowners through workshops, tours and slide programs.

NH Coverts Project – "Volunteers Working for Wildlife": The NH Coverts Cooperator Volunteer Program is a collaborative effort that helps New Hampshire landowners and community leaders become good stewards of the land and ambassadors of good stewardship. Every September, a new group of 25 volunteers convened at a 3 day training session. They receive materials, classroom instruction and field experience in wildlife, forest stewardship and land conservation. Now numbering 210 people, Coverts volunteers reach thousands of New Hampshire citizens each year through woodland tours, articles and educational programs. In addition to Cooperative Extension resources, the Coverts volunteer program receives support from the NH Fish & Game Department, the Ruffed Grouse Society, the NH Division of Forests and Lands and the USDA Forest Service.

Comprehensive Wildlife Conservation Plan: The Extension Wildlife Specialist works with the NH Fish & Game Department and partners to develop a Statewide Comprehensive Wildlife Conservation Plan. The plan will inform land trusts, communities, and agencies on the location of New Hampshire's most critical habitats and on strategies for their conservation.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funds

D. Scope of Impact: State specific

Goal 5 - Enhance economic opportunity and quality of life for Americans

Executive Summary

a. UNH Cooperative Extension conducts a wide array of programs under this national goal. These include implementation of a State Strengthening grant working with youth and families at risk programs targeted to limited income/low-income families including Nutrition Connections and the Family Lifeskills Program, part of New Hampshire's welfare reform effort, parenting programs through various deliveries including a program for incarcerated parents and their families, family finance education for various audiences including a volunteer counseling program for seniors needing Medicare and Medicaid insurance assistance, community development including Extension's successful Community Profiles program, and youth development programs

including traditional 4-H programs, 4-H camping and the Teen Assessment Program. Another key aspect of this goal is the extensive use of trained volunteers in implementing many of UNH Cooperative Extension's programs.

a. Key successes described in detail below include establishing community-based youth programs that impact and provide support for at-risk families, continued accomplishments in preparing youth and adults on public assistance for the workforce, safety education for loggers, sawmill operators, municipal workers and landowners, continued contract funding to Extension from the state Department of Health and Human Services providing the Family Lifeskills Programs for individuals in transition from welfare to work, parenting education delivered through a comprehensive newsletters series, workshops conducted by certified volunteers, and a program conducted for parents in prison with axillary support for their families; financial education programs targeted to farmers, midlife and older women, families with debt, families unable to manage finances, and elders needing assistance dealing with Medicaid and Medicare insurance; continued success and demand from new communities for Extension to conduct a Community Profile; and success in teaching youth life skills, project skills, and in providing positive, healthy learning experiences through 4-H clubs and activities, summer residential camping programs and after-school program sites.

b. Significant impacts were achieved for all of the programs identified and are described below. Based on these impacts, all programs will continue in FY2004.

c. Significant impact was achieved through the involvement of 3,745 volunteers during FY2003. Volunteer involvement is a high priority for UNH Cooperative Extension and volunteers conducting a wide variety of programs. These include lake and bay water monitoring, teaching landowners to protect wildlife habitat, master gardeners conducting community service projects or provide other educational services, 4-H leaders, marine education docents, parenting educators, and trained counselors who advise seniors on health insurance. Of note this year, Master Gardeners involved in the Veggie Volunteer program organized other volunteers to glean field vegetables for use by food pantries and non-profit kitchens saving \$5,571.

d. Total Expenditures:

Source of Funding - Smith-Lever 3b&c - \$600,337
Smith-Lever 3d - \$20,000
State matching funds - \$3,158,532
County appropriations - \$1,028,120
Grants, Contracts, Other - \$1,396,986

FTEs - 69

Agricultural Financial Management – Mike Sciabarrasi

A. Program Description: Agricultural financial management and development of business plans are essential to the success of exiting and new agricultural firms. Farms must be able to assess whether they meet goals for profitability, efficiency, liquidity and solvency. New farms and farms considering major changes must be able to realistically evaluate and project budgets for alternative enterprise combinations and size scenarios.

Business planning and financial management workshops use university marketing and management specialists as well as bankers and industry experts from across the state and region. In many programs, human resource and family development experts present material on the human aspects of a family firm, such as identification of goals and objectives and development of a family budget. Marketing specialists help assess market potential and forecasting sales. This mix of experts provides participants with a well-balanced and comprehensive approach to business and financial planning.

“Ag-Biz” farm management programs are multi-state efforts that teach farmers business and financial management skills. These programs are conducted jointly by the Cooperative Extension staff in New Hampshire and Vermont. Participants learn about financial statements, profit and cash flow projections and record keeping options. Programs were revised and are planned for upcoming years.

Two beginning farmer seminars focused on the basics of record keeping and reporting. Small farms and new farms were the target audience for these programs.

Three professional training programs in business management provided Extension educators and industry leaders with basic understanding of farm records, financial analysis techniques and economic budgets.

Individual farm consultations dealt with long-term financial planning and business plans as well as specific recommendations regarding record keeping systems. Invited presentations targeted specific topics such as understanding cash flow and cost of production calculations on New England dairy farms.

B. Impacts:

- 75 farmers improved or adopted better financial record systems
- 24 agricultural professionals improved their understanding of farm records and financial management
- 15 farmers developed or improved upon farm business plans
- Six farmers evaluated exit and farm transfer strategies designed to minimize tax impacts and attain business and family goals
- 65 agricultural professionals, industry leaders and legislators improved their understanding of the farm costs of producing milk

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

C. Scope of Impact: Multi-state

Child Care/Dependent Care – Charlene Baxter

A. Program Description: Child care needs increased tremendously over the past decade. In 2000, 65.3% of mothers with children under six were in the labor force (U.S. Department of Labor, Bureau of Labor Statistics). It is well documented that increased education of child care providers significantly improves the care provided to children. Dependent care needs in NH are significant, especially in families where an informal caregiver is providing care for a frail elderly person. Support services are lacking, support networks are often informal if they exist at all and caregivers

lack emotional support as they try to provide care to elders.

During the 2003 program year, UNH Cooperative Extension offered Pennsylvania State University's satellite workshop program *Better Kid Care* in six counties. Program topics included Let's Talk...Discipline, What Children Need to Know to Start School, Hot Topics for Center Directors: Recruiting, Hiring, and Training Staff, Activities for Learning Math: Numbers, Colors, Shapes, and Active Times – Quiet Times: Making Transitions Easier. Additional workshops were presented to child care providers in selected counties, including Bullying – What Can We Do About It? Influence of the Media on Children, Hey – Listen!, and Behavior at Mealtimes.

Additionally, Extension Educators conducted interviews for a research study to assess the needs of informal caregivers in the state. The study was conducted in conjunction with the NH Institute for Health Policy and Practice. Research examined experiences of family members caring for elders in NH, explored the effectiveness of their informal support networks, and made recommendations to improve services or training and education programs that would be responsive to their needs. The goal of 26 interviews per county for all 10 New Hampshire counties was met with seven of the 10 counties' interviews conducted by Cooperative Extension Family Development educators.

B. Impacts: Twenty-three workshops reached approximately 220 child care providers. Of those completing evaluations, 87% stated they learned new information by attending the program and 91% found the information relevant. Participants indicated they would use the information now (87%) or in the future (93%), and use or refer to the handouts again (89%). Comments from providers included:

- I will help children find their own solutions to conflicts.
- I will use redirection.
- I'll use the problem solving methods as shown in the examples – getting down and talking through the problem to reach a solution.
- I will use pretend play to facilitate transitions.
- I'll read a story after lunch – while the children are beginning their naps.
- I will get some different snacks and more toys to stop the biting and hitting for younger kids.
- I will use strings and Lego blocks in measurement activities for children.
- I will use some of the pattern activities and use sample testing of things that they need to know to enter kindergarten.

As a result of the Informal Caregivers Study conducted in 2003, the New Hampshire Institute for Health Policy and Practice, headquartered at the University of New Hampshire, received funding to develop aging and disability resource centers across the state. The three-year, \$800,000 grant allows UNH to work with the state's Division of Elderly and Adult Services to implement a more comprehensive, front-end model to help the elderly, persons with disabilities and chronic conditions, and their families access long term supports. The program is funded through the federal Agency on Aging and Centers for Medicare and Medicaid Services.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Children, Youth and Families at Risk/4-H Camps – Ann Dolloff

A. Program Description: During the summer of 2003, NH 4-H Camps operated two sites, serving 849 individual youth in 1262 camper weeks. Summer camps received significant funding from organizations around the state to support families who otherwise could not afford to pay the fees for their child to attend camp. In 2003, 74 organizations and human service agencies provided \$72,140 to support families and send youth to NH 4-H Camps.

