WASHINGTON STATE UNIVERSITY EXTENSION

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ANNUAL REPORT OF ACCOMPLISHMENTS AND RESULTS

FY04

WASHINGTON STATE UNIVERSITY EXTENSION

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Supplement to the Annual Report of Accomplishments and Results 34

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A. PLANNED PROGRAMS

1. NATIONAL GOALS

Goal 1: ***An Agricultural System that is Highly Competitive in the Global Economy.***
Washington State University (WSU) Extension has once again opted to include all our agricultural programming under **Goal 4:** ***Greater Harmony Between Agriculture and the Environment***. This does not suggest a lack of concern for production agriculture, but a change in perspective. Indeed it is because we realize the challenges facing the agricultural community that we do not separate out these two important goals. For agriculture in the state of Washington, competitiveness in the global economy requires that the agricultural community address environmental issues to be accepted by Pacific Rim nations as well as regional constituents.

We recognize that some of our programmatic impacts fit Key Themes identified under Goal 1. Those reports are included in Goal 4 and identified as Key Theme "Other" with the Goal 1 Key Theme identifier in parentheses.

Goal 2: ***A Safe and Secure Food and Fiber System.*** To ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education.

Overview
The goal of Washington State University food safety education is to ensure an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention, and education. We also help Washington residents to obtain knowledge and adopt behaviors that reduce risks of illness from foodborne pathogens. We continue to focus on food safety education from farm to table by convening food safety educators, researchers, and regulatory officials from the Pacific Northwest at the annual Northwest Food Sanitation Workshop.

Through USDA funded research, Washington State University Extension educators have developed key food safety messages for consumers. Educational programs are directed to address the following four major control factors that enable consumers to reduce their risk of foodborne illness:

- Cook foods adequately
- Avoid cross-contamination
- Keep foods at a safe temperature
- Avoid food from unsafe sources

The safety and quality of the food supply continues to be a concern, especially for people who process food at home. Proper food handling techniques can determine if food will maintain quality and safety. Volunteers who participate in the Master Food Preserver (MFP) program help Extension educators promote public health and safety through educational and outreach activities that disseminate food safety and preservation information, and proper food handling techniques. In turn the volunteers themselves increase their personal knowledge and refine communication and leadership skills.

Approximately 200 volunteers contributed 956 hours of safe food preservation and food handling educational activities and outreach to 2,627 contacts in 2004. Figured at a value of $17.19 an hour, MFP volunteers contributed $16,434 worth of time to WSU Extension. Extension educators made an additional 2,785 food safety related contacts. Of these 5412 contacts, 25 percent had food related questions that posed potentially hazardous situations that could cause illness, and an additional 25

percent of the issues were significant botulism risks that could cause disability or death. In other words, 2,706 of the questions had the potential to cause illness—1,353 of those the potential for death.

Other Extension educators focus much of their time on food safety education for food producers and processors. These educators receive certification as Hazard Analysis Critical Control Point (HACCP) instructors and conduct numerous HACCP and sanitation workshops for food processors of seafood, meat, canned foods and fresh produce. In 2004, Extension educators had contacts with 903 commercial and industry training participants.

In summary, 28 Extension educators served 16,263 participants statewide in food safety programming through food safety activities.

Sources of Funding and FTE for Goal 2

FTE Smith-Lever 3b and 3c	=	0.40 FTE
FTE Smith-Lever 3d	=	0.00 FTE
Federal Extension	=	$93,229
Non-Federal	=	$522,017
Other Federal	=	$218,085
TOTAL	=	$833,331

Key Theme - Food Handling
Key Theme – Foodborne Illness

a. The Center for Disease Control estimates that 5,000 people die and 78 million become ill each year from foodborne illness. Americans minimize the importance of good hand washing practices—an often overlooked behavior important for food safety, disease prevention and personal health. There are 52 "Germ Cities" in 11 states. Germ City is an integrated multistate, multi-institutional, multi-disciplinary Extension and research program that addresses the issue of poor hand sanitation—the most significant link to foodborne illness. Through classroom education for youth and Extension activities conducted during fairs, festivals and community events, research-based education focuses on hand washing behaviors related to safe food handling and health. By having youth and adults apply a black light sensitive lotion to their hands, and walk through a tunnel equipped with black lights, participants observe pretend germs on their hands. They then wash their hands and revisit the Germ City to assess the effectiveness of their hand washing techniques.

b. Impact: In 2004, Alabama, Hawaii, Idaho, Washington and Wyoming evaluated the success of the program with a broad variety of audiences. Of the 2,524 youth and adults completing behavior change surveys after visiting Germ City at sites in Hawaii, Idaho, and Washington, 95 percent of adults and 94 percent of children indicated they planned to improve their hand washing practices. Preliminary results from elementary and middle school research suggested that 4 to 6 weeks after the initial presentation with no new instruction, children continued their improved hand washing practices, according to both independent observations by educators/researchers and a hand grid and Likert scale evaluation tool completed by students.

c. Source of Federal Funds: Food Safety Initiative Integrated Research, Education and Extension Competitive Grants Program, Smith-Lever 3b and c, State matching

d. Scope of Impact: Multistate Extension—AL, AZ, CA, HI, ID, IL, IA, OR, TN, VT, WA, and WV

Key Theme – Food Safety
Key Theme – HACCP

a. Poor quality products cost the Washington seafood industry over $5 million annually in lost sales and wastage. Seafood safety issues and quality continues to be an impediment to increased per capita seafood consumption in the Northwest. Improper seafood handling and storage by fishermen, processors, retailers, and consumers cause loss of quality, reduced economic value, wastage, reduced sales, and potential safety problems. Improved temperature control, handling, and sanitation are needed at all levels of harvesting, processing, and distribution to maximize the economic value of the catch, reduce contamination, increase product safety, and improve the marketability and consumer acceptance of Washington's seafood products. Changes in U.S. Food and Drug Administration HACCP regulations for seafood processors require cost-effective shellfish waste disposal alternatives for crab and shrimp processors. A waste disposal method that addresses cost effectiveness and regulatory requirements compliance for local crab and shrimp waste was developed, and pilot-scale testing is scheduled.

b. Impact: Extension educators and volunteers provided technical assistance and training in the areas of seafood quality control, safety, handling, and utilization techniques to over 400 consumers, commercial fishermen, and seafood processors and retailers. All volunteers and consumers participating in the training sessions improved their knowledge and skills in seafood safety, quality control, and utilization techniques. 45 participants increased their adoption of recommended food selection and handling practices, decreased their use of foods likely to be contaminated with pathogens, and increased their understanding of food-related risks and the policy and scientific bases for risk management decisions. Improvements in sanitation techniques and temperature control were reported by fishermen, processors and retailers.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching, County

d. Scope of Impact: Multistate Extension—AK, OR, and WA

Key Theme – Foodborne Illness
Key Theme – HACCP

a. Although the United States food supply is among the safest in the world, an estimated seven million illnesses, 3,000 deaths, and billions of dollars in losses are caused by foodborne diseases each year. Educating the food industry and its regulators through food safety training programs is an effective means of reducing food borne illnesses.

b. Impact: More than 900 people participated in food safety training directed toward food processors and regulators. HACCP was implemented in more than 230 operations and more than 58 people attended and successfully passed the Better Process Control Schools (BPCS) examinations. In addition, 85 percent of the successful BPCS participants implemented course principles in their operations. More than 340 people attended Food Sanitation Workshop and 86 attended the Food Safety Farm to Table conference. Two new training programs were offered—Internal Auditing for the food Industries (37 participants) and Food Safety for Farmers Markets and Other Direct Marketers (120 participants).

c. Source of Federal Funds: Smith-Lever 3b and c, State matching

d. Scope of Impact: Multistate Extension—ID, MT, OR, and WA

Key Theme – HACCP
Key Theme – Other (Goal 1: Animal Production Efficiency)

a. There are no USDA, WSDA, or DNR offices in San Juan County, and few local resources exist for agricultural and forest producers to access technical or management information other than WSU. Local and regional markets for farm products as opposed to commodity markets are a key factor for profitable agriculture. Limited value added processing and no USDA inspected slaughter facilities existed in the county, accessibility to USDA inspected facilities on the mainland was not cost effective for small producers, and no alternatives existed for transporting livestock to and from the mainland other than Washington State Ferries. Long waits for ferry transportation between the islands and the mainland jeopardized the health and marketability of valuable livestock and impacted the livelihoods of producers. Extension educators provided educational services in marketing, food processing and safety training that supported the development and expansion of Mobile Processing Units (MPU).

b. Impact**:** There are now MPUs in California, Hawaii, and Wyoming in addition to Washington that are based on WSU Extension's model. The San Juan County project, written about in local, regional, and national publications, continues to generate information and presentation requests, needs assessments and feasibility studies from interested parties around the United States and Canada. Retail cuts of locally produced USDA inspected meat are now readily available at island farmers markets thereby increasing livestock sales profits for producers. The gross farmgate of the MPU was $400K in 2004 and is projected to be near $1 million in 2005.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching

d. Scope of Impact: Multistate—CA, HI, WA, and WY

Goal 3: ***A Healthy, Well-nourished Population.*** Through research and education on nutrition and development of more nutritious foods, enable people to make health-promoting choices.

Overview
According to 2004 data, Washington State ranks fifth in the United States for the percentage of people experiencing severe hunger. Rates of hunger are particularly high for female-headed families with children, in which USDA research documents food insecurity rates exceeding 30 percent. In addition, poor women have higher rates of low birth weight infants and higher rates of chronic diseases linked to diet. Nutrition education with low-income families with children can have lifetime impacts, making it possible for participants to live healthier lives and be productive members of society. In consideration of the needs and potential impacts, the target audience for nutrition education in Washington is low-income families, including people receiving or eligible for food stamps and children receiving free or reduced price lunches at school.

At WSU Extension, both the Expanded Food and Nutrition Education Program (EFNEP) and the Food Stamp Nutrition Education Program (FSNEP) are branded under the name *Food $ense.* In 2004, EFNEP reached families in five counties. In two-thirds of these families, income was less than or equal to 100 percent of the poverty level. In addition, a total of 4,132 youth were enrolled in EFNEP instruction.

The *Food $ense* (FSNEP) program expanded its reach from 18 to 23 counties and directly reached 52,188 people in 2004. Of that number, 54 percent were adults and 46 percent were youth, 88 percent

of the adults were food stamp eligible, and 50 percent were persons of color. Among adult participants, over one-third enrolled in a series of classes with an average 4.9 lessons, with the remainder of the clientele reached through newsletters. The majority (86 percent) of youth were reached through school enrichment programs that averaged 8.4 classroom visits. The remaining youth were taught through organized clubs, community events and after-school programs. Over 874 organizations including 16 local governments, schools and public agencies partnered with Extension in program planning and delivery, and provided in-kind contributions of staff time, meeting space and equipment to *Food $ense*.

In addition to direct educational contact, another strategy to improve the nutritional status of low-income families was public education to create consistent nutrition messages. The Nutrition Education Network of Washington, a strategic alliance of public and private concerns with leadership from WSU Extension, promoted family mealtimes among low-income families as a primary social marketing message. In 2004, the Advanced Marketing class at WSU partnered with the Nutrition Education Network of Washington to conduct focus groups and a marketing assessment to identify and test a new nutrition message. The result was the message "Energize your Life! Eat Healthy, Be Active." Banners were developed and twelve partners to date have agreed to use the new message in their nutrition programming. The campaign to market this message will continue into 2005.