Many of the youth supported had specific disabilities and special needs, requiring individualized accommodations.

- 20% of the campers had a diagnosis of physical, developmental, emotional or behavioral disability, with an estimated additional 10% at-risk (poverty, foster children, adjudication)
- Disabilities included William's syndrome, Down's syndrome, ADHD, anxiety disorder, asthma, bipolar disorder, Asperger's syndrome, clinical depression, obsessive compulsive disorder, autism, cerebral palsy, epilepsy, post-traumatic stress disorder, oppositional defiant disorder, language delays, osteogenesis imperfecta and diabetes
- The UNH Institute on Disabilities staff collaborated with NH 4-H Camp staff training and on-site supervision throughout the camping season

Fourteen youth attended camp this summer with 1:1 aides. These 14 youth represented 55 camper weeks. Four campers attended overnight camp with their aides and eleven campers attended day camp with their aides. One camper attended both day and overnight camp. This is an increase from six campers with 1:1 aides in 2002.

Twelve campers attended NH 4-H Camps through extended school year (ESY) funding, with additional support provided by Riverbend Mental Health Services and Community Bridges. This is an increase from four campers who received ESY support in 2002.

B. Impacts: As a result of these partnerships with NH school districts, the UNH Institute on Disabilities and statewide human service agencies, the diversity of youth served at NH 4-H Camps increased. In addition to the enhanced diversity of youth, the capacity of staff and the camp community to accommodate and support youth of different abilities significantly increased. No camper was sent home for behavioral reasons. Camper needs were accommodated within the camp community. This was the first summer campers were not removed from camp programs due to unmanageable behaviors.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, user fees

D. Scope of Impact: State specific

Children, Youth and Families at Risk/Teen Assessment Program - Charlotte Cross

A. Program Description: Youth face many challenges as they grow and develop. While most adolescents manage the transition from the world of childhood to adulthood successfully, some youth have problems negotiating these changes. There is a growing movement towards community collaboration for addressing adolescent issues and promoting the positive development of youth within an ecological framework.

The Teen Assessment Project (TAP) supports youth, strengthen families and builds strong communities. The first phase of the project involves building a youth-focused coalition. This group develops and administers a survey to youth in grades 7-12 about teen concerns, attitudes and behaviors, both positive and problematic. Results are shared with the community to increase awareness and knowledge of teen issues. Community education includes a parent newsletter series containing local data, a comprehensive statistical report and abstract, community forums, youth and family programs and education through media outlets. Communities strategically plan, carry out initiatives, collaborate to support positive youth development and address youth issues needing attention.

B. Impacts: To date, TAP surveyed 25,006 youth in 23 different school districts/regions representing 96 communities. In FY 2003, 1,372 students were surveyed in the Pemi-Baker, Lin-Wood and Newfound. Survey results were presented locally and featured in the media creating community awareness of youth issues. Adolescent data sharing and related programs reached 1,425 youth and 20,325 adults. Examples include Conway-Gay/Straight Alliance formed following the 2001 TAP survey now meets weekly, two educational forums held; Keene/Hinsdale/Winchester area-parent articles featured newsletter editions and a community-wide newspaper; high school health fair, adolescent issue focused parent programs, award winning youth website, planning processes with three youth oriented collaborative groups; Plymouth/Bristol/Lincoln area-school board and community data presentations, parenting classes, law enforcement adolescent party monitoring effort, high school health fair, third annual prevention summit, two coalitions continue and Newfound Prevention Coalition formed; Merrimack-Project Safeguard conducted (a strengthening families program for youth and parents), plans for teen center; Nashua-task force formed to examine high school drop out rate, an Interfaith Youth Council learning about different faiths; Raymond-peer mediation in the middle school, peer outreach in the high school, Sexual Assault Support Services educational training; community forums related to parent-teen relationships, teen sexuality, teen depression and community collaboration; community newsletter insert on alcohol, tobacco and other drug (ATOD) issues, TAP data featured on a local cable channel, coalition has developed a website and incorporated; Dover-suicide prevention campaign, ATOD prevention efforts, aspiration teams and summer camps, curriculum changes; Portsmouth-middle school health fair. TAP has developed and/or strengthened collaborative efforts with both state and local groups.

A six-part newsletter series entitled, “*Whose Kids? ... Our Kids!*” was distributed to the parents of 1,778 youth in the Raymond and Pemi-Baker school districts. Newsletters were shared with school personnel, community members and youth professionals.

TAP provides youth data that helps communities secure funding for local initiatives. To date, over \$10.5 million in the form of grants and awards will help complete TAP in communities throughout the state and to initiate and enhance programs. In FY 2003 \$1,319,183 in documented funding was received. Program examples include statewide online youth community coalition connections newsletter, comprehensive report based on gender analysis with TAP data, AmeriCorps Vista position, TAP efforts in four school districts; Conway-education on bullying; Gorham-tobacco prevention efforts; Plymouth-ATOD prevention efforts; Nashua-after school programs; Merrimack-middle school after school program resulting in improved academic performance and enhanced self esteem; Raymond-strategic planning and implementation efforts with a youth focused coalition; Claremont area-teen center, ATOD prevention efforts.

A. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grants

D. Scope of Impact: State specific

Children, Youth and Families at Risk/State Strengthening – Paula Gregory

A. Program Description: NH communities lack sufficient afterschool programs, especially in rural areas. Most parents want children to have help with homework, make friends, try new things and develop talents. Research shows children who spend time in quality out-of-school programs enhance work habits, school attendance, interpersonal skills and non-aggressive responses to peer conflict, are less likely to drop out, use drugs or become teen parents.

Three afterschool programs started by UNH Cooperative Extension, in partnership with rural communities under the CSREES 1998-2003 CYFAR program were sustained this program year. Programs include two middle school sites (grades 4-8) and an elementary school site (grades 1-5). Two-thirds (64%) of 506 participating youth qualify for free/reduced school lunch, meeting federal program requirements. Each program site offers a mix of homework assistance, enrichment, community service learning, computer labs, and activities to build life skills (social skills, teamwork, goal setting, decision-making, conflict resolution). University faculty and students evaluate program effectiveness/impacts. Community advisory committees, comprised of parents, youth, school personnel, program staff, and community leaders assist with program design and development, evaluation, and sustainability. UNH Cooperative Extension also initiated a 4-H Afterschool Team, in partnership with PlusTime New Hampshire, providing training on a variety of topics (discipline, curriculum, nutrition, food safety, resource development, collaboration) for 332 NH afterschool providers who reach 3,876 children and youth.

B. Impacts: Three rural communities fully sustained after school programs, where none existed five years ago. In Boscawen, the Concord YMCA assumed management of the program, expanding operation from three to five days/week and increasing enrollment. In Claremont, the program has grown from serving 28 middle school youth in 1998 to 1,380 students in five schools (K-12th grade). In Haverhill, the program expanded school-wide and the advisory committee worked to sustain its budget through diversified funding. 105 children participated at Extension managed sites in the past program year. Children and parents believe these programs help children improve in ability to complete homework assignments (78%) and in overall school performance. Nearly half of school staff (45%) felt their students had improved in class participation and 36% perceived improvement in academic performance. A majority felt students improved in leadership development (64%), including being a positive role model, and taking pride in their school (55%), respecting others (64%), cooperation (91%) and being helpful to others (73%). They also cited improvements in critical areas of behavior/emotions, including following rules (64%), making decisions (73%), problem solving skills (64%), being responsible, accepting consequences (64%) and self-confidence (91%). At one middle school site, 20 students (38%) showed improvement of one-half grade or more in math and 16 students (31%) showed similar improvement in language arts grades. Working with community coalitions, UNH Cooperative Extension staff assisted afterschool programs in securing \$1.1 million in new funds and in-kind services to support afterschool programs.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funding

D. Scope of impact: State specific

Community Development – Charlie French

A. **Program Description:** New Hampshire communities face many challenges, including changing demographics, shifting economic structures, emerging societal crises, unprecedented growth in some regions, and decline in others. Cooperative Extension's community development programming helps communities achieve long-term well being by building human, economic, social, and environmental capacity. To build a communities' capacity, Extension Educators provide a variety of educational services to community residents, organizations, and local governments. Examples of these educational services include facilitation of community forums, training in leadership development, assistance with planning activities and provision of technical assistance for economic development, tourism and communications. The following are impacts from Cooperative Extension's outreach and programming on NH communities and citizens.

B. **Impacts:**

Societal:

- Extension's Community Profiles program – a strategic planning/visioning program for New Hampshire communities – reached over 500 New Hampshire citizens in five towns in FY 2003. All these towns created action plans, resulting in the recruitment of over 135 volunteers to work on local action committees that address community issues and concerns
- Over 60 residents of Community Profile Communities were trained in the art of small group facilitation by Cooperative Extension, all of whom went on to facilitate their Profiles
- A Community Profile action committee in Dummer is working on a community newsletter and is actively engaging youth in local government
- Two local community organizations formed as a result Cooperative Extension's Community Profile follow up assistance in organizational development
- Thirteen volunteers and professionals received training in the art of group facilitation by Extension. Several of these trainees facilitated community forums around topics such as education, health insurance for the underinsured, and community health and well being
- Extension provided organizational assistance to the Monadnock Volunteer Center Advisory Council. This assistance lead to the recruitment of new volunteers and the development of a website to enable local citizens and organizations to share volunteer information
- Extension staff served on the advisory board of New Hampshire Celebrates Wellness (NHCW), an organization aimed at improving individual and community health. One NHCW community reported that participants lost more than 600 pounds in 2002-2003

Economic:

- Follow up technical assistance with community architectural design projects occurred in two communities as a result of community planning assistance provided by UNH Cooperative Extension, USDA Rural Development and Plan NH
- Public input on economic development, transportation, housing, open space and recreation was incorporated into Londonderry's updated Master Plan as a result of a community forum facilitated by Cooperative Extension. The plan will be supported by zoning ordinances defining city's physical growth in the future
- Over \$100,000 in funds were raised in Troy, NH for downtown redevelopment and economic development planning due to Cooperative Extension's planning assistance
 - Training in tourism development and assessment was provided to the tourism sub-committee of the Androscoggin Valley Economic Restructuring Committee as it seeks to develop an alternative tourism economy

- Extension continues to provide organizational and management assistance to a community farmers market in Belknap County which helped influence the market's quality and longevity
- Extension's Community Development initiative received a \$25,000 endowment to support applied graduate work in the area of land use protection in Hillsborough County. A graduate assistant is developing a series of fact sheets and informational resources on land use and environmental impact assessment for Hillsborough County and Southern NH

Environmental:

- Partially as a result of Extension programming in the natural resources arena, the town of Dummer tapped into statewide resources to protect community forest land from development due to a recent land sale by a multinational paper company
- An Extension-trained graduate assistant helped facilitate a forum on the impacts of growth in NH
- During the 2002-2003 program year, dozens of volunteers were trained by Cooperative Extension's COVERTS program to help community conservation efforts. These volunteers organized/conducted natural resource inventories and community cleanups
- Demographic analysis assistance (GIS maps and supporting data) was provided by Cooperative Extension to support an organization charged with residential growth in Carroll County. The grant is in the final round of consideration
- Several community landowners received education and training on placing easements on their land to help preserve valuable natural resources and environments
- Extension provided planning and organizational assistance that lead to the development of at least four master plan revisions, multiple natural resources inventories and several open space protection plans

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Family Resource Management - Suzann Knight

A. Program Description: Americans in 2002 save less than four cents of every dollar while 16 to 21 cents of every dollar went towards debt. Households saving less and spending more put their financial security at risk. Spending habits start early. In 2002, U.S. teens spent \$170 billion. The Jump\$tart Coalition for Personal Financial Literacy 2002 survey found 12th graders' personal finance knowledge level to be 50.2%, a failing grade based on the typical grade scale. Many young people could establish bad financial management habits, and stumble through their lives learning by trial and error.

UNH Cooperative Extension increased financial literacy by providing education for participants to establish financial goals, reorganize their spending to start or increase saving, decrease their debt load and follow a spending plan that will lead toward achieving financial security now and in later life. Family resource management education is taught in every New Hampshire county through face-to-face education, learn-at-home publications and the media. The audiences include those on public assistance, on probation to Individual Development Account participants, teachers, adults, youth and Medicare beneficiaries.

B. Impacts: During this reporting period, family resource management education reached 257,358 people (6,463 adults and 6,028 youth through face-to-face education, 9,467 through learn-at-home publications and 235,400 through print and nonprint media). Throughout New Hampshire UNH Cooperative Extension sponsored 38 workshop series for 344 adults within the Financial Security in Later Life national initiative with either the curricula “Taking Charge of Your Finances” or “Making Money Work For You”. These series include pre/post/follow-up evaluation tools. As a result of this education 59% decreased debt and paid-off bills, 63% are saving and 34% plan to start, 71% now follow a spending plan and 67% reported they felt more confident making money decisions. Furthermore, fewer participants indicated they were paying bills late at the end of the workshops. The most dramatic decrease was for those reporting they “often” paid their bills late seven percent after compared with 24% before the workshop experience. From beginning to end of the five week series, 39 participants saved \$11,948 and also reduced their debt by \$8,705. Through NH Saves, 41 savers committed to saving or reducing debt at a rate of \$5,509 a month or \$66,108 the first year. Savings are earmarked for home buying, emergency funds, education, retirement and business development.

To increase the number of students benefiting from the High School Financial Planning Program (HSFPP), UNH Cooperative Extension teamed with NH Jump\$tart Coalition. In spring 2003, at the annual NH Jump\$tart “Money Smarts” Conference for Teachers, four workshops focused on the HSFPP reaching 6,028 students. The evaluation results of the High School Financial Planning Program show 47% knew more about credit costs, 37% improved skills for tracking spending, 45% started saving or began saving more and 38% felt more confident about managing their money.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funding

D. Scope of Impact: State specific and multi-state.

Farm Safety - Sarah Smith

A. Program Description: A growing number of people are undertaking farming and forestry related activities on a part-time basis. New Hampshire’s forestland is owned by 83,700 individuals. Approximately 1,600 of these owners actively manage their land through the NH Tree Farm Program. Many of these individuals had limited exposure to farm and forest related equipment and activities prior to becoming active on their own land. In addition, many forest related operations only take place periodically, increasing the likelihood participants will be less familiar with equipment and techniques than those who conduct activities more frequently.

NH's Rural Safety Program encompasses safety activities within a variety of program areas. Target audiences for farm safety programming include loggers and forest products related industries, the farming community, landowners engaging in part-time/ hobbyist farming and forestry activities and rural families. Extension Educators and Specialists incorporate safety messages into their programming and publications.

New Hampshire is 83% forested. NH's forest industries represent \$1.7 billion and employ over 16,000 people, thus a major emphasis in NH's Farm Safety Program is on the timber industry. UNH Cooperative Extension cosponsors the NH Professional Loggers Program which provides training programs for loggers to help them improve their efficiency, safety and environmental awareness.

There are over 3,000 individual operations that qualify as commercial farms in New Hampshire. Safety topics related to farming include equipment safety, the safe use, containment and disposal of pesticides and other farm related chemicals.

B. Impacts:

Twenty-seven workshops were held for loggers, state and municipal workers, and farm and forest owners reaching over 575 participants. These workshops included:

- Mechanical Harvesting for Loggers (2 program)
- Safe and Productive Felling (5 programs)
- Advanced Felling (2 programs)
- First Aid and CPR (for loggers) (6 programs)
- Hazard Tree Identification (1 program)
- Chainsaw Safety for Landowners (8 programs)
- Biosecurity Workshops (2 programs)
- Managing ATV Use on the Forest Lands of NH (1 program)

In addition to workshops focusing specifically on safety considerations, safety topics are continually incorporated into site visits and workshops on other topics.

Approximately 100 workers at wood-processing companies in New Hampshire speak the Cambodian language. This past year, safety related materials were translated for Cambodian workers and a new safety video in Cambodian was developed. A post-test, distributed to participating wood products companies as a companion to the video will evaluate participant understanding of the information presented.

Extension educators helped Christmas Tree Growers manage and care for Christmas tree plantations, identify and control Christmas tree pests and use safe pruning and shearing techniques.