WSU Extension educators also addressed priority health issues in their programming. Diabetes education was a primary state focus in the health arena. Approximately 400,000 Washingtonians (six percent) have been diagnosed with diabetes—one of the leading causes of heart disease, stroke, kidney failure and lower limb amputations. Of people over age 40, approximately 12 percent of whites, 25 percent of African Americans, 50 percent of Native Americans and 30 percent of Latinos in Washington State have diabetes. In Washington State, the percentage of people diagnosed with diabetes increased 39 percent between 1990 and 2000. The Living Well with Diabetes project is designed to reduce the risk of diabetic complications and to help people learn how to better manage the disease. The target audiences are people most at risk of complications, e.g., those who have diabetes, but are not currently seeking regular medical care for the disease. In 2004, 837 people in 14 counties were enrolled in Diabetes Awareness Education classes and 72 percent completed the three-month follow-up. Of these participants, 62 percent were white, 7 percent African American, 7 percent Latino, 13 percent Native American, 2 percent Asian and 17 percent Slavic. The average education level was 12 years or more for all groups except Latinos, whose education averaged 9 years. The average age was 61 years. Forty-six percent of participants had incomes of $15,000 or less and another 12 percent had incomes between $15,000 and $19,000. At the time of enrollment, 37 percent had A1c readings over 7.0.

The Living Well with Diabetes program is one effort included in WSU Extension's Partnership for Diabetes Awareness and Education. External partners include the Joslin Diabetes Center at Harvard University, University of Hawaii, New Mexico State University, USDA/CSREES, Northwest Kidney Center and the American Heart Association. Internal WSU partners include the Colleges of Nursing and Pharmacy.

Sources of Funding and FTE for Goal 3

FTE Smith-Lever 3b and 3c	=	0.38 FTE
FTE Smith-Lever 3d	=	12.45 FTE
Federal Extension	=	$1,385,111
Non-Federal	=	$7,755,680
Other Federal	=	$281,461
TOTAL	=	$9,422,252

Key Theme – Human Health
Key Theme – Human Nutrition

a. The Diabetes Awareness Education project began in 1999 in collaboration with Joslin Diabetes Center at Harvard University in Boston Massachusetts. The long-term goal of this project is to reduce the incidence of complications from diabetes. In its fourth year of implementation, the Living Well with Diabetes program operated in fourteen counties, including an inner city urban area with a high percentage of African American residents, communities with majority Latino residents, and a tribal reservation setting. The 1.5-hour initial program includes screening for A1c, blood pressure and cholesterol. Participants learn about the screening tests and what actions they can take to reduce the risk of complications. The initial class is followed by four weekly sessions on food, nutrition and physical activity. A follow-up evaluation is conducted three months after participation.

b. Impact: In 2004, the post program evaluation results demonstrated that for white and Slavic participants, there were significant improvements in A1c, systolic blood pressure, level of physical activity, and fruit and vegetable consumption. In addition, a significant number of participants from all groups indicated that because of the class, they now know exactly what to do to take care of their diabetes, which increased both their confidence and knowledge about managing their disease. Changes were most significant in the group with highest levels of education. Participants showed significant changes on all dietary questions. Use of the food pyramid, increased consumption of fruits and vegetables, and selecting different types of fat were the items most likely to change.

c. Source of Federal Funds: Congressional appropriation through USDA CSREES

d. Scope of Impact: Multistate Extension—NM, WV, HI, and WA

Key Theme – Human Health
Key Theme – Other (Goal 1: Animal Health)
Key Theme – Other (Goal 1: Emerging Infectious Diseases)

a. Although there were fewer human and horse cases of West Nile virus in 2004, its westward spread brought it ever closer to Washington State. Lingering effects of West Nile meningitis and encephalitis, both in humans and horses, can be debilitating and long-term. Because the disease remains a serious human and veterinary health threat, continued efforts to educate people about its prevention is important. WSU Extension's West Nile virus educational efforts were directed toward Extension faculty and volunteers; horse owners; and the general public; pesticide applicators; and public officials. Extension also launched a youth service-learning project in an Island County alternative high school to teach science, health, and public service through WNV monitoring. WSU Extension continued its role as part of the State's WNV response team, and it played a supportive role to Washington Department of Health in its efforts to educate community members about the human health risks of WNV, personal protection, and mosquito control around the home. Updates were archived in streamed media format and posted on the web at http://wnv.wsu.edu.

b. Impact: WSU Extension's West Nile virus educational efforts reached 40 faculty and volunteers through e-mail postings and WNV Updates and approximately 400,000 households in 33 counties and 3 states with our information about protecting horses from WNV. Forty-two city and county employees and public land managers learned about an integrated pest management approach to

mosquito control and also about safety aspects of biological mosquito control using Bacillus thuringiensis. A small group of Bayview alternative high school students learned about monitoring for the disease by trapping mosquitoes and sending them to the Washington State Department of Health laboratory for identification of species; and by establishing a sentinel chicken flock, collecting periodic blood samples, and sending them to the Oregon State Public Health Laboratory for analysis of antibodies to WNV. They increased their knowledge of zoonotic disease, the biology of mosquitoes, and ecology WNV and made presentations to middle school students about what they learned. Based on sales of vaccine to Washington veterinarians, estimates that 55,445 horses were vaccinated in 2004.

c. Source of Federal Funds: Smith-Lever 3b and c, Washington State Department of Health

d. Scope of Impact: State specific

Key Theme – Human Nutrition
CSREES Focus Area – Nutrition with emphasis on Obesity and Behavioral Issues

a. The WSU Extension *Food $ense* Program (Food Stamp Nutrition Education) provides food and nutrition education for food stamp recipients in partnership with a variety of community-based organizations. In 2004, 23 counties supported projects promoting good nutrition and physical activity, food safety and improved utilization of food resources.

b. Impact: In 2004, 253,890 direct, 242,539 indirect, and 3,368,805 media contacts were made. A total of 52,188 individuals were reached directly. Of the adults who were evaluated after a single-event educational program: 84 percent were motivated to improve food safety practices; 77 percent were motivated to select more nutritious low-cost foods; and 76 percent were motivated to increase the variety of foods in their diets (a marker of good nutrition). Of the 1,941 adults who graduated from a series of classes and completed follow-up evaluations: 75 percent improved one or more nutrition practices; 57 percent improved one or more food resource practices; 49 percent improved one or more practices in food safety; and 34 percent reported that they ran out of food less often. Among youth Food $ense participants evaluated: 85 percent reported increasing levels of physical activity to 60 minutes per day; 83 percent reported improvement in eating breakfasts that included 3 food groups; and 75 percent began following food safety and preparation guidelines.

c. Source of Federal Funds: Smith-Lever 3b and c, County, City

d. Scope of Impact: State specific

Goal 4: ***Greater Harmony Between Agriculture and the Environment.*** Enhance the quality of the environment through better understanding of and building on agriculture's and forestry's complex links with soil, water, air and biotic resources.

Overview
Washington State University Extension provides research-based education that has increased agricultural profitability and competitiveness while preserving or enhancing natural resources and the rural environment. Multistate programs continue with partnerships in Alaska, Idaho, Oregon, and other states that have yielded significant improvements to Extension programming in risk management, forestry, water quality, and in potato production.

WSU has built interdisciplinary research and Extension teams to address Integrated Pest Management (IPM) and potato production as well as Extension, research, and teaching partnerships through our Center for Sustaining Agriculture and Natural Resources (CSANR). The CSANR works closely with the small farms program and has added a "Farmers Market" educator and a pest management educator for small farms. In potato production, Extension educators work with researchers in California, Colorado, Idaho, Texas, and Washington to test the adaptability of new cultivars and extend that knowledge to Washington potato growers.

In sustainable agriculture, 2,015 producers adopted decision support systems that recognize and evaluate the economic, environmental, and social implications of alternative plant and animal production systems. Producers managed approximately 5,583,654 acres under improved sustainable stewardship practices. Natural resource owners and managers attended 240 programs reaching 55,626 people. Over 27,651 people increased their knowledge and skills in sustaining natural resource systems such as forests, windbreaks, range, and wetlands resulting in practice changes that sustained benefits on over 11 million acres.

Washington's producers continued to build upon past successes in IPM this is evidenced by the 737 (40 newly validated) prevention-based pest management practices for use on targeted cropping systems that may reduce the pesticide load in the environment to safeguard human health and the environmental health of Washington State. Approximately 201 public forums involving joint sponsorship or collaboration enhanced multi-party collaborations and the exchange of information among public, private, and non-profit stakeholders in order to foster the development and adoption of IPM strategies and systems among selected audiences. Educational programs to improve the use of IPM strategies and systems increased the range of benefits and opportunities achieved by enterprises and individuals.

Extension is making a difference in the establishment of local food systems that are relevant to communities and enhance the economic, environmental, and social well being of those communities. We have improved our understanding of the value and characteristics of the major components of Washington's existing and emerging agriculture and food systems. WSU Extension programming assisted in the creation of 130 new vendors at farmers markets. In addition, 2 new community garden participants, most of whom were low income, facilitated the entry of people into local food production systems, both commercial and non-commercial. Last year, 20,000 people visited 85 farms in harvest celebrations that connect consumers with food producers on their farms.

Extension continues to provide education for the protection and improvement of Washington's water resources including flora and fauna water quality and quantity. Extension provided technical expertise and educational programs in pollution prevention to reduce water resource degradation from contaminants such as failing onsite sewage systems, household hazardous waste, manure pathogens, nutrients, pesticides, and soil erosion. Subsequently, 33,334 Washington residents now have a greater understanding of the interdependence of water resources, human health, and the ecology of their region and 885 program participants made changes in practices to protect water resources and aquatic life.

Pioneered by WSU Extension faculty in King and Pierce counties in Washington State over 30 years ago, the WSU Master Gardeners: The Original Master Gardeners since 1973™ has active programs in 36 of our 39 counties. The WSU Master Gardener Program includes 144 "Plant Clinics" operating in 105 communities that offer plant, insect, and disease diagnosis to the public. There were 3,792 active volunteers working on behalf of WSU Extension in 2004, contributing 221,779 hours of volunteer effort toward WSU Extension projects. In addition, the Master Gardener volunteer concept has spread to every state, Canada and other countries.

Sources of Funding and FTE for Goal 4

FTE Smith-Lever 3b and 3c	=	17.37 FTE
FTE Smith-Lever 3d	=	2.38 FTE
Federal Extension	=	$1,819,684
Non-Federal	=	$10,188,997
Other Federal	=	$4,480,202
TOTAL	=	$16,488,883

Key Theme – Endangered Species
Key Theme – Water Quality
Key Theme – Other (Goal 1: Invasive Species)

a. Spartina, a noxious invasive non-native cordgrass weed, threatens the state's $58 million oyster industry as well as critical shorebird, waterfowl and salmonid habitat of intertidal marine communities in Puget Sound and coastal Washington. Owing to the lack of effective controls, Spartina has continued to spread, despite a $1 million annual control program for the past decade. The plant forms dense stands and colonizes mudflat areas. As it spreads, it displaces native plants and animals. Affected areas become broad marsh flats cut by narrow channels, dramatically changing the habitat for native wildlife, fisheries and shellfish growing areas, including much of the state's oyster industry. State law mandates that "Spartina shall be removed and intertidal land shall be restored to the condition found on adjacent unaffected lands." Current mechanical and chemical control methods have not been successful in stopping the spread of Spartina. An Extension specialist conducted seven years of research trials and outreach on mechanical and chemical methods to improve control and restoration of the Spartina affected tidelands.

b. Impact: Research resulted in the registration of a new herbicide called “Habitat” and safer surfactants for the 2004 season. In addition, evaluation results of the effectiveness of the various control methods for restoring the affected tidelands shows that shorebird and waterfowl usage can be enhanced with specific techniques. Over 6000 acres of Spartina affected tideland in Willapa Bay and Puget Sound were treated with a new more effective and safer herbicide. Control was twice as effective and half the cost of other control methods previously used. Based on the results obtained from the state and federal agencies successful large-scale control effort in 2004, eradication of Spartina from Willapa Bay within the next six years is now very feasible.

c. Source of Federal Funds: Smith-Lever 3b and c, Hatch, State, Other Federal (Dept of Interior)

d. Scope of Impact: State specific

Key Theme – Endangered Species
Key Theme – Sustainable Agriculture
Key Theme – Water Quality
Key Theme – Other (Goal 1: Animal Production Efficiency)

a. Western Washington is home to at least 18,000 livestock farming families. WSU Extension does not have enough personnel to assist the 90 percent of these stakeholders who ask livestock management questions related to pollution of local watersheds, many of which are salmon-bearing streams and wetlands. To bridge this gap, Extension educators select, train and certify volunteer Extension Livestock Advisors (ELA) to help small livestock producers in northwest Washington protect local watersheds from pollution, reduce production costs, and improve their

bottom line. The curriculum involves 12 weeks of classroom instruction, field trips and a three-day tour of the WSU animal science and veterinary science facilities. In exchange for training, each volunteer returns at least 80 hours of volunteer service. Today, an active cadre of 85 ELA volunteers dating back to 1980 host farm tours and field trips; make farm visits and respond to phone inquiries on a wide range of subjects that benefit water quality, promote humane treatment of farm animals and increase profit margins for northwest Washington livestock and poultry producers. In particular, they host annual workshops in Snohomish, Skagit, Island and San Juan Counties that teach livestock producers Best Management Practices that help protect the waterways from manure runoff.

b. Impact: About 2,000 families realized a 10 percent savings in production costs, totaling $40,000. It is estimated by program personnel that at least 62 percent of the farmers reached by Extension Livestock Volunteers adopted one or more recommended best management practices that help protect waterways from pollution. Data collected by livestock volunteers (as part of the payback for their training) revealed 20 miles of salmon-bearing watershed were less polluted by animal waste and mud runoff.

c. Source of Federal Funds: Smith-Lever 3b and c, State, County

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management (IPM)

a. The cranberry industry lacks effective pest management tools. IPM Training and pesticide credit training for cranberry growers is a high priority. They have no other source of information other than what WSU provides. Research was conducted to develop new pest management tools. In addition to numerous newsletters and e-mail sent to growers, winter workshops, nighttime educational meetings, and summer field days addressed IPM training and scouting for cranberries.

b. Impact: More than 50% of the 1,000 Cranberry growing acres in Washington State were treated with biorational pesticides as replacements for organophosphates. New pesticide registrations for a fungicide and insecticide were obtained. These new tools provided for improved fresh fruit keeping quality and disease management, and black weevil control. The registration of Admire for Weevil control is the first new cost-effective chemical control for Weevil available to the cranberry industry since DDT.

c. Source of Federal Funds: Smith-Lever 3b and c, State, Private Industry

d. Scope of Impact: Multistate—MA, MI, NJ, OR, WA, and WI

Key Theme - Sustainable Agriculture

a. WSU Extension is working towards being fully engaged in capacity building with small- and mid-sized family farmers and diverse communities throughout Washington State to address their most pressing food and farming issues: farm profitability, environmental stewardship, a healthy food supply, farmland protection, regional economic development, and helping beginning farmers succeed. In addition, the public is often unfamiliar with farming and unaware of the environmentally sensitive management techniques used. Raising consumer awareness about their local food system helps maintain both local food systems and working landscapes in the urbanizing setting of Western Washington.

b. Impact: The Harvest Celebration event started with one county in 1998 and grew to 11 counties in 2004, connects residents with local farmers and food systems. Assisted by the efforts of the Small Farms program personnel, approximately 20,000 people visited 85 farms to participate in organized tours and open houses of area farms, banquets/dinners featuring locally produced food prepared by local chefs, a sheep shearing demonstration, and other activities to celebrate local agriculture, local farmers, and food. Extension Educators leveraged over $30,000 in other resources including at least 1,000 volunteer hours, over $8,000 in cash donations, and $10,000 of donated in-kind resources.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
Key Theme – Sustainable Agriculture
Key Theme – Other (Biological Control)
Key Theme – Other (Goal 1: Invasive Species)

a. Washington State is facing an invasion of non-native, noxious weeds, including Diffuse and Spotted Knapweed, St. Johnswort, Houndstongue, Orange Hawkweed, Meadow Hawkweed, and Dalmatian Toadflax. About 60,000 acres have been lost so far in Ferry County alone and 400,000 acres in Ferry, Stevens, Pend Oreille and Okanogan Counties and on the Colville Reservation are threatened. Non-native, invasive, noxious weeds destroy biological diversity, decrease forage for wildlife and livestock, increase chances for erosion, and decrease land values. The health of these grasslands is vital for wildlife, livestock, and people.

b. Impact: Biological weed control, in the form of insects, is replacing or supplementing the use of pesticides across Washington State as a means to manage invasive weeds that threaten native grasslands. Extension Educators worked with the U.S. Forest Service and county weed-board offices to expand the use of bioagents in Washington to fight invasive weeds. Over 437,000 insects were released at more than 470 sites in Washington. Characteristics such as soil type, annual precipitation, slope aspect, and size of weed infestation were also recorded for future evaluation. This biocontrol project has resulted in a substantial reduction of diffuse knapweed over thousands of acres in the region and is already reducing the health and rate of spread of Dalmatian toadflax infestations. More grass can be seen in sites than has been seen in 24+ years. This has been quantitatively measured at a diffuse knapweed site in northern Ferry County. Diffuse knapweed biomass has declined from 1860 lbs/acre in 1984 to less than 10 lbs/acre in 2004 with grasslands returning. In Ferry County alone, diffuse knapweed has been suppressed over an estimated 20,000+ acres with similar results being seen in Okanogan County and on the Colville Reservation. There also has been a corresponding reduction in the application of pesticides on Knapweed, with a much larger long-term reduction when the rate of spread of the invasive species is reduced. These has and will result in a substantial decrease in expenditures for weed control in Washington counties and improved environmental quality because bioagents are self-perpetuating and reduce the need for repeated applications of pesticides. Extension educators also worked with USDA-APHIS to facilitate the distribution of over 70,000 insects from breeding sites in Washington to six other western states to control Dalmatian toadflax, a very aggressive, hard to control weed. Extension educators also gave presentations at the Washington State Weed Conference in Yakima; the Regional and National Intertribal Agriculture Council Conference; and at the XXII International Congress of Entomology, in Brisbane, Australia. The biological

weed control project also is working with two graduate students who are studying Mecinus janthinus, a bioagent for Dalmatian toadflax.

c. Source of Federal Funds: Smith-Lever 3b and c, U.S Forest Service, State matching

d. Scope of Impact: State specific

Key Theme – Sustainable Agriculture

a. Washington ranks second in the nation in potato production. While the state's farmers are productive, they are squeezed between increasing production costs and decreasing prices for their commodity. They also are under pressure to reduce pesticide use and improve their stewardship of the land. Mustard green manures potentially could replace soil fumigants to control microscopic worms that present problems for farmers. Research on replacement of fumigant with mustard green manures and evaluation of varieties of mustard and other species for their green manure potential is being conducted on five farms.

b. Impact: Green mustard manures are proving increasingly effective as natural fumigants in potatoes and other crops. The use of mustard green manures increased from 1,800 acres in 1999 to 20,630 acres in 2004. A majority of these acres are or will be planted to potatoes. When farmers replace fumigant with mustard green manures, farmers can save about $66 per acre in production costs or over $4 million statewide if half the current fumigant use were replaced. The growers using green manures are beginning to see improvements in their soil quality and their ability to manage soil-borne pests, which results in increased profits. Mustard seed grown in Washington is being shipped to Idaho, Oregon and California for production of green manure crops in those states. The increased use of green mustard manures by potato growers has encouraged onion, bean, and carrot growers to try the practice.

c. Source of Federal Funds: Smith-Lever 3b and c, USDA SARE, State matching, Private Foundation

d. Scope of Impact: Multistate Extension—CA, CO, ID, OR, and WA

Key Theme – Integrated Pest Management
Key Theme – Wetlands Restoration and Protection
Key Theme – Other (Goal 1: Plant Production Efficiency)

a. Weeds have been the cranberry industry's number one problem for more than a century. They can reduce yields up 40 percent. Growers have few options to manage them because cranberries are grown mostly on environmentally sensitive wetlands. Growers spend thousands of dollars to have them pulled by hand. A new herbicide field tested by WSU Extension educators may help Washington's cranberry growers get a handle on the industry's biggest problem: weeds. Extension educators conducted field trials and collected data on a commercial pesticide registered for field corn and found the herbicide is effective in killing both annual and perennial weeds while not injuring cranberries. The herbicide is derived from a plant extract, and poses no environmental concern for surface, ground water, or wetlands.

b. Impact: Based in part on results from the field trials and the low environmental risk, the EPA granted a crisis exemption in May for use of the herbicide by cranberry growers in Washington and Oregon. The next step is getting the herbicide registered for cranberries, which will take several years. In terms of increased yield and reduced labor to pull weeds, the weed control

benefit to pull weeds from this herbicide is estimated worth up to $1 million a year to Pacific Northwest cranberry growers. Some growers have reported a $1,000 an acre savings in labor costs to pull weeds from new plantings.

c. Source of Federal Funds: Smith-Lever 3b and c, County

d. Scope of Impact: Multistate Extension—OR, and WA

Key Theme – Forest Restoration and Protection
Key Theme – Natural Resources Management

a. Northeastern Washington is one of the most forested and highest non-industrial private forest (NIPF) land-bases east of the Mississippi River. Forests cover half of the state and non industrial private forests (NIPF) comprise 20% or nearly 1.4 million hectares of the total timberland in Washington State. There are approximately 100,000 owners of NIPF lands. Washington's forests face significant health and fire issues, changing riparian environmental regulations, market and tax problems, and new technologies. Owners are diverse, most with limited technical knowledge; several are absentee owners. Owner interests range from intense timber production to nature preserve; many are interested in wildlife. Focus groups show that forest landowners want to manage their forest ground, but those residing in forested areas require forest management tools to aid them in the care and stewardship of their land. Educational programs conducted by WSU Extension and the Department of Natural Resource Sciences in cooperation with the Washington State Department of Natural Resources continued the paradigm shift from strictly commodity-based management to ecosystem management on NIPF lands as well as helping production oriented owners.