Extension participates in numerous programs with growers including maple producers, ornamental horticulture producers, corn and forage growers, dairy producers and vegetable and berry growers. Equipment and pesticide safety messages and information are distributed to these audiences.

Approximately 200 youth participated in county and state dairy and horse quiz bowls this past year. Participants need to be knowledgeable about farm safety practices in addition to their animal science topics. One fact sheet youth need to study was “Handling Farm Animals Safely.” There are safety sections in all of NH’s animal science curricula. A volunteer safety officer was assigned to the state 4-H show to monitor potentially dangerous situations and ensure that exhibitors were using safe practices. In Sullivan County, the Farm Bureau and Cooperative Extension Offices sponsored a tractor safety course for youth.

The Extension Program Leader in Forest and Wildlife Resources serves as a point of contact for the Extension Disaster Education Network and has received training regarding prevention, preparation, response and recovery from disasters. Interaction with Extension professionals from other states regarding the handling of dangerous materials and disease problems is a valuable part of this network.

C. Source of Funding: Smith-Lever 3b,c&d, State matching funds, County funds

D. Scope of Impact: State specific

Leadership Training and Development/Strengthening NH Communities – Charlie French

A. Program Description: New Hampshire communities face social, physical, economic, and environmental challenges. While some communities proactively respond to current and future issues, others lack the leadership structure and capabilities to address issues in an organized and effective fashion. UNH Cooperative Extension's Strengthening New Hampshire Communities Program (SNHC) offers a variety of training programs aimed at building leadership capacity – facilitation training workshops, a community development academy and other curricula.

B. Impacts:

Societal:

- As a result of SNHC's Community Profiles Program (community-level strategic/action planning program), over 135 volunteers received training to work more effectively on local action committees that address community issues and concerns
- Over 60 participants of Community Profiles in five towns received training in the art of small group facilitation by Cooperative Extension, all of whom facilitated their Profiles
- Two community organizations received organizational assistance and community needs assessment training from Cooperative Extension
- Extension trained a dozen community leaders and agency/organization staff in group facilitation techniques. Some of these trainees facilitated community forums that focused on education, health insurance for the underinsured and community health and well being
- Extension provided organizational capacity building assistance to the Monadnock Volunteer Center Advisory Council. This assistance led to the recruitment of new volunteers and the development of a website that helps citizens and organizations to share volunteer information

Economic:

- Training in tourism development and assessment was provided to co-chairs of the tourism sub-committee of the Androscoggin Valley Economic Recovery Corporation
- Extension provides organizational and management assistance to a community farmers market in Belknap County which helped influence the market's quality and longevity

Environmental:

- SNHC is building the capacity of graduate assistants to provide outreach in land conservation
- Extension's COVERTS program trained dozens of citizen volunteers to assist communities with conservation efforts

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, user fees

D. Scope of impact: State specific

Leadership Training and Development/Volunteers – Wendy Brock

A. Program Description: UNHCE provides educational outreach from the university to the citizens of New Hampshire to help them make quality decisions. Requests from clientele exceed the time and ability of UNHCE educators and specialists to deliver programs. Empowerment of a strong cadre of educated volunteers allows for the delivery of more educational programs and services to individuals, families, businesses and communities.

More than 3,745 volunteers received 714 hours of education through UNHCE programs. As a result they provided more than 126,840 hours of service to the state of New Hampshire.

- UNH Lay Lakes Monitoring Program (LLMP) 443 active volunteers donate 2433+ hours and students conduct research at more than 300 lake sites and 370 tributary and outlet sites
- The Coverts Project 205 active volunteers serve 116 different communities to promote wildlife and habitat conservation and forest stewardship in NH
- 170 marine docents and 98 Great Bay Coast Watch volunteers provide a lens through which students, educators and the general public can view the coastal environment. Participants represented 185 communities
- 434 Master Gardeners volunteers share their knowledge of gardening by serving 12,000 hours as volunteer educators in their communities or at the Family, Home & Garden Education Center
- 4-H youth development program 2159 volunteers help 22,500 youth acquire knowledge, develop life skills and form attitudes to become self-directing, productive and contributing members of society while developing workforce competencies
- 85 Community Tree Stewards volunteer over 4782 hours in 58 NH communities to strengthen communities, promote social change and enhance urban ecosystems through urban forestry practices
- 150 Health Insurance Counseling Education Assistance Service volunteers reached 3,889 individuals about confidential Medicare issues, which resulted in a collective saving of \$48,490

B. Impacts:

- LLMP volunteers, students and staff monitored the effectiveness of the implemented diversion ditches and culverts installed by NH State Department of Transportation to reduce the nutrient and sediment pollutant load into Chocorua Lake. The collected data indicates the diversion ditches and culverts significantly reduced the pollutant load to Chocorua Lake and will help preserve this state icon for future generations
- NH Coverts volunteers manage more than 30,000 acres of land in New Hampshire. Coverts volunteers used their experience and training to serve as local decision-makers on conservation issues in their communities. Over 65% of Coverts volunteers are active in their conservation commission, planning board or local conservation group
- Marine Docents established two endowment funds to support the SeaTrek program and docent training. They worked with over 15,000 individuals. As a result of the program, 10 schools adopted the floating lab as part of their regular curriculum
- In the Veggie Volunteer program, Master Gardeners organized other volunteers to pick vegetables for food pantries and non-profit kitchens. Meal programs saved \$430 each week for a total of \$5771
- Personal workforce development skills are enhanced by volunteers in the 4-H youth development program. Skills noted include staff supervision of all ages, enhanced tolerance of differences, ability to organize work assignments and be an effective team member and communicator in the work place
- 17 Tree Stewards volunteered 1733 hours in land conservation projects in Rockingham, Hillsborough and Strafford counties. This year NH communities appropriated \$35 million in land protection efforts at town meetings, more than double two years previous

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of impact: State specific

Parenting – Charlene Baxter

A. Program Description: Strong families raise children to become responsible, productive and caring adults. Many parents lack the knowledge and skills to promote the healthy development of their children. Increasing numbers of crimes in child abuse and neglect indicate the need to initiate prevention programs that result in long term change.

During the 2003 program year, parenting education was delivered through one-on-one interventions, seminars, an issue conference, workshop series, newsletter series, fact sheets, UNH Cooperative Extension's web site and the media.

B. Impacts: 2,200 parents were reached through Extension's face-to-face parenting programs (532 one-on-one/home visitors, 985 seminars/one time workshops and 683 workshop series). 4813 families with infants from birth to 12 months of age received the age-paced newsletter, Cradle Crier, and 3994 families with toddlers from 13 to 24 months of age received the age-paced newsletter, Toddler Tales. 10,135 fact sheets were distributed on issues ranging from bullying to the impact of divorce on children. Twenty episodes of "Positive Parent," a three-minute program airing weekly on WMUR-TV, New Hampshire's statewide television station, reached approximately 250,000 people. In addition, a statewide news article dealing with parenting and family issues reached approximately 180,000 parents.

An issue conference, "Meeting the Needs of Children, Youth and Families in a Media Age," had 80 participants, mostly professionals and parenting educators. Seventy-eight percent rated the conference as excellent. Selected comments:

- I plan on organizing a workshop for parents about the violence their children may be absorbing in the media
- Educating parents will be more effective than simply telling them to turn off the TV, it's bad for them
- I did not realize the amount of resources that are available to help teach parents and children about media literacy. I will utilize these resources now that I am aware of them
- This has influenced my own media consumption. I am leaving this conference with many ideas to bring to my classroom. I plan to develop a strong interdisciplinary unit that involves the community
- It's essential for teachers to teach media literacy

Family Connections is a Family Resource Center that offers a parenting education series at the NH Department of Corrections Lakes Region Facility for medium and minimum security inmates. The program provided parenting education to 234 incarcerated individuals in FY 2003; of these, 180 completed the series. These individuals parented 297 children ages birth through adolescence. With the Family Connections Program, inmates must attend a mandatory eight-week parenting class as soon as they are incarcerated, even if they don't have children. After that, participation is voluntary. Before visitation with their children is allowed, inmates must complete at least a month of parenting support group meetings. One-on-one visitation privileges make the program the only one of its kind in the nation. Most corrections facilities don't deal with family members.