b. Impact: The Forest Stewardship Program reached over 2000 land holders and impacted over 78,000 acres of forest ground in 2004. When participates were asked to place a monetary value on having gone through the Coached Stewardship planning process, values ranged from $100 to $50,000; one person said, “Priceless.” Over 200 individuals received one-on-one consultation or assistance and virtually all participants expressed that programming would assist them in implementing change due to increased knowledge, skills, or abilities in forestry practices including tree planting, the rehabilitation of wildlife habitat, stream and riparian area protection and timber harvesting.

c. Source of Federal Funds: Smith-Lever Act, USDA Forest Service, Washington Department of Natural Resources, Rural Technology Initiative

d. Scope of Impact: State specific

Key Theme – Integrated Pest Management
Key Theme – Other (Goal 1: Plant Production Efficiency)

a. Washington is the nation's leading producer of sweet cherries in the United States. Thirty percent of the state's crop is exported. The key quarantine pest of sweet cherries is cherry fruit fly and there is a zero tolerance for this pest in Washington sweet cherries. Five years ago, all products registered for control of this pest were either organo-phosphate or carbamate insecticides. Organic growers had lost the use of all effective products or management tools for this pest and were quickly losing control. In 2004, many of the most effective insecticides were strictly limited or completely banned near fish-bearing streams. Extension educators initiated 74 trials in eight counties in central Washington starting in the late 1990s to screen new methods and materials for

use by both conventional and organic cherry growers. The trials included a control method never before used on any tree fruit in the Pacific Northwest: application of bait that speckles the tree with an edible substance laced with a biologically derived ingredient that kills the fly if it is consumed. The product was developed to replace helicopter application of malathion to control medfly and Mexican fruit fly in large metropolitan areas in southern California. Results have been published in several popular press articles for (growers) and have been submitted to a refereed journal for publication.

b. Impact: In 2001, the EPA granted the registration of a limited-risk pesticide (spinosad), which is now used on 75 percent of the sweet cherry acreage in the state of Washington. The registration was based solely on WSU results. By 2004, this active ingredient was approved for use in organic orchards as well because spinosad has a very low level of toxicity. Trials continue to show extremely high levels of efficacy against the pest. The application of the product in this manner has no impact on the natural enemies of other cherry pests, a fact not lost on growers or the EPA. The product is so safe, it is considered safe to spray the crop only four hours before harvest, posing no hazard to employees or the applicator. Because of these attractive assets, the product was applied to 9,000 acres in its first season of use. Much higher rates of use are anticipated for 2005. In 2004, at a $20/acre cost reduction, growers statewide saved $180,000 in application costs over previous standard practices. The research and extension efforts have resulted in a reduction of 29,000 lbs. of organo-phosphates and carbamate insecticides each year in the state of Washington. In comparison, the 12,000 acres of organic tree fruit production in Washington has reduced the use of these insecticides by about 50,000 lbs. In 2004, British Columbia fruit growers provided a grant to support the specific research trials necessary to gather the unique data they need to have the product registered in Canada.

c. Source of Federal Funds: Smith-Lever 3b and c, Washington Tree Fruit Research Commission, Private companies

d. Scope of Impact: Multistate Extension—OR, WA, and BC

Key Theme: Other (Goal 1: Rangeland/Pasture Management)

a. An evaluation of educational programming needs compiled by NRCS and USDA personnel has pasture and range management educational subjects in 19 of the 23 highest training desires. In Yakima County there are approximately 30,000 vocational irrigated pasture/livestock producers. Education for this group is of high priority at the county, state and federal level. According to sheep advisory groups irrigated forage management, private property issues, lamb marketing and riparian buffer zone worries rank in the top needs. According to cattle advisory group, irrigated pasture production, riparian buffer management and research, private property range and elk trespass rank in the top needs. WSU Extension educators presented educational opportunities on MIG, vaccinations, trace minerals, supplementation, winter-feeding, fertilizer timing, fencing, weed reduction, pasture renovation, irrigated forage varieties and ranch goals. A fertilizer application experiment using temperature summation was accomplished, and additional trials are being setup for the future. Experiments and studies designed to extend the grazing season by utilizing annual forages in combination with irrigated pasture management plans were undertaken. Test plots of forage varieties, irrigation tech methods, intensive grazing, fencing tech and fertilizing were moved and condensed into one location for budget control.

b. Impact: Evaluations recorded an average of 60 percent knowledge gained during producer meetings during the year, and 80 percent of the producers attending the educational meetings stated that they intended to make management changes due to programming. Experiments and

studies to extend the grazing season into the fall were successful and well received. An average of five days of additional fall grazing was recorded, which correlates to a savings of $3.5 million in winter feed for producers in Yakima County. Experiments and studies to extend the grazing season in early spring were also successful. On average, over 12 days of additional spring grazing was recorded valued at $6 million in winter-feed savings for producers. By keeping cattle grazing 15 additional days, 119 million pounds of manure was deposited and utilized on irrigated pastures instead of being handled within a confined feeding operation. Additionally, 90 percent of health problems occur in confined situations, so a great value of grazing is less chemical use and an increase in herd health. T-Sum studies recorded an approximate 2K-pound or 33 percent difference in forage production by timing fertilizer applications. While continued studies are needed to confirm the results, this is of great economic importance to grazers and forage producers in Yakima County and the Pacific Northwest. The results of the T-Sum studies have the potential of $9.8 million worth of additional forage in Yakima County annually.

c. Source of Federal Funds: Smith-Lever 3b and c

d. Scope of Impact: State specific

Goal 5: ***Enhanced Economic Opportunity and Quality of Life for Americans.*** Empower people and communities, through research-based information and education, to address economic and social challenges facing youth, families, and communities.

Overview

Washington State University Extension offers a wide array of youth, family and community development programs that impact economic opportunity and quality of life for the people of Washington State. Included are programs in the state Plan of Action that address 1) *strengthening life skills for youth and adults*, 2) *workforce preparation*, 3) *character education*, 4) *child care and parenting education*, 5) *building strong communities*, 6) *leadership for public decision making*, and 7) *responding to economic and social change*. In addition, Extension maintains its commitment to ongoing youth and family programs that are both volunteer-based and directly delivered by Extension educators.

1) *Strengthening life skills* is a common goal of both 4-H Youth Development and Family Programs in WSU Extension. A variety of delivery mechanisms are used to reach youth and adult audiences with life skills education, including 4-H club activities and events, school enrichment, and volunteer outreach programs for adults. The primary audience for adult life skills programs is low-income families, and 4-H outreach that includes at-risk youth (see **Key Theme- Life Skills**).

In 2004, the Washington State 4-H Strategic Plan served as the operational blueprint for program priority setting, funding allocations and management structures. As an offspring of the 4-H Strategic Plan, the Teen Task Force Report was completed and well positioned 4-H for a total updating and revision of its teen leadership program across the state of Washington.

2) *Workforce preparation* and community development efforts are closely linked. The WSU Center to Bridge the Digital Divide (CBDD), with participation from a host of multidisciplinary WSU faculty and staff, moved forward with its mission to assist rural and urban underserved areas to overcome barriers to gaining the economic and social benefits of participating in the telecommunications revolution. Information communication technologies (ICT) including modern telecommunications, computers, software and digital applications represent a powerful tool to improve teaching and learning; economic opportunity, health care access and effective governance.

Log on to http://cbdd.wsu.edu to learn about the 4-H youth tech corps and the E-safety, e-work and high-tech high school programs of the CBDD (see **Key Themes – Jobs/Employment**, and **Workforce Preparation – Youth and Adult**).

3) *Ethics* refers to standards of conduct, standards that indicate how one should behave based on moral duties and virtues, which themselves are derived from principles of right and wrong. The Aspen Declaration on *Character Education* concludes that because the character and conduct of our youth reflect the character and conduct of society, "Every adult has the responsibility to teach and model the core ethical values and every social institution has the responsibility to promote the development of good character. Although the responsibility for developing the character of youth is first an obligation of families, it is also an important obligation of faith communities, schools, youth and of other human service organizations." Character development is best achieved when these groups work in concert in entire communities. In order to satisfy the 4-H goal of developing youth to their greatest potential, we cannot overlook the importance of thinking, talking and modeling ethical behavior. Youth leaders are in an ideal position to help develop and nurture ethical character in young people (see **Key Theme – Character/Ethics Education**).

4) *Parenting education and childcare* programs in Washington State focus not only on parents as a direct audience, but also on caregivers and parent educators from a variety of systems. The Parenting Team gives leadership to these efforts, including the organization of an annual regional conference. In 2004, the NW Regional Parenting Conference celebrated its 10th anniversary. For the third year, University of Idaho Extension and Oregon State University Cooperative Extension collaborated with WSU Extension to plan and implement the conference. In 2004, approximately 48 percent of the 254 attendees were first-time attendees to the three day event. The Parenting Team also reviews and promotes new parenting curricula and program approaches (see the website http://parenting.wsu.edu for more details). The team continues to give leadership to expanding the Strengthening Families Program, an integrated research and Extension program that reduces the risks of substance abuse, violence and other maladaptive behaviors in adolescence. WSU Extension 4-H continued as a contractor for the State of Washington Department of Social and Health Services to provide professional development and certification to identified state standard credits for child care providers. Despite departmental cut backs in DSHS amounting to a 25% reduction in contract resources, WSU Extension 4-H was still able in 2004 to provide to over 1,600 school age care providers training, information and technical support services. Three statewide conferences were conducted with attendance of over 300 childcare providers. Providers of childcare in Washington State are increasing their skills and knowledge of positive youth development through the efforts of 4-H professional outreach (see **Key Themes- Parenting**).

5) In the broader arena of *building strong communities*, Extension educators worked with hundreds of community leaders and organizations across the State on a myriad of projects. Examples included conducting an electronic survey of various rural small businesses regarding business assistance and training needs; leading community education programs; developing cross cultural training and enrichment programs; and providing leadership development workshops to citizens, volunteers, and board members (see **Key Theme – Community Development**).

6) *Leadership for public decision making* is enhanced through WSU Extension's Certified Public Officials program (CPO) and the Partnership for Rural Improvement. The CPO continued to work with elected and appointed local government officials to provide required and elective training leading to a CPO certificate (see **Key Themes – Community Development, Leadership Training and Development,** and **Impact of Change on Rural Communities**).

7) In *Responding to Economic and Social Change,* WSU Extension educators delivered educational programs, conducted applied research and provided technical assistance across the spectrum of local, state and regional community/economic development. Although local, state and regional leaders may be aware of the need for better information and analysis of trends and developments in order to diagnose and establish a sound understanding of their economy, how they work, how they are changing, and how they can be changed, they frequently lack the resources or staff trained to know how to access, organize, synthesize, analyze and interpret the pertinent data. Smaller rural and mid-size areas are especially limited in their capacity to initiate and undertake the applied research needed to establish a sound baseline of information and analysis from which to build a broad collective understanding of where they've been, where they are, and where they may likely be going.

To help address these realities, Extension educators conducted 3,600 social, economic and demographic analyses on behalf of community groups, social service organizations, state agencies, local/regional economic development organizations and private businesses. Two hundred and sixty (260) organizations and individuals reported direct benefits for their work from these analyses. The majority of the analyses are provided through Northwest Income Indicator Project's website http://niip.wsu.edu.