The Family Lifeskills Program (FLP) is a welfare-to-work program for those transitioning from reliance on public assistance. FLP includes parenting education that reached 474 parents. Benefits of this programming reported by participants learning to deal with behavior issues with my children, dealing with issues with our school system and I.E.P.s, parents' rights, problems with bullying, being able to give parents great information they could use right away with their children. Also, being able to communicate more effectively in the home with family members, better able to handle conflicts without getting so angry, increased understanding of child development practices including what is age appropriate, children are participating in household chores better without such a fight, using job charts in the home, weekly family meetings are being held, parents able to show affection to their children more easily.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

B. Scope of Impact: State specific

Tourism - Charlie French

A. Program Description: While most of Southern New Hampshire experiences rapid job growth and an influx of new businesses and industries, Northern New Hampshire continues to face economic crises. Resource-based industries, including tanneries, paper mills and manufacturing plants in this rural part of the state have undergone stress resulting from international competition. Although job losses this year were not as heavy as two years ago, the unemployment rate in the forest industry continues to rise. Because this region's natural beauty and wilderness resources are plentiful, the state has placed renewed interest in developing a viable tourism industry, particularly in Grafton, Coos and Carroll Counties.

Cooperative Extension provides assistance to rural communities to help them analyze the existing tourism economy and assess the potential for developing a more viable tourism industry. Assistance is provided in the areas of organization, technical training, economic analysis and financial planning.

B. Impacts:

Societal:

- Cooperative Extension provides technical and organizational assistance to the Northern Forest Heritage Park in Berlin. The park, designed to educate citizens about the life and history of a mill town, succeeded in drawing thousands of visitors to the depressed northern part of the state
- Extension staff in Rockingham County worked with local community residents to develop a community horticultural garden which has already drawn hundreds of volunteers and visitors
- To draw tourists and local residents downtown for shopping, Greenville's Community Profile Beautification Committee made holiday decorations and Christmas tree plantings
- Extension's Master Gardening program spawned dozens of community beautification projects around the state, leading to improved marketing of communities and enhanced tourism

Economic:

- Troy raised \$100,000 for downtown redevelopment. One goal of redevelopment in Troy is to draw visitors downtown to fuel downtown businesses
- Plan NH charettes were held in two NH towns as a result of visions created through Extension's Community Profiles program. The Plan NH charettes in one of the communities

focused on reuse of existing historic buildings to make the town more attractive and economically viable

- Cooperative Extension continues to help the NH Department of Resource and Economic Development and the Office of State Planning in revising the State Comprehensive Outdoor Recreation Plan
- Training in tourism development and assessment was provided to the tourism sub-committee of the Androscoggin Valley Economic Recovery Corporation as it develops an alternative tourism economy
- Cooperative Extension provides technical assistance to New Hampshire inns, resorts, campgrounds, hotels, and theme parks on landscaping, ornamental tree planting and insect control. This educational and technical assistance saved the inns/hotels money and improved their aesthetic appeal and drawing power
- Cooperative Extension helped the Balsams Resort conduct a strategic planning session aimed at improving the resort's marketing, visitor retention and expansion and economic viability. The session was developed, planned and facilitated by Cooperative Extension staff. Participants included business and industry officials, resort owners, tourism industry executives, community college officials and local industry leaders
- Extension provided technical and advisory assistance to the UNH Hospitality Industry to extend University outreach. Extension works with Resource Economics Faculty to assess the needs of the state's hospitality-based businesses

Environmental:

- Several community landowners received education and training on placing easements to help preserve valuable natural resources and environments on their land. In particular, Extension helped create a regional greenway, attracting hikers, bikers and wildlife watchers to that region
- Extension provided communities in Rockingham, Strafford, Coos and other counties with assistance in planning, development and construction of recreational trails
- Shoreline management assistance was provided to coastal communities by the NH Sea Grant program and the Marine Docents Program. Assistance led to beach cleanups, pollution monitoring and erosion mitigation projects, all of which contributed to enhancing Southern New Hampshire's beaches. The resulting media coverage helped these communities attract tourists
- Extension worked with the state park system to augment state park operations, provide education on facility and landscape care and maintenance and present exhibitions and programs. This effort improved the quality of tourism for thousands of visitors
- Extension promotes the use of timber harvesting best management practices, and promotes "logging aesthetics," improving the visual experience for tourists and visitors

Health:

- Cooperative Extension works closely with the NH Lodging and Restaurant Association to conduct food safety education for food service industry workers. As a result of the program, food service workers around the state were trained to properly prepare and handle food, resulting in reduced food contamination incidents

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Workforce Preparation/4-H Camps – Ann Dolloff

A. Program Description: NH 4-H Camps operated two sites, serving 849 individual youth in 1262 camper weeks during the summer of 2003. Approximately 20% of these youth have an identified disability or special need. To provide physically and emotionally safe environments and promote positive relationships with caring adults, carefully chosen young adult counselors receive extensive training and supervision to work successfully with a diverse population of youth.

This past summer, NH 4-H Camps had seven therapeutic recreation (TR) undergraduate and graduate students working at its camps. Five of the staff were from University of New Hampshire (UNH), one from State University of New York-Cortland and one from Green Mountain College in Vermont. In addition to the TR students, Bear Hill 4-H Camp had two UNH occupational therapy students. Three students provided 1:1 support for campers with specific disabilities to enhance inclusion into the daily camp program. Three were general counselors, two were supervisors and one was an activity leader. Regardless of their position, all the students were exposed to children of different abilities and gained valuable experiences, relevant to their course of study and future career goals. All staff advocated for youth with disabilities and witnessed firsthand the challenges and benefits of inclusion.

B. Impacts:

Impact expressed by the students:

- I can now relate to what is being presented in class to reality and the world outside. I have some work related substance to TR to put on my resume and now have the long-term goal (one of many) of running a camp similar to Bear Hill some day
- I learned more about mental illness and children with disabilities in general than I have in any class or textbook
- I learned how to use verbal de-escalation and how to develop the skills of a therapy
- I truly believe that inclusion works because I witnessed it
- It has helped me to form my ideas and philosophy about the benefits and drawbacks of inclusion, the joy of working with children of all ability levels and the importance that camps and recreation have on the growth and development of children and adults

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, user fees

D. Scope of Impact: State specific

Workforce Preparation/Mini Society - Paula Gregory

A. Program Description: Historically, NH citizens have a strong entrepreneurial spirit with an economy driven by small businesses. Yet entrepreneurship skills are not taught in public schools. Between 1995 and 2001, UNH Cooperative Extension partnered with the New England Extension Task Force on Workforce Preparation to enhance the capacity of Cooperative Extension in the six states to prepare middle school youth (4th-8th grades) for productive futures and successful entry into the workforce through entrepreneurial education. Although the Task Force disbanded, the need for youth to learn basic workforce and entrepreneurial skills remains strong in New Hampshire.

The New England Cooperative Extension Task Force on Workforce Preparation (1995-2001) focused on three major program strategies targeting children ages 9-12, including 1) development /dissemination of a resource guide for entrepreneurial educators; 2) development of a fact sheet set, "Becoming an Entrepreneur" and 3) implementation of the Kauffman Center for Entrepreneurial Leadership program/curriculum, Mini-Society®. UNH Cooperative Extension continues to address workforce issues through the third program strategy. In 2002-2003, UNH Cooperative Extension implemented the Mini-Society® through a \$23,500 grant from the Kauffman Foundation, under the leadership of a part-time project coordinator. The project targeted 20 staff from 10 afterschool programs, for a 20-hour train-the-trainer course which included a commitment to provide 30 hours of Mini-Society® programming for 25 or more children, ages 8-12, at each site (250 children).

B. Impacts:

Staff from 35 NH afterschool programs were recruited and 25 enrolled. Eleven staff from six sites attended 2.5 day training (55% of the target staff and 60% of the target sites). Targets were not reached due to staff turnover and on-site program staffing issues (lack of substitutes, resignations) at many of the afterschool programs. Mini-Society® programs were implemented at five sites (71% of sites trained), including a 4-H home school group, afterschool programs, an elementary school and a summer recreation program, reaching 75% of the targeted number of children (n=187). Youth benefited, as evidenced by daily observation logs kept by well trained program facilitators. Seventy percent of the children demonstrated improvements in solving problems, resolving conflicts and taking on leadership roles. Almost all participants (92%) learned about democracy through daily town meetings and improved their communication skills by participating in deliberations and the entrepreneurial aspects of trading, marketing and negotiating. A majority also demonstrated understanding of concepts of business start-up costs, scarcity, market mechanisms, cash flow and the role of currency in society. Parents reported an important benefit of the experience was its effectiveness in bringing children with varying learning styles and disabilities together in a setting where everyone thrives and children learn to work from the strengths of each member to achieve the goals of the group.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Workforce Preparation/Adults - Suzann Knight

A. Program Description: Federal law requires most recipients of TANF public assistance to prepare for and find paid employment. Many TANF recipients need help mastering basic lifeskills to make a successful transition to paid work. Some people have difficulty managing time, conflict, anger and stress. They may fear change or rejection. Some people need help building support networks for themselves. Many people do not have successful role models for balancing paid work and family life. Some individuals have family difficulties that undermine their ability to seek and find a job. Many people need help with parenting skills and understanding developmental needs of children. Often, parents worry about finding childcare or interacting with childcare providers. In addition, they need help developing a spending plan or preparing nutritious meals within their budget and time constraints.