Federal, state, and local natural resource enforcement agencies identify themselves as ineffective in resource protection using primarily enforcement methods. With the National Marine Fisheries Enforcement area leader, a team of Extension educators is developing a curriculum to train natural resource enforcement officials in collaborative methods. In 2004, three highly successful offerings were conducted with 104 people in attendance.

WSU Extension provided businesses with technical assistance that helped create 12 new enterprises and assisted in the retention and/or expansion of 11 businesses. In one notable area, the Extension food processing assistance program continued its work with the State's MEP, the Washington Manufacturing Service (WMS). In partnership with WMS, our food processing specialist worked with 89 different businesses in the Northwest to provide assistance in market analysis and development, solving quality problems, regulatory compliance, and resolving food safety issues.

Sources of Funding and FTE for Goal 5

FTE Smith-Lever 3b and 3c	=	10.87 FTE
FTE Smith-Lever 3d	=	0.00 FTE
Federal Extension	=	$1,634,707
Non-Federal	=	$9,153,249
Other Federal	=	$3,236,001
TOTAL	=	$14,023,957

Key Theme – Communications Skills
Key Theme – Leadership Training and Development
Key Theme – Life Skills
Key Theme – Youth Development/4-H

a. The Life Skills Evaluation System (http://ext.wsu.edu/lifeskills) is a web-based accountability tool used by Extension educators to document the changes in knowledge and skills that result from participation in life skills education. Extension educators use the system to create standardized evaluation forms online. It allows local programs to evaluate all of the major (Conference, Forum and Know Your Government) 4-H statewide events as well as individual

county youth and family programs. The data are then aggregated on a statewide basis to report changes in life skills that result from WSU Extension programs. Significant participant progress is indicated in all eight-focus life-skill areas. By using a consistent evaluation format, Washington State is better able to compile impact data across county and specific event barriers. In 2004, over 1,100 participants from various programs completed evaluations. Started in 2003, the Life Skills Evaluation was once again used in 2004 to evaluate the positive impacts of National 4-H Congress. The Washington State WSU Extension Life Skills Evaluation System impacted 45 states, Puerto Rico, Guam and the American Virgin Islands.

b. Impact: Strengthening Life Skills in the Washington State University Extension 4-H Youth Development Program takes on many facets and program initiatives including: a positive relationship with a caring adult; a safe physical and emotional environment; opportunity for skill mastery and content; opportunity to be of service to others; opportunity for goal setting self-determination and decision-making; a positive connection to the future; and the creation of an inclusive atmosphere. These programs reached over 75,000 Washington State youth with exciting, engaged programs of skill enhancement. Typical results from the Life-Skills evaluation data indicate an 88% increase in positive gain from pre-program to post-program impacts. The buffet table of programs includes outdoor recreation/leadership and longboat adventure education, and subject matter including plant and animal sciences, family living, citizenship and local government engagement, and technology. Additionally, in 2004 Washington State University Extension 4-H experienced a 13% (2,584 youth) increase in 4-H club membership strengthening youth individual relationship with a caring mentoring adult. About 84 percent reported gains in life skills as a result of program participation. The life skill area in which the largest changes were reported was *leadership*, where respondents scored .68 higher after participating in an Extension program (on a 4 point scale). The specific indicator with the largest gain was *getting others to share in leadership* (.72 on same scale). The general life skill area with the next highest level of positive change was *decision making* (.62 gain on a 4 point scale). The indicator with the most dramatic change in this category was *listing my options before making a decision*, with an increase of .73. Other indicators for which large positive changes were reported were *keeping accurate and useful records* in the useful/marketable skills category (1.34), and *making a presentation* (1.03) in the communication category of life skills.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching

d. Scope of Impact: State specific

Key Theme – Workforce Preparation – Youth and Adult
Key Theme – Other (Goal 4: Forest Resource Management)

a. Research indicates that children who attend high quality after school programs have better peer relations, emotional adjustment, conflict resolution skills, grades and conduct in school compared to their peers who are not involved in after school programs (National Institute on Out-of-School Time Center for Research 2002). Many local youth are not involved in after school sports or other extra curricular activities, and may be spending unsupervised time in high-risk settings. They may not have had the opportunity to spend time in a forest setting to learn about forest ecosystems, our local forest economy and to develop an appreciation for the environment in which we live. WSU provides 4-H youth leadership programs in 16 counties through the Secure Rural Schools and Community Self-Determination Act of 2000. Those after school programs teach job skills to youth as part of forestry education.

b. Impact: Results have been dramatic. The Forest Service has given the 4-H project a regional award for "Caring for the Land and its People." They are so impressed with the program that they are advocating in Washington, D.C. for a national model in partnership with the U.S. Fish and Wildlife Service. Over 90% of participants indicate significant gain in self-confidence, problem solving and other life skills. Gang members have turned themselves around and left their gangs to be involved in the 4-H forestry education after school program. Parents and teachers indicate dramatic changes in students with regards to their interest in school, respect for authority and having a sense of direction again. Several students have gone from being failing students and not attending school with any regularity to being model students with GPA's of 3.0 and above. Some students have expressed an interest in natural resource education and taken jobs with the Forest Service, and a couple more have graduated from high school and are now attending WSU. Youth participants have increased their knowledge of forest ecosystems, local forest economy, forest stewardship and management practices; developed an enhancement of critical thinking skills; discovered a sense of pride in a "job well done"; expressed a desire for higher education; acquired an appreciation of the unique environment in which they live and a sense of community; gained global perspectives by having opportunities to act on a local level; and gained productive and wholesome use of time both in and out of school.

c. Source of Federal Funds: Smith-Lever 3b and c, State, Secure Rural Schools and Community Self-Determination Act of 2000

d. Scope of Impact: State specific

Key Theme – Leadership Training and Development

a. The Washington State 4-H Strategic Plan was the foundation of the Volunteer Development Action Team (VDAT). The Washington 4-H Program boasts 8,307 adult volunteers and 983 youth volunteers. In order to effectively serve as leaders of enrolled youth, these volunteers need orientation, leadership training, and basic knowledge and understanding of the 4-H youth development program in addition to the core competencies that exist at the national level for 4-H professionals. Limited budgets necessitate consideration of alternative distance delivery methods for training 4-H professionals and volunteers. Employing appropriate distance delivery methods for 4-H volunteer training can reduce the duplication of efforts by individual counties and allow county 4-H professionals time to pursue other tasks.

b. Impact: To increase the effectiveness of volunteer training, the VDAT made seven training modules available online. Statewide training events have been conducted for professional faculty and staff and a uniform training methodology is being implemented across Washington. In 2004, 2,044 adult volunteers and 1,064 youth volunteers participated in training at the county, district, and state levels and were direct recipients of the VDAT work. Better-trained volunteers are better prepared to meet the needs of an increasingly diverse and challenged youth population.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching, County, Private Donors

d. Scope of Impact: State specific

Key Theme – Children, Youth and Families at Risk

a. Agencies serving youth grades five through twelve are in agreement that their students/clients present a set of needs significantly different than those of previous decades. A survey of school counselors, agency staff and ministers attribute the following issues as causes for lack of success

in school: problems related to alcohol and drug abuse, teen pregnancy, low self-esteem, poor skill levels in communication and decision making, as well as a deterioration of family bonds. The Washington 4-H adventure education program, 4-H Challenge, is a complex system of 11 site-based challenge courses, many portable challenge programs, two active rock climbing programs, a pilot long boating program, flat water canoeing, and backpacking.

b. Impact: In 2004, 10,140 Washington youth participated in Challenge activities. Typical outcomes included safer schools, more positive and cooperative school climates, youth that felt stronger positive connections to classmates and their schools, improved teamwork and collaboration, and improved experiential education skills of professional school teachers.

c. Source of Federal Funds: Smith-Lever 3b and c, Private Donation

d. Scope of Impact: State specific

Key Theme – Jobs/Employment
Key Theme – Other (Management Goal: Information Technologies)

a. The WSU Center to Bridge the Digital Divide (CBDD) helps people, communities and institutions successfully access and apply information communication technologies to achieve these and other learning and development objectives. Specifically, CBDD facilitates collaborative partnerships; provides educational outreach, research and policy guidance resulting in the development of rural telework content for distance delivery to business and community leaders; and provides the assurance that more students leave high school ready for college, work, and civic contribution.

b. Impact: In 2004 the CBDD's e-work program facilitated new productive collaboration among business and economic development leaders within a seven-county region resulting in the creation of a research-based regional strategy to encourage development of new local job opportunities through e-work. This program secured funding to continue training and technical assistance with a target of creating an additional 100 living wage jobs in seven underserved Washington State locations over the next three years. The Connecting Schools and Communities initiative trained over 500 teachers and administrators in more than a dozen Washington State school districts. This training assisted in improving local school capacity for successful teaching and learning as well as the facilitation of expanded engagement among schools and community based organizations in six Washington State locations. The CBDD helped advance community goals in areas of youth entrepreneurship, job creation, and access to public services and other local priorities. By providing continued assistance to six Washington State High Tech High Schools in their transition from traditional high school teaching models to new teaching and learning methods an emphasize was placed on project based learning, meaningful internship opportunities, stronger teacher and student leadership, and engagement with web technologies.

c. Source of Federal Funds: Smith-Lever 3b and c, USDA CSREES Rural Telework Project

d. Scope of Impact: State specific

Key Theme – Workforce Preparation - Youth and Adult

a. A new workforce preparation initiative was instituted in 2004. This effort engages middle and high school age students and the greater community in informal technology education opportunities utilizing 4-H programs through WSU Extension. Existing 4-H programs are being

expanded in the areas of science, mathematics and technology through projects, activities and events that engage children at an early age and develop community support by involving people outside formal channels of education. The 4-H program is preparing students to become technology professionals by providing high quality undergraduate and graduate education in electrical and mechanical engineering, computing and the sciences. The ultimate goal is to graduate 1,033 students in engineering and science fields by the year 2010.

b. Impacts: To date an initial middle school orientation/training has been conducted for 26 middle school youth and their parents. The purpose was the formation of a Teen Works co-hort.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching

d. Scope of impact: State specific

Key Theme – Workforce Preparation – Youth and Adult

a. The Bill and Melinda Gates Foundation funded the development of six computer labs across the state and a mobile computer lab in 2002. In December 2004, the Gates Foundation donated another 38 used computers, which were placed in four additional labs across the state. The ten computer labs are internet connected and currently offering technology related educational learning opportunities to senior citizens, youth and interested community members. Each lab has taken on a different specialty. For example, the Lincoln County lab is not only offering introduction to e-mail and Word computer classes, but they are also introducing the public to Digital Arts computerized embroidery, digitizing and scanning, and agricultural Farm Bill education. The Thurston County lab is focusing on digital photography and editing videos. The grant also created the foundation for the Washington 4-H Technology Team. This group of Extension educators, volunteer adults and teens identified service learning activities to take part in teaching people how to use and put together computers, become resources for everyone, provide computer classes to ESL students, and repair seniors' computers.