UNH Cooperative Extension contracted by the NH Department of Health and Human

Services, Division of Family Assistance conducts the Family Lifeskills Program. There are two curricula within this program: Lifeskills for Employment, Achievement and Purpose (LEAP – 90 hours) and Lifeskills Impacting Families Today (LIFT – eight hours). The Family Lifeskills Program provides TANF recipients with enhanced competencies that can bring them into the job market. These competencies include: knowledge-based skills communicated through planned curriculum and personal/interpersonal skills enhanced through group process that take place during the sessions. The knowledge-based skill areas include: food and nutrition, money management, parenting skills and personal skills facilitating a balance between work and family. The personal skills gained through the group process include enhanced self-esteem and healthy social support networks.

B. Impacts: During this reporting period 425 TANF recipients attended the Family Lifeskills Program. The Family Lifeskills Program uses pre, post and follow-up assessment tools. More than 90% of LEAP participants report they feel more prepared for the job market, 58% reporting they feel “much more” prepared; 94% reported gained knowledge about available services and 90% felt better able to handle problems. Of particular note was adherence to workplace standards, such as punctuality and attendance, gave people incentive to complete the program. The proper balance between promoting group bonding and responsibility to the group was noted by attendance, punctuality and dressing appropriately, seemed to facilitate self-esteem as well as a sense of responsibility necessary in securing and maintaining employment. Follow-up information on 201 participants found that 40% of the sample employed. Seventy-nine percent reported their relationships with people at work were good to excellent and 75% reported good or excellent relationships with employers.

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds, grant funding

D. Scope of Impact: State specific and Integrated Research & Extension

Youth Development/4-H/Life Skills - State Activities Day Survey – Paula Gregory

A. Program Description: Among the critical tasks of youth development are mastery of basic skills, including communication, problem solving and self-management through setting and self-monitoring of personal goals. In addition, as youth move toward adulthood they need skills in using resources (time, materials, money, human). For success in school, the workforce and a rapidly changing global world, youth need to become efficient at gathering, assessing and organizing information. Youth require greater skills in conflict resolution, respect for differences and acceptance of rapid change and ambiguity.

The NH 4-H Youth Development program emphasizes goal setting, communication skills (interpersonal and presentation), self-awareness (self-confidence, self-control) and related life skills (conflict management, cooperation, teamwork, and leadership). These skills are imbedded in the sequential age-appropriate learning experiences through a wide range of project areas (i.e. animal science, aerospace, water resources). Youth gain knowledge and develop important life skills through participation in 4-H clubs, after school programs, camps, special interest programs and partnering with community youth organizations. Youth serve on foundation boards, plan and implement community service projects and coach each other on speeches to improve communication skill throughout the year.

B. Impacts: A survey of 142 NH 4-H club members (ages 12-18) participating in eight county presentation events (80% of counties) indicates these members believe 4-H has helped them develop basic life skills. On a 4-point scale (never=1, sometimes=2, usually=3, always=4), youth ranked 10 questions in each of two categories - "back before I was in 4-H" and "now after being in 4-H." The same survey, with questions slightly modified to reflect "your child", was given to 121 parents attending the same event. Youth indicated the greatest gains in feeling confident speaking in front of others, thinking about ways to reach goals and making friends who are a positive influence. Parents reported seeing the greatest gain in "knowing how to gather and organize information" (2.17 to 3.29). They also agree 4-H helps youth feel confident speaking in front of others, solve conflicts, make friends who are a positive influence, use suggestions to improve their work and treat people who are different with respect. Seventy-five judges who reviewed the demonstrations and speeches presented by the youth during the day also completed a survey. The survey included eight questions comparing the "4-H participants judged today" to "other youth of similar ages who are not in 4-H." The judges ranged in years of experience with 4-H from zero to 25 years, with the majority falling under three years. On a 4-point scale (never=1, sometimes=2, usually=3, always=4), the judges felt the 4-H youth were usually (3.41) open to suggestions, compared to non-4-H youth (1.68). The 4-H youth also know how to gather and organize information for a presentation (3.09); non-4-H youth rated lower (1.56). The 4-H youth appear confident speaking in front of others (3.0); non-4-H youth again rated lower (1.52).

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of impact: State specific

Youth Community Service/Life Skills Development – Lisa Townson

A. Program Description: In addition to the development of life skills, youth must learn to appreciate the importance of service to others and their community. Data collected at New Hampshire Community Profile events and through needs assessment show a recognized need for more civic engagement across the state. Research supports the fact that volunteering and becoming involved in one's community at a young age increases the likelihood that a person will be involved as an adult. Youth often want to contribute, but don't always have the skills or knowledge to know how they can make a difference in their community.

Youth who participate in a 4-H Youth Development program in New Hampshire are encouraged to participate in a community service project. Youth in community clubs and 4-H after school programs plan and carryout a variety of service projects. The state communications contest includes a service project for all participants. Many participate in county-wide service projects as well. New to our reporting system this year, groups reported why and how service projects were planned. Goal setting is an important life skill emphasized in the 4-H program and youth were asked to articulate how they set their community service goals and the steps they identified to accomplish their objectives.

B. Impacts: Although many types of community service projects were undertaken in the past year by 4-H members, the most notable type involved taking care of others – by visiting nursing home residents, sending notes and personal supplies to troops overseas, creating a memorial for a young person killed tragically or soliciting for and delivering food baskets for needy families during the holidays. 4-H members across the state learned the importance of caring for others and that small

acts of kindness are truly appreciated by those who are less fortunate. Further, 4-H groups reported spending a considerable amount of time planning for their events and they articulated the steps taken once a goal was developed. This illustrated that youth increased skill and practice in setting and attaining goals. Over 1,200 youth and adults contributed more than 30,000 hours of community service to local projects.

Communities benefited from the contributions of 4-H in a variety of ways, through beautification programs, youth inventorying library books and assistance with a variety of other projects that increase the social capital of a community.

C. Scope of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

Youth Development/4-H/Water & Marine Education – Sharon Meeker

A. Program Description: Educating adults so they can interpret the marine and coastal environment for a variety of audiences enhances activity in their own communities in policy and practice resulting in stewardship of the environment.

- Active volunteers: 170 – 45% of which are males
- Volunteer hours (includes training, study and class time): 15,000
- Volunteer mileage: 120,000 (plus approximately 30,000 more not documented)
- 185 communities served
- 15,000 people served (includes docents teaching participants at the Seacoast Science Center, the Great Bay National Estuarine Research Reserve’s Sandy Point Center and Cooperative Extension’s Sea Trek outreach program)

B. Impacts: Docents used their training to deliver programs aboard boats in schools and at local nature centers (the Seacoast Science Center and the Great Bay National Estuarine Research Reserve) to 15,000 people including youth, educators, families and the general public. As a result of their efforts and with the leadership of the Extension specialist, the Sea Trek program accomplished the following:

- Conducted a 3-day workshop entitled “The Shoals Sojourn” at the Shoals Marine Lab on Appledore Island for ten teachers. Docents assisted with the program. This led to an all-day ocean- focused “Day of the Coast” program delivered by 30 docents and the specialist to 300 middle school students in Newmarket Middle School (Rockingham County). Six teachers at the workshop attended the Shoals Sojourn and convinced the school administration that the Day of the Coast program was a valuable activity for students. Teachers lead some of the workshops, but almost all were taught by docents, with the teachers doing introductory and/or follow-up activities
- Seventy percent of the people on the UNH Shoals Discovery Cruises reported their knowledge and appreciation of the coastal environment increased. Youth comprised 40% of the audience for these cruises. Many had never been on the ocean or an island like Appledore Island before and they thoroughly enjoyed the experience including simple oceanographic sampling on the trip. Twenty-two UNH Discovery Cruises to Great Bay and the Shoals Marine Lab on Appledore Island were conducted last year for approximately 600 people, including families, 4-H’ers and Scouts and individuals. These cruises are conducted by docents under the supervision of specialists

- The UNH Marine Docent program gained national recognition with its selection as an example of “best management practices” to represent the New Hampshire Sea Grant program at the National Sea Grant Meeting in Galveston, Texas
- The Family Boat Building program was instrumental in recruiting funds from Extension to build two boats for the 4-H summer camps. Director Chris Conlon came to the workshop and built the first boat. The second one was built by staff under his supervision. Sandy Point Discovery Center also participated in the program and built one boat for their use at the Center. The boats were used both by staff at camp and at the Center for safety supervision and instruction and for rowing instruction
- As a direct result of spring and fall floating lab programs, 10 schools adopted the program as a part of their regular science curriculum and plan to return
- Docent training for new docents spurred two of them to take a regular oceanography course at the University. One new docent decided to get her master’s degree in natural resource management and attends Antioch College. She credits the Docent training program with giving her background to help with her studies. “I took a geomorphology class where we discussed a lot of topics that we had covered in Docent training! I was so thankful of my docent training, it really paid off and was helpful. I did my presentation in that class on the Great Bay – it was a hit!”
- More than half the board of directors for the newly independent Seacoast Science Center in Rye are UNH Marine Docents. Docents use their expertise as educators about the marine environment to guide programmatic decisions and to teach programs themselves
- Docents raised nearly \$8,000 to support the SeaTrek and Docent programs. They established two endowment funds, one with the University and one with the Greater Piscataqua Community Foundation. The funds support the outreach programs and training
- Progress has been made establishing a “middle management” layer of administration for the Docent program. The Education/Administration advisory committee gives advice on all major decisions and conducts administrative activities during the year. The group established teams around several popular topics and programs. Active committees assist in upgrading docent skills and materials, particularly for electronic media. The photography committee and the technology committee archives slides, recommends purchase of new equipment and training docents to use the equipment. The annual luncheon and auction were handled by docent committees
- 50 – 80 4-H youth and their leaders participated in a variety of marine education programs headed by Penny Turner in Merrimack County. The Extension educator conducts a week-long marine and aquatic science camp and docents bring programs to the camp and take the students on the University’s research vessel to take samples and visit Appledore Island. A rise of youth interest in marine topics and increased confidence among the students resulted

C. Source of Funding: Sea Grant funding, grants

D. Scope of Impact: State specific

Management Goals

Multicultural and Diversity Issues – Paula Gregory

A. Program Description: The most recent demographic reports for New Hampshire show a slight increase in the state’s ethnicity (98.3% non-Hispanic; 1.7% Hispanic). The largest cities report

over 50 languages spoken within the schools and human service agencies report one-third of the family caseload does not speak English. UNH Cooperative Extension staff and volunteers require ongoing information, resources, and training to ensure programs reflect the changing population needs of the state. Beyond demographics, NH communities show increased diversity in other areas, evidenced by media reports of harassment, hate crimes, public policy debates and discrimination claims focused on religion, sexual orientation, disability, age and class. Many NH employers now hire recent immigrants. These workers are just beginning to learn English and are not able to effectively communicate with fellow workers or supervisors. This communication gap can impact the whole community, leading to safety issues and misunderstandings as well as opportunities for community growth and change.

UNH Cooperative Extension staff participate in annual training on working with diverse audiences, those with limited resources and inclusion of those at risk and with disabilities. In 2002, a consultant provided training which led to individual staff work plans to increase professional capacity to work with multicultural and diverse audiences.

B. Impacts:

- An advocacy organization, the Seacoast Workforce Housing Coalition, formed to address affordable housing through agency networking
- A 12-day exchange program between 11 NH and eight Costa Rican natural resource professionals shared knowledge and first hand experience with cultures and global issues that impact long-term sustainability of the earth's ecosystems, including land use, natural resources conservation and issues that directly impact species using both countries (neotropical migratory songbirds). The two groups learned about new waste water treatment tools in remote locations, use of GIS and GPS technology and natural resource expertise and issues within each country
- Many of NH's sawmills and other manufacturers hire recent immigrants and find communicating company safety regulations challenging. To address the lack of safety regulation materials available in Cambodian, and other Southeast Asian languages, two sawmills are piloting written, video and audio material to communicate safety rules to Cambodian workers
- UNH Cooperative Extension published a listing of special holidays related to the Islam holidays and customs to help goat farmers raise goats to meet market specifications for those special occasions
- 20% (n =160) of youth attending the 2003 NH 4-H Camps had a diagnosis of physical, developmental, emotional or behavioral disability. Staff received intensive training in behavioral supports to accommodate camper needs within the camp community. This was the first summer no campers were removed from camp programs or sent home due to unmanageable behaviors

C. Source of Funding: Smith-Lever 3b&c, State matching funds, County funds

D. Scope of Impact: State specific

B. Stakeholder Input Process

UNH Cooperative Extension actively involves stakeholders in the Plan of Work development and monitoring its implementation and evaluation. County and State Cooperative Extension Advisory Councils, County Commissioners, State Legislators, University administration and faculty, program committees, commodity committees, state agencies and organizations, external relations volunteers and clientele input and feedback shape development, implementation and evaluation of the Plan of Work.

County Advisory Councils designated by state statute play a key role in development of the Plan of Work and in monitoring its implementation and outcomes. Each council includes 12 citizen volunteers plus a county commissioner and one local member of the state legislature. The State Advisory Council provides oversight for the statewide Extension program. The Council's 26 seats include two from each of the state's ten advisory councils, the state CARET (Council for Agricultural Research, Extension and Teaching) representative and five members at large. Monitoring outcomes and impacts is an appropriate role since council members represent the state's population. Council members also voiced an interest in assisting with the program development process. During 2001 both county and state advisory councils, partners, stakeholders and UNH faculty were also actively involved in development of UNH Cooperative Extension's 2001-2006 Strategic Plan. In 2003 these councils and other citizens identified local issues, Extension's role in addressing these issues and ways to deliver educational programs.

Program outcomes and accomplishments are shared with advisory councils in a variety of forms. These include program presentations, reports and discussions scheduled as part of advisory council meetings. Annual accomplishment reports and impact statements are widely distributed to advisory council members, elected officials and other stakeholders. The UNH Cooperative Extension web page increasingly informs stakeholders and advisory council members of program implementation and the value and relevancy of efforts and outcomes. In addition, Cooperative Extension works closely with many partners and other stakeholders. These include state and federal agencies, public and private organizations, foundations, University faculty, town government and non-profit agencies. Key individuals representing these partners and stakeholders routinely participate in Extension program planning, implementation, evaluation and reporting.

C. Program Review Process

No significant changes took place in the program review process through merit or peer review since development and submission of the FY2000-2004 Plan of Work.

D. Evaluation of Success of Multi and Joint Activities

1. Multi-State Extension activities include a wide-range of long term partnership and collaborative efforts. Many activities reported are joint efforts with CSREES, the Northeast Region and the New England Region. Emphasis is placed on joint activities with other New England states due to common regional issues, program scale and close proximity to Extension staff in neighboring states. This joint work is enhanced through program funding made available from the New England Extension Consortium planning and implementation grants. The Consortium awards up to six planning and three implementation grants each year to facilitate regional programming. Cooperative Extension benefits from this relationship with multi-state research. The Agricultural Experiment Station at the University of New Hampshire functions under the dean of the College of Life Sciences and Agriculture, while Cooperative Extension remains a separate entity functioning under its own dean. This separate administrative structure limits collaborative efforts but current joint activities demonstrate substantial progress in enhancing collaboration and partnerships between research and Extension. The two units continue to explore producing a joint plan of work for 2007 and beyond.

2. Planned programs include the under-served and under-represented among targeted audiences. The regional EFNEP collaboration primarily targets this audience. It continues to succeed due to competent, experienced staff and supportive local advisory councils and decision-makers. After-school youth development programs and NH 4-H Camps also target and involve under-served and low-income youth, including youth with disabilities. Several agricultural and forestry programs target women as an audience. These program groups also include financial management components important to producers whose income is limited by their business management skills. Several Integrated Extension and Research projects focus on profitability and sustainability. Due to our short growing season, lack of fertile soils and limited open space, many agricultural producers marginally profit and benefit from research addressing these factors.