b. Impact: The Washington 4-H Technology Team identified teamwork, critical thinking, creativity, accepting differences, empathy, resiliency, character and imagination as the most important life skills developed through their technology work. The Teens Teaching Technology Together—the leadership team for the Washington 4-H technology effort—indicated significant increases in their abilities to clearly state thoughts, feelings, and ideas to other; organize a group to reach its goals; use different leadership styles; get others to share in leadership; and work out problems that are presented. Additionally, youth participants in the 4-H Teen Technology program indicate significant increases in their abilities to list options before making a decision, think about what might happen as a result of decisions made, work out problems that are presented, follow instructions as they are given, accept responsibility for doing a job, and admit to making mistakes.

c. Source of Federal Funds: Smith-Lever 3b and c, USDA CSREES Rural Telework Project, State, County, Private Donation

d. Scope of Impact: State specific

Key Theme – Work Force Preparation Youth and Adults

a. A major objective for WSU Extension is to assist Latino youth in developing stronger linkages with WSU and education. This is accomplished by providing mentors and leaders that not only

conduct learning experiences for these youth but also facilitate discussions about career opportunities and personal educational motivation. Volunteer mentors and leaders from the local community and WSU faculty provide ample opportunity for conversation about personal interest, education, and the necessity of being a life long learner. As part of a recruitment trip, 12 Latino students from Pasco High School traveled to WSU Pullman campus and toured the Apparel Merchandising, Design and Textile Department. Students learned about post high school options, and became aware that Washington State has the third largest apparel industry in the United States, behind New York and California.

b. Impact: Comments received from the Latina/Latino youth participants expressed strengthened capacities to think more about the future, career planning, and what to do after graduation. They also learned that they don't have to be economically wealthy to go to college if they really want because it is a matter of willingness and ambition. They learned that loans and scholarships are available to attend college. Students received information that explained financial aid procedures, how to apply for college, and admission requirements. By talking with departmental personnel they learned the importance of classes, how classes work, and got a feeling for the college atmosphere, college life and fashion design. Some students were surprised by the campus environment.

c. Source of federal Funds: Smith-Lever 3b and c, State matching, County, Private Donation

d. Scope of Impact: State specific

Key Theme – Character/Ethics Education
Key Theme – Other (Goal 1: Animal Production Efficiency)

a. Through observation and experience and youth interviews, it has been found that teens from a variety of socio-economic backgrounds have difficulty with decisions when faced with character/ethics related situations both in and out of school relationships with others. This is especially true when facing decisions in circumstances related to role modeling and in rule following rules when friends are involved. Washington State has used the Character Counts curriculum as a training base. Animal science projects continue to attract the largest single segment of 4-H membership. In 2004, 44,071 4-H members were enrolled in one or more animal science projects (Equine 15,853), dairy, goat, beef, sheep, llama, swine, poultry, rabbit, dog, cat, cavies and assorted other small pets. Producer Quality Assurance educational programs are becoming even more important as meat packing plants are being held accountable for physical, chemical, and antimicrobial hazards found in carcasses. Many of these hazards are a result of management and care given to animals before they reach the packing plant. Therefore, meat packing plants and consumers are holding producers (both youth and adults) responsible for supplying humane produced animals that are free of drug or chemical residues and physical hazards. To achieve this goal, producers must practice proper animal care throughout production. Youth producers must learn that there are economic incentives, as well as moral and ethical responsibilities, to humanely produce wholesome, high quality food products for consumers. Because youth project show animals sometimes receive less than optimal care, they may have higher incidence of disease, and may be more likely to contain illegal residues than other meat animals. Therefore, it is important to educate both youth and adult volunteers about proper care and management and its impact on product quality as youth raised animals enter the meat supply.

b. Impact: A uniform Animal Quality Assurance program and reporting system first implemented in 2003 continued to be used in 2004 across Washington State for all 4-H youth producing livestock that will enter the meat system. This program includes signing the Exhibitor Code of

Ethics. One hundred percent of 4-H youth who exhibit market animals at Washington Fairs signed an Exhibitor Code of Ethics. This document requires members, parents, and leaders to sign-off that the members have taken responsibility for the proper care and treatment of their animals, the production of wholesome food, and the development of sound ethical behavior in themselves and others. 4-H youth demonstrated their skills in raising a market animal project that meets or exceeds consumer expectations for high quality, safe food products.

c. Source of Federal funds: Smith-Lever 3b and c, State matching, Private Donation

d. Scope of Impact: State specific

Key Theme – Leadership Training and Development

a. WSU Extension 4-H youth development throughout 2004 redirected limited resources to enhance its commitment to ongoing youth programs that are both volunteer-based and directly delivered by Extension educators. In 2004, 2,973 adult volunteers received one or more 4-H training experiences. That figure represents fully 36 percent of the adult volunteer base participating in training opportunities. To improve both the quality and quantity of training opportunities the WSU Extension 4-H initiated a strengthening professional development system for Extension educators in 2003. In the second year of the three-year training cycle, 2004 professional offerings included: Programming with Schools and using the EALR's Competency; Partnerships; Basic 4-H Orientation Competency: Organizational Systems, Learning Strategies, and Adult and Youth Development; Logic Model Training (via technology) Competency: Learning Strategies; Program Days: Delegation, Competency: Adult Development; "Volunteer Training Modules" Competency: Volunteerism; "Risk Management"; Competency: Organizational Systems; "Working with Children with Special Needs"; and Competency: Youth Development.

b. Impact: New faculty and staff have reported that the 4-H orientation increased their knowledge of the 4-H program nationally and statewide, improved their skills in teaching techniques, enhanced their understanding of experiential education and clarified their risk management responsibilities. The Welcome Packets and Points of Contact systems have facilitated the new personnel in increasing their capacity to seek out knowledge and feel a part of the state 4-H program. Other long-term outcomes will be forthcoming as this project continues. Short-term and long-term evaluations are planned for the professional development trainings and the committees managing the 4-H program.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching, County, Private Donors

d. Scope of Impact: State specific

Key Theme – Children, Youth, and Families at Risk
Key Theme – Parenting

a. A report conducted by the Washington State Superintendents of Public Instruction's office recommends engaging parents and families in the late elementary and middle school years to reduce risks of a variety of risk behaviors. Studies have documented that program models that include both parents and youth to be most effective in long-term behavior change and reduction of risk. The Strengthening Families Program (SFP) for Parents/Caregivers and Youth 10-14 is an integrated research and best practices program designed to positively impact the whole family by reducing the risks of substance abuse and other problem behaviors in adolescence. WSU

Extension began offering the program in 1999 with two faculty trained and certified by the developers at Iowa State University.

b. Impact: Over the last four years, WSU Extension Trainers of Facilitators have trained more than 300 facilitators in thirty Washington counties to implement SFP. Partners include school teachers, staff and administrators; social service agencies; church groups and 4-H clubs; and community coalitions. Those trained have conducted more than 65 programs serving more than 500 families across the state. WSU Certified Trainers have grown from 2 to 12, including three Spanish language trainers. Seven Spanish language SFP trainings were delivered in 2004, the first year the program was available in the state. A faculty member in the WSU Human Development Department served as Extension's research partner. Evaluation protocols were produced and ongoing data analysis was conducted. Thirty-four outcome evaluation reports were produced in 2004. Adult program participants reported statistically significant improvements in their communication skills, ability to manage their temper and to discipline calmly, and to enjoy family time. They also reported that daily household routines (e.g., getting children to do chores and homework) were smoother after program participation. Finally, there was a significant increase in the number of parents who reported speaking regularly and specifically to their youth about expectations regarding use of substances such as alcohol, tobacco and drugs. Youth program participants also reported a statistically significant increase in their parents' ability to manage temper. In addition, they reported a significant increase in their own knowledge about stress management and about parents' expectations regarding drugs and alcohol.

c. Source of Federal Funds: Smith-Lever 3b and c, State matching

d. Scope of Impact: State specific

Key Theme – Community Development
Key Theme – Impact of Change on Rural Communities

a. Through its activities in Leadership Development for Public Decision Making, WSU Extension provided education to community members and leaders across Washington State. Notable ongoing Extension programs include the Partnership for Rural Improvement (PRI) and the Certified Public Officials (CPO) program. Now in its 30th year, the PRI is a consortium of four community colleges and WSU Extension. The consortium's mission is to bring the resources of participating institutions to bear on issues and opportunities of importance in Washington communities by expanding business and community education program offerings through innovative partnerships with recognized community groups.

b. Impact: Community education programs in northwest Washington enrolled 748 students in 184 personal enrichment workshops, assisted in the development of an "intensive Spanish" program offering five 40-hour trainings sessions to 38 students, and 120 attendees received a certificate in "Human Resource Basics" at a one-day conference. Through the efforts of three partners and 50+ volunteers, "Leadership Skagit" was launched with 27 participants. The first class graduated in July 2004 completing five community service projects with a combined value of donations and in-kind exceeding $100,000. A full class is enrolled for 2005.

c. Source of Federal Funds: Smith-Lever 3b and c, State, County

d. Scope of Impact: State specific

Key Theme – Community Development
Key Theme – Leadership Training and Development

a. Over a three-year period, WSU Extension in conjunction with community agency partners designed and developed a certification program for public officials. Curriculum for the Governmental Structures is developed, and six Community Engagement Series workshops were conducted throughout the state between June and August 2004. There are currently 600 individuals signed up for the CPO program. Enrollment for individual classes is generally full, and participants continue to ask for more classes. All 39 counties in Washington State have four or more officials enrolled in the program.

b. Impact: Elected and appointed local government officials are better prepared to deal with policy decision making, financial planning, and human resource decisions, which saves time and money from avoided lawsuits and union grievances, assists with growth management decisions and conflict management issues within their counties.

c. Source of Federal Funds: Smith-Lever 3b and c, State, County

d. Scope of Impact: State specific

Management Goal: *Multicultural and Diversity Issues*

Overview
The 4-H Youth Development Program continues to take very seriously its responsibility to provide effective outreach education programs for all youth. In 2004, fully 30 percent of the youth enrolled in 4-H were youth of color (22 percent statewide population base). Hispanic youth continue to be the largest constituent group of young persons of color. A number of unique efforts were conducted by the 4-H Extension educators to address the special needs of youth.

As part of the Lummi Cedar Project, 4-H Challenge leader taught team building and communication skills to 30 middle and high school tribal youth during a summer educational program. Participants had a one-day 4-H Ropes Course experience on the Bellingham 4-H Challenge course to learn skills in providing support and building trust in groups in their community.

In collaboration with the Colville Confederated Nations, 4-H educational delivery of Horse Clinics, West Nile Virus information, and Club programming were methods employed to increase tribal 4-H membership and participation among youth and volunteer leaders. As a result, tribal youth learned better goal setting and leadership skills, and reservation residents learned ways to minimize horse exposure to the West Nile Virus.

Not including migrant workers, the number of Hispanic residents in Washington State is approximately 300,000 and the fastest growing population in the state. In the overall Washington 4-H Program, 13 percent are Hispanic with Hispanic youth representing our largest minority population. Specific outreach to Hispanic youth has included development of a Spanish language, four-part cultural activity curriculum, “Our World Rich in Diversity”; a multicultural summer day camp outreach for 65 urban Hispanic youth; development of the 4-H meat goat project; and exhibition activities. Hispanic youth have indicated increased skills in accepting differences, leadership, communication, respect, teamwork, discipline, healthy choices and decision-making. In the continuing support of the day camp effort, 27 volunteers were recruited and contributed 727 hours.

Figured at a value of $17.19 an hour, these volunteered contributed $12,497 worth of time to support the young people.

4-H has offered international exchanges of over 35 years through the International 4-H Youth Exchange (IFYE) program. The unique global education experiences provide youth/families the opportunity to host high school students from Japan and former Russian Bloc countries for short-term, summer or long term, year-long homestays. Annually, about 60 families participate in this exchange program; hosting youth aged 12 through 24 for 3, 4, or 6 weeks during the summer. We also have opportunities for Washington youth traveling to Japan for a 4-week homestay through two of our Japanese partners—Labo International Exchange or UTREK International Exchange Center. Evaluations reveal growth in accepting differences, communication and concern for others as normal outcomes for participants. Impacts take the form of greater tolerance of others and interest in a different culture, making a difference in how these youth look at the world and their place in that world. Nearly all host families maintain long-term contact with their exchange student after they return home.

The 4-H Youth Development Program continues to be the program of choice for families of children with disabilities. In ever increasing numbers, the 4-H program is attracting youth who require special accommodation. It is the flexibility of the 4-H Program and its commitment to inclusion that makes the 4-H Program so attractive to diverse families. In addition to inclusion in existing 4-H programs, both Walla Walla and Chelan counties have horse camps for youth with disabilities. Thirty-two youth participating demonstrated increased physical mastery, confidence and self-esteem. Parents and caregivers report longer attention spans, and better listening and communication skills of the youth who participate. In addition, physicians and physical therapists report increased balance and muscle tone in riders.

Another example of the 4-H commitment to inclusion is through WSU Spokane County Extension's outreach to the immigrant Russian community. The program offers a monthly newsletter in the Russian language and the only classes in the community provided in Russian. American etiquette classes, three 3-H clubs aimed at youth of Slavic families, FAFSA workshops to encourage higher education, and celebrative events to provide opportunities for interaction between Slavic families and other community members are activities that encourage inclusion of the immigrant Russian community.

WSU Extension, selected as one of seven states, will participate in the USDA CSREES Change Agents States for Engagement (CASE) Project. The focus of the project is building the capacity of the National Land Grant System to function inclusively and effectively in a multicultural world. The CASE states are joining eight states designated as Change Agents States for Diversity (CASD) and will eventually mentor a new state. Through the project WSU Extension plans to improve both internal workplace diversity and outreach to diverse communities. A catalyst team that includes partners from WSU Human Relations and Diversity will lead the project. WSU Extension also began a partnership with WSU Human Relations and Diversity and diversity specialists from Michigan State University. WSU Extension faculty and staff participated in a multicultural awareness training in spring 2004 offered by the MSU trainers. We are now teaming to create a diversity "foundations training" that will be available throughout the university system on a regular basis. The plan is that WSU Extension educators will team with trainers from across the university to offer the classes both on and off campus. A part-time diversity coordinator was hired to facilitate the activities associated with our CASE involvement.

The number of Hispanic residents in the region now approaches the 445,000 mark; however, migrant workers nearly double this number during the grower season. Research shows that radio is a one-to-

one medium and that it is extremely culturally compatible with the Hispanic community as it relates to the listener on a personal level. Hispanic people are mobile, and radio moves with the listener, according to Radio Cadena 91.9 (KDNA), unlike any other media. Ninety-five percent of cars have radios and seventy-four percent of adults are in cars every week. KDNA reaches the Hispanic community 24 hours a day—at work, at home and at leisure—in eight southeastern Washington and north central Oregon counties. It is the only full time Spanish language educational public radio station in Washington with an estimated listener audience of 150,000. According to a study done by the Corporation for Public Broadcasting, more Hispanic people listen to KDNA than any other local Hispanic radio station. KDNA's mix includes news, music, public affairs, entertainment, cultural and educational programs, children's programs and public health. WSU Extension contracts with KDNA to provide hour-long Spanish language talk shows from 5-6 p.m. on the third Friday of each month. Subjects covered included WSU Hispanic outreach, Gear-Up, controlled irrigation design, diagnostic virology, plant quarantine and certification, osteoporosis, water efficiency and conservation, diabetes education, viticulture and enology, 4-H youth programs, diabetes lifestyle management, obesity and farmers' markets

The Extension Indian Reservation Program (EIRP) is a partnership with the Chehalis Tribe and Washington State University's Southwest Extension District, as well as the Confederated Tribes of the Colville Reservation and WSU Extension Ferry County. The program has focused on natural resources issues related to water, fish, and native plants. Developed as a spin-off from the Intertribal Agricultural Council, the program was originally designed to use Extension agricultural and natural resources programming to assist tribal members. New educational efforts that address traditional food systems, water quality protection, native plants, revival of the spring salmon ceremony, and involvement of tribal youth were implemented through the Chehalis EIRP program. WSU Extension educators also serve as a communication link for WSU Extension through membership on the South Puget Sound Intertribal Planning Agency (SPIPA) and work with four other tribes in the region. In addition, the Chehalis EIRP program has served as a focus for youth education. One success was the creation of an after school program. The Cowlitz Tribe also benefited from EIRP. As a part of the Cowlitz "Garden to Table" program, a tribal garden was planted to compliment the senior food and nutrition program. Food Fact sheets were developed this year to accompany harvested crops and to educate tribal members about the nutritional values garden produce can add to their diet. Plans to design, develop, and implement a native plant nursery is an ongoing discussion.

The WSU Extension *Food $ense* program currently has formal arrangements with three tribal groups: the Tulalip in Snohomish County; the Kalispel in Pend Oreille County; and activities on the Colville Reservation in Okanogan and Ferry Counties. WSU Extension has conducted various *Food $ense* activities on the Tulalip Tribes Reservation, including working with a local homeless shelter to provide eight houses to cultivate two food gardens that provide work and food, teach garden-enhanced nutrition education to 13 classrooms in five schools, and provide a quarterly nutrition education class at "senior tea." The tribe and WSU Extension also worked with teens and staff at the Tulalip Youth Center and helped with nutrition education as it relates to the Center's on-site garden, participated in two youth-oriented health fairs that included a Germ City exhibit and activities, as well as participated in a family-oriented health fair where the *Food $ense* exhibit highlighted food safety information and demonstrated the use of herbs in cooking. The partnership between WSU Extension and the Tulalip Tribes has resulted in an annual community harvest celebration to honor all partnering community agencies and volunteers. WSU Extension staff also dressed up in fruit and vegetable costumes and handed out packages of baby carrots during the Tulalip Salmon Days Parade. As a result of all these activities and the good working relationship that has been developed, the Tulalip Tribe has seen the cultivation of 14 food garden plots in the community, the senior center has substituted bottled water for soda at "senior teas," and the *Food $ense* staff have become a trusted support unit within the community. Through *Food $ense*, WSU Extension-Snohomish County, in

partnership with local tribal agencies contributing in-kind services and the USDA-Food Stamp Office, are implementing a nutrition education programming budget of nearly $174,000.

2. SUMMARY: SOURCES OF FUNDING AND FTE FOR GOALS 1, 2, 3, 4, and 5

FTE Smith-Lever 3b and 3c	=	29.02 FTE
FTE Smith-Lever 3d	=	14.83 FTE
Federal Extension	=	$4,932,730
Non-Federal	=	$27,619,944
Other Federal	=	$8,215,749
TOTAL	=	$40,768,423

B. STAKEHOLDER INPUT PROCESS

Washington State University Extension's planning process was built from a major initiative in 1998 when four task forces were formed to help shape WSU's role in addressing significant issues facing the state. A strategic planning process took place around the opportunity to approach the state legislature for new funding for a "Safe Food Initiative." Input from the entire agricultural community was obtained in an extended and thorough process to identify the programs and positions that would be sought. Continued stakeholder input has been an important part of updating these programs. Input is also provided by the College of Agricultural, Human, and Natural Resource Sciences' citizen advisory council. This council is made up of representatives from the agriculture industry, county government, 4-H volunteers, families and businesses.

Many of the programs and program teams in Extension have their own advisory committees made up of constituents and collaborators. An example is the two Extension Indian Reservation Programs that have strong advisory committees helping them plan and execute their work.

All county offices have an advisory system. Most have formal advisory committees that meet regularly, and all have been encouraged to do so. These committees represent the makeup of the constituents in the county, with specific efforts to obtain input from typically under-represented groups. When it is difficult to obtain formal input from such constituents because they do not want to participate in a committee, then a system of informal input is used. County Directors also obtain input from County Commissioners, personal contacts, local agencies and organizations, and through the use of key people in that community.

In addition to this standard stakeholder input, the entire university completed a strategic plan. Each unit within WSU Extension also completed a strategic implementation plan and provided implementation reports on six-month intervals to the university administration and to the Extension faculty, staff and supporters. During FY2004, major units of WSU including WSU Extension drafted benchmarks to help track progress toward strategic goals.

In 2004 WSU Extension launched the "Friends of Extension" Information Network**,** http://ext.wsu.edu/ce.cahe/administration/FriendsofExtension.pdf, to build a cadre of local clientele who are willing to express support for Washington State University and for WSU Extension to decision makers when they are informed of pending decisions that can positively or negatively affect the ability of Extension to deliver educational, research-based programs. One hundred forty three individuals have been named and will be engaged in a stakeholder input process in 2004-2005.

C. PROGRAM REVIEW PROCESS

No significant changes in the program review processes since the 5-Year Plan of Work. The Plan of Work Update was approved for WSU Extension to continue with the current approved Plan of Work, with modest changes to Goals 1 through 5. Plans are underway to begin the 5-year plan of work process in 2005. We will wait for guidance from CSREES for the next plan of work, 2006 – 2010 and make adjustments to our Program Review Process at that time.

D. EVALUATION OF THE SUCCESS OF MULTISTATE AND JOINT ACTIVITIES

Washington State University made significant progress toward its planned activities in the areas of multistate, multi-institutional, and multidisciplinary activities, and joint research and Extension activities. In Washington State, budget cuts have forced the Agricultural Research Center to focus its support on food and systems. So although our human sciences programs are based in research from both WSU and other universities, many are grant-funded and joint research while Extension programs supported by CSREES formula funds are almost entirely in the agricultural arena. These activities address issues critical to the sustainability of agriculture in the Pacific Northwest. Planned programs occurred in risk management, forestry, potato production, conservation tillage systems, IPM and sustainable agriculture through the Center for Sustaining Agriculture and Natural Resources (CSANR) http://csanr.wsu.edu/.

In the area of risk management, WSU Extension collaborated with the University of Idaho, Oregon State University, USDA Farm Service Agency, USDA Risk Management Agency, WSDA, and Wenatchee Valley College. WSU Extension is the host for the Western Center for Risk Management Education http://westrme.wsu.edu/. The center's Trade Adjustment Assistance Specialist assists in the continued development of the communication network within the 13-state area as well as with the other TAA Regional Risk Management Education Centers; thereby ensuring coordination and the free flow of information about the TAA for Farmers. By coordinating with the CSREES program leader to develop systems applicable across regions, technical assistance package components reach across regional areas in program development and delivery when a commodity is produced in more than one region. In 2004, 5,681 salmon harvesters located in 42 states and 6 foreign countries received technical training that empowered them to better manage their fishing business and allowed them access to TAA benefits.