3. All planned multi-state and integrated Extension and Research projects start with clear goals, objectives and expected outcomes. Staff focus on program evaluation as a planned part of all programming with intended outcomes and impacts determined prior to program implementation. In 2001 UNH Cooperative Extension formally adopted the Logic Model for improved program development, implementation, evaluation and reporting. Extensive staff training conducted throughout 2002 and 2003 position the Logic Model as the basis for future program planning including development of the next Plan of Work. In 2003 each program area and the Associate Director created a five-year program vision in Logic Model format to prepare for future program development and evaluation. In addition, Logic Models will be created for programming by work teams and issue teams.

4. Both multi-state programs and integrated Research and Extension programs improve effectiveness and efficiency. Through UNH Cooperative Extension's active partnership with CSREES, we access and use resources and expertise of the total Cooperative Extension System. Joint planning strengthens the entire program development and evaluation system through agreement on common initiatives, goals and procedures. This collaborative effort encourages and supports joint programming due to similar structures and operations easily connecting each partner. Integrated Extension and Research also improves effectiveness in New Hampshire. Due to Extension's responsibility to extend the university's knowledge and research for application throughout the state, joint work facilitates this process. As Extension Educators and faculty research scientists work more closely together, both entities benefit. Extension staff are more involved in research planning, informed of findings, and better equipped to convey research results to those who need it. Researchers, through their closer relationship with Extension, better understand research needs in the state and witness the practical application of their research results.

E. Multi-State Extension Activities (Form CSREES-REPT)

<u>Title of Planned Program/Activity</u>	<u>Actual FY2003 Expenditures</u>
1. Multi-State Partnership Programming	\$188,541
2. New England, Regional & National Program Planning, Conferences and Professional Development, New England & Northeast Region Organizational Leadership and Development	\$23,368

Total FY03 Expenditures:	\$211,909

Brief Report of Progress in Planned Multi-State Programs:

1. Multi-State Partnership Programming

- New Hampshire continues its active partnership in the New England Extension Consortium. Annually up to six planning and three implementation grants are awarded to facilitate regional programming
- The Eastern States Exposition continues to provide valued youth education opportunities for 4-H members throughout New England. This opportunity appeals to 4-H members and leaders and provides a strong incentive for youth to set goals and reach their full potential. This event involves Extension paid and volunteer staff in planning, conducting and administering regional youth development programs conducted in conjunction with the Exposition
- New Hampshire partners with the Natural Resources, Agriculture and Engineering Service (NRAES) to provide technical publication and educational support for Northeast states as well as critical coverage for technical expertise lacking in specialist staffing. The NRAES membership fee comes from state funds
- New Hampshire, a funding partner in the National Extension Leadership Development Program, had no participants during FY2003
- During FY2003 New Hampshire Extension staff participated in regional and New England planning meetings for producer/grower association events, professional development conferences, and multi-state collaboration including development and implementation of New England Extension Consortium program grants. NH hosted the New England Vegetable and Berry Growers Conference with over 1,000 producers attending
- Specific New England, regional and national initiatives New Hampshire participated in FY2003 include:
 - Integrated Pest Management
 - EDEN
 - NEFREC
 - National FCS Plan of Work Impact Reporting
 - NRAES
 - Expanded Food & Nutrition Education Program
 - Food Safety
 - Risk Management Initiative
 - Whole Farm Management regional initiative
 - Agricultural Profitability and Financial Management
 - Agricultural Engineering
 - Nutrient Management Initiative
 - Fresh-Water Aquaculture
 - Diversified and Alternative Agriculture
 - Agricultural Waste Management
 - Sustainable Agricultural Research & Extension Program (SARE)
 - Dairy Management & Marketing
 - New England Vegetable and Berry Growers Association and Conference
 - New England Nursery Association and NE Growers Educational Conference
 - NE Greenhouse Conference
 - New England Tree Fruit Collaboration
 - New England Green Pastures Program
 - New England Regional Plant Diagnostic Project
 - New England Youth Workforce Preparation/Mini Society Program

- New England Water Quality Initiative
- New England Turf Conference
- New England Regional 4-H Events and 4-H Leader Training
- New England and National Society of American Foresters
- Multi-state Fairs and Expositions
- Northeast Center for Rural Development
- National 4-H Curriculum Committees
- Financial Security in Later Life national initiative
- Children, Youth & Families national initiative
- Program Development and Evaluation Support and Staff Training
- Rural Development Youth and Adult Partnership Initiative
- NE Fruit IPM
- ECOP Forestry Task Force
- Community Development Exchange with Cornell University
- Livestock and Pasture Management Workshops
- Greenhouse Plan Production and Nutrition Workshops
- Developing and Integrating Educational Components for Commercial Greenhouse Production Systems
- Flower Poinsettia Production, Post Harvest and Marketing Education
- Beginning and New Farmers Initiatives
- Ag-Biz Farm Management Course
- NE Small Farms Initiative
- National Animal Waste Initiative
- Engaging Youth Grant
- Health Rocks Training
- International Programming Review Task Force
- Multi-state ACA Camp Program Review

2. New England, Regional & National Program Planning, Conferences and Professional Development

- Both the Dean & Director and Associate Director are active participants in the Northeast Extension Directors meetings to promote multi-state Extension programs and further integration of Research and Extension throughout the Northeast
- New Hampshire is an active member of the American Distance Education Consortium and accesses numerous satellite training and educational opportunities available through the consortium
- New Hampshire's five state Extension Program Leaders actively participate in regional and national Program Leader meetings and committees for program planning, collaboration, networking and implementation of national initiatives
- In support of CSREES, New Hampshire's Assistant Director for Finance & Human Resources, Director of Information Management & Distance Education, and the Educational Marketing and Information Manager participate in Administrative Officer Meetings, National Leadership Conferences, National Extension Technology Conferences and Agricultural Communicators in Education meetings

3. The Associate Director participated in the Northeast Extension Directors meeting, New England Extension Consortium, Community Development Society Conference, Galaxy

Conference and Outreach Scholarship Conference.

F. Integrated Research and Extension Activities (Form CSREES-REPT)

Title of Planned Program/Activity	Actual FY2003 Expenditures
1. William Lord	\$12,517
2. Dr. Peter Erickson	\$14,615
3. Dr. John Roberts	\$25,368
4. Dr. Stefan Seiter	\$10,800
5. Dr. Catherine Neal	\$23,406
6. Dr. Paul Fisher	\$13,771
7. Dr. Charles Schwab	\$ 1,228
8. Dr. J. Brent Loy	\$ 1,244
9. Dr. William Trumble	\$12,181
	=====
	Total FY2003 Expenditures - \$115,130

Brief Report of Progress:

1. Salary support provided for William Lord, Extension Professor and Fruit Specialist, to conduct research projects: (1) Intensive Production for Strawberries, and (2) Multi-disciplinary Evaluation of New Apple Cultivars.
2. Salary support provided for Dr. Peter Erickson, Extension Dairy Specialist, for research in Management Systems for Improved Decision-Making and Profitability of Dairy Herds.
3. Salary support provided for Dr. John Roberts, Extension Turf Specialist, who functions in a split Extension and Research position.
4. Salary support provided for Dr. Stefan Seiter, Extension Agroecology Specialist, who functions in a split Extension, Teaching and Research position.
5. Salary support for Dr. Catherine Neal, Extension Ornamentals Specialist, for research in Nutrient Management for Production and Maintenance of Ornamental Plants.
6. Salary support for Dr. Paul Fisher, Extension Ornamental Specialist, for research in A Decision-Support System for Control of pH in Soil-less Container Media.
7. Salary support for Dr. Charles Schwab, Professor of Animal & Nutritional Science, for research projects: (1) Metabolic Relationships in Supply of Nutrients in Lactating Cows; and (2) Management of Systems for Improved Decision-Making and Profitability of Dairy Herds.
8. Salary support for Dr. Brent Loy, Professor of Plant Biology and Genetics, for research projects: (1) Conservation and Utilization of Plant Genetic Resources, and (2) Genetics and Breeding of Cucurbits.
9. Salary support for Dr. William Trumble, Associate Dean for Research and Director, NH Agricultural Experiment Station, for joint administration of Integrated Research and Extension Activities.