Diseases, pests and marketability are all problems identified by potato growers that affect the sustainability of their operations. Research and Extension participants of the trial and industry at an annual meeting select potato clones and cultivars for inclusion in either the tri-state or western regional trials. This program is a cooperative effort between the county and state Extension educators both in state and across seven potato producing states in the western United States including personnel from Oregon State University, University of Idaho, University of California, Colorado State University, Texas A&M University and USDA/ARS in both Washington and Idaho. Cultivar use has changed significantly. For example, use of Russett Burbank—the standard cultivar ten years ago—now makes up less than 50 percent of the acreage. Over 40 percent of the remaining acreage is made up of cultivars that have been demonstrated as acceptable for use by the cultivar evaluation program.

WSU Extension has built interdisciplinary and multistate teams to address Integrated Pest Management (IPM) and potato production. In potato production, Extension educators work with researchers in California, Colorado, Idaho, Texas, and Washington to test the adaptability of new cultivars and extend that knowledge to Washington potato growers. IPM efforts combine with potato

production in a hot line for producers that helps them make spray decisions for the control of late blight.

The CSANR was active in several cross cutting issues. Teaching, research and Extension faculty collaborated to plan programs addressing the needs related to organic agriculture. The Washington Sustainable Food and Farming Network as a priority for their upcoming legislative effort have picked up the organic farming program proposal. They were successful, in adding a position to the WSDA that works closely with the CSANR. In 2004, WSU CSANR hosted a nationally broadcast satellite conference, "Organic livestock: Principles, Practices, and Prospects." The CSANR also responded to the emerging issue of global warming with a new interdisciplinary research and Extension program, Climate Friendly Farming, to address green house gas reduction in agriculture and received $3.75 million from the Paul G. Allen Charitable Foundation. CSANR in January hosted visitors from the China Biogas Institute in Chengdu as a first step in building global collaboration focusing on anaerobic digester technology.

In a multistate effort, the CSANR has helped develop and support The Food Alliance (TFA). TFA approved growers are experiencing direct and indirect benefits from their affiliation. Growers for whom Extension conducted the evaluation are accessing new markets and in some cases getting price premiums. Extension educators were featured in several articles about The Food Alliance that have exposed the public to a positive story about agriculture. TFA and Extension educators that help support that effort continue to be sought out as national leaders on food ecolabeling.

In the area of 4-H Youth Development, Washington State University Extension has also made remarkable progress in its goal of empowering people and communities, through research-based information and education, to address economic and social challenges facing our youth, their families and communities by effectively implementing multistate, multi-institutional and multidisciplinary efforts. Washington State 4-H Youth Development, in collaboration with the National 4-H Council, joined with 25 other states in the 4-H Curriculum Consortium System. The resulting curriculum development system provides up-to-date, relevant and leading edge curriculum for youth.

The Northwest Regional Parenting Conference has been held for the past ten years. Initiated by the WSU Parenting Team, the planning group now includes representatives from Oregon and Idaho. The conference attracts a diverse audience and addresses parenting from a number of cultural perspectives and includes workshops offered in Spanish. The conference's primary audience is professionals in parent education and care giving roles, although it also attracts a large number of parents. The conference is very effective in reaching its goal of providing professional development and networking opportunities for parent educators, as well as reaching interested parents who wish to improve their own skills. The 2004 Conference evaluation indicated that the majority of parent educators increased their confidence, ability and skills in parent education as a result. .

E. MULTISTATE EXTENSION ACTIVITIES
(See Appendix C Multistate Extension Activities Form CSREES-REPT (2/00))

Although this narrative report covers many multistate Extension activities and WSU Extension certainly does a great deal of work in collaboration with other states including Oregon and Idaho, **we have been granted a waiver for this year and will not be reporting any auditable activities.** For the purpose of this year's multistate Extension activities, we would like to highlight our forestry, risk management, potato, and water quality programs.

Forestry: To better serve WSU and Oregon State University Extension clientele on both sides of the Columbia River in the east end of the Columbia River Gorge, WSU Extension provides forestry Extension expertise from Skamania County to woodland owners in Hood River and Wasco Counties in Oregon. In return, OSU Extension Service provides horticulture expertise to apple and pear orchard and vineyard managers in Skamania and Klickitat Counties in Washington. This successful arrangement, which has been in place for more than 14 years, has resulted in close working relations between the Hood River County, OR, and Skamania County, WA, Extension offices.

Forestry program impacts includes two years of National Fire Plan grant funding for one WSU Extension FTE to enhance fire fighting capacity in rural volunteer fire districts and to teach interface dwellers firewise home maintenance and landscaping in four Washington and Oregon Columbia Gorge counties. This effort was continued and enhanced throughout 2004 by using Secure Rural Schools and Community Self-Determination Act of 2000 Title III funding. In Skamania County, EMS updated maps to allow more accurate responses. More than 150 people attended the seven classes and approximately 2000 Living with Fire brochures were distributed at the county fair. Through class evaluations and follow-up discussions, participants report that the useful knowledge and skills they learned will help to increase their homes' wildfire survivability. As a result of this project, Hood River and Wasco Counties in Oregon have funded Title III NFP299 GIS surveys.

Risk Management: In the area of risk management, WSU Extension collaborated with University of Idaho, Oregon State University, USDA/Farm Service Agency, USDA/Risk Management Agency, WSDA, and Wenatchee Valley College. WSU Extension hosts the Western Center for Risk Management Education, which serves 13 western states. The center administered $550,000 in competitive risk management education grants to public and private organizations in each of the 13 states. In addition, WSU Extension was successful in persuading the Pennsylvania State Department of Agriculture and the Federal Crop Insurance Commission to expand AGR Lite crop insurance to include Alaska, Idaho, Oregon, and Washington.

Potato: Potato clones and cultivars are selected for inclusion in either the tri-state or the western regional trials by participants of the trials and industry at an annual meeting. Results are printed for all locations in an annual summary and provided to the participants. Trial results are presented at the annual conference for most, if not all, the participating states. In Washington, the trials are used to host field days in all production areas. County Extension educators throughout the state are involved in the selection of the cooperating grower trials and in the field days. Each participating state—California, Colorado, Idaho, Oregon, Texas and Washington—is responsible for coordinating the effort, carrying out the trials, and reporting the results. Industry participation in the annual tour of trial locations is excellent and instrumental in making selection of early generation materials to be included in subsequent trials. Part of the salary of the team leader will be paid from Smith-Lever Funds.

Water Quality: The WSU Extension Water Resources Leadership Team is a committee of Extension educators providing statewide leadership, support, and coordination for the water resource educational efforts of WSU Extension. Integrated, multidisciplinary team members represent a wide range of specialty areas and regions throughout the state in addition to their normal Extension responsibilities. The team provides statewide leadership for WSU Extension water quality programs by identifying regional and statewide priority issues and mobilizing resources to address these issues based on our educational roles and capacities. This team works in a very productive partnership with the water quality coordinators from the four Land Grant Institutions, the NRCS Liaison to EPA Region 10, the Agriculture Sector Lead from EPA Region 10, the Extension Liaison to EPA Region 10, the directors of the four state water research institutes, and a representative from EPA's Corvallis

Research Lab. The Pacific Northwest Regional Water Quality Program and its impact may be accessed at http://pnwwaterweb.com/.

F. INTEGRATED RESEARCH AND EXTENSION ACTIVITIES (See Appendix C Integrated Activities Form CSREES-REPT (2/00))

A great deal of integrated work is going on in Washington State University Extension. Joint appointments between Extension and the Agricultural Research Center are common. These joint appointment personnel integrate the two missions seamlessly by delivering research-based information that focuses on real problems to the people of the state through Extension education programs. Where appropriate, we have given joint appointments to County-based Extension educators as well. WSU Extension has a multitude of integrated teams of faculty to address issues in both agriculture and human sciences. A large number of Extension educators are members of multistate research projects and multistate coordinating committees. However, the need to keep federal and state funding of positions flexible and the resultant impossibility of providing an auditable report to reflect all this work has required us to ask for a waiver of the report this year, and to underreport our actual work on the auditable forms. For the purpose of this year's integrated research and Extension activities, we would like to highlight our integrated pest management program and the CSANR.

Integrated Pest Management: WSU Extension conducts educational programs to maintain and improve agricultural production and a healthy environment by promoting pest management practices that provide adequate pest control while minimizing the potentially adverse effects of such practices upon people and the environment. Several faculty, including the IPM Coordinator, hold joint research and Extension appointments whose salaries are paid from Smith-Lever 3 (b) and (c) and Hatch Funds. Faculty holding integrated research and Extension appointments are located throughout the state and work together in multidisciplinary teams to address IMP programming needs in the areas of crops and soils, entomology, food science, horticulture and landscape architecture, and plant pathology.

CSANR: In response to rapid and complex changes facing the state, in 1991 the state legislature established the Center for Sustaining Agriculture and Natural Resources (CSANR) at WSU. The mission of the CSANR is to develop and foster agriculture and natural resource management approaches that are economically viable, environmentally sound, and socially acceptable. WSU Extension and the Agricultural Research Center jointly provide financial support to the CSANR.

The CSANR acts as facilitator to bring together interdisciplinary teams, both within WSU and in partnership with other organizations. CSANR has a stakeholder advisory committee with representation from a broad spectrum of interests. The CSANR provides education on emerging issues through conferences and workshops, on-farm testing and applied research, informational materials, a World Wide Web site, satellite broadcasts, a resource library, and personal consultation. Examples of current areas of focus are alternative farming systems, small-scale and urban agriculture, energy and agriculture, organic farming systems, role of biotechnology, integrated pest management, soil and water quality protection, and farmland preservation. The director's salary is paid from Smith-Lever 3b and c as well as Hatch Funds.

Appendix C

U.S. Department of Agriculture
Cooperative State Research, Education, and Extension Service
Supplement to the Annual Report of Accomplishments and Results
Multistate Extension Activities and Integrated Activities
(Attach Brief Summaries)

Institution: Washington State University
State: Washington

Check one: ____ Multistate Extension Activities
____ Integrated Activities (Hatch Act Funds)
_X_ Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Center for Sustaining Ag & Natural Resources					$43,172
Integrated Pest Management					$71,694
Total					**$114, 866**

Target: 3% of federal 3 (b) and (c) = $112,706

Linda Kirk Fox

Linda Kirk Fox, Interim Director

March 31, 2005
Date

Form CSREES-REPT (2/00)
Appendix C continued

U.S. Department of Agriculture
Cooperative State Research, Education, and Extension Service
Supplement to the Annual Report of Accomplishments and Results
Multistate Extension Activities and Integrated Activities
(Attach Brief Summaries)

Institution: Washington State University
State: Washington
Check one: X Multistate Extension Activities
____ Integrated Activities (Hatch Act Funds)
____ Integrated Activities (Smith-Lever Act Funds)

Actual Expenditures

Title of Planned Program/Activity	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Potato Program					$5,528
Risk Management					$27,006
Water Quality					$40,231
Forestry					$17,872
Center for Sustaining Ag & Natural Resources					$22,499
Total					**$113,136**

Target: 3% of federal 3 (b) and (c) = $112,706

Linda Kirk Fox

Linda Kirk Fox, Interim Director

March 31, 2005
Date

Form CSREES-REPT (2/00)